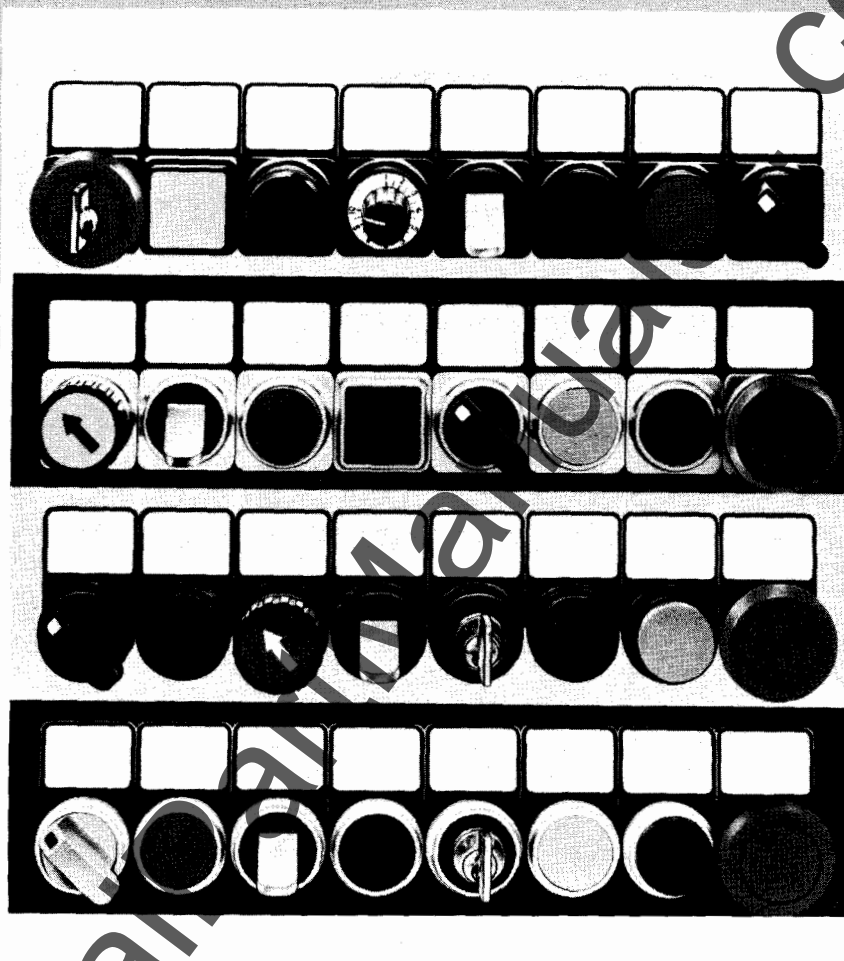


**"THE
DOMINO
LINE"**



INTERNATIONAL CONTROL PRODUCTS Push Buttons – Miniature

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TYPE D

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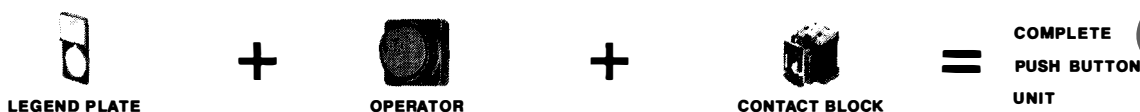


SQUARE D COMPANY

CONTROL UNITS — 22.5 mm Miniature

PUSH BUTTON OPERATORS, (NON-ILLUMINATED)

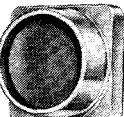
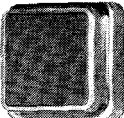
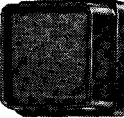
Revised Oct., 1983



TYPE D miniature push buttons offer an extremely large variety of devices to the user. Stocking is simplified because all units are interchangeable. All operators and pilot light bezels are self retaining. After engaging the operator into the mounting hole, it retains itself so that the locking ring can be screwed on from behind without assistance. All contact blocks and light modules have a snap-on mounting system. When assembled with proper enclosures, Type D operators provide protection from water, oil and dust and meet IP65 protection category standards.

PUSH BUTTON OPERATORS

Legend Plates and Contact Blocks Not Included

Description	Color Cap	Square Black Bezel	Square Chrome Bezel	Round Black Bezel	Round Chrome Bezel	Price
 Round Full Guard Button	Red Black Yellow Green Blue White No Insert*	D1A1R D1A1S D1A1Y D1A1G D1A1B D1A1W D1A1O	D2A1R D2A1S D2A1Y D2A1G D2A1B D2A1W D2A1O	D3A1R D3A1S D3A1Y D3A1G D3A1B D3A1W D3A1O	D4A1R D4A1S D4A1Y D4A1G D4A1B D4A1W D4A1O	\$10.80 10.60
 Round No Guard Button	Red	D1A3R	D2A3R	D3A3R	D4A3R	10.80
 Round Extended Guard Button	Red Black Yellow Green Blue White No Insert*	D1A7R D1A7S D1A7Y D1A7G D1A7B D1A7W D1A7O	D2A7R D2A7S D2A7Y D2A7G D2A7B D2A7W D2A7O	N/A		10.80 10.60
 Round Full Guard Booted Button	Red Black Green Yellow	D1A6R D1A6S D1A6G D1A6Y	D2A6R D2A6S D2A6G D2A6Y	D3A6R D3A6S D3A6G D3A6Y	D4A6R D4A6S D4A6G D4A6Y	18.80
 Square Full Guard Button	Red Black Yellow Green Blue White No Insert	D1A2R D1A2S D1A2Y D1A2G D1A2B D1A2W D1A2O	D2A2R D2A2S D2A2Y D2A2G D2A2B D2A2W D2A2O	N/A		10.80 10.60
 Square Extended Guard Button	Red Black Yellow Green Blue White No Insert	D1A4R D1A4S D1A4Y D1A4G D1A4B D1A4W D1A4O	D2A4R D2A4S D2A4Y D2A4G D2A4B D2A4W D2A4O	N/A		10.80 10.60

COLOR CAP INSERTS

Description	Color	Type	Price Each	Description	Color	Type	Price Each
 Round Button Insert for Types D1A1___, D2A1___, D3A1___, D4A1___, D1A7___, D2A7___	Red Black Yellow Green Blue White	Z40R Z40S Z40Y Z40G Z40B Z40W	\$.20	 Square Button Insert for Types D1A2___, D2A2___, D1A4___, D2A4___	Red Black Yellow Green Blue White	Z41R Z41S Z41Y Z41G Z41B Z41W	.20

ORDERING INFORMATION REQUIRED

Class and type number

Example: 1-9001 D1A1R

CONTACT BLOCKS — Page 5-IP

LEGEND PLATES — Page 9-IP

DIMENSIONS — Page 12-IP

APPLICATION DATA — Page 16-IP

ACCESSORIES — Page 8-IP



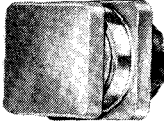
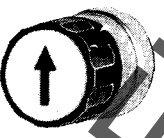
CONTROL UNITS — 22.5 mm Miniature (NON-ILLUMINATED)

INTERNATIONAL
PRODUCTS
CLASS
9001



PUSH BUTTON OPERATORS

Legend Plates and Contact Blocks Not Included

Description		Color	Square Black Bezel	Square Chrome Bezel	Round Black Bezel	Round Chrome Bezel	Price
 Mushroom	35mm (1.4 inch)	Red Green Yellow	D1B1R D1B1G D1B1Y	D2B1R D2B1G D2B1Y	D3B1R D3B1G D3B1Y	D4B1R D4B1G D4B1Y	\$12.80
	60mm (2.4 inch)	Red Black	D1B2R D1B2S	D2B2R D2B2S	D3B2R D3B2S	D4B2R D4B2S	12.80
 Mushroom	Square	Red	D1A5R	D2A5R	N/A		12.80
 Push to Maintain, Turn to Release	35mm (1.4 inch)	Red	D1C1R	D2C1R	D3C1R	D4C1R	35.80
	29mm (1.14 inch)	Red	D1C2R	D2C2R	D3C2R	D4C2R	33.80
 Push to Maintain Key Operated Release	Push to Maintain Key Operated Release	Red	D1D1R	D2D1R	D3D1R	D4D1R	42.20
 Toggle Switch	Toggle Switch	Blue Red White	D1E1B D1E1R D1E1W	D2E1B D2E1R D2E1W	D3E1B D3E1R D3E1W	D4E1B D4E1R D4E1W	24.20
 Push-Rotate to Maintain	Push-Rotate to Maintain	Red Black Yellow	D1F2R D1F2S D1F2Y	D2F2R D2F2S D2F2Y	D3F2R D3F2S D3F2Y	D4F2R D4F2S D4F2Y	13.60

Key Operated Push Buttons

	Lockable in extended and depressed positions	D1LAO	D2LAO	D3LAO	D4LAO	34.80
	Lockable in depressed position	D1LBO	D2LBO	D3LBO	D4LBO	34.80
	Lockable in extended position	D1LCO	D2LCO	D3LCO	D4LCO	34.80
	Push to Maintain Key Operated Release	D1LDO	D2LDO	D3LDO	D4LDO	34.80

■ Replacement Key — Order Class 9001 Type Z07, **\$2.40**.

ORDERING INFORMATION REQUIRED
Class and type number
Example: 1-9001 D3B1G

LEGEND PLATES — Page 9-IP
DIMENSIONS — Page 12-IP
CONTACT BLOCKS — Page 5-IP

APPLICATION DATA — Page 16-IP
ACCESSORIES — Page 8-IP

CONTROL UNITS — 22.5 mm Miniature NON-ILLUMINATED SELECTOR SWITCHES

Revised Oct., 1983



SELECTOR SWITCHES — OPERATORS (NON-ILLUMINATED)

Legend Plates and Contact Blocks Not Included

Description	Operator Color	Square Black Bezel	Square Chrome Bezel	Round Black Bezel	Round Chrome Bezel	Price
	2 Position Maintained	Red Black Yellow	D1G2R D1G2S D1G2Y	D2G2R D2G2S D2G2Y	D3G2R D3G2S D3G2Y	\$14.80
	3 Position Maintained	Red Black Yellow	D1G3R D1G3S D1G3Y	D2G3R D2G3S D2G3Y	D3G3R D3G3S D3G3Y	14.80
	3 Position Spring Return Both Sides to Center	Red Black Yellow	D1G4R D1G4S D1G4Y	D2G4R D2G4S D2G4Y	D3G4R D3G4S D3G4Y	22.80
	3 Position Spring Return Right to Center	Red Black Yellow	D1G5R D1G5S D1G5Y	D2G5R D2G5S D2G5Y	D3G5R D3G5S D3G5Y	22.80
	3 Position Spring Return Left to Center	Red Black Yellow	D1G6R D1G6S D1G6Y	D2G6R D2G6S D2G6Y	D3G6R D3G6S D3G6Y	22.80
	2 Position Maintained	Red Black Yellow	D1H2R D1H2S D1H2Y	D2H2R D2H2S D2H2Y	D3H2R D3H2S D3H2Y	16.00
	3 Position Maintained	Red Black Yellow	D1H3R D1H3S D1H3Y	D2H3R D2H3S D2H3Y	D3H3R D3H3S D3H3Y	16.00
	2 Position Maintained	Red Black Yellow	D1H4R D1H4S D1H4Y	D2H4R D2H4S D2H4Y	D3H4R D3H4S D3H4Y	16.00
	2 Position Maintained	Red Black Yellow	D1H5R D1H5S D1H5Y	D2H5R D2H5S D2H5Y	D3H5R D3H5S D3H5Y	16.00
	3 Position Maintained	Red Black Yellow	D1H7R D1H7S D1H7Y	D2H7R D2H7S D2H7Y	D3H7R D3H7S D3H7Y	16.00

SELECTOR SWITCH SEQUENCES

TWO POSITION

	ORDER	CONTACT BLOCK SYMBOL
1 0	0 1	
0 1	1 0	
1 0 0 1	0 1 1 0	

THREE POSITION

	ORDER	CONTACT BLOCK SYMBOL
1 0 0 1	0 0 1 1	
1 0 1 1	0 1 1 0	

FOR OTHER CONTACT SEQUENCE COMBINATIONS
CONTACT YOUR LOCAL SQUARE D FIELD OFFICE.

ORDERING INFORMATION REQUIRED

Class and type number

Example: 1-9001 D1G2R

CONTACT BLOCKS — Page 5-IP

LEGEND PLATES — Page 9-IP

DIMENSIONS — Pages 12-IP, 13-IP

APPLICATION DATA — Page 16-IP

ACCESSORIES — Page 8-IP



CONTROL UNITS — 22.5 mm Miniature TYPE D OPERATORS

INTERNATIONAL
PRODUCTS
CLASS
9001



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**COMPLETE
UNIT**

LEGEND PLATE

OPERATOR

CONTACT BLOCK

Legend Plates and Contact Blocks Not Included

Description		Operator Color	Square Black Bezel	Square Chrome Bezel	Round Black Bezel	Round Chrome Bezel	Price
	2 Position Maintained Key Operated Selector Switch	—	D1L___*	D2L___*	D3L___*	D4L___*	\$34.80
	3 Position Maintained Key Operated Selector Switch	—	D1L___*	D2L___*	D3L___*	D4L___*	34.80
	3 Position Key Operated Selector Switch – Spring Return Both Sides to Center	—	D1L90	D2L90	D3L90	D4L90	46.80
	Dual Function Non-Illuminated Operator	Blank Green/Red Inserts	D1M1Z●	D2M1Z●	N/A		21.60
	Dual Function Illuminated Operator See page 6-IP for Light Module Assembly		D1M2Z●	D2M2Z●			21.60
	Potentiometer Operator Without Potentiometer For use with potentiometer with 6mm diameter shaft	Black	D1R1S	D2R1S	D3R1S	D4R1S	56.00
	Hour Counter □ 120/60 Hz Indication 0-9999 Hours With Slip-On Connectors	Gray	D1S1O	D2S1O	N/A		125.00
	Fuse Holder (Less Cartridge) Current 6.3 Amps. Voltage: 250 V For Fuses 5mm to 20mm Solder Terminals	Black	D1T1S	D2T1S	D3T1S	D4T1S	26.40

- This operator provides IP-40 protection.
- For other voltages, contact local Square D Field Office.

*KEY WITHDRAWAL CODES

For 2-Position Switches			For 3-Position Switches							
Code			Code				Code			
10	Yes	No	40	Yes	No	No	70	Yes	No	Yes
20	No	Yes	50	No	No	Yes	80	Yes	Yes	Yes
30	Yes	Yes	60	No	Yes	No	90	No	Yes	No

Replacement Key — Order Class 9001 Type Z18 **\$2.40.**

CONTACT BLOCKS

Contact Arrangement Symbol	FOR MOUNTING TO OPERATOR		Price	FOR MOUNTING TO CONTACT BLOCK		Price
	Pressure Wire Terminals	Slip On Connectors★		Pressure Wire Terminals	Slip On Connectors★	
	Type	Type		Type	Type	
	DA10	DD10	\$ 6.	DB10	DE10	\$ 6.
	DA01	DD01	6.	DB01	DE01	6.
	DA11	DD11	12.	DB11	DE11	12.
	DA20	DD20	12.	DB20	DE20	12.
	DA02	DD02	12.	DB02	DE02	12.
	DC22	DF22	24.			
	DC40	DF40	24.			
	DC04	DF04	24.			

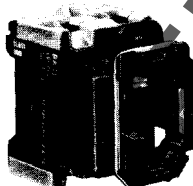
NOTE: Use a maximum of **two contact blocks per operator**. Types DC and DF consist of two contact blocks.

★Accepts commercially available 6.3mm (.25 in.) or 2.8mm (.110 in.) wide by .8mm (.032 in.) tab thickness slip on connectors.

ORDERING INFORMATION REQUIRED

Class and type number
Example: 1-9001 D1H4S
1-9001 DA-01

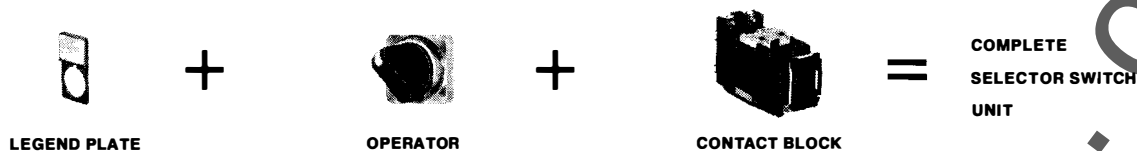
LEGEND PLATES — Page 9-IP
DIMENSIONS — Pages 13-IP, 15-IP
APPLICATION DATA — Page 16-IP
ACCESSORIES — Page 8-IP
CONTACT RATINGS — Page 16-IP



Type DA-11

CONTROL UNITS — 22.5 mm Miniature ILLUMINATED SELECTOR SWITCHES

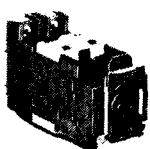
Revised Oct., 1983



SELECTOR SWITCHES — OPERATORS (ILLUMINATED)

Legend Plates, Contact Blocks and Light Modules Not Included

Description		Lens Color	Square Black Bezel	Square Chrome Bezel	Round Black Bezel	Round Chrome Bezel	Price
 Illuminated Selector Switch Operator	2 Position Maintained	Red Black Yellow	D1G20R D1G20S D1G20Y	D2G20R D2G20S D2G20Y	D3G20R D3G20S D3G20Y	D4G20R D4G20S D4G20Y	\$14.80
	3 Position Maintained	Red Black Yellow	D1G30R D1G30S D1G30Y	D2G30R D2G30S D2G30Y	D3G30R D3G30S D3G30Y	D4G30R D4G30S D4G30Y	14.80
	3 Position Spring Return Both Sides to Center	Red Black Yellow	D1G40R D1G40S D1G40Y	D2G40R D2G40S D2G40Y	D3G40R D3G40S D3G40Y	D4G40R D4G40S D4G40Y	22.80
	3 Position Spring Return Right to Center	Red Black Yellow	D1G50R D1G50S D1G50Y	D2G50R D2G50S D2G50Y	D3G50R D3G50S D3G50Y	D4G50R D4G50S D4G50Y	22.80
	3 Position Spring Return Left to Center	Red Black Yellow	D1G60R D1G60S D1G60Y	D2G60R D2G60S D2G60Y	D3G60R D3G60S D3G60Y	D4G60R D4G60S D4G60Y	22.80

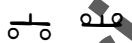
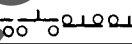
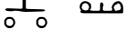
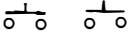
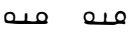


SEE PAGE 4-IP FOR CONTACT SEQUENCES

LIGHT MODULES FOR THE ABOVE OPERATORS

The light modules listed below are to be used with the illuminated selector switch operators listed above and the illuminated push buttons listed on top of Page 7-IP. For pilot lights, use the light modules listed on Page 8-IP.



Voltage	Description	Contact Arrangement	Screw Terminal	Slip-On Tab	Price	Lamps	Price
Pri /Sec/Code 110-120/ 6V •C 220-240/ 6V •D 380-420/ 6V •E 500 / 6V •G Contact Local Field Office for other Voltages.	Transformer Light Module Momentary Contacts		DTS•11	DTF•11	\$40.00*	Filament Lamp 6V/1.2W 12V/1.2W 24V/1.2W 48V/1.2W 60V/1.2W 130V/1.2W Z25 Z26 Z27 Z28 Z29 Z32	\$4.00
	Transformer Light Module with Alternate Action (Push On - Push Off) Contacts		DTS•R1	DTF•R1	52.00*		
FULL VOLTAGE Light Module 6V to 250V Max. AC/DC	Momentary Contact		DFSN11	DDFN11	32.00*	Neon Lamp 110V/1.2W 220V/1.2W Z30 Z31	4.00
			DFSN20		32.00*		
			DFSN10		26.00*		
			DFSN22	DDFN22	44.00*		
	Provides Alternate Action (Push On - Push Off)		DFSNR1	DDFNR1	44.00*		
			DFSNR2		44.00*		
			DFSNR3		44.00*		

- * Does not include a lamp. Must be ordered separately.
- Insert proper voltage code from column at left.

ORDERING INFORMATION REQUIRED

Class and type number

Example: 1-9001 D3G40R

LEGEND PLATES — Page 9-IP

DIMENSIONS — Pages 13-IP, 14-IP

APPLICATION DATA — Page 16-IP

ACCESSORIES — Page 8-IP

CONTACT RATINGS — Page 16-IP



CONTROL UNITS — 22.5 mm Miniature ILLUMINATED PUSH BUTTON OPERATORS

INTERNATIONAL
PRODUCTS
CLASS
9001



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COMPLETE ILLUMINATED
PUSH BUTTON
UNIT

LEGEND PLATE — OPERATOR

LIGHT MODULE

OPERATORS FOR ILLUMINATED PUSH BUTTON AND ALTERNATE ACTION (PUSH ON/PUSH OFF) PUSH BUTTON

Legend Plates, Light Modules and Contact Blocks Not Included

Description		Lens Color	Square Black Bezel	Square Chrome Bezel	Round Black Bezel	Round Chrome Bezel	Price
	Round Insert Full Guard	Red	D1Y1R	D2Y1R	D3Y1R	D4Y1R	\$10.80
		Green	D1Y1G	D2Y1G	D3Y1G	D4Y1G	
		Yellow	D1Y1Y	D2Y1Y	D3Y1Y	D4Y1Y	
	Square Insert No Guard	Blue	D1Y1B	D2Y1B	D3Y1B	D4Y1B	8.00
		White	D1Y1W	D2Y1W	D3Y1W	D4Y1W	
		No Insert	D1Y1O	D2Y1O	D3Y1O	D4Y1O	
	Square Insert Full Guard	Red	D1Y2R	D2Y2R	N/A		10.80
		Green	D1Y2G	D2Y2G			
		Yellow	D1Y2Y	D2Y2Y			
	Square Insert No Guard	Blue	D1Y2B	D2Y2B	N/A		8.00
		White	D1Y2W	D2Y2W			
		No Insert	D1Y2O	D2Y2O			
	Square Insert Full Guard	Red	D1Y3R	D2Y3R	N/A		10.80
		Green	D1Y3G	D2Y3G			
		Yellow	D1Y3Y	D2Y3Y			
	Square Insert No Guard	Blue	D1Y3B	D2Y3B	N/A		8.00
		White	D1Y3W	D2Y3W			
		No Insert	D1Y3O	D2Y3O			

NOTE: Above operators use light module assemblies listed on Page 6-IP.

LENS CAPS FOR ILLUMINATED PUSH BUTTONS

Description	Color	Type	Price Each	Description	Color	Type	Price Each
	Red Green Yellow Blue White	Z22R Z22G Z22Y Z22B Z22W	\$2.80		Red Green Yellow Blue White	Z23R Z23G Z23Y Z23B Z23W	2.80
Round Color Cap for D1Y1-D2Y1 D3Y1-D4Y1				Square Color Cap For D1Y2-D2Y2 and D1Y3-D2Y3			

PILOT LIGHTS

Description	Color	Square Black Bezel	Square Chrome Bezel	Round Black Bezel	Round Chrome Bezel	Price
	Red Green Yellow Blue White	D1V1R	D2V1R	D3V1R	D4V1R	\$10.80
		D1V1G	D2V1G	D3V1G	D4V1G	
		D1V1Y	D2V1Y	D3V1Y	D4V1Y	
	Red Green Yellow Blue White	D1V1B	D2V1B	D3V1B	D4V1B	8.00
		D1V1W	D2V1W	D3V1W	D4V1W	
		No Cap	D1V1O	D2V1O	D3V1O	
	Red Green Yellow Blue White	D1V2R	D2V2R	N/A		10.80
		D1V2G	D2V2G			
		D1V2Y	D2V2Y			
	Red Green Yellow Blue White	D1V2B	D2V2B	N/A		8.00
		D1V2W	D2V2W			
		No Cap	D1V2O			

NOTE: Pilot light operators use light module assemblies listed on Page 8-IP.

LENS CAPS FOR PILOT LIGHTS

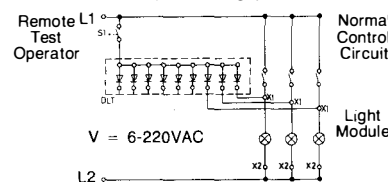
Description	Color	Type	Price Each	Description	Color	Type	Price Each
	Red Green Yellow Blue White	Z21R Z21G Z21Y Z21B Z21W	\$2.80		Red Green Yellow Blue White	Z20R Z20G Z20Y Z20B Z20W	2.80
Round Color Cap for D1V1-D2V1 D3V1-D4V1				Square Color Cap For D1V2 and D2V2			

REMOTE TEST MODULE

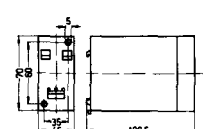
Type	Description	List
DLT	Remote Test Module	\$100.00

For use with above operators to provide remote test function. The DLT is capable of providing remote test function for 1 to 9 illuminated operators. It can be panel mounted or snapped on Class 8501 Type NT-13 DIN mounting track.

Typical Wiring Diagram (full voltage)



DIMENSIONS (mm)



ORDERING INFORMATION REQUIRED

Class and type number
Example: 1-9001 D1Y1R



LEGEND PLATES — Page 9-IP
DIMENSIONS — Page 14-IP

APPLICATION DATA — Page 16-IP
ACCESSORIES — Page 8-IP

D21B DISCOUNT

7-IP

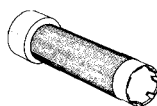
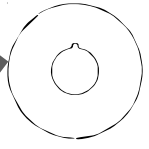
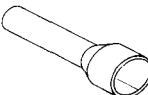
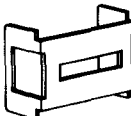
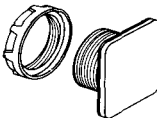
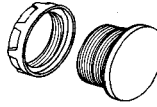
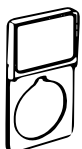
LIGHT MODULES FOR PILOT LIGHTS ON PAGE 7-IP

Description	Voltage*	Screw Terminal	Slip On Terminal	Price
 Transformer Light Module	Pri /Sec 110/120/6V 220/240/6V 380/420/6V 500/6V	DTSC DTSD DTSE DTSG	DTFC DTFD DTFE DTFG	\$28.00*
 Full Voltage Module	6V to 250V AC/DC	DFFN	DFFN	20.00*

* Price does not include lamp. Lamps listed on Page 6-IP.

• Contact local Field Office for availability of other voltages.

ACCESSORIES

Description	Type	Price	Description	Type	Price
 Boot for D3A1, D4A1	Z17	\$4.00	 Yellow Contrast Label Without Marking 68 x 30 mm	Z10	\$1.20
 Wrench For Tightening Ring Nuts	Z01	2.30	 Yellow Contrast Label Without Marking 65 mm	Z09	1.20
 Lamp Extractor	Z02	1.80	 Marking Clip For Contact Block and Lampholder Not Suitable For Transformers	Z05	.50
 Closing Plate Square — Plastic Gray Black	Z03 Z33	4.00 4.00	 Alternate Action Adapter — For Contact Blocks on Page 5-IP	Z14	12.00
 Closing Plate Round — Plastic Gray Black	Z04 Z34	4.00 4.00	 Legend Plate Holder For Square Bezels (Without Legend Plate) Use Legend Inserts Listed on Page 9-IP	Z15	.30
 Ring Nut For Fastening In Panels Or Enclosures	Z08	.80	 Legend Plate Holder For Round Bezels (Without Legend Plate) Use Legend Inserts Listed on Page 9-IP	Z16	30
 For Coupling Two Different Enclosures	Z06	3.60			

ORDERING INFORMATION REQUIRED

Class and type number
Example: 1 — 9001 Z01

DIMENSIONS: Page 15-IP



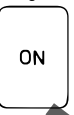
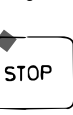
LEGEND PLATES AND MARKINGS

INTERNATIONAL
PRODUCTS
CLASS
9001

ANODIZED ALUMINUM PLATES

Lettering and Symbols Black.

For square and round bezels, including legend plate holder				
	Square		Round	
				
Marking	Type	Price	Type	Price
Blank Plate	01 Q	\$1.20	01 R	\$1.20
O	02 Q	1.20	02 R	1.20
I	03 Q	1.20	03 R	1.20
II	04 Q	1.20	04 R	1.20
O I	05 Q	1.20	05 R	1.20
START	17 Q	1.20	17 R	1.20
STOP	18 Q	1.20	18 R	1.20
ON	62 Q	1.20	62 R	1.20
OFF	63 Q	1.20	63 R	1.20
OPEN	64 Q	1.20	64 R	1.20
CLOSE	65 Q	1.20	65 R	1.20
FORWARD	66 Q	1.20	66 R	1.20
REVERSE	67 Q	1.20	67 R	1.20
RESET	68 Q	1.20	68 R	1.20
JOG	69 Q	1.20	69 R	1.20
RAISE	70 Q	1.20	70 R	1.20
LOWER	71 Q	1.20	71 R	1.20
IN	72 Q	1.20	72 R	1.20
OUT	73 Q	1.20	73 R	1.20
INCH	74 Q	1.20	74 R	1.20
RUN	75 Q	1.20	75 R	1.20
UP	76 Q	1.20	76 R	1.20
DOWN	77 Q	1.20	77 R	1.20
FAST	78 Q	1.20	78 R	1.20
SLOW	79 Q	1.20	79 R	1.20
HIGH	80 Q	1.20	80 R	1.20
LOW	81 Q	1.20	81 R	1.20
EMERG. STOP	82 Q	1.20	82 R	1.20
HAND AUTO	21 Q	1.20	21 R	1.20
HAND O AUTO	24 Q	1.20	24 R	1.20

For enclosures and plates listed on Page 10-IP. Legend Plates are self adhesive.				
	ON		STOP	
				
Marking	Type	Price	Type	Price
Blank Plate	01 W	\$.90	01 W	\$.90
O	02 W	.90	02 W	.90
I	03 S	.90	03 W	.90
II	04 S	.90	04 W	.90
O I	05 S	.90	05 W	.90
START	17 S	.90	17 W	.90
STOP	18 S	.90	18 W	.90
ON	62 S	.90	62 W	.90
OFF	63 S	.90	63 W	.90
OPEN	64 S	.90	64 W	.90
CLOSE	65 S	.90	65 W	.90
FORWARD	66 S	.90	66 W	.90
REVERSE	67 S	.90	67 W	.90
RESET	68 S	.90	68 W	.90
JOG	69 S	.90	69 W	.90
RAISE	70 S	.90	70 W	.90
LOWER	71 S	.90	71 W	.90
IN	72 S	.90	72 W	.90
OUT	73 S	.90	73 W	.90
INCH	74 S	.90	74 W	.90
RUN	75 S	.90	75 W	.90
UP	76 S	.90	76 W	.90
DOWN	77 S	.90	77 W	.90
FAST	78 S	.90	78 W	.90
SLOW	79 S	.90	79 W	.90
HIGH	80 S	.90	80 W	.90
LOW	81 S	.90	81 W	.90
EMERG. STOP	82 S	.90	82 W	.90
HAND AUTO	21 S	.90	21 W	.90
HAND O AUTO	24 S	.90	24 W	.90

• Can be used with Legend Plate Holders listed on Page 8-IP.

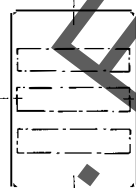
Markings and Symbols

(Hot-imprinted on plastic button inserts or color caps of pilot lights, etc.)

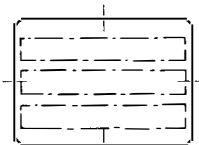
For square and round Push Buttons, Pilot Light Bezels, and Illuminated Push Buttons.

Contact local Square D Field Office for availability.

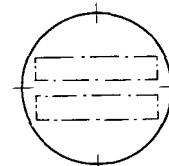
Possible engraving or imprinting for plastic button inserts, pilot light caps and anodized aluminum legend plates
Size of type 3.5 mm — 0.14 inches.



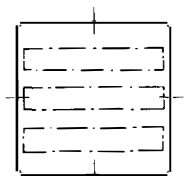
Up to three lines 8 letters max. per line



Up to three lines 12 letters max. per line



Single line 10 letters max.
Two lines 9 letters max.



Up to three lines 10 letters max. per line

ORDERING INFORMATION REQUIRED

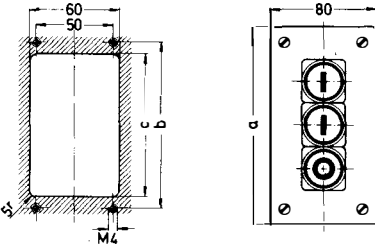
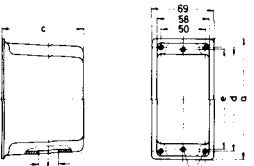
Example: 9001 24W

ENCLOSURES — FOR VERTICAL OR HORIZONTAL MOUNTING
Operators and Contact Blocks Not Included

Operators and Contact Blocks Not Included

[illegible]

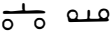
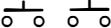
FRONT PLATES AND PULL BOXES

Description		No. of Units	Type	Price	Dimensions Inches/millimeters						Dimension Diagram — millimeters									
					a	b	c	d	e	f										
	Aluminum Front Plates	1	DFP 1	\$24.00	3.2 82	2.0 52	1.4 36	—	—	—										
		2	DFP 2	\$26.00	4.4 112	3.2 82	2.6 66	—	—	—										
		3	DFP 3	\$28.00	5.6 142	4.4 112	3.8 96	—	—	—										
		4	DFP 4	\$40.00	6.8 172	5.6 142	5.0 126	—	—	—										
		5	DFP 5	\$48.00	8.0 202	6.8 172	6.1 156	—	—	—										
		6	DFP 6	\$56.00	9.1 232	8.0 202	7.3 186	—	—	—										
		7	DFP 7	\$60.00	10.3 262	9.1 232	8.5 216	—	—	—										
		8	DFP 8	\$65.00	11.5 292	10.3 262	9.7 246	—	—	—										
<table><tr><td>Inches</td><td>0.2</td><td>2.0</td><td>2.4</td><td>3.1</td></tr><tr><td>mm</td><td>4</td><td>50</td><td>60</td><td>80</td></tr></table>											Inches	0.2	2.0	2.4	3.1	mm	4	50	60	80
Inches	0.2	2.0	2.4	3.1																
mm	4	50	60	80																
	Full Box Ice Type DFP Front Plates (Plastic)	1	DHB 1	\$12.00	2.8 71	—	3.5 90	2.0 52	1.9 48	0.8 21.5										
		2	DHB 2	\$15.00	4.0 101	—	3.5 90	3.2 82	3.1 78	0.8 21.5										
		3	DHB 3	\$18.00	5.2 131	—	3.5 90	4.4 112	4.3 108	0.8 21.5										
		4	DHB 4	\$21.00	6.3 161	—	3.5 90	5.2 142	5.4 138	0.8 21.5										
		5	DHB 5	\$24.00	7.5 191	—	3.5 90	6.8 172	6.6 168	0.8 21.5										
<table><tr><td>Inches</td><td>0.2</td><td>2.0</td><td>2.25</td><td>2.7</td></tr><tr><td>mm</td><td>4</td><td>50</td><td>58</td><td>69</td></tr></table>											Inches	0.2	2.0	2.25	2.7	mm	4	50	58	69
Inches	0.2	2.0	2.25	2.7																
mm	4	50	58	69																

* DHB Pull Boxes will accept all operators with one (1) or two (2) contact blocks or push on/off pilots with one (1) contact block only. No units with transformers are acceptable.

BASE MOUNTING MODULES FOR FITTING INTO DIECAST OR PLASTIC ENCLOSURES

Types DMG and DMI. (Screw Terminals)

Base Mounting Contact Blocks				Base Mounting FULL VOLTAGE Light Modules 6V to 250V Max. Lamp Not Included			Base Mounting Transformer Light Module	
Contact Arrangement Symbol	Type	Price	Base Mounting Full Voltage Light Module 6V to 250V AC/DC	DFGN*	\$20.00	Base Mounting Transformer Light Module 110/120/ 6V 220-240/ 6V 380-420/ 6V 500 / 6V	DTGC* DTGD* DTGE* DTGG*	\$28.00
	DG10	\$ 6.00	Full Voltage Light Module With —					
	DG01	6.00	DG-11 Contact Block	DFGN11*	32.00			
	DG11	12.00	DG-10 Contact Block	DFGN10*	26.00			
	DG20	12.00	DG-20 Contact Block	DFGN20*	32.00			
	DG02	12.00						

* Price does not include a lamp. Lamps must be ordered separately. Lamps listed on Page 5-IP.

• For other voltages, contact local Square D field office.

Enclosure Installation Possibilities								
Front Mounting (DWG)						Base Mounting (DMG and DMI)		
Type of Enclosure	Operator + 1 contact block	Operator + 2 contact blocks	Pilot Light + transformer	Illuminated Push Button + transformer	Illuminated Push On/Off + contact block	Contact block	Full Voltage Light Module + contact block	Light Module

Construction of enclosures type DMG . . . and DMI . . . :
(These enclosures will accept base mounted type contact blocks or lampholders)

Coupling two different enclosures for more than 5 units

Base

Mounting rail

Clamp for Contact block

Contact block

Cover

Coupling
Type Z 06
See Page 8-IP

ORDERING INFORMATION REQUIRED

Class and type number

Example: 1-9001 DFP 1

LEGEND PLATES — Page 11-IP

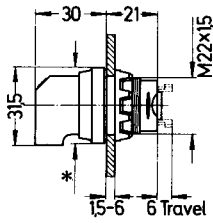
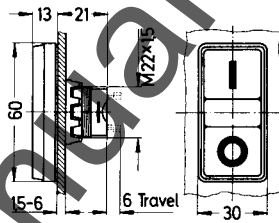
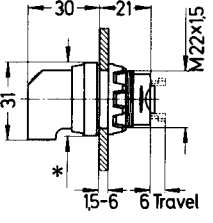
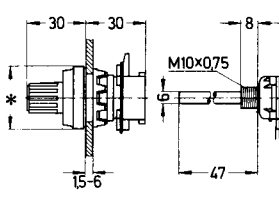
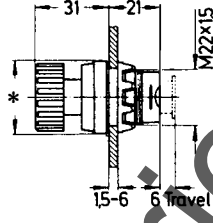
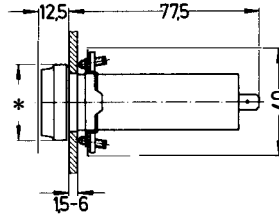
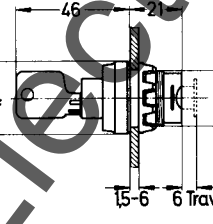
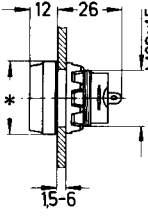
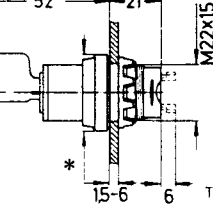
ACCESSORIES — Page 10-IP

DIMENSIONS — Page 14-IP

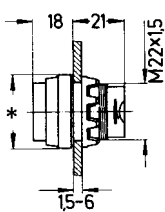
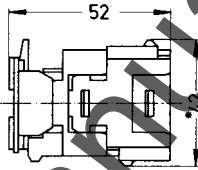
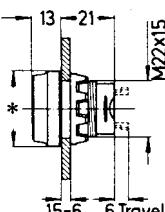
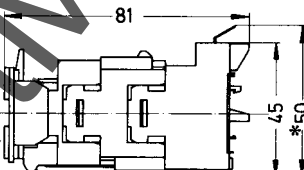
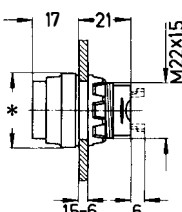
Type	Dimension Diagram Millimeters	Equivalency Table		Type	Dimension Diagram Millimeters	Equivalency Table	
		mm	inches			mm	inches
D3A1 D4A1 D1A1 D1A2 D2A1 D2A2 D1A6 D2A6 D3A6 D4A6		1.5 6.0 12 21 29 30	0.06 0.2 0.5 0.8 1.1 1.2	D1B2 D2B2 D3B2 D4B2		1.5 6.0 25 29 30 60	0.06 0.2 0.8 1.0 1.1 1.2 2.4
D1A3 D2A3 D3A3 D4A3		1.5 6.0 18 21 29 30	0.06 0.2 0.7 0.8 1.1 1.2	D1C1 D2C1 D3C1 D4C1		1.5 6 21 29 30 35	0.06 0.2 0.8 1.1 1.2 1.4
D1A4 D2A4		1.5 6.0 15 21 25 30	0.06 0.2 0.6 0.8 1.0 1.2	D1D1 D2D1 D3D1 D4D1		1.5 6 21 29 30 35 46	0.06 0.2 0.8 1.1 1.2 1.4 1.8
D1A5 D2A5		1.5 6.0 21 25 25 30	0.06 0.2 0.8 1.0 1.0 1.2	D1E1 D2E1 D3E1 D4E1		1.5 6 21 22 29 30	0.06 0.2 0.8 0.9 1.1 1.2
D1B1 D2B1 D3B1 D4B1		1.5 6 21 29 30 35	0.06 0.2 0.8 1.1 1.2 1.4	D1F2 D2F2 D3F2 D4F2		1.5 6 21 29 30 31	0.06 0.2 0.8 1.1 1.2 1.2

* Square Bezel — 30mm
Round Bezel — 29mm



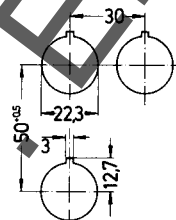
Operator Type	Dimension Diagram Millimeters	Equivalency Table		Operator Type	Dimension Diagram Millimeters	Equivalency Table	
		mm	inches			mm	inches
D1G D2G D3G D4G		1.5 6 21 29 30 31.5	0.06 0.2 0.8 1.1 1.2 1.2	D1M1 D2M1 D1M2 D2M2		1.5 6 13 21 30 60	0.06 0.2 0.5 1.8 1.2 2.4
D1G.0 D2G.0 D3G.0 D4G.0		1.5 6 21 29 30 31	0.06 0.2 0.8 1.1 1.2 1.2	D1R1 D2R1 D3R1 D4R1		1.5 6 8 29 30 47	0.06 0.2 0.3 1.1 1.2 1.9
D1H D2H D3H D4H		1.5 6 21 29 30 31	0.06 0.2 0.8 1.1 1.2 1.2	D1S1 D2S1		1.5 6 12.5 30 40 77.5	0.06 0.2 0.5 1.2 1.6 3.1
D1L (A-D) D2L (A-D) D3L (A-D) D4L (A-D)		1.5 6 21 29 30 46	0.06 0.2 0.8 1.1 1.2 1.8	D1T1 D2T1 D3T1 D4T1		1.5 6 12 26 29 30	0.06 0.2 0.5 1.0 1.1 1.2
D1L (1-9) D2L (1-9) D3L (1-9) D4L (1-9)		1.5 6.0 21 29 30 52	0.06 0.2 0.8 1.1 1.2 2.0				

* Square Bezel — 30mm
Round Bezel — 29mm

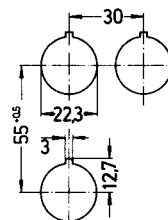
Pilot Lights and Illuminated Push Buttons							
Type	Dimension Millimeters	Equivalency Table		Contact Block Type	Dimensions Millimeters	Equivalency Table	
		mm	inches			mm	inches
D1V1 D2V1 D1V2 D2V2 D3V1 D4V1		1.5 6 18 21 29 30	0.06 0.2 0.7 0.8 1.1 1.2	DFSNR1 DFFNR1	 *45mm for Amp Connectors	42 45 52	1.7 1.8 2.0
D1Y1 D2Y1 D1Y2 D2Y2 D3Y1 D4Y1		1.5 6 13 21 29 30	0.06 0.2 0.5 0.8 1.1 1.2	DTSCR1 DTSDR1 DTSER1 DTSGR1 DTFCR1 DTFDR1 DTFER1 DTFCR1	 *50mm for Amp Connectors	45 50 81	1.8 2.0 3.2
D1Y3 D2Y3		1.5 6.0 17 21 29 30	0.06 0.2 0.7 0.8 1.1 1.2				

* Square Bezel — 30mm
Round Bezel — 29mm

Mounting hole diameter and minimum center line spacings



Without Legend Plate Holder

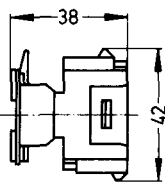
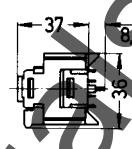
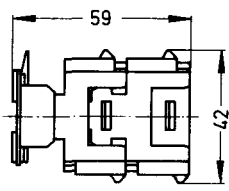
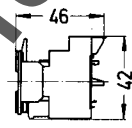
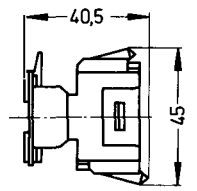
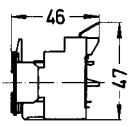
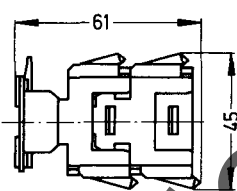
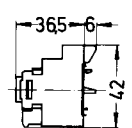
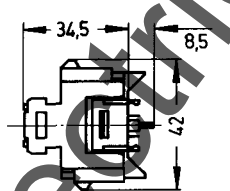
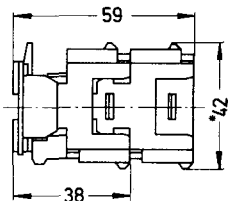
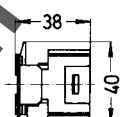
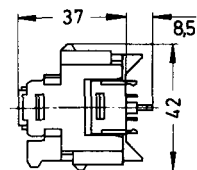
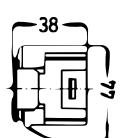
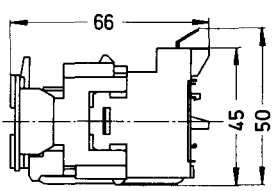


With Legend Plate Holder



CONTACT BLOCK DIMENSIONS

INTERNATIONAL
PRODUCTS
CLASS
9001

Contact Block Type	Dimensions Millimeters	Equivalency Table		Contact Block Type	Dimensions Millimeters	Equivalency Table	
		mm	inches			mm	inches
DA		38 42	1.5 1.7	DFGN		8.5 36 37	0.3 1.4 1.5
DC		42 59	1.7 2.3	DTSC DTSD DTSE DTSG		42 46	1.7 1.8
DD		40.5 45	1.6 1.8	DTFC DTFD DTFE DTFG		46 47	1.8 1.9
DF		46 61	1.8 2.4	DTGC DTGD DTGE DTGG		6 36.5 42	0.2 1.4 1.7
DG		8.5 34.5 42	0.3 1.4 1.7	DFSN11 DFFN11 DFSN22 DFFN22		38 42 45* 59	1.5 1.7 1.8* 2.3
DFSN		38 40	1.5 1.6	DFGN11		8.5 37 42 50*	0.3 1.5 1.7 2.0*
DFFN		38 44	1.5 1.7	DTSC11 DTSD11 DTSE11 DTSG11 DTFC11 DTFD11 DTFE11 DTFG11		45 50 66	1.8 2.0 2.6

* For Slip-On Connectors

The Type D Miniature Push Button Line offers a large variety of operators and contact blocks. Stocking is simplified by the fact that all units are interchangeable.

All operators and pilot lights are self-retaining. After inserting the operator into the panel mounting hole, it retains itself so that the locking ring can be screwed on from behind without assistance (one man mounting).

All contact blocks and light modules have a snap-on mounting system. Assembly of the complete unit is quickly done by snapping the elements together. Within seconds, a reliable and vibration proof assembly is made.

Individual contacts of a contact block are completely isolated from each other. Each contact is color coded for quick identification. A red terminal shroud denotes a normally closed contact and a green terminal shroud denotes a normally open contact. All terminals are shrouded and have lead-in guides for wires, resulting in quicker wiring.

A rigid guide at each terminal guides the screwdriver directly to the terminal screw.

All terminal screws are captive with self-lifting pressure wire clamps. Contact blocks with slip-on connections are also available.

The same contact blocks, lampholders etc. are used independent of the shape of the bezel. They are made of high quality arc tracking resistant moldings. Reliability in operation and positive switching — even for very low voltages — is provided by separate operation of the make and break contact, self-cleaning double-break silver nickel contacts and high contact pressure.

As the contact blocks are equipped with direct acting contacts in accordance with VDE 0113 standards, they may be used for emergency stop applications. For identification purposes a snap-on marking clip for three plastic labels is available. This can be fitted to the back of most contact blocks or lampholders. Contact identification meets DIN EN 50013. Snap-in legend plates and lenses for push buttons and pilot lights are completely independent of the mounting of the operator. They can be added or replaced at any time. Minimum center-to-center panel spacings for square and round bezel operators is 30 mm (1.2 in.) horizontal and 50 mm (2.0 in.) vertical (without legend plate bearer).

APPLICATION DATA Maximum Current Ratings

Description	IP Protection Category	Mech. Life Mill.	Ambient Temperature (Open-Style)		Volts	AC — NEMA A600				
			°C max.	°C Min.		Inductive 35% Power Factor				Resistive 75% Power Factor
						Make		Break			Continuous Carrying Amperes
						Amperes	VA	Amperes	VA	
Contact Blocks	—	10	+ 60	— 40						
Snap-On Units for Illuminated Push Buttons	—	10	+ 60	— 40	120 240 480 600	60 30 15 12	7200 7200 7200 7200	6 3 1.5 1.2	720 720 720 720	10 10 10 10
Snap-On Units for Illuminated Alternate Action Push Buttons (Push-ON/Off)	—	1	+ 60	— 40						
OPERATORS Push Button Mushroom Push Button Mushroom — Turn to Reset Mushroom — Key Reset Toggle Switch Push-and-Turn Selector Switch Selector Switch Key Switch	65	10 10 0.1 0.1 0.5 0.5 1 0.1	+ 60	— 40						
Combined Double Button	40	3								
Pilot Light	65	—	+ 60	— 40						
Illuminated Push Button	65	3	+ 60	— 40						
Enclosures	65	—	+ 60	— 40						

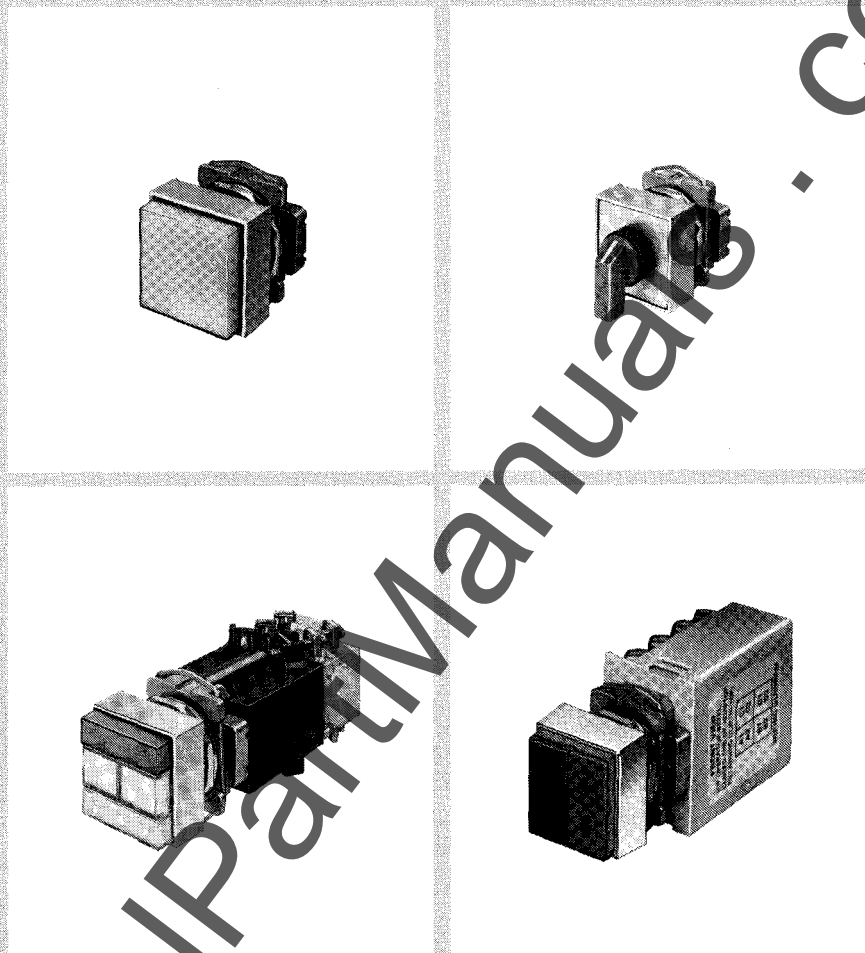
UL/CSA: Class 9001 Type D operators (when used with Type D contact blocks w pressure wire terminals) are UL listed File E71578 Guide NKCR. When they are us with Type D contact blocks with slip on connectors they are component recognized F E71578 Guide NKCR-2. Class 9001 Type D is CSA certified File LR12721 Guide 18 N-13.1U.

UL/CSA: Class 9001 Type D operators (when used with Type D contact blocks with pressure wire terminals) are UL listed File E71578 Guide NKCR. When they are used with Type D contact blocks with slip on connectors they are component recognized File E71578 Guide NKCR-2. Class 9001 Type D is CSA certified File LR12721 Guide 184-N-13.1U.

IP PROTECTION CATEGORY - Definitions

IP-40	Operators with this category protect against contact with live or moving parts of a size greater than 1 mm.	IP-65	Operators with this category provide complete protection against contact with live or moving parts inside the enclosure. In addition, this category states that fluid projected by a nozzle from any direction will not have a harmful effect when mounted in an enclosure of this category.
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Push Buttons, Square Heavy Duty Watertight

Type KX

CONTENTS

Description	Class	Pages	Description	Class	Pages
Ordering Information	9001.....	11-2	Pilot Lights	9001.....	11-8
Completely Assembled			Light Modules	9001.....	11-9
Operators	9001.....	11-3	Accessories	9001.....	11-10
Non-Illuminated			Legend Inserts or Plates	9001.....	11-11
Push Buttons	9001.....	11-4	Contact Blocks	9001.....	11-12
Illuminated Push Buttons	9001.....	11-5	"H" Numbers	9001.....	11-13
Selector Switch			Enclosures	9001.....	11-14
Selection Guide	9001.....	11-6	Dimensions	9001.....	11-15
Selector Switches	9001.....	11-7	Application Data	9001.....	11-16

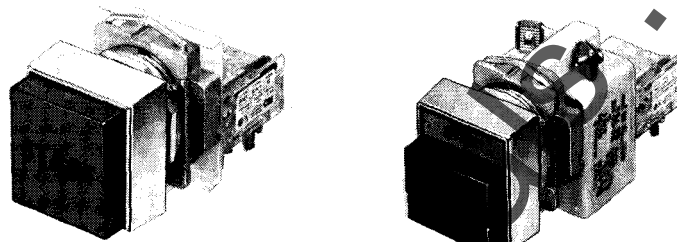


SQUARE HEAVY DUTY WATERTIGHT CONTROL UNITS

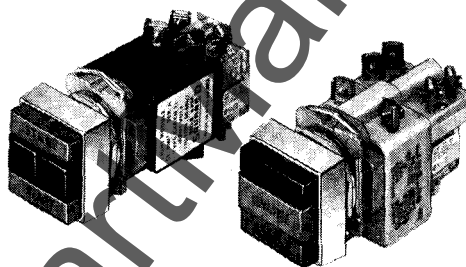
ORDERING INFORMATION

The 9001 KX Operators can be ordered in any one of three ways, which ever is most convenient. The end price will be the same all three ways. There is NO premium for Square Multifunction operators, or assembly. The three ways of ordering are:

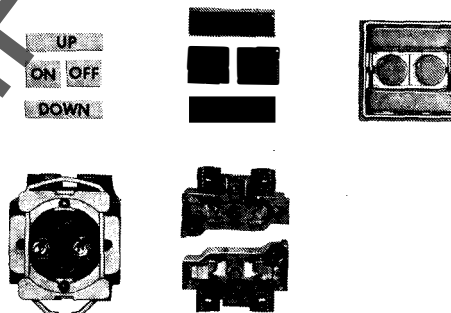
1. Choose from 42 standard assembled operators. These operators come complete with color caps, legend inserts, contact blocks, and light modules (illuminated operators only) and can be ordered using one short type number. All 42 of the operators are listed on Page 11-3. If the operator you desire isn't listed see method number 2.



2. Custom built operators can be ordered on the Quick Ship program. These operators can have the color caps, contact blocks, legend inserts, and light modules (illuminated operators only) completely assembled. See Pages 11-4 thru 11-8 for listing of operators.

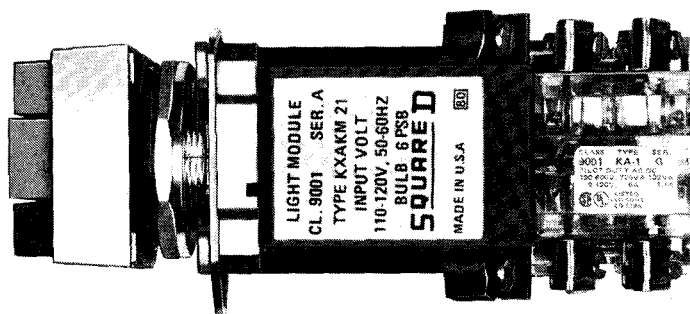
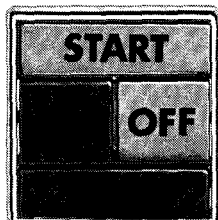


3. Separate components can be ordered from stock and you can assemble to meet your needs. See Pages 11-4 thru 11-14 for listing of components.



THE TYPE KX HAS IT ALL

- Legend protected by button cover
- Up to 4 functions per operator
- 42 completely assembled operators in stock
- Die cast chrome plated bezel for durability
- NEMA 4, 13 without boots
- Custom operators in one week or less
- Mounts in standard round hole mounting
- New mounting system speeds installation
- Contact blocks and single lamp light modules used on all our heavy duty industrial operators
- Same price as round line



SQUARE HEAVY DUTY WATERTIGHT CONTROL UNITS COMPLETELY ASSEMBLED OPERATORS — TYPE KX

CLASS
9001

SINGLE PUSH BUTTON

Description	Button Color	Legend Marking	Contacts	Type Number	Price
	Green	Start		KXRA101	\$24
	Red	Stop		KXRA102	
	Green	Start		KXRA133	18.
	Red	Stop		KXRA134	18.
	Red Mushroom	Emerg. Stop		KXRN105	36.
	Red Mushroom	Emerg. Stop		KXRN135	30.
Illuminated 110-120 V., 50-60 Hz. Transf.	Green	Start		KXRB103	56.
	Red	Stop		KXRB104	
	Red Mushroom	Emerg. Stop		KXRP106	68.

DUAL PUSH BUTTONS

Description	Top Button (#1)	Bottom Button (#2)	Contacts	Type Number	Price
	Green-Mom.-Start	Red-Mom.-Stop		KXRC111	\$48.
	Green-Mom.-Start	Red-Mom.-Stop		KXRC136	
	Green-Mom.-Up*	Green-Mom.-Down*		KXRD112	60.
	Green-Mom.-Open*	Green-Mom.-Close*		KXRD113	60.
	Green-Mom.-Fwd*	Green-Mom.-Rev.*		KXRD114	60.
	Green-Mom.-Up*	Green-Mom.-Down*		KXRD140	48.
	Green-Mom.-Open*	Green-Mom.-Close*		KXRD141	48.
	Green-Mom.-Fwd*	Green-Mom.-Rev.*		KXRD142	48.
	Green-Maint.-Start*	Red-Maint.-Stop*		KXRE115	48.
	Green-Mom.-Reset	Red-Maint.-Stop*		KXRF116	48.

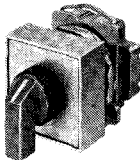
DUAL PUSH BUTTON WITH ONE PILOT LIGHT

Description	Top Button (#1)	Middle Lens (#2)	Bottom Button (#3)	Contacts	Type Number	Price
	Green-Mom.-Start	Red-On	Red-Mom.-Stop		KXRG117	\$92.
	Green-Mom.-Start	Red-On	Red-Mom.-Stop		KXRG137	
	Green-Mom.* Blank	Red-Blank	Green-Mom.* Blank		KXRH118	104.
	Green-Maint.* Start	Red-On	Red-Maint.* Stop		KXRJ119	92.
	Green-Mom.-Reset	Red-On	Red-Maint.* Stop		KXRK120	92.

DUAL PUSH BUTTON WITH DUAL PILOT LIGHTS

Description	Top Button (#1)	Left Lens (#2)	Right Lens (#3)	Bottom Button (#4)	Contacts	Type Number	Price
	Green-Mom.-Start	Red-On	Green-Off	Red-Mom.-Stop		KXRL121	\$136.
	White-Mom.-Number 1	White 1	Blue 2	Blue-Mom.-Number 2		KXRL132	
	Green-Mom.-Start	Red-On	Green-Off	Red-Mom.-Stop		KXRL138	124.
	Green-Mom.* Blank	Red-Blank	Red-Blank	Green-Mom.* Blank		KXRM122	148.

SELECTOR SWITCHES

Non-Illuminated						
Description	Positions	Legend	Knob	Contacts	Type Number	Price
	2-Maint.	Off-On	Black	$\begin{matrix} 1 & 0 \\ 0 & 1 \end{matrix}$	KXSA125	\$28.
	2-Maint.	Off-On	Black	$\begin{matrix} 0 & 1 \end{matrix}$	KXSA139	22.
	3-Maint.	Hand-Off-Auto	Black	$\begin{matrix} 1 & 0 & 0 \\ 0 & 0 & 1 \end{matrix}$	KXSD126	28.
	3-Maint.	Hand-Off-Auto	Black	$\begin{matrix} 1 & 0 & 0 \\ 0 & 0 & 1 \\ 1 & 0 & 0 \\ 0 & 0 & 1 \end{matrix}$	KXSD127	40.
Illuminated — 110-120V., 50-60 Hz., Transf.						
Description	Positions	Legend	Knob	Contacts	Type Number	Price
	2-Maint.	Off-On	Red	$\begin{matrix} 1 & 0 \\ 0 & 1 \end{matrix}$	KXSJ128	\$60.
	3-Maint.	Hand-Off-Auto	Red	$\begin{matrix} 1 & 0 & 0 \\ 1 & 0 & 1 \end{matrix}$	KXSM129	60.
	3-Maint	Hand-Off-Auto	Red	$\begin{matrix} 1 & 0 & 0 \\ 0 & 0 & 1 \\ 1 & 0 & 0 \\ 0 & 0 & 1 \end{matrix}$	KXSM130	72.

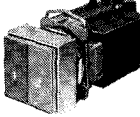
SINGLE PILOT LIGHT

Description		Lens Color	Legend Marking	Type Number	Price
110-120V., 50-60 Hz. Trans. 	Standard	Red Green	On Off	KXPA107 KXPA108	\$44.
	Push-To-Test	Red Green	On Off	KXTA109 KXTA110	56.

DUAL PUSH-TO-TEST PILOT LIGHT (Pushing Button #1 Tests Pilot Light #2—Pushing Button #4 Tests Pilot Light #3)

Description	Top Button (#1)	Left Lens (#2)	Right Lens (#3)	Bottom Button (#4)	Type Number	Price
	Green	Blank	Red	Blank	KXTC123	\$136.
	Blank	Red	Blank	Green		

DUAL PILOT LIGHT

Description	Left Lens (#1)	Right Lens (#2)	Type Number	Price
	Red	Green	KXPB124	\$80.
	Off	Off		

FOUR FIELD PILOT LIGHT

Description	Top Left (#1)	Top Right (#2)	Bottom Left (#3)	Bottom Right (#4)	Type Number	Price
	White	Blue	Green	Red	KXPC131	\$152.
	Blank	Blank	Blank	Blank		

SQUARE HEAVY DUTY WATERTIGHT CONTROL UNITS

TYPE KXR — NON-ILLUMINATED PUSH BUTTONS

All non-illuminated push buttons are of the no guard type. To make the Type KXRA operator a full guard type (does not apply to the KXRN operators), add a shroud from Page 11-10. If legend inserts are required to be assembled into the operator, see instructions on Page 11-11.

Momentary operators on this page will accept up to six Type KA contact blocks mounted in tandem (total of twelve blocks).

Maintained operators on this page will accept up to two Type KA contact blocks mounted in tandem (total of four blocks).

NON-ILLUMINATED PUSH BUTTONS

Description	Button Type	Button Cover Color	Type Number	Price
 Single Button Momentary	Standard	No Cover	KXRA	\$ 8.00
		Green	KXRAG	10.80
		Red	KXRAR	10.80
		Amber	KXRAA	10.80
		White	KXRAW	10.80
		Blue	KXRAL	10.80
	Mushroom	No Cover	KXRN	18.00
		Red	KXRN R	22.80
		Green	KXRN G	22.80
		Amber	KXRNA	22.80
		White	KXRNW	22.80
		Blue	KXRN L	22.80

Description	Button Type	Mechanical Interlock	Button Cover Color	Type Number	Price
			(1) Top	(2) Bottom	
 Dual Push Button (Non-illuminated Only)	Both Momentary	No	None	None	KXRC \$16.00
			Green	Red	KXRCGR 21.60
			Amber	Red	KXRCAR 21.60
	Both Momentary	Yes	None	None	KXRD 28.00
			Green	Red	KXRDGR 33.60
			Red	Red	KXRDGG 33.60
	Both Maintained	Yes	None	None	KXRD RR 33.60
			Green	Red	KXRD RR 33.60
			Red	Red	KXRD RR 33.60
	Top Button Momentary Bottom Button Maintained	Yes	None	None	KXRE 28.00
			Green	Red	KXREGR 33.60
			Red	Red	KXREGG 33.60
	Top Button Momentary Bottom Button Maintained	Yes	None	None	KXRE RR 33.60
			Green	Red	KXRE RR 33.60
			Red	Red	KXRE RR 33.60
	Top Button Momentary Bottom Button Maintained	Yes	None	None	KXRF 28.00
			Green	Red	KXRFGR 33.60
			Red	Red	KXRF GG 33.60
	Top Button Momentary Bottom Button Maintained	Yes	None	None	KXRF GA 33.60
			Green	Red	KXRF GA 33.60
			Red	Red	KXRF GA 33.60

BUTTON COVERS

Description	For Use on	Color	Type Number	Code	Price
 Includes KXN100	KXRA	Red Green Amber Blue White	KXAR1 KXAG1 KXAA1 KXAL1 KXAW1	R G A L W	\$2.80
 Includes KXN100	KXRN	Red Green Amber Blue White	KXARM1 KXAGM1 KXAAM1 KXALM1 KXAWM1	R G A L W	4.80
 Includes KXN200 *	KXRC KXRD KXRE KXRF	Red Green Amber Blue White	KXAR2 KXAG2 KXAA2 KXAL2 KXAW2	R G A L W	2.80

*Two required per operator. When ordering an assembled operator — specify two code numbers. The first code will be assembled into #1 and the second code will be assembled into #2.

STANDARD CONTACT BLOCKS

Symbol	Contact Block Only		Contact Block Assembled To Operator	
	Type	Price	Suffix●	Price Adder
	KA-1	\$12.00	H13	\$12.00
	KA-2	6.00	H5	6.00
	KA-3	6.00	H6	6.00

For other contact blocks — ratings — dimensions — See Page 11-12.

●EXAMPLE: Class 9001 Type KXRAG H13. Price is \$22.80. For other combinations — See Page 11-13.

To order operators with color caps other than those listed above, substitute the proper color code from the Button Cover Table.

EXAMPLE: To get a Dual Push Button similar to a 9001 KXRCGR except the top button is blue, order a 9001 KXRCBL.

For Boots — See Page 11-10

For Contact Blocks — See Page 11-12

For Addition of H# — See Page 11-13

For Legend Inserts — See Page 11-11

For Dimensions — See Page 11-15

For Application Data — See Page 11-16



SQUARE HEAVY DUTY WATERTIGHT CONTROL UNITS

ILLUMINATED PUSH BUTTONS — TYPE KXR

CLASS
9001

All illuminated push buttons are of the no guard type. To make them a full guard type (does not apply to the KXRP operators), add a shroud from Page 11-10. If legend inserts are required to be assembled into the operators, see instructions on Page 11-11.

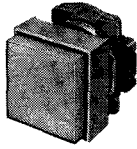
Momentary operators on this page will accept up to six Type K A contact blocks mounted in tandem (total of twelve blocks).

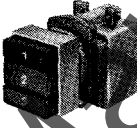
Maintained operators on this page will accept up to two Type K A contact blocks mounted in tandem (total of four blocks).

To order operators with color caps other than those listed below, substitute the proper color code from the Button Cover Table.

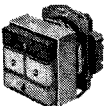
EXAMPLE: To get a Dual Push Button/Single Pilot Light similar to a 9001 KXRGIGGR except the pilot light is white, order a 9001 KXRGIGWR.

ILLUMINATED PUSH BUTTONS

Description	Button Type	Voltage	Button Cover Color	Type Number	Price	
 Single Button Momentary	Standard	110-120V 50-60 Hz Trans.	No Cover	KXRB1	\$40.00	
			Green	KXRB1G	42.80	
			Red	KXRB1R	42.80	
			Amber	KXRB1A	42.80	
	Mushroom	110-120V 50-60 Hz Trans.	White	KXRB1W	42.80	
			Blue	KXRB1L	42.80	
			Other Voltages	No Cover	KXRB•	40.00
				Green	KXRB•G	42.80
	Both Momentary	110-120V 50-60 Hz Trans.	Red	KXRP1	50.00	
			Green	KXRP1R	54.80	
			Amber	KXRP1G	54.80	
			White	KXRP1A	54.80	
	Both Maintained	110-120V 50-60 Hz Trans.	Blue	KXRP1W	54.80	
			Green	KXRP1L	54.80	
			Other Voltages	No Cover	KXRP•	50.00
				Red	KXRP•R	54.80
		Green	KXRP•G	54.80		

Description	Button Type	Mechanical Interlock	Voltage	Button Cover Color	Type Number	Price
	Both Momentary	No	110-120V 50-60 Hz Trans.	No Covers Green-Red-Red Green-Green-Red Green-Amber-Red	KXRG1 KXRG1GRR KXRG1GGR KXRG1GAR	\$56.00 64.40 64.40 64.40
				Other Voltages	No Covers KXRG•	56.00
	Both Momentary	Yes	110-120V 50-60 Hz Trans.	No Covers Green-Red-Green Green-Amber-Green Red-Green-Red	KXRH1 KXRH1GRR KXRH1GAG KXRH1GRG	68.00 76.40 76.40 76.40
				Other Voltages	No Covers KXRH•	68.00
	Both Maintained	Yes	110-120V 50-60 Hz Trans.	No Covers Green-Red-Red Green-Green-Red Green-Amber-Red	KXRJ1 KXRJ1GRR KXRJ1GGR KXRJ1GAR	68.00 76.40 76.40 76.40
				Other Voltages	No Covers KXRJ•	68.00
	Top Momentary Both Maintained	Yes	110-120V 50-60 Hz Trans.	No Covers Green-Red-Red Green-Green-Red Green-Amber-Red	KXRK1 KXRK1GRR KXRK1GGR KXRK1GAR	68.00 76.40 76.40 76.40
				Other Voltages	No Covers KXRK•	68.00

• Insert the proper voltage code from Page 11-9. Prices shown are for transformer type light module. If resistor or full voltage type is used, deduct \$8.00 from the single lamp, and \$16.00 from the dual lamp operator prices shown.

Description	Button Type	Mechanical Interlock	Voltage and Frequency	Button Cover Color	Type Number	Price
	Both Momentary	No	110-120V 50-60 Hz Transformer	No Covers Green-Green Red-Red Green-Red Red-Green Red-Green Green-Red	KXRL1 KXRL1GRR KXRL1GRRG KXRL1RGGR	\$64.00 75.20 75.20 75.20
				Other Voltages	No Covers KXRL•	64.00
	Both Momentary	Yes	110-120V 50-60 Hz Transformer	No Covers Green-Green Red-Red Green-Red Red-Green Green-Red	KXRM1 KXRM1GRR KXRM1GRRG KXRM1RGGR	76.00 87.20 87.20 87.20
				Other Voltages	No Covers KXRM•	76.00

BUTTON COVERS

Description	For Use on	Color	Type Number	Code	Price
 Includes KXN100	KXRB	Red Green Amber Blue White	KXAR1 KXAG1 KXAA1 KXAL1 KXAW1	R G A L W	\$2.80
 Includes KXN100	KXRP	Red Green Amber Blue White	KXARM1 KXAGM1 KXAAM1 KXALM1 KXAWM1	R G A L W	4.80
 Includes KXN400	KXRG (Pos. 1 & 3) KXRH (Pos. 1 & 3) KXRJ (Pos. 1 & 3) KXRK (Pos. 1 & 3) KXRL (Pos. 1 & 4) KXRM (Pos. 1 & 4)	Red Green Amber Blue White	KXAR4 KXAG4 KXAA4 KXAL4 KXAW4	R G A L W	2.80
 Includes KXN300	KXRG (Pos. 2) KXRH (Pos. 2) KXRJ (Pos. 2) KXRK (Pos. 2)	Red Green Amber Blue White	KXAR3 KXAG3 KXAA3 KXAL3 KXAW3	R G A L W	2.80
 Includes KXN500	KXRL (Pos. 2 & 3) KXRM (Pos. 2 & 3)	Red Green Amber Blue White	KXAR5 KXAG5 KXAA5 KXAL5 KXAW5	R G A L W	2.80

For Light Modules — See Page 11-9

For Contact Blocks — See Page 11-12

For "H" Numbers — See Page 11-13

For Legend Inserts — See Page 11-11

For Boots — See Page 11-10

For Lamp and Lens Removal Kit — See Page 11-10

For Dimensions — See Page 11-15

For Application Data — See Page 11-16

SQUARE HEAVY DUTY WATERTIGHT CONTROL UNITS

TYPE KXS — SELECTOR SWITCH SELECTION GUIDE

Shown below is a simplified method of selecting a selector switch to meet almost any contact sequence. For additional type numbers (spring return — illuminated — key operated) see page 11-7.

STEP NO. 1

Determine the selector switch contact sequence(s) required (see example below) and locate sequence(s) in Table 1, 2 or 3.

If more than one sequence per operator is required, look for cam type common to all sequences.

Example:

1 0 0	0 1 0	0 0 1
0 = contact open 1 = contact closed		

For the above example, use Table 2. For the contact sequences of 100, 010, and 001, cams F and L are common to all 3 sequences.

STEP NO. 2

Go to Table 4 and choose the selector switch type opposite the cam determined in Step No. 1.

For the above example:

Cam F — Type KXSDF
Cam L — Type KXSDL

STEP NO. 3

To determine contact blocks required, use Tables 1, 2, or 3.

Example:
For sequence 100 using cam F — use KA-3 mounted on side No. 2.

For sequence 010 using cam F — use KA-3 mounted on side No. 1.

For sequence 001 using cam F — use KA-2 mounted on side No. 1 or 2.

TABLE 1 — 2 Position Selector Switch

If you require contact sequence		Use Sel. Sw. with cam type	Use contact block type	Mount on side No. (See Fig. 1)
1	0	E	KA3	1 or 2
0	1	E	KA2	1 or 2

TABLE 2 — 3 Position Selector Switch

If you require contact sequence			Use Sel. Sw. with cam type	Use contact block type	Mount on side No. (See Fig. 1)
1	0	0	G	KA2	1
			C	KA2	2
			B C E F G J	KA3	1
			B	KA3	2
0	1	0	D E J L	KA5*	2
			D E	KA2	1
			F	KA2	2
			L	KA3	1
0	0	1	C F	KA3	2
			B D G L	KA2	1 or 2
			D	KA3	1
			B	KA3	2
1	1	0	B	KA5*	1
			C	KA2	1
			C F	KA5*	1 or 2
			B	KA2	2
0	1	1	G J	KA5*	1
			G	KA5*	2
			L	KA5*	2
			J	KA3	1
1	0	1	D E J L	KA5*	1
			D E	KA5*	2

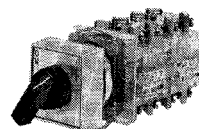


TABLE 3 — 4 Position Selector Switch

If you require contact sequence				Use Sel. Sw. with cam type	Use contact block type	Mount on side No. (See Fig. 1)
1	0	0	0	H	(A) KA3	2
0	1	0	0	H	(B) KA2	1
0	0	1	0	H	(C) KA2	2
0	0	0	1	H	(D) KA3	1
1	0	0	1	H	A & D Wired in Parallel	
1	1	0	0	H	A & B Wired in Parallel	
0	1	1	0	H	B & C Wired in Parallel	
0	0	1	1	H	C & D Wired in Parallel	
1	1	1	0	H	A, B & C Wired in Parallel	
0	1	1	1	H	B, C & D Wired in Parallel	
1	0	1	0	H	A & C Wired in Parallel	
0	1	0	1	H	B & D Wired in Parallel	
1	1	0	1	H	KA5*	2
1	0	1	1	H	KA5*	1

TABLE 4 — Maintained Contact Operators

No. of Positions	Cam Type	Non-Illuminated Type	Illuminated 120V 60 Hz. Transformer Type	Key Operated Type
2	E	KXSAE▲	KXSJE1▲	KXSRE*
	B	KXSDB▲	KXSMB1▲	KXSVB*
	C	KXSDC▲	KXSMC1▲	KXSVC*
	D	KXSDD▲	KXSMD1▲	KXSVD*
3	E	KXSDE▲	KXSME1▲	KXSVE*
	F	KXSDF▲	KXSMF1▲	KXSVE*
	G	KXSDG▲	KXSMG1▲	KXSVG*
	J	KXSDJ▲	KXSMJ1▲	KXSVJ*
4	L	KXSDL▲	KXSML1▲	KXSVL*
	H	KXSHH▲	KXSQH1▲	KXSZH*

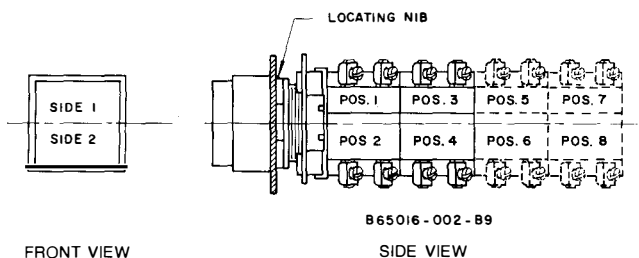
▲ Insert knob code letter here. Choose letter from Table 5.

* Choose proper key withdrawal code from Page 11-7.

TABLE 5 — Knob Selection

Color	Knob Code — Insert code letter below in place of ▲ in type no. from Table 4. Ex: KXSDBR
Black	B
Red	R
Green	G
Blue	L
White	W
Amber	A

Fig. 1 — Contact block mounting position



Contact blocks may be stacked 2 deep on sides 1 and 2, total of 4 blocks maximum. If more circuits are required, consult local Square D Field Office.

■ One Type KA-1 double-circuit block can be used in place of one Type KA-2 and one Type KA-3 single circuit blocks mounted on the same side.

$$KA-1 = KA-3 + KA-2$$

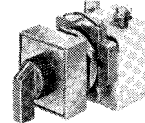
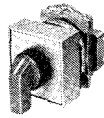
$$\begin{array}{ccc} \text{alo} & = & \text{alo} + \text{lo} \\ \text{oo} & & \text{oo} \end{array}$$

* The KA-5 must be the last block on either side. If more than one KA-5 is required on either side — consult local Square D Field Office.

SQUARE HEAVY DUTY WATERTIGHT CONTROL UNITS

TYPE KXS — SELECTOR SWITCHES

CLASS
9001



The selector switches listed below do not include a legend plate. **Legend plates are required** to be assembled into the operators: see instructions on Page 11-11.

Selector switches will accept up to two Type KA contact blocks mounted in tandem (total of four blocks).

To order a selector switch with a knob other than black, substitute the proper color code from the selector switch knob table.

EXAMPLE: To get a selector switch similar to a 9001 KXSDCB except with a red knob, order a 9001 KXSDCR.

NON-ILLUMINATED SELECTOR SWITCHES

Contact Block(s) Required To Obtain These Sequences	1 = Contact Closed 0 = Contact Open																Price				
	2 Position				3 Position													4 Position			
	Left	Right	Left	Right	Center Left	Center Right	Center Left	Center Right	Center Left	Center Right	Center Left	Center Right	Center Left	Center Right	Center Left	Center Right		0 0 0 0 0 1 0			
KA-1 Mtd. in Pos. 2 (Code H13)	1	0	0	1	1	0	0	1	1	0	0	1	1	0	0	1	0 0 0 0 0 1 0				
KA-1 Mtd. in Pos. 1 (Code H1)	1	0	0	1	0	0	1	0	0	1	0	0	0	1	0	1	0 0 0 0 0 1 0				
CAM	E		D		B		C		D		E		F		G		J		L		H
Manual Return Operator Only																					
Without Knob	KXSAE				KXSDB		KXSDC		KXSDD		KXSDE		KXSDF		KXSDG		KXSDJ		KXSDL		KXSHH
Standard Black Knob	KXSAEB				KXSDBB		KXSDCB		KXSDDB		KXSDEB		KXSDFB		KXSDGB		KXSDJB		KXSDLB		KXSHHB
Key Operated (Code 1, 2 or 3)	KXSRE▼				KXSDB▼		KXSDC▼		KXSDD▼		KXSDE▼		KXSDF▼		KXSDG▼		KXSDJB▼		KXSDL▼		KXSHH▼
Spring Return from Left																					
Without Knob	KXSBE																				
Standard Black Knob	KXSBEB																				
Key Operated (Code 2 Only)	KXSSE▼																				
Spring Return from Right																					
Without Knob			KXSCD																		
Standard Black Knob			KXSCDB																		
Key Operated (Code 1 Only)			KXSTD▼																		
Spring Return — Left to Center																					
Without Knob					KXSEB		KXSEC		KXSED		KXSEE		KXSEF		KXSEG		KXSEJ		KXSEL		
Standard Black Knob					KXSEBB		KXSECB		KXSEDB		KXSEEB		KXSEFB		KXSEGB		KXSEJB		KXSELB		
Key Operated (Code 5, 6 or 9 Only)					KXSWE▼		KXSWC▼		KXSWD▼		KXSWF▼		KXSWG▼		KXSWJ▼		KXSWL▼				
Spring Return — Right to Center																					
Without Knob					KXSFB		KXSFC		KXSFD		KXSFE		KXSFF		KXSFG		KXSFJ		KXSFL		
Standard Black Knob					KXSFB		KXSFC		KXSFD		KXSFE		KXSFF		KXSFG		KXSFJB		KXSFLB		
Key Operated (Code 4, 5 or 7 Only)					KXSXB▼		KXSXC▼		KXSXD▼		KXSXE▼		KXSXF▼		KXSXG▼		KXSXJ▼		KXSXL▼		
Spring Return — Both Sides to Center																					
Without Knob					KXSGB		KXSGC		KXSGD		KXSGE		KXSGF		KXSGG		KXSGJ		KXSGL		
Standard Black Knob					KXSGBB		KXSGCB		KXSGDB		KXSGEB		KXSGFB		KXSGGB		KXSGJB		KXSGLB		
Key Operated (Code 5 Only)					KXSXB▼		KXSXC▼		KXSXD▼		KXSXE▼		KXSXF▼		KXSXG▼		KXSXJ▼		KXSXL▼		
ILLUMINATED SELECTOR SWITCHES																					
Manual Return																					
Without Knob	KXSJE*				KXSMB*		KXSMC*		KXSMD*		KXSME*		KXSMF*		KXSMG*		KXSMJ*		KXSML*		
Standard Red Knob	KXSJE*R				KXSMB*R		KXSMC*R		KXSMD*R		KXSME*R		KXSMF*R		KXSMG*R		KXSMJ*R		KXSML*R		
Spring Return from Left																					
Without Knob	KXSKE*																				
Standard Red Knob	KXSKE*R																				
Spring Return from Right																					
Without Knob			KXSLD*																		
Standard Red Knob			KXSLD*R																		
Spring Return — Left to Center																					
Without Knob					KXSNB*		KXSNC*		KXSND*		KXSNE*		KXSNE*		KXSNE*		KXSNE*		KXSNE*		
Standard Red Knob					KXSNB*R		KXSNC*R		KXSND*R		KXSNE*R		KXSNE*R		KXSNE*R		KXSNE*R		KXSNE*R		
Spring Return — Right to Center																					
Without Knob					KXSQB*		KXSQC*		KXSQD*		KXSQE*		KXSQE*		KXSQE*		KXSQE*		KXSQE*		
Standard Red Knob					KXSQB*R		KXSQC*R		KXSQD*R		KXSQE*R		KXSQE*R		KXSQE*R		KXSQE*R		KXSQE*R		
Spring Return — Both Sides to Center																					
Without Knob					KXSPB*		KXSPC*		KXSPD*		KXSPE*		KXSPE*		KXSPE*		KXSPE*		KXSPE*		
Standard Red Knob					KXSPB*R		KXSPC*R		KXSPD*R		KXSPE*R		KXSPE*R		KXSPE*R		KXSPE*R		KXSPE*R		

NOTE: All key operated selector switches are furnished as standard with Square D number E10 key change. See Class 9001 Section 4 for other key changes.
* Insert proper voltage code from Page 11-9. Prices shown are for transformer type light module. If resistor or full voltage is used, deduct \$8.00 from the prices shown.
▼ Insert the proper key withdrawal code from the table in the lower right.

SELECTOR SWITCH KNOBS

For Use On	Color	Type Number	Code	Price
All Selector Switch Operators EXCEPT Key Operated	Black	KXA86	B	\$2.80
	Green	KXA86	G	
	Red	KXA86	R	
	Amber	KXA86	A	
	Blue	KXA86	L	
	White	KXA86	W	

CAMS

Cam	Type	Price
B	K-13B	\$1.80 each
C	K-13C	
D	K-13D	
E	K-13E	
F	K-13F	
G	K-13G	
H	K-13H	
I	K-13L	
J	K-13J	
K	K-13K	

KEY WITHDRAWAL CODES

The key withdrawal code numbers listed below indicate the positions in which the key can be withdrawn (removed) from the selector switch.

2-Position Switches				4-Position Switches			
Code	↖	↗		Code	↖	↗	↘
1	Yes	No		11	Yes	No	Yes
2	No	Yes		12	No	No	Yes
3	Yes	Yes		13	Yes	No	No
				14	Yes	Yes	Yes
3-Position Switches							
Code	↖	↑	↗	Code	↖	↑	↗
4	Yes	No	No	8	Yes	No	Yes
5	No	Yes	No	9	No	Yes	Yes
6	No	No	Yes	10	Yes	Yes	Yes
7	Yes	Yes	No				

For Light Modules — See Page 11-9
For "H" Numbers — See Page 11-3
For Contact Blocks — See Page 11-12
For Legend Plates — See Page 11-11
For Protective Boots — See Page 11-10
For Operator Dimensions — See Page 11-15
For Mounting Dimensions — See Page 11-15

SQUARE HEAVY DUTY WATERTIGHT CONTROL UNITS

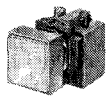
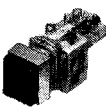
PILOT LIGHTS — TYPE KXP — KXT

If legend inserts are required to be assembled into the operator, see instructions on Page 11-11.

To order operators with color caps other than those listed below, substitute the proper color code from the Button Cover Table.

EXAMPLE: To get a Dual Push-To-Test pilot light similar to a 9001 KXTCIGRRH2 except with the top button blue, and the right pilot light white, order a 9001 KXTCILGWRH2.

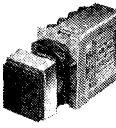
SINGLE PILOT LIGHT

Description	Style	Voltage and Frequency	Standard Pilot Light (Blank legend insert included)						Push-To-Test Pilot Light (Blank legend insert and contact block included)						Replacement Lamps
			Without Color Cap Type	Price	With Red Color Cap Type	With Green Color Cap Type	Price	Without Color Cap Type	Price	With Red Color Cap Type	With Green Color Cap Type	Price			
 Type KXPA	Transformer	110-120 V., 50-60 Hz	KXPA1	\$40.00	KXPA1R	KXPA1G	\$42.80	KXTA1H1	\$52.00	KXTA1RH1	KXTA1GH1	\$54.80	See Page 11-9		
		208-220 V., 50-60 Hz	KXPA3	40.00	KXPA3R	KXPA3G	42.80	KXTA3H1	52.00	KXTA3RH1	KXTA3GH1	54.80			
		220-240 V., 50-60 Hz	KXPA7	40.00	KXPA7R	KXPA7G	42.80	KXTA7H1	52.00	KXTA7RH1	KXTA7GH1	54.80			
		277 V., 50-60 Hz	KXPA8	40.00	KXPA8R	KXPA8G	42.80	KXTA8H1	52.00	KXTA8RH1	KXTA8GH1	54.80			
		380-480 V., 50-60 Hz	KXPA5	40.00	KXPA5R	KXPA5G	42.80	KXTA5H1	52.00	KXTA5RH1	KXTA5GH1	54.80			
		550-600 V., 50-60 Hz	KXPA6	40.00	KXPA6R	KXPA6G	42.80	KXTA6H1	52.00	KXTA6RH1	KXTA6GH1	54.80			
		110-120 V., 50-60 Hz	KXPAF1	40.00	KXPAF1R	KXPAF1G	42.80	KXTAFH1	52.00	KXTAF1RH1	KXTAF1GH1	54.80			
 Type KXTA	Resistor	18 V., AC or DC	KXPA33	32.00	KXPA33R	KXPA33G	34.80	KXTA33H1	44.00	KXTA33RH1	KXTA33GH1	46.80			
		32 V., AC or DC	KXPA23	32.00	KXPA23R	KXPA23G	34.80	KXTA23H1	44.00	KXTA23RH1	KXTA23GH1	46.80			
		120 V., AC or DC	KXPA38	32.00	KXPA38R	KXPA38G	34.80	KXTA38H1	44.00	KXTA38RH1	KXTA38GH1	46.80			
		240 V., AC or DC	KXPA25	32.00	KXPA25R	KXPA25G	34.80	KXTA25H1	44.00	KXTA25RH1	KXTA25GH1	46.80			
 Type KXTA	Full Voltage	6 V., AC or DC	KXPA31	32.00	KXPA31R	KXPA31G	34.80	KXTA31H1	44.00	KXTA31RH1	KXTA31GH1	46.80			
		12-14 V., AC or DC	KXPA32	32.00	KXPA32R	KXPA32G	34.80	KXTA32H1	44.00	KXTA32RH1	KXTA32GH1	46.80			
		24-28 V., AC or DC	KXPA35	32.00	KXPA35R	KXPA35G	34.80	KXTA35H1	44.00	KXTA35RH1	KXTA35GH1	46.80			
		48 V., AC or DC	KXPA36	32.00	KXPA36R	KXPA36G	34.80	KXTA36H1	44.00	KXTA36RH1	KXTA36GH1	46.80			
		60 V., AC or DC	KXPA37	32.00	KXPA37R	KXPA37G	34.80	KXTA37H1	44.00	KXTA37RH1	KXTA37GH1	46.80			

DUAL PILOT LIGHT

Description	Style	Voltage and Frequency	Standard Pilot Light (Blank legend inserts included)				Push-To-Test Pilot Light (Blank legend inserts and contact blocks included)				Replace-ment Lamps
			Without Caps	Price	① Left Half Red ② Right Half Green	Price	Without Color Cap	Price	Top Push Button—Green Left Pilot Light—Green Right Pilot Light—Red Bottom Push Button—Red	Price	
 Type KXPB	Transformer	110-120V., 50-60 Hz.	KXPB1	\$74.80	KXPB1RG	\$77.60	KXTC1H2	\$120.00	KXTC1GRRH2	\$131.20	See Page 11-9
		208-220V., 50-60 Hz.	KXPB3	74.80	KXPB3RG	77.60	KXTC3H2	120.00	KXTC3GRRH2	131.20	
		220-240V., 50-60 Hz.	KXPB7	74.80	KXPB7RG	77.60	KXTC7H2	120.00	KXTC7GRRH2	131.20	
		277V., 50-60 Hz.	KXPB8	74.80	KXPB8RG	77.60	KXTC8H2	120.00	KXTC8GRRH2	131.20	
		380-480V., 50-60 Hz.	KXPB5	74.80	KXPB5RG	77.60	KXTC5H2	120.00	KXTC5GRRH2	131.20	
		550-600V., 50-60 Hz.	KXPB6	74.80	KXPB6RG	77.60	KXTC6H2	120.00	KXTC6GRRH2	131.20	
 Type KXTC	Full Voltage	6V., AC or DC	KXPB31	58.80	KXPB31RG	61.60	KXTC31H2	104.00	KXTC31GRRH2	115.20	See Page 11-9
		12V., AC or DC	KXPB32	58.80	KXPB32RG	61.60	KXTC32H2	104.00	KXTC32GRRH2	115.20	
		24V., AC or DC	KXPB34	58.80	KXPB34RG	61.60	KXTC34H2	104.00	KXTC34GRRH2	115.20	
		28V., AC or DC	KXPB35	58.80	KXPB35RG	61.60	KXTC35H2	104.00	KXTC35GRRH2	115.20	
		48V., AC or DC	KXPB36	58.80	KXPB36RG	61.60	KXTC36H2	104.00	KXTC36GRRH2	115.20	
	Resistor	60V., AC or DC	KXPB37	58.80	KXPB37RG	61.60	KXTC37H2	104.00	KXTC37GRRH2	115.20	
		120V., AC or DC	KXPB38	58.80	KXPB38RG	61.60	KXTC38H2	104.00	KXTC38GRRH2	115.20	

FOUR FIELD PILOT LIGHT

Description	Style	Voltage and Frequency	Standard Pilot Light (Blank legend insert included)				Replace-ment Lamps
			Without Color Cap	Price	① Top Left—White ② Top Right—Blue ③ Bottom Left—Green ④ Bottom Right—Red	Price	
 Type KXPC	Transformer	110-120V., 50-60 Hz.	KXPC1	\$149.20	KXPC1WLGR	\$152.00	See Page 11-9
	Full Volt.	6V., AC or DC	KXPC31	117.20	KXPC31WLGR	120.00	
		12V., AC or DC	KXPC32	117.20	KXPC32WLGR	120.00	
		24V., AC or DC	KXPC34	117.20	KXPC34WLGR	120.00	
		28V., AC or DC	KXPC35	117.20	KXPC35WLGR	120.00	
		48V., AC or DC	KXPC36	117.20	KXPC36WLGR	120.00	
		60V., AC or DC	KXPC37	117.20	KXPC37WLGR	120.00	
	Resistor	120V., AC or DC	KXPC38	117.20	KXPC38WLGR	120.00	

- ① Each KXAC28 includes a clear cover and 1 each of all colors. Only 1-KXAC28 should be required per KXPB operator — unless the same color is required for #1 and #2 — then 2-KXAC28 should be ordered.
- ② When specifying color codes — the first will be installed in #1 and the second in #2. The price for BOTH color codes is \$2.80.
- ③ Each KXAC48 includes a clear cover and 1 each of all colors. Only 1-KXAC48 should be required per KXPC operator — unless the same color is required for more than 1 position. If 2 of the same colors are required — order 2-KXAC48, etc.
- ④ When specifying color codes — the first will be installed in #1, the second in #2, the third in #3 and the fourth in #4. The price for ALL FOUR color codes is \$2.80.

For Completely Assembled Operators — See Page 11-3.

For Legend Inserts — See Page 11-11.

For Light Modules — See Page 11-9.

For Lamp and Lens Removal Kit — See Page 11-10.

For Boots — See Page 11-10.

For Dimensions — See Page 11-15.

For Application Data — See Page 11-16.

BUTTON COVERS

For Use On	Color	Type Number	Code	Price
 KXPA Includes KXN100	Red Green Amber Blue White	KXAR8 KXAG8 KXAA8 KXAL8 KXAW8	R G A L W	\$2.80
 KXTA Includes KXN100	Red Green Amber Blue White	KXAR1 KXAG1 KXAA1 KXAL1 KXAW1	R G A L W	2.80
 KXPB Includes 2-KXN200	Red Green Amber Blue White	KXAC28① KXAC28① KXAC28① KXAC28① KXAC28①	R② G② A② L② W②	2.80
 KXTC (Pos. 1 & 4) Includes KXN400	Red Green Amber Blue White	KXAR4 KXAG4 KXAA4 KXAL4 KXAW4	R G A L W	2.80
 KXTC (Pos. 2 & 3) Includes KXN500	Red Green Amber Blue White	KXAR5 KXAG5 KXAA5 KXAL5 KXAW5	R G A L W	2.80
 KXPC Includes 1-KXN100	Red Green Amber Blue White	KXAC48③ KXAC48③ KXAC48③ KXAC48③ KXAC48③	R④ G④ A④ L④ W④	2.80

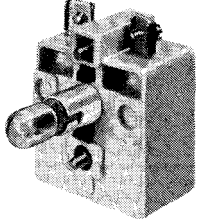


SQUARE HEAVY DUTY WATERTIGHT CONTROL UNITS

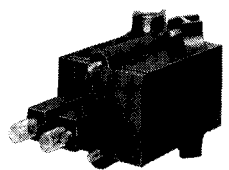
LIGHT MODULES — TYPE KXAKM

CLASS
9001

SINGLE LAMP LIGHT MODULES

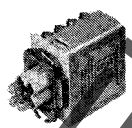
Description	For Use With		Voltage and Frequency	Separate Light Module Type	Code No.	Price	Rated VA	Replacement Lamps		
								Lamp No.	Part Number	Price (D14A)
	KXPA KXRA KXRB KXRG KXRH KXRJ KXRK KXRN KXRP KXS KXTA	Transformer	110-120V., 50-60 Hz.	KM-1	1	\$32.	3.3	GE-755	25501-01020	\$3.00
			110-120V., 50-60 Hz. Flashing Type	KMF-1	F1		4.3	GE-267	25501-01036	4.00
			208-220V., 50-60 Hz.	KM-3	3		3.6	GE-755	25501-01020	3.00
			220-240V., 50-60 Hz.	KM-7	7		3.8	GE-755	25501-01020	3.00
			220-240V., 50-60 Hz. Flashing Type	KMF-7	F7		4.8	GE-267	25501-01036	4.00
			277V., 50-60 Hz.	KM-8	8		3.9	GE-755	25501-01020	3.00
		Resistor	380-480V., 50-60 Hz.	KM-5	5	24.	4.9	GE-755	25501-01020	3.00
			550-600V., 50-60 Hz.	KM-6	6		5.7	GE-755	25501-01020	3.00
			18V., AC or DC	KM-33	33		0.5	GE-756	25501-01037	3.00
			32V., AC or DC	KM-23	23		1.3	GE-757	25501-01002	2.50
			120V., AC or DC	KM-38	38		3.0	SYL120MB	25501-01027	3.00
		Full Voltage	240V., AC or DC	KM-25	25		6.0	SYL120MB	25501-01027	3.00
			6V., AC or DC	KM-31	31	24.	0.9	GE-755	25501-01020	3.00
			12-14V., AC or DC	KM-32	32		1.1	GE-756	25501-01037	3.00
			24-28V., AC or DC	KM-35	35		2.3	GE-757	25501-01002	2.50
			48V., AC or DC	KM-36	36		2.6	SYL48MB	25501-01025	3.00
			60V., AC or DC	KM-37	37		3.0	SYL60MB	25501-01026	3.00

DUAL LAMP LIGHT MODULES

Description	For Use With		Voltage and Frequency	Separate Light Module Type	Code No.	Price	Rated VA *	Replacement Lamps*		
								Lamp No.	Part Number	Price (D14A)
	KXPB KXRL KXRM KXTC	Transformer	110-120V., 50-60 Hz.	KXAKM21	1	\$64.	2.4	Sylvania 6PSB	25501-05007	\$4.00
			208-220V., 50-60 Hz.	KXAKM23	3					
			220-240V., 50-60 Hz.	KXAKM27	7					
			277V., 50-60 Hz.	KXAKM28	8					
			380-480V., 50-60 Hz.	KXAKM25	5					
			550-600V., 50-60 Hz.	KXAKM26	6					
		Full Voltage	6V., AC or DC	KXAKM231	31	48.	0.9	6PSB	25501-05007	4.00
			12V., AC or DC	KXAKM232	32		2.0	12PSB	25501-05003	
			24V., AC or DC	KXAKM234	34		1.8	24PSB	25501-05004	
			28V., AC or DC	KXAKM235	35		1.2	28PSB	25501-05008	
		Resistor	48V., AC or DC	KXAKM236	36	48.	2.6	48PSB	25501-05009	4.00
			60V., AC or DC	KXAKM237	37		3.0	60PSB	25501-05010	
			120V., AC or DC	KXAKM238	38		3.0	120PSB	25501-05005	

* This information pertains to **each** lamp. Examples: The KXAKM231 uses 1.8VA (2 × 0.9).

FOUR LAMP LIGHT MODULES

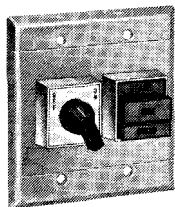
Description	For Use With		Voltage and Frequency	Separate Light Modules Type	Code No.	Price	Rated VA *	Replacement Lamps*		
								Lamp No.	Part Number	Price (D14A)
	KXPC	Transformer	110-120V., 50-60 Hz.	KXAKM41	1	\$128.	2.4	6PSB	25501-05007	\$4.00
		Full Voltage	6V., AC or DC	KXAKM431	31	96.	0.9	6PSB	25501-05007	4.00
		Resistor	12V., AC or DC	KXAKM432	32	96.	2.0	12PSB	25501-05003	4.00
			24V., AC or DC	KXAKM434	34		1.8	24PSB	25501-05004	
			28V., AC or DC	KXAKM435	35		1.2	28PSB	25501-05008	
			48V., AC or DC	KXAKM436	36		2.6	48PSB	25501-05009	
			60V., AC or DC	KXAKM437	37		3.0	60PSB	25501-05010	
			120V., AC or DC	KXAKM438	38		3.0	120PSB	25501-05005	

* This information pertains to **each** lamp. Examples: The KXAKM431 uses 3.6VA (4 × 0.9).

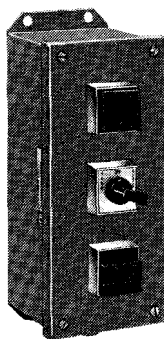
CLASS
9001

SQUARE HEAVY DUTY WATERTIGHT CONTROL UNITS

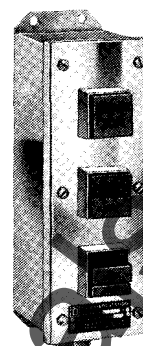
TYPE KX — ENCLOSURES



Type K-26



Type KYAF-300



Type KYSS-300

CONTROL STATIONS — APPLICATION DATA

Enclosures have sufficient depth to accommodate two contact blocks in tandem (total of four blocks) on non-illuminated operators and two contact blocks side-by-side on illuminated operators.

No. of Units	NEMA Type 13			
	Surface Mounting Sheet Steel Enclosures			
	Enclosure Only		Custom Built Assembled Stations*	
	Type	Price	Type	Price
1	KYAF-1	\$28.00	KYAF-100	\$28.00
2	KYAF-2	32.00	KYAF-200	32.00
3	KYAF-3	36.00	KYAF-300	36.00
4	KYAF-4	44.00	KYAF-400	44.00
6	KYAF-6	52.00	KYAF-600	52.00
9	KYAF-9	64.00	KYAF-900	64.00
12	KYAF-12	80.00	KYAF-1200	80.00
16	KYAF-16	100.00	KYAF-1600	100.00
20	KYAF-20	120.00	KYAF-2000	120.00
25	KYAF-25	140.00	KYAF-2500	140.00

No. of Units	NEMA Type 4 and 13			
	Surface Mounting Stainless Steel Enclosures*			
	Enclosure Only		Custom Built Assembled Stations*	
	Type	Price	Type	Price
1	KYSS-1	\$72.00	KYSS-100	\$72.00
2	KYSS-2	76.00	KYSS-200	76.00
3	KYSS-3	104.00	KYSS-300	104.00
4	KYSS-4	136.00	KYSS-400	136.00
6	KYSS-6	200.00	KYSS-600	200.00
9	KYSS-9	248.00	KYSS-900	248.00
12	KYSS-12	300.00	KYSS-1200	300.00
16	KYSS-16	396.00	KYSS-1600	396.00
20	KYSS-20	440.00	KYSS-2000	440.00
25	KYSS-25	560.00	KYSS-2500	560.00
30	KYSS-30	660.00	KYSS-3000	660.00

○ If this enclosure is used, the entire control station will be NEMA 13 rated.

* See ordering information below.

* Identical to the 9001 KYC enclosures shown in 9001 section 4; except the rivet holes for the 9001 KN-800 legend plates have been removed.

STAINLESS STEEL FLUSH PLATES — NEMA 1

Flush plates accept Type KX operators and contact blocks. Used with a standard 2 x 3 general purpose switch box, 2 1/2 deep. Two Type K contact blocks mounted in tandem require a 3 1/2 deep box. Although watertight, oiltight operators are used, an assembled station is not watertight, oiltight. Kits include flush plate, cover screws and a set of liners.

No. of Units	Type	Price
1	K25	\$8.
2	K26	12.
3	K27	16.
4	K28	24.

ORDERING INFORMATION

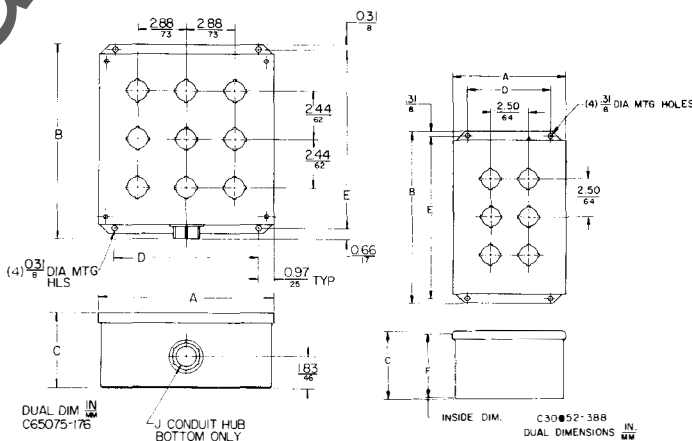
Base prices shown for custom built assembled control stations include the enclosure only. The complete price for an assembled station is the sum of the base price plus prices for all control units to be installed. There is no extra charge for assembly. Orders must be accompanied with a key Sheet or Sketch showing all control units in their desired locations.

For nameplate on enclosure with markings as specified add \$6.00. The standard nameplate size is 1 1/16 by 1/2 inches. It has a black field with white letters. For nameplates other than our standard, contact your local Square D field office.

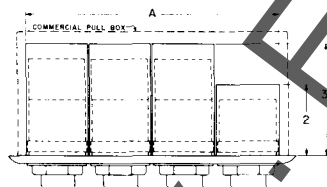
APPROXIMATE DIMENSIONS

Type KYSS

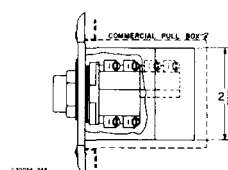
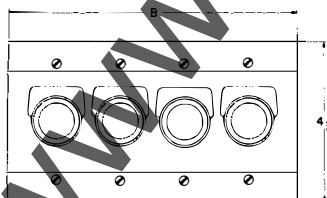
Type KYAF



Approximate Dimensions



Number of Units	Dimensions	
	A	B
1	125/32	23/4
2	319/32	49/16
3	513/32	63/8
4	77/32	83/16



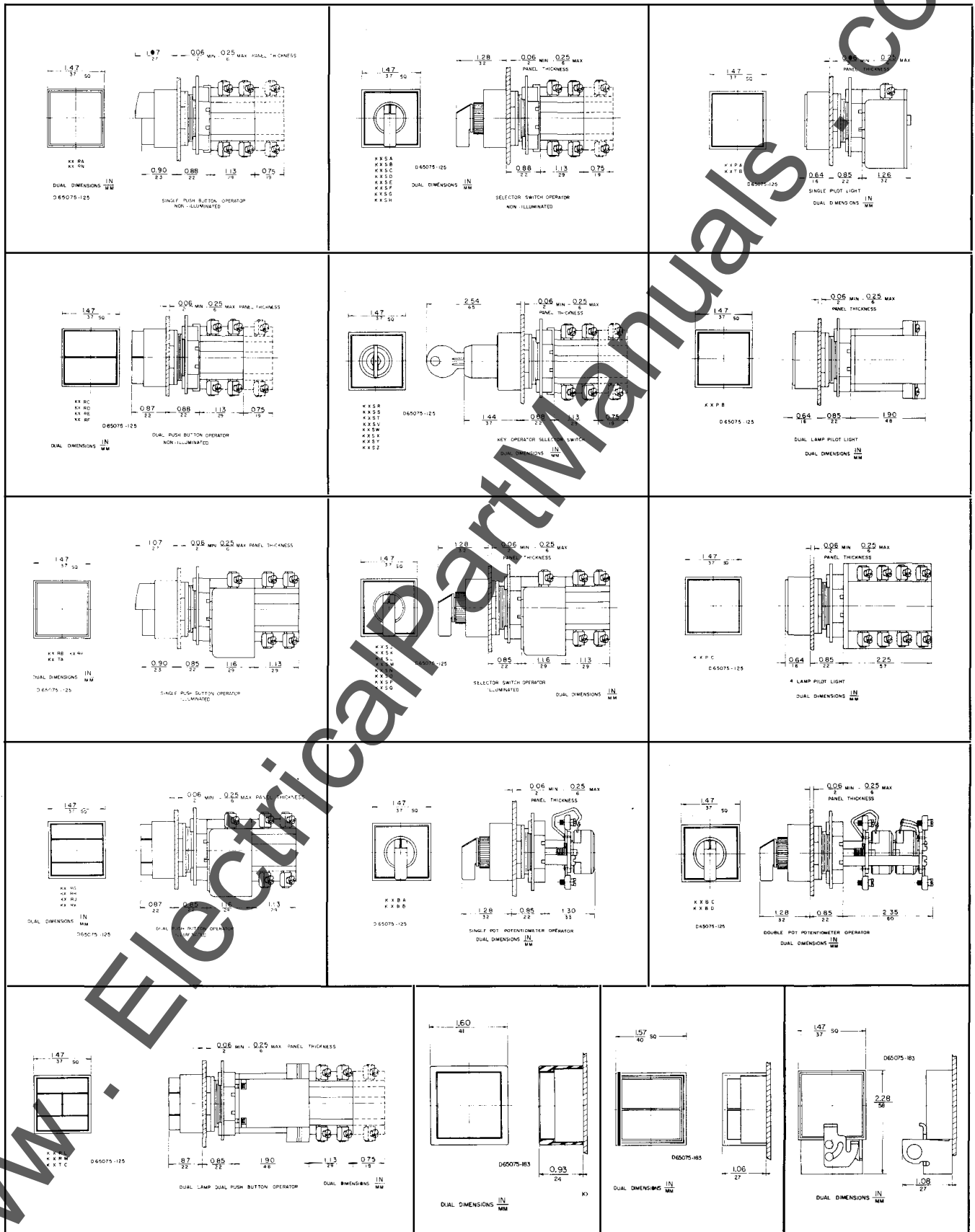
No. of Units	Overall Dim.			Mounting Dim.		Conduit
	A	B	C	D	E	
1	3 1/2	8 11/32	3 3/8	1 3/4	7 1/2	3/4
2	3 1/2	8 11/32	3 3/8	1 3/4	7 1/2	3/4
3	3 1/2	10 25/32	3 3/8	1 3/4	9 15/16	3/4
4	3 1/2	13 1/32	3 3/8	1 3/4	12 3/8	3/4
6	7 1/16	11 15/32	4 15/32	5 7/8	10 5/8	3/4
9	10 7/16	11 19/32	4 15/32	8 1/2	10 5/8	1
12	10 7/16	14 1/32	4 15/32	8 1/2	13 1/16	1 1/4
16	13 1/16	14 1/32	4 15/32	11 1/8	13 1/16	1 1/2
20	13 1/16	16 15/32	4 15/32	11 1/8	15 1/2	1 1/2
25	15 1/16	16 15/32	4 15/32	13 3/4	15 1/2	(2) 1 1/2
30	15 1/16	18 29/32	4 15/32	13 3/4	17 15/16	(2) 1 1/2

NO. OF UNITS	OVERALL DIM.			MTG DIM.		PDC DIM.
	A	B	C	D	E	
1	4.18	5.24	3.59	2.25	4.62	3.37
2	4.18	10.37	3.59	2.25	7.12	3.37
3	4.18	10.37	3.59	2.25	9.62	3.37
4	4.18	10.37	3.59	2.25	12.12	3.37
6	10.6	10.37	3.59	2.25	10.75	4.25
9	10.6	10.37	3.59	2.25	10.75	4.25
12	10.6	10.37	3.59	2.25	10.75	4.25
16	13.13	10.37	3.59	2.25	10.75	4.25
20	13.13	10.37	3.59	2.25	10.75	4.25
25	15.67	10.37	3.59	2.25	10.75	4.25

SQUARE HEAVY DUTY WATERTIGHT CONTROL UNITS

TYPE KX — DIMENSIONS

CLASS
9001



Minimum Centerline Spacings for Type KX
2 1/4" Vertically
1 5/8" Horizontally

SQUARE HEAVY DUTY WATERTIGHT CONTROL UNITS

TYPE KX — APPLICATION DATA

9001 KX MATERIAL LIST

SINGLE PUSH BUTTON

(KXRA, KXRB, KXRN, KXRP, KXTA)

Gasket — Nitrile
Seal — Nitrile
Seal Retainer — Steel
Bezel — Zinc
Stem — Polycarbonate
Stem Cover — Polycarbonate
Legend Insert — Polyester
Return-Spring — Music Wire
Ring Nut — Zinc or Aluminum
Adaptor — Zinc
Adaptor Mounting Clip — Music Wire
Liner — Nylon

DUAL PUSH BUTTON (NON-ILLUMINATED & ILLUMINATED) (KXRC, KXRD, KXRE, KXRF, KXRG, KXRH, KXRJ, KXRK, KXRL, KXRM, KXTC)

Gasket — Nitrile
Seal — Nitrile
Seal Retainer — Brass
Bezel — Zinc
Button Stem — Stainless Steel
Button — Polyester
Button Cover — Polycarbonate
Legend Insert — Polyester
Lamp Cover — Polycarbonate
Lens Retainer — Polycarbonate
Lens — Polycarbonate
Return Spring — Music Wire
Ring Nut — Zinc or Aluminum
Adaptor — Zinc
Adaptor Mounting Clip — Music Wire
Liner — Nylon
Retaining Ring — Steel
Interlock Pad — Polyester
Interlock — Sintered Steel
Interlock — Nylon (KXRD)
Pin — Steel (KXRE, KXRF)
Detent Bearing — Steel (KXRE, KXRF)
Detent Spring — Music Wire (KXRE, KXRF)
Interlock — Steel (KXRM)

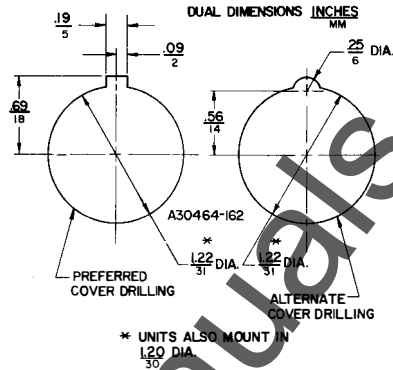
SELECTOR SWITCH (NON-ILLUMINATED & ILLUMINATED) (KXS)

Gasket — Nitrile
Seal — Nitrile
Seal Retainer — Steel
Return Spring — Music Wire
Cam Rotor — Polyester
Cam Follower — Nylon
Cam Carrier — Nylon
Cam — Acetal
Bearing — Polyester
Bezel — Zinc
Knob — Polycarbonate or Nylon
Knob Ring Nut — Polycarbonate
Knob Seal — Nitrile
Legend Plate — ABS
Plug Insert — Polyester
Key Plug — Zinc, Brass, Music Wire
Key — Brass
Locking Head — Zinc
Locking Head Seal — Nitrile
Insert — Zinc
Adaptor — Zinc
Adaptor Mounting Clip — Music Wire
Liner — Nylon
Ring Nut — Zinc or Aluminum

CONTACT BLOCK (Type KA)

Housing — Transparent Nylon
Contact Slider — Nylon or Acetal
Terminal — Steel
Saddle Clamp — Steel
Spring — Steel
Contacts — Silver and Copper
Blade — Beryllium Copper

Mounting Hole for All Type KX Control Units



HOLE PUNCH

The 1.22" diameter hole required to mount Type KX operators may be cut with Greenlee knockout punch No. 730-S. The notch may be cut with Greenlee punch No. 730-K. Both punches are available through electrical wholesalers.

Operator Service Temperature Range:

— 22° to + 140° Fahrenheit
— 30° to + 60° Celsius

MINIMUM CENTERLINE SPACING FOR TYPE "KX" CONTROL UNITS

2 1/4" vertically
1 1/8" horizontally

9001 KX Material List (continued)

PILOT LIGHT

(KXPA, KXPB, KXPC)

O-Ring — Nitrile
Bezel — Zinc
Lens Assembly — Polycarbonate
Baffle — Steel
Ring Nut — Zinc or Aluminum
Adaptor — Zinc
Adaptor Mounting Clip — Music Wire

LIGHT MODULE (SINGLE LAMP KM)

Housing — Polyester
Socket — Steel
Terminal — Brass
Saddle Clamp — Steel
Translating Pin — Polycarbonate
Transformer — Nylon, Steel, Copper, Polyvinyl Chloride, Polytetrafluoroethylene, Acetate, Paper
Lamp Spring — Phosphor Bronze

LIGHT MODULE (2 LAMP KXAKM2)

Adaptor Screw — Steel
Housing — Polyester
Lamp Terminal — Copper
Terminal — Steel
Saddle Clamp — Steel
Contact Spring — Copper
Translating Pin — Polycarbonate
Transformer — Nylon, Steel, Copper, Polyvinyl Chloride, Polytetrafluoroethylene, Acetate, Paper

LIGHT MODULE (4 LAMP KXAKM4)

Housing — Nylon
Lamp Terminal — Copper
Adaptor Screw — Steel
Terminal — Steel
Saddle Clamp — Steel
Transformer — Nylon, Steel, Copper, Polyvinyl Chloride, Polytetrafluoroethylene, Acetate, Paper

HEAVY DUTY CONTROL STATIONS POTENTIOMETER OPERATORS — TYPE T

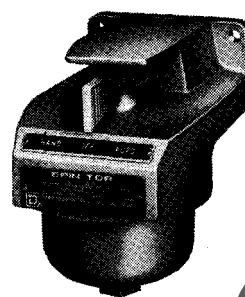
CLASS
9001

HEAVY DUTY SPIN TOP® EXPLOSION-PROOF CONTROL STATIONS

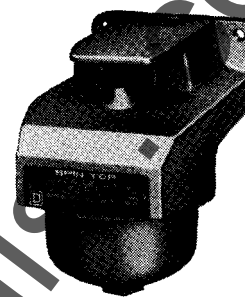
CLASS I GROUPS B, C AND D HAZARDOUS LOCATIONS
CLASS II GROUPS E, F AND G HAZARDOUS LOCATIONS

The SPIN TOP control station enclosure is constructed of HIGH DENSITY ALUMINUM ALLOY CASTINGS for maximum strength and minimum weight. Installation and maintenance is more convenient because of the light weight. The enclosure consists of a collar section that houses the push button or selector switch operator and contact block along with a removable threaded tank section. Push button control stations as standard have provision for padlocking the "Stop" or "Off" button in the depressed position.

SPIN TOP control stations are available only as factory assembled versions as listed below.

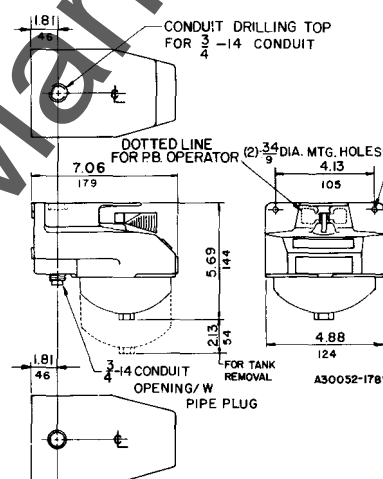


Type GT-112



Type GT-201

APPROXIMATE DIMENSIONS CAST ALUMINUM ENCLOSURES SPIN TOP® HAZARDOUS LOCATIONS — TYPE GT



PUSH BUTTONS

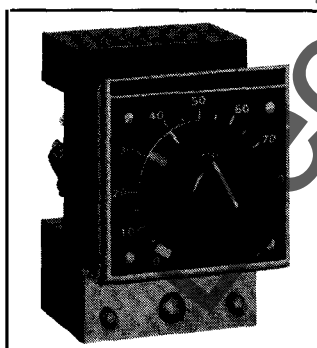
Marking	Momentary Contact			Maintained Contact		
	Symbol	Type	Price	Symbol	Type	Price
Start	16	GT-101	\$118.	....	....	....
Stop	16	GT-102	118.	....	....	....
Start-Stop	113	GT-201	132.	114	GT-107	\$132.
On-Off	113	GT-203	132.	114	GT-103	132.
Jog-Run	113	GT-205	132.	114	GT-105	132.
Forw.-Rev.	113	GT-206	132.	114	GT-106	132.
Open-Close	113	GT-213	132.	114	GT-113	132.
Up-Down	113	GT-214	132.	114	GT-114	132.

SELECTOR SWITCHES (Maintained only)

Description	Symbol	Marking	Type	Price
Two Position	99	On-off Safe-Run Jog-Run Forw.-Rev.	GT-108 GT-109 GT-110 GT-111	\$122.
Three Position	115	Hands-Off-Auto	GT-112	122.

CONTACT SYMBOLS — See Class 9001 Section 3 Page 3-7.

POTENTIOMETERS



Potentiometer units may be purchased completely factory assembled, or the operator only is available for users who wish to obtain potentiometers from another source. Ohmite Type AB Style CLU potentiometers, or equivalent, can be used in the Type TS-51 operator. Type TS-53 operators will accept Ohmite Model H or Model J with 1½" shaft, or equivalent potentiometers.

Description	Type	Price†
Operator with 2 Watt Potentiometer	TS-50	\$ 80.
Operator only (for 2 Watt Potentiometer)	TS-51	56.
Operator with 25 Watt Potentiometer	TS-52	140.
Operator only (For 25 or 50 Watt Pot)	TS-53	116.
Operator with 50 Watt Potentiometer	TS-54	148.

† Prices include dial plate with 0-100% graduations and function marking with maximum of 18 characters (one line). No price deductions for omission.

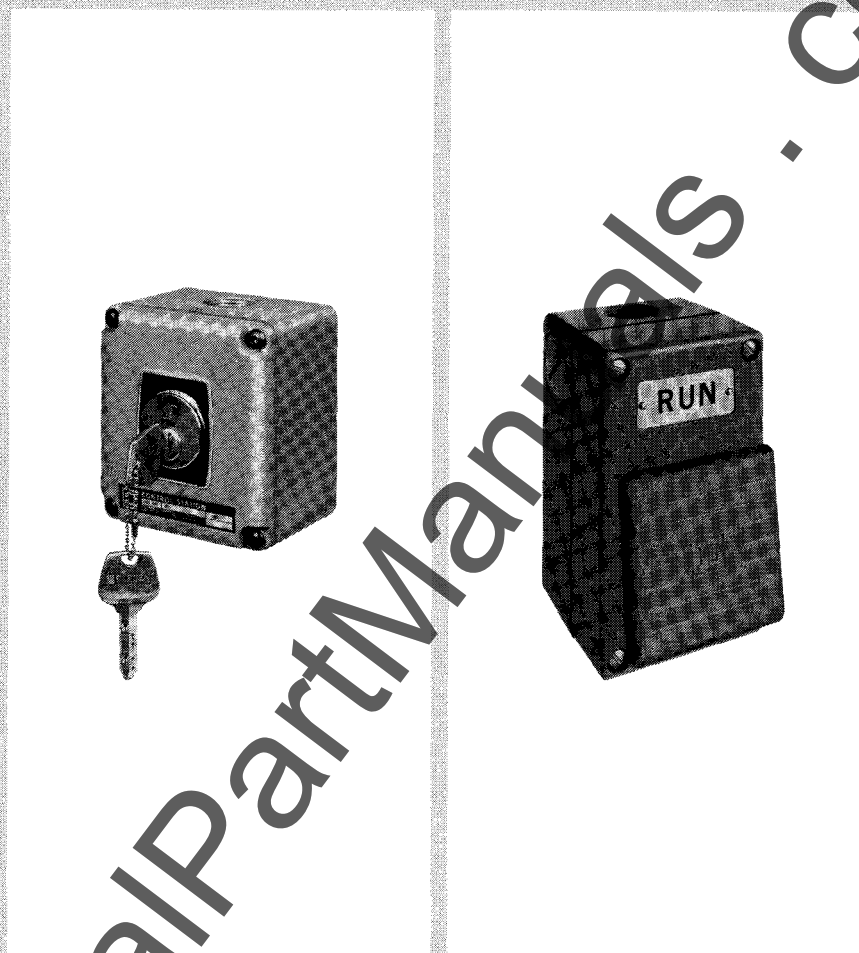
STANDARD POTENTIOMETER SIZES

Values in Ohms
(Linear Taper, 10% Tolerance Except as Noted)

2-Watt	25-Watt	50-Watt
50 25,000	1 125	0.5 150
100 50,000	2 175	1 225
250 0.1 meg	3 250	2 300
500 0.25 meg.	6 350	4 500
1,000 0.5 meg.	8 500	6 800
2,500 1.0 meg.*	10 750	8 1,000
5,000 2.5 meg.*	15 1,000	12 1,600
10,000 5.0 meg.*	25 1,500	16 2,500
	35 2,500	22 3,500
	50 3,500	35 5,000
	75 5,000	50 8,000
	100	80 10,000
		125

*Plus or minus 20%

www.ElectricalPartManuals.com



Specialty Control Stations

TYPE K AND P

CONTENTS

Description	Class	Pages
Security Control Stations	9001	10-2
Palm Operated Press Button	9001	10-3



SQUARE D COMPANY

HEAVY DUTY CONTROL STATIONS

TYPE K — SECURITY CONTROL STATIONS

JANUARY, 1981

Application: Control of overhead doors in shopping centers, warehouses, and in residential, commercial, and industrial developments.

Covers are held securely in place with allen screws. A mechanical interlock prevents removal of the cover, even if the allen screws are removed. A key is required to raise or lower the door and this same key releases the interlock to permit removal of the cover. Locks are builders hardware types, which permits keying station to the rest of the locks in a development.

Stations with Best Lock Company locks give extra flexibility and

security as lock cores only can be changed instead of re-keying. These will find wide acceptance in new developments as the contractor can use his construction cores during construction, and the owner can insert different cores (and keys) into the locks when he takes over the building — no need to install new stations or change out entire lock. Cores can be furnished or omitted as indicated. Order replacement cores from the local Best Universal Lock Company representative. Square D is not authorized to supply cores only.

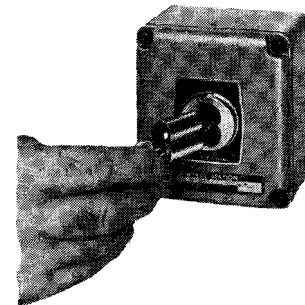
STANDARD FEATURES — ALL STATIONS

- All locks are **random keyed**. Keyed alike, master keying, etc. are available — consult local Square D Field Office.
- Lock nameplate markings: OPEN - CLOSE
- Key operators are all spring return from both sides to center, maintained contact not available. Key withdrawal is in the center position only.
- Electrical Ratings.
Key operator — same as Class 9007 Type AO-2. One Type AO-2 is used for open, one for closed.
Pushbutton — same as Class 9001 Type KA-1. (Except Type KZC stations rated 300 volts maximum.)

Description	Type of Lock	Lock Finish	Special Features	Cast Aluminum Enclosure▲		Satin Chrome Finish Flush Mtd. W/Box	
				Type	Price	Type	Price
Key Operator Only	Corbin Yale Best	Chrome Brass Chrome	Complete With Core* (6 Tumbler Pins) Lock Cylinder Only — Core Omitted■	KY-198	\$132.	KZC-198	\$152.
	Best	Chrome		KY-199	132.	KZC-199	152.
	Best	Chrome	Complete With Core* (7 Tumbler Pins) Lock Cylinder Only — Core Omitted■	KY-197	188.	KZC-197	208.
	Best	Chrome		KY-196	164.	KZC-196	184.
	Schlage	Chrome	Maximum Security Cylinder	KY-195	192.	KZC-195	212.
	Sargent	Chrome		KY-194	168.	KZC-194	188.
Key Operator With Stop Button	Corbin Yale Best	Chrome Brass Chrome	Complete With Core* (6 Tumbler Pins) Lock Cylinder Only — Core Omitted■	KY-193	132.	KZC-193	152.
	Best	Chrome		KY-192	240.	KZC-192	260.
	Best	Chrome	Complete With Core* (7 Tumbler Pins) Lock Cylinder Only — Core Omitted■	KY-298	160.	KZC-298	180.
	Best	Chrome		KY-299	180.	KZC-299	180.
	Schlage	Chrome	Maximum Security Cylinder	KY-297	216.	KZC-297	236.
	Sargent	Chrome		KY-296	182.	KZC-296	212.
				KY-295	220.	KZC-295	240.
				KY-294	196.	KZC-294	216.
				KY-293	160.	KZC-293	180.
				KY-292	268.	KZC-292	288.

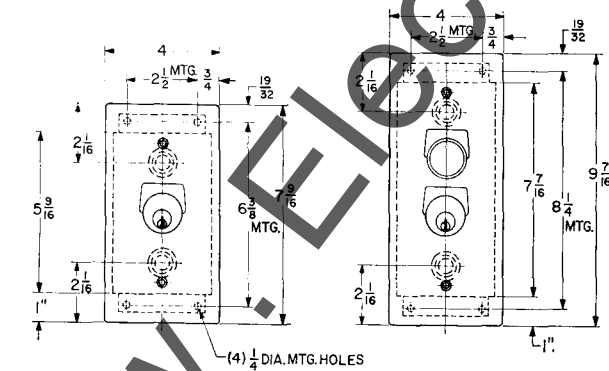


Type KY-192



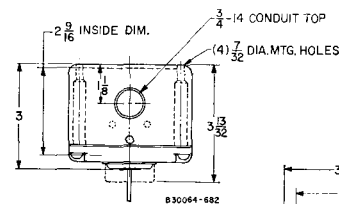
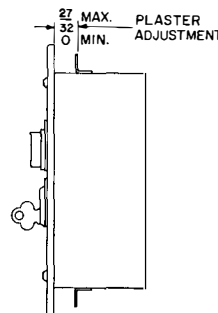
- ▲ Meets NEMA 3R requirements.
* When Best Lock stations are supplied with core, core cannot be changed by customer.
■ When Best Lock stations are supplied without core, customer must purchase core separately from Best Lock Company, and customer can subsequently change core at his convenience.

APPROXIMATE DIMENSIONS



B 30064-683

Flush Mounted Stations



Surface Mounted Stations

PALM OPERATED PRESS BUTTON TYPE P



CLASS 9001, TYPE P1
WITH CLASS 9001, TYPE PB

Safety requirements on power operated stamping presses are necessarily very rigid. One of the basic requirements is that all operators concerned with the stamping press be required to depress a push button with each hand before the press is allowed to start its stroke. Guards must be used on all "RUN" and "INCH" buttons. The Class 9001 Type P palm operated button has been designed for this application. General Features are:

- Oiltight enclosure, large plastic button area, short button travel, and large easily read legend plates.

The Class 9001 Type P enclosure is of heavy wall die cast construction designed to take lots of abuse. The button is available for mounting in a machine cavity or in its own oiltight enclosure.

N.P. Marking (Color)	Contact Symbol	• Features	Operator Only		
			Without Box — Without Guard		
			Class	Type	• Price
RUN (green)		1 N.O., 1 N.C. Momentary Contacts. Green Button	9001	P1	\$98.
STOP (red)		1 N.C. Momentary Contact. Red Button	9001	P2	88.
INCH (black)		1 N.O., 1 N.C. Momentary Contacts. Black Button	9001	P3	98.
RUN (green)		2 N.O., 2 N.C. Momentary Contacts. Green Button	9001	P4	114.
STOP (red)		2 N.O., 2 N.C. Momentary Contacts. Red Button	9001	P5	114.
INCH (black)		2 N.O., 2 N.C. Momentary Contacts. Black Button	9001	P6	114.
TOP STOP (red)		1 N.C. Momentary Contact. Yellow Button	9001	P7	100.

Description	Class	Type	• Price
Box	9001	PB	\$50.
Deep Guard	9001	PG-1	18.
Shallow Guard	9001	PG-2	16.

CLASS 9001					
Type	A	B	• C	D	• E
P1, P2, P3, P4, P5, P6	...	...	...	...	3 1/2
With Deep Guard, PG-1	4 5/16	5 3/4	4 7/8	1 1/2	3 1/2
With Shallow Guard, PG-2	4 1/32	5 19/32	3 3/8	1	3 1/2

THESE BUTTONS AND CONTACT MECHANISMS ARE UL LISTED.



SQUARE D COMPANY

D1B DISCOUNT

ELECTRICAL RATINGS — SINGLE POLE

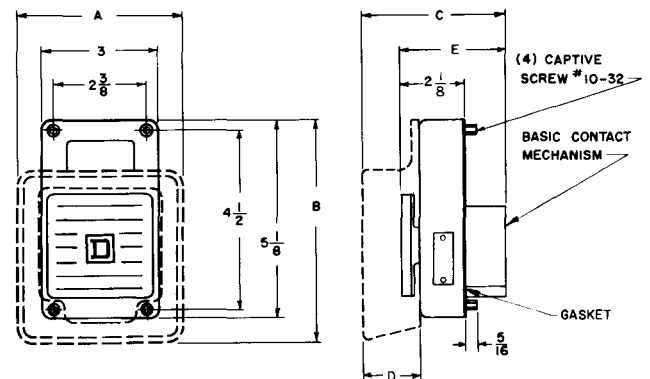
AC — HEAVY DUTY — NEMA A600					DC — STANDARD DUTY — NEMA P600		
Volts	Inductive 35% Power Factor			Resistive 75% Power Factor	Volts	Inductive and Resistive	
	Make Amperes	Break Amperes	Continuous Carrying Amperes	Make, Break and Continuous Amperes		Make and Break Amperes	Continuous Carrying Amperes
120	60	6	10	10	120	1.1	10
240	30	3	10	10	240	0.55	10
480	15	1.5	10	10	600	0.2	10
600	12	1.2	10	10			

BASIC CONTACT MECHANISM (FOR REPLACEMENT)

Contacts are Square D Class 9001 Type KA-2 (N.O.) and Class 9001 Type KA-3 (N.C.) installed on a mounting bracket and sealed to prevent individual block removal. Contact blocks must be replaced in complete assemblies only.

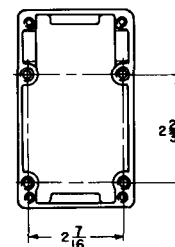
Contacts	Used With	Part No.	List Price D14A Discount
1 N.C. 1 N.O.	P1, P3	31013-051-50	\$26.
2 N.O. 2 N.C.	P4, P5, P6	31013-051-51	40.
1 N.C.	P2, P7	31013-051-52	19.

APPROXIMATE DIMENSIONS

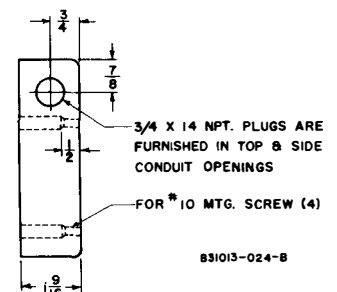


Type P

CLASS 9001
TYPE PB



Type PB



Note: The Class 9001 Type PB Box must be mounted in position as shown to permit proper mounting of a Class 9001 Type P1 thru P7 Palm Operated Press Button.

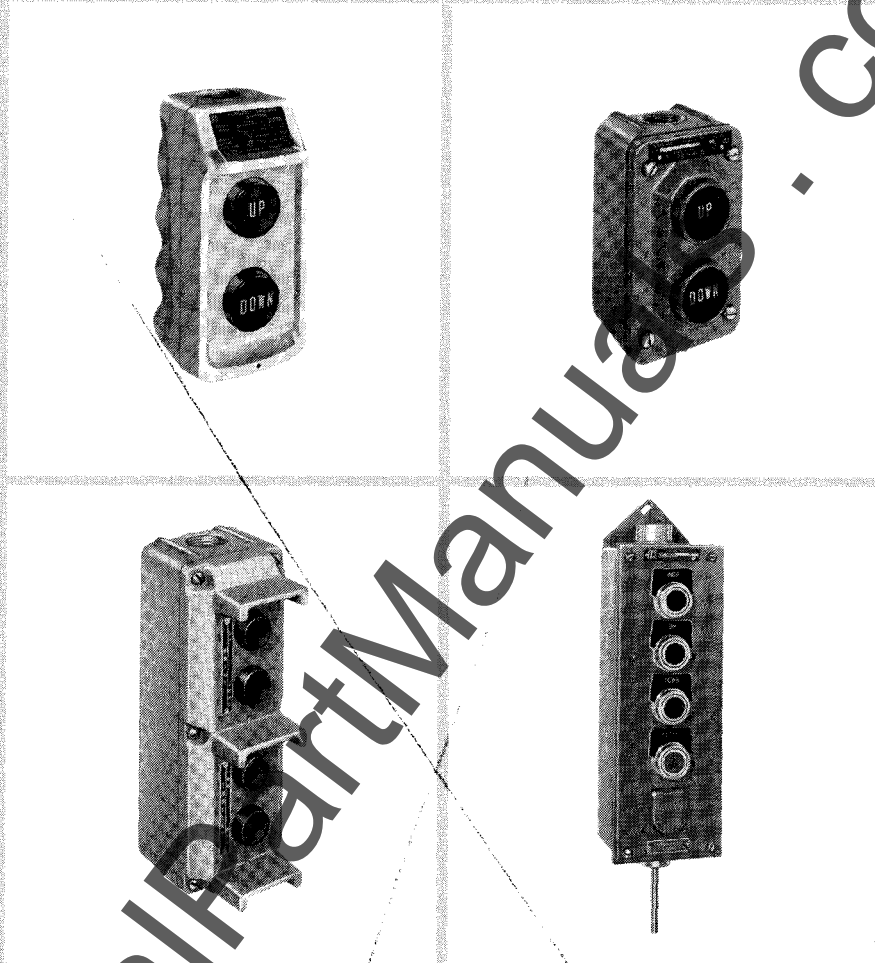
ORDERING INFORMATION REQUIRED

- Order by class and type number:
Operator, Box, Guard

www.ElectricalPartManuals.com



SQUARE D COMPANY



Pendant Control Stations

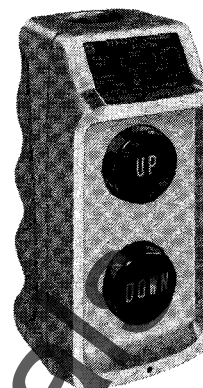
CONTENTS

Description	Class	Pages
Types B40 and BW70	9001	9-2
Replacement Units	9001	9-3
Types UG and UW	9001	9-4
Application Data	9001	9-5
Dimensions	9001	9-6
Type KYB	9001	9-7

PENDANT CONTROL STATIONS **FOR HOIST CONTROL APPLICATIONS — TYPE B**

JANUARY, 1981

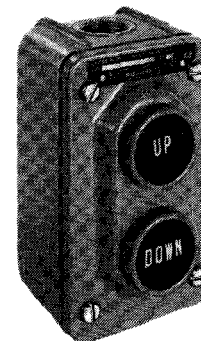
The Class 9001 Type BW70 pendant station is used for hoist applications. The thermoplastic enclosure is provided with a ½ inch conduit entrance at top to accept a pendant cable. The stations are rated NEMA 1, 3, 3R, 4 and 4X. The enclosure is available in an array of colors. For convenience, push buttons have interchangeable legend inserts. The complete line is U.L. listed.



No. of Units	Legend Insert Markings	Mechanical Interlock	Enclosure Color			Price	Contact Symbol See Page 9-5
			Yellow	Black	Red		
2	Up-Down	Yes	BW72Y	BW72B	BW72R	\$33.	146
	Forward-Reverse	Yes	BW73Y	BW73B	BW73R	33.	146
	On-Off*	Yes	BW74Y	BW74B	BW74R	45.	10
	Start-Stop	No	BW75Y	BW75B	BW75R	33.	145
	Start-Stop*	Yes	BW76Y	BW76B	BW76R	45.	10
	On-Off	No	BW77Y	BW77B	BW77R	33.	146
	On-Off	No	BW79Y	BW79B	BW79R	33.	145
	W/O Legend Inserts	Yes	BW70YU	BW70BU	BW70RU	31.	25
	W/O Legend Inserts	No	BW71YU	BW71BU	BW71RU	31.	25
	W/O Legend Inserts*	Yes	BW74YU	BW74BU	BW74RU	43.	147

* Maintained Contact

The Class 9001 Type B40 line of pendant stations are used for hoist applications. The general purpose enclosure consists of a sheet steel cover and a die cast aluminum box with a ½ inch conduit entrance at top to accept a pendant cable. All stations are provided with mechanical interlocks which prevent closing both contacts simultaneously. A neoprene diaphragm may be obtained on any version to further protect the interior from moisture or dust. For convenience, push buttons have interchangeable legend inserts.



No. of Units	Legend Insert Markings	Mechanical Interlock	Neoprene Diaphragm	Gray	Price	Contact Symbol See Page 9-5
2	Up-Down	Yes	No	B40	\$32.	146
	Up-Down		Yes	B42	38.	146
	For.-Rev.		No	B41	32.	146
	For.-Rev.		Yes	B43	38.	146
	Start-Stop		No	B40-S3	32.	145
	Start-Stop		Yes	B42-S1	38.	145
	On-Off		No	B51	44.	10
	On-Off		Yes	B52	50.	10



PENDANT CONTROL STATIONS REPLACEMENT UNITS

 CLASS
9001

REPLACEMENT INTERIORS 9001-BW70's			
Type Number	Symbol	Description	Price
BOC358	147	W/Diaphragm	\$25.00
BOC359	25	W/Diaphragm, W/O Interlock	25.00
BOC366	25	W/Diaphragm, W/Interlock	25.00

REPLACEMENT INTERIORS 9001-B40's			
Type Number	Symbol	Description	Price
BOC364	146	W/Diaphragm, Interlock, Cover Plate	\$25.00
BOC365	10	W/Diaphragm, W/Cover Plate	25.00
BOC363*	145	W/Diaphragm, Cover Plate, W/O Interlock	25.00

* Non-stock

REPLACEMENT ENCLOSURES 9001-BW70's						
Description	Yellow	Price (D14A)	Red	Price (D14A)	Black	Price (D14A)
Box	31101-132-01	\$6.00	31101-132-02	\$11.00	31101-132-03	\$8.00
Cover	31101-147-50	5.00	31101-147-51	9.00	31101-147-52	7.00

INTERCHANGEABLE PUSH BUTTON LEGEND INSERTS						
Marking	For NEMA 4X Type BW70's and B40's	Mushroom Button Inserts For NEMA 4X Type BW70's and B40's	Marking	For NEMA 4X Type BW70's and B40's	Mushroom Button Inserts For NEMA 4X Type BW70's and B40's	Price Each
	Type	Type		Type	Type	
Start	B259	B282	High			\$1.
Stop	B260	B283	Low	.....	.....	
Fast	.....	.....	On	B257	B280	
Slow	.....	.....	Off	B258	B281	
Forward	B255	B278	Hand	B265	B288	
Reverse	B256	B279	Auto	B266	B289	
Open	B263	B286	Joog	.....	.....	
Close	B264	B287	Blank-			
Raise	B261	B264	Black	B251	B251	
Lower	B262	B285	Blank-			
Up	B253	B276	Red	B252	B252	
Down	B254	B277				

Order must specify quantity of 10 or multiples of 10.

LEGEND INSERT KIT (Kit includes one each of standard legend inserts as indicated below Type No. of kit.)

Where Used:		Type	Price
For NEMA 4X Type BW70's and B40's	Push Button	B250 (incl's 1 each of B253 thru B266)	\$14.
	Mushroom Button	B300 (incl's 1 each of B276 thru B289)	14.

MUSHROOM BUTTON HOLDER For NEMA 4X Type BW70's and B40's

Color	Type	Price
Red	B303	\$4.

• HANGER BRACKET AND SEAL KIT

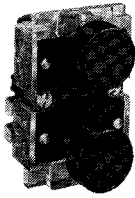
Type	Price
B350	\$2.

PENDANT CONTROL STATIONS FOR CRANE, HOIST AND SPECIAL MACHINERY

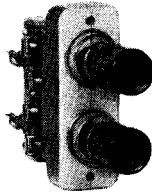
JANUARY, 1981

Class 9001 Pendant Stations, which consist of Type U enclosures and various push button units, are generally used to control cranes

and hoists. They are available as factory assembled stations, or with push buttons and enclosures unassembled.



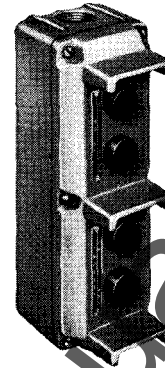
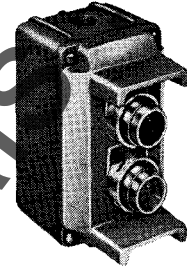
Type B-45



Type UO-2



Type TJ-3

Type UGS-20
With 2 Type B-45Type UG-10
With 2 Type TJ-3

PUSH BUTTON UNITS

Number of Buttons per Unit	Description	General Purpose			Weather Resistant			Symbol See Page 9-5
		Type	Price		Type	Price		
			Unassembled	Assembled		Unassembled	Assembled	
TYPES B AND C								
2	Momentary Contact.....	B-45	\$ 22.	\$ 30.	B-46	\$ 32.	\$ 40.	1
2	Momentary Contact.....	B-47	16.	24.	B-48	26.	34.	5
2	Maintained Contact.....	C-44	28.	36.	C-45	38.	46.	10
TYPE U — MULTI-SPEED*								
2	2 Speed Unit.....	UO-5	\$ 96.	\$104.	UO-6	\$106.	\$114.	87
2	3 Speed Unit.....	UO-2	108.	116.	UO-4	118.	126.	88
2	4 Speed Unit.....	UO-7	116.	124.	UO-8	126.	134.	89
2	5 Speed Unit.....	UO-1	120.	128.	UO-3	130.	138.	90
*Can only be used with standard depth enclosures. •Buttons are mechanically interlocked.								
TYPE TJ▲ (Type TJ units are oiltight push button operated snap switches)								
1	1 Speed Unit (one Class 9007 Type AO-1).....	TJ-1	\$36.	\$40.				16
1	1 Speed Unit (one Class 9007 Type CO-3).....	TJ-11	48.	52.				140
1	2 Speed Unit (two Class 9007 Type AO-1).....	TJ-2	48.	52.				141
1	3 Speed Unit (one Type AO-1 and one Type CO-7).....	TJ-3	64.	68.				142
1	4 Speed Unit (two Class 9007 Type CO-7).....	TJ-4	80.	84.				143
TYPES K and T▲▲								
1	Push Button (Use No-Guard Style)	Choose Type K units or Type T units from current Square D Catalog Section 4 or 8.				Add \$4.00 to the price of each Type K or Type T unit when ordering assembled station.		
1	Pilot Light							
1	Selector Switch							
1	Closing Plate							

* Use Type KA contact blocks and one adaptor, part number 31051-026-01, with each push button or selector switch operator. Type U enclosures for Type K or Type T operators will include one adaptor 31051-026-01 for each mounting hole.

▲ Use Type TN-2 nameplates only with Type T units. Use type KN2 nameplates with Type K and Type TJ units.

ENCLOSURES† STANDARD DEPTH ENCLOSURES

Size	Conduit Entrance Size	General Purpose				Weather Resistant			
		For Types B, C & U		For Types K, T & TJ		For Types B, C & U		For Types K, T & TJ	
		Type	Price	Type	Price	Type	Price	Type	Price
2 Button	3/8"	UG-1	\$ 56.	UG-11	\$ 80.	UW-1	\$ 64.	UW-11	\$ 88.
4 Button	1/2"	UG-2	84.	UG-12	108.	UW-2	94.	UW-12	118.
6 Button	1/4"	UG-3	140.	UG-13	164.	UW-3	152.	UW-13	176.
8 Button	1/2"	UG-4	196.	UG-14	220.	UW-4	210.	UW-14	234.
10 Button	1/2"	UG-5	250.	UG-15	284.	UW-5	276.	UW-15	300.
12 Button	1/2"	UG-6	316.	UG-16	340.	UW-6	334.	UW-16	358.
SHALLOW DEPTH ENCLOSURESⓈ									
2 Button	3/8"	UGS-1	\$ 56.	UGS-11	\$ 80.	UWS-1	\$ 64.	UWS-11	\$ 88.
4 Button	1/2"	UGS-2	84.	UGS-12	108.	UWS-2	94.	UWS-12	118.
6 Button	1/4"	UGS-3	140.	UGS-13	164.	UWS-3	152.	UWS-13	176.
8 Button	1/2"	UGS-4	196.	UGS-14	220.	UWS-4	210.	UWS-14	234.

Ⓢ Consist of smaller enclosures coupled together.

† Price of nameplate is not included in enclosure price.

Ⓢ Use only Types B, C, K, T and TJ push button units. Shallow depth enclosures will not accept Type UO units.

NAMEPLATES FOR TYPES B, C & U

Marking	Part Number	Price
Standard Marking: Hoist; Up-Down Trolley; East-West	144-D492-X1 144-D669-X4	\$1.20 1.20
Trolley; For.-Rev. Trolley; North-South	144-D492-X2 144-D669-X5	1.20 1.20
Bridge; For.-Rev. Bridge; East-West Bridge; North-South	144-D492-X3 144-D669-X6 144-D669-X7	1.20 1.20 1.20
Start-Stop Reset-Stop Blank Non-Standard Markings	144-D669-X1 144-D669-X2 144-D492-X4 144-D492-X5 (Specify Marking)	1.20 1.20 1.20 6.00

HANGER BRACKETS

Conduit Entrance Size	Part Number	Price
3/4"	2868-D1 -X2	\$2.
1"	2868-D1 -X3	2.
1 1/4"	2868-D19-X1	2.
1 1/2"	2868-D19-X2	2.

SPECIAL FEATURES

Description	Form	Price
Convert Cover Hole in Enclosure for Types B, C, & U to Accept Type T or Type K Push Button (Only for Factory Assembled Stations)	Specify Form Y35	\$12.00 per hole

ORDERING INFORMATION REQUIRED UNASSEMBLED STATIONS:

- 1 — Order interior push button units by class and type number (use "unassembled" price).
- 2 — Order enclosure by class and type number.
- 3 — Order nameplate, specify marking.
- 4 — Order hanger bracket by part number according to conduit size listed to the left.

ASSEMBLED STATIONS:

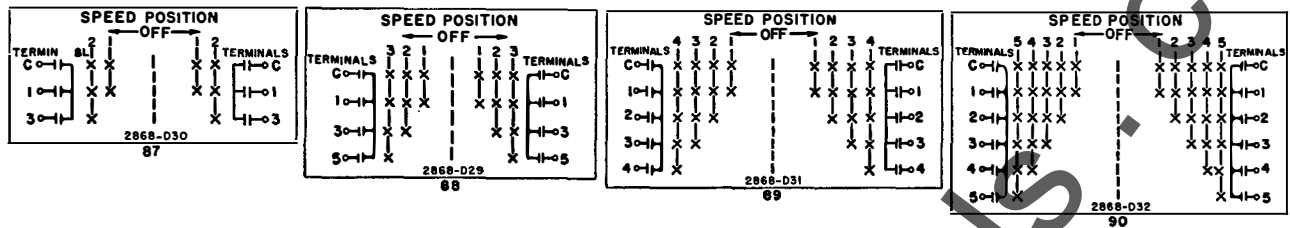
- 1 — Order enclosure by class and type and add a "Zero" to end of type number. Example: 9001 Type UG-20 vs. Type UG-2.
- 2 — List interior push button units desired starting at the top of enclosure (use "assembled" price).
- 3 — Specify nameplate markings.
- 4 — Order hanger bracket by part number according to conduit size listed to the left.



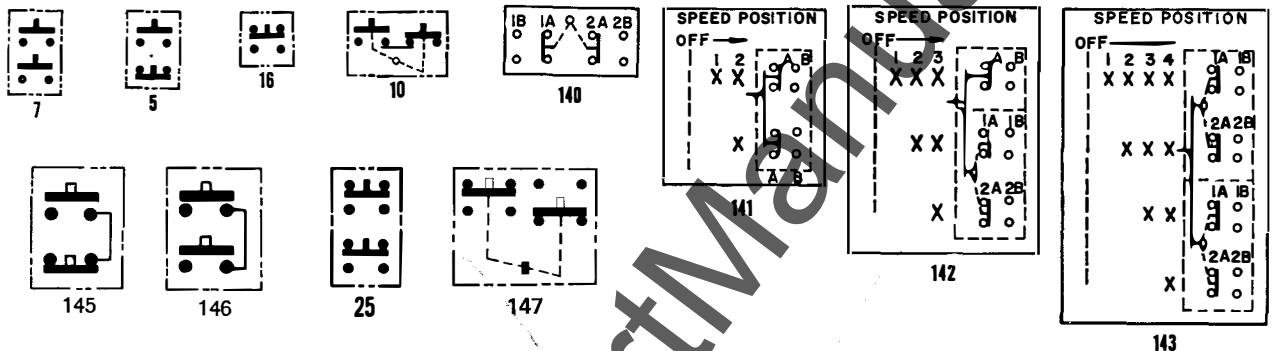
PENDANT CONTROL STATIONS

APPLICATION DATA

SYMBOLS



NOTE: For symbols 87, 88, 89, and 90 all terminals for single multi-speed push button are **NOT** found on same side of push button block. Terminal C, 3 and 4 are on one side of the block while terminals 1, 2 and 5 are found on the opposite side.



ELECTRICAL CONTACT RATINGS (TYPES B40 AND BW70)

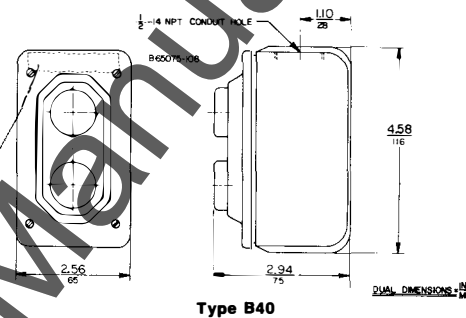
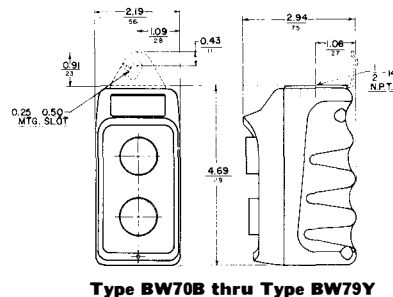
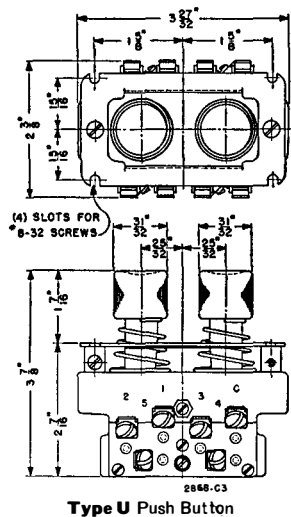
AC — NEMA B600							DC—NEMA P600		
Volts*	Inductive 35% Power Factor				Continuous Carrying Amperes	Resistive 75% Power Factor Make, Break and Contin- uous Carrying Amperes	Volts	Inductive and Resistive	
	Make		Break					Make and Break Amperes	Con- tinuous Carrying Amperes
	Amps.	VA	Amps.	VA					
120	30	3600	3	360	5	5	120	1.1	5
240	15	3600	1.5	360	5	5	240	.55	5
480	7.5	3600	.75	360	5	5	600	.2	5
600	6	3600	.6	360	5	5			

* OSHA Regulation, Section 1910.170 Overhead and Gantry Cranes, limits the voltage at Pendant Pushbuttons to 150 VAC and 300 VDC.

CONTACT RATINGS

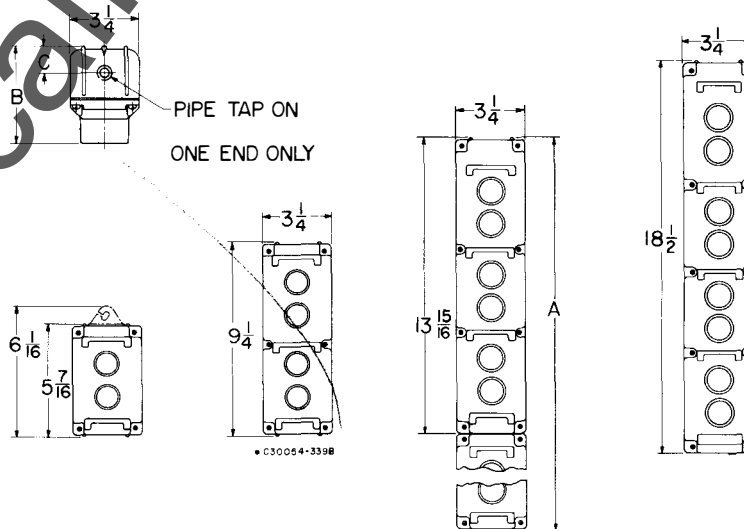
Device Type	Maximum Voltage	AC Amperes		DC Amperes	
		Make	Break	Make & Break	
B & C	120	30	3	1.1	
	250	15	1.5	.55	
	480	7.5	.75	.2	
	600	6	.6		
TR & TS	120	60	6	2.2	
	240	30	3	1.	
UO	120	6.6	1.25	.15	
	240	3.3	.62	.075	
TJ	250	Refer to Class 9007 section 5 of the current Square D Catalog for rating of appropriate snap switch.			

APPROXIMATE DIMENSIONS



ENCLOSURES

Cover holes for Types B, C, & U differ from those for Type T and Type K. Type T and Type K units can be mounted in the same enclosure with Type B, C, & U units as **Factory Assembled Stations**. Use enclosure for B, C, & U units and specify which holes are to be drilled to accept Type T and Type K units. (See "Special Features" for price adder.) All Type U enclosures are cast aluminum.

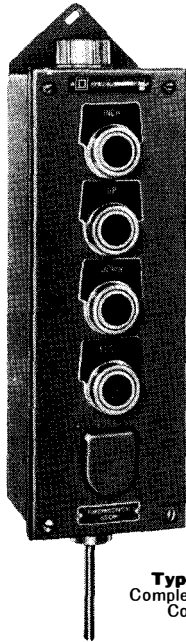


Number of Units	Conduit Size			Conduit Size		
	UG & UW	A	B	UGS & UWS	A	B
2	3/4	—	4 1/16	3/4	—	3 13/16
4	1	—	4 1/16	3/4	—	3 13/16
6	1 1/4	—	4 1/16	1	—	3 13/16
8	1 1/4	—	4 1/16	1	—	3 13/16
10	1 1/2	23 1/16	4 1/16	—	—	—
12	1 1/2	27 3/4	4 1/16	—	—	—



HEAVY DUTY OILTIGHT CONTROL STATIONS

TYPE K — PENDANT TYPE

CLASS
9001


Type KYB-50-A
Complete with **Type K**
Control Units

Type KYB pendant control stations are designed for use with Class 9001 Type K oiltight control units. The NEMA 13 enclosures are both oiltight and dusttight. They are available in two basic forms:

ENCLOSURES ONLY

Available for customer assembly. A closing plate is provided at the bottom of the enclosures to allow use with or without a Class 9001 Type K-8 wobble stick.

FACTORY ASSEMBLED STATIONS

1—With Wobble Stick Operator.

Stations are furnished with a Type K-8 wobble stick operator and Type KA-1 contact block mounted in the bottom. Additional operators, contact blocks, pilot lights must be selected and priced to complete the station. The wobble stick operator is considered as one unit, therefore, the number of additional units selected should be for one less than the total units in station.

2—Without Wobble Stick Operator.

Stations are furnished without wobble stick. Operators and contact blocks must be selected to complete the station.

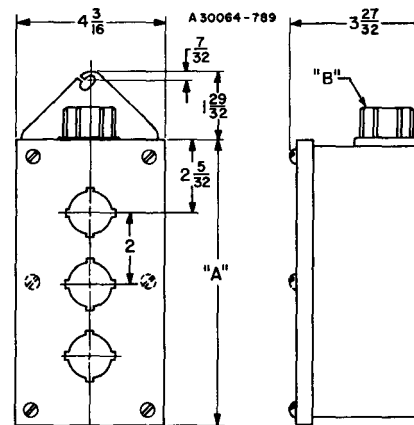
Total Number of Units in Station*	Factory Assembled Stations					
	Enclosure Only for Customer Assembly		With Wobble Stick Stop Unit †		Without Wobble Stick	
	Type	Price	Type	Price	Type	Price
2	KYB-2	\$ 68.	KYB-20-A	\$104.	KYB-20-B	\$ 68.
3	KYB-3	92.	KYB-30-A	128.	KYB-30-B	92.
4	KYB-4	116.	KYB-40-A	152.	KYB-40-B	116.
5	KYB-5	140.	KYB-50-A	176.	KYB-50-B	140.
6	KYB-6	168.	KYB-60-A	304.	KYB-60-B	168.
7	KYB-7	308.	KYB-70-A	344.	KYB-70-B	304.
8	KYB-8	348.	KYB-80-A	384.	KYB-80-B	348.
9	KYB-9	412.	KYB-90-A	448.	KYB-90-B	412.
10	KYB-10	444.	KYB-100-A	480.	KYB-100-B	444.

†Price includes enclosure, Type K wobble stick operator with Type KA-1 Contact Block, and "Emergency-Stop" nameplate.

*In the case of stations furnished with wobble stick operator, the wobble stick is counted as one unit.

APPROXIMATE DIMENSIONS

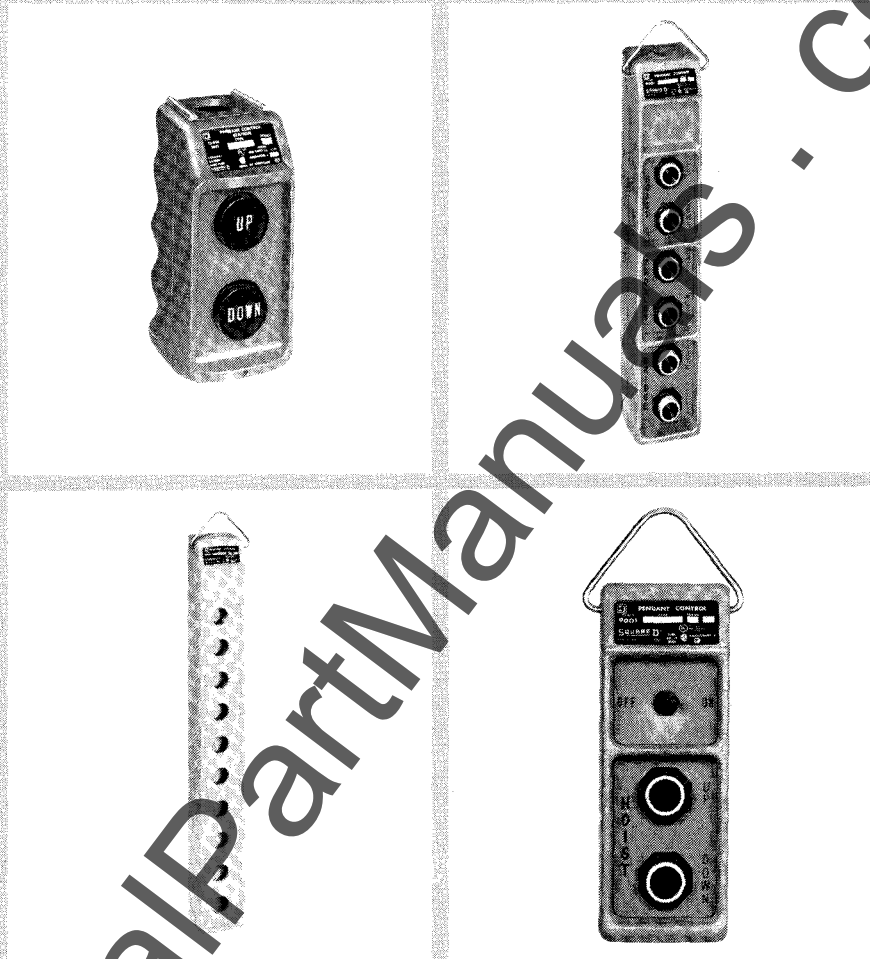
Type KYB-	2	3	4	5	6	7	8	9	10
Dim. "A"	6	8	10	12	14	16	18	20	22
Hub Size "B"	3/4	3/4	3/4	3/4	1	1	1	1 1/4	1 1/4



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SQUARE D COMPANY



Pendant Control Stations

CONTENTS

Description	Class	Pages
Types BW70 and BW80.....	9001.....	9-2
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SQUARE D COMPANY

PENDANT CONTROL STATIONS FOR HOIST CONTROL APPLICATIONS — TYPE BW

JANUARY, 1983

The Class 9001 BW70 and BW80 pendant stations are used for hoist applications, requiring either single speed or two speed buttons. The thermoplastic enclosure is provided with a 1/2 inch conduit entrance at top to accept a pendant cable. The stations are rated NEMA 1, 3, 3R, 4 and 4X. The enclosure is available in three colors. All universal stations have double circuit blocks (1 N.O. – 1 N.C.) on each button and come without legends so they can be assembled to fit the application. For convenience, push buttons have interchangeable legend inserts. The complete line is U.L. and C.S.A. listed.



No. Of Units	Description	Legend Insert Markings	Mechanical Interlock	Enclosure Color			Price	Contact Symbol See Below
				Yellow	Black	Red		
2	Single Speed	Up-Down	Yes	BW72Y	BW72B	BW72R	\$35.	146
		Forward-Reverse	Yes	BW73Y	BW73B	BW73R	35.	146
		On-Off*	Yes	BW74Y	BW74B	BW74R	47.	10
		Start-Stop	No	BW75Y	BW75B	BW75R	35.	145
		Start-Stop*	Yes	BW76Y	BW76B	BW76R	47.	10
		On-Off	No	BW77Y	BW77B	BW77R	35.	146
		On-Off	No	BW79Y	BW79B	BW79R	35.	145
		W/O Legend Inserts	Yes	BW70YU	BW70BU	BW70RU	33.	25
		W/O Legend Inserts	No	BW71YU	BW71BU	BW71RU	33.	25
		W/O Legend Inserts*	Yes	BW74YU	BW74BU	BW74RU	45.	147
	Two Speed	W/O Legend Inserts	Yes	BW80YU	BW80BU	BW80RU	52.	150

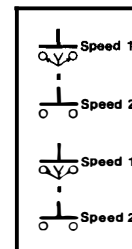
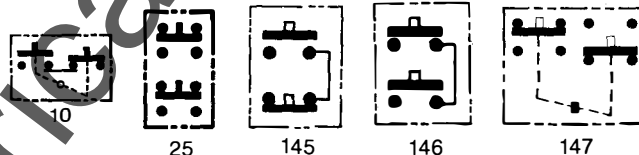
* Maintained Contact

FOR DIMENSIONS, REPLACEMENT INTERIORS AND ENCLOSURES SEE PAGE 9-4

HANGER BRACKET AND SEAL KIT

Type	Price
B350	\$2.

CONTACT SYMBOLS



INTERCHANGEABLE PUSH BUTTON LEGEND INSERTS

Marking	For NEMA 4X Type BW70's and BW80		Marking	For NEMA 4X Type BW70's and BW80		Price Each
	Type	Type		Type	Type	
Start	B259	B282	High			\$1.
Stop	B260	B283	Low	....	....	
Fast	....	....	On	B257	B280	
Slow	....	....	Off	B258	B281	
Forward	B255	B278	Hand	B265	B288	
Reverse	B256	B279	Auto	B266	B289	
Open	B263	B286	Jog	....	....	
Close	B264	B287	Blank-	....	....	
Raise	B261	B284	Black	B251	B251	
Lower	B262	B285	Blank-	....	....	
Up	B253	B276	Red	B252	B252	
Down	B254	B277	....	....	....	

Order must specify quantity of 10 or multiples of 10.

LEGEND INSERT KIT
(Kit includes one each of standard legend inserts as indicated below Type No. of kit.)

Where Used:	Type	Price
For NEMA 4X Type BW70's and BW80	Push Button	B250 (Incl's 1 each of B253 thru B266) \$14.
	Mushroom Button	B300 (incl's 1 each of B276 thru B289) 14.

MUSHROOM BUTTON HOLDER
For NEMA 4X Type BW70's and BW80

Color	Type	Price
Red	B303	\$4.



PENDANT CONTROL STATIONS

TYPE SKYP — NEMA 4X AND 13

CLASS
9001

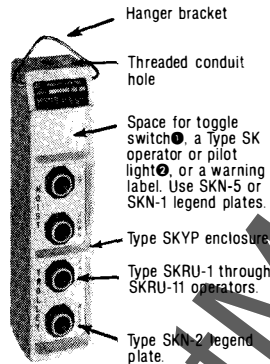
This line of pendant stations consists of polymeric enclosures (2 through 10 units), push button units (1 through 5 speed) and laminated legend plates. All enclosures have an extra single unit space near the top which permits the installation of a toggle switch ①, a Type SK operator or pilot light ② or a warning label. All enclosures come with a stainless steel hanger bracket and internal strain relief post, as standard. Enclosures are yellow and have a threaded opening in the top. The complete line is U.L. and C.S.A. listed.

ENCLOSURES

Size	Conduit Entrance Size	Enclosure Only▲	Enclosure For Assembled Station●	Price
		Type	Type	
2 Button	1/2"-14 NPT	SKYP-2	SKYP-20	\$50.
4 Button	3/4"-14 NPT	SKYP-4	SKYP-40	65.
6 Button	3/4"-14 NPT	SKYP-6	SKYP-60	80.
8 Button	1"-11 1/2" NPT	SKYP-8	SKYP-80	100.
10 Button	1"-11 1/2" NPT	SKYP-10	SKYP-100	120.

▲ Class 9001 SK illuminated operators and push-to-test pilot lights will not fit in these enclosures.

● Assembled pendant stations consist of an enclosure, operators and legend plates. The price of the total station consists of the prices of the individual components — there is no charge for assembly. Example: 9001 SKYP-20 plus 9001 SKRU-5 plus 9001 SKN-201; total price is \$152.40 List. Orders must include a key sheet showing the desired operator locations.



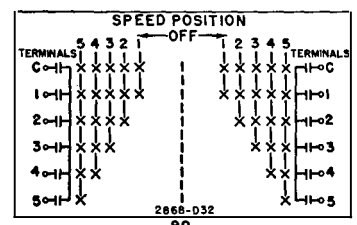
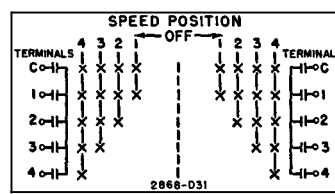
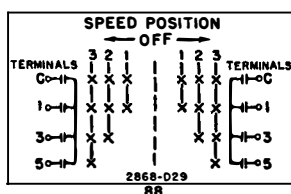
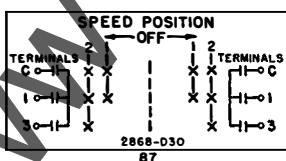
PUSH BUTTON UNITS

	Number of Buttons Per Unit	Description	Contact Symbol — See Below	Type	Price
	2	Single Speed — Momentary Interlocked	7	SKRU-1	\$36.
	2	Single Speed — Momentary Non-Interlocked	5	SKRU-10	30.
	2	Single Speed — Maintained Interlock	10	SKRU-11	42.
	2	Two Speed — Momentary Interlocked	87	SKRU-2	76.
	2	Three Speed — Momentary Interlocked	88	SKRU-3	90.
	2	Four Speed — Momentary Interlocked	89	SKRU-4	95.
	2	Five Speed — Momentary Interlocked	90	SKRU-5	100.

Types SKRU 1, 10 and 11 use Type KA contact blocks. Types SKRU 2 thru 5 are factory sealed contact blocks. For additional contact sequences consult local Square D Field Office.



CONTACT SYMBOLS



(X Denotes contacts closed)

LEGEND PLATES

Where Used	Marking	Type	Price
	Blank-Blank	SKN-200	\$2.40
	Hoist: Up-Down	SKN-201	2.40
	Trolley: East-West	SKN-202	2.40
	Trolley: Fwd.-Rev.	SKN-203	2.40
	Trolley: North-South	SKN-204	2.40
	Bridge: Fwd.-Rev.	SKN-205	2.40
	Bridge: East-West	SKN-206	2.40
	Bridge: North-South	SKN-207	2.40
	Start-Stop	SKN-208	2.40
	Reset-Stop	SKN-209	2.40
	Specify Marking	SKN-299	10.40
	Blank	SKN-500③	\$3.60
	Off-On	SKN-544③	3.60
	On-Off	SKN-545③	3.60
	Specify Marking	SKN-599③	7.60
	Blank	SKN-100③	1.20
	On	SKN-103	1.20
	Off	SKN-104	1.20
	Emerg. Stop	SKN-105	1.20
	Run	SKN-124	1.20
	Power On	SKN-138	1.20
	Off-On	SKN-144	1.20
	Specify Marking	SKN-199③	5.20

① Can be supplied by Square D as Class 9001 Type SKSTS-1 at \$15.00. D1B — includes boot for NEMA 4X.

② See Class 9001, Catalog Section 6.

③ Includes legend plate, gasket and ground plate to be used with toggle switch.

④ Tri-laminated legend plate having a yellow or red background on a black core.

DIMENSIONS — See Page 9-4.

CONTACT RATINGS — See Page 9-4.

CLOSING PLATE

Type	Price
SK-52	\$4.

REPLACEMENT INTERIORS 9001 — BW70'S AND BW80

Pendant Station	Type Number	Symbol	Description	Price
		See page 9-2		
BW72	BOC366	25	W/Diaphragm, W/Interlock	\$25.
BW73	BOC366	25	W/Diaphragm, W/Interlock	25.
BW74	BOC358	147	W/Diaphragm	25.
BW75	BOC359	25	W/Diaphragm, W/O Interlock	25.
BW76	BOC358	147	W/Diaphragm	25.
BW77	BOC359	25	W/Diaphragm, W/O Interlock	25.
BW79	BOC359	25	W/Diaphragm, W/O Interlock	25.
BW80	BOC367	150	W/Diaphragm, W/Interlock	44.

REPLACEMENT ENCLOSURES 9001-BW70'S AND BW80

Description	Yellow	Price (D14A)	Red	Price (D14A)	Black	Price (D14A)
Box	31101-132-01	\$6.	31101-132-02	\$11.	31101-132-03	\$8.
Cover	31101-147-50	5.	31101-147-51	9.	31101-147-52	7.

**ELECTRICAL CONTACT RATINGS (TYPES BW70'S, BW80 AND AC RATINGS ONLY FOR TYPES SKRU-2 THRU SKRU-5 —
FOR DC RATINGS ON SKRU-2 THRU SKRU-5 SEE SEPARATE TABLE)**

AC — NEMA B600							DC — NEMA P600		
Volts*	Inductive 35% Power Factor				Con- tinuous Carrying Amperes	Resistive 75% Power Factor Make, Break and Contin- uous Carrying Amperes	Volts	Inductive and Resistive	
	Make		Break					Make and Break Amperes	Con- tinuous Carrying Amperes
	Amps.	VA	Amps.	VA					
120	30	3600	3	360	5	5	120	1.1	5
240	15	3600	1.5	360	5	5	240	.55	5
480	7.5	3600	.75	360	5	5	600	.2	5
600	6	3600	.6	360	5	5			

ELECTRICAL CONTACT RATINGS (TYPES SKRU-1, 10 AND 11)

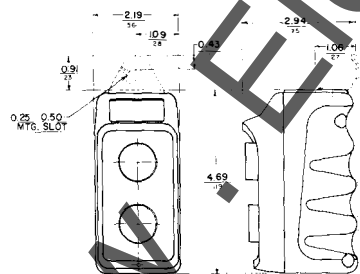
AC — NEMA A600							DC		
Volts*	Inductive 35% Power Factor				Continuous Carrying Amperes	Resistive 75% Power Factor	Volts	Inductive and Resistive	
	Make		Break					Make and Break Amperes	Continuous Carrying Amperes
	Amps.	VA	Amps.	VA					
120	60	7200	6	720	10	10	120	1.1	10
240	30	7200	3	720	10	10	240	.55	10
480	15	7200	1.5	720	10	10	600	2	10
600	12	7200	1.2	720	10	10			

CONTACT RATINGS (TYPES SKRU-2 THRU SKRU-5)

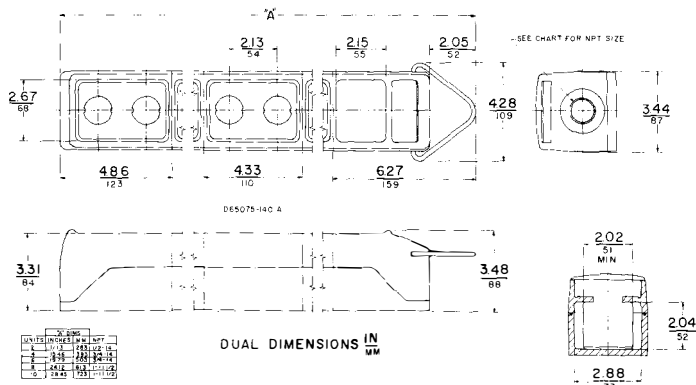
Volts	DC	
	Inductive and Resistive	
	Make and Break Amperes	Continuous Carrying Amperes
120	.15	5
240	.075	5

* OSHA Regulation, Section 1910.170 Overhead and Gantry Cranes, limits the voltage at Pendant Pushbuttons to 150 VAC and 300 VDC.

APPROXIMATE DIMENSIONS



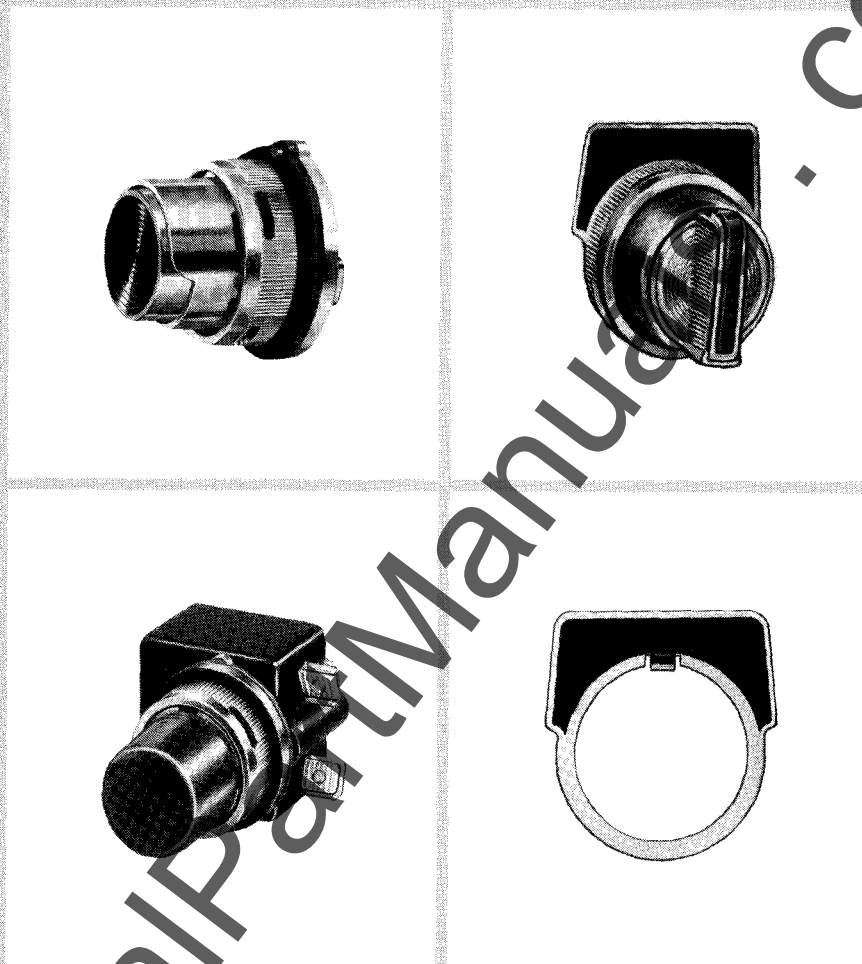
Type BW70B thru Type BW80YU



TYPE SKYP*

*Class 9001 Type SK Illuminated operators and Push-To-Test Pilot Lights will **not** fit in these enclosures.



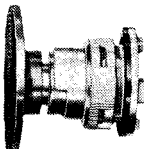


Push Buttons Heavy Duty Oiltight TYPE T

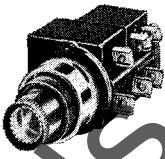
CONTENTS

Description	Class	Pages	Description	Class	Pages
Operators	9001	8-2, 8-3, 8-4	Nameplates	9001	8-7
Accessories	9001	8-5	Dimensions	9001	8-8
Contact Blocks	9001	8-6	Enclosures	Use 9001 K	Catalog Section 4

**Non-Illuminated
Push Button Operators**
Legend Plate Not Included

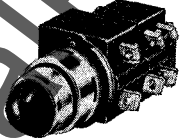
Description	Color Insert	Type	Price
Half Guard 	Universal —Includes one of each color insert from table below	TR-50	\$10.80
	Black	TR-1	10.80
	Red	TR-2	10.80
Full Guard 	Universal —Includes one of each color insert from table below	TR-51	10.80
	Black	TR-6	10.80
	Red	TR-7	10.80
Extended Guard 	Universal —Includes one of each color insert from table below	TR-52	10.80
	Black	TR-35	10.80
	Red	TR-36	10.80
No Guard 	Universal —Includes one of each color insert from table below	TR-53	10.80
	Black	TR-13	10.80
	Red	TR-14	10.80
Mushroom Button 	1 3/8" Dia. Black	TR-3	22.80
	1 3/8" Dia. Red	TR-4	22.80
	2 1/4" Dia. Black	TR-10	22.80
	2 1/4" Dia. Red	TR-11	22.80

Illuminated Push Button
Contact Blocks (1 N.O.-1 N.C.) Included
Legend Plate Not Included

Description	Voltage and Frequency	 (Without Guard Shown)					
		Without Guard			With Guard		
		With Red Color Cap	With Green Color Cap	Price	With Red Color Cap	With Green Color Cap	Price
Transformer	110-120 V., 50-60 Hz. 208-220 V., 50-60 Hz. 380-480 V., 50-60 Hz. 550-600 V., 50-60 Hz.	TP 35R3 TP 37R3 TP 39R3 TP 40R3	TP 35G3 TP 37G3 TP 39G3 TP 40G3	\$54.80	TP 41R3 TP 43R3 TP 45R3 TP 46R3	TP 41G3 TP 43G3 TP 45G3 TP 46G3	\$58.80
Resistor	120 V., AC or DC 240 V., AC or DC	TP 52R3 TP 53R3	TP 52G3 TP 53G3	\$46.80	TP 59R3 TP 60R3	TP 59G3 TP 60G3	\$50.80
Full Voltage	6 V., AC or DC 12 V., AC or DC 18 V., AC or DC 24 V., AC or DC 28 V., AC or DC 60 V., AC or DC 120 V., AC or DC	TP 47R3 TP 48R3 TP 49R3 TP 50R3 TP 51R3 TP 63R3 TP 52R3	TP 47G3 TP 48G3 TP 49G3 TP 50G3 TP 51G3 TP 63G3 TP 52G3	\$46.80	TP 54R3 TP 55R3 TP 56R3 TP 57R3 TP 58R3 TP 68R3 TP 59R3	TP 54G3 TP 55G3 TP 56G3 TP 57G3 TP 58G3 TP 68G3 TP 59G3	\$50.80

Type T illuminated operators use Type K light modules. For replacement lamps and VA rating, refer to listing of Class 9001 Type K light modules in Class 9001 Catalog Section 4.

Pilot Lights
Legend Plate not Included

Description	Voltage and Frequency	 Standard Pilot Light		 Push-To-Test Pilot Light	
		With Red Plastic Color Cap	With Green Plastic Color Cap	With Red Glass Color Cap	With Green Glass Color Cap
		Type	Type	Type	Type
Transformer	110-120 V., 50-60 Hz. 208-220 V., 50-60 Hz. 380-480 V., 50-60 Hz. 550-600 V., 50-60 Hz.	TP-1R1 TP-3R1 TP-5R1 TP-6R1	TP-1G1 TP-3G1 TP-5G1 TP-6G1	TP-21R2 TP-23R2 TP-25R2 TP-26R2	TP-21G2 TP-23G2 TP-25G2 TP-26G2
Neon	120 V., AC or DC 240 V., AC or DC 380 V., AC or DC 480 V., AC or DC 550 V., AC or DC	TP-7R1 TP-8R1 TP-9R1 TP-10R1 TP-11R1	TP-7G1 TP-8G1 TP-9G1 TP-10G1 TP-11G1	.....	.....
Resistor	120 V., AC or DC 240 V., AC or DC	TP-19R1 TP-20R1	TP-19G1 TP-20G1	TP-32R2 TP-33R2	TP-32G2 TP-33G2
Full Voltage	6 V., AC or DC 12 V., AC or DC 18 V., AC or DC 24 V., AC or DC 28 V., AC or DC 60 V., AC or DC 120 V., AC or DC	TP-12R1 TP-13R1 TP-14R1 TP-15R1 TP-16R1 TP-18R1 TP-19R1	TP-12G1 TP-13G1 TP-14G1 TP-15G1 TP-16G1 TP-18G1 TP-19G1	TP-27R2 TP-28R2 TP-29R2 TP-30R2 TP-31R2 TP-64R2 TP-32R2	TP-27G2 TP-28G2 TP-29G2 TP-30G2 TP-31G2 TP-64G2 TP-32G2

Type T illuminated operators use Type K light modules. For replacement lamps and VA rating, refer to listing of Class 9001 Type K light modules in Class 9001 Catalog Section 4.

**Color Inserts for
Non-Illuminated Push Buttons**

Color	Type	Price Each
Black	T-6BK	\$.20
Red	T-6RD	
Green	T-6GN	
Brown	T-6BN	
Yellow	T-6YW	
Orange	T-6OE	
Blue	T-6BE	
White	T-6WH	
Gray	T-6GY	
Universal (All Colors)	T-6U	1.60
Orders must specify quantity of 10 or multiples of 10		

**Separate Color Caps
For Illuminated Push Buttons**

Color	Type	Price
Red	R3	\$2.80
Green	G3	
Amber	A3	
Blue	B3	
Clear	C3	
White	W3	

**Separate Color Caps
For Pilot Lights**

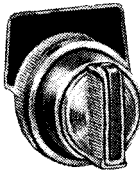
Color	Plastic Cap for Standard Pilot Lights Only	Glass Caps for Standard or Push-To-Test Pilot Lights	Price
	Type	Type	
Red	R1	R2	\$2.80
Green	G1	G2	
Amber	A1	A2	
Blue	B1	B2	
Clear	C1	C2	
White	W1	W2	



HEAVY DUTY OILTIGHT CONTROL UNITS TYPE T

CLASS
9001

Selector Switch Operators Legend Plate Not Included

Description	Contact Block Required		1 = Contact Closed 0 = Contact Open									
			2 Position				3 Position				4 Position	
	Quantity and Type	Mount in Position	Left	Right	Left	Right	Center	Center	Center	Center	Center	Center
 Selector Switch	1-KA-1 	#2	1 0	0 1	1 0 0	0 1 1	1 0 0	0 0 1	0 1 0	1 0 0	0 0 1 0	0 0 1 0
	1-KA-1 	#1	1 0	0 1	0 0 1	1 1 0	1 0 0	0 0 1	0 1 0	1 0 0	0 1 0	0 0 0 1
			0 1	1 0	0 0 1	1 1 0	0 0 1	0 1 0	0 1 0	0 0 1	0 0 1	0 1 0 0
			Type	Type	Type	Type	Type	Type	Type	Type	Type	Price
Manual Return			TS-1		TS-2		TS-3		TS-4		TS-6	
Standard Black Knob.....			TS-1K*		TS-2K*		TS-3K*		TS-4K*		TS-6K*	
Key Operated.....												\$14.80
Spring Return — Left to Center			TS-14		TS-15		TS-16		TS-17		TS-19	
Standard Black Knob.....			TS-14K2		TS-15K*		TS-16K*		TS-17K*		TS-19K*	
Key Operated.....												22.80
Spring Return — Right to Center				TS-27	TS-511	TS-521	TS-531	TS-541	TS-551			
Standard Black Knob.....				TS-27K1	TS-21K*	TS-22K*	TS-23K*	TS-24K*	TS-25K*			
Key Operated.....												22.80
Spring Return — Both Sides to Center					TS-8	TS-9	TS-10	TS-11	TS-12			
Standard Black Knob.....					TS-8K5	TS-9K5	TS-10K5	TS-11K5	TS-12K5			
Key Operated.....												22.80
												46.80

***KEY WITHDRAWAL CODE:** See Class 9001 Type K Selector Switch in Catalog Section 4 for proper code no. All key operated selector switches are furnished as standard with Square D number NQ1101 key change. Refer to local Square D field office for other key changes. TS400 not available with K14 key withdrawal code.

SELECTOR PUSH BUTTON OPERATORS Legend Plate and Contact Block Not Included

Contact Blocks Required	Two Position Operators														Price	Three Position Operators		
	1 = Contact Closed 0 = Contact Open															F = Free D = Depressed		
	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right		Left	Center	Right
1-KA-1 or 1-TA	F D	F D	F D	F D	F D	F D	F D	F D	F D	F D	F D	F D	F D	F D	F D	F D	F D	
	1 0	0 0	1 1	0 0	1 0	0 0	0 0	1 0	1 1	1 0	...	...	...	...	...	...	...	
	0 1	1 1	0 0	0 1	0 1	0 1	0 1	0 0	0 0	0 1	...	...	...	...	...	...	...	
	Symbol 67		Symbol 71		Symbol 75		Symbol 93		Symbol 102									
2-KA-1 or 1-TB	1 0	0 0	1 0	0 0	1 0	0 0	0 0	1 0	1 0	1 1	0 0	1 0	0 0	1 1	1 0	1 0	1 1	
	0 1	1 1	0 1	0 1	0 1	0 1	0 1	0 0	0 1	0 0	0 1	0 1	0 1	0 1	0 0	0 0	0 0	
	1 0	0 0	1 1	0 0	1 0	0 0	0 0	1 0	1 1	1 0	0 0	1 1	1 1	1 1	0 0	1 1	1 0	
	0 1	1 1	0 0	0 1	0 1	0 1	0 1	0 0	0 0	0 1	0 1	0 0	0 0	0 0	0 1	0 0	0 1	
	Symbol 68		Symbol 72		Symbol 76		Symbol 94		Symbol 82		Symbol 95		Symbol 98			Symbol 85		
Non-Illuminated Operators	Type		Type		Type		Type		Type		Type		Type			Type	Price	
Half Guard Black Insert	TQ-1		TQ-2		TQ-3		TQ-36		TQ-26		TQ-42		TQ-50		\$22.80	TQ-32	\$26.80	
Full Guard Black Insert	TQ-11		TQ-12		TQ-13		TQ-39		TQ-48		TQ-45		TQ-53		26.80	....	....	
Extended Guard Black Insert	TQ-62		TQ-56		TQ-65		TQ-69		TQ-59		TQ-71		TQ-73		26.80	....	....	

Color Inserts For Selector Switch

Color	Type	Price Each
Black	T-4BK	\$.40
Red	T-4RD	.40
Green	T-4GN	.40
Brown	T-4BN	.40
Yellow	T-4YW	.40
Orange	T-4OE	.40
Blue	T-4BE	.40

Orders must specify min. quantity of 10 or multiple of 10

Gloved Hand Knob For Selector Switch

Type	Price
T-7	\$16.00

Color Inserts For Selector — Push Buttons

Color	Type	Price Each
Black	T-5BK	\$.40
Red	T-5RD	.40
Green	T-5GN	.40
Brown	T-5BN	.40
Yellow	T-5YW	.40
Orange	T-5OE	.40
Blue	T-5BE	.40

Orders must specify min. quantity of 10 or multiple of 10 in any one color.

HEAVY DUTY OILTIGHT CONTROL UNITS TYPE T

JANUARY, 1981

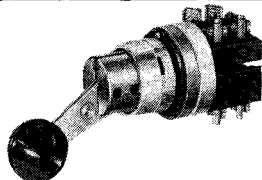
Four-Way Operator — Joy Stick Type

This four way, five position operator (center position neutral) has one lever to operate up to a maximum of eight Type KA-1 contact blocks, two maximum in the Up, Down, Left or Right positions. Maintained contact or momentary contact is available, with or without an off position latch. Conversion to any desired combination of momentary contact or maintained contact can easily be accomplished in the field.

Description †	Operator Only (Without Contact Blocks)		Operator with 4 Type KA-1 Contact Blocks		Operator with 8 Type KA-1 Contact Blocks	
	Type	Price	Type	Price	Type	Price
Momentary Contact with Off Position Latch.....	TX-1	\$128.	TX-1A	\$176.	TX-1B	\$224.
Momentary Contact.....	TX-2	128.	TX-2A	176.	TX-2B	224.
Maintained Contact with Off Position Latch.....	TX-3	128.	TX-3A	176.	TX-3B	224.
Maintained Contact.....	TX-4	128.	TX-4A	176.	TX-4B	224.

†Requires use of separately mounted legend plates (not included).

Three-Position Master Switches (not completely oiltight)

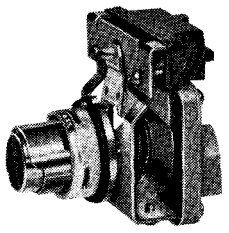
	Description	Symbol	Type ★	Price	SYMBOL 103		
	3-Position Master Switch, Complete with Contact Block Maintained Contact..... Spring Return to Center....	103 104‡	TS-80E-2 TS-82D-1	\$74. 78.	UP A1 A2	CENTER O O	DOWN O O

‡Symbol 104 is same as 103 except contacts A1 and B1 are not furnished.
★These switches are furnished with special contact blocks.

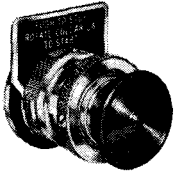
DUST BOOT FOR THREE POSITION MASTER SWITCH

Type	Price
TU-61	\$16.

Time Delay Push Button

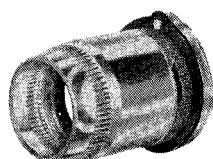
Timing period is adjustable from 0.2 second to 60 seconds and begins after push button has been released. Devices require the space of two standard operators. Devices include a package of nine color inserts for color coding the push button. Contacts are quick make — quick break. Type listed is half guard version. Legend plate not included.			
	Description		Timed Contact 1 N.O. & 1 N.C.
	Type	TRD-150	
	Price	\$70.80	

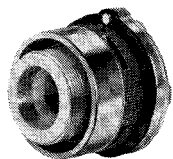
MAINTAINED PUSH BUTTON WITH 1 1/8" MUSHROOM BUTTON

		
Color	Type	Price
Black	TRM-3	\$44. Does Not Include Contact Block But Does Include Legend Plate
Red	TRM-4	
Green	TRM-20	
Brown	TRM-21	
Yellow	TRM-22	
Orange	TRM-23	
Blue	TRM-24	
Button locks in the depressed position—Turning knurled ring releases operator to its normal position. Price includes nameplate: “Push-to-Stop Rotate Collar CW to Start”		

Basic Operators

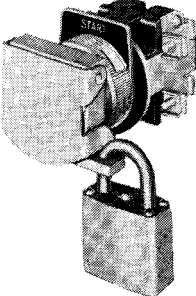
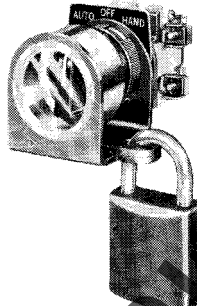
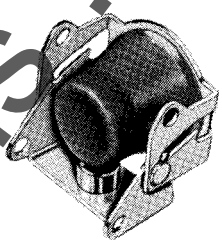
Standard Pilot Light Less Color Cap And Light Module	
	
Type	Price
TP	\$8.

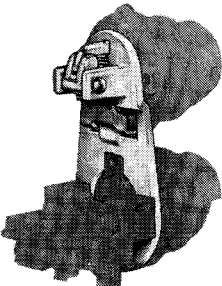
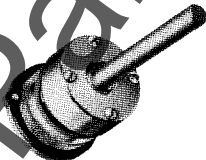
Illuminated Push Button With Full Guard Less Color Cap And Light Module	
	
Type	Price
TIL	\$12.

Illuminated Push Button Without Guard And Push To Test Pilot Light Less Color Cap, Light Module And Contact Block	
	
Type	Price
T2L	\$8.

CONTROL UNITS — HEAVY DUTY OILTIGHT TYPE T — ACCESSORIES

 CLASS
9001

LATCH TYPE PADLOCK ATTACHMENT		COVER TYPE PADLOCK ATTACHMENT		SELECTOR SWITCH PADLOCK ATTACHMENT		LATCH TYPE PADLOCK ATTACHMENT	
							
Type	Price	Type	Price	Type	Price	Type	Price
TL-1	\$12.	TL-2	\$12.	TL-3	\$12.	TL-5	\$20.
Locks button in depressed position. Must be used with operator having standard half guard. Can be used with mushroom buttons.		(Padlock not furnished.) Must be used with operator having standard half guard.		(Padlock not furnished.)		Locks button (with Type TU cap) in depressed position.	

MAINTAINED CONTACT ATTACHMENT		WOBBLE STICK OPERATOR		PUSH BUTTON WRENCH	
				Type	Price
				T-1	\$12.
				Simplifies installation of Type T units.	
		Type	Price	TRIM WASHER	
		TW-1	\$22.80 Does Not Include Legend Plate Or Contact Block	Type	Price
Type	Price	For hurried or emergency operation. Consists of Type TR push button operator with wobble stick attachment.		TN-5	\$1.20
TM-1	\$12.			For use where legend plate is not required. Keeps ring nut from marring panel finish.	
Use with two Type TR push buttons and one contact block. The contact block should always be assembled to the "Stop" operator.					

PROTECTIVE CAP				WATER-TIGHT CAP					
	Color	Type	Price		Color	For Push Buttons		For Selector Sw.	
						Type	Price	Type	Price
	Black	TU-1	\$8.		Black	TU-11	\$8.	TU-51	\$16.
	Red	TU-2	8.		Red	TU-12	8.	TU-52	16.
	Blue	TU-3	8.		Blue	TU-13	8.	TU-53	16.
	Brown	TU-4	8.		Brown	TU-14	8.	TU-54	16.
	Green	TU-5	8.		Green	TU-15	8.	TU-55	16.
	Yellow	TU-6	8.		Yellow	TU-16	8.	TU-56	16.
The Type TU-6 cap will prevent metal shavings and other foreign matter from interfering with proper operation of oil tight push buttons. They are for use with the KY, KZ and KYA enclosures and can be used with TN legend plates.				These caps are for use on the Class 9001 Type KYC NEMA 4 water tight enclosures listed in Class 9001 Catalog Section 4. Separately mounted legend plates (Type KN-8) must be used to insure a water tight seal.					
				Clear Silicone Cap — For standard pilot lights TU-17 \$12. For push-to-test pilot lights and illuminated pushbuttons TU-27 12.					

CONTROL UNITS — HEAVY DUTY OILTIGHT

TYPE T & K — CONTACT BLOCKS

JANUARY, 1981

APPLICATION DATA

Two basic types of contact blocks are available.

Type K — These blocks are available in 5 basic types — 3 standard and 2 special purpose blocks. Any of them can be mounted side by side or in tandem behind an operator to accomplish a particular contact arrangement. The Type K blocks should be used whenever possible.

Type T — The Type T blocks are available in the same basic arrangements as the Type K except each block serves a particular function such as 2 N.O.-2 N.C. contacts. They cannot be mounted side by side and only by using the special TF block can tandem mounting be accomplished. Type T blocks should be used for replacement purposes only.

STANDARD CONTACT BLOCKS ALL TYPE T OPERATORS ACCEPT TYPE KA CONTACT BLOCKS

Description Type K block shown.	Symbol	Type K		Equivalent Type T*	
		Type	Price	Type	Price
		KA-1	\$12.	TA	\$18.
		KA-2	6.	TA-2	9.
		KA-3	6.	TA-1	9.

*Use Type T contact blocks for replacement purposes only.

ADDITIONAL CIRCUIT ARRANGEMENTS AVAILABLE

Description Type K block shown.	Symbol	Type K		Equivalent Type T	
		Contact Blocks Req'd.	Price	Contact Blocks Req'd.	Price
		Order Two Type KA-1	\$12. Each	Order One Type TB	\$36.
		Order Two Type KA-2	6. Each	Order One Type TD	18.
		Order Two Type KA-3	6. Each	Order One Type TC	18.
SEQUENCING N.O. Contact of KA-4 closes before N.O. Contact on KA-1		Order One Type KA-4 & One Type KA-1	12. Each	Order One Type TE	45.
OVERLAPPING N.O. Contact of KA-4 closes before N.C. Contact of KA-3 Opens		Order One Type KA-4 & One Type KA-5	(KA-4) 12, (KA-5) 6.	Order One Type TE-1 2 single pole single throw contacts.	18.

CONTACT BLOCK RATING — MAXIMUM AC TYPE K and TYPE T

Volts	AC Amperes — NEMA A600				Resistive 75% Power Factor Make, Break and Continuous
	Inductive Pilot Duty 35% Power Factor				
	Make	Break	Continuous		
120	60	6	10	10	
240	30	3	10	10	
480	15	1.5	10	10	
600	12	1.2	10	10	

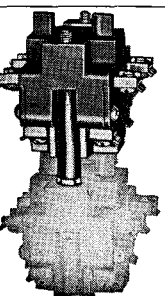
CONTACT BLOCK RATING — MAXIMUM DC

Volts	Type K				Type T	
	DC Inductive and Resistive				DC Amperes Inductive Pilot Duty	
	Make and Break				Make and Break	Con- tinuous
	KA-1	KA-2 KA-3	KA-4	KA-5	Continuous Carrying Amperes	
120	1.1	1.1	1.1	1.1	10	2.2
240	0.55	0.55	0.55	0.55	10	0.55
600	0.2	0.2	0.2	0.2	10	0.2

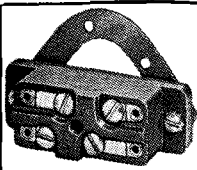
SPECIAL PURPOSE CONTACT BLOCKS

Description Type K block shown.	Symbol	Type K		Type T	
		Type	Price	Type	Price
	 N.O. Contact Early Closing	KA-4	\$12.	No equivalent	
	 Late Opening	KA-5	6.	No equivalent	

2 POLE DOUBLE THROW FOR TANDEM MOUNTING

Description	Symbol	Type	Price
		TF	\$36.
For use with any T contact block, except Types TE & TE-1, to obtain additional contacts. Note: A Special Purpose Block is not required to mount a Type K block in tandem.			

SNAP ACTION CONTACTS

			For use with Type TR and KR non-illuminated push button operators and Type TS and KS two position non-illuminated selector switch operators. See Class 9007 Catalog Section 5 for contact ratings. Contact rating of single pole unit is same as listed for 9007 AO-2; two pole unit has same rating as 9007 CO-3.		
Description	Type	Price			
Single pole, double throw	TA-5	\$36.			
Two pole, double throw	TB-2	54.			

DIMENSIONS — See page 8-8



HEAVY DUTY OILTIGHT CONTROL UNITS

LEGEND PLATES — TYPE T

CLASS
9001

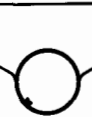
Standard Legend Plates

Standard Markings	Type Number	
		
Unless Noted TN-2 Black Field TN-3 Black Field		
FOR PUSH BUTTON OR PILOT LIGHT		
Blank	TN-200	TN-300
Start	TN-201	TN-301
Stop-Red	TN-202	TN-302
On	TN-203	TN-303
Off-Red	TN-204	TN-304
Emerg. Stop-Red	TN-205	TN-305
Forward	TN-206	TN-306
Reverse	TN-207	TN-307
Close	TN-208	TN-308
Open	TN-209	TN-309
Down	TN-210	TN-310
Up	TN-211	TN-311
Fast	TN-212	TN-312
Slow	TN-213	TN-313
High	TN-214	TN-314
Low	TN-215	TN-315
Inch	TN-216	TN-316
In	TN-217	TN-317
Jog	TN-218	TN-318
Jog For.	TN-219	TN-319
Jog Rev.	TN-220	TN-320
Lower	TN-221	TN-321
Out	TN-222	TN-322
Reset	TN-223	TN-323
Run	TN-224	TN-324
Start Jog	TN-225	TN-325
Test	TN-226	TN-326
Raise	TN-227	TN-327
Decrease	TN-228	TN-328
Increase	TN-229	TN-329
Left	TN-230	TN-330
Right	TN-231	TN-331
Cycle Start	TN-232	TN-332
Feed Start	TN-233	TN-333
Cycle Stop	TN-234	TN-334
Feed Stop	TN-235	TN-335
Motor Run	TN-236	TN-336
Motor Stop	TN-237	TN-337
Power On	TN-238	TN-338
Full Speed	TN-272	TN-372
Low Speed	TN-273	TN-373
Second Speed	TN-274	TN-374
Third Speed	TN-275	TN-375
FOR SELECTOR SWITCH OR SELECTOR-PUSH BUTTON		
For.-Rev.	TN-239	TN-339
Hand-Auto.	TN-240	TN-340
High-Low	TN-241	TN-341
Jog-Run	TN-242	TN-342
Man.-Auto.	TN-243	TN-343
Off-On	TN-244	TN-344
On-Off	TN-245	TN-345
Open-Close	TN-246	TN-346
Raise-Lower	TN-247	TN-347
Run-Jog	TN-248	TN-348
Safe-Run	TN-249	TN-349
Slow-Fast	TN-250	TN-350
Start-Stop	TN-251	TN-351
Start-Stop	TN-252	TN-352
Up-Down	TN-253	TN-353
Low-High	TN-254	TN-354
Stop-Start	TN-255	TN-355
Left-Right	TN-256	TN-356
On-Auto	TN-257	TN-357
Summer-Winter	TN-258	TN-358
Auto-Off-Hand	TN-259	TN-359
For.-Off-Rev.	TN-260	TN-360
Hand-Off-Auto.	TN-261	TN-361
Jog-Safe-Run	TN-262	TN-362
Man.-Off-Auto.	TN-263	TN-363
Open-Off-Close	TN-264	TN-364
Up-Off-Down	TN-265	TN-365
Low-Off-High	TN-266	TN-366
For.-Safe-Rev.	TN-267	TN-367
Jog-Stop-Run	TN-268	TN-368
Slow-Off-Fast	TN-269	TN-369
Summer-Off-Winter	TN-270	TN-370
High-Low-Off	TN-271	TN-371
Raise-Off-Lower	TN-272	TN-372
High-Off-Low	TN-273	TN-373

PRICING INFORMATION:

TN-2 or TN-3 with standard marking	\$1.20 each
TN-2 or TN-3 with special marking	\$5.20 each
TN-200R or TN-300R (Red Field) any marking	\$5.20 each
TN-200R or TN-300R (Red Field) blank	\$1.20 each

Special Legend Plates

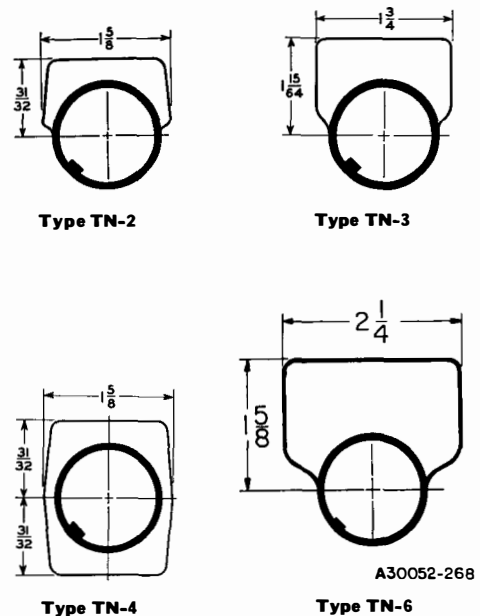
Description	Type	Price	
		Blank	Any Marking
 Double Headed	TN-4	\$2.40	\$6.40
 Extra Large For customer's enclosure only. Minimum spacing between operators must be 2 1/4" vertically and 2 1/4" horizontally.	TN-6	\$2.40	\$6.40

Maximum Number of Lines and Characters for Type TN Legend Plates.

Type	TN-2	TN-3	TN-4	TN-6
Max. No. of Characters per Line	18	18	18	22
Max. No. of Lines	2	3	4	4

The maximum number of characters and lines given above is a practical maximum and is based on a minimum size of characters to facilitate easy reading. When fewer characters than the maximum are required the size of the characters is changed to permit the best readability.

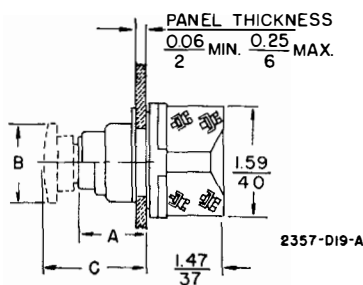
Approximate Dimensions



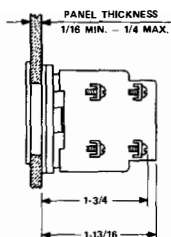
NOTE—Legend plates may be rotated to 90°, 180° or 270° from position shown.

APPROXIMATE DIMENSIONS

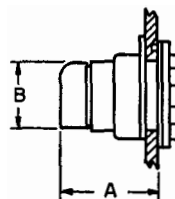
PUSH BUTTONS



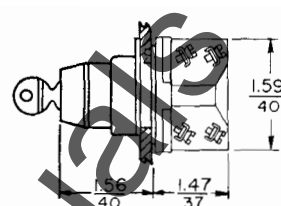
Types TR and TQ with Type KA Contact Blocks



Types TR and TQ with Type T Contact Blocks

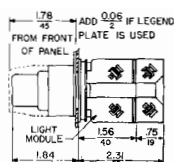


Type TS Selector Switch Operators

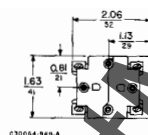


Type TS Key Operated Selector Switches

Push Button Operators Type TR and Selector-Push Button Operators Type TQ			
Description	Dimension		
	A	B	C
Standard half guard, full guard, and without guard	1½"	.....	.....
Small mushroom button .....	.....	1½"	1⅜ ₁₆ "
Large mushroom button .....	.....	2¼"	1⅝ ₃₂ "
Extended guard	1½"	.....	.....

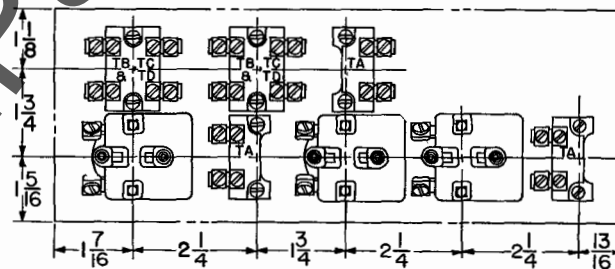


Illuminated Push Buttons Type TP



Selector Switch Operators Type TS		
Description	Dimension	
	A	B
Standard Knob	1½	1½
Gloved Hand Knob	2	1¾

ENCLOSURE MINIMUM SPACINGS



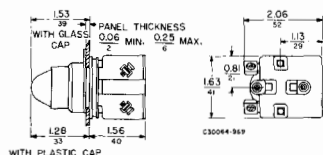
2357-C|3

Type TL-1 or TL-2 padlock attachments can be added to TR-Type operators without adding to overall dimensions or without interference to other operators mounted adjacent.

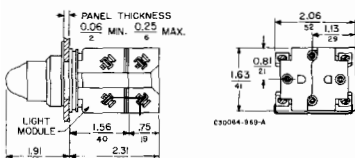
Type TM-1 maintained contact device may be installed on two push button units mounted from 1 1/8" (min.) to 2 1/2" (max.) apart, arranged either vertically or side by side. The contact block should always be assembled to the operator designated as Stop, Off or Safe.

For Type KA Block minimum spacing see Class 9001 Type K Section 4.

PILOT LIGHTS

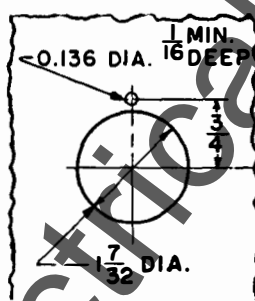


Standard Pilot Lights Type TP

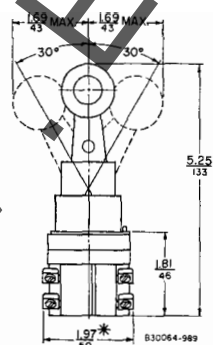


Push-to-Test Pilot Lights Type TP

CORRECT DRILLING FOR MOUNTING ALL DEVICES



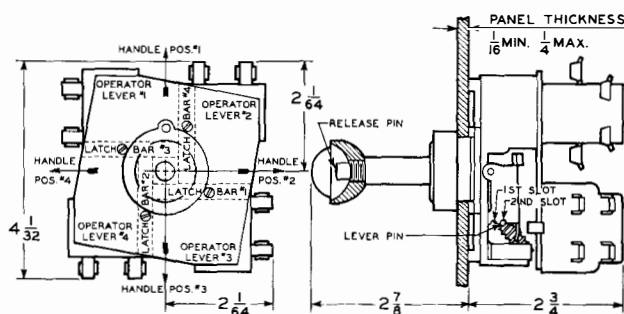
1 7/32" diameter hole may be cut with Greenlee knockout punch, No. 730-S, available through electrical wholesalers.



* OVER LIVE PARTS

Type TS80-E-2

SPECIAL PURPOSE OPERATORS



Four Position Joy Stick Operator Type TX



Push Buttons Miniature, Oiltight

TYPE L

CONTENTS

Description	Class	Pages
Non-illuminated Push Buttons	9001	7-2 & 7-3
Illuminated Push Buttons	9001	7-4 & 7-5
Alternate Action Push Buttons	9001	7-6
Multifunction Operators	9001	7-7
Selector Switch Selection Guide	9001	7-8
2 Position Selector Switches	9001	7-9
3 Position Selector Switches	9001	7-10 — 7-13
4 Position Selector Switches	9001	7-14

CONTENTS

Description	Class	Pages
Pilot Lights	9001	7-15
Light Modules and Basic Operators	9001	7-16
Miscellaneous Operators	9001	7-17
Legend Plates	9001	7-18
Contact Blocks	9001	7-19
Accessories	9001	7-20
Application Data	9001	7-21
Dimensions	9001	7-22 & 7-23

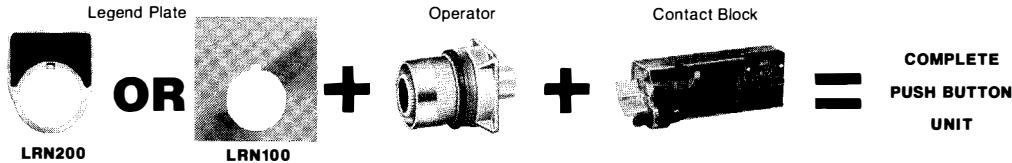


SQUARE D COMPANY

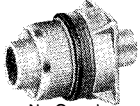
MINIATURE OILTIGHT CONTROL UNITS

ROUND MOMENTARY PUSH BUTTONS — NON-ILLUMINATED

JANUARY, 1982
Supersedes page
dated January, 1981



LEGEND PLATE NOT INCLUDED WITH OPERATOR CONTACT BLOCKS INCLUDED ONLY WHERE SPECIFIED

Description	Insert Color	Contact Blocks (Mounted)	Type		Price
			Pressure Wire Connectors	Slip On Connectors	
 Full Guard	Universal — includes one of each color insert from table at right.	None	LRR-1U	LRR-1U	\$10.80
	Black	None	LRR-1B	LRR-1B	10.80
	Black	1 N.C.	LRR-1BW1	LRR-1BW2	16.80
	Black	1 N.O.	LRR-1BW3	LRR-1BW4	16.80
	Black	1 N.C., 1 N.O.	LRR-1BW5	LRR-1BW6	22.80
	Black	Other	LRR-1B●	LRR-1B●	●
	Red	None	LRR-1R	LRR-1R	10.80
	Red	1 N.C.	LRR-1RW1	LRR-1RW2	16.80
	Red	1 N.O.	LRR-1RW3	LRR-1RW4	16.80
	Red	1 N.C., 1 N.O.	LRR-1RW5	LRR-1RW6	22.80
	Red	Other	LRR-1R●	LRR-1R●	●
	Other	None	LRR-1* LRR-1*	LRR-1* LRR-1*	10.80
 Extended Guard	Universal — includes one of each color insert from table at right.	None	LRR-2U	LRR-2U	10.80
	Black	None	LRR-2B	LRR-2B	10.80
	Black	1 N.C.	LRR-2BW1	LRR-2BW2	16.80
	Black	1 N.O.	LRR-2BW3	LRR-2BW4	16.80
	Black	1 N.C., 1 N.O.	LRR-2BW5	LRR-2BW6	22.80
	Black	Other	LRR-2B●	LRR-2B●	●
	Red	None	LRR-2R	LRR-2R	10.80
	Red	1 N.C.	LRR-2RW1	LRR-2RW2	16.80
	Red	1 N.O.	LRR-2RW3	LRR-2RW4	16.80
	Red	1 N.C., 1 N.O.	LRR-2RW5	LRR-2RW6	22.80
	Red	Other	LRR-2R●	LRR-2R●	●
	Other	None	LRR-2* LRR-2*	LRR-2* LRR-2*	10.80
 No Guard	Universal — includes one of each color insert from table at right.	None	LRR-3U	LRR-3U	10.80
	Black	None	LRR-3B	LRR-3B	10.80
	Black	1 N.C.	LRR-3BW1	LRR-3BW2	16.80
	Black	1 N.O.	LRR-3BW3	LRR-3BW4	16.80
	Black	1 N.C., 1 N.O.	LRR-3BW5	LRR-3BW6	22.80
	Black	Other	LRR-3B●	LRR-3B●	●
	Red	None	LRR-3R	LRR-3R	10.80
	Red	1 N.C.	LRR-3RW1	LRR-3RW2	16.80
	Red	1 N.O.	LRR-3RW3	LRR-3RW4	16.80
	Red	1 N.C., 1 N.O.	LRR-3RW5	LRR-3RW6	22.80
	Red	Other	LRR-3R●	LRR-3R●	●
	Other	None	LRR-3* LRR-3*	LRR-3* LRR-3*	10.80
 1" Mushroom Button	Red	None	LRR-4R	LRR-4R	12.80
	Red	1 N.C.	LRR-4RW1	LRR-4RW2	18.80
	Red	1 N.O.	LRR-4RW3	LRR-4RW4	18.80
	Red	Other	LRR-4R●	LRR-4R●	●
	Other	None	LRR-4▲ LRR-4▲	LRR-4▲ LRR-4▲	12.80
 1 1/2" Mushroom Button	Red	None	LRR-5R	LRR-5R	12.80
	Red	1 N.C.	LRR-5RW1	LRR-5RW2	18.80
	Red	1 N.O.	LRR-5RW3	LRR-5RW4	18.80
	Red	Other	LRR-5R●	LRR-5R●	●
	Other	None	LRR-5▲ LRR-5▲	LRR-5▲ LRR-5▲	12.80

● For other combinations of contact blocks assembled to operators and appropriate price adders, see Page 7-19.
* or ▲ Complete Type number by adding color code letter from tables at right.

FOR APPLICATION DATA, SEE PAGE 7-3

ACCESSORIES AND MODIFICATIONS — ROUND

COLOR INSERTS — NON-ILLUMINATED OPERATORS

Orders must specify quantity of 10 or multiples of 10

Color	* Code	Type	Price Each
Black	B	LR16B	\$.20
Red	R	LR16R	.20
Green	G	LR16G	.20
Brown	N	LR16N	.20
Yellow	Y	LR16Y	.20
Orange	S	LR16S	.20
Blue	L	LR16L	.20
White	W	LR16W	.20
Universal (All Colors)	U	LR16U	1.60

Example: Green full guard push button is Type LRR1G.

MUSHROOM BUTTONS — ROUND OPERATORS

Color	▲ Code	Type		Price
		1" Dia.	1½" Dia.	
Black	B	LR-70B	LR-17B	\$4.80
Red	R	LR-70R	LR-17R	
Green	G	LR-70G	LR-17G	
Yellow	Y	LR-70Y	LR-17Y	
Blue	L	LR-70L	LR-17L	
White	W	LR-70W	LR-17W	
Amber	A	LR-70A	LR-17A	
Example: Amber 1½" Dia. mushroom button operator is Type LRR5A				

RING NUTS

Used On	Type	Price
LRR-1	LR-41	\$.80
LRR-2	LR-42	.80
LRR-3 LRR-4 (No Guard)	LR-40	.80
LRR-4 (Full Guard)	LR-48	16.00
LRR-5 (No Guard)	LR-44	.80

STANDARD CONTACT BLOCKS (For Round or Square)

Description	With Pres- sure Wire Connectors	With Slip-On Terminals	Price
	Type	Type	
Single Circuit Normally Closed	LA-1	LB-1	\$6.00
Single Circuit Normally Open	LA-21	LB-21	6.00

COMMON LEGEND PLATES — Page 7-18.

OPERATOR DIMENSIONS —

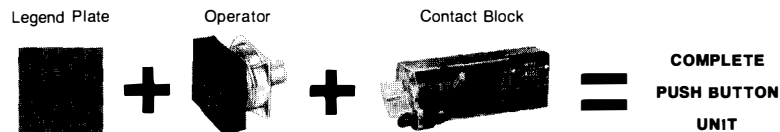
Pages 7-22, 7-23.



MINIATURE OILTIGHT CONTROL UNITS

SQUARE MOMENTARY PUSH BUTTONS — NON-ILLUMINATED

CLASS
9001



BLANK LEGEND INSERT INCLUDED

Description	Insert Color	Contact Blocks (Mounted)	Connector Type		Price
			Pressure Wire	Slip-On	
	Green	None	LSR1G	LSR1G	\$10.80
	Green	1 N.C.	LSR1GW1	LSR1GW2	16.80
	Green	1 N.O.	LSR1GW3	LSR1GW4	16.80
	Green	1 N.C., 1 N.O.	LSR1GW5	LSR1GW6	22.80
	Green	Other	LSR1G●	LSR1G●	●
	Red	None	LSR1R	LSR1R	10.80
	Red	1 N.C.	LSR1RW1	LSR1RW2	16.80
	Red	1 N.O.	LSR1RW3	LSR1RW4	16.80
	Red	1 N.C., 1 N.O.	LSR1RW5	LSR1RW6	22.80
	Red	Other	LSR1R●	LSR1R●	●
Full Guard	Amber	None	LSR1A	LSR1A	10.80
	Blue	None	LSR1L	LSR1L	10.80
	Clear	None	LSR1C	LSR1C	10.80
	Green	None	LSR3G	LSR3G	10.80
	Green	1 N.C.	LSR3GW1	LSR3GW2	16.80
	Green	1 N.O.	LSR3GW3	LSR3GW4	16.80
	Green	1 N.C., 1 N.O.	LSR3GW5	LSR3GW6	22.80
	Green	Other	LSR3G●	LSR3G●	●
	Red	None	LSR3R	LSR3R	10.80
	Red	1 N.C.	LSR3RW1	LSR3RW2	16.80
	Red	1 N.O.	LSR3RW3	LSR3RW4	16.80
	Red	1 N.C., 1 N.O.	LSR3RW5	LSR3RW6	22.80
	Red	Other	LSR3R●	LSR3R●	●
No Guard	Amber	None	LSR3A	LSR3A	10.80
	Blue	None	LSR3L	LSR3L	10.80
	Clear	None	LSR3C	LSR3C	10.80
	Green	None	LSR4G	LSR4G	12.80
	Green	1 N.C.	LSR4GW1	LSR4GW2	18.80
	Green	1 N.O.	LSR4GW3	LSR4GW4	18.80
	Green	1 N.C., 1 N.O.	LSR4GW5	LSR4GW6	24.80
	Green	Other	LSR4G●	LSR4G●	●
	Red	None	LSR4R	LSR4R	12.80
	Red	1 N.C.	LSR4RW1	LSR4RW2	18.80
	Red	1 N.O.	LSR4RW3	LSR4RW4	18.80
	Red	1 N.C., 1 N.O.	LSR4RW5	LSR4RW6	24.80
	Red	Other	LSR4R●	LSR4R●	●
Domed Button (Mushroom)	Amber	None	LSR4A	LSR4A	12.80
	Blue	None	LSR4L	LSR4L	12.80
	Clear	None	LSR4C	LSR4C	12.80

• For other combinations of contact blocks assembled to operators and appropriate price adders, see Page 7-19.

ACCESSORIES AND MODIFICATIONS — SQUARE ACCESSORIES FOR CONVERSION

From Square to Round			From Round to Square				
							
Round Conversion Kit	Mushroom Button	Ring Nut	Bezel	Ring Nut	Spacers		
Order: Proper Ring Nut from the Ring Nuts Table and a Round Conversion Kit or the Proper Mushroom Button from the Mushroom Button Table.			Order: Square Conversion Kit and an insert kit from the table below.				
Description		Type	Price	Description		Type	Price
Round Conversion Kit (Standard Button and one Universal Insert Kit)		LR-27	\$2.80	Square Conversion Kit (Bezel, Ring Nut, Spacers)		LS-70	\$8.00
				Bezel only		LS-60	.40
				Square Ring Nut only		LS-40	.40
				Spacer only		LW-2	N/C

INSERT KITS

(Includes button, blank legend insert and colored button cover)

		Full Guard		No Guard		Domed Button	
Color	Code Letter	Type	Price	Type	Price	Type	Price
Green	G	LS-71G	\$2.80	LS-72G	\$2.80	LS-73G	\$4.80
Red	R	LS-71R		LS-72R		LS-73R	
Amber	A	LS-71A		LS-72A		LS-73A	
Blue	L	LS-71L		LS-72L		LS-73L	
Clear	C	LS-71C		LS-72C		LS-73C	

COMMON LEGEND PLATES PAGE 7-18
OPERATOR DIMENSIONS PAGES 7-22, 7-23

APPLICATION DATA FOR PUSH BUTTONS

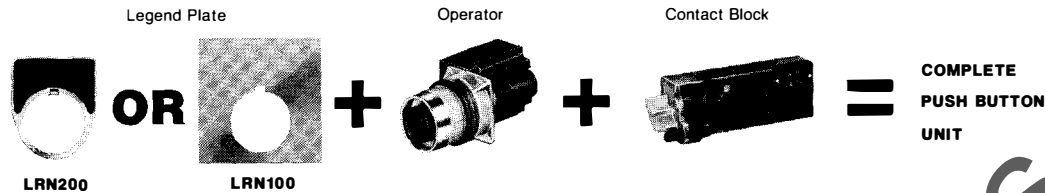
Type L operators are suitable for use indoors on NEMA 13 oiltight and dusttight enclosures to prevent entry of lint, dust, oil, coolant and other non-corrosive industrial liquids. For NEMA 4 watertight enclosures or for applications where dust, chips, shavings, ice or other foreign materials can build up around the external operator, a protective cap must be used, see Page 7-20 (protective caps available for round operators only).

Guards, bezels, inserts and color caps are field convertible by ordering the required guard, bezel, insert or color cap from tables on Pages 7-2, 7-4. Any round push button can be converted to a mushroom operator by ordering the mushroom button from tables on Pages 7-2, 7-4. **Non-illuminated operators can be converted to illuminated operators** by adding a color cap and light module. **Round operators can be converted to square** by adding a conversion kit and the desired insert kit from the tables below. All contact blocks are single circuit. A maximum of four contact blocks, NO or NC, can be mounted on non-illuminated operators and a maximum of two contact blocks, NO or NC, can be mounted on illuminated operators.

MINIATURE OILTIGHT CONTROL UNITS

ROUND MOMENTARY PUSH BUTTONS — ILLUMINATED

JANUARY, 1982
Supersedes page
dated January, 1981



LEGEND PLATE NOT INCLUDED CONTACT BLOCKS INCLUDED ONLY WHERE SPECIFIED

Description	Voltage	Color Cap	Contact Blocks (Mounted)	Type		Price
				Pressure Wire	Slip-On	
 Full Guard	120 Volt 60 Hz Transformer Type	Red	None	LR1L-A1R	LR1L-B1R	\$42.80
		Red	1 N.C.	LR1L-A1RW1	LR1L-B1RW2	48.80
		Red	1 N.D.	LR1L-A1RW3	LR1L-B1RW4	48.80
		Red	Other	LR1L-A1R●	LR1L-B1R●	42.80●
		Green	None	LR1L-A1G	LR1L-B1G	42.80
		Green	1 N.C.	LR1L-A1GW1	LR1L-B1GW2	48.80
 No Guard	120 Volt 60 Hz Transformer Type	Red	None	LR1L-A1G●	LR1L-B1G●	42.80●
		Red	1 N.C.	LR1L-A1GW3	LR1L-B1GW4	48.80
		Red	1 N.D.	LR1L-A1G●	LR1L-B1G●	42.80●
		Red	Other	LR1L-A1G●	LR1L-B1G●	42.80●
		Green	None	LR1L-A1*	LR1L-B1*	42.80
		Green	1 N.C.	LR1L-A1*	LR1L-B1*	42.80
 1" Dia. Mushroom	120 Volt 60 Hz Transformer Type	Red	None	LR1L-A1*	LR1L-B1*	42.80
		Red	1 N.C.	LR1L-A1*	LR1L-B1*	42.80
		Red	1 N.D.	LR1L-A1*	LR1L-B1*	42.80
		Red	Other	LR1L-A1*	LR1L-B1*	42.80
		Green	None	LR1L-A1*	LR1L-B1*	42.80
		Green	1 N.C.	LR1L-A1*	LR1L-B1*	42.80
 1 1/2" Dia. Mushroom	120 Volt 60 Hz Transformer Type	Red	None	LR1L-A1*	LR1L-B1*	42.80
		Red	1 N.C.	LR1L-A1*	LR1L-B1*	42.80
		Red	1 N.D.	LR1L-A1*	LR1L-B1*	42.80
		Red	Other	LR1L-A1*	LR1L-B1*	42.80
		Green	None	LR1L-A1*	LR1L-B1*	42.80
		Green	1 N.C.	LR1L-A1*	LR1L-B1*	42.80

- For other combinations of contact blocks assembled to operators and appropriate price adders see Page 7-19.
* Insert proper color code from table at right.
▲ Complete type number by adding light module code number from Other Voltages Table this page.
★ See Other Voltages Table (this page) for possible price deductions.

ACCESSORIES AND MODIFICATIONS — ROUND COLOR CAPS AND MUSHROOM CAPS

Color	Code *	Type		Price
		Color Cap	1" Dia. Mushroom	
Red	R	LR-57R	LR-70R	\$4.80
Green	G	LR-57G	LR-70G	
Amber	A	LR-57A	LR-70A	
Blue	L	LR-57L	LR-70L	
White	W	LR-57W	LR-70W	
Yellow	Y	LR-57Y	LR-70Y	

*Example: Amber full guard illuminated push button (120V transformer style) is Type LR1L-A1A.

OTHER VOLTAGES

Description	Voltage & Frequency	Operator Assembled With Any Light Module	
		Code ▲ No.	Price★ Adjustment
Transformer	110-120V, 50-60 Hz.	1	No Change
	208-220V, 50-60 Hz.	3	
	220-240V, 50-60 Hz.	7	
Resistor	48V, AC or DC	36	Deduct \$8.
	60V, AC or DC	37	
	120V, AC or DC	38	
Full Voltage	6V, AC or DC	31	Deduct \$8.
	12V, AC or DC	32	
	24V, AC or DC	34	
	28V, AC or DC	35	

To order round or square illuminated push button operators with voltages other than 120 Volt, 60 Hertz transformer style, insert the Code ▲ No. from the table at the right in the operator Type number. Price deductions ★ for full voltage or resistor style operators are as shown in the table.
*Example: A full guard illuminated push button with a 24 volt full voltage light module is Type LR1L-A34, priced at \$32. (\$40. minus \$8). For replacement lamps and rated VA see page 7-16.

Used On	Type	Price
LR1L	LR-41	\$.80
LR2L	LR-40	.80
LR4L		
(No Guard)	LR-40	.80
LR4L		
(Full Guard)	LR-48	16.00
LR3L	LR-44	.80

FOR SEPARATE CONTACT BLOCKS SEE NEXT PAGE

Legend Plates — See Page 7-18.

Ring Nuts — See Page 7-2.

Conversion Kits — See Page 7-3.

Operator Dimensions — See Pages 7-22, 7-23.

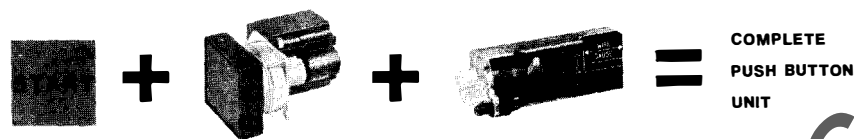
MINIATURE OILTIGHT CONTROL UNITS SQUARE MOMENTARY PUSH BUTTONS — ILLUMINATED

CLASS
9001

Legend Plate

Operator

Contact Block

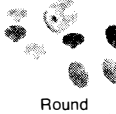
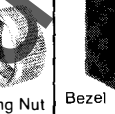
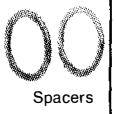


BLANK LEGEND INSERT INCLUDED

Description	Voltage	Color	Contact Blocks (Mounted)	Type		Price
				Pressure Wire	Slip-On	
 Full Guard	120 Volt 60 Hz Transformer Type	Green	None	LS1L-A1G	LS1L-B1G	\$42.80
		Green	1 N.C.	LS1L-A1GW1	LS1L-B1GW2	48.80
		Green	1 N.O.	LS1L-A1GW3	LS1L-B1GW4	48.80
		Green	Other	LS1L-A1G●	LS1L-B1G●	42.80*
		Red	None	LS1L-A1R	LS1L-B1R	42.80
	Other	Red	1 N.C.	LS1L-A1RW1	LS1L-B1RW2	48.80
		Red	1 N.O.	LS1L-A1RW3	LS1L-B1RW4	48.80
		Red	Other	LS1L-A1R●	LS1L-B1R●	42.80*
		Other	None	LS1L-A1*	LS1L-B1*	42.80
		Red	None	LS1L-A1▲	LS1L-B1▲	42.80*
 No Guard	120 Volt 60 Hz Transformer Type	Red	None	LS3L-A1R	LS3L-B1R	42.80
		Red	1 N.C.	LS3L-A1RW1	LS3L-B1RW2	48.80
		Red	1 N.O.	LS3L-A1RW3	LS3L-B1RW4	48.80
		Red	Other	LS3L-A1R●	LS3L-B1R●	42.80*
		Green	None	LS3L-A1G	LS3L-B1G	42.80
	Other	Green	1 N.C.	LS3L-A1GW1	LS3L-B1GW2	48.80
		Green	1 N.O.	LS3L-A1GW3	LS3L-B1GW4	48.80
		Green	Other	LS3L-A1G●	LS3L-B1G●	42.80*
		Other	None	LS3L-A1*	LS3L-B1*	42.80
		Red	None	LS3L-A1▲	LS3L-B1▲	42.80*
 Domed Button (Mushroom)	120 Volt 60 Hz Transformer Type	Red	None	LS4L-A1R	LS4L-B1R	44.80
		Red	1 N.C.	LS4L-A1RW1	LS4L-B1RW2	50.80
		Red	1 N.O.	LS4L-A1RW3	LS4L-B1RW4	50.80
		Red	Other	LS4L-A1R●	LS4L-B1R●	44.80*
		Green	None	LS4L-A1G	LS4L-B1G	44.80
	Other	Green	1 N.C.	LS4L-A1GW1	LS4L-B1GW2	50.80
		Green	1 N.O.	LS4L-A1GW3	LS4L-B1GW4	50.80
		Green	Other	LS4L-A1G●	LS4L-B1G●	44.80*
		Other	None	LS4L-A1*	LS4L-B1*	44.80
		Red	None	LS4L-A1▲	LS4L-B1▲	44.80*

- ★ See Other Voltages Table Page 7-4 for possible price deductions.
● For other combinations of contact blocks assembled to operators and appropriate price adders see Page 7-19.
* Add proper code letter from Insert Kits Table.
▲ Complete type number by adding light module code number from Other Voltages Table Page 7-4.

ACCESSORIES AND MODIFICATIONS — SQUARE ACCESSORIES FOR CONVERSION

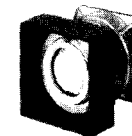
From Square to Round			From Round to Square		
					
Order: Proper Ring Nut from the Ring Nuts Table and a Round Conversion Kit or the Proper Mushroom Button from the Mushroom Button Table.			Order: Square Conversion Kit and an insert kit from the table below.		
Description	Type	Price	Description	Type	Price
Square Conversion Kit (Bezel, Ring Nut, Spacers)	LS-70	\$2.80	Bezel only	LS-60	.40
Round Conversion Kit (Standard Button and one Universal Insert Kit)	LR-27	\$2.80	Square Ring Nut only	LS-40	.40
			Spacer only	LW-2	N/C

INSERT KITS (Includes button, blank legend insert and colored button cover)

Color	Code Letter	Full Guard		No Guard		Domed Button	
		Type	Price	Type	Price	Type	Price
Green	G	LS-71G	\$2.80	LS-72G	\$2.80	LS-73G	\$4.80
Red	R	LS-71R		LS-72R		LS-73R	
Amber	A	LS-71A		LS-72A		LS-73A	
Blue	L	LS-71L		LS-72L		LS-73L	
Clear	C	LS-71C		LS-72C		LS-73C	

SQUARE OPERATORS WITH BEZEL

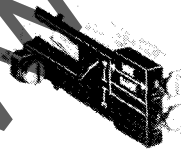
Less color insert kit and contact blocks

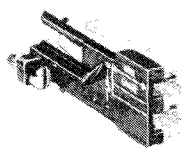


Operator	Type	Price
Push Button	LS1L	\$8.

COMMON LEGEND PLATES PAGE 7-18 OPERATOR DIMENSIONS PAGES 7-22, 7-23

CONTACT BLOCKS FOR ROUND OR SQUARE

	Accepts One — #14 stranded wire Two — #16 stranded wires Two — #18 stranded wires		
	Description	Type	Price
	Single Circuit Closed...	LA-1	\$6.
Single Circuit Open...		LA-21	6.

	Accepts Commercially available .110" or .250" wide by .032" tab thickness slip-on connectors.		
	Description	Type	Price
	Single Circuit Closed...	LB-1	\$6.
Single Circuit Open...		LB-21	6.

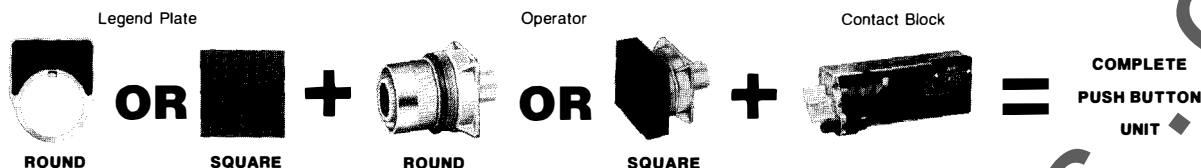
MINIATURE OILTIGHT CONTROL UNITS

ALTERNATE ACTION PUSH BUTTONS (PUSH ON — PUSH OFF)

ROUND AND SQUARE

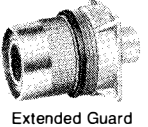
ILLUMINATED AND NON-ILLUMINATED

JANUARY, 1982
Supersedes page
dated January, 1981



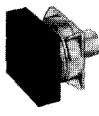
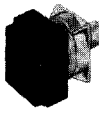
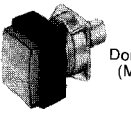
ALTERNATE ACTION ROUND NON-ILLUMINATED

Legend Plate and Contact Block Not Included.

Description	Insert Color	Type	Price
 Full Guard	Universal — includes one of each color insert listed on page 7-2.	LRR-361U	\$26.80
	Red	LRR-361R	26.80
	Green	LRR-361G	26.80
	Black	LRR-361B	26.80
	Other	LRR-361*	26.80
 Extended Guard	Universal — includes one of each color insert listed on page 7-2.	LRR-362U	26.80
	Black	LRR-362B	26.80
	Other	LRR-362*	26.80
 No Guard	Universal — Includes one of each color insert listed on page 7-2.	LRR-363U	26.80
	Black	LRR-363B	26.80
	Other	LRR-363*	26.80
 Mushroom Button	1" Dia. Red	LRR-364R	28.80
	1" Dia. Black	LRR-364B	28.80
	1" Dia. Other	LRR-364*	28.80
	1 3/8" Dia. Red	LRR-365R	28.80
	1 3/8" Dia. Black	LRR-365B	28.80
	1 3/8" Dia. Other	LRR-365*	28.80

* or 0 Complete type number by adding the color code letter from accessories table below.

ALTERNATE ACTION SQUARE NON-ILLUMINATED

Description	Insert Color	Type	Price
 Full Guard	Green	LSR-361G	\$26.80
	Red	LSR-361R	26.80
	Amber	LSR-361A	26.80
	Blue	LSR-361L	26.80
	Clear	LSR-361C	26.80
 No Guard	Green	LSR-363G	26.80
	Red	LSR-363R	26.80
	Amber	LSR-363A	26.80
	Blue	LSR-363L	26.80
	Clear	LSR-363C	26.80
 Domed Button (Mushroom)	Green	LSR-364G	28.80
	Red	LSR-364R	28.80
	Amber	LSR-364A	28.80
	Blue	LSR-364L	28.80
	Clear	LSR-364C	28.80

ACCESSORIES AND MODIFICATIONS — ROUND

COLOR CAPS AND MUSHROOM CAPS

Color	Code	Type				Price
		Color Cap	Price	1" Dia. Mushroom	1 3/8" Dia. Mushroom	
Red	R	LR-57R	\$2.80	LR-70R	LR-17R	\$4.80
Green	G	LR-57G		LR-70G	LR-17G	
Amber	A	LR-57A		LR-70A	LR-17A	
Blue	L	LR-57L		LR-70L	LR-17L	
White	W	LR-57W		LR-70W	LR-17W	
Yellow	Y	LR-57Y		LR-70Y	LR-17Y	

***Example:** Amber full guard illuminated alternate action push button (120V transformer style) is Type LR361-LA1A.

ALTERNATE ACTION ROUND ILLUMINATED

Legend Plate and Contact Block Not Included.

Description	Insert Color	Type	Price
 Full Guard	Red	LR-361L■●R	\$58.80*
	Green	LR-361L■●G	58.80*
	Amber	LR-361L■●A	58.80*
	Other	LR-361L■●0	58.80*
 Extended Guard	Red	LR-362L■●R	58.80*
	Green	LR-362L■●G	58.80*
	Amber	LR-362L■●A	58.80*
	Other	LR-362L■●0	58.80*
 No Guard	Red	LR-363L■●R	58.80*
	Green	LR-363L■●G	58.80*
	Amber	LR-363L■●A	58.80*
	Other	LR-363L■●0	58.80*
 Mushroom Button	1" Dia. Red	LR-364L■●R	60.80*
	1" Dia. Green	LR-364L■●G	60.80*
	1" Dia. Other	LR-364L■●0	60.80*
	1 3/8" Dia. Red	LR-365L■●R	60.80*
	1 3/8" Dia. Green	LR-365L■●G	60.80*
	1 3/8" Dia. Other	LR-365L■●0	60.80*

■ Insert "A" for pressure wire connectors or "B" for slip on terminals on the light module.
● Complete type number by adding light module code number from Page 7-16.
0 Complete type number by adding the color code letter from accessories table below.
* See table on Page 7-16 for possible price deductions.

ALTERNATE ACTION SQUARE ILLUMINATED

Description	Insert Color	Type	Price
 Full Guard	Green	LS-361L■●G	\$58.80*
	Red	LS-361L■●R	58.80*
	Amber	LS-361L■●A	58.80*
	Blue	LS-361L■●L	58.80*
	Clear	LS-361L■●C	58.80*
 No Guard	Green	LS-363L■●G	58.80*
	Red	LS-363L■●R	58.80*
	Amber	LS-363L■●A	58.80*
	Blue	LS-363L■●L	58.80*
	Clear	LS-363L■●C	58.80*
 Domed Button (Mushroom)	Green	LS-364L■●G	60.80*
	Red	LS-364L■●R	60.80*
	Amber	LS-364L■●A	60.80*
	Blue	LS-364L■●L	60.80*
	Clear	LS-364L■●C	60.80*

■ Insert "A" for pressure wire connectors or "B" for slip on terminals on the light module.
● Complete type number by adding light module code number from Page 7-16.
* See table on Page 7-16 for possible price deductions.

ACCESSORIES AND MODIFICATIONS — SQUARE

INSERT KITS

(Includes button, blank legend insert and colored button cover)

(includes button, blank legend, insert and colored button covers)						
	Full Guard		No Guard		Domed Button	
	Color	Type	Type	Price	Type	Price
	Green	LS-71G	LS-72G	\$2.80	LS-73G	\$4.80
	Red	LS-71R	LS-72R		LS-73R	
	Amber	LS-71A	LS-72A		LS-73A	
	Blue	LS-71L	LS-72L		LS-73L	
Clear	LS-71C	LS-72C	LS-73C			

FOR APPLICATION DATA SEE PAGE 7-7.

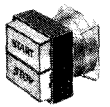


MINIATURE OILTIGHT CONTROL UNITS MULTI-FUNCTION OPERATORS

CLASS
9001

DUAL BUTTON OPERATOR — Non-Illuminated Only

Both momentary non-interlocked buttons. Blank legend inserts included.

Description	Colors	Type	Price
 Two Full Guard Buttons	Red-Green	LSR-60RG	\$21.60
	Green-Amber	LSR-60GA	21.60
	Red-Clear	LSR-60RC	21.60
	Amber-Blue	LSR-60AL	21.60
	Red-Red	LSR-60RR	21.60
	Other	LSR-60##	21.60
 Full Guard No Guard	Green-Red	LSR-61GR	21.60
	Green-Amber	LSR-61GA	21.60
	Red-Clear	LSR-61RC	21.60
	Amber-Blue	LSR-61AL	21.60
	Red-Red	LSR-61RR	21.60
	Other	LSR-61##	21.60
 Two No Guard Buttons	Red-Green	LSR-62RG	21.60
	Green-Amber	LSR-62GA	21.60
	Red-Clear	LSR-62RC	21.60
	Amber-Blue	LSR-62AL	21.60
	Red-Red	LSR-62RR	21.60
	Other	LSR-62##	21.60

APPLICATION DATA

Type L operators are suitable for use indoors on NEMA 13 oiltight and dusttight enclosures to prevent entry of lint, dust, oil, coolant and other non-corrosive industrial liquids. For NEMA 4 watertight enclosures or for applications where dust, chips, shavings, ice or other foreign material can build up around the external operator, a protective cap must be used, see Page 7-20 (protective caps available for round operators only).

ALTERNATE ACTION PUSHBUTTONS

Guards, bezels, inserts and color caps are field convertible by ordering the required guard, bezel, insert or color cap from tables on Pages 7-2 to 7-5. Any round push button can be converted to a mushroom operator by ordering the mushroom button from table on Page 7-6. Non-illuminated operators can be converted to illuminated operators by adding a color cap and light module. Round operators can be converted to square by adding a conversion kit from page 7-5 and the desired insert kit from the table on Page 7-6.

DUAL BUTTON OPERATOR

Dual button operators are available in square version only. Colored inserts are interchangeable. Order inserts from table below. These operators will accept 2 contact blocks per button for a total of 4 contact blocks per operator.

MULTIFIELD PUSHBUTTONS

Multifield pushbuttons will accept 1 or 2 Type L contact blocks.

Voltage Code and Replacement Lamps for Multi-field Operators

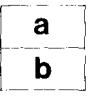
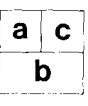
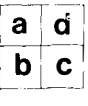
Voltage	Voltage Code #	Lamp Number	Square D Part Number	Lamp Price (D14A)
6 Volts	51	CM7-7683	25501-04042	\$4.00
12 Volts	52	CM7-8097	25501-04043	4.00
24 Volts	54	CM7-7839	25501-04044	4.00

INSERT KIT FOR DUAL BUTTON OPERATOR

(Includes button, blank legend insert and colored button cover)	Color Code	Full Guard#	No GuardΔ	Price
R	LS-74R	LS-75R		\$1.40
G	LS-74G	LS-75G		
A	LS-74A	LS-75A		
L	LS-74L	LS-75L		
C	LS-74C	LS-75C		

MULTI-FIELD PUSH BUTTON - Illuminated

Single momentary button. Will accept up to 2 Type L contact blocks

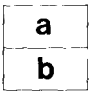
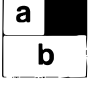
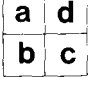
Description	Voltage	Type		Price
		Pressure Wire	Slip-On	
 Two Field	6 Volts	LSR-42A51 + + a b	LSR-42B51 + + a b	\$68.00
	12 Volts	LSR-42A52 + + a b	LSR-42B52 + + a b	68.00
	24 Volts	LSR-42A54 + + a b	LSR-42B54 + + a b	68.00
 Three Field	6 Volts	LSR-43A51 + + + a b c	LSR-43B51 + + + a b c	112.00
	12 Volts	LSR-43A52 + + + a b c	LSR-43B52 + + + a b c	112.00
	24 Volts	LSR-43A54 + + + a b c	LSR-43B54 + + + a b c	112.00
 Four Field	6 Volts	LSR-44A51 + + + + a b c d	LSR-44B51 + + + + a b c d	136.00
	12 Volts	LSR-44A52 + + + + a b c d	LSR-44B52 + + + + a b c d	136.00
	24 Volts	LSR-44A54 + + + + a b c d	LSR-44B54 + + + + a b c d	136.00

† For a, b, c, and d insert the required color code from table below.

Color Code	Color
R	Red
G	Green
A	Amber
L	Blue
C	Clear

ALL OPERATORS ON THIS PAGE
USE STANDARD
TYPE L CONTACT BLOCKS

MULTI-FIELD PILOT LIGHT

Description	Voltage	Type		Price
		Pressure Wire	Slip-On	
 Two Field	6 Volts	LSP-42A51 + + a b	LSP-42B51 + + a b	\$68.00
	12 Volts	LSP-42A52 + + a b	LSP-42B52 + + a b	68.00
	24 Volts	LSP-42A54 + + a b	LSP-42B54 + + a b	68.00
 Three Field	6 Volts	LSP-43A51 + + + a b c	LSP-43B51 + + + a b c	112.00
	12 Volts	LSP-43A52 + + + a b c	LSP-43B52 + + + a b c	112.00
	24 Volts	LSP-43A54 + + + a b c	LSP-43B54 + + + a b c	112.00
 Four Field	6 Volts	LSP-44A51 + + + + a b c d	LSP-44B51 + + + + a b c d	136.00
	12 Volts	LSP-44A52 + + + + a b c d	LSP-44B52 + + + + a b c d	136.00
	24 Volts	LSP-44A54 + + + + a b c d	LSP-44B54 + + + + a b c d	136.00

Example: The type number for a multi-field pilot light, with four fields, pressure wire connectors on the light module, 24 volts, with red, green, amber and blue fields will be **9001LSP44A54RGAL**. The price is **\$136.00**.

STANDARD CONTACT BLOCKS

Description	With Pressure Wire Connectors	With Slip-On Terminals	Price
	Type	Type	
Single Circuit Closed	LA-1	LB-1	\$6.6.
Single Circuit Open	LA-21	LB-21	

MINIATURE OILTIGHT CONTROL UNITS

SELECTOR SWITCH SELECTION GUIDE

JANUARY, 1982
Supersedes page
dated January, 1981

Shown below is a simplified method of selecting a selector switch to meet almost any contact sequence. For additional type numbers (spring return — illuminated — key operated) see pages 7-9 thru 7-14.

STEP NO. 1

Determine the selector switch contact sequence(s) required (see example below) and locate sequence(s) in Table 1, 2 or 3.

If more than one sequence per operator is required, look for cam type common to all sequences.

A maximum of 4 contact blocks or sequences can be used on non-illuminated selector switches. A maximum of 2 contact blocks or sequences can be used on illuminated selector switches.

Example:

1 0 0	0 1 0	0 0 1
0 = contact open 1 = contact closed		

For the above example, use Table 2. For the contact sequences of 100, 010, and 001, cam 4 is common to all 3 sequences.

STEP NO. 2

Go to Table 4 and choose the selector switch type opposite the cam determined in Step No. 1.

For the above example:

Cam 4 — Type LRSD4.

STEP NO. 3:

To determine contact blocks required, use Tables 1, 2, or 3.

Example:

For sequence 100 using cam 4 — use LA-1 or LB-1 mounted in position no. 4.

For sequence 010 using cam 4 — use LA-1 or LB-1 mounted in position no. 1.

For sequence 001 using cam 4 — use LA-1 or LB-1 mounted in position no. 2.

TABLE 1
2 Position Selector Switch

If you require contact sequence		Use Sel. Sw. with cam No.	Use contact block type	Mount in Position No.
0	1	2	LA-1 or LB-1	1, 2, 3, 4
1	0	2	LA-21 or LB-21	1, 2, 3, 4

TABLE 2
3 Position Selector Switch

If you require contact sequence			Use Sel. Sw. with cam No.	Use Contact Block Type	Mount in Position No.
1	0	0	1 2 4 7	LA-1 or LB-1 LA-21 or LB-21 LA-1 or LB-1 LA-21 or LB-21	1 2 3 4
0	1	0	2 4 5	LA-1 or LB-1 LA-21 or LB-21 LA-21 or LB-21 LA-1 or LB-1	1 2 3 4
0	0	1	1 4 5 7	LA-1 or LB-1 LA-1 or LB-1 LA-21 or LB-21 LA-1 or LB-1	1 2 3 4
1	1	0	1 4 5 7	LA-21 or LB-21 LA-21 or LB-21 LA-1 or LB-1 LA-21 or LB-21	1 2 3 4
0	1	1	1 2 4 7	LA-21 or LB-21 LA-1 or LB-1 LA-21 or LB-21 LA-1 or LB-1	1 2 3 4
1	0	1	2 4 5	LA-21 or LB-21 LA-1 or LB-1 LA-21 or LB-21	1 2 3 4

◆ These positions cannot be used when illuminated devices are desired. The light module assembly uses positions 3 and 4.

TABLE 3
4 Position Non-Illuminated Switch

If you require contact sequence				Use Sel. Sw. with cam No.	Use contact block type	Mount in Position No.
1	0	0	0	8	(A) LA-1 or LB-1	1
0	1	0	0	8	(B) LA-1 or LB-1	3
0	0	1	0	8	(C) LA-1 or LB-1	4
0	0	0	1	8	(D) LA-1 or LB-1	2
1	0	0	1	8	A & D Wired in Parallel	
1	1	0	0	8	A & B Wired in Parallel	
0	1	1	0	8	B & C Wired in Parallel	
0	0	1	1	8	C & D Wired in Parallel	
1	0	1	0	8	A & C Wired in Parallel	
0	1	0	1	8	B & D Wired in Parallel	
0	1	1	1	8	LA-21 or LB-21	1
1	0	1	1	8	LA-21 or LB-21	3
1	1	0	1	8	LA-21 or LB-21	4
1	1	1	0	8	LA-21 or LB-21	2

TABLE 4
Maintained Contact

No. of Position	Cam Number	Non-Illuminated		Illuminated — 120V Transf.	
		Round Type	Square Type	Round Type	Square Type
2	2	LRSA2*	LSSA2*	LR-A2J*1*	LS-A2J*1*
3	1	LRSD1*	LSSD1*	LR-D1J*1*	LS-D1J*1*
	2	LRSD2*	LSSD2*	LR-D2J*1*	LS-D2J*1*
	4	LRSD4*	LSSD4*	LR-D4J*1*	LS-D4J*1*
	5	LRSD5*	LSSD5*	LR-D5J*1*	LS-D5J*1*
	7	LRSD7*	LSSD7*	LR-D7J*1*	LS-D7J*1*
4	8	LRSH8*	LSSH8*	.....	.....

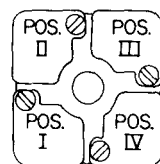
* Insert knob color code from table 5.

● Insert "A" for pressure wire connectors or "B" for slip-on terminals on light module.

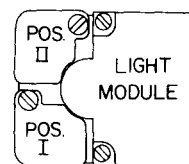
TABLE 5
Knob Selection

Color	Knob Code — Insert code letter below in place of * in type no. from Table 4. Ex: LRSD4B	
	Standard Knob	Gloved Hand Knob
Black	B	FB
Red	R	FR
Green	G	FG
Blue	L	FL
White	W	FW
Amber	A	FA

Fig. 1 — Contact block mounting position



Non-Illuminated



Illuminated

A maximum of 4 contact blocks may be used on any "L" operator. On illuminated operators, a maximum of 2 contact blocks may be used, one in position no. 1 and one in position no. 2.



MINIATURE OILTIGHT CONTROL UNITS

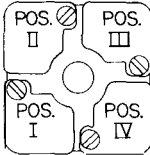
2 POSITION — NON-ILLUMINATED & ILLUMINATED —

SELECTOR SWITCH OPERATORS

CLASS
9001



2 POSITION SELECTOR SWITCH OPERATORS — Legend Plate and Contact Blocks Not Included

CONTACT BLOCKS REQUIRED			1 = Contact Closed 0 = Contact Open		Order Contact Blocks From Table on Page		
Contact Block Position	Mount In Position	Quantity and Type					
	I	(1) LA-1 or LB-1 (1) LA-21 or LB-21	0 1	1 0			
	II	(1) LA-1 or LB-1 (1) LA-21 or LB-21	0 1	1 0			
	III	(1) LA-1 or LB-1 (1) LA-21 or LB-21	1 0	0 1			
	IV	(1) LA-1 or LB-1 (1) LA-21 or LB-21	1 0	0 1			
Rear View	Cam No. (Included with operator)		2				
Description		Knob Color	Round Type	Square Type	Price		
Non-Illuminated Operators Manual Return Key Operated (Code 1, 2, 3) With Contact Blocks Assembled (See Page 7-19) With 1-LA-1 in Pos. 1 With 1-LA-21 in Pos. 1 With 1-LA-1 in Pos. 1 & 1-LA-21 in Pos. 2		None	L RSA-2	L SSA-2	\$12.00		
		Black	L RSA-2B	L SSA-2B	14.80		
		Red	L RSA-2R	L SSA-2R	14.80		
		Green	L RSA-2G	L SSA-2G	14.80		
		Amber	L RSA-2A	L SSA-2A	14.80		
		Other	L RSA-2*	L SSA-2*	14.80		
		—	L RSA-2K†	L SSA-2K†	38.80		
		Black	L RSA-2BW1	L SSA-2BW1	20.80		
		Black	L RSA-2BW3	L SSA-2BW3	20.80		
		Black	L RSA-2BW5	L SSA-2BW5	26.80		
Spring Return From Left		None	L RSB-2	L SSB-2	20.00		
Key Operated (Code 2 only)	Black	L RSB-2B	L SSB-2B	22.80			
	Red	L RSB-2R	L SSB-2R	22.80			
	Green	L RSB-2G	L SSB-2G	22.80			
	Amber	L RSB-2A	L SSB-2A	22.80			
	Other	L RSB-2*	L SSB-2*	22.80			
	—	L RSB-2K2	L SSB-2K2	46.80			
	Spring Return From Right		None	L RSC-2	L SSC-2	20.00	
	Key Operated (Code 1 only)	Black	L RSC-2B	L SSC-2B	22.80		
		Red	L RSC-2R	L SSC-2R	22.80		
		Green	L RSC-2G	L SSC-2G	22.80		
Amber		L RSC-2A	L SSC-2A	22.80			
Other		L RSC-2*	L SSC-2*	22.80			
—		L RSC-2K1	L SSC-2K1	46.80			
Description		Voltage	Knob Color	Round Type	Square Type	Price	
Illuminated Operators Manual Return With Contact Blocks Assembled (See page 7-19) With 1-LA-1 in Pos. 1 With 1-LA-21 in Pos. 1 With 1-LA-1 in Pos. 1 & 1-LA-21 in Pos. 2		120V, 60 Hz Transformer Style	None	L RA2J■1	L SA2J■1	\$44.00	
		Other Voltages	Red	L RA2J■1R	L SA2J■1R	46.80	
			Green	L RA2J■1G	L SA2J■1G	46.80	
			Amber	L RA2J■1A	L SA2J■1A	46.80	
			Other	L RA2J■1*	L SA2J■1*	46.80	
			Red	L RA2J■1R	L SA2J■1R	46.80*	
		120V, 60 Hz Transformer Style	Red	L RA2JA1RW1	L SA2JA1RW1	52.80	
		Other Voltages	Red	L RA2JA1RW3	L SA2JA1RW3	52.80	
			Red	L RA2JA1RW5	L SA2JA1RW5	58.80	
			Spring Return From Left		120V, 60 Hz Transformer Style	None	L RB2J■1	L SB2J■1	52.00
Other Voltages	Red	L RB2J■1R	L SB2J■1R	54.80			
	Green	L RB2J■1G	L SB2J■1G	54.80			
	Amber	L RB2J■1A	L SB2J■1A	54.80			
	Other	L RB2J■1*	L SB2J■1*	54.80			
	Red	L RB2J■1R	L SB2J■1R	54.80*			
	Spring Return From Right		120V, 60 Hz Transformer Style	None	L RC2J■1	L SC2J■1	52.00
	Other Voltages	Red	L RC2J■1R	L SC2J■1R	54.80		
		Green	L RC2J■1G	L SC2J■1G	54.80		
		Amber	L RC2J■1A	L SC2J■1A	54.80		
		Other	L RC2J■1*	L SC2J■1*	54.80		
Red		L RC2J■1R	L SC2J■1R	54.80*			

ACCESSORIES AND MODIFICATIONS

SELECTOR SWITCH KNOBS — ROUND

Color	Standard Type	Gloved Hand Type	Price
Black▼	LR-61B	LR-67B	\$2.80
Red	LR-58R	LR-65R	
Green	LR-58G	LR-65G	
Blue	LR-58L	LR-65L	
White	LR-58W	LR-65W	
Amber	LR-58A	LR-65A	

SELECTOR SWITCH KNOBS — SQUARE

Color	Standard Type	Gloved Hand Type	Price
Black▼	LS-61B	LS-67B	\$2.80
Red	LS-58R	LS-65R	
Green	LS-58G	LS-65G	
Blue	LS-58L	LS-65L	
White	LS-58W	LS-65W	
Amber	LS-58A	LS-65A	

▼ For use on non-illuminated switches only.

APPLICATION DATA — SEE PAGE 7-14

OTHER VOLTAGES

To order round or square illuminated selector switch operators with voltages other than 120 Volt, 60 Hertz transformer style, insert the Code ● No. from the table below in the operator type number.

★ Price deductions for full voltage or resistor style operators are as shown.

Example: A round manual return illuminated 2 position selector switch with a 24 Volt full voltage light module is Type LRA2JA34, priced at \$36. (\$44. minus \$8). For replacement lamps and rated VA see page 7-16.

Description	Voltage and Frequency	Operator Assembled With Any Light Module	
		Code ● No.	Price★ Adjustment
Transformer	110-120V, 50-60 Hz	1	No Change
	110-120V, 25-30 Hz	2	
	208-220V, 50-60 Hz	3	
	220-240V, 50-60 Hz	7	
Resistor	277V, 50-60 Hz	8	Deduct \$8.
	14V, AC or DC	21	
	18V, AC or DC	22	
	32V, AC or DC	23	
Full Voltage	48V, AC or DC	36	Deduct \$8.
	60V, AC or DC	37	
	120V, AC or DC	38	
	6V, AC or DC	31	
	12V, AC or DC	32	Deduct \$8.
	14V, AC or DC	21	
	24V, AC or DC	34	
	28V, AC or DC	35	

SELECTOR SWITCH CAM — ROUND OR SQUARE

Cam No.	Type	Price
2	LCS-2	\$1.80

Orders must specify quantity of 5 or multiple of 5.

KEY WITHDRAWAL CODE

Number	Yes	No
1	Yes	No
2	No	Yes
3	Yes	Yes

All key operated selector switches are furnished as standard with Square D number E10 key change. Consult local Square D Field Office for other key changes.

■ Insert: "A" for pressure wire connectors or "B" for slip-on terminals on light modules.

● Complete Type number by adding light module code number from the table above.

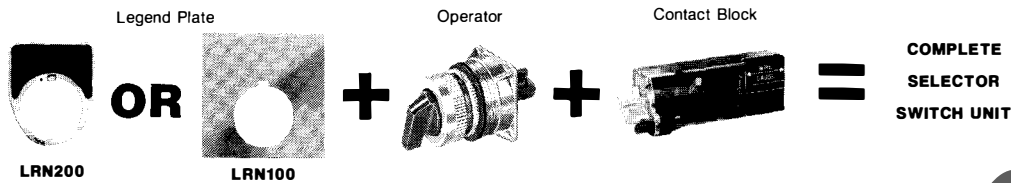
★ Adjust price per "Other Voltages" table.

* Complete type number by adding knob color code letter.

For Legend Plates — See Page 7-18. For Standard Contact Blocks — See Page 7-19. Operator Dimensions — See Pages 7-22, 7-23.

MINIATURE OILTIGHT CONTROL UNITS
ROUND NON-ILLUMINATED — 3 POSITION —
SELECTOR SWITCH OPERATORS

JANUARY, 1982

Supersedes page
dated January, 19813 POSITION NON-ILLUMINATED SELECTOR SWITCH OPERATORS
Legend Plate and Contact Blocks Not Included

CONTACT BLOCKS REQUIRED			1 = Contacts Closed 0 = Contacts Open				Order Contact Blocks From Table Below
Contact Block Position	Mount in Position	Quantity and Type	1 0 0 0 1 1	0 0 1 1 1 0	0 1 0 1 0 1	1 0 0 0 1 1	
 Rear View	I	(1) LA-1 or LB-1 (1) LA-21 or LB-21	1 0 0 0 1 1	0 0 1 1 1 0	0 1 0 1 0 1	1 0 0 0 1 1	
	II	(1) LA-1 or LB-1 (1) LA-21 or LB-21	0 1 1 1 0 0	1 0 1 0 1 0	0 1 1 1 0 0	0 0 1 1 1 0	
	III	(1) LA-1 or LB-1 (1) LA-21 or LB-21	1 1 0 0 0 1	1 1 0 0 0 1	1 0 1 0 1 0	1 0 0 0 1 1	
	IV	(1) LA-1 or LB-1 (1) LA-21 or LB-21	0 0 1 1 1 0	0 1 0 1 0 1	1 0 0 0 1 1	0 1 1 1 0 0	
Cam (included with operator)			1	5	2	7	4
Description	Knob Color	Type	Type	Type	Type	Type	Price
 Manual Return Key Operated (Code 4-10) With Contact Blocks Assembled (See Page 7-19) With 1-LA-1 in Pos. 1 With 1-LA-21 in Pos. 1 With 1-LA-1 in Pos. 1 & 1-LA-21 in Pos. 2	None Black Red Green Other —	LRSD-1 LRSD-1B LRSD-1R LRSD-1G LRSD-1* LRSD-1K*	LRSD-5 LRSD-5B LRSD-5R LRSD-5G LRSD-5* LRSD-5K*	LRSD-2 LRSD-2B LRSD-2R LRSD-2G LRSD-2* LRSD-2K*	LRSD-7 LRSD-7B LRSD-7R LRSD-7G LRSD-7* LRSD-7K*	LRSD-4 LRSD-4B LRSD-4R LRSD-4G LRSD-4* LRSD-4K*	\$12.00 14.80 14.80 14.80 14.80 38.80
	Black Black	LRSD-1BW1 LRSD-1BW3	LRSD-5BW1 LRSD-5BW3	LRSD-2BW1 LRSD-2BW3	LRSD-7BW1 LRSD-7BW3	LRSD-4BW1 LRSD-4BW3	20.80 20.80
	Black	LRSD-1BW5	LRSD-5BW5	LRSD-2BW5	LRSD-7BW5	LRSD-4BW5	26.80
	None Black Red Green Other —	LRSF-1 LRSF-1B LRSF-1R LRSF-1G LRSF-1* LRSF-1K*	LRSF-5 LRSF-5B LRSF-5R LRSF-5G LRSF-5* LRSF-5K*	LRSF-2 LRSF-2B LRSF-2R LRSF-2G LRSF-2* LRSF-2K*	LRSF-7 LRSF-7B LRSF-7R LRSF-7G LRSF-7* LRSF-7K*	LRSF-4 LRSF-4B LRSF-4R LRSF-4G LRSF-4* LRSF-4K*	20.00 22.80 22.80 22.80 22.80 46.80
	—	LRSF-1K*	LRSF-5K*	LRSF-2K*	LRSF-7K*	LRSF-4K*	46.80
 Spring Return Left To Center Key Operated (Code 5, 6 or 9 ONLY)	None Black Red Green Other —	LRSG-1 LRSG-1B LRSG-1R LRSG-1G LRSG-1* LRSG-1K*	LRSG-5 LRSG-5B LRSG-5R LRSG-5G LRSG-5* LRSG-5K*	LRSG-2 LRSG-2B LRSG-2R LRSG-2G LRSG-2* LRSG-2K*	LRSG-7 LRSG-7B LRSG-7R LRSG-7G LRSG-7* LRSG-7K*	LRSG-4 LRSG-4B LRSG-4R LRSG-4G LRSG-4* LRSG-4K*	20.00 22.80 22.80 22.80 22.80 46.80
	Black Black	LRSG-1BW1 LRSG-1BW3	LRSG-5BW1 LRSG-5BW3	LRSG-2BW1 LRSG-2BW3	LRSG-7BW1 LRSG-7BW3	LRSG-4BW1 LRSG-4BW3	20.80 20.80
	Black	LRSG-1BW5	LRSG-5BW5	LRSG-2BW5	LRSG-7BW5	LRSG-4BW5	26.80
	None Black Red Green Other —	LRSE-1 LRSE-1B LRSE-1R LRSE-1G LRSE-1* LRSE-1K*	LRSE-5 LRSE-5B LRSE-5R LRSE-5G LRSE-5* LRSE-5K*	LRSE-2 LRSE-2B LRSE-2R LRSE-2G LRSE-2* LRSE-2K*	LRSE-7 LRSE-7B LRSE-7R LRSE-7G LRSE-7* LRSE-7K*	LRSE-4 LRSE-4B LRSE-4R LRSE-4G LRSE-4* LRSE-4K*	20.00 22.80 22.80 22.80 22.80 46.80
	—	LRSE-1K5	LRSE-5K5	LRSE-2K5	LRSE-7K5	LRSE-4K5	46.80
Spring Return Right To Center Key Operated (Code 4, 5 or 7 ONLY)							
Spring Return Both Sides To Center Key Operated (Code 5 ONLY)							

* Add code letter from table below.

‡Key Withdrawal Code:

No.	↖	↑	↗	No.	↖	↑	↗
4	Yes	No	No	8	Yes	No	Yes
5	No	Yes	No	9	No	Yes	Yes
6	No	No	Yes	10	Yes	Yes	Yes
7	Yes	Yes	No				

STANDARD CONTACT BLOCKS

Description	With Pressure Wire Connectors	With Slip-On Terminals	Price
	Type	Type	
Single Circuit Closed	LA-1	LB-1	\$6.
Single Circuit Open	LA-21	LB-21	6.

ACCESSORIES AND MODIFICATIONS

Selector Switch Knobs — Round

Color	Code* Letter For Assembled to Operator	Round		Price
		Standard Type	Gloved Hand Type	
Black	B	LR-61B	LR-67B	\$2.80
Red	R	LR-58R	LR-65R	
Green	G	LR-58G	LR-65G	
Blue	L	LR-58L	LR-65L	
White	W	LR-58W	LR-65W	
Amber	A	LR-58A	LR-65A	

APPLICATION DATA SEE
PAGE 7-14For Contact Blocks Assem-
bled to Operator, See
Page 7-19.For Legend Plates, See Page
7-18.For Operator Dimensions,
See Pages 7-22, 7-23.For Ring Nuts, See Page
7-14.Conversion Kit, See Page
7-14.

MINIATURE OILTIGHT CONTROL UNITS

SQUARE NON-ILLUMINATED — 3 POSITION — SELECTOR SWITCH OPERATORS

CLASS
9001

Legend Plate

Operator

Contact Block



**COMPLETE
SELECTOR
SWITCH UNIT**

3 POSITION NON-ILLUMINATED SELECTOR SWITCH OPERATORS

Legend Plate and Contact Blocks Not Included

CONTACT BLOCKS REQUIRED			1 = Contacts Closed 0 = Contacts Open					Order Contact Blocks From Table Below
Contact Block Position	Mount in Position	Quantity and Type	1 0 0 0 1 1	0 0 1 1 0 0	0 1 0 0 0 1	1 0 0 0 1 1	0 1 0 1 0 1	
 Rear View	I	(1) LA-1 or LB-1 (1) LA-21 or LB-21	1 0 0 0 1 1	0 0 1 1 0 0	0 1 0 0 0 1	1 0 0 0 1 1	0 1 0 1 0 1	
	II	(1) LA-1 or LB-1 (1) LA-21 or LB-21	0 1 1 1 0 0	1 0 0 0 1 0	0 1 1 1 0 0	0 0 1 1 1 0	0 0 1 1 1 0	
	III	(1) LA-1 or LB-1 (1) LA-21 or LB-21	1 1 0 0 0 1	1 1 0 0 0 1	1 0 1 0 1 0	1 0 0 0 1 1	Not Used	
	IV	(1) LA-1 or LB-1 (1) LA-21 or LB-21	0 0 1 1 1 0	0 1 0 0 0 1	1 0 0 0 1 1	0 1 1 1 0 0	1 0 0 0 1 1	
Cam (included with operator)			1	5	2	7	4	
Description	Knob Color	Type	Type	Type	Type	Type	Type	Price
Manual Return	None Black Red Green Other	LSSD-1 LSSD-1B LSSD-1R LSSD-1G LSSD-1*	LSSD-5 LSSD-5B LSSD-5R LSSD-5G LSSD-5*	LSSD-2 LSSD-2B LSSD-2R LSSD-2G LSSD-2*	LSSD-7 LSSD-7B LSSD-7R LSSD-7G LSSD-7*	LSSD-4 LSSD-4B LSSD-4R LSSD-4G LSSD-4*		\$12.00 14.80 14.80 14.80 14.80
Key Operated (Code 4-10)	—	LSSD-1K#	LSSD-5K#	LSSD-2K#	LSSD-7K#	LSSD-4K#		38.80
With Contact Blocks Assembled								
With 1-LA-1 in Pos. 1	Black	LSSD-1BW1	LSSD-5BW1	LSSD-2BW1	LSSD-7BW1	LSSD-4BW1		20.80
With 1-LA-21 in Pos. 1	Black	LSSD-1BW3	LSSD-5BW3	LSSD-2BW3	LSSD-7BW3	LSSD-4BW3		20.80
With 1-LA-1 in Pos. 1 & 1-LA-21 in Pos. 2	Black	LSSD-1BW5	LSSD-5BW5	LSSD-2BW5	LSSD-7BW5	LSSD-4BW5		26.80
Spring Return Left To Center	None Black Red Green Other	LSSF-1 LSSF-1B LSSF-1R LSSF-1G LSSF-1*	LSSF-5 LSSF-5B LSSF-5R LSSF-5G LSSF-5*	LSSF-2 LSSF-2B LSSF-2R LSSF-2G LSSF-2*	LSSF-7 LSSF-7B LSSF-7R LSSF-7G LSSF-7*	LSSF-4 LSSF-4B LSSF-4R LSSF-4G LSSF-4*		20.00 22.80 22.80 22.80 22.80
Key Operated (Code 5, 6 or 9 Only)	—	LSSF-1K#	LSSF-5K#	LSSF-2K#	LSSF-7K#	LSSF-4K#		46.80
Spring Return Right To Center	None Black Red Green Other	LSSG-1 LSSG-1B LSSG-1R LSSG-1G LSSG-1*	LSSG-5 LSSG-5B LSSG-5R LSSG-5G LSSG-5*	LSSG-2 LSSG-2B LSSG-2R LSSG-2G LSSG-2*	LSSG-7 LSSG-7B LSSG-7R LSSG-7G LSSG-7*	LSSG-4 LSSG-4B LSSG-4R LSSG-4G LSSG-4*		20.00 22.80 22.80 22.80 22.80
Key Operated (Code 4, 5 or 7 Only)	—	LSSG-1K#	LSSG-5K#	LSSG-2K#	LSSG-7K#	LSSG-4K#		46.80
Spring Return Both Sides To Center	None Black Red Green Other	LSSE-1 LSSE-1B LSSE-1R LSSE-1G LSSE-1*	LSSE-5 LSSE-5B LSSE-5R LSSE-5G LSSE-5*	LSSE-2 LSSE-2B LSSE-2R LSSE-2G LSSE-2*	LSSE-7 LSSE-7B LSSE-7R LSSE-7G LSSE-7*	LSSE-4 LSSE-4B LSSE-4R LSSE-4G LSSE-4*		20.00 22.80 22.80 22.80 22.80
Key Operated (Code 5 Only)	—	LSSE-1K5	LSSE-5K5	LSSE-2K5	LSSE-7K5	LSSE-4K5		46.80

* Add code letter from table below.

#Key Withdrawal Code

No.	↖	↑	↗	No.	↖	↑	↗
4	Yes	No	No	8	Yes	No	Yes
5	No	Yes	No	9	No	Yes	Yes
6	No	No	Yes	10	Yes	Yes	Yes
7	Yes	Yes	No				

SELECTOR SWITCH CAMS

Cam	Type	Price
1	LCS-1	\$1.80
2	LCS-2	
4	LCS-4	
5	LCS-5	
7	LCS-7	

Orders must specify quantity of 5 or multiples of 5.

All key operated selector switches are furnished as standard with E10 key change. Consult local Square D Field Office for other key changes.

A virtually unlimited number of contact sequences are available. If the sequences listed above do not meet your requirements, consult local Square D Field Office.

APPLICATION DATA SEE PAGE 7-14

ACCESSORIES AND MODIFICATIONS

Selector Switch Knobs — Square

Color	Code* Letter For Assembled to Operator	Square		Price
		Standard Type	Gloved Hand Type	
Black	B	LS-61B	LS-67B	\$2.80
Red	R	LS-58R	LS-65R	
Green	G	LS-58G	LS-65G	
Blue	L	LS-58L	LS-65L	
White	W	LS-58W	LS-65W	
Amber	A	LS-58A	LS-65A	

MINIATURE OILTIGHT CONTROL UNITS

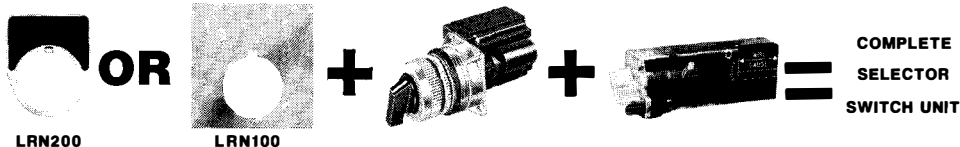
ROUND — 3 POSITION — ILLUMINATED — SELECTOR SWITCH OPERATORS

JANUARY, 1982
Supersedes page
dated January, 1981

Legend Plate

Operator

Contact Block



3 POSITION ILLUMINATED SELECTOR SWITCH OPERATORS — Legend Plate and Contact Blocks Not Included

CONTACT BLOCKS REQUIRED				1 = Contact Closed 0 = Contact Open				Order Contact Blocks From Table on Page 7-19
Contact Block Position	Mount in Position	Quantity and Type						
 Rear View	I	(1) LA-1 or LB-1 (1) LA-21 or LB-21	1 0 0 0 1 1	0 0 1 1 1 0	0 1 0 1 0 1	1 0 0 0 1 1	0 1 0 1 0 1	
	II	(1) LA-1 or LB-1 (1) LA-21 or LB-21	0 1 1 1 0 0	1 0 1 0 1 0	0 1 1 1 0 0	0 0 1 1 1 0	0 0 1 1 1 0	
Cam (Included with Operator)				1	5	2	7	4
Description	Voltage	Knob Color	Type	Type	Type	Type	Type	Price
Manual Return With Contact Blocks Assembled (See Page 7-19) With 1-LA-1 in Pos. 1 With 1-LA-21 in Pos. 1 With 1 LA-1 in Pos. 1 & 1-LA-21 in Pos. 2	120V, 60 Hz Transformer Type	None Red Green Amber Other	LR-D1J1 LR-D1J1R LR-D1J1G LR-D1J1A LR-D1J1*	LR-D5J1 LR-D5J1R LR-D5J1G LR-D5J1A LR-D5J1*	LR-D2J1 LR-D2J1R LR-D2J1G LR-D2J1A LR-D2J1*	LR-D7J1 LR-D7J1R LR-D7J1G LR-D7J1A LR-D7J1*	LR-D4J1 LR-D4J1R LR-D4J1G LR-D4J1A LR-D4J1*	\$44.00 46.80 46.80 46.80 46.80
	Other Voltages	None Red	LR-D1J1* LR-D1J1R	LR-D5J1* LR-D5J1R	LR-D2J1* LR-D2J1R	LR-D7J1* LR-D7J1R	LR-D4J1* LR-D4J1R	44.00* 46.80*
	120V, 60 Hz Transformer Type	Red	LR-D1JA1RW1 LR-D1JA1RW3	LR-D5JA1RW1 LR-D5JA1RW3	LR-D2JA1RW1 LR-D2JA1RW3	LR-D7JA1RW1 LR-D7JA1RW3	LR-D4JA1RW1 LR-D4JA1RW3	52.80 52.80
	Other Voltages	Red	LR-D1JA1RW5	LR-D5JA1RW5	LR-D2JA1RW5	LR-D7JA1RW5	LR-D4JA1RW5	58.80
Spring Return Left To Center	120V, 60 Hz Transformer Type	None Red Green Amber Other	LR-F1J1 LR-F1J1R LR-F1J1G LR-F1J1A LR-F1J1*	LR-F5J1 LR-F5J1R LR-F5J1G LR-F5J1A LR-F5J1*	LR-F2J1 LR-F2J1R LR-F2J1G LR-F2J1A LR-F2J1*	LR-F7J1 LR-F7J1R LR-F7J1G LR-F7J1A LR-F7J1*	LR-F4J1 LR-F4J1R LR-F4J1G LR-F4J1A LR-F4J1*	52.00 54.80 54.80 54.80 54.80
	Other Voltages	None Red	LR-F1J1* LR-F1J1R	LR-F5J1* LR-F5J1R	LR-F2J1* LR-F2J1R	LR-F7J1* LR-F7J1R	LR-F4J1* LR-F4J1R	52.00* 54.80*
	120V, 60 Hz Transformer Type	None Red Green Amber Other	LR-G1J1 LR-G1J1R LR-G1J1G LR-G1J1A LR-G1J1*	LR-G5J1 LR-G5J1R LR-G5J1G LR-G5J1A LR-G5J1*	LR-G2J1 LR-G2J1R LR-G2J1G LR-G2J1A LR-G2J1*	LR-G7J1 LR-G7J1R LR-G7J1G LR-G7J1A LR-G7J1*	LR-G4J1 LR-G4J1R LR-G4J1G LR-G4J1A LR-G4J1*	52.00 54.80 54.80 54.80 54.80
	Other Voltages	None Red	LR-G1J1* LR-G1J1R	LR-G5J1* LR-G5J1R	LR-G2J1* LR-G2J1R	LR-G7J1* LR-G7J1R	LR-G4J1* LR-G4J1R	52.00* 54.80*
Spring Return Both Sides To Center	120V, 60 Hz Transformer Type	None Red Green Amber Other	LR-E1J1 LR-E1J1R LR-E1J1G LR-E1J1A LR-E1J1*	LR-E5J1 LR-E5J1R LR-E5J1G LR-E5J1A LR-E5J1*	LR-E2J1 LR-E2J1R LR-E2J1G LR-E2J1A LR-E2J1*	LR-E7J1 LR-E7J1R LR-E7J1G LR-E7J1A LR-E7J1*	LR-E4J1 LR-E4J1R LR-E4J1G LR-E4J1A LR-E4J1*	52.00 54.80 54.80 54.80 54.80
	Other Voltages	None Red	LR-E1J1* LR-E1J1R	LR-E5J1* LR-E5J1R	LR-E2J1* LR-E2J1R	LR-E7J1* LR-E7J1R	LR-E4J1* LR-E4J1R	52.00* 54.80*

■ Insert "A" for pressure wire connectors or "B" for slip-on terminals on light module.

● Complete Type number by adding light module code number from the table below.

★ See table below for possible price deductions.

OTHER VOLTAGES

To order round or square illuminated selector switch operators with voltages other than 120 Volt, 60 Hertz transformer style, insert the Code ● No. from the table below in the operator type number.

★ Price deductions for full voltage or resistor style operators are as shown.

Example: A round manual return illuminated 3 position selector switch with a 24 Volt full voltage light module is Type LR-D2JA34, priced at \$36. (\$44, minus \$8). For replacement lamps and rated VA see page 7-16.

Description	Voltage and Frequency	Operator Assembled With Any Light Module	
		Code ● No.	Price★ Adjustment
Transformer	110-120V, 50-60 Hz	1	No Change
	110-120V, 25-30 Hz	2	
	208-220V, 50-60 Hz	3	
	220-240V, 50-60 Hz	7	
	277V, 50-60 Hz	8	
Resistor	14V, AC or DC	21	Deduct \$8.
	18V, AC or DC	22	
	32V, AC or DC	23	
	48V, AC or DC	36	
	60V, AC or DC	37	
	120V, AC or DC	38	
	24V, AC or DC	31	
Full Voltage	12V, AC or DC	32	Deduct \$8.
	14V, AC or DC	21	
	24V, AC or DC	34	
	28V, AC or DC	35	

APPLICATION DATA SEE PAGE 7-14

ACCESSORIES AND MODIFICATIONS

Selector Switch Knobs — Round

Color	Code● Letter For Assembled to Operator	Round		Price
		Standard Type	Gloved Hand Type	
Black	B	LR-61B	LR-67B	\$2.80
Red	R	LR-58R	LR-65R	
Green	G	LR-58G	LR-65G	
Blue	L	LR-58L	LR-65L	
White	W	LR-58W	LR-65W	
Amber	A	LR-58A	LR-65A	

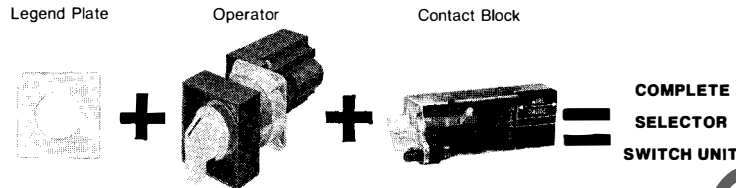


MINIATURE OILTIGHT CONTROL UNITS

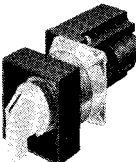
SQUARE — 3 POSITION — ILLUMINATED —

SELECTOR SWITCH OPERATORS

CLASS
9001



3 POSITION ILLUMINATED SELECTOR SWITCH OPERATORS — Legend Plate and Contact Blocks Not Included

CONTACT BLOCKS REQUIRED				1 = Contact Closed 0 = Contact Open					Order Contact Blocks From Table on Page 7-19
Contact Block Position	Mount in Position	Quantity and Type							
 Rear View	I	(1) LA-1 or LB-1 (1) LA-21 or LB-21	1 0 0 0 1 1	0 0 1 1 1 0	0 1 0 1 0 1	1 0 0 0 1 1	0 1 0 1 0 1		
	II	(1) LA-1 or LB-1 (1) LA-21 or LB-21	0 1 1 1 0 0	1 0 1 0 1 0	0 1 1 1 0 0	0 0 1 1 1 0	0 0 1 1 1 0		
Cam (Included with Operator)			1	5	2	7	4		
Description	Voltage	Knob Color	Type	Type	Type	Type	Type	Price	
 The Legend Plate (not included) is needed to hold the knob in place	Manual Return	120V, 60 Hz Transformer Type	None Red Green Amber Other	LS-D1J11 LS-D1J1R LS-D1J1G LS-D1J1A LS-D1J1*	LS-D5J11 LS-D5J1R LS-D5J1G LS-D5J1A LS-D5J1*	LS-D2J11 LS-D2J1R LS-D2J1G LS-D2J1A LS-D2J1*	LS-D7J11 LS-D7J1R LS-D7J1G LS-D7J1A LS-D7J1*	LS-D4J11 LS-D4J1R LS-D4J1G LS-D4J1A LS-D4J1*	\$44.00 46.80 46.80 46.80 46.80 44.00* 46.80*
		Other Voltages	None Red	LS-D1J11 LS-D1J1R	LS-D5J11 LS-D5J1R	LS-D2J11 LS-D2J1R	LS-D7J11 LS-D7J1R	LS-D4J11 LS-D4J1R	
	With Contact Blocks Assembled (See Page 7-19)	120V, 60 Hz Transformer Type	Red Red	LS-D1JA1RW1 LS-D1JA1RW3	LS-D5JA1RW1 LS-D5JA1RW3	LS-D2JA1RW1 LS-D2JA1RW3	LS-D7JA1RW1 LS-D7JA1RW3	LS-D4JA1RW1 LS-D4JA1RW3	52.80 52.80
	With 1-LA-1 in Pos. 1 With 1-LA-21 in Pos. 1 & 1-LA-21 in Pos. 2	Red	LS-D1JA1RW5	LS-D5JA1RW5	LS-D2JA1RW5	LS-D7JA1RW5	LS-D4JA1RW5	58.80	
	Spring Return Left To Center	120V, 60 Hz Transformer Type	None Red Green Amber Other	LS-F1J11 LS-F1J1R LS-F1J1G LS-F1J1A LS-F1J1*	LS-F5J11 LS-F5J1R LS-F5J1G LS-F5J1A LS-F5J1*	LS-F2J11 LS-F2J1R LS-F2J1G LS-F2J1A LS-F2J1*	LS-F7J11 LS-F7J1R LS-F7J1G LS-F7J1A LS-F7J1*	LS-F4J11 LS-F4J1R LS-F4J1G LS-F4J1A LS-F4J1*	52.00 54.80 54.80 54.80 54.80
		Other Voltages	None Red	LS-F1J11 LS-F1J1R	LS-F5J11 LS-F5J1R	LS-F2J11 LS-F2J1R	LS-F7J11 LS-F7J1R	LS-F4J11 LS-F4J1R	52.00* 54.80*
	Spring Return Right To Center	120V, 60 Hz Transformer Type	None Red Green Amber Other	LS-G1J11 LS-G1J1R LS-G1J1G LS-G1J1A LS-G1J1*	LS-G5J11 LS-G5J1R LS-G5J1G LS-G5J1A LS-G5J1*	LS-G2J11 LS-G2J1R LS-G2J1G LS-G2J1A LS-G2J1*	LS-G7J11 LS-G7J1R LS-G7J1G LS-G7J1A LS-G7J1*	LS-G4J11 LS-G4J1R LS-G4J1G LS-G4J1A LS-G4J1*	52.00 54.80 54.80 54.80 54.80
		Other Voltages	None Red	LS-G1J11 LS-G1J1R	LS-G5J11 LS-G5J1R	LS-G2J11 LS-G2J1R	LS-G7J11 LS-G7J1R	LS-G4J11 LS-G4J1R	52.00* 54.80*
	Spring Return Both Sides To Center	120V, 60 Hz Transformer Type	None Red Green Amber Other	LS-E1J11 LS-E1J1R LS-E1J1G LS-E1J1A LS-E1J1*	LS-E5J11 LS-E5J1R LS-E5J1G LS-E5J1A LS-E5J1*	LS-E2J11 LS-E2J1R LS-E2J1G LS-E2J1A LS-E2J1*	LS-E7J11 LS-E7J1R LS-E7J1G LS-E7J1A LS-E7J1*	LS-E4J11 LS-E4J1R LS-E4J1G LS-E4J1A LS-E4J1*	52.00 54.80 54.80 54.80 54.80
		Other Voltages	None Red	LS-E1J11 LS-E1J1R	LS-E5J11 LS-E5J1R	LS-E2J11 LS-E2J1R	LS-E7J11 LS-E7J1R	LS-E4J11 LS-E4J1R	52.00* 54.80*

- Insert "A" for pressure wire connectors or "B" for slip-on terminals on light module.
● Complete Type number by adding light module code number from the table on page 7-12.
★ See page 7-12 for possible price deductions.

ACCESSORIES AND MODIFICATIONS

Selector Switch Knobs — Square

Color	Code* Letter For Assembled to Operator	Square		Price
		Standard Type	Gloved Hand Type	
Black	B	LS-61B	LS-67B	\$2.80
Red	R	LS-58R	LS-65R	
Green	G	LS-58G	LS-65G	
Blue	L	LS-58L	LS-65L	
White	W	LS-58W	LS-65W	
Amber	A	LS-58A	LS-65A	

SELECTOR SWITCH CAMS

Cam	Type	Price
1	LCS-1	\$1.80
2	LCS-2	
4	LCS-4	
5	LCS-5	
7	LCS-7	
Orders must specify quantity of 5 or multiples of 5.		

APPLICATION DATA SEE PAGE 7-14

For Standard Contact Blocks, See Page 7-19.
For Contact Blocks Assembled to Operator, See Page 7-19.
For Legend Plates, See Page 7-18.
For Operator Dimensions, See Pages 7-22, 7-23.

MINIATURE OILTIGHT CONTROL UNITS

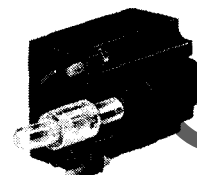
LIGHT MODULES AND BASIC OPERATORS

JANUARY, 1982
Supersedes page
dated January, 1981

LIGHT MODULES

All Type L illuminated operators listed on pages 7-4 thru 7-15 can be assembled with any Type L light module listed below. Operators can be ordered assembled with any light module by following the instructions below or on pages 7-4, 7-9, 7-12, or 7-15.

Separate operators and light modules can also be ordered for assembly on the job. **Non-illuminated operators can be converted to illuminated operators** by adding a light module and color cap.



Description	Voltage and Frequency	Approximate Rated VA	Lamp Number		Operator Assembled with any Light Module		Separate Light Modules		Price
			Manufacturer's No.	Square D Part No.	Code No.	Price Adjustment	With Pressure Wire Connectors Type	With Slip-On Connectors Type	
Transformer	110-120V, 50-60 Hz	1.2	GE-86	25501-99004	1	No Change	LMA-1	LMB-1	\$32.
	208-220V, 50-60 Hz	1.2	GE-86	25501-99004	3		LMA-3	LMB-3	
	220-240V, 50-60 Hz	1.2	GE-86	25501-99004	7		LMA-7	LMB-7	
	277V, 50-60 Hz	1.2	GE-86	25501-99004	8		LMA-8	LMB-8	
Resistor	14V, AC or DC	1.1	GE-73	25501-99002	21	Deduct \$8 From Price in Illuminated Operator Table	LMA-21	LMB-21	24.
	18V, AC or DC	1.5	GE-73	25501-99002	22		LMA-22	LMB-22	
	32V, AC or DC	1.3	GE-85	25501-99003	23		LMA-23	LMB-23	
	48V, AC or DC	1.9	GE-85	25501-99003	36		LMA-36	LMB-36	
	60V, AC or DC	2.4	GE-85	25501-99003	37		LMA-37	LMB-37	
	120V, AC or DC	4.8	GE-85	25501-99003	38		LMA-38	LMB-38	
Full Voltage	6V, AC or DC	1.3	GE-86	25501-99004	31	Deduct \$8 From Price in Illuminated Operator Table	LMA-31	LMB-31	24.
	12V, AC or DC	1.0	GE-73	25501-99002	32		LMA-32	LMB-32	
	14V, AC or DC	1.1	GE-73	25501-99002	21		LMA-21	LMB-21	
	24V, AC or DC	1.0	GE-85	25501-99003	34		LMA-34	LMB-34	
	28V, AC or DC	1.1	GE-85	25501-99003	35		LMA-35	LMB-35	

ORDERING INFORMATION

Operator assembled with any light module

1. Select illuminated operator or pilot light (by Type and Price) from Pages 7-4 thru 7-15.
2. Select code number (●) from table above for light module required.

Example: For 24 volt full voltage type light module, code number is 34.

3. Insert code number selected in Step 2 in place of ● per following: LR1L-A●, LR1L-B●, LR2L-B●, LR-___JA●, LR-___JB●, LRP-A●, LRP-B●, LRT-A● and LRT-B●.
4. Adjust price of operator or pilot light by the amount shown in table above.

Example: For Type LR-A2JA34R, price is \$38.80 (46.80 - \$8.00).

Separate Light Modules

1. Select light module required by specifying Class, Type and Price from table above.

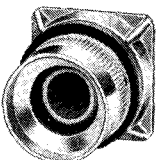
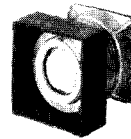
Example: Class 9001 Type LMA-34 at \$24.

SQUARE D REPLACEMENT LAMPS

Lamp Number	Lamp Voltage	Part Number	Price (D14A)
GE-73	14 V.	25501-99002	\$4.
GE-85	28 V.	25501-99003	4.
GE-86	6.3 V.	25501-99004	4.
Description		Part Number	Price (D1B)
Lamp Holder		65126-044-50	\$75
Lamp Puller		65127-074-01	.50

BASIC OPERATORS

Non-illuminated Push Buttons and Selector Switches can be made illuminated by the addition of a light module and appropriate color cap.

ROUND OPERATORS WITH RING NUT			BASIC OPERATOR			SQUARE OPERATORS WITH BEZEL								
 Less color cap, light module and contact blocks			 TO COMPLETE OPERATOR ADD: <table><tr><th>Push Button</th><th>Standard Pilot Light</th></tr><tr><td>Round: Proper ring nut (see page 7-2) and round conversion kit (9001LR-27).</td><td>Round: Ring nut (9001LR-40), a lens (see page 7-15) and add light module (see table above).</td></tr><tr><td>Square: Square conversion kit (9001LS-70) and color insert kit (see page 7-3).</td><td>Square: Square conversion kit (9001LS-70), and color insert kit (see page 7-15), and a light module (see table above).</td></tr></table>			Push Button	Standard Pilot Light	Round: Proper ring nut (see page 7-2) and round conversion kit (9001LR-27).	Round: Ring nut (9001LR-40), a lens (see page 7-15) and add light module (see table above).	Square: Square conversion kit (9001LS-70) and color insert kit (see page 7-3).	Square: Square conversion kit (9001LS-70), and color insert kit (see page 7-15), and a light module (see table above).	 Less color insert kit, light module and contact blocks.		
Push Button	Standard Pilot Light													
Round: Proper ring nut (see page 7-2) and round conversion kit (9001LR-27).	Round: Ring nut (9001LR-40), a lens (see page 7-15) and add light module (see table above).													
Square: Square conversion kit (9001LS-70) and color insert kit (see page 7-3).	Square: Square conversion kit (9001LS-70), and color insert kit (see page 7-15), and a light module (see table above).													
Operator	Type	Price	Operator	Type	Price	Operator	Type	Price						
Push button with full guard	LR1L	\$8.	Push button and push-to-test pilot light	LRR	\$7.20	Push Button	LS1L	\$8.						
Standard Pilot Light	LRP	8.	Standard pilot light	LP	7.20	Standard Pilot Light	LSP	8.						
Push button with no guard ring nut and push-to-test pilot light	LR2L	8.				Push-to-test Pilot Light	LS1L	8.						

ROUND Three Position Selector Switch with Ring Nut			
Description	Type	Price	
Manual Return	LRSD	\$10.20	
Spring Return Both Sides To Center	LRSE	18.20	
Spring Return Left Side To Center	LRSF	18.20	
Spring Return Right Side To Center	LRSR	18.20	

BASIC OPERATOR Three Position Selector Switch			
Description	Type	Price	
Manual return	LD	\$ 9.00	
Spring return both Sides to center	LE	17.00	
Spring return left Side to center	LF	17.00	
Spring return right Side to center	LG	17.00	

SQUARE Three Position Selector Switch with Bezel			
Description	Type	Price	
Manual Return	LSSD	\$10.20	
Spring Return Both Sides To Center	LSSE	18.20	
Spring Return Left Side To Center	LSSF	18.20	
Spring Return Right Side To Center	LSSG	18.20	

MINIATURE OILTIGHT CONTROL UNITS

TYPE L — JOY STICK OPERATORS AND MISCELLANEOUS OPERATORS

CLASS
9001

APPLICATION DATA

Momentary contact operators spring return to the center position. Maintained contact operators remain in each position and must be reset manually.

JOYSTICK OPERATORS — Round Only

Description	Price Does NOT include contact blocks or legend plate					
	3 Position		5 Position		9 Position	
	Type	Price	Type	Price	Type	Price
Momentary Contact	LRX-4	\$70.80	LRX-8	\$86.80	LRX-12	\$110.80
Maintained Contact	LRX-2	70.80	LRX-6	86.80	LRX-10	110.80

Contact Target Table

(Note: A maximum of 4 isolated single circuit contacts can be used).

Operator	Contact Block Type	Mount in Contact Block Position	Handle Position 1 = Contacts Closed 0 = Contacts Open									
			0°	45°	90°	135°	180°	225°	270°	315°	Center	
3 Position	LA-21 or LB-21	I (Not Used)	0				1				0	
	LA-1 or LB-1	II	1				0				1	
	LA-21 or LB-21	III (Not Used)	0				0				0	
	LA-1 or LB-1	IV	0				1				1	
5 Position	LA-21 or LB-21	I	1		0		0		1		0	
	LA-1 or LB-1	II	0	1	0		1		0	1	0	
	LA-21 or LB-21	III	0		1		0		0		0	
	LA-1 or LB-1	IV	1	0	0		1		1	1	1	
	LA-21 or LB-21	I	0	0	0	0	0	1	0	0	0	1
	LA-1 or LB-1	II	1	1	0	1	0	0	0	1	0	1
	LA-21 or LB-21	III	0	1	0	0	0	0	0	0	0	1
	LA-1 or LB-1	IV	1	0	1	0	1	1	1	1	1	1
9 Position	LA-21 or LB-21	I	0	0	0	0	0	1	0	0	0	1
	LA-1 or LB-1	II	1	1	0	1	0	0	0	0	1	1
	LA-21 or LB-21	III	0	1	0	0	0	0	0	0	0	1
	LA-1 or LB-1	IV	1	0	1	0	1	1	1	1	1	1
	LA-21 or LB-21	I	0	0	0	0	0	0	0	0	0	1
	LA-1 or LB-1	II	1	1	0	1	0	1	1	1	1	1
	LA-21 or LB-21	III	0	1	0	0	0	0	0	0	0	1
	LA-1 or LB-1	IV	1	0	1	0	1	1	1	1	1	1

LEGEND PLATE

Marking	Type	Price
Blank	LRN-900	\$1.20

INTERLOCKED PUSH BUTTONS

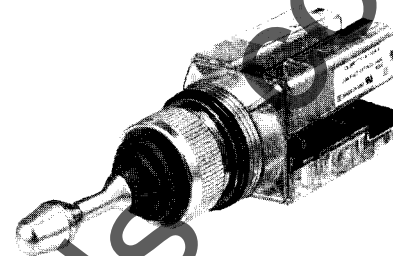
Includes two maintained push buttons, interlocked to prevent depressing both buttons simultaneously. Each push button (included) accepts one or two contact blocks (not included). Spacing is adjustable from 1½ inches to 1¾ inches, centerline to centerline. Type LRR11U includes two Type LR16U universal insert kits. Type LSR11 has no color inserts. Order color insert kits for Type LSR11 from table below (two kits per LSR11).

Round		Square	
Type	Price	Type	Price
LRR11U	\$33.60	LSR11	\$28.00

SQUARE INSERT KITS

(Includes button, blank legend plate and colored button cover)

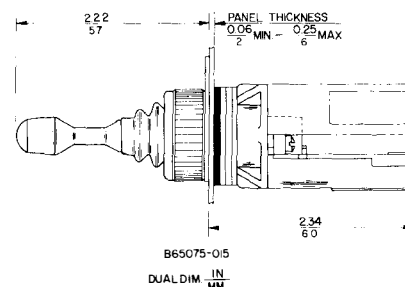
Full Guard		No Guard		Domed Button	
Color	Type	Price	Type	Price	Type
Green	LS-71G		LS-72G		LS-73G
Red	LS-71R		LS-72R		LS-73R
Amber	LS-71A	\$2.80	LS-72A	\$2.80	LS-73A
Blue	LS-71L		LS-72L		LS-73L
Clear	LS-71C		LS-72C		LS-73C



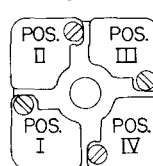
STANDARD CONTACT BLOCKS

Description	Type		Price
	With Pressure Wire Connectors	With Slip-On Terminals	
Single Circuit Closed	LA-1	LB-1	\$6.
Single Circuit Open	LA-21	LB-21	6.

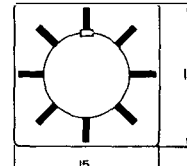
APPROXIMATE DIMENSIONS



Contact Block Position

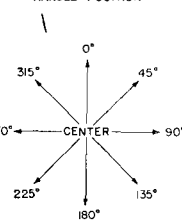


REAR VIEW



TYPE LRN-900

HANDLE POSITION



FRONT VIEW

POTENTIOMETER (WITH DIAL PLATE)

Watts	Description	Type		Price
		Round Type	Square Type	
2	Operator only for Single or Tandem Pot	LR-20	LS-20	\$56.
	Operator with Single Pot	LR-21	LS-21	80.
	Operator with Tandem Pot	LR-23	LS-23	112.

Complete Type No. by adding suffix No. from table below.
EXAMPLE: Type LR-2105

Suffix	Ohms	Suffix	Ohms	Suffix	Ohms	Suffix	Ohms
01	50	06	2500	11	100K	81	500
02	100	07	5000	12	250K	82	1000
03	250	08	10K	13	500K	83	5000
04	500	09	25K	14	1.0 Meg.	84	25K
05	1000	10	50K	15	2.5 Meg.		
				16	5.0 Meg.		

Separate Dial Plate		Type	Price
Round		LRN-905	\$1.20
Square		LSN-905	1.20

MINIATURE OILTIGHT CONTROL UNITS
TYPE L LEGEND PLATESJANUARY, 1982
Supersedes page
dated January, 1981

Marking	FOR PUSH BUTTON OR PILOT LIGHT			
	Round		Square (Mylar Insert)	
			Single	Dual
Blank	LRN-100	LRN-200	LSN-200M	LSN-200D
Blank — Red	LRN-100R	LRN-200R	LSN-200M	LSN-200D
Start	LRN-101	LRN-201	LSN-201M	LSN-201D
Stop — Red	LRN-102	LRN-202	LSN-202M	LSN-202D
On	LRN-103	LRN-203	LSN-203M	LSN-203D
Off — Red	LRN-104	LRN-204	LSN-204M	LSN-204D
Emerg. Stop — Red	LRN-105	LRN-205	LSN-205M	LSN-205D
Forward	LRN-106	LRN-206	LSN-206M	LSN-206D
Reverse	LRN-107	LRN-207	LSN-207M	LSN-207D
Close	LRN-108	LRN-208	LSN-208M	LSN-208D
Open	LRN-109	LRN-209	LSN-209M	LSN-209D
Down	LRN-110	LRN-210	LSN-210M	LSN-210D
Up	LRN-111	LRN-211	LSN-211M	LSN-211D
Fast	LRN-112	LRN-212	LSN-212M	LSN-212D
Slow	LRN-113	LRN-213	LSN-213M	LSN-213D
High	LRN-114	LRN-214	LSN-214M	LSN-214D
Low	LRN-115	LRN-215	LSN-215M	LSN-215D
Inch	LRN-116	LRN-216	LSN-216M	LSN-216D
In	LRN-117	LRN-217	LSN-217M	LSN-217D
Jog	LRN-118	LRN-218	LSN-218M	LSN-218D
Jog For.	LRN-119	LRN-219	LSN-219M	LSN-219D
Jog Rev.	LRN-120	LRN-220	LSN-220M	LSN-220D
Lower	LRN-121	LRN-221	LSN-221M	LSN-221D
Out	LRN-122	LRN-222	LSN-222M	LSN-222D
Reset	LRN-123	LRN-223	LSN-223M	LSN-223D
Run	LRN-124	LRN-224	LSN-224M	LSN-224D
Start Jog	LRN-125	LRN-225	LSN-225M	LSN-225D
Test	LRN-126	LRN-226	LSN-226M	LSN-226D
Raise	LRN-127	LRN-227	LSN-227M	LSN-227D
Decrease	LRN-128	LRN-228	LSN-228M	LSN-228D
Increase	LRN-129	LRN-229	LSN-229M	LSN-229D
Left	LRN-130	LRN-230	LSN-230M	LSN-230D
Right	LRN-131	LRN-231	LSN-231M	LSN-231D
Cycle Start	LRN-132	LRN-232	LSN-232M	LSN-232D
Feed Start	LRN-133	LRN-233	LSN-233M	LSN-233D
Cycle Stop	LRN-134	LRN-234	LSN-234M	LSN-234D
Feed Stop	LRN-135	LRN-235	LSN-235M	LSN-235D
Motor Run	LRN-136	LRN-236	LSN-236M	LSN-236D
Motor Stop	LRN-137	LRN-237	LSN-237M	LSN-237D
Power On	LRN-138	LRN-238	LSN-238M	LSN-238D
Full Speed	LRN-172	LRN-272	LSN-272M	LSN-272D
Low Speed	LRN-173	LRN-273	LSN-273M	LSN-273D
Second Speed	LRN-174	LRN-274	LSN-274M	LSN-274D
Third Speed	LRN-175	LRN-275	LSN-275M	LSN-275D

Marking	FOR SELECTOR SWITCHES			
	Round		Square	
			Knob Style	Key Oper.
Blank	LRN-100	LRN-200	LSN-200A	LSN-200K
For-Rev.	LRN-139	LRN-239	LSN-239A	LSN-239K
Hand-Auto.	LRN-140	LRN-240	LSN-240A	LSN-240K
High-Low	LRN-141	LRN-241	LSN-241A	LSN-241K
Jog-Run	LRN-142	LRN-242	LSN-242A	LSN-242K
Man.-Auto.	LRN-143	LRN-243	LSN-243A	LSN-243K
Off-On	LRN-144	LRN-244	LSN-244A	LSN-244K
On-Off	LRN-145	LRN-245	LSN-245A	LSN-245K
Open-Close	LRN-146	LRN-246	LSN-246A	LSN-246K
Raise-Lower	LRN-147	LRN-247	LSN-247A	LSN-247K
Run-Jog	LRN-148	LRN-248	LSN-248A	LSN-248K
Safe-Run	LRN-149	LRN-249	LSN-249A	LSN-249K
Slow-Fast	LRN-150	LRN-250	LSN-250A	LSN-250K
Start-Stop	LRN-151	LRN-251	LSN-251A	LSN-251K
Up-Down	LRN-153	LRN-253	LSN-253A	LSN-253K
Low-High	LRN-154	LRN-254	LSN-254A	LSN-254K
Stop-Start	LRN-155	LRN-255	LSN-255A	LSN-255K
Left-Right	LRN-156	LRN-256	LSN-256A	LSN-256K
Summer-Winter	LRN-157	LRN-257	LSN-257A	LSN-257K
Auto.-Off-Hand	LRN-158	LRN-258	LSN-258A	LSN-258K
For.-Off-Rev.	LRN-159	LRN-259	LSN-259A	LSN-259K
Hand-Off-Auto.	LRN-160	LRN-260	LSN-260A	LSN-260K
Jog-Safe-Run	LRN-161	LRN-261	LSN-261A	LSN-261K
Man-Off-Auto.	LRN-162	LRN-262	LSN-262A	LSN-262K
Open-Off-Close	LRN-163	LRN-263	LSN-263A	LSN-263K
Up-Off-Down	LRN-164	LRN-264	LSN-264A	LSN-264K
Low-Off-High	LRN-165	LRN-265	LSN-265A	LSN-265K
For.-Safe-Rev.	LRN-166	LRN-266	LSN-266A	LSN-266K
Jog-Stop-Run	LRN-167	LRN-267	LSN-267A	LSN-267K
Slow-Off-Fast	LRN-168	LRN-268	LSN-268A	LSN-268K
Summer-Off-Winter	LRN-169	LRN-269	LSN-269A	LSN-269K
High-Low-Off	LRN-170	LRN-270	LSN-270A	LSN-270K
Raise-Off-Lower	LRN-171	LRN-271	LSN-271A	LSN-271K
On-Auto.	LRN-176	LRN-276	LSN-276A	LSN-276K
High-Off-Low	LRN-177	LRN-277	LSN-277A	LSN-277K
Auto.-Man.-Off	LRN-178	LRN-278	LSN-278A	LSN-278K

PRICING INFORMATION — ROUND

Legend Plate	Description	Type	Price
LRN-1	Standard Markings	Select From Table at Left	\$1.20
	Special Marking (Specify Marking Required)	Aluminum Field	5.20
		Red Field	
LRN-2	Standard Markings	Select From Table at Left	1.20
	Special Marking (Specify Marking Required)	Black Field	5.20
		Red Field	

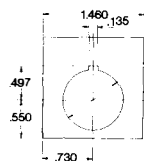
PRICING INFORMATION — SQUARE

Legend Plate For	Description	Type	Price
Push Button or Pilot Light (Mylar insert)	Standard Markings	Select from Table at Left	\$1.20
	Special Marking (Specify Marking Required)	LSN-299M	5.20
		LSN-299D	
Knob Style Selector Switch	Standard Markings	Select From Table at Left	1.20
	Special Marking (Specify Marking Required)	LSN-299A	5.20
		LSN-299K	
Key Operated Selector Switch	Standard Markings	Select from Table at Left	1.20
	Special Marking (Specify Marking Required)	LSN-299K	5.20
		LSN-299K	

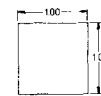
Maximum Number Of Lines And Characters For Type L Legend Plates.

Type	LRN-1	LRN-2	LSN-299				
			M	D	A	B	C
Max. No. of Characters Per Line	16	11	11	11	1	11	1
Max. No. of Lines	2	2	2	1	7	1	7

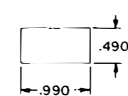
APPROXIMATE DIMENSIONS



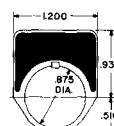
Type LRN-1



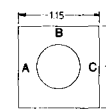
Type LSN-299M



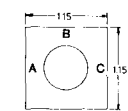
Type LSN-299D



Type LRN-2



Type LSN-299A



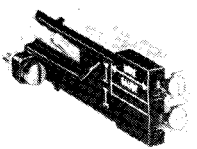
Type LSN-299K



MINIATURE OILTIGHT CONTROL UNITS

CONTACT BLOCKS AND CONTACT BLOCKS ASSEMBLED TO OPERATORS

CLASS
9001

	Accepts		
	One — #14 stranded wire		
	Two — #16 stranded wires		
	Two — #18 stranded wires		
PRESSURE WIRE CONNECTORS	Description	Type	Price
	Single Circuit Closed...	LA-1	\$6.
	Single Circuit Open...	LA-21	6.

All contact blocks are single circuit with double break fine silver contacts rated 600 Volt, AC or DC. Clear sided blocks have color coded covers:

Single circuit open: Colored black.

Single circuit closed: Colored red.

Normal contact status is indicated on blocks

Indicates contact normally OPEN
Indicates contact normally CLOSED.

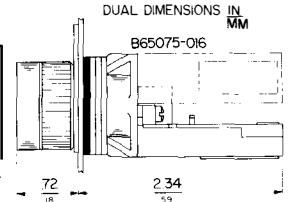
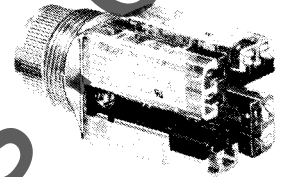
Maximum number of contact blocks:
4 on non-illuminated operator.
2 on illuminated.

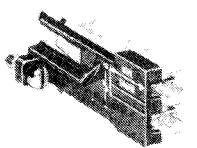
SLIP-ON FEMALE CONNECTORS

.110" x .032" Tabs

Wire Size	Type	Price Each	Standard Pack Quantity
22-18 AWG	LFC-1	\$1.60	50Δ
16-14 AWG	LFC-2	.60	50Δ

ΔOrders must specify quantity listed or multiple of quantity listed.



	Accepts		
	Commercially available .110" or .250" wide by .032" tab thickness slip-on connectors.		
	Description	Type	Price
	Single Circuit Closed...	LB-1	\$6.
SLIP-ON TERMINALS	Single Circuit Open...	LB-21	6.

ELECTRICAL CONTACT RATINGS — 600 V MAX.

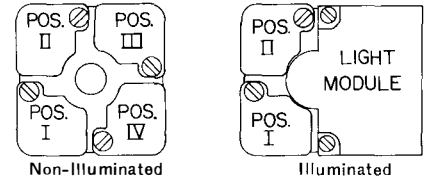
Volts	AC — NEMA B600						DC		
	Inductive 35% Power Factor				Continuous Carrying Amperes	Resistive 75% Power Factor	Volts	Inductive and Resistive	
	Make		Break					Make and Break Amperes	Continuous Carrying Amperes
	Amps.	VA	Amps.	VA					
120	30	3600	3	3600	5	5	120	.22	1.
240	15	3600	1.5	3600	5	5	240	.11	1.
480	7.5	3600	.75	3600	5	5	600	.05	1.
600	6	3600	.6	3600	5	5			

LOCATION CHART FOR CONTACT BLOCKS ASSEMBLED TO OPERATOR

The system illustrated below has been set up to enable an operator and a particular arrangement of contact blocks to be specified by a single type number. The operators and contact blocks will be shipped completely factory assembled — no additional charge for assembly.

EXAMPLE: A Type LRR-1B push button with 1-Type LA-1 and 1-Type LA-21 contact block would be Class 9001 Type LRR-1B-W5.

Contact Block Position — Rear View



Suffix No. (Add to Operator Type No.)	Total Circuits† (Contact designation below refers to push buttons only. For selector switch sequences, see pages 7-8 to 7-13)	Contact Block and Mounting Position (For all push buttons. Also for all selector switches, after positions chosen for required contact sequences, see pages 7-8 to 7-13).				Price Adder
		I	II	III	IV	
W1	1 N.C.	LA-1				\$ 6.
W2	1 N.C., 1 N.O.	LB-1				6.
W3	1 N.O.	LA-21				6.
W4	1 N.O.	LB-21				6.
W5	1 N.C., 1 N.O.	LA-1	LA-21			12.
W6	1 N.C., 1 N.O.	LB-1	LB-21			12.
W7	2 N.C., 2 N.O.	LA-1	LA-21	LA-21	LA-21	24.
W8	2 N.C., 2 N.O.	LB-1	LB-1	LB-21	LB-21	24.
W9	2 N.O.	LA-21	LA-21			12.
W10	2 N.O.	LB-21	LB-21			12.
W11	2 N.O.	LA-21	LA-21			12.
W12	2 N.O.	LB-21	LB-21			12.
W13	2 N.O., 2 N.C.	LA-1	LA-21	LA-21	LA-1	24.
W14	2 N.O., 2 N.C.	LB-1	LB-21	LB-21	LB-1	24.
W15	4 N.C.	LA-1	LA-1	LA-1	LA-1	24.
W16	4 N.C.	LB-1	LB-1	LB-1	LB-1	24.
W17	4 N.O.	LA-21	LA-21	LA-21	LA-21	24.
W18	4 N.O.	LB-21	LB-21	LB-21	LB-21	24.
W19	2 N.C., 2 N.O.	LA-1	LA-21	LA-1	LA-21	24.
W20	2 N.C., 2 N.O.	LB-1	LB-21	LB-1	LB-21	24.
W21	1 N.C., 1 N.O.	LA-21	LA-21			12.
W22	1 N.C., 1 N.O.	LB-21	LB-1			12.
W23	2 N.C., 2 N.O.	LA-21	LA-1	LA-1	LA-21	24.
W24	2 N.C., 2 N.O.	LB-21	LB-1	LB-1	LB-21	24.
W25	2 N.C., 2 N.O.	LA-1	LA-1	LA-1	LA-1	12.
W26	2 N.C., 2 N.O.	LB-1	LB-1	LB-1	LB-1	12.
W27	2 N.C.	LA-1	LA-1			12.
W28	2 N.C.	LB-1	LB-1			12.
W29	2 N.C.			LA-1	LA-1	12.
W30	2 N.C.			LB-1	LB-1	12.
W31	2 N.C.		LA-1		LA-1	12.

Suffix No. (Add to Operator Type No.)	Total Circuits† (Contact designation below refers to push buttons only. For selector switch sequences, see pages 7-8 to 7-13).	Contact Block and Mounting Position (For all push buttons. Also for all selector switches, after positions chosen for required contact sequences, see pages 7-8 to 7-13).				Price Adder
		I	II	III	IV	
W32	2 N.C.		LB-1		LB-1	\$12.
W33	2 N.O.		LA-21		LA-21	12.
W34	2 N.O.		LB-21		LB-21	12.
W35	2 N.C.		LA-1	LA-1		12.
W36	2 N.C.		LB-1	LB-1		12.
W37	3 N.C.	LA-1	LA-1		LA-1	18.
W38	3 N.C.	LB-1	LB-1		LB-1	18.
W41	1 N.C., 2 N.O.	LA-21	LA-21		LA-1	18.
W42	1 N.C., 2 N.O.	LB-21	LB-21		LB-1	18.
W43	1 N.O.			LA-21		6.
W44	1 N.O.			LB-21		6.
W45	2 N.O.			LA-21	LA-21	12.
W46	2 N.O.			LB-21	LB-1	12.
W49	2 N.O., 2 N.C.	LA-21	LA-1	LA-21	LA-1	24.
W50	2 N.O., 2 N.C.	LB-21	LB-1	LB-21	LB-1	24.
W53	3 N.C.		LA-1	LA-1	LA-1	18.
W54	1 N.C.		LA-1			6.
W55	1 N.C.		LB-1			6.
W56	3 N.O.	LA-21	LA-21	LA-21		18.
W57	3 N.O.	LB-21	LB-21	LB-21		18.
W58	2 N.O., 1 N.C.		LA-21	LA-21	LA-1	18.
W59	2 N.O., 1 N.C.		LB-21	LB-21	LB-1	18.
W60	2 N.C.	LA-1		LA-1		12.
W61	2 N.C.	LB-1		LB-1		12.
W64	2 N.C., 1 N.O.	LA-1	LA-1	LA-21		18.
W65	2 N.C., 1 N.O.	LB-1	LB-1	LB-21		18.
W66	3 N.C., 1 N.O.	LA-1	LA-1	LA-21	LA-1	24.
W67	3 N.C., 1 N.O.	LB-1	LB-1	LB-21	LB-1	24.
W68	3 N.C., 1 N.O.	LA-1	LA-1	LA-1	LA-21	24.
W69	1 N.C.			LA-1		6.

† Contact Designation: N.O. — Normally Open N.C. — Normally Closed

ACCESSORIES

PROTECTIVE CAPS
Round Operators Only

The Type LRU Protective Caps are suitable for either dusttight or watertight applications.		
For Non-Illuminated Push Buttons		
Color	Type	Price
Black	LRU-1	\$8.
Red	LRU-2	8.
Blue	LRU-3	8.
Brown	LRU-4	8.
Green	LRU-5	8.
Yellow	LRU-6	8.
For Selector Switches		
Color	Type	Price
Black*	LRU- 11	\$12.
Clear	LRU-20	
For Illuminated Push Button		
Color	Type	Price
Clear	LRU-7	\$8.
For Standard Pilot Light and Push-to-Test Pilot Light		
Color	Type	Price
Clear	LRU-8	\$8.
*For use with non-illuminated operators only.		

*For use with non-illuminated operators only.

PADLOCK ATTACHMENTS
Round Operators Only

	
Holds standard push button, with or without protective cap, illuminated or non-illuminated in depressed position.	
Type	Price
LR-4	\$12.
Holds 1" diameter mushroom button, illuminated or non-illuminated, in depressed position.	
Type	Price
LR-5	\$12.
Cover type for standard push button with or without protective cap, 1" diameter mushroom button, standard selector switch and push-to-test pilot light. Operators can be illuminated or non-illuminated. Prevents operation of operator.	
Type	Price
LR-6	\$12.
Cover type for 1" diameter mushroom button, standard selector switch and push-to-test pilot light, with or without protective cap, illuminated or non-illuminated. Prevents operation of operator.	
Type	Price
LR-7	\$12.

PRINTED CIRCUIT BOARD SOCKET

Description	Type	Price
 For 1 or 2 contact blocks and all illuminated operators.*	LPC-2	\$4.
For non-illuminated operators up to 4 contact blocks*	LPC-4	8.

*Contact blocks with slip on type connectors (9001 LB-1 or 9001 LB-21) must be used when using a printed circuit board socket.

PUSH BUTTON INTERLOCK — Round or Square

Description	Type	Price
 Interlock can be mounted on 2 adjacent momentary push buttons to prevent depressing both buttons simultaneously. Each push button (not included) will accept 1 or 2 contact blocks (not included). Spacing is adjustable from 1½ to 2½ inches, centerline to centerline.	L-3	\$8.00

WRENCHES — For Tightening Ring Nuts

Description	Type	Price
 For Round Operators	LR-1	\$12.00
 Standard Wrench For Square Operators	LS-1	.50
 Deluxe Wrench for Square Operators	LS-2	12.00

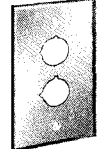
CLOSING PLATES

Description	Type	Price
 Grey Painted	LR-51	\$4.
Chrome Plated	LR-52	4.
 Non-Metallic Black	LS-51	4.

WOBBLE STICK

 For easy operation of any standard round push button. Total extension 2½ inches.	Type	Price
	LR-8	\$12.

STAINLESS STEEL FLUSHPLATES
For Type L Control Units
(Stations Are Not Oiltight)

 Allows Type L control units to be mounted in standard pullboxes.			
Number of Units	Fits Pullbox Size	Type	Price
1	Single Gang	L-25F	\$ 8.
2*	Single Gang	L-26F	8.
4	Double Gang	L-27F	12.
6	Triple Gang	L-28F	16.
*Can mount only one illuminated operator.			
Blank Nameplates For Above			
Background	Type	Price	
Black	LRN-910	\$1.20	
Red	LRN-910R	1.20	



MINIATURE OILTIGHT CONTROL STATIONS

CLASS
9001

APPLICATION DATA

Class 9001 Type L enclosures are available in NEMA 13 (oiltight and dusttight) sheet steel surface mounting type. They are available in custom factory assembled arrangements and as separate unassembled enclosures. Enclosures have sufficient space to accommodate four contact blocks on non-illuminated operators and two contact blocks on illuminated operators.

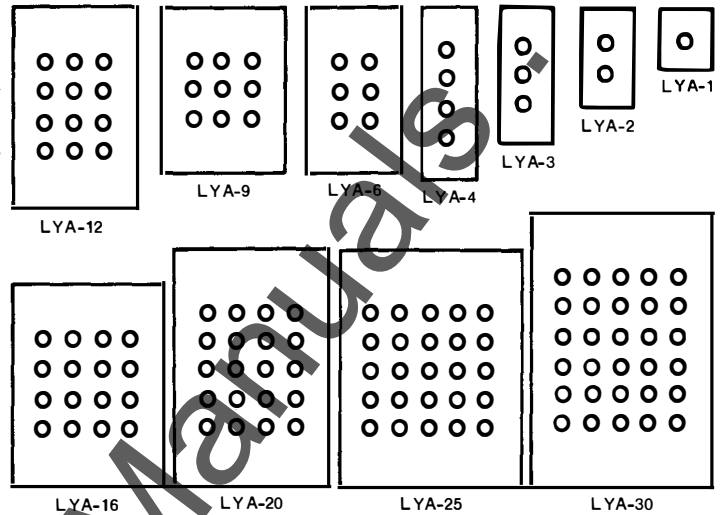
CUSTOM BUILT FACTORY ASSEMBLED STATIONS

NEMA TYPE 13		
Number of Units	Surface Mounting Type	Base Price
1	LYA-100	\$ 28.
2	LYA-200	30.
3	LYA-300	32.
4	LYA-400	36.
6	LYA-600	48.
9	LYA-900	56.
12	LYA-1200	72.
16	LYA-1600	92.
20	LYA-2000	120.
25	LYA-2500	144.
30	LYA-3000	160.

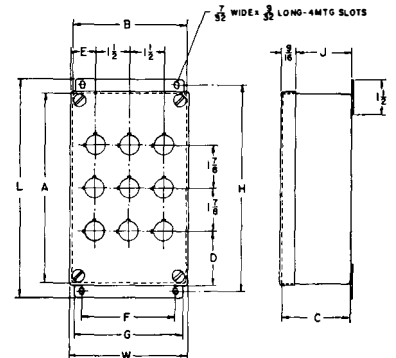
Base prices shown include the enclosure only. The complete price for an assembled station is the sum of this base price plus prices of all control units to be installed. (There is no extra charge for factory assembly.) Orders must be accompanied with a sketch showing all control units in their desired location. For legend plate on enclosure with markings as specified; add \$6.

ENCLOSURES ONLY FOR CUSTOMER ASSEMBLY

NEMA TYPE 13		
Number of Units	Surface Mounting Type	Base Price
1	LYA-1	\$ 28.
2	LYA-2	30.
3	LYA-3	32.
4	LYA-4	36.
6	LYA-6	48.
9	LYA-9	56.
12	LYA-12	72.
16	LYA-16	92.
20	LYA-20	120.
25	LYA-25	144.
30	LYA-30	160.



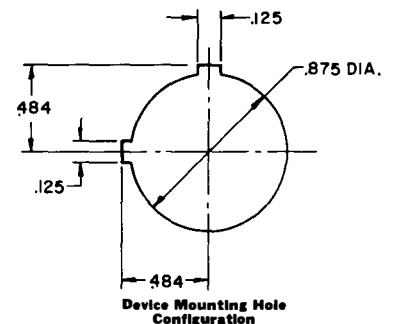
Type No.	No. Holes	Enclosure Size			D	E	F	G	H	I	Overall	
		A	B	C							L	W
LYA-1	1	3¼	2¾	3½	1⅞	1⅜	1⅞	2½	3¼	3⅜	4¼	2⅜
LYA-2	2	5⅞	2¾	3½	1⅞	1⅜	1⅞	2½	5⅞	3⅜	6⅞	2⅜
LYA-3	3	7	2¾	3½	1⅞	1⅜	1⅞	2½	7½	3⅜	8	2⅜
LYA-4	4	8⅞	2¾	3½	1⅞	1⅜	1⅞	2½	9⅞	3⅜	9⅞	2⅜
LYA-6	6	8½	5	4¼	2⅜	1⅝	1⅞	4¾	9	3⅞	9½	5⅞
LYA-9	9	8½	6½	4¼	2⅜	1⅝	1⅞	6¼	9	3⅞	9½	6⅜
LYA-12	12	10⅞	6½	4¼	2⅜	1⅝	1⅞	8¼	10⅞	3⅞	11⅞	6⅜
LYA-16	16	10⅞	8	4¼	2⅜	1⅝	1⅞	7¾	10⅞	3⅞	11⅞	8⅞
LYA-20	20	12¼	8	4¼	2⅜	1⅝	1⅞	7¾	12¾	3⅞	13¼	8⅞
LYA-25	25	12¼	9½	4¼	2⅜	1⅝	1⅞	8¾	12¾	3⅞	13¼	9⅜
LYA-30	30	14⅞	9½	4¼	2⅜	1⅝	1⅞	8¾	14¾	3⅞	15⅞	9⅜



MINIMUM CENTERLINE SPACING For Type L Control Units

Description		Spacing (Inches)	
		Horizontal	Vertical
Round Operators without Legend Plates	Non-illuminated	1 1/4	1 1/4
	Illuminated	1 1/2	1 1/4
Round Operators with Type LRN-1 Legend Plates	Non-illuminated	1 1/2	1 1/2
	Illuminated	1 1/2	1 1/2
Round Operators with Type LRN-2 Legend Plates	Non-illuminated	1 1/4	1 1/2
	Illuminated	1 1/2	1 1/2
Square Operators	Non-illuminated	1 1/4	1 1/4
	Illuminated	1 1/2	1 1/4

APPROXIMATE DIMENSIONS

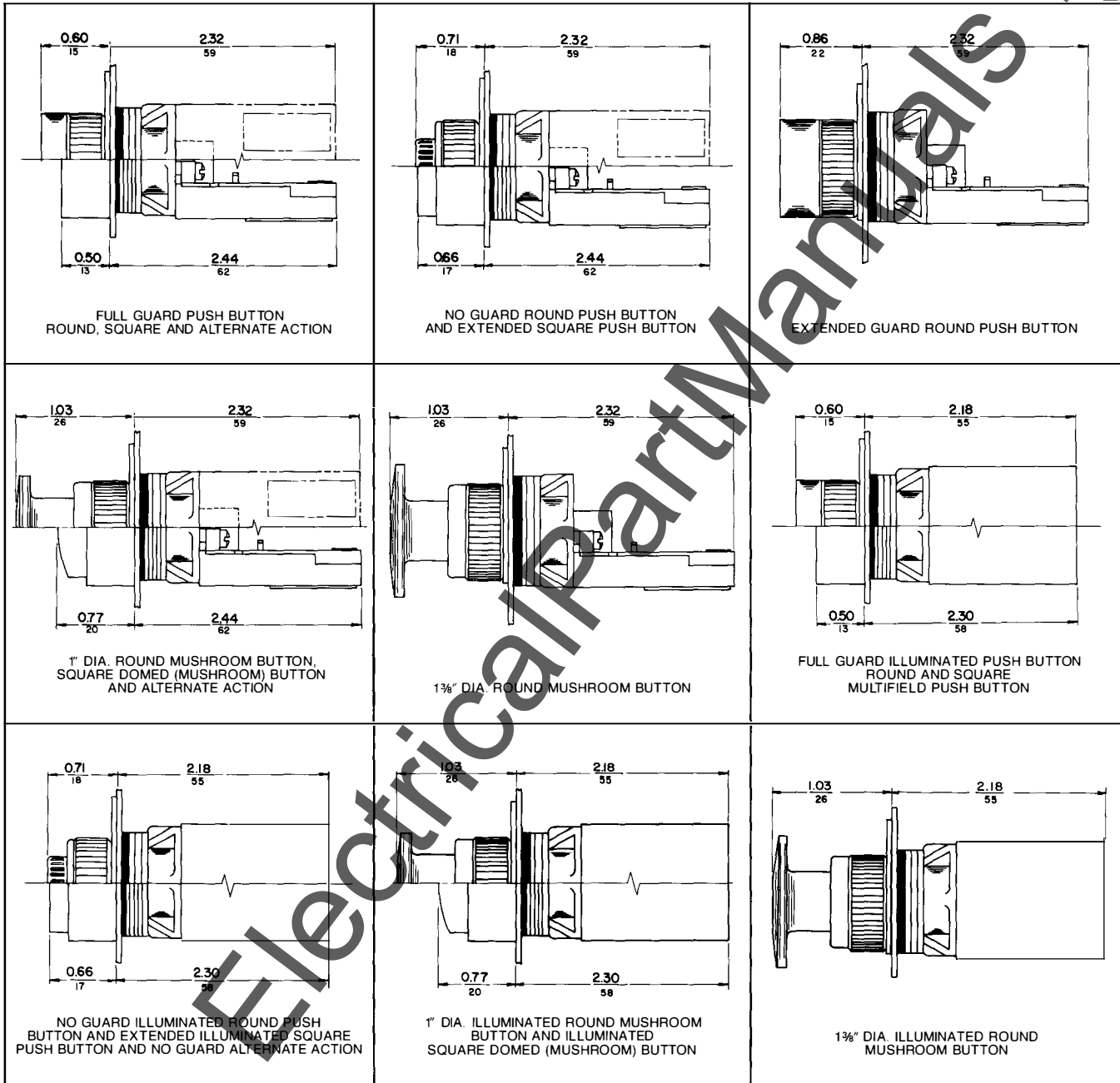


MINIATURE OILTIGHT CONTROL UNITS OPERATOR DIMENSIONS

JANUARY, 1982
Supersedes page
dated January, 1981

APPROXIMATE DIMENSIONS

Note: Where both round and square operators are available, round operator dimensions are shown on top, square operator dimensions on the bottom.

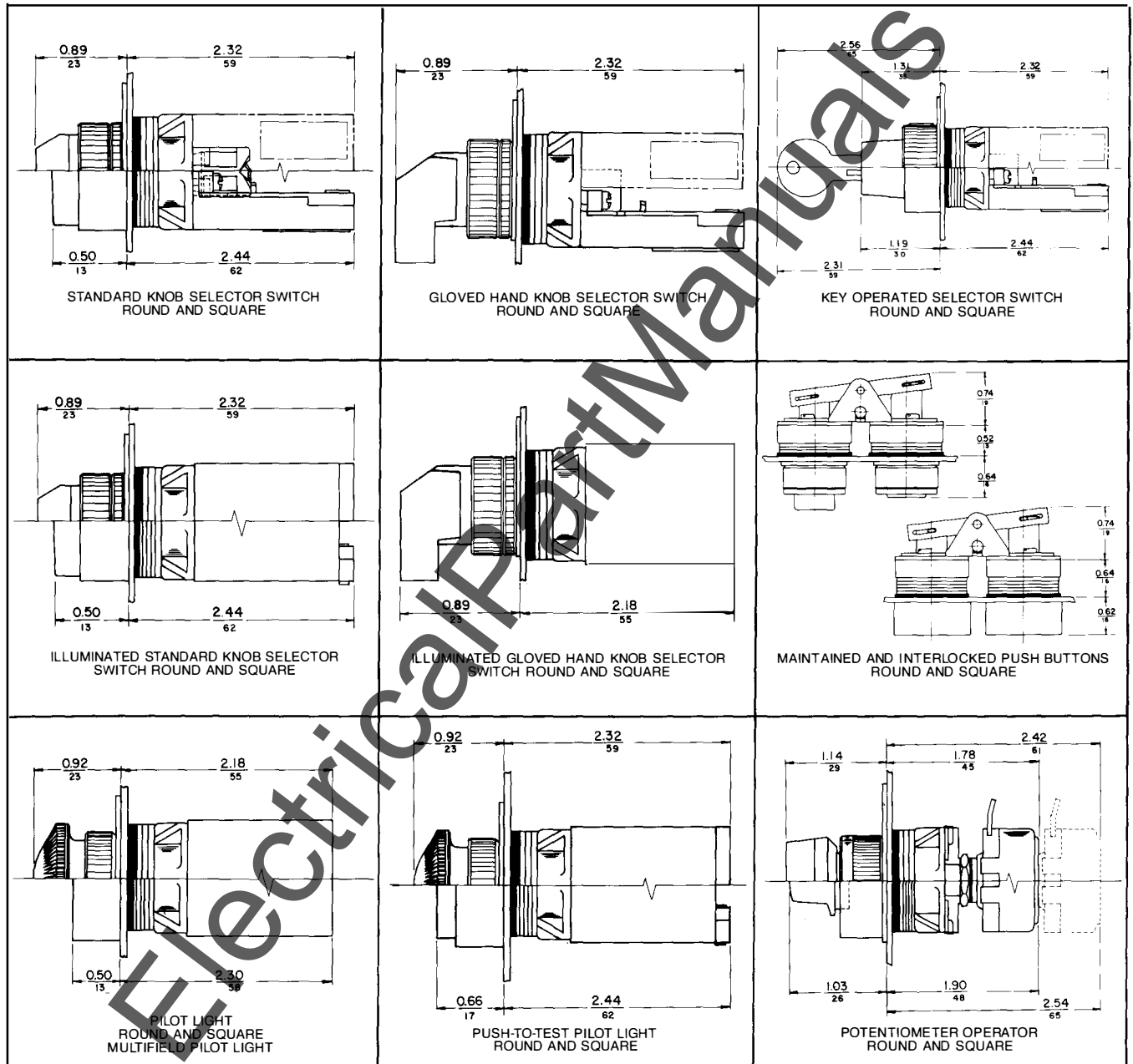


MINIATURE OILTIGHT CONTROL UNITS OPERATOR DIMENSIONS

CLASS
9001

APPROXIMATE DIMENSIONS

Note: Where both round and square operators are available, round operator dimensions are shown on top, square operator dimensions on the bottom.



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SQUARE D COMPANY



Push Buttons

NEMA 4X Corrosion Resistant

NEMA 4 Watertight

NEMA 13 Oiltight

Type SK

CONTENTS

Description	Class	Page
Push Buttons	9001	6-2 and 6-3
Contact Blocks	9001	6-3
Selector Switches	9001	6-4 and 6-5
Pilot Lights	9001	6-6
Enclosures	9001	6-7
Legend Plates	9001	6-7
Dimensions	9001	6-8

HEAVY DUTY CONTROL UNITS

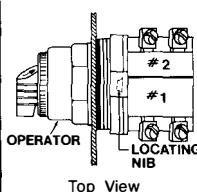
TYPE SK — 2 POSITION SELECTOR SWITCH OPERATORS

JANUARY, 1983

NEMA 4X CORROSION RESISTANT/WATERTIGHT AND NEMA 13 OILTIGHT

TYPE SK NON-METALLIC 2 POSITION SELECTOR SWITCH OPERATORS

(Legend Plate and Contact Block Not Included Unless Noted)

CONTACT BLOCK REQUIRED			1 — Contact Closed 0 — Contact Open	
Contact Block Position	Quantity and Type	Mount in Position	Left Right	Left Right
 Top View	1-KA-1 	#2	1 0 0 1	0 1 1 0
	1-KA-1 	#1	1 0 0 1	0 1 1 0
NON-ILLUMINATED OPERATORS			CAM	Type Type Price
Manual Return Operator Only				
Without Knob			E	SKS-11 \$12.00
Standard Black Knob			E	SKS-11B 14.80
With Contact Block(s)				
Standard Black Knob			E	SKS-11BH13 25.60
With 1-KA-1 in Pos. #2			E	SKS-11BH1 26.60
With 1-KA-1 in Pos. #1			E	SKS-11BH2 38.80
With 2-KA-1 in Pos. #1 & 2				
Spring Return from Left			E	SKS-25 20.00
Without Knob			E	SKS-25B 22.80
Spring Return from Right			D	SKS-34 20.00
Without Knob			D	SKS-34B 22.80
ILLUMINATED OPERATORS			CAM	Type Type Price
With 120 v., 60 Hz.; 110 v., 50 Hz. Transformer Type Light Module				
Manual Return				
Without Knob			E	SK-11J1 \$44.00
Standard Red Knob			E	SK-11J1R 46.80
Other Voltages Without Knob			E	SK-11J 44.00
Other Voltages Standard Red Knob			E	SK-11J1R 46.80
Spring Return from Left			E	SK-25J1 52.00
Without Knob			E	SK-25J1R 54.80
Standard Red Knob			E	SK-25J 52.00
Other Voltages Without Knob			E	SK-25J1R 54.80
Other Voltages Standard Red Knob			E	SK-25J 54.80
Spring Return from Right			D	SK-34J1 52.00
Without Knob			D	SK-34J1R 54.80
Standard Red Knob			D	SK-34J 52.00
Other Voltages Without Knob			D	SK-34J1R 54.80
Other Voltages Standard Red Knob			D	SK-34J 54.80

*For other voltages and types of illuminated operators, see Page 6-6.

Selector Switch Knobs

(Illuminated and Non-Illuminated Operators)
If knob is to be assembled to operator,
see table 5 Class 9001 Catalog Section 4

Color	Standard Knob	Gloved Hand Knob	Coin Operated	Price
	Type	Type	Type	
Black	B-11▲	B-25▲	B-18▲	\$2.80
Red	R-8	R-24	R-16	
Green	G-8	G-24	G-16	
Brown	N-11▲	N-25▲	N-18▲	
Yellow	Y-8	Y-24	Y-16	
Orange	S-11▲	S-25▲	S-18▲	
Blue	L-8	L-24	L-16	
White	W-8	W-24	W-16	
Amber	A-8	A-24	A-16	
Clear	C-8	C-24	C-16	

▲Black, brown, and orange are opaque and for use on non-illuminated operators only.

Application Data

Cams are field convertible. Separate cams are listed below. For knob colors and types not listed, order operator without knob plus separate knob of desired color and type from table below. Non-illuminated operators can be converted to illuminated type by ordering the separate light module required from Page 6-6. Selector switch operators will accept up to two Type KA contact blocks mounted in tandem (total of four blocks).

Standard Contact Blocks

Symbol	Type	Price
	KA-1	\$12.
	KA-2	6.
	KA-3	6.

For other contact blocks and ratings, see Class 9001 Catalog Section 4.

Cams

Cam	Type	Price
B	K-13B	\$1.80 each
C	K-13C	
D	K-13D	
E	K-13E	
F	K-13F	
G	K-13G	
H	K-13H	
L	K-13L	
J	K-13J	

Orders must specify minimum quantity of 10 or multiple of 10.

Ring Nuts

Description	Type	Price
Selector Switch Ring Nut	SK-45	\$1.20
Secondary Ring Nut (Holds Knob on selector switches)	SK-46	1.20

Contact Blocks Assembled To Operator

Symbol	Contact Block Mounted in Position:	Suffix (Add to operator type number)	Price Adder
	#2	H13	\$12.
	#1	H1	12.
	#2 and #1	H2	24.

Example: Class 9001 Type SKS-11BH2 Price is \$38.80.
For other combinations — See Class 9001 Catalog Section 4.

See Class 9001 Catalog Section 4
For Selector Switch Selection Guide
For Padlock Attachment
For Operator Dimensions
For Mounting Dimensions

For Legend Plates — See Page 6-7

HEAVY DUTY CONTROL UNITS

TYPE SK — SELECTOR SWITCH OPERATORS

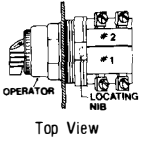
CLASS
9001

NEMA 4X CORROSION RESISTANT/WATERTIGHT AND NEMA 13 OILTIGHT

TYPE SK NON-METALLIC

3 AND 4 POSITION SELECTOR SWITCH OPERATORS

(Legend Plate and Contact Block Not Included Unless Noted)

Contact Block Required			1 = Contact Closed 0 = Contact Open										Price
Contact Block Position	Quantity and Type	Mount in Position	Center Left Right	Center Left Right	Center Left Right	Center Left Right	Center Left Right	Center Left Right	Center Left Right	Center Left Right	Center Left Right	Center Left Right	
 Top View	1-KA-1 	#2	1 0 0 0 1 1	1 0 0 0 0 1	0 0 1 0 1 0	1 0 0 0 1 0	1 0 0 0 0 1	1 0 0 0 1 1	1 0 0 0 1 1	0 0 1 1 0 0	0 1 0 0 0 1	1 0 0 0 0 1	
	1-KA-1 	#1	0 0 1 1 1 0	1 0 0 0 0 1	0 0 1 0 1 0	1 0 0 0 1 0	0 1 0 0 0 1	0 0 1 0 0 1	1 0 1 0 1 0	0 0 1 0 1 0	0 0 1 0 1 0	0 0 1 0 1 0	
CAM			B	C	D	E	F	G	J	L	H		Price
NON-ILLUMINATED OPERATORS			Type	Type	Type	Type	Type	Type	Type	Type	Type		
Manual Return Operator Only													
Without Knob			SKS-42	SKS-43	SKS-44	SKS-45	SKS-46	SKS-47	SKS-49	SKS-401	SKS-88		\$12.00
Standard Black Knob			SKS-42B	SKS-43B	SKS-44B	SKS-45B	SKS-46B	SKS-47B	SKS-49B	SKS-401B	SKS-88B		14.80
With Contact Block(s)													
Standard Black Knob													
With 1-KA-1 in Pos #2			SKS-42BH13	SKS-43BH13	SKS-44BH13	SKS-45BH13	SKS-46BH13	SKS-47BH13	SKS-49BH13	SKS-401BH13	SKS-88BH13		26.80
With 1-KA-1 in Pos #1			SKS-42BH1	SKS-43BH1	SKS-44BH1	SKS-45BH1	SKS-46BH1	SKS-47BH1	SKS-49BH1	SKS-401BH1	SKS-88BH1		26.80
With 2-KA-1 in Pos #1 & 2			SKS-42BH2	SKS-43BH2	SKS-44BH2	SKS-45BH2	SKS-46BH2	SKS-47BH2	SKS-49BH2	SKS-401BH2	SKS-88BH2		38.80
Spring Return — Left to Center													
Without Knob			SKS-62	SKS-63	SKS-64	SKS-65	SKS-66	SKS-67	SKS-69	SKS-601			20.00
Standard Black Knob			SKS-62B	SKS-63B	SKS-64B	SKS-65B	SKS-66B	SKS-67B	SKS-69B	SKS-601B			22.80
Spring Return — Right to Center													
Without Knob			SKS-72	SKS-73	SKS-74	SKS-75	SKS-76	SKS-77	SKS-79	SKS-701			20.00
Standard Black Knob			SKS-72B	SKS-73B	SKS-74B	SKS-75B	SKS-76B	SKS-77B	SKS-79B	SKS-701B			22.80
Spring Return — Both Sides to Center													
Without Knob			SKS-52	SKS-53	SKS-54	SKS-55	SKS-56	SKS-57	SKS-59	SKS-501			20.00
Standard Black Knob			SKS-52B	SKS-53B	SKS-54B	SKS-55B	SKS-56B	SKS-57B	SKS-59B	SKS-501B			22.80

ILLUMINATED OPERATORS*			Type	Type	Type	Type	Type	Type	Type	Type	Type	Price
With 110-120 v., 50-60 Hz. transformer type light module												
Manual Return												
Without Knob			SK-42J1	SK-43J1	SK-44J1	SK-45J1	SK-46J1	SK-47J1	SK-49J1	SK-401J1	SK-88J1	\$44.00
Standard Red Knob			SK-42J1R	SK-43J1R	SK-44J1R	SK-45J1R	SK-46J1R	SK-47J1R	SK-49J1R	SK-401J1R	SK-88J1R	46.80
Other Voltages Without Knob			SK-42J*	SK-43J*	SK-44J*	SK-45J*	SK-46J*	SK-47J*	SK-49J*	SK-401J*	SK-88J*	44.00
Other Voltages Standard Red Knob			SK-42J*R	SK-43J*R	SK-44J*R	SK-45J*R	SK-46J*R	SK-47J*R	SK-49J*R	SK-401J*R	SK-88J*R	46.80
Spring Return — Left to Center												
Without Knob			SK-62J1	SK-63J1	SK-64J1	SK-65J1	SK-66J1	SK-67J1	SK-69J1	SK-601J1		52.00
Standard Red Knob			SK-62J1R	SK-63J1R	SK-64J1R	SK-65J1R	SK-66J1R	SK-67J1R	SK-69J1R	SK-601J1R		54.80
Other Voltages Without Knob			SK-62J*	SK-63J*	SK-64J*	SK-65J*	SK-66J*	SK-67J*	SK-69J*	SK-601J*		52.00
Other Voltages Standard Red Knob			SK-62J*R	SK-63J*R	SK-64J*R	SK-65J*R	SK-66J*R	SK-67J*R	SK-69J*R	SK-601J*R		54.80
Spring Return — Right to Center												
Without Knob			SK-72J1	SK-73J1	SK-74J1	SK-75J1	SK-76J1	SK-77J1	SK-79J1	SK-701J1		52.00
Standard Red Knob			SK-72J1R	SK-73J1R	SK-74J1R	SK-75J1R	SK-76J1R	SK-77J1R	SK-79J1R	SK-701J1R		54.80
Other Voltages Without Knob			SK-72J*	SK-73J*	SK-74J*	SK-75J*	SK-76J*	SK-77J*	SK-79J*	SK-701J*		52.00
Other Voltages Standard Red Knob			SK-72J*R	SK-73J*R	SK-74J*R	SK-75J*R	SK-76J*R	SK-77J*R	SK-79J*R	SK-701J*R		54.80
Spring Return — Both Sides to Center												
Without Knob			SK-52J1	SK-53J1	SK-54J1	SK-55J1	SK-56J1	SK-57J1	SK-59J1	SK-501J1		52.00
Standard Red Knob			SK-52J1R	SK-53J1R	SK-54J1R	SK-55J1R	SK-56J1R	SK-57J1R	SK-59J1R	SK-501J1R		54.80
Other Voltages Without Knob			SK-52J*	SK-53J*	SK-54J*	SK-55J*	SK-56J*	SK-57J*	SK-59J*	SK-501J*		52.00
Other Voltages Standard Red Knob			SK-52J*R	SK-53J*R	SK-54J*R	SK-55J*R	SK-56J*R	SK-57J*R	SK-59J*R	SK-501J*R		54.80

* For Other Voltages and Types — See Page 6-6.

TYPE SK NON-METALLIC

BASIC OPERATORS

SELECTOR SWITCH — Three Position		
Description	Type	Price
Manual Return	SKS-4	\$10.20
Spring Return Both Sides To Center	SKS-5	18.20
Spring Return Left Side To Center	SKS-6	18.20
Spring Return Right Side To Center	SKS-7	18.20

For Separate Knobs, Cams and Ring Nuts
— See Page 6-4

For Contact Blocks — See Page 6-3

For Legend Plates — See Page 6-7

 See Class 9001 Catalog Section 4
 For Selector Switch Selection Guide
 For Padlock Attachment
 For Operator Dimensions
 For Mounting Dimensions

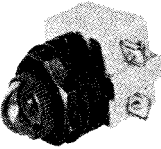
HEAVY DUTY CONTROL UNITS

TYPE SK — PILOT LIGHTS AND LIGHT MODULES

NEMA 4X CORROSION RESISTANT/WATERTIGHT AND NEMA 13 OILTIGHT

JANUARY, 1983

Type SK Non-Metallic Pilot Lights (Legend Plate Not Included)

Description	Style	Standard Pilot Light (Legend Plate Not Included)						Push-to-Test Pilot Light (Contact Block Included — but NOT Legend Plate)						Replacement Lamps
		Voltage and Frequency	Without Color Cap	Price	With Red Color Cap	With Green Color Cap	Price	Without Color Cap	Price	With Red Color Cap	With Green Color Cap	Price		
			Type		Type	Type		Type		Type	Type			
	Transformer	110-120 V., 50-60 Hz.	SKP-1	\$40.00	SKP-1R9	SKP-1G9	\$42.80	SKT-1	\$52.00	SKT-1R9	SKT-1G9	\$54.80	See Below	
		208-220 V., 50-60 Hz.	SKP-3	40.00	SKP-3R9	SKP-3G9	42.80	SKT-3	52.00	SKT-3R9	SKT-3G9	54.80		
		220-240 V., 50-60 Hz.	SKP-7	40.00	SKP-7R9	SKP-7G9	42.80	SKT-7	52.00	SKT-7R9	SKT-7G9	54.80		
		277 V., 50-60 Hz.	SKP-8	40.00	SKP-8R9	SKP-8G9	42.80	SKT-8	52.00	SKT-8R9	SKT-8G9	54.80		
		380-480 V., 50-60 Hz.	SKP-5	40.00	SKP-5R9	SKP-5G9	42.80	SKT-5	52.00	SKT-5R9	SKT-5G9	54.80		
		550-600 V., 50-60 Hz.	SKP-6	40.00	SKP-6R9	SKP-6G9	42.80	SKT-6	52.00	SKT-6R9	SKT-6G9	54.80		
		110-120 V., 50-60 Hz. Flashing Type	SKPF-1	40.00	SKPF-1R9	SKPF-1G9	42.80	SKTF-1	52.00	SKTF-1R9	SKTF-1G9	54.80		
		220-240 V., 50-60 Hz. Flashing Type	SKPF-7	40.00	SKPF-7R9	SKPF-7G9	42.80	SKTF-7	52.00	SKTF-7R9	SKTF-7G9	54.80		
	Resistor	18 V., AC or DC	SKP-33	32.00	SKP-33R9	SKP-33G9	34.80	SKT-33	44.00	SKT-33R9	SKT-33G9	46.80		
		32 V., AC or DC	SKP-23	32.00	SKP-23R9	SKP-23G9	34.80	SKT-23	44.00	SKT-23R9	SKT-23G9	46.80		
		120 V., AC or DC	SKP-38	32.00	SKP-38R9	SKP-38G9	34.80	SKT-38	44.00	SKT-38R9	SKT-38G9	46.80		
		240 V., AC or DC	SKP-25	32.00	SKP-25R9	SKP-25G9	34.80	SKT-25	44.00	SKT-25R9	SKT-25G9	46.80		
	Full Voltage	6 V., AC or DC	SKP-31	32.00	SKP-31R9	SKP-31G9	34.80	SKT-31	44.00	SKT-31R9	SKT-31G9	46.80		
		12-14 V., AC or DC	SKP-32	32.00	SKP-32R9	SKP-32G9	34.80	SKT-32	44.00	SKT-32R9	SKT-32G9	46.80		
		24-28 V., AC or DC	SKP-35	32.00	SKP-35R9	SKP-35G9	34.80	SKT-35	44.00	SKT-35R9	SKT-35G9	46.80		
		48 V., AC or DC	SKP-36	32.00	SKP-36R9	SKP-36G9	34.80	SKT-36	44.00	SKT-36R9	SKT-36G9	46.80		
		60 V., AC or DC	SKP-37	32.00	SKP-37R9	SKP-37G9	34.80	SKT-37	44.00	SKT-37R9	SKT-37G9	46.80		

APPLICATION DATA

Type SK — Any voltage or type of light module can be factory assembled on any of the above pilot lights. For colors, other than listed, order the pilot light without color cap and order the separate color cap from table at right. The push-to-test pilot light comes assembled and wired with one Type KA-1 (1 N.O. — 1 N.C.) contact block. For operator and mounting dimensions see Class 9001 Catalog Section Page 4.

Color Caps (For Standard and Push-To-Test Pilot Light)

Color	Plastic	Price
Red	R-9	\$2.80
Green	G-9	
Amber	A-9	
Blue	L-9	
Clear	C-9	
White	W-9	
Yellow	Y-9	

Type SK Non-Metallic Basic Operator

STANDARD PILOT LIGHT Less Color Cap and Light Module	
Type	Price
SKP	\$8.00
PUSH-TO-TEST PILOT LIGHT	
Type	Price
SK2L	\$8.00

Ring Nuts

Used on	Type	Price
SKP	SK-40	\$1.20
SKT	SK-49	1.20

LIGHT MODULES

Description	Voltage and Frequency	Operator Assembled With Any Light Module		Separate Light Modules		Rated VA	Replacement Lamps					
		Code No.	Price Adjustment	Type	Price		SERIES A thru F			SERIES G		
							Lamp No.	Part Number	Price (D14A)	Lamp No.	Part Number	Price (D14A)
Transformer	110-120 V., 50-60 Hz.	1	No Change	KM-1	\$32.	3.3	GE-44	25501-01005	\$3.00	GE-755	25501-01020	\$3.00
	110-120 V., 50-60 Hz. Flashing Type	F1		KMF-1		4.3	GE-256	25501-01015	4.00	GE-267	25501-01036	4.00
	110-120 V., 25-30 Hz.	2		KM-2		1.6	GE-1490	25501-01003	3.00	GE-1490	25501-01003	3.00
	208-220 V., 50-60 Hz.	3		KM-3		3.6	GE-44	25501-01005	3.00	GE-755	25501-01020	3.00
	220-240 V., 25-30 Hz.	4		KM-4		1.3	GE-1490	25501-01003	3.00	GE-1490	25501-01003	3.00
	220-240 V., 50-60 Hz.	7		KM-7		3.8	GE-44	25501-01005	3.00	GE-755	25501-01020	3.00
	220-240 V., 50-60 Hz. Flashing Type	F7	KMF-7	4.8	GE-256	25501-01015	4.00	GE-267	25501-01036	4.00		
	277 V., 50-60 Hz.	8	KM-8	3.9	GE-44	25501-01005	3.00	GE-755	25501-01020	3.00		
	380-480 V., 50-60 Hz.	5	KM-5	4.9	GE-44	25501-01005	3.00	GE-755	25501-01020	3.00		
	550-660 V., 50-60 Hz.	6	KM-6	5.7	GE-44	25501-01005	3.00	GE-755	25501-01020	3.00		
Neon+	120 V., AC	11	Deduct \$8.	KM-11	\$24.	0.2	CMDK1A5	25501-05014	4.50	NE51H	25501-01013	8.00
	240 V., AC or DC	12		KM-12		0.3	CMDK1A5	25501-05014	4.50	NE51H	25501-01013	8.00
	380 V., AC or DC	13		KM-13		0.5	CMDK1A5	25501-05014	4.50	NE51H	25501-01013	8.00
	480 V., AC or DC	14		KM-14		0.6	CMDK1A5	25501-05014	4.50	NE51H	25501-01013	8.00
	550 V., AC or DC	15		KM-15		1.0	CMDK1A5	25501-05014	4.50	NE51H	25501-01013	8.00
Resistor	18 V., AC or DC	33	Deduct 8.	KM-33	\$24.	1.5	SYL18ESB	25501-05011	4.00	GE756	25501-01037	3.00
	32 V., AC or DC	23		KM-23		1.3	SYL28PSB	25501-05008	4.00	GE757	25501-01002	2.50
	120 V., AC or DC	38		KM-38		3.0	SYL120PSB	25501-05005	4.00	SYL120MB	25501-01027	3.00
	240 V., AC or DC	25		KM-25		6.0	SYL120PSB	25501-05005	4.00	SYL120MB	25501-01027	3.00
Full Voltage	6 V., AC or DC	31	Deduct 8.	KM-31	\$24.	0.9	SYL6PSB	25501-05007	4.00	GE-755	25501-01020	3.00
	12-14 V., AC or DC	32		KM-32		1.1	SYL12PSB	25501-05003	4.00	GE-756	25501-01037	3.00
	24-28 V., AC or DC	35		KM-35		2.3	SYL28PSB	25501-05008	4.00	GE-757	25501-01002	2.50
	48 V., AC or DC	36		KM-36		2.6	SYL48PSB	25501-05009	4.00	SYL48MB	25501-01025	3.00
	60 V., AC or DC	37		KM-37		3.0	SYL60PSB	25501-05010	4.00	SYL60MB	25501-01026	3.00

* Should be used with red, amber or clear color caps only.

HEAVY DUTY CONTROL UNITS

TYPE SK — CONTROL STATIONS AND ENCLOSURES

CLASS
9001

NEMA 4X CORROSION RESISTANT/WATERTIGHT AND NEMA 13 OILTIGHT

APPLICATION DATA

NEMA 4X control stations are designed for use in areas where they might be exposed to corrosive liquids.

Type SKY enclosures are made of a lightweight glass reinforced thermoplastic, with a neoprene gasket for exclusion of dust, liquids or oil. The enclosure color is light gray. Use of non-metallic Type SK operators eliminates the need for ground provision. If metallic operators are used — suitable grounding provisions (per current

UL requirements) must be incorporated. Conduit hub is included as standard.

Type SKN legend plates are made of thermoplastic. They are tri-laminated, white or red background, on a black core, 2.20" square. Standard or special legends are engraved with standard engraving tools.

Standard Assembled Stations — NEMA Type 4X (Glass Reinforced Thermoplastic)



Type SKY-201

No. of Units	Legend Markings and Features	Type	Price	Assembled Station Consists of (one each unless noted):			
				Enclosure	Operators	Contact Blocks	Legend Plates
1	Start	SKY-101	\$72.00	SKY-1	SKR-1B	KA-1	SKN-701
	Stop	SKY-103	\$66.00	SKY-1	SKR-1R	KA-3	SKN-702
	Stop (Lockout)	SKY-105	\$66.00	SKY-1	SKR-1R with K-5	KA-3	SKN-702
	Jog	SKY-107	\$72.00	SKY-1	SKR-1B	KA-1	SKN-718
	Man-Auto (Sel. Switch)	SKY-108	\$76.00	SKY-1	SKS-11B	KA-1	SKN-743
	Off-On (Sel. Switch)	SKY-110	\$76.00	SKY-1	SKS-11B	KA-1	SKN-744
	Hand-Off-Auto (Sel. Switch)	SKY-111	\$76.00	SKY-1	SKS-43B	KA-1	SKN-760
2	Start-Stop	SKY-201	\$98.00	SKY-2	SKR-1B, SKR-1R	KA-1, KA-3	SKN-701, SKN-702
	Start-Stop (Lockout on Stop)	SKY-203	\$118.00	SKY-2	SKR-1B, SKR-1R with K-5	KA-1, KA-3	SKN-701, SKN-702
	Forward-Reverse	SKY-204	\$104.00	SKY-2	(2) SKR-1B	(2) KA-1	SKN-706, SKN-707
	Up-Down	SKY-205	\$104.00	SKY-2	(2) SKR-1B	(2) KA-1	SKN-711, SKN-710
	Open-Close	SKY-206	\$104.00	SKY-2	(2) SKR-1B	(2) KA-1	SKN-709, SKN-708
3	Forward-Reverse-Stop	SKY-301	\$170.00	SKY-3	(2) SKR-1B, SKR-1R	(2) KA-1, KA-3	SKN-706, SKN-707, SKN-702
	Up-Down-Stop	SKY-302	\$170.00	SKY-3	(2) SKR-1B, SKR-1R	(2) KA-1, KA-3	SKN-711, SKN-710, SKN-702
	Open-Close-Stop	SKY-303	\$170.00	SKY-3	(2) SKR-1B, SKR-1R	(2) KA-1, KA-3	SKN-709, SKN-708, SKN-702
	High-Low-Stop	SKY-304	\$170.00	SKY-3	(2) SKR-1B, SKR-1R	(2) KA-1, KA-3	SKN-714, SKN-715, SKN-702
	Start-Jog-Stop	SKY-305	\$170.00	SKY-3	(2) SKR-1B, SKR-1R	(2) KA-1, KA-3	SKN-701, SKN-718, SKN-702
	Red 120 VAC Pilot Light-Start-Stop	SKY-315A	\$88.80	SKY-3	SKP-1R6, SKR-1B, SKR-1R	KA-1, KA-3	SKN-701, SKN-702

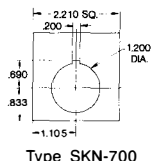
GLASS POLYESTER ENCLOSURES ONLY (For Customer Assembly)

No. of Units	Type	Price
1	SKY-1	\$ 48.
2	SKY-2	56.
3	SKY-3	104.
4	SKY-4	112.
6	SKY-6	200.
9	SKY-9	248.
12	SKY-12	300.
16	SKY-16	396.
20	SKY-20	440.
25	SKY-25	560.

Standard Legend Plates

Standard Markings	Type	Standard Markings	Type
Blank-White/Red	SKN-700	Slow	SKN-713
Start	SKN-701	High	SKN-714
Stop	SKN-702	Low	SKN-715
On	SKN-703	Jog	SKN-718
Off	SKN-704	Reset	SKN-723
Emerg. Stop	SKN-705	Run	SKN-724
Forward	SKN-706	For-Rev	SKN-739
Reverse	SKN-707	Jog-Run	SKN-742
Close	SKN-708	Man-Auto	SKN-743
Open	SKN-709	Off-On	SKN-744
Down	SKN-710	Safe-Run	SKN-749
Up	SKN-711	Up-Down	SKN-753
Fast	SKN-712	Hand-Off-Auto	SKN-760
Price	\$1.20		

Approximate Dimensions



Type SKN-700

Custom Built Assembled Stations Ordering Information

1. Specify the enclosure required by adding "00" to the appropriate Type number from the table at left (example: a custom assembled 2 unit station requires enclosure type SKY-200).
2. Specify Type SK non-metallic operators and Type SKN legend plates. See Pages 6-2 thru 6-7.
3. Specify Type K contact blocks, light modules and other accessories. See Pages 6-2 thru 6-6.
4. Orders must include a sketch or key sheet showing the desired operator locations.

Pricing Information:

The complete price of a custom assembled station is the sum of the price of the enclosure (from the table at left) plus the prices of all control units and legend plates specified. There is no charge for assembly.

Non-Standard Legend Plates with Special Legend Marking (Specify marking and background color required)*

Background Color	Type	Price
White or Red	SKN-799	\$5.20

*Maximum number of lines for SKN legend plates are two horizontally or one vertically on each side, with a maximum of ten characters or spaces per line. The tri-laminated legend plates have a white or red background on a black core.

Closing Plate

Description	Round (1 1/2" Dia.) Type	Price
Chrome Plated	K-52	\$4.

Wrench

Where Used	Type
For tightening ring nuts on Type SK control units	K-95

See Class 9001 Catalog Section 4
 For Selector Switch Selection Guide
 For Padlock Attachments
 (K-5, K-6, K-7, K-62, K-67 Only)
 For Operator Dimensions
 For Mounting Dimensions

HEAVY DUTY CONTROL UNITS

TYPE SK — DIMENSIONS

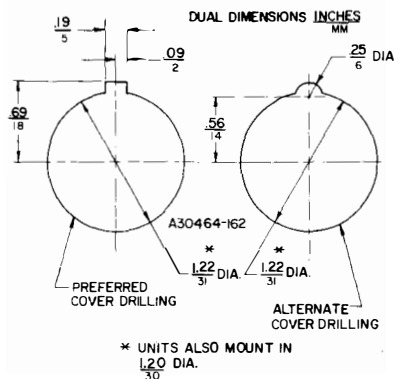
JANUARY, 1983

NEMA 4X CORROSION RESISTANT/WATERTIGHT AND NEMA 13 OILTIGHT

Operator Service Temperature Range:

- 22° to + 140° Fahrenheit
- 30° to + 60° Celsius

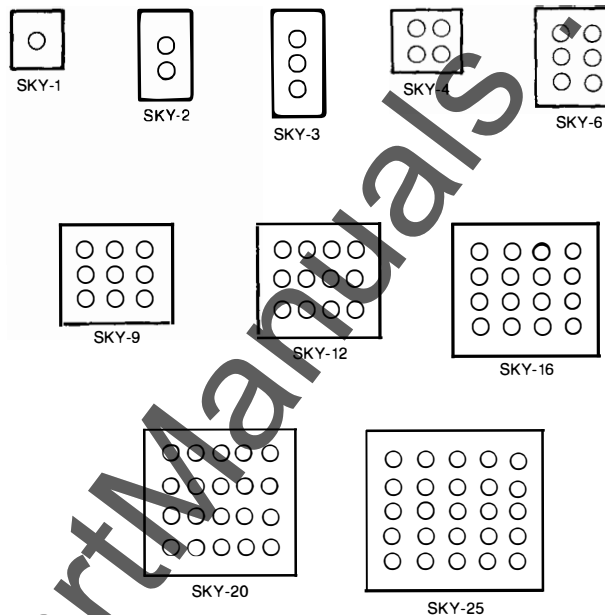
MOUNTING HOLE FOR ALL TYPE SK CONTROL UNITS



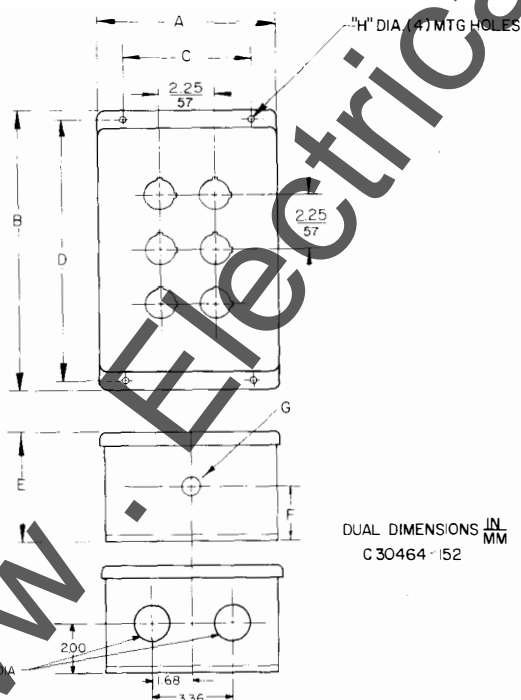
HOLE PUNCH

The 1.22" diameter hole required to mount Type SK operators may be cut with Greenlee knockout punch No. 730-S. The notch may be cut with Greenlee punch No. 730-K. Both punches are available through electrical wholesalers.

Location of Control Units



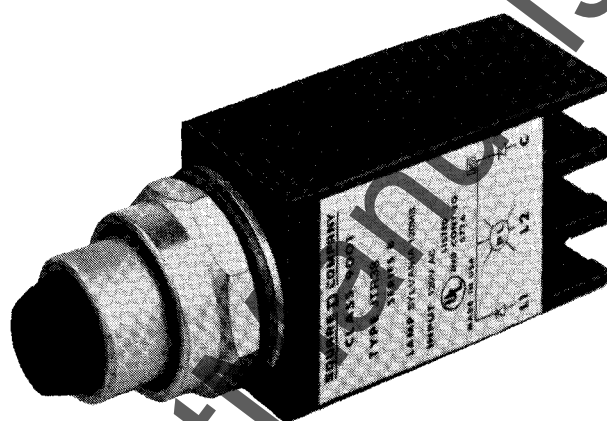
APPROXIMATE DIMENSIONS



No. of Units	Overall Dim.		Mtg. Dim.		Height	Conduit Location	Conduit Size	Mtg. Hole
	A	B	C	D	E	F	G	H
1	3.50 89	4.88 124	2.38 60.1	4.00 102	3.38 86	1.68 43	.750 19	.25 6
2	3.50 89	7.12 181	2.38 60.1	6.25 159	3.38 86	1.68 43	.750 19	.25 6
3	3.50 89	9.38 238	2.38 60.1	8.50 216	3.38 86	1.68 43	.750 19	.25 6
4	7.38 187	7.50 191	4.00 102	6.75 171	4.81 122	2.00 51	.750 19	.31 8
6	7.38 187	9.62 244	4.00 102	8.88 226	4.81 122	2.00 51	.750 19	.31 8
9	9.38 238	11.62 295	6.00 152	10.75 273	4.25 108	1.75 44	1.00 25	.31 8
12	9.38 238	11.62 295	6.00 152	10.75 273	4.25 108	1.75 44	1.00 25	.31 8
16	11.38 289	13.62 346	8.00 203	12.75 324	5.25 133	2.00 51	1.50 38	.31 8
20	11.38 289	13.62 346	8.00 203	12.75 324	5.25 133	2.00 51	1.50 38	.31 8
25	13.25 337	15.38 391	10.00 254	14.62 371	6.38 162	2.00 51	1.50 38	.31 8

Operator Dimensions — See Class 9001 Catalog Section 4. Use dimensions of equivalent Type K operators; i.e. for SKR-1U use KR-1U, for SKS11B use KS11B.





Pilot Lights Compact

Type J

CONTENTS

Description	Class	Page
Pilot Lights	9001	5-2
Legend Plates	9001	5-2
Accessories	9001	5-2
Dimensions	9001	5-3

COMPACT OILTIGHT CONTROL UNITS

TYPE J — PILOT LIGHTS, PUSH-TO-TEST AND REMOTE TEST PILOT LIGHTS

JANUARY, 1981

APPLICATION DATA

Type J compact pilot lights are designed to be mounted in a .69" (11/16") diameter mounting hole. For colors other than listed, order the pilot light without color cap (example: Type JP1) and order the separate color cap from the table below.

Type J pilot light terminals will accept up to two #14 wires.

Type JT push-to-test pilot lights have a contact block built into the encapsulated body.

Type JTR remote test pilot lights have dual inputs for one-push remote testing — all you need is a push button with a current rating equal to the total lamp draw as indicated in the table below. Example: Ten Type JTR-38 have a total lamp draw of .25 amps (10 × .025 A).

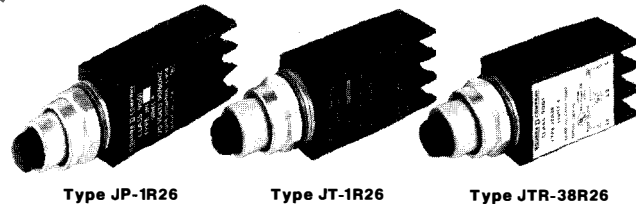
Remote test lights can also be energized from two separate input signals of the same voltage and polarity, by wiring the "Test" terminal to the second input signal.

Description	Style	Voltage and Frequency	Without Color Cap	Price	With Red Color Cap	With Green Color Cap	Price	Lamp
			Type		Type*	Type*		
Standard Pilot Light	Transformer	110-120V., 50-60 Hz	JP-1	\$40.00	JP-1R26	JP-1G26	\$42.80	GE755
	Full Voltage	6V., AC or DC	JP-31	32.00	JP-31R26	JP-31G26	34.80	GE755
		12V., AC or DC	JP-32	32.00	JP-32R26	JP-32G26	34.80	Syl. 12MB
		24V., AC or DC	JP-34	32.00	JP-34R26	JP-34G26	34.80	Syl. 24MB
		28V., AC or DC	JP-35	32.00	JP-35R26	JP-35G26	34.80	Syl. 28MB
		48V., AC or DC	JP-36	32.00	JP-36R26	JP-36G26	34.80	Syl. 48MB
		60V., AC or DC	JP-37	32.00	JP-37R26	JP-37G26	34.80	Syl. 60MB
		120V., AC or DC	JP-38	32.00	JP-38R26	JP-38G26	34.80	Syl. 120MB
Push-To-Test Pilot Light	Transformer	110-120V., 50-60 Hz	JT-1	52.00	JT-1R26	JT-1G26	54.80	GE755
	Full Voltage	6V., AC or DC	JT-31	44.00	JT-31R26	JT-31G26	46.80	GE755
		12V., AC or DC	JT-32	44.00	JT-32R26	JT-32G26	46.80	Syl. 12MB
		24V., AC or DC	JT-34	44.00	JT-34R26	JT-34G26	46.80	Syl. 24MB
		28V., AC or DC	JT-35	44.00	JT-35R26	JT-35G26	46.80	Syl. 28MB
		48V., AC or DC	JT-36	44.00	JT-36R26	JT-36G26	46.80	Syl. 48MB
		60V., AC or DC	JT-37	44.00	JT-37R26	JT-37G26	46.80	Syl. 60MB
		120V., AC or DC	JT-38	44.00	JT-38R26	JT-38G26	46.80	Syl. 120MB
Remote Test Pilot Light	Resistor	6V., AC	JTR-31	52.00	JTR-31R26	JTR-31G26	54.80	G.E. 1490
	Full Voltage	12V., AC	JTR-32	52.00	JTR-32R26	JTR-32G26	54.80	Syl. 12MB
		24V., AC	JTR-34	52.00	JTR-34R26	JTR-34G26	54.80	Syl. 24MB
		28V., AC	JTR-35	52.00	JTR-35R26	JTR-35G26	54.80	Syl. 28MB
		48V., AC	JTR-36	52.00	JTR-36R26	JTR-36G26	54.80	Syl. 48MB
		60V., AC	JTR-37	52.00	JTR-37R26	JTR-37G26	54.80	Syl. 60MB
		120V., AC	JTR-38	52.00	JTR-38R26	JTR-38G26	54.80	Syl. 120MB

* Supplied with "glass" color caps. If "plastic" color caps are desired, substitute G29, R29, etc., for G26, R26, etc. Example: JP1G29, JP1R29, etc.

Color Caps

Color	Type J		Price
	Glass	Plastic	
Red	R-26	R-29	\$2.00
Green	G-26	G-29	
Amber	A-26	A-29	
Blue	L-26	L-29	
Clear	C-26	C-29	
White	W-26	W-29	
Yellow	Y-26	Y-29	



Type JP-1R26

Type JT-1R26

Type JTR-38R26

Legend Plates

Description		Type	Price
	Blank	Black Field Red Field	JN-100 JN-100R 1.20
	Special Marking (Specify Marking)	Black Field Red Field	JN-199 JN-199R 5.20
	Blank	Aluminum Field	JN-700 1.20
	Special Marking (Specify Marking)	Aluminum Field	JN-799 5.20

Maximum Number of Lines and Characters For Type JN Legend Plates

Type	JN-1	JN-7
Maximum Number of Characters Per Line	8	16
Maximum Number of Lines	2	2

Type J Mounting Adapter Kit

Allows Type J pilot light to be mounted in a standard miniature (Type L) 3/8" diameter hole.	
Type	Price
J-3	\$2.20

Replacement Lamps

Manufacturer Part Number	Rated Voltage	Rated Current Draw	Square D Part Number	Price (D14A)
GE 755	6.3V	.150A	25501-01020	\$3.00
G.E. 1490	3V	.160A	25501-01003	
Syl. 12MB	12V	.170A	25501-01022	
Syl. 24MB	24V	.073A	25501-01023	
Syl. 28MB	28V	.040A	25501-01024	
Syl. 48MB	48V	.053A	25501-01025	
Syl. 60MB	60V	.050A	25501-01026	
Syl. 120MB	120V	.025A	25501-01027	

NOTE: Octagonal ring nuts can be tightened with standard tools, or use the reverse end of Square D wrench Class 9001 Type K-95, see Class 9001 Catalog Section 4.

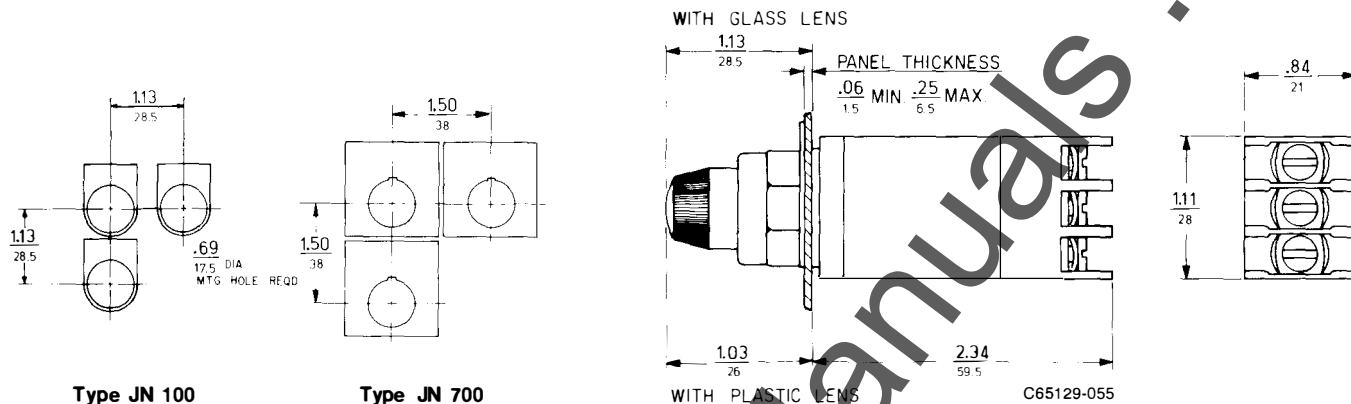


COMPACT OILTIGHT PILOT LIGHTS

Type J — Dimensions

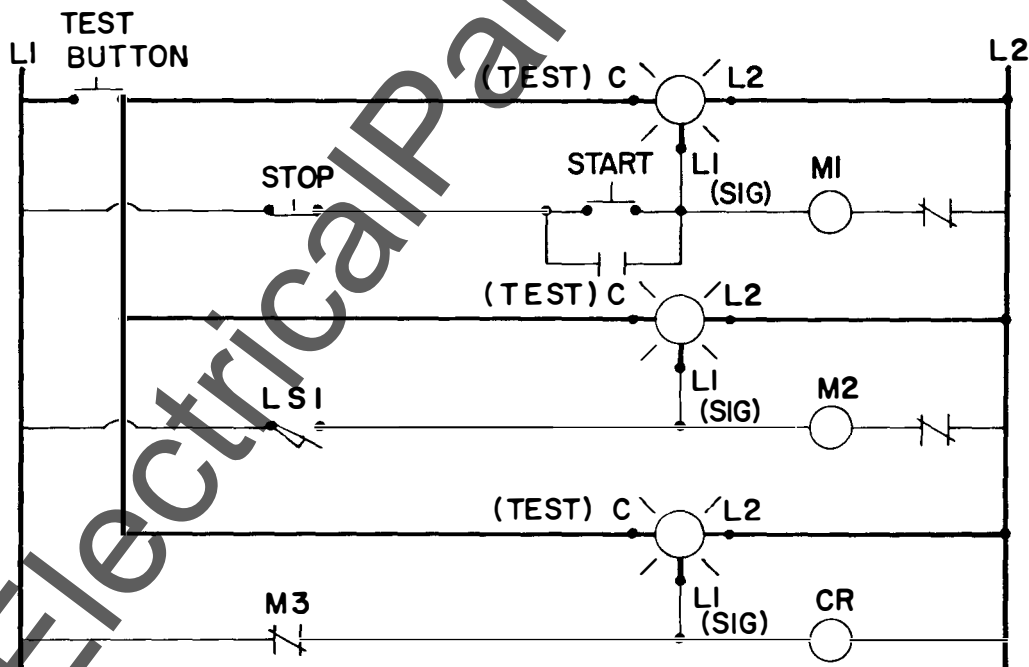
CLASS
9001

Dimensions



Dual Dimensions: **INCHES**
Millimeters

Remote Test Pilot Light — Typical Wiring Diagram



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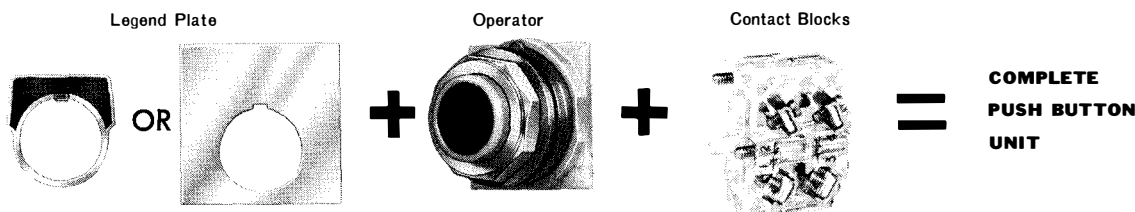
SQUARE D COMPANY



Push Buttons Heavy Duty Oiltight TYPE K

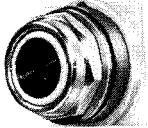
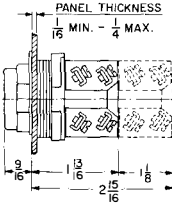
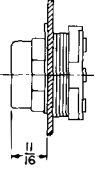
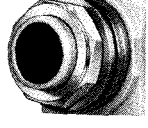
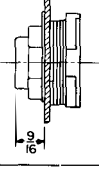
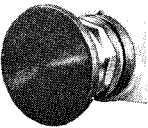
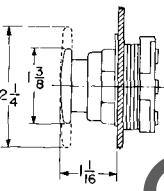
CONTENTS

Description	Class	Pages	Description	Class	Pages
Push Buttons	9001	4-2 thru 4-4	Accessories	9001	4-16
Joy Stick Operator	9001	4-5	Legend Plates	9001	4-17
Selector Push Button	9001	4-6	Contact Blocks	9001	4-18 thru 4-21
Key Operated Push Button ..	9001	4-6	Enclosures	9001	4-22 thru 4-25
Selector Switches	9001	4-7 thru 4-11	Dimensions	9001	4-26 thru 4-27
Pilot Lights	9001	4-12 thru 4-13	Application Data	9001	4-28
Other Operators	9001	4-14 thru 4-15			



Momentary Operators

Legend Plate and Contact Block Not Included Unless Noted

Description	Approximate Dimensions*	Insert Color	Type	Price
 Full Guard		Operator Only Universal Includes one of each color insert from table below. Black Red	KR-1U	\$10.80
			KR-1B	10.80
			KR-1R	10.80
		Operator with Contact Block Black with 1 NO-1 NC (KA-1)	KR-1BH13	22.80
		Black with 1 NO (KA-2)	KR-1BH5	16.80
		Black with 1 NC (KA-3)	KR-1BH6	16.80
		Red with 1 NO-1 NC (KA-1)	KR-1RH13	22.80
		Red with 1 NO (KA-2)	KR-1RH5	16.80
 Extended Guard		Universal Includes one of each color insert from table below. Black	KR-2U	10.80
			KR-2B	10.80
		Red	KR-2R	10.80
 No Guard		Universal Includes one of each color insert from table below. Black	KR-3U	10.80
			KR-3B	10.80
		Red	KR-3R	10.80
 Mushroom Button		Snap-In Type		
		Color	1 3/8" D.	2 1/4" D.
		Black	KR-4B	KR-5B
		Red	KR-4R	KR-5R
		Screw-On with Set Screw Type		
		Color	1 3/8" D.	2 1/4" D.
		Black	KR-24B	KR-25B
		Green	KR-24G	KR-25G
		Red	KR-24R	KR-25R
		Yellow	KR-24Y	KR-25Y
		Basic Operator less mushroom button	KR-20	10.80
		For colors not listed — see Tables 1 and 2 below.		

* MOUNTING DIMENSIONS — See Page 4-28.

Color Inserts

Color	Type	Price Each
Black	T-6BK	\$.20
Red	T-6RD	
Green	T-6GN	
Yellow	T-6YW	
Orange	T-6OE	
Blue	T-6BE	
White	T-6WH	
Universal (All Colors)	T-6U	1.60
Orders must specify quantity of 10 or multiples of 10.		

Mushroom Button Kits

Color	Table 1		Table 2		Price
	For colors not listed for KR-4 or KR-5; order KR-1U and kit below		For colors not listed for KR-24 or KR-25; order KR-20 and kit below		
	Type		Type		
	1½" D.	2¼" D.	1½" D.	2¼" D.	
Black	K-16B	K-17B	K-92B	K-93B	\$12.
Red	K-16R	K-17R	K-92R	K-93R	
Green	K-16G	K-17G	K-92G	K-93G	
Brown	K-16N	K-17N	K-92N	K-93N	
Yellow	K-16Y	K-17Y	K-92Y	K-93Y	
Orange	K-16S	K-17S	K-92S	K-93S	
Blue	K-16L	K-17L	K-92L	K-93L	

Application Data

Ring nuts and inserts are field convertible by ordering the ring nut or insert from tables below. Any push button can be converted to a mushroom operator by ordering the mushroom button kit from Table 1 below and inserting mushroom in push button operator stem.

Operators on this page will accept up to six Type KA contact blocks mounted in tandem (total of twelve blocks).

Common Legend Plates

Marking	Type		Price
	 (Black Field Unless Noted)	 (Aluminum Field Unless Noted)	
Blank	KN-200	KN-700	\$1.20
Blank (Red)	KN-200R	KN-700R	
Start	KN-201	KN-701	
Stop (Red)	KN-202	KN-702	
On	KN-203	KN-703	
Off (Red)	KN-204	KN-704	
Down	KN-210	KN-710	
Up	KN-211	KN-711	
Jog	KN-218	KN-718	
Reset	KN-223	KN-723	
Run	KN-224	KN-724	
For other legend plates — See Page 4-17.			

Standard Contact Blocks

Symbol	Contact Block Only		Contact Block Assembled To Operator	
	Type	Price	Suffix	Price Adder
	KA-1	\$12.00	H13	\$12.00
	KA-2	6.00	H5	6.00
	KA-3	6.00	H6	6.00
For other contact blocks — ratings — dimensions — See Page 4-18.				
EXAMPLE: Class 9001 Type KR-3B H13. Price is \$22.80 . For other combinations — See Page 4-19.				

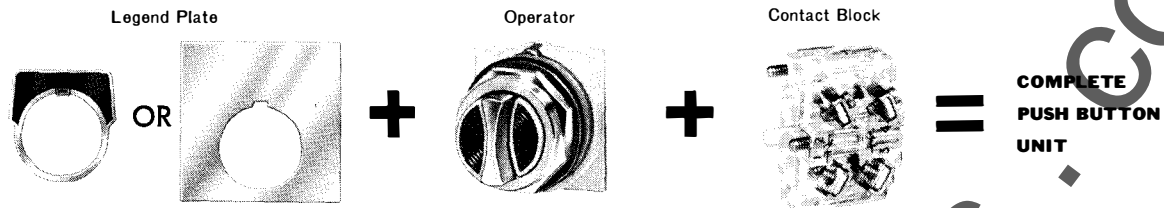
Interchangeable Push Button
Ring Nuts and Guards

Description	Used On	Type	Price
Ring Nut	KR-3	K-40	\$ 1.20
Ring Nut	KR-1 KR-4 KR-5	K-41	1.20
Ring Nut	KR-20 KR-24 KR-25	K-49	1.20
Ring Nut	KR-2	K-42	1.20
Mushroom Button Guard	KR-4	K-48	16.00
Extended Mushroom Button Guard	KR-4	K-56Y	16.00



HEAVY DUTY OILTIGHT CONTROL UNITS

TYPE K — SPECIAL PURPOSE PUSH BUTTON OPERATORS — NON-ILLUMINATED

CLASS
9001

APPLICATION DATA

Types KR-6, KR-7 and KR-67: One operator performs same function as two units. Up to six Type KA contact blocks can be mounted in tandem (total of twelve blocks).

Types KR-8 and KR-9: Type KR-8 requires (1) N.C. KA-1 or KA-3 for "Start" and (1) KA-5 (Page 4-18) for "Stop". Type KR-9 requires (1) N.C. KA-1 or KA-3.

To convert to illuminated type, order separate light module (Page 4-13). Order complete factory assembled illuminated operators from Page 4-4. For any knob color not listed, order KR-8 or KR-9 and separate knob of desired color from below. Up to two Type KA contact blocks can be mounted in tandem (total of four blocks).

Types KR-11U and KR-12U: Type KR-11U consists of two maintained, interlocked operators. Pushing on either one releases the other. Type KR-12U consists of one momentary and one maintained operator, interlocked such that pushing on the momentary operator releases the maintained operator. The interlock attachment mounts on either the operators or contact blocks. A total of two Type KA contact blocks can be mounted side by side on each operator (total of four on either type KR-11U or KR-12U).

Special Purpose Operators — Legend Plate and Contact Block Not Included

Description	Color Insert or Knob	Type	Price
	Universal — includes two inserts of each color from insert table below Black — Red Green — Red	KR-6U KR-6BR KR-6GR	\$22.80 22.80 22.80
	Universal — includes two inserts of each color from insert table below Black — Red Green — Red	KR-67U KR-67BR KR-67GR	34.80 34.80 34.80
	Universal — includes two inserts of each color from insert table below Black — Red Green — Red	KR-7U KR-7BR KR-7GR	34.80 34.80 34.80
	None Red Green	KR-8 KR-8R KR-8G	21.20* 24.00* 24.00*
	None Red Green	KR-9 KR-9R KR-9G	33.20* 36.00* 36.00*
	Universal — includes two inserts of each color listed on page 4-2.	KR-11U	33.60
	Universal — includes two inserts of each color listed on page 4-2.	KR-12U	45.60

*Includes KN-379 legend plate. (Marked: Pull To Start — Push To Stop).

Push-Pull Mushroom Adapter

Used to mount mushroom button knobs (Types A-20 thru Y-21; see page 4-4) on Types KR-8 or KR-9 operators.

Type	Price
K-54	No charge

Accessories and Modifications

Color Inserts For Dual Function Operators

Color	Type	Price
Black	B-19	\$.40
Red	R-19	.40
Green	G-19	.40
Universal (Includes 2 each of B-19, R-19 and G-19)	U-19	2.40

Orders must specify quantity of 10 or multiples of 10.

Ring Nuts

Used on	Type	Price
KR-6, KR-7, KR-67	K-47	\$1.20
KR-8	K-58	
KR-9	K-49	
KR-11 and Maintained Button Only of KR-12	K-42	
Mom. of KR-12	K-41	

Knobs For Push-Pull Operators

Color	Type	Price
Red	R-22	\$2.80
Green	G-22	
Blue	L-22	
Yellow	Y-22	
White	W-22	
Black	B-23▲	
Brown	N-23▲	
Orange	S-23▲	
Clear	C-22	
Amber	A-22	

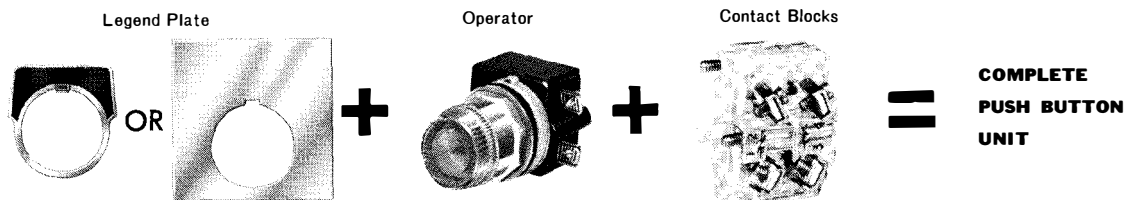
▲Black, brown, and orange are opaque and for use on non-illuminated operators only.

Mounting Dimensions — See Page 4-28.



**CONTROL UNITS — HEAVY DUTY OILTIGHT
TYPE K — PUSH BUTTON OPERATORS — ILLUMINATED**

JANUARY, 1981

**APPLICATION DATA**

Types K1L and K2L: Ring nuts and color caps are field convertible. For any color cap or mushroom knob not listed, order operator without color cap and required color cap or mushroom knob (used only on K2L series) from table below. For voltages and types of light modules not listed, see Page 4-13. **Up to six Type KA contact blocks can be mounted in tandem (total of twelve blocks).**

Types KR-8P and KR-9P: Type KR-8P requires (1) KA-1 (N.C.) or KA-3 for "Start" and (1) KA-5 (Page 4-18) for "Stop". For any color not listed, order operator without knob and required knob from Page 4-3. For voltages and types of light modules not listed, see Page 4-13. **Up to two Type KA contact blocks can be mounted in tandem (total of four blocks).**

**Illuminated Push Button Operators
Legend Plate and Contact Block Not Included**

Voltage and Frequency (Transformer Type)	Lamp No.	Rated VA	Color Cap	With Guard		Without Guard	
				Type	Price	Type	Price
120 v., 60 Hz.; 110 v., 50 Hz.	#755	3 @ 60 Hz., 6 @ 50 Hz.	None	K1L-1	\$44.00	K2L-1	\$40.00
			Red	K1L-1R	46.80	K2L-1R	42.80
			Green	K1L-1G	46.80	K2L-1G	42.80
240 v., 60 Hz.; 220 v., 50 Hz.	#755	3 @ 60 Hz., 6 @ 50 Hz.	None	K1L-7	44.00	K2L-7	40.00
			Red	K1L-7R	46.80	K2L-7R	42.80
			Green	K1L-7G	46.80	K2L-7G	42.80
480 v., 60 Hz.; 440 v., 50 Hz.	#755	3 @ 60 Hz., 6 @ 50 Hz.	None	K1L-5	44.00	K2L-5	40.00
			Red	K1L-5R	46.80	K2L-5R	42.80
			Green	K1L-5G	46.80	K2L-5G	42.80
600 v., 60 Hz.; 550 v., 50 Hz.	#755	3 @ 60 Hz., 6 @ 50 Hz.	None	K1L-6	44.00	K2L-6	40.00
			Red	K1L-6R	46.80	K2L-6R	42.80
			Green	K1L-6G	46.80	K2L-6G	42.80

For other voltages and types, see page 4-13.

**Illuminated Push-Pull Operators
Contact Block Not Included**

Voltage and Frequency (Transformer Type)	Lamp No.	Rated VA	Color Cap	Momentary Contact		Maintained Contact	
				Type	Price	Type	Price
120 v., 60 Hz.; 110 v., 50 Hz.	#755	3 @ 60 Hz., 6 @ 50 Hz.	None	KR-8P1	\$53.20	KR-9P1	\$65.20
			Red	KR-8P1R	56.00	KR-9P1R	68.00
			Green	KR-8P1G	56.00	KR-9P1G	68.00
240 v., 60 Hz.; 220 v., 50 Hz.	#755	3 @ 60 Hz., 6 @ 50 Hz.	None	KR-8P7	53.20	KR-9P7	65.20
			Red	KR-8P7R	56.00	KR-9P7R	68.00
			Green	KR-8P7G	56.00	KR-9P7G	68.00
480 v., 60 Hz.; 440 v., 50 Hz.	#755	3 @ 60 Hz., 6 @ 50 Hz.	None	KR-8P5	53.20	KR-9P5	65.20
			Red	KR-8P5R	56.00	KR-9P5R	68.00
			Green	KR-8P5G	56.00	KR-9P5G	68.00
600 v., 60 Hz.; 550 v., 50 Hz.	#755	3 @ 50 Hz., 6 @ 50 Hz.	None	KR-8P6	53.20	KR-9P6	65.20
			Red	KR-8P6R	56.00	KR-9P6R	68.00
			Green	KR-8P6G	56.00	KR-9P6G	68.00

For other voltages and types, see page 4-13. For separate knobs — see page 4-3.

Accessories and Modifications

Also see Page 4-16

Color Caps For Illuminated Push Buttons

Ring Nuts						
Used On	Type	Price	Color	Standard Type	1 3/4" Mushroom Type	2 1/4" Mushroom Type
K1L	K-44	\$5.20	Red	R-7	R-20	R-21
K2L	K-49	1.20	Green	G-7	G-20	G-21
			Amber	A-7	A-20	A-21
			Blue	L-7	L-20	L-21
			Clear	C-7	C-20	C-21
			White	W-7	W-20	W-21
			Yellow	Y-7	Y-20	Y-21
KR-8P KR-9P	K-58 K-49	1.20				

Standard Contact Blocks

Symbol	Type	Price
	KA-1	\$12.
	KA-2	6.
	KA-3	6.

For other contact blocks and ratings, see page 4-18.

Contact Blocks Assem. to Operators

Symbol	Suffix (Add to operator type number)	Price Adder
	H13	\$12.
	H2	24.
	H25* For use with KA-5 KA-3	12.

Example: Class 9001 Type K1L-1RH2
Price is \$70.80.
For other Combinations — See Page 4-19.

*Function of Type KR8 — H25 or Type KR8P — H25:
Unactuated Position; Type KA-5 closed, Type KA-3 held open.
Pull (Start) Position; Both contacts closed.
Push (Stop) Position; Both contacts open.

Common Legend Plates

Marking	Type		Price
	(Black Field Unless Noted)	(Aluminum Field Unless Noted)	
Blank	KN-200	KN-700	\$1.20
Blank (Red)	KN-200R	KN-700R	
Start	KN-201	KN-701	
Stop (Red)	KN-202	KN-702	
On	KN-203	KN-703	
Off (Red)	KN-204	KN-704	
Down	KN-210	KN-710	
Up	KN-211	KN-711	
Jog	KN-218	KN-718	
Reset	KN-223	KN-723	
Run	KN-224	KN-724	

For other legend plates — See Page 4-17.

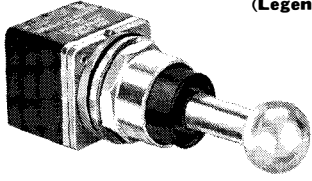
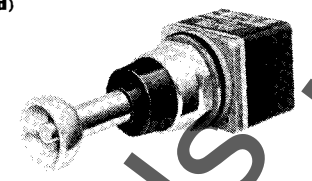
**Push-Pull Mushroom Adapter
— See Page 4-3****Mounting Dimensions —
See Page 4-28**

CONTROL UNITS — HEAVY DUTY OILTIGHT

TYPE K — JOY STICK OPERATORS

CLASS
9001

(Legend Plate and Contact Block Not Included)

Without Latch With Latch

Description			Type (Operator Only)			Price
			↔	↑↓	↖↗	
3 Position- Center Off	Momentary Contact	Without Latch	K31	K71	-----	\$70.80
	Spring Return to Center	With Latch	K30	K70	-----	70.80
	Maintained Contact	Without Latch	K33	K73	-----	70.80
		With Latch	K32	K72	-----	70.80
5 Position- Center Off	Momentary Contact	Without Latch	-----	-----	K35	86.80
	Spring Return to Center	With Latch	-----	-----	K34	86.80
	Maintained Contact	Without Latch	-----	-----	K37	86.80
		With Latch	-----	-----	K36	86.80

The joy stick operator is ideal for applications where only one circuit is to be energized at one time. The three position joy stick closes one circuit each in Up-Down or Right-Left position with all circuits open in center position. The five position operator closes one circuit each in Up, Down, Left and Right positions with all circuits open in center position.

Momentary contact operators spring return to the center position. Maintained operators remain in each position and must be reset manually. Operators with latch cannot be operated until the latch button in center of handle is pressed.

Contact blocks may be placed in positions 1, 2, 3 and 4, (see Figure 2 below), with a **maximum of four blocks total**.

Contact Arrangements

Operator	Contact Block Type	Contact Block Location (See Fig. 2)	Contact (See Fig. 2)	Handle position (with ref. to NIB, see fig. 1)				
				1 ↑	2 →	OFF	3 ↓	4 ←
↔ 3 Position Operator	KA3	POS 1 (3)	A		1	O		O
	KA3	POS 2 (4)	A		O	O		1
↑↓ 3 Position Operator	KA2	POS 1 (3)	B	1		O	O	
	KA2	POS 2 (4)	B	O		O	1	
↖↗ 5 Position Operator	KA1	POS 1 (3)	A	O	1	O	O	O
			B	1	O	O	O	O
	KA1	POS 2 (4)	A	O	O	O	O	1
			B	O	O	O	1	O

Note: (1) Contact Closed (O) Contact Open

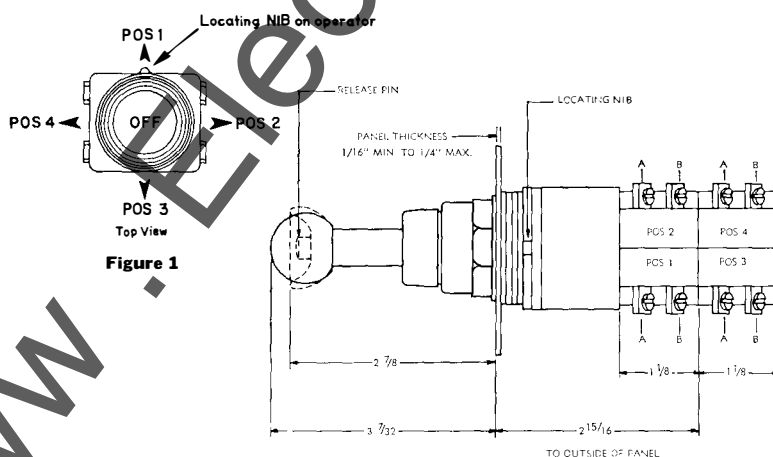


Figure 2

Contact Blocks

Type	Price
KA-1	\$12.
KA-2	6.
KA-3	6.

Contact Blocks Assembled to Operator

Contact Block Quantity and Type	Contact Block Position	Suffix (Add to Operator Type Number)	Price Adder
(2) KA-3	#1 and #2	H8	\$12.
(2) KA-2	#1 and #2	H7	12.
(2) KA-1	#1 and #2	H2	24.

EXAMPLE: Class 9001 Type K37-H2
Price is **\$110.80**

For other combinations — see page 4-19.

LEGEND PLATES — See Page 4-17 (Type KN-9).

MOUNTING DIMENSIONS — See Page 4-28.

HEAVY DUTY OILTIGHT CONTROL UNITS

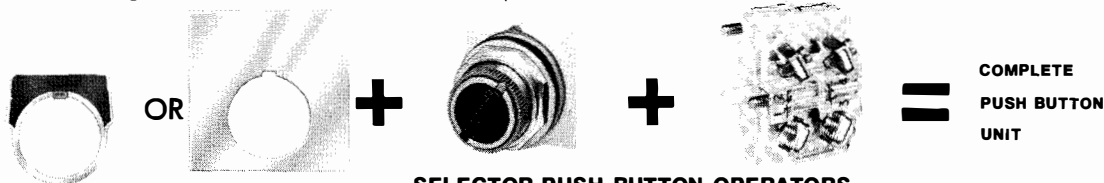
TYPE K — SELECTOR PUSH BUTTONS AND KEY OPERATED PUSH BUTTONS

JANUARY, 1981

Legend Plate

Operator

Contact Block



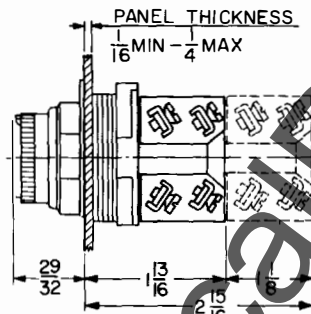
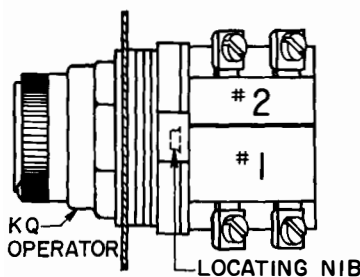
SELECTOR PUSH BUTTON OPERATORS

Legend Plate and Contact Block Not Included

Contact Block Required		Two Position Operators												Three Position Operators			Order Contact Blocks From Page 4-18						
		1 = Contact Closed 0 = Contact Open						F = Free D = Depressed															
		Left		Right		Left		Right		Left		Right		Left		Right		Left	Center	Right			
Quantity and Type	Mount in Position	F	D	F	D	F	D	F	D	F	D	F	D	F	D	F		D	F	D			
1-KA-1 	#2	0	0	1	0	0	0	1	0	0	0	1	1	1	0	1	0	0	0	1	0	1	1
		0	1	0	1	0	1	0	0	0	1	0	0	0	1	0	1	0	1	0	0	0	0
1-KA-1 	#1	0	0	1	1	0	0	1	0	1	1	1	0	0	0	1	1	1	0	1	0	1	0
		0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	1	1	0	0	0	1	0
CAM		P		R		S		T		Y		Z		U									
Color Insert		Type		Type		Type		Type		Type		Type		Type				Price					
Without Insert Black		KQ-11 KQ-11B		KQ-12 KQ-12B		KQ-13 KQ-13B		KQ-14 KQ-14B		KQ-15 KQ-15B		KQ-18 KQ-18B		KQ-27 KQ-27B				\$22.40 22.80					

Contact Block Position

Approximate Dimensions



APPLICATION DATA

Inserts are field convertible. For colors not listed, order operator without insert plus separate color insert from table below. Up to two Type KA contact blocks can be mounted in tandem (total of four blocks). Selector pushbuttons cannot be illuminated.

Color Inserts

Color	Type	Price
Black	T-5BK	\$.40
Red	T-5RD	.40
Green	T-5GN	.40
Brown	T-5BN	.40
Yellow	T-5YW	.40
Orange	T-5OE	.40
Blue	T-5BE	.40
White	T-5WH	.40

Orders must specify minimum quantity of 10 or multiple of 10.

Cams

Cam	Type	Price
P	T-3P	\$3.20
R	T-3R	
S	T-3S	
T	T-3T	
U	T-3U	
Y	T-3Y	
Z	T-3Z	

Orders must specify minimum quantity of 10 or multiple of 10.

MOUNTING DIMENSIONS — See Page 4-28

KEY OPERATED PUSH BUTTONS

Key operated push buttons are used wherever unauthorized use of a push button is to be discouraged. Examples are locking a "Start" push button in the extended position or locking a "Stop" push button in the depressed position. The operator can also be locked in the flush position — holding all contacts open. Up to two Type KA contact blocks can be mounted in tandem (total of four blocks).

Legend Plate and Contact Block Not Included

Description	Positions In Which Push Button Can Be Locked			Type	Price
	Extended	Flush	Depressed		
Push button operable only with key in lock. Key is removable in locked position only.	X X	.. X .. X	 X X	KR-131 KR-132 KR-133 KR-137	\$34.80
Push button operable with or without key in lock. Push button can be locked with key only. Key removable in both locked or unlocked position.	X X	.. X .. X	 X X	KR-141 KR-142 KR-143 KR-147	
Unit is set by rotating key, with button in extended position. Key is removable only in this set position. When pushed, the button will then lock in position indicated at right.	.. ..	X ..	.. X	KR-152 KR-153	

All key operated push buttons are furnished as standard with Square D number E10 key change. See page 4-11 for other key changes.



MOUNTING DIMENSIONS — See Page 4-28.

OPERATOR DIMENSIONS — See Page 4-27.



SELECTION GUIDE

Shown below is a simplified method of selecting a selector switch to meet almost any contact sequence. For additional type numbers (spring return — illuminated — key operated) see pages 4-8 thru 4-11.

STEP NO. 1

Determine the selector switch contact sequence(s) required (see example below) and locate sequence(s) in Table 1, 2 or 3.

If more than one sequence per operator is required, look for cam type common to all sequences.

Example:

↖	↑	↗
1	0	0
0	1	0
0	0	1

0 = contact open
1 = contact closed

For the above example, use Table 2. For the contact sequences of 100, 010, and 001, cams F and L are common to all 3 sequences.

STEP NO. 2

Go to Table 4 and choose the selector switch type opposite the cam determined in Step No. 1.

For the above example:

Cam F — Type KS46
Cam L — Type KS401

STEP NO. 3

To determine contact blocks required, use Tables 1, 2, or 3.

Example:

For sequence 100 using cam F — use KA-3 mounted on side No. 2.

For sequence 010 using cam F — use KA-3 mounted on side No. 1.

For sequence 001 using cam F — use KA-2 mounted on side No. 1 or 2.

TABLE 1 — 2 Position Selector Switch

If you require contact sequence		Use Sel. Sw. with cam type	Use contact block type	Mount on side No. (See Fig. 1)
↖	↗			
1	0	E	KA3	1 or 2
0	1	E	KA2	1 or 2

TABLE 2 — 3 Position Selector Switch

If you require contact sequence			Use Sel. Sw. with cam type	Use contact block type	Mount on side No. (See Fig. 1)
↖	↑	↗			
1	0	0	G	KA2	1
			C E L	KA2	2
			B C E F G J	KA3	1
			B C E F G J	KA3	2
			B D E G J	KA5*	2
0	1	0	D E J L	KA2	1
			D E	KA2	2
			F	KA3	1
			L	KA3	2
			C F	KA2	1 or 2
0	0	1	B D G L	KA3	1
			D	KA3	2
			B	KA5*	1
			B	KA2	1
			C F	KA5*	1 or 2
0	1	1	B G J	KA2	2
			G	KA5*	1
			L	KA5*	2
			J	KA3	1
			D E J L	KA5*	1
1	0	1	D E	KA5*	2

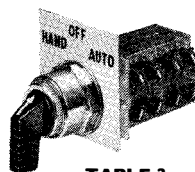


TABLE 3 — 4 Position Selector Switch

If you require contact sequence				Use Sel. Sw. with cam type	Use contact block type	Mount on side No. (See Fig. 1)
↖	↑	↗	↘			
1	0	0	0	H	(A) KA3	2
0	1	0	0	H	(B) KA2	1
0	0	1	0	H	(C) KA2	2
0	0	0	1	H	(D) KA3	1
1	0	0	1	H	A & D Wired in Parallel	
1	1	0	0	H	A & B Wired in Parallel	
0	1	1	0	H	B & C Wired in Parallel	
0	0	1	1	H	C & D Wired in Parallel	
1	1	1	0	H	A, B & C Wired in Parallel	
0	1	1	1	H	B, C & D Wired in Parallel	
1	0	1	0	H	A & C Wired in Parallel	
0	1	0	1	H	B & D Wired in Parallel	
1	1	0	1	H	KA5*	2
1	0	1	1	H	KA5*	1

TABLE 4 — Maintained Contact Operators

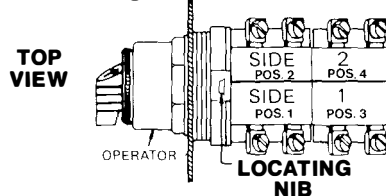
No. of Positions	Cam Type	Non-Illuminated Type	Illuminated, 120 V 60 Hz Transformer Type
2	E	KS11▲	K11J1▲
	B	KS42▲	K42J1▲
	C	KS43▲	K43J1▲
3	D	KS44▲	K44J1▲
	E	KS45▲	K45J1▲
	F	KS46▲	K46J1▲
	G	KS47▲	K47J1▲
	J	KS49▲	K49J1▲
	L	KS401▲	K401J1▲
	H	KS88▲	K88J1▲

▲ Insert knob code letter here. Choose letter from Table 5.

TABLE 5 — Knob Selection

Color	Knob Code — Insert code letter below in place of ▲ in type no. from Table 4. Ex: KS42FR.		
	Standard Knob	Gloved Hand Knob	Coin Operated Knob
Black	B	FB	TB
Red	R	FR	TR
Green	G	FG	TG
Brown	N	FN	TN
Yellow	Y	FY	TY
Orange	S	FS	TS
Blue	L	FL	TL
White	W	FW	TW
Amber	A	FA	TA
Clear	C	FC	TC

Fig. 1 — Contact block mounting position



Contact blocks may be stacked 2 deep on sides 1 and 2, total of 4 blocks maximum. If more circuits are required, consult local Square D Field Office.

■ One Type KA-1 double-circuit block can be used in place of one Type KA-2 and one Type KA-3 single circuit blocks mounted on the same side.

$$KA-1 = KA-3 + KA-2$$

$$\begin{array}{ccc} \text{alo} & \text{---} & \text{alo} \\ \text{0 0} & & \text{0 0} \end{array}$$

* The KA-5 must be the last block on either side. If more than one KA-5 is required on either side — consult local Square D Field Office.

MOUNTING DIMENSIONS — See Page 4-28



SQUARE D COMPANY

HEAVY DUTY OILTIGHT CONTROL UNITS

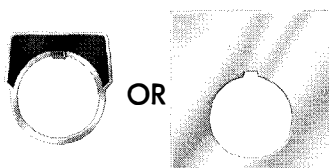
TYPE K — 2 POSITION SELECTOR SWITCH OPERATORS

JANUARY, 1981

Legend Plate

Operator

Contact Block



+



+



**COMPLETE
SELECTOR SWITCH
UNIT**

2 Position Selector Switch Operators

Legend Plate and Contact Block Not Included Unless Noted

CONTACT BLOCK REQUIRED			1 — Contact Closed 0 — Contact Open			
Contact Block Position	Quantity and Type	Mount in Position	Left Right		Left Right	
 Top View	1-KA-1 	#2	1	0	0	1
	1-KA-1 	#1	0	1	1	0
NON-ILLUMINATED OPERATORS			Type		Type	Price
Manual Return Operator Only						
Without Knob			KS-11		.....	\$12.00
Standard Black Knob			KS-11B		.....	14.80
Key Operated (Code 1, 2 or 3)			KS-11K*		.....	38.80
With Contact Block(s)						
Standard Black Knob						
With 1-KA-1 in Pos. # 2			KS-11BH13		.....	26.80
With 1-KA-1 in Pos. # 1			KS-11BH1		.....	26.80
With 1-KA-1 in Pos. # 1 & 1-KA-1 in Pos. # 2			KS-11BH2		.....	38.80
Spring Return from Left						
Without Knob			KS-25		.....	20.00
Standard Black Knob			KS-25B		.....	22.80
Key Operated (Code 2 Only)			KS-25K2		.....	46.80
Spring Return from Right						
Without Knob			.....		KS-34	20.00
Standard Black Knob			.....		KS-34B	22.80
Key Operated (Code 1 Only)			.....		KS-34K1	46.80
ILLUMINATED OPERATORS						
With 120 v., 60 Hz.; 110 v. 50 Hz. Transformer Type Light Module			Type		Type	Price
Manual Return						
Without Knob			K-11J1		.....	\$44.00
Standard Red Knob			K-11J1R		.....	46.80
Spring Return from Left						
Without Knob			K-25J1		.....	52.00
Standard Red Knob			K-25J1R		.....	54.80
Spring Return from Right						
Without Knob			.....		K-34J1	52.00
Standard Red Knob			.....		K-34J1R	54.80

For other voltages and types of illuminated operators, see Page 4-13.

*KEY WITHDRAWAL CODE: For 2 Position Switches

Code			Code			Code		
1	Yes	No	2	No	Yes	3	Yes	Yes

NOTE:

All key operated selector switches are furnished as standard with Square D number E10 key changes. See Page 4-11 for other key changes.

TWO COLOR SELECTOR SWITCH

Used to indicate red in left position and green in right position on illuminated operators. Kit includes knob (standard or gloved hand), lamp shield and instructions for assembly. Can be installed on any new or existing illuminated operator with transformer type light module (do not use with other light module types).

Knob	Type	Price	Factory Assembled Form Number	Price Adder
Standard	K-81RG	\$6.	Y-178	\$6.
Gloved Hand	K-82RG	6.	Y-178-1	6.

Add Form number to standard Type number, eg. Type K11J1 Form Y-178.

Cams are field convertible. Separate cams are listed on Page 4-10. For knob colors and types not listed, order operator without knob plus separate knob of desired color and type from table on Page 4-10. Non-illuminated operators can be converted to illuminated type by ordering the separate light module required from Page 4-13. Selector switch operators will accept up to two Type KA contact blocks mounted in tandem (total of four blocks).

Standard Contact Blocks

	Symbol	Type	Price
		KA-1	\$12.
		KA-2	6.
		KA-3	6.

For other contact blocks and ratings, see Page 4-18.

Common Legend Plates

Marking	Type		Price
	(Black Field Unless Noted)	(Aluminum Field Unless Noted)	
Blank	KN-200	KN-700	\$1.20
Hand-Auto	KN-240	KN-740	
Man.-Auto	KN-243	KN-743	
Off-On	KN-244	KN-744	
On-Off	KN-245	KN-745	
Open-Close	KN-246	KN-746	
Start-Stop	KN-251	KN-751	
Auto-Off-Hand	KN-258	KN-758	
For-Off-Rev	KN-259	KN-759	
Hand-Off-Auto	KN-260	KN-760	
Man-Off-Auto	KN-262	KN-762	
High-Off-Low	KN-277	KN-777	

For other legend plates — see Page 4-17.

Contact Blocks Assembled To Operator

Symbol	Contact Block Mounted in Position:	Suffix (Add to operator type number)	Price Adder
	#2	H13	\$12.
	#1	H1	12.
	#2 and #1	H2	24.

Example: Class 9001 Type KS-11BH2 Price is \$38.80.

For other Combinations — See Page 4-19.

ACCESSORIES AND MODIFICATIONS — See Page 4-16

DIMENSIONS — See Page 4-26

MOUNTING DIMENSIONS — See Page 4-28



HEAVY DUTY OILTIGHT CONTROL UNITS

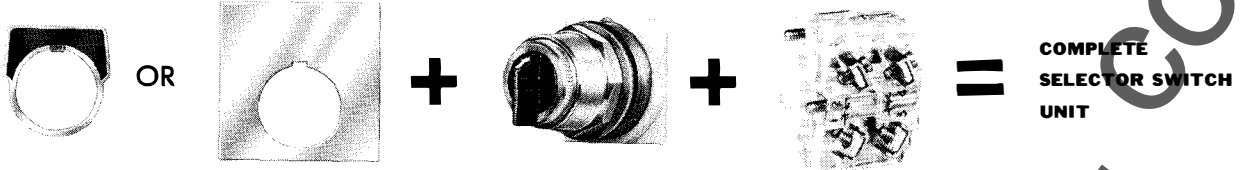
TYPE K — 3 POSITION SELECTOR SWITCH OPERATORS

CLASS
9001

Legend Plate

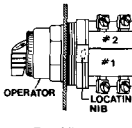
Operator

Contact Blocks



3 Position Selector Switch Operators

Legend Plate and Contact Block Not Included Unless Noted

Contact Block Required			1 = Contact Closed 0 = Contact Open										
Contact Block Position	Quantity and Type	Mount in Position	Center Left Right	Center Left Right	Center Left Right	Center Left Right	Center Left Right	Center Left Right	Center Left Right	Center Left Right	Center Left Right	Center Left Right	
 Top View	1-KA-1 	#2	1 0 0 0 1 1	1 0 0 0 0 1	0 0 1 0 1 0	1 0 0 0 1 0	1 0 0 0 0 1	1 0 0 0 1 1	1 0 0 0 1 1	1 0 0 0 1 1	0 1 0 1 0 0		
	1-KA-1 	#1	0 0 1 1 1 0	1 0 0 0 0 1	0 0 1 0 1 0	1 0 0 0 1 0	0 1 0 0 0 1	0 0 1 1 0 0	1 0 1 0 1 0	0 0 1 0 1 0	0 0 1 0 1 0		
CAM			B	C	D	E	F	G	J	L			
NON-ILLUMINATED OPERATORS			Type	Type	Type	Type	Type	Type	Type	Type			Price
Manual Return Operator Only													
Without Knob			KS-42	KS-43	KS-44	KS-45	KS-46	KS-47	KS-49	KS-401			\$12.00
Standard Black Knob			KS-42B	KS-43B	KS-44B	KS-45B	KS-46B	KS-47B	KS-49B	KS-401B			14.80
Key Operated (Code 4 thru 10)			KS-42K*	KS-43K*	KS-44K*	KS-45K*	KS-46K*	KS-47K*	KS-49K*	KS-401K*			38.80
With Contact Block(s)													
Standard Black Knob			KS-42BH13	KS-43BH13	KS-44BH13	KS-45BH13	KS-46BH13	KS-47BH13	KS-49BH13	KS-401BH13			26.80
With 1-KA-1 in Pos #2			KS-42BH1	KS-43BH1	KS-44BH1	KS-45BH1	KS-46BH1	KS-47BH1	KS-49BH1	KS-401BH1			26.80
With 1-KA-1 in Pos #1			KS-42BH2	KS-43BH2	KS-44BH2	KS-45BH2	KS-46BH2	KS-47BH2	KS-49BH2	KS-401BH2			38.80
Spring Return — Left to Center													
Without Knob			KS-62	KS-63	KS-64	KS-65	KS-66	KS-67	KS-69	KS-601			20.00
Standard Black Knob			KS-62B	KS-63B	KS-64B	KS-65B	KS-66B	KS-67B	KS-69B	KS-601B			22.80
Key Operated (Code 5, 6 or 9 only)			KS-62K*	KS-63K*	KS-64K*	KS-65K*	KS-66K*	KS-67K*	KS-69K*	KS-601K*			46.80
Spring Return — Right to Center													
Without Knob			KS-72	KS-73	KS-74	KS-75	KS-76	KS-77	KS-79	KS-701			20.00
Standard Black Knob			KS-72B	KS-73B	KS-74B	KS-75B	KS-76B	KS-77B	KS-79B	KS-701B			22.80
Key Operated (Code 4, 5 or 7 only)			KS-72K*	KS-73K*	KS-74K*	KS-75K*	KS-76K*	KS-77K*	KS-79K*	KS-701K*			46.80
Spring Return — Both Sides to Center													
Without Knob			KS-52	KS-53	KS-54	KS-55	KS-56	KS-57	KS-59	KS-501			20.00
Standard Black Knob			KS-52B	KS-53B	KS-54B	KS-55B	KS-56B	KS-57B	KS-59B	KS-501B			22.80
Key Operated (Code 5 only)			KS-52K5	KS-53K5	KS-54K5	KS-55K5	KS-56K5	KS-57K5	KS-59K5	KS-501K5			46.80
ILLUMINATED OPERATORS													
With 110-120 v., 50-60Hz. transformer type light module			Type	Type	Type	Type	Type	Type	Type	Type			Price
Manual Return													
Without Knob			K-42J1	K-43J1	K-44J1	K-45J1	K-46J1	K-47J1	K-49J1	K-401J1			44.00
Standard Red Knob			K-42J1R	K-43J1R	K-44J1R	K-45J1R	K-46J1R	K-47J1R	K-49J1R	K-401J1R			46.80
Spring return — Left to Center													
Without Knob			K-62J1	K-63J1	K-64J1	K-65J1	K-66J1	K-67J1	K-69J1	K-601J1			52.00
Standard Red Knob			K-62J1R	K-63J1R	K-64J1R	K-65J1R	K-66J1R	K-67J1R	K-69J1R	K-601J1R			54.80
Spring return — Right to Center													
Without Knob			K-72J1	K-73J1	K-74J1	K-75J1	K-76J1	K-77J1	K-79J1	K-701J1			52.00
Standard Red Knob			K-72J1R	K-73J1R	K-74J1R	K-75J1R	K-76J1R	K-77J1R	K-79J1R	K-701J1R			54.80
Spring Return — Both Sides to Center													
Without Knob			K-52J1	K-53J1	K-54J1	K-55J1	K-56J1	K-57J1	K-59J1	K-501J1			52.00
Standard Red Knob			K-52J1R	K-53J1R	K-54J1R	K-55J1R	K-56J1R	K-57J1R	K-59J1R	K-501J1R			54.80

For other Voltages and Types — see page 4-13.

***KEY WITHDRAWAL CODE:**

NOTE: All key operated selector switches are furnished as standard with Square D number E10 key change. See page 4-11 for other key changes.

3-Position Switches							
Code				Code			
4	Yes	No	No	8	Yes	No	Yes
5	No	Yes	No	9	No	Yes	Yes
6	No	No	Yes	10	Yes	Yes	Yes
7	Yes	Yes	No				

Application Data, etc. — See Page 4-10

Mounting Dimensions — See Page 4-10

Two Color Selector Switch

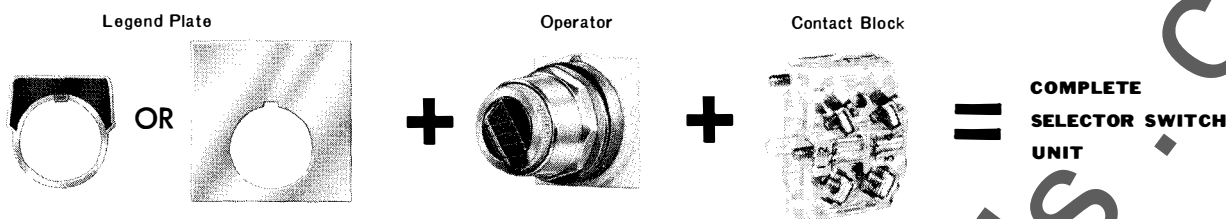
Used to indicate red in left position, no color (off) in center position and green in right position on illuminated operators. Kit includes knob (either standard or gloved hand), lamp shield and instructions for assembly. Can be installed on any new or existing illuminated operator with transformer type light module (do not use with other light module types).

Knob	Type	Price	Factory Assembled Form Number	Price Adder
Standard	K-83RG	\$6.	Y-178	\$6.
Gloved Hand	K-84RG	6.	Y-178-1	6.

Add form number to standard Type number, eg. Type K-43J1 Form Y-178.

CONTROL UNITS — HEAVY DUTY OILTIGHT TYPE K — 4 POSITION SELECTOR SWITCH OPERATORS

JANUARY, 1981



4 Position Selector Switch Operators Legend Plate and Contact Block Not Included

CONTACT BLOCK REQUIRED			1 = Contact Closed 0 = Contact Open	Order Contact Blocks From Page 4-8
Contact Block Position	Quantity and Type	Mount in Position		
 Top View	1-KA-1 	#2	1 0 0 0 0 0 1 0	
	1-KA-1 	#1	0 0 0 1 0 1 0 0	
NON-ILLUMINATED OPERATORS		Cam	Type	Price
Manual Return				
Without Knob.....		H	KS-88	\$12.00
Standard Black Knob.....		H	KS-88B	14.80
Key Operated (Code 11, 12, 13 or 14).....		H	KS-88K*	38.80
ILLUMINATED OPERATORS				
With 110-120 v., 50-60 Hz. transformer type light module		Cam	Type	Price
Manual Return				
Without Knob.....		H	K-88J1	\$44.00
Standard Red Knob.....		H	K-88J1R	46.80
For other Voltages and Types — see page 4-13.				

Application Data

For knob colors and types not listed, order operator without knob plus separate knob of desired color and type from table below. Non-illuminated operators can be converted to illuminated type by ordering the separate light module required from Page 4-13. For voltages and types of light modules (illuminated operators) not listed, see Page 4-13. **Selector switch operators will accept up to two Type KA contact blocks mounted in tandem (total of four blocks).**

*KEY WITHDRAWAL CODE:

4-Position Switches				
Code				
11	Yes	No	No	Yes
12	No	No	No	Yes
13	Yes	No	No	No
14	Yes	Yes	Yes	Yes

NOTE:

All key operated selector switches are furnished as standard with Square D number E10 key change. See page 4-11 for other key changes.

LEGEND PLATES — See page 4-8

ACCESSORIES AND MODIFICATIONS — See below

DIMENSIONS — See below

MOUNTING DIMENSIONS — See page 4-28

Accessories And Modifications

For Others — See Page 4-16.

Selector Switch Knobs (Illuminated and Non-Illuminated Operators)

Color				Price
	Standard Knob	Gloved Hand Knob	Coin Operated	
	Type	Type	Type	
Black	B-11▲	B-25▲	B-18▲	\$2.80
Red	R-8	R-24	R-16	
Green	G-8	G-24	G-16	
Brown	N-11▲	N-25▲	N-18▲	
Yellow	Y-8	Y-24	Y-16	
Orange	S-11▲	S-25▲	S-18▲	
Blue	L-8	L-24	L-16	
White	W-8	W-24	W-16	
Amber	A-8	A-24	A-16	
Clear	C-8	C-24	C-16	

▲Black, brown, and orange are opaque and for use on non-illuminated operators only.

●When converting standard or gloved hand knobs to coin operated type, spacer ring nut Type K-43 must also be used.

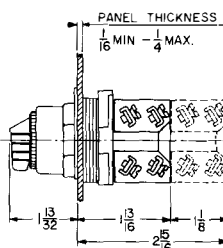
Cams

Cam	Type	Price
B	K-13B	\$1.80
C	K-13C	
D	K-13D	
E	K-13E	
F	K-13F	
G	K-13G	
H	K-13H	
L	K-13L	
J	K-13J	
Orders must specify minimum quantity of 10 or multiple of 10.		

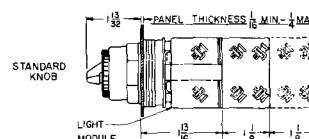
Ring Nuts

Description	Type	Price
Selector Switch Ring Nut	K-45	\$1.20
Secondary Ring Nut (Holds Knob on selector switches)	K-46	1.20
Spacer Ring Nut for coin operated selector switches	K-43	1.20

Approximate Dimensions



Non-Illuminated



Illuminated



HEAVY DUTY OILTIGHT CONTROL UNITS

TYPES K & L — KEY INFORMATION

CLASS
9001

APPLICATION DATA

All key operated devices are furnished as standard with Square D number E10 (key only part no. is 29411-01100) key change.* The following 24 additional key changes are available at no extra cost:

E11-E13, E15-E18, E20-E26, E28-E33, CH501, CH674, SR251, T107.

Occasionally it is desirable to have several devices with dis-similar key changes, but all operable by a single master key. The following key changes with master keying provisions are available at **\$4.00** list additional per device.

Key No.	Total Key Changes Available	Master Key	
		Part No.	Price
E36 thru E60	25	29411-51990	\$2.40

Each device is supplied with two matching keys. Order master keys separately. To order a device with one of the above key changes, insert the desired key number after the basic type number of the operator. (Example: Class 9001 Type KS-42K5**E11**, 9001 Type KR-131**E22**, or 9001 Type LRSA2K3**E42**).

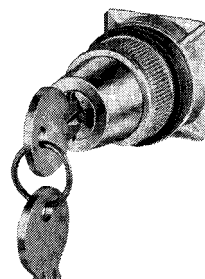
Type K
Key Operated
Selector Switch



Type K
Key Operated
Push Button



Type L
Key Operated
Selector Switch



KEY WITHDRAWAL ARRANGEMENT FOR SELECTOR SWITCHES

Positions marked "Yes" are those in which the key can be withdrawn, locking the switch in that position.

2-Position Switches			3-Position Switches						4-Position Switches					
No.	↖	↗	No.	↖	↑	↗	No.	↖	↑	↗	No.	↖	↗	↘
1	Yes	No	4	Yes	No	No	8	Yes	No	Yes	11	Yes	No	No
2	No	Yes	5	No	Yes	No	9	No	Yes	Yes	12	No	No	No
3	Yes	Yes	6	No	No	Yes	10	Yes	Yes	Yes	13	Yes	No	No
			7	Yes	Yes	No					14	Yes	Yes	Yes

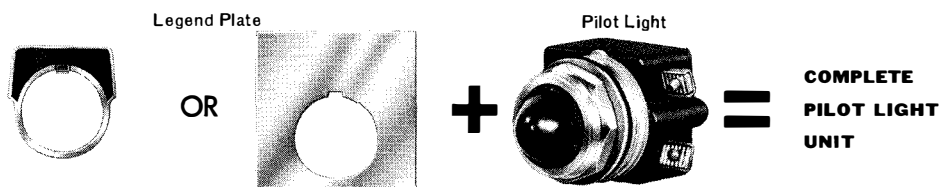
* E10 supersedes D10 key change. E10 and D10 key change **not** interchangeable. Consult Local Square D Field Office for availability of D10 key change.



HEAVY DUTY OILTIGHT CONTROL UNITS

TYPE K — PILOT LIGHTS

JANUARY, 1981



Description	Style	Standard Pilot Light (Legend Plate Not Included)						Push-to-Test Pilot Light (Contact Block Included — but NOT Legend Plate)					Replace- ment Lamps
		Voltage and Frequency	Without Color Cap	Price	With Red Color Cap	With Green Color Cap	Price	Without Color Cap	Price	With Red Color Cap	With Green Color Cap		
			Type		Type*	Type*		Type		Type*	Type*		
	Trans- former	110-120 V., 50-60 Hz.	KP-1	\$40.00	KP-1R6	KP-1G6	\$42.80	KT-1	\$52.00	KT-1R6	KT-1G6	\$54.80	See Page 4-13
		208-220 V., 50-60 Hz.	KP-3	40.00	KP-3R6	KP-3G6	42.80	KT-3	52.00	KT-3R6	KT-3G6	54.80	
		220-240 V., 50-60 Hz.	KP-7	40.00	KP-7R6	KP-7G6	42.80	KT-7	52.00	KT-7R6	KT-7G6	54.80	
		380-480 V., 50-60 Hz.	KP-5	40.00	KP-5R6	KP-5G6	42.80	KT-5	52.00	KT-5R6	KT-5G6	54.80	
		550-600 V., 50-60 Hz.	KP-6	40.00	KP-6R6	KP-6G6	42.80	KT-6	52.00	KT-6R6	KT-6G6	54.80	
		110-120 V., 50-60 Hz. Flashing Type	KPF-1	40.00	KPF-1R6	KPF-1G6	42.80	KTF-1	52.00	KTF-1R6	KTF-1G6	54.80	
		220-240 V., 50-60 Hz. Flashing Type	KPF-7	40.00	KPF-7R6	KPF-7G6	42.80	KTF-7	52.00	KTF-7R6	KTF-7G6	54.80	
	Neon	120 V., AC	KP-11	32.00	KP-11R6	.....	34.80	KT-11	44.00	KT-11R6	.....	46.80	
		240 V., AC or DC	KP-12	32.00	KP-12R6	.....	34.80	KT-12	44.00	KT-12R6	.....	46.80	
		380 V., AC or DC	KP-13	32.00	KP-13R6	.....	34.80	KT-13	44.00	KT-13R6	.....	46.80	
		480 V., AC or DC	KP-14	32.00	KP-14R6	.....	34.80	KT-14	44.00	KT-14R6	.....	46.80	
		550 V., AC or DC	KP-15	32.00	KP-15R6	.....	34.80	KT-15	44.00	KT-15R6	.....	46.80	
	Re- sis- tor	18 V., AC or DC	KP-33	32.00	KP-33R6	KP-33G6	34.80	KT-33	44.00	KT-33R6	KT-33G6	46.80	
		32 V., AC or DC	KP-23	32.00	KP-23R6	KP-23G6	34.80	KT-23	44.00	KT-23R6	KT-23G6	46.80	
		240 V., AC or DC	KP-25	32.00	KP-25R6	KP-25G6	34.80	KT-25	44.00	KT-25R6	KT-25G6	46.80	
	Full Volt- age	6 V., AC or DC	KP-31	32.00	KP-31R6	KP-31G6	34.80	KT-31	44.00	KT-31R6	KT-31G6	46.80	
		12-14 V., AC or DC	KP-32	32.00	KP-32R6	KP-32G6	34.80	KT-32	44.00	KT-32R6	KT-32G6	46.80	
		24-28 V., AC or DC	KP-35	32.00	KP-35R6	KP-35G6	34.80	KT-35	44.00	KT-35R6	KT-35G6	46.80	
		48 V., AC or DC	KP-36	32.00	KP-36R6	KP-36G6	34.80	KT-36	44.00	KT-36R6	KT-36G6	46.80	
		60 V., AC or DC	KP-37	32.00	KP-37R6	KP-37G6	34.80	KT-37	44.00	KT-37R6	KT-37G6	46.80	
		120 V., AC or DC	KP-38	32.00	KP-38R6	KP-38G6	34.80	KT-38	44.00	KT-38R6	KT-38G6	46.80	

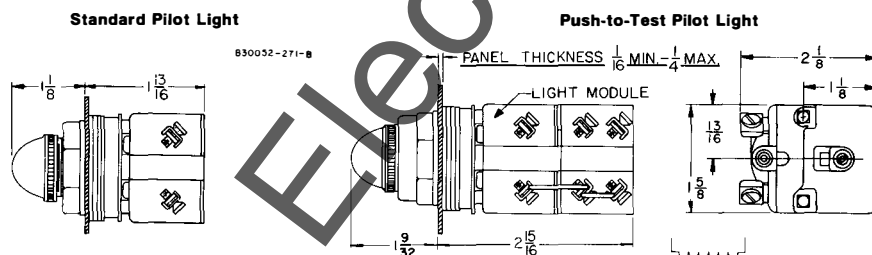
* Supplied with "glass" color caps. If "plastic" color caps are desired, substitute G9, R9, etc. for G6, R6, etc. Example: KT1G9, KT1R9, etc.

APPLICATION DATA

Type K — Any voltage or type of light module can be factory assembled on any of the above pilot lights per instructions on Page 4-13. For colors, other than listed, order the pilot light without color cap and order the separate color cap from table at right. The push-to-test pilot light comes assembled and wired with one Type KA-1 (1 N.O. — 1 N.C.) contact block.

Note: For compact pilot lights (Type J), See Class 9001 Catalog Section 5.

Approximate Dimensions



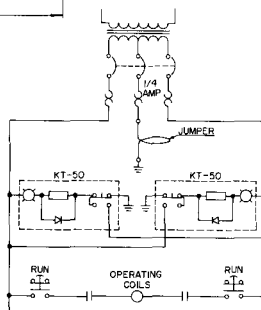
Mounting Dimensions — See Page 4-28

Push-to-Test Ground Detector Pilot Light

(Contact Block Included — But NOT Legend Plate or Color Cap)

Used in pairs to indicate a grounded condition in a control circuit fed from a grounded center-tapped transformer. The Type KT-50 is commonly used in press control circuits, and fulfills the requirements of the ground detector called for in ANSI B11.1 (1971), Par. E3.6.5. Consult local Square D Field Office for proper application.

Voltage and Frequency	Type	Price
110-120 V., 50-60 Hz.	KT-50	\$72.



Common Legend Plates

Marking	Type		Price
	 (Black Field Unless Noted)	 (Aluminum Field Unless Noted)	
Blank	KN-200	KN-700	\$1.20
Blank (Red)	KN-200R	KN-700R	
Start	KN-201	KN-701	
Stop (Red)	KN-202	KN-702	
On	KN-203	KN-703	
Off (Red)	KN-204	KN-704	
Down	KN-210	KN-710	
Up	KN-211	KN-711	
Jog	KN-218	KN-718	
Reset	KN-223	KN-723	
Run	KN-224	KN-724	
For other legend plates — See Page 4-17.			

Accessories and Modifications

For Others — See Page 4-16

Color Caps (For Standard and Push-to-Test Pilot Light)

Color	Glass	Plastic	Price
Red	R-6	R-9	\$2.80
Green	G-6	G-9	
Amber	A-6	A-9	
Blue	L-6	L-9	
Clear	C-6	C-9	
White	W-6	W-9	
Yellow	Y-6	Y-9	

Ring Nuts

Used on	Type	Price
KP	K-40	\$1.20
KT	K-49	1.20



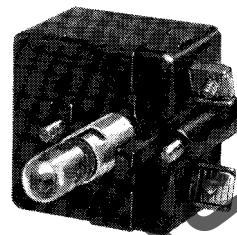
HEAVY DUTY OILTIGHT CONTROL UNITS

TYPE K — LIGHT MODULES

CLASS
9001

Most Type K illuminated operators are listed with transformer type light modules. Other voltages, as well as neon, resistor and full voltage light modules, are available and can be substituted for the transformer type light module.

Separate light modules are available for use in converting non-illuminated selector switches and push-pull operators to their respective illuminated versions. Separate light modules are also available for changing the voltage or type of light module on any illuminated operator.

 Light
Modules


Description	Voltage and Frequency	Operator Assembled With Any Light Module		Separate Light Modules		Rated VA	Replacement Lamps
		*Code No.	Price Adjustment	Type	Price		
Transformer	110-120 V., 50-60 Hz.	1	No Change	KM-1	\$32.	3.3	See Below
	110-120 V., 50-60 Hz. Flashing Type	F1		KMF-1		4.3	
	110-120 V., 25-30 Hz.	2		KM-2		1.6	
	208-220 V., 50-60 Hz.	3		KM-3		3.6	
	220-240 V., 25-30 Hz.	4		KM-4		1.3	
	220-440 V., 50-60 Hz.	7		KMF-7		3.8	
	220-240 V., 50-60 Hz. Flashing Type	F7		KMF-7		4.8	
	277 V., 50-60 Hz.	8		KM-8		3.9	
	380-480 V., 50-60 Hz.	5		KM-5		4.9	
	550-600 V., 50-60 Hz.	6		KM-6		5.7	
Neon†	120 V., AC	11	Deduct \$8.	KM-11	\$24.	0.2	
	240 V., AC or DC	12		KM-12		0.3	
	380 V., AC or DC	13		KM-13		0.5	
	480 V., AC or DC	14		KM-14		0.6	
	550 V., AC or DC	15		KM-15		1.0	
Resistor	18 V., AC or DC	33	Deduct 8.	KM-33	\$24.	3.2	
	32 V., AC or DC	23		KM-23		1.3	
	120 V., AC or DC	38		KM-38		3.0	
	240 V., AC or DC	25		KM-25		6.0	
Full Voltage	6 V., AC or DC	31	Deduct 8.	KM-31	\$24.	0.9	
	12-14 V., AC or DC	32		KM-32		2.0	
	24-28 V., AC or DC	35		KM-35		1.2	
	48 V., AC or DC	36		KM-36		2.6	
	60 V., AC or DC	37		KM-37		3.0	
	120 V., AC or DC	38		KM-38		3.0	

† Should be used with red, amber or clear color caps only.

* For voltages other than listed on preceding pages insert proper code number in place of the * per the following and adjust price of operator by the amount shown in table above: K1L-*, K2L-*, KR-8P*, KR-9P*, K-J*, KP-* and KT-*. Example: K1L-34R at \$38.80 (\$46.80—\$8.00)

REPLACEMENT LAMPS

For SERIES A thru F Light Modules

Light Module Type	Lamp No.	Square D Replacement Lamps	
		Part Number	Price (D14A)
KM-1	GE44●	25501-01005	\$3.00
KM-2	GE1490	25501-01003	3.00
KM-3	GE44●	25501-01005	3.00
KM-4	GE1490	25501-01003	3.00
KM-5	GE44●	25501-01005	3.00
KM-6	GE44●	25501-01005	3.00
KM-7	GE44●	25501-01005	3.00
KM-8	GE44●	25501-01005	3.00
KM-9	GE755●	25501-01020	3.00
KMF-1	GE267	25501-01015	4.00
KMF-7	GE267	25501-01015	4.00
KM-11	CMDK1A5	25501-05014	4.50
KM-12	CMDK1A5	25501-05014	4.50
KM-13	CMDK1A5	25501-05014	4.50
KM-14	CMDK1A5	25501-05014	4.50
KM-15	CMDK1A5	25501-05014	4.50
KM-21	SYL 12PSB	25501-05003	4.00
KM-22	SYL 12PSB	25501-05003	4.00
KM-23	SYL 28PSB	25501-05008	4.00
KM-25	SYL 120PSB	25501-05005	4.00
KM-31	SYL 6PSB	25501-05007	4.00
KM-32	SYL 12PSB	25501-05003	4.00
KM-33	SYL 18ESB	25501-05011	4.00
KM-34	SYL 24PSB	25501-05004	4.00
KM-35	SYL 28PSB	25501-05008	4.00
KM-36	SYL 48PSB	25501-05009	4.00
KM-37	SYL 60PSB	25501-05010	4.00
KM-38	SYL 120PSB	25501-05005	4.00

● GE44 and GE755 are interchangeable (GE755 gives longer life).

For SERIES G Light Modules

Light Module Type	Lamp No.	Square D Replacement Lamps	
		Part Number	Price (D14A)
KM-1	GE755●	25501-01020	\$3.00
KM-2	GE1490	25501-01003	3.00
KM-3	GE755●	25501-01020	3.00
KM-4	GE1490	25501-01003	3.00
KM-5	GE755●	25501-01020	3.00
KM-6	GE755●	25501-01020	3.00
KM-7	GE755●	25501-01020	3.00
KM-8	GE755●	25501-01020	3.00
KMF-1	GE267	25501-01036	4.00
KMF-7	GE267	25501-01036	4.00
KM-11	NE51H	25501-01013	8.00
KM-12	NE51H	25501-01013	8.00
KM-13	NE51H	25501-01013	8.00
KM-14	NE51H	25501-01013	8.00
KM-15	NE51H	25501-01013	8.00
KM-23	GE757	25501-01002	2.50
KM-25	SYL 120MB	25501-01027	3.00
KM-31	GE755●	25501-01020	3.00
KM-32	GE756	25501-01037	3.00
KM-33	GE756	25501-01037	3.00
KM-35	GE757	25501-01002	2.50
KM-36	SYL 48MB	25501-01025	3.00
KM-37	SYL 60MB	25501-01026	3.00
KM-38	SYL 120MB	25501-01027	3.00

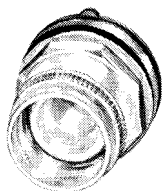
● GE44 and GE755 are interchangeable (GE755 gives longer life).



HEAVY DUTY OILTIGHT CONTROL UNITS
TYPE K — OTHER OPERATORS

JANUARY, 1981

BASIC OPERATORS

ILLUMINATED PUSH BUTTON
WITH FULL GUARDLess Color Cap And
Light Module

Type	Price
K1L	\$12.00

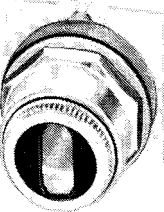
STANDARD PILOT LIGHT

Less Color Cap and
Light Module

Type	Price
KP	\$8.00

ILLUMINATED PUSH BUTTON
WITHOUT GUARD AND
PUSH-TO-TEST PILOT LIGHTLess Color Cap, Light
Module, and Contact
Block (includes wires
For Push-To-Test)

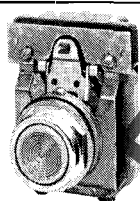
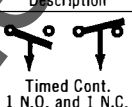
Type	Price
K2L	\$8.00
K2L-S1 (with liner for use as non-illuminated operator)	8.00

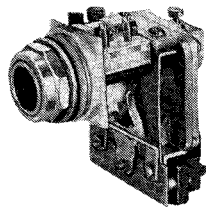
SELECTOR SWITCH			
 Less Knob and Cam	Description	Type	Price
	Manual Return	KS-4	\$10.20
	Spring Return Both Sides To Center	KS-5	18.20
	Spring Return Left Side To Center	KS-6	18.20
	Spring Return Right Side To Center	KS-7	18.20
Note: Remove nylon liner before adding light module for illuminated operators.			

MOUNTING DIMENSIONS — See Page 4-28.

TIME DELAY PUSH BUTTON

Dimensions — See Page 4-27.

	Type (All Colors)			
	Full Guard	Extended Guard	No Guard	Price
	 Timed Cont. 1 N.O. and 1 N.C.	KRD1U-H1	KRD2U-H1	KRD3U-H1	$ 70.80
 Timed Cont. 2 N.O. and 2 N.C.	KRD1U-H2	KRD2U-H2	KRD3U-H2	\$130.80
	Timing period is adjustable from 0.1 second to 60 seconds and begins after button has been released. Devices include a package of seven color inserts for color coding the push button. Contacts are quick make — quick break.			

	
Time Delay Push Button With Instantaneous Contacts Legend Plate Not Included	
Same as Type KRD1U-H1 but with one Type KA-1 (1 NO-1 NC) contact block mounted between the operator and the timing head.	
Type	Price
KRD1UH1-S2	\$82.80

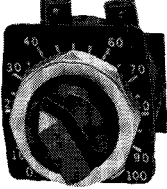


HEAVY DUTY OILTIGHT CONTROL UNITS

TYPE K — OTHER OPERATORS

CLASS
9001

Potentiometer (With Dial Plate)



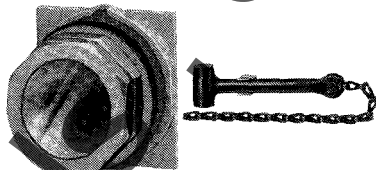
Watts	Description	Type	Price
2	Operator only- Single Pot	K-20	\$ 56.
	Operator with Single Pot	K-21●	80.
	Operator only-Tandem Pot	K-22	88.
	Operator with Tandem Pot	K-23▲	112.

●▲ Complete Type No. by adding suffix No. from table below.
 Example: Type K21**05**

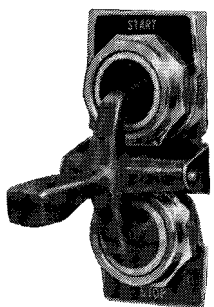
Suffix ●	Ohms	Suffix ●	Ohms	Suffix ●	Ohms	Suffix ▲	Ohms	
							Front	Rear
01	50	07	5000	13	500K	81	500	1000
02	100	08	10K	14	1.0 Meg	82	1000	1000
03	250	09	25K	15	2.5 Meg	83	5000	5000
04	500	10	50K	16	5.0 Meg	84	25K	25K
05	1000	11	100K	17●	5.0 Meg			
06	2500	12	250K					

● For use with 9050 Type T.

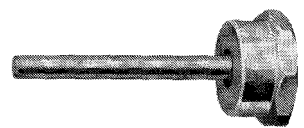
Emergency "Break Glass" Operator

 Operator is held in a depressed position by a glass disc. When the glass disc is broken with the hammer, button returns to a normal extended position. Package of 5 discs included with operator.	
Type	Price
K-15	\$34.80
Package of 5 replacement discs: K-57	4.00

Rocker Arm Operating Lever

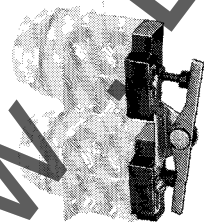
		Allows two standard push buttons to be operated independently of each other. Price does NOT include push buttons or legend plates. Order push buttons from Page 4-2 and legend plates from Page 4-17 — specify which marking is to be inverted.	
Type	Price		
K-50	\$21.60		

Wobble Stick

 For easy operation of any standard push button	
Type	Price
K-8	\$12.

MOUNTING DIMENSIONS — See Page 4-28

INTERLOCK

 For mechanically interlocking two push buttons so that only one button can be depressed at a time. A Type K3 attachment is furnished with the 9001 KR-11 and KR-12 operators. However, maintained operators are supplied here and the K3 interlock serves to release one of the buttons when the other is depressed. When used with momentary contact buttons, the K3 interlock does not hold the buttons in the depressed position. It simply prevents pushing both buttons at the same time. The Type K3 interlock can be mounted behind the operators, or behind Type KA contact blocks as shown. Operators and blocks not included.	
DIMENSIONS — See Page 4-27.	
Type	Price
K3	\$8.

PLUG RECEPTACLE

Receptacle

Plug

Provides a panel or control station with a convenient power source to supply work lamps or portable power tools. Plug will accept a cord diameter from .281 inch to .421 inch. Complete unit is oil-tight and has a maximum rating of 15 amperes at 125 volts. Receptacle cover must be in place when not in use to retain oil-tight seal.

Description	Type	Price
Midget Twist-Lock Receptacle with provisions for grounding	K-24	\$24.
Midget Twist-lock Plug with Seal-Tite-Plug cover	K-14	16.

HEAVY DUTY OILTIGHT CONTROL UNITS

TYPE K — ACCESSORIES

JANUARY, 1981

Padlock Attachments

	For non-illuminated push button — Std. or mushroom (KR-4, KR-5 mushroom button only — will not work with KR-24 or KR-25). Holds button in depressed position.		For non-illuminated push buttons with protective cap. Holds button in depressed position and can be padlocked.		For non-illuminated push buttons, cover type attachment that can be padlocked. Does not hold button in depressed position.		For selector switches and illuminated push buttons without guard. Cover type attachment that can be padlocked to keep unauthorized personnel from tampering with operator.
Type	Price	Type	Price	Type	Price	Type	Price
K-4	\$12.	K-5	\$20.	K-6	\$12.	K-7	\$12.

	Cover Type Attachment for Padlocking Potentiometer		For push buttons, cover type attachment Similar to K-6 shown above EXCEPT without lockout provision and with spring loaded cover.		For push-pull operator (Types KR-8 and KR-9) and illuminated push buttons (Types K1L and K2L). Holds button in depressed position.
Type	Price	Type	Price	Type	Price
K-67	\$12.	K-60	\$16.	K-62	\$20.



Type K-7C shown

The 9001 K-7 padlock attachment listed above allows any selector switch, with standard knob, to be locked in any position. For those situations when it is desirable to lock the selector switch in one position only, the following devices are available. "X" indicates the position in which the selector switch, with standard knob, can be locked.

Type	2 Position Maintained	2 Position Spring Return From Right	2 Position Spring Return From Left	3 Position Maintained	3 Position Spring Return From Right	3 Position Spring Return From Left	3 Position Spring Return From Both Sides	4 Position Maintained	Price
K-7A	—	—	—	X	—	—	—	X	\$20.
K-7B	—	—	—	—	X	—	—	—	
K-7C	—	—	—	—	—	X	—	—	
K-7D	—	—	—	—	—	—	—	X	
K-7E	—	—	—	—	—	—	—	—	
K-7F	X	—	—	—	—	—	—	—	
K-7G	—	X	—	—	—	—	—	—	

Protective Caps



KU-1



KU-17



KU-37



KU-27

The Type KU protective cap kits are suitable for either dust tight or water tight applications. For dust tight applications standard KU legend plates can be used. For water tight applications separately mounted legend (Type KN-8) plates must be used. The K-1 wrench is used for the installation of these kits.

For Non-Illuminated Push Buttons*			Clear Color for		Type	Price
Color	Type	Price	Standard Knob Selector Switch		KU-17	\$12.
Black	KU-1	\$8.	Gloved Hand Cap for use on std. knob Selector Switch		KU-18	12.
Red	KU-2	8.			KU-27	12.
Blue	KU-3	8.	Standard Pilot Light and Maintained Contact Push Buttons		KU-37	12.
Brown	KU-4	8.			KU-47	16.
Green	KU-5	8.	Push-to-Test and Illuminated Push Button Without Guard			
Yellow	KU-6	8.				
Clear	KU-7	8.	Illuminated Push But. With Guard			
Clear (Provides Full Guard)	KU-8	12.				

*Use KU-27 for maintained contact push buttons.

Wrench



K-95



K-1

Where Used	Type	Price
For tightening ring nuts on Type K and J control units.	K-95	\$12.
For protective cap kits.	K-1	12.

Closing Plates

Description	Type	Price
Painted	K-11	\$4.
Chrome Plated	K-12	4.



HEAVY DUTY OILTIGHT CONTROL UNITS

TYPE K — CONTACT BLOCKS ASSEMBLED TO OPERATORS

JANUARY, 1981

LOCATION CHART FOR CONTACT BLOCKS ASSEMBLED TO OPERATORS (Continued)

Suffix No. (Add to Operator Type No.)	† Total Circuits	Positions								Circuit Symbol*	Suffix No. (Add to Operator Type No.)	† Total Circuits	Positions								Circuit Symbol*
		1	2	3	4	5	6	7	8				1	2	3	4	5	6	7	8	
H24	2 N.O. 1 N.C.	KA-1	KA-2								H40	2 N.C. 2 N.O. 1 E.C. N.O.	KA-1	KA-1		KA-4					
H25	1 N.C. 1 L.O. N.C.	KA-5	KA-3								H41	2 N.O. 1 N.C.	KA-3	KA-2		KA-2					
H26	2 N.O. 1 E.C. N.O. 3 N.C.	KA-1	KA-1	KA-4							H42	4 N.O. 2 N.C.	KA-1	KA-1	KA-2	KA-2					
H27	3 N.C.	KA-3	KA-3	KA-3							H43	3 N.O.	KA-2	KA-2	KA-2						
H28	1 N.O. 2 N.C.	KA-1	KA-3								H44	1 N.O. 2 N.C.	KA-3	KA-2		KA-3					
H29	5 N.C. 3 N.O. 1 E.C. N.O. 1 L.O. N.C.	KA-1	KA-4	KA-1	KA-5	KA-1	KA-3				H45	2 N.C. 3 N.O.	KA-1	KA-2	KA-3	KA-2					
H30	3 N.C. 2 E.C. N.O. 2 L.O. N.C. 1 N.O.	KA-4	KA-5	KA-4		KA-1		KA-5			H45	3 N.O.	KA-2	KA-2		KA-2					
H31	1 N.C. 3 N.O.	KA-2	KA-2	KA-1							H47	4 N.C. 2 L.O. N.C.	KA-5	KA-3	KA-3	KA-5	KA-3	KA-3			
H32	2 N.C. 2 N.O.		KA-1		KA-1						H48	4 N.C. 2 N.O. 2 E.C. N.O.	KA-1	KA-1	KA-4	KA-4					
H33	3 N.C. 1 N.O.	KA-1	KA-3	KA-3							H49	7 N.C. 5 N.O. 1 L.O. N.C. 1 E.C. N.O.	KA-1	KA-1	KA-1	KA-1	KA-1	KA-3	KA-5	KA-4	
H34	1 N.C. 1 N.O. 1 L.O. N.C.	KA-5	KA-1								H50	3 N.C. 1 L.O. N.C.	KA-5	KA-3	KA-3	KA-3					
H35	7 N.C. 5 N.O.	KA-1	KA-1	KA-1	KA-1	KA-1	KA-3		KA-3		H51	3 N.C. 1 E.C. N.O.	KA-5	KA-3		KA-4					
H36	1 N.O.		KA-2								H52	3 N.C. 1 N.O.	KA-3	KA-1	KA-3						
H37	1 N.O. 1 N.C.	KA-3	KA-2								H53	1 N.C. 1 E.C. N.O. 1 N.O.	KA-4	KA-2							
H38	2 N.O. 2 N.C.	KA-3	KA-2	KA-3	KA-2						H54	1 N.C. 1 E.C. N.O. 1 L.O. N.C. 1 N.O.	KA-4	KA-5	KA-2						
H39	2 N.C. 1 L.O. N.C.	KA-5	KA-1		KA-3						* Contact Designation refers to push buttons only. For selector switch sequences, see pages 4-6 thru 4-11. † Explanation: N.O. — Normally Open N.C. — Normally Closed E.C. — Early Closing L.O. — Late Opening										



HEAVY DUTY OILTIGHT CONTROL UNITS

TYPE K — CONTACT BLOCKS ASSEMBLED TO OPERATORS

CLASS
9001

LOCATION CHART FOR CONTACT BLOCKS ASSEMBLED TO OPERATORS (Continued)

Suffix No. (Add to Operator Type No.)	† Total Circuits	Positions								Circuit Symbol*	Suffix No. (Add to Operator Type No.)	† Total Circuits	Positions								Circuit Symbol*
		1	2	3	4	5	6	7	8				1	2	3	4	5	6	7	8	
H55	2 N.C. 4 N.O.	KA-1	KA-2	KA-2		KA-1					H72	1 N.C. 1 L.O. N.C.	KA-3	KA-5							
H56	4 N.O.	KA-2	KA-2	KA-2	KA-2						H73	2 N.O. 3 N.C.	KA-1	KA-1	KA-3						
H57	1 N.C. 1 L.O. N.C. 1 E.C. N.O.	KA-5	KA-4								H74	2 N.O. 1 N.C. 1 L.O. N.C.	KA-1	KA-2	KA-5	KA-5					
H58	1 L.O. N.C.		KA-5								H75	1 N.O. 5 N.C.	KA-1	KA-3	KA-3	KA-3	KA-3				
H59	3 N.O. 2 N.C.	KA-1	KA-2	KA-1							H76	1 N.C. 5 N.O.	KA-1	KA-2	KA-2	KA-2	KA-2				
H60	3 N.O. 3 N.C.	KA-1	KA-2	KA-1		KA-3					H77	2 N.O. 2 N.C.	KA-1		KA-1						
H61	2 N.O. 2 L.O. N.C.	KA-2	KA-2	KA-5	KA-5						H78	1 N.C. 2 N.O. 1 L.O. N.C.	KA-1	KA-2		KA-5					
H62	2 N.O. 2 N.C.	KA-1	KA-2	KA-3							H79	2 N.C. 1 L.O. N.C.	KA-3	KA-3		KA-5					
H63	2 N.C. 1 N.O.	KA-1		KA-3							H80	2 N.C. 2 E.C. N.O. 2 L.O. N.C.	KA-4	KA-4	KA-5	KA-5					
H64	2 N.O. 1 N.C.	KA-3	KA-3	KA-2							H81	3 N.C. 3 N.O.	KA-1	KA-1	KA-2	KA-3					
H65	5 N.O. 6 N.C.	KA-3	KA-2	KA-3	KA-1	KA-1	KA-1	KA-1	KA-1		H82	2 N.C. 2 N.O.	KA-12	KA-12	KA-13	KA-13					
H66	4 N.C. 2 N.O.	KA-3	KA-1	KA-3	KA-1						H83	1 L.O. N.C. 1 N.C.	KA-35	KA-33							
H67	6 N.O. 3 N.C.	KA-1	KA-2	KA-1	KA-2	KA-2	KA-2	KA-3			H84	5 N.C. 1 L.O. N.C. 2 E.C. N.O.	KA-3	KA-4	KA-3	KA-4	KA-5	KA-3			
H68	4 N.O. 3 N.C.	KA-1	KA-2	KA-1	KA-2	KA-3		KA-3			H85	3 N.C. 1 L.O. N.C. 2 E.C. N.O.		KA-4		KA-4		KA-5	KA-3		
H69	7 N.C. 1 N.O.	KA-1	KA-3	KA-3	KA-3	KA-3	KA-3	KA-3			H86	2 N.C. 1 N.O.	KA-3	KA-2	KA-3						
H70	3 N.O. 4 N.C.	KA-1	KA-2	KA-3	KA-2	KA-3		KA-3													
H71	4 N.C.	KA-3	KA-3	KA-3	KA-3																

‡ In addition to the contact blocks listed, one KA-1 is mounted in position 10 (behind position 8).

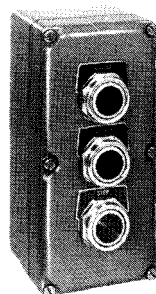
* Contact Designation refers to push buttons only. For selector switch sequences, see pages 4-6 thru 4-11.

† Explanation:

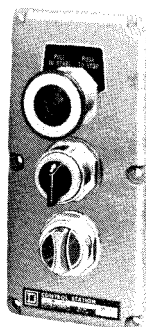
N.O. — Normally Open
N.C. — Normally Closed

E.C. — Early Closing
L.O. — Late Opening

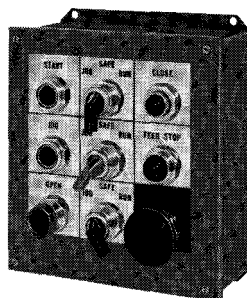
TYPE K



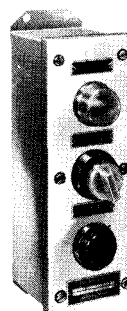
Type KYK-31



Type KZ-310



Type KYAF-90



Type KYC-300



Type K-26

CONTROL STATIONS — APPLICATION DATA

Class 9001 Type K enclosures are available in NEMA 13 (oiltight and dusttight) and NEMA 4 Stainless Steel (watertight and dusttight). Both types are available completely assembled in standard and custom arrangements and as separate unassembled enclosures. Enclosures have sufficient depth to accommodate two contact blocks in tandem (total of four blocks) on non-illuminated operators and two contact blocks side-by-side on illuminated operators.

Operators used are listed on Pages 4-2 thru 4-14. On NEMA 4 enclosures (Type KYC), protective caps (Page 4-16) and separate legend plates (Type KN-8 on Page 4-17) must be used to maintain the watertight seal.

For Standard Assembled Stations — See Below

For Enclosures Only (Customer Assembly) — See Pages 4-23 and 4-25.

For Custom Assembled Stations — See Pages 4-23 and 4-25.

For NEMA 4X Enclosures — See Class 9001 Catalog Section 6.

Dimensions — See Pages 4-23 thru 4-25.

STANDARD ASSEMBLED STATIONS — NEMA TYPE 13

No. of Units	Legend Plate Markings and Features	Surface Mounting		Consists of (one each unless noted):			
		Type	Price	Enclosure	Operators	Contact Blocks	Legend Plates
1	Start (Mushroom Button).....	KYK-11	\$64.	KY-1	KR-1B	KA-1	KN-201
	Stop (Mushroom Button).....	KYK-12	76.	KY-1	KR-4B	KA-1	KN-201
	Stop (Mushroom Button).....	KYK-13	64.	KY-1	KR-1R	KA-1	KN-202
	Stop (With Lockout).....	KYK-14	76.	KY-1	KR-4R	KA-1	KN-202
	Off-On (Selector Switch).....	KYK-15	76.	KY-1	KR-1R with K-4	KA-1	KN-202
	Hand-Off-Auto (Sel. Switch).....	KYK-110	68.	KY-1	KS-11B	KA-1	KN-244
	To Stop — Break Glass (With "Break Glass" Operator).....	KYK-111	68.	KY-1	KS-43B	KA-1	KN-260
	Up-Down-Stop (Lockout on Stop).....	KYK-116	92.	KY-1	K-15	KA-1	KN-799R
	Start-Stop (Mushroom on Stop).....	KYK-21	92.	KY-2	KR-1B, KR-1R	(2) KA-1	KN-201, 202
	Start-Stop (Lockout on Stop).....	KYK-22	104.	KY-2	KR-1B, KR-4R	(2) KA-1	KN-201, 202
2	Up-Down-Stop (Maintained Contact).....	KYK-23	104.	KY-2	KR-1B, KR-1R with K-4	(2) KA-1	KN-201, 202
	Up-Down-Stop (Maintained Contact).....	KYK-25	92.	KY-2	(2) KR-1B	(2) KA-1	KN-211, 210
	Up-Down-Stop (Maintained Contact).....	KYK-27	92.	KY-2	KR-11U	(1) KA-1	KN-201, 202
	Up-Down-Stop (Maintained Contact).....	KYK-27	92.	KY-2	KR-11U	(1) KA-1	KN-201, 202
3	Forward-Reverse-Stop.....	KYK-31	124.	KY-3	(2) KR-1B, KR-1R	(3) KA-1	KN-206, 207, 202
	Up-Down-Stop.....	KYK-32	124.	KY-3	(2) KR-1B, KR-1R	(3) KA-1	KN-211, 210, 202
	Open-Close-Stop.....	KYK-33	124.	KY-3	(2) KR-1B, KR-1R	(3) KA-1	KN-209, 208, 202
	High-Low-Stop.....	KYK-34	124.	KY-3	(2) KR-1B, KR-1R	(3) KA-1	KN-214, 215, 202
	Red 120 VAC Pilot Light — Start-Stop.....	KYK-317	132.	KY-3	KP-1R6, KR-1B, KR-1R	KA-2, KA-3	KN-200, 201, 202
	Forward-Reverse-Stop.....	KYK-31	124.	KY-3	(2) KR-1B, KR-1R	(3) KA-1	KN-206, 207, 202
	Up-Down-Stop.....	KYK-32	124.	KY-3	(2) KR-1B, KR-1R	(3) KA-1	KN-211, 210, 202

Standard Assembled Stations — NEMA Type 4 (Stainless Steel)

No. of Units	Legend Plate Markings and Features	Type	Price	Assembled Station Consists of (one each unless noted):				
				Enclosure	Operators	Caps	Contact Blocks	Legend Plates
1	Start.....	KYC-101	\$109.	KYC-1	KR-1B	KU-1	KA-1	KN-801
	Stop (Lockout).....	KYC-103	98.	KYC-1	KR-1R	KU-2	KA-3	KN-802
	Off-On (Selector Switch).....	KYC-105	118.	KYC-1	KR-1R with K-5	KU-2	KA-3	KN-802
	Hand-Off-Auto (Selector Switch).....	KYC-110	112.	KYC-1	KS-11B	KU-17	KA-1	KN-844
	Hand-Off-Auto (Selector Switch).....	KYC-111	112.	KYC-1	KS-43B	KU-17	KA-1	KN-860
2	Start-Stop.....	KYC-201	134.	KYC-2	KR-1B, KR-1R	KU-1, KU-2	KA-1, KA-3	KN-801, 802
	Start-Stop (Lockout on Stop).....	KYC-203	154.	KYC-2	KR-1B, KR-1R with K-5	KU-1, KU-2	KA-1, KA-3	KN-801, 802
	Up-Down-Stop.....	KYC-205	140.	KYC-2	(2) KR-1B	(2) KU-1	(2) KA-1	KN-811, 810
	Start-Stop (Maintained Contact).....	KYC-210	148.	KYC-2	KR-11U	(2) KU-27	(1) KA-1	KN-801, 802
3	Forward-Reverse-Stop.....	KYC-301	194.	KYC-3	(2) KR-1B, KR-1R	(2) KU-1, KU-2	(2) KA-1, KA-3	KN-806, 807, 802
	Up-Down-Stop.....	KYC-302	194.	KYC-3	(2) KR-1B, KR-1R	(2) KU-1, KU-2	(2) KA-1, KA-3	KN-811, 810, 802
	Open-Close-Stop.....	KYC-303	194.	KYC-3	(2) KR-1B, KR-1R	(2) KU-1, KU-2	(2) KA-1, KA-3	KN-809, 808, 802
	High-Low-Stop.....	KYC-304	194.	KYC-3	(2) KR-1B, KR-1R	(2) KU-1, KU-2	(2) KA-1, KA-3	KN-814, 815, 802
	Forward-Reverse-Stop (Lockout on Stop).....	KYC-308	214.	KYC-3	(2) KR-1B, KR-1R with K-5	(2) KU-1, KU-2	(2) KA-1, KA-3	KN-806, 807, 802
	Up-Down-Stop (Lockout on Stop).....	KYC-309	214.	KYC-3	(2) KR-1B, KR-1R with K-5	(2) KU-1, KU-2	(2) KA-1, KA-3	KN-811, 810, 802
	Open-Close-Stop (Lockout on Stop).....	KYC-310	214.	KYC-3	(2) KR-1B, KR-1R with K-5	(2) KU-1, KU-2	(2) KA-1, KA-3	KN-809, 808, 802
	High-Low-Stop (Lockout on Stop).....	KYC-311	214.	KYC-3	(2) KR-1B, KR-1R with K-5	(2) KU-1, KU-2	(2) KA-1, KA-3	KN-814, 815, 802
	Forward-Reverse-Stop.....	KYC-301	194.	KYC-3	(2) KR-1B, KR-1R	(2) KU-1, KU-2	(2) KA-1, KA-3	KN-806, 807, 802
	Up-Down-Stop.....	KYC-302	194.	KYC-3	(2) KR-1B, KR-1R	(2) KU-1, KU-2	(2) KA-1, KA-3	KN-811, 810, 802
	Open-Close-Stop.....	KYC-303	194.	KYC-3	(2) KR-1B, KR-1R	(2) KU-1, KU-2	(2) KA-1, KA-3	KN-809, 808, 802



HEAVY DUTY CONTROL STATIONS

TYPE K — ENCLOSURES AND DIMENSIONS

CLASS
9001

Custom Built Assembled Stations

NEMA Type 13							Ordering Information		NEMA Type 4 Stainless Steel		
No. of Units	Surface Mounting				Flush Mounting Without Pullbox▲●						
	Cast Aluminum		Sheet Steel (With 2½" Hole Spacings) (Supersedes Type KYA)		Cast Aluminum						
	Type●	Base Price	Type	Base Price	Type●	Base Price					
1	KY-10	\$ 40.	KYAF-100	\$ 28.	KZ-110	\$ 24.	Base prices shown include the enclosure only. The complete price for an assembled station is the sum of this base price plus prices of all control units to be installed. (There is no extra charge for assembly.) Orders must be accompanied with a key sheet or sketch showing all control units in their desired locations. For nameplate on enclosure with markings as specified add \$6.	1	KYC-100	\$ 72.	
2	KY-20*	44.	KYAF-200	32.	KZ-210*	24.		2	KYC-200	76.	
3	KY-30*	52.	KYAF-300	36.	KZ-310*	28.		3	KYC-300	104.	
4	KY-40*	64.	KYAF-400	44.	KZ-410*	40.		4	KYC-400	136.	
6	KY-60	80.	KYAF-600	52.	KZ-60	56.		6	KYC-600	200.	
9	KY-90	104.	KYAF-900	64.	KZ-90	76.		9	KYC-900	248.	
12	KY-120	140.	KYAF-1200	80.	KZ-120	108.		12	KYC-1200	300.	
16	KY-160	180.	KYAF-1600	100.	KZ-160	148.		16	KYC-1600	396.	
20	.....	.....	KYAF-2000	120.	.....	.....		20	KYC-2000	440.	
25	.....	.....	KYAF-2500	140.	.....	.....		25	KYC-2500	560.	
								30	KYC-3000	660.	

* Types KN-3 and KN-4 legend plates will not fit upright on these enclosures with their long axis vertical.

▲ For machine cavity mounting. Pull box not available.

● Type KN-1 legend plates will not fit on these enclosures.

Enclosures Only (For Customer Assembly)

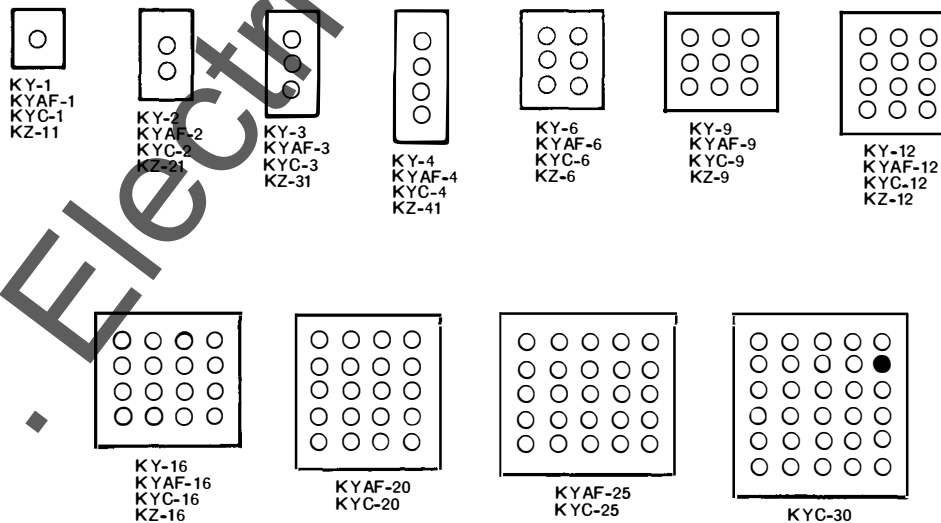
NEMA Type 13						NEMA Type 4 Stainless Steel				For NEMA 4X See Class 9001 Catalog Section 6
No. of Units	Surface Mounting				Flush Mounting Without Pullbox▲●					
	Cast Aluminum		Sheet Steel (With 2½" Hole Spacings) (Supersedes Type KYA)		Cast Aluminum					
	Type●	Price	Type	Price	Type●	Price	No. of Units	Type	Price	
1	KY-1	\$ 40.	KYAF-1	\$ 28.	KZ-11	\$ 24.	1	KYC-1	\$ 72.	
2	KY-2*	44.	KYAF-2	32.	KZ-21*	24.	2	KYC-2	76.	
3	KY-3*	52.	KYAF-3	36.	KZ-31*	28.	3	KYC-3	104.	
4	KY-4*	64.	KYAF-4	44.	KZ-41*	40.	4	KYC-4	136.	
6	KY-6	80.	KYAF-6	52.	KZ-6	56.	6	KYC-6	200.	
9	KY-9	104.	KYAF-9	64.	KZ-9	76.	9	KYC-9	248.	
12	KY-12	140.	KYAF-12	80.	KZ-12	108.	12	KYC-12	300.	
16	KY-16	180.	KYAF-16	100.	KZ-16	148.	16	KYC-16	396.	
20	....	....	KYAF-20	120.	....	....	20	KYC-20	440.	
25	....	....	KYAF-25	140.	....	....	25	KYC-25	560.	
							30	KYC-30	660.	

* Types KN-3 and KN-4 legend plates will not fit upright on these enclosures with their long axis vertical.

▲ For machine cavity mounting. Pull box not available.

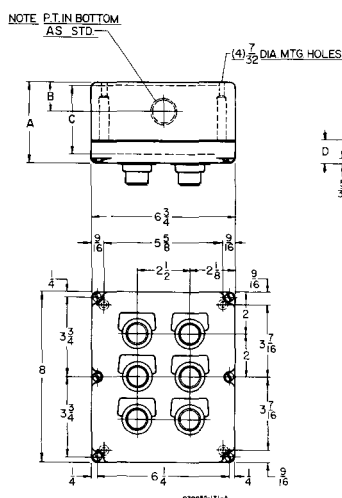
● Type KN-1 legend plates will not fit on these enclosures.

Location of Control Units

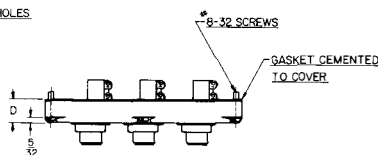


Dimensions
continued on
page 4-24

Type KY

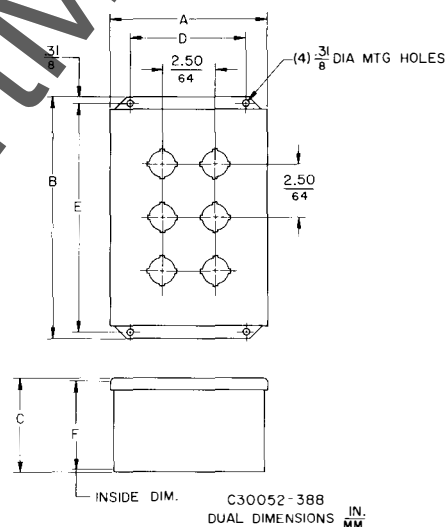


Type KZ

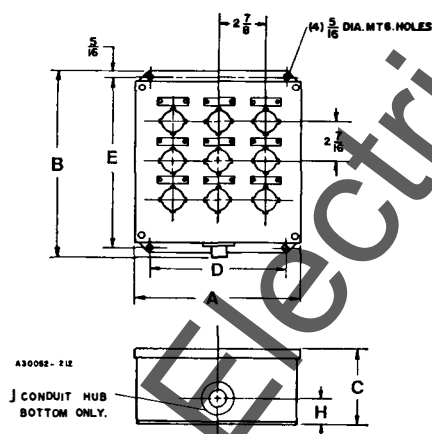


No. of Units	Overall Dim.			Mounting Dim.				Conduit		Other Dim.		
				KY		KZ						
	A	B	C	D	E	F	G	H	R	J	K	L
1	3½	4	3½ ^{3/32}	3	2¾	3½	3½	1½	¾-14	—	2	10-24 x ½
2	3½	5¼	3½ ^{3/32}	3	4½	3½	5¼	1½	¾-14	1¾	2	10-24 x ½
3	3½	7½	3½ ^{3/32}	3	6¾	3½	7	1½	¾-14	1¾	2	10-24 x ½
4	3½	9¾	3½ ^{3/32}	3	9	3½	9¾	1½	¾-14	1¾	2	10-24 x ½
6	6¾	8	3½ ^{3/32}	5	6	3½	8¾	1½	¾-14	2	2	8-32
9	9¾	8	3½ ^{3/32}	8	8¾	3½	11¾	1½	1¼-14	2	2	8-32
12	12¾	10	4½ ^{3/32}	8½	8¾	3½	9¾	1½ ^{1/32}	1¼-11½	2	2	8-32
16	16¾	10¼	4½ ^{3/32}	10¾	9½	11¼	10	1½ ^{1/32}	1¼-11½	2	2¼	8-32

Type KYAF



Type KYC



No. of Units	Overall Dim.			Mounting Dim.		Conduit	
	A	B	C	D	E	H	J
1	3½	8 1/32	3 5/8	1 3/4	7 7/8	1 1/32	¾
2	3½	8 1/32	3 5/8	1 3/4	7 7/8	1 1/32	¾
3	3½	10 1/32	3 5/8	1 3/4	9 7/8	1 1/32	¾
4	3½	13 1/32	3 5/8	1 3/4	12 3/8	1 1/32	¾
6	7 1/16	11 5/32	4 1/32	5/8	10 5/8	1 5/8	¾
9	10 1/16	11 1/32	4 1/32	8/12	10 5/8	1 5/8	1
12	10 1/16	14 1/32	4 1/32	8/12	13 1/8	1 5/8	1 1/4
16	13 1/16	14 1/32	4 1/32	1 1/8	13 1/8	1 5/8	1 1/2
20	13 1/16	16 1/32	4 1/32	1 1/8	15 1/2	1 5/8	1 1/2
25	15 1/16	16 1/32	4 1/32	1 3/4	15 1/2	1 5/8	(2) 1 1/2
30	15 1/16	18 29/32	4 1/32	1 3/4	17 1/8	1 5/8	(2) 1 1/2

No. of Units	Overall Dim.			Mtg. Dim.		Inside Dim.
	A	B	C	D	E	
1	$\frac{4.18}{106}$	$\frac{5.24}{133}$	$\frac{3.59}{91}$	$\frac{2.25}{57}$	$\frac{4.62}{117}$	$\frac{3.37}{86}$
2	$\frac{4.18}{106}$	$\frac{7.74}{197}$	$\frac{3.59}{91}$	$\frac{2.25}{57}$	$\frac{7.12}{181}$	$\frac{3.37}{86}$
3	$\frac{4.18}{106}$	$\frac{10.24}{260}$	$\frac{3.59}{91}$	$\frac{2.25}{57}$	$\frac{9.62}{244}$	$\frac{3.37}{86}$
4	$\frac{4.18}{106}$	$\frac{12.74}{324}$	$\frac{3.59}{91}$	$\frac{2.25}{57}$	$\frac{12.12}{308}$	$\frac{3.37}{86}$
6	$\frac{7.43}{189}$	$\frac{11.37}{289}$	$\frac{4.50}{114}$	$\frac{5.50}{140}$	$\frac{10.75}{273}$	$\frac{4.25}{108}$
9	$\frac{9.68}{246}$	$\frac{11.37}{289}$	$\frac{4.50}{114}$	$\frac{7.75}{197}$	$\frac{10.75}{273}$	$\frac{4.25}{108}$
12	$\frac{9.68}{246}$	$\frac{13.87}{352}$	$\frac{4.50}{114}$	$\frac{7.75}{197}$	$\frac{13.25}{337}$	$\frac{4.25}{108}$
16	$\frac{11.93}{303}$	$\frac{13.87}{352}$	$\frac{4.50}{114}$	$\frac{10.00}{254}$	$\frac{13.25}{337}$	$\frac{4.25}{108}$
20	$\frac{11.93}{303}$	$\frac{16.37}{416}$	$\frac{4.50}{114}$	$\frac{10.00}{254}$	$\frac{15.75}{400}$	$\frac{4.25}{108}$
25	$\frac{14.18}{360}$	$\frac{16.37}{416}$	$\frac{4.50}{114}$	$\frac{12.25}{311}$	$\frac{15.75}{400}$	$\frac{4.25}{108}$

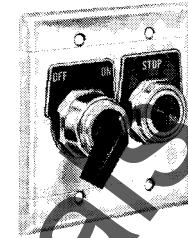
HEAVY DUTY CONTROL STATIONS

TYPE K — FLUSH PLATES

CLASS
9001

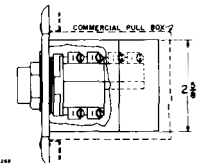
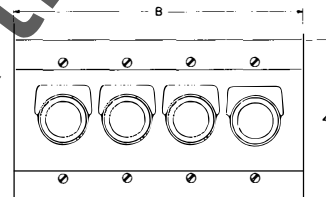
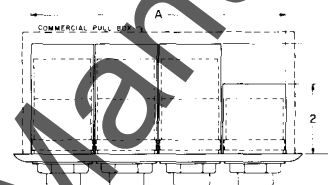
STAINLESS STEEL FLUSH PLATES

These flush plates accept Type K operators and contact blocks and may be used with a standard 2 x 3 general purpose switch box. A 2½ deep box should be used with two Type K contact blocks mounted side by side. If two Type K contact blocks mounted in tandem are needed, a 3½ deep box should be used. Although oiltight operators are used, an assembled station using the flush plates **is not oiltight**. The kits include the stainless steel flush plate, cover screws and a set of liners. The liners must be used to maintain electrical clearance.



Two Unit

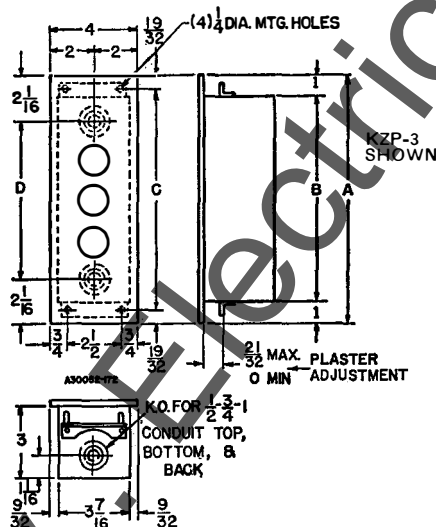
Approximate Dimensions



Number of Units	Description	Type Number	Price
1	1 Unit flush plate, cover screws, insulating liners.....	K25	\$ 8.
2	2 Unit flush plate, cover screws, insulating liners.....	K26	12.
3	3 Unit flush plate, cover screws, insulating liners.....	K27	16.
4	4 Unit flush plate, cover screws, insulating liners.....	K28	24.

Number of Units	Dimensions	
	A	B
1	12 ⁵ / ₃₂	2 ³ / ₄
2	3 ¹⁹ / ₃₂	4 ⁹ / ₁₆
3	5 ¹³ / ₃₂	6 ³ / ₈
4	7 ⁷ / ₃₂	8 ¹ / ₁₆

GENERAL PURPOSE FLUSH MOUNTING CONTROL STATION WITH PULL BOX FOR TYPE K CONTROL UNITS (Stations Are Not Oiltight)



Number of Units	Enclosure Only For Customer Assembly		Custom Built Factory Assembled Control Stations	
	Type	Price	Type	Price
1	KZP-1	\$ 52.	KZP-10	\$ 52.
2	KZP-2	60.	KZP-20	60.
3	KZP-3	76.	KZP-30	76.
4	KZP-4	80.	KZP-40	80.
5	KZP-5	96.	KZP-50	96.
6	KZP-6	100.	KZP-60	100.
7	KZP-7	132.	KZP-70	132.
8	KZP-8	136.	KZP-80	136.

Special Features	Price
Stainless steel flush plate: No. of Units: 1-4..... 5-8.....	Add \$ 88. 112.
Omit Pull Box: No. of Units: 1-2..... 3-4..... 5-6..... 7-8.....	Deduct \$ 24. 32. 40. 48.

Type	A	B	C	D
KZP-1	7 ⁹ / ₁₆	5 ⁹ / ₁₆	6 ³ / ₈	3 ⁷ / ₁₆
KZP-2	9 ⁷ / ₁₆	7 ⁷ / ₁₆	8 ¹ / ₄	5 ⁵ / ₁₆
KZP-3	11 ³ / ₁₆	9 ⁹ / ₁₆	10 ¹ / ₈	7 ³ / ₁₆
KZP-4	13 ³ / ₁₆	11 ³ / ₁₆	12	9 ⁹ / ₁₆
KZP-5	15 ¹ / ₁₆	13 ¹ / ₁₆	13 ⁷ / ₈	10 ¹³ / ₁₆
KZP-6	16 ¹⁹ / ₁₆	14 ¹³ / ₁₆	15 ³ / ₈	12 ¹³ / ₁₆
KZP-7	18 ¹³ / ₁₆	16 ¹³ / ₁₆	17 ³ / ₈	14 ¹ / ₁₆
KZP-8	20 ¹ / ₁₆	18 ¹ / ₁₆	19 ¹ / ₂	16 ⁹ / ₁₆

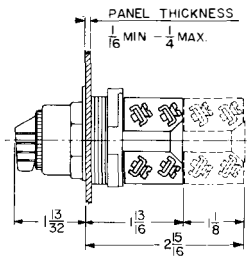
ORDERING INFORMATION REQUIRED

- For Customer Assembly** — Order enclosure only by Class and Type number from Table above. Order separate oiltight control units, legend plates or attachments from catalog sheets.
- For Custom Built Factory Assembled Control Stations** — Price custom built stations at base price for enclosure from Table above plus the total price of all units specified.

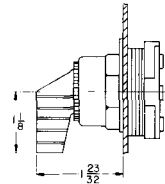
HEAVY DUTY OILTIGHT CONTROL UNITS TYPE K — DIMENSIONS

JANUARY, 1981

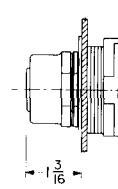
NON-ILLUMINATED SELECTOR SWITCH



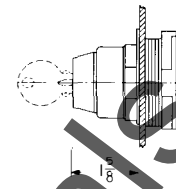
Standard Knob



Gloved Hand Knob

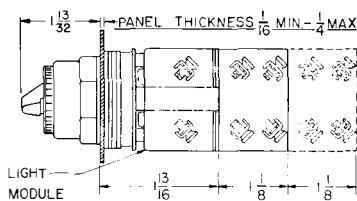


Coin Operated

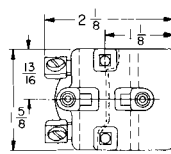


Key Operated

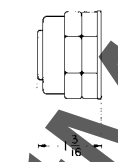
ILLUMINATED SELECTOR SWITCH



Standard Knob

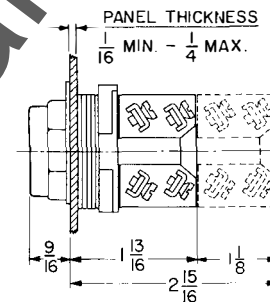


Gloved Hand Knob



Coin Operated Knob

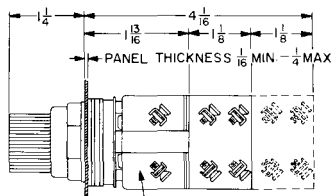
CONTACT BLOCKS



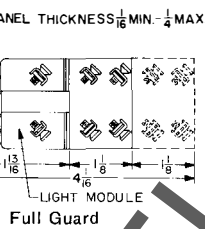
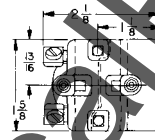
C30052-246-A

Types KA-1, KA-4,
KA-41 thru KA-45

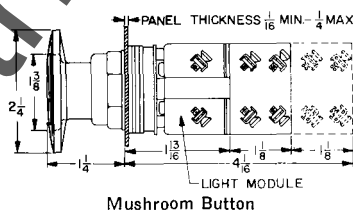
ILLUMINATED PUSH BUTTON



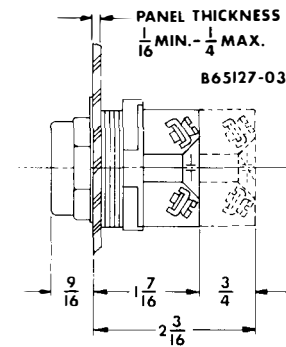
Light Module
No Guard



Full Guard

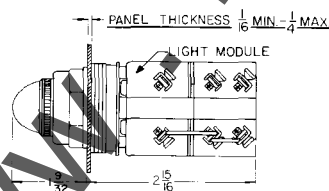


Mushroom Button

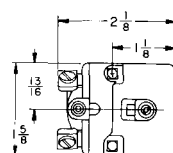


Types KA-2, KA-3, KA-5

PILOT LIGHTS



Push-To-Test



Standard

For additional dimensions of Operators shown and not shown on Pages 4-26 and 4-27, request Approval Drawing Pads 9001-4, 9001-5 and 9001-6 from your local Square D Field Office.

HEAVY DUTY OILTIGHT CONTROL UNITS

TYPE K — APPLICATION DATA

JANUARY, 1981

Operator Service Temperature Range:

- 22° to + 140° Fahrenheit
- 30° to + 60° Celsius

MATERIALS:**PUSH BUTTON AND PUSH-TO-TEST PILOT LIGHT**

(Types KR and KT)

- Gasket — Nitrile
- Seal — Nitrile
- Seal Cap — Thermoplastic Polyester
- Decorative Ring — Acrylic Film
- Compensating Washer — Polypropylene
- Lock Ring — Polypropylene
- Stem — Thermoplastic Polyester
- Base Cap — Thermoplastic Polyester
- Knob — Polycarbonate
- Liner — Polypropylene
- Hold Down Spring for Type K-15 — Neoprene
- Operator Base — Zinc
- Operator Base (KR-8 only) — Polyester
- Return Spring — Music Wire or Stainless Steel
- Ring Nuts — Aluminum or Zinc
- Springkeeper — Steel
- Locking Thrust Washer — Zinc

SELECTOR SWITCH (Type KS)

- Gasket — Nitrile
- Seal — Nitrile
- Bearing Washer — Polytetrafluoroethylene
- Compensating Washer — Polypropylene
- Cam Follower — Nylon
- Liner — Polypropylene
- Knob — Polycarbonate
- Cam Carrier — Nylon
- Cam Rotor — Thermoplastic Polyester
- Cam — Acetal
- Operator Base — Zinc
- Detent Spring — Music Wire
- Ring Nuts — Aluminum or Zinc
- Seal Keeper — Steel
- Locking Thrust Washer — Zinc

PILOT LIGHT (Type KP)

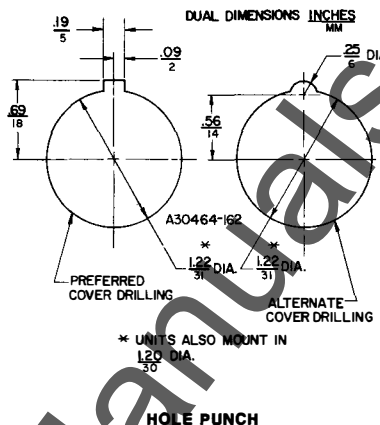
- Gasket — Nitrile
- Translating Pin — Polycarbonate
- Compensating Washer — Polypropylene
- Lens — Glass or Polycarbonate
- Light Module Housing — Thermoplastic Polyester
- Operator Base — Zinc
- Glass Lens Ring — Aluminum

LIGHT MODULE (Type KM)

- Housing — Thermoplastic Polyester
- Socket — Steel
- Terminal — Brass
- Saddle Clamp — Steel
- Translating Pin — Polycarbonate
- Transformer — Nylon, Steel, Copper, Polyvinyl Chloride, Polytetrafluoroethylene, Acetate, Paper

CONTACT BLOCK (Type KA)

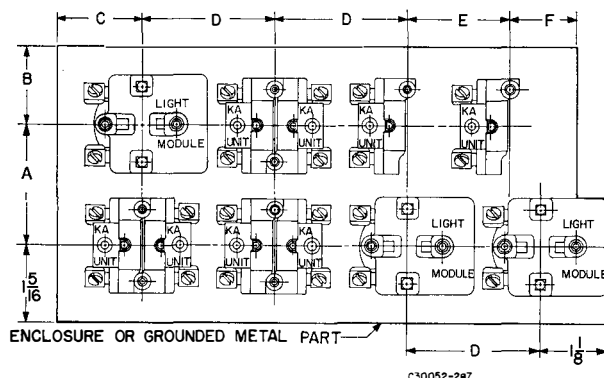
- Housing — Transparent Nylon
- Contact Slider — Phenolic, Nylon or Acetal
- Terminal — Steel
- Saddle Clamp — Steel
- Spring — Steel
- Contacts — Silver and Copper
- Blade — Beryllium Copper

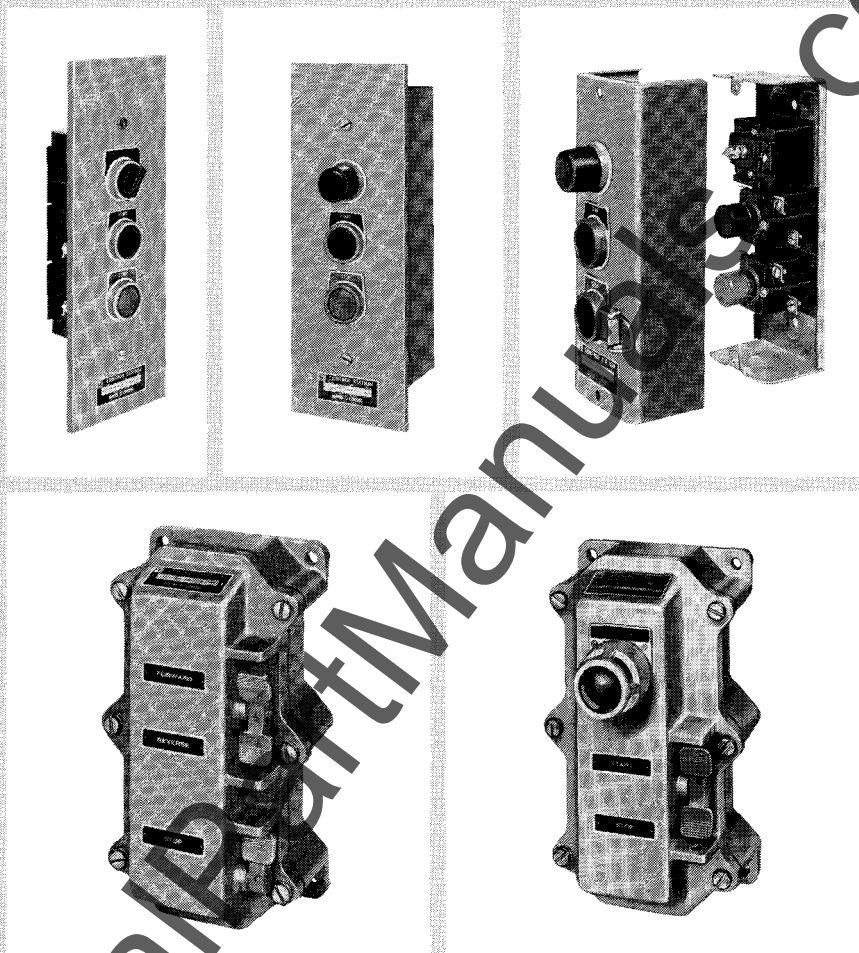
Mounting Hole for All Type K Control Units

The 1.22" diameter hole required to mount Type K operators may be cut with Greenlee knockout punch No. 730-K. The notch may be cut with Greenlee punch No. 730-K. Both punches are available through electrical wholesalers.

MINIMUM CENTERLINE SPACING FOR TYPE "K" CONTROL UNITS

Legend Plate	Operator	Spacing (Inches)					
		A	B	C	D	E	F
KN-1	All	2 1/4	1 3/8	1 1/8	2 1/4	2 1/4	1 1/8
KN-2, 5	Standard Pushbutton	1 3/4	1 1/8	1 1/8	2 1/4	1 1/8	7/8
	1 3/8" Dia. Mushroom B	1 3/4	1 1/8	1 1/8	2 1/4	1 1/8	7/8
	2 1/4" Dia. Mushroom B	2 1/4	1 1/8	1 1/8	2 1/4	2 1/4	1 1/8
	Selector Switch Knobs	1 3/4	1 1/8	1 1/8	2 1/4	1 1/8	7/8
KN-3	Standard Pushbutton	2	1 1/8	1 1/8	2 1/4	1 3/4	7/8
	1 3/8" Dia. Mushroom B	2	1 1/8	1 1/8	2 1/4	1 3/4	7/8
	2 1/4" Dia. Mushroom B	2 1/4	1 1/8	1 1/8	2 1/4	2 1/4	1 1/8
	Selector Switch Knobs	2	1 1/8	1 1/8	2 1/4	1 3/4	7/8
KN-4	Standard Pushbutton	1 1/2	1 1/8	1 1/8	2 1/4	1 1/8	7/8
	1 3/8" Dia. Mushroom B	1 1/2	1 1/8	1 1/8	2 1/4	1 1/8	7/8
	2 1/4" Dia. Mushroom B	2 1/4	1 1/8	1 1/8	2 1/4	2 1/4	1 1/8
	Selector Switch Knobs	1 1/2	1 1/8	1 1/8	2 1/4	1 1/8	7/8
KN-6	All	2 3/8	1 3/8	1 1/8	2 1/4	2 1/4	1 1/8
KN-7	All	2 1/2	1 3/4	1 1/8	2 1/2	2 1/2	1 1/4





Control Stations Heavy Duty

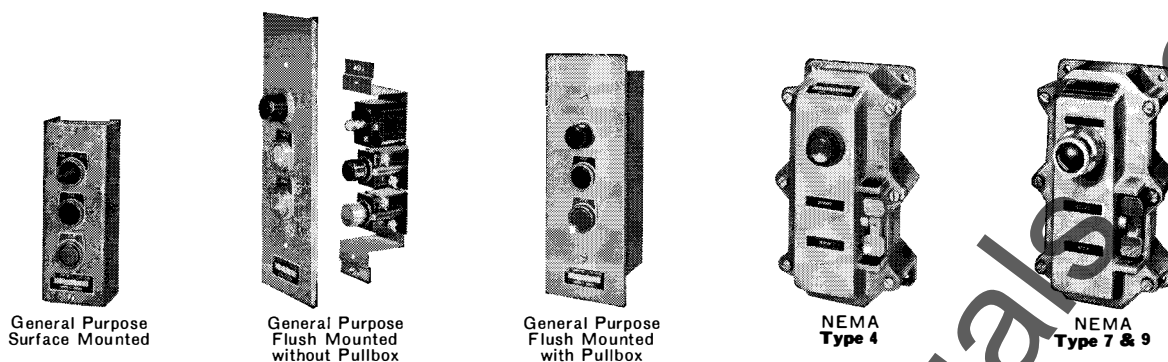
CONTENTS

Description	Class	Pages	Description	Class	Pages
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Type GG General Purpose	9001	3-3 thru 3-6	Type GO Push Button	9001	3-8
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GFP Flush w/ Pull Box	9001	3-3 thru 3-6	PO Pilot Light	9001	3-8
GR Explosion Proof	9001	3-3 thru 3-5	Dimensions & Contact Sym.		3-7
GW Watertight	9001	3-3 thru 3-5			
FP Pull Box	9001	3-6			

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HEAVY DUTY CONTROL STATIONS

APPLICATION DATA AND STANDARD CONTROL STATIONS — TYPE G

CLASS
9001

APPLICATION DATA

Heavy duty control stations are intended for use in the control circuits of relays, magnetic starters and contactors, sizes 00-9, or control panels where the contact rating required exceeds that of the standard duty line. Control stations are available as standard factory assembled or custom factory assembled. Separate base mounted control units are available for use as replacement items or for mounting in user's enclosure.

ELECTRICAL CONTACT RATINGS

AC — NEMA A600						DC			
Volts	Inductive 35% Power Factor				Con- tinuous Carrying Amperes	Resistive 75% Power Factor Make Break and Continuous Carrying Amperes	Volts	Inductive and Resistive	
	Make		Break					Make and Break Amperes	Con- tinuous Carrying Amperes
	Amps.	VA	Amps.	VA					
120	60	7200	6	720	10	10	120	1.1	10
240	30	7200	3	720	10	10	240	.55	10
480	15	7200	1.5	720	10	10	480	.2	10
600	12	7200	1.2	720	10	10	600		10

STANDARD CONTROL STATIONS

NEMA Type 4, 7 and 9 stations as standard have provision for padlocking the "Stop" button in the depressed position.

No. of Units	Legend Plate Marking and Features	General Purpose Surface Mounting NEMA Type 1		General Purpose Flush Mounting Without Pullbox		General Purpose Flush Mounting With Pullbox		Watertight and Dusttight NEMA Type 4		For Hazardous Locations Class I, Groups B, C and D Class II, Groups E, F and G NEMA Types 7 & 9		Contact Symbol—See Page 3-7
		Type	Price	Type	Price	Type	Price	Type	Price	Type	Price	
1	Start.....	GG-101	\$44.	GF-101	\$44.	3FP-101	\$68.	GW-101	\$111.	GR-101	\$127.	16
	Stop.....	GG-102	44.	GF-102	44.	GFP-102	68.					
	Stop (Lockout).....	GG-103	56.	GF-103	56.	GFP-103	80.	GW-103	111.	GR-103	127.	
	Reset.....	GG-104	44.	GF-104	44.	GFP-104	68.	GW-104	111.	GR-104	127.	
	Jog.....	GG-105	44.	GF-105	44.	GFP-105	68.	GW-105	111.	GR-105	127.	
	Stop (Mushroom Button).....	GG-107	56.	GF-107	56.	GFP-107	80.					
	Start (Mushroom Button).....	GG-108	56.	GF-108	56.	GFP-108	80.	GW-108	123.	GR-108	139.	
	Emergency Stop.....	GG-113	44.	GF-113	44.	GFP-113	68.	GW-133	111.	GR-133	127.	
	Emergency Stop (Mushroom Button).....	GG-114	56.	GF-114	56.	GFP-114	80.	GW-134	123.	GR-134	139.	
	Stop (Mushroom, Lockout).....	GG-115	68.	GF-115	68.	GFP-115	92.	GW-115	123.	GR-115	139.	
	Safe-Run (Selector Switch).....	GG-116		GF-116		GFP-116		GW-116		GR-116	18	
	High-Low (Selector Switch).....	GG-117	48.	GF-117	48.	GFP-117	72.	GW-117	115.	GR-117	131.	
	Open-Close (Selector Switch).....	GG-118		GF-118		GFP-118		GW-118		GR-118	19	
	Off-On (Selector Switch).....	GG-119		GF-119		GFP-119		GW-119		GR-119	18	
	Up-Down (Selector Switch).....	GG-120		GF-120		GFP-120		GW-120		GR-120		
	For.-Rev. (Selector Switch).....	GG-121	48.	GF-121	48.	GFP-121	72.	GW-121	115.	GR-121	131.	
	Jog-Run (Selector Switch) Maintained.....	GG-122		GF-122		GFP-122		GW-122		GR-122	19	
	Hand-Off-Auto. (Selector Switch).....	GG-123		GF-123		GFP-123		GW-123		GR-123	17	
	Fast-Slow (Selector Switch).....	GG-124	48.	GF-124	48.	GFP-124	72.	GW-124	115.	GR-124	131.	
	Man.-Auto (Selector Switch).....	GG-126		GF-126		GFP-126		GW-126		GR-126	19	
	Red Pilot Light: 120 V., 60 Hz., 110 V., 50 Hz.....	GG-127A	72.	GF-127A	72.	GFP-127A	96.	GW-127A	139.	GR-127A	155.	22
	240 V., 60 Hz., 220 V., 50 Hz.....	GG-127B		GF-127B		GFP-127B		GW-127B		GR-127B		
	480 V., 60 Hz., 440 V., 50 Hz.....	GG-127C		GF-127C		GFP-127C		GW-127C		GR-127C		
	600 V., 60 Hz., 550 V., 50 Hz.....	GG-127D		GF-127D		GFP-127D		GW-127D		GR-127D		
	Red Pilot Light: 120 V., AC or DC.....	GG-128	64.	GF-128	64.	GFP-128	88.	GW-128	131.	GR-128	147.	23
	240 V., AC or DC.....	GG-129		GF-129		GFP-129		GW-129		GR-129		
	Green Pilot Light 120 V., 60 Hz., 110 V., 50 Hz.....	GG-130A	72.	GF-130A	72.	GFP-130A	96.	GW-130A	139.	GR-130A	155.	22
	240 V., 60 Hz., 220 V., 50 Hz.....	GG-130B		GF-130B		GFP-130B		GW-130B		GR-130B		
	480 V., 60 Hz., 440 V., 50 Hz.....	GG-130C		GF-130C		GFP-130C		GW-130C		GR-130C		
	600 V., 60 Hz., 550 V., 50 Hz.....	GG-130D		GF-130D		GFP-130D		GW-130D		GR-130D		
	Green Pilot Light 120 V., AC or DC.....	GG-131	64.	GF-131	64.	GFP-131	88.	GW-131	131.	GR-131	147.	23
	240 V., AC or DC.....	GG-132		GF-132		GFP-132		GW-132		GR-132		

● Pullboxes can be ordered separately on page 3-6. Type GFP consists of Type GF plus Type FP pullbox.



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D1B DISCOUNT

● Revised 10-79

3-3

CONTROL STATIONS — HEAVY DUTY

TYPE G — STANDARD CONTROL STATIONS (Cont.)

JANUARY, 1982

NEMA Type 4, 7 and 9 stations as standard have provision for padlocking the "Stop" button in the depressed position.

No. of Units	Legend Plate Marking and Features	General Purpose Surface Mounting NEMA Type 1		General Purpose Flush Mounting Without Pullbox		General Purpose Flush Mounting With Pullbox		Watertight and Dusttight NEMA Type 4		For Hazardous Locations Class I, Groups B, C and D Class II, Groups E, F and G NEMA Types 7 & 9		Contact Symbol— See Page 3-7
		Type	Price	Type	Price	Type	Price	Type	Price	Type	Price	
2	Start-Stop.....	GG-201	\$ 68.	GF-201	\$ 68.	GFP-201	\$ 92.	GW-201	125.	GR-201	142.	25
	For.-Rev.....	GG-202	68.	GF-202	68.	GFP-202	92.	GW-202	125.	GR-202	142.	25
	Up-Down.....	GG-203	68.	GF-203	68.	GFP-203	92.	GW-203	125.	GR-203	142.	25
	Open-Close.....	GG-204	68.	GF-204	68.	GFP-204	92.	GW-204	125.	GR-204	142.	25
	High-Low.....	GG-205	68.	GF-205	68.	GFP-205	92.	GW-205	125.	GR-205	142.	25
	Start-Stop (Lockout on Stop).....	GG-206	80.	GF-206	80.	GFP-206	104.	GW-206	125.	GR-206	142.	25
	In-Out.....	GG-207	68.	GF-207	68.	GFP-207	92.	GW-207	125.	GR-207	142.	25
	Open-Reset.....	GG-208	68.	GF-208	68.	GFP-208	92.	GW-208	125.	GR-208	142.	25
	Jog-Stop (Jog Attachment).....	GG-209	80.	GF-209	80.	GFP-209	104.	GW-209	125.	GR-209	142.	25
	On-Off.....	GG-210	68.	GF-210	68.	GFP-210	92.	GW-210	125.	GR-210	142.	25
	Start-Stop (1 Momentary & 1 Maintained).....	GG-211	88.	GF-211	88.	GFP-211	112.	GW-211	145.	GR-211	162.	105
	Start-Stop (Maintained Contact).....	GG-213	68.	GF-213	68.	GFP-213	92.	GW-213	125.	GR-213	142.	107
	On-Off (Maintained Contact).....	GG-214	68.	GF-214	68.	GFP-214	92.	GW-214	125.	GR-214	142.	107
	Start-Stop (Mushroom Button on Stop).....	GG-215	80.	GF-215	80.	GFP-215	104.	GW-215	137.	GR-215	154.	25
	Start-Stop (Maint. Cont. & Mush. B. on Stop).....	GG-217	80.	GF-217	80.	GFP-217	104.	GW-217	137.	GR-217	154.	107
	Raise — Lower.....	GG-218	68.	GF-218	68.	GFP-218	92.	GW-218	125.	GR-218	142.	25
	Start-Stop (Mush. B. on Start & Stop, Lockout on Stop).....	GG-219	104.	GF-219	104.	GFP-219	128.	GW-219	149.	GR-219	166.	25
	Open-Close (Maintained Contact).....	GG-220	68.	GF-220	68.	GFP-220	92.	GW-220	125.	GR-220	142.	107
	Jog-Stop (Lockout on Stop).....	GG-221	80.	GF-221	80.	GFP-221	104.	GW-221	125.	GR-221	142.	25
	Safe-Run, Start (1 Sel. Sw., 1 Button).....	GG-222	72.	GF-222	72.	GFP-222	96.	GW-222	129.	GR-222	146.	18
	Transformer Type P.L. 120 V., 60 Hz., 110 V., 50 Hz.....	GG-226A		GF-226A		GFP-226A		GW-226A		GR-226A		16
	Start With Red Pilot Light 240 V., 60 Hz., 220 V., 50 Hz.....	GG-226B	96.	GF-226B	96.	GFP-226B	120.	GW-226B	153.	GR-226B	170.	22
	480 V., 60 Hz., 440 V., 50 Hz.....	GG-226C		GF-226C		GFP-226C		GW-226C		GR-226C		16
	600 V., 60 Hz., 550 V., 50 Hz.....	GG-226D		GF-226D		GFP-226D		GW-226D		GR-226D		
3	Resistor Type P.L. 120 V., AC or DC.....	GG-227	88.	GF-227	88.	GFP-227	112.	GW-227	145.	GR-227	162.	23
	240 V., AC or DC.....	GG-228		GF-228		GFP-228		GW-228		GR-228		16
	Transformer Type P.L. 120 V., 60 Hz., 110 V., 50 Hz.....	GG-229A		GF-229A		GFP-229A		GW-229A		GR-229A		16
	Stop With Red Pilot Light 240 V., 60 Hz., 220 V., 50 Hz.....	GG-229B	96.	GF-229B	96.	GFP-229B	120.	GW-229B	153.	GR-229B	170.	22
	480 V., 60 Hz., 440 V., 50 Hz.....	GG-229C		GF-229C		GFP-229C		GW-229C		GR-229C		16
	600 V., 60 Hz., 550 V., 50 Hz.....	GG-229D		GF-229D		GFP-229D		GW-229D		GR-229D		
	Resistor Type P.L. 120 V., AC or DC.....	GG-230	88.	GF-230	88.	GFP-230	112.	GW-230	145.	GR-230	162.	23
	240 V., AC or DC.....	GG-231		GF-231		GFP-231		GW-231		GR-231		16
	Hand-Off-Selector Switch 120 V., 60 Hz., 110 V., 50 Hz.....	GG-232A	100.	GF-232A	100.	GFP-232A	124.	GW-232A	157.	GR-232A	174.	22
	240 V., 60 Hz., 220 V., 50 Hz.....	GG-232B		GF-232B		GFP-232B		GW-232B		GR-232B		17
3	480 V., 60 Hz., 440 V., 50 Hz.....	GG-232C		GF-232C		GFP-232C		GW-232C		GR-232C		
	600 V., 60 Hz., 550 V., 50 Hz.....	GG-232D		GF-232D		GFP-232D		GW-232D		GR-232D		
	With Red Pilot Light 120 V., AC or DC.....	GG-233	92.	GF-233	92.	GFP-233	116.	GW-233	149.	GR-233	166.	23
	240 V., AC or DC.....	GG-234		GF-234		GFP-234		GW-234		GR-234		17
	Transformer Type P.L. 1 Red, 1 Green Pilot Light 120 V., 60 Hz., 110 V., 50 Hz.....	GG-235A		GF-235A		GFP-235A		GW-235A		GR-235A		27
	240 V., 60 Hz., 220 V., 50 Hz.....	GG-235B	124.	GF-235B	124.	GFP-235B	148.	GW-235B	181.	GR-235B	198.	
	480 V., 60 Hz., 440 V., 50 Hz.....	GG-235C		GF-235C		GFP-235C		GW-235C		GR-235C		
	600 V., 60 Hz., 550 V., 50 Hz.....	GG-235D		GF-235D		GFP-235D		GW-235D		GR-235D		
	Resistor Type P.L. 1 Red, 1 Green Pilot Light 120 V., AC or DC.....	GG-236	108.	GF-236	108.	GFP-236	132.	GW-236	165.	GR-236	182.	28
	240 V., AC or DC.....	GG-237		GF-237		GFP-237		GW-237		GR-237		
3	Transformer Type P.L. 2 Red Pilot Lights 120 V., 60 Hz., 110 V., 50 Hz.....	GG-238A		GF-238A		GFP-238A		GW-238A		GR-238A		27
	240 V., 60 Hz., 220 V., 50 Hz.....	GG-238B	124.	GF-238B	124.	GFP-238B	148.	GW-238B	181.	GR-238B	198.	
	480 V., 60 Hz., 440 V., 50 Hz.....	GG-238C		GF-238C		GFP-238C		GW-238C		GR-238C		
	600 V., 60 Hz., 550 V., 50 Hz.....	GG-238D		GF-238D		GFP-238D		GW-238D		GR-238D		
	Resistor Type P.L. 2 Red Pilot Lights 120 V., AC or DC.....	GG-239	108.	GF-239	108.	GFP-239	132.	GW-239	165.	GR-239	182.	28
	240 V., AC or DC.....	GG-240		GF-240		GFP-240		GW-240		GR-240		
	For.-Rev-Stop.....	GG-301	88.	GF-301	88.	GFP-301	124.	GW-301	212.	GR-301	272.	8
	Up-Down-Stop.....	GG-302	88.	GF-302	88.	GFP-302	124.	GW-302	212.	GR-302	272.	
	Open-Close-Stop.....	GG-303	88.	GF-303	88.	GFP-303	124.	GW-303	212.	GR-303	272.	
	High-Low-Stop.....	GG-304	88.	GF-304	88.	GFP-304	124.	GW-304	212.	GR-304	272.	
	Start-Jog-Stop (Lockout on Stop).....	GG-305	100.	GF-305	100.	GFP-305	136.	GW-305	212.	GR-305	272.	
3	Up-Down-Run.....	GG-306	88.	GF-306	88.	GFP-306	124.	GW-306	212.	GR-306	272.	
	Open-Close-Stop (Lockout on Stop).....	GG-307	100.	GF-307	100.	GFP-307	136.	GW-307	212.	GR-307	272.	
	High-Low-Stop (Lockout on Stop).....	GG-308	100.	GF-308	100.	GFP-308	136.	GW-308	212.	GR-308	272.	
	Start-Jog-Stop.....	GG-309	88.	GF-309	88.	GFP-309	124.	GW-309	212.	GR-309	272.	
	For.-Rev-Stop (Lockout on Stop).....	GG-310	100.	GF-310	100.	GFP-310	136.	GW-310	212.	GR-310	272.	
	Up-Down-Stop (Lockout on Stop).....	GG-311	100.	GF-311	100.	GFP-311	136.	GW-311	212.	GR-311	272.	
	For.-Rev-Stop.....	GG-301	88.	GF-301	88.	GFP-301	124.	GW-301	212.	GR-301	272.	
	Up-Down-Stop.....	GG-302	88.	GF-302	88.	GFP-302	124.	GW-302	212.	GR-302	272.	
	Open-Close-Stop.....	GG-303	88.	GF-303	88.	GFP-303	124.	GW-303	212.	GR-303	272.	
	High-Low-Stop.....	GG-304	88.	GF-304	88.	GFP-304	124.	GW-304	212.	GR-304	272.	
	Start-Jog-Stop (Lockout on Stop).....	GG-305	100.	GF-305	100.	GFP-305	136.	GW-305	212.	GR-305	272.	

Pullboxes can be ordered separately on page 3-6, Type GFP consists of Type GF plus Type FP pullbox.

• Revised



HEAVY DUTY CONTROL STATIONS

STANDARD CONTROL STATIONS — TYPE G

CLASS
9001

NEMA Type 4, 7 and 9 stations as standard have provision for padlocking the "Stop" button in the depressed position.

No. of Units	Legend Plate Marking and Features	General Purpose Surface Mounting NEMA Type 1		General Purpose Flush Mounting Without Pullbox		General Purpose Flush Mounting With Pullbox		Watertight and Dusttight NEMA Type 4		For Hazardous Locations Class I, Groups B, C and D Class II, Groups E, F and G NEMA Types 7 and 9		Contact Symbol—See Page 3-7
		Type	Price	Type	Price	Type	Price	Type	Price	Type	Price	
3	For-Rev.-Stop (Mushroom on Stop).....	GG-312		GF-312		GFP-312		GW-346		GR-346		8
	Up-Down-Stop (Mushroom on Stop).....	GG-313		GF-313		GFP-313		GW-347		GR-347		
	Open-Close-Stop (Mushroom on Stop).....	GG-314	\$100.	GF-314	\$100.	GFP-314	\$136.	GW-348	\$224.	GR-348	\$284.	33
	High-Low-Stop (Mushroom on Stop).....	GG-315		GF-315		GFP-315		GW-349		GR-349		
	Start-Jog-Stop (Jog Attachment).....	GG-316		GF-316		GFP-316		.....		.....		
	For-Rev., Start-Stop (Sel. Sw., 2 Push Buttons)...	GG-317		GF-317		GFP-317		GW-350		GR-350		19
	High-Low, Start-Stop (Sel. Sw., 2 Push Buttons)...	GG-318		GF-318		GFP-318		GW-351		GR-351		
	Up-Down, Start-Stop (Sel. Sw., 2 Push Buttons)...	GG-319	92.	GF-319	92.	GFP-319	128.	GW-352	216.	GR-352	276.	25
	Jog-Run, Start-Stop (Sel. Sw., 2 Push Buttons)...	GG-320		GF-320		GFP-320		GW-353		GR-353		
	Safe-Run, Start-Stop (Sel. Sw., 2 Push Buttons)...	GG-321		GF-321		GFP-321		GW-354		GR-354		18
	Auto-Hand, Start-Stop (Sel. Sw., 2 Push Buttons)...	GG-322		GF-322		GFP-322		GW-355		GR-355		
	Safe-Run, For-Rev. (Sel. Sw., 2 Push Buttons)...	GG-323	92.	GF-323	92.	GFP-323	128.	GW-323	216.	GR-323	276.	25
	Safe-Run, High-Low (Sel. Sw., 2 Push Buttons)...	GG-324		GF-324		GFP-324		GW-324		GR-324		
	Safe-Run, Up-Down (Sel. Sw., 2 Push Buttons)...	GG-325		GF-325		GFP-325		GW-325		GR-325		
3	Red Transformer Type P.L. 120 V., 60 Hz., 110 V., 50 Hz.....	GG-328A		GF-328A		GFP-328A		GW-334A		GR-334A		22
	240 V., 60 Hz., 220 V., 50 Hz.....	GG-328B		GF-328B		GFP-328B		GW-334B		GR-334B		
	480 V., 60 Hz., 440 V., 50 Hz.....	GG-328C	116.	GF-328C	116.	GFP-328C	152.	GW-334C	240.	GR-334C	300.	25
	600 V., 60 Hz., 550 V., 50 Hz.....	GG-328D		GF-328D		GFP-328D		GW-334D		GR-334D		
	Red Resistor Type P.L. 120 V., AC or DC.....	GG-329		GF-329		GFP-329		GW-335		GR-335		23
	240 V., AC or DC.....	GG-330	108.	GF-330	108.	GFP-330	144.	GW-336	232.	GR-336	292.	
	Green Transformer Type P.L. 120 V., 60 Hz., 110 V., 50 Hz.....	GG-331A		GF-331A		GFP-331A		GW-337A		GR-337A		22
	240 V., 60 Hz., 220 V., 50 Hz.....	GG-331B		GF-331B		GFP-331B		GW-337B		GR-337B		
	480 V., 60 Hz., 440 V., 50 Hz.....	GG-331C	116.	GF-331C	116.	GFP-331C	152.	GW-337C	240.	GR-337C	300.	25
	600 V., 60 Hz., 550 V., 50 Hz.....	GG-331D		GF-331D		GFP-331D		GW-337D		GR-337D		
	Green Resistor Type P.L. 120 V., AC or DC.....	GG-332		GF-332		GFP-332		GW-338		GR-338		23
	240 V., AC or DC.....	GG-333	108.	GF-333	108.	GFP-333	144.	GW-339	232.	GR-339	292.	
4	High-Sec.-Low-Stop.....	GG-401	108.	GF-401	108.	GFP-401	144.	GW-402		GR-402		38
	High-Sec.-Low-Stop (Lockout on Stop).....	GG-402	120.	GF-402	120.	GFP-402	156.	GW-402		GR-402		
	High-Low-Start-Stop.....	GG-403	108.	GF-403	108.	GFP-403	144.	GW-404		GR-404		424.
	High-Low-Start-Stop (Lockout on Stop).....	GG-404	120.	GF-404	120.	GFP-404	156.	GW-404	255.	GR-404	424.	
	Up-Down-Run-Stop.....	GG-405	108.	GF-405	108.	GFP-405	144.	GW-406		GR-406		8
	Up-Down-Run-Stop (Lockout on Stop).....	GG-406	120.	GF-406	120.	GFP-406	156.	GW-406		GR-406		
	Up-Down-For-Rev.....	GG-409	108.	GF-409	108.	GFP-409	144.	GW-409		GR-409		8
	High-Low, For-Rev.-Stop (1 Selector Sw., 3 P.B.)...	GG-410		GF-410		GFP-410		GW-451		GR-451		
	For-Rev., High-Low-Stop (1 Selector Sw., 3 P.B.)...	GG-411	112.	GF-411	112.	GFP-411	148.	GW-452	259.	GR-452	428.	19
	High-Low, Up-Down-Stop (1 Selector Sw., 3 P.B.)...	GG-412		GF-412		GFP-412		GW-453		GR-453		
	Safe-Run, For-Rev.-Stop (1 Selector Sw., 3 P.B.)...	GG-413	112.	GF-413	112.	GFP-413	148.	GW-454	259.	GR-454	428.	18
	Transformer Type P.L. 120 V., 60 Hz., 110 V., 50 Hz.....	GG-417A		GF-417A		GFP-417A		GW-455A		GR-455A		
4	Start-Stop With Red & Green Pilot Lights	GG-417B		GF-417B		GFP-417B		GW-455B		GR-455B		27
	480 V., 60 Hz., 220 V., 50 Hz.....	GG-417C		GF-417C		GFP-417C		GW-455C		GR-455C		
	600 V., 60 Hz., 440 V., 50 Hz.....	GG-417D	164.	GF-417D	164.	GFP-417D	200.	GW-455D	311.	GR-455D	480.	25
	Resistor Type P.L. 120 V., AC or DC.....	GG-418		GF-418		GFP-418		GW-456		GR-456		
	240 V., AC or DC.....	GG-419	148.	GF-419	148.	GFP-419	184.	GW-457	295.	GR-457	464.	28
	Transformer Type P.L. 120 V., 60 Hz., 110 V., 50 Hz.....	GG-429A		GF-429A		GFP-429A		GW-458A		GR-458A		
	240 V., 60 Hz., 220 V., 50 Hz.....	GG-429B		GF-429B		GFP-429B		GW-458B		GR-458B		22
	480 V., 60 Hz., 440 V., 50 Hz.....	GG-429C	136.	GF-429C	136.	GFP-429C	172.	GW-458C	283.	GR-458C	452.	
	600 V., 60 Hz., 550 V., 50 Hz.....	GG-429D		GF-429D		GFP-429D		GW-458D		GR-458D		8
	Resistor Type P.L. 120 V., AC or DC.....	GG-430		GF-430		GFP-430		GW-459		GR-459		
	240 V., AC or DC.....	GG-431	128.	GF-431	128.	GFP-431	172.	GW-460	275.	GR-460	444.	23

① Pullboxes can be ordered separately on page 3-6. Type GFP consists of Type GF plus Type FP pullbox.

CONTROL STATIONS — HEAVY DUTY

TYPE G — STANDARD & CUSTOM FACTORY ASSEMBLED CONTROL STATIONS

JANUARY, 1982

STANDARD CONTROL STATIONS (Cont.)

No. of Units	Legend Plate Marking and Features		General Purpose Surface Mounting NEMA Type 1		General Purpose Flush Mounting Without Pullbox		General Purpose Flush Mounting With Pullbox		Contact Symbol — See Pages 3-7
			Type	Price	Type	Price	Type	Price	
5	High-Third-Sec.-Low-Stop High-Third-Sec.-Low-Stop (Lockout on Stop)		GG-501 GG-502	\$128. 140.	GF-501 GF-502	\$128. 140.	GFP-501 GFP-502	\$176. 188.	39
	For.-Rev.-Stop With Red & Green Pilot Lights	Transformer Type P.L. 120 V., 60 Hz., 110 V., 50 Hz. 240 V., 60 Hz., 220 V., 50 Hz. 480 V., 60 Hz., 440 V., 50 Hz. 600 V., 60 Hz., 550 V., 50 Hz.	GG-503A GG-503B GG-503C GG-503D	184.	GF-503A GF-503B GF-503C GF-503D	184.	GFP-503A GFP-503B GFP-503C GFP-503D	232.	27 8
		Resistor Type P.L. 120 V., AC or DC 240 V., AC or DC	GG-504 GG-505	168.	GF-504 GF-505	168.	GFP-504 GFP-505	216.	28 8
		Transformer Type P.L. 120 V., 60 Hz., 110 V., 50 Hz. 240 V., 60 Hz., 220 V., 50 Hz. 480 V., 60 Hz., 440 V., 50 Hz. 600 V., 60 Hz., 550 V., 50 Hz.	GG-506A GG-506B GG-506C GG-506D	184.	GF-506A GF-506B GF-506C GF-506D	184.	GFP-506A GFP-506B GFP-506C GFP-506D	232.	27 8
		Resistor Type P.L. 120 V., AC or DC 240 V., AC or DC	GG-507 GG-508	168.	GF-507 GF-508	168.	GFP-507 GFP-508	216.	28 8

○ Pullboxes can be ordered separately on page 3-6. Type GFP consists of Type GF plus Type FP pullbox.

PULL BOXES FOR TYPE GF DEVICES (Converts Type GF to Type GFP)

Number of Units	Type	Price	Number of Units	Type	Price
1	FP-1	\$24.	5	FP-5	\$48.
2	FP-2	24.	6	FP-6	48.
3	FP-3	36.	7	FP-7	72.
4	FP-4	36.	8	FP-8	72.

CUSTOM FACTORY ASSEMBLED CONTROL STATIONS

ORDERING INFORMATION: Base prices shown include the enclosure with either 9001 GO-1, GO-2 or GO-3 push buttons and legend plates. The complete price for an assembled station is the sum of this base price plus prices of any special control units or special features from table below to be installed. (There is no extra charge for factory assembly.) Order must be accompanied with a sketch showing all control units in their desired locations.

Number of Units	Legend Plate Marking Included in Base Price	General Purpose Surface Mounting NEMA Type 1		General Purpose Flush Mounting Without Pullbox		General Purpose Flush Mounting With Pullbox		Watertight and Dusttight NEMA Type 4		For Hazardous Locations Class I, Groups B, C and D Class II, Groups E, F and G NEMA Types 7 & 9	
		Type	Base Price	Type	Base Price	Type	Base Price	Type	Base Price	Type	Base Price
1	Standard Markings	GG-10	\$ 44.	GF-10	\$ 44.	GFP-10	\$ 68.	GW-10	\$111.	GR-10	\$127.
2	Standard Markings	GG-20	68.	GF-20	68.	GFP-20	92.	GW-20	125.	GR-20	142.
3	Standard Markings	GG-30	88.	GF-30	88.	GFP-30	124.	GW-30	212.	GR-30	272.
4	Standard Markings	GG-40	108.	GF-40	108.	GFP-40	144.	GW-40	255.	GR-40	424.
5	Standard Markings	GG-50	128.	GF-50	128.	GFP-50	176.	.....	.....	.....	.....
6	Standard Markings	GG-60	148.	GF-60	148.	GFP-60	196.	.....	.....	.....	.....
7	Standard Markings	GG-70	172.	GF-70	172.	GFP-70	244.	.....	.....	.....	.....
8	Standard Markings	GG-80	192.	GF-80	192.	GFP-80	264.	.....	.....	.....	.....

○ Pullboxes can be ordered separately from table above. Type GFP consists of Type GF plus Type FP pullbox.

PRICES FOR ADDITIONS AND SPECIAL FEATURES

Substitutions (In Place of Standard Push Button Units)	Enclosure Type	Price Addition Each	Substitutions (In Place of Standard Push Button Units)	Enclosure Type	Price Addition Each
Selector sw. (2 & 3 position maintained only available)	All	\$ 4.	Jog attachment for P. B. (Not available in NEMA 4, 7-9)	GG, GF, GFP	\$12.
Maintained P.B. (2) single pole, single throw, interlocked	All	N.C.	Mushroom cap P. B. 1 3/4" dia., single operator only	All	12.
Pilot light, Transformer type with standard voltages	All	28.	Lockout latch to P.B.	All	12.
Pilot light, Resistor type with standard voltages (full voltage lamp furnished in NEMA 7 & 9)	All	20.	Special legend plate, per plate	All	4.
Three Point Contact (contact symbol 40)	All	12.	Special station N. P. marking	All	6.
Double Unit P.B. (2 N.O. only or 2 N.C. only contacts)	All	12.	Standard legend plates: 9001 TN-2	GG, GF, GFP	N.C.
			9001 KN-8	GW, GR	N.C.

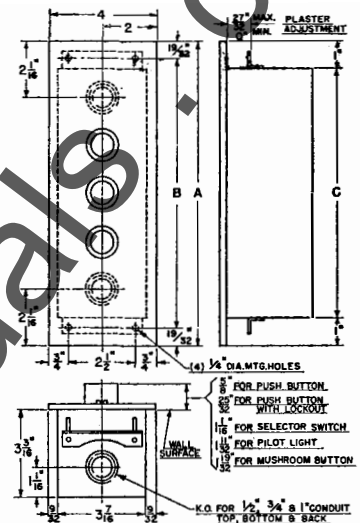
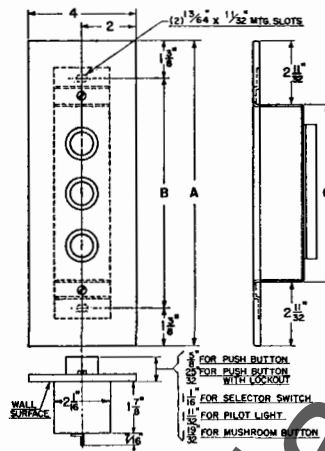
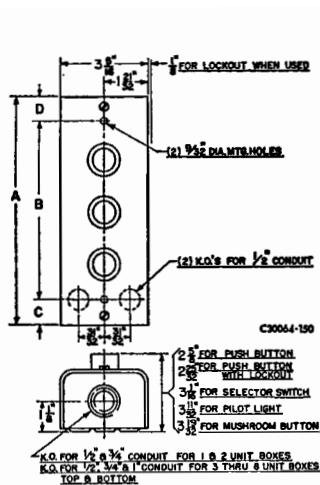


TYPE G HEAVY DUTY CONTROL STATIONS

DIMENSIONS and CONTACT SYMBOLS

CLASS
9001

APPROXIMATE DIMENSIONS



GENERAL PURPOSE SURFACE MOUNTING

No. of Units	Dimensions			
	A	B	C	D
1	4 3/8	2 5/8	2 9/32	2 7/32
2	6 1/4	4 1/2	2 9/32	2 7/32
3	8 3/8	6 3/8	1 1/32	3 1/32
4	10 1/4	8 1/4	1 1/32	3 1/32
5	12 1/8	10 1/8	1 1/32	3 1/32
6	14	12	1 1/32	3 1/32
7	15 7/8	13 7/8	1 1/32	3 1/32
8	17 3/4	15 3/4	1 1/32	3 1/32

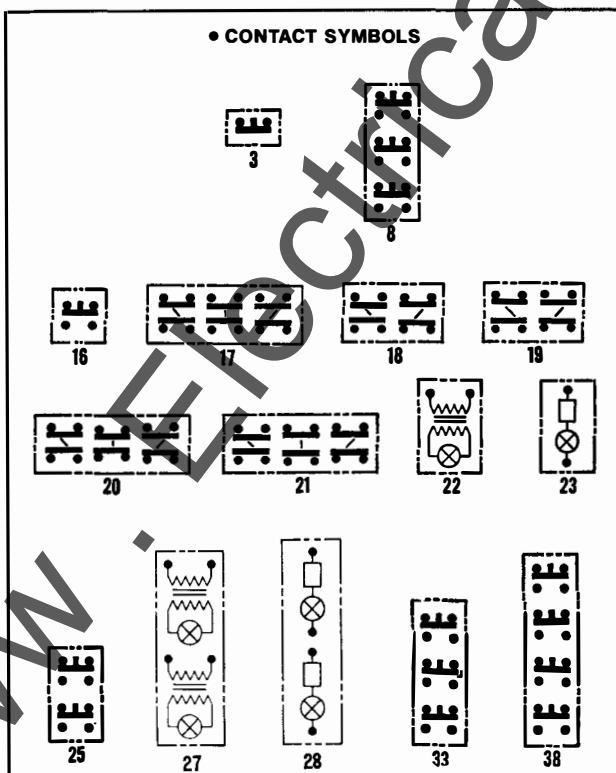
GENERAL PURPOSE FLUSH MOUNTING WITHOUT PULLBOX

No. of Units	Dimensions		
	A	B	C
1	7 7/16	4 13/16	2 7/8
2	9 7/16	6 11/16	4 3/4
3	11 5/8	8 9/16	6 5/8
4	13 3/8	10 7/8	8 1/2
5	15 1/8	12 5/8	10 3/8
6	16 1 5/16	14 3/8	12 1/4
7	18 1 3/8	16 1/8	14 1/8
8	20 1 1/8	17 13/16	16

GENERAL PURPOSE FLUSH MOUNTING WITH PULLBOX

No. of Units	Dimensions		
	A	B	C
1	7 7/16	6 3/8	5 5/8
2	9 7/16	8 1/4	7 1/8
3	11 5/8	10 1/8	9 5/8
4	13 3/8	12	11 3/8
5	15 1/8	13 3/8	13 1/8
6	16 1 5/16	15 3/8	14 1 5/8
7	18 1 3/8	17 5/8	16 1 3/8
8	20 1 1/8	19 1/2	18 1 1/8

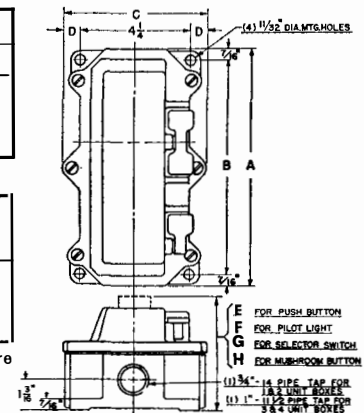
WATERTIGHT, DUSTTIGHT AND HAZARDOUS LOCATIONS ENCLOSURES*



No. of Units	Dimensions			
	A	B	C	D
1	5 7/8	4 1/4	5 7/8	7 1/8
2	7 7/8	6 1/4	5 7/8	7 1/8
3	9 7/8	8 1/4	5 1/2	9 7/8
4	11 7/8	10 1/4	5 7/8	11 7/8

Dim.	Watertight and Dusttight	Hazardous Locations
E	3 15/16	3 7/8
F	4 21/32	4 1 1/16
G	4 3/4	5 7/32
H	5 9/32	5 1 1/32

*Type GW and Type GR enclosures are made of cast grey iron.



HEAVY DUTY CONTROL STATIONS
SEPARATE CONTROL UNITS — TYPE G

JANUARY, 1982

HEAVY DUTY CONTROL UNITS

The control units listed below are for replacement in control stations. These control units can also be used with customer's own enclosure, but do not include nameplates (or mounting provisions

for nameplates) or color caps. For other component replacements refer to service bulletin 268 AS.

PUSH BUTTON OPERATOR (Class 9001)

Enclosure Types		GG, GF, GFP GW and GR		GG, GF, GFP		Contact Symbol See Page 3-7
Operator Description		Push Button		Mushroom Push Button		
		Type	● Price	Type	● Price	
Black button 1 N.O. — 1 N.C.		GO-1	\$22.80	GO-16	\$34.80	16
Red button 1 N.C.		GO-2	22.80	GO-17	34.80	3
Red button 1 N.O. — 1 N.C.		GO-3	22.80	GO-18	34.80	16
Black button — 3 point contact		GO-4	34.80	GO-19	50.80	40
Black button — 2 poles N.O.		GO-7	34.80	GO-20	50.80	41
Red button — 2 poles N.C.		GO-8	34.80	GO-21	50.80	42
Jog attachment — Black button	GG, GF, GFP	GO-9	63.00			16
1 Mom. — 1 Maint. (2 Push Buttons interlocked)	GG, GF, GFP	GO-10	65.60			105
	GW, GR	GO-11	65.60			105
Maintained cont. (2 Push Buttons interlocked)	GG, GF, GFP	GO-12	45.60			107
	GW, GR	GO-15	45.60			107

• SELECTOR SWITCH OPERATOR (Class 9001)

Enclosure Types		GG, GF and GFP				GW and GR		Contact Symbol See Page 3-7
Operator		Vertical Mounting		Horizontal Mounting		Vertical Mounting		
Description		Type	Price	Type	Price	Type	Price	
Single Pole, double throw, 3 position	1	HO-1	\$26.80	HO-7	\$26.80	HO-51	\$26.80	17
Double Pole, single throw, 2 position	2	HO-2	26.80	HO-8	26.80	HO-52	26.80	18
Single Pole, double throw, 2 position	2	HO-3	26.80	HO-9	26.80	HO-53	26.80	19
Single Pole, double throw, 3 position	3	HO-4	26.80	HO-10	26.80	HO-54	26.80	20
Double Pole, single throw, 3 position	3	HO-5	26.80	HO-11	26.80	HO-55	26.80	21

PILOT LIGHTS
For Enclosure Type GG, GF, GFP and GW

TRANSFORMER TYPE			
Frequency		Type	Price
60 Hz.	50 Hz.		
120 V.	110 V.	PO-21	\$40.
240 V.	220 V.	PO-22	
480 V.	440 V.	PO-23	
600 V.	550 V.	PO-24	
25 Hertz			
110 V.		PO-31	
220 V.		PO-32	
RESISTOR TYPE — AC or DC			
Volts	Type		Price
120	PO-41		\$32.
240	PO-42		

COLOR CAPS

For use with Type GG, GF and GFP factory assembled control stations.							
Color	Type	Price	Color	Type	Price		
Red Green Amber	R1 G1 A1	\$2.80	Blue Clear White	B1 C1 W1	\$2.80		
For use with customers own enclosure or panel — will not fit on Square D enclosures. Mount in 1½" diameter hole in 18 to 13 gauge sheet steel.							
Color	Type	Price	Color	Type	Price		
Amber Blue Clear	A4 B4 C4	\$2.80	Green Red White	G4 R4 W4	\$2.80		





Push Buttons Standard Duty

TYPE B

CONTENTS

Description	Class Pages
Control Stations	9001 .. 2-3
Accessories - Ratings	9001 .. 2-4
Application	9001 .. 2-5
Replacement Units	9001 .. 2-6
Separate Control Units	9001 .. 2-7

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STANDARD DUTY CONTROL STATIONS

TYPE B

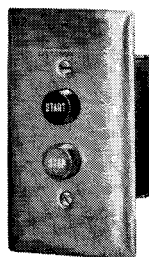
CLASS
9001

Standard duty control stations are designed for use with magnetic motor starters to govern the starting, stopping or reversing of all

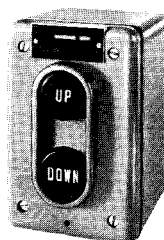
types of electric motors. Push buttons are momentary contact unless otherwise indicated. Selector switches are maintained contact.



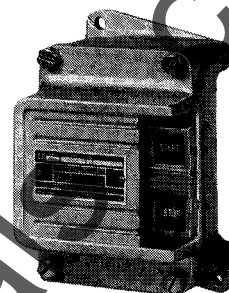
NEMA 1
Surface Mounting



NEMA 1
Flush Mounting
(w/o pullbox)



NEMA 4



NEMA 7-9

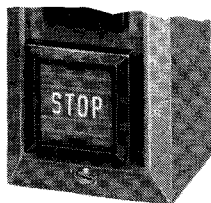
CONTROL STATIONS

Bold face Type numbers indicate stations normally stocked in the Square D Physical Distribution System or can be furnished as a quick ship out of Central Warehouse using a "Universal" station plus accessories.

No. of Units	Nameplate Markings and Features	Contact Symbol See Page 290	Surface Mounting NEMA Type 1		Stainless Steel Flush Plate (Pullbox* not included)		Watertight and Dusttight NEMA Type 4		For Hazardous Locations Class I, Groups B, C & D or Class II, Groups E, F, & G NEMA Types 7 and 9	
			Type	Price	Type	Price	Type	Price	Type	Price
1	Start	1	BG101	\$24.	BF101	\$32.	BW146	\$76.	BR101	\$102.
	Stop	3	BG102	24.	BF102	32.	BW147	76.	BR102	102.
	Stop (Mushroom Button)	3	BG103	28.			BW151	80.	BR103	106.
	Stop (Lockout)	3	BG104	36.			BW148	76.	BR104	102.
	Universal (w/o Legend Insert) ▲	16	BG107	23.	BF107	31.	BW159	75.	BR107	101.
	Off-on (Selector Switch)	19	BG111	24.	BF111	32.				
	Hand-Off-Auto (Selector Switch)	17	BG112	24.	BF112	32.				
	Universal Selector Switch (w/o Legend Insert) ▲	19 or 17	BG114	23.	BF114	31.				
	Red Pilot Light: 120/240V. AC or DC	121	BG121	56.	BF121	64.				
	Green Pilot Light: 120/240V. AC or DC	121	BG122	56.	BF122	64.				
	Pilot Light (w/o Lens): 120/240 V. AC or DC ▲	121	BG123	53.	BF123	61.				
2	Start-Stop	145	BG201	24.	BF201	32.	BW240	76.	BR204	102.
	Start-Stop	146	BG202	30.	BF202	38.	BW252	76.	BR202	102.
	Start-Stop (Mushroom on Stop)	145	BG203	28.			BW250	80.	BR203	102.
	Start-Stop (Lockout on Stop)	145	BG204	36.			BW241	76.	BR204	102.
	Start-Stop (Mushroom on Start and Stop)	145	BG205	32.			BW246	84.	BR205	110.
	Forward-Reverse	146	BG206	30.	BF206	38.	BW242	76.	BR206	102.
	Open-Close	146	BG207	30.	BF207	38.	BW244	76.	BR207	102.
	Up-Down	146	BG208	30.	BF208	38.	BW243	76.	BR208	102.
	Raise-Lower	146	BG209	30.	BF209	38.	BW253	76.	BR209	102.
	On-Off	145	BG210	24.	BF210	32.	BW245	76.	BR210	102.
	On-Off	146	BG211	30.	BF211	38.	BW254	76.	BR211	102.
	Universal (w/o Legend Inserts) ▲	25	BG214	22.	BF214	30.	BW260	74.	BR214	100.
	Start-Stop (Maintained Contact)	10	BG215	36.	BF215	44.	BW255	88.	BR215	114.
	On-Off (Maintained Contact)	10	BG216	36.	BF216	44.	BW256	88.	BR216	114.
	Hand-Auto (Maintained Contact)	10	BG217	36.	BF217	44.	BW257	88.	BR217	114.
	Universal (Maintained Contact w/o Legend Inserts) ▲	147	BG218	34.	BF218	42.	BW258	86.	BR218	112.
	Off-On (Selector Switch), Red P.L.: 120/240 V AC or DC	19 & 121	BG221	88.	BF221	96.				
	Hand-Off-Auto (Selector Switch), Red P.L.: 120/240V AC or DC	17 & 121	BG223	88.	BF223	96.				
	Universal Selector Switch & Pilot Light 120/240V AC or DC (w/o Legend Insert & w/o Lens) ▲	17 or 19 & 121	BG224	84.	BF224	92.				
	Hand-Off-Auto (Selector Switch) & Start (Push Button)	17 & 1	BG225	36.	BF225	44.				
	Universal Selector Switch & Push Button (w/o Legend Inserts) ▲	17 or 19 & 16	BG226	34.	BF226	42.				
	Fast-Slow-Stop	109	BG301	48.	BF301	58.	▲ "Universal" designates control stations without legend inserts, lenses or accessory kits. Universal stations plus separate legend inserts and other accessories listed on page 2-4 allow the user to conveniently build up standard or custom stations. Universal stations in NEMA 4 line are not furnished with a lockout.			
	Fwd.-Rev.-Stop	109	BG302	48.	BF302	58.				
	Open-Close-Stop	109	BG303	48.	BF303	58.				
	Raise-Lower-Stop	109	BG304	48.	BF304	58.				
	Up-Down-Stop	109	BG305	48.	BF305	58.				
	High-Low-Stop	109	BG306	48.	BF306	58.				
	Start-Stop	109	BG316	48.						
	Fwd.-Rev.-Stop (Lockout on Stop)	109	BG322	60.						
	Up-Down-Stop (Lockout on Stop)	109	BG325	60.						
	High-Low-Stop (Lockout on Stop)	109	BG326	60.						
	Universal (w/o Legend Inserts) ▲	8	BG307	45.	BF307	55.	*Use standard 2 1/8 inch deep wall boxes, single gang for Types BF1 — and BF2— and two gang for Type BF3—.			
	Start-Stop, Red Pilot Light: 120/240V AC or DC	145 & 121	BG308	88.	BF308	96.				
	Universal Push Buttons (2) & Pilot Light: 120/240V AC or DC (w/o Legend Inserts & w/o Lens) ▲	25 & 121	BG309	83.	BF309	91.				
	Start-Stop (Maintained Contacts) & Red Pilot Light: 120/240V AC or DC	10 & 121	BG310	96.	BF310	104.				
	On-Off (Maintained Contact) & Red Pilot Light: 120/240V AC or DC	10 & 121	BG311	96.	BF311	104.				
	Hand-Auto (Maintained Contact), & Red Pilot Light: 120/240V AC or DC	10 & 121	BG312	96.	BF312	104.				
	Universal Push Buttons (Maintained Contact) & Pilot Light: 120/240V AC or DC (w/o Legend Inserts & w/o Lens) ▲	147 & 121	BG313	91.	BF313	99.				
	Hand-Off-Auto (Selector Switch), & Start-Stop (Push Buttons)	17 & 145	BG314	48.	BF314	56.				
	Universal Selector Switch & 2 Push Buttons (w/o Legend Inserts) ▲	17 or 19 & 25	BG315	45.	BF315	53.				

STANDARD DUTY CONTROL STATIONS
ACCESSORIES — RATINGS — TYPE B

JANUARY, 1981



MUSHROOM CAPS

For **NEMA Type 1** surface mounting stations. Kit does not include legend insert; order separate legend insert from the tables below.

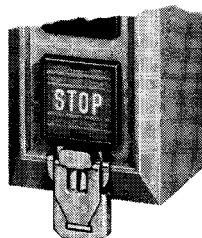
EX: For red mushroom button marked STOP, order one 9001 Type B301 plus one 9001 Type B102.

Color	Type	Price
Red	B301	\$4.
Black	B302	

For **NEMA 4**

Color	Type	Price
Red	B303	\$4.

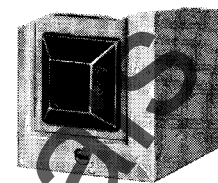
ACCESSORY KITS



LOCKOUT KIT

For **NEMA Type 1** surface mounting stations, bottom unit only. Can be used on either push button or on 2 or 3 position selector switch.

Type	Price
B321	\$12.



PILOT LIGHT LENSES

Color	For NEMA Type 1 Surface Mounting	For NEMA Type 1 Flush Mounting	Price
	Type	Type	
Red	B331	B341	\$3.
Green	B332	B342	

INTERCHANGEABLE PUSH BUTTON LEGEND INSERTS

Marking	For NEMA 1 Surface Mounting Push Button & Mushroom Caps	For NEMA 1 Flush Mounting	For NEMA 7-9	For NEMA 4	Mushroom Button Inserts For NEMA 4	Price Each
	Type	Type	Type	Type	Type	
Start	B101	B131	B161	B259	B282	\$1.
Stop	B102	B132	B162	B260	B283	
Fast	B103	B133	B163	....	....	
Slow	B104	B134	B164	....	....	
Forward	B105	B135	B165	B255	B278	
Reverse	B106	B136	B166	B256	B279	
Open	B107	B137	B167	B263	B286	
Close	B108	B138	B168	B264	B287	
Raise	B109	B139	B169	B261	B284	
Lower	B110	B140	B170	B262	B285	

Order must specify quantity of 10 or multiples of 10.

Marking	For NEMA 1 Surface Mounting Push Button & Mushroom Caps	For NEMA 1 Flush Mounting	For NEMA 7-9	For NEMA 4	Mushroom Button Inserts For NEMA 4	Price Each
	Type	Type	Type	Type	Type	
Up	B111	B141	B171	B253	B276	\$1.
Down	B112	B142	B172	B254	B277	
High	B113	B143	B173	....	....	
Low	B114	B144	B174	....	....	
On	B115	B145	B175	B257	B280	
Off	B116	B146	B176	B258	B281	
Hand	B117	B147	B177	B265	B288	
Auto	B118	B148	B178	B266	B289	
Jog	B119	B149	B179	....	....	
Blank-Black	B129	B159	B189	B251	B251	
Blank-Red	B129R	B159R	B189R	B252	B252	

Order must specify quantity of 10 or multiples of 10.

LEGEND INSERT KITS

(Kit includes one each of standard legend inserts as indicated below Type No. of Kit.)

Where Used:	Type	Price
For NEMA 1 Surface Mounting	Push Buttons	B100 (Incl's 1 each of B101 thru B119) \$19.
	Selector Switches	B200 (Incl's 1 each of B201 thru B212) 12.
For NEMA 1 Flush Mounting	Push Buttons	B130 (Incl's 1 each of B131 thru B149) 19.
	Selector Switches	B230 (Incl's 1 each of B231 thru B242) 12.
For NEMA 7-9	Push Button	B160 (Incl's 1 each of B161 thru B179) 19.
For NEMA 4	Push Button	B250 (Incl's 1 each of B253 thru B266) 14.
For NEMA 4	Mushroom Button	B300 (Incl's 1 each of B276 thru B289) 14.

INTERCHANGEABLE SELECTOR SWITCH LEGEND PLATES

Marking	For NEMA 1 Surface Mounting	For NEMA 1 Flush Mounting	Price Each
	Type	Type	
Off-On	B201	B231	\$1.
Hand-Off-Auto	B202	B232	
Manual-Auto	B203	B233	
Fwd.-Rev.	B204	B234	
Open-Close	B205	B235	
Open-Off-Close	B206	B236	
Hand-Auto	B207	B237	
Fwd.-Off-Rev.	B208	B238	
Summer-Winter	B209	B239	
Summer-Off-Winter	B210	B240	
Low-Off-High	B211	B241	
Up-Off-Down	B212	B242	

Order must specify quantity of 10 or multiples of 10.

ELECTRICAL CONTACT RATINGS

AC — NEMA B600							DC—NEMA P600		
Volts	Inductive 35% Power Factor					Resistive 75% Power Factor	Volts	Inductive and Resistive	
	Make		Break		Continuous Carrying Amperes	Make, Break and Contin- uous Carrying Amperes		Make and Break Amperes	Con- tinuous Carrying Amperes
	Amps.	VA	Amps.	VA					
120	30	3600	3	360	5	5	120	1.1	5
240	15.	3600	1.5	360	5	5	240	.55	5
480	7.5	3600	.75	360	5	5	600	.2	5
600	6.	3600	.6	360	5	5			

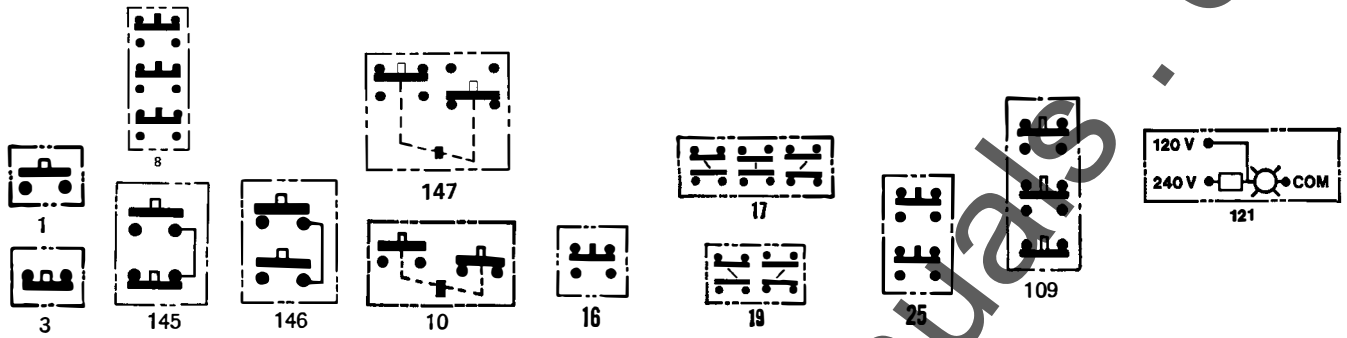


STANDARD DUTY CONTROL STATIONS

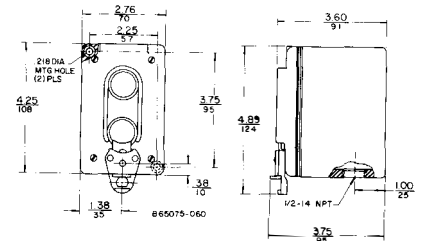
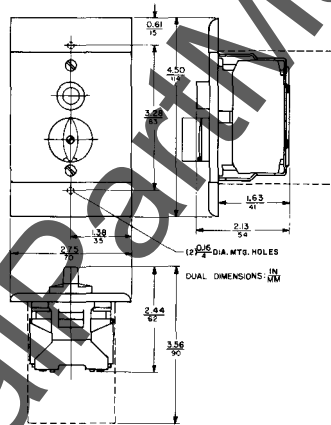
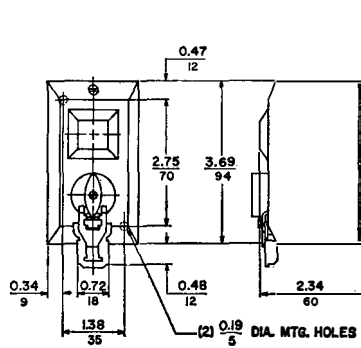
APPLICATION DATA — NEMA 4 REPLACEMENT COMPONENTS

CLASS
9001

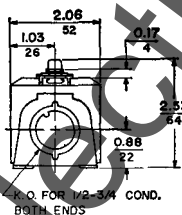
CONTACT SYMBOLS



APPROXIMATE DIMENSIONS

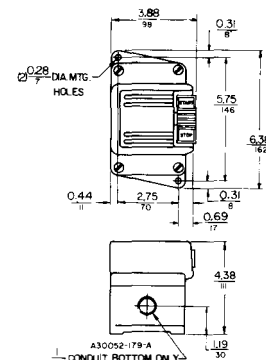


Type BW
Cast Zinc Enclosure



Type BG*
Glass Filled Polyester Cover

C30064-834



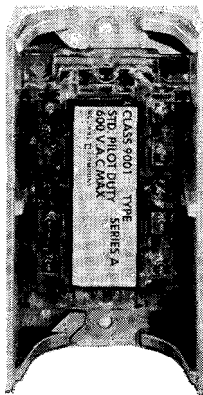
Type BR
Cast Aluminum Enclosure

Replacement Interiors For NEMA 4 Stations (Push Buttons In Cover Type)			
Control Station Type	Contact Block Assembly Type	Symbol	Price
BW145-BW159	BOC360	16	\$35.
BW240-BW260	BOC361	25	35.
BW255-BW258	BOC362	147	35.

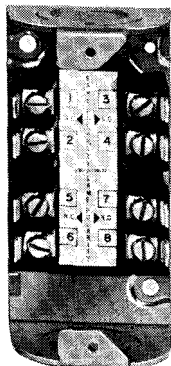
Replacement Cover Assemblies For NEMA 4 Stations (Push Buttons In Cover Type)		
Type	Description	Price
BWD108	W/O Lockout	\$ 5.
BWD109	W/ Lockout	10.
BWD219	W/O Lockout	5.
BWD220	W/ Lockout	10.

Dual Dimensions: **INCHES**
Millimeters

STANDARD DUTY REPLACEMENT UNITS TYPE B

**CLASS
9001**


Type BGC-214
(Type BGC contact block assemblies include cover)



Type BGB-214

REPLACEMENT INTERIORS FOR TYPE B STANDARD DUTY PUSH BUTTON STATIONS

For Control Station Types	Contact Block Assembly Type ▲	Price	Terminal Block Wiring Receptacle Type	Price
BF101-BF107	BOC-107	\$11.00	BFB-107	\$12.00
BF111-BF114	BOC-114	11.00	BFB-114	12.00
BF121-BF123	BOC-123	41.00	BFB-123	12.00
BF201-BF214	BOC-214	10.00	BFB-214	12.00
BF215-BF218	BOC-218	22.00	BFB-214	12.00
BF221-BF224	BOC-224	66.00	BFB-224	18.00
BF225-BF226	BOC-226	16.00	BFB-226	18.00
BF301-BF307	BOC-214 & BOC-107	10.00 11.00	BFB-214 & BFB-107	12.00 12.00
BF308-BF309	BOC-214 & BOC-123	10.00 41.00	BFB-214 & BFB-123	12.00 12.00
BF310-BF313	BOC-218 & BOC-123	22.00 41.00	BFB-214 & BFB-123	12.00 12.00
BF314-BF315	BOC-214 & BOC-114	10.00 11.00	BFB-214 & BFB-114	12.00 12.00
BG101-BG107	BGC-107	11.00	BGB-107	12.00
BG111-BG114	BGC-114	11.00	BGB-114	12.00
BG121-BG123	BGC-123	41.00	BGB-123	12.00
BG201-BG214	BGC-214	10.00	BGB-214	12.00
BG215-BG218	BGC-218	22.00	BGB-214	12.00
BG221-BG224	BGC-224	66.00	BGB-224	18.00
BG225-BG226	BGC-226	16.00	BGB-226	18.00
BG301-BG307	BGC-307	11.00	BGB-307	24.00
BG308-BG309	BGC-309	58.00	BGB-309	24.00
BG310-BG313	BGC-313	67.00	BGB-309	24.00
BG314-BG315	BGC-315	21.00	BGB-315	24.00
BR101-BR107	BOC-107	11.00	BFB-107	12.00
BR202-BR214	BOC-214	10.00	BFB-214	12.00
BR215-BR218	BOC-218	22.00	BFB-214	12.00
BW101-BW107	BOC-107	11.00	BFB-107	12.00
BW202-BW214	BOC-214	10.00	BFB-214	12.00
BW215-BW218	BOC-218	22.00	BFB-214	12.00

Note: Contact block assemblies for all Type BG stations include cover and contact block.

Replacement contact block assemblies and terminal block wiring receptacles for push buttons have provision for 1 N.O. & 1 N.C. circuit on each button. Unneeded circuits need not be wired.

▲ Order separate legend plates, if required, from listing on Page 2-4.

Replacement Lamps for All Type B Pilot Lights

Sylvania Lamp No.	Square D Part No.	Sq. D Price
120PSB	25501-05005	\$4.

Selector Switch Knob for Types BG & BF Selector Switches

Type	Price
B351	\$3.

Flush Cover Plates for Type BF Stations

For Types	Part Number	Price
BF101-BF123	30400-003-11	\$26.
BF201-BF226	30400-003-02	16.
BF301-BF315	31101-043-01	26.

D14A DISCOUNT
D14A DISCOUNT

Lever Arm Assemblies For Type BW and BR Stations

Types	Assembly Type	Price
BW101-BW107	31101-114-54	\$9.
BR101-BR107	31101-114-52	9.
BW202-BW218	31101-114-51	9.
BR202-BR218	31101-114-50	9.

D14A DISCOUNT

Blank Button Inserts For Type BW and BR Interiors

Color	Part Number	Price
Black	31101-127-01	\$1.
Red	31101-127-02	1.

SEPARATE CONTROL UNITS PILOT LIGHTS AND PUSH BUTTONS

**CLASS
9001**

INSTRUMENT TYPE INCANDESCENT PILOT LIGHTS

A black and white photograph of a compact oiltight pilot light. It has a cylindrical body with a threaded section in the middle. Two electrical terminals are on the left side, and a mounting bracket is on the right. The top has a lens.	Voltage	Avg. Current (Amps.)	Red Lens Type	Green Lens Type	Amber Lens Type	Clear Lens Type	Yellow Lens Type	White Lens Type	Price
	12V	.170	OR-12	OG-12	OA-12	OC-12	OY-12	OW-12	\$8.
	24V	.073	OR-24	OG-24	OA-24	OC-24	OY-24	OW-24	
	120V	.025	OR-120	OG-120	OA-120	OC-120	OY-120	OW-120	
For Compact Oiltight Pilot Light (Class 9001 Type J)— See Class 9001 Catalog Section 6									

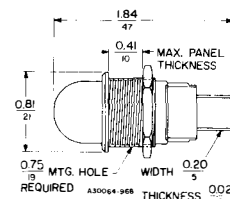
REPLACEMENT LAMPS

Voltage	Sylvania Lamp No.	Square D Part No.	Square D Price
12V	12PSB	25501-05003	\$4.
24V	24PSB	25501-05004	
120V	120PSB	25501-05005	

REPLACEMENT LENSES

Color	Part Number	Price
Red	25504-20020	\$2.
Green	25504-20040	2.
Amber	25504-20060	2.
Clear	25504-20010	2.
Yellow	25504-20030	2.
White	25504-30040	2.
Minimum Order Quantity 10		

APPROXIMATE DIMENSIONS



D14A DISCOUNT

D14A DISCOUNT

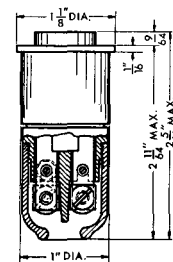
PUSH BUTTON UNIT DESIGNED FOR SETSCREW MOUNTING IN 1" DIAMETER HOLE

APPLICATION DATA

Typical applications are as door limit switches on machine tools or as push buttons incorporated into the handles of portable tools. The heavy brass housing can be tightly fitted into a hole reamed to size without danger of breakage. Set screws may also be used to hold the unit in place.

Description	Type	Price	Contact Symbol
Single Pole — Momentary Contact — Normally Open — Double Break	KC-7	\$54.	
Single Pole — Momentary Contact — Normally Closed — Double Break	KC-8	54.	

APPROXIMATE DIMENSIONS



PUSH BUTTON UNITS — TYPE KB

Ordering Instructions — Specify Class and Type Number; also specify the G number from the illustrated tables below to indicate the terminal arrangement and marking desired. Example: Type KB1-G104.

Marking	Contact Symbol	Terminal Arrangement Required						Price
TYPE KB-1							\$12.	
TYPE KB-2								
TYPE KB-3								
Blank (Black) Blank (Red) Start Stop Forward Reverse Up Down Open Close High Low		G101 G102 G104 G105 G106 G107 G108 G109 G110 G111 G112 G113	G201 G202 G204 G205 G206 G207 G208 G209 G210 G211 G212 G213	G301 G302 G304 G305 G306 G307 G308 G309 G310 G311 G312 G313	G401 G402 G404 G405 G406 G407 G408 G409 G410 G411 G412 G413	G501 G502 G504 G505 G506 G507 G508 G509 G510 G511 G512 G513		



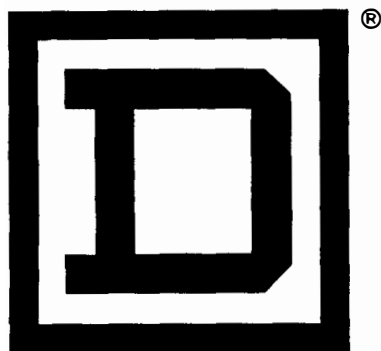
SQUARE D COMPANY

D1B DISCOUNT

www.ElectricalPartManuals.com



SQUARE D COMPANY

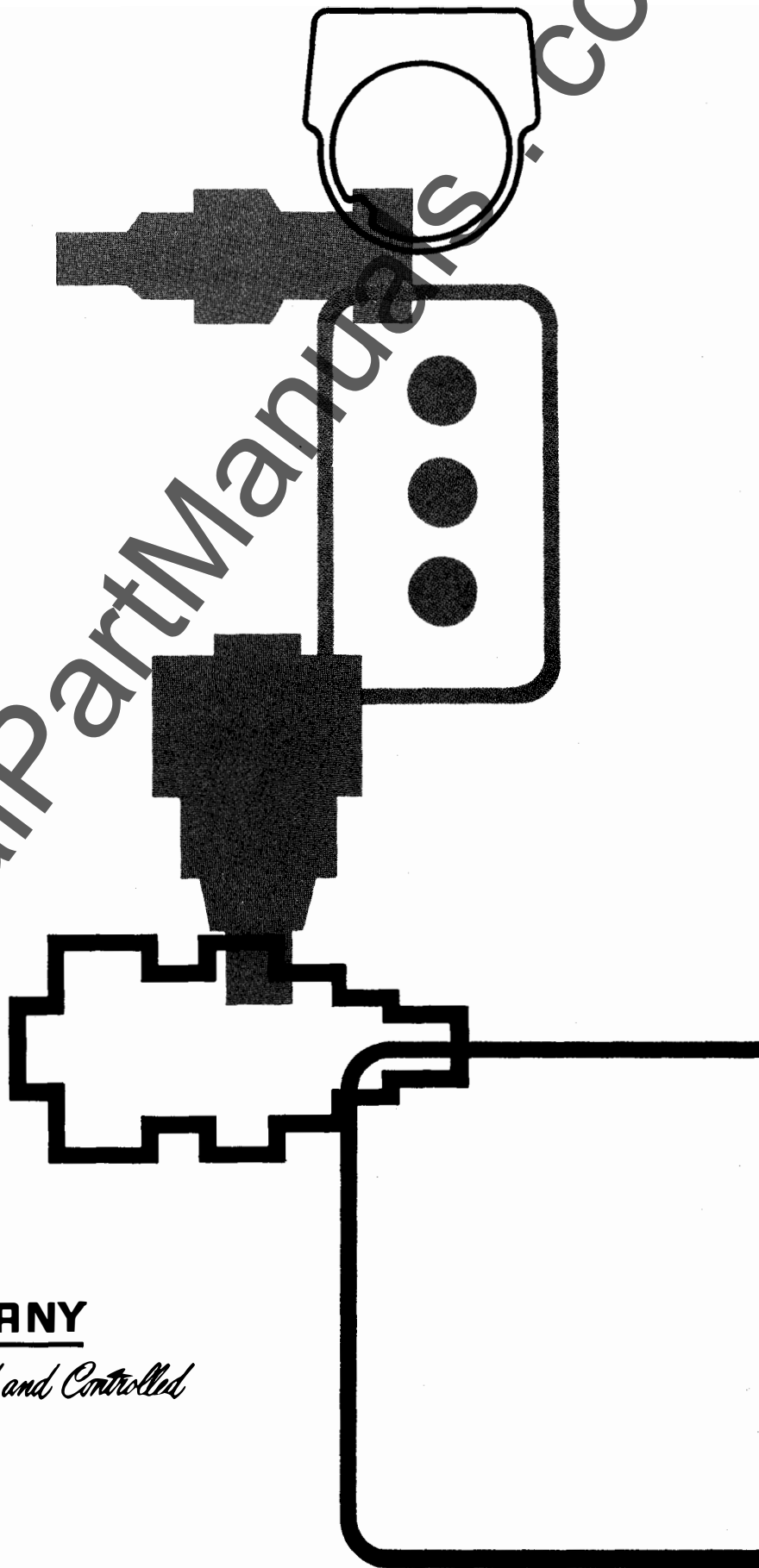


Push Buttons

OIL TIGHT

SQUARE D COMPANY

Wherever Electricity is Distributed and Controlled





OIL-TIGHT PUSH BUTTONS

unmatched in

APPEARANCE

PERFORMANCE

FLEXIBILITY

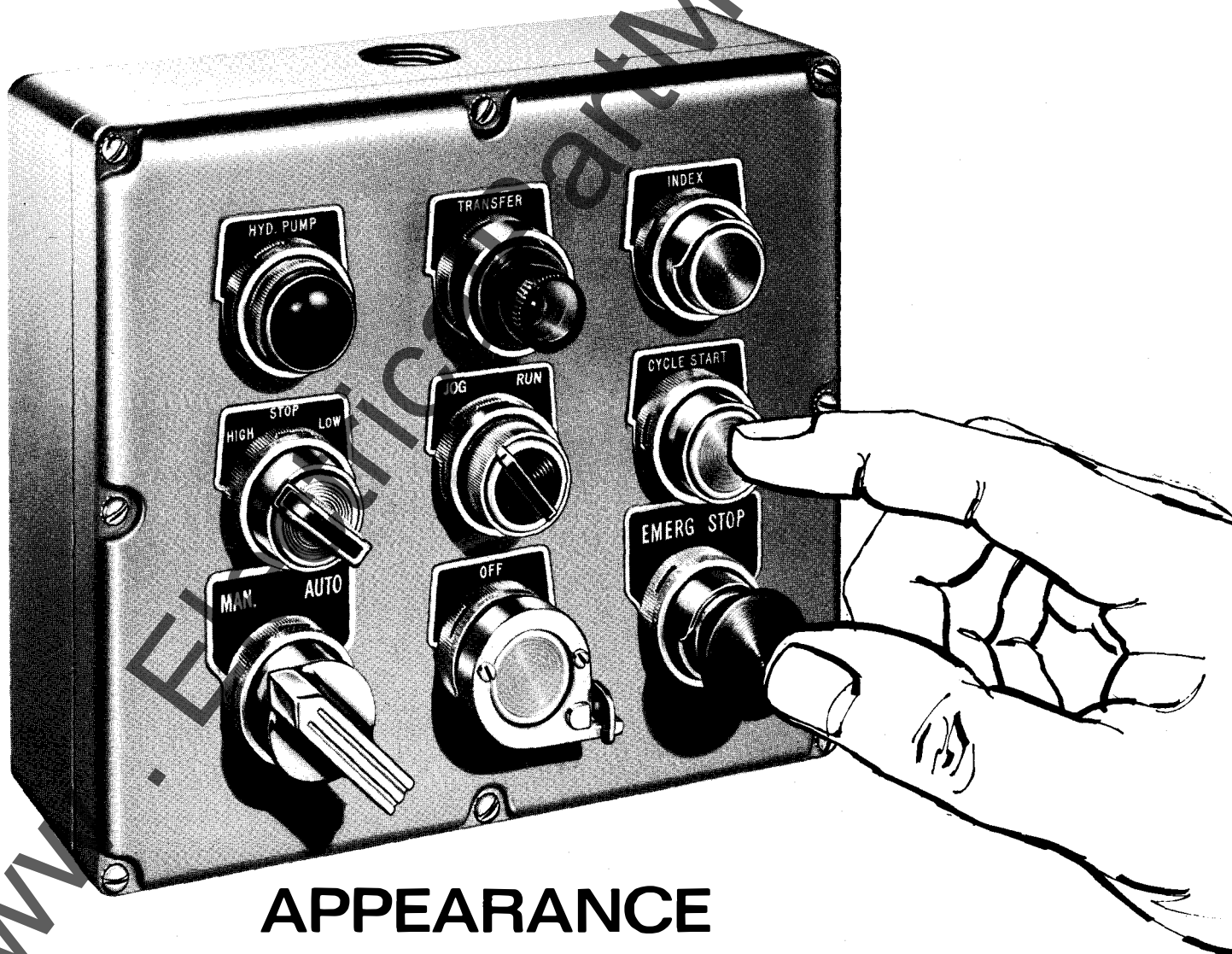
Square D Company, originator of heavy duty oil-tight push buttons, selector switches, and pilot lights, is continually adding new devices and improvements, thus maintaining Square D's leadership in appearance, performance, and flexibility.

Originally designed for machine tool applications, these oil-tight units, because of their flexibility, are now used in countless applications.

Any custom designed station can be assembled

from a few operators, contact blocks, nameplates and enclosures. These units are readily available directly from Square D or from authorized distributors located throughout the country.

A new line of contact blocks now makes Square D's present oil-tight operators more flexible than ever. With these new blocks and the popular color inserts an infinite variety of combinations can be assembled from a minimum of stock.



APPEARANCE

Attractively designed enclosures, chrome plated operators and permanently colored button inserts add the final touch to any machine or installation. Control stations are always right-up-front where appearance really counts.

PERFORMANCE

It's what's inside that counts!

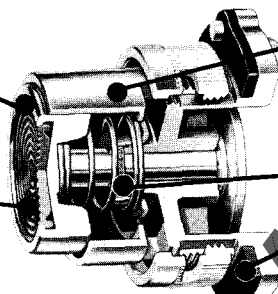
Control units provide the functions of initiating control circuits. They are simple functions but very important. Machines or entire installations are dependent on them for their proper operation. Square D control units have proven their dependability and durability in tens of thousands of installations — even under the most severe conditions.

Only premium quality materials are used in Square D control units — your assurance of long and trouble-free service. Ruggedly designed interior parts are another good reason for buying or specifying Square D, a point you'll appreciate when you review these important benefits:

Unbreakable all metal buttons — Machined aluminum alloy buttons resist all kinds of abuse. The all-metal button and the extra long shaft bearing give the unit a solid dependable feel.

Easily installed permanently colored inserts — Made of high density polyethylene, these inserts resist wear, solvents and oils. They are available in seven colors — black, red, green, brown, yellow, orange and blue.

OPERATOR

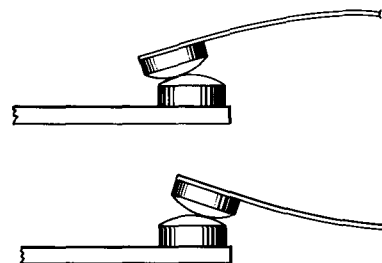


Sturdy metal guard — Die cast guard with an attractive polished chrome finish guards against accidental operation of the push button.

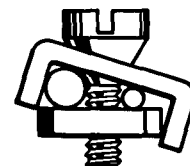
Completely oil-tight — A spring loaded neoprene and cork seal around the shaft completely prevents oil or coolant from entering through the unit. A neoprene gasket provides a tight seal between the panel and the control unit.

CONTACT BLOCK TYPE K

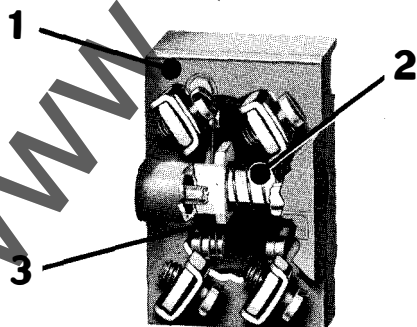
Contact Reliability — New scrubbing contact action with positive wipe provides excellent contact reliability.



Self Lifting Pressure Wire Terminal — Makes insertion of wires quick and easy. Clamp is free to roll to compensate for wires of different size.



TYPE K BLOCK

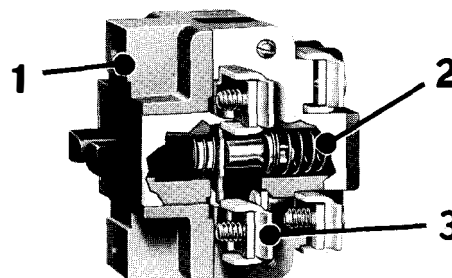


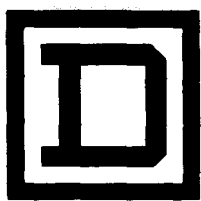
1. Arc Resisting Melamine Contact Block — Contact blocks are molded of melamine which has superior arc resistance and is also highly resistant to carbon tracking.

2. Fatigue Resisting Stainless Steel Springs — Used throughout the unit. Stainless steel springs resist rust and fatigue, and provide good contact pressure for years of trouble-free service.

3. Silver Contacts — Double break contacts are rated for heavy duty service.

TYPE T BLOCK



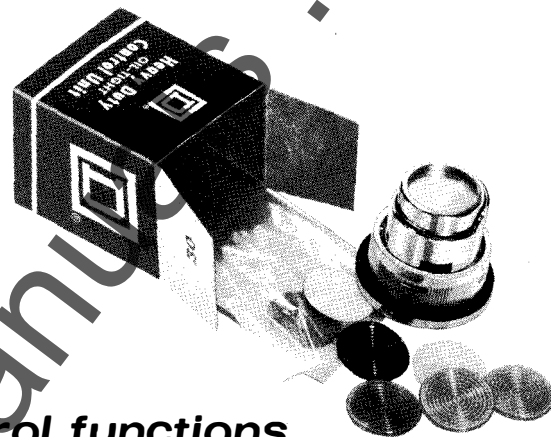


FLEXIBILITY.....*make your own custom designed stations*

COMBINE ANY OPERATOR... WITH ANY CONTACT BLOCK

A small stock of operators plus one or more of the Type K or Type T contact blocks and a few nameplates are all you need to assemble your own control stations.

Square D line of operators features a removable colored insert. An operator of any desired color can be assembled in seconds without tools — and at no extra cost. Colored inserts are a standard feature on push buttons, selector switches, and selector-push buttons.



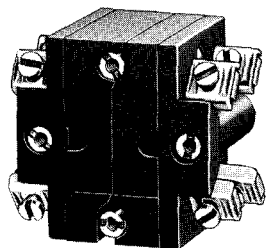
A virtually unlimited selection of control functions from Standard Components

TYPE K CONTACT BLOCK

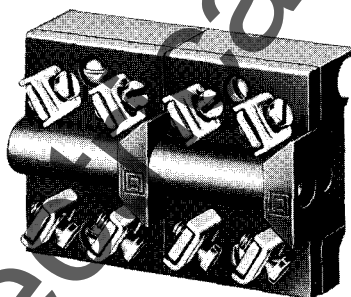


EASY TO MOUNT

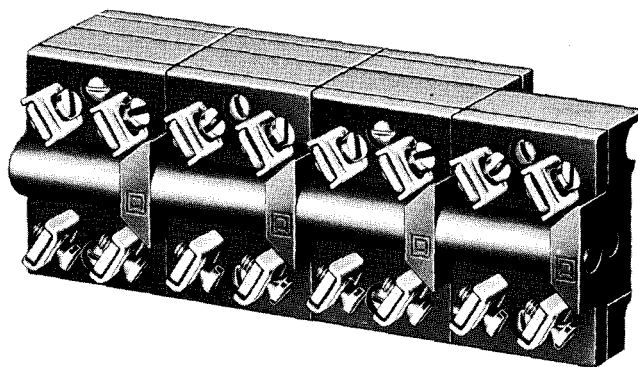
The new Type K contact block is easily mounted side by side or in tandem providing an almost unlimited selection of circuit arrangements.



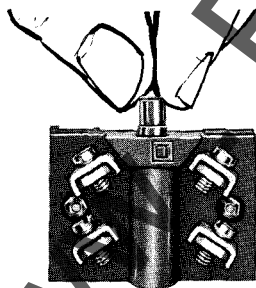
Side by side



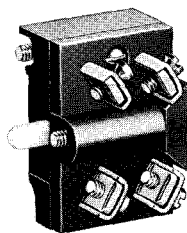
Two in tandem



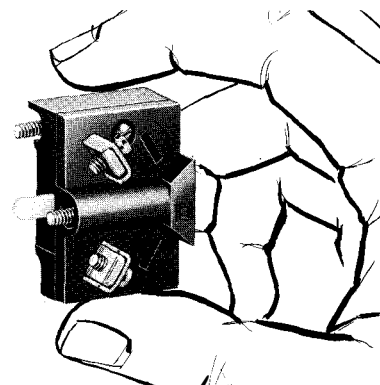
Four in tandem



Captive Mounting Screws — No time lost in looking for lost or misplaced screws. The recessed heads of the captive screws have an internal thread that accepts the screw on the block to be added. If additional circuits are needed just add the required blocks. No extra parts required.

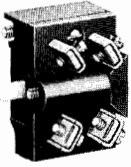


Reduced Inventory — One Type KA-1 single pole double throw (1 N.O. — 1 N.C.) is all that is needed to accomplish a majority of the common circuit arrangements. Stock can be kept to a minimum.

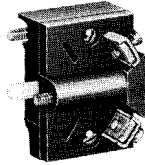


Small — The small compact size of the Type K block permits tandem mounting of two blocks in standard Square D enclosures.

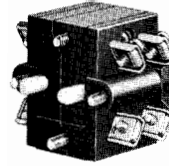
CONTACT BLOCKS—Type K



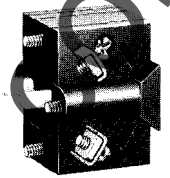
Single pole,
double throw,



Single pole,
single throw
(1 N.O. or 1 N.C.)

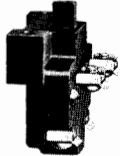


Sequencing

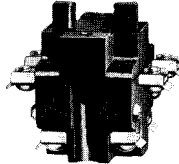


Overlapping

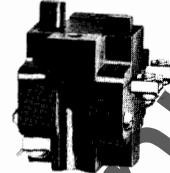
CONTACT BLOCKS—Type T



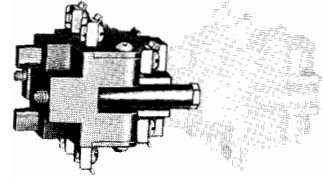
- Single pole, single throw
(1 N.O. or 1 N.C.)
- Single pole, double throw



- Double pole, double throw
- Double pole, single throw
(2 N.O. or 2 N.C.)

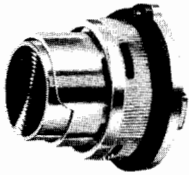


- Overlapping
- Sequencing

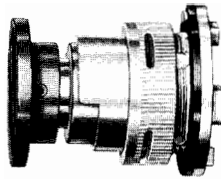


Double pole, double throw,
for tandem mounting

OPERATORS



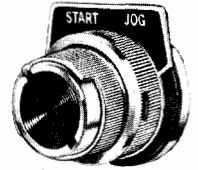
Push button
with half guard



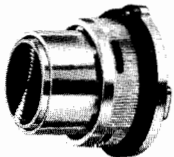
Standard mushroom
push button



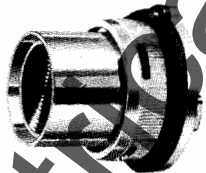
Standard
selector switch.



Selector push button
with half guard



Push button
with full guard



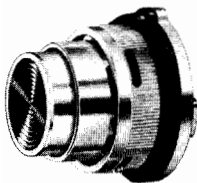
Push button
with extended guard.



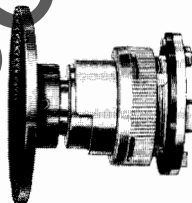
Coin operated
selector switch



Selector push button
with full guard



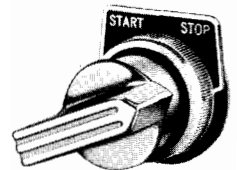
Push button
without guard



Large mushroom
push button

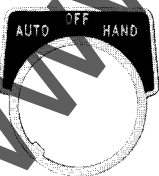


Key operated
selector switch



Gloved hand
selector switch

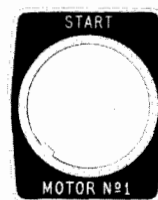
LEGEND PLATES



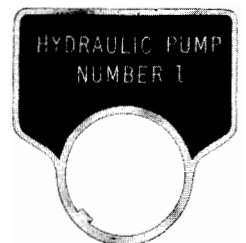
Standard legend plate



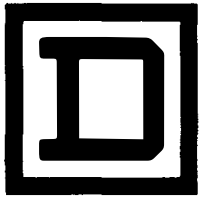
Large legend plate



Double headed legend plate



Extra large legend plate

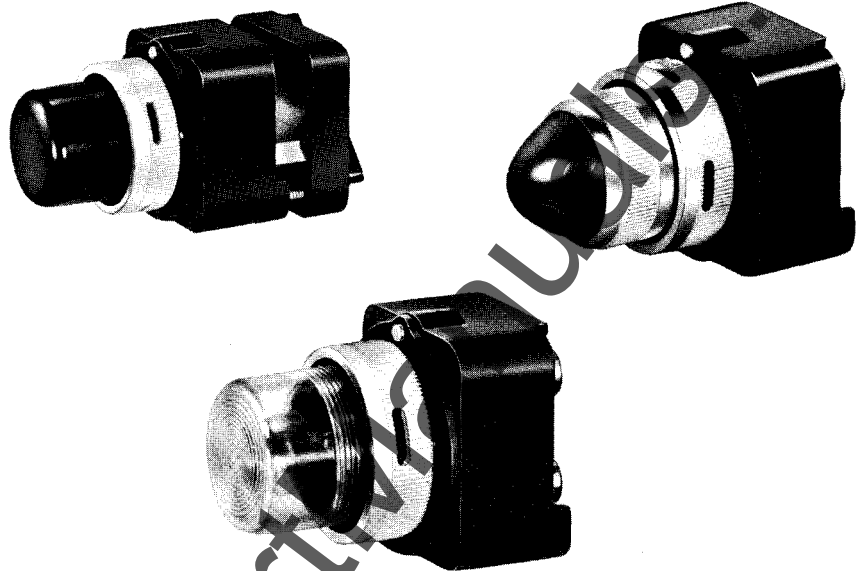


PILOT LIGHTS

featuring wide angle visibility

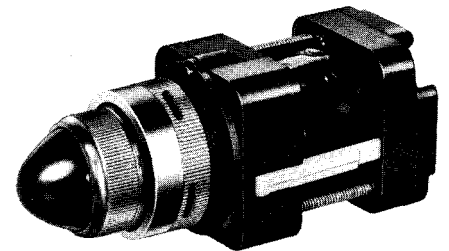
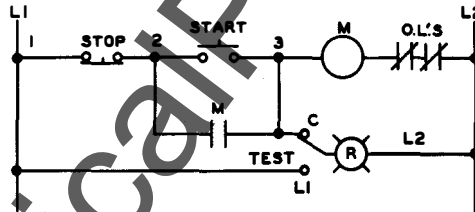
STANDARD PILOT LIGHTS

Square D pilot lights feature wide angle visibility and are styled to match push buttons and selector switches. Full voltage and transformer type pilot lights are available. On transformer types, the built-in transformers are an integral part of the pilot light. Thus, no extra panel space is required. Transformer type pilot lights with six volt lamp filaments withstand vibration and greatly increase lamp life. Color caps are available in six colors — red, amber, green, blue, white and clear, either in plastic or glass.



PUSH-TO-TEST PILOT LIGHT

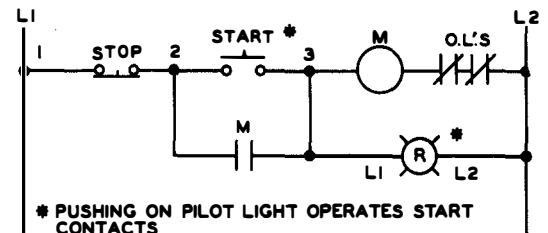
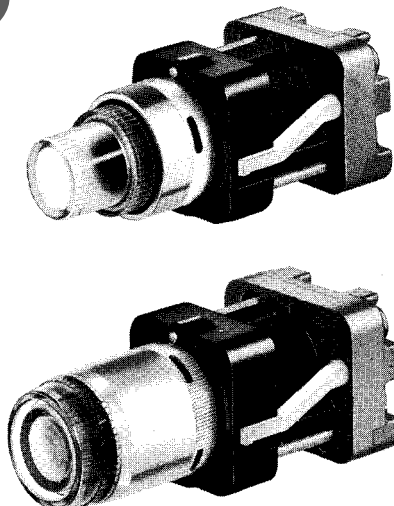
Square D's completely oil-tight push-to-test pilot light incorporates all the features of the standard pilot light plus a separate circuit to test the bulb. Pressing the color cap connects the bulb across an external voltage supply. A positive contact feel eliminates any doubt as to whether a unit is in the "test" position. Push-to-test pilot lights occupy the same space as standard pilot lights.



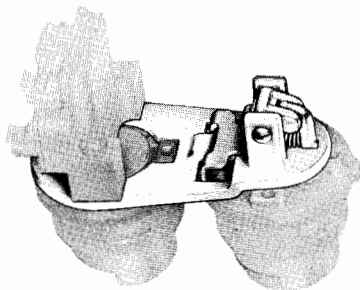
ILLUMINATED PUSH BUTTONS

These control units combine the functions of a pilot light plus a double circuit push button in one space-saving device. Pushing the pilot light lens operates the heavy duty contacts. Although these units have many applications, they are ideally suited as "Start" buttons when an indicating light is required to show when the motor is running. (See diagram.)

Illuminated push buttons are supplied without guard or with full guard. Part of the full guard which shields the button is made of clear plastic to afford wide angle visibility.

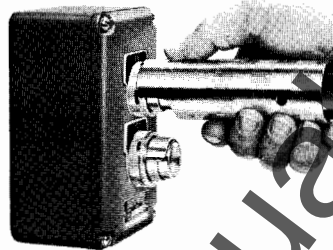


ACCESSORIES and ATTACHMENTS



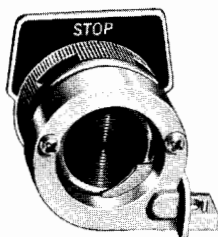
MAINTAINED CONTACT ATTACHMENT

Provides maintained contact operation when assembled with two standard push buttons and one contact block. (Use Type T contact blocks only.)



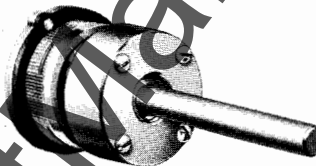
PUSH BUTTON WRENCH

Makes installation of oil-tight control units easy. May be used with all standard operators and pilot lights.



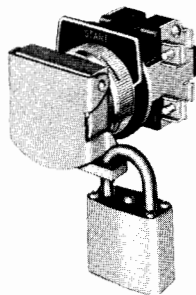
LATCH TYPE PADLOCK ATTACHMENT

Used with standard or mushroom buttons to lock button in the depressed position.



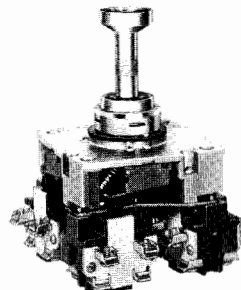
WOBBLE STICK OPERATOR

Provides contact operation when moved in any direction. Ideally suited as an "emergency stop" on a pendant type station where it is desirable to actuate the operator from any direction.



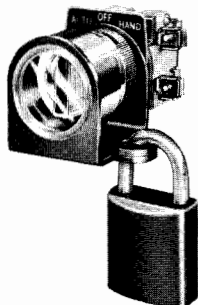
COVER TYPE PADLOCK ATTACHMENT

Used with standard buttons to prevent depressing button.



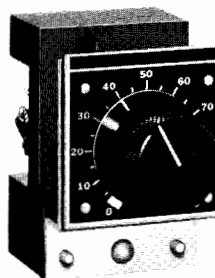
JOY STICK OPERATOR

Permits operation in any one of four directions with a single operator. Essentially four buttons in one unit where it is important that only one function be performed at one time. (Use Type T contact blocks only.)



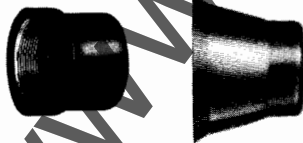
WINDOW TYPE PADLOCK ATTACHMENT

Prevents unauthorized operation of standard selector switches. Transparent cover for easy inspection of the switch position.



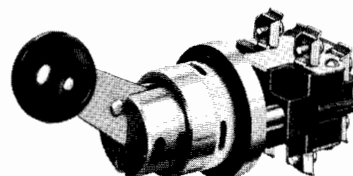
POTENTIOMETER

Knurled knob operator controls 2, 25 or 50 watt potentiometers. Ideally suited for speed control of motors when used with adjustable voltage drives.



NEOPRENE CAPS

Protects push buttons from foreign matter which might impair operation. Watertight caps available for selector switches or in translucent form for pilot lights or illuminated push buttons.



THREE POSITION MASTER SWITCH

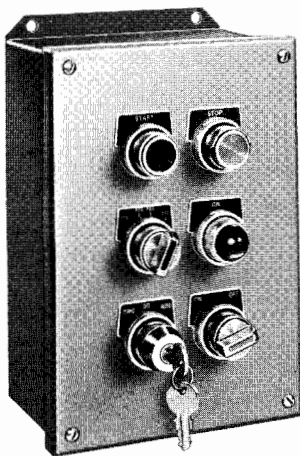
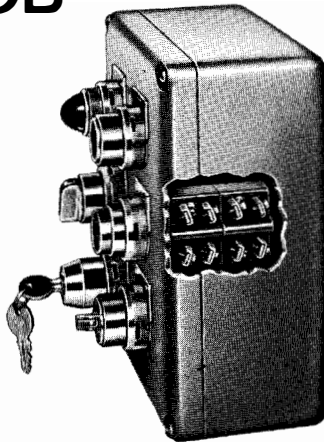
For use as master switch or for gloved hand operation. Provided in maintained contact or spring return to center types.

Dust-tight cap

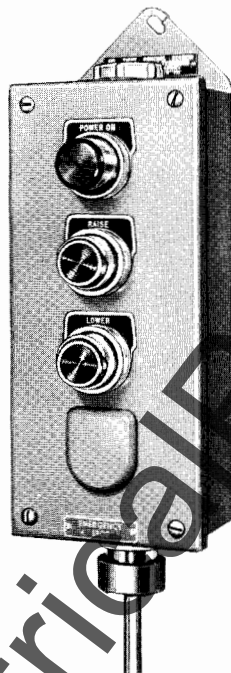
Watertight cap

ENCLOSURES FOR EVERY JOB

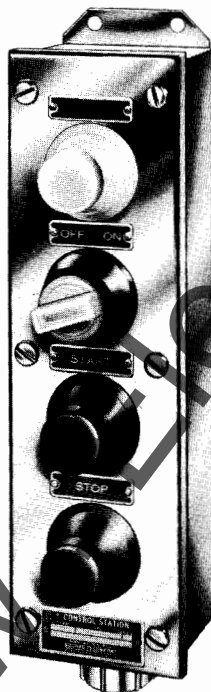
Type KY control station with Type K contact blocks mounted in tandem



Sheet steel control station



Pendant type control station



Nema 4 watertight control station

NEW TYPE KY NEMA 12 CAST ENCLOSURES with sufficient depth to accommodate two Type K contact blocks mounted in tandem. Enclosures are available for mounting one through 16 units and have been designed specifically to NMTBA and JIC standards for machine tool service. They have a grey, baked enamel finish and a streamlined appearance. The larger enclosures feature Square D's exclusive "slide and swing" hinged cover for easy wiring. Covers will also accept operators that require either the dowel pin hole or the notch in the enclosure for holding the operator in place. These cast enclosures can be purchased separately or with control units installed.

SHEET STEEL NEMA 12 ENCLOSURES for field assembly or as factory assembled stations with six through 25 control units. External mounting feet and neoprene gasketing insure an oil and coolant tight seal. "Slide and swing" covers are also provided on these enclosures.

PENDANT TYPE STATIONS are used on machines when it is desirable to move the control station to suit the operator. These sheet steel enclosures can be supplied for assembling two to ten control units in a vertical row. They are available separately or as completely assembled stations. The enclosures are designed so that a wobble stick operator can be placed in the bottom of the enclosure, providing an excellent emergency stop feature.

NEMA 4 WATERTIGHT ENCLOSURES are fabricated from AISI No. 304 stainless steel. Enclosure design has been kept plain to simplify cleaning, yet results in a very attractive installation. Push buttons, selector switches and pilot lights are provided with watertight caps which give each unit a smooth, easy-to-clean surface, guards against corrosion, and seals out water and other liquids. Metal legend plates with a clear baked protective finish and chrome plated conduit hubs are also supplied. Factory assembled stations can be furnished with up to 30 control units. In addition, all components are available separately for customers who wish to assemble their own stations.

Be sure to include Square D control stations on your next job. In appearance, performance and flexibility, Square D controls are without equal.

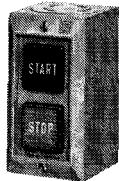
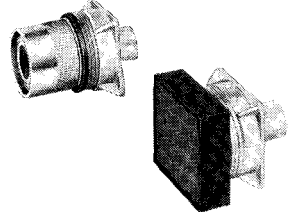
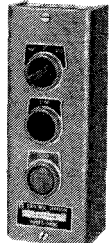
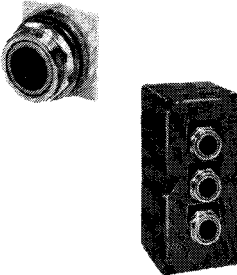
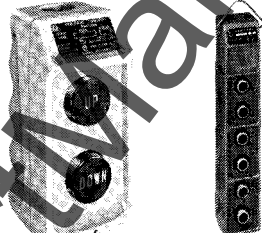
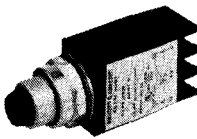
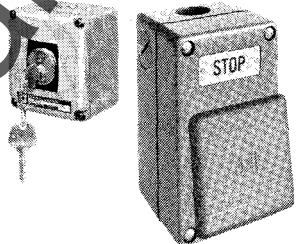
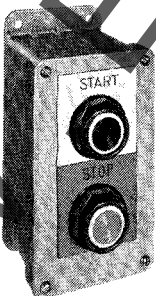
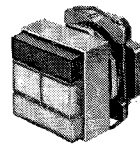
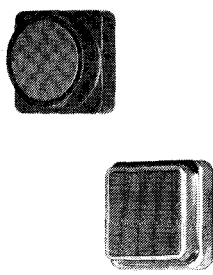
Bulletin SM-303R1 3-65 MP



SQUARE D COMPANY

CONTROL STATION AND CONTROL UNIT SELECTION GUIDE

**CLASS
9001**

 Standard Duty — Type B Class 9001 Section 2 Control Stations with standard duty ratings can be used with magnetic starters and contactors through Size 4.	 Miniature Oiltight — Type L Class 9001 Section 7 Round and Square Miniature Control Units offer the Type K flexibility, but at a 40% savings in panel space.
 Heavy Duty — Type G Class 9001 Section 3 Control Stations with heavy duty ratings can be used with magnetic starters and contactors through Size 8.	 Heavy Duty Oiltight — Type T Class 9001 Section 8 Heavy Duty Oiltight Control Units and Stations are intended primarily for machine tool and industrial applications, especially foundries.
 Heavy Duty Oiltight — Type K Class 9001 Section 4 Heavy Duty Oiltight Control Units and Stations are intended primarily for machine tool and industrial applications.	 Pendant Control Stations Class 9001 Section 9 The Pendant Control Stations are primarily used to control cranes and hoists.
 Compact Oiltight Pilot Lights — Type J Class 9001 Section 5 Compact Oiltight Pilot Lights are ideal where there is a high density of pilot lights on a panel.	 Specialty Control Stations Class 9001 Section 10 Security Control Stations offer an extra degree of security for applications in shopping centers, warehouses, and in residential, commercial and industrial developments. Palm operated press buttons are used for press control.
 NEMA 4X Control Station — Type SK Class 9001 Section 6 NEMA 4X Control Stations are designed for use in areas where they might be exposed to corrosive liquids. Use of non-metallic watertight Type SK operators eliminates the need for ground provision.	 Square Heavy Duty Watertight — Type KX Class 9001 Section 11 Type K X is a square multifunction NEMA 4-13 line of operators that mount in a Type K mounting hole. This line saves space by combining push buttons and pilot lights into one common operator. Many parts from the Type KX and K are common.
	 International Push Buttons — Type D See Class 9001-ICP Catalog Section Type D push buttons offer a large variety of control units for those customers who need IEC rated push buttons and offer the same space savings as the miniature Type L line. Most of the Type D control units meet protection category IP-65. They are available in both round and square, black or chrome color bezels.

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SQUARE D COMPANY



STANDARD DUTY PUSH BUTTON STATIONS

600 VOLTS AC				CLASS 9001								600 VOLTS DC					
No. of Units	Nameplate Markings and Features	GENERAL PURPOSE ENCLOSURES								Sym- bol	Water-tight and Dust-tight Enclosure NEMA Types 4 and 5			For Hazardous Locations Class I Group B, C, and D or Class II Groups E, F and G NEMA Types 7 and 9			
		Surface Mounting NEMA Type 1		Flush Mounting Without Pull Box ▲		Stainless Steel Flush Plate with Pull Box		Type	Price		Sym.	Type	Price	Sym.			
		Type	Price	Type	Price	Type	Price	Type	Price		Sym.	Type	Price	Sym.			
		Type	Price	Type	Price	Type	Price	Type	Price		Sym.	Type	Price	Sym.			

PILOT LIGHTS AND MOMENTARY CONTACT PUSH BUTTONS

1	Start.....	B-32	\$ 6.	BB-1	\$ 7.50	BF-19	\$11.50	BW-46	\$ 19.	BR-32	\$ 23.	1
	Stop.....	B-33	6.	BB-2	7.50	BF-20	11.	BW-47	19.	BR-33	23.	3
	Stop (Lockout).....	B-38	9.	BB-3	10.50	BF-21	19.	BW-48	19.	BR-38	23.	3
2	Start—Stop.....	B-30	\$ 6.	BB-4	\$ 7.50	BF-13	\$11.	BW-40	\$ 19.	BR-31	\$ 23.	5
	Start—Stop (Mushroom Stop).....	B-50	9.	BB-10	10.50	BF-13	11.	BW-50	22.	BR-31	23.	5
	Start—Stop (Lockout on Stop).....	B-31	9.	BB-5	10.50	BF-13	11.	BW-41	19.	BR-31	23.	5
3	Forward—Reverse.....	B-34	7.50	BB-6	9.	BF-22	12.50	BW-42	19.	BR-34	23.	7
	Up—Down.....	B-35	7.50	BB-7	9.	BF-23	12.50	BW-43	19.	BR-35	23.	7
	Open—Close.....	B-36	7.50	BB-8	9.	BF-24	12.50	BW-44	19.	BR-36	23.	7
4	On—Off.....	B-37	7.50	BB-9	9.	BF-25	12.50	BW-45	19.	BR-37	23.	7
5	Forward—Reverse—Stop.....	RK-2A	\$12.	RK-3A	\$13.50	BF-14	22.	BR-32	23.	1		
	Up—Down—Stop.....	RK-2B	12.	RK-3B	13.50	BF-14	22.	BR-33	23.	3		
	Open—Close—Stop.....	RK-2C	12.	RK-3C	13.50	BF-14	22.	BR-34	23.	7		
6	High—Low—Stop.....	RK-2D	12.	RK-3D	13.50	BF-14	22.	BR-35	23.	7		
	Forw.—Rev.—Stop (Lockout on Stop).....	RK-4A	15.			BF-14	22.	BR-36	23.	7		
	Up—Down—Stop (Lockout on Stop).....	RK-4B	15.			BF-14	22.	BR-37	23.	7		
7	Open—Close—Stop (Lockout on Stop).....	RK-4C	15.			BF-14	22.	BR-38	23.	7		
	High—Low—Stop (Lockout on Stop).....	RK-4D	15.			BF-14	22.	BR-39	23.	7		
	Fast—Slow—Stop (Lockout on Stop).....	RK-4E	15.			BF-14	22.	BR-40	23.	7		
8	Start—Jog—Stop (Lockout on Stop).....	RK-4F	15.			BF-14	22.	BR-41	23.	7		
	Start—Stop—With Red P.L., 115/230 V. AC or DC.....	B-39	22.			BF-14	22.	BR-42	23.	7		

MAINTAINED CONTACT

1	Off—On (2 Pos. Sel. Switch).....	C-46 ●	\$ 6.	CB-46 ●	\$ 7.50	96 ‡						
	Hand—Off—Auto (3 Pos. Sel. Switch).....	C-47 ●	6.	CB-47 ●	7.50	97 ‡						
	Hand—Off—Auto (Bakelite Enclosure for Knockout Mtg.).....			LB-3	8.	14						
2	Start—Stop.....	C-41	\$ 9.	CB-1	\$10.50	10	CW-5	\$ 22.	10	CR-41	\$ 23.	10
	On—Off.....	C-42	9.	CB-2	10.50	10	CW-6	22.	10	CR-42	23.	10
	Manual—Auto.....	C-43	9.	CB-3	10.50	10	CW-7	22.	10			
3	On—Off (Lever Operated).....						CW-8	22.	10			
	On—Off Tumbler Switch with Red Pilot Light; 115/230 V., AC or DC.....					BF-17	25.					
	Start—Stop—With Red Pilot Light; 115/230 V. AC or DC.....	C-39	25.									

●Rated 600 v ac, 250 v dc.

▲Pull box not available for these stations.

‡Other contact sequences available.



STANDARD DUTY PUSH BUTTON STATIONS

Push Button Units

0-600 VOLTS AC		0-600 VOLTS DC	
Type	Circuit	Price	Symbol
KB-1	Single N. O.	\$ 3.	1
KB-2	Single N. C.	3.	3
KB-3	Double	3.	16

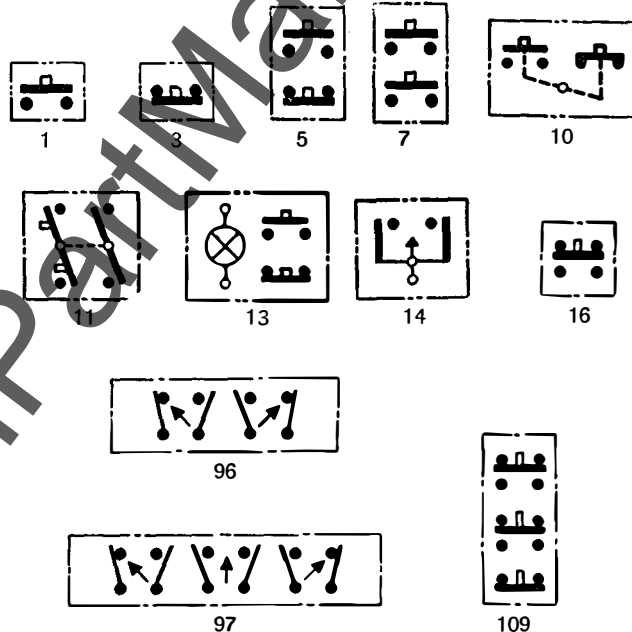
Ordering Instructions — Specify Class and Type Number; also specify the G number from the illustrated tables below to indicate the terminal arrangement and marking desired.

PRICES FOR ADDITIONS AND SPECIAL FEATURES

★ Attaching black or red mushroom cap, per button.....	\$ 3.
✱ Special paint.....	3.
✱ Corrosion-resisting finish on enclosure or flush plate.....	5.50
✱ Chromium plating sheet steel enclosure or flush plate.....	11.
✱ Special nameplate markings, per station.....	1.50
✱ Arranging button markings on standard stations for horizontal mounting, per button.....	N.C.
Legend plate on ENCLOSURE with markings specified by customer.....	1.50

- ★ Available only on Types B, BB, BW, C, and CB stations.
- ✱ No additional charge is made for special paint when 50 or more identical devices are ordered at one time.
- ✱ Available only on Types B, BB, BW, C, CB, and RK stations.
- ✱ Standard markings listed on Class 9001 Supplementary Price Sheet Page 9.

TYPE KB-1					
TYPE KB-2					
TYPE KB-3					
Blank (Black)	G101	G201	G301	G401	G501
Blank (Red)	G102	G202	G302	G402	G502
Start	G104	G204	G304	G404	G504
Stop	G105	G205	G305	G405	G505
Forward	G106	G206	G306	G406	G506
Reverse	G107	G207	G307	G407	G507
Up	G108	G208	G308	G408	G508
Down	G109	G209	G309	G409	G509
Open	G110	G210	G310	G410	G510
Close	G111	G211	G311	G411	G511
High	G112	G212	G312	G412	G512
Low	G113	G213	G313	G413	G513



ORDERING INSTRUCTIONS

- 1—Order push button station by complete Class and Type number.
- 2—If special nameplates are required, order a "Class 9001 similar to Type . . ." and specify nameplate marking of

units in proper order from top to bottom. An additional charge of \$1.50 per station will be made.

- 3—If special features are desired, order a "Class 9001 similar to Type . . ." and state clearly the features required.



PUSH BUTTON UNIT DESIGNED FOR SETSCREW MOUNTING IN 1" DIAMETER HOLE

600 VOLTS MAX. AC		CLASS 9001		115 VOLTS MAX. DC	
Description	Unit with Molded Bakelite Terminal Cover			Symbol	
	Type	Price			
Single Pole — Momentary Contact — Normally Open — Double Break	KC-7	•\$ 9.			
Single Pole — Momentary Contact — Normally Closed — Double Break	KC-8	•\$ 9.			

Contacts are satisfactory for standard duty push button service on AC and are rated 1.1 amperes, 115 volts DC.

ORDERING INSTRUCTIONS

1—Order push button unit by specifying complete Class and Type Number.

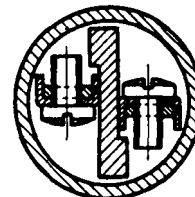
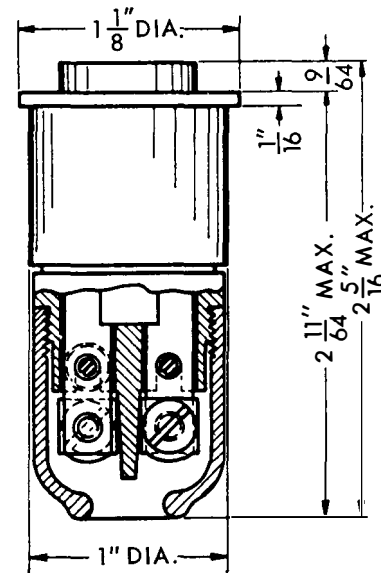
DESCRIPTION

Class 9001, Type KC standard duty push button units are momentary contact single circuit devices designed for mounting in a small cylindrical hole. These units are light in weight and only 1" in diameter. Typical applications are as door limit switches on machine tools or as push buttons incorporated into the handles of portable tools. An example of the latter type application has been the use of these devices in the handles of automatically operated gun welders where space and weight are limiting factors.

Double break single circuit contacts are rated "standard duty" on AC voltages up to 600 which permits them to control a load equivalent to the operating coil of a magnetic contactor rated 150 amperes (Size 4) or smaller. The DC rating is 1.1 amperes at 115 volts.

Type KC push buttons are small but well insulated. The unit consists of four molded bakelite parts and a brass housing. Contacts are double break silver to silver. A laminated (silver and bronze) contact disc is part of the movable contact assembly, and two silver contact buttons are inserted in the molded base. A round-nosed bakelite cap screws onto the bakelite case, covering terminals and wiring to the push button unit.

The heavy brass housing can be tightly fitted into a hole reamed to size without danger of breakage. Set screws may also be used to hold the unit in place.



•Revised

SQUARE D COMPANY

Prices Subject to Change without Notice.

SCHEDULE DS-1 DISCOUNTS

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HEAVY DUTY CONTROL STATIONS

600 VOLTS AC

600 VOLTS DC

Description		Symbol	General Purpose Surface Mounting NEMA Type 1		General Purpose Flush Mounting Without Pullbox		General Purpose Flush Mounting With Pullbox		Watertight & Dusttight NEMA Types 4&5		Symbol
Nameplate Marking	Features		Type	Price	Type	Price	Type	Price	Type	Price	
ONE UNIT											
Start.....	Lockout.....	16	GG-101	\$11.	GF-101	\$11.	GFP-101	\$17.	GW-101	\$23.	
Stop.....			GG-102	11.	GF-102	11.	GFP-102	17.	GW-102	23.	
Stop.....			GG-103	14.	GF-103	14.	GFP-103	20.	GW-103	26.	
Reset.....			GG-104	11.	GF-104	11.	GFP-104	17.	GW-104	23.	
Jog.....			GG-105	11.	GF-105	11.	GFP-105	17.	GW-105	23.	
Stop.....			GG-107	14.	GF-107	14.	GFP-107	20.	GW-107	26.	
Start.....			GG-108	14.	GF-108	14.	GFP-108	20.	GW-108	26.	
Emerg. Stop.....			GG-113	11.	GF-113	11.	GFP-113	17.	GW-113	23.	
Emerg. Stop.....			GG-114	14.	GF-114	14.	GFP-114	20.	GW-114	26.	
Stop.....			GG-115	17.	GF-115	17.	GFP-115	23.	GW-115	26.	
Safe-Run.....	Selector Switch.....	18	GG-116	12.	GF-116	12.	GFP-116	18.	GW-116	24.	
High-Low.....	Selector Switch.....	19	GG-117	12.	GF-117	12.	GFP-117	18.	GW-117	24.	
Open-Close.....	Selector Switch.....	19	GG-118	12.	GF-118	12.	GFP-118	18.	GW-118	24.	
Off-On.....	Selector Switch.....	18	GG-119	12.	GF-119	12.	GFP-119	18.	GW-119	24.	
Up-Down.....	Selector Switch.....	19	GG-120	12.	GF-120	12.	GFP-120	18.	GW-120	24.	
For.-Rev.....			GG-121	12.	GF-121	12.	GFP-121	18.	GW-121	24.	
Jog-Run.....			GG-122	12.	GF-122	12.	GFP-122	18.	GW-122	24.	
Hand-Off-Auto.....	Selector Switch.....	17	GG-123	12.	GF-123	12.	GFP-123	18.	GW-123	24.	
Fast-Slow.....	Selector Switch.....	19	GG-124	12.	GF-124	12.	GFP-124	18.	GW-124	24.	
Man.-Auto.....	Selector Switch.....	19	GG-126	12.	GF-126	12.	GFP-126	18.	GW-126	24.	
	Red Pilot Light: 120 V., 60 Cy., 110 V., 50 Cy... 220 V., 50-60 Cy... 480 V., 60 Cy., 440 V., 50 Cy... 600 V., 60 Cy., 550 V., 50 Cy...	22	GG-127A GG-127B GG-127C GG-127D	18.	GF-127A GF-127B GF-127C GF-127D	18.	GFP-127A GFP-127B GFP-127C GFP-127D	24.	GW-127A GW-127B GW-127C GW-127D	30.	
	Red Pilot Light: 115 V., AC or DC..... 230 V., AC or DC.....	23	GG-128 GG-129	16.	GF-128 GF-129	16.	GFP-128 GFP-129	22.	GW-128 GW-129	28.	
	Green Pilot Light: 120 V., 60 Cy., 110 V., 50 Cy... 220 V., 50-60 Cy... 480 V., 60 Cy., 440 V., 50 Cy... 600 V., 60 Cy., 550 V., 50 Cy...	22	GG-130A GG-130B GG-130C GG-130D	18.	GF-130A GF-130B GF-130C GF-130D	18.	GFP-130A GFP-130B GFP-130C GFP-130D	24.	GW-130A GW-130B GW-130C GW-130D	30.	
	Green Pilot Light: 115 V., AC or DC..... 230 V., AC or DC.....	23	GG-131 GG-132	16.	GF-131 GF-132	16.	GFP-131 GFP-132	22.	GW-131 GW-132	28.	
TWO UNIT											
Start-Stop.....	Lockout on Stop.....	25	GG-201	\$17.	GF-201	\$17.	GFP-201	\$23.	GW-201	\$28.	
Forward-Reverse.....			GG-202	17.	GF-202	17.	GFP-202	23.	GW-202	28.	
Up-Down.....			GG-203	17.	GF-203	17.	GFP-203	23.	GW-203	26.	
Open-Close.....			GG-204	17.	GF-204	17.	GFP-204	23.	GW-204	26.	
High-Low.....			GG-205	17.	GF-205	17.	GFP-205	23.	GW-205	26.	
Start-Stop.....			GG-206	20.	GF-206	20.	GFP-206	26.	GW-206	26.	
In-Out.....			GG-207	17.	GF-207	17.	GFP-207	23.	GW-207	26.	
Open-Reset.....			GG-208	17.	GF-208	17.	GFP-208	23.	GW-208	26.	
Jog-Stop.....			GG-209	20.	GF-209	20.	GFP-209	26.	GW-209	26.	
On-Off.....			GG-210	17.	GF-210	17.	GFP-210	23.	GW-210	26.	
Start-Stop.....	Maintained Contact.....	107	GG-213	17.	GF-213	17.	GFP-213	23.	GW-213	26.	
On-Off.....	Maintained Contact.....	107	GG-214	17.	GF-214	17.	GFP-214	23.	GW-214	26.	
Start-Stop.....	Mushroom Button on Stop.....	25	GG-215	20.	GF-215	20.	GFP-215	26.	GW-215	29.	
Start-Stop.....	Main. Cont. Mush. B. on Stop.....	107	GG-217	20.	GF-217	20.	GFP-217	26.	GW-217	29.	
Raise-Lower.....	Mushroom Button on Start and Stop, Lockout on Stop.....	25	GG-218	17.	GF-218	17.	GFP-218	23.	GW-218	26.	
Start-Stop.....			GG-219	26.	GF-219	26.	GFP-219	32.	GW-219	32.	
Open-Close.....			GG-220	17.	GF-220	17.	GFP-220	23.	GW-220	26.	
Jog-Stop.....	Lockout on Stop.....	25	GG-221	20.	GF-221	20.	GFP-221	26.	GW-221	26.	
Safe-Run, Start.....	1 Sel. Sw., 1 Button.....	16	GG-222	18.	GF-222	18.	GFP-222	24.	GW-222	27.	
	Red Pilot Light, 1 Button: 120 V., 60 Cy., 110 V., 50 Cy... 220 V., 50-60 Cy... 480 V., 60 Cy., 440 V., 50 Cy... 600 V., 60 Cy., 550 V., 50 Cy...	22	GG-226A GG-226B GG-226C GG-226D	24.	GF-226A GF-226B GF-226C GF-226D	24.	GFP-226A GFP-226B GFP-226C GFP-226D	30.	GW-226A GW-226B GW-226C GW-226D	33.	
Start.....	Red Pilot Light, 1 Button: 115 V., AC or DC..... 230 V., AC or DC.....	23	GG-227 GG-228	22.	GF-227 GF-228	22.	GFP-227 GFP-228	28.	GW-227 GW-228	31.	
		16									
		16									

All push button units are momentary contact; all selector switch units maintained contact. Transformer and Resistor type pilot lights occupy space equal to that required for one push button unit.

†NEMA Type 4-5 stations as standard have provision for padlocking the "Stop" button in the depressed position.

General Revision.

SQUARE D COMPANY

Prices Subject to Change without Notice.

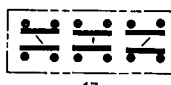
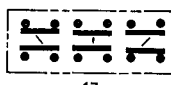
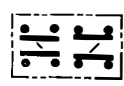
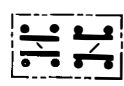
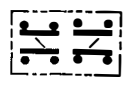
SCHEDULE DS-1 DISCOUNTS



HEAVY DUTY CONTROL STATIONS

600 VOLTS AC

600 VOLTS DC

Description		Symbol	General Purpose Surface Mounting NEMA Type 1		General Purpose Flush Mounting Without Pullbox		General Purpose Flush Mounting With Pullbox		Watertight & Dusttight NEMA Types 4&5+		Symbol
Nameplate Marking	Features		Type	Price	Type	Price	Type	Price	Type	Price	
TWO UNIT (Cont'd)											
Stop.....	Red Pilot Light, 1 Button: 120 V., 60 Cy., 110 V., 50 Cy... 220 V., 50-60 Cy... 480 V., 60 Cy., 440 V., 50 Cy... 600 V., 60 Cy., 550 V., 50 Cy...	22 16	GG-229A GG-229B GG-229C GG-229D	\$24.	GF-229A GF-229B GF-229C GF-229D	\$24.	GFP-229A GFP-229B GFP-229C GFP-229D	\$30.	GW-244A GW-244B GW-244C GW-244D	\$38.	
Stop.....	Red Pilot Light, 1 Button: 115 V., AC or DC..... 230 V., AC or DC.....	23 16	GG-230 GG-231	22.	GF-230 GF-231	22.	GFP-230 GFP-231	28.	GW-245 GW-246	31.	
Hand-Off-Auto.....	Red Pilot Light, 1 Selector Sw.: 120 V., 60 Cy., 110 V., 50 Cy... 220 V., 50-60 Cy... 480 V., 60 Cy., 440 V., 50 Cy... 600 V., 60 Cy., 550 V., 50 Cy...	22 17	GG-232A GG-232B GG-232C GG-232D	25.	GF-232A GF-232B GF-232C GF-232D	25.	GFP-232A GFP-232B GFP-232C GFP-232D	31.	GW-232A GW-232B GW-232C GW-232D	34.	
Hand-Off-Auto.....	Red Pilot Light, 1 Selector Sw. 115 V., AC or DC..... 230 V., AC or DC.....	23 17	GG-233 GG-234	23.	GF-233 GF-234	23.	GFP-233 GFP-234	29.	GW-233 GW-234	32.	
	1 Red, 1 Green Pilot Light: 120 V., 60 Cy., 110 V., 50 Cy... 220 V., 50-60 Cy... 480 V., 60 Cy., 440 V., 50 Cy... 600 V., 60 Cy., 550 V., 50 Cy...	27	GG-235A GG-235B GG-235C GG-235D	31.	GF-235A GF-235B GF-235C GF-235D	31.	GFP-235A GFP-235B GFP-235C GFP-235D	37.	GW-235A GW-235B GW-235C GW-235D	40.	
	1 Red, 1 Green Pilot Light: 115 V., AC or DC..... 230 V., AC or DC.....	28	GG-236 GG-237	27.	GF-236 GF-237	27.	GFP-236 GFP-237	33.	GW-236 GW-237	36.	
	2 Red Pilot Lights: 120 V., 60 Cy., 110 V., 50 Cy... 220 V., 50-60 Cy... 480 V., 60 Cy., 440 V., 50 Cy... 600 V., 60 Cy., 550 V., 50 Cy...	27	GG-238A GG-238B GG-238C GG-238D	31.	GF-238A GF-238B GF-238C GF-238D	31.	GFP-238A GFP-238B GFP-238C GFP-238D	37.	GW-238A GW-238B GW-238C GW-238D	40.	
	2 Red Pilot Lights: 115 V., AC or DC..... 230 V., AC or DC.....	28	GG-239 GG-240	27.	GF-239 GF-240	27.	GFP-239 GFP-240	33.	GW-239 GW-240	36.	
THREE UNIT											
For.-Rev.-Stop.....			GG-301	\$22.	GF-301	\$22.	GFP-301	\$31.			
Up-Down-Stop.....			GG-302	22.	GF-302	22.	GFP-302	31.			
Open-Close-Stop.....			GG-303	22.	GF-303	22.	GFP-303	31.			
High-Low-Stop.....			GG-304	22.	GF-304	22.	GFP-304	31.			
Start-Jog-Stop.....	Lockout on Stop.....		GG-305	25.	GF-305	25.	GFP-305	34.	GW-305	\$44.	
Up-Down-Run.....			GG-306	22.	GF-306	22.	GFP-306	31.	GW-306	44.	
Open-Close-Stop.....	Lockout on Stop.....		GG-307	25.	GF-307	25.	GFP-307	34.	GW-307	44.	
High-Low-Stop.....	Lockout on Stop.....		GG-308	25.	GF-308	25.	GFP-308	34.	GW-308	44.	
Start-Jog-Stop.....		8	GG-309	22.	GF-309	22.	GFP-309	31.			
For.-Rev.-Stop.....	Lockout on Stop.....		GG-310	25.	GF-310	25.	GFP-310	34.	GW-310	44.	
Up-Down-Stop.....	Lockout on Stop.....		GG-311	25.	GF-311	25.	GFP-311	34.	GW-311	44.	
For.-Rev.-Stop.....	Mushroom on Stop.....		GG-312	25.	GF-312	25.	GFP-312	34.	GW-346	47.	
Up-Down-Stop.....	Mushroom on Stop.....		GG-313	25.	GF-313	25.	GFP-313	34.	GW-347	47.	
Open-Close-Stop.....	Mushroom on Stop.....		GG-314	25.	GF-314	25.	GFP-314	34.	GW-348	47.	
High-Low-Stop.....	Mushroom on Stop.....		GG-315	25.	GF-315	25.	GFP-315	34.	GW-349	47.	
Start-Jog-Stop.....	Jog Attachment.....	33	GG-316	25.	GF-316	25.	GFP-316	34.			
For.-Rev., Start-Stop.....		19	GG-317		GF-317		GFP-317		GW-350		
High-Low, Start-Stop.....			GG-318		GF-318		GFP-318		GW-351		
Up-Down, Start-Stop.....	Sel. Sw., 2 Push Buttons.....	25	GG-319	23.	GF-319	23.	GFP-319	32.	GW-352	45.	
Jog-Run, Start-Stop.....			GG-320		GF-320		GFP-320		GW-353		
Safe-Run, Start-Stop.....			GG-321		GF-321		GFP-321		GW-354		
Auto-Hand, Start-Stop.....			GG-322		GF-322		GFP-322		GW-355		
Safe-Run, For.-Rev.....	Sel. Sw., 2 Push Buttons.....	25	GG-323	23.	GF-323	23.	GFP-323	32.	GW-323	45.	
Safe-Run, High-Low.....			GG-324		GF-324		GFP-324		GW-324		
Safe-Run, Up-Down.....			GG-325		GF-325		GFP-325		GW-325		
Start-Stop.....	Red Pilot Light, 2 Push Buttons: 120 V., 60 Cy., 110 V., 50 Cy... 220 V., 50-60 Cy... 480 V., 60 Cy., 440 V., 50 Cy... 600 V., 60 Cy., 550 V., 50 Cy...	22 25	GG-328A GG-328B GG-328C GG-328D	29.	GF-328A GF-328B GF-328C GF-328D	29.	GFP-328A GFP-328B GFP-328C GFP-328D	38.	GW-334A GW-334B GW-334C GW-334D	51.	
Start-Stop.....	Red Pilot Light, 2 Push Buttons: 115 V., AC or DC..... 230 V., AC or DC.....	23 25	GG-329 GG-330	27.	GF-329 GF-330	27.	GFP-329 GFP-330	36.	GW-335 GW-336	49.	
Start-Stop.....	Green Pilot Lt., 2 Push Buttons: 120 V., 60 Cy., 110 V., 50 Cy... 220 V., 50-60 Cy... 480 V., 60 Cy., 440 V., 50 Cy... 600 V., 60 Cy., 550 V., 50 Cy...	22 25	GG-331A GG-331B GG-331C GG-331D	29.	GF-331A GF-331B GF-331C GF-331D	29.	GFP-331A GFP-331B GFP-331C GFP-331D	38.	GW-337A GW-337B GW-337C GW-337D	51.	
Start-Stop.....	Green Pilot Lt., 2 Push Buttons: 115 V., AC or DC..... 230 V., AC or DC.....	23 25	GG-332 GG-333	27.	GF-332 GF-333	27.	GFP-332 GFP-333	36.	GW-338 GW-339	49.	

All push button units are momentary contact; all selector switch units maintained contact. Transformer and full voltage type pilot lights occupy space equal to that required for one push button unit.

*NEMA Type 4 and 5 stations as standard have provision for padlocking the "Stop" button in the depressed position.

SQUARE D COMPANY

General Revision.

SCHEDULE DS-1 DISCOUNTS

Prices Subject to Change without Notice.

JANUARY, 1963

Supersedes Price Sheet 9001,
Page 5, dated December, 1962
(Minor Correction — 4/64)CLASS **9001**

Price Sheet PAGE 5

HEAVY DUTY CONTROL STATIONS**600 VOLTS AC****600 VOLTS DC**

Description		Symbol	General Purpose Surface Mounting NEMA Type 1		General Purpose Flush Mounting Without Pullbox		General Purpose Flush Mounting With Pullbox		Watertight & Dust-tight NEMA Types 4&5+		Symbol		
Nameplate Marking	Features		Type	Price	Type	Price	Type	Price	Type	Price			
FOUR UNIT													
High-Sec.-Low-Stop.....	Lockout on Stop.....	38	GG-401	\$27.	GF-401	\$27.	GFP-401	\$36.	GW-401	.....			
High-Sec.-Low-Stop.....			GG-402	30.	GF-402	30.	GFP-402	39.	GW-402	.....			
High-Low-Start-Stop.....			GG-403	27.	GF-403	27.	GFP-403	36.	GW-403	.....			
High-Low-Start-Stop.....			GG-404	30.	GF-404	30.	GFP-404	39.	GW-404	\$53.			
Up-Down-Run-Stop.....			GG-405	27.	GF-405	27.	GFP-405	36.	GW-405	.....			
Up-Down-Run-Stop.....	Lockout on Stop.....	19	GG-406	30.	GF-406	30.	GFP-406	39.	GW-406	.....	8		
Up-Down-For.-Rev.....			GG-409	27.	GF-409	27.	GFP-409	36.	GW-409	.....			
High-Low, For.-Rev.-Stop...	1 Selector Sw., 3 Push Buttons..	8	GG-410	.....	GF-410	.....	GFP-410	.....	GW-451	.....			
For.-Rev., High-Low-Stop...			GG-411	.....	GF-411	.....	GFP-411	.....	GW-452	.....			
High-Low, Up-Down-Stop...			GG-412	.....	GF-412	.....	GFP-412	.....	GW-453	.....			
Safe-Run, For.-Rev.-Stop...	1 Selector Sw., 3 Push Buttons..	18	GG-413	28.	GF-413	28.	GFP-413	37.	GW-454	54.			
Start-Stop.....	Red P. L., Green P. L., 2 P. B. 120 V., 60 Cy., 110 V., 50 Cy.. 220 V., 50-60 Cy.. 480 V., 60 Cy., 440 V., 50 Cy.. 600 V., 60 Cy., 550 V., 50 Cy..	27	GG-417A	41.	GF-417A	41.	GFP-417A	50.	GW-455A	67.			
			GG-417B		GF-417B		GFP-417B		GW-455B				
			GG-417C		GF-417C		GFP-417C		GW-455C				
			GG-417D		GF-417D		GFP-417D		GW-455D				
Start-Stop.....	Red P. L., Green P. L. 2 P. B. 115 V., AC or DC..... 230 V., AC or DC.....	28	GG-418	37.	GF-418	37.	GFP-418	46.	GW-456	63.			
			GG-419		GF-419		GFP-419		GW-457				
For.-Rev.-Stop.....	Red Pilot Light, 3 Push Buttons: 120 V., 60 Cy., 110 V., 50 Cy.. 220 V., 50-60 Cy.. 480 V., 60 Cy., 440 V., 50 Cy.. 600 V., 60 Cy., 550 V., 50 Cy..	22	GG-429A	34.	GF-429A	34.	GFP-429A	43.	GW-458A	60.			
			GG-429B		GF-429B		GFP-429B		GW-458B				
			GG-429C		GF-429C		GFP-429C		GW-458C				
			GG-429D		GF-429D		GFP-429D		GW-458D				
For.-Rev.-Stop.....	Red Pilot Light, 3 Push Buttons: 115 V., AC or DC..... 230 V., AC or DC.....	23	GG-430	32.	GF-430	32.	GFP-430	41.	GW-459	58.			
			GG-431		GF-431		GFP-431		GW-460				
FIVE UNIT													
High-Third-Sec.-Low-Stop..	Lockout on Stop.....	39	GG-501	\$32.	GF-501	\$32.	GFP-501	\$44.	.....	.....			
High-Third-Sec.-Low-Stop..			GG-502	35.	GF-502	35.	GFP-502	47.	.....	.....			
For.-Rev.-Stop.....			Red P.L., Green P.L., 3 P.B. 120 V., 60 Cy., 110 V., 50 Cy.. 220 V., 50-60 Cy.. 480 V., 60 Cy., 440 V., 50 Cy.. 600 V., 60 Cy., 440 V., 50 Cy..	27	GG-503A	46.	GF-503A	46.	GFP-503A	58.			
					GG-503B		GF-503B		GFP-503B				
					GG-503C		GF-503C		GFP-503C				
For.-Rev.-Stop.....	Red P. L., Green P. L. 3 P.B. 115 V., AC or DC..... 230 V., AC or DC.....	28	GG-504	42.	GF-504	42.	GFP-504	54.	.....	.....			
			GG-505		GF-505		GFP-505		.....				
Up-Down-Stop.....	Red P. L., Green P. L., 3 P.B. 120 V., 60 Cy., 110 V., 50 Cy.. 220 V., 50-60 Cy.. 480 V., 60 Cy., 440 V., 50 Cy.. 600 V., 60 Cy., 550 V., 50 Cy..	27	GG-506A	46.	GF-506A	46.	GFP-506A	58.	.....	.....			
			GG-506B		GF-506B		GFP-506B		.....				
			GG-506C		GF-506C		GFP-506C		.....				
			GG-506D		GF-506D		GFP-506D		.....				
Up-Down-Stop.....	Red P. L., Green P. L. 3 P. B.. 115 V., AC or DC..... 230 V., AC or DC.....	28	GG-507	42.	GF-507	42.	GFP-507	54.	.....	.....			
			GG-508		GF-508		GFP-508		.....				
HAZARDOUS LOCATIONS — CLASS I, GROUPS B, C, D — CLASS II, GROUPS E, F, G													
Description		Symbol	NEMA Types 7 and 9+		Description		Symbol	NEMA Types 7 and 9+		Price	Symbol		
Nameplate Marking	Features		Type	Price	Nameplate Marking	Features		Type	Price				
ONE UNIT													
Start-Stop.....	Mushroom Button.....	16	GR-101	\$27.	Fast-Slow.....	Selector Switch.....	19	GR-124	\$28.				
Stop.....			GR-103	27.	Man.-Auto.....	Selector Switch.....		GR-126	28.				
Jog-Start.....			GR-105	30.	Red Pilot Light: 220 V., 50-60 Cy.. 480 V., 60 Cy., 440 V., 50 Cy.. 600 V., 60 Cy., 550 V., 50 Cy..		22	GR-127B	34.				
Emerg. Stop.....			GR-108	27.				GR-127C					
Emerg. Stop.....			GR-133	30.				GR-127D					
Safe-Run.....	Selector Switch.....	18	GR-116	28.	Red Pilot Light: 115 V. AC or DC..... 230 V., AC or DC.....		43	GR-128	32.				
			GR-117	28.				GR-129					
High-Low-Open-Close-Off-On.....	Selector Switch.....	19	GR-118	28.	TWO UNIT								
Up-Down-For.-Rev.-Jog-Run.....	Selector Switch.....	19	GR-120	28.	Forward-Reverse.....	Up-Down-Open-Close-High-Low-Start-Stop.....	25	GR-202	\$30.				
			GR-121	28.	GR-203								
Hand-Off-Auto.....	Selector Switch.....	17	GR-122	28.	GR-204								
			GR-123	28.	GR-205								
				GR-206									

All push button units are momentary contact; all selector switch units maintained contact. Transformer and full voltage type pilot lights occupy space equal to that required for one push button unit.

*NEMA Type 4, 5, 7, and 9 stations as standard have provision for padlocking the "Stop" button in the depressed position.

*Symbol 43 shown on page 6.

SQUARE D COMPANY

General Revision

Prices Subject to Change without Notice.

SCHEDULE DS-1 (K) DISCOUNTS



HEAVY DUTY CONTROL STATIONS

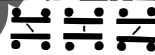
600 VOLTS AC

600 VOLTS DC

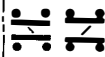
HAZARDOUS LOCATIONS — CLASS I, GROUPS B, C, D — CLASS II, GROUPS E, F, G				
Description		Symbol	NEMA Types 7 and 9+	
Nameplate Marking	Features		Type	Price
TWO UNIT (Cont'd.)				
On-Off.....		25	GR-210	\$30.
Start-Stop.....	Maintained Contact.....	107	GR-241	30.
On-Off.....	Maintained Contact.....	107	GR-214	30.
Start-Stop.....	Mushroom Button on Stop...	25	GR-242	33.
Open-Close.....	Maintained Contact.....	107	GR-220	30.
Jog-Stop.....		25	GR-221	30.
Safe-Run, Start....	1 Sel. Sw. 1 Button.....	18 16	GR-222	31.
Start.....	Red Pilot Light, 1 Button: 220 V., 50-60 Cy..... 480 V., 60 Cy., 440 V., 50 Cy.. 600 V., 60 Cy., 550 V., 50 Cy..	22 16	GR-226B GR-226C GR-226D	37.
Start.....	Red Pilot Light, 1 Button 115 V., AC or DC..... 230 V., AC or DC.....	43 16	GR-227 GR-228	35.
Stop.....	Red Pilot Light, 1 Button 220 V., 50-60 Cy..... 480 V., 60 Cy., 440 V., 50 Cy.. 600 V., 60 Cy., 550 V., 50 Cy..	22 16	GR-244B GR-244C GR-244D	37.
Stop.....	Red Pilot Light, 1 Button.... 115 V., AC or DC..... 230 V., AC or DC.....	43 16	GR-245 GR-246	35.
Hand-Off-Auto.....	Red Pilot Light, 1 Sel. Sw.: 220 V., 50-60 Cy..... 480 V., 60 Cy., 440 V., 50 Cy.. 600 V., 60 Cy., 550 V., 50 Cy..	22 17	GR-232B GR-232C GR-232D	38.
Hand-Off-Auto.....	Red Pilot Light, 1 Sel. Sw.: 115 V., AC or DC..... 230 V., AC or DC.....	43 17	GR-233 GR-234	36.
	1 Red, 1 Green Pilot Light: 220 V., 50-60 Cy..... 480 V., 60 Cy., 440 V., 50 Cy.. 600 V., 60 Cy., 550 V., 50 Cy..	27	GR-235B GR-235C GR-235D	44.
	1 Red, 1 Green Pilot Light: 115 V., AC or DC..... 230 V., AC or DC.....	43 43	GR-236 GR-237	40.
THREE UNIT				
Start-Jog-Stop.....		8	GR-305	\$58.
Up-Down-Run.....			GR-306	58.
Open-Close-Stop....			GR-307	58.
High-Low-Stop.....			GR-308	58.
Start-Jog-Stop.....			GR-310	58.
For.-Rev. Stop.....			GR-311	58.
Up-Down-Stop.....			GR-312	58.
For.-Rev. Stop.....	Mushroom on Stop.....		GR-346	61.
THREE UNIT (Cont'd.)				
Open-Close-Stop....	Mushroom on Stop.....	8	GR-348	\$61.
High-Low-Stop.....	Mushroom on Stop.....	8	GR-349	61.
For.-Rev., Start-Stop		*	GR-350	
High-Low, Start-Stop	Sel. Sw., 2 Push Buttons....	19 25	GR-351 GR-352	\$59.
Up-Down, Start-Stop				
Safe-Run, Start-Stop		*	GR-354	
Auto-Hand Start-Stop	Sel. Sw., 2 Push Buttons....	19 25	GR-355 GR-323	59.
Safe-Run, For.-Rev.				
Start-Stop.....	Red Pilot Lt., 2 Push Buttons: 220 V., 50-60 Cy..... 480 V., 60 Cy., 440 V., 50 Cy.. 600 V., 60 Cy., 550 V., 50 Cy..	22 25	GR-334B GR-334C GR-334D	65.
Start-Stop.....	Red Pilot Lt., 2 Push Buttons: 115 V., AC or DC..... 230 V., AC or DC.....	43 25	GR-335 GR-336	63.
Start-Stop.....	Green Pilot Lt., 2 Push B.... 220 V., 50-60 Cy..... 480 V., 60 Cy., 440 V., 50 Cy.. 600 V., 60 Cy., 550 V., 50 Cy..	22 25	GR-337B GR-337C GR-337D	65.
Start-Stop.....	Green Pilot Lt., 2 Push B.... 115 V., AC or DC..... 230 V., AC or DC.....	43 25	GR-338 GR-339	63.
FOUR UNIT				
High-Sec.-Low-Stop..		*	GR-402	\$90.
High-Low-Start-Stop		38	GR-404	
Up-Down-Run-Stop			GR-406	
Up-Down-For.-Rev.			GR-409	
High-Low, For.-Rev.		*	GR-451	
Stop.....		19	GR-452	91.
For.-Rev., High-Low	1 Sel. Sw., 3 Push Buttons...	8	GR-453	
Stop.....				
High-Low, Up-Down				
Stop.....				
Safe-Run, For.-Rev.	1 Sel. Sw., 3 Push Buttons...	18 8	GR-454	91.
Stop.....				
Start-Stop.....	Red P. L., Green P. L., 2 P.B. 220 V., 50-60 Cy..... 480 V., 60 Cy., 440 V., 50 Cy.. 600 V., 60 Cy., 550 V., 90 Cy..	27 25	GR-455B GR-455C GR-455D	104.
Start-Stop.....	Red P. L., Green P. L., 2 P. B.: 115 V., AC or DC..... 230 V., AC or DC.....	43 25	GR-456 GR-457	100.



16



17



18



22



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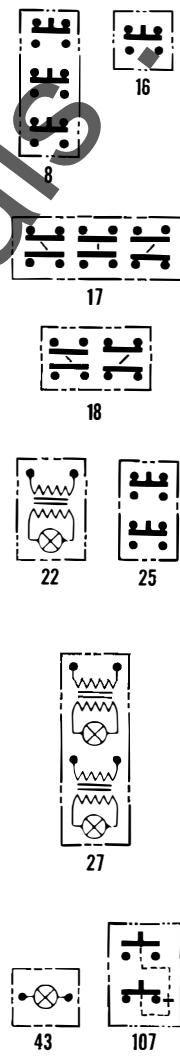
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43



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Base Price table For Custom-Built Stations +

0-600 VOLTS AC				CLASS 9001				6-600 VOLTS DC			
Number of Units	Nameplate Marking	Surface Mounting General Purpose Enclosure NEMA Type 1		Flush Mounting General Purpose Without Pull Box		Flush Mounting General Purpose With Pull Box		Water-tight and Dust-tight Enclosure NEMA Type 4 and 5+		Hazardous Locations Class 1, Group B, C and D Class 2, Group E, F and G NEMA Types 7 and 9+	
		Type	Base Price	Type	Base Price	Type	Base Price	Type	Base Price	Type	Base Price
1	Standard Markings....	GG-10	\$11.	GF-10	\$11.	GFP-10	\$17.	GW-10	\$23.	GR-10	\$27.
2	Standard Markings....	GG-20	17.	GF-20	17.	GFP-20	23.	GW-20	26.	GR-20	30.
3	Standard Markings....	GG-30	22.	GF-30	22.	GFP-30	31.	GW-30	44.	GR-30	58.
4	Any Marking.....	GG-40	27.	GF-40	27.	GFP-40	36.	GW-40	53.	GR-40	90.
5	Any Marking.....	GG-50	32.	GF-50	32.	GFP-50	44.				
6	Any Marking.....	GG-60	37.	GF-60	37.	GFP-60	49.				
7	Any Marking.....	GG-70	43.	GF-70	43.	GFP-70	61.				
8	Any Marking.....	GG-80	48.	GF-80	48.	GFP-80	66.				

+ Base prices cover stations with push buttons only. If selector switches, pilot lights or other special features are required make additions shown in table on page 61.

*NEMA Type 4-5, 7 and 9 stations as standard have provisions for padlocking the "Stop" button in the depressed position.

*Symbols 19 and 38 shown on page 5.



HEAVY DUTY CONTROL STATIONS

PRICES FOR ADDITIONS AND SPECIAL FEATURES

Substitutions (In Place of Standard Push Button Units)	Enclosure Type	Price Addition Each	Additions	Enclosure Type	Price Addition Each
Selector Switch.....	All	\$1.	Red or Black Mushroom Cap to P. B.....	All	\$3.
Two single pole, single throw, maintained P. B.....	All	N.C.	Gloved hand operator.....	GG, GF, GFP	4.
Transformer type P.L. with standard voltages	All	7.	Lockout latch to P. B.....	GG, GF, GFP	3.
Resistor type P.L. with standard voltages..... (Full voltage bulb furnished in NEMA 7&9)	All	5.	(Available only on bottom unit).....	GW, GR	N.C.
Three Point Contact.....	All	3.	Special paint.....	GG, GF, GF	3.
Double Unit (2 N.O. or 2 N.C. Contacts).....	All	3.	Corrosion resisting finish on enclosure.....	GW, GR	5.
Pushbutton with jog attachment..... (Not available in NEMA 4-5, 7-9)	GG, GF, GFP	3.	•Special non-standard N.P., per N.P.....	GG, GF, GFP	\$5.50
			Legend plate on ENCLOSURE with marking specified by customer.....	GW, GR	Standard 1.
				All	1.50

•For Standard Nameplate Markings, see Table below.

HEAVY DUTY CONTROL UNITS

Push Buttons — Selector Switches — Pilot Lights

0-600 VOLTS

OPEN TYPE

CLASS 9001

Function	Description	Standard Button		Mushroom Button		Sym- bol
		Type	Price	Type	Price	
Push Button Units	Black Button—double circuit.....	GO-1	\$ 3.70	GO-16	\$ 6.70	16
	Red Button—single circuit N.C.....	GO-2	3.70	GO-17	6.70	3
	Red Button—double circuit.....	GO-3	3.70	GO-18	6.70	16
	Black Button—three point contacts.....	GO-4	6.70	GO-19	10.70	40
	Black Button—Two poles N.O.....	GO-7	6.70	GO-20	10.70	41
	Red Button—Two poles N.C.....	GO-8	6.70	GO-21	10.70	42
Function	Description	For Vertical Mounting		For Side-by-Side Mounting		Sym- bol
		Type	Price	Type	Price	
Selector Switch Units	Single Pole, double throw.....	HO-1		HO-7	\$ 4.70	17
	Double Pole, single throw.....	HO-2		HO-8	4.70	18
	Single Pole, double throw.....	HO-3		HO-9	4.70	19
	Single Pole, double throw.....	HO-4		HO-10	4.70	20
	Double Pole, single throw.....	HO-5		HO-11	4.70	21

Heavy duty open type control units or pilot lights do not include nameplates, nor do they include mounting provisions for nameplates. However, nameplates for separate mounting on the user's enclosure or flush plate may be ordered as Class 9001 Type TN-8. Refer to the Standard Nameplates listed to the right.

OPEN TYPE PILOT LIGHTS AND COLOR CAPS *

CLASS 9001

TRANSFORMER TYPE			
Frequency		Type	Price
60 Cycle	50 Cycle		
120 V.	110 V.	PO-21	\$ 10.
220 V.	220 V.	PO-22	
480 V.	440 V.	PO-23	
600 V.	550 V.	PO-24	
25 Cycle		PO-31 PO-32	
110 V.	220 V.		
RESISTOR TYPE — AC or DC			
Volts	Type		Price
120 240	PO-41 PO-42		\$ 8.

PULLBOXES CLASS 9001

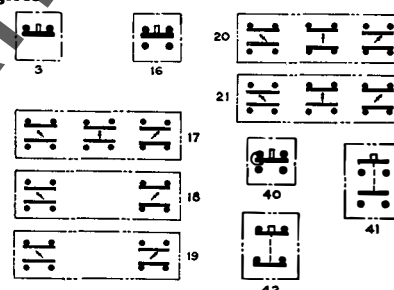
No. of Units	Type	Price
1	FP-1	\$ 6.
2	FP-2	6.
3	FP-3	9.
4	FP-4	9.
5	FP-5	12.
6	FP-6	12.
7	FP-7	18.
8	FP-8	18.

Plastic Color Caps for General Purpose Flush and Surface Mounted Catalog Listed Devices

Color	Type	Price	Color	Type	Price
Red	R1	\$.70	Blue	B1	\$.70
Green	G1		Clear	C1	
Amber	A1		White	W1	

Open type pilot lights are supplied without color cap. Replacement color caps for factory assembled Types GG, GF, and GFP control stations can be selected from **Table above**. Color caps for installation on user's panel can be ordered from **Table below** — these are plastic snap-in design, for mounting in 1½" diameter hole in 18 to 13 gauge sheet steel.

COLOR CAPS					
Color	Type	Price	Color	Type	Price
Amber	A4	\$.70	Green	G4	\$.70
Blue	B4		Red	R4	
Clear	C4		White	W4	



STANDARD NAMEPLATES

Marking	Type	Marking	Type
Blank	TN-800	Lower	TN-821
Start	TN-801	Out	TN-822
Stop	TN-802	Reset	TN-823
On	TN-803	Run	TN-824
Off	TN-804	Raise	TN-827
Emer. Stop	TN-805	For.-Rev.	TN-839
Forward	TN-806	High-Low	TN-841
Reverse	TN-807	Jog-Run	TN-842
Close	TN-808	Man.-Auto	TN-843
Open	TN-809	Off-On	TN-844
Down	TN-810	On-Off	TN-845
Up	TN-811	Open-Close	TN-846
High	TN-814	Safe-Run	TN-849
Low	TN-815	Start-Stop	TN-851
In	TN-817	Up-Down	TN-853
Jog	TN-818	For.-Off-Rev.	TN-859
Jog-Forward	TN-819	Hand-Off-Auto	TN-860
Jog Reverse	TN-820	Jog-Safe-Run	TN-861

Nameplate with markings listed in this table may be purchased separately at \$0.30 list each. Nameplates with special markings not listed in this table may be purchased separately at \$1.30 list each.

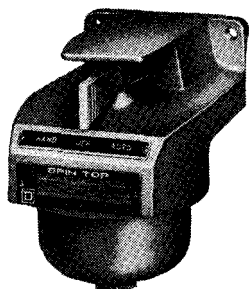
ORDERING INFORMATION REQUIRED

- 1—Order **standard** one, two, three, four and five unit control stations by class and type number from tables on pages 3, 4, 5, and 6.
- 2—If **custom-built** station is desired, order by class and type number from base price table on page 6, specify nameplate markings corresponding to units arranged from top to bottom, and state clearly the special featured required.
- 3—Price **custom-built** station at base price plus additions shown in listings on this page. If pilot lights are involved give voltage, frequency, and color. Selector switches must be specified by diagram symbol.

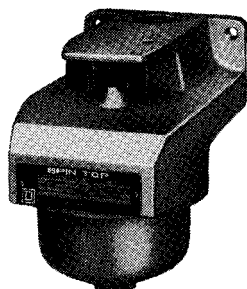


HEAVY DUTY SPIN TOP® EXPLOSION-PROOF CONTROL STATIONS

CLASS I GROUPS B, C and D HAZARDOUS LOCATIONS & CLASS II GROUPS E, F and G HAZARDOUS LOCATIONS



Type GT-112



Type GT-201

FACTORY ASSEMBLED CONTROL STATIONS

PUSH BUTTONS

600 VOLTS AC				600 VOLTS DC		
Marking	Momentary Contact			Maintained Contact		
	Sym- bol	Type	Price	Sym- bol	Type	Price
Start	16	GT-101	\$27.	...	...	...
Stop	16	GT-102†	27.	...	...	...
Start-Stop	113	GT-201†	30.	114	GT-107†	\$ 30.
On-Off	113	GT-203†	30.	114	GT-103†	30.
Jog-Run	113	GT-205	30.	114	GT-105	30.
Forw.-Rev.	113	GT-206	30.	114	GT-106	30.
Open-Close	113	GT-213	30.	114	GT-113	30.
Up-Down	113	GT-214	30.	114	GT-114	30.

†Includes provisions for padlocking the "Stop" and "Off" button in the depressed position.

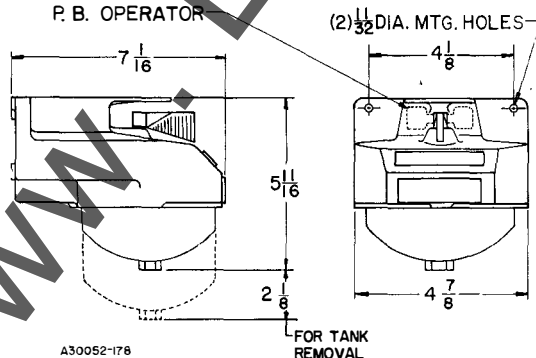
SELECTOR SWITCHES

Description	Symbol	Marking	Type	Price
Two Position	99	On-Off Safe-Run Jog-Run Forw.-Rev.	GT-108 GT-109 GT-110 GT-111	\$28.
Three Position	115	Hand-Off-Auto	GT-112	\$28.

CONTACT SYMBOLS

	Symbol	113	LEFT CENTER RIGHT
	Symbol	115	A1 O O O O O O A2 O O O O O O
	Symbol	16	LEFT RIGHT
	Symbol	114	A1 O O O O O O A2 O O O O O O
	Symbol	99	LEFT RIGHT
	Symbol	99	A1 O O O O O O A2 O O O O O O

DOTTED LINE FOR
P. B. OPERATOR



A30052-178

APPLICATION

The Class 9001 Type GT Spin Top explosion proof NEMA 7-9 control stations are constructed in accordance with the requirements of Underwriters Laboratories Specifications for (Class 1 Groups B, C, and D) and (Class 2 Groups E, F, and G) hazardous locations, as defined in the National Electrical Code. They have been designed specifically for installations where the atmosphere contains hydrogen, gasoline, petroleum, naphtha, alcohol, acetone, lacquer solvent vapors or natural gas. They are also suitable for applications found in flour and feed mills, grain elevators and sugar mills.

CONSTRUCTION FEATURES

The Spin Top control station enclosure is constructed of **high density aluminum alloy castings** for maximum strength and minimum weight. Installation and maintenance is more convenient because of the light weight. The enclosure consists of a collar section that houses the push button or selector switch operator and contact block along with a removable threaded tank section.

Some of the more important control station features are as follows:

Class 1 Group B — Hydrogen — Designed and tested in accordance with U.L. requirements for use in atmospheres containing hydrogen gas.

Appearance — Attractively styled enclosure with a bright baked aluminum enamel finish.

Protected Operating Lever — Push button or selector switch operator is protected from accidental operation or damage by a protective hood on the collar section.

Rocker Arm Type Operator — Best for corrosive locations — is used on the push buttons.

Stainless Steel thread in thread operating shafts have been used throughout the line.

Adequate Wiring Space is provided in the collar and tank section and the size of the complete device still kept to a minimum.

Heavy Duty Contact Blocks are provided. Contacts are double break silver to silver and carry a heavy duty rating. Contact blocks are designed for frequent operation and severe service.

A 3/4" conduit entry is provided as standard on the top and bottom of the collar section for convenience in wiring. One 3/4 inch pipe plug is included with each device for those installations that require only one conduit entry.

The Spin Top control station is available with either a push button (momentary or maintained) or selector switch operator. Provisions for padlocking the push button operator in the "stop" position is supplied as standard.



CLASS	9001
PAGE	0.1
JULY, 1968	

CONTROL STATION AND CONTROL UNIT SELECTION GUIDE

STANDARD DUTY

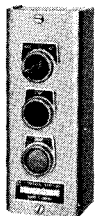


Standard Duty Control stations are used with magnetic starters and contactors to govern the more common control functions such as "Start-Stop" and "Forward-Reverse-Stop". Either one, two or three control units are assembled together in a variety of enclosure types to provide unified surface or flush mounted control stations.

A guideline in selection of standard duty control stations is the standard duty ratings which permit use with starters and contactors through Size 4.

Class 9001	Price Page	Desc. Page	Dim. Page
Control Stations.....	1	1-2	1-2
Control Units.....	2-2.1	—	—

HEAVY DUTY



Heavy duty control stations are intended for use in control circuits of magnetic starters or contactors up to 600 volts ac or dc. Separate push buttons, selector switches and pilot lights may be assembled together as needed to form a complete station. Heavy duty control stations offer more flexibility than standard duty control stations permitting build up of a station to meet specific function requirements. Heavy duty ratings permit use with contactors and starters Size 5 and larger as well as Sizes 00 through 4.

Class 9001	Price Page	Desc. Page	Dim. Page
Control Stations.....	3-6.1	5-6	3-5
Control Units.....	6.1	7	5
Start-Stop Control Stations.....	6.2	—	—

TYPE K — HEAVY DUTY OIL-TIGHT



Type K heavy duty oil-tight control units and stations are intended primarily for use on machine tool applications or in environments necessitating the use of a dust-tight control station such as in foundries and steel mills.

The oil-tight control units and stations are by no means limited to these applications, however. Virtually unlimited combinations of control units — push buttons, selector switches, pilot lights, etc. can be assembled into enclosures to meet specific circuit design requirements for an innumerable number of applications; including watertight applications in breweries and meat packing plants.



The Type K control units and stations incorporate features and flexibility not found in the Type T line listed below and should be substituted for Type T operators whenever possible.

Class 9001	Page
Push Buttons.....	148
Illuminated Push Buttons.....	149
Standard and Illuminated Selector Switches.....	150-156
Selector-Push Buttons.....	157
Pilot Lights.....	158
Special Purpose Operators.....	159-160
Contact Blocks.....	164
Legend Plates.....	161
Accessories.....	162-163
Enclosures.....	165, 169,
Control Stations.....	165-166, 168-169, 170.5

TYPE T — HEAVY DUTY OIL-TIGHT



Type T heavy duty oil-tight control units, like the Type K above, are intended primarily for machine tool and industrial applications, but are suitable for applications elsewhere, as well.

Use of Type T control units on new applications should be discouraged as much as possible and Type K control units should be substituted because of the additional flexibility in operator selection and circuit design built into the Type K control units.

Class 9001	Price Page	Desc. Page
Push Buttons.....	8	14
Illuminated Push Buttons.....	9	15
Selector Switches.....	10-11	14
Selector-Push Button.....	12-13	14
Pilot Lights.....	9	15
Special Purpose Operators.....	8, 13	16
Contact Blocks.....	7	13
Legend Plates.....	14.1	16
Accessories.....	14	17
Enclosures (See Type K).....	—	—
Control Stations (See Type K).....	—	—

SPECIAL PUSH BUTTON STATIONS



Pendant push button stations are designed specifically for control of the magnetic contactors used on hoists, monorails and other overhead material handling equipment. Pendant type control stations are particularly adaptable for use on special machines where remote operation is desirable.

Palm operated press buttons are specifically designed for use on stamping presses to meet safety regulations where a basic requirement is that the operator of the press initiate action by depressing a large push button with each hand.

Class 9001	Price Page	Desc. Page	Dim. Page
Pendant Type Stations			
Standard Duty Units.....	15	21-22	13
Heavy Duty Oil-Tight Units.....	15	21-22	13
Standard and Shallow Enclosures.....	15	21-22	13
Palm Operated Press Buttons.....	17	23	24

www.ElectricalPartManuals.com



OCTOBER, 1968

STANDARD DUTY CONTROL STATIONS

APPLICATION

Standard duty control stations are used with magnetic motor starters to govern the starting, stopping, or reversing of all types of electric motors. Push button units are assembled in various combinations to form unified stations for remote control of starter and motor operations. Standard duty stations may consist of either one, two, or three, control units and can be furnished in either surface mounted or flush mounting constructions. Both momentary and maintained contact push button assemblies are available in two unit stations.

RATINGS

Voltage	Normal Current	Inrush Current
110-125 V. AC.....	3.0	30
220-250 V. AC.....	1.5	15
440-480 V. AC.....	0.75	7.5
550-600 V. AC.....	0.6	6
115-125 V. DC.....	1.1	....
230-250 V. DC.....	0.55	....
550-600 V. DC.....	0.2	....

CONSTRUCTION

Types B, BB and BW push button stations are supplied in either one or two unit construction and with all combinations of standard markings. Types B and BW denote surface mounted stations in general purpose and water-tight enclosures respectively. Type BB identifies a station with a general purpose flush mounting plate, but without a pull box.

General purpose enclosures for Type B stations are constructed of heavy sheet steel finished in baked gray enamel. Rounded slip-on covers are attached to the base by means of screws at the top and bottom.

A maximum of wiring space is available when the cover is removed. Knockouts are provided in the back and both ends.

Water-tight enclosures for the Type BW series are die cast. A threaded conduit entrance is provided in the bottom of the enclosure. Gaskets around the operating buttons and between the cover and the case form the water-tight seal. Type BW-49 is lever operated.

Flush mounting plates for Type BB push buttons are heavy gauge sheet steel finished in baked gray enamel.

Double break, silver contacts are used for both the start and stop units. The contacts are single circuit and are arranged in normally open construction for the start and normally closed for the stop. A removable connecting strap is used as a common connection between one side of the start and stop circuits.

A single molded phenolic block supports the contact mechanism and terminals for both the start and stop circuits. The terminals project beyond the contact mechanism to facilitate wiring.

Type BR push button control stations have cast aluminum enclosures with machined surfaces, and are suitable for Class I Groups B, C, D and Class II Groups E, F, G hazardous locations. Stations of this type are available in either one or two push button units.

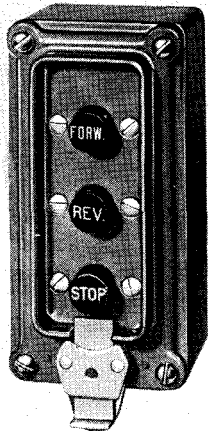


SQUARE D COMPANY

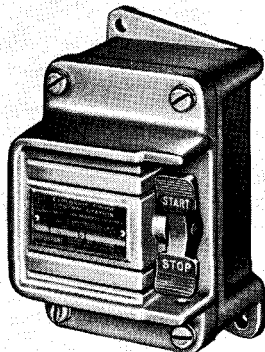


STANDARD DUTY CONTROL STATIONS

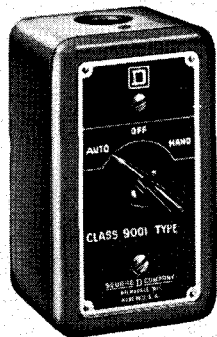
OCTOBER, 1968



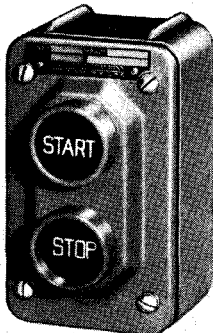
Class 9001
Type RK-4A



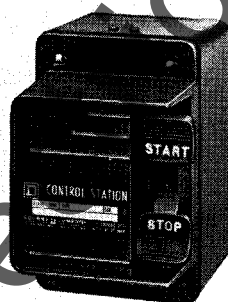
Class 9001
Type BR-31



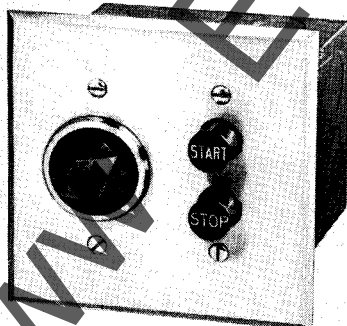
Class
9001
Type
C-47



Class 9001
Type C-41



Class 9001
Type BW-49



Class 9001
Type BF-14

Both cover and case have machined surfaces as required by Article 500 of the National Electric Code. Four stainless steel screws fasten the cover to the case, to insure maintenance of the seal. A stainless steel rod, turning in a close fitting stainless steel bearing, joins the external operating lever to the internal push button mechanism. The materials have been chosen to avoid corrosion or sticking.

A threaded conduit entrance is provided in one end, and two lugs on the casting base are drilled for mounting screws.

The contacts are double break, silver to silver with a common connection bar between the start and stop mechanism. All contacts and terminals are assembled on a single phenolic base.

Type RK push button stations meet the requirements of a compact, 3 button station for standard duty reversing applications. Three individual push button units are fastened to a die cast cover and enclosed in a cast box. On the Type RK4A through F a lockout feature is supplied on the stop button. This station is also supplied without conduit box for flush mounting purposes. The cast enclosures are suitable for general purpose indoor applications where normal atmospheric conditions prevail, and are intended primarily to avoid accidental contact with live parts.

The push button units are equipped with double break, silver contacts and are completely enclosed in bakelite bases. Stop buttons are single circuit while all other buttons are double circuit. Terminals are arranged for convenience in wiring.

Types C, CB and CW stations are similar to the B, BB and BW stations, except that the contacts are arranged for maintained contact.

The double break, silver to silver single circuit contact mechanism is identical with that supplied on the Type B momentary contact stations. Contact blocks are molded phenolic.

Type BF stations are for flush mounting applications in the building trade. They are equipped with **stainless steel flush plates** and are provided with standard sheet steel pull boxes with plaster adjustment.

Push buttons used with the Type BF devices may be either momentary contact or maintained contact type. Terminals are provided on pilotlights for either 115 V. or 230 V. connection.

Supersedes Dimension Sheet 9001,
Page 1, dated October, 1964



CLASS **9001**
Dimension
Sheet

PAGE 1

STANDARD DUTY CONTROL STATIONS

Approximate Dimensions — Not for Construction

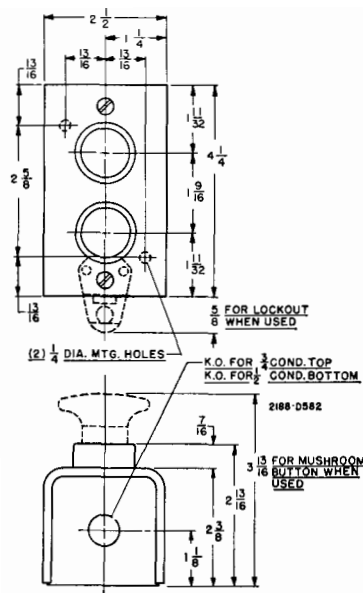


Figure 1
Type B30 thru B38, B50.

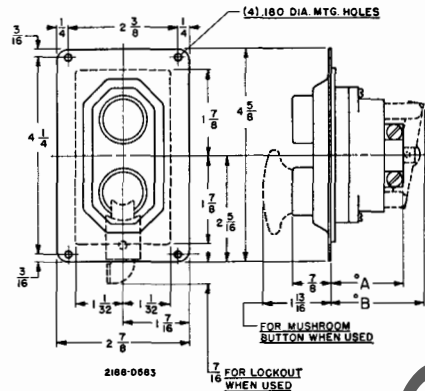


Figure 2
Type BB1 thru BB10, CB1 thru CB3.

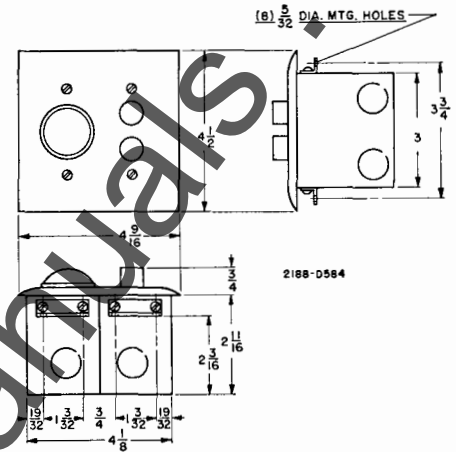


Figure 3
Type BF14 and BF17

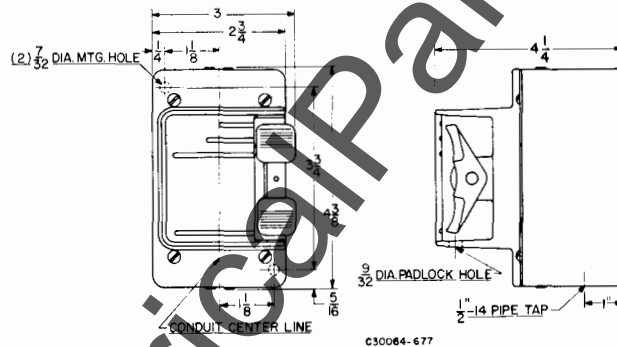


Figure 6
Class 9001 Type BW49 and Class 9001 Type CW8

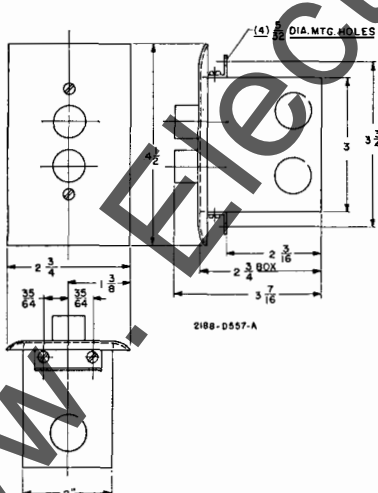


Figure 4
Type BF13, BF19-20, BF22 thru BF25.

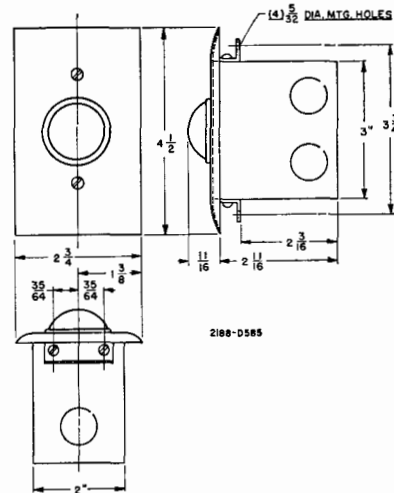


Figure 5
Type BF21.

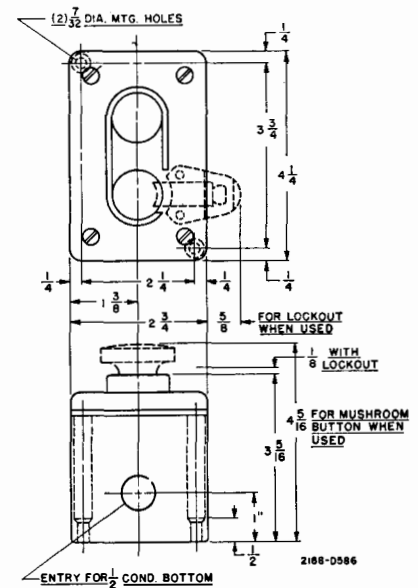


Figure 7
Type BW40 thru BW48, BW50.

Dimensions are in Inches.

Dimensions Subject to Change without Notice.

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STANDARD DUTY CONTROL STATIONS

Approximate Dimensions — Not For Construction

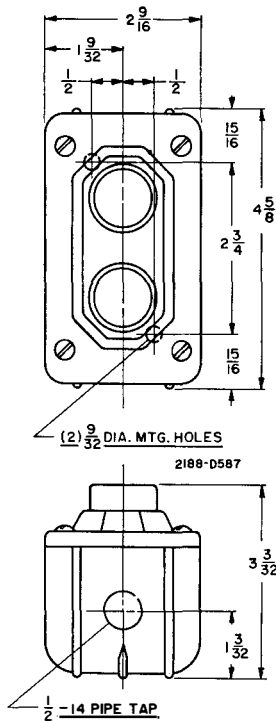


Figure 7
Type C41 thru C43.

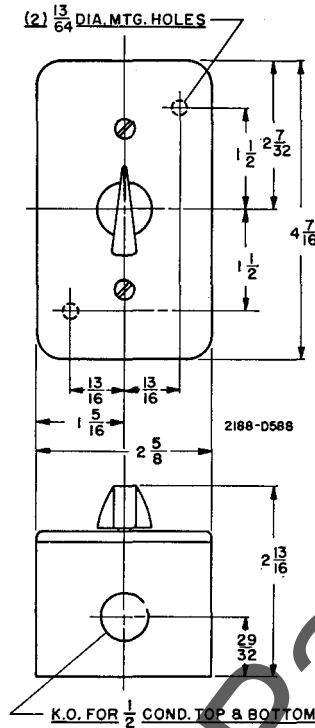


Figure 8
Type C46-47.

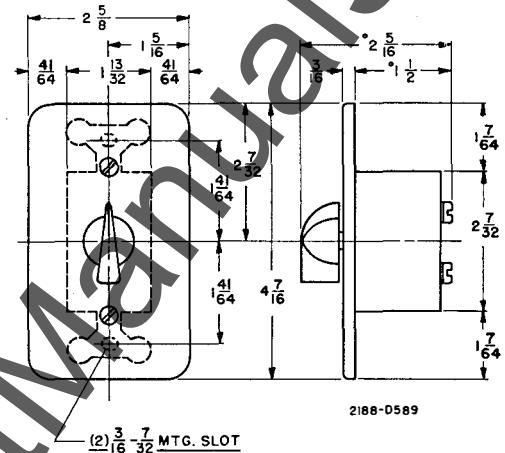


Figure 9
Type CB46-47

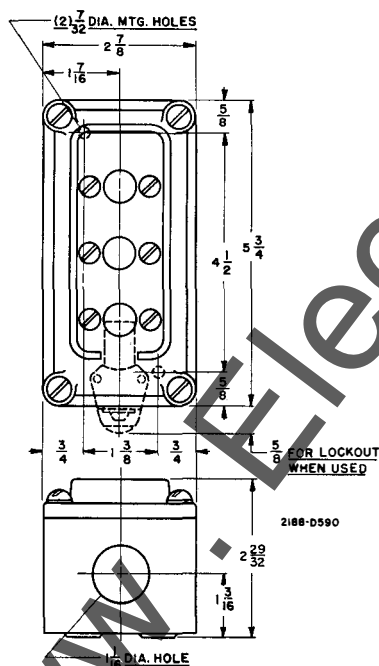


Figure 10
Type RK1A thru RK1D,
RK2A, thru RK2F,
RK4A thru RK4F.

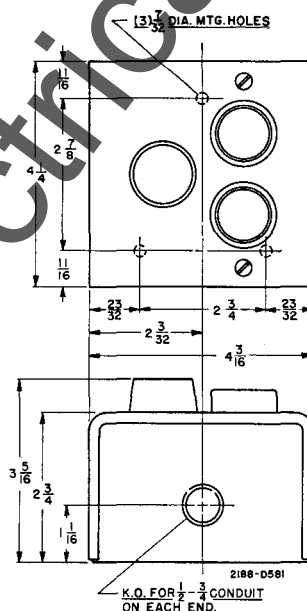


Figure 11
Type B39 and C39

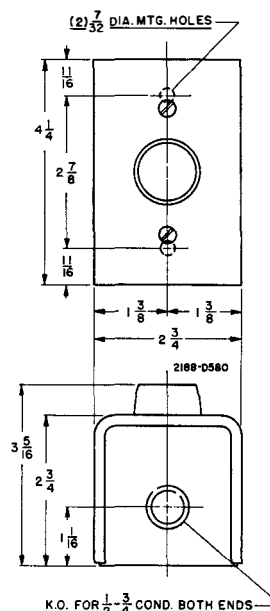


Figure 12
Type B49.

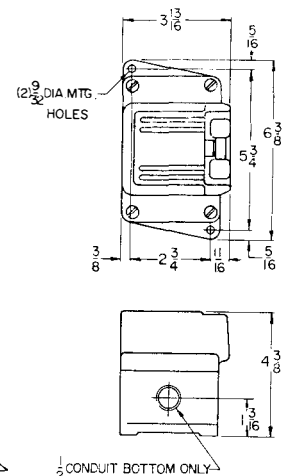


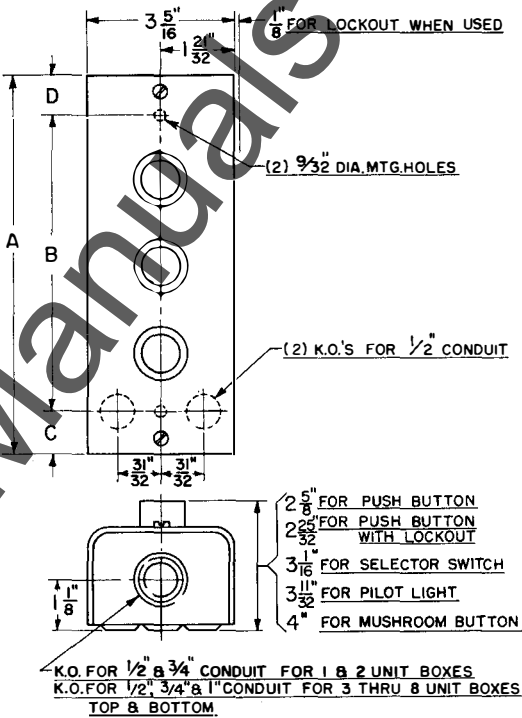
Figure 13
Type BR and CR



HEAVY DUTY CONTROL STATIONS
Approximate Dimensions — Not for Construction

GENERAL PURPOSE ENCLOSURES — Surface Mounting

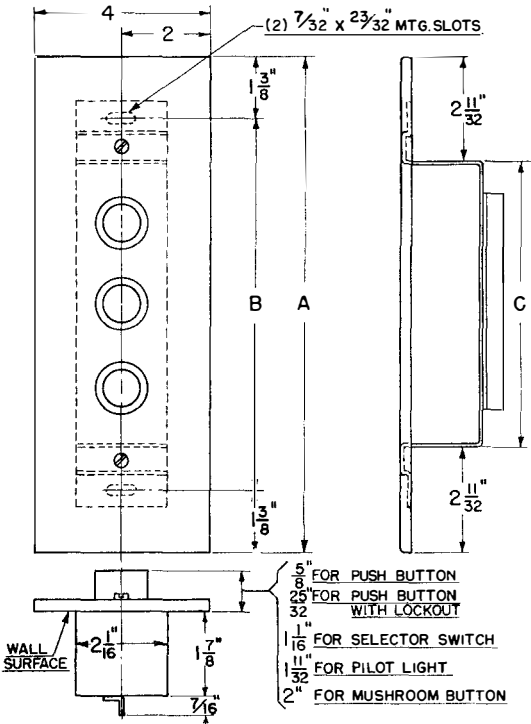
Number of Units	Dimensions			
	A	B	C	D
1	4 3/4	2 3/8	2 3/32	2 1/32
2	6 1/4	4 1/2	2 3/32	2 1/32
3	8 3/4	6 3/4	1 1/32	3 1/32
4	10 1/4	8 1/4	1 1/32	3 1/32
5	12 1/8	10 1/8	1 1/32	3 1/32
6	14	12	1 1/32	3 1/32
7	15 1/4	13 1/4	1 1/32	3 1/32
8	17 1/4	15 1/4	1 1/32	3 1/32



GENERAL PURPOSE ENCLOSURES — Flush Mounting without Pullbox

Number of Units	Dimensions		
	A	B	C
1	7 1/8	4 13/16	2 7/8
2	9 1/8	6 11/16	4 3/4
3	11 1/8	8 9/16	6 3/8
4	13 1/8	10 7/16	8 1/2
5	15 1/8	12 5/16	10 3/8
6	17 1/8	14 3/16	12 1/4
7	19 1/8	16 1/16	14 1/8
8	21 1/8	17 13/16	16

These devices can be used with a pullbox.
For dimensions of pullbox see dimensions for "flush mounting — with pullbox" on page 4.

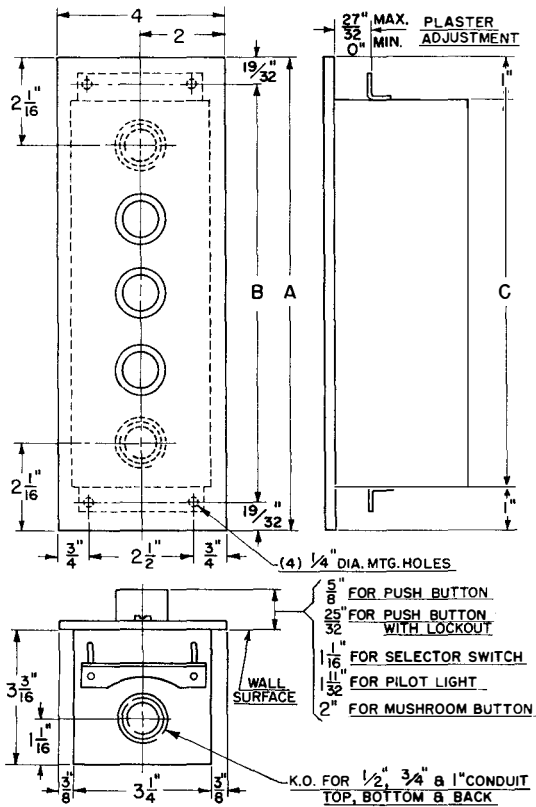




HEAVY DUTY CONTROL STATIONS

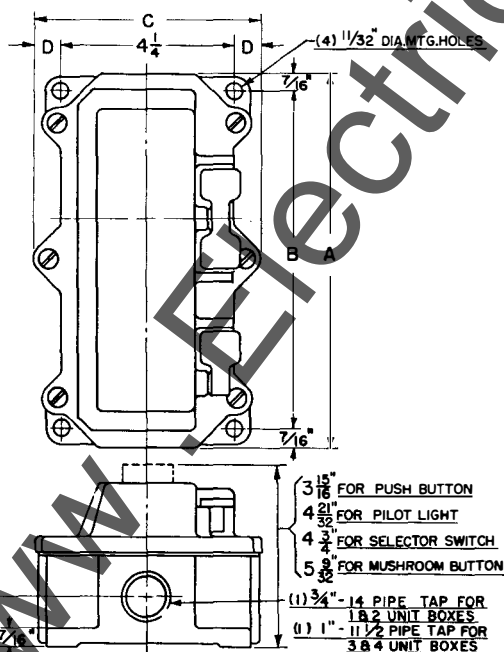
Approximate Dimensions — Not for Construction

GENERAL PURPOSE ENCLOSURES — Flush Mounting with Pullbox



Number of Units	Dimensions		
	A	B	C
1	7 1/16	6 3/8	5 9/16
2	9 1/16	8 1/4	7 1/16
3	11 3/16	10 1/8	9 3/16
4	13 1/16	12	11 3/16
5	15 1/16	13 7/8	13 1/16
6	16 1/16	15 3/4	14 1/16
7	18 1/16	17 5/8	16 1/16
8	20 1/16	19 1/2	18 1/16

WATER-TIGHT AND DUST-TIGHT ENCLOSURES



Number of Units	Dimensions			
	A	B	C	D
1	5 1/8	4 1/4	5 1/8	7 1/16
2	7 1/8	6 1/4	7 1/8	9 1/16
3	9 1/8	8 1/4	9 1/8	11 1/16
4	11 1/8	10 1/4	11 1/8	13 1/16

General Revision.

SQUARE D COMPANY

Dimensions Subject to Change without Notice.

DECEMBER, 1962

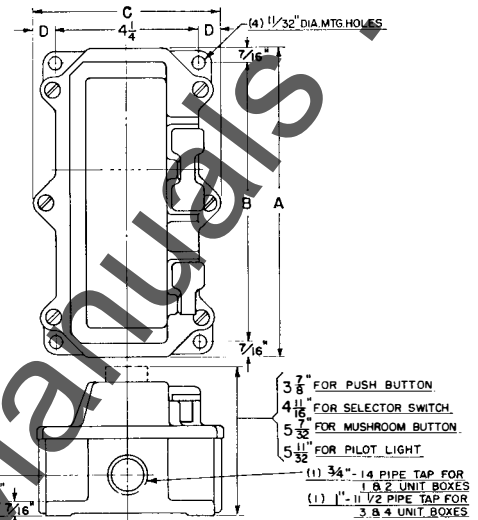
Supersedes Dimension Sheet 9001
Pages 5 and 6, dated July, 1952



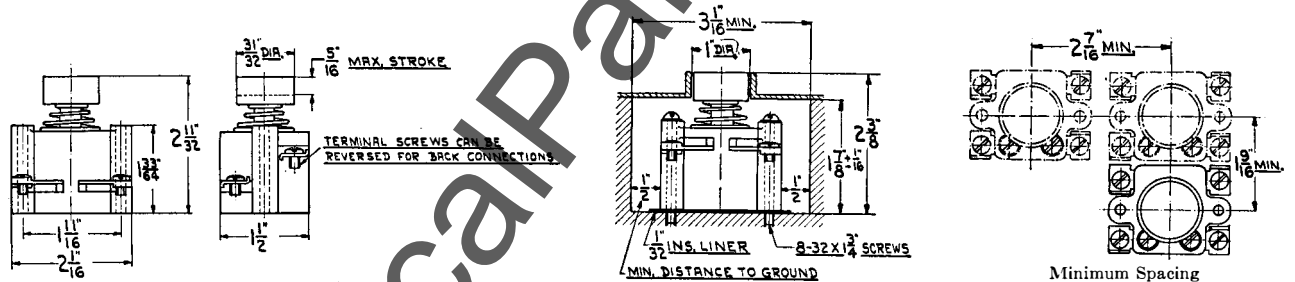
CLASS **9001**
Dimension
Sheet PAGE 5

HEAVY DUTY CONTROL STATIONS Approximate Dimensions — Not for Construction **HAZARDOUS LOCATIONS ENCLOSURES**

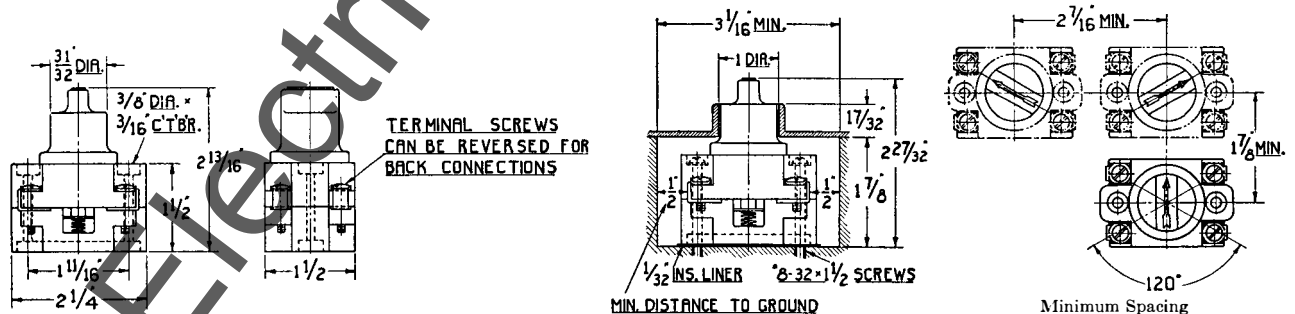
Number of Units	Dimensions			
	A	B	C	D
1	5 1/8	4 1/4	5 1/4	7/16
2	7 1/8	6 1/4	5 1/2	7/16
3	9 1/8	8 1/4	5 1/2	7/8
4	11 1/8	10 1/4	5 3/8	7/16



OPEN TYPE UNITS **Push Buttons**



Selector Switches



Pilot Lights



SQUARE D COMPANY

General Revision

Dimensions Subject to Change without Notice.

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JUNE, 1968

Supersedes Price Sheets 9001,
Page 7, dated September, 1963 and
Page 14.7, dated December, 1966.CLASS **9001**
Price Sheet PAGE 7

HEAVY DUTY OIL-TIGHT CONTROL UNITS

CONTACT BLOCKS

Contact blocks listed are used with the Class 9001 Type T operators. These operators are listed on the following pages 8 through 14.

Two basic types of contact blocks are available.

Type K — These blocks are available in 5 basic types — 3 standard and 2 special purpose blocks. Any of them can be mounted side by side or in tandem behind an operator to accomplish a particular contact arrangement. The Type K blocks should be used whenever possible. (Note: Type K blocks cannot be used with the Type TX, TS-80E2, TS-82D1, and TM-1 attachment).

Type T — The Type T blocks are available in the same basic arrangements as the Type K except each block serves a particular function such as 2 N.O.-2 N.C. contacts. They cannot be mounted side by side and only by using the special TF block can tandem mounting be accomplished.

STANDARD CONTACT BLOCKS

Description †	Symbol	Type K		Equivalent Type T	
		Type	Price	Type	Price
		KA-1	\$3.00	TA	\$3.00
		KA-2	1.50	TA-2	1.50
		KA-3	1.50	TA-1	1.50

† Type K block is shown.

ADDITIONAL CIRCUIT ARRANGEMENTS AVAILABLE

Description †	Symbol	Type K		Equivalent Type T	
		Contact Blocks Req'd	Price	Contact Blocks Req'd	Price
		Order Two Type KA-1	\$3.00 Each	Order One Type TB	\$6.00
		Order Two Type KA-2	1.50 Each	Order One Type TD	3.00
		Order Two Type KA-3	1.50 Each	Order One Type TC	3.00
SEQUENCING N.O. Contact of KA-4 closes before N.O. Contact on KA-1 (Type KR Operator only)		Order One Type KA-4 & One Type KA-1	3.00 Each	Order One Type TE	7.50
OVERLAPPING N.O. Contact of KA-4 closes before N.C. Contact of KA-5 Opens (Type KR Operators only)		Order One Type KA-4 & One Type KA-5	(KA-4) 3.00 (KA-5) 1.50	Order One Type TE-1▲	3.00

† Type K block is shown.

▲ Type TE-1 block has 2 single pole single throw contacts.

CONTACT BLOCK RATING — MAXIMUM A.C. TYPE K and TYPE T

Volts	AC Amperes			Resistive 75% Power Factor Make, Break, and Continuous
	Inductive Pilot Duty 35% Power Factor			
	Make	Break	Continuous	
120	60	6	10	10
240	30	3	10	10
480	15	1.5	10	10
600	12	1.2	10	10

CONTACT BLOCK RATING — MAXIMUM D.C.

Volts	Type K			Type T	
	DC Amperes			DC Amperes	
	Inductive Pilot Duty			Inductive Pilot Duty	
	Make and Break		Con- tinuous	Make and Break	Con- tinuous
	Single Throw	Double Throw			
120	1.1	1.1	10	2.2	10
240	0.55	.....	10	0.55	10
600	0.2	.....	10	0.2	10

SPECIAL PURPOSE CONTACT BLOCKS

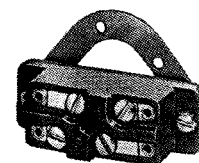
Description†	Symbol	Type K		Type T	
		Type	Price	Type	Price
 N.O. Contact Early Closing		KA-4	\$3.00	No equivalent	
 Late Opening		KA-5	1.50	No equivalent	

† Type K block is shown.

2 POLE DOUBLE THROW FOR TANDEM MOUNTING

Description	Symbol	Type	Price
		TF	\$6.
For use with any T contact block, except Types TE & TE-1, to obtain additional contacts. Note: A Special Purpose Block is not required to mount a Type K block in tandem.			

SNAP ACTION CONTACTS



For use with Type TR push buttons. Refer selector switch applications to factory. See Class 9007 catalog section for contact ratings*.

Description	Type	Price
Single pole, double throw	TA-5	\$6.
Two pole, double throw	TB-2	9.

*Contact rating of single pole unit is same as listed for 9007 AO-2; two pole unit has same rating as 9007 CO-3.



HEAVY DUTY OIL-TIGHT CONTROL UNITS

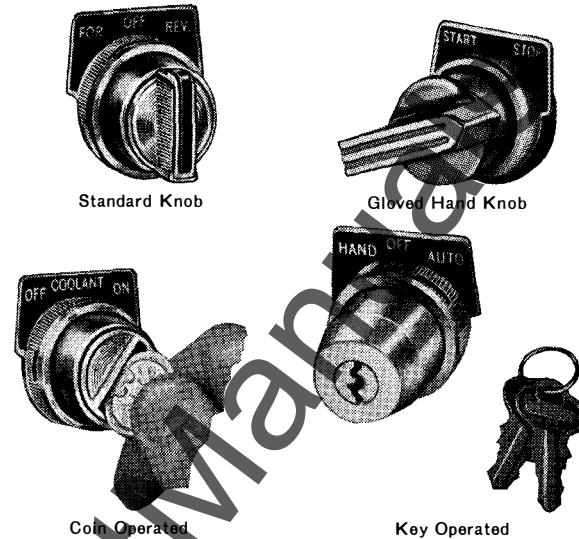
Table 6 — Two-Position Selector Switches

2-CIRCUIT UNITS				
Description	Features▲	Operator with Type TA Single Pole Double Throw Contact BlockⓈ		Price ★
		Type		
		Symbol 44	Symbol 99	
2-Position Main- tained Contact	Standard Knob—			
	Black.....	TS-1A	.....	\$ 7.
	Red.....	TS-112A	.....	7.
	Green.....	TS-113A	.....	7.
	Brown.....	TS-114A	.....	7.
	Yellow.....	TS-115A	.....	7.
	Orange.....	TS-116A	.....	7.
	Blue.....	TS-117A	.....	7.
	Gloved Hand Knob.....	TS-21A	.....	11.
	Coin Operated.....	TS-A-1A	.....	9.
	Key Operated*.....	TS-1K*A	.....	13.
2-Position Spring Return From Left To Center †	Standard Knob—			
	Black.....	TS-14A	.....	9.
	Red.....	TS-122A	.....	9.
	Green.....	TS-123A	.....	9.
	Brown.....	TS-124A	.....	9.
	Yellow.....	TS-125A	.....	9.
	Orange.....	TS-126A	.....	9.
	Blue.....	TS-127A	.....	9.
	Gloved Hand Knob.....	TS-41A	.....	13.
	Key Operated.....	TS-14K2A	.....	15.
2-Position Spring Return From Right To Center ‡	Standard Knob—			
	Black.....	.....	TS-27A	9.
	Red.....	.....	TS-132A	9.
	Green.....	.....	TS-133A	9.
	Brown.....	.....	TS-134A	9.
	Yellow.....	.....	TS-135A	9.
	Orange.....	.....	TS-136A	9.
	Blue.....	.....	TS-137A	9.
	Gloved Hand Knob.....	.....	TS-42A	13.
	Key Operated.....	.....	TS-27K1A	15.

Symbol	LEFT	RIGHT	Symbol	LEFT	RIGHT
44			99		

4-CIRCUIT UNITS				
Description	Features▲	Operator with Type TB Duplex Double Throw Contact Block		Price ★
		Type		
		Symbol 45	Symbol 100	
2-Position Main- tained Contact	Standard Knob—			
	Black.....	TS-1B		\$ 10.
	Red.....	TS-112B		10.
	Green.....	TS-113B		10.
	Brown.....	TS-114B		10.
	Yellow.....	TS-115B		10.
	Orange.....	TS-116B		10.
	Blue.....	TS-117B		10.
	Gloved Hand Knob.....	TS-21B		14.
	Coin Operated.....	TS-A-1B		12.
	Key Operated*	TS-1K*B		16.
2-Position Spring Return From Left To Center †	Standard Knob—	✚		
	Black.....	TS-14B		12.
	Red.....	TS-122B		12.
	Green.....	TS-123B		12.
	Brown.....	TS-124B		12.
	Yellow.....	TS-125B		12.
	Orange.....	TS-126B		12.
	Blue.....	TS-127B		12.
	Gloved Hand Knob.....	TS-41B		16.
	Key Operated.....	TS-14K2B		18.
2-Position Spring Return From Right To Center ‡	Standard Knob—	✚		
	Black.....		TS-27B	12.
	Red.....		TS-132B	12.
	Green.....		TS-133B	12.
	Brown.....		TS-134B	12.
	Yellow.....		TS-135B	12.
	Orange.....		TS-136B	12.
	Blue.....		TS-137B	12.
	Gloved Hand Knob.....		TS-42B	16.
	Key Operated.....		TS-27K1B	18.

Symbol	LEFT	RIGHT	Symbol	LEFT	RIGHT
45			100		



Key Operated Selector Switches With Dissimilar Key Changes

All key operated selector switches listed on pages 10 and 11 are furnished as standard with Square D number D10 key change and two keys. (Extra keys, part number 9406W110, can be purchased at \$0.60 list each.) For applications requiring several switches with dissimilar key changes, the following 23 additional key changes are available at no extra cost.

D11	D14	D17	D20	D25	D28	D31	CH501
D12	D15	D18	D22	D26	D29	D32	CH674
D13	D16	D19	D24	D27	D30	D34	SR251

To order a selector switch with one of the above key changes, insert desired key change number after basic Type number of operator immediately preceding the contact block letter designation. Example: A switch similar to Type TS-3K5B except with D11 key change would be ordered as Class 9001 Type TS-3K5-D11B.

Master Keying Provision

Occasionally it is desirable to have several switches with dissimilar key changes, but all operable by a single master key. The following key changes with master keying provisions are offered at \$1.00 addition per switch:

Key No.	Total Key Changes Available	Master Key (List Price Each \$0.60)
DH1 thru DH50	50	9409W00099

Each switch is supplied with two matching keys. Order master keys separately.

***IMPORTANT**—THESE KEY OPERATED SELECTOR SWITCH TYPE NUMBERS MUST BE COMPLETED BY INSERTING KEY WITHDRAWAL CODE NUMBER IN PLACE OF ASTERISK (*). Select code number from table on page 11. Spring return selector switches are available only with the key withdrawal indicated.

★ Prices include a Type TN-2 legend plate with standard markings shown in Table 14, page 14.1. Deduct \$0.30 if legend plate is not required. For other legend plates or special markings see Table 16, page 14.1

◊ To order a selector switch **without contact block**, omit final letter (A or B) of Type number. Deduct \$3.00 if Type TA contact block is omitted, \$6.00 if Type TB contact block is omitted.

▲ Selector switches with standard knob feature snap-in inserts which allow the user to change color when desired. See page 14 for listing of color insert kits.

✦ Type TF contact block cannot be used on these switches.

† These switches operate left-center rather than left-right.

‡ These switches operate center-right rather than left-right.

ORDERING INFORMATION REQUIRED — See Page 14.2

SQUARE D COMPANY

SCHEDULE DS-1 DISCOUNTS

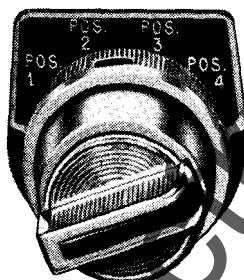
Prices Subject to Change without Notice.



HEAVY DUTY OIL-TIGHT CONTROL UNITS

Table 6A — Four Position Selector Switches

4-CIRCUIT UNITS				
Description	Symbol 112		Features ▲	Operator with Type TB Duplex Double Throw Contact Block ①
				Type Price ★
4-Position Maintained Contact			Standard Knob	
			Black.....	TS-401B \$ 10.
			Red.....	TS-402B 10.
			Green.....	TS-403B 10.
			Brown.....	TS-404B 10.
			Yellow.....	TS-405B 10.
			Orange.....	TS-406B 10.
			Blue.....	TS-407B 10.
			Gloved Hand Knob.....	TS-49B 14.
			Key Operated *.....	TS-400K *B 16.



Class 9001
Type TS-401

KEY WITHDRAWAL CODE NUMBERS FOR KEY OPERATED SELECTOR SWITCH

Positions marked "Yes" are those in which the key can be withdrawn, thereby locking the switch in that position.

4-Position Switches

Code No.	↖	↗	↘	↙
11	Yes	No	No	Yes
12	No	No	No	Yes
13	Yes	No	No	No

***IMPORTANT**—The key operated selector switch Type Number must be completed by inserting key withdrawal code number in place of asterisk (*). Select code number from key withdrawal table above.

★Prices include a blank Type TN-2 or TN-3 legend plate. Add \$1. for any marking. Deduct \$0.30 if legend plate is not required.

①To order a selector switch without contact block, omit final letter (B) of Type Number and deduct \$6.

▲Selector switches with standard knob feature snap-in inserts which allow the user to change color when desired. See page 14 for listing of color insert kits.

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APRIL, 1967

Supersedes Price Sheet 9001,
Page 11, dated August, 1961CLASS **9001**
Price Sheet PAGE 11**HEAVY DUTY OIL-TIGHT CONTROL UNITS****Table 7 — Three-Position Selector Switches**

2-CIRCUIT UNITS						
Description	Features▲	Operator with Type TA Single Pole Double Throw Contact Block ①				Price ★
		Type				
		Symbol 48	Symbol 52	Symbol 56	Symbol 60	
3-Position Maintained Contact	Standard Knob—	TS-2A	TS-3A	TS-4A	TS-5A	\$ 7.
	Black.....	TS-142A	TS-152A	TS-162A	TS-172A	7.
	Red.....	TS-140A	TS-150A	TS-160A	TS-170A	7.
	Other Colors.....	TS-22A	TS-23A	TS-24A	TS-25A	11.
	Gloved Hand Knob.....	TSA-2A	TSA-3A	TSA-4A	TSA-5A	9.
	Coin Operated.....	TS-2K *A	TS-3K *A	TS-4K *A	TS-5K *A	13.
3-Position Spring Return From Both Sides To Center	Standard Knob—	TS-8A	TS-9A	TS-10A	TS-11A	\$ 9.
	Black.....	TS-202A	TS-212A	TS-222A	TS-232A	9.
	Red.....	TS-200A	TS-210A	TS-220A	TS-230A	9.
	Other Colors.....	TS-35A	TS-36A	TS-37A	TS-38A	13.
	Gloved Hand Knob.....	TS-8K5A	TS-9K5A	TS-10K5A	TS-11K5A	15.
	Key Operated.....					
3-Position Spring Return From Left To Center Only	Standard Knob—	TS-15A	TS-16A	TS-17A	TS-18A	9.
	Black.....	TS-262A	TS-272A	TS-282A	TS-292A	9.
	Red.....	TS-260A	TS-270A	TS-280A	TS-290A	9.
	Other Colors.....	TS-43A	TS-44A	TS-45A	TS-46A	13.
	Gloved Hand Knob.....	TS-15K *A	TS-16K *A	TS-17K *A	TS-18K *A	15.
	Key Operated *.....					
3 Position Spring Return From Right To Center Only	Standard Knob—	TS-511A	TS-521A	TS-531A	TS-541A	\$ 9.
	Black.....	TS-512A	TS-522A	TS-532A	TS-542A	9.
	Red.....	TS-510A	TS-520A	TS-530A	TS-540A	9.
	Other Colors.....	TS-518A	TS-528A	TS-538A	TS-548A	13.
	Gloved Hand Knob.....	TS-21K *A	TS-22K *A	TS-23K *A	TS-24K *A	15.
	Key Operated *.....					

**KEY WITHDRAWAL
CODE NUMBERS FOR
KEY OPERATED
SELECTOR SWITCH**

Positions marked "Yes" are those which the key can be withdrawn, thereby locking the switch in that position

2-Position Switches		
Code No.	Left	Right
1	Yes	No
2	No	Yes
3	Yes	Yes

3-Position Switches

Code No.	Left	Center	Right
4	Yes	No	No
5	No	Yes	No
6	No	No	Yes
7	Yes	Yes	No
8	Yes	No	Yes
9	No	Yes	Yes
10	Yes	Yes	Yes

●Complete the type number by inserting one of the following numbers for insert color identification: 3-green, 4-brown, 5-yellow, 6-orange, 7-blue.

●Complete the type number by inserting one of the following numbers for insert color identification: 3-green, 4-brown, 5-yellow, 6-orange, 7-blue.

Symbol	LEFT CENTER RIGHT	Symbol	LEFT CENTER RIGHT	Symbol	LEFT CENTER RIGHT	Symbol	LEFT CENTER RIGHT
48		52		56		60	

**KEY WITHDRAWAL
CODE NUMBERS FOR
KEY OPERATED
SELECTOR SWITCH**

Positions marked "Yes" are those in which the key can be withdrawn, thereby locking the switch in that position

2-Position Switches

Code No.	Left	Right
1	Yes	No
2	No	Yes
3	Yes	Yes

3-Position Switches

Code No.	Left	Center	Right
4	Yes	No	No
5	No	Yes	No
6	No	No	Yes
7	Yes	Yes	No
8	Yes	No	Yes
9	No	Yes	Yes
10	Yes	Yes	Yes

4-CIRCUIT UNITS								
Description	Features▲	Operator with Type TB Duplex Double Throw Contact Block ①						Price ★
		Symbol 49	Symbol 53	Symbol 57	Symbol 61	Symbol 79	Symbol 86	
3-Position Maintained Contact	Standard Knob—							
	Black.....	TS-2B	TS-3B	TS-4B	TS-5B	TS-6B	TS-7B	\$10.
	Red.....	TS-142B	TS-152B	TS-162B	TS-172B	TS-182B	TS-192B	10.
	Other Colors.....	TS-140B	TS-150B	TS-160B	TS-170B	TS-180B	TS-190B	10.
	Gloved Hand Knob.....	TS-23B	TS-24B	TS-25B	TS-26B	TS-28B		14.
	Coin Operated.....	TSA-2B	TSA-3B	TSA-4B	TSA-5B	TSA-6B	TSA-7B	12.
	Key Operated *.....	TS-2K *B	TS-3K *B	TS-4K *B	TS-5K *B	TS-6K *B	TS-7K *B	16.
3-Position Spring Return From Both Sides To Center	Standard Knob—			+	+			
	Black.....	TS-8B	TS-9B	TS-10B	TS-11B	TS-12B	TS-13B	\$12.
	Red.....	TS-202B	TS-212B	TS-222B	TS-232B	TS-242B	TS-252B	12.
	Other Colors.....	TS-200B	TS-210B	TS-220B	TS-230B	TS-240B	TS-250B	12.
	Gloved Hand Knob.....	TS-35B	TS-36B	TS-37B	TS-38B	TS-39B	TS-40B	16.
	Key Operated.....	TS-8K5B	TS-9K5B	TS-10K5B	TS-11K5B	TS-12K5B	TS-13K5B	18.
3-Position Spring Return From Left To Center Only	Standard Knob—				+			
	Black.....	TS-15B	TS-16B	TS-17B	TS-18B	TS-19B	TS-20B	\$12.
	Red.....	TS-262B	TS-272B	TS-282B	TS-292B	TS-302B	TS-312B	12.
	Other Colors.....	TS-260B	TS-270B	TS-280B	TS-290B	TS-300B	TS-310B	12.
	Gloved Hand Knob.....	TS-43B	TS-44B	TS-45B	TS-46B	TS-47B	TS-48B	16.
	Key Operated *.....	TS-15K *B	TS-16K *B	TS-17K *B	TS-18K *B	TS-19K *B	TS-20K *B	18.
3-Position Spring Return From Right To Center Only	Standard Knob—							
	Black.....	TS-511B	TS-521B	TS-531B	TS-541B	TS-551B	TS-561B	\$12.
	Red.....	TS-512B	TS-523B	TS-532B	TS-542B	TS-552B	TS-562B	12.
	Other Colors.....	TS-510B	TS-520B	TS-530B	TS-540B	TS-550B	TS-560B	12.
	Gloved Hand Knob.....	TS-518B	TS-528B	TS-538B	TS-548B	TS-558B	TS-568B	16.
	Key Operated *.....	TS-21K *B	TS-22K *B	TS-23K *B	TS-24K *B	TS-25K *B	TS-26 K *B	18.

●Complete the type number by inserting one of the following numbers for insert color identification: 3-green, 4-brown, 5-yellow, 6-orange, 7-blue.

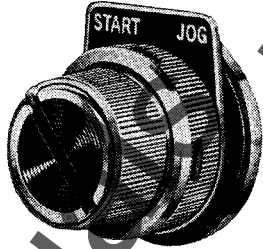
Symbol	LEFT CENTER RIGHT	Symbol	LEFT CENTER RIGHT	Symbol	LEFT CENTER RIGHT	Symbol	LEFT CENTER RIGHT
49	A100						



HEAVY DUTY OIL-TIGHT CONTROL UNITS

Table 8 — Two-Position Selector-Push Buttons

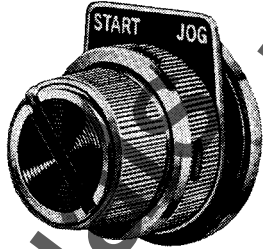
2-CIRCUIT UNITS						
Description ▲	Operator with Type TA Single Pole Double Throw Contact Block ①					Price ★
	Type					
	Symbol 67	Symbol 71	Symbol 75	Symbol 93	Symbol 102	
Standard Half Guard—						
Black.....	TQ-1A	TQ-2A	TQ-3A	TQ-36A	TQ-26A	\$ 9.
Red.....	TQ-6A	TQ-7A	TQ-8A	TQ-37A	TQ-28A	9.
Green.....	TQ-113A	TQ-123A	TQ-133A	TQ-153A	TQ-143A	9.
Brown.....	TQ-114A	TQ-124A	TQ-134A	TQ-154A	TQ-144A	9.
Yellow.....	TQ-115A	TQ-125A	TQ-135A	TQ-155A	TQ-145A	9.
Orange.....	TQ-116A	TQ-126A	TQ-136A	TQ-156A	TQ-146A	9.
Blue.....	TQ-117A	TQ-127A	TQ-137A	TQ-157A	TQ-147A	9.
Full Guard—						
Black.....	TQ-11A	TQ-12A	TQ-13A	TQ-39A	TQ-48A	\$10.
Red.....	TQ-16A	TQ-17A	TQ-18A	TQ-40A	TQ-49A	10.
Green.....	TQ-183A	TQ-193A	TQ-203A	TQ-223A	TQ-213A	10.
Brown.....	TQ-184A	TQ-194A	TQ-204A	TQ-224A	TQ-214A	10.
Yellow.....	TQ-185A	TQ-195A	TQ-205A	TQ-225A	TQ-215A	10.
Orange.....	TQ-186A	TQ-196A	TQ-206A	TQ-226A	TQ-216A	10.
Blue.....	TQ-187A	TQ-197A	TQ-207A	TQ-227A	TQ-217A	10.
Extended Guard—						
Black.....	TQ-62A	TQ-56A	TQ-65A	TQ-69A	TQ-59A	\$10.
Red.....	TQ-63A	TQ-57A	TQ-66A	TQ-70A	TQ-60A	10.
Green.....	TQ-253A	TQ-263A	TQ-273A	TQ-293A	TQ-283A	10.
Brown.....	TQ-254A	TQ-264A	TQ-274A	TQ-294A	TQ-284A	10.
Yellow.....	TQ-255A	TQ-265A	TQ-275A	TQ-295A	TQ-285A	10.
Orange.....	TQ-256A	TQ-266A	TQ-276A	TQ-296A	TQ-286A	10.
Blue.....	TQ-257A	TQ-267A	TQ-277A	TQ-297A	TQ-287A	10.



Full Guard

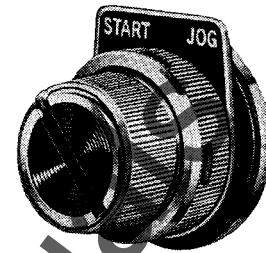
Symbol	Push Button	Guard Position
		LEFT RIGHT
67	Free	A10 A20
	De-pressed	A10 A20
71	Free	A10 A20
	De-pressed	A10 A20
75	Free	A10 A20
	De-pressed	A10 A20
93	Free	A10 A20
	De-pressed	A10 A20
102	Free	A10 A20
	De-pressed	A10 A20

4-CIRCUIT UNITS							
Description ▲	Operator with Type TB Duplex Double Throw Contact Block ①						Price ★
	Type						
	Symbol 68	Symbol 72	Symbol 76	Symbol 82	Symbol 94	Symbol 98	
Standard Half Guard—							
Black.....	TQ-1B	TQ-2B	TQ-3B	TQ-26B	TQ-36B	TQ-42B	\$ 12.
Red.....	TQ-6B	TQ-7B	TQ-8B	TQ-28B	TQ-37B	TQ-43B	12.
Green.....	TQ-113B	TQ-123B	TQ-133B	TQ-143B	TQ-153B	TQ-163B	12.
Brown.....	TQ-114B	TQ-124B	TQ-134B	TQ-144B	TQ-154B	TQ-164B	12.
Yellow.....	TQ-115B	TQ-125B	TQ-135B	TQ-145B	TQ-155B	TQ-165B	12.
Orange.....	TQ-116B	TQ-126B	TQ-136B	TQ-146B	TQ-156B	TQ-166B	12.
Blue.....	TQ-117B	TQ-127B	TQ-137B	TQ-147B	TQ-157B	TQ-167B	12.
Full Guard—							
Black.....	TQ-11B	TQ-12B	TQ-13B	TQ-48B	TQ-39B	TQ-45B	\$ 13.
Red.....	TQ-16B	TQ-17B	TQ-18B	TQ-49B	TQ-40B	TQ-46B	13.
Green.....	TQ-183B	TQ-193B	TQ-203B	TQ-213B	TQ-223B	TQ-233B	13.
Brown.....	TQ-184B	TQ-194B	TQ-204B	TQ-214B	TQ-224B	TQ-234B	13.
Yellow.....	TQ-185B	TQ-195B	TQ-205B	TQ-215B	TQ-225B	TQ-235B	13.
Orange.....	TQ-186B	TQ-196B	TQ-206B	TQ-216B	TQ-226B	TQ-236B	13.
Blue.....	TQ-187B	TQ-197B	TQ-207B	TQ-217B	TQ-227B	TQ-237B	13.
Extended Guard—							
Black.....	TQ-62B	TQ-56B	TQ-65B	TQ-59B	TQ-69B	TQ-71B	\$ 13.
Red.....	TQ-63B	TQ-57B	TQ-66B	TQ-60B	TQ-70B	TQ-72B	13.
Green.....	TQ-253B	TQ-263B	TQ-273B	TQ-283B	TQ-293B	TQ-303B	13.
Brown.....	TQ-254B	TQ-264B	TQ-274B	TQ-284B	TQ-294B	TQ-304B	13.
Yellow.....	TQ-255B	TQ-265B	TQ-275B	TQ-285B	TQ-295B	TQ-305B	13.
Orange.....	TQ-256B	TQ-266B	TQ-276B	TQ-286B	TQ-296B	TQ-306B	13.
Blue.....	TQ-257B	TQ-267B	TQ-277B	TQ-287B	TQ-297B	TQ-307B	13.



Full Guard

Symbol	Push Button	Guard Position
		LEFT RIGHT
68	Free	A10 A20 B10 B20
	De-pressed	A10 A20 B10 B20
72	Free	A10 A20 B10 B20
	De-pressed	A10 A20 B10 B20
76	Free	A10 A20 B10 B20
	De-pressed	A10 A20 B10 B20
82	Free	A10 A20 B10 B20
	De-pressed	A10 A20 B10 B20
94	Free	A10 A20 B10 B20
	De-pressed	A10 A20 B10 B20
98	Free	A10 A20 B10 B20
	De-pressed	A10 A20 B10 B20



Full Guard

★ Prices include a Type TN-2 legend plate with standard markings shown in Table 15, page 14.1 Deduct \$0.30 if legend plate is not required. For other legend plates or special markings see Table 16, page 14.1.

① To order a selector-push button **without contact block**, omit final letter (A or B) of Type number. Deduct \$3.00 if Type TA contact block is omitted, \$6.00 if Type TB contact block is omitted.

▲ Selector-push buttons feature snap-in color inserts which allow the user to change color when desired. See page 14 for listing of color insert kits.

ORDERING INSTRUCTIONS — See Page 14.2

SQUARE D COMPANY

General Revision

SCHEDULE DS-1 DISCOUNTS

Prices subject to change without notice



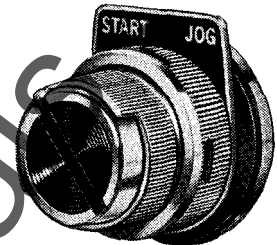
HEAVY DUTY OIL-TIGHT CONTROL UNITS

Table 9 — Three-Position Selector-Push Buttons

Description▲	Operator with Type TB Duplex Double Throw Contact Block	
	Type	Price
	Symbol 85	★
Standard Half Guard—		
Black.....	TQ-32B	\$ 13.
Red.....	TQ-34B	13.
Green.....	TQ-323B	13.
Brown.....	TQ-324B	13.
Yellow.....	TQ-325B	13.
Orange.....	TQ-326B	13.
Blue.....	TQ-327B	13.

★▲See footnotes on page 12.

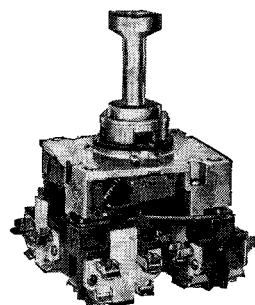
Sym- bol	Push Button	Guard Position LEFT CENTER RIGHT
85	Free	
	De-pressed	



Half Guard

ORDERING INFORMATION REQUIRED — See Page 14.2.

Table 10 — Four-Way Operator — Joy Stick Type



This four-way (5 position) operator has one lever used to operate four type TA or TB contact blocks independently. It is especially useful to assure operation of only one contact unit at a time. Maintained contact or momentary contact is available, with or without an off position latch. Conversion to any desired combination of momentary contact or maintained contact can easily be accomplished in the field.

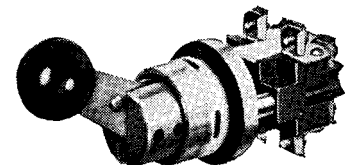
Description✚	Operator Only (Without Contact Blocks)		Operator with Type TA Contact Blocks		Operator with Type TB Contact Blocks	
	Type	Price	Type	Price	Type	Price
Momentary Contact with Off Position Latch.....	TX-1	\$ 22.	TX-1A	\$ 34.	TX-1B	\$ 46.
Momentary Contact.....	TX-2	22.	TX-2A	34.	TX-2B	46.
Maintained Contact with Off Position Latch.....	TX-3	22.	TX-3A	34.	TX-3B	46.
Maintained Contact.....	TX-4	22.	TX-4A	34.	TX-4B	46.

✚Requires use of separately mounted legend plates (not included). Type TF contact blocks cannot be used on this operator.

ORDERING INFORMATION REQUIRED — Order by Class and Type No

Table 11 — Three-Position Master Switches (not completely oil-tight)

Description	Symbol	Type★	Price	SYMBOL 103		
				UP	CENTER	DOWN
3-Position Master Switch, Complete with Contact Block	103	TS-80E-2	\$ 20.	A1	A1	A1
Maintained Contact.....	104‡	TS-82D-1	23.	A2	A2	A2
Spring Return to Center...				B1	B1	B1
				B2	B2	B2

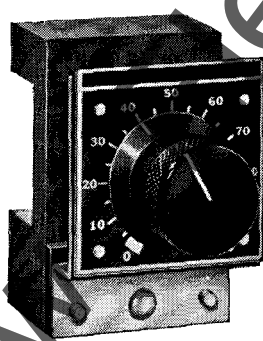


‡Symbol 104 is same as 103 except contacts A1 and B1 are not furnished.

★These switches are furnished with special contact blocks. Other contact blocks, including TF, cannot be used.

ORDERING INFORMATION REQUIRED — Order by Class and Type No. Specify Legend Plate Markings.

Table 12 — Potentiometers



Potentiometer units may be purchased completely factory assembled, or the operator only is available for users who wish to obtain potentiometers from another source. Ohmite Type AB Style CLU potentiometers, or equivalent, can be used in the Type TS-51 operator. Type TS-53 operators will accept Ohmite Model H or Model J with 1½" shaft, or equivalent potentiometers.

Description	Type	Price†
Operator with 2 Watt Potentiometer.....	TS-50	\$ 20.
Operator only (For 2 Watt Potentiometer)....	TS-51	14.
Operator with 25 Watt Potentiometer.....	TS-52	35.
Operator only (For 25 or 50 Watt Pot).....	TS-53	29.
Operator with 50 Watt Potentiometer.....	TS-54	37.

STANDARD POTENTIOMETER SIZES
Values in Ohms
(Linear Taper, 10% Tolerance Except as Noted)

2-Watt	25-Watt	50-Watt
50 25,000	1 125	0.5 150
100 50,000	2 175	1 225
250 0.1 meg.	3 250	2 300
500 0.25 meg.	6 350	4 500
1,000 0.5 meg.	8 500	6 800
2,500 1.0 meg. *	10 750	8 1,000
5,000 2.5 meg. *	15 1,000	12 1,600
10,000 5.0 meg. *	25 1,500	16 2,500
	35 2,500	22 3,500
	50 3,500	35 5,000
	75 5,000	50 8,000
*Plus or minus 20%	100	80 10,000
		125

†Prices include dial plate with 0-100% graduations and function marking with maximum of 18 characters (one line). No deduction for omission. Depth of 25 and 50-watt units requires use of liner to maintain electrical clearance when used with Type TY-1, 2, 3 or 4 enclosure.

ORDERING INFORMATION REQUIRED — Order by Class and Type No. Specify Total Resistance Required.

General Revision.

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SCHEDULE DS-1 DISCOUNTS

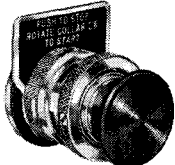
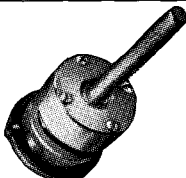
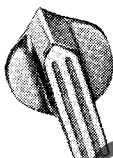


HEAVY DUTY OIL-TIGHT CONTROL UNITS

Table 13 — Attachments — Accessories

MAINTAINED CONTACT ATTACHMENT		LATCH TYPE PADLOCK ATTACHMENT		COVER TYPE PADLOCK ATTACHMENT		SELECTOR SWITCH PADLOCK ATTACHMENT		LATCH TYPE PADLOCK ATTACHMENT	
Type	Price	Type	Price	Type	Price	Type	Price	Type	Price
TM-1	\$ 3.	TL-1	\$ 3.	TL-2	\$ 3.	TL-3	\$ 3.	TL-5	\$ 5.
Use with two Type TR push buttons & one contact block *		Locks button in depressed position.		(Padlock not furnished)		(Padlock not furnished)		Locks button (with Type TU cap) in depressed position.	

*The contact block should always be assembled to the operator designated as "Stop", "Off" or "Safe".
 †Must be used with operator having standard half guard. (Type TL-1 can be used with mushroom buttons.)

										TRIM WASHER	
MAINTAINED PUSH BUTTON WITH 1 1/2" MUSHROOM BUTTON			WOBBLE STICK OPERATOR†		GLOVED HAND KNOB		CLOSING PLATES			Type	Price
Color	Type	Price	Type	Price	Type	Price	Description	Type No.	Price	TN-5	\$0.30
Black	TRM-3	\$11.00 (Less Contact Block)	TW-1	\$ 6.	T-7	\$ 4.	Standard Use on KY, KYA, KZ	K-11	\$ 1.	For use where legend plate is not required. Keeps ring nut from marring panel finish.	
Red	TRM-4						Chrome Plated For use on KYC	K-12	1.		
Green	TRM-20						PUSH BUTTON WRENCH		Type	Price	
Brown	TRM-21								T-1	\$ 3.	
Yellow	TRM-22								Simplifies installation of Type T units.		
Orange	TRM-23										
Blue	TRM-24										
Button locks in the depressed position—Turning knurled ring releases operator to its normal position. Price includes nameplate: "Push-to-Stop Rotate Collar CW to Start!"			For hurried or emergency operation.		Fits any Type TS selector switch with standard knob.		For covering unused holes in enclosure cover.				

†Consists of push button operator with wobble stick attachment. Price includes a Type TN-2 legend plate with standard markings shown in Table 14, page 14.1 Deduct \$0.30 if legend plate is not required. For other legend plates or special markings see Table 16, page 14.1

PROTECTIVE CAP

The Type TU1-6 cap will prevent metal shavings and other foreign matter from interfering with proper operation of oil tight push buttons. They are for use with the TY and TYA enclosures and can be used with TN legend plates.

WATER-TIGHT CAP

These caps are for use on the TYC NEMA 4 water tight enclosures listed on page 14.6. Separately mounted legend plates must be used to insure a water tight seal.

COLOR INSERTS PUSH BUTTONS

Color	Type	Price Each	Min. Order ★ Qty.
Black	T-6BK	\$.05	10
Red	T-6RD	.05	10
Green	T-6GN	.05	10
Brown	T-6BN	.05	10
Yellow	T-6YW	.05	10
Orange	T-6OE	.05	10
Blue	T-6BE	.05	10

SELECTOR SWITCHES

Black	T-4BK	\$.10	10
Red	T-4RD	.10	10
Green	T-4GN	.10	10
Brown	T-4BN	.10	10
Yellow	T-4YW	.10	10
Orange	T-4OE	.10	10
Blue	T-4BE	.10	10

SELECTOR — PUSH BUTTONS

Black	T-5BK	\$.10	10
Red	T-5RD	.10	10
Green	T-5GN	.10	10
Brown	T-5BN	.10	10
Yellow	T-5YW	.10	10
Orange	T-5OE	.10	10
Blue	T-5BE	.10	10

★Orders must specify min. quantity of 10 or multiple of 10 in any one color.

Color	For Push Buttons		For Selector Sw.	
	Type	Price	Type	Price
Black	TU-11	\$ 2.	TU-51	\$ 4.
Red	TU-12	2.	TU-52	4.
Blue	TU-13	2.	TU-53	4.
Brown	TU-14	2.	TU-54	4.
Green	TU-15	2.	TU-55	4.
Yellow	TU-16	2.	TU-56	4.

Clear Silicone Cap — For standard pilot lights

For push-to-test pilot
lights and illuminated
pushbuttons.

TU-17	\$ 3.
TU-27	3.

ORDERING INFORMATION REQUIRED — Order by Class and Type No.

General Revision.

SQUARE D COMPANY

SCHEDULE DS-1 DISCOUNTS

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JULY, 1968

Supersedes Price Sheet 9001,
Page 14.1-14.2, dated July, 1965
Page 14.3, June, 1965; Page 14.5-14.6,
May, 1966



CLASS 9001
Price Sheet PAGE 14.1

HEAVY DUTY OIL-TIGHT CONTROL UNITS

Table 14 — Separate Legend Plates

Standard Marking (Black Field Unless Noted)	Type Number	
		

FOR PUSH BUTTON OR PILOT LIGHT

Blank	TN-200	TN-300
Start	TN-201	TN-301
*Stop	TN-202	TN-302
On	TN-203	TN-303
*Off	TN-204	TN-304
*Emerg. Stop	TN-205	TN-305
Forward	TN-206	TN-306
Reverse	TN-207	TN-307
Close	TN-208	TN-308
Open	TN-209	TN-309
Down	TN-210	TN-310
Up	TN-211	TN-311
Fast	TN-212	TN-312
Slow	TN-213	TN-313
High	TN-214	TN-314
Low	TN-215	TN-315
Inch	TN-216	TN-316
In	TN-217	TN-317
Jog	TN-218	TN-318
Jog For.	TN-219	TN-319
Jog Rev.	TN-220	TN-320
Lower	TN-221	TN-321
Out	TN-222	TN-322
Reset	TN-223	TN-323
Run	TN-224	TN-324
Start Jog	TN-225	TN-325
Test	TN-226	TN-326
Raise	TN-227	TN-327
Decrease	TN-228	TN-328
Increase	TN-229	TN-329
Left	TN-230	TN-330
Right	TN-231	TN-331
Cycle Start	TN-232	TN-332
Feed Start	TN-233	TN-333
Cycle Stop	TN-234	TN-334
Feed Stop	TN-235	TN-335
Motor Run	TN-236	TN-336
Motor Stop	TN-237	TN-337
Power On	TN-238	TN-338
Full Speed	TN-272	TN-372
Low Speed	TN-273	TN-373
Second Speed	TN-274	TN-374
Third Speed	TN-275	TN-375

FOR SELECTOR SWITCH OR SELECTOR PUSH BUTTON

For.-Rev.	TN-239	TN-339
Hand-Auto.	TN-240	TN-340
High-Low	TN-241	TN-341
Jog-Run	TN-242	TN-342
Man.-Auto.	TN-243	TN-343
Off-On	TN-244	TN-344
On-Off	TN-245	TN-345
Open-Close	TN-246	TN-346
Raise-Lower	TN-247	TN-347
Run-Jog	TN-248	TN-348
Safe-Run	TN-249	TN-349
Slow-Fast	TN-250	TN-350
Start-Stop	TN-251	TN-351
▲Start-Stop	TN-252	.....
Up-Down	TN-253	TN-353
Low-High	TN-254	TN-354
Stop-Start	TN-255	TN-355
Left-Right	TN-256	TN-356
On-Auto	TN-276	TN-376
Summer-Winter	TN-257	TN-357
Auto-Off-Hand	TN-258	TN-358
For.-Off-Rex.	TN-259	TN-359
Hand-Off-Auto.	TN-260	TN-360
Jog-Safe-Run	TN-261	TN-361
Man.-Off-Auto.	TN-262	TN-362
Open-Off-Close	TN-263	TN-363
Up-Off-Down	TN-264	TN-364
Low-Off-High	TN-265	TN-365
For.-Safe-Rev.	TN-266	TN-366
Jog-Stop-Run	TN-267	TN-367
Slow-Off-Fast	TN-268	TN-368
Summer-Off-Winter	TN-269	TN-369
High-Low-Off	TN-270	TN-370
Raise-Off-Lower	TN-271	TN-371
High-Off-Low	TN-277	TN-377

*Red Field ▲Green-Red Field

PRICING INFORMATION:

Legend plates listed in Table 14.....	\$.30 each
TN-2 or TN-3 with special marking.....	\$ 1.30 each
TN-200R or TN-300R (Red Field) any marking.....	\$ 1.30 each
TN-200R or TN-300R (Red Field) blank.....	\$.30 each

Table 15 — Special Legend Plates

Description	Type	Price	
		Blank	Any Marking
 Double Headed	TN-4 ⊖	\$.60	\$ 1.60
 Extra Large	TN-6 †	\$.60	\$ 1.60

†For customer's enclosure only minimum spacing between operators must be 2½" vertically and 2¼" horizontally.

⊖Can be used with all Type KY, TY, TYA and TYB enclosures but must be mounted horizontally when used with Type KY-2, 3, or 4 and TY-2, 3, or 4.

Table 16 — Additions for Devices Requiring Non-Standard Legend Plate Markings

Prices for most oil-tight operators listed in Table 2 through 13 include a Type TN-2 legend plate with standard markings. If special markings are required, or if a different Type TN legend plate is to be substituted on these operators, the following additions apply.

Special markings on TN-2.....	\$ 1.00
Substitute TN-3 with standard markings.....	N.C.
Substitute TN-3 with special markings.....	1.00
Substitute TN-4 or TN-6 with any markings.....	1.30

Maximum Number of Lines and Characters for Type TN Legend Plates.

Type.....	TN-2	TN-3	TN-4	TN-6
Max. No. of Characters per Line.....	18	18	18	22
Max. No. of Lines.....	2	3	4	4

The maximum number of characters and lines given above is a practical maximum and is based on a minimum size of characters to facilitate easy reading. When fewer characters than the maximum are required the size of the characters is changed to permit the best readability.

SQUARE D COMPANY

Prices Subject to Change without Notice.

SCHEDULE DS-1 DISCOUNTS

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AUGUST, 1965

HEAVY DUTY OIL-TIGHT CONTROL UNITS

TYPE KA CONTACT BLOCKS

The modular design of the Type KA line enables the user to conveniently build up contact blocks to meet various control circuit requirements. Additional blocks can be added as requirements change without disturbing the existing circuitry. Extreme flexibility, small size and contact reliability make this block an excellent choice for a wide variety of control requirements. The outstanding features of the Type KA line are listed below:

- **Extreme Flexibility** — Any two contact blocks can be mounted side by side on an operator. Recessed heads of the two captive mounting screws are threaded so that additional blocks can be stacked in tandem without additional hardware.
- **Small Size** — all basic contact blocks are the same physical size and vary only in the number of circuits. The total panel depth required is reduced to a minimum.
- **Captive Mounting Screws** — The two captive screws are a convenient part of the contact block. No time need be wasted in looking for lost or misplaced screws.
- **Easy to Wire** — The terminals are placed at an angle so that they are readily accessible even when blocks are tandem mounted.
- **Self Lifting Pressure Wire Terminal Clamps** — As the terminal screw is released, the pressure wire clamp is lifted off the terminal making the insertion of wires quick and easy. The clamp is also free to roll to compensate for insertion of different size wires (#12 — #18, stranded or solid).
- **Arc Resisting Melamine Contact Block** — Contact blocks are molded of melamine which is highly resistant to carbon tracking.
- **High Reliability Contacts** — The rolling, wiping action when the contacts close provides excellent reliability.

Double break contacts are rated for heavy duty service.

- **Fatigue Resistant Stainless Steel Springs** — Used throughout the unit, stainless steel springs resist rust and fatigue and provide good contact pressure for years of trouble-free service.

APPLICATION

The Type KA contact block is easily adapted to the Type T operators through the use of the Type K-2 nylon liner. This liner must be installed on the base of the operator prior to installation of one or more of the Type KA contact blocks. Besides insuring adequate electrical clearance between the operator base and contact block, the liner serves as an aid in the proper positioning of the contact blocks during installation.

Standard Contact Blocks

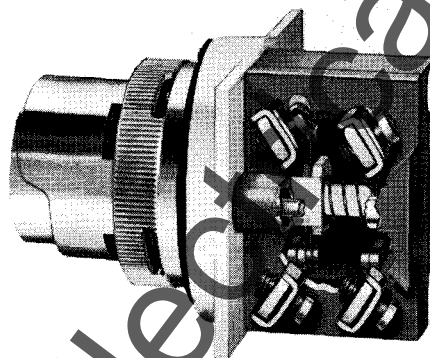
The standard contact blocks and descriptions are as follows:

- Type KA-1 — single pole double throw, double circuit, 1 N.O.—1 N.C.
- Type KA-2 — single pole single throw, single circuit, 1 N.O.
- Type KA-3 — single pole single throw, single circuit, 1 N.C.

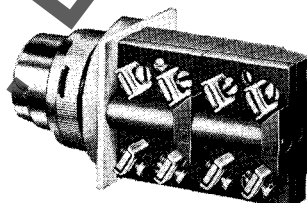
Special Purpose Contact Blocks

Special purpose contact blocks and description are as follows:

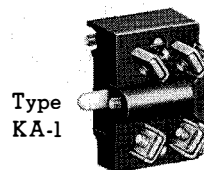
- Type KA-4 — Single pole, double throw, double circuit, 1 early closing N.O. and 1 standard N.C. The early closing N.O. circuit on the KA-4 will close before the N.O. circuit on either a KA-1 or KA-2 when the two blocks are mounted side by side.
- Type KA-5 — Single pole, single throw, single circuit, 1 late opening N.C. The late opening N.C. circuit on the KA-5 will open after the early closing N.O. circuit on the KA-4 has closed when the two blocks are mounted side by side.



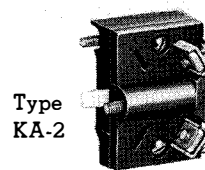
Construction features



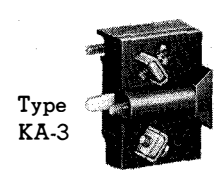
Type T operator with liner and KA-1 contact blocks



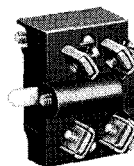
Type KA-1



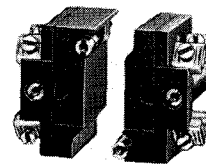
Type KA-2



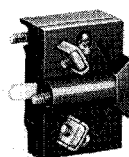
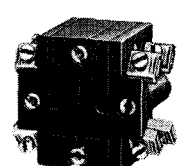
Type KA-3



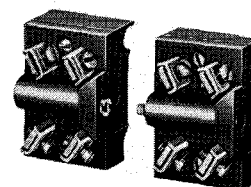
Type KA-4



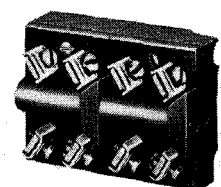
Side-by-side mounting



Type KA-5



Tandem mounting



www.ElectricalPartManuals.com



AUGUST, 1961

HEAVY DUTY OIL-TIGHT CONTROL UNITS

APPLICATION

Type T oil-tight push button, selector switch and pilot light units may be assembled in any combination to meet a variety of requirements. Although originally designed for machine tool applications, these oil-tight units because of their flexibility are now used for all types of applications.

Oil-tight operators are separate from contact blocks. Thus, any contact block may be used with any operator. Any customer designed control station can be assembled from a few operators, contact blocks, nameplates and enclosures.

Color is an important feature of oil-tight control units, since color is used to differentiate control functions. In order to increase the flexibility of these oil-tight units, color inserts made of high density polyethylene can be inserted into the unbreakable all metal buttons. A push button can be ordered in any desired color and it will be supplied with the color insert installed. Universal operators can also be purchased. This unit consists of a basic operator plus a package of seven color inserts. Customer can then choose the color he wishes and snap the appropriate color insert in place. Color inserts are standard on push buttons, selector switches and selector-push buttons.

CONTACT BLOCKS

One or two pole blocks with several different contact sequences are available. Although the blocks are compact, accessibility has not been sacrificed. All terminal screws can be reached by a screwdriver, without having to go in at an angle. Wiring clips under each screw facilitate connection.

Contact block features are as follows:

- A. **Arc Resisting Melamine Contact Block** — Contact blocks are molded of melamine which has superior arc resistance and is also highly resistant to carbon tracking.
- B. **Silver Contacts** — Double break contacts are rated for heavy duty service. A rolling, wiping action when the contacts close provides excellent contact reliability.
- C. **Fatigue Resisting Stainless Steel Springs** — Used throughout the unit, stainless steel springs resist rust and fatigue, and provide good contact pressure for years of trouble-free service.

Single Pole Contact Blocks — The Type TA blocks are single pole double throw and mount on any one of the push button or selector switch operators by means of two screws conveniently placed.

Duplex Contact Block — The Type TB duplex contact block consists of two single pole double throw mechanisms in one assembly. Separate operating stems function as a double pole unit when the block is used with a standard push button operator, but may work as two independent single pole units when used with a selector switch or selector push button operator.

Type TC — Consists of two single pole single throw normally closed contacts.

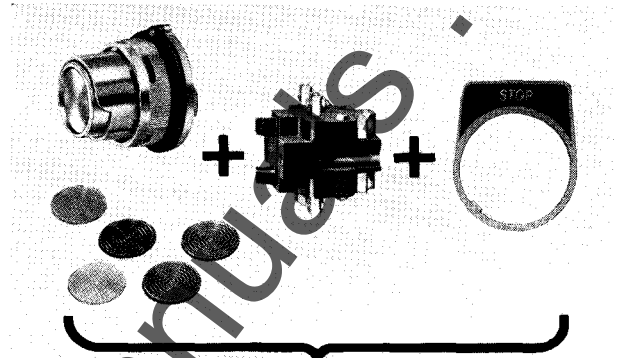
Type TD — Consists of two single pole single throw normally open contacts.

Type TE — Is designed for two speed or sequence operation. One of the two independent contact mechanisms has been modified to cause its contacts to close before the other normally open circuits closes. Both normally closed contacts are opened at the same time.

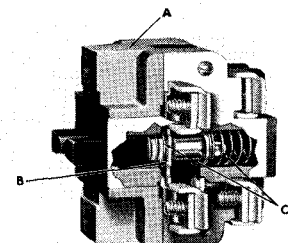
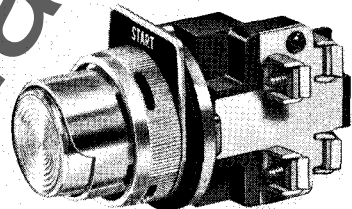
Type TE-1 — Consists of two single pole single throw contacts except that they are modified so that one contact closes before the other opens.

Type TF — Differs from TB to the extent that both operating stems are extended for tandem operation of an additional Type TA, TB, TC or TD block mounted on insulated studs furnished with the Type TF unit.

Snap Action Contacts — Available as either single pole double throw or double pole double throw. Snap action contacts can be used on push buttons only.



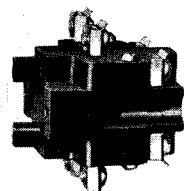
Operator with inserts, plus contact block and nameplate equals complete device



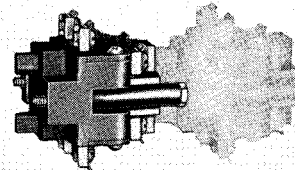
Construction features of duplex contact block



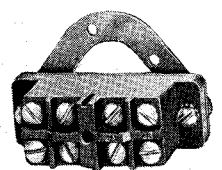
Single pole, contact block



Duplex contact block



Double pole, double throw contact block for tandem mounting

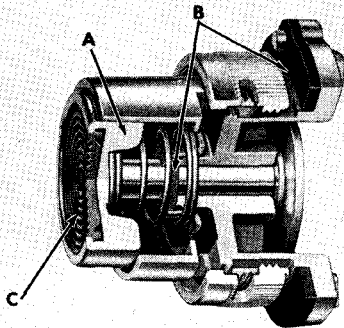


Single pole, double throw or double pole, double throw snap action contacts

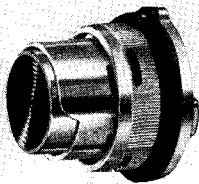


HEAVY DUTY OIL-TIGHT CONTROL UNITS

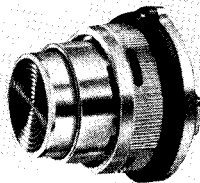
AUGUST, 1961



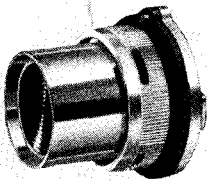
Construction features of
push button operators



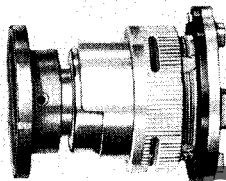
Push button
with half guard



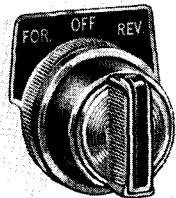
Push button
without guard



Push button
with extended guard



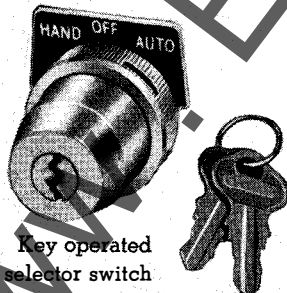
Standard mushroom
push button



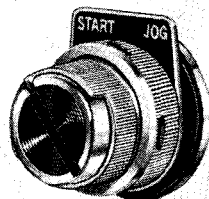
Standard
selector switch



Coin operated
selector switch



Key operated
selector switch



Selector push button
with half guard

Push Button Operators — Push button units initiate control circuits that are many times simple functions, but very important. Entire installations are dependent upon them for proper operation. Square D control units have proven their dependability and durability under the most severe operating conditions.

Some of the more important construction features are:

- A. **Unbreakable all metal buttons** — machined aluminum alloy buttons resist all kinds of abuse. The all metal button and the extra long shaft bearing give the unit a solid dependable feel.
- B. **Completely oil-tight** — a spring loaded neoprene and cork seal around the shaft completely prevents oil or coolant from entering through the unit. A neoprene gasket provides a tight seal between the panel and the control unit.
- C. **Easily installed colored inserts** — made of high density polyethylene these inserts resist wear, solvents and oils. They are available in seven colors — black, red, green, brown, yellow, orange and blue.

Selector Switch Operators — Standard Knob — Oil-tight construction features are similar to those illustrated for the push button operators. All metal knobs accommodate seven color inserts made of high density polyethylene. These inserts match the color inserts of the push buttons.

Either two or three position operators are available. The three position units are furnished with any one of five different cams which provide a variety of circuit arrangements.

Coin Operated — A parallel group of selector switch operators have a slot for coin operation instead of the usual knob, and are used for those applications where unauthorized operation should be discouraged.

Key Operated — Where a selector switch must be made inoperable in certain positions for safety or other reasons, a key operated unit is particularly well suited. In addition to the wide variety of contact arrangements available with the standard selector switch, the key operated unit can be provided with any combination of key withdrawal positions to meet every application.

Standard key operated selector switches are furnished with two keys which will operate any other standard unit. If desired, other key combinations or master keys can be furnished.

Gloved Hand Knob Operator — A large chrome plated knob is available for those applications where operators must wear heavy gloves, or where a larger knob is desired.

Selector-Push Button Operators — Selector switch and push button functions are combined in a single operator consisting of a push button with guard which turns to give the equivalent of two or three position selector operation. Selector push buttons are available with colored inserts which match the inserts on the push button and selector switch operators.



APRIL, 1967

HEAVY DUTY OIL-TIGHT CONTROL UNITS

CLASS 9001

PILOT LIGHTS

Square D pilot lights feature wide angle visibility and are styled to match the buttons. Full voltage and transformer type pilot lights are available. On transformer types, the built-in transformers are an integral part of the pilot light. Thus, no extra panel space is required.

Standard Transformer Type Pilot Lights have the following features:

- Color cap and mounting parts have been styled to match push buttons and selector switch operator appearance.
- Wide angle visibility is accomplished by color cap design and the position of the bulb with respect to the cap.
- Brilliance is sufficient to be observed against a light background.
- 6 volt lamp filament is strong enough to withstand shock or vibration which usually results in failure of higher voltage filaments.
- Bayonet type socket will not permit lamp to loosen under severe conditions of shock or vibration.
- Built-in transformer eliminates necessity for separately mounted transformer.
- Color caps are available in clear, white, red, amber, green, and blue in either glass or plastic. Glass color-caps are also available in yellow.

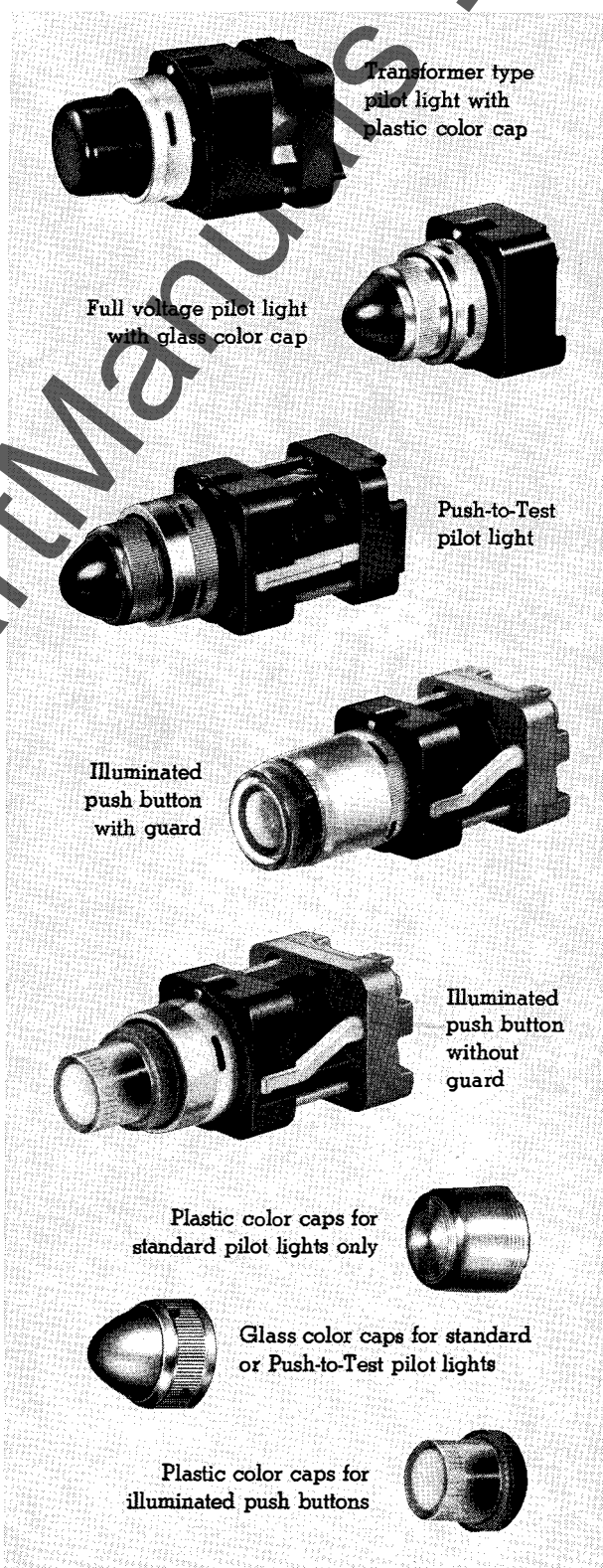
Neon Pilot Lights — These units have low current requirements and permit inclusion of a series resistor for high voltages. Due to the quality of the light emitted by the neon lamp, it is recommended that only the clear, uncolored cap be used.

Push-To-Test Pilot Light — This pilot light incorporates the features of the standard pilot lights described above, with the addition of a separate circuit to test the bulb. The design of this device makes it possible to test the bulb simply by pushing on the color cap. In the test position, there is a positive contact feel, eliminating any doubt as to whether the unit is actually in the test position. Oil-tightness of the unit is maintained throughout the test operation. There are no wires to be broken within the unit as all internal connections are pressure connections of silver plated beryllium copper. This push-to-test pilot light occupies the same panel space as the standard Type T unit.

Illuminated Push Buttons — These control units combine the functions of a pilot light, plus a double circuit push button in one space-saving device. Pushing the pilot light lens operates the heavy duty contact. Although these units have many applications, they are ideally suited as "start" buttons when an indicating light is required to show when the motor is running.

Illuminated push buttons are supplied without guard or with full guard. Part of the full guard which shields the button is made of clear plastic to afford wide angle visibility.

Separate Color Caps — Color caps can be supplied either in glass or plastic to suit individual requirements. They are interchangeable on standard pilot light units, but it is important to note that plastic color caps cannot be used on the push-to-test pilot light units. Plastic color caps are available for illuminated push buttons.



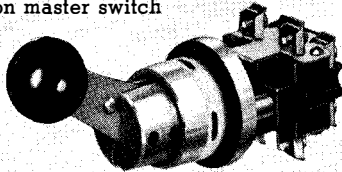
SQUARE D COMPANY

HEAVY DUTY OIL-TIGHT CONTROL UNITS

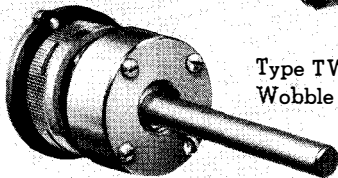
APRIL, 1967



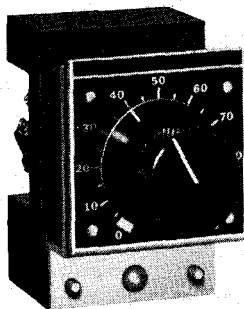
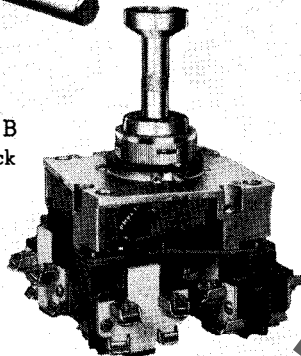
Type TS-80E2
3 position master switch



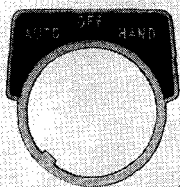
Type TW-1
Wobble stick operator



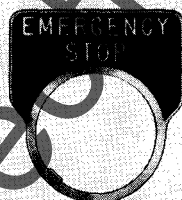
Type TX-1B
Joy stick



Type TS-50
Potentiometer



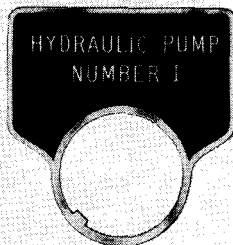
Type TN-2
for selector switches



Type TN-3
Extra large legend plate



Type TN-4
Double headed legend plate



Type TN-6
Extra large legend plate

SPECIAL PURPOSE OPERATORS

Three-Position Master Switch — For use as master switch or for gloved hand operation. This unit can be provided as a maintained contact or spring return to center type. These switches are furnished with a special contact block. Other contact blocks, including the Type TT tandem block, cannot be used. A Type TN-3 extra large legend plate is supplied engraved for horizontal (side) mounting.

Wobble Stick — This operator will replace any standard Type T push button operator. It is actuated by pushing the lever in any direction. Because of this method of operation, the wobble stick is particularly suited for use as an "emergency stop" operator on a pendant type station where it would be desirable to reach the operator quickly from any direction.

Joy Stick — This four-way, five-position operator has one lever used to operate four Type TA or TB contact blocks independently. The device is essentially four buttons in one unit where it is important that only one function be performed at one time. Maintained contact or momentary contact operation is available with or without an off position latch. Conversion to any desired combination of momentary contact or maintained contact can easily be accomplished in the field.

Potentiometer — Knurled knob operator controls 2, 25 or 50 watt potentiometers. Ideally suited for speed control of motors when used with adjustable speed drives.

LEGEND PLATES

Standard legend plates can be furnished for all operators. The metal legend plates fit easily on the operators and a small projection (Key) holds it in position. Standard legend plates are supplied with a black field. Those marked "STOP, OFF, OR EMERGENCY STOP" are supplied with a red field as standard. Legend plates with the more common markings are available from stock and are identified by a specific type number. Special markings can be engraved to order. Blank legend plates also available for customer engraving.

Type TN-2 — The Type TN-2 Legend Plate is standard and will be supplied on all orders unless otherwise specified.

Type TN-3 — The Type TN-3 large legend plates are used where more characters or lines are required or where larger type is desired.

Type TN-4 — The Type TN-4 double headed legend plates provide space for marking above and below the operator. These legend plates generally have the button operation "START" at the top and the bottom function "Motor No. 1" at the bottom.

Type TN-5 Trim Washer — For use when legend plate is not required. This washer keeps the ring nut from marring the panel finish.

Type TN-6 — The Type TN-6 Extra large legend plate is for use with a customer's enclosure only where the spacing between operators is a minimum of $2\frac{5}{16}$ " vertical and $2\frac{1}{4}$ " horizontal.



APRIL, 1967

CLASS 9001

HEAVY DUTY OIL-TIGHT CONTROL UNITS

PILOT LIGHTS

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- Bayonet type socket will not permit lamp to loosen under severe conditions of shock or vibration.
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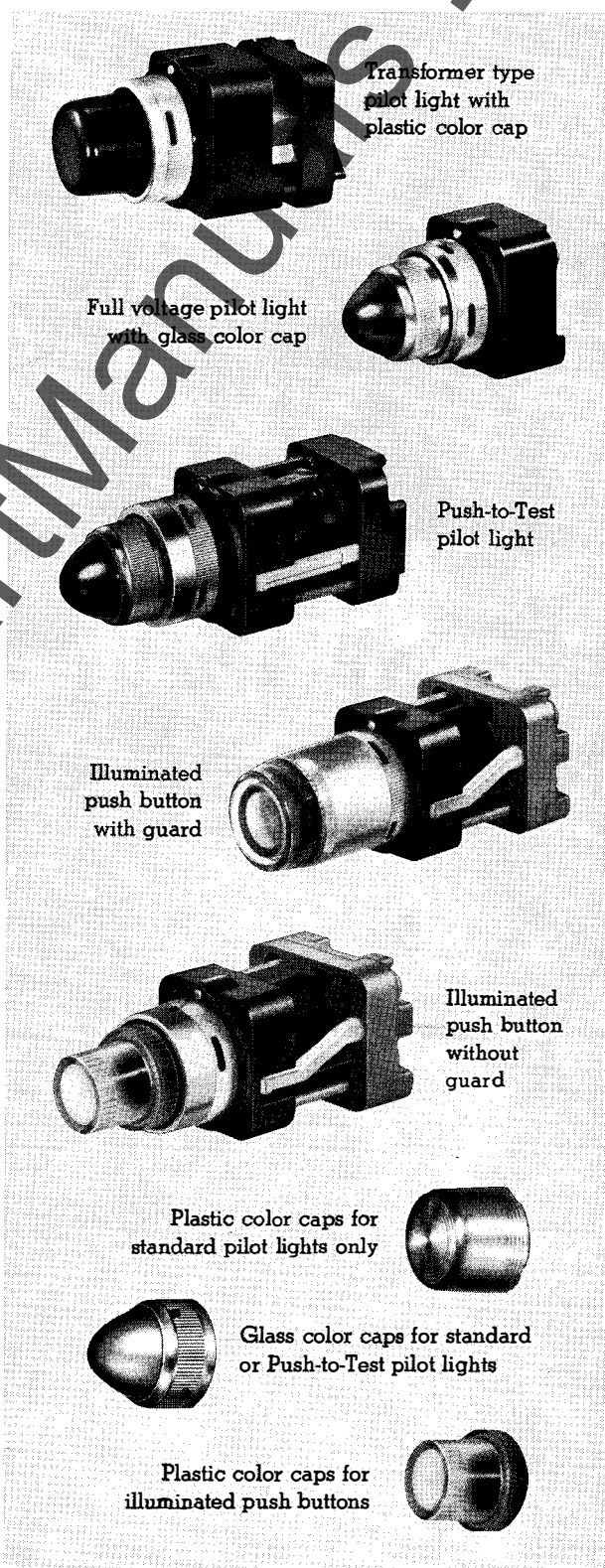
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Illuminated Push Buttons — These control units combine the functions of a pilot light, plus a double circuit push button in one space-saving device. Pushing the pilot light lens operates the heavy duty contact. Although these units have many applications, they are ideally suited as "start" buttons when an indicating light is required to show when the motor is running.

Illuminated push buttons are supplied without guard or with full guard. Part of the full guard which shields the button is made of clear plastic to afford wide angle visibility.

Separate Color Caps — Color caps can be supplied either in glass or plastic to suit individual requirements. They are interchangeable on standard pilot light units, but it is important to note that plastic color caps cannot be used on the push-to-test pilot light units. Plastic color caps are available for illuminated push buttons.



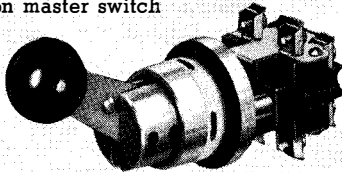
SQUARE D COMPANY

HEAVY DUTY OIL-TIGHT CONTROL UNITS

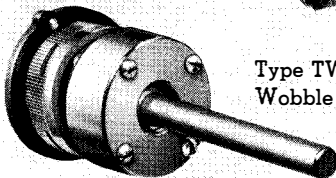
APRIL, 1967



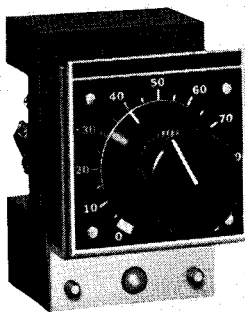
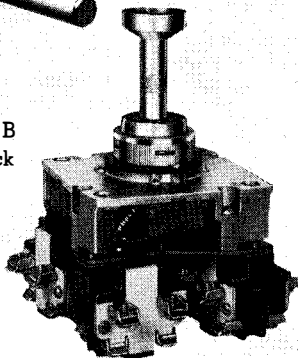
Type TS-80E2
3 position master switch



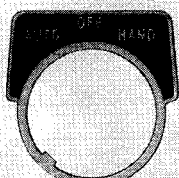
Type TW-1
Wobble stick operator



Type TX-1B
Joy stick



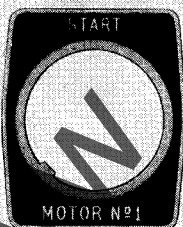
Type TS-50
Potentiometer



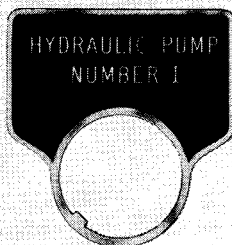
Type TN-2
for selector switches



Type TN-3
Extra large legend plate



Type TN-4
Double headed legend plate



Type TN-6
Extra large legend plate

SPECIAL PURPOSE OPERATORS

Three-Position Master Switch — For use as master switch or for gloved hand operation. This unit can be provided as a maintained contact or spring return to center type. These switches are furnished with a special contact block. Other contact blocks, including the Type TF tandem block, cannot be used. A Type TN-3 extra large legend plate is supplied engraved for horizontal (side) mounting.

Wobble Stick — This operator will replace any standard Type T push button operator. It is actuated by pushing the lever in any direction. Because of this method of operation, the wobble stick is particularly suited for use as an "emergency stop" operator on a pendant type station where it would be desirable to reach the operator quickly from any direction.

Joy Stick — This four-way, five-position operator has one lever used to operate four Type TA or TB contact blocks independently. The device is essentially four buttons in one unit where it is important that only one function be performed at one time. Maintained contact or momentary contact operation is available with or without an off position latch. Conversion to any desired combination of momentary contact or maintained contact can easily be accomplished in the field.

Potentiometer — Knurled knob operator controls 2, 25 or 50 watt potentiometers. Ideally suited for speed control of motors when used with adjustable speed drives.

LEGEND PLATES

Standard legend plates can be furnished for all operators. The metal legend plates fit easily on the operators and a small projection (Key) holds it in position. Standard legend plates are supplied with a black field. Those marked "STOP, OFF, OR EMERGENCY STOP" are supplied with a red field as standard. Legend plates with the more common markings are available from stock and are identified by a specific type number. Special markings can be engraved to order. Blank legend plates also available for customer engraving.

Type TN-2 — The Type TN-2 Legend Plate is standard and will be supplied on all orders unless otherwise specified.

Type TN-3 — The Type TN-3 large legend plates are used where more characters or lines are required or where larger type is desired.

Type TN-4 — The Type TN-4 double headed legend plates provide space for marking above and below the operator. These legend plates generally have the button operation "START" at the top and the bottom function "Motor No. 1" at the bottom.

Type TN-5 Trim Washer — For use when legend plate is not required. This washer keeps the ring nut from marring the panel finish.

Type TN-6 — The Type TN-6 Extra large legend plate is for use with a customer's enclosure only where the spacing between operators is a minimum of $2\frac{5}{16}$ " vertical and $2\frac{1}{4}$ " horizontal.



JULY, 1968

HEAVY DUTY OIL-TIGHT CONTROL UNITS

ATTACHMENTS - ACCESSORIES

Maintained Contact Attachment — Type TM-1 — This attachment, when assembled with two Class 9001 Type TR push button operators and one Class 9001 Type TA, TB, TC or TD contact block, affords maintained contact operation. Type TF tandem block can also be used if additional contacts are desired.

Padlock Attachments — Type TL-1 — This padlock attachment may be used with a half guard or mushroom push button operator to permit locking of the button in the depressed position.

Type TL-2 — This padlock attachment can be used only with the half guarded push button operator to prevent depressing the button.

Type TL-3 — This padlock attachment is designed for use with a standard selector switch operator, but may also be used with any push button or selector-push button operator. When locked, a transparent cover allows easy inspection of the switch position.

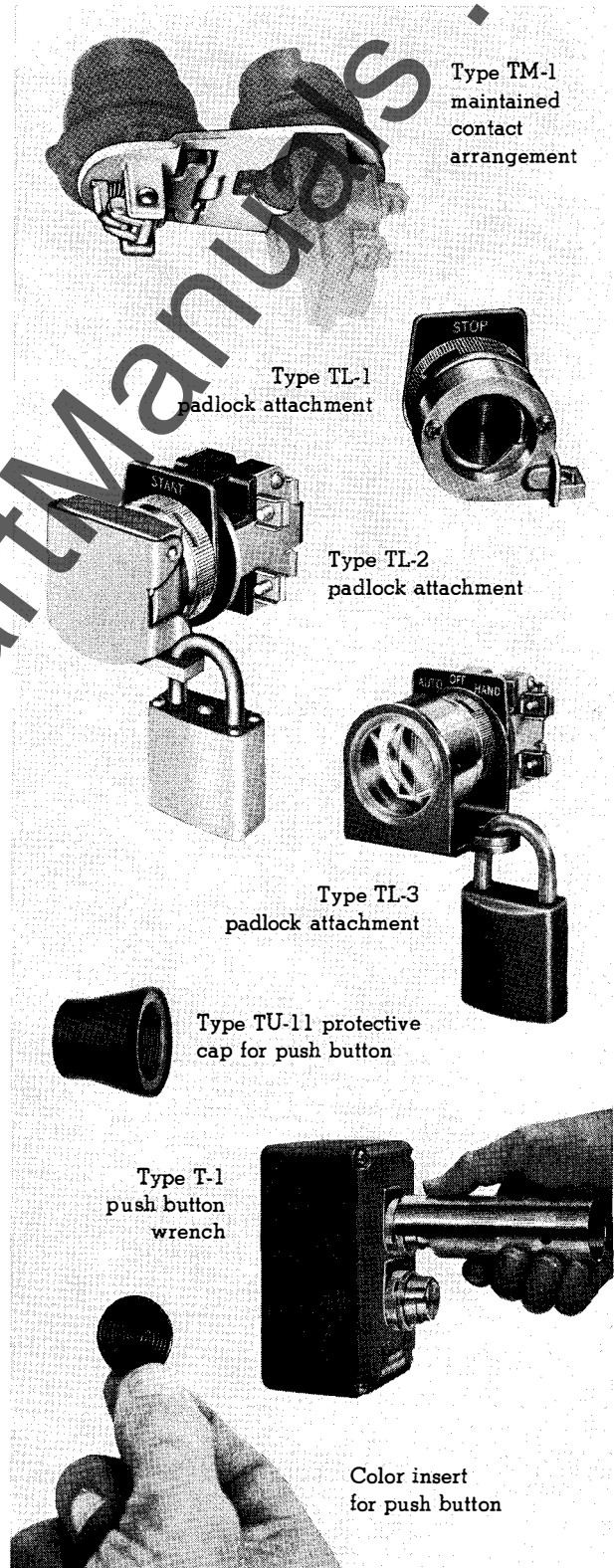
Type TL-5 — This padlock attachment is for use with the Type TU protective cap. Attachment locks button in depressed position.

Neoprene Cap for Push Buttons — Type TU — This cap may be used to protect any standard push button operator from foreign material which might cake around the button, or from severe weather where icing or extreme dustiness would be encountered. Caps can be supplied in six colors. A clear silicone cap is available for pilot lights and illuminated push buttons.

Closing Plate Assemblies — Closing plates are available for filling unused openings of any TY or TZ control station. They consist of a molded phenolic disk with a gasket to cover the hole inside and out.

Push Button Wrench — Type T-1 — This wrench facilitates the installation of oil-tight control units. It may be used with any of the standard operators.

Color Insert Kits — Three kits containing a quantity of inserts of one color for push buttons (Type T-6), selector switches (Type T-4), and selector-push buttons (Type T-5) are available. These packages of inserts are useful for changing the color of operators in the field.



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SUPERSEDES:

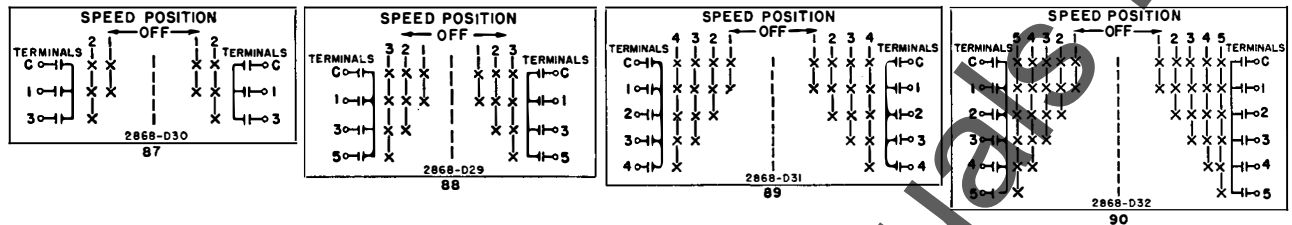
Class 9001
Descriptive Sheet,
Pages 21, 22
dated June, 1966



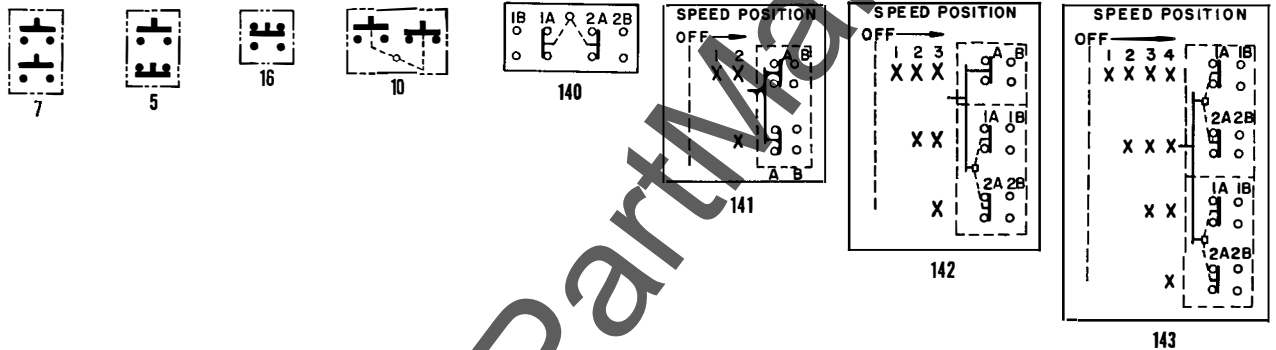
CLASS	9001
PAGE	105
DECEMBER, 1968	

PENDANT PUSHBUTTON STATIONS

APPLICATION DATA

SYMBOLS

NOTE: For symbols 87, 88, 89, and 90 all terminals for single multi-speed push button are **NOT** found on same side of push button block. Terminal C, 3 and 4 are on one side of the block while terminals 1, 2 and 5 are found on the opposite side.

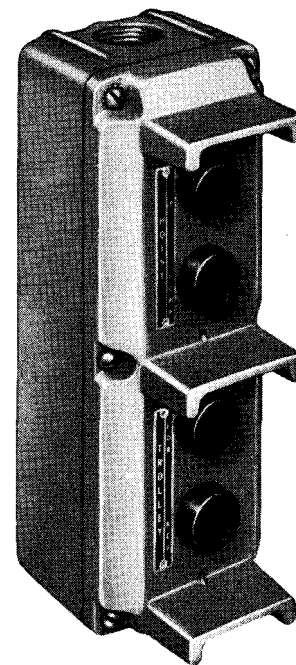


RATINGS — Types B and C units have pilot duty ratings only, 600 volts max., AC or DC. These units will control contactor circuits up to and including Size 4. Type U units are for pilot duty only, 250 volts max., AC or DC. These units will control contactors up to and including Size 2 on DC and Size 3 on AC. Type TJ snap switch and Type T contact block ratings may be obtained by referring to Class 9007 price sheets.

ENCLOSURES — Type U enclosures are available in various combinations of two, four, and six unit enclosures up through 12 units in the standard enclosures and six units in the shallow enclosures.

Important enclosure notes:

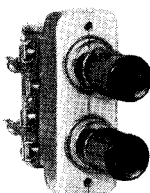
- (1) Type U pushbutton units cannot be used with shallow depth enclosures.
- (2) Cover holes for Types B, C, & U differ from those for Type T. Type T units can be mounted in the same enclosure with Type B, C, & U units as **Factory Assembled Stations**. Use enclosure for B, C, & U units and specify which holes are to be drilled to accept Type T units. (See "Additions and Special Features" for price adder.)
- (3) Price of enclosures includes either blank or standard nameplates — as specified. For non-standard markings add **\$1.50** for each two button unit.



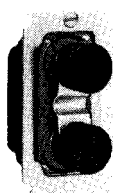
Type UGS-20



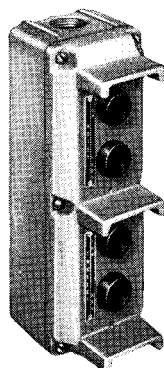
PENDANT PUSHBUTTON STATIONS FOR CRANE, HOIST AND SPECIAL MACHINERY



Type U ①



Type B-45 ①



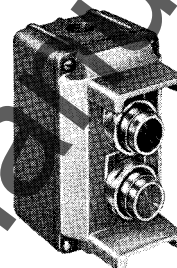
Type UGS-20



Hanger Bracket ①



Type TJ-3 ①



Type UG-10

SHALLOW DEPTH ENCLOSURE (3¾ inches deep)

STANDARD DEPTH ENCLOSURE (4½ inches deep)

- ① Type B-45: Single Speed, 2 Button, Mechanically Interlocked, Standard Duty Unit.
Type B-47, C44: Maintained or Momentary Contact "Start-Stop", Standard Duty Unit.
② Type U: Multi-Speed, Mechanically Interlocked 2 Button, Standard Duty Unit.
③ Type T: Oiltight, Multi-Speed, 1 Button Units.
④ Hanger Brackets

Choose: 1) Pushbutton Units Required
2) Proper Enclosure
3) Order as "Factory Assembled" or as "Components"

PUSHBUTTON UNITS

Number of Buttons per Unit	Description	General Purpose			Weather Resistant			Symbol
		Type	Price		Type	Price		
			Unassembled	Assembled		Unassembled	Assembled	

TYPE B AND C — STANDARD DUTY

2	1 Speed Unit.....	B-45	\$5.50	\$7.50	B-46	\$8.00	\$10.00	7
2	Momentary Contact—Start-Stop.....	B-47	4.00	6.00	B-48	6.50	8.50	5
2	Maintained Contact—Start-Stop.....	C-44	7.00	9.00	C-45	9.50	11.50	10

TYPE U — MULTI-SPEED — STANDARD DUTY

2	2 Speed Unit.....	UO-5	\$24.00	\$26.00	UO-6	\$26.50	\$28.50	87
2	3 Speed Unit.....	UO-2	27.00	29.00	UO-4	29.50	31.50	88
2	4 Speed Unit.....	UO-7	29.00	31.00	UO-8	31.50	33.50	89
2	5 Speed Unit.....	UO-1	30.00	32.00	UO-3	32.50	34.50	90

TYPE TJ AND T — HEAVY DUTY — OILTIGHT (Type TJ units are oiltight pushbutton operated snap switches)

1	1 Speed Unit (one AO-1).....	TJ-1	\$ 9.00	\$10.00	16
1	1 Speed Unit (one CO-3).....	TJ-11	12.00	13.00	140
1	2 Speed Unit (two AO-2).....	TJ-2	12.00	13.00	141
1	3 Speed Unit (one AO-1 and one CO-7).....	TJ-3	16.00	17.00	142
1	4 Speed Unit (two CO-7).....	TJ-4	20.00	21.00	143

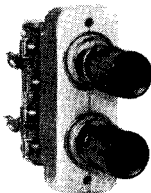
Pilot Lights
Push Buttons
Selector Switches
Closing Plate

Refer to Class 9001 Type T Price Sheets.
Can use Type T blocks only. **Not Type K.**

Add \$1.00 to price of each individual Type T unit when ordering assembled.



Type B-45 ①



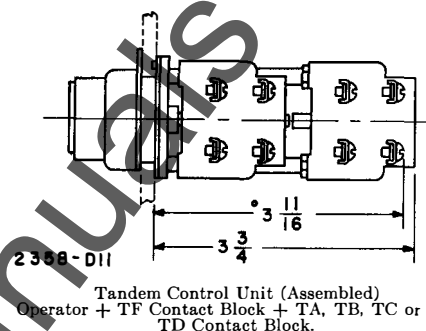
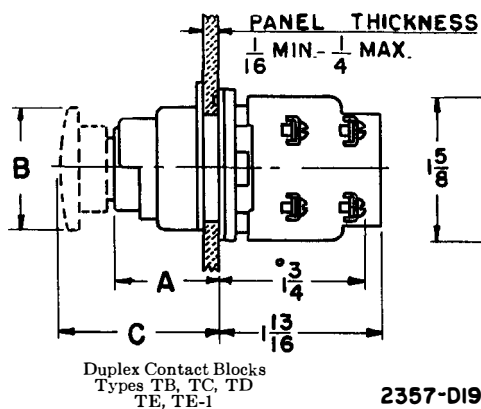
Type U ①



TJ-3 ①

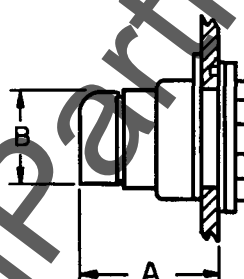


Approximate Dimensions — Not for Construction



Push Button Operators Type TR and
Selector-Push Button Operators Type TQ

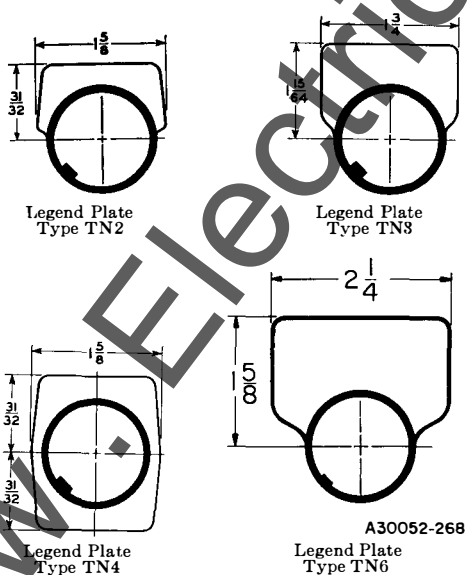
Description	Dimension		
	A	B	C
Standard half guard, full guard, and without guard	1 1/8	....	....
Small mushroom button...	....	1 3/8	1 13/16
Large mushroom button...	....	2 1/4	1 29/32
Extended guard.....	1 1/8	....	....



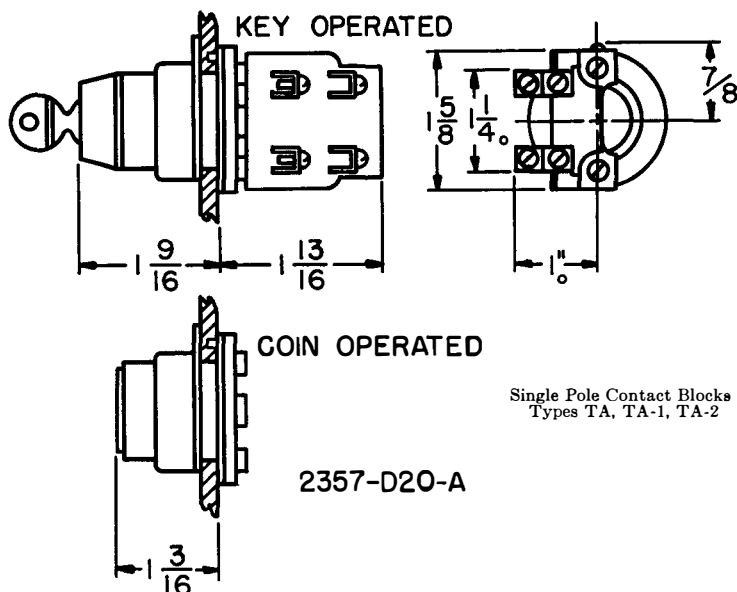
Selector Switch Operators
Type TS

Description	Dimension	
	A	B
Standard Knob.....	1 1/8	1 1/8
Gloved Hand Knob.....	2	1 1/4

TYPE TN LEGEND PLATES



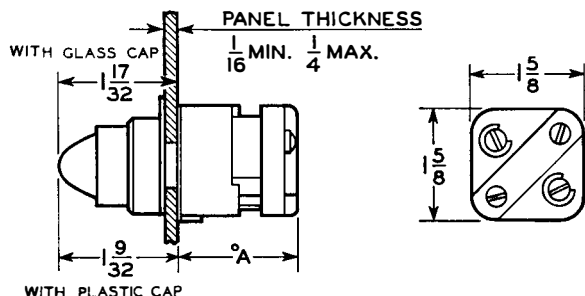
NOTE—Legend plates may be rotated to 90°, 180° or 270° from position shown.



Note—Outside diameter of ring nut on all oil-tight operators is 1 1/8"



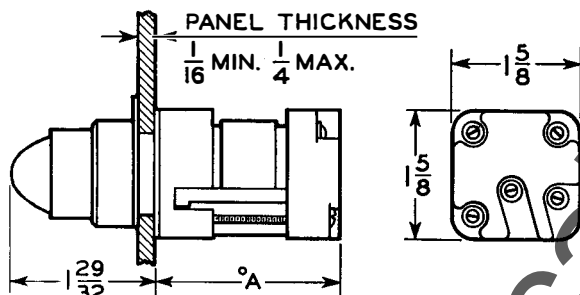
Approximate Dimensions — Not For Construction



Standard Pilot Lights Type TP

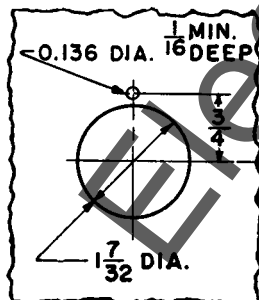
Type	Dim. A
TP1 thru 6.....	1 3/4
TP7 thru 11.....	1
TP12 thru 16, 19.....	1 5/16
TP20.....	1 7/8

*Dimensions over Live Terminals.



Push-to-Test Pilot Lights Type TP

Type	Dim. A
TP21 thru 26, 32, 33.....	2 5/8
TP27 thru 31.....	1 1/2

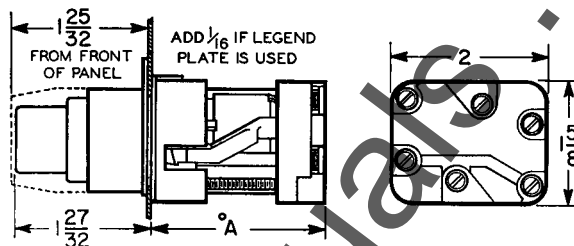


**Correct Drilling for
Mounting All Devices**

1 1/2" diameter hole may be cut with Greenlee knockout punch, 1 1/2" No. 730-S, available through electrical wholesalers.

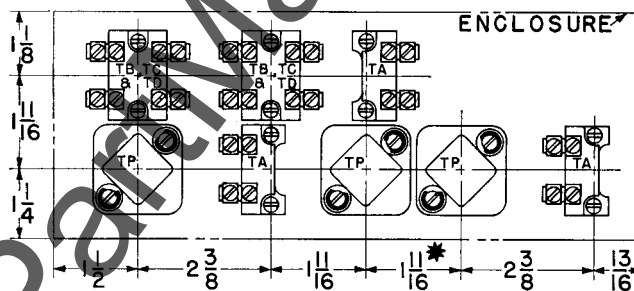
- Locating pin hole (0.136) as shown is for guard location above horizontal (or top of button). Guard may be rotated to other positions by drilling locating pin hole in proper location.

•Revised



Illuminated Push Buttons Type TP

Type	Dim. A
TP35 thru 46.....	2 5/8
TP47 thru 60.....	2 3/4



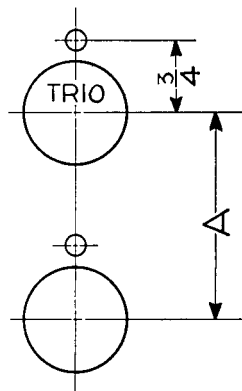
2357-C13

Minimum Spacings

*This dimension applies to standard or push-to-test pilot lights mounted horizontally adjacent. It must be increased to 2 1/4" if one unit is an illuminated push button, or to 2 3/4" if both are illuminated push buttons. Other dimensions shown apply to all Type TP units.

Type TL-1 or TL-2 padlock attachments can be added to TR-Type operators without adding to overall dimensions or without interference to other operators mounted adjacent.

Type TM-1 maintained contact device may be installed on two push button units mounted from 1 1/8" (min.) to 2 1/2" (max.) apart, arranged either vertically or side by side. The contact block should always be assembled to the operator designated as Stop, Off or Safe.



DIMENSION "A"	
TR10	2 1/2
TR3	2
TR1	1 1/8

When installing a Type TR10 (large diameter mushroom button) adjacent to another TR10, TR3 (small diameter mushroom button) or TR1 (standard operator) refer to dimension A in table above.

•Depth of these units require a liner to maintain electrical clearance when used with Type TY1, 2, 3 or 4 enclosure.

JULY, 1968

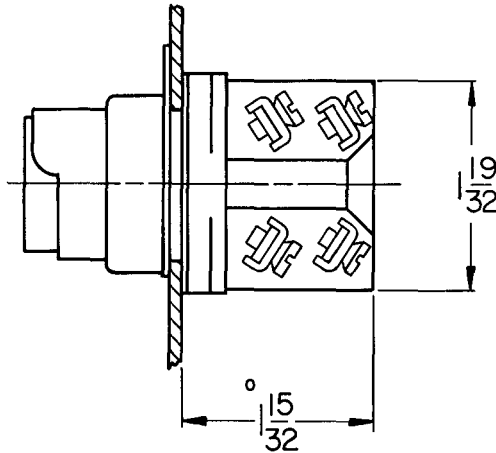
Supersedes Dimension Sheet 9001,
Pages 9 and 12 dated July, 1965



CLASS **9001**
Dimension
Sheet
PAGE 9

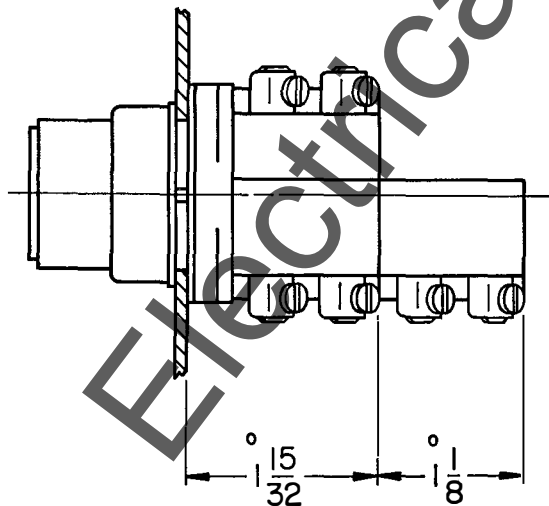
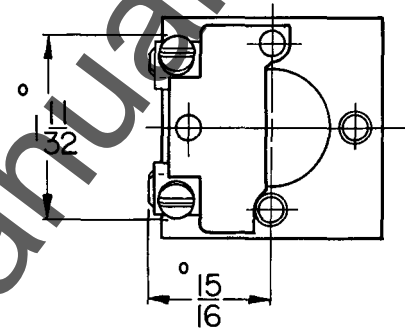
TYPE KA CONTACT BLOCKS

Approximate Dimensions — Not for Construction



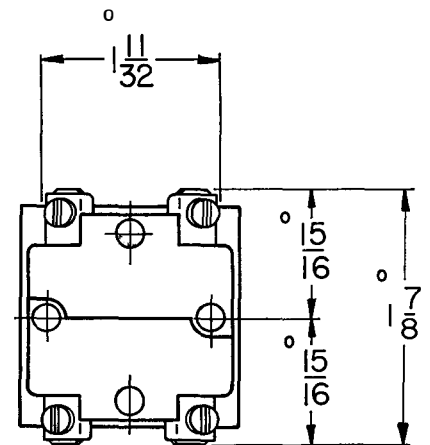
B30052-168

One Type KA Contact Block



B30052-169

FOR EACH ADDITIONAL
CONTACT BLOCK



Three Type KA Contact Blocks
Two mounted side-by-side and one in tandem.

°Dimensions over Live Terminals.

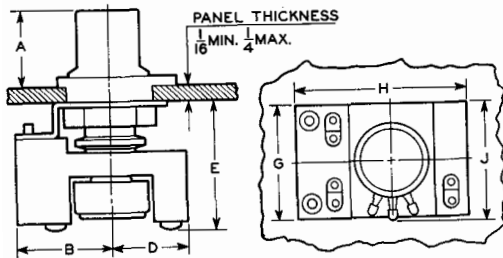
Dimensions Subject to Change without Notice.

SQUARE D COMPANY

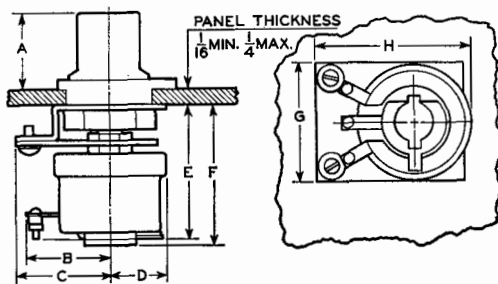
Dimensions are in inches.



Approximate Dimensions — Not for Construction



2 Watt

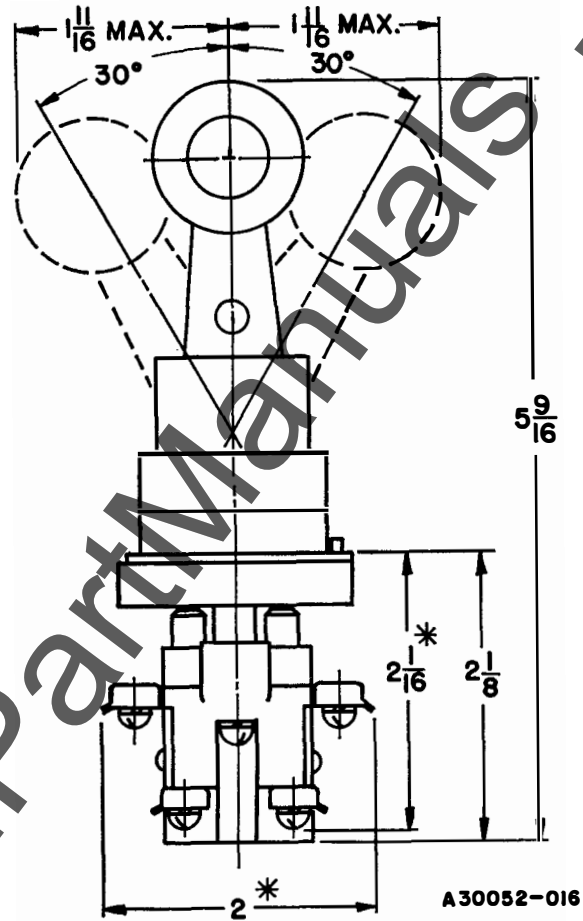


25 and 50 Watt

Potentiometer Type TS

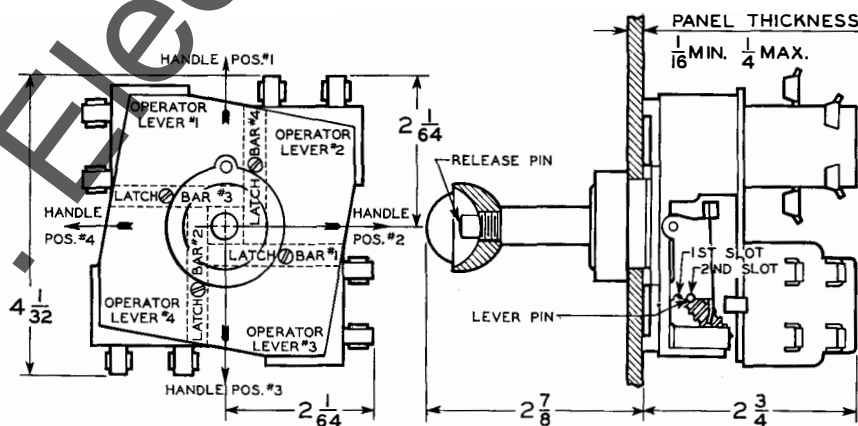
Dim.	2 Watt	25 Watt	50 Watt
A	1 1/16	1 1/16	1 1/4
B	1 3/8	1 7/16	1 11/16
C	...	1 3/8	1 3/8
D	1 1/16	2 5/16	1 5/16
E	1 3/8	1 3/8	2 1/8
F	...	1 15/16	2 1/2
G	1 5/8	1 5/8	1 5/8
H	2 7/16	2 1/8	2 1/4
J	1 11/16	...	...

①Depth of these units requires a liner to maintain electrical clearance when used with Type T-1, 2, 3 or 4 enclosure.



*** OVER LIVE PARTS**

Type TS-80 E2



Four Position Joy Stick Operator Type TX

JUNE, 1966

Supersedes Price Sheet 9001,
Page 15, dated Oct., 1964CLASS **9001**
Price Sheet PAGE 15

PENDANT TYPE PUSH BUTTON STATIONS STANDARD DUTY AND HEAVY DUTY OIL-TIGHT FOR CRANE AND SPECIAL MACHINERY

Interior Only (Open Type)

CLASS 9001								
Number of Units	Description	General Purpose			Weather Resistant▲			Symbol
		Type	Price		Type	Price		
			Unmounted	Mounted		Unmounted	Mounted	
TYPE U — STANDARD DUTY								
2	1 Speed Unit *	B-45	\$ 5.50	\$ 7.50	B-46	\$ 8.00	\$10.00	7
2	2 Speed Unit *	UO-5	24.00	26.00	UO-6	26.50	28.50	87
2	3 Speed Unit *	UO-2	27.00	29.00	UO-4	29.50	31.50	88
2	4 Speed Unit *	UO-7	29.00	31.00	UO-8	31.50	33.50	89
2	5 Speed Unit *	UO-1	30.00	32.00	UO-3	32.50	34.50	90
2	Momentary Contact — Start-Stop Unit...	B-47	4.00	6.00	B-48	6.50	8.50	5
2	Maintained Contact — Start-Stop Unit...	C-44	7.00	9.00	C-45	9.50	11.50	10
TYPE TJ AND T — HEAVY DUTY OIL-TIGHT								
1	1 Speed Unit (One AO-1)	TJ-1	\$ 9.00	\$10.00	TJ-1	\$ 9.00	\$10.00	16
1	1 Speed Unit (One CO-3)	TJ-11	12.00	13.00	TJ-11	12.00	13.00	140
1	2 Speed Unit (Two AO-2)	TJ-2	12.00	13.00	TJ-2	12.00	13.00	141
1	3 Speed Unit (One AO-1 and One CO-7)	TJ-3	16.00	17.00	TJ-3	16.00	17.00	142
1	4 Speed Unit (Two CO-7)	TJ-4	20.00	21.00	TJ-4	20.00	21.00	143
	Pilot Lights Push Buttons Selector Switches	Refer to Class 9001 Type T Price Sheets Pages 7 thru 14 for Ratings and Price of Individual Unit *			Add \$1.00 to prices of each individual Type T unit when ordering mounted.			

[▲]Weather resistant type is provided with Neoprene diaphragm.

*Each unit so marked consists of two mechanically interlocked push buttons.

^⓪Each Type TJ unit consists of an oil-tight push button operated Class 9007 snap switch or switches. One unit is required for each direction.

†Oil-tight operators with tandem Type T contact blocks can not be used in enclosures listed below.

♦Only Type T contact blocks, not Type K, can be used with Type U enclosures.

Enclosures Only — Base Price *

Size	Conduit Entrance I.P. Size	General Purpose				Weather Resistant ▲			
		For Types B, C, & U ★		For Types T & TJ		For Types B, C, & U ★		For Types T & TJ	
		Type	Price	Type	Price	Type	Price	Type	Price
STANDARD ENCLOSURE									
2 Button	¾"	UG-1	\$14.00	UG-11	\$20.00	UW-1	\$16.00	UW-11	\$22.00
4 Button	1"	UG-2	21.00	UG-12	27.00	UW-2	23.50	UW-12	29.50
6 Button	1¼"	UG-3	35.00	UG-13	41.00	UW-3	38.00	UW-13	44.00
8 Button	1½"	UG-4	59.00	UG-14	65.00	UW-4	62.50	UW-14	68.50
10 Button	1½"	UG-5	65.00	UG-15	71.00	UW-5	69.00	UW-15	75.00
12 Button	1½"	UG-6	79.00	UG-16	85.00	UW-6	83.50	UW-16	89.50
SHALLOW ENCLOSURES †									
2 Button	¾"	UGS-1	14.00	UGS-11	20.00	UWS-1	16.00	UWS-11	22.00
4 Button	1"	UGS-2	21.00	UGS-12	27.00	UWS-2	23.50	UWS-12	29.50
6 Button	1¼"	UGS-3	35.00	UGS-13	41.00	UWS-3	38.00	UWS-13	44.00

★NOTE: Type TJ and T oil-tight units may be combined with Types B, C and U interiors as factory assembled stations. Use enclosure for Types B, C and U interiors and add \$3.00 for special drilling of each hole required to accommodate Type TJ and other Type T push button units. (Refer to example No. 2 on Page 16).

*Base price includes enclosure with standard nameplates. Special nameplates are \$1.50 each additional per two button station. Hanger brackets are available at additional charge — see below.

†Shallow enclosures will not accommodate Type U push buttons.

Accessories — Hanger Brackets

Enclosure Size	Conduit Entrance I.P. Size	Part Number	Price
2 Button	3/4"	2868-D1-X2	\$0.50
4 Button	1"	2868-D1-X3	0.50
6 or 8 Button	1 1/4"	2868-D19-X1	0.50
10 Button	1 1/2"	2868-D19-X2	0.50
2 or 4 Button *	1/2"	2868-D1-X1	0.50
6 or 8 Button *	1"	2868-D19-X3	0.50

*For use with non-standard conduit entrance.

General Revision.

SQUARE D COMPANY

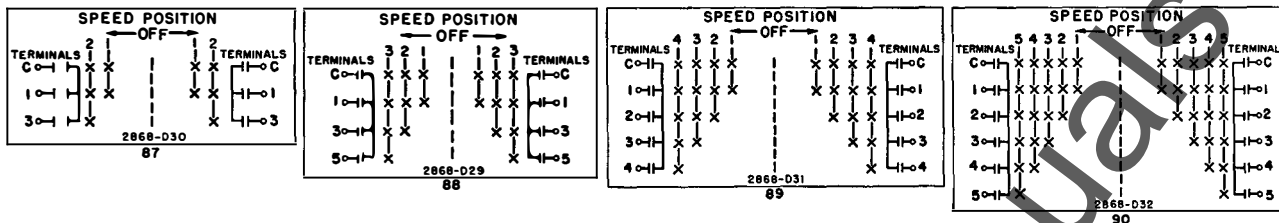
Prices Subject to Change without Notice.

SCHEDULE DS-1 DISCOUNTS

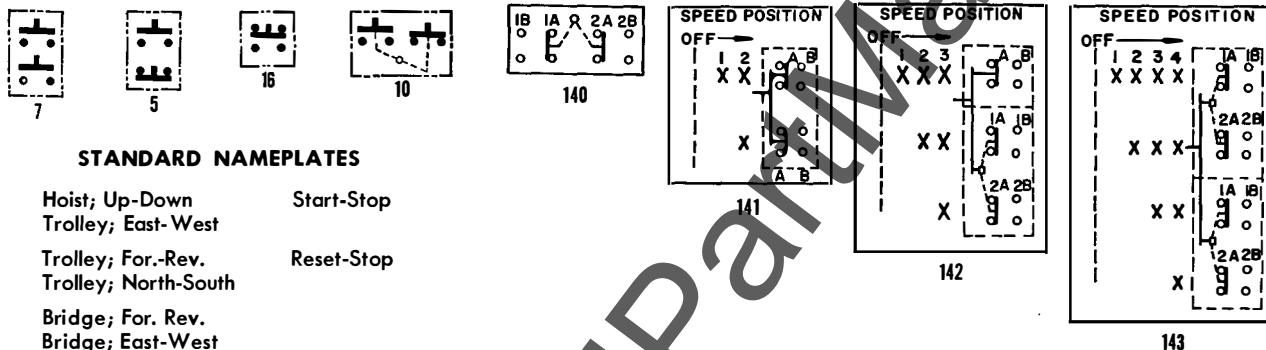


PENDANT TYPE PUSH BUTTON STATIONS STANDARD DUTY AND HEAVY DUTY OIL-TIGHT FOR CRANE AND SPECIAL MACHINERY

SYMBOLS



NOTE: For symbols 87, 88, 89, and 90 all terminals for single multi-speed push button are **NOT** found on same side of push button block. Terminal C, 3 and 4 are on one side of the block while terminals 1, 2 and 5 are found on the opposite side.



STANDARD NAMEPLATES

Hoist; Up-Down Start-Stop
Trolley; East-West
Trolley; For-Rev. Reset-Stop
Trolley; North-South
Bridge; For. Rev.
Bridge; East-West

ORDERING INFORMATION REQUIRED

UNASSEMBLED STATIONS:

- 1—Order "Enclosure Only" or "Interior Only" by Class and Type number.
- 2—Standard nameplates as specified on order will be furnished with the enclosure (unmounted). If markings are not specified, blank nameplates will be furnished.
- 3—Order "special" nameplate as separate items; for example: nameplate marked Horn; Off-On at \$1.50 per two button station additional.

EXAMPLE: (1) Class 9001 Type UG-20, consisting of:
NO. 1

(1) 9001 UG-2 Enclosure	\$21.00
Marked: Trolley; Fwd.-Rev.	
Hoist: Up-Down	
(1) 9001 B45	7.50
(1) 9001 UO-2	29.00
Total Price	\$57.50

ASSEMBLED STATIONS:

- 1—When ordering assembled push button station, add "0" (zero) to end of "enclosure only" type number and list interior units desired using mounted prices for interiors. Total price of all items is price of assembled station (see Example No. 1).
- 2—Order nameplates, marked as desired, with enclosure, and they will be furnished mounted. No additional charge for standard nameplates ordered with enclosure. For special nameplate markings, add 1.50 each per two button station.
- 3—If a combination of Type B, C and U or Type TJ and T push buttons is desired for a single enclosure; select enclosure for the required number of push buttons and specify Class 9001 Type Form Y35 (see Example No. 2).
- 4—Include description specifying location and type of push button, starting from top to bottom.
- 5—Consult factory for other special features or combinations desired.

EXAMPLE: (1) Class 9001 Type UG-50 Form Y35, consisting of:
NO. 2

(1) 9001 UG-5 Y35 enclosure	\$ 65.00
Marked: Power On — Reset	
Bridge: Fwd. — Rev.	
Trolley: Fwd. — Rev.	
Hoist: Up — Down	
Off-On — Horn	
(1) 9001 TP-9R1	10.00
(1) 9001 TR-51B	10.00
(2) 9001 TJ-2 (@ 13.00 ea.)	26.00
(1) 9001 UO-2	7.50
(1) 9001 UO-1	32.00
(1) 9001 TS-21B	15.00
(1) TJ-11	13.00
Special Drilling (6 holes @ \$3.00 ea.)	18.00
Special Nameplates (2 @ \$1.50 ea.)	3.00
Total Price	\$199.50

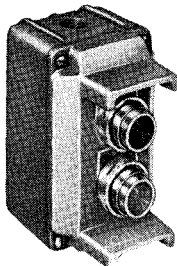
General Revision.



PENDANT PUSHBUTTON STATIONS FOR CRANE, HOIST AND SPECIAL MACHINERY

ENCLOSURES

STANDARD DEPTH ENCLOSURES

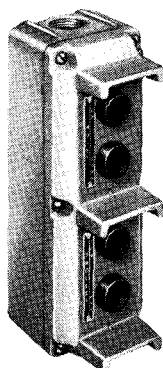


Type UG-10

Size	Conduit Entrance Size	General Purpose				Weather Resistant			
		For Types B, C & U		For Types T & TJ		For Types B, C & U		For Types T & TJ	
		Type	Price	Type	Price	Type	Price	Type	Price
2 Button	3/4"	UG-1	\$14.00	UG-11	\$20.00	UW-1	\$16.00	UW-11	\$22.00
4 Button	1"	UG-2	21.00	UG-12	27.00	UW-2	23.50	UW-12	29.50
6 Button	1 1/4"	UG-3	35.00	UG-13	41.00	UW-3	38.00	UW-13	44.00
8 Button	1 1/4"	UG-4	59.00	UG-14	65.00	UW-4	62.50	UW-14	68.50
10 Button	1 1/2"	UG-5	65.00	UG-15	71.00	UW-5	69.00	UW-15	75.00
12 Button	1 1/2"	UG-6	79.00	UG-16	85.00	UW-6	83.50	UW-16	89.50

SHALLOW DEPTH ENCLOSURES

2 Button	3/4"	UGS-1	\$14.00	UGS-11	\$20.00	UWS-1	\$16.00	UWS-11	\$22.00
4 Button	3/4"	UGS-2	21.00	UGS-12	27.00	UWS-2	23.50	UWS-12	29.50
6 Button	1"	UGS-3	35.00	UGS-13	41.00	UWS-3	38.00	UWS-13	44.00



Type UGS-20

HANGER BRACKETS

Enclosure Size	Conduit Entrance Size	Part Number	Price
2 Button	3/4"	2868-D1 -X2	\$0.50
4 Button	1"	2868-D1 -X3	0.50
6 or 8 Button	1 1/4"	2868-D19-X1	0.50
10 Button	1 1/2"	2868-D19-X2	0.50
2 or 4 Button*	1 1/2"	2868-D1 -X1	0.50
6 or 8 Button*	1"	2868-D19-X3	0.50

*For use with non-standard conduit entrance.

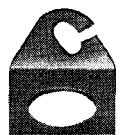
NAMEPLATES

Marking	Part Number	Price
Standard Marking:		
Hoist; Up-Down	144-D492-X1	\$0.30
Trolley; East-West	144-D669-X4	0.30
Trolley; For.-Rev.	144-D492-X2	0.30
Trolley; North-South	144-D669-X5	0.30
Bridge; For.-Rev.	144-D492-X3	0.30
Bridge; East-West	144-D669-X6	0.30
Start-Stop	144-D669-X1	0.30
Reset-Stop	144-D669-X3	0.30
Blank	144-D492-X4	0.30
Non-Standard Markings	144-D492-X4 (Specify Marking)	1.50

*Price of standard nameplate is included with price of any enclosure.

SPECIAL FEATURES

Convert Cover Hole in Enclosure for Types B, C, & U to Accept Type T Push Button (Only for Factory Assembled Stations)	Specify Form Y35	\$3.00/per hole
---	------------------	-----------------



Hanger Bracket

ORDERING INFORMATION REQUIRED

UNASSEMBLED STATIONS:

- 1—Order interior pushbutton units by class and type number (use "unassembled" price)
- 2—Order enclosure by class and type number
- 3—Specify nameplate markings

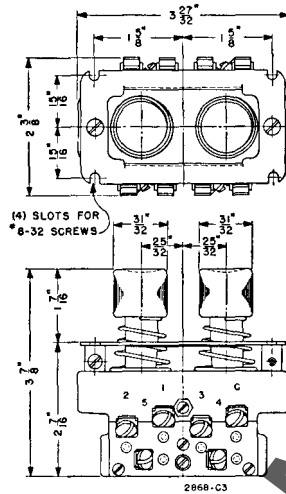
ASSEMBLED STATIONS:

- 1—Order enclosure by class and type and add a "Zero" to end of type number. Example: 9001 Type UG-20 vs Type UG-2
- 2—List interior pushbutton units desired starting at the top of enclosure (use "assembled" price)
- 3—Specify nameplate markings

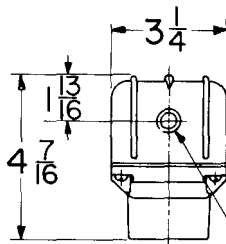


PENDANT TYPE CONTROL STATIONS

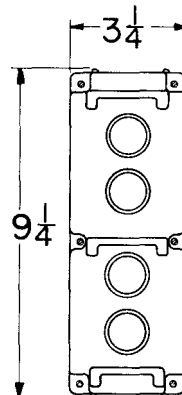
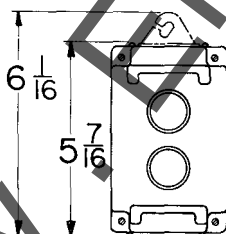
Approximate Dimensions — Not for Construction



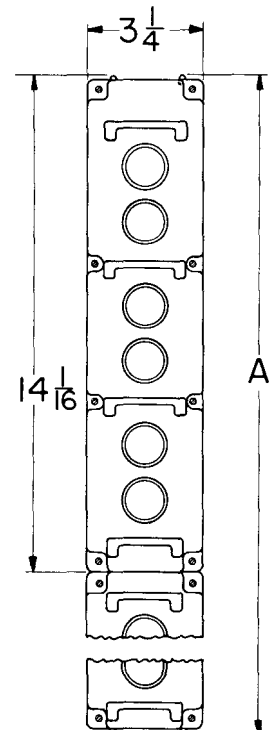
Type U Push Button



$\frac{3}{4}$ PIPE TAP FOR 2 UNIT
 1 PIPE TAP FOR 4 UNIT
 $1\frac{1}{4}$ PIPE TAP FOR 6 OR 8 UNIT
 $1\frac{1}{2}$ PIPE TAP FOR 10 OR 12 UNIT
 PIPE TAP ON ONE END ONLY



C30054-339



Dimensions are in inches.



JUNE, 1966

PENDANT TYPE CONTROL STATIONS

APPLICATION

Pendant push button stations were designed specifically for control of the magnetic contactors used on hoist, monorails and other overhead material handling equipment. Pendant type control stations are particularly adaptable for use on special machines where remote operation is desirable.

Push buttons are available to control the forward or reverse rotation of motors. Control of one, two, three, four or five speed motors from a single duplex station is possible with the use of the Type U push buttons. The Type TJ push buttons may be used to control up to four speed motors or special sequencing operations. Other control operations may be obtained by the use of the Type B, C and T push buttons, selector switches and pilot lights.

Enclosures accommodating from one to three duplex push buttons are available, and any number of control stations can be furnished in one pendant type unit by combining two or more of the Type U enclosures. Deep enclosures are available with covers to accommodate either Type B, C and U push button units or the Type T or TJ push buttons. Shallow enclosures to provide greater ease of handling are also available for all push buttons except the Type U push button.

PUSH BUTTONS

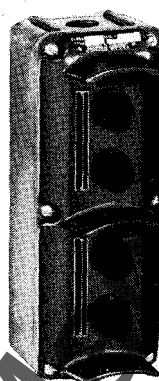
TYPE B, momentary contact and **TYPE C**, maintained contact "Start-Stop" push buttons are offered for master control of hoist control circuits, or for special pendant control station applications. The Type B push button may also be used for control of single speed reversing motors. This button consists of two normally open momentary contact units mounted in a molded Bakelite case. Closing of both circuits simultaneously is prevented by means of a steel mechanical interlock located directly beneath the button. A separate enclosure is available but this interior will also fit Type U enclosures.

TYPE U push buttons are furnished as momentary contact duplex units for control of two to five speed wound rotor reversing motors. They are mechanically interlocked to prevent simultaneous energization of the forward and reverse contactors. The buttons must be held down to energize the contactors, de-energizing occurs instantly as the operator removes his hand. The multi-speed units allow control from a single station, the motor speed varying as the push button is depressed. Initial depression picks up the directional contactor. Further operation energizes the higher speed contactors which short out additional resistance. The highest speed shorting contactor becomes energized when the button is fully depressed. Special features include a grounding terminal to permit grounding the case to the pendant cable as a safety precaution.

For applications requiring weather resisting equipment, a specially mounted Neoprene diaphragm can be furnished with the Type B, C and U push buttons. When used in conjunction with the Type U enclosure, this diaphragm securely seals the contact block from the external operator button.

TYPE TJ push buttons are assemblies of Type T oil-tight operators with various combinations of Type A or C snap switches. The snap action of these switches make these push buttons particularly adaptable to control of one, two, three or four speed wound rotor motors, two speed squirrel cage motors or on applications requiring sequential operation and/or special contact operation.

TYPE T oil-tight operators and selector switches with various contact blocks and pilot lights may be utilized for particular crane control functions or control of special machinery.



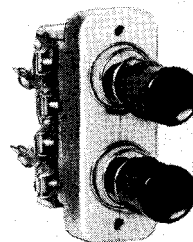
Type UG-20
four button
station



Type UG-40
eight button
station showing
combination
of 6 button
& 2 button
enclosures



Type B single speed
push button showing
mechanical interlock



Type U
multispeed
push button unit

RATINGS

TYPES B AND C stations are of pilot duty ratings only, 0 to 600 volts maximum ac or dc. These units will control contactor circuits up to and including Size 4.

TYPE U push buttons are rated for pilot duty only at 0 to 250 volts maximum ac or dc and will handle control circuits of contactors up to and including Size 2 on dc and Size 3 on ac.

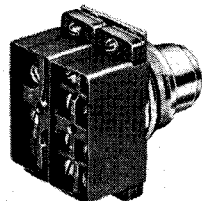
TYPE TJ snap switch contact mechanism ratings may be obtained by referring to Class 9007 price sheet page 9.

TYPE T contact block ratings may be obtained by referring to Class 9001 price sheet page 7.



PENDANT TYPE CONTROL STATIONS

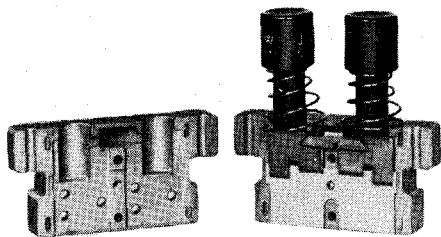
JUNE, 1966



Type TJ-3
three speed oil-tight
push button operated
snap switches

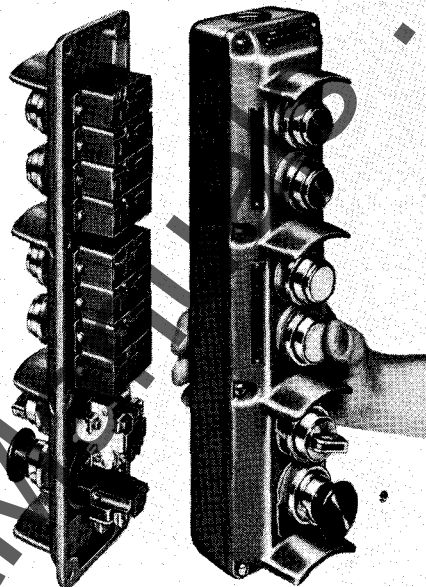


Optional
hanger
bracket



9001 Type U push button partly
disassembled to show construction
details. Note slider and contact
arrangement

Type USG-13
shallow station
with Type TJ and
T push buttons



CONSTRUCTION

TYPES B AND C have double break, silver-to-silver contacts mounted in molded Bakelite. Type B contacts are momentary contact, single circuit, while Type C contacts are arranged for maintained contact operation.

TYPE U push button stations are of a unique construction. The contacts are single break, silver plated steel to withstand rugged service and yet provide good electrical conductivity. The contact mechanism consists of a knife-like slider that passes over spherically shaped contact tips. The contact tips are held in place by a strong spiral spring resting against the terminal. The circuit is completed through the "common" terminal to the spring and stationary contact, then to the knife slider, and out through another stationary spherical contact and spring to the "speed position" terminal. As the knife blade moves downward, it contacts one after another of the stationary contacts, picking up the proper directional contactor coil and subsequently the higher speed contact control circuits. Since these contacts are used for pilot duty only, they are not subject to great electrical wear. The primary consideration, mechanical wear, was the cause of considerable study before the correct materials to produce good mechanical and electrical life were found.

Closing of both push button units at one time is prevented by a steel mechanical interlock mounted inside the push button case. The case is of molded Plaskon-Alkyd, fiber glass reinforced. This material has excellent mechanical strength and high resistance to carbon arc tracking.

TYPE TJ push button units are unique assemblies of standard Type T operators and various Type A and C snap switches which are sequentially operated through an offset mechanical bar by the Type T push button operator. Type AO-1 contacts are single pole, double throw — one circuit normally open and one circuit normally closed. These circuits are electrically separate, but cannot be used on opposite polarities. The Type CO-3 is a two pole device with each pole electrically separate from the other and can be used on opposite polarities. The contacts of each pole of the Type CO-3 are single pole, double-throw — these circuits are electrically separate but cannot be used on opposite polarities. The Type CO-7 is a two stage snap switch which has two poles similar to Type CO-3 except one pole operates before the other pole.

TYPE T push button operators, selector switches and pilot lights may now be accommodated in the Type U enclosures. For a comprehensive listing of the various combinations of operators and contact blocks as well as a description of the construction and features of the Type T heavy duty oil-tight control units, refer to Class 9001 price sheets pages 7 through 14 and descriptive sheets pages 13 through 18.

ENCLOSURES

Pendant type stations are suspended from hoists by an electrical cable and chain and are subject to very hard usage and abuse. On special machinery applications pendant type stations may be mounted on a movable arm or spring loaded cable to increase the mobility of the operator. These stations are free to swing and to minimize inertia and increase strength, the enclosures are made of light weight cast aluminum alloy. The box is ribbed vertically for additional strength as well as to provide a better grip for the operator. A hanger bracket for supporting chain or cable is available as an optional feature. However, no cable fittings or connections are provided as standard.

TYPE U enclosures are available in various combinations of two, four, six unit enclosures up through 12 units in the standard enclosures and six units in the shallow enclosures. Types are available with covers drilled to accommodate Types B, C and U push buttons or for the Types T and TJ heavy duty oil-tight control units. Cover castings include guards over each unit of two buttons to prevent accidental closing of any of the circuits.

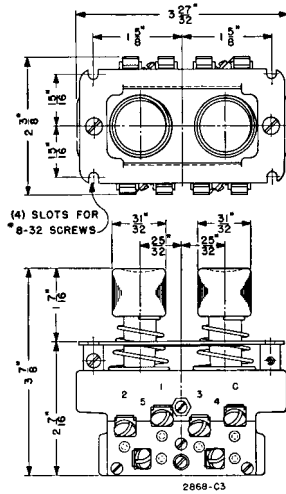
The standard enclosure will accommodate the Type B, C and U push buttons or the Type TJ and T push buttons. The shallow types allow for easier handling and will accommodate the Type B, C, T and TJ push buttons, but not the Type U. Both the standard and shallow enclosures are available in general purpose and weather-resistant types. In the weather-resistant type, cork Neoprene gaskets are used between the box and cover castings to prevent the entry of dust and water.

Pendant control stations are available as factory assembled stations or separate interiors and enclosures may be ordered for field assembly. Where it is desired to combine Type B, C and U units with Type TJ and T units in the same enclosure, stations must be ordered as factory assembled only.

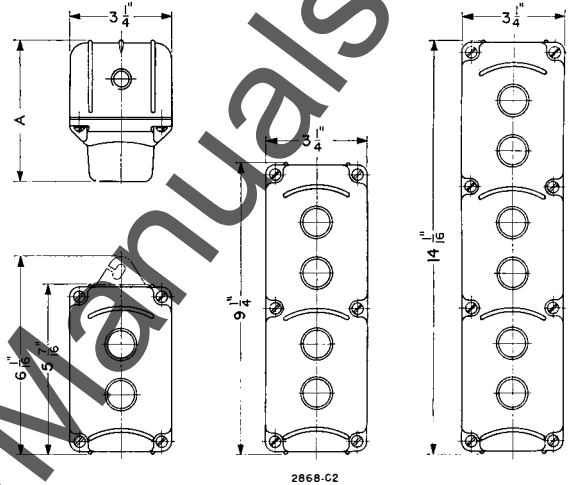


PENDANT TYPE CONTROL STATIONS

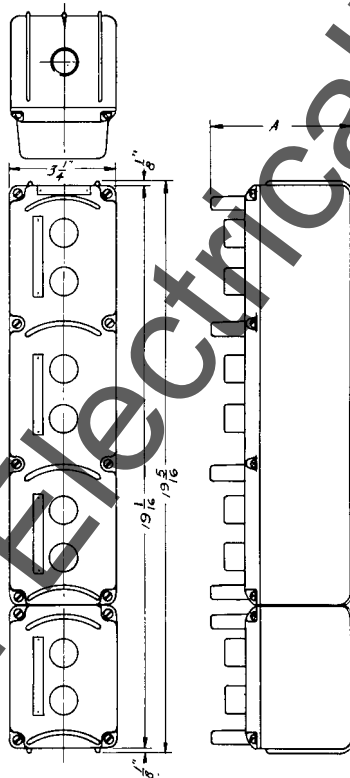
Approximate Dimensions — Not For Construction



Type U Push Button



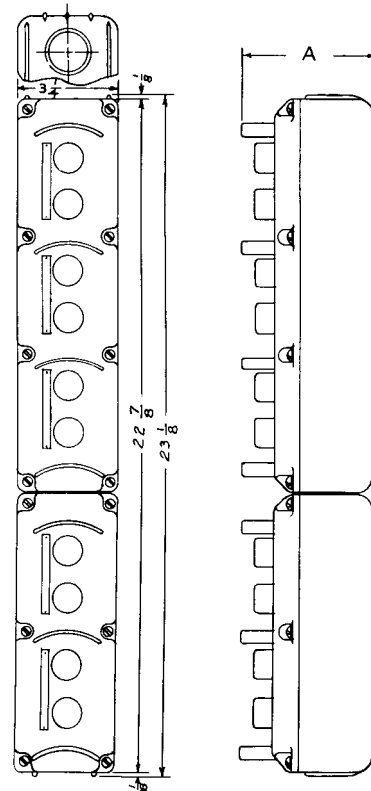
2, 4 & 6 Button Enclosure



10 Button Enclosure

Dimension "A"

Standard	4 1/2
Shallow	3 3/4



12 Button Enclosure

Dimensions are in inches.

Dimensions Subject to Change without Notice.

SQUARE D COMPANY

www.ElectricalPartManuals.com

NOVEMBER, 1964

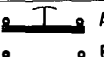
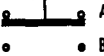
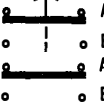
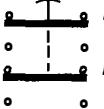
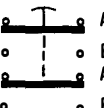
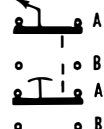
Supersedes Price Sheet 9001,
Page 17, dated December, 1962CLASS **9001**
Price Sheet PAGE 17

PALM OPERATED PRESS BUTTON HEAVY DUTY — OIL-TIGHT

This heavy duty, oil-tight palm operated push button has been designed to meet the critical requirements of mass production industries for application on stamping presses. The rugged button and enclosure will take a lot of abuse. The snap action contacts cannot be "teased". A key operated contact is available to bypass buttons on a multi-station press. The button is easy to install, and its attractive appearance is a credit to any press installation. Protective guards, as required by many safety codes, are available. Single pole, double throw or two pole double throw contacts can be provided. Two pole devices are listed on page 18.



SINGLE POLE, Double Throw Separate Circuit ★

CLASS 9001														600 VOLTS AC MAX.			
N.P. Marking	Contact Symbol	Features	Without Guard				With Shallow Guard				With Deep Guard						
			With Box		Without Box		With Box		Without Box		With Box		Without Box				
			Type	List Price	Type	List Price	Type	List Price	Type	List Price	Type	List Price	Type	List Price			
RUN		1 N.O., 1 N.C. Momentary Contacts...	PB1	\$28.00	P1	\$22.00	PB41	\$31.50	P41	\$25.50	PB31	\$32.00	P31	\$26.00			
STOP		1 N.C. Momentary Contact.....	PB2	24.50	P2	18.50	PB42	28.00	P42	22.00	PB32	28.50	P32	22.50			
INCH		1 N.O., 1 N.C. Momentary Contacts...	PB3	28.00	P3	22.00	PB43	31.50	P43	25.50	PB33	32.00	P33	26.00			
RUN		2 N.O., 2 N.C. Momentary Contacts...	PB4	32.00	P4	26.00	PB44	35.50	P44	29.50	PB34	36.00	P34	30.00			
STOP		2 N.O., 2 N.C. Momentary Contacts...	PB5	32.00	P5	26.00	PB45	35.50	P45	29.50	PB35	36.00	P35	30.00			
NCH		2 N.O., 2 N.C. Momentary Contacts...	PB6	32.00	P6	26.00	PB46	35.50	P46	29.50	PB36	36.00	P36	30.00			
RUN	Normal Position 	Key Oper. Completely Turned (by pass) 2 N.O., 2 N.C. Mom- entary Contacts With 2 Position Key Lock	†PB1L	38.00	†P1L	32.00	†PB41L	41.50	†P41L	35.50	†PB31L	42.00	†P31L	36.00			
	Palm Operator Depressed 																

Box only — Class 9001 Type PB..... List Price \$ 6.00
Deep Guard Only — Class 9001 Type PG-1..... List Price \$ 4.00
Shallow Guard Only — Class 9001 Type PG-2..... List Price \$ 3.50

† Industry standard key will be furnished. CH501 or any Heavy Duty Oil-Tight Class 9001 Selector Switch Keys are available on special order. Add \$ 5.00 list for special key.

BASIC CONTACT MECHANISM

Class	Type	List Price
9007	AO-2	\$ 2.90●

★ Contacts are single pole, double throw—one circuit normally open and one circuit normally closed. These circuits are electrically separate, but cannot be used on opposite polarities.

ORDERING INFORMATION REQUIRED

1—Order by Class and Type Number.

ELECTRICAL RATINGS — SINGLE POLE

Volts	AC Pilot Duty Amperes ▲ *		DC Pilot Duty Amperes ▲▲	
	Make	Break	Double Throw	Single Throw
110	40	15	0.5	2.0
220	20	10	0.2	0.5
440	10	6	.....	.....
600	8	5	0.02	0.1

* AC continuous amp. rating is 15 amps. based on a 75% power factor.

▲ AC pilot duty rating is based on a 35% power factor.

▲▲ DC pilot duty rating is based on inductive loads such as coils and solenoids.

● Changed since previous issue.

SQUARE D COMPANY

Prices Subject to Change without Notice.

SCHEDULE DS-1 DISCOUNTS



PALM OPERATED PRESS BUTTON **HEAVY DUTY — OIL-TIGHT**

TWO POLE, Double Throw, Separate Circuit ★ ★

CLASS 9001												600 VOLTS AC MAX.	
N.P. Marking	Features	Without Guard				With Shallow Guard				With Deep Guard			
		With Box		Without Box		With Box		Without Box		With Box		Without Box	
		Type	List Price	Type	List Price	Type	List Price	Type	List Price	Type	List Price	Type	List Price
RUN	2 N.O., 2 N.C. Momentary Contacts.....	PB101	\$31.00	P101	\$25.00	PB141	\$34.50	P141	\$28.50	PB131	\$35.00	P131	\$29.00
STOP	2 N.C. Momentary Contact.....	PB102	27.50	P102	21.50	PB142	31.00	P142	25.00	PB132	31.50	P132	25.50
INCH	2 N.O., 2 N.C. Momentary Contacts.....	PB103	31.00	P103	25.00	PB143	34.50	P143	28.50	PB133	35.00	P133	29.00
RUN	4 N.O., 4 N.C. Momentary Contacts.....	PB104	38.00	P104	32.00	PB144	41.50	P144	35.50	PB134	42.00	P134	36.00
STOP	4 N.O., 4 N.C. Momentary Contacts.....	PB105	38.00	P105	32.00	PB145	41.50	P145	35.50	PB135	42.00	P135	36.00
INCH	4 N.O., 4 N.C. Momentary Contacts.....	PB106	38.00	P106	32.00	PB146	41.50	P146	35.50	PB136	42.00	P136	36.00
RUN	4 N.O., 4 N.C. Momentary Contacts..... with 2 Position Key Lock	†PB101L	44.00	†P101L	38.00	†PB141L	47.50	†P141L	41.50	†PB131L	48.00	†P131L	42.00

NOTE: Contact symbols for push buttons shown above are the same as those shown on page 17 for equivalent devices except an additional and identical set of contacts is operated by each button.

Box only — Class 9001 Type PB.....List Price \$6.00
Deep Guard Only — Class 9001 Type PG-1.....List Price \$4.00
Shallow Guard Only — Class 9001 Type PG-2.....List Price \$3.50

† Industry standard key will be furnished. CH501 or any Heavy Duty Oil-Tight Class 9001 Selector Switch Keys are available on special order. Add \$5.00 list for special key.

BASIC CONTACT MECHANISM

Class	Type	List Price
9007	CO-3	\$ 5.80

★ ★ Each pole is electrically separate from the other and can be used on opposite polarities. The contacts of each pole of the Type CO-3 are single pole, double throw—these circuits are electrically separate but cannot be used on opposite polarities.

ELECTRICAL RATINGS — TWO POLE

Volts	AC Pilot Duty ▲ * *		Volts	DC Pilot Duty Amperes ▲ ▲	
	Make	Break		Single Throw	Double Throw †
0-115	30 Amps.	3 Amps.	115	1.0	0.2
115-600	3450 VA.	345 VA.	230	0.3	0.1
			600	0.1	...

* * AC continuous amp. rating is 10 amps. based on a 75% power factor.
▲ AC pilot duty rating is based on a 35% power factor.

▲ ▲ DC pilot duty rating is based on inductive loads such as coils and solenoids.

† Double throw switches rated 250 volts dc maximum.

ORDERING INFORMATION REQUIRED

1—Order by Class and Type Number.



DECEMBER, 1962

PALM OPERATED PRESS BUTTON

APPLICATION

Safety requirements on power operated stamping presses are necessarily very rigid. One of the basic requirements is that all operators concerned with the stamping press be required to depress a push button with each hand before the press is allowed to start its stroke. The Class 9001 Type P palm operated button has been designed for this application. General requirements are:

Oil tight enclosure, large button area, short button travel, contact switch cannot be "teased", facilities for bypassing button where desirable, and large easily read legend plates.

FEATURES AND CONSTRUCTION

The Class 9001 Type P enclosure is of heavy wall die cast construction designed to take lots of abuse. The button is available for mounting in a machine cavity or in its own oil tight enclosure. Cover screws are self retaining and the control terminals are easily accessible to facilitate mounting of the button. The button is supplied with all conduit openings closed with pipe plugs.

The push button surface is large (over $7\frac{1}{2}$ square inches) and is made as thick as possible to extend life under abrasive contact with work gloves. The button need travel only $\frac{1}{4}$ " for operation. This combination of large button surface and short button travel reduces operator fatigue to a minimum. Guards are ruggedly designed but attractively styled. Socket head mounting screws are provided to discourage unauthorized removal of the guards.

Legend plates are recessed to avoid abrasion and are color coded for immediate identity; RUN plate is green, INCH plate is black, and STOP plate is red. The button surface of the STOP unit is also painted red.

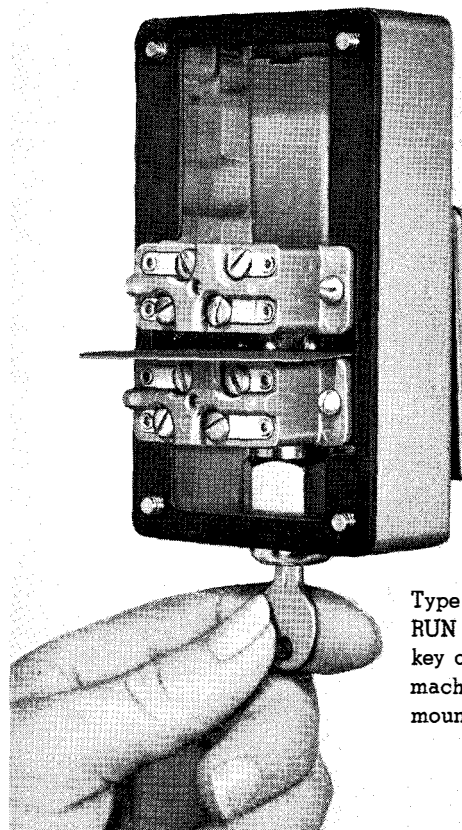
The contact mechanism is the standard Square D Class 9007 Type AO-2 precision snap switch. This switch has proved reliable in many other tough applications (limit switches, timers, relays, foot switches, pressure switches, etc.). The double break, silver to silver contacts assure contact reliability. The snap action insures that the button will not telegraph.

Normal press applications can be satisfied with a single pole double throw contact arrangement. For special applications, the Type P button is available with two snap switches providing double pole double throw action.

On multiple station presses, where the number of operators is subject to change with the job being run, it is necessary to bypass RUN buttons when fewer than the maximum number of operators are being used. The Type P is offered with a key operator which automatically jumpers out a button (both RUN circuit and anti-repeat circuit) when the key operator is turned to the bypass position. As the key is turned to bypass, it closes contacts shorting the normally closed **before** closing the normally open contacts, thereby insuring that a dummy plug relay (where used) will function to lock out the circuit in the event all buttons are bypassed. This insures against spurious operation of the press in the event that all buttons are inadvertently locked out.



Type PB2
STOP button with box.



Type P1L
RUN button with
key operator for
machine cavity
mounting.

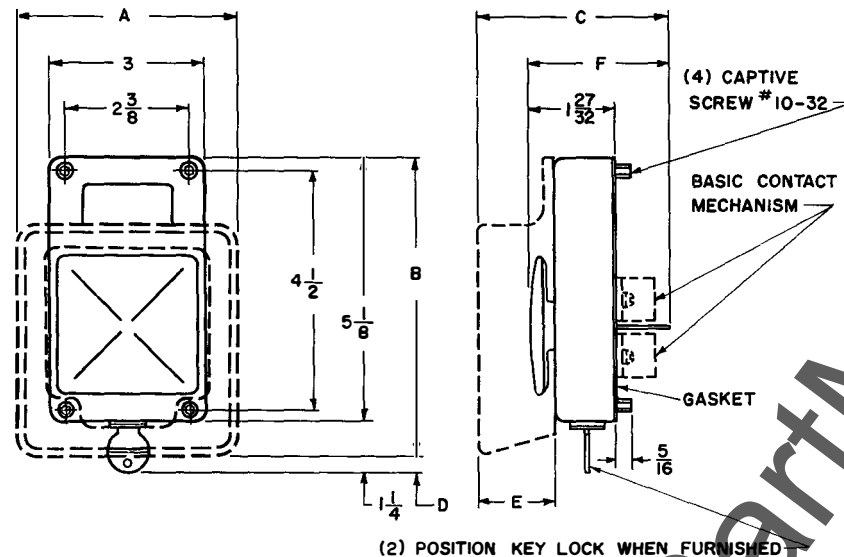
PALM OPERATED PRESS BUTTON

DECEMBER, 1962



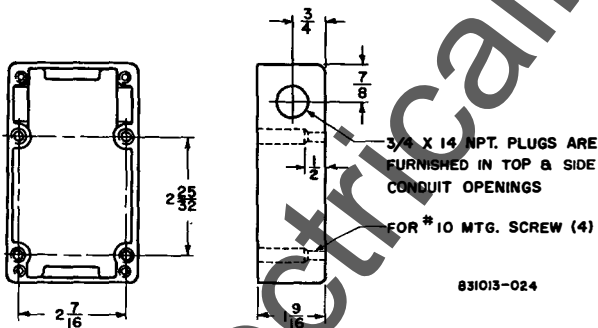
PALM OPERATED PRESS BUTTON

Heavy Duty — Oil-Tight



Class 9001 Type P

Approximate Dimensions
Not For Construction

CLASS 9001
TYPE PB

Class 9001 Type PB

Note: The Class 9001 Type PB Box must be mounted in position as shown to permit proper mounting of a Class 9001 Type P1 thru P6 Palm Operated Press Button.

CLASS 9001

Type	A	B	C	D	E	F
P1, P2, P3, P4, P5, P6	.....	.....	.....	.....	.....	2 27/32
P31, P32, P33, P34, P35, P36	4 5/16	5 3/4	3 3/4	.....	1 1/2	2 27/32
P41, P42, P43, P44, P45, P46	4 1/2	5 19/32	3 3/4	.....	1	2 27/32
P-1L	.....	.....	.....	.....	.....	2 27/32
P-31L	4 5/16	5 3/4	3 3/4	5/8	1 1/2	2 27/32
P-41L	4 1/2	5 19/32	3 3/4	25/32	1	2 27/32

Dimensions are in inches.

SQUARE D COMPANY



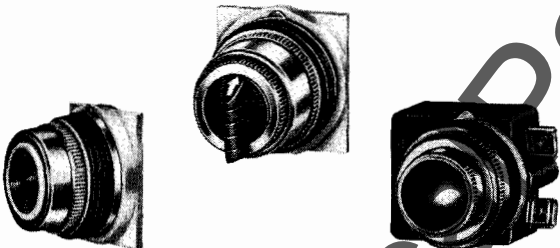
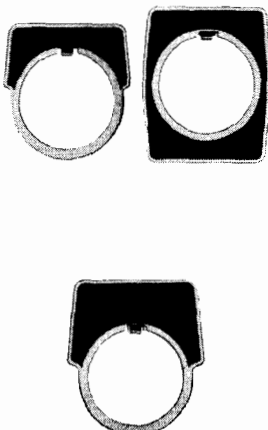
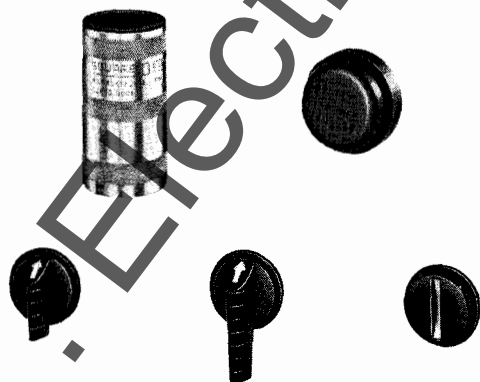
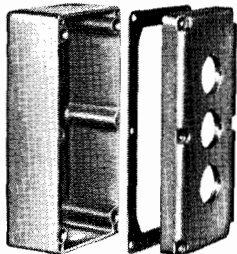
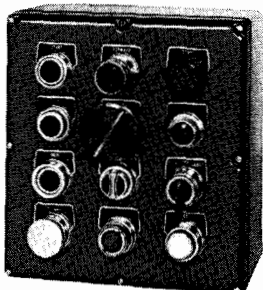
**TYPE K
HEAVY DUTY OIL-TIGHT CONTROL UNITS**

GENERAL INFORMATION

The Class 9001 Type K heavy duty oil-tight push button line meets the requirement for operators that have a minimum projection in front of the panel (low silhouette) and mount in a notch type hole. The operators are held in place by the nameplate or an indexing ring.

The Type K complete line consists of separate operators, contact blocks, legend plates, and enclosures that may be assembled in any combination to meet a variety of requirements. Although the oil-tight units were designed for machine tool applications, they can be used for any general purpose non oil-tight application.

SELECTION GUIDE

OPERATORS <table><tr><th>Description</th><th>Page</th></tr><tr><td>Standard Push Buttons</td><td>148</td></tr><tr><td>Illuminated Push Buttons</td><td>149</td></tr><tr><td>Selector Switches— Illuminated and Non-Ill.</td><td>150-156</td></tr><tr><td>Selector—Push Buttons</td><td>157</td></tr><tr><td>Pilot Lights—Standard and Push-to-Test</td><td>158</td></tr><tr><td>Special Purpose Operators</td><td>159-160</td></tr></table> 	Description	Page	Standard Push Buttons	148	Illuminated Push Buttons	149	Selector Switches— Illuminated and Non-Ill.	150-156	Selector—Push Buttons	157	Pilot Lights—Standard and Push-to-Test	158	Special Purpose Operators	159-160	CONTACT BLOCKS Page 164 	LEGEND PLATES Page 161 
Description	Page															
Standard Push Buttons	148															
Illuminated Push Buttons	149															
Selector Switches— Illuminated and Non-Ill.	150-156															
Selector—Push Buttons	157															
Pilot Lights—Standard and Push-to-Test	158															
Special Purpose Operators	159-160															
ACCESSORIES Pages 162-163 	ENCLOSURES Pages 165, 169 	CONTROL STATIONS Pages 165-166, 168-169 														

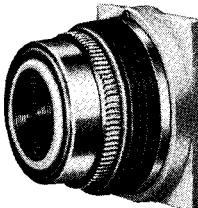
ORDERING INFORMATION REQUIRED

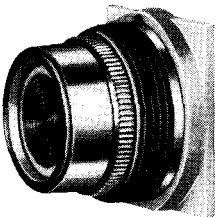
Class and type number

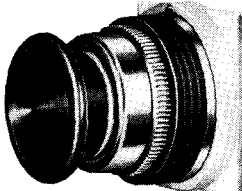


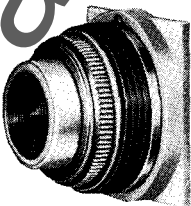
TYPE K HEAVY DUTY OIL-TIGHT CONTROL UNITS

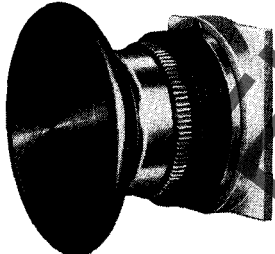
STANDARD PUSH BUTTON — NON-ILLUMINATED OPERATORS

 — Push Button — Full Guard	Insert Color	Type	Price *
	Black	KR-1B	\$2.70
	Red	KR-1R	
	Green	KR-1G	
	Brown	KR-1N	
	Yellow	KR-1Y	
	Orange	KR-1S	
	Blue	KR-1L	
	White	KR-1W	
	Universal (All Colors)	KR-1U	

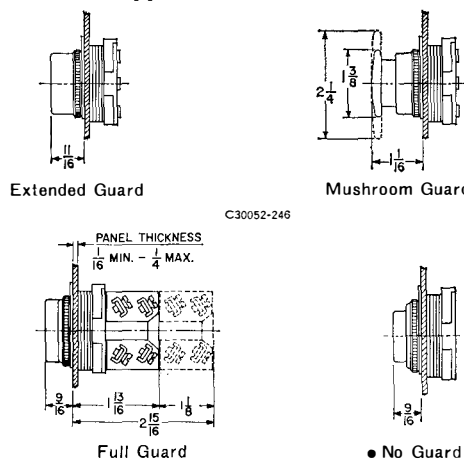
	Insert Color	Type	Price *
	Black	KR-2B	\$2.70
	Red	KR-2R	
	Green	KR-2G	
	Brown	KR-2N	
	Yellow	KR-2Y	
	Orange	KR-2S	
	Blue	KR-2L	
	White	KR-2W	
	Universal (All Colors)	KR-2U	
— Push Button — Extended Guard			

	Insert Color	Type	Price *
	Black	KR-4B	\$5.70
	Red	KR-4R	
	Green	KR-4G	
	Brown	KR-4N	
	Yellow	KR-4Y	
	Orange	KR-4S	
	Blue	KR-4L	
	White	KR-4W	
	— Push Button — Mushroom Button 1 3/8" Dia.		

 — Push Button — Without Guard	Insert Color	Type	Price *
	Black	KR-3B	\$2.70
	Red	KR-3R	
	Green	KR-3G	
	Brown	KR-3N	
	Yellow	KR-3Y	
	Orange	KR-3S	
	Blue	KR-3L	
	White	KR-3W	
	Universal (All Colors)	KR-3U	

	Insert Color	Type	Price *
	Black	KR-5B	\$5.70
	Red	KR-5R	
	Green	KR-5G	
	Brown	KR-5N	
	Yellow	KR-5Y	
	Orange	KR-5S	
	Blue	KR-5L	
	White	KR-5W	
	— Push Button — Mushroom Button 2 1/4" Dia.		

Approximate Dimensions



*Prices **DO NOT** include legend plate. Order separate legend plate from page 161.

• Revised

SQUARE D COMPANY

All dimensions are in inches

SCHEDULE DS-1 DISCOUNTS

Prices subject to change without notice.



TYPE K HEAVY DUTY OIL-TIGHT CONTROL UNITS

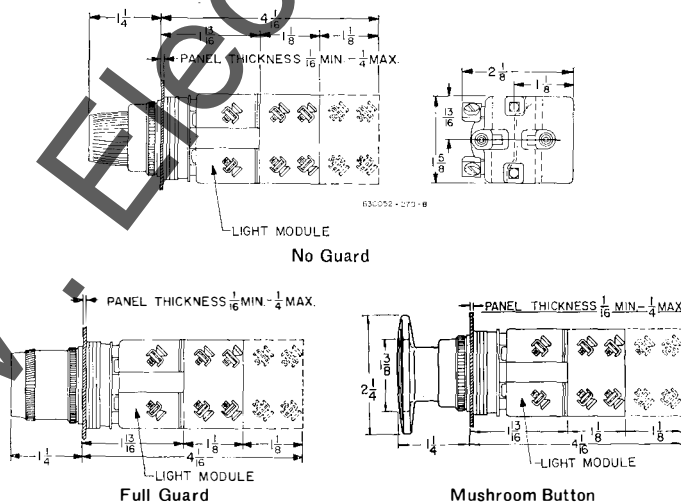
PUSH BUTTON — ILLUMINATED OPERATORS

Description	Voltage and Frequency	Lamp No.	Rated VA	With Guard			Without Guard		
				Type without Color Cap	Price*	Type with Color Cap	Type without Color Cap	Price*	Type with Color Cap
Transformer Type	120 v., 60 cy.; 110 v., 50 cy.	GE 44	3@ 60 cy., 6@ 50 cy.	K1L-1		K1L-1	K2L-1		K2L-1
	110 v., 25-30 cy.	GE 1490	4@ 25 cy.	K1L-2		K1L-2	K2L-2		K2L-2
	208-220 v., 50-60 cy.	GE 44	3@ 60 cy., 6@ 50 cy.	K1L-3		K1L-3	K2L-3		K2L-3
	220 v., 25-30 cy.	GE 1490	5@ 25 cy.	K1L-4	\$11.00	K1L-4	K2L-4	\$10.00	K2L-4
	240 v., 60 cy.; 220 v., 50 cy.	GE 44	3@ 60 cy., 6@ 50 cy.	K1L-7		K1L-7	K2L-7		K2L-7
	480 v., 60 cy., 440 v., 50 cy.	GE 44	3@ 60 cy., 6@ 50 cy.	K1L-5		K1L-5	K2L-5		K2L-5
	600 v., 60 cy., 550 v., 50 cy.	GE 44	3@ 60 cy., 6@ 50 cy.	K1L-6		K1L-6	K2L-6		K2L-6
Neon Type (Clear Color Cap)	120 v., AC or DC	G.E. K1C	.171	K1L-11		K1L-11	K2L-11		K2L-11
	240 v., AC or DC		.255	K1L-12		K1L-12	K2L-12		K2L-12
	380 v., AC or DC		.471	K1L-13	\$ 9.00	K1L-13	K2L-13	\$ 8.00	K2L-13
	480 v., AC or DC		.564	K1L-14		K1L-14	K2L-14		K2L-14
	550 v., AC or DC		.932	K1L-15		K1L-15	K2L-15		K2L-15
Resistor Type	14 v., AC or DC	Sylvania 12PSB	2.40	K1L-21		K1L-21	K2L-21		K2L-21
	18 v., AC or DC	12PSB	3.18	K1L-22	\$ 9.00	K1L-22	K2L-22	\$ 8.00	K2L-22
	32 v., AC or DC	28PSB	1.28	K1L-23		K1L-23	K2L-23		K2L-23
	120 v., AC or DC	....	....	Use K1L-38		Use K1L-38	Use K2L-38		Use K2L-38
	240 v., AC or DC	120PSB	6.00	K1L-25		K1L-25	K2L-25		K2L-25
Full Voltage Type	6 v., AC or DC	Sylvania 6PSB	.840	K1L-31		K1L-31	K2L-31		K2L-31
	12 v., AC or DC	12PSB	2.04	K1L-32		K1L-32	K2L-32		K2L-32
	18 v., AC or DC	G.E. 18E	.810	K1L-33	\$ 9.00	K1L-33	K2L-33	\$ 8.00	K2L-33
	24 v., AC or DC	Sylvania 24PSB	1.75	K1L-34		K1L-34	K2L-34		K2L-34
	28 v., AC or DC	28PSB	1.12	K1L-35		K1L-35	K2L-35		K2L-35
	48 v., AC or DC	48PSB	2.54	K1L-36		K1L-36	K2L-36		K2L-36
	60 v., AC or DC	60PSB	3.00	K1L-37		K1L-37	K2L-37		K2L-37
	120 v., AC or DC	120PSB	3.00	K1L-38		K1L-38	K2L-38		K2L-38

*Prices **DO NOT** include legend plate. Order separate legend plate from page 161. Order separate light modules from page 163. Order separate color caps from page 162.5.

• Complete type number by inserting appropriate color cap code letter listed below. Illuminated mushroom knob can be used on operator without guard (K2L-) **only**. On neon type use clear color cap **only**.

Approximate Dimensions



• COLOR CAP CODE LETTER			
Color	Standard	Mushroom Knob	
		1 3/8" Dia.	2 1/4" Dia.
Red	R	R20	R21
Green	G	G20	G21
Amber	A	A20	A21
Blue	L	L20	L21
Clear	C	C20	C21
White	W	W20	W21
Yellow	Y	Y20	Y21

All dimensions are in inches.

General revision

SQUARE D COMPANY

Prices subject to change without notice.

SCHEDULE DS-1 DISCOUNTS



TYPE K HEAVY DUTY OIL-TIGHT CONTROL UNITS

TWO POSITION SELECTOR SWITCH — NON-ILLUMINATED OPERATORS

SELECTION INSTRUCTIONS

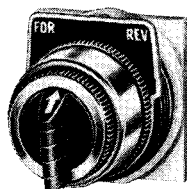
Operator Only.

1. Locate the desired contact symbol.
X = contacts closed.
O = contacts open.
2. Refer to the operator type numbers listed directly below the contact symbols.

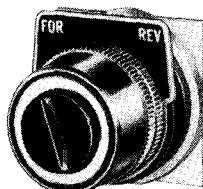
3. Select the appropriate type number depending on the type of operator required.

Contact Block Only.

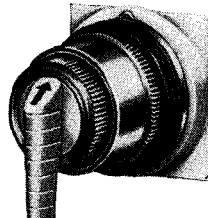
1. Locate the desired contact symbol.
2. The type and quantity of contact blocks required are listed to the left of the contact symbols.



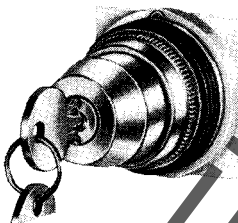
Standard Knob



Coin Operated

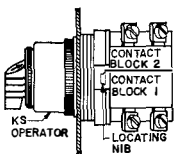


Gloved Hand Knob



Key Operated

Two Position Selector Switch—Non-Illuminated

						
B300052-252						
Description		Contact Block Number	Left	Right	Left	Right
Contact Block Only	Order One Type KA-1 Contact Block	#2	X O	O X	O X	X O
			Symbol 44 (Cam A for KS-11 Cam E for KS-25)	Symbol 99 (Cam D)		
	Order Two Type KA-1 Contact Blocks (Mount Side-By-Side)	#2	X O	O X	O X	X O
		#1	X O	O X	O X	X O
			Symbol 45 (Cam A for KS-11 Cam E for KS-25)	Symbol 100 (Cam D)		
Operator Only	Type of Operator		Type Number		Price *	
	Manual Return —					
	Without Knob.....		KS-11		\$3.00	
	Standard Knob.....		KS-11▲		3.70	
	Coin Operated.....		KS-11T▲		5.70	
	Gloved Hand Knob.....		KS-11F▲		3.70	
	Key Operated.....		KS-11K★		9.70	
	Spring Return from Left —					
	Without Knob.....		KS-25		\$ 5.00	
	Standard Knob.....		KS-25▲		5.70	
	Gloved Hand Knob.....		KS-25F▲		5.70	
	Key Operated.....		KS-25K2		11.70	
	Spring Return from Right —					
	Without Knob.....		KS-34		\$ 5.00	
	Standard Knob.....		KS-34▲		5.70	
	Gloved Hand Knob.....		KS-34F▲		5.70	
	Key Operated.....		KS-34K1		11.70	

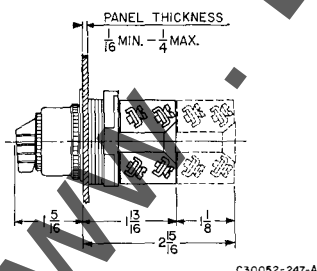
▲Insert Knob Color Code Letter from this Table

Color	Black	Red	Green	Brown	Yellow	Orange	Blue	White
Color Code Letter	B	R	G	N	Y	S	L	W

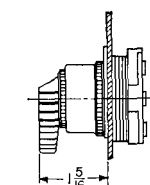
★Key operated selector switch type numbers must be completed by selecting appropriate key withdrawal number from table on bottom of page 156.

*Prices **DO NOT** include legend plate. Order separate legend plate from page 161. Order separate knobs from page 163.

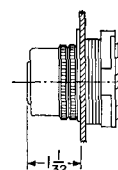
Approximate Dimensions



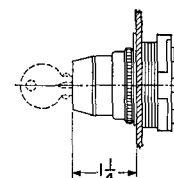
Standard Knob



Gloved Hand Knob



Coin Operated



Key Operated

All dimensions are in inches.

SQUARE D COMPANY

SCHEDULE DS-1 DISCOUNTS

Prices subject to change without notice.



TYPE K — HEAVY DUTY OIL-TIGHT CONTROL UNITS

TWO POSITION SELECTOR SWITCH — ILLUMINATED OPERATORS

SELECTION INSTRUCTIONS

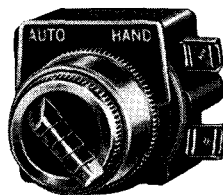
Operator Only.

1. Locate the desired contact symbol.
X = contacts closed.
O = contacts open.
2. Refer to the operator type numbers listed directly below the contact symbols.
3. Select the appropriate type number depending on the type of operator required.

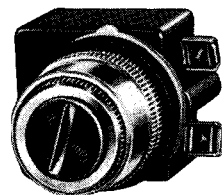
Contact Block Only.

1. Locate the desired contact symbol.
2. The type and quantity of contact blocks required are listed to the left of the contact symbol.

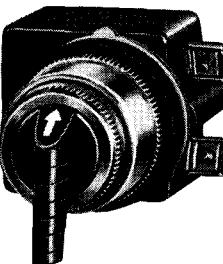
Two Position Selector Switch — Illuminated



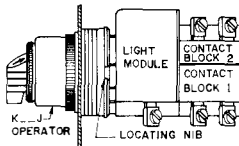
Standard Knob



Coin Operated



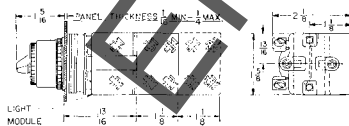
Gloved Hand Knob

		Description		Contact Block Number		Left		Right		Left		Right		Price	
Contact Block Only	Order One Type KA-1 Contact Block				#2	#2	X	O	O	X	O	X	O	X	\$3.00
	Order Two Type KA-1 Contact Blocks (Mount Side-By-Side)				#1	#2	X	O	O	X	O	X	O	X	
					#1	#1	X	O	X	O	X	O	X	O	\$6.00
							Symbol 44 (Cam A for K-11J Cam E for K-25J)				Symbol 99 (Cam D)				
							Symbol 45 (Cam A for K-11J Cam E for K-25J)				Symbol 100 (Cam D)				
Operator Only	Type of Operator		Type Number		Transformer Type		Full Voltage, Resistor and Neon Type		Price *						
	Manual Return — Without Knob..... Standard Knob..... Coin Operated..... Gloved Hand Knob.....		K-11J● K-11J●▲ K-11J●T▲ K-11J●F▲		..... ..... ..... .....		..... ..... ..... .....		\$11.00 11.70 13.70 11.70		\$ 9.00 9.70 11.70 9.70				
		Spring Return from Left — Without Knob..... Standard Knob..... Gloved Hand Knob.....		K-25J● K-25J●▲ K-25J●F▲		..... ..... .....		..... ..... .....		13.00 13.70 13.70		11.00 11.70 11.70			
		Spring Return from Right — Without Knob..... Standard Knob..... Gloved Hand Knob.....		..... ..... .....		..... ..... .....		..... ..... .....		13.00 13.70 13.70		11.00 11.70 11.70			
						K-34J● K-34J●▲ K-34J●F▲		..... ..... .....		13.00 13.70 13.70		11.00 11.70 11.70			

*Prices **DO NOT** include legend plate. Order separate legend plate from page 161.

▲ Insert Voltage Number (●) and Knob Color Letter (▲) From Table Below

Approximate Dimensions



K-J Standard Knob



Gloved Hand Knob



Coin Operated Knob

Description		Color of Knob											
Type	Voltage and Frequency	Amber		Blue		Clear		Green		Red		White	
Transformer Type Incandescent Lamp	120 V, 60 Cy.; 110 V, 50 Cy.	1	A	1	L	1	C	1	G	1	R	1	W
	110V, 25-30 Cy.	2	A	2	L	2	C	2	G	2	R	2	W
	208-220 V, 50-60 Cy.	3	A	3	L	3	C	3	G	3	R	3	W
	220 V, 25-30 Cy.	4	A	4	L	4	C	4	G	4	R	4	W
	240 V, 60 Cy.; 220 V, 50 Cy.	5	A	5	L	5	C	5	G	5	R	5	W
	480 V, 60 Cy.; 440 V, 50 Cy.	6	A	6	L	6	C	6	G	6	R	6	W
Neon Lamp (use clear knob only)	120 V, AC or DC	11	C	11	C	11	C	11	C	11	C	11	C
	240 V, AC or DC	12	C	12	C	12	C	12	C	12	C	12	C
	380 V, AC or DC	13	C	13	C	13	C	13	C	13	C	13	C
	480 V, AC or DC	14	C	14	C	14	C	14	C	14	C	14	C
	550 V, AC or DC	15	C	15	C	15	C	15	C	15	C	15	C
Resistor Type Incandescent Lamp	14 V, AC or DC	21	A	21	L	21	C	21	G	21	R	21	W
	18 V, AC or DC	22	A	22	L	22	C	22	G	22	R	22	W
	32 V, AC or DC	23	A	23	L	23	C	23	G	23	R	23	W
	120 V, AC or DC	24	A	24	L	24	C	24	G	24	R	24	W
	240 V, AC or DC	25	A	25	L	25	C	25	G	25	R	25	W
Full Voltage Type Incandescent Lamp	6 V, AC or DC	31	A	31	L	31	C	31	G	31	R	31	W
	12 V, AC or DC	32	A	32	L	32	C	32	G	32	R	32	W
	18 V, AC or DC	33	A	33	L	33	C	33	G	33	R	33	W
	24 V, AC or DC	34	A	34	L	34	C	34	G	34	R	34	W
	28 V, AC or DC	35	A	35	L	35	C	35	G	35	R	35	W
	48 V, AC or DC	36	A	36	L	36	C	36	G	36	R	36	W
	60 V, AC or DC	37	A	37	L	37	C	37	G	37	R	37	W
	120 V, AC or DC	38	A	38	L	38	C	38	G	38	R	38	W
	120 V, AC or DC	39	A	39	L	39	C	39	G	39	R	39	W
	120 V, AC or DC	40	A	40	L	40	C	40	G	40	R	40	W

† Use 120 v., AC or DC full voltage type, voltage number 38.

All dimensions are in inches

SQUARE D COMPANY

General revision

Prices subject to change without notice.

SCHEDULE DS-1 DISCOUNTS



TYPE K — HEAVY DUTY OIL-TIGHT CONTROL UNITS

THREE POSITION SELECTOR SWITCH — NON-ILLUMINATED OPERATORS

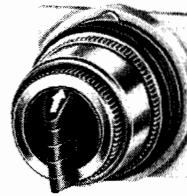
SELECTION INSTRUCTIONS

Operator Only.

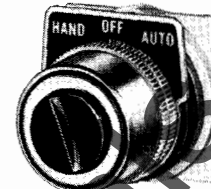
1. Locate the desired contact symbol.
X = contacts closed. O = contacts open.
2. Refer to the operator type numbers listed directly below the contact symbols.
3. Select the appropriate type number depending on the type of operator required.

Contact Block Only.

1. Locate the desired contact symbol.
2. The type and quantity of contact blocks required are listed to the left of the contact symbols.

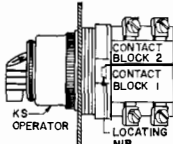


Standard Knob



Coin Operated

Three Position Selector Switch — Non-Illuminated

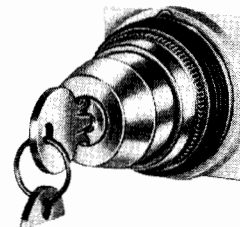
													
Description		BS0052-282	Contact Block Number	Center Left Right	Center Left Right	Center Left Right	Center Left Right	Center Left Right	Center Left Right	Center Left Right	Center Left Right	Price	
Contact Block Only	Order One Type KA-1 Contact Block  #2		#2	X O X Symbol 48 (Cam B)	X O X Symbol 52 (Cam C)	O O X Symbol 56 (Cam D)	X O O Symbol 60 (Cam E)					\$3.00	
	Order Two Type KA-1 Contact Blocks (Mount Side-By-Side)  #1  #2		#2	X O O O X X O O X	X O O O O X X O O	O O O O X O O O X	X O O O X O X O O	X O O O O X O X O	X O O O X X O O X		\$6.00		
			#1	X X O Symbol 49 (Cam B)	O O X Symbol 53 (Cam C)	O X O Symbol 57 (Cam D)	O X O Symbol 61 (Cam E)	O O X Symbol 79 (Cam F)	X O O Symbol 86 (Cam G)				
Type of Operator			Type Number									Price *	
Operator Only	Manual Return —												
	Without Knob.....			KS-42	KS-43	KS-44	KS-45	KS-46	KS-47		\$3.00		
	Standard Knob.....			KS-42▲	KS-43▲	KS-44▲	KS-45▲	KS-46▲	KS-47▲		3.70		
	Coin Operated.....			KS-42T▲	KS-43T▲	KS-44T▲	KS-45T▲	KS-46T▲	KS-47T▲		5.70		
	Gloved Hand Knob.....			KS-42F▲	KS-43F▲	KS-44F▲	KS-45F▲	KS-46F▲	KS-47F▲		3.70		
	Key Operated.....			KS-42K★	KS-43K★	KS-44K★	KS-45K★	KS-46K★	KS-47K★		9.70		
	Spring Return —												
	Left to Center —												
	Without Knob.....			KS-62	KS-63	KS-64	KS-65	KS-66	KS-67		5.00		
	Standard Knob.....			KS-62▲	KS-63▲	KS-64▲	KS-65▲	KS-66▲	KS-67▲		5.70		
	Gloved Hand Knob.....			KS-62F▲	KS-63F▲	KS-64F▲	KS-65F▲	KS-66F▲	KS-67F▲		5.70		
	Key Operated.....			KS-62K★	KS-63K★	KS-64K★	KS-65K★	KS-66K★	KS-67K★		11.70		
	Spring Return —												
	Right to Center —												
	Without Knob.....			KS-72	KS-73	KS-74	KS-75	KS-76	KS-77		5.00		
	Standard Knob.....			KS-72▲	KS-73▲	KS-74▲	KS-75▲	KS-76▲	KS-77▲		5.70		
	Gloved Hand Knob.....			KS-72F▲	KS-73F▲	KS-74F▲	KS-75F▲	KS-76F▲	KS-77F▲		5.70		
	Key Operated.....			KS-72K★	KS-73K★	KS-74K★	KS-75K★	KS-76K★	KS-77K★		11.70		
	Spring Return — Both Sides to Center —												
	Without Knob.....			KS-52	KS-53	KS-54	KS-55	KS-56	KS-57		5.00		
	Standard Knob.....			KS-52▲	KS-53▲	KS-54▲	KS-55▲	KS-56▲	KS-57▲		5.70		
	Gloved Hand Knob.....			KS-52F▲	KS-53F▲	KS-54F▲	KS-55F▲	KS-56F▲	KS-57F▲		5.70		
	Key Operated.....			KS-52K★	KS-53K★	KS-54K★	KS-55K★	KS-56K★	KS-57K★		11.70		

▲ Insert Knob Color Code Letter from this Table

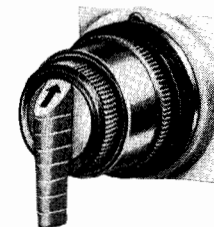
Color	Black	Red	Green	Brown	Yellow	Orange	Blue	White
Color Code Letter	B	R	G	N	Y	S	L	W

★ Key operated selector switch type numbers must be completed by selecting appropriate key withdrawal number from table on bottom of page 156.

* Prices **DO NOT** include legend plate. Order separate legend plate from page 161. Order separate knobs from page 163. Order separate cams from page 162.

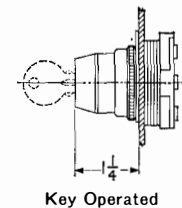
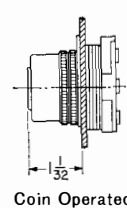
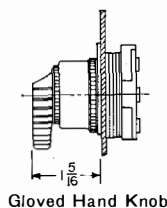
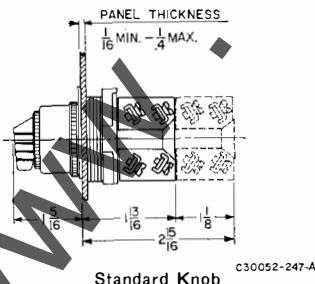


Key Operated



Gloved Hand Knob

Approximate Dimensions



All dimensions are in inches.

SQUARE D COMPANY

SCHEDULE DS-1 DISCOUNTS

Prices subject to change without notice.

SUPERSEDES:

Class 9001

Page 153

November, 1967



CLASS	9001
PAGE	153
MAY, 1968	

TYPE K — HEAVY DUTY OIL-TIGHT CONTROL UNITS

THREE POSITION SELECTOR SWITCH — ILLUMINATED OPERATORS

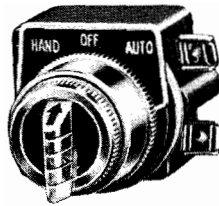
SELECTION INSTRUCTIONS

Operator Only.

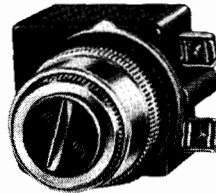
1. Locate the desired contact symbol.
X = contacts closed.
O = contacts open.
2. Refer to the operator type numbers listed directly below the contact symbols.
3. Select the appropriate type number depending on the type of operator required.

Contact Block Only.

1. Locate the desired contact symbol.
2. The type and quantity of contact blocks required are listed to the left of the contact symbols.

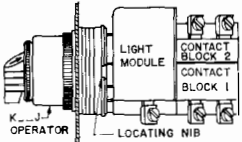


Standard Knob



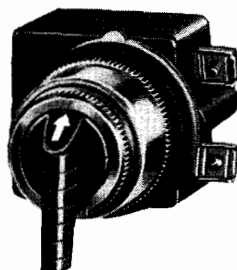
Coin Operated

Three Position Selector Switch — Illuminated

Description		Contact Block Number		Center		Center		Center		Center		Center		Price
				Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	
Contact Block Only	Order One Type KA-1 Contact Block  #2	#2		X O O	X O O	O O X	X O O							\$3.00
			O X X	O O X	O X O	O X O								
	Order Two Type KA-1 Contact Blocks (Mount Side-By-Side)  #1	#2		X O O	X O O	O O X	X O O	X O O	X O O	X O O	X O O			\$6.00
	 #2	#1		O X X	O O X	O X O	O X O	O X O	O X O	O X O	X O O	Symbol 86 (Cam G)		
Operator Only	Type of Operator		Type Number										Price *	
													Transformer Type	Full Voltage, Resistor and Neon Type
	Manual Return—		K-42J	K-43J	K-44J	K-45J	K-46J	K-47J	\$11.00	\$ 9.00				
	Without Knob.....		K-42J	K-43J	K-44J	K-45J	K-46J	K-47J	11.70	9.70				
	Standard Knob.....		K-42J	K-43J	K-44J	K-45J	K-46J	K-47J	13.70	11.70				
	Coin Operated.....		K-42J	K-43J	K-44J	K-45J	K-46J	K-47J	11.70	9.70				
	Gloved Hand Knob.....		K-42J	K-43J	K-44J	K-45J	K-46J	K-47J						
	Spring Return—		K-62J	K-63J	K-64J	K-65J	K-66J	K-67J	13.00	11.00				
	Left to Center —		K-62J	K-63J	K-64J	K-65J	K-66J	K-67J	13.70	11.70				
	Without Knob.....		K-62J	K-63J	K-64J	K-65J	K-66J	K-67J	13.70	11.70				
	Standard Knob.....		K-62J	K-63J	K-64J	K-65J	K-66J	K-67J						
	Gloved Hand Knob.....		K-62J	K-63J	K-64J	K-65J	K-66J	K-67J						
	Spring Return—		K-72J	K-73J	K-74J	K-75J	K-76J	K-77J	13.00	11.00				
	Right to Center —		K-72J	K-73J	K-74J	K-75J	K-76J	K-77J	13.70	11.70				
	Without Knob.....		K-72J	K-73J	K-74J	K-75J	K-76J	K-77J	13.70	11.70				
	Standard Knob.....		K-72J	K-73J	K-74J	K-75J	K-76J	K-77J						
Gloved Hand Knob.....		K-72J	K-73J	K-74J	K-75J	K-76J	K-77J							
Spring Return — Both Sides to Center —		K-52J	K-53J	K-54J	K-55J	K-56J	K-57J	13.00	11.00					
Without Knob.....		K-52J	K-53J	K-54J	K-55J	K-56J	K-57J	13.70	11.70					
Standard Knob.....		K-52J	K-53J	K-54J	K-55J	K-56J	K-57J	13.70	11.70					
Gloved Hand Knob.....		K-52J	K-53J	K-54J	K-55J	K-56J	K-57J							

*Prices DO NOT include legend plate. Order separate legend plate from page 161. Order separate knobs from page 163. Order separate cams from page 162.

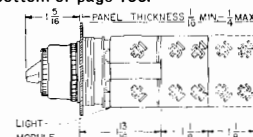
●▲Complete type number by inserting voltage number (●) and knob color letter (▲) from table on bottom of page 155.



Gloved Hand Knob

Standard Knob
K...J

Approximate Dimensions



Gloved Hand Knob



Coin Operated Knob



830052-272-B

All dimensions are in inches.

SQUARE D COMPANY

General revision

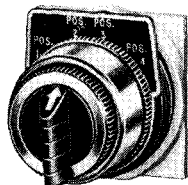
Prices subject to change without notice.

SCHEDULE DS-1 DISCOUNTS

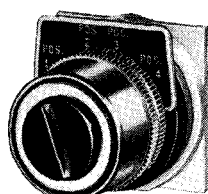


TYPE K HEAVY DUTY OIL-TIGHT CONTROL UNITS

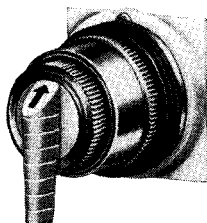
FOUR POSITION SELECTOR SWITCH — NON-ILLUMINATED OPERATORS



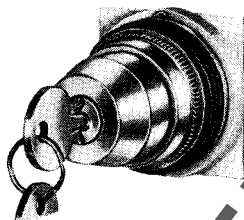
Standard Knob



Coin Operated



Gloved Hand Knob



Key Operated

SELECTION INSTRUCTIONS

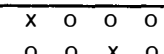
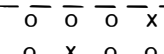
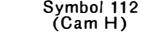
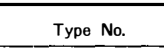
Operator Only.

1. Locate the desired contact symbol.
X = contacts closed.
O = contacts open.
2. Refer to the operator type numbers listed directly below the contact symbols.
3. Select the appropriate type number depending on the type of operator required.

Contact Block Only.

1. Locate the desired contact symbol.
2. The type and quantity of contact blocks required are listed to the left of the contact symbols.

Four Position Selector Switch — Non-Illuminated

Description		Contact Block Number		Price
Contact Block Only	Order Two Type KA-1 Contact Blocks (Mount Side-By-Side)	#2	    Symbol 112 (Cam H)	\$6.00
		#1		
Operator Only	Type of Operator	Type No.	Price *	
	Manual Return Without Knob..... Standard Knob..... Coin Operated..... Gloved Hand Knob..... Key Operated.....	KS-88 KS-88 KS-88T▲ KS-88F▲ KS-88K★	\$ 3.00 3.70 5.70 3.70 9.70	

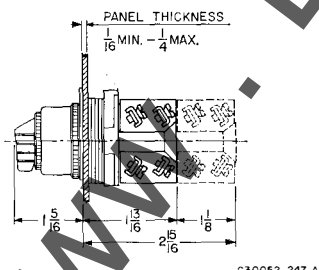
▲ Insert Knob Color Code Letter from this Table

Color	Black	Red	Green	Brown	Yellow	Orange	Blue	White
Color Code Letter	B	R	G	N	Y	S	L	W

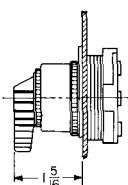
★ Key operated selector switch type numbers must be completed by selecting appropriate key withdrawal number from table on bottom of page 156.

* Prices **DO NOT** include legend plate. Order separate legend plate from page 161. Order separate knobs from page 163.

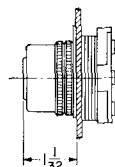
Approximate Dimensions



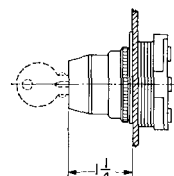
Standard Knob



Gloved Hand Knob



Coin Operated



Key Operated

General revision

SQUARE D COMPANY

SCHEDULE DS-1 DISCOUNTS

All dimensions are in inches.

Prices subject to change without notice

SUPERSEDES:

Class 9001
Page 155
May, 1968



CLASS	9001
PAGE	155
JULY, 1969	

TYPE K HEAVY DUTY OIL-TIGHT CONTROL UNITS

FOUR POSITION SELECTOR SWITCH — ILLUMINATED OPERATORS

SELECTION INSTRUCTIONS

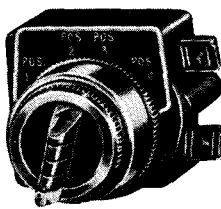
Operator Only.

1. Locate the desired contact symbol.
X = contacts closed.
O = contacts open.
2. Refer to the operator type numbers listed directly below the contact symbols.

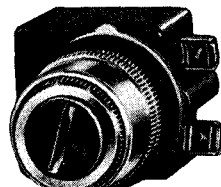
3. Select the appropriate type number depending on the type of operator required.

Contact Block Only.

1. Locate the desired contact symbol.
2. The type and quantity of contact blocks required are listed to the left of the contact symbol.



Standard Knob



Coin Operated

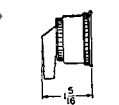


Gloved Hand Knob

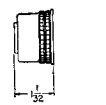
Approximate Dimensions



K J Standard Knob

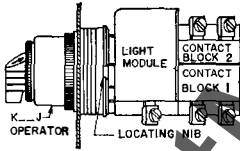


Gloved Hand Knob



Coin Operated Knob

Four Position Selector Switch — Illuminated

		CONTACT BLOCK 2 CONTACT BLOCK 1	CONTACT Block Number		Price																
Contact Block Only	Order Two Type KA-1 Contact Blocks (Mount Side-By-Side)		#2 — — — — #1	<table><tr><td>X</td><td>O</td><td>O</td><td>O</td></tr><tr><td>O</td><td>O</td><td>X</td><td>O</td></tr><tr><td>O</td><td>O</td><td>O</td><td>X</td></tr><tr><td>O</td><td>X</td><td>O</td><td>O</td></tr></table> Symbol 112 (Cam H)	X	O	O	O	O	O	X	O	O	O	O	X	O	X	O	O	\$6.00
		X	O	O	O																
O	O	X	O																		
O	O	O	X																		
O	X	O	O																		
Operator Only	Type of Operator		Type No.	Price *																	
	Manual Return — Without Knob Standard Knob Coin Operated Gloved Hand Knob		K-88J● K-88J●▲ K-88J●T▲ K-88J●F▲	\$11.00 11.70 13.70 11.70	\$ 9.00 9.70 11.70 9.70																

*Prices **DO NOT** include legend plate. Order separate legend plate from page 161. Order separate knobs from page 163. Order separate cams from page 162.

● Insert Voltage Number (●) and Knob Color Letter (▲) From Table Below

Description		Color of Knob															
Type	Voltage and Frequency	Amber		Blue		Clear		Green		Red		White		Yellow			
		●	▲	●	▲	●	▲	●	▲	●	▲	●	▲	●	▲		
Transformer Type Incandescent Lamp	120 V, 60 Cy.; 110 V, 50 Cy.	1	A	1	L	1	C	1	G	1	R	1	W	1	Y		
	110 V, 25-30 Cy.	2	A	2	L	2	C	2	G	2	R	2	W	2	Y		
	208-220 V, 50-60 Cy.	3	A	3	L	3	C	3	G	3	R	3	W	3	Y		
	220 V, 25-30 Cy.	4	A	4	L	4	C	4	G	4	R	4	W	4	Y		
	240 V, 60 Cy.; 220 V, 50 Cy.	7	A	7	L	7	C	7	G	7	R	7	W	7	Y		
	480 V, 60 Cy.; 440 V, 50 Cy.	5	A	5	L	5	C	5	G	5	R	5	W	5	Y		
Neon Lamp (use clear knob only)	600 V, 60 Cy.; 550 V, 50 Cy.	6	A	6	L	6	C	6	G	6	R	6	W	6	Y		
	120 V, AC or DC	11				11	C										
	240 V, AC or DC	12				12	C										
	380 V, AC or DC	13				13	C										
	480 V, AC or DC	14				14	C										
	550 V, AC or DC	15				15	C										
Resistor Type Incandescent Lamp	14 V, AC or DC	21	A	21	L	21	C	21	G	21	R	21	W	21	Y		
	18 V, AC or DC	22	A	22	L	22	C	22	G	22	R	22	W	22	Y		
	32 V, AC or DC	23	A	23	L	23	C	23	G	23	R	23	W	23	Y		
	120 V, AC or DC	24	A	24	L	24	C	24	G	24	R	24	W	24	Y		
	240 V, AC or DC	25	A	25	L	25	C	25	G	25	R	25	W	25	Y		
Full Voltage Type Incandescent Lamp	6 V, AC or DC	31	A	31	L	31	C	31	G	31	R	31	W	31	Y		
	12 V, AC or DC	32	A	32	L	32	C	32	G	32	R	32	W	32	Y		
	18 V, AC or DC	33	A	33	L	33	C	33	G	33	R	33	W	33	Y		
	24 V, AC or DC	34	A	34	L	34	C	34	G	34	R	34	W	34	Y		
	28 V, AC or DC	35	A	35	L	35	C	35	G	35	R	35	W	35	Y		
	48 V, AC or DC	36	A	36	L	36	C	36	G	36	R	36	W	36	Y		
	60 V, AC or DC	37	A	37	L	37	C	37	G	37	R	37	W	37	Y		
	120 V, AC or DC	38	A	38	L	38	C	38	G	38	R	38	W	38	Y		

† Use 120 v., AC or DC full voltage type, voltage number 38.

All dimensions are in inches.

No change since previous issue.

SQUARE D COMPANY

Prices subject to change without notice.

SCHEDULE DS-1 DISCOUNTS

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SUPERSEDES:
Class 9001
Page 156
May, 1968



TYPE K HEAVY DUTY OIL-TIGHT CONTROL UNITS

KEY OPERATED SELECTOR SWITCH — NON-ILLUMINATED OPERATORS

Key Operated Selector Switches

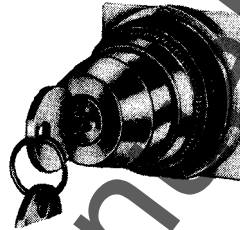
All key operated selector switches are furnished as standard with Square D number D10 (part no. 29406-01100) key change. The following 17 additional key changes are available at no extra cost:

D11 through D20, D22, D24, D32, D34, CH501, CH674, SR521.

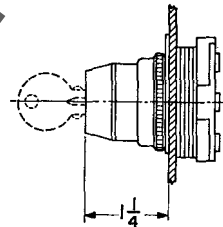
Occasionally it is desirable to have several switches with dis-similar key changes, but all operable by a single master key. The following key changes with master keying provisions are available at **\$1.00** list additional per switch.

Key No.	Total Key Changes Available	Master Key	
		Part No.	Price
•DH1 thru DH50	50	29409-51990	\$ 0.60

Each switch is supplied with two matching keys. Order master keys separately. To order a selector switch with one of the above key changes, insert the desired key number after the basic type number of the operator (Example: Class 9001 Type KS-42K5D11).



Approximate Dimensions



★KEY WITHDRAWAL ARRANGEMENT

Select appropriate key withdrawal number from table below to complete key operated selector switch type numbers. Position marked "Yes" are those in which the key can be withdrawn, locking the switch in that position. Be sure to check key withdrawal selection table below before selecting key withdrawal number.

2-Position Switches			3-Position Switches								4-Position Switches				
No.	Left	Right	No.	Left	Center	Right	No.	Left	Center	Right	No.	Left	↖	↗	Right
1	Yes	No	4	Yes	No	No	8	Yes	No	Yes	11	Yes	No	No	Yes
2	No	Yes	5	No	Yes	No	9	No	Yes	Yes	12	No	No	No	Yes
3	Yes	Yes	6	No	No	Yes	10	Yes	Yes	Yes	13	Yes	No	No	No
			7	Yes	Yes	No									

KEY WITHDRAWAL SELECTION

IMPORTANT: The following table lists the key withdrawal arrangements available for selector switches having more than one possible withdrawal arrangement. Those switches not listed have only one withdrawal arrangement. Make selection from table above based on key withdrawal arrangements shown in this table.

Selector Switch Type	Key Withdrawal Arrangements Available
KS11K★	1, 2, or 3
KS4-K★	4 through 10
KS6-K★	5, 6, or 9
KS7-K★	4, 5, or 7
KS8-K★	11, 12, or 13



TYPE K — HEAVY DUTY OIL-TIGHT CONTROL UNITS

TWO AND THREE POSITION SELECTOR-PUSH BUTTON OPERATORS

SELECTION INSTRUCTIONS

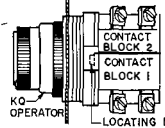
Operator Only.

1. Locate the desired contact symbol.
X = contacts closed.
O = contacts open.
2. Refer to the operator type numbers listed directly below the contact symbols.
3. Select the appropriate type number depending on the type of operator required.

Contact Block Only.

1. Locate the desired contact symbol.
2. The type and quantity of contact blocks required are listed to the left of the contact symbols.

Selector-Push Button — Two Position

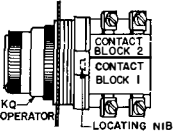
Description		Contact Block No.	Position																Price
			F = Free D = Depressed																
			Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right			
	Order One Type KA-1 Contact Block	#1	F D	F D	F D	F D	F D	F D	F D	F D	F D	F D	F D	F D	F D	F D	\$3.00		
			O O	X O	O O	X O	O O	X X	X X	X O	X X	O O	X O	O O	X O	O O			
	#1		O X	O X	O X	O O	O X	O O	O O	O X	O O	O X	O X	O X	O X	X X			
	Order Two Type KA-1 Contact Blocks (Mount Side-By-Side)	#2	Symbol 117 (Cam P)	Symbol 93 (Cam R)	Symbol 116 (Cam S)	Symbol 102 (Cam T)	Symbol 71 (Cam Y)	Symbol 75 (Cam Y)	Symbol 67 (Cam Z)	\$6.00									
			O O	X O	O O	X O	O O	X X	X O		X X	X O	O O	X O	O O				
			O X	O X	O X	O O	O X	O O	O X		O O	O X	O X	O X	X X				
#1		O O	X O	O O	X O	O O	X X	X O	X X	O O	X O	O O	X O	O O					
		O X	O X	O X	O O	X X	O O	X X	X O	O X	O O	X O	O O	X O	X X				
		Symbol 95 (Cam P)	Symbol 94 (Cam R)	Symbol 98 (Cam S)	Symbol 82 (Cam T)	Symbol 72 (Cam Y)	Symbol 76 (Cam Y)	Symbol 68 (Cam Z)											

Operator Only	Color of Insert		Type Number																Price *
	Without Insert		KO-11	KO-12	KO-13	KO-14	KO-15	KO-16	KO-18	\$5.60									
	Black		KO-11B	KO-12B	KO-13B	KO-14B	KO-15B	KO-16B	KO-18B	\$5.70									
	Red		KO-11R	KO-12R	KO-13R	KO-14R	KO-15R	KO-16R	KO-18R	\$5.70									
	Green		KO-11G	KO-12G	KO-13G	KO-14G	KO-15G	KO-16G	KO-18G	\$5.70									
	Brown		KO-11N	KO-12N	KO-13N	KO-14N	KO-15N	KO-16N	KO-18N	\$5.70									
	Yellow		KO-11Y	KO-12Y	KO-13Y	KO-14Y	KO-15Y	KO-16Y	KO-18Y	\$5.70									
	Orange		KO-11S	KO-12S	KO-13S	KO-14S	KO-15S	KO-16S	KO-18S	\$5.70									
	Blue		KO-11L	KO-12L	KO-13L	KO-14L	KO-15L	KO-16L	KO-18L	\$5.70									

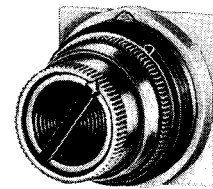
◐ Mount block in position #2

▲ Mount contact blocks 90° counter-clockwise to position shown.

Selector-Push Button — Three Position

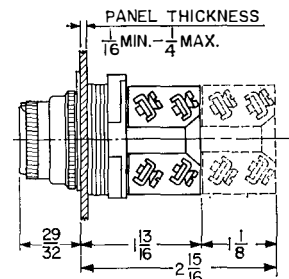
Description		Position F = Free D = Depressed						Price	
	Contact Block Number	Left		Center		Right			
		F	D	F	D	F	D		
Contact Block Only	Order One Type KA-1 Contact Block	#2	X	O	X	O	X	X	\$3.00
			O	X	O	O	O	O	
	Order Two Type KA-1 Contact Blocks (Mount Side-By-Side)	#2	Symbol 118 (Cam U)						\$6.00
			X	O	X	O	X	X	
		#1	O	X	O	O	O	O	
	X		X	X	O	X	O		
		#1	O	O	O	O	O	X	
			Symbol 85 (Cam U)						
Operator Only	◆ Color of Insert	Type Number						Price *	
	Without Insert	KO-27						\$5.60	
	Black	KO-27B						5.70	
	Red	KO-27R						5.70	
	Green	KO-27G						5.70	
	Brown	KO-27N						5.70	
	Yellow	KO-27Y						5.70	
	Orange	KO-27S						5.70	
	Blue	KO-27L						5.70	

*Prices **DO NOT** include legend plate. Order separate legend plate from page 161. Order separate inserts from page 163.



Selector-Push Button
(Selector shown in Right Position)

Approximate Dimensions



Selector-Push Button

All dimensions are in inches

Prices subject to change without notice.

SQUARE D COMPANY

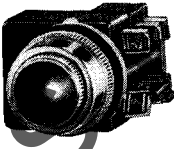
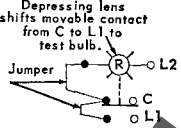
General revision

SCHEDULE DS-1 DISCOUNTS



TYPE K — HEAVY DUTY OIL-TIGHT CONTROL UNITS

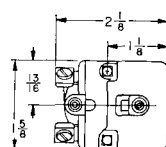
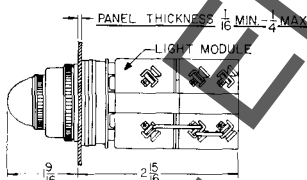
PILOT LIGHTS — STANDARD AND PUSH-TO-TEST

Description	Voltage and Frequency	Lamp No.	Rated VA						
				Standard		Push-to-Test			
				Type Without Color Cap	Price*	Type With Color Cap	Price*	Type Without Color Cap	Price*
Transformer Type	120 v., 60 cy. 110 v., 50 cy.	GE44	3@ 60 cy. 6@ 50 cy.	KP-1	\$10.00	KP-1 •	\$10.70	KT-1	\$13.00
	120 v., 60 cy. 110 v., 50 cy. Flashing Type	GE256	4.8@ 60 cy. 4.8@ 50 cy.	KP-F1	10.00	KP-F1 •	10.70	KT-F1	13.00
	110 v., 25-30 cy.	GE1490	4@ 25 cy.	KP-2	10.00	KP-2 •	10.70	KT-2	13.00
	208-220 v., 50-60 cy.	GE44	3@ 60 cy. 6@ 50 cy.	KP-3	10.00	KP-3 •	10.70	KT-3	13.00
	220 v., 25-30 cy.	GE1490	5@ 25 cy.	KP-4	10.00	KP-4 •	10.70	KT-4	13.00
	240 v., 60 cy. 220 v., 50 cy.	GE44	3@ 60 cy., 6@ 50 cy.	KP-7	10.00	KP-7 •	10.70	KT-7	13.00
	240 v., 60 cy. 220 v., 50 cy. Flashing Type	GE256	5.3@ 60 cy. 5.3@ 50 cy.	KP-F7	10.00	KP-F7 •	10.70	KT-F7	13.00
	480 v., 60 cy. 440 v., 50 cy.	GE44	3@ 60 cy. 6@ 50 cy.	KP-5	10.00	KP-5 •	10.70	KT-5	13.00
	600 v., 60 cy. 550 v., 50 cy.	GE44	3@ 60 cy. 6@ 50 cy.	KP-6	10.00	KP-6 •	10.70	KT-6	13.00
Neon Type (Clear Color Cap Only)	120 v., AC or DC	GE K1C	.171	KP-11	8.00	KP-11 •	8.70	KT-11	11.00
	240 v., AC or DC	GE K1C	.255	KP-12	8.00	KP-12 •	8.70	KT-12	11.00
	380 v., AC or DC	GE K1C	.471	KP-13	8.00	KP-13 •	8.70	KT-13	11.00
	480 v., AC or DC	GE K1C	.564	KP-14	8.00	KP-14 •	8.70	KT-14	11.00
	550 v., AC or DC	GE K1C	.932	KP-15	8.00	KP-15 •	8.70	KT-15	11.00
Resistor Type	14 v., AC or DC	Sylvania 12PSB	2.40	KP-21	8.00	KP-21 •	8.70	KT-21	11.00
	18 v., AC or DC	12PSB	3.18	KP-22	8.00	KP-22 •	8.70	KT-22	11.00
	32 v., AC or DC	28PSB	1.28	KP-23	8.00	KP-23 •	8.70	KT-23	11.00
	120 v., AC or DC			Use KP-38		Use KP-38		Use KT-38	
	240 v., AC or DC	120PSB	6.00	KP-25	8.00	KP-25 •	8.70	KT-25	11.00
Full Voltage Type	6 v., AC or DC	Sylvania 6PSB	.840	KP-31	8.00	KP-31 •	8.70	KT-31	11.00
	12 v., AC or DC	12PSB	2.04	KP-32	8.00	KP-32 •	8.70	KT-32	11.00
	18 v., AC or DC	GE18E	.810	KP-33	8.00	KP-33 •	8.70	KT-33	11.00
	24 v., AC or DC	Sylvania 24PSB	1.75	KP-34	8.00	KP-34 •	8.70	KT-34	11.00
	28 v., AC or DC	28PSB	1.12	KP-35	8.00	KP-35 •	8.70	KT-35	11.00
	48 v., AC or DC	48PSB	2.54	KP-36	8.00	KP-36 •	8.70	KT-36	11.00
	60 v., AC or DC	60PSB	3.00	KP-37	8.00	KP-37 •	8.70	KT-37	11.00
	120 v., AC or DC	120PSB	3.00	KP-38	8.00	KP-38 •	8.70	KT-38	11.00

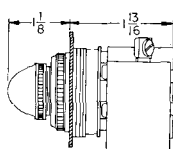
•Complete Type Number by inserting appropriate color cap code letter listed below.

*Prices **DO NOT** include legend plate. Order separate legend plate from Page 161. Order separate color caps from Page 162.5.

APPROXIMATE DIMENSIONS



PUSH TO TEST



STANDARD

• COLOR CAP CODE LETTER

Color	Glass	Plastic
		
Red	R6	R9
Green	G6	G9
Amber	A6	A9
Blue	L6	L9
Clear	C6	C9
White	W6	W9
Yellow	Y6	Y9

General revision

SQUARE D COMPANY

All dimensions are in inches.

SCHEDULE DS-1 DISCOUNTS

Prices subject to change without notice.

SUPERSEDES:

Class 9001

Page 159

May, 1968

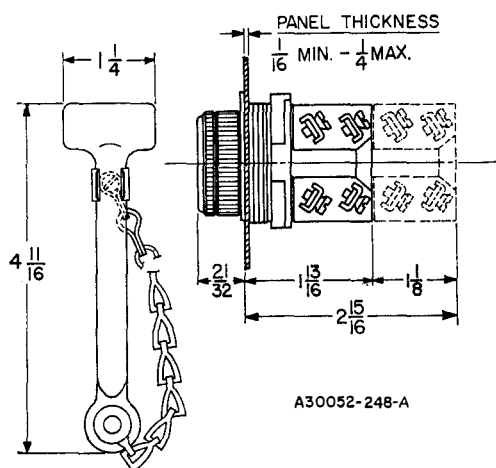


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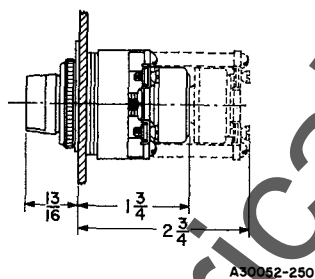
TYPE K HEAVY DUTY OIL-TIGHT CONTROL UNITS

SPECIAL PURPOSE — OPERATORS

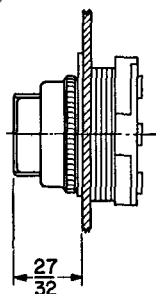
Approximate Dimensions



Emergency "Break Glass" Operator

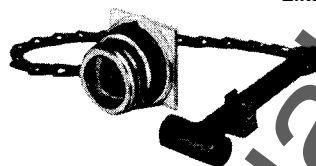


Potentiometer Operator



Dual Function Operator

EMERGENCY "BREAK GLASS" OPERATOR



Class 9001 Type K-15
Price **\$8.70 ***

Operator is held in a depressed position by a glass disc. When the glass disc is broken with the hammer, button returns to a normal extended position. Operator includes push button unit, hammer, and five glass discs. Order separate contact block from Class 9001, Page 161.



POTENTIOMETER OPERATOR

Watts Capacity	Description	Type No.	Price
2 Watts	Operator only-Single Unit . . .	K-20	\$14.00
	Operator with Single Pot. . . .	K-21●	20.00
	Operator only-Tandem Pot. . .	K-22	22.00
	Operator with Tandem Pot. . .	K-23▲	28.00

●▲Complete Type number by adding suffix from table below (Ex: Type K-21 with 2500 ohm pot assembled is Type K2106).

●Suffix	Ohms Resistance	●Suffix	Ohms Resistance	▲Suffix	Ohms Resistance	
01	50	09	25K	81	500	1000
02	100	10	50K	82	1000	1000
03	250	11	100K	83	5000	5000
04	500	12	250K	84	25K	25K
05	1000	13	500K			
06	2500	14	1.0 meg			
07	5000	15	2.5 meg			
08	10K	16	5.0 meg			

Price includes dial plate with 0-100% graduations. No deduction for omission.



DUAL FUNCTION OPERATOR

Operator will perform the same function as two separate push buttons and mount in a single cover hole. A dual function split field nameplate, Type KN-5, can be ordered from page 161.

COLOR		Momentary Contact * Price \$5.70	Maintained Contact * Price \$8.70
Left Insert	Right Insert		
Universal	†	KR-6U	KR-7U
Black	Black	KR-6BB	KR-7BB
Black	Red	KR-6BR	KR-7BR
Red	Black	KR-6RB	KR-7RB
Green	Red	KR-6GR	KR-7GR
Red	Green	KR-6RG	KR-7RG

*Prices **DO NOT** include legend plate. Order separate legend plate from page 161.
†Includes 2 each black, red and green inserts.

All dimensions are in inches.

Prices subject to change without notice.

SQUARE D COMPANY

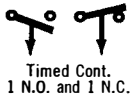
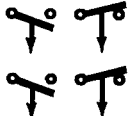
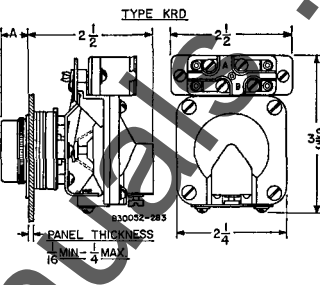
General revision

SCHEDULE DS-1 DISCOUNTS

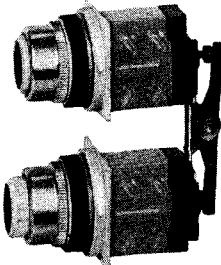
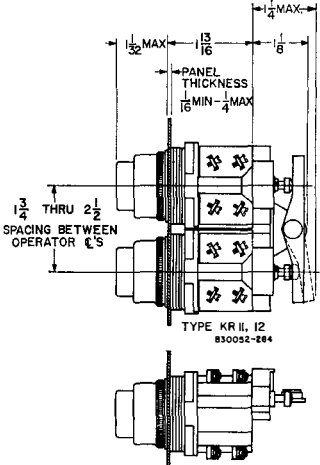


TYPE K — HEAVY DUTY OIL-TIGHT CONTROL UNITS SPECIAL PURPOSE OPERATORS

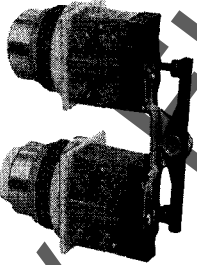
TIME DELAY PUSH BUTTON

 Time Delay After Release of Button Note: When mounted in top or bottom hole of Type K enclosures, device requires one additional space below or above operator. When mounted other than in top or bottom hole, device may require two additional spaces, one above and one below operator. Closing plates must be installed on unused holes. Refer to page 171 for minimum spacing between standard operators.	 Timed Cont. 1 N.O. and 1 N.C.	Type (All Colors)			
		Full Guard	Extended Guard	No Guard	Price *
		KRD1U-H1	KRD2U-H1	KRD3U-H1	\$17.70
		KRD1U-H2	KRD2U-H2	KRD3U-H2	\$32.70
	 Timed Cont. 2 N.O. and 2 N.C.				
Timing period is adjustable from 0.2 second to 1 minute and begins after button has been released. Devices include a package of eight color inserts for color coding the push button. Contacts are quick make — quick break.					
 TYPE KRD Panel thickness: 1/16 MIN - 1/4 MAX					
		Type No.	Dimension "A"		
		KRD1U-H1	Full Guard		
		KRD1U-H2	Ext. Guard		
		KRD2U-H1	No Guard		
		KRD2U-H2			
		KRD3U-H1			
		KRD3U-H2			

MAINTAINED CONTACT PUSH BUTTONS

 NOTE: CONTACT BLOCKS NOT INCLUDED IN KR11U OR KR12U OPERATOR.	Description Two Button Interlocked Assembly Maintained Contact Two Button Interlocked Assembly One Button Maintained, One Button Momentary	Type	Price *
		KR11U	\$ 8.40
		KR12U	11.40
Class 9001 KR11U and KR12U operators consist of two push buttons, mechanically interlocked to prevent pushing both buttons at the same time. Contact blocks are not included. Type KR11U — Consists of two maintained operators, interlocked such that pushing on one, releases the other. Again pushing on the second button releases the first. Maintained operators are furnished. The interlock attachment (Type K3), which is furnished as part of the KR11U, does not hold two momentary operators in the maintained position. It only prevents pushing both buttons at the same time. Typical application "Start-Stop" — Use one KA-1 (wire to N.C. contact) or one KA-3, and mount behind stop button. TYPE KR12U — Consists of one momentary operator and one maintained operator, interlocked such that pushing on the momentary operator releases the maintained operator. Typical application "Stop" (maintained) — "Push-to-reset" (momentary) — Use one KA-1 (wire to N.C. contact) or KA-3, and mount behind stop button.			
 TYPE KR11, 12 830052-284			

INTERLOCK

	Type	Price
	K3	\$3.
For mechanically interlocking two push buttons so that only one button can be depressed at a time. A Type K3 attachment is furnished with the 9001 KR-11 and KR-12 operators. However, maintained operators are supplied here and the K3 interlock serves to release one of the buttons when the other is depressed. When used with momentary contact buttons, the K3 interlock does not hold the buttons in the depressed position. It simply prevents pushing both buttons at the same time. The Type K3 interlock can be mounted behind the operators, or behind Type KA contact blocks as shown. Operators and blocks not included.		
For dimensions, see maintained contact Push Buttons above.		

*Prices **DO NOT** include legend plate. Order separate legend plate from page 161.



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PAGE	160.5
DECEMBER, 1969	

TYPE K — HEAVY DUTY OIL-TIGHT CONTROL UNITS

SPECIAL PURPOSE OPERATORS

PUSH PULL OPERATOR

Push-pull operators are available either momentary or maintained, illuminated or non-illuminated. Normal application of push-pull operators is "start-stop" but the operators are not limited to this one application. A Type KN-379 nameplate engraved "Pull to start — Push to stop" is furnished with each operator. Contact blocks are not included.

Momentary Contact Operators — Type KR8 and KR8P. See Contact Symbols below. For "Pull to start — Push to stop" operation, Block "A" can be either a KA-3 or KA-1. Block "B" must be a KA-5. Normally closed on block "A" is "start" contact. Block "B" is stop contact. Operation is as follows:

In the neutral position, midway between "pulled" and "pushed," block "A" is open, block "B" is closed. Pulling on operator closes NC on block "A" ("start"), releasing returns blocks to initial position. Pushing on operator opens block "B" ("stop") and closes NO on block "A" (if used). Momentary push-pull operator with 1-KA-3 and 1-KA-5

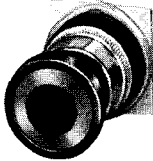
block duplicates "start-stop" 3 wire control scheme.

For other applications such as "Pull to open — Push to close", etc., use sufficient number of single circuit or double circuit blocks to meet the requirements.

Maintained Contact Operators — Type KR9 and KR9P. See Contact Symbol below. Block "C" can be either a KA-3 or KA-1. Operation is such that in the pulled position the NC contact is closed and in the pushed position the NO contact is closed. There is no neutral position as there is on the momentary operators.

Illuminated Operators — Type KR8P and KR9P type numbers must be completed by adding the voltage code number. Only transformer types are furnished as completed devices. For resistor, transformer, and neon types, order the non-illuminated operator with or without color cap, and separate light module from Page 163. See note (*) below.

TYPE (with Legend Plate, without Contact Blocks)

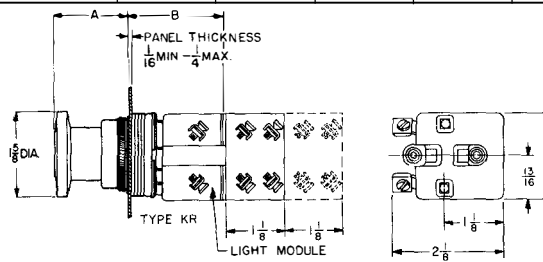
					Illuminated (Transformer Type)				
									
Knob Color	Momentary A B	Price	Maintained C	Price	Knob Color	Momentary A B	Price	Maintained C	Price
Without Knob	KR-8	\$5.30	KR-9	\$8.30	Without Knob	KR-8P●	\$13.30	KR-9P●	\$16.30
Red	KR-8R	6.00	KR-9R	9.00	Red	KR-8P●R	14.00	KR-9P●R	17.00
Green	KR-8G		KR-9G		Green	KR-8P●G		KR-9P●G	
Blue	KR-8L		KR-9L		Blue	KR-8P●L		KR-9P●L	
Yellow	KR-8Y		KR-9Y		Yellow	KR-8P●Y		KR-9P●Y	
White	KR-8W		KR-9W		Amber	KR-8P●A		KR-9P●A	
Black	KR-8B		KR-9B		Clear	KR-8P●C		KR-9P●C	
Brown	KR-8N		KR-9N		White	KR-8P●W		KR-9P●W	
Orange	KR-8S		KR-9S						

*Black, brown and orange knobs cannot be adapted to illuminated operators. Knob color must be changed. Order new knob from Page 163.

When using neon light modules, order operators without knob and clear knob from Page 163.

• Insert Voltage Numbers from Table Below.

Voltage	120 V., 60 Hz. 110 V., 50 Hz.	208- 220 V., 50- 60 Hz.	240 V., 60 Hz. 220 V., 50 Hz.	480 V., 60 Hz. 440 V., 50 Hz.	600 V., 60 Hz. 550 V., 50 Hz.
Voltage No.	1	3	7	5	6



Push pull operator

Type No.	"A" Dim.			"B" Dim.
	De-pressed (Stop)	Midway (Neutral)	Extended (Start)	
KR8	1 1/4	1 13/32	1 1/8	3/4
KR9	1 1/4	...	1 1/8	3/4
KR8P ●	1 1/4	1 13/32	1 1/8	1 13/16
KR9P ●	1 1/4	...	1 1/8	1 13/16

All dimensions are in inches.

SQUARE D COMPANY

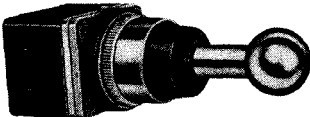
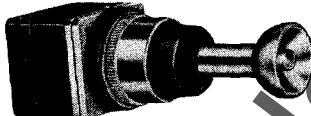
Prices subject to change without notice.

SCHEDULE DS-1 DISCOUNTS



TYPE K — HEAVY DUTY OIL-TIGHT CONTROL UNITS

JOY STICK OPERATORS

							
Without Latch			With Latch				
Description						Price*	Contact Block Only
			Type (Operator Only)				
3 Position- Center Off	Momentary Contact	Without Latch	K31	K71	----	\$17.70	Order
	Spring Return to Center	With Latch	K30	K70	----	17.70	Type KA-3
	Maintained	Without Latch	K33	K73	----	17.70	Contact
	Contact	With Latch	K32	K72	----	17.70	Blocks
5 Position- Center Off	Momentary Contact	Without Latch	----	----	K35	21.70	Order
	Spring Return to Center	With Latch	----	----	K34	21.70	Type KA-1
	Maintained	Without Latch	----	----	K37	21.70	Contact
	Contact	With Latch	----	----	K36	21.70	Blocks

The joy stick operator is ideal for applications where only one circuit is to be energized at one time. The three position joy stick closes one circuit each in Up-Down or Right-Left position with all circuits open in center position. The five position operator closes one circuit each in Up, Down, Left and Right positions with all circuits open in center position.

Momentary contact operators spring return to the center position. Maintained operators remain in each position and must be reset manually. Operators with latch cannot be operated until the latch button in center of handle is pressed.

Contact blocks may be placed in positions 1, 2, 3 and 4, (see Figure 2 below), with a maximum of four blocks total.

*Prices **DO NOT** include legend plate. Order separate Type KN-900 or KN-999 legend plate from Page 161.

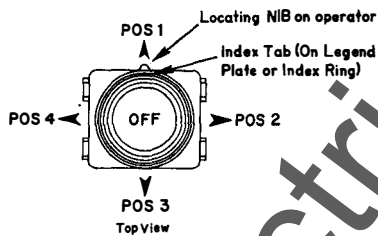


Figure 1

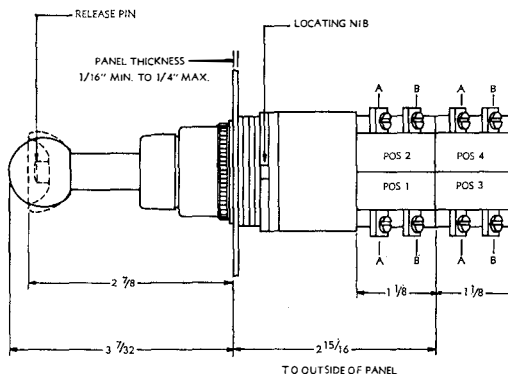


Figure 2

Operator		Contact Block Type	Contact Block Location (See Fig. 2)	Contact	Handle position (with ref. to NIB, see fig. 1)				
					1 	2 	OFF	3 	4 
	3 Position Operator	KA3	POS 1 (3)	A		X	O		O
		KA3	POS 2 (4)	A		O	O		X
	3 Position Operator	KA3	POS 1 (3)	A	X		O	O	
		KA3	POS 2 (4)	A	O		O	X	
	5 Position Operator	KA1	POS 1 (3)	A	O	X	O	O	O
				B	X	O	O	O	O
		KA1	POS 2 (4)	A	O	O	O	O	X
				B	O	O	O	X	O

Note (X) Contact Closed

(O) Contact Open

SUPERSEDES:

Class 9001
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May, 1968



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TYPE K — HEAVY DUTY OIL-TIGHT CONTROL UNITS

LEGEND PLATES

Standard Legend Plates — KN-2, KN-3 and KN-8

Standard Marking (Black Field Unless Noted) *Red Field	Type Number (Blue Field)		
	KN-200	KN-300	KN-800
FOR PUSH BUTTON OR PILOT LIGHT			
*Blank	KN-200R	KN-300R	KN-800R
Blank	KN-200	KN-300	KN-800
Start	KN-201	KN-301	KN-801
*Stop	KN-202	KN-302	KN-802
On	KN-203	KN-303	KN-803
*Off	KN-204	KN-304	KN-804
*Emerg. Stop	KN-205	KN-305	KN-805
Forward	KN-206	KN-306	KN-806
Reverse	KN-207	KN-307	KN-807
Close	KN-208	KN-308	KN-808
Open	KN-209	KN-309	KN-809
Down	KN-210	KN-310	KN-810
Up	KN-211	KN-311	KN-811
Fast	KN-212	KN-312	KN-812
Slow	KN-213	KN-313	KN-813
High	KN-214	KN-314	KN-814
Low	KN-215	KN-315	KN-815
Inch	KN-216	KN-316	KN-816
In	KN-217	KN-317	KN-817
Jog	KN-218	KN-318	KN-818
Jog For.	KN-219	KN-319	KN-819
Jog Rev.	KN-220	KN-320	KN-820
Lower	KN-221	KN-321	KN-821
Out	KN-222	KN-322	KN-822
Reset	KN-223	KN-323	KN-823
Run	KN-224	KN-324	KN-824
Start Jog	KN-225	KN-325	KN-825
Test	KN-226	KN-326	KN-826
Raise	KN-227	KN-327	KN-827
Decrease	KN-228	KN-328	KN-828
Increase	KN-229	KN-329	KN-829
Left	KN-230	KN-330	KN-830
Right	KN-231	KN-331	KN-831
Cycle Start	KN-232	KN-332	KN-832
Feed Start	KN-233	KN-333	KN-833
Cycle Stop	KN-234	KN-334	KN-834
Feed Stop	KN-235	KN-335	KN-835
Motor Run	KN-236	KN-336	KN-836
Motor Stop	KN-237	KN-337	KN-837
Power On	KN-238	KN-338	KN-838
Full Speed	KN-272	KN-372	KN-872
Low Speed	KN-273	KN-373	KN-873
Second Speed	KN-274	KN-374	KN-874
Third Speed	KN-275	KN-375	KN-875
Pull To Start		KN-376	KN-876
Push To Stop		KN-377	KN-877
FOR SELECTOR SWITCH OR SELECTOR PUSH BUTTON			
For.-Rev.	KN-239	KN-339	KN-839
Hand-Auto.	KN-240	KN-340	KN-840
High-Low	KN-241	KN-341	KN-841
Jog-Run	KN-242	KN-342	KN-842
Man.-Auto.	KN-243	KN-343	KN-843
Off-On	KN-244	KN-344	KN-844
On-Off	KN-245	KN-345	KN-845
Open-Close	KN-246	KN-346	KN-846
Raise-Lower	KN-247	KN-347	KN-847
Run-Jog	KN-248	KN-348	KN-848
Safe-Run	KN-249	KN-349	KN-849
Slow-Fast	KN-250	KN-350	KN-850
Start-Stop	KN-251	KN-351	KN-851
Up-Down	KN-252	KN-352	KN-852
Low-High	KN-253	KN-353	KN-853
Start-Stop	KN-254	KN-354	KN-854
Left-Right	KN-255	KN-355	KN-855
On-Auto	KN-256	KN-356	KN-856
On-Off	KN-257	KN-357	KN-857
Summer-Winter	KN-258	KN-358	KN-858
Auto-Off-Hand	KN-259	KN-359	KN-859
For.-Off-Rev.	KN-260	KN-360	KN-860
Hand-Off-Auto	KN-261	KN-361	KN-861
Jog-Safe-Run	KN-262	KN-362	KN-862
Man.-Off-Auto	KN-263	KN-363	KN-863
Open-Off-Close	KN-264	KN-364	KN-864
Up-Off-Down	KN-265	KN-365	KN-865
Low-Off-High	KN-266	KN-366	KN-866
For.-Safe-Rev.	KN-267	KN-367	KN-867
Jog-Stop-Run	KN-268	KN-368	KN-868
Slow-Off-Fast			
Summer-Off			
Winter	KN-269	KN-369	KN-869
High-Low-Off	KN-270	KN-370	KN-870
Raise-Off-Lower	KN-271	KN-371	KN-871
High-Off-Low	KN-272	KN-372	KN-872
Auto-Man.-Off	KN-273	KN-373	KN-873
	KN-274	KN-374	KN-874
	KN-275	KN-375	KN-875
	KN-276	KN-376	KN-876
	KN-277	KN-377	KN-877
	KN-278	KN-378	KN-878

Special Legend Plates — KN-4, KN-5, KN-6, KN-9

TYPE KN-5 (For Use with Dual Function Operators KR6, and KR-7)		TYPE KN-4 Double Headed Can be used with all Type KY enclosures but must be mounted horizontally when used with KY-2, 3, or 4.	
Type No.	Standard Markings	Type No.	Standard Markings
KN-500	Blank	KN-400	Blank
KN-501	Start On		
KN-502	Blank Stop Off		
Type No.	Black	Type No.	Standard Markings
KN-520	Blank Start On	KN-600	Blank
KN-521	Blank Stop Off		
KN-522	Forward		
KN-523	Reverse		
KN-524	Up		
KN-525	High		
KN-526	Open		
TYPE KN-6 Extra Large For customers enclosure only. Minimum spacing between operators must be 2 1/8" vertically and 2 1/4" horizontally.		TYPE KN-9 (For use with joy stick operators)	
Type No.	Standard Markings	Type No.	Standard Markings
KN-600	Blank	KN-900	Blank

Pricing Information

Legend Plate	Description	Type No.	Price
KN-2	Standard Markings	Select from Table to Left	\$.30
	Special Marking (Specify Marking Required)	Black Field	KN-299
		Red Field	KN-299R
KN-3	Standard Markings	Select from Table to Left	.30
	Special Marking (Specify Marking Required)	Black Field	KN-399
		Red Field	KN-399R
KN-4	Blank	KN-400	.60
	Any Marking (Specify Marking)	KN-499	1.60
KN-5	Standard Markings	Select from Table above	.30
	Special Marking (Specify Marking Required)	Black Field	KN-599
		Green-Red Field	KN-519
KN-6	Blank	KN-600	.60
	Any Marking (Specify Marking)	KN-699	1.60
KN-8 (For Use with KYC Enclosure)	Standard Markings	Select from Table to Left	.30
	Special Marking (Specify Marking Required)	Blue Field	KN-899
		Red Field	KN-899R
KN-9	Blank	KN-900	.30
	Any Marking (Specify Marking)	KN-999	1.30

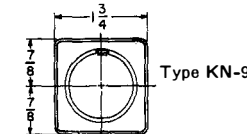
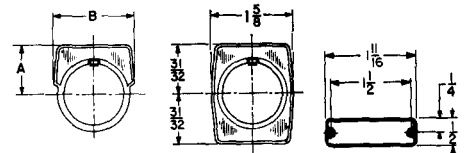
Maximum Number of Lines and Characters for Type KN Legend Plates

Type	KN-2	KN-3	KN-4	KN-5	KN-6	KN-8	KN-9
Max. No. of Char. per Line	18	18	18	8 per field	22	18	18 per pos.
Max. No. of Lines	2	3	4	2 per field	4	2	1 per pos.

The maximum number of characters and lines given above is a practical maximum and is based on a minimum size of characters to facilitate easy reading. When fewer characters than the maximum are required the size of the characters is changed to permit the best readability.

Approximate Dimensions

Type	A	B
KN-2	3 1/2	1 5/8
KN-3	1 1/4	1 3/4
KN-5	3 1/2	1 5/8
KN-6	1 1/4	2 1/4



A30052-360

All dimensions are in inches

SQUARE D COMPANY

General revision

Prices subject to change without notice.

SCHEDULE DS-1 DISCOUNTS

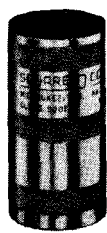
CLASS	9001
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DECEMBER, 1969	



SUPERSEDES:
Class 9001
Page 162
May, 1968

TYPE K HEAVY DUTY OIL-TIGHT CONTROL UNITS

ACCESSORIES

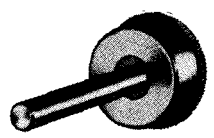


WRENCH

For tightening ring nut on operators

Type Number	Price
K-1	\$ 3.

WOBBLE STICK



For easy operation of any standard push button

Type Number	Price
K-8	\$ 3.

CLOSING PLATES



STANDARD

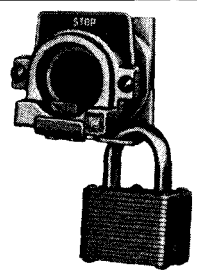
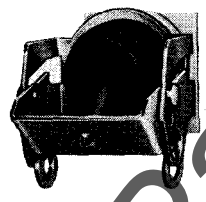
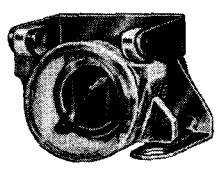
For covering unused holes in enclosure cover



ROUND

Description	Standard	Price	Round	Price
Use on KY, KVA, KZ	K-11	\$1.	K-51	\$1.
Use on KYC	K-12	1.	K-52	1.

PADLOCK ATTACHMENTS

Description				
	For push button, std. or mushroom button. (Holds button in depressed position. Padlock not included.)	For push buttons with protective cap. Holds button in depressed position and can be padlocked.	For push buttons, cover type attachment that can be padlocked. Does not hold button in depressed position.	For selector switches and illuminated push buttons without guard. Cover type attachment that can be padlocked to keep unauthorized personnel from tampering with operator.
Type	K-4	K-5	K-6	K-7
Price	\$ 3.	\$ 5.	\$ 3.	\$ 3.

PROTECTIVE CAP KITS

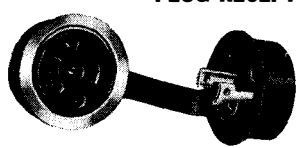
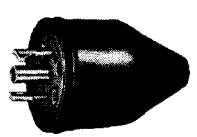





The Type KU protective cap kits are suitable for either dust tight or water tight applications. For dust tight applications standard KU nameplates can be used. For water tight applications separately mounted legend plates must be used. Kits include necessary mounting hardware.

For Push Buttons			Clear Color for		
Color	Type	Price	Selector Switch	Type	Price
Black	KU-1	\$2.	Standard Pilot Light	KU-17	\$3.
Red	KU-2	2.	Push-to-Test and Illuminated Push But. Without Guard	KU-27	3.
Blue	KU-3	2.	Illuminated Push But. With Guard	KU-37	3.
Brown	KU-4	2.		KU-47	4.
Green	KU-5	2.			
Yellow	KU-6	2.			
Clear	KU-7	2.			

PLUG RECEPTACLE

Receptacle **Plug**

Provides a panel or control station with a convenient power source to supply work lamps or portable power tools. Plug will accept a cord diameter from .281 inch to .421 inch. Complete unit is oil-tight and has a maximum rating of 15 amperes at 125 volts. Receptacle cover must be in place when not in use to retain oil-tight seal.

Description	Type	Price
Midget Twist-Lock Receptacle with provisions for grounding	K-24	\$ 6.
Midget Twist-lock Plug with Seal-Tite-Plug cover	K-14	4.

Selector Switch Cams					Selector-Push Button Cams			
Cam	Type		Price	Min. Order Qty. †	Cam	Type	Price	Min. Order Qty. †
	Standard, Coin, Gloved Hand Knob	Key Operated						
A B C D E F G H	K-13A	T-3A	.45 (DS-14 Discount)	10	P	T-3P	.80 (DS-14 Discount)	10
	K-13B	T-3B		10	R	T-3R		10
	K-13C	T-3C		10	S	T-3S		10
	K-13D	T-3D		10	T	T-3T		10
	K-13E	T-3E		10	U	T-3U		10
	K-13F	T-3F		10	Y	T-3Y		10
	K-13G	T-3G		10	Z	T-3Z		10
	K-13H	T-3H		10				

†Orders must specify minimum quantity of 10 or multiple of 10.
General revision

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SCHEDULE DS-1 DISCOUNTS

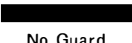
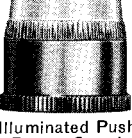
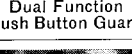
Prices subject to change without notice.



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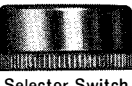
TYPE K — HEAVY DUTY OIL-TIGHT CONTROL UNITS

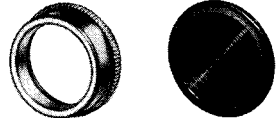
ACCESSORIES

PUSH BUTTON AND PILOT LIGHT GUARDS			
Description	Type	Price	Used On
 No Guard	K-40	\$.30	KR-3, KR-3 K-15, K-20, K-21, K-22 K-23, KP
 Full Guard	K-41	.30	KR-1, KR-4, KR-5 KR-8, KR-8P, KR-9, KR-9P, KR-1
 Extended Guard	K-42	.30	KR-2, KT, K2L, KRD-2
 Illuminated Push Button Guard	K-44	1.30	K1L
 Dual Function Push Button Guard	K-47	.30	KR-6, KR-7
 Mushroom Button Guard	K-48	4.00	KR-4

COLOR INSERTS			
Color	Type	Price Each	Min. Order † Qty.
FOR PUSH BUTTON			
Black	T-6BK	\$.05	10
Red	T-6RD	.05	10
Green	T-6GN	.05	10
Brown	T-6BN	.05	10
Yellow	T-6YW	.05	10
Orange	T-6OE	.05	10
Blue	T-6BE	.05	10
White	T-6WH	.05	10
Universal (All Colors)	T-6U	.40	10
FOR SELECTOR-PUSH BUTTON			
Black	T-5BK	.10	10
Red	T-5RD	.10	10
Green	T-5GN	.10	10
Brown	T-5BN	.10	10
Yellow	T-5YW	.10	10
Orange	T-5OE	.10	10
Blue	T-5BE	.10	10
White	T-5WH	.10	10
FOR DUAL FUNCTION OPERATOR			
Black	B-19	.10	10
Red	R-19	.10	10
Green	G-19	.10	10
Brown	N-19	.10	10
Yellow	Y-19	.10	10
Orange	S-19	.10	10
Blue	L-19	.10	10
Universal *	U-19	.60	10

†Orders must specify minimum quantity of 10 or multiple of 10.
*Includes 2 each Types B-19, R-19 and G-19.

SELECTOR SWITCH GUARDS AND RING NUTS			
Description	Type	Price	Used On
 Selector Switch Guard	K-45	\$.30	KS, K...J
 Secondary Ring Nut (Holds knob on selector switches)	K-46	.30	KS, K...J
 Spacer Ring Nut for coin operated selector switches	K-43	.30	KS...T, K...J...T

MUSHROOM BUTTON KIT (Non-Illuminated Operators)			
 For conversion of standard push button to Mushroom button operator			
Color	Type No.		Price
	1 3/8" D.	2 1/4" D.	
Black	K-16B	K-17B	\$ 3.
Red	K-16R	K-17R	
Green	K-16G	K-17G	
Brown	K-16N	K-17N	
Yellow	K-16Y	K-17Y	
Orange	K-16S	K-17S	
Blue	K-16L	K-17L	

SEPARATE COLOR CAPS For Illuminated Operators										
				R6	R9	R7	R20	R21		
For Standard and Push-to-Test Pilot Light				Plastic for Illuminated Push Button						
Color	Type		Price	Color	Standard		1 3/8" Mushroom		2 1/4" Mushroom	
	Glass	Plastic			Type	Price	Type	Price	Type	Price
Red	R-6	R-9	\$.70	Red	R-7	\$.70	R-20	\$.70	R-21	\$.70
Green	G-6	G-9		Green	G-7		G-20		G-21	
Amber	A-6	A-9		Amber	A-7		A-20		A-21	
Blue	L-6	L-9		Blue	L-7		L-20		L-21	
Clear	C-6	C-9		Clear	C-7		C-20		C-21	
White	W-6	W-9		White	W-7		W-20		W-21	
Yellow	Y-6	Y-9		Yellow	Y-7	Y-20	Y-21			

SQUARE D COMPANY

Prices subject to change without notice.

SCHEDULE DS-1 DISCOUNTS

www.ElectricalPartManuals.com

SUPERSEDES:

Class 9001
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TYPE K HEAVY DUTY OIL-TIGHT CONTROL UNITS

ACCESSORIES

SELECTOR SWITCH KNOBS (Illuminated and Non-Illuminated Operators)						
						
Standard Knob		Gloved Hand Knob		Coin Operated		
Color	Type	Price	Type	Price	Type	Price
Black	B-11 ▲	\$0.70	B-17 ▲	\$0.70	B-18 ▲	\$0.70
Red	R-8	.70	R-15	.70	R-16	.70
Green	G-8	.70	G-15	.70	G-16	.70
Brown	N-11 ▲	.70	N-17 ▲	.70	N-18 ▲	.70
Yellow	Y-8	.70	Y-15	.70	Y-16	.70
Orange	S-11 ▲	.70	S-17 ▲	.70	S-18 ▲	.70
Blue	L-8	.70	L-15	.70	L-16	.70
White	W-8	.70	W-15	.70	W-16	.70
Amber	A-8	.70	A-15	.70	A-16	.70
Clear	C-8	.70	C-15	.70	C-16	.70

▲Black, brown, and orange are opaque and for use on non-illuminated operators only.

*When converting standard or gloved hand knobs to coin operated type, spacer ring nut Type K-43 must also be used.

KNOBS FOR PUSH-PULL OPERATORS (Illuminated and Non-Illuminated)		
		
Color	Type	Price
Red	R-22	\$.70
Green	G-22	
Blue	L-22	
Yellow	Y-22	
White	W-22	
Black	B-23 ▲	
Brown	N-23 ▲	
Orange	S-23 ▲	
Clear	C-22	
Amber	A-22	

▲Black, brown, and orange are opaque and for use on non-illuminated operators only.

LIGHT MODULES			
			
Description	Voltage and Frequency	Type	Price
Transformer	120 v., 60 cycle	KM-1	\$ 8.
	110 v., 50 cycle	KM-1	
	120 v., 60 cycle	KMF-1	
	110 v., 50 cycle	KMF-1	
	Flashing Type	KMF-1	
	110 v., 25-30 cycle	KM-2	
	208-220 v., 50-60 cycle	KM-3	
	220 v., 25-30 cycle	KM-4	
	480 v., 60 cycle	KM-5	
	440 v., 50 cycle	KM-6	
Neon	600 v., 60 cycle	KM-6	6.
	550 v., 50 cycle	KM-6	
	240 v., 60 cycle	KM-7	
	220 v., 50 cycle	KM-7	
	Flashing Type	KMF-7	
Resistor	120 v., AC or DC	KM-11	6.
	240 v., AC or DC	KM-12	
	380 v., AC or DC	KM-13	
	480 v., AC or DC	KM-14	
	550 v., AC or DC	KM-15	
Full Voltage	14 v., AC or DC	KM-21	6.
	18 v., AC or DC	KM-22	
	32 v., AC or DC	KM-23	
	120 v., AC or DC	Use KM-38	
	240 v., AC or DC	KM-25	
	6 v., AC or DC	KM-31	
	12 v., AC or DC	KM-32	
	18 v., AC or DC	KM-33	
	24 v., AC or DC	KM-34	
	28 v., AC or DC	KM-35	

SEPARATE LAMPS (Schedule DS-14 Disc.)		
Lamp No.	Square D Part No.	Price
GE44	25501-01005	\$.55
GE1490	25501-01003	.75
GEK1C	25501-05012	.75
GE18E	25501-05011	.75
GE256	25501-01015	.75
Sylvania		
6PSB	25501-05007	.75
12PSB	25501-05003	.75
25PSB	25501-05004	.75
28PSB	25501-05008	.75
48PSB	25501-05009	.75
60PSB	25501-05010	.75
120PSB	25501-05005	.75

SQUARE D COMPANY

General revision

Prices subject to change without notice.

SCHEDULE DS-1 DISCOUNTS



TYPE K HEAVY DUTY OIL-TIGHT CONTROL UNITS CONTACT BLOCKS

Additional circuit arrangements can be obtained by ordering one or more of the KA-1 through KA-5 contact blocks and mounting them side by side or in tandem to meet a variety of circuit requirements. The Type KY, KYA and KYC enclosures will accept two KA contact blocks mounted in tandem.

CONTACT BLOCK RATING

Volts	AC Amperes			
	Inductive Pilot Duty 35% Power Factor			Resistive 75% Power Factor
	Make	Break	Continuous	Make, Break, and Continuous
120	60	6	10	10
240	30	3	10	10
480	15	1.5	10	10
600	12	1.2	10	10

Volts	DC Amperes		
	Inductive Pilot Duty		
	Make and Break		Continuous
	Single Throw	Double Throw	
120	1.1	1.1	10
240	0.55	.....	10
600	0.2	.....	10

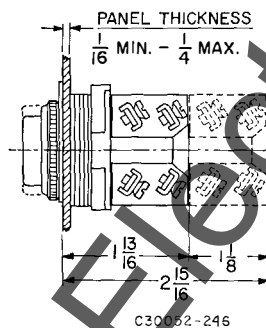
Standard Contact Blocks

Description	Symbol	Type	Price
		KA-1	\$ 3.00
		KA-2	1.50
		KA-3	1.50

Special Purpose Contact Blocks

Description	Symbol	Type	Price
	 N.O. Contact Early Closing	KA-4	\$ 3.00
	 Late Opening	KA-5	1.50

Approximate Dimensions



Additional Circuit Arrangements Available

Description	Symbol	Contact Blocks Required
		Order Two Type KA-1
		Order Two Type KA-2
		Order Two Type KA-3
SEQUENCING N.O. Contact of KA-4 closes before N.O. Contact on KA-1 (Type KR Operator only)	 KA-4 KA-1	Order One Type KA-4 and One Type KA-1
OVERLAPPING N.O. Contact of KA-4 closes before N.C. Contact of KA-5 Opens (Type KR Operators only)	 KA-4 KA-5	Order One Type KA-4 and One Type KA-5

SUPERSEDES:

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November, 1967



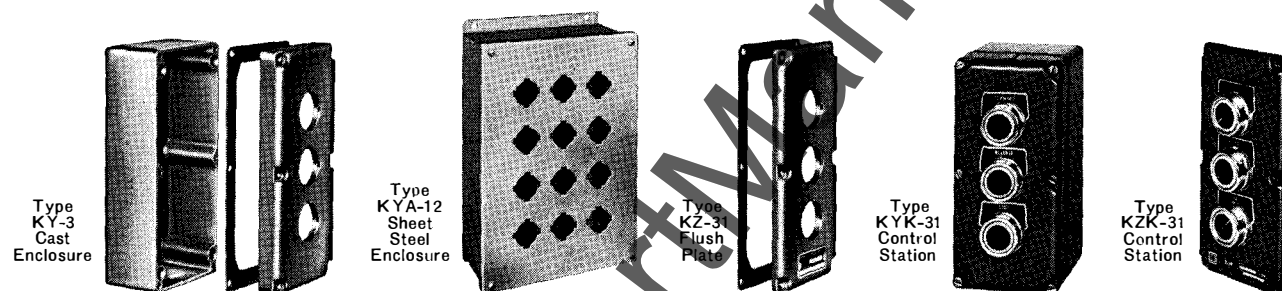
CLASS	9001
PAGE	165
MAY, 1968	

TYPE K HEAVY DUTY OIL-TIGHT CONTROL STATIONS

Enclosures — NEMA 12 (For Customer Assembly)

No. of Units	Surface Mounting				Flush Mounting	
	Cast		Sheet Steel		Cast †	
	Type	Price	Type	Price	Type	Price
1	KY-1	\$ 10.	.....	.....	KZ-11	\$ 6.
2	KY-2	11.	.....	.....	KZ-21	6.
3	KY-3	13.	.....	.....	KZ-31	7.
4	KY-4	16.	.....	.....	KZ-41	10.
6	KY-6	20.	KYA-6	\$ 13.	KZ-6	14.
9	KY-9	26.	KYA-9	16.	KZ-9	19.
12	KY-12	35.	KYA-12	20.	KZ-12	27.
16	KY-16	45.	KYA-16	25.	KZ-16	37.
20	.....	.....	KYA-20	30.	.....	.....
25	.....	.....	KYA-25	35.	.....	.....

†Consists of cover plate and gasket.



Assembled Control Stations — NEMA 12 — Cast Enclosure

CLASS 9001						600 VOLTS AC			
No. of Units	Nameplate Marking	Features	Surface Mounting		Flush Mounting Without Pull Box		Contact Symbol and Location		
			Type	Price	Type	Price	Top	2	3
1	Start.....	Mushroom Button.....	KYK-11	\$ 16.	KZK-11	\$ 12.	16	..	..
	Start.....		KYK-12	19.	KZK-12	15.	16	..	..
	Stop.....		KYK-13	16.	KZK-13	12.	16	..	..
	Stop.....		KYK-14	19.	KZK-14	15.	16	..	..
	Stop.....		KYK-15	19.	KZK-15	15.	16	..	..
	Safe-Run.....	Selector Switch.....	KYK-16	17.	KZK-16	13.	44	..	..
	Safe-Run.....		KYK-17	19.	KZK-17	15.	71	..	..
	Jog-Run.....		KYK-18	17.	KZK-18	13.	44	..	..
	Start-Jog.....		KYK-19	22.	KZK-19	18.	72	..	..
	Off-On.....		KYK-110	17.	KZK-110	13.	44	..	..
Auto-Off-On.....	Selector Switch.....	KYK-111	17.	KZK-111	13.	52	..	..	
2	Start-Stop.....	Mushroom on Stop.....	KYK-21	23.	KZK-21	18.	16	16	..
	Start-Stop.....		KYK-22	26.	KZK-22	21.	16	16	..
	Start-Stop.....		KYK-23	26.	KZK-23	21.	16	16	..
	Forward-Reverse.....		KYK-24	23.	KZK-24	18.	16	16	..
	Up-Down.....		KYK-25	23.	KZK-25	18.	16	16	..
	Open-Close.....	Maintained Contact.....	KYK-26	23.	KZK-26	18.	16	16	..
	Start-Stop.....		KYK-27	23.	KZK-27	18.	16	..	..
	Start-Safe-Run.....		KYK-28	24.	KZK-28	19.	16	44	..
	Forward-Reverse-Stop.....		KYK-29	29.	KZK-29	24.	72	16	..
	High-Low-Stop.....		KYK-210	29.	KZK-210	24.	72	16	..
	Up-Down-Stop.....		KYK-211	29.	KZK-211	24.	72	16	..
	Open-Close-Stop.....		KYK-212	29.	KZK-212	24.	72	16	..
3	Forward-Reverse-Stop.....	1 Selector Switch, 2 Buttons.....	KYK-31	31.	KZK-31	25.	16	16	16
	Up-Down-Stop.....		KYK-32	31.	KZK-32	25.	16	16	16
	Open-Close-Stop.....		KYK-33	31.	KZK-33	25.	16	16	16
	High-Low-Stop.....		KYK-34	31.	KZK-34	25.	16	16	16
	Forward-Reverse-Start-Stop.....		KYK-35	32.	KZK-35	26.	44	16	16
	Jog-Run-Start-Stop.....		KYK-36	32.	KZK-36	26.	44	16	16

For station identification plate on enclosure engraved as specified, add \$1.50 list.

Contact Symbols

16	44		52			71		72		F = Free D = Depressed
	LEFT	RIGHT	LEFT	CENTER	RIGHT	F	D	F	D	
	X	O	X	O	O	X	X	O	O	
	O	X	O	O	X	O	O	X	X	

General revision

SQUARE D COMPANY

Prices subject to change without notice.

SCHEDULE DS-1 DISCOUNTS



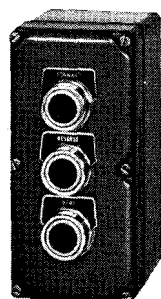
TYPE K HEAVY DUTY OIL-TIGHT CONTROL STATIONS

Control Stations — NEMA 12 — Assembled-To-Order

Many factory assembled combinations are available. These are furnished in Type KY and KZ cast enclosures and KYA sheet steel enclosures. To order, specify Class and Type number shown in table at right for the required number of units. Submit a sketch showing all control units in their desired location. (Forms for this purpose are available from Square D field offices.) Select control units from listing on Pages 148 through 164.

Custom Built Stations

Custom control stations can be built in a variety of forms — wall mounting, free standing, or console types. Special features such as flow diagrams, instruction plates, meters, wiring of units to terminal blocks, etc. can be included. Submit requirements to any Square D field office or authorized distributor.



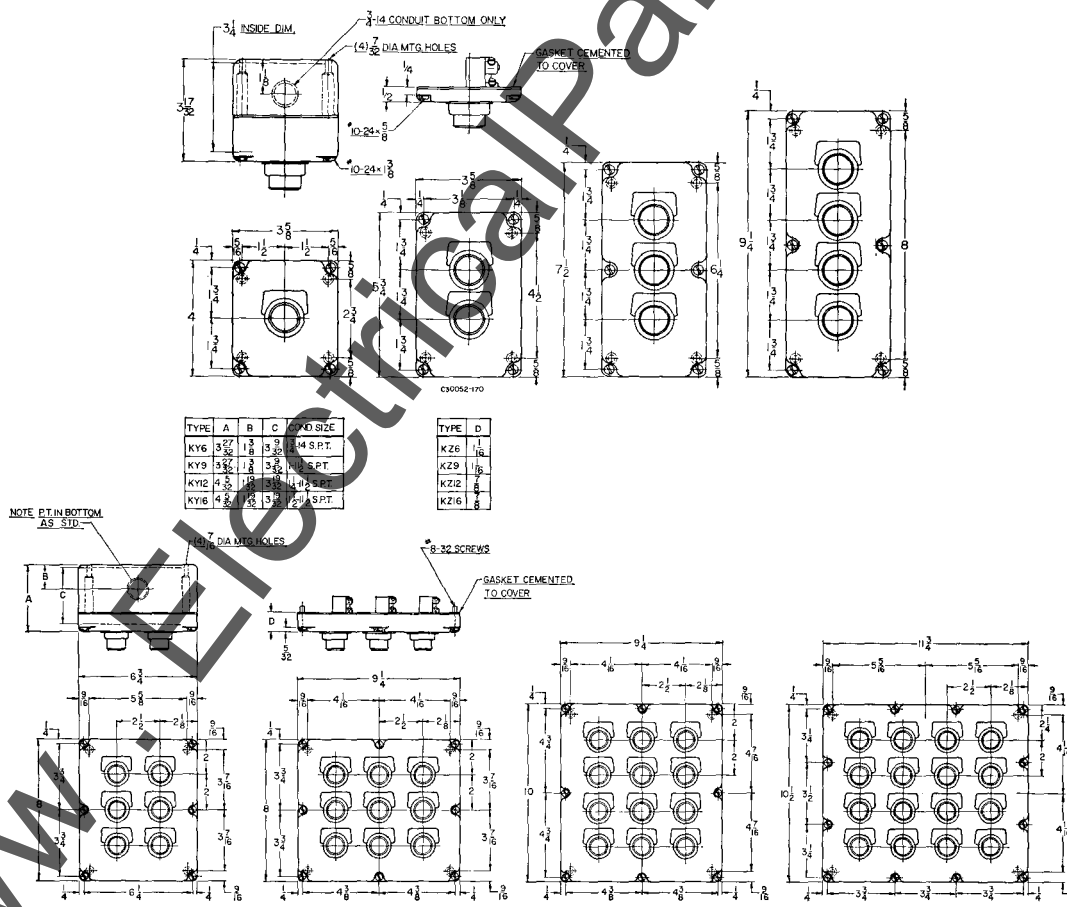
Type
KY-30

No. of Units	Surface Mounting				Flush Mounting	
	Cast		Sheet Steel		Cast	
	Type	Base Price	Type	Base Price	Type	Base Price
1	KY-10	\$ 10.	.....	.....	KZ-110	\$ 6.
2	KY-20	11.	.....	.....	KZ-210	6.
3	KY-30	13.	.....	.....	KZ-310	7.
4	KY-40	16.	.....	.....	KZ-410	10.
6	KY-60	20.	KYA-60	\$ 13.	KZ-60	14.
9	KY-90	26.	KYA-90	16.	KZ-90	19.
12	KY-120	35.	KYA-120	20.	KZ-120	27.
16	KY-160	45.	KYA-160	25.	KZ-160	37.
20	.....	.....	KYA-200	30.	.....	.....
25	.....	.....	KYA-250	35.	.....	.....

NOTE: Base prices shown include the enclosure only. The complete price for an assembled station is the sum of the base price plus price of all control units to be installed. (There is no extra charge for factory assembly.)

CAST ENCLOSURES — TYPE KY and KZ

Approximate Dimensions





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JANUARY, 1969	

SECURITY PUSH BUTTON STATIONS
FOR CONTROLLING OVERHEAD DOORS

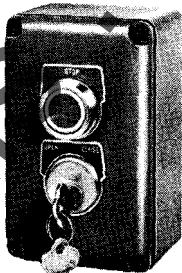
The Type K Security Push Button is a tamper proof device used for controlling overhead doors in shopping centers and in residential, commercial and industrial developments.

The cover is held securely in place with four allen screws. In addition a mechanical interlock further prevents the removal of the cover. The station is supplied with a key which is used to raise or lower the door and which also releases the mechanical interlock to facilitate removal of the cover.

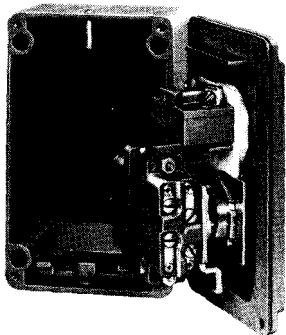
The lock is a standard builders hardware type lock. This permits keying it to the rest of the locks in a development.



Type KZC-299



Type KY-298

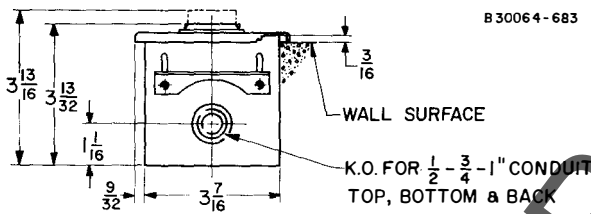
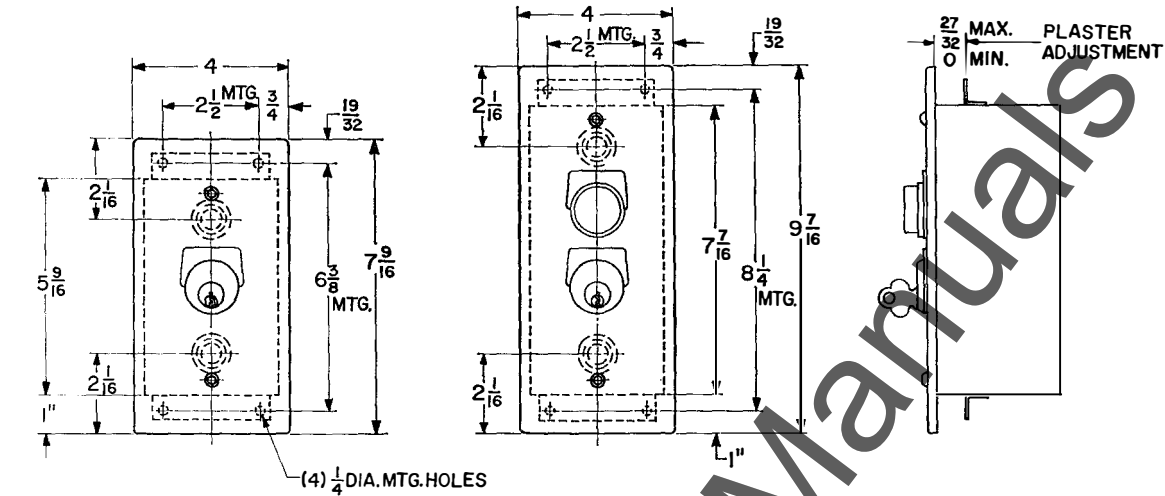


Type KY-298

Description	Cast Enclosure		Satin Chrome Finish Flush Mounted W/Box	
	Class & Type No.	Price	Class & Type No.	Price
Key Operator Only (Corbin Chrome Finish Lock).....	9001 KY-198	\$33.	9001 KZC-198	\$38.
Key Operator Only (Yale Brass Finish Lock).....	9001 KY-199	33.	9001 KZC-199	38.
Key Operator with Stop Button (Corbin Chrome Finish Lock).....	9001 KY-298	40.	9001 KZC-298	45.
Key Operator with Stop Button (Yale Brass Finish Lock).....	9001 KY-299	40.	9001 KZC-299	45.

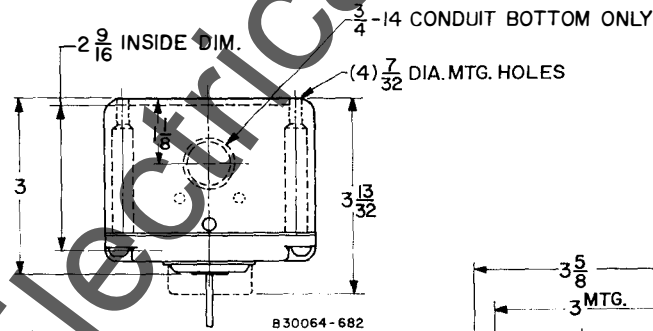


SECURITY PUSH BUTTON STATIONS FOR CONTROLLING OVERHEAD DOORS

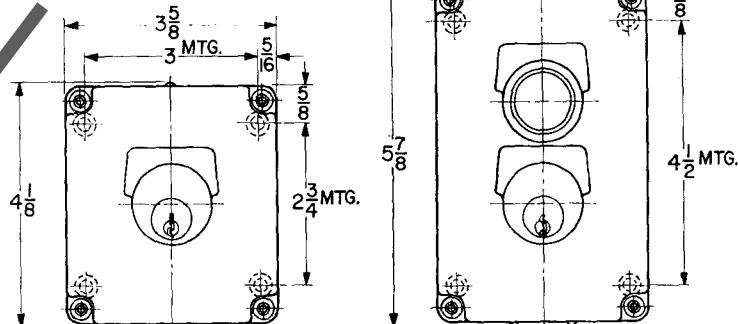


B30064-683

Types KZC-198, 199, 298, 299



B30064-682

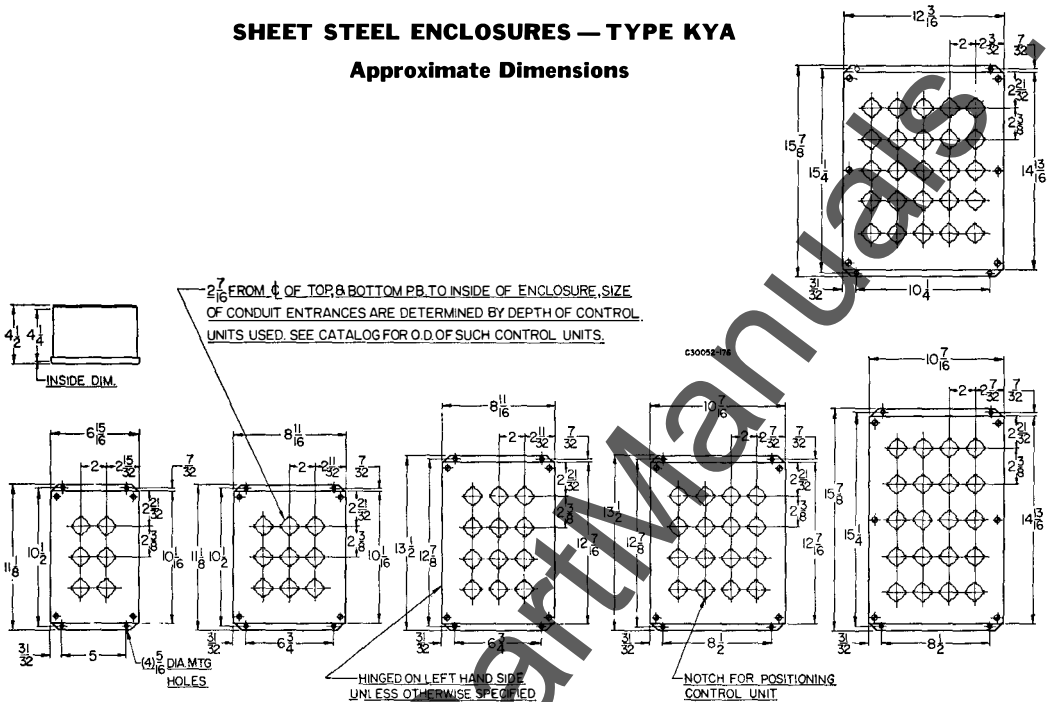


Types KY-198, 199, 298, 299



**TYPE K
HEAVY DUTY OIL-TIGHT CONTROL STATIONS**

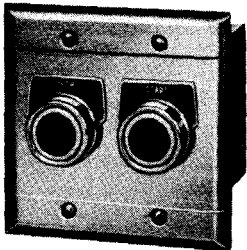
SHEET STEEL ENCLOSURES — TYPE KYA
Approximate Dimensions



STAINLESS STEEL FLUSH PLATES

(For Customer Assembly Only — Cannot be Factory Assembled with Operators)

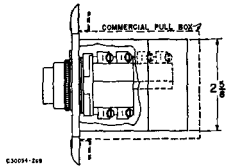
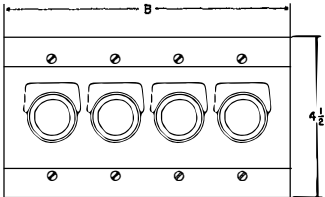
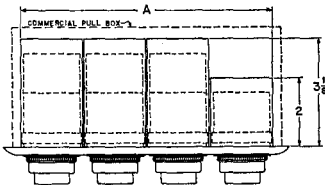
These flush plates accept the Type K operators and contact blocks and may be used with a standard 2 x 3 general purpose switch box. A 2 3/4 deep box should be used with two Type K contact blocks mounted side by side. If two Type K contact blocks mounted in tandem are needed a 3 1/2 deep box should be used. Although oil-tight operators are used, an assembled station using the flush plates is not oil-tight. The kits include the stainless steel flush plate, cover screws and a set of liners. The liners must be used to maintain electrical clearance.



Two Unit

Number of Units	Description	Type Number	Price
1	1 Unit flush plate, cover screws, insulating liners.....	K25	\$ 2.
2	2 Unit flush plate, cover screws, insulating liners.....	K26	3.
3	3 Unit flush plate, cover screws, insulating liners.....	K27	4.
4	4 Unit flush plate, cover screws, insulating liners.....	K28	6.

Approximate Dimensions



Number of Units	Dimensions	
	A	B
1	12 5/32	2 3/4
2	3 19/32	4 9/16
3	5 13/32	6 3/8
4	7 7/32	8 1/16

All dimensions are in inches.

SQUARE D COMPANY

Prices subject to change without notice.

SCHEDULE DS-1 DISCOUNTS



TYPE K HEAVY DUTY CONTROL STATIONS NEMA 4 STAINLESS STEEL ENCLOSURE

Assembled Control Stations

SURFACE MOUNTING		CLASS 9001			600 VOLTS MAX. AC		
No. of Units	Nameplate Markings	Features ①	Type	Price	Contact Symbol and Location		
					Top	2	3
1	Start.....		KYC-101	●\$26.	16		
	Stop.....		KYC-103	● 26.	16		
	Stop.....	Lockout.....	KYC-105	● 31.	16		
	Reset.....		KYC-106	● 26.	16		
	Jog.....		KYC-107	● 26.	16		
	Man.-Auto.....	Selector Switch.....	KYC-108	28.	44		
	For.-Rev.....	Selector Switch.....	KYC-109	28.	44		
	Off-On.....	Selector Switch.....	KYC-110	28.	44		
	Hand-Off-Auto.....	Selector Switch.....	KYC-111	28.	52		
	For.-Off-Rev.....	Selector Switch.....	KYC-112	28.	52		
		Red Pilot Light:					
		120 v., 60 cy. or 110 v., 50 cy.....	KYC-115A	● 32.	22		
		208-220 v., 50-60 cy.....	KYC-115B	● 32.	22		
		480 v., 60 cy. or 440 v., 50 cy.....	KYC-115C	● 32.	22		
		600 v., 60 cy. or 550 v., 50 cy.....	KYC-115D	● 32.	22		
2	Start-Stop.....		KYC-201	● 35.	16	16	
	Start-Stop.....	Lockout on Stop.....	KYC-203	● 40.	16	16	
	Forward-Reverse.....		KYC-204	● 35.	16	16	
	Up-Down.....		KYC-205	● 35.	16	16	
	Open-Close.....		KYC-206	● 35.	16	16	
	High-Low.....		KYC-208	● 35.	16	16	
	Start-Stop.....	Maintained Contact.....	KYC-210	● 35.		111	
	On-Off.....	Maintained Contact.....	KYC-211	● 35.		111	
3	Forward-Reverse-Stop.....		KYC-301	50.	16	16	16
	Up-Down-Stop.....		KYC-302	50.	16	16	16
	Open-Close-Stop.....		KYC-303	50.	16	16	16
	High-Low-Stop.....		KYC-304	50.	16	16	16
	Start-Jog-Stop.....		KYC-305	50.	16	16	16
	Forward-Reverse-Stop.....	Lockout on Stop.....	KYC-308	55.	16	16	16
	Up-Down-Stop.....	Lockout on Stop.....	KYC-309	55.	16	16	16
	Open-Close-Stop.....	Lockout on Stop.....	KYC-310	55.	16	16	16
	High-Low-Stop.....	Lockout on Stop.....	KYC-311	55.	16	16	16
	Start-Jog-Stop.....	Lockout on Stop.....	KYC-312	55.	16	16	16
	Start-Stop.....	With Red Pilot Light:					
		120 v., 60 cy. or 110 v., 50 cy.....	KYC-315A	● 56.	22	16	16
		208-220 v., 50-60 cy.....	KYC-315B	● 56.	22	16	16
		480 v., 60 cy. or 440 v., 50 cy.....	KYC-315C	● 56.	22	16	16
		600 v., 60 cy. or 550 v., 50 cy.....	KYC-315D	● 56.	22	16	16
	Start-Stop.....	With Red Pilot Light:					
		115 v., AC or DC.....	KYC-316A	● 54.	43	16	16
		230 v., AC or DC.....	KYC-316B	● 54.	23	16	16

①All stations listed are furnished with one 3/4" — 14 conduit hub at bottom. (Box is reversible to allow conduit entry at top.)

16	22	23	43	44	52	111
				LEFT RIGHT	LEFT CENTER RIGHT	

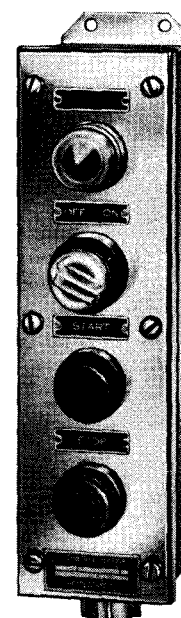
GENERAL

Type KYC stainless steel, water-tight control stations give greatly improved protection from the corrosive atmospheres associated with sewage disposal plants, chemical and fertilizer plants, tanneries, steel mills and many other industries. They are also ideal for breweries, dairies, meat packing plants and other food processing concerns where cleanliness is essential and equipment is hosed down frequently.

Stainless steel is highly resistant to the effects of excess moisture, salt spray, foodstuffs, fatty acids, sterilizing solutions, nitric acid, most of the organic chemicals and dyestuffs, and a variety of inorganic chemicals.

Enclosures are NEMA 4 water-tight, and are fabricated from AISI No. 304 stainless steel. Enclosure design has been kept plain to simplify cleaning, yet results in a very attractive installation. Push buttons, selector switches and pilot lights are provided with a water-tight cap which gives each unit a smooth, easy-to-clean surface, guards against corrosion, and seals out water and other liquids. Metal legend plates which are supplied with a clear baked protective finish are riveted to the enclosure. Chrome plated conduit hubs are also supplied.

Factory assembled stations can be furnished with up to 30 control units. In addition, all components are available separately for customers who wish to assemble their own stations.



Type KYC-400

• Revised.

SQUARE D COMPANY

SCHEDULE DS-1 DISCOUNTS

Prices subject to change without notice.

SUPERSEDES:

Class 9001
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May, 1968



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MARCH 15, 1969	

TYPE K HEAVY DUTY CONTROL STATIONS NEMA 4 STAINLESS STEEL ENCLOSURE

ASSEMBLED-TO-ORDER STATIONS

In addition to the assembled stations listed on page 168, many other factory assembled combinations are available in stations containing up to 30 units. To order, specify Class and Type number as shown in the table at right for the required number of units. Submit a sketch showing all control units in their desired location. Specify size and location of conduit hubs required.

Base prices listed in the table include only the enclosure. The complete price for an assembled station is the sum of this base price plus prices of all control units to be installed. Refer to the component listing below for selection of appropriate control units.

BASE PRICE TABLE

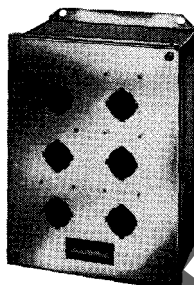
No. of Units	Class 9001 Type	Base Price
1	KYC-100	\$ 18.
2	KYC-200	19.
3	KYC-300	26.
4	KYC-400	34.
6	KYC-600	50.
9	KYC-900	62.
12	KYC-1200	75.
16	KYC-1600	99.
20	KYC-2000	110.
25	KYC-2500	140.
30	KYC-3000	165.

COMPONENTS FOR CUSTOMER ASSEMBLY

ENCLOSURES



KYC-4



KYC-6

No. of Units	Std. Conduit Hubs (Installed in Bottom) ①	Class 9001 Type	Price
1	(1) 3/4" - 14	KYC-1	\$ 18.
2	(1) 3/4" - 14	KYC-2	19.
3	(1) 3/4" - 14	KYC-3	26.
4	(1) 3/4" - 14	KYC-4	34.
6	(1) 3/4" - 14	KYC-6	50.
9	(1) 1" - 11 1/2"	KYC-9	62.
12	(1) 1 1/4" - 11 1/2"	KYC-12	75.
16	(1) 1 1/2" - 11 1/2"	KYC-16	99.
20	(1) 1 3/4" - 11 1/2"	KYC-20	110.
25	(2) 1 1/2" - 11 1/2"	KYC-25	140.
30	(2) 1 3/4" - 11 1/2"	KYC-30	165.

① Box is reversible to allow conduit entry at top.

CONTROL UNITS



KU-1
Protective Cap

Control Units — Order control units from listings on Pages 148-155, 158, 160, 162 and 164. In order to obtain a NEMA 4 water-tight control station, a NEMA 4 stainless steel enclosure must be used along with water-tight caps on all control units. Water-tight caps are listed on Page 162 and are available for PUSH BUTTONS, ILLUMINATED and NON-ILLUMINATED without a mushroom button; SELECTOR SWITCH, ILLUMINATED OR NON-ILLUMINATED with STANDARD KNOB; and STANDARD or PUSH-TO-TEST PILOT LIGHTS.

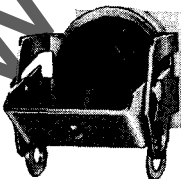
LEGEND PLATES



● **Legend Plates** — In order to maintain a water-tight seal between the protective caps and enclosure cover, separately mounted legend plates must be used.

Metal legend plates with a clear baked protective finish can be purchased separately. Order as CLASS 9001 TYPE KN-800 and specify marking desired. See Page 161 for standard KN-8 legend plate listing. Rivets for attaching the legend plates are supplied with the separate enclosures. If no marking is required to identify the function of an operator a blank Type KN-8 must be attached to the cover to maintain the water-tight seal. Legend plates with any standard marking listed on Page 161 are \$0.30 each. Legend plates with other markings are \$1.30 each. Size of the KN-8 is 1/2" by 1-11/16".

ACCESSORIES



K-5



K-12

Accessories — Use the CLASS 9001 TYPE K-5 padlock attachment and CLASS 9001 TYPE K-12 closing plate listed on Page 162.

● Revised

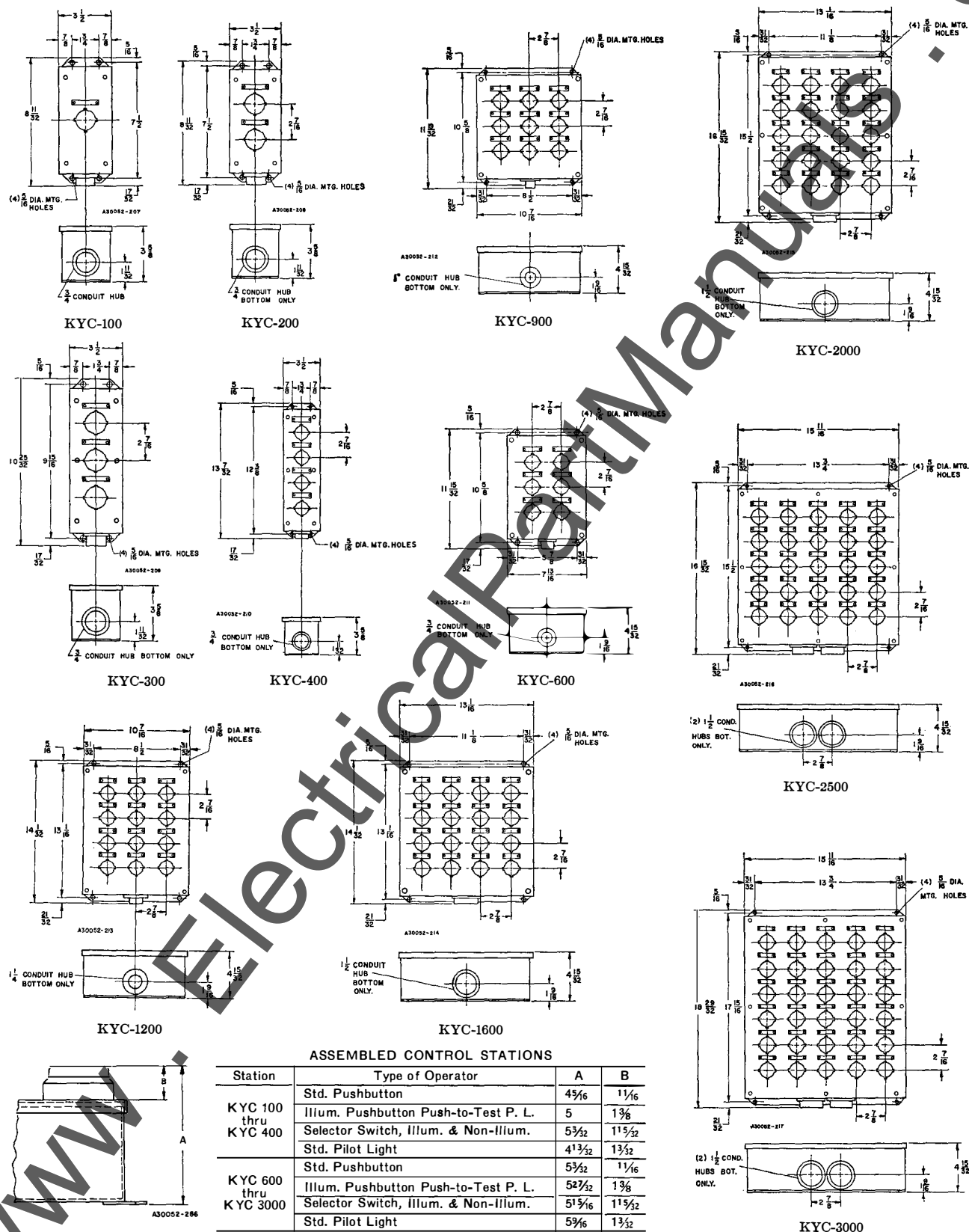
Prices subject to change without notice.

SQUARE D COMPANY

SCHEDULE DS-1 DISCOUNTS



TYPE K NEMA 4 STAINLESS STEEL ENCLOSURES — TYPE KYC



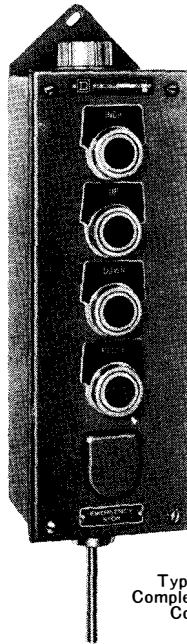
Approximate Dimensions — Not for Construction

SQUARE D COMPANY

All dimensions are in inches.



TYPE K HEAVY DUTY OIL-TIGHT CONTROL UNITS PENDANT TYPE NEMA 12 ENCLOSURES



Type KYB-50-A
Complete with Type K
Control Units

Type KYB pendant control stations are designed for use with Class 9001 Type K oil-tight control units. The NEMA 12 enclosures are both oil-tight and dust-tight. They are available in two basic forms:

ENCLOSURES ONLY

Are available for customer assembly. A closing plate is provided at the bottom of the enclosures to allow use with or without a Class 9001 Type K-8 wobble stick.

FACTORY ASSEMBLED STATIONS

1—With Wobble Stick Operator.

Stations are furnished with a Type K-8 wobble stick operator and Type KA-1 contact block mounted in the bottom. Additional operators, contact blocks, pilot lights must be selected and priced to complete the station. The wobble stick operator is considered as one unit, therefore, the number of additional units selected should be for one less than the total units in station.

2—Without Wobble Stick Operator.

Stations are furnished without wobble stick. Operators and contact blocks must be selected to complete the station.

Total Number of Units in Station*	Enclosure Only for Customer Assembly		Factory Assembled Stations			
			With Wobble Stick Stop Unit †		Without Wobble Stick	
	Type	Price	Type	Price	Type	Price
2	KYB-2	\$ 17.	KYB-20-A	\$ 26.	KYB-20-B	\$ 17.
3	KYB-3	23.	KYB-30-A	32.	KYB-30-B	23.
4	KYB-4	29.	KYB-40-A	38.	KYB-40-B	29.
5	KYB-5	35.	KYB-50-A	44.	KYB-50-B	35.
6	KYB-6	67.	KYB-60-A	76.	KYB-60-B	67.
7	KYB-7	77.	KYB-70-A	86.	KYB-70-B	77.
8	KYB-8	87.	KYB-80-A	96.	KYB-80-B	87.
9	KYB-9	103.	KYB-90-A	112.	KYB-90-B	103.
10	KYB-10	111.	KYB-100-A	120.	KYB-100-B	111.

†Price includes enclosure, Type K wobble stick operator with Type KA-1 Contact Block, and "Emergency-Stop" nameplate.

*In the case of stations furnished with wobble stick operator, the wobble stick is counted as one unit.

CONDUIT SIZE

Number of Units	Std. Conduit Hub
2	3/4"
3	3/4"
4	3/4"
5	3/4"
6	1"
7	1"
8	1"
9	1 1/4"
10	1 1/4"

Control Units — Order control units such as push buttons, selector switches and contact blocks from listings on pages 148-164. Any of the 9001 Type K operators and accessories can be used with these enclosures.

Legend Plates — "Emergency Stop" legend plate is provided as standard with all KYB-A enclosures. Other legends are chosen from page 161.



TYPE K HEAVY DUTY OIL-TIGHT CONTROL UNITS

APPLICATION DATA

OPERATOR

Service Temperature Range:

- 22° to +140° Fahrenheit
- 30° to + 60° Centigrade

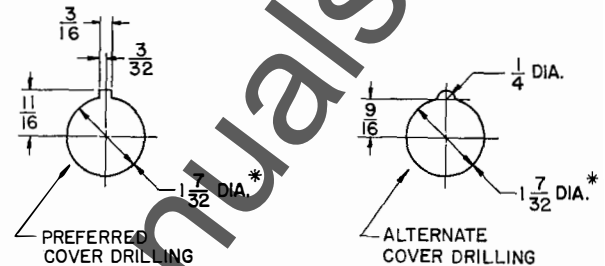
MINIMUM SPACINGS

MINIMUM CENTERLINE SPACING FOR TYPE "K" LIGHT MODULES & CONTACT UNITS							
LEGEND PLATE ORIENTATION POSITION 1							
Legend Plate	Operator	Spacing (Inches)					
		A	B	C	D	E	F
KN-2, 5	Standard Pushbutton	1 3/4	1 5/8	1 7/8	2 1/4	1 11/16	7/8
	1 3/8" Dia. Mushroom B	1 3/4	1 5/8	1 7/8	2 1/4	1 11/16	7/8
	2 1/4" Dia. Mushroom B	2 1/4	1 5/8	1 7/8	2 1/4	2 1/4	1 1/8
	Selector Switch Knobs	1 3/4	1 5/8	1 7/8	2 1/4	1 11/16	7/8
KN-3	Standard Pushbutton	2	1 5/8	1 7/8	2 1/4	1 3/4	7/8
	1 3/8" Dia. Mushroom B	2	1 5/8	1 7/8	2 1/4	1 3/4	7/8
	2 1/4" Dia. Mushroom B	2 1/4	1 5/8	1 7/8	2 1/4	2 1/4	1 1/8
	Selector Switch Knobs	2	1 5/8	1 7/8	2 1/4	1 3/4	7/8
KN-4	Standard Pushbutton	1 11/16	1 5/8	1 7/8	2 1/4	1 5/8	7/8
	1 3/8" Dia. Mushroom B	1 11/16	1 5/8	1 7/8	2 1/4	1 5/8	7/8
	2 1/4" Dia. Mushroom B	2 1/4	1 5/8	1 7/8	2 1/4	2 1/4	1 1/8
	Selector Switch Knobs	1 11/16	1 5/8	1 7/8	2 1/4	1 5/8	7/8
KN-6	Standard Pushbutton	2 3/8	1 5/8	1 7/8	2 1/4	2 1/4	1 1/8
	1 3/8" Dia. Mushroom B	2 3/8	1 5/8	1 7/8	2 1/4	2 1/4	1 1/8
	2 1/4" Dia. Mushroom B	2 3/8	1 5/8	1 7/8	2 1/4	2 1/4	1 1/8
	Selector Switch Knobs	2 3/8	1 5/8	1 7/8	2 1/4	2 1/4	1 1/8

LEGEND PLATE ORIENTATION POSITION 2							
Legend Plate	Operator	Spacing (Inches)					
		A	B	C	D	E	F
KN-2, 5	Standard Pushbutton	1 5/8	1 5/8	1 7/8	2 1/4	1 3/4	7/8
	1 3/8" Dia. Mushroom B	1 5/8	1 5/8	1 7/8	2 1/4	1 3/4	7/8
	2 1/4" Dia. Mushroom B	2 1/4	1 5/8	1 7/8	2 1/4	2 1/4	1 1/8
	Selector Switch Knobs	1 5/8	1 5/8	1 7/8	2 1/4	1 3/4	7/8*
KN-3	Standard Pushbutton	1 3/4	1 5/8	1 7/8	2 1/4	2	7/8
	1 3/8" Dia. Mushroom B	1 3/4	1 5/8	1 7/8	2 1/4	2	7/8
	2 1/4" Dia. Mushroom B	2 1/4	1 5/8	1 7/8	2 1/4	2 1/4	1 1/8
	Selector Switch Knobs	1 3/4	1 5/8	1 7/8	2 1/4	2	7/8*
KN-4	Standard Pushbutton	1 5/8	1 5/8	1 7/8	2 1/4	1 11/16	1
	1 3/8" Dia. Mushroom B	1 5/8	1 5/8	1 7/8	2 1/4	1 11/16	1
	2 1/4" Dia. Mushroom B	2 1/4	1 5/8	1 7/8	2 1/4	2 1/4	1 1/8
	Selector Switch Knobs	1 5/8	1 5/8	1 7/8	2 1/4	1 11/16	1
KN-6	Standard Pushbutton	2 1/4	1 5/8	1 7/8	2 3/8	2 3/8	7/8
	1 3/8" Dia. Mushroom B	2 1/4	1 5/8	1 7/8	2 3/8	2 3/8	7/8
	2 1/4" Dia. Mushroom B	2 1/4	1 5/8	1 7/8	2 3/8	2 3/8	1 1/8
	Selector Switch Knobs	2 1/4	1 5/8	1 7/8	2 3/8	2 3/8	7/8*

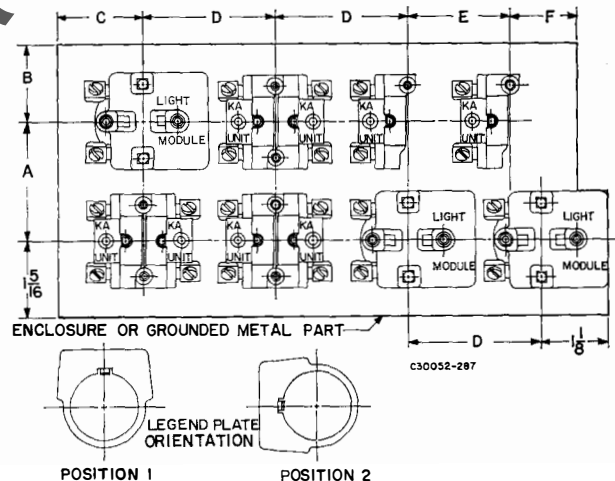
*For gloved hand knob use 1 in.

Drilling for All Operators



*UNITS ALSO MOUNT IN
1 13/64 DIA. HOLE

MINIMUM SPACINGS



SPECIFICATION

Operators shall be suitable for mounting in a 1 7/32 inch diameter notch type cover hole and held in place by the nameplate or an indexing ring. Non-illuminated push buttons and selector-push buttons shall have removable polyethylene inserts in 8 different colors for function color coding. Illuminated push buttons shall have removable color caps in 7 different colors for function color coding and shall include illuminated mushroom color caps. Non-illuminated selector switches shall have removable knobs in 8 different colors for function color coding. Illuminated selector switches shall have removable knobs in 7 different colors for function color coding. Push button inserts and color caps and selector switch knobs shall be removable from the front of the panel without disturbing the wiring or mounting. All pilot lights and illuminated operators shall have removable light modules.

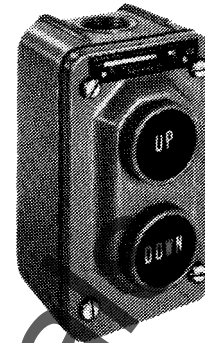
Contact blocks shall be single pole, single throw or single pole, double throw and mount side-by-side and/or in tandem to the base of the operators. Contact block mounting screws shall be captive and the terminals shall be the pressure wire type with a self lifting pressure clamp that will compensate for wires of different size. Contacts shall be double break and rated for heavy duty service. Contact tips shall be silver.

Enclosures shall be cast or sheet steel NEMA 12 construction with hinged covers on the 6 unit and larger devices. Enclosures shall have sufficient depth to accommodate two contact blocks in tandem.

PENDANT CONTROL STATIONS FOR HOIST CONTROL APPLICATIONS — TYPE B

CLASS
9001

The Class 9001 Type B line of pendant stations are used for hoist applications. The general purpose enclosure consists of a sheet steel cover and a die cast aluminum box with a 1/2 inch conduit entrance at top to accept a pendant cable. All stations are provided with mechanical interlocks which prevent closing both contacts simultaneously. A neoprene diaphragm may be obtained on any version to further protect the interior from moisture or dust. For convenience, push buttons have interchangeable legend inserts.



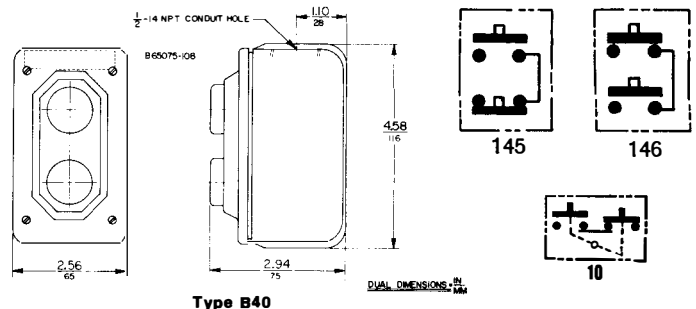
No. of Units	Legend Insert Markings	Mechanical Interlock	Neoprene Diaphragm	Gray	Price	Contact Symbol See Below
2	Up-Down	Yes	No	B40	\$32.	146
	Up-Down		Yes	B42	38.	146
	For.-Rev.		No	B41	32.	146
	For.-Rev.		Yes	B43	38.	146
	Start-Stop		No	B40-S3	32.	145
	Start-Stop		Yes	B42-S1	38.	145
	On-Off		No	B51	44.	10
	On-Off		Yes	B52	50.	10

INTERCHANGEABLE PUSH BUTTON LEGEND INSERTS						
Marking	For Type B40's	Mushroom Button Inserts For Type B40's	Marking	For Type B40's	Mushroom Button Inserts For Type B40's	Price Each
Start	B259	B282	High	B257	B280	\$1.
Stop	B260	B283	Low	B258	B281	
Fast	....	....	On	B255	B288	
Slow	....	....	Off	B256	B289	
Forward	B255	B278	Hand	B251	B251	
Reverse	B256	B279	Auto	B252	B252	
Open	B263	B286	Jog	....	....	
Close	B264	B287	Blank	....	....	
Raise	B261	B284	Black	....	....	
Lower	B262	B285	Blank	....	....	
Up	B253	B276	Red	....	....	
Down	B254	B277	....	....	....	

Order must specify quantity of 10 or multiples of 10.

REPLACEMENT INTERIORS 9001-B40's			
Type Number	Symbol	Description	Price
BOC364	146	W/Diaphragm, Interlock, Cover Plate	\$25.
BOC365*	10	W/Diaphragm, W/Cover Plate	25.
BOC363*	145	W/Diaphragm, Cover Plate, W/O Interlock	25.

* Non-stock



Type B40

ELECTRICAL CONTACT RATINGS

AC — NEMA B600							DC — NEMA P600			
Volts*	Inductive 35% Power Factor				Resistive 75% Power Factor	Continuous Carrying Amperes	Volts	Inductive and Resistive		
	Make		Break					Make, Break and Continuous Carrying Amperes	Make and Break Amperes	Continuous Carrying Amperes
	Amps.	VA	Amps.	VA						
120	30	3600	3	360	5	5	120	1.1	5	
240	15	3600	1.5	360	5	5	240	.55	5	
480	7.5	3600	.75	360	5	5	600	.2	5	
600	6	3600	.6	360	5	5				

* OSHA Regulation, Section 1910.170 Overhead and Gantry Cranes, limits the voltage at Pendant Pushbuttons to 150 VAC and 300 VDC.

PENDANT CONTROL STATIONS FOR CRANE, HOIST AND SPECIAL MACHINERY

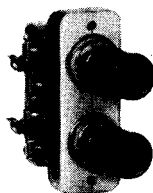
JANUARY, 1983
SUPPLEMENTARY

Class 9001 Pendant Stations, which consist of Type U enclosures and various push button units, are generally used to control cranes

and hoists. They are available as factory assembled stations or with push buttons and enclosures unassembled.



Type B-45



Type UO-2



Type TJ-3

PUSH BUTTON UNITS

Number of Buttons per Unit	Description	General Purpose			Weather Resistant			Symbol See Page S9-3
		Type	Price		Type	Price		
			Unassembled	Assembled		Unassembled	Assembled	
TYPES B AND C								
2	Momentary Contact●.....	B-45	\$ 22.	\$ 30.	B-46	\$ 32.	\$ 40.	7
2	Momentary Contact.....	B-47	16.	24.	B-48	26.	34.	5
2	Maintained Contact●.....	C-44	28.	36.	C-45	38.	46.	10
TYPE U — MULTI-SPEED*								
2	2 Speed Unit●.....	UO-5	\$ 96.	\$104.	UO-6	\$106.	\$114.	87
2	3 Speed Unit●.....	UO-2	108.	116.	UO-4	118.	126.	88
2	4 Speed Unit●.....	UO-7	116.	124.	UO-8	126.	134.	89
2	5 Speed Unit●.....	UO-1	120.	128.	UO-3	130.	138.	90
*Can only be used with standard depth enclosures. ●Buttons are mechanically interlocked.								
TYPE TJA (Type TJ units are oiltight push button operated snap switches)								
1	1 Speed Unit (one Class 9007 Type AO-1).....	TJ-1	\$36.	\$40.				16
1	1 Speed Unit (one Class 9007 Type CO-3).....	TJ-11	48.	52.				140
1	2 Speed Unit (two Class 9007 Type AO-1).....	TJ-2	48.	52.				141
1	3 Speed Unit (one Type AO-1 and one Type CO-7).....	TJ-3	64.	68.				142
1	4 Speed Unit (two Class 9007 Type CO-7).....	TJ-4	80.	84.				143
TYPES K and T★▲								
1	Push Button (Use No-Guard Style)	Choose Type K units or Type T units from current Square D Catalog Section 4 or 8.				Add \$4.00 to the price of each Type K or Type T unit when ordering assembled station.		
1	Pilot Light							
1	Selector Switch							
1	Closing Plate							

★ Use Type KA contact blocks and one adaptor, part number 31051-026-01, with each push button or selector switch operator. Type U enclosures for Type K or Type T operators will include one adaptor 31051-026-01 for each mounting hole.

▲ Use Type TN-2 nameplates only with Type T units. Use Type KN2 nameplates with Type K and Type TJ units.

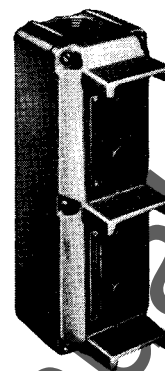
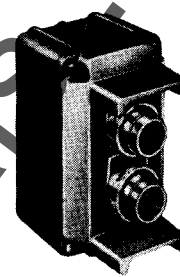
ENCLOSURES† STANDARD DEPTH ENCLOSURES

Size	Conduit Entrance Size	General Purpose				Weather Resistant			
		For Types B, C & U		For Types K, T & TJ		For Types B, C & U		For Types K, T & TJ	
		Type	Price	Type	Price	Type	Price	Type	Price
2 Button	3/4"	UG-1	\$ 56.	UG-11	\$ 80.	UW-1	\$ 64.	UW-11	\$ 88.
4 Button	1"	UG-2	84.	UG-12	108.	UW-2	94.	UW-12	118.
6 Button	1 1/4"	UG-3	140.	UG-13	164.	UW-3	152.	UW-13	176.
8 Button	1 1/4"	UG-4	196.	UG-14	220.	UW-4	210.	UW-14	234.
10 Button	1 1/2"	UG-5	260.	UG-15	284.	UW-5	276.	UW-15	300.
12 Button	1 1/2"	UG-6	316.	UG-16	340.	UW-6	334.	UW-16	358.
SHALLOW DEPTH ENCLOSURESⓄ									
2 Button	3/4"	UGS-1	\$ 56.	UGS-11	\$ 80.	UWS-1	\$ 64.	UWS-11	\$ 88.
4 Button	3/4"	UGS-2	84.	UGS-12	108.	UWS-2	94.	UWS-12	118.
6 Button	1"	UGS-3	140.	UGS-13	164.	UWS-3	152.	UWS-13	176.
8 Button	1"	UGS-4	196.	UGS-14	220.	UWS-4	210.	UWS-14	234.

Ⓞ Consist of smaller enclosures coupled together.

† Price of nameplate is not included in enclosure price.

Ⓞ Use only Types B, C, K, T and TJ push button units. Shallow depth enclosures will not accept Type UO units.

Type UGS-20
With 2 Type B-45Type UG-10
With 2 Type TJ-3

NAMEPLATES FOR TYPES B, C & U

Marking	Part Number	Price
Standard Marking:		
Hoist; Up-Down	144-D492-X1	\$1.20
Trolley; East-West	144-D669-X4	1.20
Trolley; For.-Rev.	144-D492-X2	1.20
Trolley; North-South	144-D669-X5	1.20
Bridge; For.-Rev.	144-D492-X3	1.20
Bridge; East-West	144-D669-X6	1.20
Bridge; North-South	144-D669-X7	1.20
Start-Stop	144-D669-X1	1.20
Reset-Stop	144-D669-X3	1.20
Blank	144-D492-X4	1.20
Non-Standard Markings	144-D492-X5 (Specify Marking)	6.00

HANGER BRACKETS

Conduit Entrance Size	Part Number	Price
3/4"	2868-D1 - X2	\$2.
1"	2868-D1 - X3	2.
1 1/4"	2868-D19-X1	2.
1 1/2"	2868-D19-X2	2.

ORDERING INFORMATION REQUIRED UNASSEMBLED STATIONS:

- 1 — Order interior push button units by class and type number (use "unassembled" price).
- 2 — Order enclosure by class and type number.
- 3 — Order nameplate, specify marking.
- 4 — Order hanger bracket by part number according to conduit size listed to the left.

ASSEMBLED STATIONS:

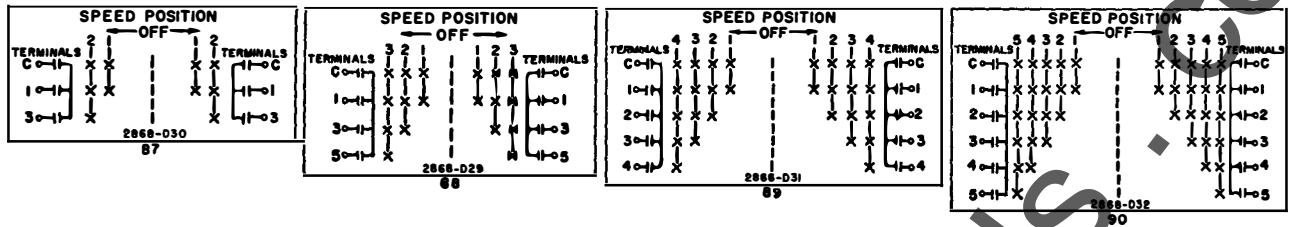
- 1 — Order enclosure by class and type and add a "Zero" to end of type number. Example: 9001 Type UG-20 vs. Type UG-2.
- 2 — List interior push button units desired starting at the top of enclosure (use "assembled" price).
- 3 — Specify nameplate markings.
- 4 — Order hanger bracket by part number according to conduit size listed to the left.



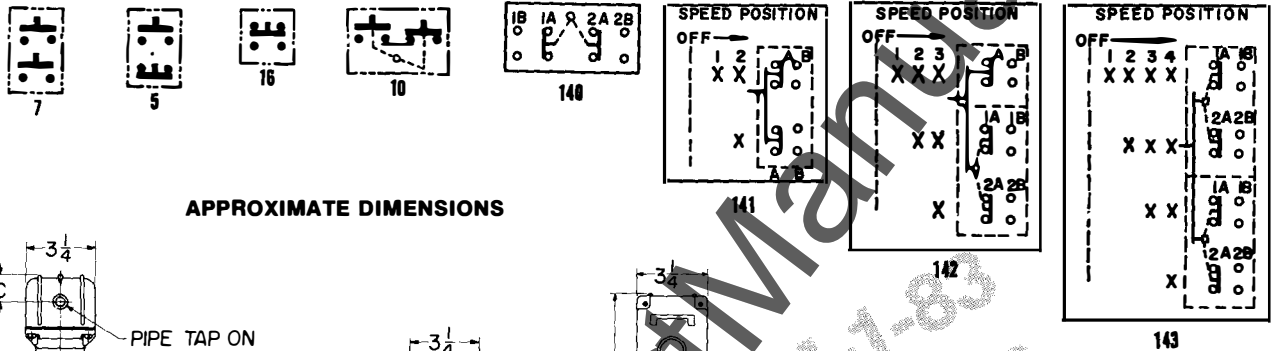
PENDANT CONTROL STATIONS DIMENSIONS

9001

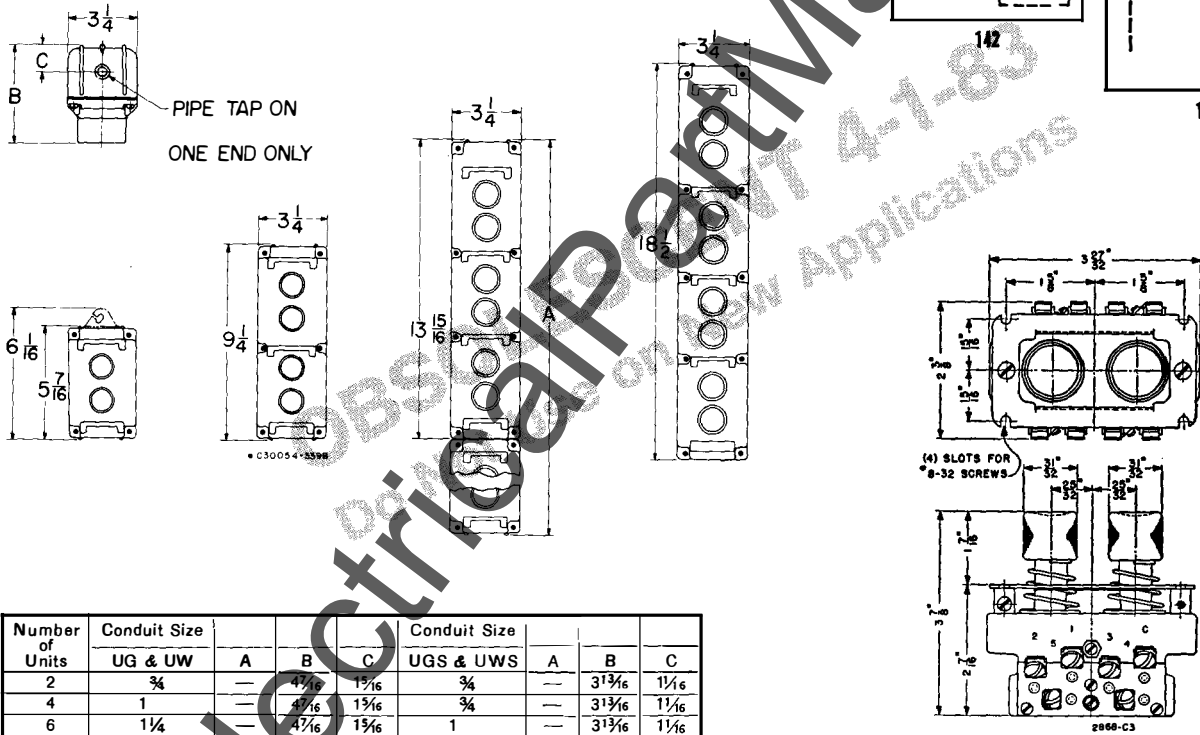
SYMBOLS



NOTE: For symbols 87, 88, 89, and 90 all terminals for single multi-speed push button are NOT found on same side of push button block. Terminal C, 3 and 4 are on one side of the block while terminals 1, 2 and 5 are found on the opposite side.



APPROXIMATE DIMENSIONS



Number of Units	Conduit Size			Conduit Size		
	UG & UW	A	B	UGS & UWS	A	B
2	3/4	—	4 1/16	3/4	—	3 13/16
4	1	—	4 7/16	3/4	—	3 13/16
6	1 1/4	—	4 11/16	1	—	3 13/16
8	1 1/4	—	4 5/8	1	—	3 7/8
10	1 1/2	23 1/16	4 7/16	—	—	—
12	1 1/2	27 3/4	4 7/16	—	—	—

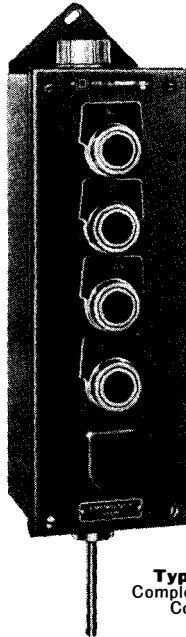
CONTACT RATINGS

Device Type	Maximum Voltage	AC Amperes		DC Amperes	
		Make	Break	Make & Break	
B & C	120	30	3.	1.1	
	250	15	1.5	.55	
	480	7.5	.75		
	600	6	.6	.2	
TR & TS	120	60	6	2.2	
	240	30	3	1.	
UO	120	6.6	1.25	.15	
	240	3.3	.62	.075	
TJ	250	Refer to Class 9007 section 5 of the current Square D Catalog for rating of appropriate snap switch.			

HEAVY DUTY OILTIGHT CONTROL STATIONS

TYPE K — PENDANT TYPE

JANUARY, 1983
SUPPLEMENTARY



Type KYB-50-A
Complete with **Type K**
Control Units

Type KYB pendant control stations are designed for use with Class 9001 Type K oiltight control units. The NEMA 13 enclosures are both oiltight and dusttight. They are available in two basic forms:

ENCLOSURES ONLY

Available for customer assembly. A closing plate is provided at the bottom of the enclosures to allow use with or without a Class 9001 Type K-8 wobble stick.

FACTORY ASSEMBLED STATIONS

1—With Wobble Stick Operator.

Stations are furnished with a Type K-8 wobble stick operator and Type KA-1 contact block mounted in the bottom. Additional operators, contact blocks, pilot lights must be selected and priced to complete the station. The wobble stick operator is considered as one unit, therefore, the number of additional units selected should be for one less than the total units in station.

2—Without Wobble Stick Operator.

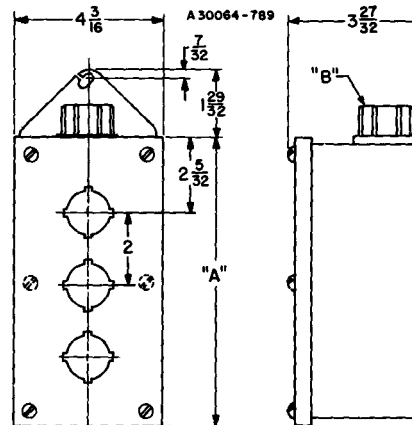
Stations are furnished without wobble stick. Operators and contact blocks must be selected to complete the station.

Total Number of Units in Station*	Factory Assembled Stations					
	Enclosure Only for Customer Assembly		With Wobble Stick Stop Unit †		Without Wobble Stick	
	Type	Price	Type	Price	Type	Price
2	KYB-2	\$ 68.	KYB-20-A	\$104.	KYB-20-B	\$ 68.
3	KYB-3	92.	KYB-30-A	128.	KYB-30-B	92.
4	KYB-4	116.	KYB-40-A	152.	KYB-40-B	116.
5	KYB-5	140.	KYB-50-A	176.	KYB-50-B	140.
6	KYB-6	168.	KYB-60-A	304.	KYB-60-B	168.
7	KYB-7	308.	KYB-70-A	344.	KYB-70-B	304.
8	KYB-8	348.	KYB-80-A	384.	KYB-80-B	348.
9	KYB-9	412.	KYB-90-A	448.	KYB-90-B	412.
10	KYB-10	444.	KYB-100-A	480.	KYB-100-B	444.

†Price includes enclosure, Type K wobble stick operator with Type KA-1 Contact Block, and "Emergency-Stop" nameplate.

*In the case of stations furnished with wobble stick operator, the wobble stick is counted as one unit.

APPROXIMATE DIMENSIONS



Type KYB-	2	3	4	5	6	7	8	9	10
Dim. "A"	6	8	10	12	14	16	18	20	22
Hub Size "B"	3/4	3/4	3/4	3/4	1	1	1	1 1/4	1 1/4

