# CR324X solid state overload relays

For panel mounting

## 3-pole, 600 V AC



CR324X overload relay (panel-mount)

### **Technical features**

- 2:1 Adjustable full load amps with tactile feedback dial
- Selectable 10/20/30 protection class
- Ambient insensitive within the stated operating temperature range of –20° to +70  $^\circ\mathrm{C}$
- Built-in thermal memory to prevent hot motor restarts
- Protection against complete phase current loss
- Manual reset (standard) and remote reset (optional) 120 V AC
- Accuracy: ± 2%

- Repeatability: ± 2%
- Self-powered @ 50% of minimum current range
- Size: 1-6 (0.40 A-540 A, 600 V, 50/60 Hz)
- Unbalance trip signal for PLC operation
- Manual trip
- Visual trip indication
- Standard isolated 1 NO and 1 NC aux. contact (A600, Q600)
- Built-in line/load straps
- Fits with existing 300-line starters
- Power factor correction terminals (sizes 1-4)
- DIN rail mountable sizes 1 and 2

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### **Product number selection instructions**

1. Replace \* in product number with appropriate digit from full load current selection table below.

#### Solid state overload relays

NEMA size	Continuous ampere rating	Mounting position	Product number
1	27	Panel mount	CR324CX*P
2	45	Panel mount	CR324DX*P
3, 4	90,135	Panel mount	CR324FX*P
1	27	For MRO and replacement	CR324CX*S
2	45	For MRO and replacement	CR324DX*S
3, 4	90,135	For MRO and replacement	CR324FX*S <sup>1,2</sup>
5	270	For MRO and replacement	CR324GX*S <sup>3</sup>
6	540	For MRO and replacement	CR324HX*K <sup>4</sup>
6	540	For MRO and replacement	CR324HX*S⁵

<sup>1</sup>If Product No. digit "K" is selected from Full Load Current Selection Table.

<sup>2</sup>Reset on CR324FX\*S overloads is approximately 1" longer than on equivalent bimetal overloads. For ABB 300-line enclosures, perform the actions noted below:

<sup>3</sup>CR324GX\*S may be used as replacement for bimetal overload on size 5 starters. Use existing CTs.

<sup>4</sup>CR324HX\*K kit must be used as solid-state replacement for bimetal overloads on size 6, since CT ratio changes, CTs included.

<sup>5</sup>CR324HX\*S may be used as a replacement for existing solid-state overload on size 6. Use existing CTs.

Enclosure reset extension type	Adjustment required		
Threaded rod (standard)	Cut threaded shaft 1" and adjust for 1/8" gap.		
"U" style, 2¼" long	Replace extension with product number 55-512811G005.		
"U" style, 1½" long	Replace extension with product number 55-512811G002.		

#### Solid state overload relay options

ltem	NEMA size	Voltage	Product number
Remote reset	1-6	120 V AC	CR324XRRM02
Panel mount adapter	1	N/A	CR324CXPMA
	2	N/A	CR324DXPMA

## Full load current selection table

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% 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.

Overload range for				
solid state starters	NEMA size	Fuse max.	Breaker max.	Insert digit in product number
0.4–0.85	00-1	3	15	C
0.8–1.7	00–1	6	15	D
1.6-3.4	00–1	12	15	E
3.2–6.8	00–1	25	25	F
6.5–13.5	00-1	50	50	G
13–27	00-1	100	100	Н
6.5–13.5	2	50	50	G
13–27	2	100	100	Н
25–50	2	200	200	3
17–35	3 and 4	125	125	К
35-70	3 and 4	250	250	L
65–135	3 and 4	500	400	М
35-70	5	-	-	Ν
65–135	5	500	400	P
130–270	5	600	800	Q
130–270	6	1200	800	S
260–540	6	1200	800	Т