

Installation Instructions

Bulletin 193 E100 Panel Or DIN Rail Mount Overload Relay



Allen-Bradley



At the end of its life, this equipment should be collected separately from any unsorted municipal waste.

Application and Installation

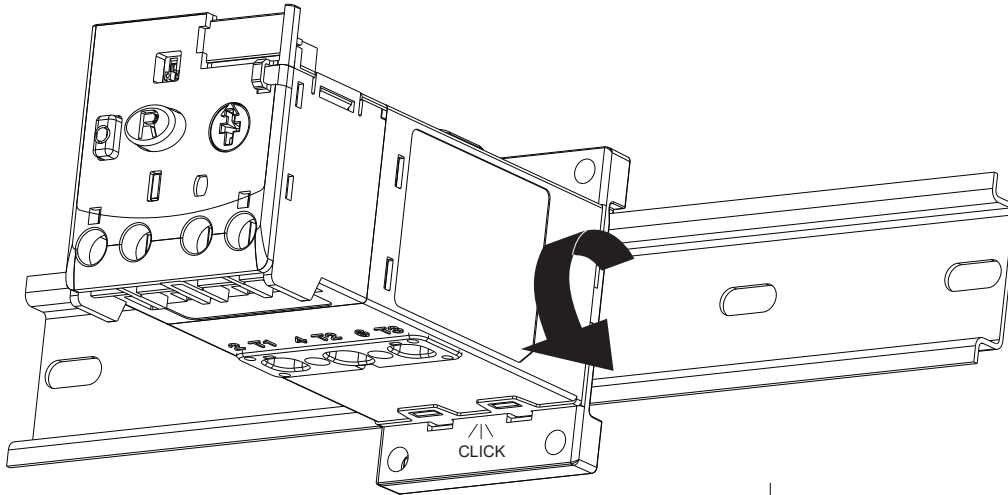
(Cat 193-1E__P)

WARNING: To prevent electrical shock, disconnect from power source before installing or servicing. Install in suitable enclosure. Keep free from contaminants. Follow NFPA70E requirements.

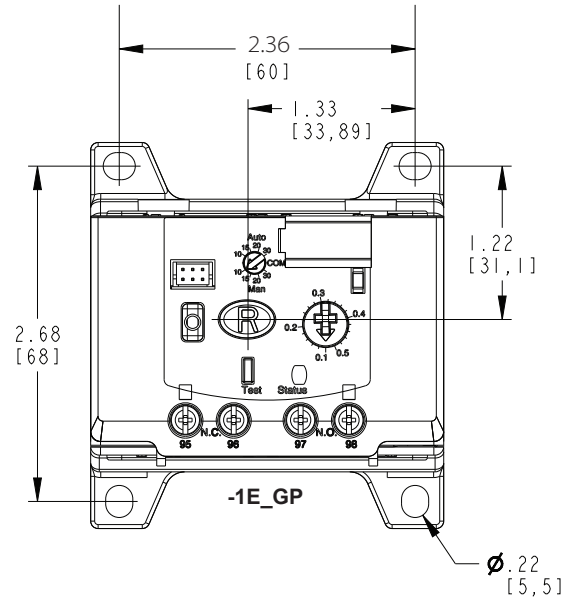
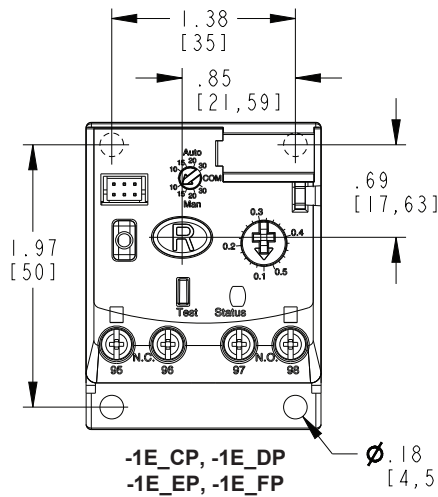
WARNING: Do not use automatic reset mode in applications where unexpected automatic restart of the motor can cause injury to persons or damage to equipment.

Installation

DIN Rail Mount

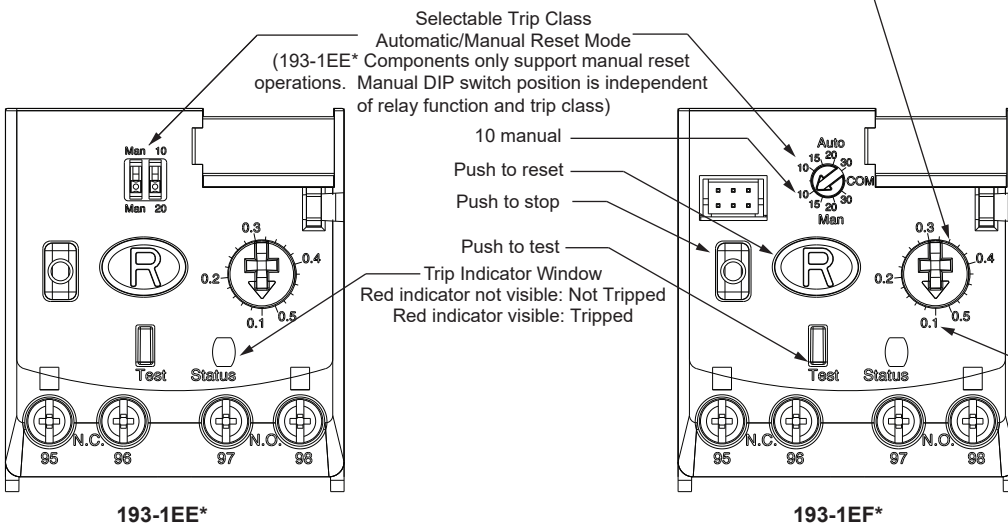


Panel Mount Dimensions



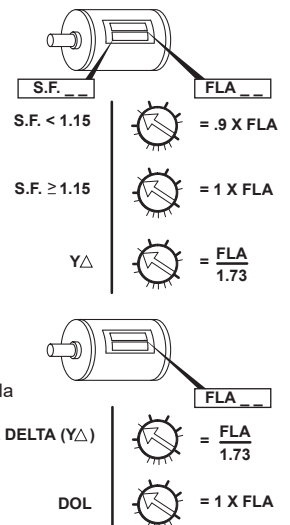
Settings

To adjust trip current, turn dial until the desired current is aligned with the pointer. Trip rating is 120% of dial setting.



193-1EE*

193-1EF*



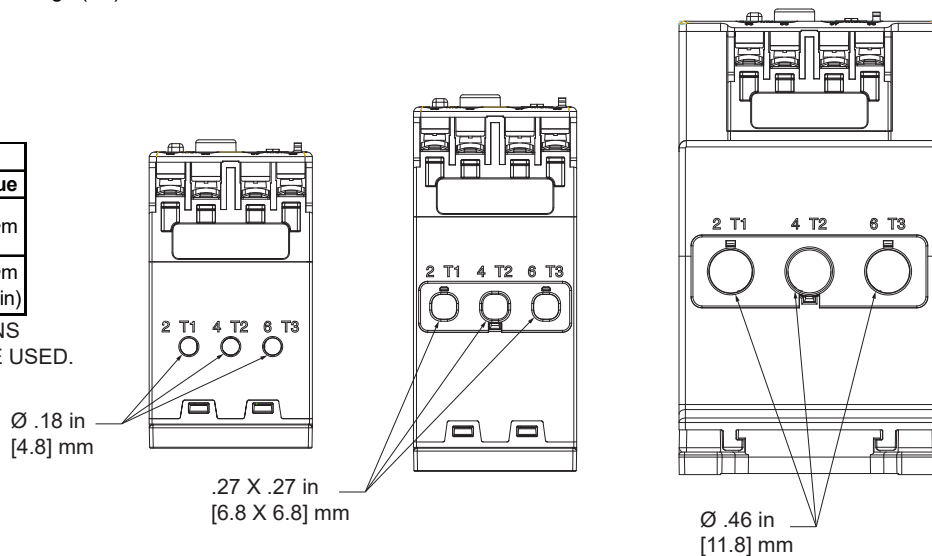
Main Connections

Rated Insulation Voltage (Ui): 690V AC
 Rated Operational Voltage (Ue) IEC/UL: 690V AC/600V AC

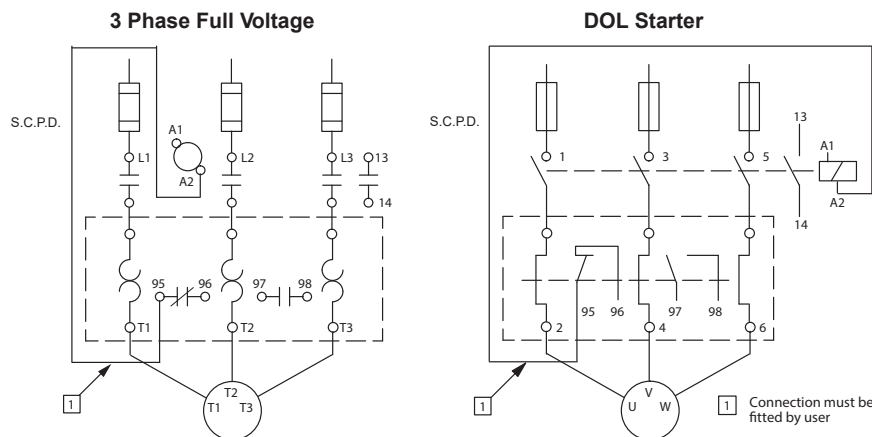
Rated Operating Frequency: 50 / 60 Hz

		Control Wiring	
Wire Type	# Wires	Range	Torque
Flexible Stranded w/ Ferrule	1 Wire	0.75...2.5 mm ²	1.4 N•m
	2 Wires*		
Stranded / Solid	1 Wire	0.75...4.0 mm ² (18...12 AWG)	1.4 N•m (12 lb-in)
	2 Wires*		

*FOR MULTIPLE CONDUCTOR APPLICATIONS THE SAME SIZE AND STYLE WIRE MUST BE USED.



Wiring Diagram



Contact Status

Contact Status

Contact Ratings: N.O. C600 / N.C. B600 (AC)
 N.O. / N.C. R300 (DC)

Normal		Stop Pressed	Test Tripped																							
95 — /— 96	Closed	Open	Open																							
97 — — 98	Open	Open	Closed																							
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Short Circuit Ratings, per UL60947-4-1 and CSA 22.2 No. 60947-4-1

Table 1: E100 UL Standard Fault Ratings, Type I

Cat No	Amp Range	UL class RK5 Fuse Max (A)	Ckt Bkr Frame Max Amp	600 Vac	
193-	1E_CP	1 - 5 A	---	5 kA	
	1E_DP	3.2 - 16.0 A	---		
	1E_EP	5.4-27.0 A	100		140G-H2 (100 A)
	1E_FP	11-55 A	175		140G-J2 (200 A)
	1E_GP	20-100 A	350	140G-K3 (400 A)	10 kA

Table 2: Panel Mount, Standalone Overload, High Fault, Type I

E100 Overload		High Fault Rating		Max Fuse Rating	
Cat No	Amp Range	Max Available Fault Current	Max Voltage	UL class J Fuse Max (A)	
193-	1E_CP	1 - 5 A	100 kA	600 V	20
	1E_DP	3.2 - 16.0 A			60
	1E_EP	5.4-27.0 A			100
	1E_FP	11-55 A			110
	1E_GP	20-100 A			225

Table 3: Short Circuit Ratings, Type I, Using 140U D Frame Circuit Breakers

E100 Overload		Contactor	Maximum (1) Circuit Breaker 140U-D6D3-	Standard Fault Rating	High Fault Rating	
Cat No	Amp Range			600Y / 347 V	480Y / 277 V	600Y / 347 V
193-	1E_CP	1 - 5 A	100-C09	5 kA	65 kA	25 kA
	1E_DP	3.2 - 16.0 A	100-C12			
	1E_EP	5.4-27.0 A	100-C16 100-C23			

(1) Selected breaker size shall not exceed 4x starter FLA

Table 4: Type I, High Fault Ratings using 140G Circuit Breakers

E100 Overload		Contactor	Short Circuit Protection Device		Fault Rating		
Cat No	Amp Range	Cat. No.	Ckt Bkr Frame	Max Amp (1)	480 Vac	600 Vac	
193-	1E_EP	5.4-27.0 A	100-C16, 100-C23, 100-C30, 100-C37, 100-C43, 100-C55	140G-H6	100 A	65 kA	25 kA
	1E_FP	11-55 A	100-C30, 100-C37, 100-C43, 100-C55	140G-J6	200 A	65 kA	25 kA
	1E_GP	20-100 A	100-C60, 100-C72, 100-C85, 100-C97	140G-K6	350 A	65 kA	35 kA

(1) Selected breaker size shall not exceed 4x starter FLA

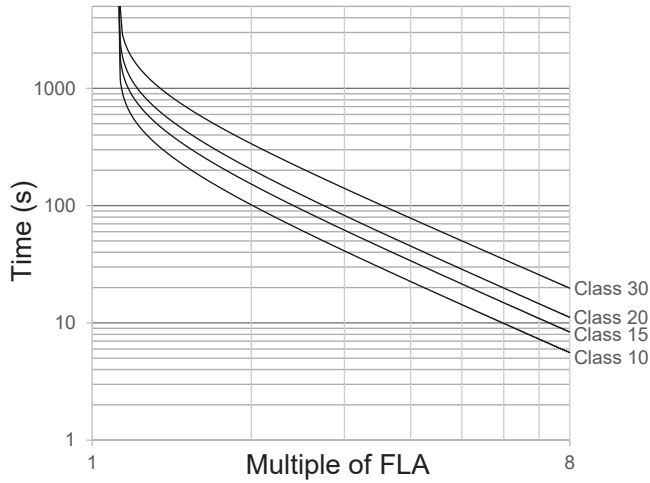
Table 5: Type I and Type II Fuse Coordination with Bul. 100-C contactors per EN/IEC 60947-4-1

E100 Overload		Contactor	Standard Fault, Prospective S. C. current , Ir (kA)	High Fault, Conditional S. C. current , Iq (kA)	Max Voltage (V)	Fuse	
Cat No	Amp Range	Cat. No.				Type I & II Max Class J or CC (A)	
193-	1E_CP 1E_DP	1 - 5 A	100-C09	1	100	600	15
			100-C12				20
		3.2 - 16.0 A	100-C16				30 (1)
			100-C23				40 (1)
	1E_EP	5.4-27.0 A	100-C09	3			15
			100-C12				20
			100-C16				30
	1E_EP	5.4-27.0 A	100-C23	40			
	1E_FP	11-55 A	100-C30	5			50
			100-C37				50
			100-C43				70
			100-C55				80
1E_GP	20-100 A	100-C60	80				
1E_GP	20-100 A	100-C72	5	100			
		100-C85		150			
		100-C97		175			

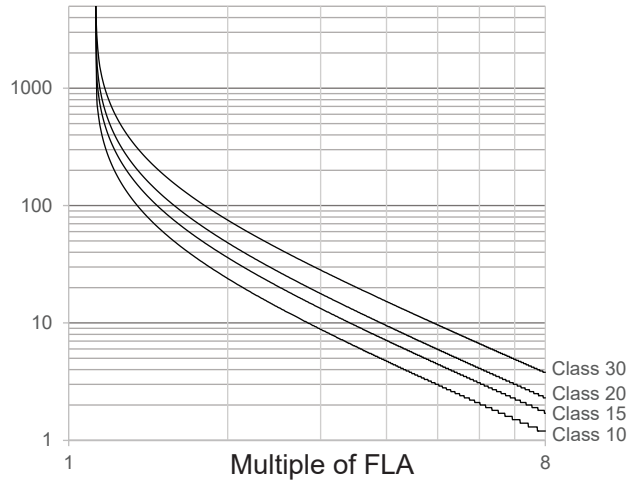
(1) 20A max when used with 1-5A overload.

Trip Curves

Cold Trip Curves



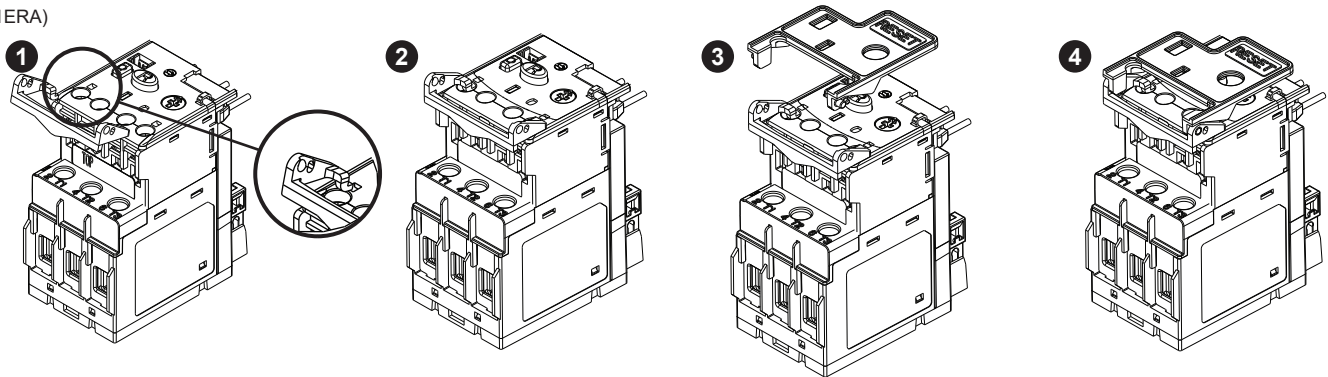
Hot Trip Curves



Accessories

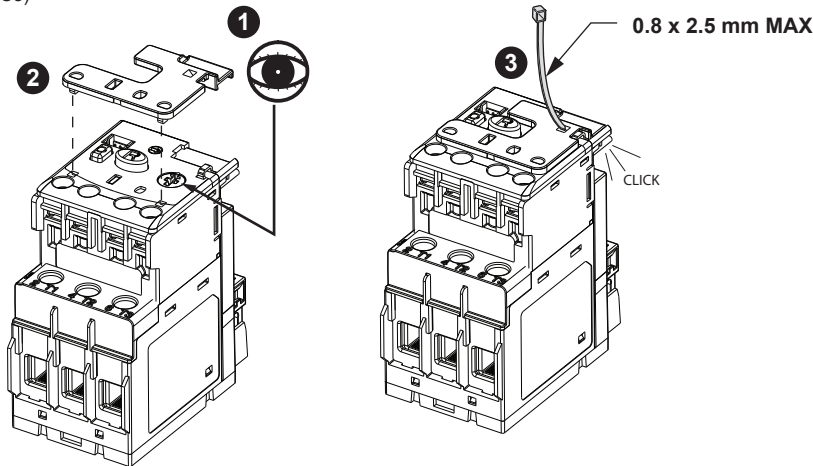
Overload Relay Reset Adapter

(Cat 193-1ERA)



Overload Relay Anti-Tamper Shield

(Cat 193-1BC8)



For Technical Support, visit rok.auto/support.





Rockwell Automation maintains current product environmental compliance information on its website at rok.auto/pec.

Product certificates are located in the Rockwell Automation Literature Library: rok.auto/certifications.

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EEE Yönetmeliğine Uygundur.

rockwellautomation.com

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