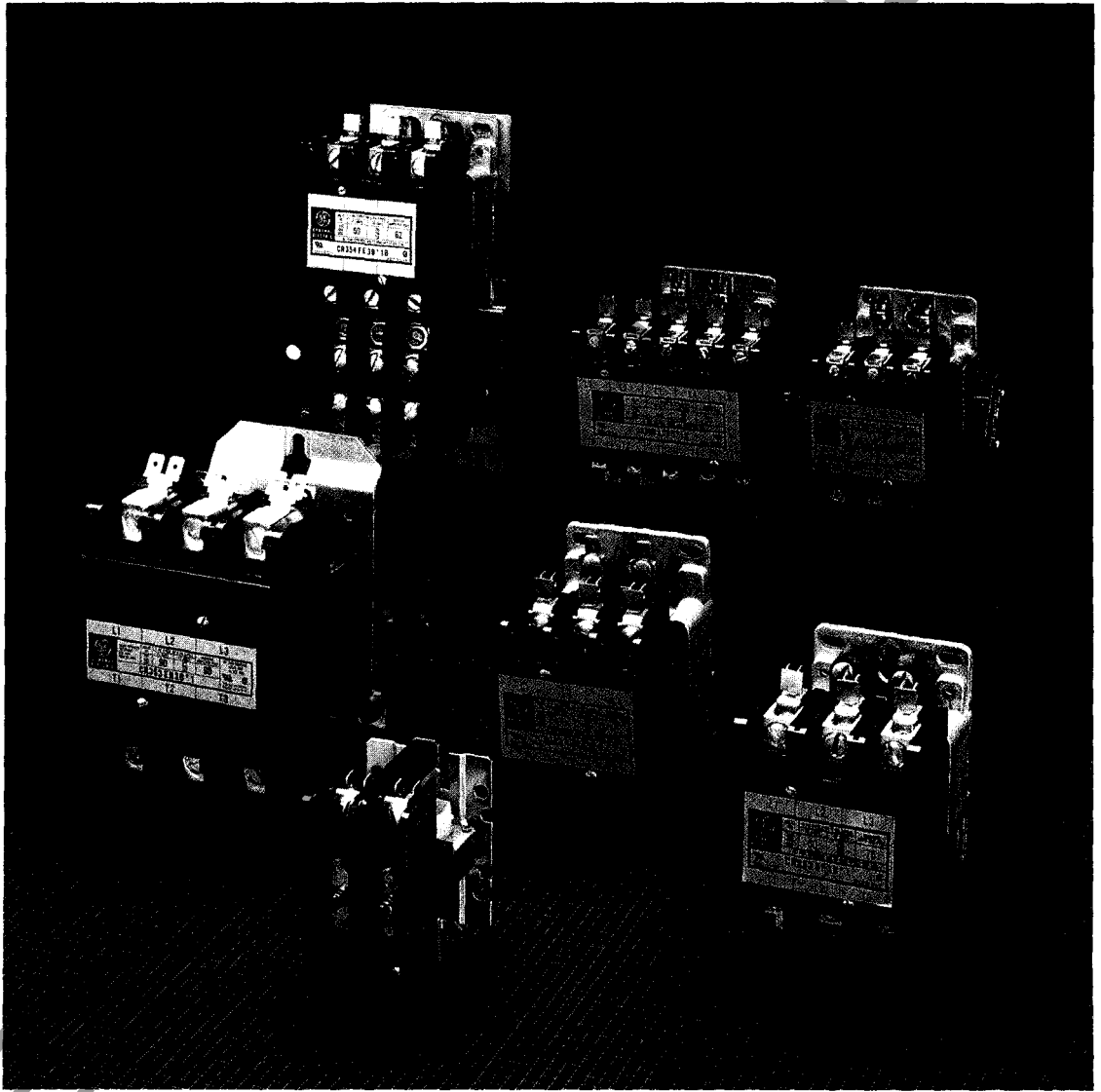




*GE Definite Purpose Controls*

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**Contactors, Starters, Two-speed Controllers**



# Reliable Contactors, Starters, and Two-speed Controllers With Broad Industry Acceptance

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## Introduction:

Serving industry for over 30 years, GE continues to offer definite purpose control components that provide the dependability required on today's air conditioning, heating and refrigeration, data processing, power supply, food processing, agricultural, and other industrial equipment. Contactors, starters, and 2-speed controllers reflect quality materials and workmanship resulting in products with broad industry acceptance. Backed by design knowledge and experience, GE definite purpose components offer high reliability for a wide variety of applications. All carry UL component recognition and are certified by CSA.

Look at these customer-oriented features and benefits:

- Universal mounting plate with multiple holes makes it easy to interchange with other manufacturers' devices.
- Bold, easy-to-read terminal markings simplify installation and field maintenance.
- Straight-through wiring helps speed installation.
- Wiring time is reduced because it is not necessary to loop or bend leads around the device.
- Connections are further simplified with standard combination screw and quick-connect power and coil terminals.

- Moisture-resistant coils protect contactors from dirt and moisture.
- Precision, self-aligning magnets add to quiet, dependable operation.
- Inspection of durable, double-break contacts is performed easily without removal of contactor.
- Housing design offers high arc tracking resistance and dielectric strength.
- Corrosion-resistant materials used throughout.
- Arc confining cover (except CR353C compact design).
- Replaceable contacts and coils (except for CR353C compact design).
- New Class B coil for higher ambient operation on contactors up to 60 FLA.

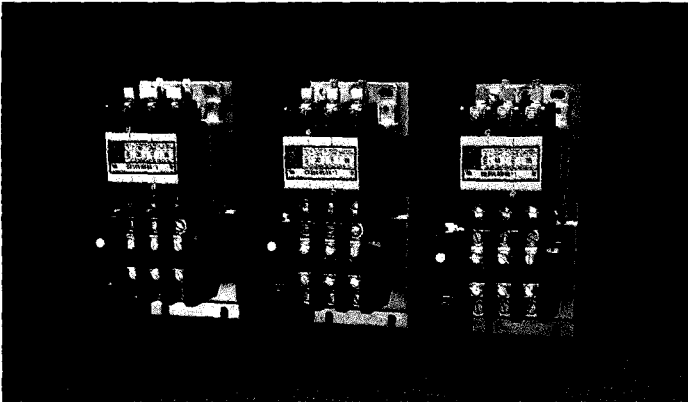
This bulletin provides detailed technical information for easy, accurate selection of all GE definite purpose controls. Simplified charts for all basic models include all available factory modification for your exact requirements. Field modification kits and replacement parts are also included for easy selection.

## Contactors



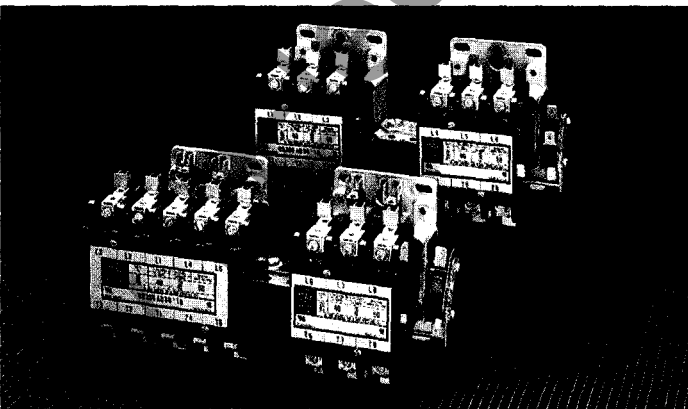
- 20 through 150 ampere.
  - 600-volt rated.
  - Silver cadmium oxide contacts for dependable service and long life.
  - Molded coils to protect against damage and resist moisture.①
  - Arc confining cover also protects against contaminants.①
  - Standard terminations:
    - Binding head screw with double quick connect terminals on 20-, 25-, and 30-ampere ratings.
    - Box lugs with double quick connect terminals on 40- through 90-ampere ratings.
    - Pressure connectors on 120- and 150-ampere ratings.
  - Replaceable coil and contacts.①
  - Clearly visible nameplates.
  - Enclosure kits available.①
- ① Does not apply to CR353C contactors.

## Starters



- 25- through 60-ampere.
- 600-volt rated.
- Single- and 3-phase forms.
- Standard or ambient compensated overload relays.
- Straight through wiring.
- Enclosure kit available.

## Two-speed Controllers



- 25- through 90-ampere.
- 600-volt rated.
- For single- or two-winding motor application.
- Standard features include mechanical and cross-electrical interlocking.



20-, 25-, and 30-ampere, 1- and 2-pole Compact Design

**CR353 — Open Type**

**1-pole**

Inductive Full Load	Ampere Ratings				Resistive Per Pole	Standard Open Type
	Locked Rotor ①			Resistive Per Pole		Catalog Number
	277V	480V	600V			
20	120	100	80	30	CR353CA1A*1	
25	150	125	100	35	CR353CB1A*1	
30	150	125	100	40	CR353CC1A*1	

\* Insert letter from Coil Selection Table below.

① Refer to page 13 for stalled rotor recycle ratings.



**1-pole Plus Shunted Pole**

Inductive Full Load	Ampere Ratings				Resistive Per Pole	Standard Open Type
	Locked Rotor ①			Resistive Per Pole		Catalog Number
	277V	480V	600V			
20	120	100	80	30	CR353CA3A*1	
25	150	125	100	35	CR353CB3A*1	
30	150	125	100	40	CR353CC3A*1	

\* Insert letter from Coil Selection Table below.

① Refer to page 13 for stalled rotor recycle ratings.

**2-pole**

Inductive Full Load	Ampere Ratings				Resistive Per Pole	Standard Open Type
	Locked Rotor ①			Resistive Per Pole		Catalog Number
	277V	480V	600V			
20	120	100	80	30	CR353CA2A*1	
25	150	125	100	35	CR353CB2A*1	
30	180	150	120	40	CR353CC2A*1	

\* Insert letter from Coil Selection Table below.

① Refer to page 13 for stalled rotor recycle ratings.

**AC Coil Selection Table**

Letter Code	Voltage		Inrush VA (Nominal)		Sealed VA (Nominal)		Sealed Watts (Nominal)		Resistance Ohms ± 10%
	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	
H	24	24	35	42	7.0	8.5	3.0	3.2	11
A	110-120	110	42	50	8.5	10.2	3.6	3.85	210
B	208-240	208-220	42	50	8.5	10.2	3.6	3.85	790
F	277	—	42	50	8.5	10.2	3.6	—	1240
C	440-480	380-440	42	50	8.5	10.2	3.6	3.85	3550

**Factory Modifications**

**Terminals:**

Change letter in 9th position (CR353CA2AH1)

<b>Binding Head Screw</b> With Quick Connect Terminals . . . . . <b>A</b>
<b>Screw with Pressure Plate</b> With Quick Connect Terminals . . . . . <b>E</b>

**Auxiliary Contacts:**

Letter "A" in 12th position (CR353CA2AH1A)

Indicates no auxiliary contacts. If auxiliary contacts are required, refer to CR353A forms. Omit "A" if customer part number is not required.
---

**Terminal Markings:**

Number "1" in 11th position (CR353CA2AH1)

Indicates Line ("L") markings at Top/Load ("T") markings at bottom
--

**Customer Part Number:**

Add letter in 13th position (CR353CA2AH1AB)

Customer Part Number on device and carton label . . . <b>B</b>
--

20-, 30-, and 40-ampere, 2-, 3- and 4-pole

**CR353A — Open Type**

Ampere Ratings				Resistive Per Pole	Number Of Poles <sup>①</sup>	Standard Open Type
Inductive Full Load	Locked Rotor		Catalog Number			
	240V	480V		600V		
25	150	125	100	35	2 3 4	CR353AB2A*1
						CR353AB3A*1
						CR353AB4A*1
30	180	150	120	40	2 3 4	CR353AC2A*1
						CR353AC3A*1
						CR353AC4A*1
40	240	200	160	50	2 3 4	CR353AD2B*1
						CR353AD3B*1
						CR353AD4B*1

\* Insert letter from Coil Selection Tables below.

① For information on 5-pole Forms, refer to your nearest GE Electrical Distribution & Control sales office.



**AC Coil Selection Table**

Letter Code	Voltage		Inrush VA (Nominal)		Sealed VA (Nominal)		Sealed Watts (Nominal)		Resistance Ohms ± 10%
	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	
H	24 (2, 3-pole)	24	60	68	7	7.4	2.3	2.7	5.61
H	24 (4-pole)	24	77	87	10	12	4.0	4.6	3.94
A	110-120	110-120	77	87	10	12	4.0	4.6	89.5
B	208-240	208-240	77	87	10	12	4.0	4.6	366.0
F	277	—	77	—	10	—	4.0	—	713.0
C	416-480	416-480	77	87	10	12	4.0	4.6	1872.0
D	575-600	550	77	87	10	12	4.0	4.6	2983.0

**DC Coil Selection Table<sup>②</sup>**

Letter Code	Voltage	Inrush VA (Nominal)	Sealed VA (Nominal)	Sealed Watts (Nominal)	Resistance Ohms ± 10%	
					Inrush	Sealed
P	12-14 VDC	54	2.34	2.34	2.98	61.6
R	24-28 VDC	54	2.34	2.34	12.6	283.0
S	120 VDC	140	5.16	5.16	98.4	2783.0

② Includes factory wired coil switch.

**Factory Modifications**

**Terminals:**

Change letter in 9th position (CR353AC3AH1)

<b>Binding Head Screw</b>	
With Quick Connect Terminals	<b>A</b>
Without Quick Connect Terminals	<b>C</b>
<b>Box Lug</b>	
With Quick Connect Terminals	<b>B</b>
Without Quick Connect Terminals	<b>D</b>

**Terminal Markings:**

Change number in 11th position (CR353AC3AH1)

No terminal markings	<b>0</b> <sup>③</sup>
Line ("L") markings at Top/Load ("T") markings at bottom	<b>1</b>
Load ("T") markings at Top/Line ("L") markings at bottom	<b>2</b>

③ Omit "0" if additional modifications are not required.

**Auxiliary Contacts:**

Add letter in 12th position (CR353AC3AH1B)

None	<b>A</b> <sup>④</sup>
10 Amp, 250 Vac SPDT <sup>⑤</sup> on left side	<b>B</b>

④ Omit "A" if additional modification is not required.

⑤ For 600-volt rating, select a device with additional power pole.

**Customer Part Number:**

Add letter in 13th position (CR353AC3AH1BB)

Customer Part Number on device and carton label	<b>B</b>
---	----------



50- and 60-ampere, 2- and 3-pole

### CR353F — Open Type

Inductive Full Load	Ampere Ratings			Resistive Per Pole	Number Of Poles	Standard Open Type
	Locked Rotor					Catalog Number
	240V	480V	600V			
50	300	250	200	62	2 3	CR353FE2B*1 CR353FE3B*1
60	360	300	240	75	2 3	CR353FF2B*1 CR353FF3B*1



\* Insert letter from Coil Selection Tables below.

### AC Coil Selection Table

Letter Code	Voltage		Inrush VA (Nominal)		Sealed VA (Nominal)		Sealed Watts (Nominal)		Resistance Ohms ±10%
	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	
H	24	24	100	119	11	14	8	9.4	2.75
A	110-120	110-120	100	119	11	14	8	9.4	64.3
B	208-240	208-240	100	119	11	14	8	9.4	241.0
F	277	—	100	—	11	—	8	—	389.0
C	440-480	380-416	100	119	11	14	8	9.4	972.0
D	575-600	550	100	119	11	14	8	9.4	2074.0

### DC Coil Selection Table<sup>①</sup>

Letter Code	Voltage	Inrush VA (Nominal)	Sealed VA (Nominal)	Sealed Watts (Nominal)	Resistance Ohms ± 10%	
					Inrush	Sealed
P	12 VDC	110	3.8	3.8	1.85	37.6
R	24 VDC	110	3.8	3.8	5.2	153.0
S	115 VDC	110	3.8	3.8	133.0	2519.0

① Includes factory wired coil switch.

### Factory Modifications

#### Terminals:

Change letter in 9th position (CR353FE3BH1)

<b>Binding Head Screw</b>	
With Quick Connect Terminals	A
Without Quick Connect Terminals	C
<b>Box Lug</b>	
With Quick Connect Terminals	B
Without Quick Connect Terminals	D

#### Auxiliary Contacts:

Add letter in 12th position (CR353FE3BH1B)

None	A <sup>③</sup>
10 Amp, 250 Vac SPDT on left side	B
10 Amp, 600 Vac, 1-NO on left side	G

③ Omit "A" if additional modification is not required.

#### Terminal Markings:

Change number in 11th position (CR353FE3BH1)

No terminal markings	0 <sup>②</sup>
Line ("L") markings at Top/Load ("T") markings at bottom	1
Load ("T") markings at Top/Line ("L") markings at bottom	2

② Omit "0" if additional modifications are not required.

#### Customer Part Number:

Add letter in 13th position (CR353FE3BH1BB)

Customer Part Number on device and carton label	B
---	---

75- and 90-ampere, 2- and 3-pole

**CR353E — Open Type**

Ampere Ratings				Resistive Per Pole	Number Of Poles	Standard Open Type
Inductive Full Load	Locked Rotor					Catalog Number
	240V	480V	600V			
75	450	375	300	90	2	CR353EG2B*1
					3	CR353EG3B*1
90	540	450	360	90	2	CR353EH2B*1
					3	CR353EH3B*1

\* Insert letter from Coil Selection Tables below.



**AC Coil Selection Table**

Letter Code	Voltage		Inrush VA (Nominal)		Sealed VA (Nominal)		Sealed Watts (Nominal)		Resistance Ohms ± 10%
	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	
H	24	—	233	—	40	—	16	—	1.46
A	115–120	110	233	263	40	51	16	19	28.7
B	208–240	220	233	263	40	51	16	19	109.0
F	277	—	233	—	40	—	16	—	169.0
C	460	440	233	263	40	51	16	19	547.0
D	600	550	233	263	40	51	16	19	655.0

**DC Coil Selection Table<sup>①</sup>**

Letter Code	Voltage	Inrush VA (Nominal)	Sealed VA (Nominal)	Sealed Watts (Nominal)	Resistance Ohms ± 10%	
					Inrush	Sealed
P	12 VDC	275	11.5	11.5	.54	12.7
R	24 VDC	275	11.5	11.5	2.13	51.9
S	115 VDC	275	11.5	11.5	47.1	1133.0

① Includes factory wired coil switch.

**Factory Modifications**

**Terminals:**

Change letter in 9th position (CR353EG3BH1)

<b>Binding Head Screw</b>	
With Quick Connect Terminals	A
Without Quick Connect Terminals	C
<b>Box Lug</b>	
With Quick Connect Terminals	B
Without Quick Connect Terminals	D

**Auxiliary Contacts:**

Add letter in 12th position (CR353EG3BH1B)

None	A <sup>③</sup>
10 Amp, 250 Vac SPDT on left side	B
10 Amp, 600 Vac, 1-NO, 1-NC on left side	D

③ Omit "A" if additional modification is not required.

**Terminal Markings:**

Change number in 11th position (CR353EG3BH1)

No terminal markings	0 <sup>②</sup>
Line ("L") markings at Top/Load ("T") markings at bottom	1
Load ("T") markings at Top/Line ("L") markings at bottom	2

② Omit "0" if additional modifications are not required

**Customer Part Number:**

Add letter in 13th position (CR353EG3BH1BB)

Customer Part Number on device and carton label	B
---	---



120- and 150-ampere, 2- and 3-pole

### CR353G — Open Type

Inductive Full Load	Ampere Ratings			Resistive Per Pole	Number Of Poles	Standard Open Type
	Locked Rotor					Catalog Number
	240V	480V	600V			
120	720	600	480	120	2 3	CR353GJ2A*1 CR353GJ3A*1
150 ①	900	750	600	150	2 3	CR353GK2A*1 CR353GK3A*1

\* Insert letter from Coil Selection Table below.

① For information on higher ratings, refer to your nearest GE Electrical Distribution & Control sales office.



### AC Coil Selection Table

Letter Code	Voltage		Inrush VA (Nominal)		Sealed VA (Nominal)		Sealed Watts (Nominal)		Resistance Ohms ±10%	
	60 Hz	50 Hz	60/50 Hz		60/50 Hz		60/50 Hz		120 Amp	150 Amp
			120 Amp	150 Amp	120 Amp	150 Amp	120 Amp	150 Amp		
A	115-120	110	1150	1217	80	85	18.4	18.8	2.11	2.02
B	230-240	220	1150	1217	80	85	18.4	18.8	10.6	10.4
C	460-480	440	1150	1217	80	85	18.4	18.8	41.8	41.7
D	575-600	550	1150	1217	80	85	18.4	18.8	67.0	64.4

### Factory Modifications

#### Terminals:

Change letter "A" in 9th position (CR353GJ2AB1)

Indicates Pressure Type Terminals

#### Customer Part Number:

Add letter in 13th position (CR353GJ3AB1BB)

Customer Part Number on device and carton label ..... B

#### Terminal Markings:

Change number "1" in 11th position (CR353GJ2AB1)

Indicates Line ("L") markings at Top/Load ("T") markings at bottom

#### Auxiliary Contacts:

Add letter in 12th position (CR353GJ3AB1B)

None	A <sup>2</sup>
10 Amp, 600 Vac, 1 NO	B
10 Amp, 600 Vac, 1 NC	C
10 Amp, 600 Vac, 1 NO-1 NC	D

② Omit "A" if additional modification is not required.



25-, 30-, and 40-ampere, Single- and Three-phase

### CR354A — Open Type

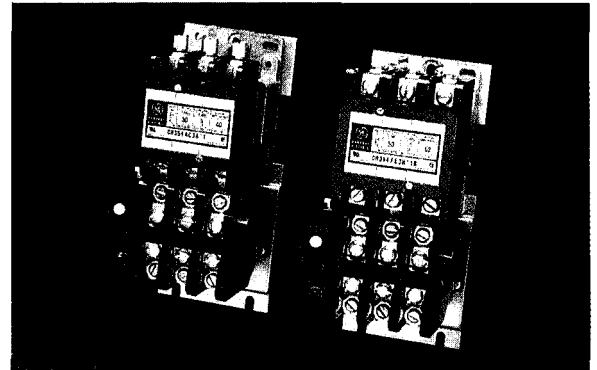
Ampere Ratings				Phase	Poles	NO Aux. Contact ①	Over-Load Relays	Open Type	
Inductive Full Load	Locked Rotor							With Standard Overload Relay	With Ambient Compensated Overload Relay
	240V	480V	600V					Catalog Number	Catalog Number
25	150	125	100	1	2	—	1	CR354AB2A*3	CR354AB2A*4
				1	2	1	1	CR354AB2A*3B	CR354AB2A*4B
				3	3	—	3	CR354AB3A*3	CR354AB3A*4
				3	3	1	3	CR354AB3A*3B	CR354AB3A*4B
30	180	150	120	1	2	—	1	CR354AC2A*3	CR354AC2A*4
				1	2	1	1	CR354AC2A*3B	CR354AC2A*4B
				3	3	—	3	CR354AC3A*3	CR354AC3A*4
				3	3	1	3	CR354AC3A*3B	CR354AC3A*4B
40	240	200	160	1	2	—	1	CR354AD2B*3	CR354AD2B*4
				1	2	1	1	CR354AD2B*3B	CR354AD2B*4B
				3	3	—	3	CR354AD3B*3	CR354AD3B*4
				3	3	1	3	CR354AD3B*3B	CR354AD3B*4B

\* Insert letter from Coil Selection Table below.

① Rated 10 Amp, 250 Vac.

#### Terminals:

25 and 30 Ampere Ratings have binding screw terminals.  
40 Ampere Ratings have box lug type.



### AC Coil Selection Table

Letter Code	Voltage		Inrush VA (Nominal)		Sealed VA (Nominal)		Sealed Watts (Nominal)		Resistance Ohms ± 10%
	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	
H	24	24	60	68	7	7.4	2.3	2.7	5.61
A	110-120	110-120	77	87	10	12	4.0	4.6	89.5
B	208-240	208-240	77	87	10	12	4.0	4.6	366.0
F	277	—	77	—	10	—	4.0	—	713.0
C	416-480	416-480	77	87	10	12	4.0	4.6	1872.0

### Factory Modifications

#### Overload Relays:

Change letter in 11th position (CR354AC3AB3)

Standard-Unwired	1
Ambient Compensated-Unwired	2
Standard-Wired	3
Ambient Compensated-Wired	4



50- and 60-ampere, Single- and Three-phase

**CR354F — Open Type**

Ampere Ratings				Phase	Poles	NO Aux. Contact ①	Over-Load Relays	Open Type	
Inductive Full Load	Locked Rotor							With Standard Overload Relay	With Ambient Compensated Overload Relay
	240V	480V	600V					Catalog Number	Catalog Number
50	300	250	200	1	2	—	1	CR354FE2B*3	CR354FE2B*4
				1	2	1	1	CR354FE2B*3B	CR354FE2B*4B
				3	3	—	3	CR354FE3B*3	CR354FE3B*4
				3	3	1	3	CR354FE3B*3B	CR354FE3B*4B
60	360	300	240	1	2	—	1	CR354FF2B*3	CR354FF2B*4
				1	2	1	1	CR354FF2B*3B	CR354FF2B*4B
				3	3	—	3	CR354FF3B*3	CR354FF3B*4
				3	3	1	3	CR354FF3B*3B	CR354FF3B*4B

\* Insert letter from Coil Selection Table below.

① Rated 10 Amp, 250 Vac.



**Terminals:**

50 Ampere ratings have box lug type.

**AC Coil Selection Table**

Letter Code	Voltage		Inrush VA (Nominal)		Sealed VA (Nominal)		Sealed Watts (Nominal)		Resistance Ohms ± 10%
	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	
H	24	24	100	119	11	14	8	9.4	2.75
A	110-120	110-120	100	119	11	14	8	9.4	64.3
B	208-240	208-240	100	119	11	14	8	9.4	241.0
F	277	—	100	—	11	—	8	—	389.0
C	440-480	380-416	100	119	11	14	8	9.4	972.0

**Factory Modifications**

**Overload Relays:**

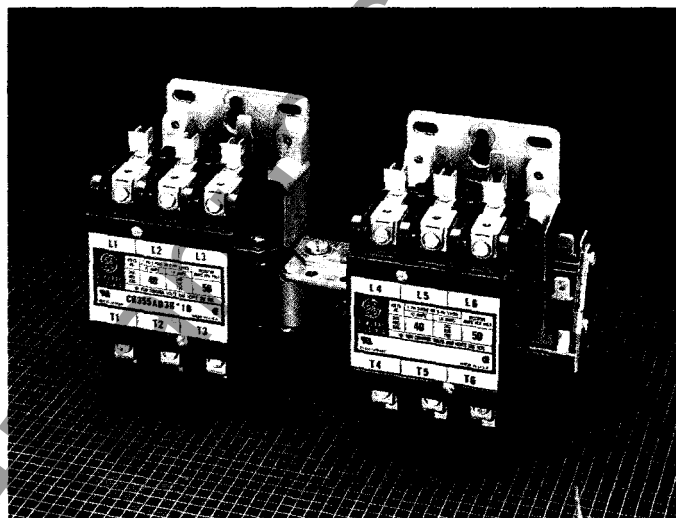
Change number in 11th position (CR354FE3BB3)

Standard-Unwired	1
Ambient Compensated-Unwired	2
Standard-Wired	3
Ambient Compensated-Wired	4

25-, 30-, and 40-ampere, Two-speed Controllers

**CR355A — Open Type**

Inductive Full Load	Ampere Ratings			Number Of Poles	Standard Open Type ①
	Locked Rotor				Catalog Number
	240V	480V	600V		
25	150	125	100	2-3	CR355AB2A*1B
				3-3	CR355AB3A*1B
				5-3	CR355AB5A*1B
30	180	150	120	2-3	CR355AC2A*1B
				3-3	CR355AC3A*1B
				5-3	CR355AC5A*1B
40	240	200	160	2-3	CR355AD2B*1B
				3-3	CR355AD3B*1B
				5-3	CR355AD5B*1B



\* Insert letter from Coil Selection Table below.

Note: Controllers shown are limited to 240 Vac coil rating. For controllers with higher coil ratings, refer to the nearest GE Electrical Distribution & Control sales office.

① All 2-speed controllers include mechanical and electrical interlocking. For control of 2-speed single-winding motors, use 5 3-pole or 2 3-pole and separate 3-pole contactor.

**AC Coil Selection Table**

Letter Code	Voltage		Inrush VA (Nominal)		Sealed VA (Nominal)		Sealed Watts (Nominal)		Resistance Ohms ± 10%
	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	
H	24 (2, 3-pole)	24	60	68	7	7.4	2.3	2.7	5.61
H	24 (5-pole)	24	77	87	10	12	4.0	4.6	3.94
A	110-120	110-120	77	87	10	12	4.0	4.6	89.5
B	208-240	208-240	77	87	10	12	4.0	4.6	366.0

**Factory Modifications**

**Terminals:**

Change letter in 9th position (CR355AB2BH1B)

<b>Binding Head Screw</b>	
With Quick Connect Terminals	A
Without Quick Connect Terminals	C
<b>Box Lug</b>	
With Quick Connect Terminals	B
Without Quick Connect Terminals	D

**Terminal Markings:**

Change number in 11th position (CR355AB2BH1B)

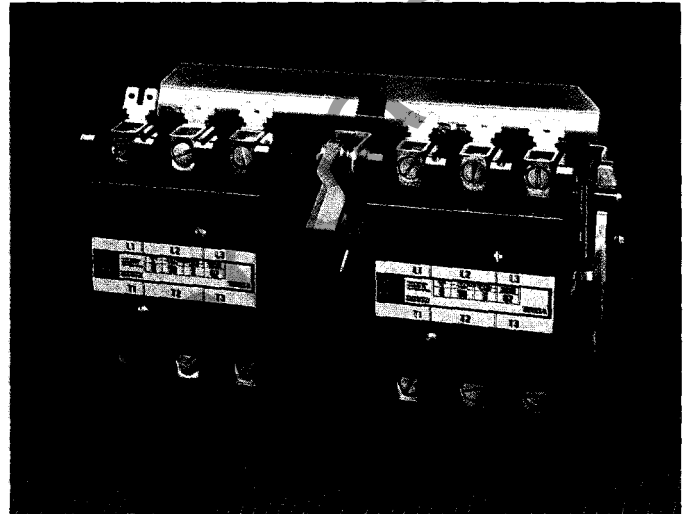
No terminal markings	0
Line ("L") markings at Top/Load ("T") markings at bottom	1



50-, 60-, 75- and 90-ampere, Two-speed Controllers

**CR355E — Open Type**

Inductive Full Load	Ampere Ratings			Number Of Poles	Standard Open Type <sup>①</sup>
	Locked Rotor				Catalog Number
	240V	480V	600V		
50	300	250	200	2-3 3-3	CR355EE2B*1C CR355EE3B*1C
60	360	300	240	2-3 3-3	CR355EF2B*1C CR355EF3B*1C
75	450	375	300	2-3 3-3	CR355EG2B*1C CR355EG3B*1C
90	540	450	360	2-3 3-3	CR355EH2B*1C CR355EH3B*1C



\* Insert letter from Coil Selection Tables below.

Note: Controllers shown are limited to 240 Vac coil rating. For controllers with higher coil ratings, refer to the nearest GE Electrical Distribution & Control sales office.

① All 2-speed controllers include mechanical and electrical interlocking. For control of 2-speed single-winding motors, use 2-3-pole form and a separate 3-pole contactor.

**AC Coil Selection Table  
CR355E 50- and 60-ampere 2-speed Controllers**

Letter Code	Voltage		Inrush VA (Nominal)		Sealed VA (Nominal)		Sealed Watts (Nominal)		Resistance Ohms ±10%
	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	
H	24	—	184	—	32	—	12	—	1.46
A	115-120	110	184	208	32	41	12	14	28.7
B	208-240	220	184	208	32	41	12	14	109.0

**AC Coil Selection Table  
CR355E 75- and 90-ampere 2-speed Controllers**

Letter Code	Voltage		Inrush VA (Nominal)		Sealed VA (Nominal)		Sealed Watts (Nominal)		Resistance Ohms ±10%
	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	
H	24	—	233	—	40	—	16	—	1.02
A	115-120	110	233	263	40	51	16	19	25.2
B	208-240	220	233	263	40	51	16	19	95.6

**Terminals:**

Letter "B" in 9th position (CR355EE2B11C)

Indicates box lug type terminals.

Technical Data

Definite Purpose Control Technical Data

Family			Amperes		Locked Rotor Ampere Ratings									Pickup Volts	Dropout Volts	Wire Size Range AWG	Terminal Torque <sup>③</sup>
CR 353	CR 354	CR 355	Inductive	Resistive	3 Ph-3-pole 1 Ph-2-pole			3 Ph-2-pole 1 Ph-1-pole			Part Winding						
					240V	480V	600V	240V	480V	600V	240V	480V	600V				
AB	AB	AB	25	35	150	125	100	150	125 <sup>①</sup>	100 <sup>①</sup>	150	125	100	85% <sup>②</sup> or less of nominal coil voltage	50% or less of nominal coil voltage	8-16	35 lb.-in.
AC	AC	AC	30	40	180	150	120	180	150 <sup>①</sup>	120 <sup>①</sup>	180	150	120			8-16	
AD	AD	AD	40	50	240	200	160	240	200 <sup>①</sup>	160 <sup>①</sup>	192	192	160			4-14	
CA			20	30	120	100	80	100	60	40	—	—	—	85% or less of nominal coil voltage	50% or less of nominal coil voltage	8-16	35 lb.-in.
CB			25	35	150	125	100	125	70	45	—	—	—			8-16	
CC			30	40	180	150	120	150	75	50	—	—	—			—	
		EE	50	62	300	250	200	—	—	—	300	250	200	85% or less of nominal coil voltage	55% or less of nominal coil voltage	2-14	80 lb.-in.
		EF	60	75	360	300	240	—	—	—	360	—	—			2-14	
EG		EG	75	90	450	375	300	—	—	—	450	375	300	85% or less of nominal coil voltage	55% or less of nominal coil voltage	1/0-14	50 lb.-in.
EH		EH	90	90	540	450	360	—	—	—	540	450	360			1/0-14	
FE	FE		50	62	300	250	200	—	—	—	300	250	200	85% or less of nominal coil voltage	60% or less of nominal coil voltage	2-14	50 lb.-in.
FF	FF		60	75	360	300	240	—	—	—	360	300	240			2-14	
GJ			120	120	720	600	480	—	—	—	720	600	480	85% or less of nominal coil voltage	65% or less of nominal coil voltage	2/0-10	200 lb.-in.
GK			150	150	900	750	600	—	—	—	900	750	600			3/0-8	

① These ratings apply where the contactor is not required to make and break line connection if the unit recycles under stalled rotor conditions.

② 24 Volt coils 2- and 3-pole forms pickup at 75% or less of nominal coil voltage.

③ For box lug and pressure type terminals.

Underwriters Laboratories and CSA References

Family			Underwriters Laboratories Reference				CSA Reference		
CR 353	CR 354	CR 355	File	Vol.	Section	Issued	File	Guide	Class
AB		AB	E1811	2	52	09/26/74	LR15492	361-E-0.2	1222 01
AC		AC	E1811	2	51	09/25/74	LR15492	361-E-0.2	1222 01
AD		AD	E1811	2	21	02/09/67	LR15492	361-E-0.2	1222 01
	AB		E1811	2	50	08/09/75	LR15492	361-E-0.2	1222 01
	AC		E1811	2	50	08/09/75	LR15492	361-E-0.2	1222 01
	AD		E1811	2	50	08/09/75	LR15492	361-E-0.2	1222 01
CA			E1811	2	76	02/08/80	LR15492	361-E-0.2	1222 01
CB			E1811	2	76	02/08/80	LR15492	361-E-0.2	1222 01
CC			E1811	2	76	02/08/80	LR15492	361-E-0.2	1222 01
		EE	E1811	2	26	03/10/70	LR15492	361-E-0.2	1222 01
		EF	E1811	2	25	01/22/70	LR15492	361-E-0.2	1222 01
EG		EG	E1811	2	24	10/15/68	LR15492	361-E-0.2	1222 01
EH		EH	E1811	2	30	06/01/74	LR15492	361-E-0.2	1222 01
FE	FE		E1811	2	54	06/17/75	LR15492	361-E-0.2	1222 01
FF	FF		E1811	2	54	06/17/75	LR15492	361-E-0.2	1222 01
GJ			E1811	3	6	10/15/68	LR15492	361-E-0.2	1222 01
GK			E1811	3	5	05/26/76	LR15492	361-E-0.2	1222 01

Shipping Weights

Family CR	Estimated Shipping Weight (Lbs.)
353AB, AC, AD	1.5
354AB, AC, AD	3.0
355AB, AC, AD	4.3
353CA, CB, CC	1.0
355EE, EF	8.1
353EG, EH	4.0
355EG, EH	8.1
353FE, FF	1.9
354FE	3.5
353GJ, GK	17.5



### Heater Selection Information

To prevent overloading the starter do not select heater(s) for a motor of larger rating than the maximum given on the nameplate for the starter.

For continuous rated motors, with a service factor of 1.15 to 1.25, select the heater with maximum motor amperes equal to or immediately greater than the motor full-load current (provides a maximum of 125 percent protection). For continuous rated motors with no service factor, multiply the full-load current of the motor by 0.90 and use this value to select the heater.

To protect the heater and starter during a short circuit, provide motor-branch-circuit protection in accordance with Table 430-152 in Article 430 of the National Electrical Code. In no case should the fuse rating exceed 4 times the motor full-load current for single-element fuses, or 2.25 times for dual-element fuses, or the fuse size listed in heater table under Maximum Fuse Rating.

If full-load amperes of motor falls between two ratings, select heaters for the higher rating.

These tables are not to be used to select heaters for Hermetic Motor applications. Contact your nearest GE sales office for information.

### Heater Selection for Starters<sup>①</sup> Single-phase (25-, 30-, 40-, 50-, and 60-ampere)

(Heater amps based on 75°C wire)  
All heaters are packaged three to a carton.

Single-phase (1 Heater Required)					
Maximum Motor Full Load Amperes					Heater Cat. No.
25 Amp Starter	30 Amp Starter	40 Amp Starter	50 Amp Starter	60 Amp Starter	CR123
5.79 6.12 6.49	5.79 6.12 6.49	5.79 6.12 6.49	6.15 6.47 6.84	6.15 6.47 6.84	C592A C630A C695A
7.59 8.71 9.19	7.59 8.71 9.19	7.59 8.71 9.19	7.72 8.99 9.87	7.72 8.99 9.87	C778A C867A C955A
10.1 11.2 11.9	10.1 11.2 11.9	10.1 11.2 11.9	10.6 12.0 12.3	10.6 12.0 12.3	C104B C113B C125B
12.6 14.5 17.7	12.6 14.5 17.7	12.6 14.5 17.7	14.0 15.7 17.6	14.0 15.7 17.6	C137B C151B C163B
19.1 21.4 22.9	19.1 21.4 22.9	19.1 21.4 22.9	20.1 23.3 27.0	20.1 23.3 27.0	C180B C198B C214B
24.7 25.0 ---	24.7 25.9 27.1	24.7 25.9 27.1	29.8 32.2 33.9	29.8 32.2 33.9	C228B C250B C273B
---	30.0 ---	30.2 34.8 40.0	36.7 42.5 46.2	36.7 42.5 46.2	C303B C330B C366B
---	---	---	50.0 ---	50.3 52.4 58.2 60.0	C400B C440B C460B C500B

<sup>①</sup> Heater selection table applies to Open & Type 1 enclosed starters with standard or ambient compensated overload relays.

Heater Selection Information (Continued)

**Heater Selection for Starters<sup>①</sup>**  
**Three-phase (25- and 30-ampere)**

(Heater amps based on 75°C wire)  
 All heaters are packaged three to a carton.

3-phase (3 Heaters Required)		
Maximum Motor Full Load Amperes		Heater Cat. No.
25 Amp Starter	30 Amp Starter	CR123
5.00 5.53 6.02	5.00 5.53 6.02	C630A C695A C778A
6.93 7.30 7.98	6.93 7.30 7.98	C867A C955A C104B
8.77 9.40 10.6	8.77 9.40 10.6	C113B C125B C137B
11.6 14.0 15.4	11.6 14.0 15.4	C151B C163B C180B
17.0 18.9 20.3	17.0 18.9 20.3	C198B C214B C228B
21.5 23.0 25.0	21.5 23.0 25.4	C250B C273B C303B
---	28.1 30.0	C330B C366B

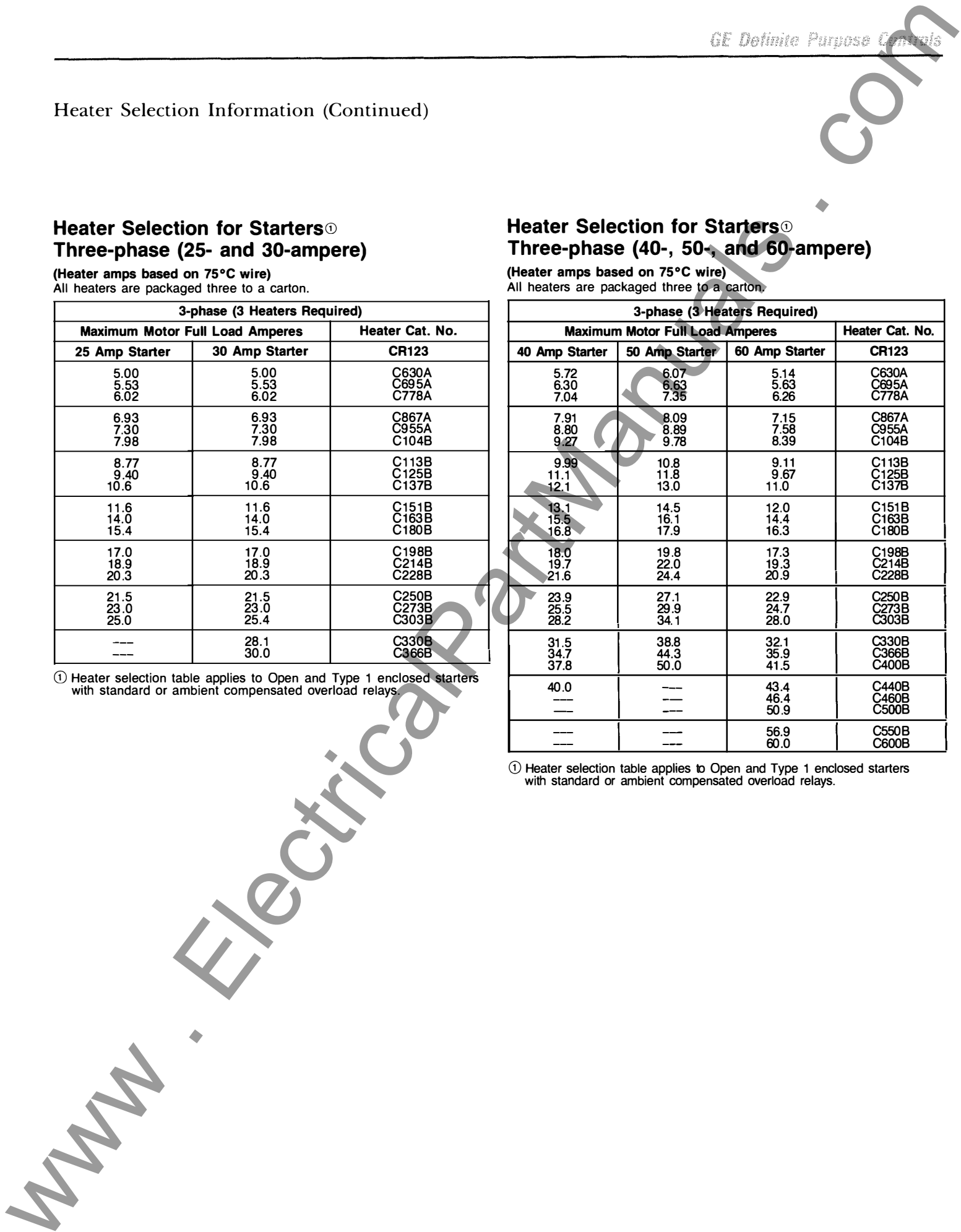
① Heater selection table applies to Open and Type 1 enclosed starters with standard or ambient compensated overload relays.

**Heater Selection for Starters<sup>①</sup>**  
**Three-phase (40-, 50-, and 60-ampere)**

(Heater amps based on 75°C wire)  
 All heaters are packaged three to a carton.

3-phase (3 Heaters Required)			
Maximum Motor Full Load Amperes			Heater Cat. No.
40 Amp Starter	50 Amp Starter	60 Amp Starter	CR123
5.72 6.30 7.04	6.07 6.63 7.35	5.14 5.63 6.26	C630A C695A C778A
7.91 8.80 9.27	8.09 8.89 9.78	7.15 7.58 8.39	C867A C955A C104B
9.99 11.1 12.1	10.8 11.8 13.0	9.11 9.67 11.0	C113B C125B C137B
13.1 15.5 16.8	14.5 16.1 17.9	12.0 14.4 16.3	C151B C163B C180B
18.0 19.7 21.6	19.8 22.0 24.4	17.3 19.3 20.9	C198B C214B C228B
23.9 25.5 28.2	27.1 29.9 34.1	22.9 24.7 28.0	C250B C273B C303B
31.5 34.7 37.8	38.8 44.3 50.0	32.1 35.9 41.5	C330B C366B C400B
40.0 --- ---	--- --- ---	43.4 46.4 50.9	C440B C460B C500B
---	---	56.9 60.0	C550B C600B

① Heater selection table applies to Open and Type 1 enclosed starters with standard or ambient compensated overload relays.





Field Installation Kits  
(Not available for CR353C compact design)

**Auxiliary Contact Kits For Field Installation**

Contactor Rating	Auxiliary <sup>①</sup> Contact Type	Kit Catalog Number
25-60 Amp	SPDT	CR353XAAA
75-90 Amp	SPDT	CR353XAAB
120-150 Amp	1 NO	CR353XABC
	1 NC	CR353XACC
	1 NO-1 NC	CR353XADC

① Auxiliary contacts for 25- through 90-ampere contactors are rated 10 amp, 250 Vac, 1/2 Hp @ 125 Vac or 250 Vac. Auxiliary contacts for 120- and 150-ampere contactors are rated 7200 VA make, 720 VA break, 10 Amp carry, 600 Vac.

**Enclosure Kits (Type 1)**

Contactor Rating	Kit Catalog Number	Starter Rating	Kit Catalog Number
25-60 Amp	CR353XE1BB	20-50 Amp	CR353XE1AA
75-90 Amp	CR353XE1BC	---	---
120-150 Amp	②	---	---

② Refer to nearest GE Electrical Distribution & Control sales office.

**Double .250" Quick Connect Adapter For Coil Terminals**

For Use On:	Catalog Number
CR353AB, AC, AD CR354AB, AC, AD CR355AB, AC, AD	CR353XY1 (Package of 10)

**AC Replacement Coils**

Letter Code	Coil Ratings Volts		Catalog Number
	60 Hz	50 Hz	
<b>25-, 30-, 40-amp—CR353AB, AC, AD, 354AB, AC, AD, 355AB, AC, AD</b>			
H	24	(2-, 3-pole) 24	55-B19H
H	24	(4-pole) 24	55-B20H
A	110-120	110-120	55-B20A
B	208-240	208-240	55-B20B
F	277	—	55-B20F
C	416-480	416-480	55-B20C
<b>50- 60-amp—CR353FE, FF, 354FE</b>			
H	24	24	55-B23H
A	115-120	110-120	55-B23A
B	208-240	208-240	55-B23B
F	277	—	55-B23F
C	440-480	380-416	55-B23C
<b>50-, 60-amp—CR353EE, EF</b>			
H	24	24	55-B21H
A	115-120	110	55-B21A
B	208-240	220	55-B21B
F	277	—	55-B21F
C	440-480	440	55-B21C
<b>75-, 90-amp—CR353EG, EH, CR355EG, EH</b>			
H	24	—	55-B22H
A	115-120	110	55-B22A
B	208-240	220	55-B22B
F	277	—	55-B22F
C	460	440	55-B22C
<b>120-amp—CR353GJ</b>			
A	115-120	110	55-501336G002
B	230-240	220	55-501336G003
C	460-480	440	55-501336G004
D	575-600	550	55-501336G005
<b>150-amp—CR353GK</b>			
A	115-120	110	55-501463G002
B	230-240	220	55-501463G003
C	460-480	440	55-501463G004
D	575-600	550	55-501463G005

**Replacement Contact Kits**

Family CR:	Contactor Rating Amperes	Number Of Poles Per Kit	Kit Catalog Number	Type Of Termination
353AB	25	1	55-152313G223	Binding screw with quick connects
353AC	30	1	55-152313G071	
353AD	40	3	55-152313G111A	Box lug with quick connects
353AD	40	4	55-152313G111B	
353FE	50 <sup>③</sup>	1	55-152313G216	
353FF	60 <sup>④</sup>	1	55-152313G237	
353EG	75	1	55-152313G218	
353EH	90	1	55-152313G217	
353GJ	120	3	55-152313G139	Pressure type
353GK	150	3	55-152313G140	

③ For CR355EE, use 55-152313G150

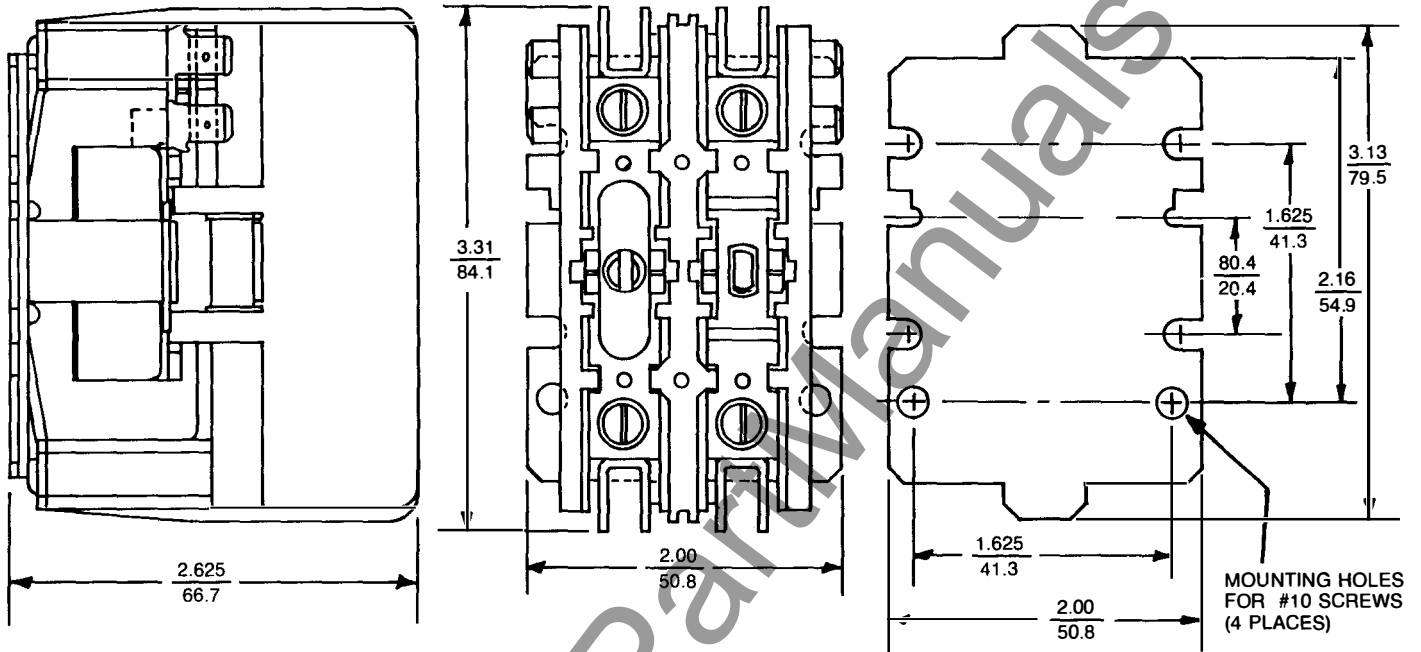
④ For CR355EF, use 55-152313G277



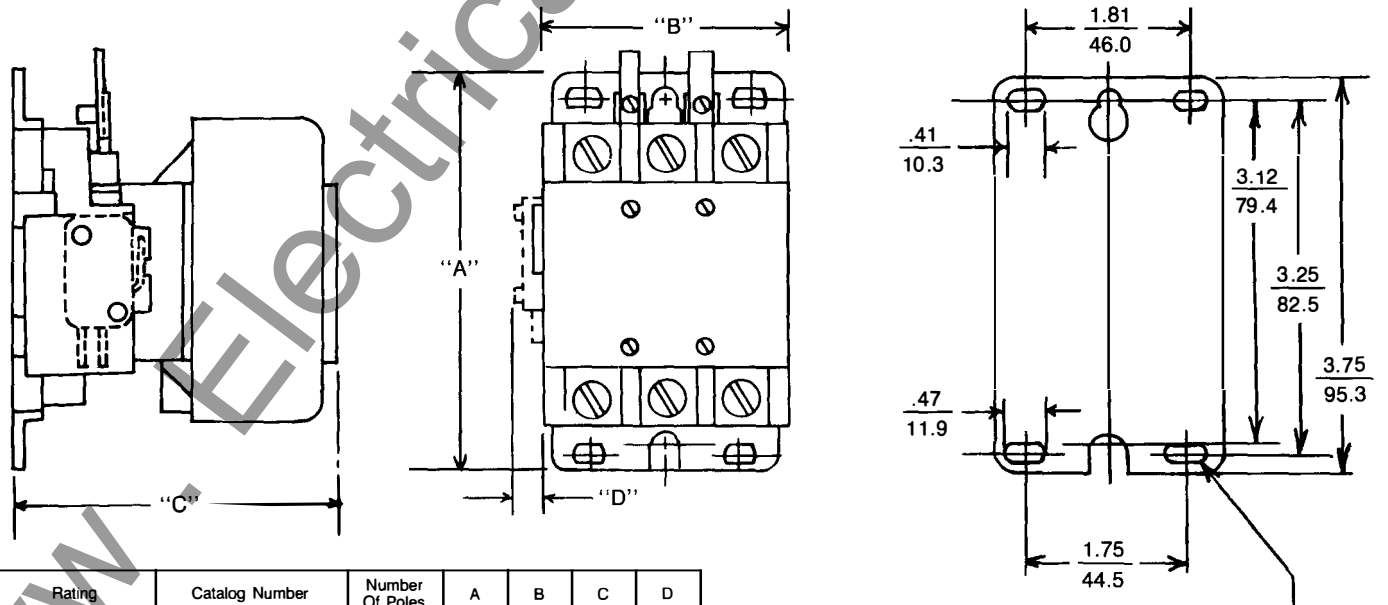
Contactor Dimensions

Dual Dimensions  $\frac{\text{Inches}}{\text{Millimeters}}$  For Estimating Only

CR353C — 20-, 25-, and 30-ampere Contactors (Compact Design)



CR353A and F — 25- Through 60-ampere Contactors



MOUNTING HOLES FOR #10 SCREWS (6 PLACES)

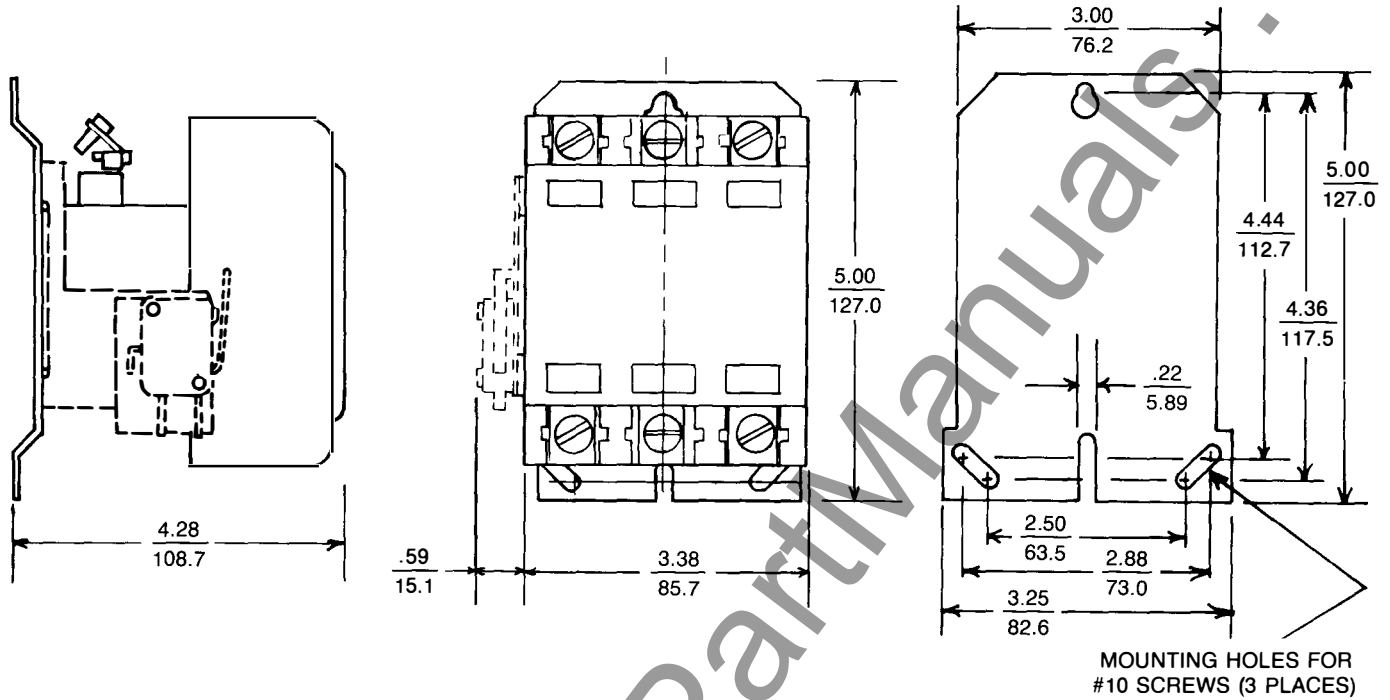
Rating	Catalog Number	Number Of Poles	A	B	C	D
25-, 30-, 40-amp	CR353AB, AC, AD	2, 3	3.75	2.42	3.28	.69
			95.3	61.5	83.3	17.5
25-, 30-, 40-amp	CR353AB, AC, AD	4	3.75	3.09	3.28	.22
			95.3	78.6	83.3	5.6
50-, 60-amp	CR353FE, FF	2, 3	3.75	2.75	3.56	.50
			95.3	69.8	90.4	12.7



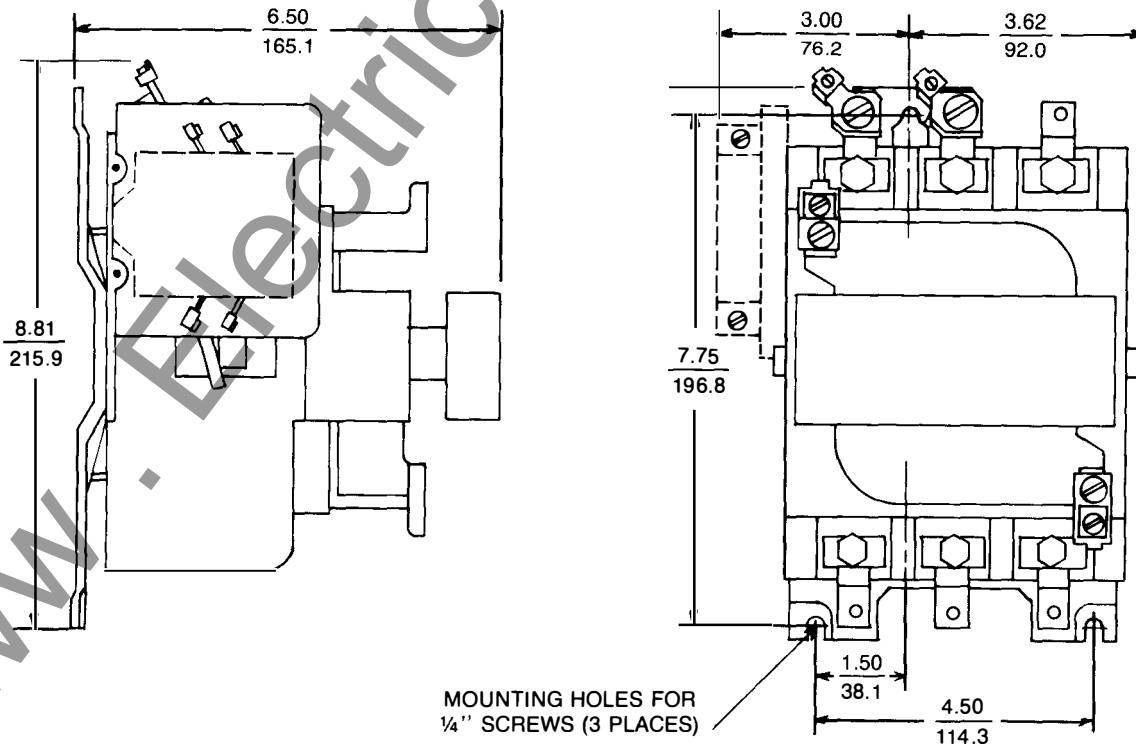
Contactor Dimensions (Continued)

Dual Dimensions  $\frac{\text{Inches}}{\text{Millimeters}}$  For Estimating Only

CR353E — 75- and 90-ampere Contactors



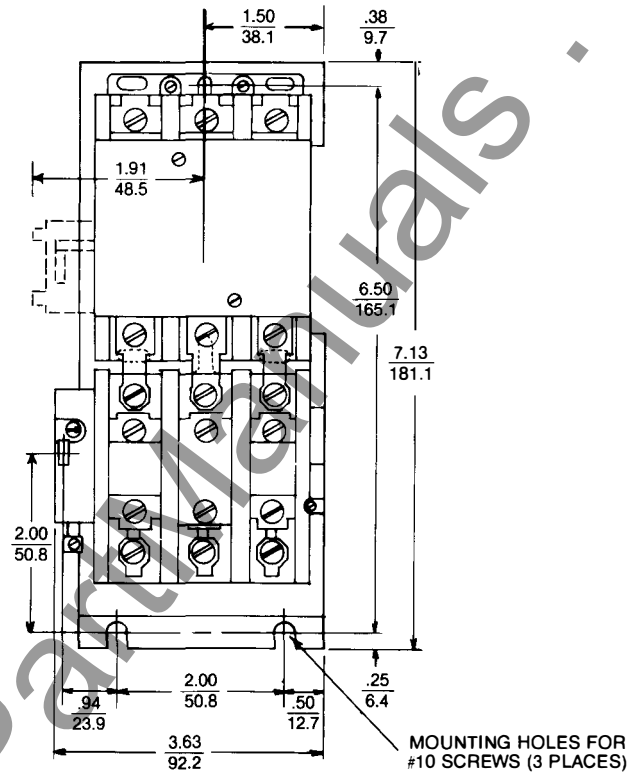
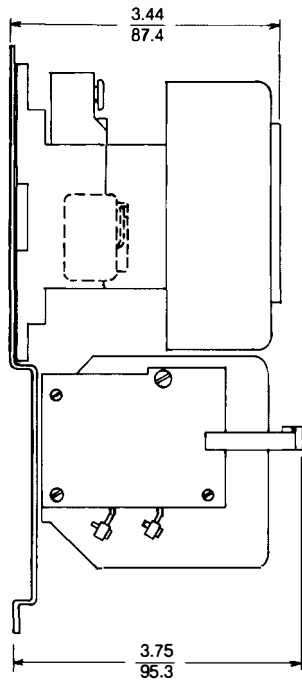
CR353G — 120- and 150-ampere Contactors



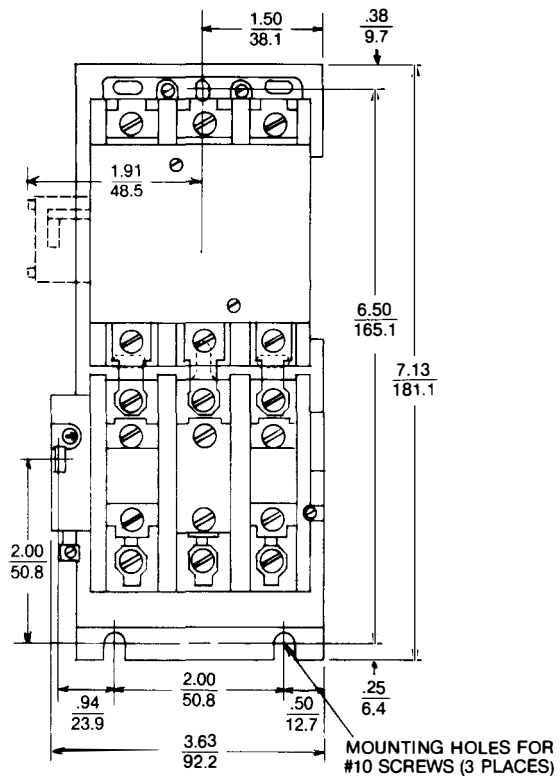
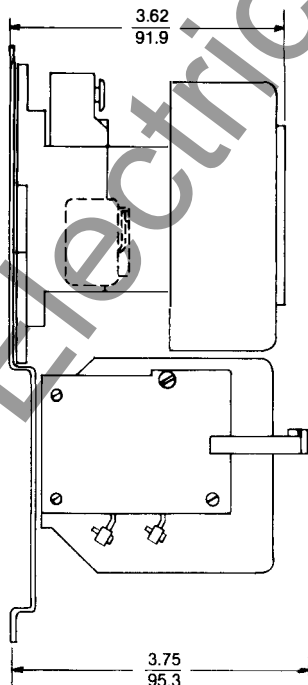
Starter Dimensions

Dual Dimensions  $\frac{\text{Inches}}{\text{Millimeters}}$  For Estimating Only

CR354A — 25-, 30-, and 40-ampere Starters



CR354F — 50-ampere Starters



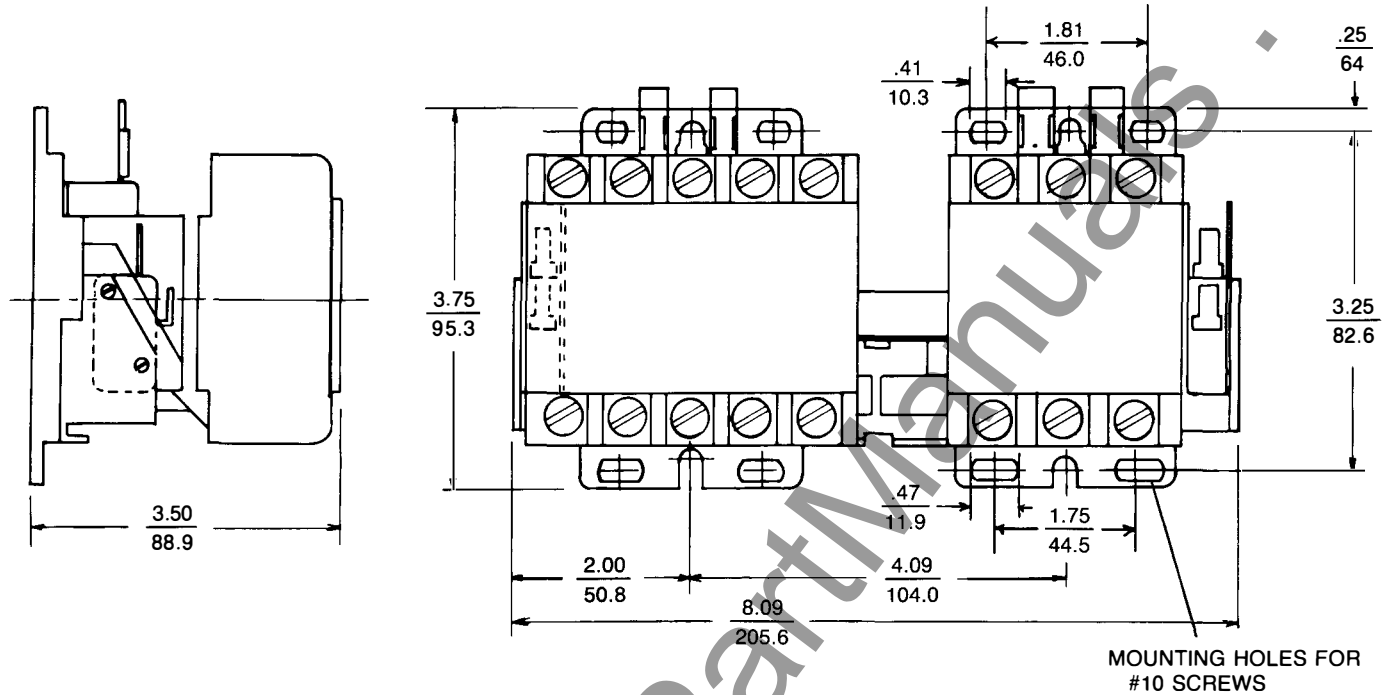
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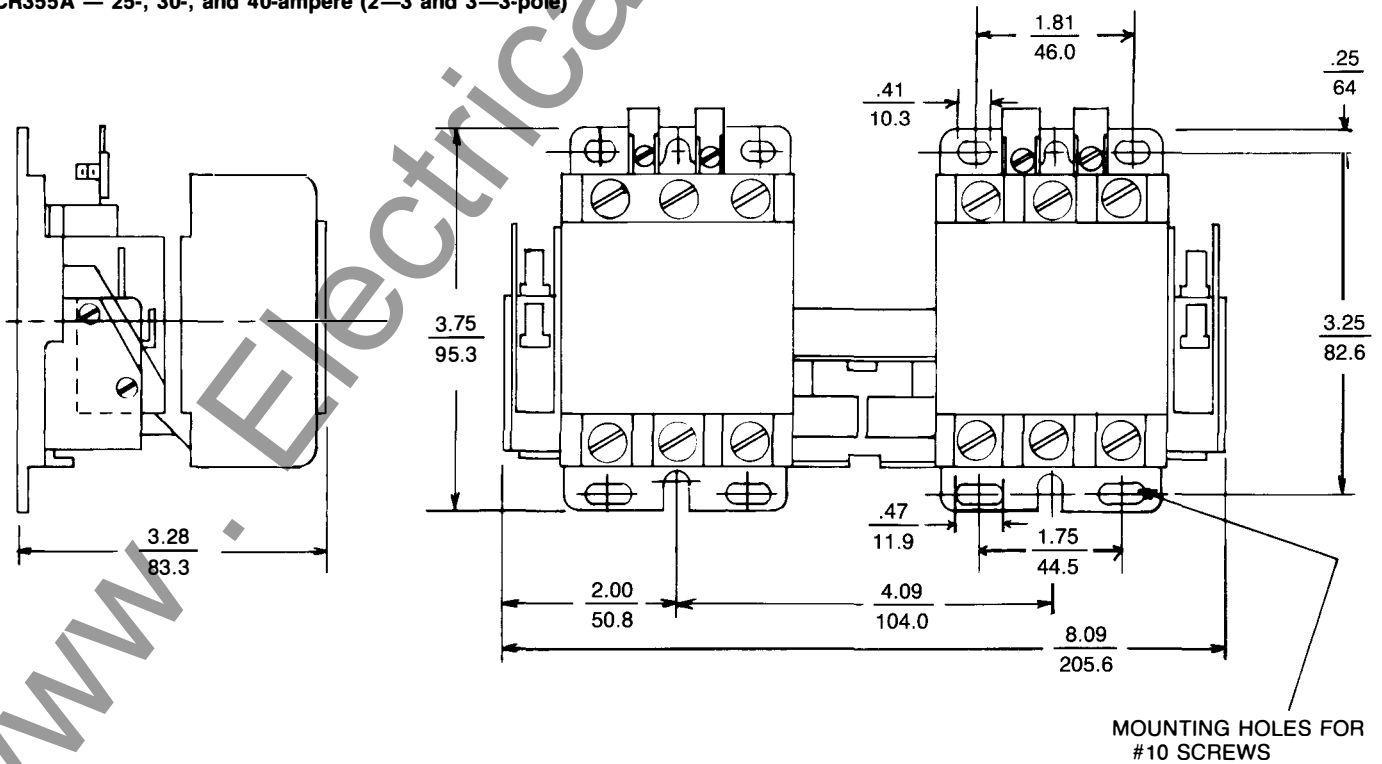
### Two-speed Controller Dimensions

Dual Dimensions  $\frac{\text{Inches}}{\text{Millimeters}}$  For Estimating Only

CR355A — 25-, 30-, and 40-ampere (5—3-pole)



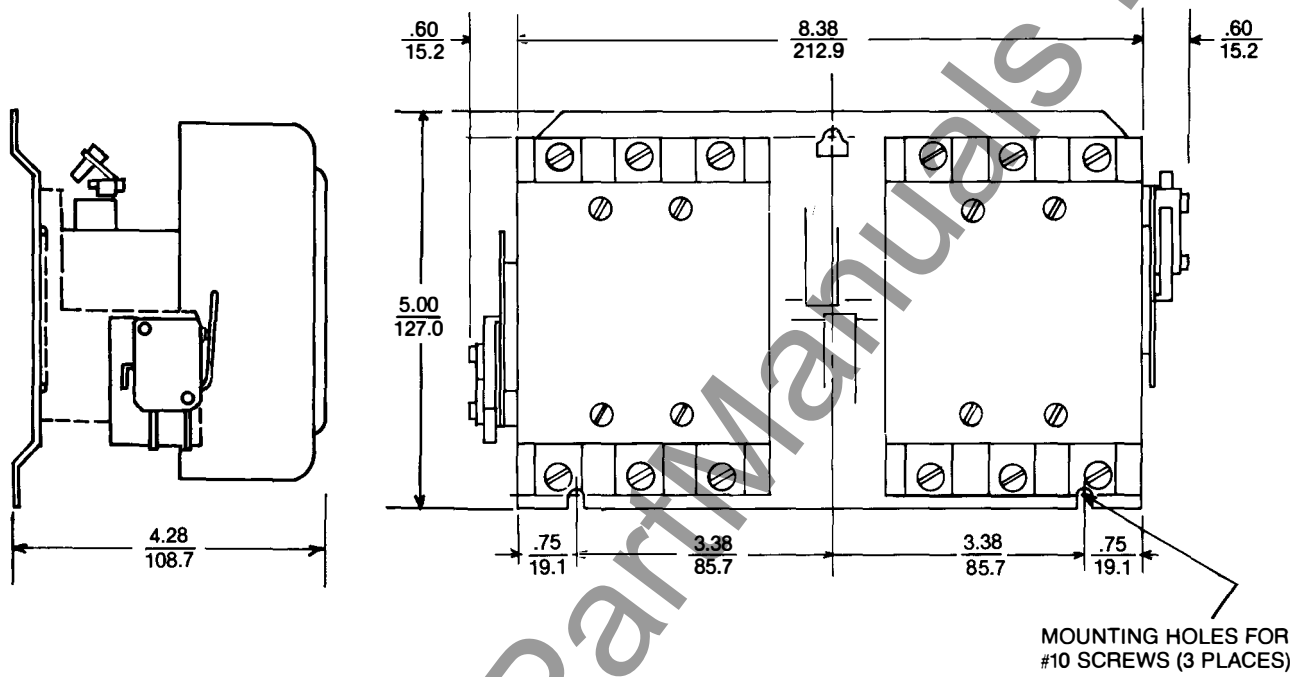
CR355A — 25-, 30-, and 40-ampere (2—3 and 3—3-pole)



Two-speed Controller Dimensions

Dual Dimensions  $\frac{\text{Inches}}{\text{Millimeters}}$  For Estimating Only

CR355E — 50-, 60-, 75-, and 90-ampere



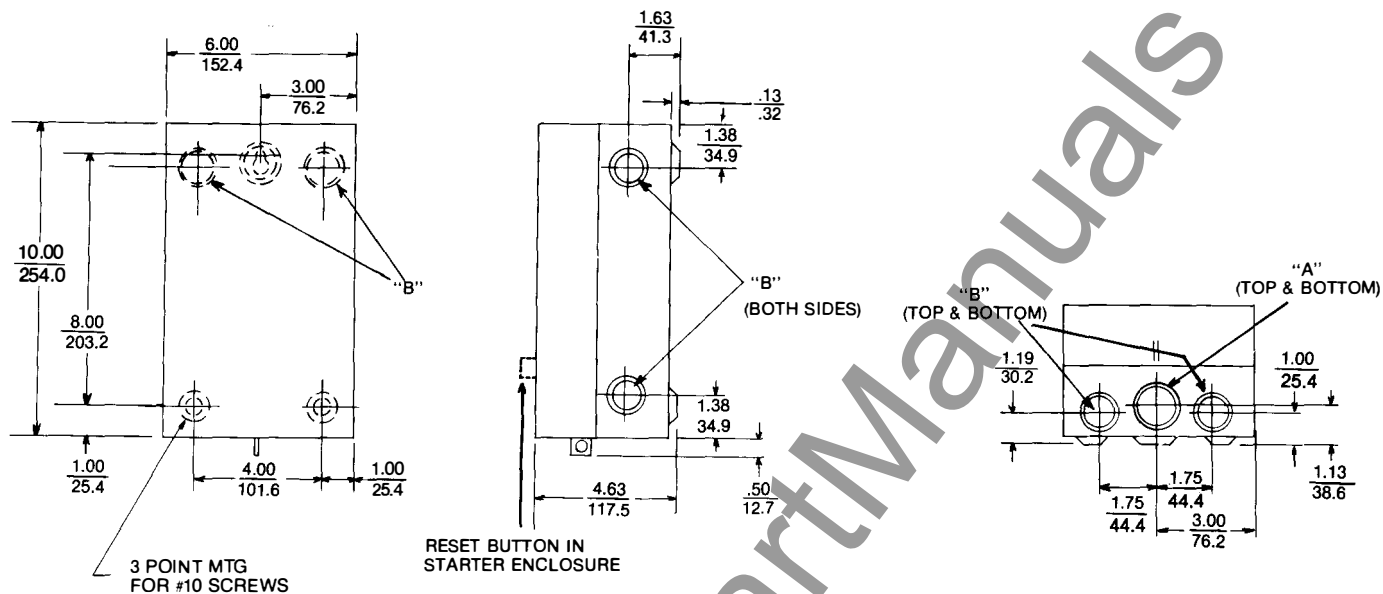
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### Enclosure Dimensions

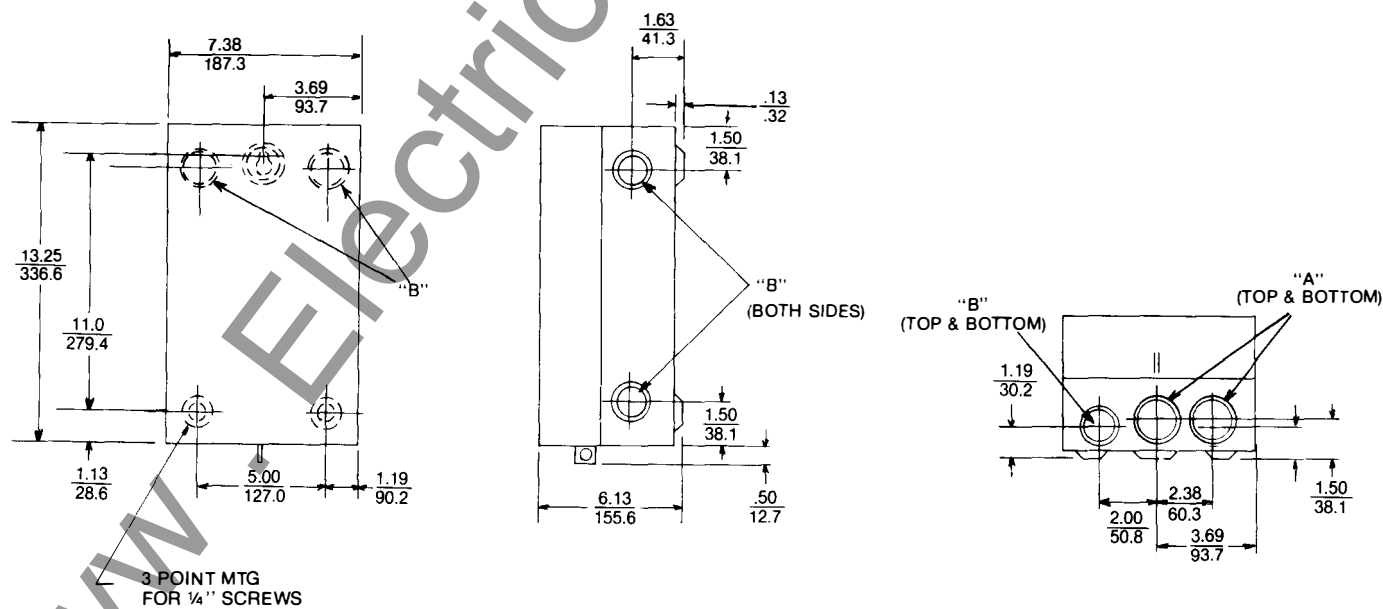
Dual Dimensions  $\frac{\text{Inches}}{\text{Millimeters}}$  For Estimating Only

For CR353A & F, 25-, Through 60-ampere Contactors;  
And CR354A & F, 25- Through 50-ampere Starters



"A" Combination Knock-outs For  $\frac{3}{4}$ " or 1" Conduit  
"B" Combination Knock-outs For  $\frac{1}{2}$ " or  $\frac{3}{4}$ " Conduit

For CR353E, 75- and 90-ampere Contactors



"A" Combination Knock-outs For 1" or  $1\frac{1}{4}$ " Conduit  
"B" Combination Knock-outs For  $\frac{1}{2}$ " or  $\frac{3}{4}$ " Conduit

# Quality Products For All Your Control Needs

Now, **original equipment manufacturers** in the U.S. and Europe can rely on a single source to meet their customer's control specifications. Both NEMA and IEC rated components are now available worldwide from one reliable supplier—GE. Now to help you fill orders fast you can get quick delivery on the exact control you need. You can also count on the complete local support you need for special design and application assistance so you can better fill your customer's needs.

GE's worldwide distributors also offer the logical choice for **equipment users**, too, with a full line of NEMA and IEC rated devices for replacement or updating existing equipment. No matter what control you're presently using you never need to worry about availability of the right control components. Your local GE distributor is fully stocked to efficiently handle all your replacement part needs.

## IEC-RATED MOTOR CONTROLS

GE's internationally accepted 400-Line contactors give you control in 10 ratings from 5 to 50 horsepower in a modular economical design. The complete 400-Line includes contactors, overload relays and accessories for machine tool and other industrial applications.

## NEMA-RATED MOTOR CONTROLS

GE's 300-Line offers NEMA-rated controls with a complete line of full-voltage non-reversing, reversing, two-speed, and combination contactors and motor starters. They're specification approved for the toughest industrial applications.

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GE's full line of sensors includes mechanical limit switches, proximity switches, and photoelectric controls to meet a wide variety of industrial applications; including metal working, automotive, and material handling. They're available in modular plug-in forms, compact threaded-barrel forms, and can sense virtually any material with great speed and accuracy.

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GE's heavy-duty oiltight series of octagonal ring push buttons are designed for worldwide acceptability in an attractive, rugged design. They even provide watertight and dust-tight protection without the use of cumbersome operator boots. With their single-screw contact block mounting arrangement you can cut installation time and costs. And their clear LEXAN covers make contact inspection easy, too.

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GE's industrial relays have interchangeable cartridges, convertible contacts, and straight-through wiring. This full line of quality components includes two-through twelve-pole configurations for applications up to 600 volts, and includes latched, self-checking and timing options.



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