



September, 1980
Supersedes DB 34-251,
Dated February, 1968

600 Volts, 20 Ampere
Continuous Capacity

Mailed To: E, D, C/1976/DB

Instrument and Control Switches Type W-2

Application

The Type W-2 switch is designed for use as an instrument, control or general purpose switch. It is compact, yet of sufficient size to provide long, trouble-free service when applied within the specified ratings.

Design flexibility of internal parts and contacting, plus external jumpering of the contact studs affords almost limitless switching combinations for relatively few standard components. The design flexibility is provided in the basic switch styles. A complete switch is made up of a basic switch, one of several styled handles, external jumper, (when required) and a nameplate.

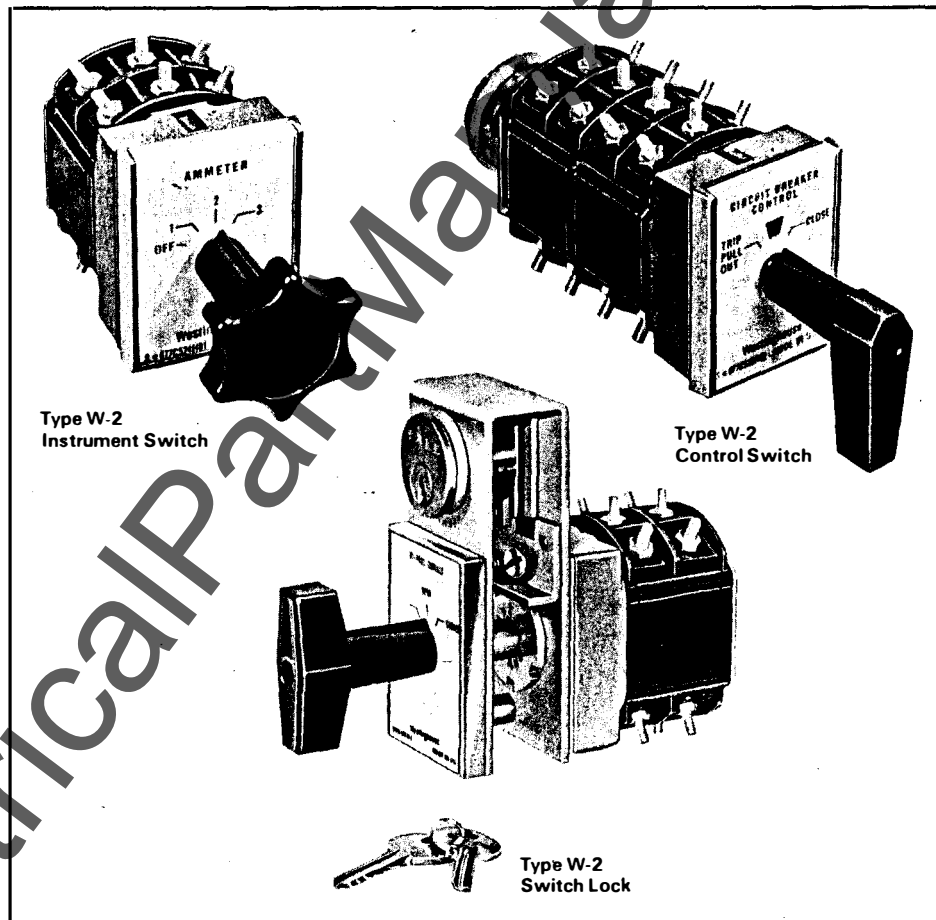
The W-2 switch may be ordered as a single style unit where such a style meets a specific application. Where a single listed style does not meet a specific application, the desired switch may be ordered by specifying the required styled components. As separate items or by completing Contact Tabulation Form 34219.

The materials used in the manufacture of the Type W-2 Switch make it virtually inherently fungus proof. Only the handles are made of organic material and, therefore, the only part requiring fungus treatment.

The style numbers shown in this bulletin apply to switches for mounting on 1/8 to 1/4 inch thick panels. Switches for thicker panels (up to two inches) are available on special order. They may be obtained by 1) specifying as "similar to a given style except for mounting on _____ inch thick panel, or 2) by completing contact tabulation Form 34219.

Instrument Switches: Maintained contact type for use with all classes of electrical instruments, relays, meters, and for performing various circuit combinations. Designed for panel mounting and equipped with handles for manual operation.

Control Switches: Are designed as spring return to the original or neutral position. They are used for circuit breaker control and other types of electrically controlled apparatus where momentary contact is required. They are designed for panel mounting and equipped with a handle for manual operation.



Advantages

- Small Size
- Variable Circuitry by "You Wire It"
- More Contacts per Unit Volume
- Roller-Wipe Spring Actuated Contacting
- Momentary and Maintained Contact Designs, or in Combination
- Greater Availability of Contacts with Terminal Identification for Automated Wiring or Application Changes in Field
- Double Break Contacts per Stage
- UL recognized

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Design Features

General Construction

The W-2 switch consists essentially of an operating handle, face plate, control housing, contact frame assembly and rotor assembly. It can be built up in any number of stages from 1 to 9, which stages are clamped together and to the control housing by two tie bolts. A steel operating shaft ties the contact rotors together. A metal cover on the rear holds the position stop pins, retains the shaft and provides switch identification. For push or pull switches, the metal cover is replaced by a polycarbonate cover which houses the pull-out mechanism.

Switch Positions

The Type W-2 switch has a minimum of two and a maximum of twelve rotary positions with a 30° throw between positions, irrespective of the number. Each rotary position coincides precisely with the nameplate markings. The degree of throw between positions is fixed and cannot be changed. The number of positions of each switch can be altered by removing the rear cover and changing the position of the "stop" pin or pins located in the rear housing spacer. In addition to rotary motion, the W-2 switch can be provided with a lateral movement (push-pull) of the handle and shaft.

Contact Frames

Two contact frame sizes are available; the half frame with six sets of contacts; three sets on the top at 11, 12 and 1 o'clock positions and three sets on the bottom at 5, 6 and 7 o'clock positions. The full frame with 12 sets of contacts, each set located at 30° intervals around its perimeter as are the numbers on a clock. The contact frames are made of glass polyester insulating material.

Contacts

Switches are usually referred to as "so many stages long". For a W-2 switch, a stage of contacts consists of a contact frame (either 6 or 12 contact sets) and a rotor.

At every position location on the frame, there are two contact terminal studs in line (a set) per stage. Each of these studs is one piece, made of bronze alloy and silver plated.

Rotors

The rotors are standard in design and hold the roller contacts. Each rotor, made of glass polyester insulating material, rotates independently between the stage spacer plates. The rotor assembly is equipped with one to six rollers (as determined by the required circuitry) each of which makes contact with two adjacent

stationary terminal studs to complete a circuit and so affording a double, series break contact. The silver-plated bronze alloy roller contacts provide a rolling, wiping action, are self-aligning on assembly and require no adjustment of contact pressure for the life of the switch. Contact springs do not carry current.

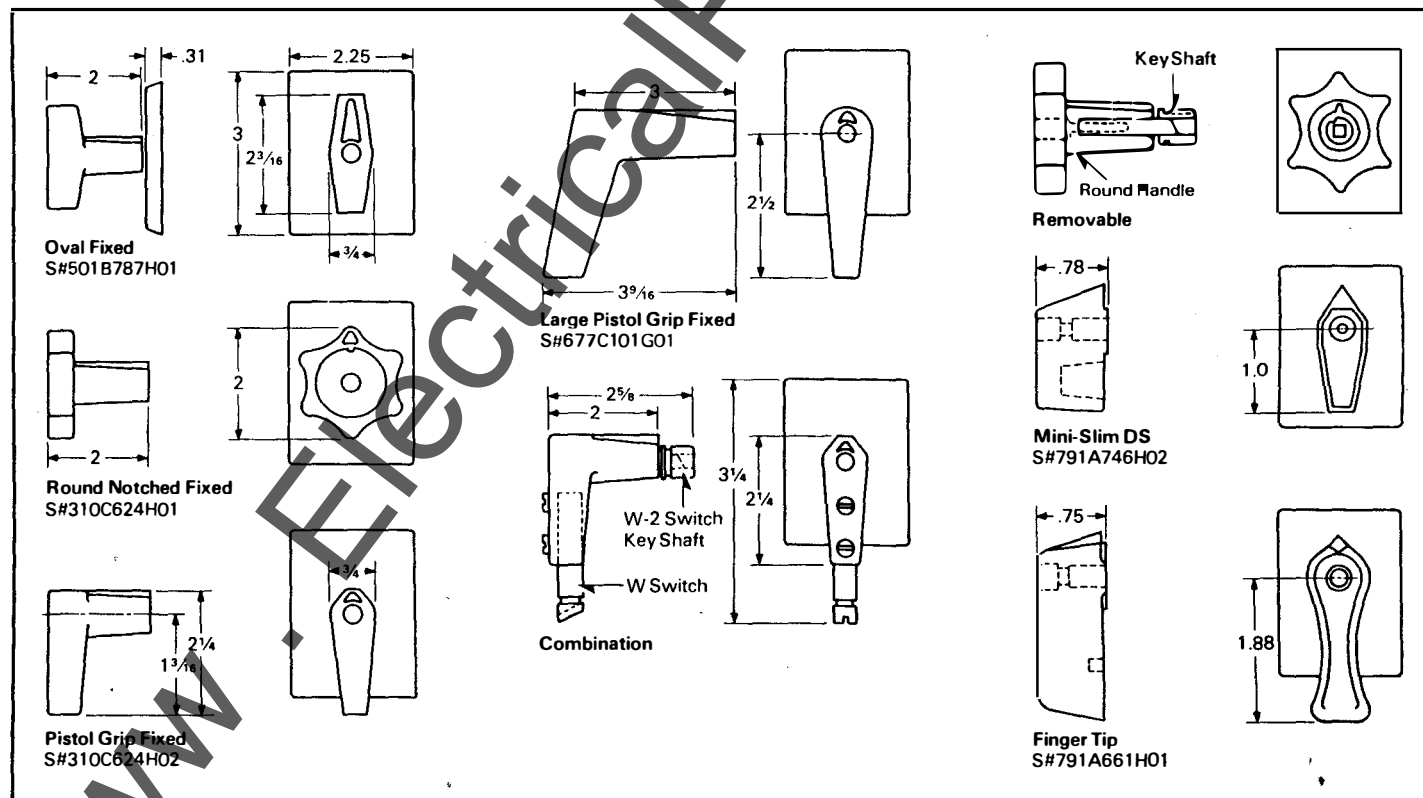
Contact Flexibility

Basic "you wire it" flexibility is available in the Type W-2 switch. While the internal contacting is standardized for each basic type of switch; such as ammeter, voltmeter, circuit breaker, etc., by using available insulated jumpers, connections between external switch terminals can be made to obtain the desired circuitry for a specific application. This minimizes the number of basic styled switches that otherwise would be required.

Switch Dial

The Type W-2 switch dial consists of two parts; i.e., a dial plate and a nameplate.

The standard control switch dial plate is die cast aluminum, with red and green target parts, where required, and serves as the base for mounting the nameplate. The nameplate is made of a white Cyclac ABS material on which is stamped in black the desired position markings.





Handles

Handles for the Type W-2 switch are made of a phenolic insulating material designed to afford a smooth, easy, and comfortable grip of pleasing appearance. Each handle has a recessed arrow molded into it as a visual aid in positioning.

The handles are made in six shapes: Oval, round, pistol grip, large pistol grip, finger tip and mini-slim DS.

They can be obtained in the fixed type or the removable key type. All handles are fastened to the shaft by a screw through the front of the handle.

There is also available a combination removable key type handle in the pistol grip shape that can be used to operate both the Type W-2 and the Type W switches designed for removable key operation.

Switches using mini-slim or finger tip handles require a shorter shaft extension than do the shank type handles. Therefore mini-slim and finger tip handles are not interchangeable with the other 4 shank type handles.

Operation

The Type W-2 switch is a rotary roller action switch. Rotation of the shaft causes the rotor rollers to roll from one set of stationary contacts to another. The number of roller contacts can vary from 1 to 6 depending on the number of rotary positions required for the switch application. Each roller contact, moving radially, is held in and guided by a slot in the rotor arm. The rollers are pushed outward by spring pressure. Between roller and spring there is an insulated spring seat to reduce friction and wear. On standard potential contacts, an insulated wheel is used on both ends of the roller contact which wheels roll inside the switch stator frame. This arrangement reduces the friction of the spring-loaded roller in riding up on the stationary contact and also results in an increased air gap and faster contact separation.

Overlapping contacts are obtained by increasing the diameter of the contact rollers of the shorting bar. At mid-position the roller spans the space between the stationary contacts. Such rollers provide a make-before-break contact in going from one position to an adjacent position.

The Type W-2 switch is available in both the maintained and the spring return types. Both types use a common housing that is $\frac{7}{8}$ " deep, located between the back surface of the dial plate and the frame-rotor unit. This feature permits easy conversion from one type to another with a minimum of parts, time and experience.

Maintained Type: On a switch of this type, the switch is held in each rotary position by a star wheel mechanism. The mechanism consists of a pointed notched, molded wheel rotating between two metal rollers mounted on spring loaded arms. This arrangement provides a positive snap action as the handle is turned.

Momentary Type: This type uses a rotor that is returned to its original position by a double coil wound spring. The spring offers minimum opposition to movement of the switch handle, but is sufficiently strong to operate the rotor for all required contacting.

For current circuits, there is available an assembly of normally closed contact between front and rear terminals at each position on a stage. The assembly consists of a shorting bar across the two terminals and held closed by spring pressure. Turning the switch handle causes a cam to push the shorting bar away from the two terminals. Operating simultaneously with this contact assembly, in a different stage, are regular rollers designed and arranged so that they make a parallel circuit just prior to opening of the normally closed contact. This arrangement permits overlapping transition in current metering of circuits.

On three-position switches, slip contacts are available. These contacts close when the switch operating handle is turned to the right position and remain closed after the operating handle has returned to the center position. The contacts open when the operating handle is turned to the left position and remain open upon return of the handle to the center position.

In addition to rotary motion, the W-2 switch can be provided with lateral movement (push-pull). Spring actuated roller contacts are mounted in a wafer housing fastened to the operating shaft by "E" rings. The wafer housing can only be moved by a push or pull movement. The roller contact spans two adjacent terminals on a band and it moves back and forth between two bands in a stage.

Interrupting Ratings

Voltage	Amperes			
	General Purpose	Pilot Duty 35% P.F. Normal	Inrush	2 Contacts in Series General Purpose
Standard Contact				
600 Volts Ac	8	2.4	12	20
240 Volts Ac	20	6	30	40
110 Volts Ac	30	10	60	60
250 Volts Dc	1.65	1.1	..	9.5
125 Volts Dc	5	2.2	..	20

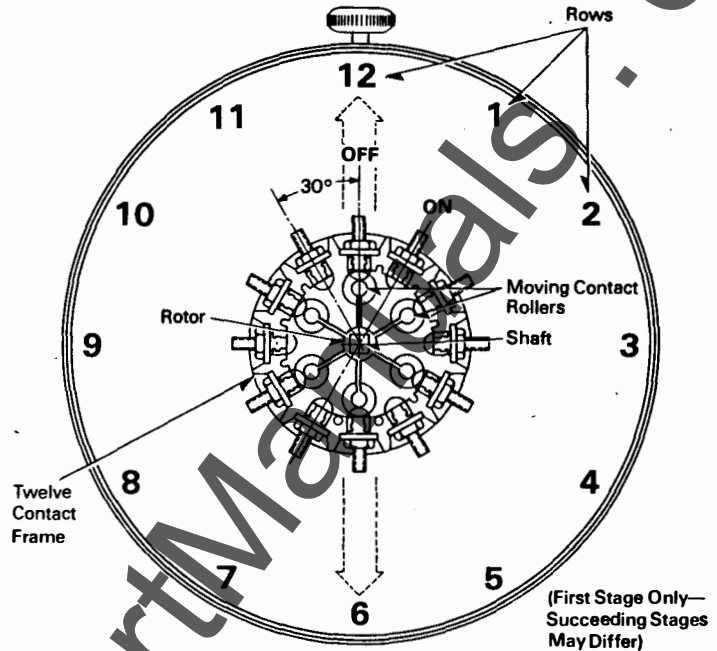
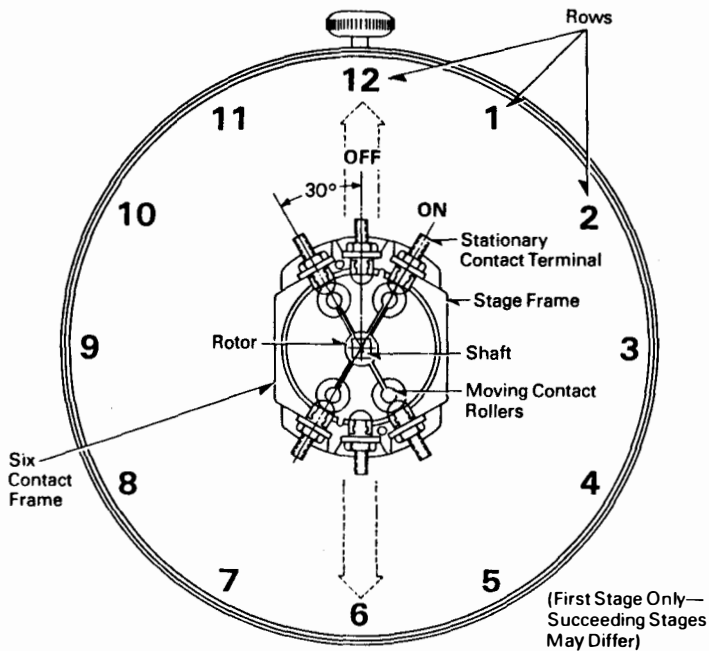
Note: Adjacent poles (contacts in same chamber) must be connected at same polarity.

Slip Contacts

600 Volts Ac	8	2.4	12	...
240 Volts Ac	20	6	30	...
110 Volts Ac	30	10	60	...
250 Volts Dc	1	.55	..	...
125 Volts Dc	3.5	1.1	..	...

Note: 2 adjacent side pole double throw contacts (in same chamber or stage) must be connected at same polarity.

Pull and ammeter contacts are not given ratings as they do not interrupt loads. Normally closed ammeter contact has a continuous rating of 10 amperes.



Contact Interpretation

The contacts of the Type W-2 Switch are identified by the combination of Bands and Rows.

Rows

Viewing the switch from the handle end (front), it is noted the terminals are arranged in rows from front to back. The rows are set 30 degrees apart as is the face of a clock. On the six contact frame, the top three rows are identified as 11, 12 and 1 o'clock. The three rows at the bottom of the stage are 5, 6 and 7 o'clock. On the twelve contact frame, the rows are set as per each number on the face of a clock.

Bands

As the switch is viewed from the side, bands of terminals are readily seen around the outer perimeter of the stage frame. Such bands are lettered. The band nearest the handle end is band "A", the second band is band "B", etc. Bands "A" and "B" constitute stage one, bands "C" and "D" constitute stage two, etc.

The row numbers and band letters are then combined to form full terminal identification as shown on figure 14 above and in the contact tabulations shown in this bulletin.

Contacts

The stationary contact (terminal) is a solid one piece forging. The moving (roller) contact is a solid bar.

To complete a circuit the roller contact internally bridges the stationary terminals in adjacent bands in the same row, for example, bands A & B in row twelve (A12-B12) etc.

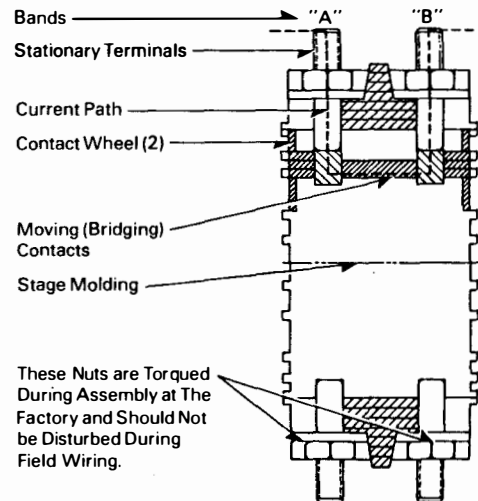
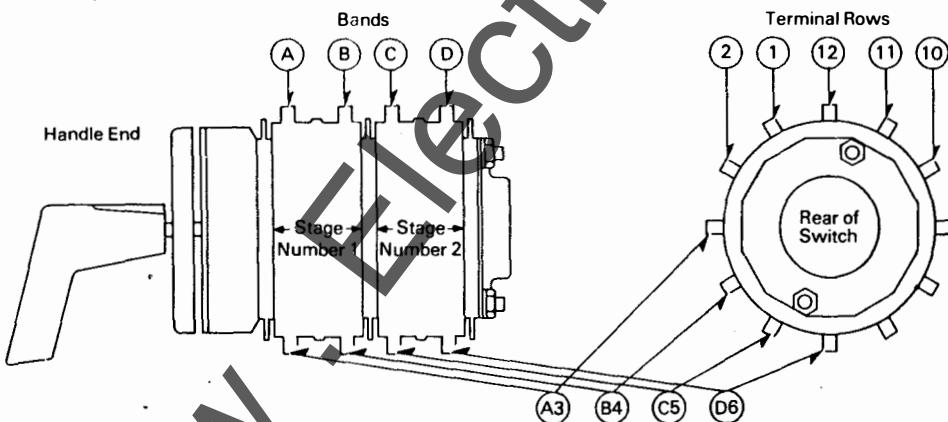


Figure 1: Methods of Identifying Contact Terminal Letter of Bands, Numbered Rows.

Each Type W-2 switch is shipped with hardware packet containing one nut for each switch terminal to facilitate field wiring.



Construction Details

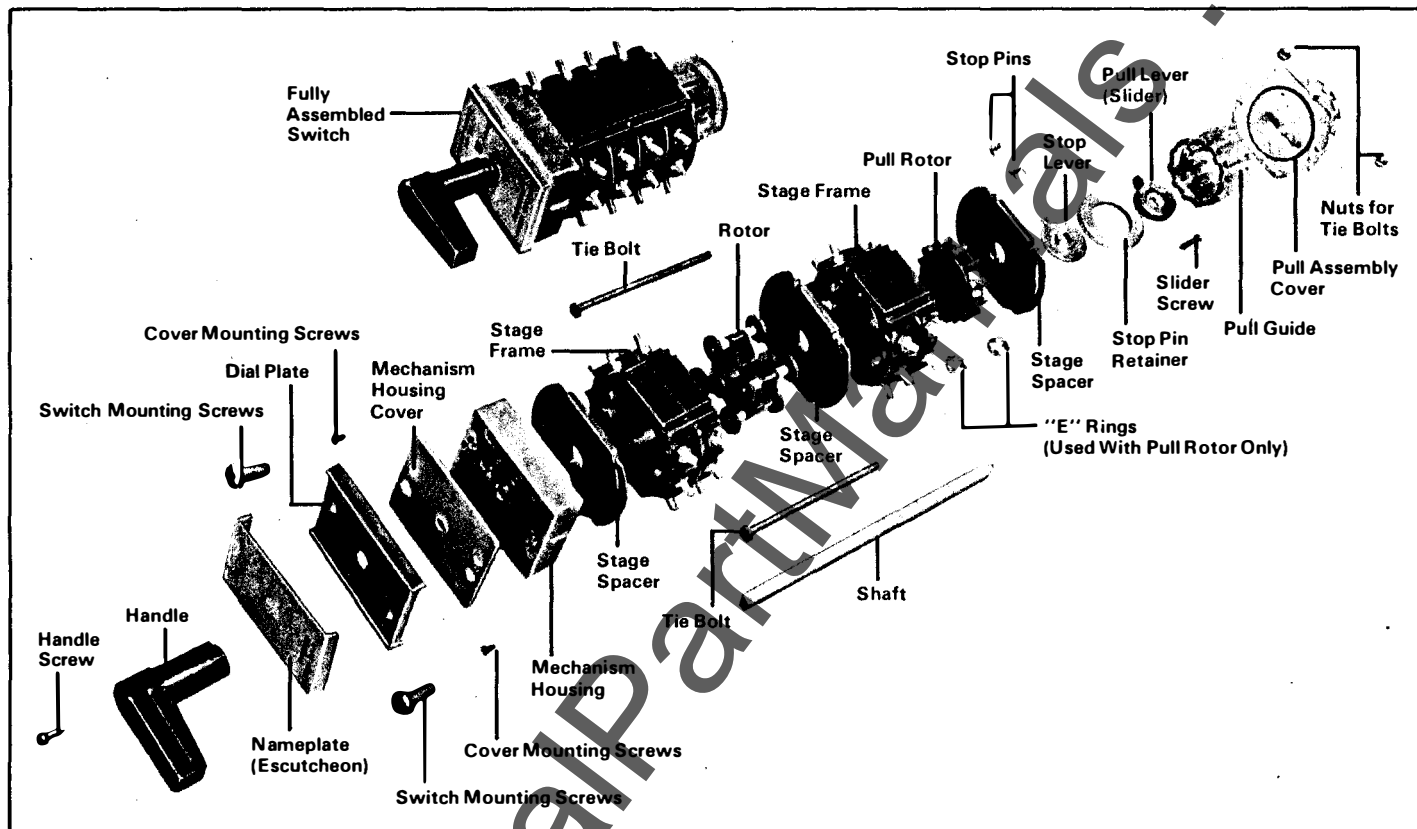


Figure 2: Exploded View of Typical Control Switch.

Construction Details of Important Sub-assemblies

Frame 6 Contacts

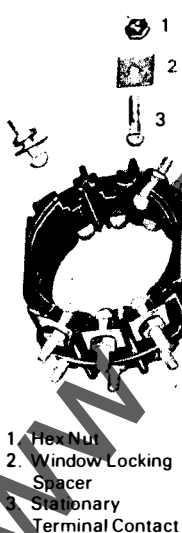


Figure 3

Rotor Pull Contact



Figure 4

Rotor Standard 4 Roller Potential Contacts



Figure 5

Rotor Standard 6 Roller Overlap Contacts



Figure 6

Control Housing With Maintained Contact Mechanism

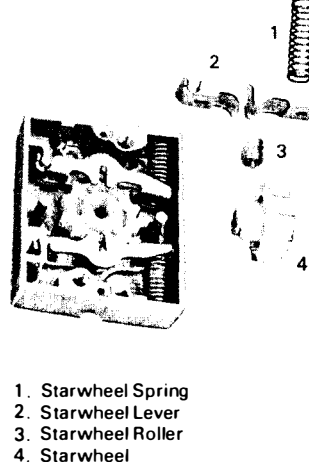


Figure 7

Control Housing With Momentary Mechanism

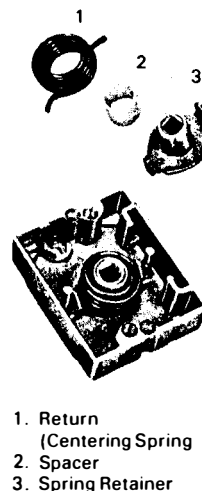
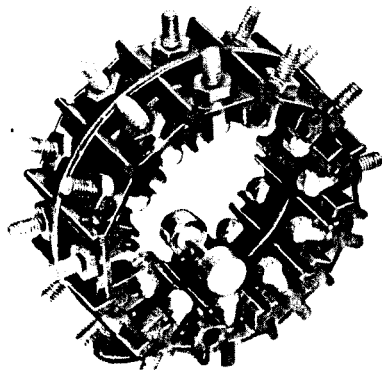
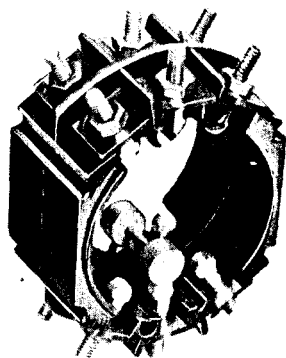


Figure 8

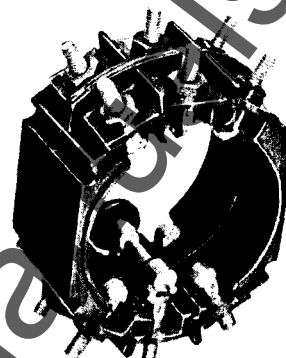
Stage Frame Construction



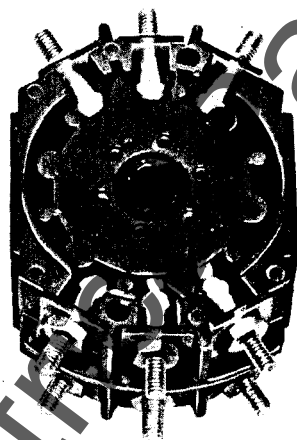
12 Contact Frame With Overlapping Contact Roller
(Make Before Break)



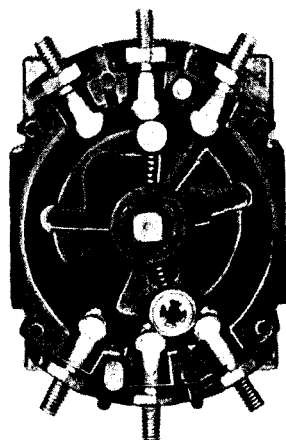
6 Contact Frame With Overlapping Contact Roller
(Make Before Break)



6 Contact Frame With Standard Potential Contact
Roller (Break Before Make)



6 Contact Frame With Push-Pull Rotor



6 Contact Frame With Slip Contact Rotor



Rotor Construction

Contacting of the Type W-2 Switch is derived from the varied assembly of fully standard parts. The stators (stage frames) are of the 6-contact and 12-contact designs per stage. The number of contacts per position and the number of required positions determine the rotor configuration. The stage frames remain unaltered, but the rotors are assembled to suit the application.

In the following is illustrated the contact tabulation derived from a particular rotor configuration. All illustrations are for a single stage. The Type W-2 Switch can be made up of several duplicate stages or a combination of varied compatible stages.

The following illustrations are intended to permit a fuller understanding of the internal construction and flexibility of the Type W-2 Switch.

Rotor Configurations Used With The Six Contact Frame

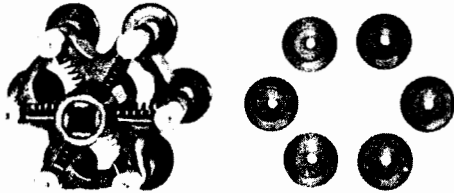
Rotor Configuration	Resulting Contact Operation	Position Available	Function																
	<table><tr><th>CONTACT</th><th>POSITION</th></tr><tr><td></td><td>1 0 2</td></tr><tr><td>A11-B11</td><td>X</td></tr><tr><td>A12-B12</td><td>X</td></tr><tr><td>A1-B1</td><td>X</td></tr><tr><td>A5-B5</td><td>X</td></tr><tr><td>A6-B6</td><td>X</td></tr><tr><td>A7-B7</td><td>X</td></tr></table>	CONTACT	POSITION		1 0 2	A11-B11	X	A12-B12	X	A1-B1	X	A5-B5	X	A6-B6	X	A7-B7	X		Two Contacts Closed in Each of Three Positions
CONTACT	POSITION																		
	1 0 2																		
A11-B11	X																		
A12-B12	X																		
A1-B1	X																		
A5-B5	X																		
A6-B6	X																		
A7-B7	X																		
	<table><tr><th>CONTACT</th><th>POSITION</th></tr><tr><td></td><td>11 12 1 2 3 4</td></tr><tr><td>A11-B11</td><td>X</td></tr><tr><td>A12-B12</td><td>X</td></tr><tr><td>A1-B1</td><td>X</td></tr><tr><td>A5-B5</td><td>X</td></tr><tr><td>A6-B6</td><td>X</td></tr><tr><td>A7-B7</td><td>X</td></tr></table>	CONTACT	POSITION		11 12 1 2 3 4	A11-B11	X	A12-B12	X	A1-B1	X	A5-B5	X	A6-B6	X	A7-B7	X		One Contact Closed in Each of Six Positions
CONTACT	POSITION																		
	11 12 1 2 3 4																		
A11-B11	X																		
A12-B12	X																		
A1-B1	X																		
A5-B5	X																		
A6-B6	X																		
A7-B7	X																		
	<table><tr><th>CONTACT</th><th>POSITION</th></tr><tr><td></td><td>1 2 1</td></tr><tr><td>A11-B11</td><td>X</td></tr><tr><td>A12-B12</td><td>X</td></tr><tr><td>A1-B1</td><td>X</td></tr><tr><td>A5-B5</td><td>X</td></tr><tr><td>A6-B6</td><td>X</td></tr><tr><td>A7-B7</td><td>X</td></tr></table>	CONTACT	POSITION		1 2 1	A11-B11	X	A12-B12	X	A1-B1	X	A5-B5	X	A6-B6	X	A7-B7	X		Two Contacts Closed in Twelve O'clock Position-Four Contacts Closed in One O'clock Position
CONTACT	POSITION																		
	1 2 1																		
A11-B11	X																		
A12-B12	X																		
A1-B1	X																		
A5-B5	X																		
A6-B6	X																		
A7-B7	X																		
	<table><tr><th>CONTACT</th><th>POSITION</th></tr><tr><td></td><td>1 2 1</td></tr><tr><td>A11-B11</td><td>X</td></tr><tr><td>A12-B12</td><td>X</td></tr><tr><td>A1-B1</td><td>X</td></tr><tr><td>A5-B5</td><td>X</td></tr><tr><td>A6-B6</td><td>X</td></tr><tr><td>A7-B7</td><td>X</td></tr></table>	CONTACT	POSITION		1 2 1	A11-B11	X	A12-B12	X	A1-B1	X	A5-B5	X	A6-B6	X	A7-B7	X		Four Contacts Closed in Twelve O'clock Position-Two Contacts Closed in One O'clock Position
CONTACT	POSITION																		
	1 2 1																		
A11-B11	X																		
A12-B12	X																		
A1-B1	X																		
A5-B5	X																		
A6-B6	X																		
A7-B7	X																		

Slip Rotor Used With The Six Contact Frame

CONTACT	POSITION			
	11	12	12	1
	A	A		
	11	1		
A11-B11	X			
A12-B12		X	X	
A1-B1			X	X
A5-A6	X	X		
A6-A7			X	X
B5-B6	X	X		
B6-B7			X	X

Slip Rotor:
Top Portion—One Contact Closed in Each of Three Positions. Lower Portion—Two Contacts Closed in Each of Two Positions.

Rotor Configurations Used With The Twelve Contact Frame

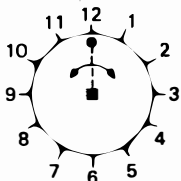


Rotor Configuration

Resulting Contact Operation

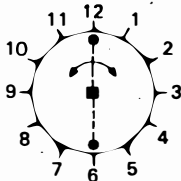
Position Available

Function



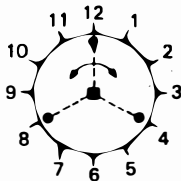
CONTACT	1	2	3	4	5	6	7	8	9	10	11
A12-B12	X										
A1-B1		X									
A2-B2			X								
A3-B3				X							
A4-B4					X						
A5-B5						X					
A6-B6							X				
A7-B7								X			
A8-B8									X		
A9-B9										X	
A10-B10											X
A11-B11											

One Contact Closed in Each of Twelve Positions



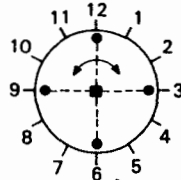
CONTACT	1	2	3	4	5	6	7	8	9	10	11
A10-B10	X										
A11-B11		X									
A12-B12			X								
A1-B1				X							
A2-B2					X						
A3-B3						X					
A4-B4							X				
A5-B5								X			
A6-B6									X		
A7-B7										X	
A8-B8											X
A9-B9											

Two Contacts Closed in Each of Six Positions



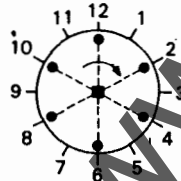
CONTACT	1	2	3	4	5	6	7	8	9	10	11
A11-B11	X										
A12-B12		X									
A1-B1			X								
A2-B2				X							
A3-B3					X						
A4-B4						X					
A5-B5							X				
A6-B6								X			
A7-B7									X		
A8-B8										X	
A9-B9											X
A10-B10											

Three Contacts Closed in Each of Four Positions



CONTACT	1	2	3	4	5	6	7	8	9	10	11
A11-B11	X										
A12-B12		X									
A1-B1			X								
A2-B2				X							
A3-B3					X						
A4-B4						X					
A5-B5							X				
A6-B6								X			
A7-B7									X		
A8-B8										X	
A9-B9											X
A10-B10											

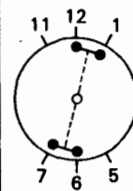
Four Contacts Closed in Each of Three Positions



CONTACT	1	2	3	4	5	6	7	8	9	10	11
A11-B11	X										
A12-B12		X									
A1-B1			X								
A2-B2				X							
A3-B3					X						
A4-B4						X					
A5-B5							X				
A6-B6								X			
A7-B7									X		
A8-B8										X	
A9-B9											X
A10-B10											

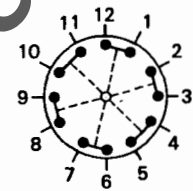
Six Contacts Closed in Each of Two Positions

Push-Pull Rotors



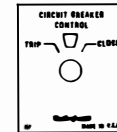
Six Contact Stage With Pull Rotor—Two Pull to Break and Two Pull Make Contacts

C12-C1	C12-D1	C6-C7	D6-D7
X	X	X	X
X	X	X	X
X	X	X	X



Twelve Contact Stage With Pull Rotor—Six Pull to Break and Six Pull to Make Contacts

CONTACT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
C12-C1	X	X	X	X	X	X	X	X	X	X
D12-D1	X	X	X	X	X	X	X	X	X	X
C2-C3	X	X	X	X	X	X	X	X	X	X
D2-D3	X	X	X	X	X	X	X	X	X	X
C4-C5	X	X	X	X	X	X	X	X	X	X
D4-D5	X	X	X	X	X	X	X	X	X	X
C6-C7	X	X	X	X	X	X	X	X	X	X
D6-D7	X	X	X	X	X	X	X	X	X	X
C8-C9	X	X	X	X	X	X	X	X	X	X
D8-D9	X	X	X	X	X	X	X	X	X	X
C10-C11	X	X	X	X	X	X	X	X	X	X
D10-D11	X	X	X	X	X	X	X	X	X	X



Type W-2 Switch Materials

Handle
Nameplate
Dial Plate
Housing
Stage Frame
Rotor
Stationary Contact
Roller Contact
Springs
Locking Spacer Window
Starwheel
Pull Cover and Guide

Moldarta, General Purpose
Cyclocac, ABS Molded Composition
Aluminum Die Cast
Aluminum Die Cast
Glass Polyester
Glass Polyester
Silicon Bronze, Silver Plated
Silicon Bronze, Silver Plated
Stainless Steel
Polysulfone
Nylon
Polycarbonate



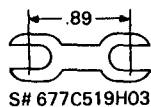
com

External Connectors

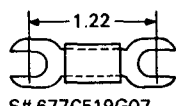
Additional flexibility of the type W-2 switch is gained with the use of external connectors (jumpers) applied to the switch terminals.

Type W-2 switches ordered for specific applications where the circuitry requires jumpers, the necessary jumpers are applied at the factory.

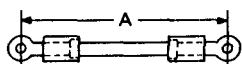
When basic switches are used and when field changes of existing switches becomes necessary, external connectors (jumpers) may be obtained from the factory. The following charts will aid in identifying the external connectors. These charts identify the terminals to be connected and the connectors by number to accomplish such connection.



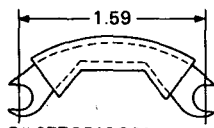
S# 677C519H03



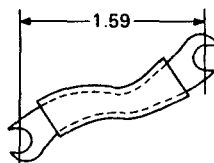
S# 677C519G07



Style No.	Dim. "A"
677C782G01	3.50
677C782G02	4.25
677C782G03	5.00
677C782G04	5.50



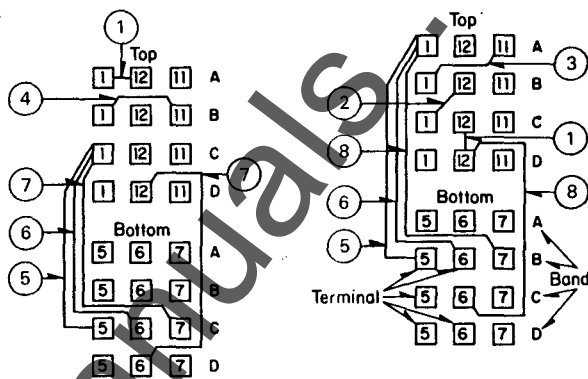
S# 677G519G01



S# 677C519G05

6-Contact Stage Connector

Connector	Style No.
1	677C519H08
2	677C519G07
3	677C519G05
4	677C519G01
5	677C782G01
6	677C782G02
7	677C782G03
8	677C782G04

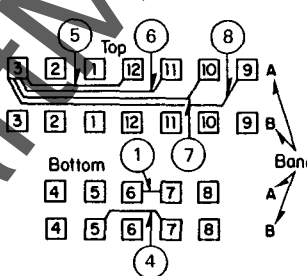


Connectors in Same Band

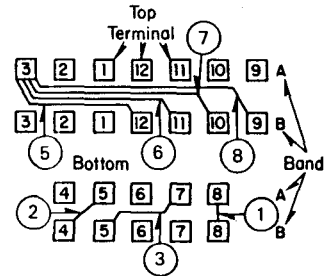
Connectors between Adjacent Bands

12-Contact Stage Connector

Connector	Style No.
1	677C519H08
2	677C519G07
3	677C519G05
4	677C519G01
5	677C782G01
6	677C782G02
7	677C782G03
8	677C782G04



Connectors in Same Band



Connector between Adjacent Bands

How to Order Stamped Dial Nameplates

NP 502A054H01 (Fixed Handle) Fig. 1

NP 502A054H03 (Removable Key) Fig. 1

NP 502A054H02

(Fixed Handle with Target) Fig. 2

NP 502A054H04 (Fixed Handle) Fig. 3

NP 502A054H05 (Removable Key) Fig. 3

NP 310C619H09 (Fixed Handle) Fig. 4

Select figure number meeting nameplate requirement. Specify the required blank nameplate style as given for the selected figure number and specify the desired markings at location numbers shown on the figures.

Example: Select Figure 2—Order NP502A054H02 Stamp 11 = Trip, 1 = Close, 15 = Circuit Breaker, 16 = Control.

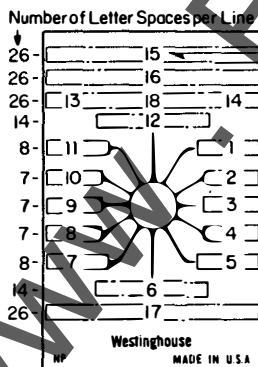


Figure 1

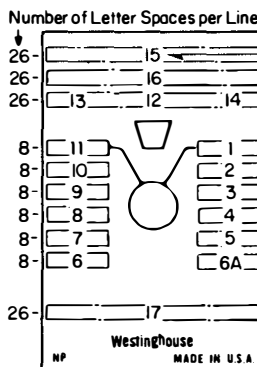


Figure 2

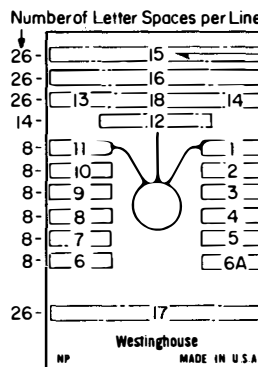


Figure 3

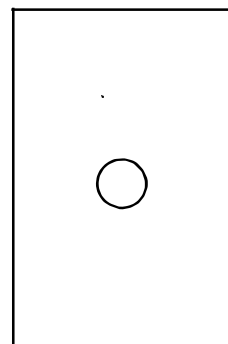
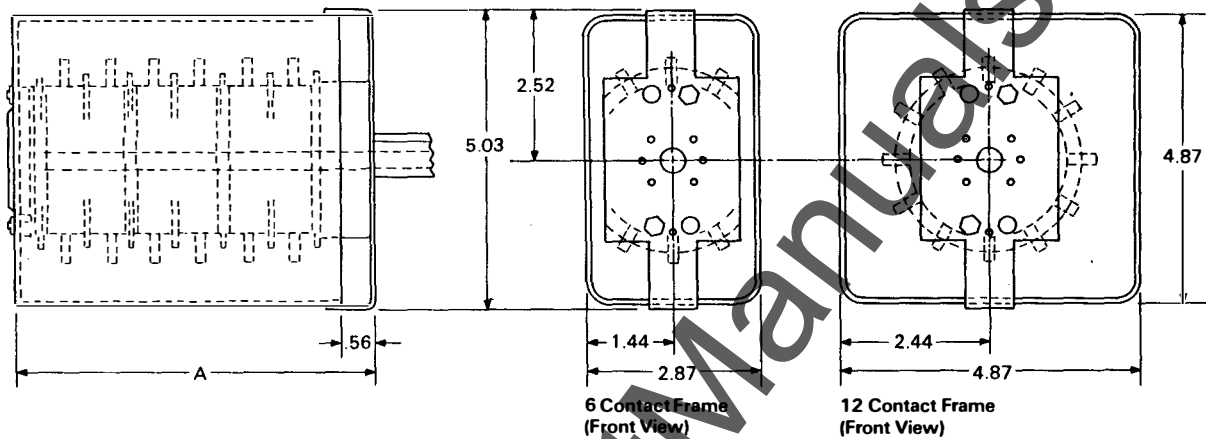


Figure 4 (Totally Blank)

Protective Covers, Type W-2 Switch

Designed to totally enclose all contact terminals. Made of high density Polyethylene. Provides no conduit connection. Wiring enters through opening between panel and front opening of enclosure. Secured in position by switch tie bolts. Switch identification remains visible.

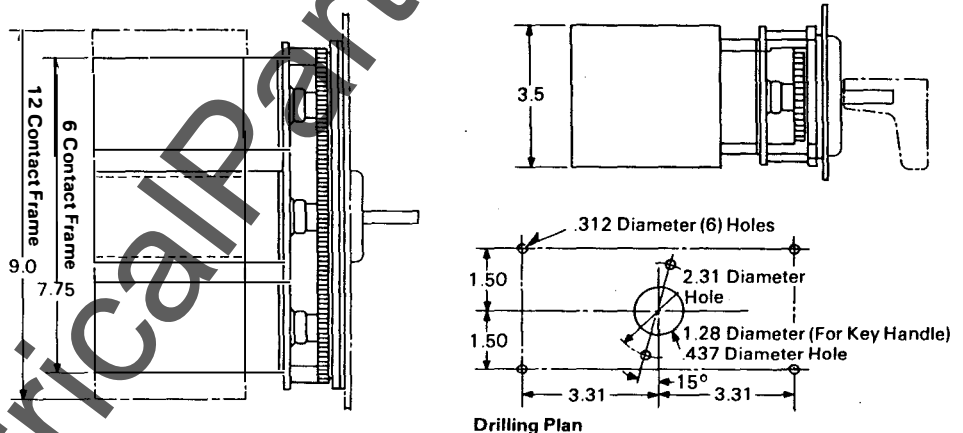
Switch Stage	A
1	2.88
2	4.38
3	5.88
4	7.38
5	8.88
6	10.38
7	11.88
8	13.38
9	14.88
10	16.38



Gear Assemblies Type W-2 Switches

A gear assembly is available which will accept either two units of the twelve contact frame or three units of the six contact frame; all units being operated from a common handle.

Gearing is recommended where a great number of contacts are required to be operated simultaneously and depth behind the panel is limited.

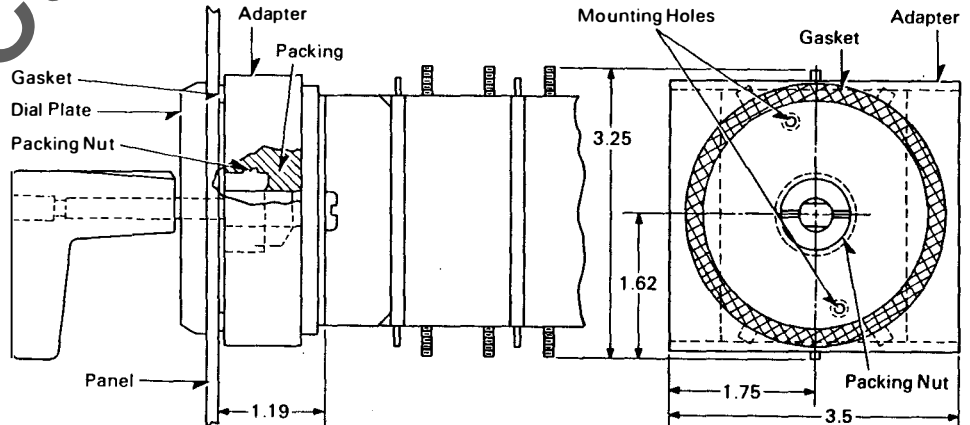


Packing Gland Water-Tight

This packing gland is designed to prevent water or other liquids from entering the switch from front of the panel.

An impregnated asbestos bushing and packing nut is used to seal around the switch shaft—a neoprene gasket is used to form a seal between the switch and panel.

This device is intended to be used where the panel is exposed to weather and where the structure itself is weatherproof.



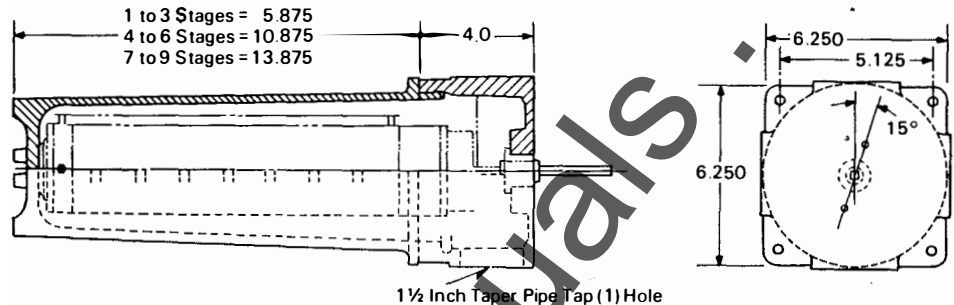


Enclosure

Weatherproof—Watertight—Dusttight

Available is an explosion-proof enclosure of aluminum die cast material which will accept the Type W-2 switch up to nine stages of either the twelve contact frame or the six contact frame. With minor modification this enclosure is suitable for weather-proof, water and oil tight applications.

As standard, one hole is provided for conduit and is tapped for 1-inch tapered pipe.

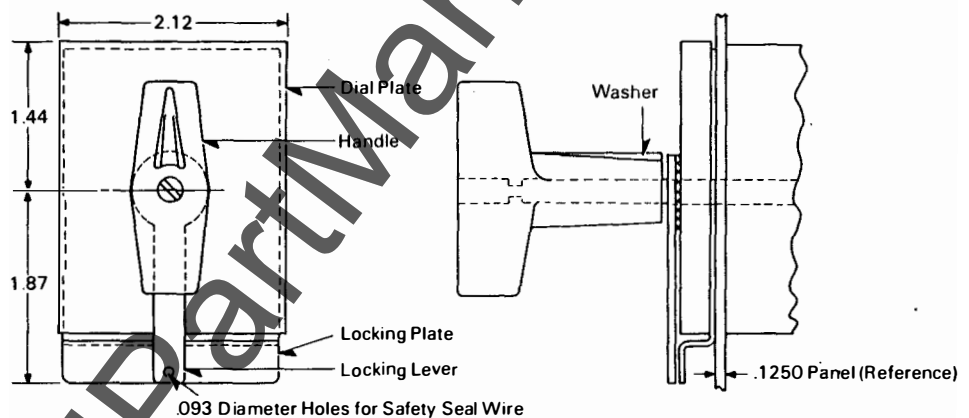


Locking Device

Safety Wire

A device to permit a Type W-2 switch to be locked in the 12 o'clock position by means of a wire and lead seal. This device may be added to Type W-2 switches in the field without modification and can be ordered with switches from the factory.

This device provides an inexpensive means to prevent switch operation by unauthorized personnel.

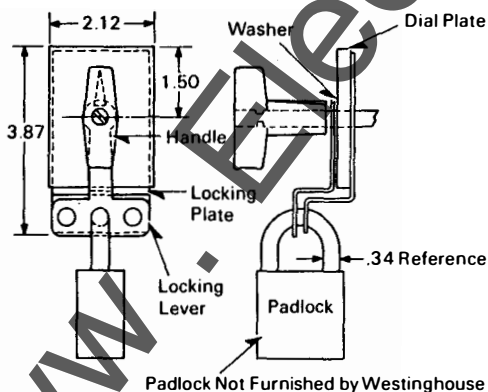


Padlocking Device—Type W-2 Switches

Designed with new Federal safety standards in mind. Will accept up to three (3) padlocks.

Applicable to switches existing in the field without modification. Style numbers will be applied to new switches ordered on the factory when including this device.

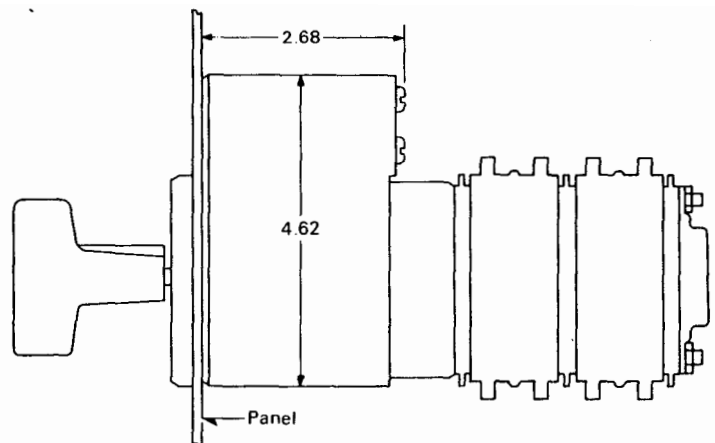
The locking plate mounts between switch dial plate and panel. The locking lever mounts on switch shaft and travels with the shaft as it rotates.



Solenoid Locking Device

For the Type W-2 switch a solenoid locking device is available. Solenoids can be supplied suitable for 115 volts or 230 volts ac.

The switch unit is locked against rotation when the solenoid is energized. The switch handle can be rotated only when the solenoid is de-energized.



The type W-2 switch can be supplied with either 1, 2 or 3 locks. In the case of 1 lock, it can be mounted either at the top or to the left or to the right of the switch handle. For one lock top mounting is considered the standard. When two locks are required, the normal mounting is one lock to the left and one lock to the right of the switch handle.

When a single switch is furnished with more than one lock, such locks may be keyed alike or keyed differently as the application may require.

For Handle and Switch Dimensions, Refer to Standard Outline Drawings

Drilling Plan (Key Lock)

Panel Thickness

312 Diameter (2) Holes

Center of Switch

Dimensions:

- 0.25
- 3.4375
- 2.5
- 1.50
- 2.25
- 1.375
- 1.4375
- 15°
- 2.50
- 2.31
- 1.281

Drilling Plan (Key Lock)

In situations where key locking is required, the Yale lock cylinder would be supplied. However, when key interlocking with other equipment is required, the locks would be specially ordered on Gould Company separately because of the key co-ordination required.

Technical drawing of a switch assembly showing four views: Assembly 1 (top), Assembly 2 (left), Assembly 3 (right), and Assembly 4 (bottom). The drawing includes dimensions for hole diameters, hole counts, radii, and center-to-center distances. A note refers to 'Note A' for hole details.

Assembly 1 (Top View): Shows a rectangular plate with a central hole. Dimensions include a width of 2.25 and a height of 3.44. A central hole is indicated with a crosshair.

Assembly 2 (Left View): Shows the side profile of the assembly. Dimensions include a total height of 2.50 and a bottom section height of 1.50. A central hole is indicated with a crosshair.

Assembly 3 (Right View): Shows the side profile of the assembly. Dimensions include a total height of 2.50 and a bottom section height of 1.50. A central hole is indicated with a crosshair.

Assembly 4 (Bottom View): Shows the bottom profile of the assembly. Dimensions include a total width of 3.44 and a bottom section width of 0.25. A central hole is indicated with a crosshair.

Detail View (Right): Shows a detailed view of the central hole. Dimensions include a hole diameter of 1.44 (3) Holes, a radius of 2.31, and a distance of 2.50 from the center of the hole to the center of the switch. The center of the switch is labeled as the center of the hole.

Dimensions:

- 2.25 (Width of Assembly 1)
- 3.44 (Height of Assembly 1)
- 2.50 (Height of Assembly 2)
- 1.50 (Height of Assembly 3)
- 0.25 (Width of Assembly 4)
- 2.50 (Distance from center of hole to center of switch)
- 1.44 Dia. (3) Holes
- 2.31 Radius
- 1.28 Dia. Hole (See Note A)
- 0.31 Dia. (2) Holes
- 15° (Angle of hole)
- 2.50 (Distance from center of hole to center of switch)
- Center of Switch

- Key Interlocking can be furnished on type W-2 switches utilizing either 1, 2 or 3 locks with keying as required.

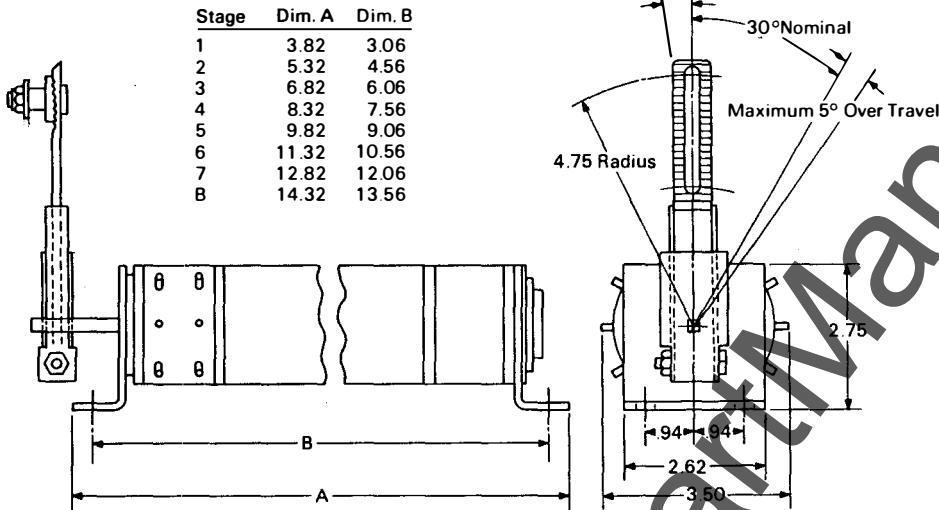
For further clarification and specific reference:

- Assembly #1 = one lock mounted above handle.
Assembly #2 = one lock mounted to left of handle.
Assembly #3 = one lock mounted to right of handle.
Assembly #4 = three locks—including assemblies 1, 2, and 3.



Auxiliary Switch, Type W-2

The type W-2 auxiliary switch is designed around the six contact stage frame and rotor of the type W-2 instrument and control switch. This switch is a two position device and can be supplied with an overtravel lever (Figure #4) or without lever.



Contacting of one stage may take the form of either Figure #1 or Figure #2.

For multiple stages contacting may take the form of Figure #1 or Figure #2 or a combination of both as shown in Figure #3.

Switch Position Tabulations.

CONTACT	POSITION	
	12	1
A11-B11	X	
A12-B12		X
A1-B1	X	
A5-B5	X	
A6-B6		X
A7-B7	X	

Figure 1

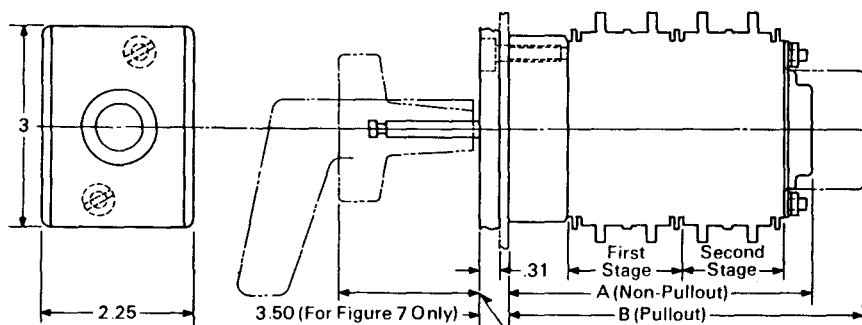
CONTACT	POSITION	
	12	1
A11-B11		X
A12-B12	X	
A1-B1		X
A5-B5		X
A6-B6	X	
A7-B7		X

Figure 2

CONTACT	POSITION	
	12	1
A11-B11		X
A12-B12	X	
A1-B1		X
A5-B5		X
A6-B6	X	
A7-B7		X
C11-D11	X	
C12-D12		X
C1-D1	X	
C5-D5	X	
C6-D6		X
C7-D7	X	

Figure 3

Six and Twelve Contact Frame Pull Out and Non-Pull Out



2.06 (For Figures 4, 5 and 6)
.84 (For Figure 8), .81 (For Figure 9)

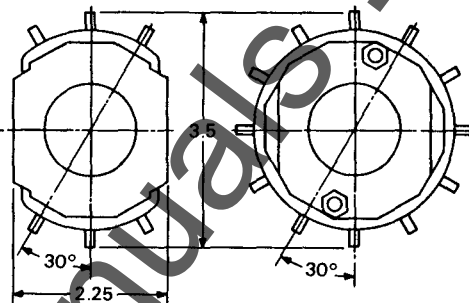
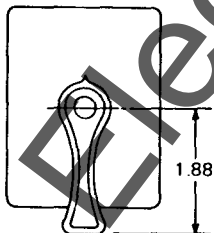
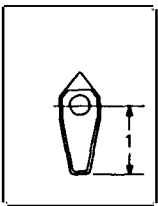
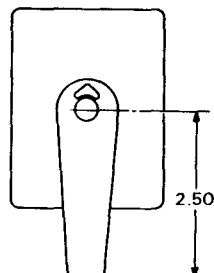
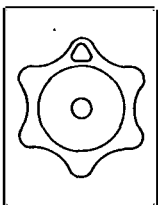
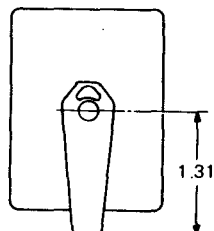
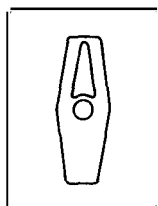
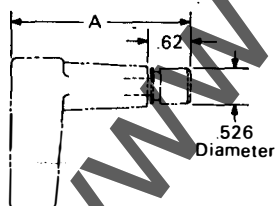
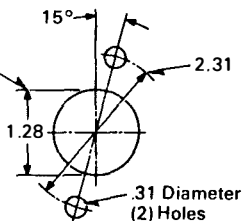


Figure 3



Line No.	No. of Stages	A	Description	Line No.	No. of Stages	B	Description	Line No.	Panel THK
1	1	2.97	STD.	31	1	3.81	STD.	51	1.25
2	2	4.47	STD.	32	2	5.31	STD.		to
3	3	5.97	STD.	33	3	6.81	STD.		.250
4	4	7.47	STD.	34	4	8.31	STD.	52	
5	5	8.97	STD.	35	5	9.81	STD.	53	
6	6	10.47	STD.	36	6	11.31	STD.	54	.38
7	7	11.97	STD.	37	7	12.81	STD.	55	.50
8	8	13.47	STD.	38	8	14.31	STD.	56	1.00
9	9	14.97	STD.	39	9	15.81	STD.	57	1.25
10	10	16.47	STD.	40	10	17.31	STD.	58	1.50
21	1	3.85	2-Mech HSG.	41	1	4.69	2-Mech HSG.	59	2.00
22	2	5.35	2-Mech HSG.	42	2	6.19	2-Mech HSG.	60	2.25
23	3	6.85	2-Mech HSG.	43	3	7.69	2-Mech HSG.		
24	4	8.35	2-Mech HSG.	44	4	9.19	2-Mech HSG.		
25	5	9.85	2-Mech HSG.	45	5	10.69	2-Mech HSG.		
26	6	11.35	2-Mech HSG.	46	6	12.19	2-Mech HSG.		
27	7	12.85	2-Mech HSG.	47	7	13.69	2-Mech HSG.		
28	8	14.35	2-Mech HSG.	48	8	15.19	2-Mech HSG.		
29	9	15.85	2-Mech HSG.	49	9	16.69	2-Mech HSG.		
30	10	17.35	2-Mech HSG.	50	10	18.19	2-Mech HSG.		

Note:
For Removable Key Designs Panel Hole Must be 1.28 Diameter.
For Fixed Handle Designs Hole May be Reduced to .43 Diameter



Removable Key Dimension

Figure A

1	2.62
2	2.62
3	2.62
4	4.12
5	1.40
6	1.37



Typical Arrangement of Type W-2 Switch With Type EZC Indicating Lamps

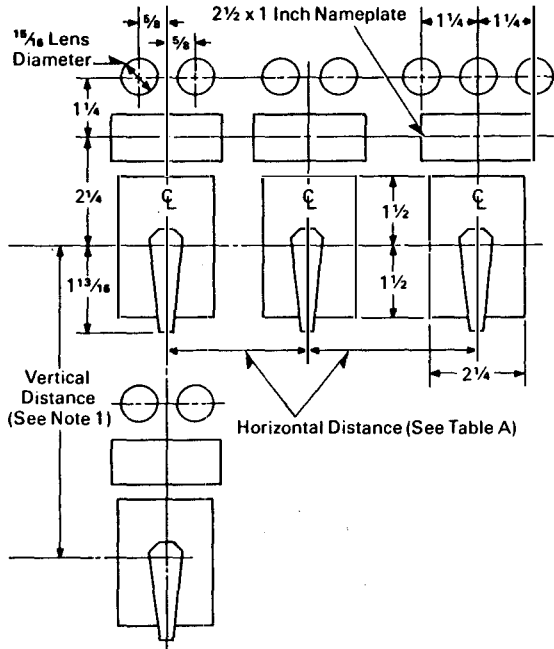


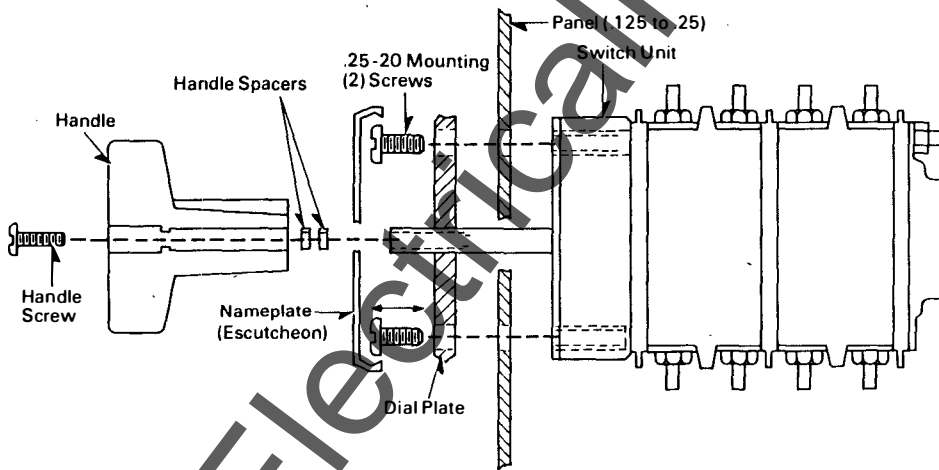
Table A

Switch Contact Frame Size	Number of Lamps Above Each Switch		Horizontal Distance
	Sw. 1	Sw. 2	
6	0	0	3
12	0	0	5 1/2
6	2	2	3
12	2	2	5 1/2
6	3	3	4 1/4
12	3	3	5 1/2
6	2	3	3-5 5/8
12	2	3	5 1/2

Note 1

Vertical Distance Between Switches:
With Lamps and Nameplate-7 Inches
Without Lamps/With Nameplate-5 1/2 Inches
Without Lamps or Nameplate-5 1/2 Inches

Typical Mounting



	Number	Shape	Type	Number		Number	Shape	Type	Number
Ammeter					Voltmeter/ Ammeter (Combination on One Shaft)				
2 Phase	505A700G01	Round	MA	1	3 Phase, 3 Wire System	508A299G03	Round	MA	34
3 Phase, 2 CT's	505A701G02	Round	MA	2	(3 Circuits and 2 PT's)				
3 Phase, 2 CT's	3669A41G01	(Key)*	MA	2	3 Phase, 4 Wire System	508A299G09	Round	MA	35
(Use Removable Key)	787A989G02				(3 CT's and 3 PT's)				
3 Phase, 3 CT's	505A701G01	Round	MA	2A	3 Phase, 4 Wire System	787A977G01	Round	MA	36
(Independent Circuit)					(3 CT's and 3 PT's)				
3 Phase, 3 CT's	661A208G01	(Key)*	MA	2A	End of Circuit Connection				
(Independent Circuit)					3 Phase, 3 Wire System	787A977G02	Round	MA	37
Use Removable Key	661A208G03				(3 CT's and 2 PT's)				
3 Phase, 3 CT's	505A701G05	Round	MA	3	End of Circuit Connection				
(No OFF Position)					Voltage Control				
3 Phase, 3 CT's	787A976G01	Round	MA	4	Raise-OFF-Lower	505A703G01	Pistol	MO	38
(End of Circuit)					Raise-OFF-Lower	505A703G06	Oval	MO	38
3 Phase, 3 CT's	800A426G01	(Key)*	MA	4	Raise-OFF-Lower	505A715G01	Pistol	MO	39
(End of Circuit)					Raise-OFF-Lower	505A715G05	Oval	MO	39
Use Removable Key	508A298G02				Raise-OFF-Lower	505A716G01	Oval	MO	40
3 Phase, 2 CT's	787A976G02	Round	MA	5					
(End of Circuit)					Synchroscope				
3 Phase, 2 CT's	800A426G02	(Key)*	MA	5	Machine to Bus	505A755G01	(Key)*	MA	41
(End of Circuit)					(Removable Key)	505A755G02			41
Use Removable Key	508A298G02				Between Machines	505A757G01	(Key)*	MA	42
3 Phase, 3 CT's	787A976G03	Round	MA	6	(Running Key)	505A757G02			42
(End of Circuit)					(Incoming Key)	505A757G03			42
No OFF Position					Frequency Meter				
3 Phase, 2 CT's	787A976G04	Round	MA	7	ON-OFF	508A467G01	(Key)*	MA	43
(End of Circuit)					(Removable Key)	508A467G02	Round		43
No OFF Position						508A467G08	Oval		43
3 CT's and Neutral	508A463G04	Round	MA	8	Wattmeter				
4 CT's	508A463G05	Round	MA	9	In-Out	505A712G90	Round	MA	44
6 CT's Independently	508A481G01	Round	MA	10	OFF-ON	505A734G09	Round	MA	45
on One Meter					OFF-ON	505A754G04	(Key)*	MA	46
2 Three Phase CT's	658A615G02	Round	MA	11	(Removable Key)	505A797G02	Oval		46
3 Phase, 2 CT's	787A984G01	Mini-Slim	MA	12	OFF-ON	505A740G06	Round	MA	47
(End of Circuit)					OFF-ON	505A740G07	Round	MA	48
3 Phase, 2 CT's	787A994G02	Mini-Slim	MA	13	OFF-ON	505A779G05	(Key)*	MA	49
(End of Circuit)					(Removable Key)	508A247G02	Oval		49
3 Phase, 3 CT's	787A984G03	Mini-Slim	MA	14	OFF-ON	505A752G01	(Key)*	MA	50
(End of Circuit)					(Removable Key)	505A752G02	Round		50
3 Phase, 3 CT's	787A984G04	Mini-Slim	MA	15	Power Factor Meter				
(End of Circuit)					OFF-ON	505A753G01	(Key)*	MA	51
ON-OFF, 1 CT's	787A984G05			16	(Removable Key)	505A753G02			51
(End of Circuit)					OFF-ON	505A754G01	(Key)*	MA	52
3 Phase, 2 CT's	787A984G06	Mini-Slim	MA	17	(Removable Key)	505A754G02			52
(End of Circuit)					W-OFF-RVA	505A712G91	Round	MA	53
3 Phase, 2 CT's	787A984G07	Mini-Slim	MA	18	OFF-ON	508A496G03	Round	MA	54
(End of Circuit)					OFF-ON	802A470G01	(Key)*	MA	55
3 Phase, 3 CT's					(Removable Key)	505A754G03			55
Voltmeter					Pilot Wire Test	508A468G01	Round	MO	56
Single Phase	505A747G01	(Key)*	MA	19	Regulator Cutout	505A712G01	Round	MA	57
(Use Removable Key)	505A747G02				Regulator Cut				

Application	Style Number	Handle Shape	Contact Type	Figure Number
Voltmeter / Ammeter (Combination on One Shaft)				
3 Phase, 3 Wire System (3 Circuits and 2 PT's)	508A299G03	Round	MA	34
3 Phase, 4 Wire System (3 CT's and 3 PT's)	508A299G09	Round	MA	35
3 Phase, 4 Wire System (3 CT's and 3 PT's)	787A977G01	Round	MA	36
3 Phase, 3 Wire System (3 CT's and 2 PT's) End of Circuit Connection	787A977G02	Round	MA	37
Voltage Control				
Raise-OFF-Lower	505A703G01	Pistol	MO	38
Raise-OFF-Lower	505A703G06	Oval	MO	38
Raise-OFF-Lower	505A715G01	Pistol	MO	39
Raise-OFF-Lower	505A715G05	Oval	MO	39
Raise-OFF-Lower	505A716G01	Oval	MO	40
Synchroscope				
Machine to Bus (Removable Key)	505A755G01	(Key)*	MA	41
Between Machines (Running Key)	505A755G02			41
Between Machines (Running Key)	505A757G01	(Key)*	MA	42
Between Machines (Incoming Key)	505A757G02			42
Between Machines (Incoming Key)	505A757G03			42
Frequency Meter				
ON-OFF (Removable Key)	508A467G01	(Key)*	MA	43
	508A467G02	Round		43
	508A467G08	Oval		43
Wattmeter				
In-Out	505A712G90	Round	MA	44
OFF-ON	505A734G09	Round	MA	45
OFF-ON	505A754G04	(Key)*	MA	46
(Removable Key)	505A797G02	Oval		46
OFF-ON	505A740G06	Round	MA	47
OFF-ON	505A740G07	Round	MA	48
OFF-ON	505A779G05	(Key)*	MA	49
(Removable Key)	508A247G02	Oval		49
OFF-ON	505A752G01	(Key)*	MA	50
(Removable Key)	505A752G02	Round		50
Power Factor Meter				
OFF-ON (Removable Key)	505A753G01	(Key)*	MA	51
	505A753G02			51
OFF-ON (Removable Key)	505A754G01	(Key)*	MA	52
	505A754G02			52
W-OFF-RVA	505A712G91	Round	MA	53
OFF-ON	508A496G03	Round	MA	54
OFF-ON	802A470G01	(Key)*	MA	55
(Removable Key)	505A754G03			55
Pilot Wire Test	508A468G01	Round	MO	56
Regulator Cutout	505A712G01	Round	MA	57
Regulator Cutout	508A224G02	Round	MA	58
Electrode Control	505A716G02	Oval	MO	59
Electrode Control	505A716G04	Pistol	MO	59
Motor Control	505A716G03	Oval	MO	60
Motor Control	505A716G05	Pistol	MO	60
Motor Control	663A245G06	Pistol	MO	61
Speed Control	505A703G02	Pistol	MO	62
Speed Control	505A703G07	Oval	MO	62

Standard Application Switches, Style Numbers, *Continued*

Circuit Breaker Control

Style Number	Handle Shape	Handle ① Operation	Figure ② Number
505A713G01	Pistol	MO	63
505A713G03	Oval	MO	63
505A713G02	Pistol	MO	64
505A714G01	Pistol	MO	65
505A714G02	Oval	MO	65
505A718G01	Pistol	MO	66
505A718G15	Pistol	MO	67
505A717G01	Pistol	MO	68
505A717G03	Oval	MO	68
505A720G01	Pistol	MO	69
505A720G03	Oval	MO	69
508A244G01	Pistol	MO	70
508A244G02	Oval	MO	70
508A262G01	Pistol	MO	71
508A262G03	Oval	MO	71
508A264G01	Oval	MO	72
508A264G02	Pistol	MO	72
508A281G02	Pistol	MO	73
508A284G01	Pistol	MO	74
505A738G07	Pistol	MO	75
802A231G01	Pistol	MO	76
508A207G02	Pistol	MO	77
508A218G07	Pistol	MO	78
508A229G01	Pistol	MO	79
802A469G01	Pistol	MO	80
508A480G01	Pistol	MO	81
508A480G08	Pistol	MO	82
508A255G03	Pistol	MO	83

① All circuit breaker control switches listed are momentary operation, i.e., spring return to neutral.

② Figures 63 to 74 include a "Pull-to-Lock" or "Pull-Lamp Cutout" feature. Figures 75 to 83 do not include a "Pull-out" feature.

Temperature Switches

All Type W-2 Temperature Switches Furnished by Westinghouse Have Gold Plated Contacts.

Number of Thermocouples	Style Number	Handle	Handle Shape	Figure Number
----------------------------	-----------------	--------	-----------------	------------------

Approximate Lead Compensation

Two	505A710G03	Fixed	Round	84
Three	505A710G06	Fixed	Round	85
Four	505A710G01	Fixed	Round	86
	663A452G01	Key	Round	87
		505A765G03	Round	
Five	800A279G01	Key		88
		505A765G03	Round	
Six	663A488G02	Fixed	Round	89
	800A451G01	Key	Round	90
		505A765	Round	
Eight	663A453G03	Key		91
		505A765	Round	
Ten	663A488G01	Fixed	Round	92
	663A453G01	Key	Round	93
		505A765G03	Round	

Accurate Lead Compensation

One	781A254G01	Fixed	Round	94
Four	505A709G01	Fixed	Round	95
	505A711G01	Key		96
		505A711G03	Round	
Six	661A210G06	Fixed	Round	97
	781A489G01	Key	Round	98
		505A765G03	Round	
Seven	781A472G01	Fixed	Round	99
Ten	661A210G01	Fixed	Round	100
	663A454G01	Key		101
		505A711G03	Round	

OFF-ON Switches and Selector Switches

Style Number	Handle Operation	Figure Number
505A706G01	MA	102
505A706G02	MA	102
505A706G03	MA	102
505A723G01	MO	102
505A723G02	MO	102
505A723G03	MO	102
505A702L03	MA	103
505A733G01	MA	104
505A745G01	MA	105
505A722G01	MA	106
505A725G06	MO	106
505A722G02	MA	106
505A722G03	MA	106
505A725G01	MO	106
505A725G11	MO	106
505A781G03	MA	107
505A782G01	MO	107

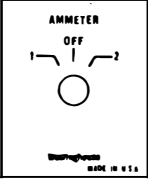
General Application Switches

Style Number	Application	Handle Operation	Figure Number
505A706G55	1 or 2 Pole-2 Throw	MA	108
505A733G17	1 Pole-4 Throw	MA	109
505A733G18	1 Pole-5 Throw	MA	110
505A745G17	1 Pole-7 Throw	MA	111
505A745G18	1 Pole-8 Throw	MA	112
505A745G19	1 Pole-10 Throw	MA	113
505A702L02	1 or 2 Pole with OFF	MA	114
505A703G51	2 Pole-2 Throw	MO	114
508A423G16	2 Pole-8 Throw	MA	115
508A423G17	2 Pole-12 Throw	MA	116
505A712G92	4 Pole-2 Throw	MA	117
505A715G32	4 Pole-2 Throw	MO	117
505A726G14	6 Pole-2 Throw	MA	118
505A727G15	6 Pole-2 Throw	MO	118

Position Tabulations

All Wiring Diagrams Contained in This Bulletin are to be Considered as "TYPICAL."

1

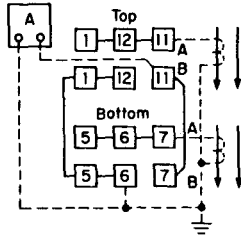


Ammeter
2 Phase

Style No. 505A700G01
Handle: Round Fixed
Contacts: Maintained
Stages: 2, Six Contact Frame
Mounting: 1/8-1/4
Target: No

2A

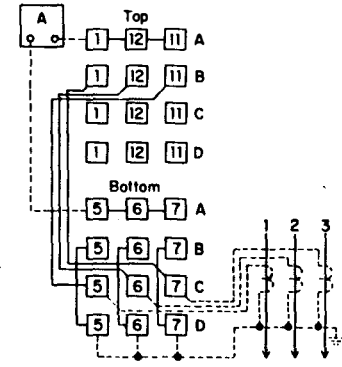
CONTACT	POSITION
	1 - OFF - 2
A11-B11	X X
A12-B12	X X X X
A1-B1	X X
A5-B5	X X
A6-B6	X X X X
A7-B7	X X



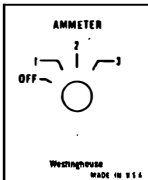
Ammeter
3 Phase-3 CT's

Style No. 505A701G01
Handle: Round Fixed
Contacts: Maintained
Stages: 2, Six Contact Frame
Mounting: 1/8-1/4
Target: No

(R) Switch: S#661A208G01
Removable Key Handle: S#661A208G03
Key Removable in OFF Position Only
S=30°



2

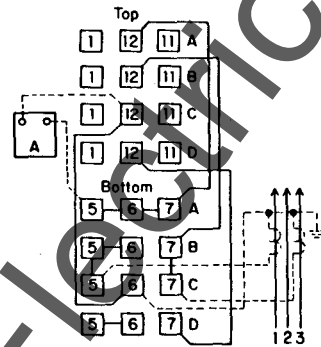


Ammeter
3 Phase-2 CT's

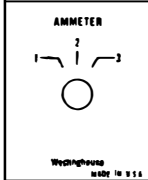
Style No. 505A701G02
Handle: Round Fixed
Contacts: Maintained
Stages: 2, Six Contact Frame
Mounting: 1/8-1/4
Target: No

CONTACT	POSITION
	0 - 1 - 2 - 3
A11-B11	X X X X
A12-B12	X X X X
A1-B1	X X
A5-B5	X X X X
A6-B6	X X X X
A7-B7	X X
C11-D11	X X X X X X
C12-D12	X X X X X X
C1-D1	X X X X X X
C5-D5	X X X X X X
C6-D6	X X X X X X
C7-D7	X X X X X X

(R) Switch: S#3669A41G01
Removable Key Handle: S#787A988G02
Key Removable in OFF Position Only
S=240°



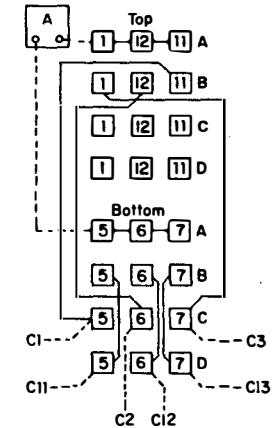
3



CONTACT	POSITION
	1 - 2 - 3
A11-B11	X X
A12-B12	X X X X
A1-B1	X X
A5-B5	X X
A6-B6	X X X X
A7-B7	X X
C11-D11	X X X X X X
C12-D12	X X X X X X
C1-D1	X X X X X X
C5-D5	X X X X X X
C6-D6	X X X X X X
C7-D7	X X X X X X

Ammeter
3 Phase-3 CT's

Style No. 505A701G05
Handle: Round Fixed
Contacts: Maintained
Stages: 2, Six Contact Frame
Mounting: 1/8-1/4
Target: No

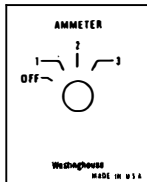


Notes:
"S" Angle Refers to Key Bearing Setting for Switches With Removable Key Handles.
"R" = Removable Key Switch.



Position Tabulations, Continued

4



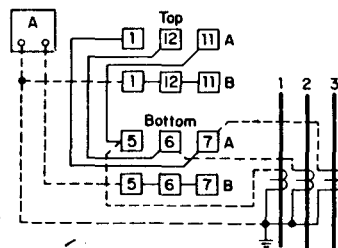
CONTACT	POSITION											
	OFF	1	2	3	4	5	6	7	8	9	10	11
A11-B11	X	X	X	X	X	X	X	X	X	X	X	X
A12-B12	X	X	X	X	X	X	X	X	X	X	X	X
A1-B1	X	X	X	X	X	X	X	X	X	X	X	X
A5-B5	X	X	X	X	X	X	X	X	X	X	X	X
A6-B6	X	X	X	X	X	X	X	X	X	X	X	X
A7-B7	X	X	X	X	X	X	X	X	X	X	X	X

Ammeter

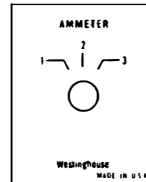
3 Phase-3 CT's (End of Circuit)

Style No. 787A976G01
Handle: Round Fixed
Contacts: Maintained
Stages: 1, Six Contact Frame
Mounting: 1/8-1/4
Target: No

(R) Switch: S#800A426G01
Removable Key Handle: S#508A298G02
Key Removable in OFF Position Only
S=0°



7

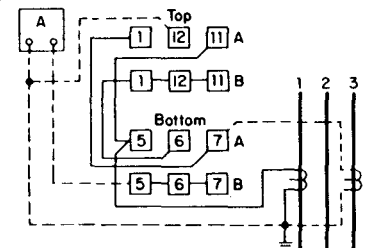


CONTACT	POSITION											
	OFF	1	2	3	4	5	6	7	8	9	10	11
A11-B11	X	X	X	X	X	X	X	X	X	X	X	X
A12-B12	X	X	X	X	X	X	X	X	X	X	X	X
A1-B1	X	X	X	X	X	X	X	X	X	X	X	X
A5-B5	X	X	X	X	X	X	X	X	X	X	X	X
A6-B6	X	X	X	X	X	X	X	X	X	X	X	X
A7-B7	X	X	X	X	X	X	X	X	X	X	X	X

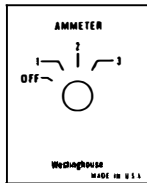
Ammeter

3 Phase-2 CT's (End of Circuit)

Style No. 787A976G04
Handle: Round Fixed
Contacts: Maintained
Stages: 1, Six Contact Frame
Mounting: 1/8-1/4
Target: No



5



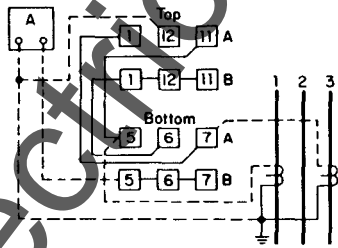
CONTACT	POSITION											
	OFF	1	2	3	4	5	6	7	8	9	10	11
A11-B11	X	X	X	X	X	X	X	X	X	X	X	X
A12-B12	X	X	X	X	X	X	X	X	X	X	X	X
A1-B1	X	X	X	X	X	X	X	X	X	X	X	X
A5-B5	X	X	X	X	X	X	X	X	X	X	X	X
A6-B6	X	X	X	X	X	X	X	X	X	X	X	X
A7-B7	X	X	X	X	X	X	X	X	X	X	X	X

Ammeter

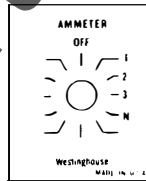
3 Phase-2 CT's (End of Circuit)

Style No. 787A976G02
Handle: Round Fixed
Contacts: Maintained
Stages: 1, Six Contact Frame
Mounting: 1/8-1/4
Target: No

(R) Switch: S#800A426G02
Removable Key Handle: S#508A298G02
Key Removable in OFF Position Only
S=0°



8

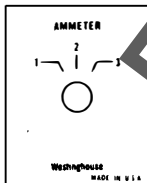


CONTACT	POSITION											
	OFF	1	2	3	4	5	6	7	8	9	10	11
A11-B11	X	X	X	X	X	X	X	X	X	X	X	X
A12-B12	X	X	X	X	X	X	X	X	X	X	X	X
A1-B1	X	X	X	X	X	X	X	X	X	X	X	X
A5-B5	X	X	X	X	X	X	X	X	X	X	X	X
A6-B6	X	X	X	X	X	X	X	X	X	X	X	X
A7-B7	X	X	X	X	X	X	X	X	X	X	X	X
C11-D11	X	X	X	X	X	X	X	X	X	X	X	X
C12-D12	X	X	X	X	X	X	X	X	X	X	X	X
C1-D1	X	X	X	X	X	X	X	X	X	X	X	X
C5-D5	X	X	X	X	X	X	X	X	X	X	X	X
C6-D6	X	X	X	X	X	X	X	X	X	X	X	X
C7-D7	X	X	X	X	X	X	X	X	X	X	X	X
E11-F11	X	X	X	X	X	X	X	X	X	X	X	X
E12-F12	X	X	X	X	X	X	X	X	X	X	X	X
E1-F1	X	X	X	X	X	X	X	X	X	X	X	X
E5-F5	X	X	X	X	X	X	X	X	X	X	X	X
E6-F6	X	X	X	X	X	X	X	X	X	X	X	X
E7-F7	X	X	X	X	X	X	X	X	X	X	X	X

Ammeter

Style No. 508A463G04
Handle: Round Fixed
Contacts: Maintained
Stages: 3, Six Contact Frame
Mounting: 1/8-1/4
Target: No

6

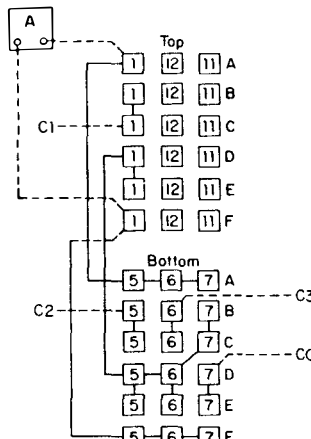
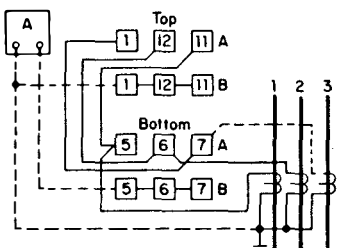


CONTACT	POSITION											
	OFF	1	2	3	4	5	6	7	8	9	10	11
A11-B11	X	X	X	X	X	X	X	X	X	X	X	X
A12-B12	X	X	X	X	X	X	X	X	X	X	X	X
A1-B1	X	X	X	X	X	X	X	X	X	X	X	X
A5-B5	X	X	X	X	X	X	X	X	X	X	X	X
A6-B6	X	X	X	X	X	X	X	X	X	X	X	X
A7-B7	X	X	X	X	X	X	X	X	X	X	X	X

Ammeter

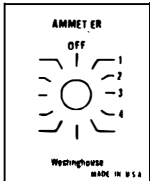
3 Phase-3 CT's (End of Circuit)

Style No. 787A976G03
Handle: Round Fixed
Contacts: Maintained
Stages: 1, Six Contact Frame
Mounting: 1/8-1/4
Target: No



Position Tabulations, Continued

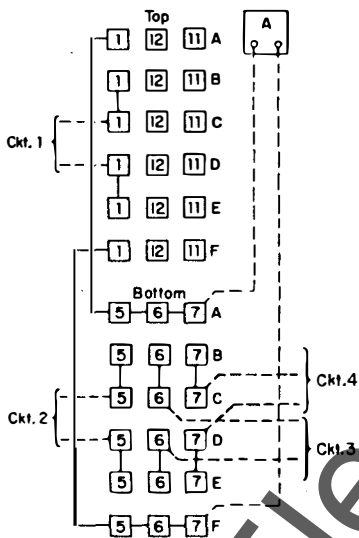
9



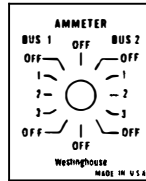
Ammeter

Style No. 508A463G05
Handle: Round Fixed
Contacts: Maintained
Stages: 3, Six Contact Frame
Mounting: 1/8-1/4
Target: No

CONTACT	POSITION											
	0	1	2	3	4	5	6	7	8	9	10	11
A11-B11												
A12-B12	X	X										
A1-B1			X	X	X							
A5-B5						X	X	X				
A6-B6									X	X	X	
A7-B7											X	X
C11-D11	X	X	X	X	X	X	X	X	X	X	X	X
C12-D12	X	X	X	X	X	X	X	X	X	X	X	X
C1-D1	X	X	X	X	X	X	X	X	X	X	X	X
C5-D5	X	X	X	X	X	X	X	X	X	X	X	X
C6-D6	X	X	X	X	X	X	X	X	X	X	X	X
C7-D7	X	X	X	X	X	X	X	X	X	X	X	X
E11-F11												
E12-F12	X	X										
E1-F1			X	X	X							
E5-F5						X	X	X				
E6-F6								X	X	X		
E7-F7										X	X	



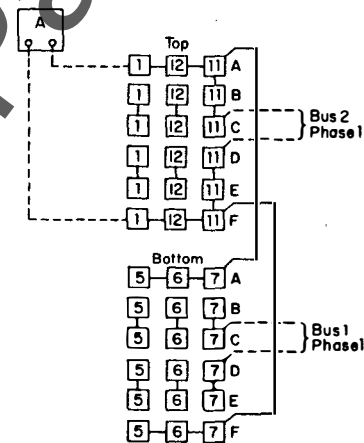
10



Ammeter

Style No. 508A461G01
Handle: Round Fixed
Contacts: Maintained
Stages: 3, Six Contact Frame
Mounting: 1/8-1/4
Target: No

CONTACT	POSITION											
	0	1	2	3	4	5	6	7	8	9	10	11
A11-B11												
A12-B12	X	X										
A1-B1			X	X	X							
A5-B5						X	X	X				
A6-B6									X	X	X	
A7-B7											X	X
C11-D11	X	X	X	X	X	X	X	X	X	X	X	X
C12-D12	X	X	X	X	X	X	X	X	X	X	X	X
C1-D1	X	X	X	X	X	X	X	X	X	X	X	X
C5-D5	X	X	X	X	X	X	X	X	X	X	X	X
C6-D6	X	X	X	X	X	X	X	X	X	X	X	X
C7-D7	X	X	X	X	X	X	X	X	X	X	X	X
E11-F11												
E12-F12	X	X										
E1-F1			X	X	X							
E5-F5						X	X	X				
E6-F6								X	X	X		
E7-F7										X	X	

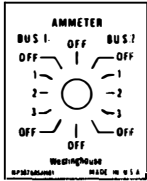


Balance of Incoming Connections are Similar.



Position Tabulations, Continued

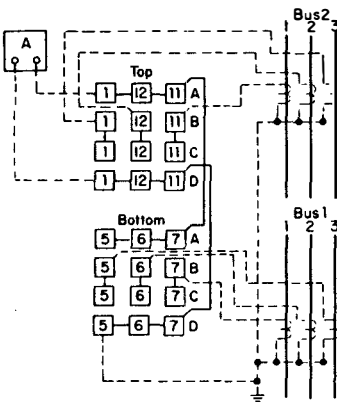
11



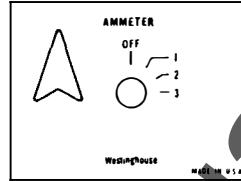
Ammeter

Style No. 658A615G02
Handle: Round Fixed
Contacts: Maintained
Stages: 2, Six Contact Frame
Mounting: 1/8-1/4
Target: No.

CONTACT	POSITION											
	BUS 2						BUS 1					
A11-B11	0	0	0	1	2	3	0	0	0	3	2	1
A12-B12				X	X	X						
A1-B1							X	X	X			
A5-B5										X	X	X
A6-B6											X	X
A7-B7												X
C11-D11	X	X	X	X	X	X	X	X	X	X	X	X
C12-D12	X	X	X	X	X	X	X	X	X	X	X	X
C1-D1	X	X	X	X	X	X	X	X	X	X	X	X
C5-D5	X	X	X	X	X	X	X	X	X	X	X	X
C6-D6	X	X	X	X	X	X	X	X	X	X	X	X
C7-D7	X	X	X	X	X	X	X	X	X	X	X	X



13

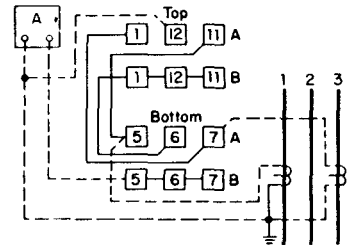


Ammeter

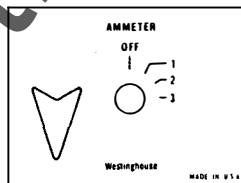
3 Phase-2 CT's (End of Circuit)
Style No. 787A984G02
Handle: Fixed, Mini-Slim DS
Contacts: Maintained
Stages: 1, Six Contact Frame
Mounting: 1/8-1/4
Target: No

CONTACT	POSITION					
	OFF	1	2	3	4	5
A11-B11	X	X	X	X	X	X
A12-B12	X	X	X	X	X	X
A1-B1	X	X	X	X	X	X
A5-B5	X	X	X	X	X	X
A6-B6	X	X	X	X	X	X
A7-B7	X	X	X	X	X	X

Note:
Switch Mounted 90° From Standard.



14

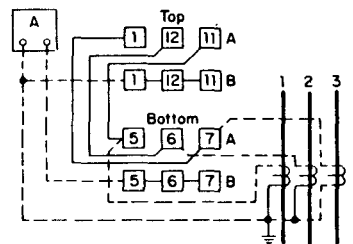


Ammeter

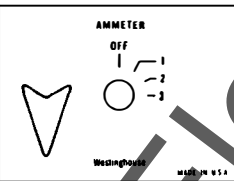
3 Phase-3 CT's (End of Circuit)
Style No. 787A984G03
Handle: Fixed, Mini-Slim DS
Contacts: Maintained
Stages: 1, Six Contact Frame
Mounting: 1/8-1/4
Target: No.

CONTACT	POSITION					
	OFF	1	2	3	4	5
A11-B11	X	X	X	X	X	X
A12-B12	X	X	X	X	X	X
A1-B1	X	X	X	X	X	X
A5-B5	X	X	X	X	X	X
A6-B6	X	X	X	X	X	X
A7-B7	X	X	X	X	X	X

Note:
Switch Mounted 90° From Standard.



12

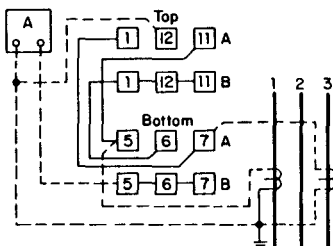


Ammeter

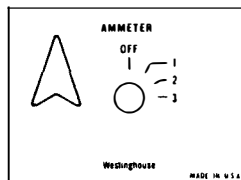
3 Phase-2 CT's (End of Circuit)
Style No. 787A984G01
Handle: Fixed, Mini-Slim DS
Contacts: Maintained
Stages: 1, Six Contact Frame
Mounting: 1/8-1/4
Target: No

CONTACT	POSITION					
	OFF	1	2	3	4	5
A11-B11	X	X	X	X	X	X
A12-B12	X	X	X	X	X	X
A1-B1	X	X	X	X	X	X
A5-B5	X	X	X	X	X	X
A6-B6	X	X	X	X	X	X
A7-B7	X	X	X	X	X	X

Note:
Switch Mounted 90° From Standard.



15

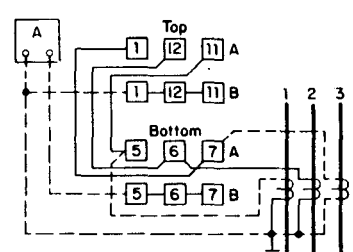


Ammeter

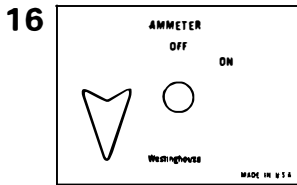
3 Phase-3 CT's (End of Circuit)
Style No. 787A984G04
Handle: Fixed, Mini-Slim
Contacts: Maintained
Stages: 1, Six Contact Frame
Mounting: 1/8-1/4
Target: No

CONTACT	POSITION					
	OFF	1	2	3	4	5
A11-B11	X	X	X	X	X	X
A12-B12	X	X	X	X	X	X
A1-B1	X	X	X	X	X	X
A5-B5	X	X	X	X	X	X
A6-B6	X	X	X	X	X	X
A7-B7	X	X	X	X	X	X

Note:
Switch Mounted 90° From Standard.



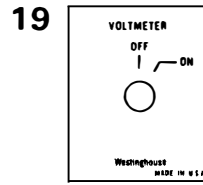
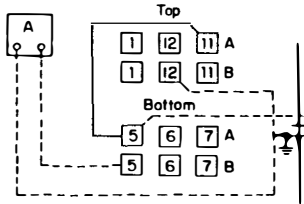
Position Tabulations, Continued



CONTACT	POSITION
	OFF ON
A11-B11	X X
A5-B5	X X

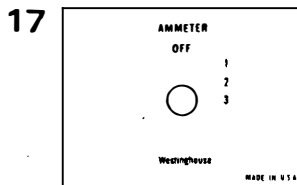
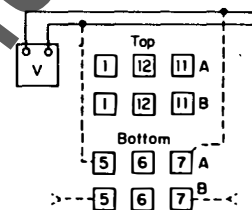
Note:
Switch Mounted 90° From Standard.

Ammeter
3 Phase-1 CT
Style No. 787A984G05
Handle: Mini-Slim, Fixed
Contacts: Maintained
Stages: 1, Six Contact Frame
Mounting: 1/8-1/4
Target: No



CONTACT	POSITION
	OFF ON
A11-B11	X X
A12-B12	X X
A1-B1	X X
A5-B5	X X
A6-B6	X X
A7-B7	X X

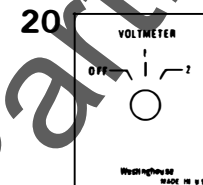
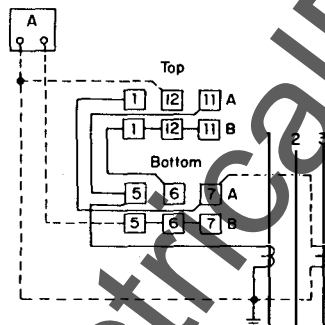
Voltmeter
Single Phase
(R) Switch: S#505A747G01
Removable Key Handle: S# 505A747G02
Key Removable in OFF Position Only.
S=0°
Contacts: Maintained
Stages: 1, Six Contact Frame
Mounting: 1/8-1/4
Target: No



CONTACT	POSITION
	OFF 1 2 3
A11-B11	X X X X X X X X
A12-B12	X X X X X X X X
A1-B1	X X X X X X X X
A5-B5	X X X X X X X X
A6-B6	X X X X X X X X
A7-B7	X X X X X X X X

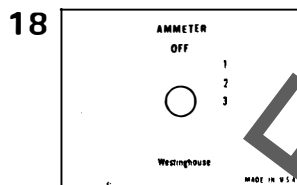
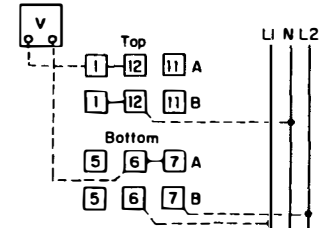
Note:
Switch Mounted 90° From Standard.

Ammeter
3 Phase-2 CT's (End of Circuit)
Style No. 787A984G06
Handle: Mini-Slim DS, Fixed
Contacts: Maintained
Stages: 1, Six Contact Frame
Mounting: 1/8-1/4
Target: No



CONTACT	POSITION
	OFF 1 2
A11-B11	X X
A12-B12	X X
A1-B1	X X
A5-B5	X X
A6-B6	X X
A7-B7	X X

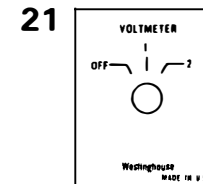
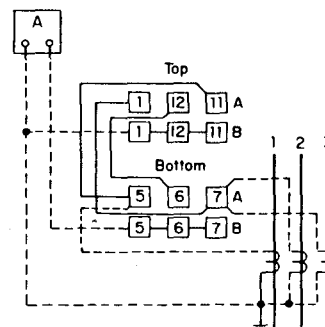
Voltmeter
2 Phase-Ac-3 Wire
Style No. 505A702G01
Handle: Round Fixed
Contacts: Maintained
Stages: 1, Six Contact Frame
Mounting: 1/8-1/4
Target: No



CONTACT	POSITION
	OFF 1 2 3
A11-B11	X X X X X X X X
A12-B12	X X X X X X X X
A1-B1	X X X X X X X X
A5-B5	X X X X X X X X
A6-B6	X X X X X X X X
A7-B7	X X X X X X X X

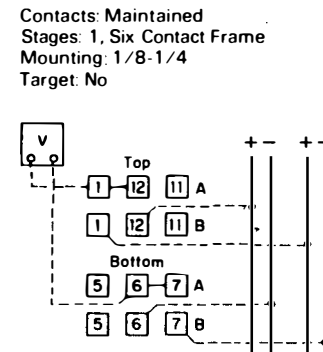
Note:
Switch Mounted 90° From Standard.

Ammeter
3 Phase-3 CT's (End of Circuit)
Style No. 787A984G07
Handle: Mini-Slim DS, Fixed
Contacts: Maintained
Stages: 1, Six Contact Frame
Mounting: 1/8-1/4
Target: No



CONTACT	POSITION
	OFF 1 2
A11-B11	X X
A12-B12	X X
A1-B1	X X
A5-B5	X X
A6-B6	X X
A7-B7	X X

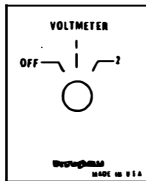
Voltmeter
2 Circuit-Dc-2 Wire
Style No. 505A702G02
Handle: Round Fixed
(R) Switch Only: S#505A748G01
Removable Key Handle: S# 505A748G02
Key Removable in OFF Position Only.
S=0°
Contacts: Maintained
Stages: 1, Six Contact Frame
Mounting: 1/8-1/4
Target: No





Position Tabulations, Continued

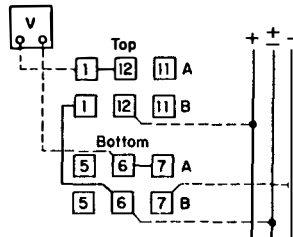
22



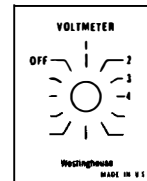
CONTACT	POSITION
A11-B11	X
A12-B12	X
A1-B1	X
A5-B5	X
A6-B6	X
A7-B7	X

Voltmeter
Dc-3 Wire

Style No. 505A702G05
Handle: Round Fixed
Contacts: Maintained
Stages: 1, Six Contact Frame
Mounting: 1/8-1/4
Target: No



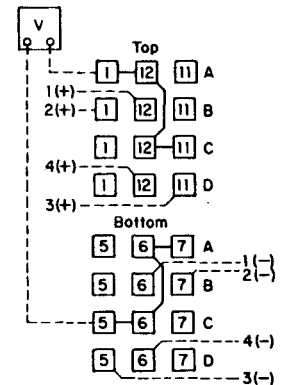
25



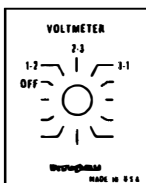
CONTACT	POSITION
A11-B11	X
A12-B12	X
A1-B1	X
A5-B5	X
A6-B6	X
A7-B7	X
C11-D11	X
C12-D12	X
C1-D1	X
C5-D5	X
C6-D6	X
C7-D7	X

Voltmeter
4 Circuit

Style No. 505A704G01
Handle: Round Fixed
Contacts: Maintained
Stages: 2, Six Contact Frame
Mounting: 1/8-1/4
Target: No



23

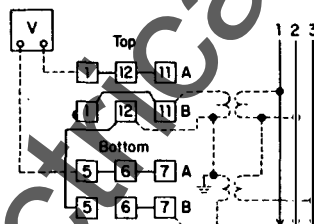


CONTACT	POSITION
A11-B11	X
A12-B12	X
A1-B1	X
A5-B5	X
A6-B6	X
A7-B7	X

Voltmeter
3 Phase-3 Wire

Style No. 505A702G04
Handle: Round Fixed
(R) Switch Only: S#505A749G01
Removable Key Handle: S# 505A749G02
Key Removable in OFF Position Only.
S=60°

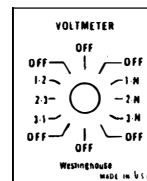
Contacts: Maintained
Stages: 1, Six Contact Frame
Mounting: 1/8-1/4
Target: No



Tabulation of
Switch as Jumped

A1-B11	X	X
A1-B12	X	X
A5-B5	X	X
A5-B7	X	X

26

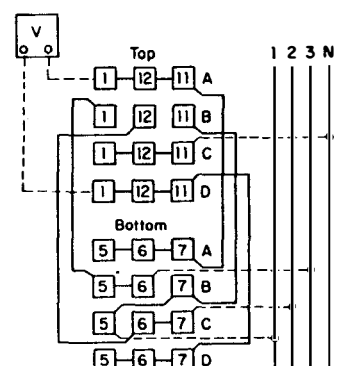


CONTACT	POSITION
A11-B11	X
A12-B12	X
A1-B1	X
A5-B5	X
A6-B6	X
A7-B7	X
C11-D11	X
C12-D12	X
C1-D1	X
C5-D5	X
C6-D6	X
C7-D7	X

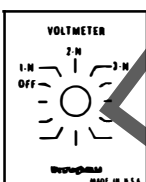
Voltmeter

Phase to Neutral and Phase to Phase

Style No. 505A705G01
Handle: Round Fixed
Contacts: Maintained
Stages: 2, Six Contact Frame
Mounting: 1/8-1/4
Target: No



24

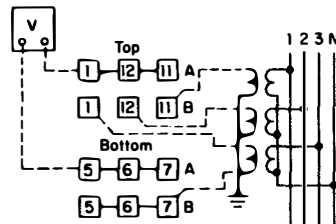


CONTACT	POSITION
A11-B11	X
A12-B12	X
A1-B1	X
A5-B5	X
A6-B6	X
A7-B7	X

Voltmeter
3 Phase-4 Wire

Style No. 505A702G05
Handle: Round Fixed
(R) Switch Only: S#505A762G01
Removable Key Handle: S# 505A762G02
Key Removable in OFF Position Only.
S=315°

Contacts: Maintained
Stages: 1, Six Contact Frame
Mounting: 1/8-1/4
Target: No

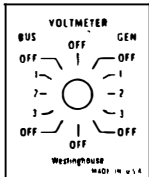


Tabulation of
Switch as Jumped

A1-B11	X	X
A1-B12	X	X
A1-B1	X	X
A5-B5	X	X

Position Tabulations, Continued

27

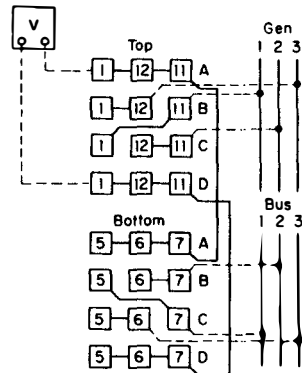


Voltmeter

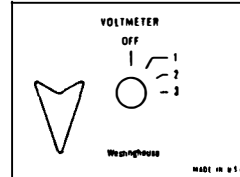
Two 3 Phase Circuits

Style No. 505A705G02
Handle: Round Fixed
Contacts: Maintained
Stages: 2, Six Contact Frame
Mounting: 1 8-1 4
Target: No

CONTACT	POSITION											
	0	0	1	2	3	0	0	0	0	2	1	0
A11-B11			X									
A12-B12				X								
A1-B1					X							
A5-B5						X						
A6-B6							X					
A7-B7								X				
C11-D11			X									
C12-D12				X								
C1-D1					X							
C5-D5						X						
C6-D6							X					
C7-D7								X				



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Voltmeter

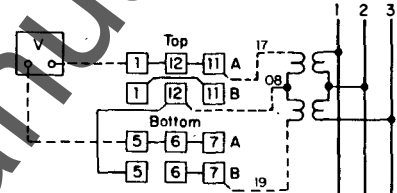
3 Phase-3 Wire

Style No. 3562A01G01
Handle: Mini-Slim DS, Fixed
Contacts: Maintained
Stages: 1, Six Contact Frame
Mounting: 1/8-1/4
Target: No

CONTACT	POSITION			
	0	1	2	3
A11-B11		X		
A12-B12			X	
A1-B1				X
A5-B5		X		
A6-B6			X	
A7-B7				X

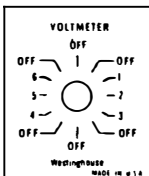
Tabulation of Switch With
Extra Connectors Added.

A1-B11		X		
A1-B12			X	
A5-B5		X		
A5-B7			X	



Note:
Switch Mounted 90° From Standard.
Nameplate Arrow Down.

28

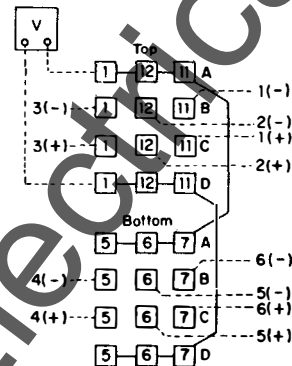


Voltmeter

6 Circuit

Style No. 505A705G03
Handle: Round Fixed
Contacts: Maintained
Stages: 2, Six Contact Frame
Mounting: 1/8-1/4
Target: No

CONTACT	POSITION											
	0	0	1	2	3	0	0	0	0	4	5	6
A11-B11			X									
A12-B12				X								
A1-B1					X							
A5-B5						X						
A6-B6							X					
A7-B7								X				
C11-D11			X									
C12-D12				X								
C1-D1					X							
C5-D5						X						
C6-D6							X					
C7-D7								X				



30



Voltmeter

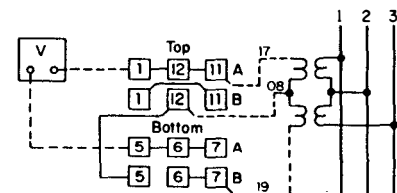
3 Phase-3 Wire

Style No. 3562A01G01
Handle: Mini-Slim DS, Fixed
Contacts: Maintained
Stages: 1, Six Contact Frame
Mounting: 1/8-1/4
Target: No

CONTACT	POSITION			
	0	1	2	3
A11-B11		X		
A12-B12			X	
A1-B1				X
A5-B5		X		
A6-B6			X	
A7-B7				X

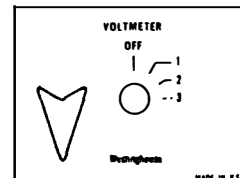
Tabulation of Switch With
Extra Connectors Added.

A1-B11		X		
A1-B12			X	
A5-B5		X		
A5-B7			X	



Note:
Switch Mounted 90° From Standard.
Nameplate Arrow Up.

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Voltmeter

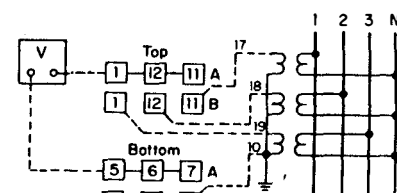
3 Phase-4 Wire

Style No. 3562A01G03
Handle: Mini-Slim DS, Fixed
Contacts: Maintained
Stages: 1, Six Contact Frame
Mounting: 1/8-1/4
Target: No

CONTACT	POSITION			
	0	1	2	3
A11-B11		X		
A12-B12			X	
A1-B1				X
A5-B5		X		
A6-B6			X	
A7-B7				X

Tabulation of Switch With
Extra Connectors Added.

A1-B11		X		
A1-B12			X	
A1-B1				X
A5-B5		X		

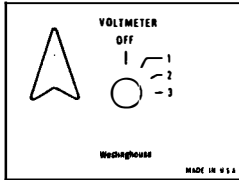


Note:
Switch Mounted 90° From Standard.
Nameplate Arrow Down.



Position Tabulations, Continued

32



Voltmeter

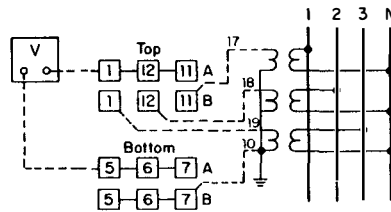
3 Phase-4 Wire

Style No. 3562A01G04
Handle: Mini-Slim DS, Fixed
Contacts: Maintained
Stages: 1, Six Contact Frame
Mounting: 1/8-1/4
Target: No

CONTACT	POSITION			
	0	1	2	3
A11-B11		X		
A12-B12			X	
A1-B1				X
A5-B5		X		
A6-B6			X	
A7-B7				X

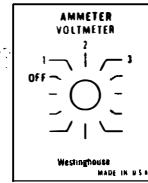
**Tabulation of Switch With
Extra Connectors Added.**

A1-B11		X	
A1-B12			X
A1-B1			X
A5-B5		X	X



Note:
Switch Mounted 90° From Standard,
Nameplate Arrow Up.

34

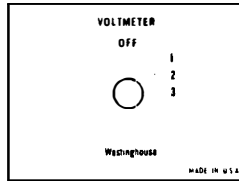


Ammeter/Voltmeter

Style No. 508A299G03
Handle: Round Fixed
Contacts: Maintained
Stages: 3, Six Contact Frame
Mounting: 1/8-1/4
Target: No

CONTACT	POSITION							
	0	1	11	2	21	3	31	32
A11-B11		X		X		X		
A12-B12			X		X		X	
A1-B1				X			X	
A5-B5		X	X	X	X	X	X	X
A6-B6			X	X	X	X	X	X
A7-B7								X
C1-D11	X	X	X	X	X	X	X	X
C12-D12	X	X	X	X	X	X	X	X
C1-B1	X	X	X	X	X	X	X	X
C5-D5	X	X	X	X	X	X	X	X
C6-D6	X	X	X	X	X	X	X	X
C7-D7	X	X	X	X	X	X	X	X
E1-F11		X						
E12-F12				X				
E1-F1								X
E5-F5		X						
E6-F6				X				
E7-F7						X		

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Voltmeter

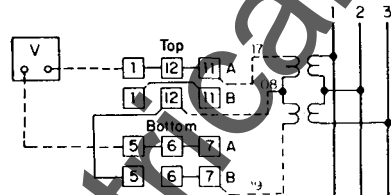
3 Phase-3 Wire

Style No. 3562A01G05
Handle: Mini-Slim DS, Fixed
Contacts: Maintained
Stages: 1, Six Contact Frame
Mounting: 1/8-1/4
Target: No

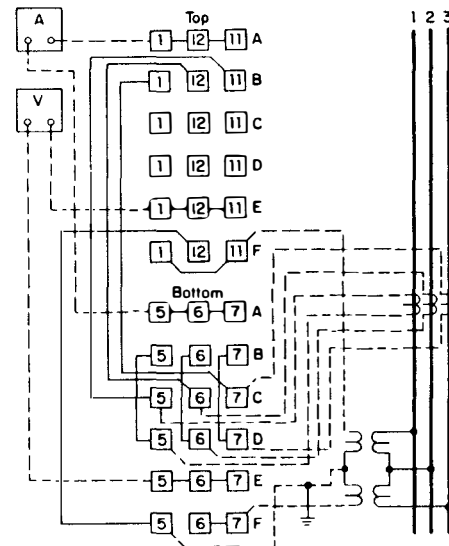
CONTACT	POSITION			
	0	1	2	3
A11-B11		X		
A12-B12			X	
A1-B1				X
A5-B5		X		
A6-B6			X	
A7-B7				X

**Tabulation of Switch With
Extra Connectors Added.**

A1-B11		X	X
A1-B12			X
A5-B5		X	
A5-B7			X

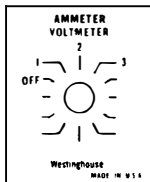


Note:
Switch Mounted 90° From Standard.



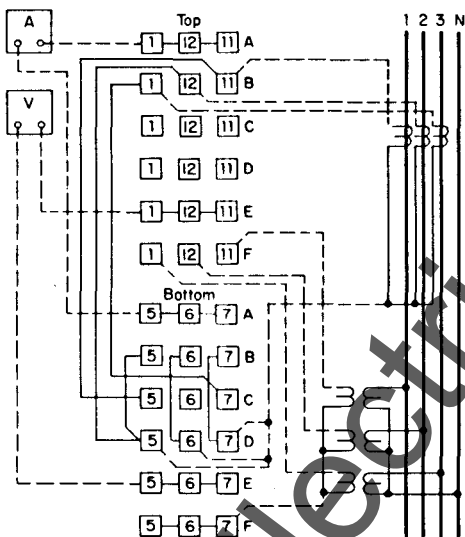
Position Tabulations, *Continued*

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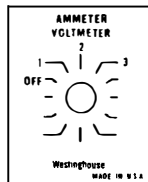
**Ammeter/Voltmeter**

Style No. 508A299G09
 Handle: Round Fixed
 Contacts: Maintained
 Stages: 3, Six Contact Frame
 Mounting: 1/8-1/4
 Target: No

CONTACT	POSITION					
	0	1	2	3	4	5
A11-B11		X	X	X		
A12-B12				X	X	X
A1-B1						X
A5-B5		X	X	X		
A6-B6				X	X	X
A7-B7						X
C11-D11	X	X	X	X	X	X
C12-D12	X	X	X	X	X	X
C1-D1	X	X	X	X	X	X
C5-D5	X	X	X	X	X	X
C6-D6	X	X	X	X	X	X
C7-D7	X	X	X	X	X	X
E11-F11		X				
E12-F12				X		
E1-F1						X
E5-F5		X				
E6-F6				X		
E7-F7						X



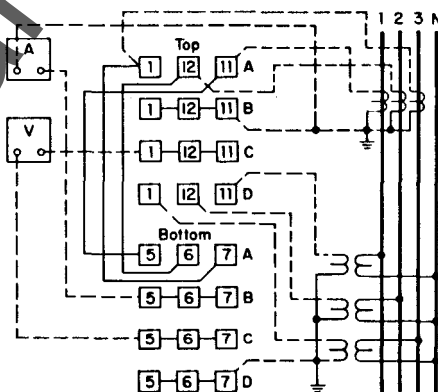
36

**Ammeter/Voltmeter**

3 Phase-4 Wire-3 CT's and 3 PT's
 (End of Line Application)

Style No. 787A977G01
 Handle: Round Fixed
 Contacts: Maintained
 Stages: 2, Six Contact Frame
 Mounting: 1/8-1/4
 Target: No

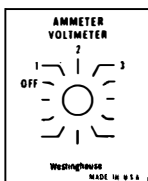
CONTACT	POSITION					
	0	1	2	3	4	5
A11-B11	X	X	X	X	X	X
A12-B12	X	X	X	X	X	X
A1-B1	X	X	X	X	X	X
A5-B5	X	X	X	X	X	X
A6-B6			X	X	X	
A7-B7					X	X
C11-D11		X				
C12-D12				X		
C1-D1						X
C5-D5		X				
C6-D6				X		
C7-D7						X





Position Tabulations, Continued

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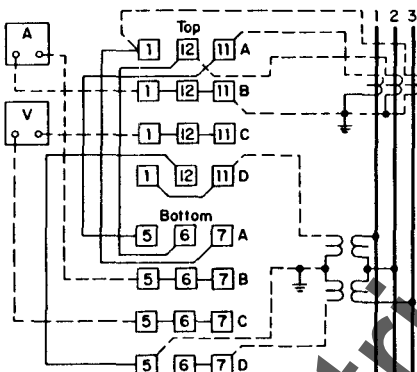


Ammeter/Voltmeter

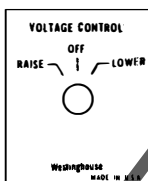
3 Phase-Wire-3 CT's and 3 PT's
(End of Line Application)

Style No. 787A977G02
Handle: Round Fixed
Contacts: Maintained
Stages: 2, Six Contact Frame
Mounting: 1/8-1/4
Target: No

CONTACT	POSITION					
	OFF	1	2	3	4	5
A11-B11	X	X	X	X	X	X
A12-B12	X	X	X	X	X	X
A1-B1	X	X	X	X	X	X
A5-B5	X	X	X			
A6-B6			X	X	X	
A7-B7					X	X
C11-D11		X				
C12-D12			X			
C1-D1						X
C5-D5		X				
C6-D6			X			
C7-D7						X



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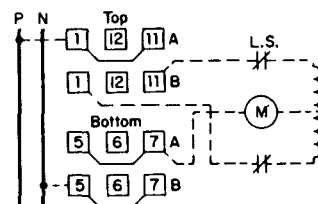
Voltage Control

Style No. 505A703G01
Handle: Pistol Grip Fixed
Contacts: Momentary
Stages: 1, Six Contact Frame
Mounting: 1/8-1/4
Target: No

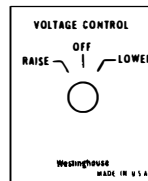
Oval Fixed Handle
Switch: S# 505A703G06

CONTACT	POSITION		
	R	O	L
A11-B11	X		
A12-B12	X		
A1-B1		X	
A5-B5	X		
A6-B6	X		
A7-B7		X	

Note:
Spring Return to
OFF Position.



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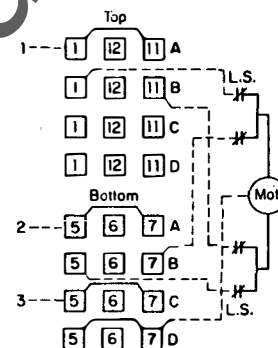
Voltage Control

Style No. 505A715G01
Handle: Pistol Grip Fixed
Contacts: Momentary
Stages: 2, Six Contact Frame
Mounting: 1/8-1/4
Target: No

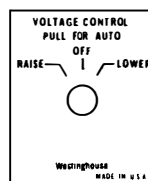
Oval Fixed Handle
Switch: S# 505A715G05

CONTACT	POSITION		
	R	O	L
A11-B11	X		
A12-B12	X		
A1-B1		X	
A5-B5	X		
A6-B6			X
A7-B7			X
C11-D11	X		
C12-D12		X	
C1-D1			X
C5-D5	X		
C6-D6			X
C7-D7			X

Note:
Spring Return to OFF Position.



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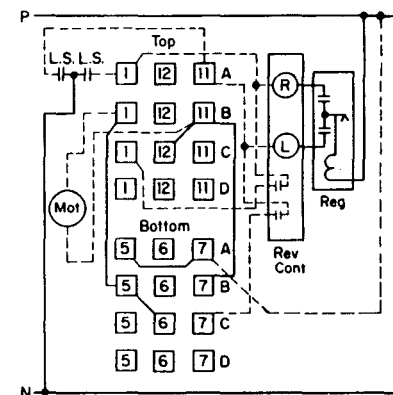


Voltage Control

Style No. 505A716G01
Handle: Oval Fixed
Contacts: Momentary
Stages: 2, Six Contact Frame
Mounting: 1/8-1/4
Target: No

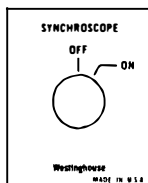
CONTACT	POSITION			
	R	O	P	L
A11-B11	X			
A12-B12		X	X	
A1-B1				X
A5-B5	X			
A6-B6		X	X	
A7-B7			X	
C12-C1			X	
D12-D1	X	X	X	
C6-C7			X	
D6-D7	X	X	X	

Note:
Spring Return to OFF Position.
Maintained In Pull Out at OFF.



Position Tabulations, Continued

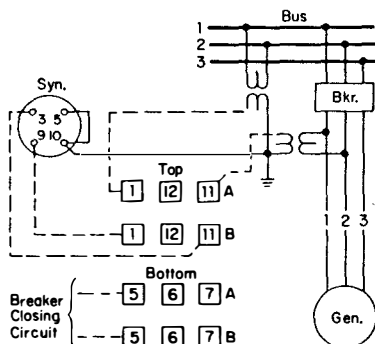
41



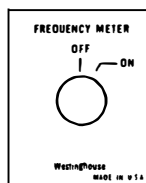
CONTACT	POSITION OFF ON
A11-B11	X
A12-B12	X
A1-B1	X
A5-B5	X
A6-B6	X
A7-B7	X

Synchroscope

(R) Style No. 505A755G01
 Handle: Removable Key
 Contacts: Maintained
 Stages: 1, Six Contact Frame
 Mounting: 1/8-1/4
 Target: No



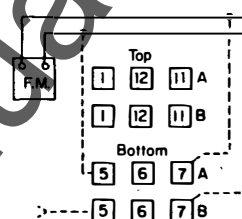
43



CONTACT	POSITION OFF ON
A11-B11	X
A12-B12	X
A1-B1	X
A5-B5	X
A6-B6	X
A7-B7	X

Frequency Meter

(R) Style No. 508A467G01
 Handle: Removable Key
 Contacts: Maintained
 Stages: 1, Six Contact Frame
 Mounting: 1/8-1/4
 Target: No

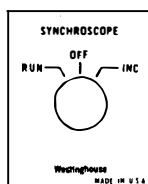


Note:
 Handle Removable in OFF Position.
 Ref. to Key Handle S#508A467G02 (Round).
 Ref. to Key Handle S#508A467G03 (Oval).
 S=105°

Note:

Key Handle Removable in OFF Position.
 Key Handle Not Furnished as Part of Switch.
 Ref. to Key Handle S# 505A755G02 (Round)
 S=180°

42



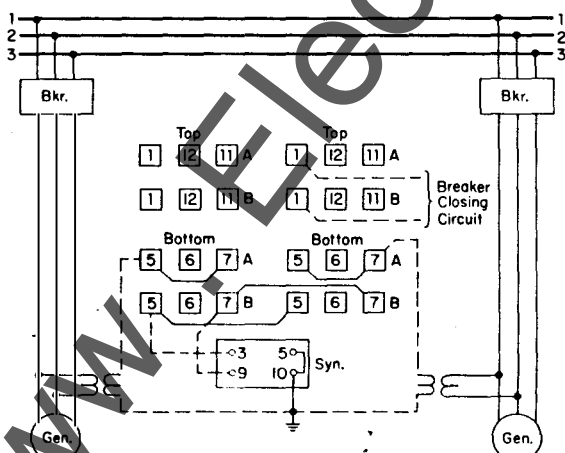
CONTACT	R	O	I
A11-B11	X		
A12-B12		X	
A1-B1			X
A5-B5	X		
A6-B6		X	
A7-B7			X

Synchroscope

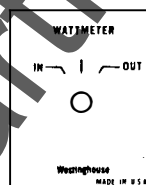
(R) Style No. 505A757G01
 Handle: Removable Key
 Contacts: Maintained
 Stages: 1, Six Contact Frame
 Mounting: 1/8-1/4
 Target: No

Note:
 Switch Operated by Two Keys
 RUN (S# 505A757G02)
 INC (S# 505A757G03)

Key Handle Removable in
 OFF Position. (S=30°)



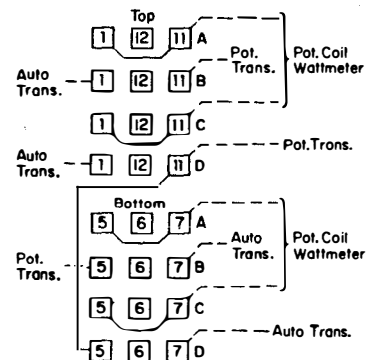
44



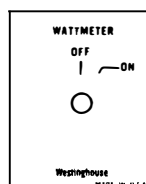
CONTACT	POSITION IN - OUT
A11-B11	X
A12-B12	X
A1-B1	X
A5-B5	X
A6-B6	X
A7-B7	X
C11-D11	X
C12-D12	X
C1-D1	X
C5-D5	X
C6-D6	X
C7-D7	X

Wattmeter

Style No. 505A712G90
 Handle: Round Fixed
 Contacts: Maintained
 Stages: 2, Six Contact Frame
 Mounting: 1/8-1/4
 Target: No



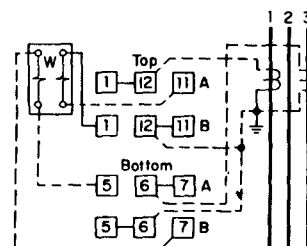
45



CONTACT	POSITION OFF - ON
A11-B11	X X
A12-B12	X X
A1-B1	X X
A5-B5	X X
A6-B6	X X
A7-B7	X X

Wattmeter

Style No. 505A734G09
 Handle: Round Fixed
 Contacts: Maintained
 Stages: 1, Six Contact Frame
 Mounting: 1/8-1/4
 Target: No

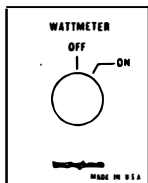


* Note:
 Adjacent Overlap
 Contacts are Electrically
 Connected Together
 During Transfer.



Position Tabulations, Continued

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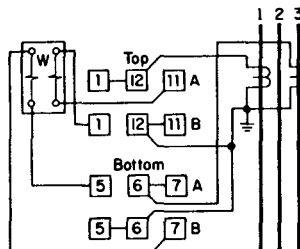
Wattmeter

(R) Style No. 505A754G04
Handle: Removable Key
Contacts: Maintained
Stages: 1, Six Contact Frame
Mounting: 1/8-1/4
Target: No

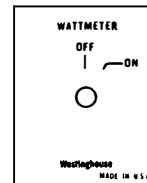
Note:
Key Handle Removable in OFF Position.
Key Handle Not Furnished as Part of Switch.
Ref. to Key Handle S#505A797G02 (Oval).
S=300°

CONTACT	POSITION	
	OFF	ON
A11-B11	X	X
A12-B12	X	X
A1-B1	X	X
A5-B5	X	X
A6-B6	X	X
A7-B7	X	X

* **Note:**
Adjacent Overlap Contacts
are Electrically Connected
Together During Transfer.



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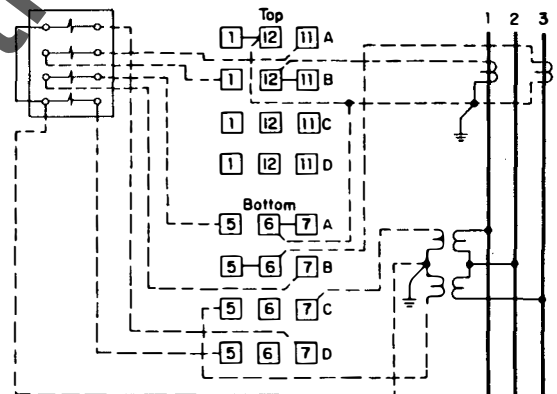


Wattmeter

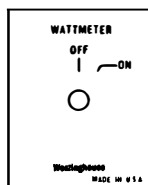
Style No. 505A740G07
Handle: Round Fixed
Contacts: Maintained
Stages: 2, Six Contact Frame
Mounting: 1/8-1/4
Target: No

CONTACT	POSITION	
	OFF	ON
A11-B11	X	X
A12-B12	X	X
A1-B1	X	X
A5-B5	X	X
A6-B6	X	X
A7-B7	X	X
C11-D11	X	X
C12-D12	X	X
C1-D1	X	X
C5-D5	X	X
C6-D6	X	X
C7-D7	X	X

Note:
Adjacent Overlap Contacts
are Electrically Connected
Together During Transfer.



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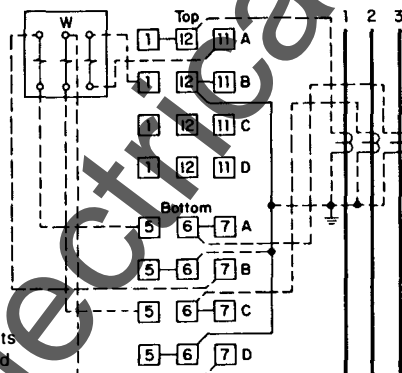


Wattmeter

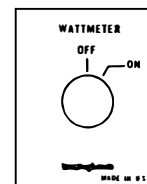
Style No. 505A740G06
Handle: Round Fixed
Contacts: Maintained
Stages: 2, Six Contact Frame
Mounting: 1/8-1/4
Target: No

CONTACT	POSITION	
	OFF	ON
A11-B11	X	X
A12-B12	X	X
A1-B1	X	X
A5-B5	X	X
A6-B6	X	X
A7-B7	X	X
C11-D11	X	X
C12-D12	X	X
C1-D1	X	X
C5-D5	X	X
C6-D6	X	X
C7-D7	X	X

* **Note:**
Adjacent Overlap Contacts
are Electrically Connected
Together During Transfer.



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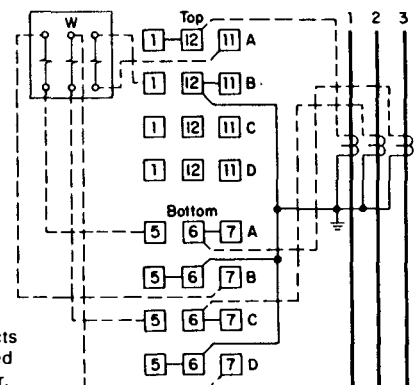
Wattmeter

(R) Style No. 505A779G05
Handle: Removable Key
Contacts: Maintained
Stages: 2, Six Contact Frame
Mounting: 1/8-1/4
Target: No

Note:
Key Handle Removable in OFF Position.
Key Handle Not Furnished as Part of Switch.
Ref. to Key Handle S#508A247G02 (Round).
S=60°

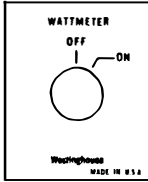
CONTACT	POSITION	
	OFF	ON
A11-B11	X	X
A12-B12	X	X
A1-B1	X	X
A5-B5	X	X
A6-B6	X	X
A7-B7	X	X
C11-D11	X	X
C12-D12	X	X
C1-D1	X	X
C5-D5	X	X
C6-D6	X	X
C7-D7	X	X

* **Note:**
Adjacent Overlap Contacts
are Electrically Connected
Together During Transfer.



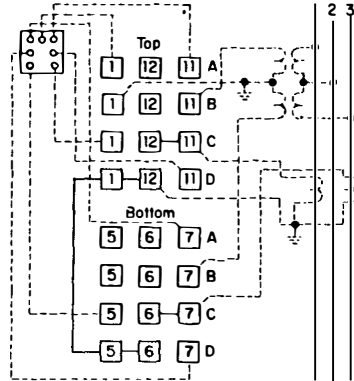
Position Tabulations, Continued

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**Wattmeter**

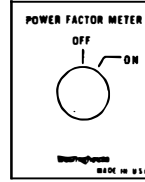
(R) Style No. 505A752G01
 Handle: Removable Key
 Contacts: Maintained
 Stages: 2, Six Contact Frame
 Mounting: 1/8-1/4
 Target: No

CONTACT	POSITION	
	ON	OFF
A11-B11		X
A12-B12	X	
A1-B1		X
A5-B5		X
A6-B6	X	
A7-B7		X
C11-D11	X	X
C12-D12	X	X
C1-D1	X	X
C5-D5	X	X
C6-D6	X	X
C7-D7	X	X



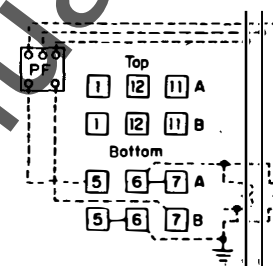
Note:
 Ref. to Removable Key Handle S#505A752G02 (Round).
 Key Removable in OFF Position Only.
 S=120°

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**Power Factor Meter****Current Transfer Only**

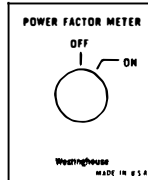
(R) Style No. 505A754G01
 Handle: Removable Key
 Contacts: Maintained
 Stages: 1, Six Contact Frame
 Mounting: 1/8-1/4
 Target: No

CONTACT	POSITION	
	OFF	ON
A11-B11		X
A12-B12	X	X
A1-B1		X
A5-B5		X
A6-B6	X	X
A7-B7	X	X



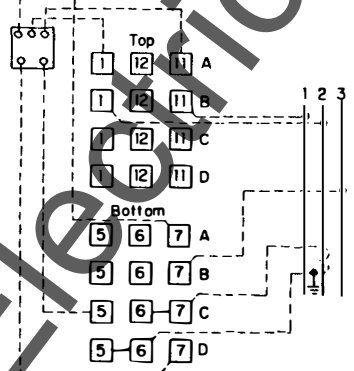
Note:
 Ref. to Removable Key Handle S#505A754G02 (Round).
 Key Removable in OFF Position Only.
 S=300°

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**Power Factor Meter**

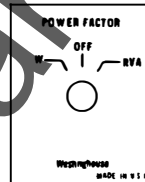
(R) Style No. 505A753G01
 Handle: Removable Key
 Contacts: Maintained
 Stages: 2, Six Contact Frame
 Mounting: 1/8-1/4
 Target: No

CONTACT	POSITION	
	OFF	ON
A11-B11		X
A12-B12	X	
A1-B1		X
A5-B5		X
A6-B6	X	
A7-B7		X
C11-D11	X	X
C12-D12	X	X
C1-D1	X	X
C5-D5	X	X
C6-D6	X	X
C7-D7	X	X



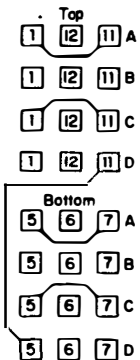
Note:
 Ref. to Removable Key Handle S#505A753G02 (Round).
 Key Removable in OFF Position Only.
 S=300°

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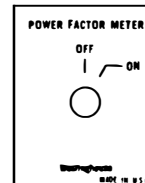
**Power Factor**

Style No. 505A712G91
 Handle: Round Fixed
 Contacts: Maintained
 Stages: 2, Six Contact Frame
 Mounting: 1/8-1/4
 Target: No

CONTACT	POSITION		
	W	O	RVA
A11-B11	X		
A12-B12		X	
A1-B1			X
A5-B5	X		
A6-B6		X	
A7-B7			X
C11-D11	X		
C12-D12		X	
C1-D1			X
C5-D5	X		
C6-D6		X	
C7-D7			X

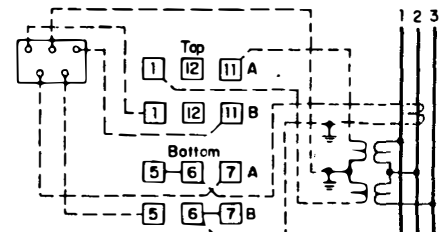


54

**Power Factor Meter**

Style No. 508A496G03
 Handle: Round Fixed
 Contacts: Maintained
 Stages: 1, Six Contact Frame
 Mounting: 1/8-1/4
 Target: No

CONTACT	POSITION	
	OFF	ON
A11-B11		X
A12-B12	X	
A1-B1		X
A5-B5	X	X
A6-B6	X	X
A7-B7	X	X

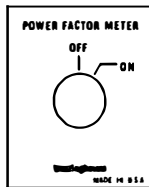


* Note:
 Adjacent Overlap Contacts are Electrically
 Connected Together During Transfer



Position Tabulations, Continued

55



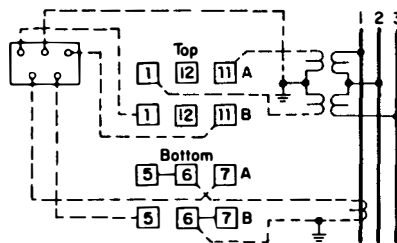
CONTACT	POSITION			
	OFF	ON		
A11-B11		X		
A12-B12	X			
A1-B1		X		
A5-B5		X	X	
A6-B6	X	X		
A7-B7		X	X	

* Note:
Adjacent Overlap Contacts
are Electrically Connected
Together During Transfer.

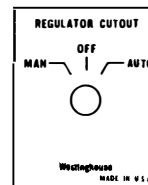
Power Factor Meter

(R) Style No. 802A470G01
Handle: Removable Key
Contacts: Maintained
Stages: 1, Six Contact Frame
Mounting: 1/8-1/4
Target: No

Note:
Key Handle Removable in OFF Position.
Key Handle Not Furnished as Part of Switch
Ref. to Key Handle S#505A754G03 (Oval).
S=300°



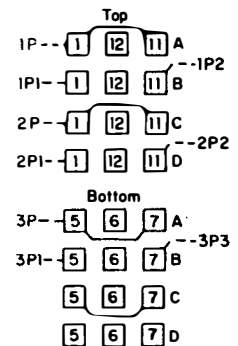
57



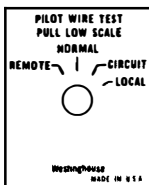
CONTACT	POSITION		
	M	O	A
A11-B11	X		
A12-B12		X	
A1-B1		X	
A5-B5	X		
A6-B6		X	
A7-B7		X	
C11-D11	X		
C12-D12		X	
C1-D1			X
C5-D5	X		
C6-D6		X	
C7-D7			X

Regulator Cutout

Style No. 505A712G01
Handle: Round Fixed
Contacts: Maintained
Stages: 2, Six Contact Frame
Mounting: 1/8-1/4
Target: No



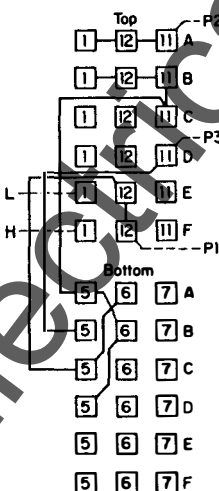
56



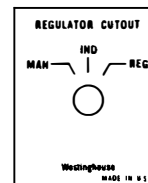
CONTACT	POSITION					
	R	P	N	C	L	P
A11-B11	X	X				
A12-B12			X	X		
A1-B1				X	X	
A5-B5	X	X				
A6-B6		X	X			
A7-B7				X	X	
C11-D11					X	X
C12-D12						
C1-D1						X
C5-D5					X	X
C6-D6						
C7-D7						
E12-E1		X	X	X	X	
F12-F1	X	X	X	X	X	
E6-E7	X	X	X	X	X	
F6-F7	X	X	X	X	X	

Pilot Wire Test

Style No. 508A468G01
Handle: Pistol Grip Fixed
Contacts: Momentary
Stages: 3, Six Contact Frame
Mounting: 1/8-1/4
Target: Yes



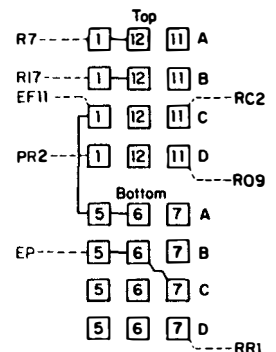
58



CONTACT	POSITION			
	M	I	R	
A11-B11	X	X		
A12-B12	X	X		
A1-B1			X	X
A5-B5	X	X		
A6-B6		X	X	
A7-B7		X	X	
C11-D11	X	X		
C12-D12		X	X	
C1-D1			X	X
C5-D5	X	X		
C6-D6		X	X	
C7-D7			X	X

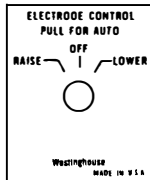
Regulator Cutout

Style No. 508A224G02
Handle: Round Fixed
Contacts: Maintained
Stages: 2, Six Contact Frame
Mounting: 1/8-1/4
Target: No



Position Tabulations, Continued

59



CONTACT	POSITION			
	R	O	P	L
A11-B11	X			
A12-B12		X	X	
A1-B1				X
A5-B5	X			
A6-B6		X	X	
A7-B7				X
C12-C1			X	
D12-D1	X	X		X
C6-C7			X	
D6-D7	X	X		X

Electrode Control

Switch S#505A716G02

(Oval Fixed Handle)

Switch S#505A716G04

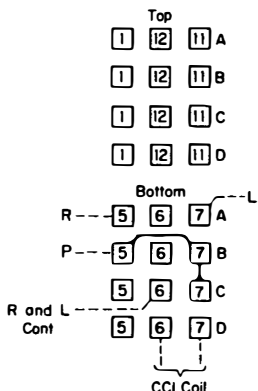
(Pistol Grip Fixed Handle)

Contacts: Momentary

Stages: 2, Six Contact Frame

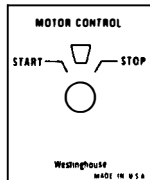
Mounting: 1/8-1/4

Target: No



Note:
Maintained in Pull Out at OFF.

61



CONTACT	POSITION			
	STOP	-	N	-
A11-B11	X			
A12-B12		X		
A1-B1				X
A5-B5	X	X		
A6-B6		X	X	
A7-B7			X	X

* Note:
Adjacent Overlap Contacts
are Electrically Connected
Together During Transfer.

Motor Control

Style No. 663A245G06

Handle: Pistol Grip Fixed

Contacts: Momentary

Stages: 1, Six Contact Frame

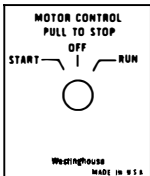
Mounting: 1/8-1/4

Target: Yes



Note:
Spring Return to Center (N) Position.

60



CONTACT	POSITION			
	R	O	P	L
A11-B11	X			
A12-B12		X	X	
A1-B1				X
A5-B5	X			
A6-B6		X	X	
A7-B7				X
C12-C1			X	
D12-D1	X	X		X
C6-C7			X	
D6-D7	X	X		X

Motor Control

Switch S#505A716G03

(Oval Fixed Handle)

Switch S#505A716G05

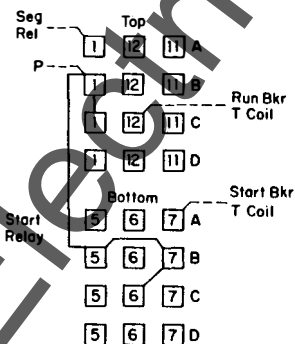
(Pistol Grip Fixed Handle)

Contacts: Momentary

Stages: 2, Six Contact Frame

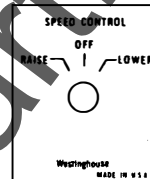
Mounting: 1/8-1/4

Target: No



Note:
Maintained in Pull Out at OFF.

62



CONTACT	POSITION			
	R	O	P	L
A11-B11	X			
A12-B12		X		
A1-B1				X
A5-B5	X			
A6-B6		X		
A7-B7			X	X

Speed Control

Switch S#505A703G02

(Pistol Grip Fixed Handle)

Switch S#505A703G07

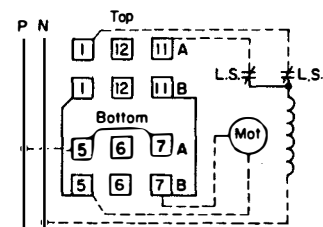
(Oval Fixed Handle)

Contacts: Momentary

Stages: 1, Six Contact Frame

Mounting: 1/8-1/4

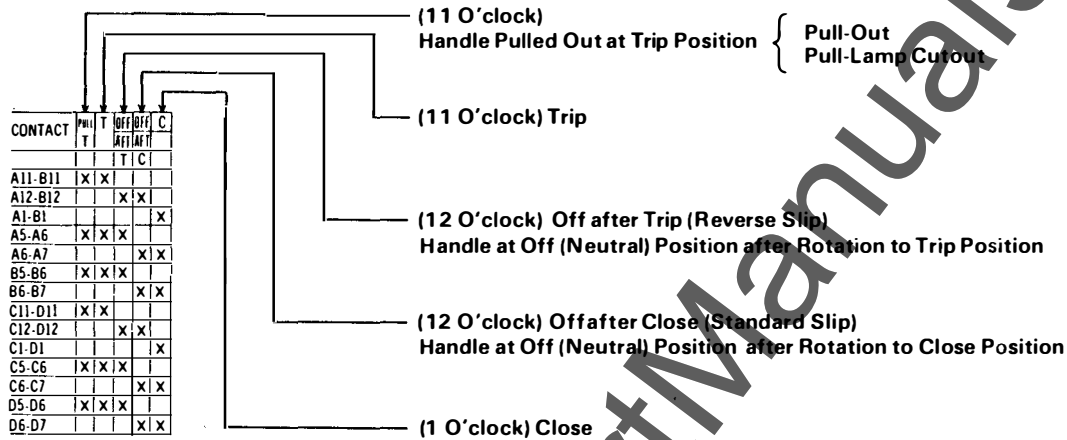
Target: No



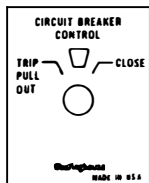


Position Tabulations, *Continued*

Interpretation of position designations for Figures 63 through 83 and other switches using slip and/or pull contacts.



63



CONTACT	POSITION			
	P	T	O	C
A11-B11	X	X		
A12-B12			X	X
A1-B1				X
A5-B5	X	X		
A6-B6			X	
A7-B7				X

Circuit Breaker Control

Switch S#505A713G01
(Pistol Grip Fixed Handle)

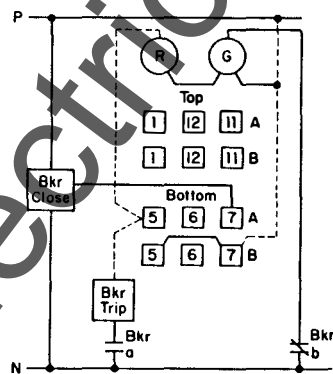
Switch S#505A713G03
(Oval Fixed Handle)

Contacts: Momentary

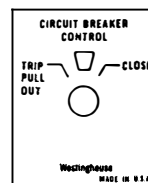
Stages: 1, Six Contact Frame

Mounting: 1/8-1/4

Target: Yes



64



CONTACT	POSITION			
	P	T	O	C
A11-B11	X	X		
A12-B12			X	X
A1-B1				X
A5-B5	X	X		
A6-B6			X	
A7-B7				X

Circuit Breaker Control

Style No 505A713G02

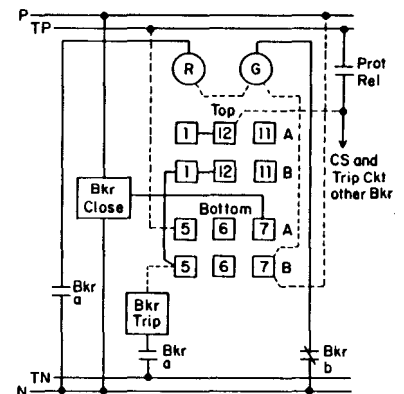
Handle: Pistol Grip Fixed

Contacts: Momentary

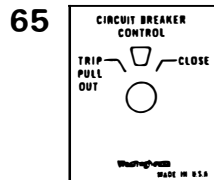
Stages: 1, Six Contact Frame

Mounting: 1/8-1/4

Target: Yes



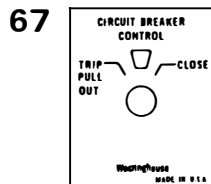
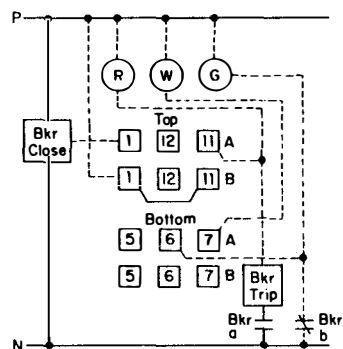
Position Tabulations, Continued



CONTACT	POSITION				
	P	T	OFF	MT	C
A11-B11	X	X			
A12-B12			X	X	
A1-B1					X
A5-A6	X	X	X		
A6-A7			X	X	
B5-B6	X	X	X		
B6-B7			X	X	

Circuit Breaker Control

Switch S#505A714G01
(Pistol Grip Fixed Handle)
Switch S#505A714G02
(Oval Fixed Handle)
Contacts: Momentary
Stages: 1, Six Contact Frame
Mounting: 1/8-1/4
Target: Yes



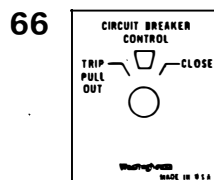
CONTACT	POSITION				
	P	T	OFF	MT	C
A11-B11	X	X			
A12-B12			X	X	
A1-B1					X
A5-B5	X	X	X		
A6-B6			X	X	
A7-B7			X	X	
C11-D11	X	X	X		
C12-D12			X	X	
C1-D1					X
C5-C6	X	X	X		
C6-C7			X	X	
D5-D6	X	X	X		
D6-D7			X	X	

Circuit Breaker Control

Style No. 505A718G15
Handle: Pistol Grip Fixed
Contacts: Momentary
Stages: 2, Six Contact Frame
Mounting: 1/8-1/4
Target: Yes

Note:
Connectors Added to
Obtain Contact A1-B1
Closed in Close, Trip
and Trip Pull Out
Positions.

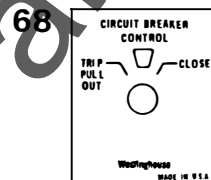
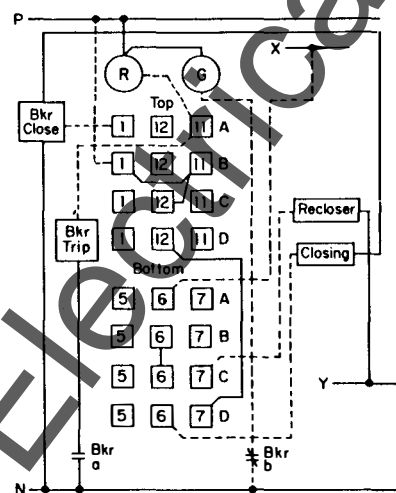
Top				
1	12	11	A	
1	12	11	B	
1	12	11	C	
1	12	11	D	
Bottom				
5	6	7	A	
5	6	7	B	
5	6	7	C	
5	6	7	D	



CONTACT	POSITION				
	P	T	OFF	MT	C
A11-B11	X	X			
A12-B12			X	X	
A1-B1					X
A5-B5	X	X	X		
A6-B6			X	X	
A7-B7			X	X	
C11-D11	X	X	X		
C12-D12			X	X	
C1-D1					X
C5-C6	X	X	X		
C6-C7			X	X	
D5-D6	X	X	X		
D6-D7			X	X	

Circuit Breaker Control

Style No. 505A718G01
Handle: Pistol Grip Fixed
Contacts: Momentary
Stages: 2, Six Contact Frame
Mounting: 1/8-1/4
Target: Yes

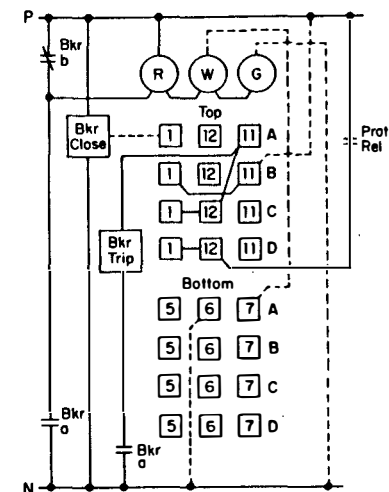


CONTACT	POSITION				
	P	T	OFF	MT	C
A11-B11	X	X			
A12-B12			X	X	
A1-B1					X
A5-A6	X	X	X		
A6-A7			X	X	
B5-B5	X	X	X		
B6-B7			X	X	
C11-D11	X	X	X		
C12-D12			X	X	
C1-D1					X
C5-C6	X	X	X		
C6-C7			X	X	
D5-D6	X	X	X		
D6-D7			X	X	

Circuit Breaker Control

Switch S#505A717G02
(Pistol Grip Fixed Handle)
Switch S#505A717G03
(Oval Fixed Handle and No Connectors)

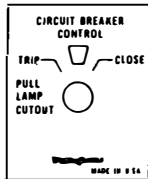
Contacts: Momentary
Stages: 2, Six Contact Frame
Mounting: 1/8-1/4
Target: Yes





Position Tabulations, Continued

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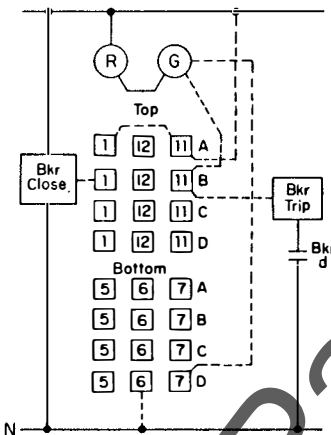
CONTACT	POSITION			
	P	T	O	C
A11-B11	X	X		
A12-B12			X	
A1-B1				X
A5-B5	X	X		
A6-B6			X	
A7-B7				X
C12-D1	X			
D12-D1		X	X	X
C6-C7	X			
D6-D7		X	X	X

Circuit Breaker Control

Switch S#505A720G01
(Pistol Grip Fixed Handle)

Switch S#505A720G03
(Oval Fixed Handle)

Contacts: Momentary
Stages: 2, Six Contact Frame
Mounting: 1/8-1/4
Target: Yes
No Connectors Furnished



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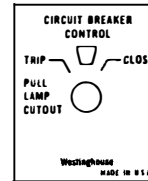
CONTACT	POSITION			
	P	T	OFF	MT
A11-B11	X	X		
A12-B12			X	X
A1-B1				X
A5-B5	X	X		
A6-B6			X	X
A7-B7				X
C11-D11	X	X		
C12-D12			X	X
C1-D1				X
C5-C6	X	X	X	X
C6-C7			X	X
D5-D6	X	X	X	X
D6-D7			X	X
E12-E1	X			
F12-F1		X	X	X
E6-E7	X			
F6-F7		X	X	X

Circuit Breaker Control

Switch S#508A264G02
(Pistol Grip Fixed Handle)

Switch S#508A264G01
(Oval Fixed Handle)

Contacts: Momentary
Stages: 3, Six Contact Frame
Mounting: 1/8-1/4
Target: Yes



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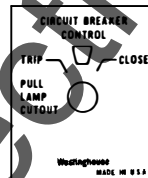
CONTACT	POSITION			
	P	T	OFF	MT
A11-B11	X	X		
A12-B12			X	X
A1-B1				X
A5-A6	X	X	X	
A6-A7			X	X
B5-B6	X	X	X	
B6-B7			X	X
C12-C1	X			
D12-D1		X	X	X
C6-C7	X			
D6-D7		X	X	X

Circuit Breaker Control

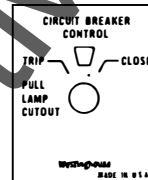
Switch S#508A244G01
(Pistol Grip Fixed Handle)

Switch S#508A244G02
(Oval Fixed Handle)

Contacts: Momentary
Stages: 2, Six Contact Frame
Mounting: 1/8-1/4
Target: Yes



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Circuit Breaker Control

Style No. 508A281G02

Handle: Pistol Grip Fixed

Contacts: Momentary
Stages: 4, Six Contact Frame
Mounting: 1/8-1/4
Target: Yes

CONTACT	POSITION			
	P	T	OFF	MT
A11-B11	X	X		
A12-B12			X	X
A1-B1				X
A5-B5	X	X		
A6-B6			X	X
A7-B7				X
C11-D11	X	X		
C12-D12			X	X
C1-D1				X
C5-C6	X	X	X	X
C6-C7			X	X
D5-D6	X	X	X	X
D6-D7			X	X
E11-F11	X	X		
E12-F12			X	X
E1-F1				X
E5-E6	X	X	X	
E6-E7			X	X
F5-F6	X	X	X	
F6-F7			X	X
G12-G1	X			
H12-H1		X	X	X
G6-G7	X			
H6-H7		X	X	X

Top			
1	12	11	A
1	12	11	B
1	12	11	C
1	12	11	D
1	12	11	E
1	12	11	F
1	12	11	G
1	12	11	H

Bottom			
5	6	7	A
5	6	7	B
5	6	7	C
5	6	7	D
5	6	7	E
5	6	7	F
5	6	7	G
5	6	7	H

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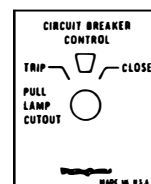
CONTACT	POSITION			
	P	T	OFF	MT
A11-B11	X	X		
A12-B12			X	X
A1-B1				X
A5-A6	X	X	X	
A6-A7			X	X
B5-B6	X	X	X	
B6-B7			X	X
C11-D11	X	X		
C12-D12			X	X
C1-D1				X
C5-C6	X	X	X	
C6-C7			X	X
D5-D6	X	X	X	
D6-D7			X	X
E12-E1	X			
F12-F1		X	X	X
E6-E7	X			
F6-F7		X	X	X

Circuit Breaker Control

Switch S#508A262G01
(Pistol Grip Fixed Handle)

Switch S#508A262G03
(Oval Fixed Handle)

Contacts: Momentary
Stages: 3, Six Contact Frame
Mounting: 1/8-1/4
Target: Yes

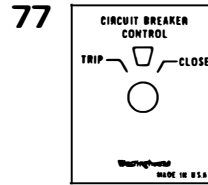
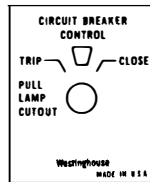


Position Tabulations, Continued

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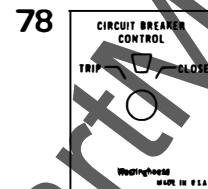
CONTACT	POSITION			
	PULL T	T	N	C
A11-B11	X	X		
A12-B12			X	X
A1-B1				X
A5-A6	X	X	X	
A6-A7			X	X
B5-B6	X	X	X	
B6-B7			X	X
C11-D11	X	X		
C12-D12			X	X
C1-D1				X
C5-C6	X	X	X	
C6-C7			X	X
D5-D6	X	X	X	
D6-D7			X	X
E11-F11	X	X		
E12-F12			X	X
E1-F1				X
E5-E6	X	X	X	
E6-E7			X	X
F5-F6	X	X	X	
F6-F7			X	X
G12-G1	X			
H12-H1		X	X	X
G6-G7	X			
H6-H7		X	X	X

Circuit Breaker Control
 Style No. 508A284G01
 Handle: Pistol Grip Fixed
 Contacts: Momentary
 Stages: 4. Six Contact Frame
 Mounting: 1/8-1/4
 Target: Yes



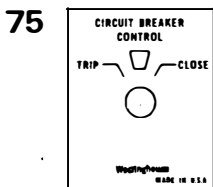
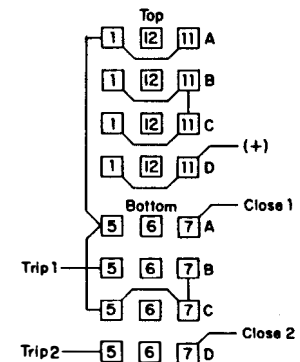
Circuit Breaker Control
 Style No. 508A207G02
 Handle: Pistol Grip Fixed
 Contacts: Momentary
 Stages: 1. Six Contact Frame
 Mounting: 1/8-1/4
 Target: Yes

CONTACT	POSITION		
	T	O	C
A11-B11	X		
A12-B12		X	
A1-B1			X
A5-B5	X		
A6-B6		X	
A7-B7			X

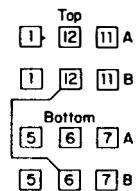


Circuit Breaker Control
For Operating Two Breakers
 Style No. 508A218G07
 Handle: Pistol Grip Fixed
 Contacts: Momentary
 Stages: 2. Six Contact Frame
 Mounting: 1/8-1/4
 Target: Yes

CONTACT	POSITION		
	T	N	C
A11-B11	X		
A12-B12		X	
A1-B1			X
A5-B5	X		
A6-B6		X	
A7-B7			X
C11-D11	X		
C12-D12		X	
C1-D1			X
C5-D5	X		
C6-D6		X	
C7-D7			X



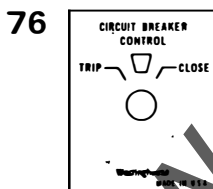
Circuit Breaker Control
 Style No. 505A738G07
 Handle: Pistol Grip Fixed
 Contacts: Momentary
 Stages: 1. Six Contact Frame
 Mounting: 1/8-1/4
 Target: Yes



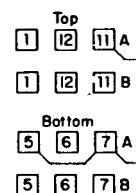
CONTACT	POSITION			
	T	N	N	C
A11-B11	X			
A12-B12		X	X	
A1-B1				X
A5-A6	X	X		
A6-A7			X	X
B5-B6	X	X		
B6-B7			X	X

Tabulation of Switch With Extra Connectors Added.

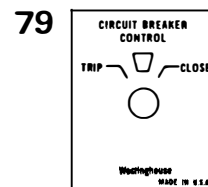
A11-B11	X			
A1-B1				X
A5-A6	X	X		
A6-A7			X	X
A12-B5		X		
A12-B7			X	



Circuit Breaker Control
 Style No. 802A231G01
 Handle: Pistol Grip Fixed
 Contacts: Momentary
 Stages: 1. Six Contact Frame
 Mounting: 1/8-1/4
 Target: Yes



CONTACT	POSITION			
	T	N	N	C
A11-B11	X			
A12-B12		X	X	
A1-B1				X
A5-B5	X	X		
A6-B6			X	X
A7-B7	X			



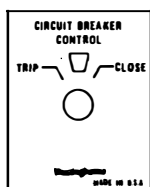
Circuit Breaker Control
 Style No. 508A229G01
 Handle: Pistol Grip Fixed
 Contacts: Momentary
 Stages: 2. Six Contact Frame
 Mounting: 1/8-1/4
 Target: Yes

CONTACT	POSITION			
	T	N	N	C
A11-B11	X			
A12-B12		X	X	
A1-B1				X
A5-B5	X			
A6-B6		X	X	
A7-B7				X
C11-D11	X			
C12-D12		X	X	
C1-D1				X
C5-C6	X	X		
C6-C7			X	X
D5-D6	X	X		
D6-D7			X	X



Position Tabulations, *Continued*

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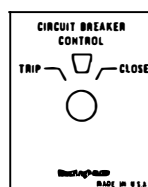


Circuit Breaker Control
Style No. 802A469G01
Handle: Pistol Grip Fixed
Contacts: Momentary
Stages: 2, Six Contact Frame
Mounting: 1/8-1/4
Target: Yes

CONTACT	POSITION			
	T	N	N	C
	MT	MT		
A11-B11	X			
A12-B12		X	X	
A1-B1				X
A5-B5				X
A6-B6				
A7-B7	X			
C11-D11	X			
C12-D12		X	X	
C1-D1				X
C5-C6		X	X	
C6-C7			X	X
D5-D6	X	X		
D6-D7			X	X

Top			
1	12	11	A
1	12	11	B
1	12	11	C
1	12	11	D
Bottom			
5	6	7	A
5	6	7	B
5	6	7	C
5	6	7	D

82

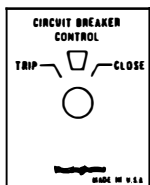


Circuit Breaker Control
Style No. 508A480G08
Handle: Pistol Grip Fixed
Contacts: Momentary
Stages: 2, Six Contact Frame
Mounting: 1/8-1/4
Target: Yes

CONTACT	POSITION			
	T	N	N	C
	MT	MT		
A11-B11	X			
A12-B12		X	X	
A1-B1				X
A5-A6	X	X		
A6-A7		X	X	
B5-B6	X			
B6-B7		X	X	
C11-D11	X			
C12-D12		X	X	
C1-D1				X
C5-C6		X	X	
C6-C7			X	X
D5-D6	X	X		
D6-D7			X	X

Top			
1	12	11	A
1	12	11	B
1	12	11	C
1	12	11	D
Bottom			
5	6	7	A
5	6	7	B
5	6	7	C
5	6	7	D

81

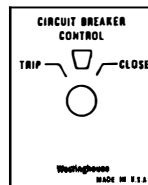


Circuit Breaker Control
Style No. 508A480G01
Handle: Pistol Grip Fixed
Contacts: Momentary
Stages: 2, Six Contact Frame
Mounting: 1/8-1/4
Target: Yes

CONTACT	POSITION			
	T	N	N	C
	MT	MT		
A11-B11	X			
A12-B12		X	X	
A1-B1				X
A5-A6	X	X		
A6-A7		X	X	
B5-B6	X	X		
B6-B7		X	X	
C11-D11	X			
C12-D12		X	X	
C1-D1				X
C5-C6	X	X		
C6-C7		X	X	
D5-D6	X	X		
D6-D7			X	X

Top			
1	12	11	A
1	12	11	B
1	12	11	C
1	12	11	D
Bottom			
5	6	7	A
5	6	7	B
5	6	7	C
5	6	7	D

83



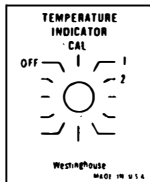
Circuit Breaker Control
Style No. 508A255G03
Handle: Pistol Grip Fixed
Contacts: Momentary
Stages: 3, Six Contact Frame
Mounting: 1/8-1/4
Target: Yes

CONTACT	POSITION			
	T	N	N	C
	MT	MT		
A11-B11	X			
A12-B12		X	X	
A1-B1				X
A5-B5	X			
A6-B6		X	X	
A7-B7			X	
C11-D11	X			
C12-D12		X	X	
C1-D1				X
C5-C6	X	X		
C6-C7		X	X	
D5-D6	X	X		
D6-D7			X	X
E11-F11	X			
E12-F12		X	X	
E1-F1				X
E5-E6	X	X		
E6-E7		X	X	
F5-F6	X	X		
F6-F7			X	X

Top			
1	12	11	A
1	12	11	B
1	12	11	C
1	12	11	D
1	12	11	E
1	12	11	F
Bottom			
5	6	7	A
5	6	7	B
5	6	7	C
5	6	7	D
5	6	7	E
5	6	7	F

Position Tabulations, Continued

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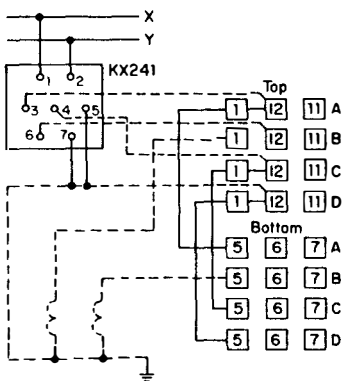


Temperature

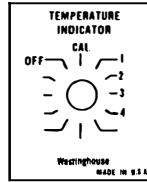
Approximate Lead Compensation

Style No. 505A710G03
 Handle: Round, Fixed
 Contacts: Maintained
 Stages: 2, Six Contact Frame
 Mounting: 1/8-1/4
 Target: No

CONTACT	POSITION					
	0	-	C	-	1	2
A11-B11	X	X				
A12-B12	X	X	X	X		
A1-B1				X	X	X
A5-B5					X	X
C11-D11	X					
C12-D12			X			
C1-D1					X	
C5-D5						X



86

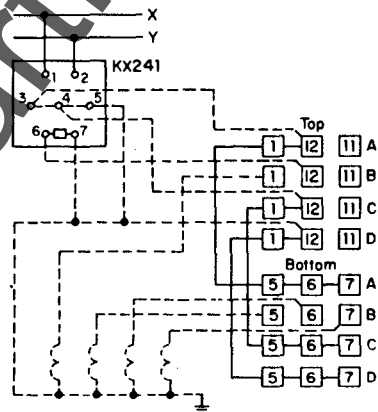


Temperature

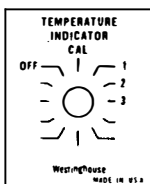
Approximate Lead Compensation

Style No. 505A710G01
 Handle: Round, Fixed
 Contacts: Maintained
 Stages: 2, Six Contact Frame
 Mounting: 1/8-1/4
 Target: No

CONTACT	POSITION									
	0	-	C	-	1	-	2	-	3	4
A11-B11	X	X								
A12-B12	X	X	X	X						
A1-B1				X	X	X				
A5-B5					X	X	X			
A6-B6						X	X	X		
A7-B7							X	X	X	
C11-D11	X									
C12-D12			X							
C1-D1					X					
C5-D5							X			
C6-D6								X		
C7-D7									X	



85

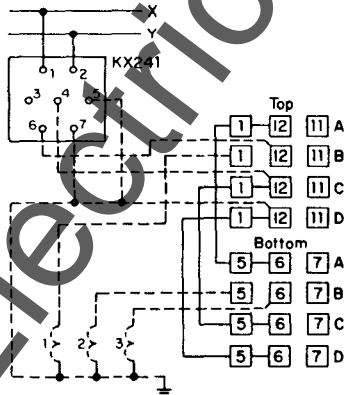


Temperature

Approximate Lead Compensation

Style No. 505A710G06
 Handle: Round, Fixed
 Contacts: Maintained
 Stages: 2, Six Contact Frame
 Mounting: 1/8-1/4
 Target: No

CONTACT	POSITION					
	0	-	C	-	1	2
A11-B11	X	X				
A12-B12	X	X	X	X		
A1-B1				X	X	X
A5-B5					X	X
A6-B6						X
C11-D11	X					
C12-D12			X			
C1-D1					X	
C5-D5						X
C6-D6						X

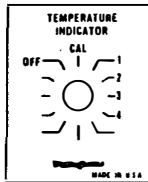


* Note: Adjacent Overlap Contacts are Electrically Connected Together During Transfer.



Position Tabulations, Continued

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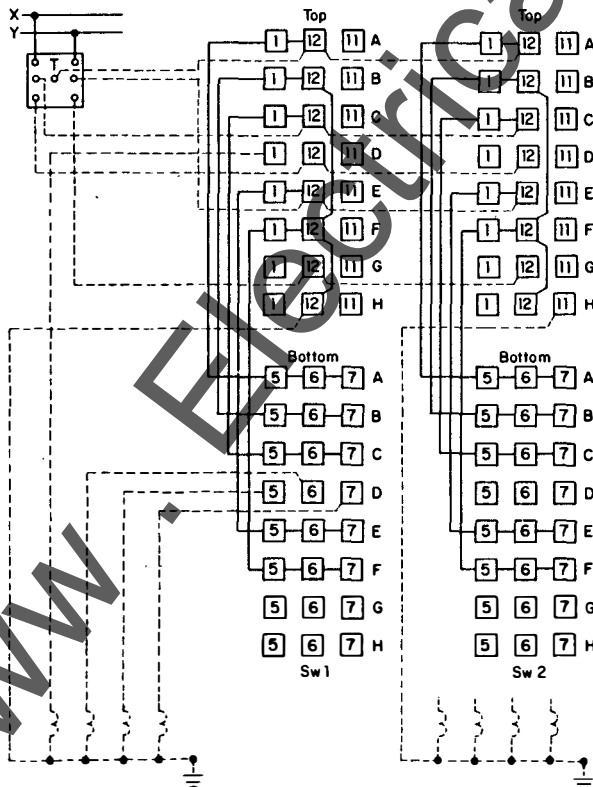
Temperature

Approximate Lead Compensation

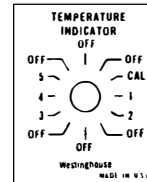
(R) Style No. 663A452G01
Handle: Removable Key
Contacts: Maintained
Stages: 4, Six Contact Frame
Mounting: 1/8-1/4
Target: No

Ref. to Removable Key Handle S#505A765G03.
Key Removable in OFF Position Only.
S=240°

CONTACT	POSITION									
	OFF	C	1	2	3	4				
A11-B11	X									
A12-B12		X								
A1-B1			X							
A5-B5				X						
A6-B6					X					
A7-B7						X				
C11-D11	X	X								
C12-D12		X	X	X						
C1-D1			X	X	X					
C5-D5				X	X	X				
C6-D6					X	X	X			
C7-D7						X	X	X		
E11-F11	X	X								
E12-F12		X	X	X						
E1-F1			X	X	X					
E5-F5				X	X	X				
E6-F6					X	X	X			
E7-F7						X	X	X		
G11-H11	X	X								
G12-H12		X	X	X						
G1-H1			X	X	X					
G5-H5				X	X	X				
G6-H6					X	X	X			
G7-H7						X	X	X		



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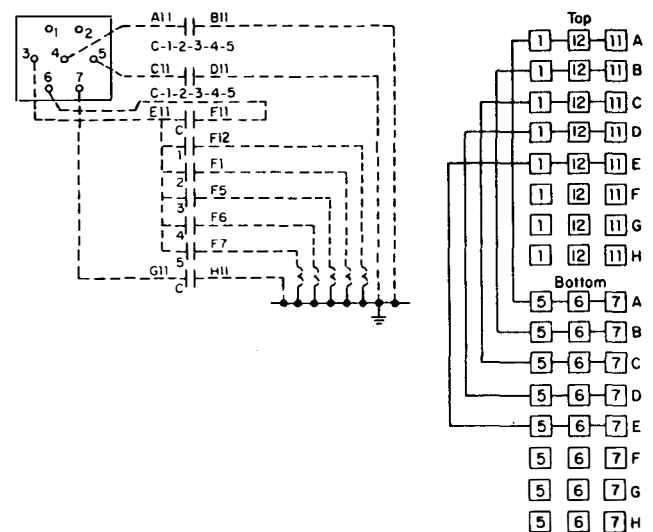
Temperature

Approximate Lead Compensation

(R) Style No. 800A279G01
Handle: Removable Key
Contacts: Maintained
Stages: 4, Six Contact Frame
Mounting: 1/8-1/4
Target: No

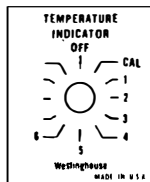
Note:
Key Handle Removable in OFF (12 O'clock) Position Only.
Key Handle Not Furnished With Switch.
Ref. to Key Handle S#505A765G03 (Round).
S=270°

CONTACT	POSITION															
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
A11-B11																
A12-B12																
A1-B1																
A5-B5																
A6-B6																
A7-B7																
C11-D11																
C12-D12																
C1-D1																
C5-D5																
C6-D6																
C7-D7																
E11-F11																
E12-F12																
E1-F1																
E5-F5																
E6-F6																
E7-F7																
G11-H11																
G12-H12																
G1-H1																
G5-H5																
G6-H6																
G7-H7																



Position Tabulations, Continued

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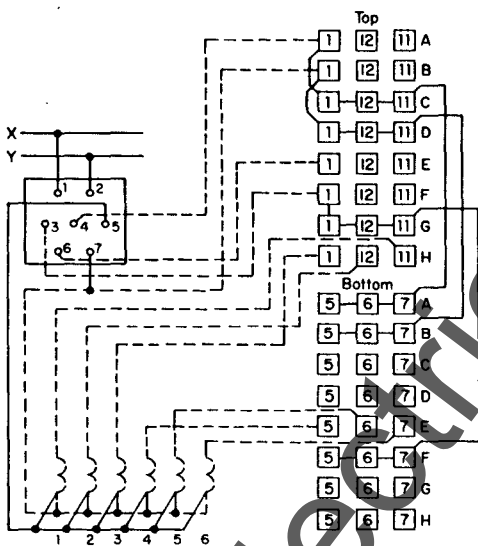


Temperature

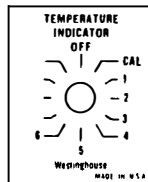
Approximate Lead Compensation

Style No. 663A488G02
 Handle: Round, Fixed
 Contacts: Maintained
 Stages: 4, Six Contact Frame
 Mounting: 1/8-1/4
 Target: No

CONTACT	POSITION															
	0	-	C	-	1	-	2	-	3	-	4	-	5	-	6	
A12-B12	X															
A1-B1			X													
A5-B5											X					
A6-B6													X			
A7-B7															X	
C11-D11					X											
C12-D12						X										
C1-D1							X									
E12-F12	X	X														
E1-F1		X	X	X												
E5-F5										X	X	X				
E6-F6												X	X	X		
E7-F7														X	X	
G11-H11				X	X	X										
G12-H12					X	X	X	X								
G1-H1							X	X	X							



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Temperature

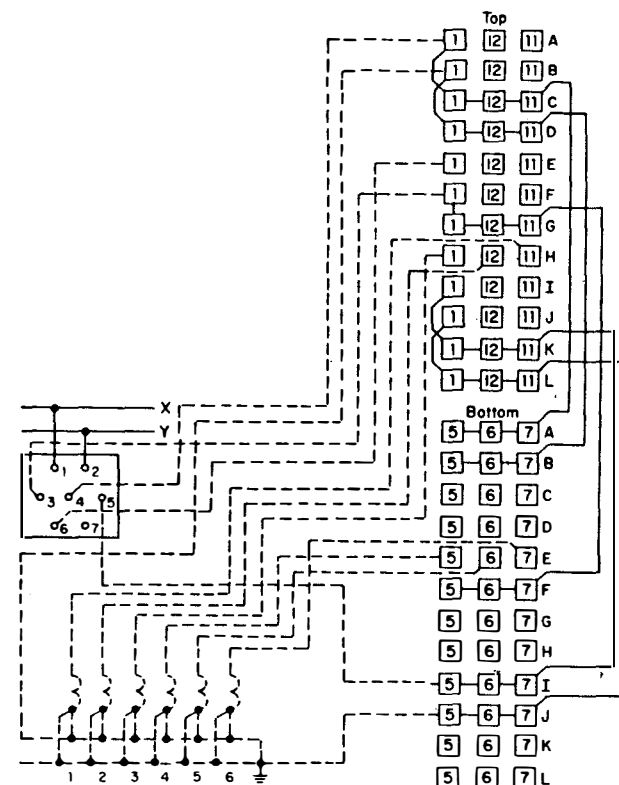
Approximate Lead Compensation

(R) Style No. 800A451G01
 Handle: Removable Key
 Contacts: Maintained
 Stages: 6, Six Contact Frame
 Mounting: 1/8-1/4
 Target: No

Note:

Key Handle Removable in OFF Position Only.
 Ref. to Key Handle S#505A765G03 (Round).
 S=270°

CONTACT	POSITION														
	0	-	C	-	1	-	2	-	3	-	4	-	5	-	6
A12-B12	X														
A1-B1			X												
A5-B5											X				
A6-B6													X		
A7-B7														X	
G11-D11					X										X
G12-D12						X									
C1-D1							X								
E12-F12	X	X							X						
E1-F1		X	X	X											
E5-F5										X	X	X			
E6-F6											X	X	X		
E7-F7												X	X	X	X
G11-H11					X	X	X								
G12-H12					X	X	X	X	X						
G1-H1							X	X	X						
I12-J12	X	X													
I1-J1		X	X	X											
I5-J5										X	X	X			
I6-J6											X	X	X	X	
I7-J7												X	X	X	X
K11-L11				X	X	X									
K12-L12				X	X	X	X	X	X						
K1-L1							X	X	X						

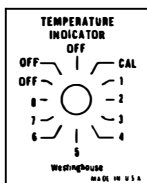


* Note: Adjacent Overlap Contacts
 are Electrically Connected
 Together During Transfer.



Position Tabulations, *Continued*

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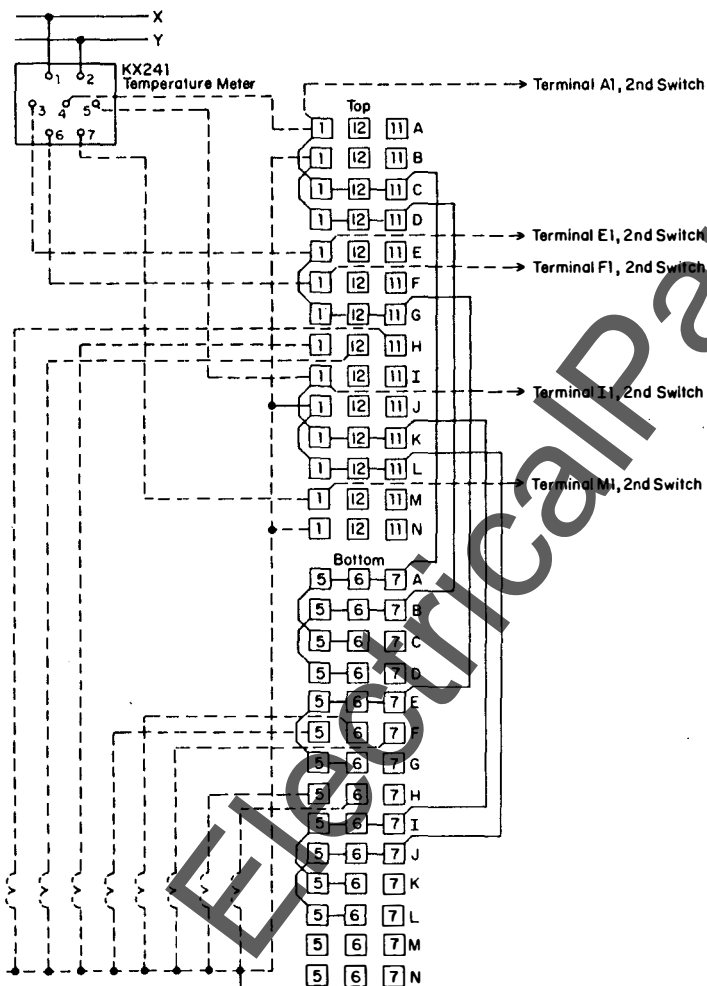


Temperature

Approximate Lead Compensation

(R) Style No. 663A453G03
Handle: Removable Key
Contacts: Maintained
Stages: 7, Six Contact Frame
Mounting: 1/8-1/4
Target: No

Note:
Key Handle Removable in OFF Position Only.
Ref. to Key Handle S#505A765G03.
S=270°



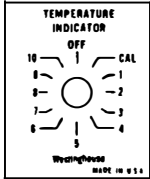
CONTACT	POSITION															
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
A11-B11																
A12-B12	X															
A1-B1		X														
A5-B5						X										
A6-B6							X									
A7-B7								X								
C11-D11			X													
C12-D12				X												
C1-D1					X											
C5-D5															X	
C6-D6																X
C7-D7																
E1-F1																
E12-F12	X	X														
E1-F1		X	X	X												
E5-F5						X	X	X								
E6-F6							X	X	X	X	X	X				
E7-F7								X	X	X	X	X				
G11-H11			X	X	X											
G12-H12				X	X	X										
G1-H1					X	X	X									
G5-H5													X	X	X	
G6-H6														X	X	
G7-H7																

3rd Stage Shown
5th-7th Stages
(I-J, M-N) are
Same

4th Stage Shown
6th Stage (K-L)
is Same

Position Tabulations, *Continued*

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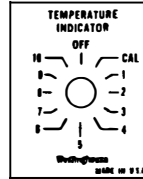
Temperature

Approximate Lead Compensation

Style No. 663A488G01
 Handle: Round, Fixed
 Contacts: Maintained
 Stages: 4, Six Contact Frame
 Mounting: 1/8-1/4
 Target: No

CONTACT	O	C	1	2	3	4	5	6	7	8	9	10
A11-B11												X
A12-B12	X											
A1-B1		X										
A5-B5						X						
A6-B6							X					
A7-B7								X				
C11-D11			X									
C12-D12				X								
C1-D1					X							
C5-D5								X				
C6-D6									X			
C7-D7										X		
E11-F11											X	X
E12-F12	X	X										X
E1-F1		X	X	X								
E5-F5						X	X	X				
E6-F6							X	X	X			
E7-F7								X	X	X		
G11-H11			X	X	X							
G12-H12				X	X	X						
G1-H1					X	X	X					
G5-H5							X	X	X			
G6-H6								X	X	X		
G7-H7									X	X	X	

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Temperature

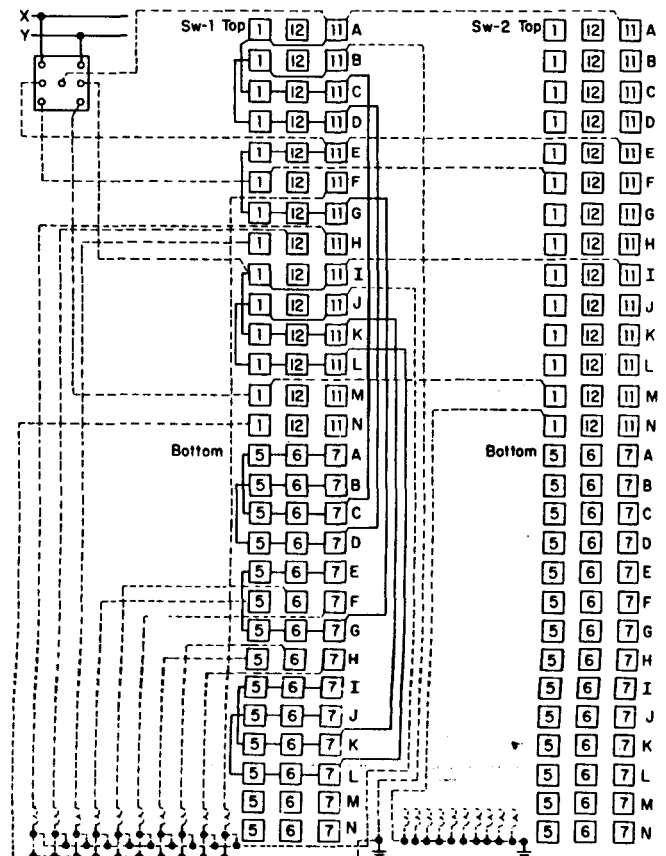
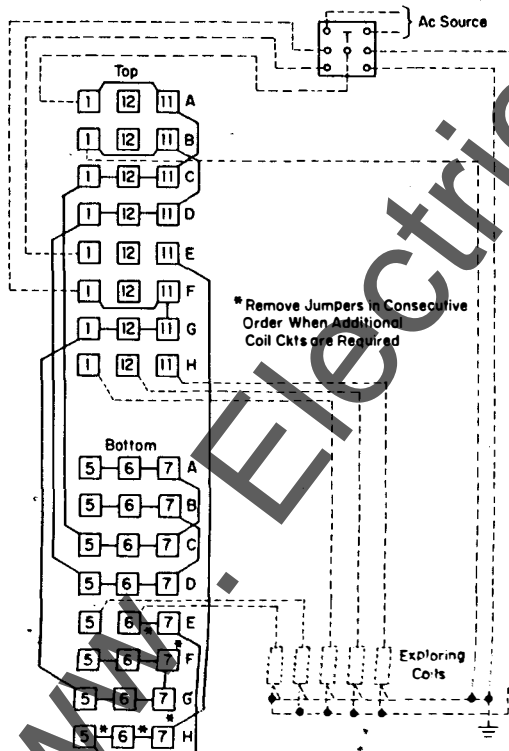
Approximate Lead Compensation

(R) Style No. 663A453G01
 Handle: Removable Key
 Contacts: Maintained
 Stages: 7, Six Contact Frame
 Mounting: 1/8-1/4
 Target: No

Note: Key Handle Removable in OFF Position Only.
 Ref. to Removable Key Handle S#505A765G03. S=270°

CONTACT	O	C	1	2	3	4	5	6	7	8	9	10
A11-B11												X
A12-B12	X											
A1-B1		X										
A5-B5						X						
A6-B6							X					
A7-B7								X				
C11-D11			X									
C12-D12				X								
C1-D1					X							
C5-D5								X				
C6-D6									X			
C7-D7										X		
E11-F11											X	X
E12-F12	X	X										X
E1-F1		X	X	X								
E5-F5						X	X	X				
E6-F6							X	X	X			
E7-F7								X	X	X		
G11-H11			X	X	X							
G12-H12				X	X	X						
G1-H1					X	X	X					
G5-H5							X	X	X			
G6-H6								X	X	X		
G7-H7									X	X	X	

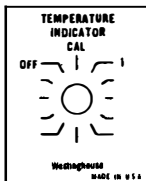
1st Stage
2nd Stage
3rd Stage Shown
5th-7th Duplicate
4th Stage Shown 6th Duplicate





Position Tabulations, Continued

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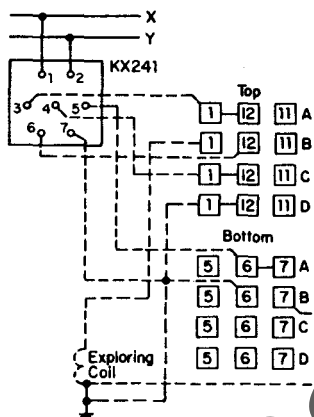


CONTACT	POSITION			
	O	C	1	2
A11-B11	X	X		
A12-B12		X	X	X
A1-B1			X	X
A5-B5	X	X		
A6-B6		X	X	X
A7-B7			X	X
C11-D11	X			
C12-D12		X		
C1-D1			X	
C5-D5	X			
C6-D6		X		
C7-D7				X

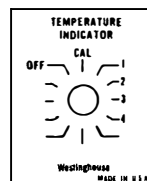
Temperature

Accurate Lead Compensation

Style No. 781A254G01
Handle: Round, Fixed
Contacts: Maintained
Stages: 2, Six Contact Frame
Mounting: 1/8-1/4
Target: No



95

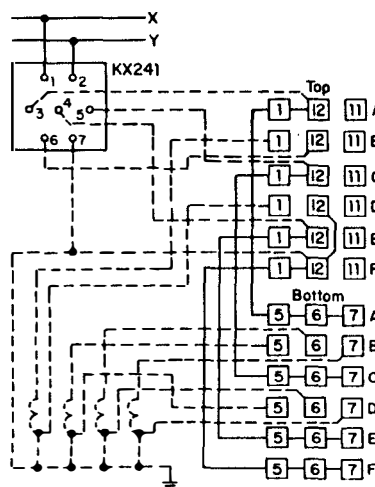


CONTACT	POSITION			
	O	C	1	2
A11-B11	X	X		
A12-B12		X	X	X
A1-B1			X	X
A5-B5	X	X		
A6-B6		X	X	X
A7-B7			X	X
C11-D11	X			
C12-D12		X		
C1-D1			X	
C5-D5	X			
C6-D6		X		
C7-D7				X
E11-F11	X			
E12-F12		X		
E1-F1			X	
E5-F5				X
E6-F6				X
E7-F7				X

Temperature

Accurate Lead Compensation

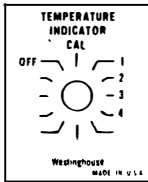
Style No. 505A709G01
Handle: Round, Fixed
Contacts: Maintained
Stages: 3, Six Contact Frame
Mounting: 1/8-1/4
Target: No



* Note: Adjacent Overlap Contacts
are Electrically Connected
Together During Transfer.

Position Tabulations, *Continued*

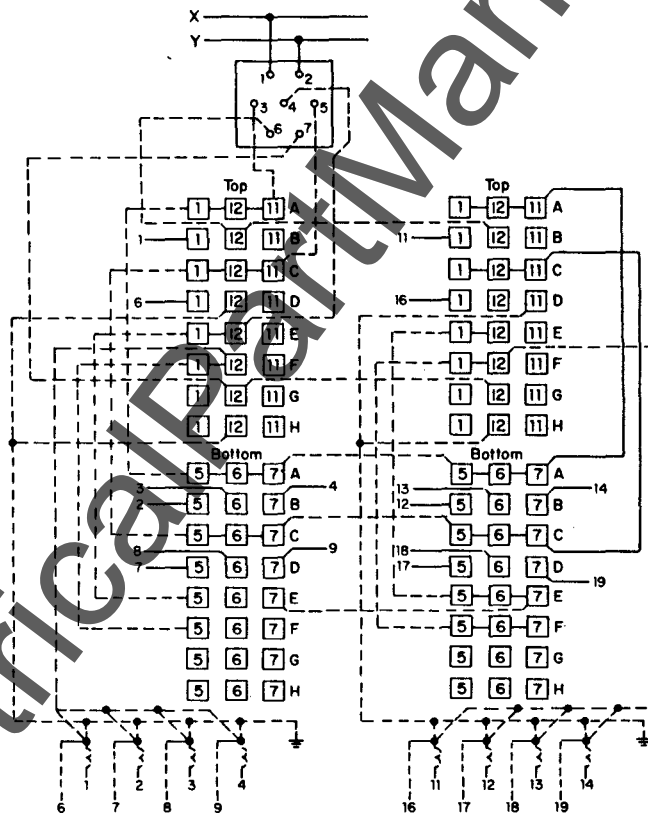
96

**Temperature****Accurate Lead Compensation**

(R) Style No. 505A711G01
 Handle: Removable Key
 Contacts: Maintained
 Stages: 4, Six Contact Frame
 Mounting: 1/8-1/4
 Target: No

Key Handle Removable in OFF Position Only.
 Ref. to Removable Key Handle S#505A711G03.
 S=90°

CONTACT	POSITION									
	-	-	-	1	-	2	-	3	-	4
A11-B11	X	X								
A12-B12		X	X	X						
A1-B1				X	X	X				
A5-B5						X	X	X		
A6-B6							X	X	X	
A7-B7										
C11-D11	X	X							X	X
C12-D12			X	X	X					
C1-D1				X	X	X				
C5-D5						X	X	X		
C6-D6								X	X	X
C7-D7										X
E11-F11	X								X	X
E12-F12			X							
E1-F1					X					
E5-F5							X			
E6-F6								X		
E7-F7										X
G11-H11	X	X								
G12-H12		X	X	X						
G1-H1				X	X	X				
G5-H5						X	X	X		
G6-H6								X	X	X
G7-H7									X	X

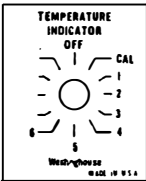


* Note: Adjacent Overlap Contacts
 are Electrically Connected
 Together During Transfer.



Position Tabulations, Continued

97

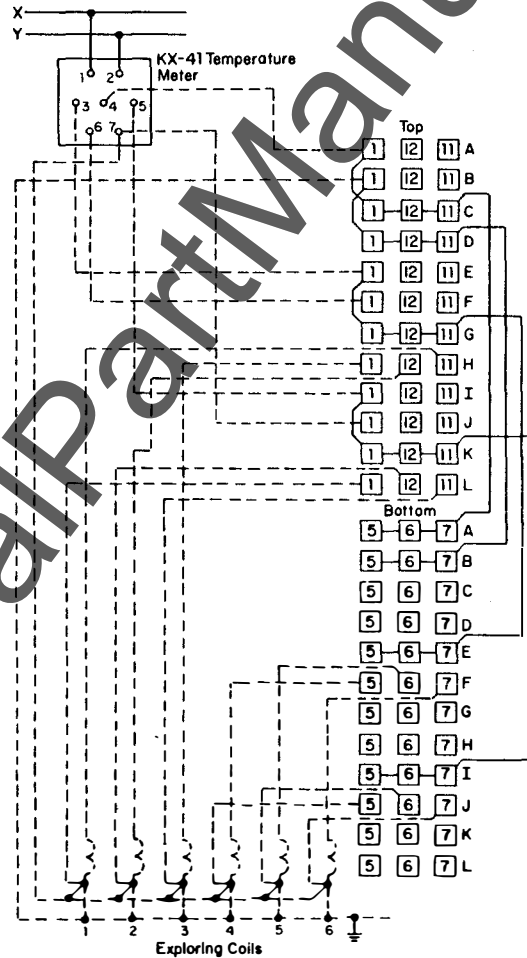


Temperature

Accurate Lead Compensation

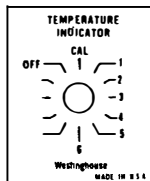
Style No. 661A210G06
Handle: Round, Fixed
Contacts: Maintained
Stages: 6, Contact Frame
Mounting: 1/8-1/4
Target: No

CONTACT	POSITION											
	0	1	2	3	4	5	6	7	8	9	10	11
A12-B12	X											
A1-B1		X										
A5-B5					X							
A6-B6						X						
A7-B7							X					
C11-D11			X									
C12-D12				X								
C1-D1					X							
E12-F12	X	X										
E1-F1		X	X	X								
E5-F5					X	X	X					
E6-F6						X	X	X				
E7-F7							X	X	X			
G11-H11			X	X	X							
G12-H12				X	X	X						
G1-H1					X	X	X					
I12-J12	X	X										
I1-J1		X	X	X								
I5-J5					X	X	X					
I6-J6						X	X	X				
I7-J7							X	X	X			
K11-L11			X	X	X							
K12-L12				X	X	X						
K1-L1					X	X	X					



Position Tabulations, *Continued*

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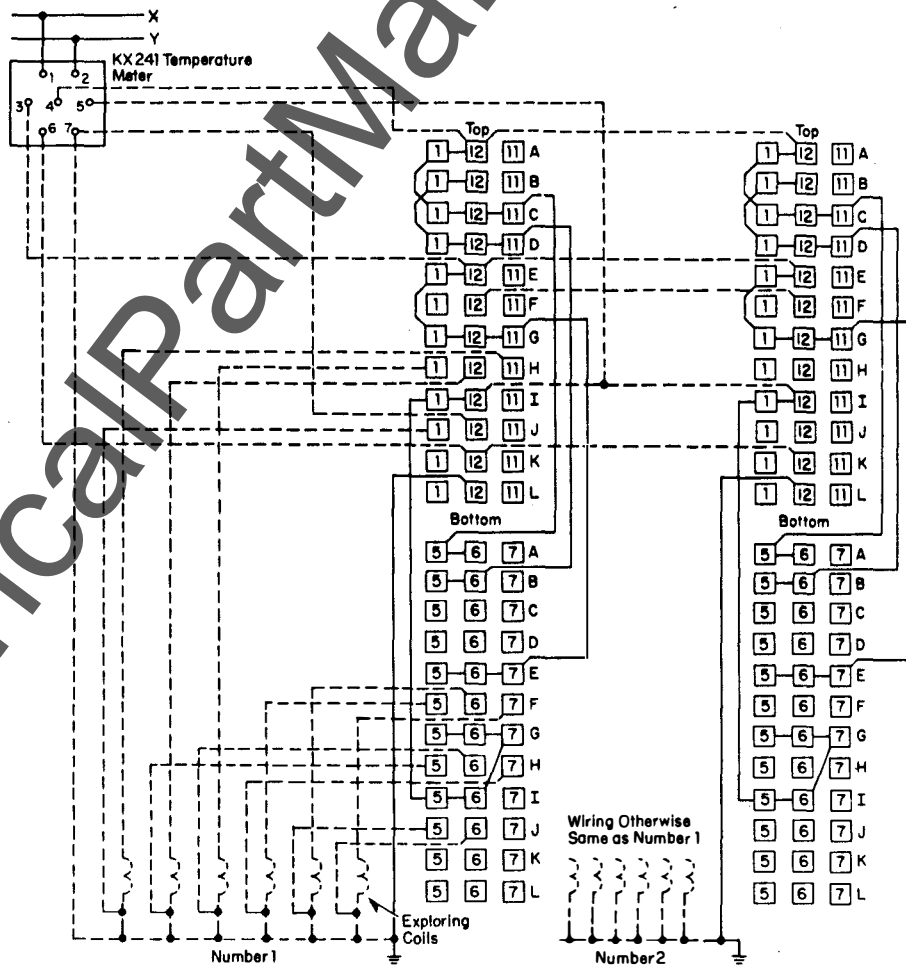
**Temperature****Accurate Lead Compensation**

(R) Style No. 781 A489G01
 Handle: Removable Key
 Contacts: Maintained
 Stages: 6, Six Contact Frame
 Mounting: 1/8-1/4
 Target: No

Note:

Key Handle Removable in OFF Position Only.
 Key Handle Not Furnished With Switch.
 Ref. to Key Handle S#505A765G03 (Round)
 S-240°

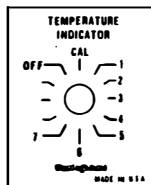
CONTACT	POSITION															
	0	-	C	-	1	-	2	-	3	-	4	-	5	-	6	
A11-B11	X															
A12-B12			X													
A1-B1				X												
A5-B5													X			
A6-B6															X	
A7-B7																
C11-D11						X										
C12-D12							X									
C1-D1								X								
C5-D5						X			X							
C6-D6							X									
C7-D7								X								
E11-F11	X	X														
E12-F12		X	X	X												
E1-F1			X	X	X						X	X	X			
E5-F5											X	X	X			
E6-F6													X	X		
E7-F7																
G11-H11					X	X	X									
G12-H12						X	X	X								
G1-J1							X	X	X							
G5-H5					X	X	X									
G6-H6						X	X	X								
G7-H7							X	X	X							
I11-J11	X	X														
I12-J12		X	X	X												
I1-J1			X	X	X											
I5-J5										X	X	X				
I6-J6													X	X		
I7-J7																
K11-L11	X	X														
K12-L12		X	X	X												
K1-L1			X	X	X											
K5-L5										X	X	X				
K6-L6											X	X	X			
K7-L7																





Position Tabulations, *Continued*

99

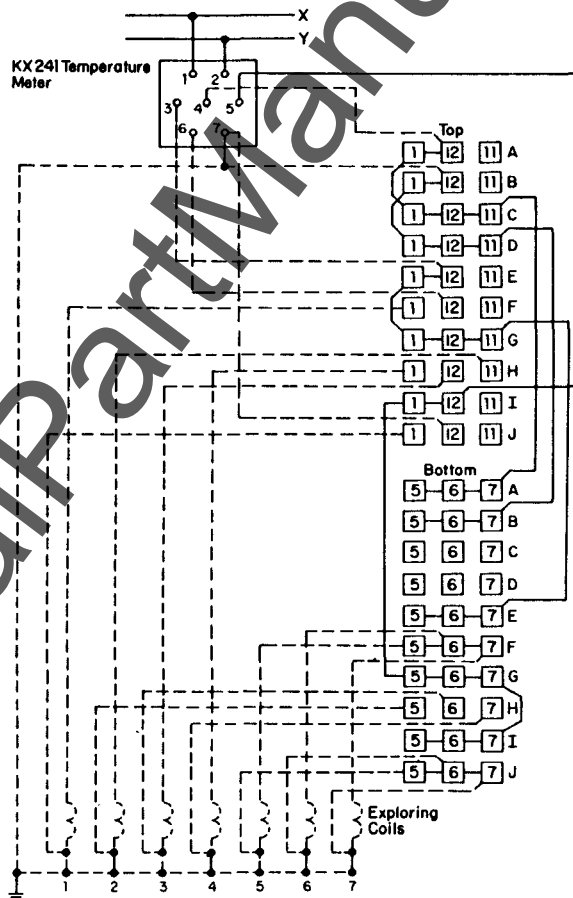


Temperature

Accurate Lead Compensation

Style No. 781A472G01
Handle: Round, Fixed
Contacts: Maintained
Stages: 5, Six Contact Frame
Mounting: 1/8-1/4
Target: No

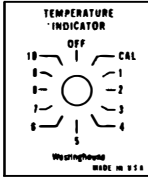
CONTACT	POSITION													
	0	1	2	3	4	5	6	7	8	9	10	11	12	13
A11-B11	X													
A12-B12		X												
A1-B1			X											
A5-B5						X								
A6-B6							X							
A7-B7								X						
C11-D11				X										
C12-D12					X									
C1-D1						X								
C5-D5				X										
C6-D6					X									
C7-D7						X								
E11-F11	X	X												
E12-F12		X	X	X										
E1-F1			X	X	X									
E5-F5						X	X	X						
E6-F6							X	X	X					
E7-F7								X	X	X				
G11-H11			X	X	X									
G12-H12				X	X	X								
G1-H1					X	X	X							
G5-H5			X	X	X									
G6-H6				X	X	X								
G7-H7					X	X	X							
I11-J11	X	X												
I12-J12		X	X	X										
I1-J1			X	X	X									
I5-J5						X	X	X						
I6-J6							X	X	X					
I7-J7								X	X					



* Note: Adjacent Overlap Contacts
are Electrically Connected
Together During Transfer.

Position Tabulations, Continued

100

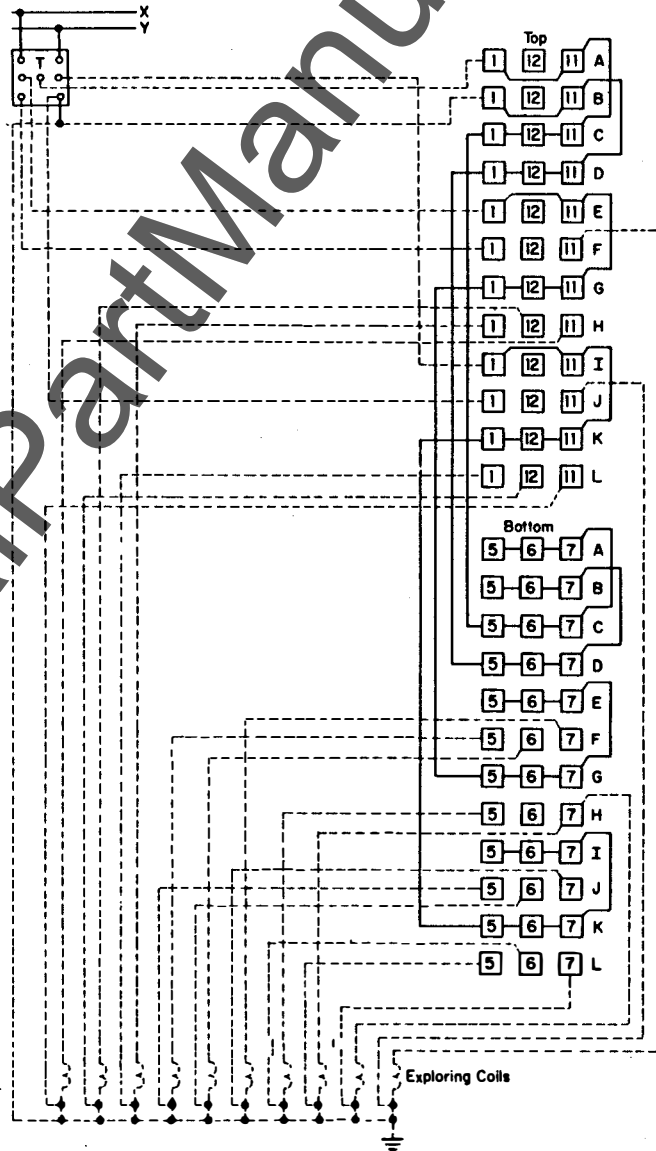


Temperature

Accurate Lead Compensation

Style No. 661A210G01
Handle: Round, Fixed
Contacts: Maintained
Stages: 6, Six Contact Frame
Mounting: 1/8-1/4
Target: No

CONTACT	0	1	2	3	4	5	6	7	8	9	10
A11-B11											X
A12-B12	X										
A1-B1		X									
A5-B5					X						
A6-B6						X					
A7-B7							X				
C11-D11			X								
C12-D12				X							
C1-D1					X						
C5-D5							X				
C6-D6								X			
C7-D7									X		
E11-F11										X	X
E12-F12	X	X								X	X
E1-F1	X	X	X								X
E5-F5					X	X	X				
E6-F6						X	X	X			
E7-F7							X	X	X		
G11-H11		X	X	X							
G12-H12			X	X	X						
G1-H1				X	X	X					
G5-H5							X	X	X		
G6-H6								X	X	X	
G7-H7									X	X	X
J11-K11										X	X
J12-K12	X	X									X
J1-K1		X	X	X							
J5-K5					X	X	X				
J6-K6						X	X	X			
J7-K7							X	X	X		
L11-M11		X	X	X							
L12-M12			X	X	X						
L1-M1				X	X	X					
L5-M5							X	X	X		
L6-M6								X	X	X	
L7-M7									X	X	X

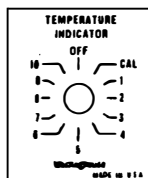


* Note: Adjacent Overlap Contacts are Electrically Connected Together During Transfer.



Position Tabulations, Continued

101



Temperature

Accurate Lead Compensation

(R) Style No. 663A454G01

Handle: Removable Key

Contacts: Maintained

Stages: 4, Six Contact Frame

Mounting: 1/8-1/4

Target: No

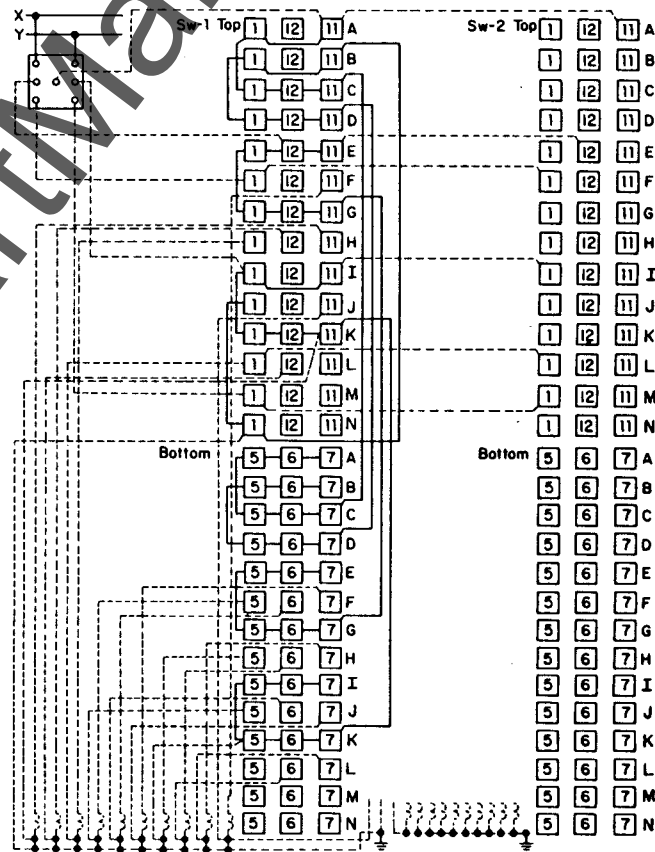
Note:

Key Removable in OFF Position Only.

Ref. to Removable Key Handle S#505A711G03

S=120°

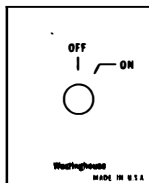
CONTACT	POSITION									
	0	C	1	2	3	4	5	6	7	8
A11-B11										
A12-B12	X									
A1-B1		X								
A5-B5						X				
A6-B6							X			
A7-B7								X		
C11-D11			X							
C12-D12				X						
C1-D1					X					
C5-D5								X		
C6-D6									X	
C7-D7										X
E11-F11										X
E12-F12	X	X								X
E1-F1		X	X							X
E5-F5					X	X	X			
E6-F6						X	X	X		
E7-F7							X	X	X	
G11-H11			X	X	X					
G12-H12				X	X	X				
G1-H1					X	X	X			
G5-H5							X	X	X	
G6-H6								X	X	X
G7-H7									X	X



Note: Wiring for Sw-2 Same as for Sw-1.

Position Tabulations, Continued

102



OFF-ON Switch

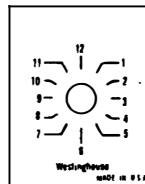
Fixed Handle Maintained Momentary
 Oval 505A706G01 505A723G01
 Pistol Grip 505A706G02 505A723G02
 Round 505A706G03 505A723G03

Stage: 1, Six Contact Frame
 Mounting: 1/8-1/4
 Target: No

CONTACT	POSITION OFF ON
A11-B11	X
A12-B12	X
A1-B1	X
A5-B5	X
A6-B6	X
A7-B7	X

Top
 1 2 11 A
 1 2 11 B
 Bottom
 5 6 7 A
 5 6 7 B

105



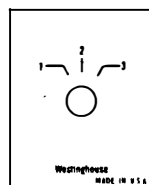
Selector Switch

Style No. 505A745G01
 Handle: Oval Fixed
 Contacts: Maintained
 Stages: 2, Six Contact Frame
 Mounting: 1/8-1/4
 Target: No

CONTACT	POSITION	1	2	3	4	5	6	7	8	9	10
A11-B11	OFF ON	X									
A12-B12	OFF ON	X									
A1-B1	OFF ON		X								
A5-B5	OFF ON				X						
A6-B6	OFF ON					X					
A7-B7	OFF ON						X				
C11-D11	OFF ON		X								
C12-D12	OFF ON			X							
C1-D1	OFF ON				X						
C5-D5	OFF ON							X			
C6-D6	OFF ON								X		
C7-D7	OFF ON									X	

Top
 1 2 11 A
 1 2 11 B
 1 2 11 C
 1 2 11 D
 Bottom
 5 6 7 A
 5 6 7 B
 5 6 7 C
 5 6 7 D

103



Selector Switch

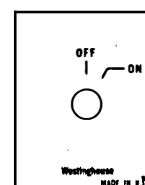
Style No. 505A702L03
 Handle: Oval Fixed
 Contacts: Maintained

Style No. 3745A75G23
 Handle: Oval Fixed
 Contacts: Momentary
 Stages: 1, Six Contact Frame
 Mounting: 1/8-1/4
 Target: No

CONTACT	POSITION 1 2 3
A11-B11	X
A12-B12	X
A1-B1	X
A5-B5	X
A6-B6	X
A7-B7	X

Top
 1 2 11 A
 1 2 11 B
 Bottom
 5 6 7 A
 5 6 7 B

106



OFF-ON Switch

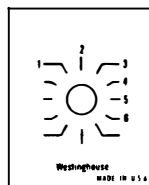
Fixed Handle Maintained Momentary
 Oval 505A722G01 505A725G06
 Pistol Grip 505A722G02 505A725G01
 Round 505A722G03 505A725G11

Stage: 1, Six Contact Frame
 Mounting: 1/8-1/4
 Target: No

CONTACT	POSITION OFF ON
A11-B11	X
A12-B12	X
A1-B1	X
A5-B5	X
A6-B6	X
A7-B7	X
C11-D11	X
C12-D12	X
C1-D1	X
C5-D5	X
C6-D6	X
C7-D7	X

Top
 1 2 11 A
 1 2 11 B
 1 2 11 C
 1 2 11 D
 Bottom
 5 6 7 A
 5 6 7 B
 5 6 7 C
 5 6 7 D

104



Selector Switch

Style No. 505A733G01
 Handle: Oval Fixed
 Contacts: Maintained
 Stages: 1, Six Contact Frame
 Mounting: 1/8-1/4
 Target: No

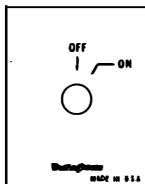
CONTACT	POSITION 1 2 3 4 5 6
A11-B11	X
A12-B12	X
A1-B1	X
A5-B5	X
A6-B6	X
A7-B7	X

Top
 1 2 11 A
 1 2 11 B
 Bottom
 5 6 7 A
 5 6 7 B



Position Tabulations, *Continued*

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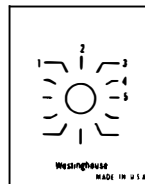
OFF-ON Switch

Style No. 505A781G03
Handle: Oval Fixed
Contacts: Maintained

Style No. 505A782G01
Handle: Oval Fixed
Contacts: Momentary
Stages: 3, Six Contact Frame
Mounting: 1/8-1/4
Target: No

CONTACT	POSITION	
	OFF	ON
A11-B11		X
A12-B12	X	
A1-B1		X
A5-B5		X
A6-B6	X	
A7-B7		X
C11-D11		X
C12-D12	X	
C1-D1		X
C5-D5		X
C6-D6	X	
C7-D7		X
E11-F11		X
E12-F12	X	
E1-F1		X
E5-F5		X
E6-F6	X	
E7-F7		X

110



General Application Switch

1 Pole - 5 Throw

Style No. 505A733G18
Handle: Oval Fixed
Contacts: Maintained
Stages: 1, Six Contact Frame
Mounting: 1/8-1/4
Target: No

CONTACT	POSITION				
	1	2	3	4	5
A11-B11	X				
A12-B12		X			
A1-B1			X		
A5-B5				X	
A6-B6					X

Top		
1	12	11 A
1	12	11 B
Bottom		
5	6	7 A
5	6	7 B

108



General Application Switch

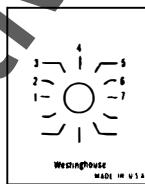
1 and 2 Pole - 2 Throw

Style No. 505A706G55
Handle: Oval Fixed
Contacts: Maintained
Stages: 1, Six Contact Frame
Mounting: 1/8-1/4
Target: No

CONTACT	POSITION	
	1	2
A11-B11		X
A12-B12	X	
A1-B1		X
A5-B5		X
A6-B6	X	
A7-B7		X

Top		
1	12	11 A
1	12	11 B
Bottom		
5	6	7 A
5	6	7 B

111



General Application Switch

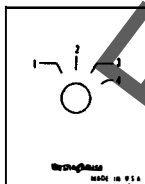
1 Pole - 7 Throw

Style No. 505A745G17
Handle: Oval Fixed
Contacts: Maintained
Stages: 2, Six Contact Frame
Mounting: 1/8-1/4
Target: No

CONTACT	POSITION						
	1	2	3	4	5	6	7
A11-B11			X				
A12-B12				X			
A1-B1					X		
C11-D11						X	
C12-D12							X
C6-D6	X						
C7-D7		X					

Top		
1	12	11 A
1	12	11 B
1	12	11 C
1	12	11 D
Bottom		
5	6	7 A
5	6	7 B
5	6	7 C
5	6	7 D

109



General Application Switch

1 Pole - 4 Throw

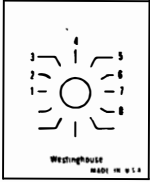
Style No. 505A733G17
Handle: Oval Fixed
Contacts: Maintained
Stages: 1, Six Contact Frame
Mounting: 1/8-1/4
Target: No

CONTACT	POSITION			
	1	2	3	4
A11-B11	X			
A12-B12		X		
A1-B1			X	
A5-B5				X

Top		
1	12	11 A
1	12	11 B
Bottom		
5	6	7 A
5	6	7 B

Position Tabulations, Continued

112



CONTACT	POSITION							
	1	2	3	4	5	6	7	8
A11-B11			X					
A12-B12				X				
A1-B1					X			
C11-D11						X		
C12-D12							X	
C1-D1								X
C6-D6	X							
C7-D7		X						

General Application Switch

1 Pole - 8 Throw

Style No. 505A745G18

Handle: Oval Fixed

Contacts: Maintained

Stages: 2, Six Contact Frame

Mounting: 1/8-1/4

Target: No

Top
1 12 11 A

1 12 11 B

1 12 11 C

1 12 11 D

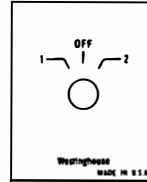
Bottom
5 6 7 A

5 6 7 B

5 6 7 C

5 6 7 D

114



General Application Switch

1 Pole or 2 Pole With OFF

Style No. 505A702L02

Handle: Oval Fixed

Contacts: Maintained

Style No. 505A703G51

Handle: Oval Fixed

Contacts: Momentary

Stages: 1, Six Contact Frame

Mounting: 1/8-1/4

Target: No

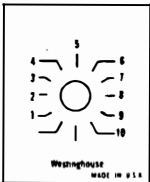
Top
1 12 11 A

1 12 11 B

Bottom
5 6 7 A

5 6 7 B

113



CONTACT	POSITION									
	1	2	3	4	5	6	7	8	9	10
A11-B11				X						
A12-B12					X					
A1-B1						X				
C11-D11							X			
C12-D12								X		
C1-D1									X	
A5-B5										X
C5-D5	X									
C6-D6		X								
C7-D7			X							

General Application Switch

1 Pole - 10 Throw

Style No. 505A745G19

Handle: Oval Fixed

Contacts: Maintained

Stages: 2, Six Contact Frame

Mounting: 1/8-1/4

Target: No

Top
1 12 11 A

1 12 11 B

1 12 11 C

1 12 11 D

Bottom
5 6 7 A

5 6 7 B

5 6 7 C

5 6 7 D

115



CONTACT	POSITION							
	1	2	3	4	5	6	7	8
A11-B11			X					
A12-B12				X				
A1-B1					X			
C11-D11						X		
C12-D12							X	
C1-D1								X
C6-D6	X							
C7-D7		X						
E11-F11			X					
E12-F12				X				
E1-F1					X			
G11-H11						X		
G12-H12							X	
G1-H1								X
G6-H6	X							
G7-H7		X						

General Application Switch

2 Pole - 8 Throw

Style No. 508A423G16

Handle: Oval Fixed

Contacts: Maintained

Stages: 4, Six Contact Frame

Mounting: 1/8-1/4

Target: No

Top
1 12 11 A

1 12 11 B

1 12 11 C

1 12 11 D

1 12 11 E

1 12 11 F

1 12 11 G

1 12 11 H

Bottom
5 6 7 A

5 6 7 B

5 6 7 C

5 6 7 D

5 6 7 E

5 6 7 F

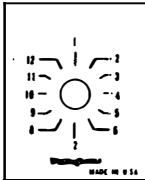
5 6 7 G

5 6 7 H



Position Tabulations, Continued

116



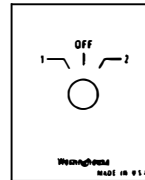
General Application Switch

2 Pole - 12 Throw

Style No. 508A423G17
Handle: Oval Fixed
Contacts: Maintained
Stages: 4, Six Contact Frame
Mounting: 1/8-1/4
Target: No

CONTACT	POSITION										
	1	2	3	4	5	6	7	8	9	10	11
A11-B11	X										
A12-B12		X									
A1-B1			X								
A5-B5						X					
A6-B6							X				
A7-B7								X			
C11-D11				X							
C12-D12					X						
C1-D1						X					
C5-D5								X			
C6-D6									X		
C7-D7										X	
E11-F11	X										X
E12-F12		X									
E1-F1			X								
E5-F5						X					
E6-F6							X				
E7-F7								X			
G11-H11				X							
G12-H12					X						
G1-H1						X					
G5-H5								X			
G6-H6									X		
G7-H7										X	

118



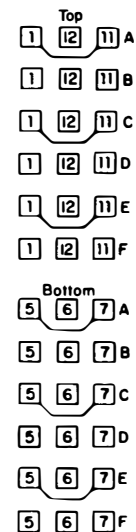
General Application Switch

6 Pole - 2 Throw

Style No. 505A726G14
Handle: Oval Fixed
Contacts: Maintained

Style No. 505A727G15
Handle: Oval Fixed
Contacts: Momentary
Stages: 3, Six Contact Frame
Mounting: 1/8-1/4
Target: No

CONTACT	POSITION	
	1	2
A11-B11	X	
A12-B12		X
A1-B1		X
A5-B5	X	
A6-B6		X
A7-B7		X
C11-D11	X	
C12-D12		X
C1-D1		X
C5-D5	X	
C6-D6		X
C7-D7		X
E11-F11	X	
E12-F12		X
E1-F1		X
E5-F5	X	
E6-F6		X
E7-F7		X



117



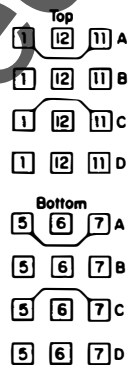
General Application Switch

4 Pole - 2 Throw

Style No. 505A712G92
Handle: Oval Fixed
Contacts: Maintained

Style No. 505A715G32
Handle: Oval Fixed
Contacts: Momentary
Stages: 2, Six Contact Frame
Mounting: 1/8-1/4
Target: No

CONTACT	POSITION	
	1	2
A11-B11	X	
A12-B12		X
A1-B1		X
A5-B5	X	
A6-B6		X
A7-B7		X
C11-D11	X	
C12-D12		X
C1-D1		X
C5-D5	X	
C6-D6		X
C7-D7		X



Basic Switches-Style Numbers

Basic switches do not include handle, nameplate nor external jumpers; these items may be ordered separately. For handles see page 2, nameplates see page 9 and external jumpers see page 9. For complete switch style including handle, nameplate and jumpers, refer to Switchgear Component Sales, East Pittsburgh Division.

Momentary Contacts

Figure	Basic Switch	Target	Handle
119	505A623G01 ①	No	Fixed
119	663A177G01 ①	No	Removable Key ①
120	505A668G01 ①	No	Fixed
122	505A607G01 ①	No	Fixed
123	505A625G01 ①	No	Fixed
124	505A624G01 ①	No	Fixed
125	505A684G01 ①	No	Fixed
126	505A603G01	No	Fixed
126	508A107G01 ①	Yes	Fixed
126	663A195G01 ①	No	Removable Key ①
127	508A110G01 ①	No	Fixed
128	508A111G01 ①	No	Fixed
128	505A638G01 ①	Yes	Fixed
129	505A615G01 ①	No	Fixed
129	508A118G01 ①	Yes	Fixed
130	508A125G01 ①	No	Fixed
131	508A127G01 ①	No	Fixed
132	508A128G01 ①	No	Fixed
132	508A129G01 ①	Yes	Fixed
133	508A133G01 ①	No	Fixed
133	505A620G01 ①	Yes	Fixed
134	508A143G01 ①	No	Fixed
134	508A144G01 ①	Yes	Fixed
135	505A627G01 ①	No	Fixed
135	508A145G01 ①	Yes	Fixed
136	508A189G01 ①	No	Fixed
136	508A161G01 ①	Yes	Fixed
137	508A162G01 ①	Yes	Fixed
138	508A163G01 ①	No	Fixed
138	508A164G01 ①	Yes	Fixed
139	505A619G01 ①	Yes	Fixed
140	508A167G01 ①	Yes	Fixed
141	505A630G01 ①	No	Fixed
142	508A181G01 ①	Yes	Fixed
143	508A183G01 ①	No	Fixed
143	508A184G01 ①	Yes	Fixed
144	505A632G01 ①	No	Fixed
157	505A651G01 ①	No	Fixed
158	658A542G01 ①	No	Fixed
159	658A578G01	No	Fixed
161	505A661G01 ①	Yes	Fixed
162	508A342G01 ①	Yes	Fixed
167	508A344G01 ①	No	Fixed

Maintained Contacts

Figure	Basic Switch	Target	Handle	Figure	Basic Switch	Target	Handle
119	505A606G01	No	Fixed	146	508A199G01	No	Fixed
119	505A647G01 ①	No	Removable Key ①	146	508A300G01 ①	No	Removable Key ①
120	505A667G01	No	Fixed	147	505A633G01	No	Fixed
120	505A669G01 ①	No	Removable Key ①	148	508A302G01	No	Fixed
121	508A396G01	No	Fixed	149	508A363G01	No	Fixed
122	505A634G01	No	Fixed	150	508A307G01	No	Fixed
122	505A654G01 ①	No	Removable Key ①	150	508A308G01 ①	No	Removable Key ①
123	505A622G01	No	Fixed	151	508A310G01	No	Fixed
123	505A670G01 ①	No	Removable Key ①	151	508A311G01 ①	No	Removable Key ①
124	505A621G01	No	Fixed	152	508A314G01	No	Fixed
124	505A672G01 ①	No	Removable Key ①	152	508A370G01 ①	No	Removable Key ①
125	505A628G01	No	Fixed	153	508A317G01	No	Fixed
125	505A685G01 ①	No	Removable Key ①	154	505A645G01	No	Fixed
126	505A602G01	No	Fixed	154	508A320G01 ①	No	Removable Key ①
126	508A108G01 ①	No	Removable Key ①	155	508A323G01	No	Fixed
127	505A600G01	No	Fixed	155	781A181G01 ①	No	Removable Key ①
127	661A105G01 ①	No	Removable Key ①	156	508A326G01	No	Fixed
128	781A377G01	Yes	Fixed	157	505A650G01	No	Fixed
128	508A112G01 ①	No	Removable Key ①	157	661A152G01 ①	No	Removable Key ①
129	505A612G01	No	Fixed	158	505A659G01	No	Fixed
129	508A119G01 ①	No	Removable Key ①	158	661A150G01 ①	No	Removable Key ①
130	508A124G01	No	Fixed	159	505A660G01	No	Fixed
131	508A126G01	No	Fixed	159	663A176G01 ①	No	Removable Key ①
133	658A594G01	Yes	Fixed	160	508A334G01	No	Fixed
135	505A626G01	No	Fixed	160	663A175G01 ①	No	Removable Key ①
135	508A146G01 ①	No	Removable Key ①	167	508A343G01	No	Fixed
140	508A166G01	No	Fixed	167	781A123G01 ①	No	Removable Key ①
141	505A664G01	No	Fixed	168	508A351G01	No	Fixed
144	505A631G01	No	Fixed	169	505A644G01	No	Fixed
144	508A173G01 ①	No	Removable Key ①	169	663A340G01 ①	No	Removable Key ①
145	508A196G01	No	Fixed				
145	781A167G01 ①	No	Removable Key ①				

① Spring return to "12" position.

② If key is desired, the following must be specified:

(a) Shape of handle.

(b) If to be interchangeable with other keys, specify the position or positions in which the key is to be removable and the style of the existing switch.

(c) If the key is to be removable in a different position than indicated for the basic switch, or is to be non-interchangeable with other key handles, order the basic switch as "similar to" a style number and give specific requirements.

③ Key removable in "12" position.

④ Key removable in "11" position.

⑤ Key removable in "10" position.



com

Additional Position Tabulations

119

CONTACT	POSITION
A11-B11	X
A12-B12	X
A1-B1	X
A5-B5	X
A6-B6	X
A7-B7	X

120

CONTACT	POSITION
A11-B11	X
A12-B12	X
A1-B1	X
A5-B5	X
A6-B6	X
A7-B7	X

121

CONTACT	POSITION
A11-B11	X
A12-B12	X
A1-B1	X
A5-B5	X
A6-B6	X
A7-B7	X

122

CONTACT	POSITION
A11-B11	X
A12-B12	X
A1-B1	X
A5-B5	X
A6-B6	X
A7-B7	X

123

CONTACT	POSITION
A11-B11	X
A12-B12	X
A1-B1	X
A5-B5	X
A6-B6	X
A7-B7	X
C11-D11	X
C12-D12	X
C1-D1	X
C5-D5	X
C6-D6	X
C7-D7	X

124

CONTACT	POSITION
A11-B11	X
A12-B12	X
A1-B1	X
A5-B5	X
A6-B6	X
A7-B7	X
C11-D11	X
C12-D12	X
C1-D1	X
C5-D5	X
C6-D6	X
C7-D7	X

125

CONTACT	POSITION
A11-B11	X
A12-B12	X
A1-B1	X
A5-B5	X
A6-B6	X
A7-B7	X
C11-D11	X
C12-D12	X
C1-D1	X
C5-D5	X
C6-D6	X
C7-D7	X
E11-F11	X
E12-F12	X
E1-F1	X
E5-F5	X
E6-F6	X
E7-F7	X

126

CONTACT	POSITION
A11-B11	X
A12-B12	X
A1-B1	X
A5-B5	X
A6-B6	X
A7-B7	X

127

CONTACT	POSITION
A11-B11	X
A12-B12	X
A1-B1	X
A5-B5	X
A6-B6	X
A7-B7	X

128

CONTACT	POSITION
A11-B11	X
A12-B12	X
A1-B1	X
A5-A6	X
A6-A7	X
B5-B6	X
B6-B7	X

129

CONTACT	POSITION
A11-B11	X
A12-B12	X
A1-B1	X
A5-B5	X
A6-B6	X
A7-B7	X
C11-D11	X
C12-D12	X
C1-D1	X
C5-D5	X
C6-D6	X
C7-D7	X

130

CONTACT	POSITION
A11-B11	X
A12-B12	X
A1-B1	X
A5-B5	X
A6-B6	X
A7-B7	X
C11-D11	X
C12-D12	X
C1-D1	X
C5-D5	X
C6-D6	X
C7-D7	X

131

CONTACT	POSITION
A11-B11	X
A12-B12	X
A1-B1	X
A5-B5	X
A6-B6	X
A7-B7	X
C11-D11	X
C12-D12	X
C1-D1	X
C5-D5	X
C6-D6	X
C7-D7	X

132

CONTACT	POSITION
A11-B11	X
A12-B12	X
A1-B1	X
A5-B5	X
A6-B6	X
A7-B7	X
C11-D11	X
C12-D12	X
C1-D1	X
C5-C6	X
C6-C7	X
C7-D7	X
D6-D7	X

133

CONTACT	POSITION
A11-B11	X
A12-B12	X
A1-B1	X
A5-B5	X
A6-B6	X
A7-B7	X
C12-C1	X
D12-D1	X
C6-C7	X
D6-D7	X

134

CONTACT	POSITION
A11-B11	X
A12-B12	X
A1-B1	X
A5-A6	X
A6-A7	X
B5-B6	X
B6-B7	X
C12-C1	X
D12-D1	X
C6-C7	X
D6-D7	X

135

CONTACT	POSITION
A11-B11	X
A12-B12	X
A1-B1	X
A5-B5	X
A6-B6	X
A7-B7	X
C11-D11	X
C12-D12	X
C1-D1	X
C5-D5	X
C6-D6	X
C7-D7	X
E11-F11	X
E12-F12	X
E1-F1	X
E5-F5	X
E6-F6	X
E7-F7	X

136

CONTACT	POSITION
A11-B11	X
A12-B12	X
A1-B1	X
A5-B5	X
A6-B6	X
A7-B7	X
C12-C1	X
D12-D1	X
C6-C7	X
D6-D7	X
E12-E1	X
F12-F1	X
F6-F7	X

137

CONTACT	POSITION
A11-B11	X
A12-B12	X
A1-B1	X
A5-A6	X
A6-A7	X
B5-B6	X
B6-B7	X
C11-D11	X
C12-D12	X
C1-D1	X
C5-C6	X
C6-C7	X
D5-D6	X
D6-D7	X
E12-E1	X
F12-F1	X
E6-E7	X
F6-F7	X

138

CONTACT	POSITION
A11-B11	X
A12-B12	X
A1-B1	X
A5-B5	X
A6-B6	X
A7-B7	X
C11-D11	X
C12-D12	X
C1-D1	X
C5-C6	X
C6-C7	X
D5-D6	X
D6-D7	X
E12-E1	X
F12-F1	X
E6-E7	X
F6-F7	X

139

CONTACT	POSITION
A11-B11	X
A12-B12	X
A1-B1	X
A5-A6	X
A6-A7	X
B5-B6	X
B6-B7	X
C11-D11	X
C12-D12	X
C1-D1	X
C5-C6	X
C6-C7	X
D5-D6	X
D6-D7	X
E11-F11	X
E12-F12	X
E1-F1	X
E5-E6	X
E6-E7	X
F5-F6	X
F6-F7	X

* Adjacent overlap contacts are electrically connected together during transfer.

Additional Position Tabulations, Continued

140

CONTACT	POSITION		
	11	12	1
A11-B11	X		
A12-B12	X	X	
A1-B1			X
A5-B5	X		
A6-B6	X	X	
A7-B7			X
C11-D11	X		
C12-D12	X	X	
C1-D1			X
C5-D5	X		
C6-D6	X	X	
C7-D7			X
E12-F1	X	X	X
E6-E7	X	X	
F6-F7	X	X	X

141

CONTACT	POSITION		
	11	12	1
A11-B11	X		
A12-B12	X		
A1-B1			X
A5-B5	X		
A6-B6	X		
A7-B7			X
C11-D11	X		
C12-D12	X		
C1-D1			X
C5-D5	X		
C6-D6	X		
C7-D7			X
E11-F11	X		
E12-F12	X		
E1-F1			X
E5-F5	X		
E6-F6	X		
E7-F7			X
G11-H11	X		
G12-H12	X		
G1-H1			X
G5-H5	X		
G6-H6	X		
G7-H7			X

142

CONTACT	POSITION			
	11	12	1	2
A11-B11	X			
A12-B12	X	X		
A1-B1				X
A5-B5	X	X		
A6-B6		X	X	
A7-B7				X
C11-D11	X	X		
C12-D12		X	X	
C1-D1				X
C5-C6	X	X	X	
C6-C7	X	X	X	
D5-D6	X	X	X	
D6-D7			X	X
E11-F11	X	X		
E12-F12		X	X	
E1-F1				X
E5-E6	X	X	X	
E6-E7	X	X	X	
F6-F7	X	X	X	
G6-G7	X	X	X	
H6-H7	X	X	X	

143

CONTACT	POSITION			
	11	12	1	2
A11-B11	X	X		
A12-B12			X	X
A1-B1				X
A5-A6	X	X	X	
A6-A7			X	X
B5-B6	X	X	X	
B6-B7			X	X
C11-D11	X	X		
C12-D12			X	X
C1-D1			X	X
C5-C6	X	X	X	
C6-C7			X	X
D5-D6	X	X	X	
D6-D7			X	X
E11-F11	X	X		
E12-F12			X	X
E1-F1				X
E5-E6	X	X	X	
E6-E7			X	X
F5-F6	X	X	X	
F6-F7			X	X
G12-G1	X			X
H12-H1		X	X	X
G6-G7	X			X
H6-H7		X	X	X

144

CONTACT	POSITION		
	11	12	1
A11-B11	X		
A12-B12		X	
A1-B1			X
A5-B5	X		
A6-B6		X	
A7-B7			X
C11-D11	X		
C12-D12	X		
C1-D1			X
C5-D5	X		
C6-D6	X		
C7-D7			X
E11-F11	X		
E12-F12	X		
E1-F1			X
E5-F5	X		
E6-F6	X		
E7-F7			X
G11-H11	X		
G12-H12	X		
G1-H1			X
G5-H5	X		
G6-H6	X		
G7-H7			X
H11-J11	X		
H12-J12		X	
I1-J1			X
I5-J5	X		
I6-J6			X
I7-J7			X

145

CONTACT	POSITION		
	11	12	1
A11-B11	X		
A12-B12		X	
A1-B1			X
A5-B5	X		
A6-B6		X	
A7-B7			X
C11-D11	X		
C12-D12	X		
C1-D1			X
C5-D5	X		
C6-D6		X	
C7-D7			X
E11-F11	X		
E12-F12	X		
E1-F1			X
E5-F5	X		
E6-F6	X		
E7-F7			X
G11-H11	X		
G12-H12	X		
G1-H1			X
G5-H5	X		
G6-H6	X		
G7-H7			X
I11-J11	X		
I12-J12	X		
I1-J1			X
I5-J5	X		
I6-J6	X		
I7-J7	X		
K11-L11	X		
K12-L12	X		
K1-L1			X
K5-L5	X		
K6-L6	X		
K7-L7			X

146

CONTACT	POSITION				
	10	11	12	1	2
A11-B11	X	X	X		
A12-B12			X	X	X
A1-B1					X
A5-B5	X	X	X		
A6-B6			X	X	X
A7-B7				X	X
C11-D11	X	X	X	X	X
C12-D12	X	X	X	X	X
C1-D1	X	X	X	X	X
C5-D5	X	X	X	X	X
C6-D6	X	X	X	X	X
C7-D7	X	X	X	X	X
E11-F11		X			
E12-F12			X		
E1-F1					X
E5-F5		X			
E6-F6			X		
E7-F7					X

147

CONTACT	POSITION			
	11	12	1	2
A11-B11	X			
A12-B12	X			
A1-B1			X	
A5-B5			X	
A6-B6				X
A7-B7				X

148

CONTACT	POSITION						
	11	12	1	2	3	4	
A11-B11	X	X					
A12-B12	X	X	X				
A1-B1			X	X	X		
A5-B5			X	X	X		
A6-B6					X	X	
A7-B7						X	X

149

CONTACT	POSITION									
	11	12	1	2	3	4	5	6	7	8
A11-B11	X	X								
A12-B12	X	X	X							
A1-B1			X	X	X					
A5-B5				X	X	X				
A6-B6					X	X	X			
A7-B7						X	X	X		
C11-D11	X	X	X	X	X	X	X	X	X	X
C12-D12	X	X	X	X	X	X	X	X	X	X
C1-D1	X	X	X	X	X	X	X	X	X	X
C5-D5	X	X	X	X	X	X	X	X	X	X
C6-D6	X	X	X	X	X	X	X	X	X	X
C7-D7	X	X	X	X	X	X	X	X	X	X
E11-F11	X	X								
E12-F12	X	X	X							
E1-F1				X	X	X				
E5-F5					X	X	X			
E6-F6						X	X	X		
E7-F7							X	X	X	

150

CONTACT	POSITION			
	11	12	1	2
A11-B11	X			
A12-B12	X			
A1-B1			X	
A5-B5			X	
A6-B6				X
A7-B7				X
C11-D11	X			
C12-D12	X			
C1-D1			X	
C5-D5			X	
C6-D6			X	
C7-D7				X
E11-F11	X			
E12-F12	X			
E1-F1			X	
E5-F5			X	
E6-F6			X	
E7-F7			X	

151

CONTACT	POSITION						
	11	12	1	2	3	4	
A11-B11	X	X					
A12-B12	X	X	X				
A1-B1			X	X	X		
A5-B5			X	X	X		
A6-B6				X	X	X	
A7-B7					X	X	
C11-D11	X	X					
C12-D12	X	X	X				
C1-D1			X	X	X		
C5-D5			X	X	X		
C6-D6				X	X	X	
C7-D7					X	X	
E11-F11	X	X					
E12-F12	X	X	X				
E1-F1			X	X	X		
E5-F5			X	X	X		
E6-F6				X	X	X	
E7-F7					X	X	

* Adjacent overlap contacts are electrically connected together during transfer.



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Additional Position Tabulations, Continued

152	CONTACT	POSITION			
		11	12	1	2
	A11-B11	X			
	A12-B12		X		
	A1-B1			X	
	A5-B5	X			
	A6-B6		X		
	A7-B7			X	
	C11-D11				X
	C12-D12				
	C1-D1				X
	C5-D5			X	
	C6-D6				X
	C7-D7				X
	E11-F11	X			
	E12-F12		X		
	E1-F1			X	
	E5-F5	X			
	E6-F6		X		
	E7-F7			X	
	G11-H11			X	
	G12-H12				X
	G1-H1				X
	G5-H5			X	
	G6-H6				X
	G7-H7				X

154	CONTACT	POSITION									
		11	12	1	2	3	4	5	6	7	8
	A11-B11	X									
	A12-B12		X								
	A1-B1			X							
	A5-B5					X					
	A6-B6						X				
	A7-B7							X			
	C11-D11			X							
	C12-D12				X						
	C1-D1					X					
	C5-D5							X			
	C6-D6								X		
	C7-D7									X	

155	CONTACT	POSITION									
		11	12	1	2	3	4	5	6	7	8
	A11-B11	X									
	A12-B12		X								
	A1-B1			X							
	A5-B5					X					
	A6-B6						X				
	A7-B7							X			
	C11-D11			X							
	C12-D12				X						
	C1-D1					X					
	C5-D5							X			
	C6-D6								X		
	C7-D7									X	
	E11-F11	X									
	E12-F12		X								
	E1-F1			X							
	E5-F5					X					
	E6-F6						X				
	E7-F7							X			
	G11-H11			X							
	G12-H12				X						
	G1-H1					X					
	G5-H5							X			
	G6-H6								X		
	G7-H7									X	

157	CONTACT	POSITION	
		11	12
	A11-B11	X	
	A12-B12		X
	A1-B1		X
	A2-B2	X	
	A3-B3		X
	A4-B4	X	
	A5-B5		X
	A6-B6	X	
	A7-B7		X
	A8-B8	X	
	A9-B9		X
	A10-B10	X	

153	CONTACT	POSITION			
		11	12	1	2
	A11-B11	X			
	A12-B12		X		
	A1-B1			X	
	A5-B5	X			
	A6-B6		X		
	A7-B7			X	
	C11-D11				X
	C12-D12				X
	C1-D1				X
	C5-D5			X	
	C6-D6				X
	C7-D7				X
	E11-F11	X			
	E12-F12		X		
	E1-F1			X	
	E5-F5	X			
	E6-F6		X		
	E7-F7			X	
	G11-H11			X	
	G12-H12				X
	G1-H1				X
	G5-H5			X	
	G6-H6				X
	G7-H7				X
	I11-J11	X			
	I12-J12		X		
	I1-J1			X	
	I5-J5	X			
	I6-J6		X		
	I7-J7			X	
	K11-L11			X	
	K12-L12				X
	K1-L1				X
	K5-L5			X	
	K6-L6				X
	K7-L7				X

156	CONTACT	POSITION															
		11	12	1	2	3	4	5	6	7	8	9	10	11	12	13	14
	A11-B11	X															
	A12-B12		X														
	A1-B1			X													
	A5-B5					X											
	A6-B6						X										
	A7-B7							X									
	C11-D11			X					X								
	C12-D12				X					X							
	C1-D1					X					X						
	C5-D5						X					X					
	C6-D6							X					X				
	C7-D7								X					X			
	E11-F11	X															
	E12-F12		X														
	E1-F1			X													
	E5-F5					X											
	E6-F6						X										
	E7-F7							X									
	G11-H11			X													
	G12-H12				X												
	G1-H1					X											
	G5-H5						X										
	G6-H6							X									
	G7-H7								X								
	I11-J11	X															
	I12-J12		X														
	I1-J1			X													
	I5-J5	X															
	I6-J6		X														
	I7-J7			X													
	K11-L11					X											
	K12-L12						X										
	K1-L1							X									
	K5-L5								X								
	K6-L6									X							
	K7-L7										X						

158	CONTACT	POSITION	
		11	12
	A12-B12	X	
	A1-B1		X
	A2-B2	X	
	A3-B3		X
	A4-B4	X	
	A5-B5		X
	A6-B6	X	
	A7-B7		X
	A8-B8	X	
	A9-B9		X
	A10-B10	X	
	A11-B11	X	
	C12-D12	X	
	C1-D1		X
	C2-D2	X	
	C3-D3		X
	C4-D4	X	
	C5-D5		X
	C6-D6	X	
	C7-D7		X
	C8-D8	X	
	C9-D9		X
	C10-D10	X	
	C11-D11		X

159	CONTACT	POSITION	
		11	12
	A11-B11	X	
	A12-B12		X
	A1-B1		X
	A2-B2	X	
	A3-B3		X
	A4-B4	X	
	A5-B5		X
	A6-B6	X	
	A7-B7		X
	A8-B8	X	
	A9-B9		X
	A10-B10	X	

160	CONTACT	POSITION	1	2	1
	A11-B11	X			
	A12-B12	X			
	A1-B1				X
	A2-B2	X			
	A3-B3	X			
	A4-B4	X			
	A5-B5	X			
	A6-B6	X			
	A7-B7	X			
	A8-B8	X			
	A9-B9	X			
	A10-B10	X			
	C11-D11	X			
	C12-D12	X			
	C1-D1	X			
	C2-D2	X			
	C3-D3	X			
	C4-D4	X			
	C5-D5	X			
	C6-D6	X			
	C7-D7	X			
	C8-D8	X			
	C9-D9	X			
	C10-D10	X			

161	CONTACT	POSITION	P	11	12	1
	A11-B11	X	X			
	A12-B12	X	X			
	A1-B1					X
	A2-B2	X	X			
	A3-B3			X	X	
	A4-B4			X	X	
	A5-A6	X	X	X		
	A6-A7	X	X	X		
	B5-B6	X	X	X		
	B6-B7	X	X	X		
	A8-A9	X	X	X		
	A9-A10	X	X	X		
	B8-B9	X	X	X		
	B9-B10	X	X	X		

162	CONTACT	POSITION	P	11	12	A	1
	A11-B11	X	X				
	A12-B12	X	X				
	A1-B1						X
	A2-B2	X	X				
	A3-B3			X	X		
	A4-B4			X	X		
	A5-A6	X	X	X			
	A6-A7	X	X	X			
	B5-B6	X	X	X			
	B6-B7	X	X	X			
	A8-A9	X	X	X			
	A9-A10	X	X	X			
	B8-B9	X	X	X			
	B9-B10	X	X	X			
	C12-C1	X					
	D12-D1	X	X	X	X		
	C2-C3	X					
	D2-D3	X	X	X	X		
	C4-C5	X					
	D4-D5	X	X	X	X		
	C6-C6	X					
	D6-D7	X	X	X	X		
	C8-C9	X					
	D8-D9	X	X	X	X		
	C10-C11	X					
	D10-D11	X	X	X	X		

163	CONTACT	POSITION	11	12	1	2
	A11-B11	X				
	A12-B12	X				
	A1-B1				X	
	A2-B2				X	
	A3-B3	X				
	A4-B4	X				
	A5-B5		X			
	A6-B6		X			
	A7-B7	X				
	A8-B8	X				
	A9-B9	X				
	A10-B10	X				

164	CONTACT	POSITION	10	11	12	1	2	3
	A10-B10	X						
	A11-B11	X						
	A12-B12					X		
	A1-B1					X		
	A2-B2					X		
	A3-B3					X		
	A4-B4	X						
	A5-B5		X					
	A6-B6			X				
	A7-B7				X			
	A8-B8					X		
	A9-B9						X	

165	CONTACT	POSITION	2	1	2	3	4	5	6	7	8	9	10	11
	A12-B12	X												
	A1-B1		X											

[illegible]



This form is available through your Westinghouse office or Westinghouse Electric Supply Company location.

Form 34219 (For ordering switches not covered in this publication or to outline desired modifications)

SWITCH POSITION TABULATION
TYPE W2 SWITCH-DESCRIPTIVE BULLETIN 34-251
WESTINGHOUSE FORM 34219

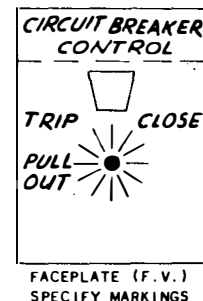
SWITCH STYLE NO.	PURCHASER	G.O. NO.	ENG.	DATE
505A717G02	John Doe	A2XZY		

SWITCH POSITION TABULATION (Front View)																			
CONTACT	POSITION																		
	PULL	TRIP	OFF	AFT	CLOSE														
	T		T	C															
A11-B11	X	X																	
A12-B12			X	X															
A1-B1					X														
A5-A6	X	X	X																
A6-A7				X	X														
B5-B6	X	X	X																
B6-B7				X	X														
C11-D11	X	X																	
C12-D12			X	X															
C1-D1					X														
C5-C6	X	X	X																
C6-C7				X	X														
D5-D6	X	X	X																
D6-D7				X	X														

TOP		TOP	
1 12 11 A	3 2 1 12 11 10 9 A	1 12 11 B	3 2 1 12 11 10 9 B
BOTTOM		BOTTOM	
5 6 7 A	4 5 6 7 8 A	5 6 7 B	4 5 6 7 8 B
PLAN VIEW		PLAN VIEW	
TYPICAL 6 CONTACT STAGE		TYPICAL 12 CONTACT STAGE	

CONTACTS: Momentary - Maintained
HANDLES: Fixed - Removable Key
Over - Round - Pistol Grip
MOUNTING: 1/8 - 1/4 - 1 - 1 1/2 - 2, _____ Thick Panel
TARGET: Yes - No
STAGE CONTACTS: 6 - 12

Remarks or Additional Data:



LOCATION

DEPT.

NAME

