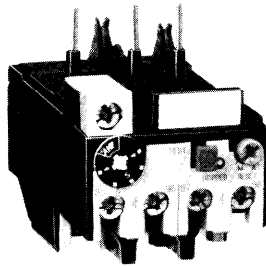
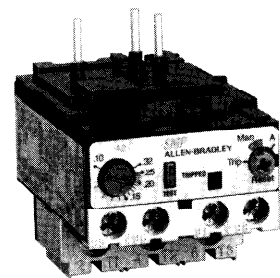




## Bulletin 193 SMP™ Solid-state Overload Relay Series B to SMP-1™ Cross Reference



Series B Cat. No. 193-BSB30



SMP-1 Cat. No. 193-A1C1

The Bulletin 193 SMP-1 solid-state overload relay replaces the Bulletin 193 Series B bimetallic overload relay. The SMP-1 overload relay provides the same protective features that the Series B provides, as well as some additional innovations that allow for even greater protection of AC motors. The SMP-1 overload relay:

- trips as quickly as 2 seconds under phase loss conditions on fully loaded motors
- reduces panel heat
- has a wider adjustment range

The transition to the SMP-1 overload relay will require minimal adjustment for the panel builder and user, as the SMP-1 overload relay has been designed to be completely interchangeable with the existing Bulletin 193 Series B product. This attention to detail results in identical dimensions so that no adjustments have to be made for reset locations, wiring methods, or attachment to Bulletin 100 contactors.

SMP and SMP-1 are trademarks of Allen-Bradley Company, Inc.

# Allen-Bradley HMIs

## Product Data

Bulletin 193 Series B to SMP-1 Solid-state  
Overload Relay Cross Reference

## New Features

### Wider Adjustment Range

The SMP-1 overload relay provides a maximum current adjustment range of 3.2:1, which allows a single SMP-1 relay to be used as a replacement for up to three of the Bulletin 193 Series B relays.

### Phase Loss Protection

A major benefit gained by using the SMP-1 overload relay is improved phase loss protection. The SMP-1 overload relay utilizes a custom application-specific integrated circuit (ASIC) to better protect against damage when phase loss conditions occur. Under such conditions, the SMP-1 overload relay trips as quickly as 2 seconds under phase loss conditions on fully loaded motors, reducing the damage incurred by 3-phase motors.

### Low Energy Consumption and Reduced Heat Generation

Unlike traditional overload relays, the SMP-1 overload relay uses solid-state circuits to model motor windings. This drastically decreases the amount of energy required to provide overload functionality. The SMP-1 overload relay uses only 150 mW of power to provide overcurrent protection. This lowers operating costs, but even more significantly, it reduces the heat normally associated with traditional overload relays.

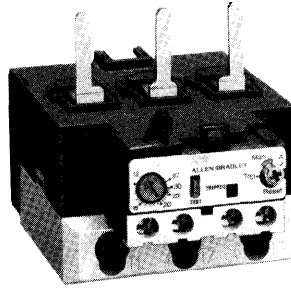
### Direct Attachment through 180A

Previously, for contactors rated more than 75A, extra time and special kits were required to mount the traditional electromechanical overload relay. The SMP-1 overload relay eliminates those requirements; overload relays rated up to 180A are available for direct mounting to contactors.

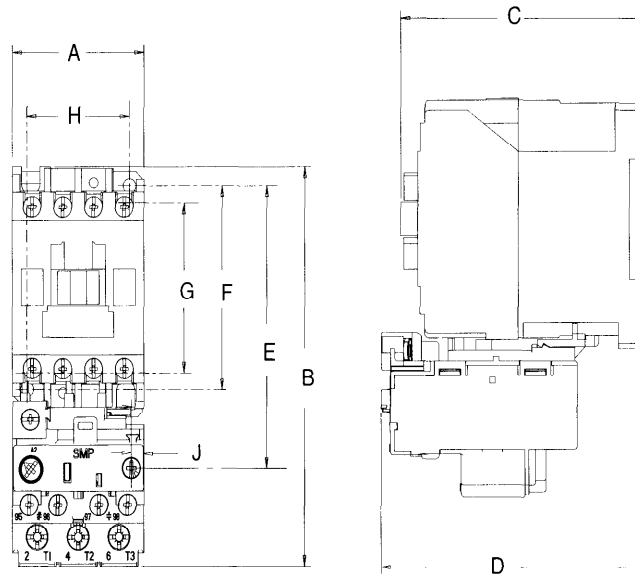
**Product Data**

Bulletin 193 Series B to SMP-1 Solid-state  
Overload Relay Cross Reference

**Dimensional Information**



SMP-1 Cat No. 193-A1K3

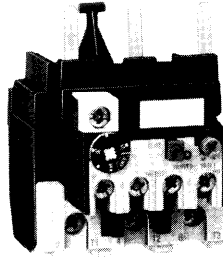


**Dimensions in Millimeters (Inches)**

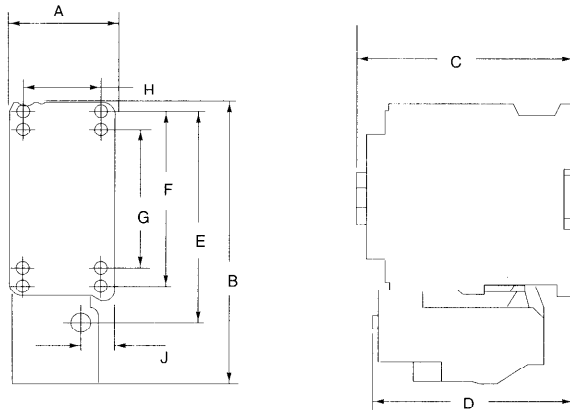
	Contactor Cat. No.	A Wide	B High	C Deep	D	E	F	G	H	J
SMP-1 Overload Relay	100-A09, -A12	45 (1-25/32)	117.7 (41/64)	84 (3-5/16)	90.7 (3-37/64)	83.2 (3-9/32)	60 (2-3/8)	50 (1-31/32)	35 (1-25/64)	4.3 (11/64)
	100-A18, A24	55 (2-11/64)	127 (5)	92 (3-5/8)	96 (3-25/32)	94 (3-45/64)	75 (2-61/64)	60 (2-3/8)	35 (1-25/64)	15.1 (19/32)
	100-A30	55 (2-11/64)	145.8 (5-3/4)	109 (4-19/64)	92.5 (3-41/64)	112 (4-13/32)	90 (3-35/64)	75 (2-61/64)	40 (1-9/16)	12.5 (1/2)
	A38, A45	75 (2-61/64)	174.3 (6-7/8)	125 (4-15/16)	120.1 (4-47/64)	127 (5)	100 (3-5/16)	-	55 (2-11/64)	19.4 (49/64)
	A60, A75	91 (3-37/64)	186.6 (7-11/32)	142 (5-19/32)	134.2 (5-9/32)	134.6 (5-5/16)	110 (4-11/32)	-	80 (3-5/32)	21.9 (21/32)

## Product Data

Bulletin 193 Series B to SMP-1 Solid-state  
Overload Relay Cross Reference



Series B Cat. No. 193-CPC45



### Dimensions in Millimeters (Inches)

	Contactor Cat. No.	A Wide	B High	C Deep	D	E	F	G	H	J
Series B Overload Relay	100-A09, -A12	45 (1-13/16)	119 (4-11/16)	84 (3-5/16)	98 (3-55/64)	80 (3-11/64)	60 (2-23/64)	50 (1-31/32)	35 (1-3/8)	6 (15/64)
	100-A18, -A24	55 (2-13/64)	127 (5)	92 (3-5/8)	103 (4-1/16)	91 (3-37/64)	75 (2-61/64)	60 (2-23/64)	35 (1-3/8)	17 (43/64)
	100-A30	55 (2-5/32)	145 (5-45/64)	109 (4-19/64)	99 (3-59/64)	109 (4-19/64)	90 (3-35/64)	75 (2-61/64)	40 (1-37/64)	14 (9/16)
	100-A38, -A45	75 (2-61/64)	175 (6-29/32)	125 (4-59/64)	94 (3-11/16)	129 (5-1/16)	100 (3-15/64)	-	55 (2-11/64)	11 (7/16)
	100-A60, -A75	91 (3-3/4)	187 (7-3/8)	147 (5-51/64)	108 (4-1/4)	137 (5-25/64)	110 (4-15/32)	-	80 (3-5/32)	29 (1-9/64)

**Product Data**

Bulletin 193 Series B to SMP-1 Solid-state  
Overload Relay Cross Reference

## Cross-reference Guide

Use the table below as a guide for cross referencing from Bulletin 193 series B bimetallic IEC overload relays to the SMP-1 solid state overload relay. Note that the shaded areas indicate an overload relay that could be replaced by one of two of the new SMP-1 overload relays. The application full load current should be checked to ensure that the best replacement is chosen.

Series B Cat. No.	Series B Adjustment Range	SMP-1 Cat.No. <sup>①</sup>	SMP-1 Adjustment Range
193-BSA18	0.10–0.16A	193-A1A1	.1–.32A
193-BSA26	.016–0.24A		
193-BSA35	0.24–0.40A	193-A1C1	.32–1A
193-BSA70	0.40–0.60A		
193-BSA90	0.60–1.0A		
193-BSB12	0.8–1.2A	193-A1D1	1.0–2.9A
193-BSB16	1.0–1.6A		
193-BSB22	1.5–2.3A		
193-BSB30	2.0–3.0A	193-A1E1	1.6–5.0A
193-BSB42	2.8–4.2A		
193-BSB60	4.0–6.0A	193-A1F1	3.7–12A
193-BSB80	5.5–8.0A		
193-BSC10	6.0–10A		
193-BSC15	10–16A	193-A1H1	12–32A
193-BSC24	16–24A		
193-BSC32	22–32A		
193-CPC30	18–30A	193-A1J2	14–45A
193-CPC45	30–45A		
193-CPC63	45–60A	193-A1K3	23–75A
193-CPC75	60–75A		
193-HPD110	66–110A	193-A1L4	66–110A
193-DPC88	60–88A	193-A1M5	57–180A
193-DPD120	80–120A		
193-DPD200	120–200A		
193-EPD180	120–180A	193-A1N6	96–300A
193-EPD300	180–300A		
193-FPD240	160–240A	193-A1P6	128–400A
193-FPD400	240–400A		
193-GPD378 <sup>②</sup>	252–378A	193-A1R6 <sup>②</sup>	200–630A
193-GPD630 <sup>②</sup>	378–630A		

① To make the SMP overload relay an auto/manual reset, change the catalog string to A4.  
Example: **Cat. No. 193-A1C1** becomes **Cat. No. 193-A4C1**.

② The catalog number as listed is incomplete. To complete the catalog number, insert the coil voltage code from the coil selection table below.

### Coil Voltage Table

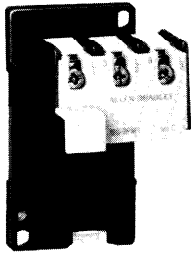
Voltage	24	48	110	120	208	220	240	277	380	415	440	480	500	600
50 Hz	K	Y	D	–	–	A	T	–	N	I	B	–	M	–
60 Hz	J	X	–	D	H	L	A	F	–	–	G	B	–	C

## Product Data

Bulletin 193 Series B to SMP-1 Solid-state  
Overload Relay Cross Reference

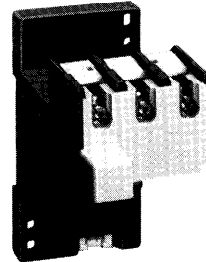
## Updated Accessories

Other accessories that have been updated are shown below.



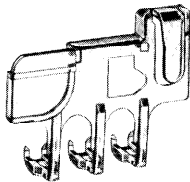
Series B Cat. No. 193-BPM1

### Panel Mounting Adapter

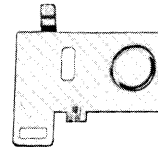


SMP-1 Cat. No. 193-BPM2

### Anti-tamper Shield



Series B Cat. No. 193-BC1



SMP-1 Cat. No. 193-BC5



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