

# **PRODUCT PROFILE**

# Bulletin 193 E1 Plus Pass-Thru **Electronic Overload Relay**

#### **Advantages**

- Compact size
- Works with any contactor
- Self powered
- Available for 1...27 A applications
- Allows a wide current adjustment range
  - 5:1
- Current measurement based protection
  - More accurately models a motor's thermal condition in which ambient temperature is not a factor
- Enhanced phase loss protection
  - Responds to phase loss conditions within 3 seconds
- Integrated DIN rail and panel mount
- Retains thermal memory
  - Advanced electronics model the heating and cooling effects of a motor during off periods to ensure accurate protection for both hot and cold motors
- Latching trip relay
- Optional modules to provide additional protection and communications
  - Ground fault
  - Jam
  - PTC thermistor monitoring
  - DeviceNet
  - **PROFIBUS**



## Overview

The Bulletin 193 E1 Plus Pass-Thru Electronic Overload Relay provides an economical means to electronically protect electric motors for applications using a Bulletin 100-K Mini Contactor, external current transformers, or non Allen-Bradley® contactors. The E1 Plus Pass-Thru includes an integrated DIN rail mount and panel mounting tabs to eliminate the need for a separate panel mount adapter and save panel space.

This overload relay is self powered and has the footprint of a traditional bi-metal overload relay. It can be used in applications that range from 1...27 A and its three 0.17 inch (4.3 mm) diameter apertures can be used with 10 AWG or 6 mm<sup>2</sup> wire.

The E1 Plus Pass-Thru electronically provides thermal overload and phase loss protection. Its protection capabilities can be expanded by using one of the optional protection or communication and protection side mount modules.

The relay is offered in two models. The ED model provides fixed protection while the EE model provides selectable and expandable protection, and is available in single-phase and three-phase applications.



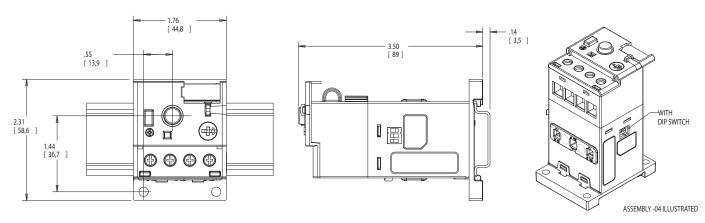
### **Product Selection**

Bulletin 193 E1 Plus Pass-Thru Devices	193-ED Three-Phase	193-EE Three-Phase	193-EE Single Phase
Adjustment Range [A]	Cat. No.	Cat. No.	Cat. No.
1.05.0	193-ED1CP	193-EECP	193-EEPP
3.216	193-ED1DP	193-EEDP	193-EERP
5.427	193-ED1EP	193-EEEP	193-EESP

#### Accessories

Description	
The DeviceNet Communication & Protection Side-Mount Module Communicates motor diagnostic information on a DeviceNet network; it contains integrated I/O (2 inputs and 1 output); and offers expanded protective functions including overload warning, jam protection, and underload warning.	
The PROFIBUS Communication & Protection Side-Mount Module Communicates motor diagnostic information on a PROFIBUS network; it contains integrated I/O (2 inputs and 1 output); and offers expanded protective functions including overload warning, jam protection, and underload warning.	193-EPRB
E1 Plus Jam Protection Side Mount Module Provides Jam protection with adjustable trip level and trip delay settings. The module also provides an input to allow remote reset of a trip.	193-EJM
E1 Plus Ground Fault Protection Side Mount Module Provides adjustable 20 mA - 5 A ground fault protection. The module also provides an input to allow remote reset of a trip.	193-EGF
E1 Plus Ground Fault/Jam Protection Side Mount Module Provides adjustable 20 mA - 5 A ground fault and fixed jam protection. The module also provides an input to allow remote reset of a trip.	193-EGJ
E1 Plus PTC Protection Side Mount Module Provides terminals for connection of up to 6 PTC thermistor sensors. These sensors react to actual temperature. The module also provides an input to allow remote reset of a trip.	193-EPT
E1 Plus Remote Reset Side Mount Module Provides an input to allow remote reset of a trip.	193-ERR
Current Adjustment Shield Prevents inadvertent adjustments of the current setting. (Package of 10)	193-BC8
<b>External Reset Adapter</b> For enclosed, through-the-door reset applications. Metal construction IP66, non-illuminated with rod (length: 142 mm, adjustable range 141159 mm). Please consult the 800F catalog pages for additional types.	193-ERA

# **Dimensional Diagrams**



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