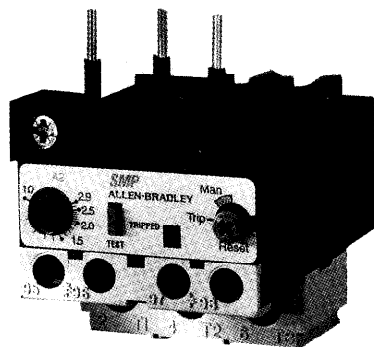




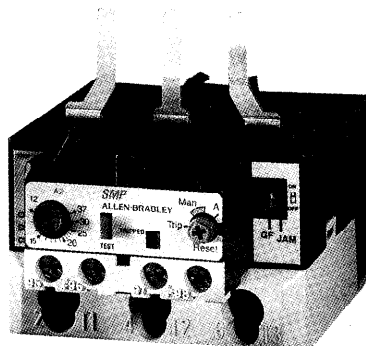
SMP Overload Relay Specification

Bulletin 193 and Bulletin 592

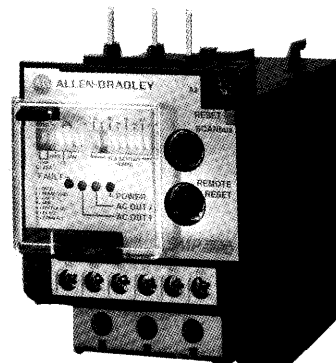
Typical Specification



SMP-1 Overload Relay



SMP-2 Overload Relay



SMP-3 Overload Relay

1. General

- 1.1 This specification describes the general requirements for solid-state overload relay protection.
- 1.2 The overload relay meets:
 - 1.2.1 UL 508
 - 1.2.2 CSA C22.2 No. 14
 - 1.2.3 IEC 947-4
 - 1.2.4 IEC 801-1 parts 2 through 6
 - 1.2.5 Starters incorporating the solid-state overload relay meets the IEC 947-4-1 requirements for Type 2 Coordination at 600V with a 100,000A available fault current. Type 2 Coordination is

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AB Drives

achieved with NEMA starters when protected by any brand of UL Listed Class RK1, J, or CC fuses. Type 2 Coordination is achieved with IEC starters when protected by any brand of UL Listed Class J or CC fuses.

- 1.2.6 IEC starters incorporating the solid-state overload relay meet IEC 947-4-1 requirements for Type 2 Coordination at 415V with an 80,000A available fault current when protected by GEC Alstom Type T fuses.
- 1.2.7 The overload relays are modular in design with versions available for use on both IEC and NEMA starters.
- 1.2.8 The overload relay family provides a choice in levels of protection.
- 1.2.9 The overload relays directly replace existing electromechanical overload relays (eutectic alloy or bimetallic).

2. Solid-state Overload Relay – Basic Functionality

- 2.1 The overload relay is self-powered.
- 2.2 The overload relay is available in fixed tripping classes of 10, 20, or 30.
- 2.3 The overload relay is available in manual reset or automatic/manual reset versions.
- 2.4 The overload relay trips in 2 seconds or less under phase loss conditions when applied to a fully loaded motor.
- 2.5 The overload relay operates on 150mW or less of power.
- 2.6 The overload relay provides a visible trip indicator.
- 2.7 The overload relay provides 1 N.O. and 1 N.C. isolated auxiliary contacts.
- 2.8 The overload relay provides a test button that operates the normally closed contact.
- 2.9 The overload relay provides a test trip function that when operated trips both the N.O. and N.C. contacts.
- 2.10 The overload relay has trip-free construction.
- 2.11 The overload relay has a current adjustment range of 3.2:1 or greater.
- 2.12 The overload relay is ambient temperature compensated.

3. Intermediate Functionality

- 3.1 The overload relay is self-powered.
- 3.2 The overload relay can be converted from manual to automatic reset.

- 3.3 The overload relay will trip in two seconds or less under phase loss conditions when applied to a fully loaded motor.
- 3.4 The overload relay operates on 150mW of power or less .
- 3.5 The overload relay provides a visible trip indicator.
- 3.6 The overload relay provides 1 N.O. and 1 N.C. isolated auxiliary contacts.
- 3.7 The overload relay provides a test button that operates the normally closed contact.
- 3.8 The overload relay provides a test trip function that when operated trips both the N.O. and N.C. contacts.
- 3.9 The overload relay has trip free construction.
- 3.10 The overload relay has a current adjustment range of 3.2:1 or greater.
- 3.11 The overload relay is ambient temperature compensated.
- 3.12 The overload relay has selectable 10, 15, 20, or 30 tripping classes.
- 3.13 The overload relay has user selectable jam/stall protection.
- 3.14 The overload relay has user selectable ground fault protection.

4. Enhanced Protection and Network Communications

- 4.1 The overload relay has a current adjustment range of 5:1 or greater.
- 4.2 The overload relay has +/- 2.5% setting accuracy.
- 4.3 The overload relay can be converted from manual to automatic reset.
- 4.4 The overload relay trips in two seconds or less under phase loss conditions when applied to a fully loaded motor.
- 4.5 The overload relay provides a visible trip indicator.
- 4.6 The overload relay provides led status indication.
- 4.7 The trip indication LED flashes in a pattern that indicates the trip cause.
- 4.8 The overload relay provides 1 N.C. auxiliary contact.
- 4.9 The overload relay provides a test trip function that when operated trips both the N.C. contact and the N.O. triac outputs.
- 4.10 The overload relay has trip free construction.
- 4.11 The overload relay is ambient temperature compensated.

Product Data

SMP Specification

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- 4.12 The overload relay has user selectable 10, 15, 20, or 30 tripping classes.
- 4.13 The overload relay has user selectable jam/stall protection.
- 4.14 The overload relay has user selectable ground fault protection.
- 4.15 The overload relay is compatible with a hand-held or panel-mounted interface device that provides a two-line backlit LCD and start, stop, and reset control functions.
- 4.16 The overload relay can communicate on the Allen-Bradley Remote I/O and DeviceNet networks.
- 4.17 The overload relay provides the following information on a communication network.
 - 4.17.1 Average Current
 - 4.17.2 Percent Phase Imbalance
 - 4.17.3 Percent Thermal Capacity Used
 - 4.17.4 Trip Cause
 - 4.17.5 Full Load Current Setting
 - 4.17.6 Output Triac Status
- 4.18 The overload relay provides two triac outputs that enable the overload to control two starter coils.
- 4.19 The overload relay provides the following control functions on a communication network.
 - 4.19.1 Start
 - 4.19.2 Stop
 - 4.19.3 Reset

