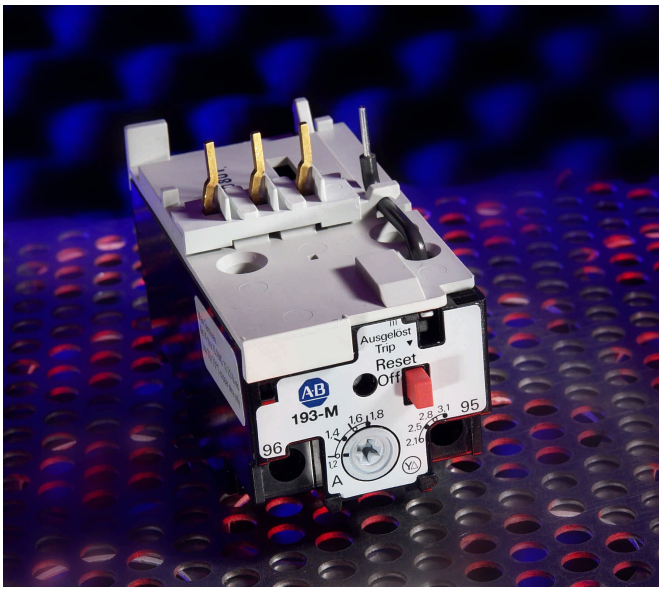
Bulletin 193-M Overload Relay Product Profile

Reliable, simple motor protection



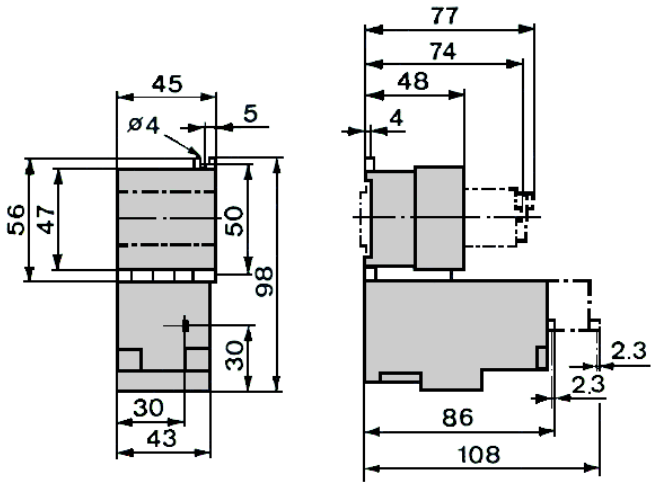
The Allen-Bradley 193-M overload relay from complete automation supplier Rockwell Automation provides reliable motor protection in normal duty applications regardless of installation location, installation position and ambient temperature. In addition, the tripping accuracy is high and constant.

- Bimetallic overload relay
- Directly mounts to 100-M contactors (5…12 A)
- Phase loss sensitivity (trips at maximum 125% of current setting)
- Trip class 10
- Built-in connection between N.C. trip contact (95) and contactor coil terminal (A2)
- Optional normally open auxiliary contact
- Manual reset only
- Trip indication
- UL, CSA and CE compliant

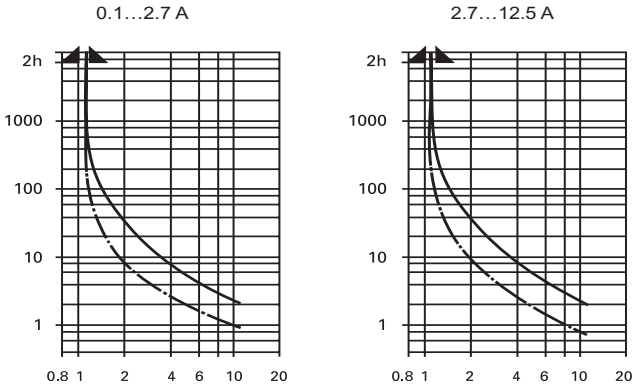
Mounts on:		Setting Range [A]	Cat. No.	Max. current rating of backup gL fuse [A] IEC Coordination Type 1	2
100-M Contactor	M05…M12	0.10…0.15	193-M-A15	25	1
		0.15…0.23	193-M-A23	25	1
		0.23…0.35	193-M-A35	25	2
		0.35…0.55	193-M-A55	25	2
		0.55…0.8	193-M-A80	25	2
		0.8…1.2	193-M-B12	25	4
		1.2…1.8	193-M-B18	25	4
		1.8…2.7	193-M-B27	25	6
		2.7…4	193-M-B40	25	10
		4…6	193-M-B60	25	—
	M09…M12	6…7.7	193-M-B77	25	16
		7.5…9	193-M-B90	25	16
	M12	8.8…10.5	193-M-C10	25	—
		10.4…12.5	193-M-C12	25	—
193-M Overload Relay (Optional N.O. Auxiliary Contact)		—	193-M-F10		

Dimensions — (shown for 193-M on 100-M contactor)

Dimensions are in mm. Dimensions are not intended to be used for manufacturing purposes.



Trip curves



Trip curve notes:

Time/current characteristics of thermal overload relay
Mean value of tolerance bands 3-phase heated. Full line curves relate to cold relay. Dashed curves relate to relay at operating temperature (at set current load).
Tolerance trip time ±20%, ±10% for current.
Function limits and temperature compensation from –25°C…+75°C.
Tripping limit specified in IEC 60947-4 for –5°C…+40°C are included in the –20°C…60°C range.

◢◣ Specified points relative to operating temperature condition; in compliance with IEC 60947-4.
Single phasing (phase failure):
Trip limits 1.05…1.25 of set current I_{eF} (1.05…1.32 I_{eF} is permissible according to IEC 60947-4).
For motors up to 10 kW, the 2-phase trip at 1.25 I_{eF} max. guarantees heat buildup limitation to the value which occurs in the event of a 3-phase trip at 1.2 I_{eF}.

Specifications

Main Circuit			
Rated Insulation Voltage			
IEC	AC		500 V
UL/CSA	AC		600 V
Max. Wire Size			
IEC	Fine Stranded w. Ferrule	[mm^2]	2 x (1…2.5)
	Coarse Stranded or Solid	[mm^2]	2 x (1.5…4)
UL/CSA	Stranded or Solid	[AWG]	2 x (14…10)
Recommended Torque		[N-m]	1.4…2.0
		[lb-in]	12…20
Control Circuit			
Rated Insulation Voltage			
IEC	AC		500 V
UL/CSA	AC		600 V
Rated Operating Current			
AC-12		[A]	4
AC-15	200…240 V	[A]	3
	380…415 V	[A]	1.6
Max. Wire Size			
IEC	Fine Stranded w. Ferrule	[mm^2]	2 x (0.75…2.5)
	Coarse Stranded or Solid	[mm^2]	2 x (0.75…2.5)
UL/CSA	Stranded or Solid	[AWG]	2 x (18…14)
Recommended Torque		[N-m]	1.2
		[lb-in]	11
General			
Standards Compliance	IEC 60947, DIN VDE 0660, UL 508, CSA C22.2 No. 14		
Approvals	CE, cULus		
Ambient Temperature	Open		–20…+60 °C (–4…+140 °F)
	Enclosed		–20…+40 °C (–4…+104 °F)

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