

Next Generation Dedicated Function Motor Protection Relays

Product Selection/Specifications

Product Selection

Motor Protection Relay Type	Description	Cat. No.
 Bulletin 809S Current Monitoring Relays	1...10 A AC/DC (1-phase); 24/48V AC/DC control power	809S-C1-10A-48
	1...10 A AC/DC (1-phase); 115/230V AC control power	809S-C1-10A-230
 Bulletin 813S Voltage Monitoring Relays	Single-phase voltage monitoring relay, 2...500V AC/DC; 24/48V AC/DC control power	813S-V1-500V-48
	Single-phase voltage monitoring relay, 2...500V AC/DC; 115/230V AC control power	813S-V1-500V-230
	Three-phase voltage monitoring relay, 110...115V AC	813S-V3-110V
	Three-phase voltage monitoring relay, 208...240V AC	813S-V3-230V
	Three-phase voltage monitoring relay, 380...415V AC	813S-V3-400V
	Three-phase voltage monitoring relay, 440...480V AC	813S-V3-480V
 Bulletin 814S Power Monitoring Relays	Three-phase power (kW) monitoring relay, 380...480V AC & 1...10 A AC	814S-W3-480V-10A
	Three-phase power (kW) monitoring relay, 600...690V AC & 1...10 A AC	814S-W3-690V-10A
	Three-phase power factor monitoring relay, 380...480V AC & 1...10 A AC	814S-PF3-480V-10A
	Three-phase power factor monitoring relay, 600...690V AC & 1...10 A AC	814S-PF3-690V-10A
 Bulletin 817 Thermistor Monitoring Relay	Thermistor monitoring relay, 24/48V AC/DC control power	817S-PTC-48
	Thermistor monitoring relay, 115V AC control power	817S-PTC-115
	Thermistor monitoring relay, 230V AC control power	817S-PTC-230

Current Transformers

Use only with **Cat No. 809S-C1**.

Trip Current Range Continuous AC Amperes (5 A Secondary Winding)	Maximum Current [A]		Cat. No.
	Continuous	Inrush	
4.2...50	75	350	809S-CT1
17...200	300	1400	809S-CT2
42...500	750	3500	809S-CT3
100...1200	1800	8400	809S-CT4

Specifications

Bulletin 809S Current Monitoring Relay, Single-Phase

Cat. No.	809S-C1-10A-48	809S-C1-10A-230
Input Specifications		
Measuring Range	1...10 A AC/DC	1...10 A AC/DC
Internal Resistance	3 mΩ	3 mΩ
Maximum for 1 Second	50 A	50 A
Contact Input	Terminals Z1, Y1	Terminals Z1, Y1
Disabled	>10 kΩ	>10 kΩ
Enabled	<500 Ω	<500 Ω
Latch Disable	>500 ms	>500 ms
Output Specifications		
Type of Contact	(1) Form C	(1) Form C
Rated Insulation Voltage	250V AC	250V AC
Supply Specifications	Terminals A1, A2 or A3, A2	Terminals A1, A2 or A3, A2
Rated Operational Voltage	24...48V AC/DC +/- 15%	115/230V AC +/- 15%
	45 to 65 Hz, Insulated	45 to 65 Hz, Insulated
Rated Operational Power	4 VA, 3 W	4 VA, 3 W
General Specifications		
Power ON Delay	1 s +/- 0.5 s or 6 s +/- 0.5 s	1 s +/- 0.5 s or 6 s +/- 0.5 s
Environment		
Degree of Protection	IP 20	IP 20
Pollution Degree	3	3
Dimensions (W x H x D)	22.5 x 80 x 99.5 mm	22.5 x 80 x 99.5 mm
Screw Terminals	Max. 0.5 N•m	Max. 0.5 N•m

Next Generation Dedicated Function Motor Protection Relays

Specifications

Bulletin 813S Voltage Relay, Single-Phase

Cat. No.	813S-V1-500V-48	813S-V1-500V-230
Input Specifications		
Measuring Range	2...500 V AC/DC	2...500 V AC/DC
Internal Resistance	500 kΩ	500 kΩ
Maximum for 1 Second	1000 V	1000 V
Contact Input		
	Terminals Z1, Y1	Terminals Z1, Y1
Disabled	>10 kΩ	>10 kΩ
Enabled	<500 Ω	<500 Ω
Latch Disable	>500 ms	>500 ms
Output Specifications		
Type of Contact	(1) Form C	(1) Form C
Rated Insulation Voltage	250V AC	250V AC
Supply Specifications		
	Terminals A1, A2 or A3, A2	Terminals A1, A2 or A3, A2
Rated Operational Voltage	24 to 48 V AC/DC +/- 15%	115/230V AC +/- 15%
	45 to 65 Hz, Insulated	45 to 65 Hz, Insulated
Rated Operational Power	4VA, 3 W	4VA, 3 W
General Specifications		
Power ON Delay	1 s +/- 0.5 s or 6 s +/- 0.5 s	1 s +/- 0.5 s or 6 s +/- 0.5 s
Environment		
Degree of Protection	IP 20	IP 20
Pollution Degree	3	3
Dimensions (W x H x D)	22.5 x 80 x 99.5 mm	22.5 x 80 x 99.5 mm
Screw Terminals	Max. 0.5 N•m	Max. 0.5 N•m

Bulletin 813S Voltage Relay, Three-Phase

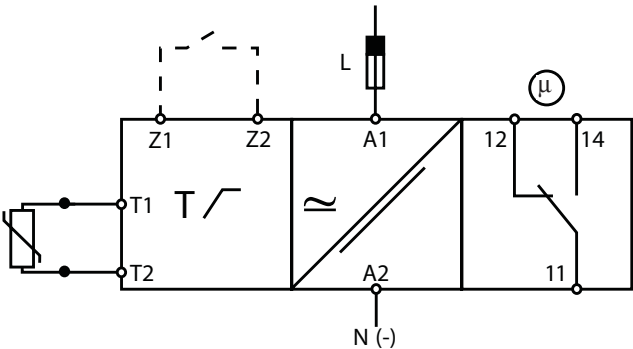
Cat. No.	813S-V3-110V	813S-V3-230V	813S-V3-400V	813S-V3-480V	813S-V3-690V
Input Specifications					
Input	Terminals L1, L2, L3, N	Terminals L1, L2, L3, N	Terminals L1, L2, L3, N	Terminals L1, L2, L3, N	Terminals L1, L2, L3, N
Supply	110...115V AC	208...240V AC	380...415V AC	440...480V AC	600...690V AC
	Self-powered	Self-powered	Self-powered	Self-powered	Self-powered
Frequency	50...400 Hz	50...400 Hz	50...400 Hz	50...400 Hz	50...400 Hz
Ranges					
Upper Level	+2...+22% of the nominal voltage	+2...+22% of the nominal voltage	+2...+22% of the nominal voltage	+2...+22% of the nominal voltage	+2...+22% of the nominal voltage
Lower Level	-22...-2% of the nominal voltage	-22...-2% of the nominal voltage	-22...-2% of the nominal voltage	-22...-2% of the nominal voltage	-22...-2% of the nominal voltage
Asymmetry	2...22% of the nominal voltage	2...22% of the nominal voltage	2...22% of the nominal voltage	2...22% of the nominal voltage	2...22% of the nominal voltage
Tolerance	2...22% of the nominal voltage	2...22% of the nominal voltage	2...22% of the nominal voltage	2...22% of the nominal voltage	2...22% of the nominal voltage
Hysteresis					
Set Points from 2...5%	1%	1%	1%	1%	1%
Set Points from 5...22%	2%	2%	2%	2%	2%
Output Specifications					
Type of Contact	(2) Form C, Normally Energized	(2) Form C, Normally Energized	(2) Form C, Normally Energized	(2) Form C, Normally Energized	(2) Form C, Normally Energized
Rated Insulation Voltage	250V AC	250V AC	250V AC	250V AC	250V AC
Supply Specifications					
Rated Operational Power	13 VA @ Δ 400V AC, 50 Hz	13 VA @ Δ 400V AC, 50 Hz	13 VA @ Δ 400V AC, 50 Hz	13 VA @ Δ 400V AC, 50 Hz	21 VA @ Δ 600V AC, 50 Hz
General Specifications					
Power ON Delay	1 s +/- 0.5 s or 6 s +/- 0.5 s	1 s +/- 0.5 s or 6 s +/- 0.5 s	1 s +/- 0.5 s or 6 s +/- 0.5 s	1 s +/- 0.5 s or 6 s +/- 0.5 s	1 s +/- 0.5 s or 6 s +/- 0.5 s
Environment					
Degree of Protection	IP 20	IP 20	IP 20	IP 20	IP 20
Pollution Degree	3	3	3	3	3
Dimensions (W x H x D)	45 x 80 x 99.5 mm	45 x 80 x 99.5 mm	45 x 80 x 99.5 mm	45 x 80 x 99.5 mm	45 x 80 x 99.5 mm
Screw Terminals	Max. 0.5 N•m	Max. 0.5 N•m	Max. 0.5 N•m	Max. 0.5 N•m	Max. 0.5 N•m



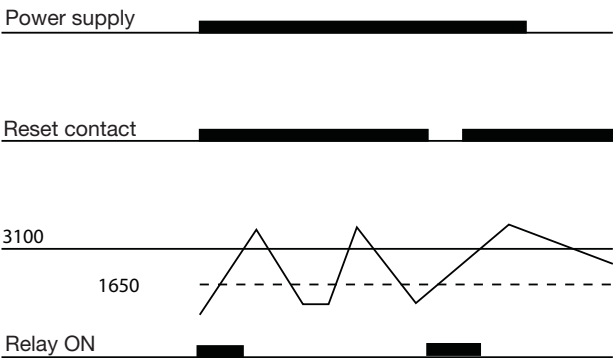
Thermistor Monitoring Relays

These devices are motor temperature monitoring relays, used to monitor the temperature of the coils of a motor with built-in PTCs. The alarm status of the relay can be reset by either an external contact or an internal button. The test button allows the simulation of the fault condition. The LEDs indicate the alarm status.

Bulletin 817S Wiring Diagram



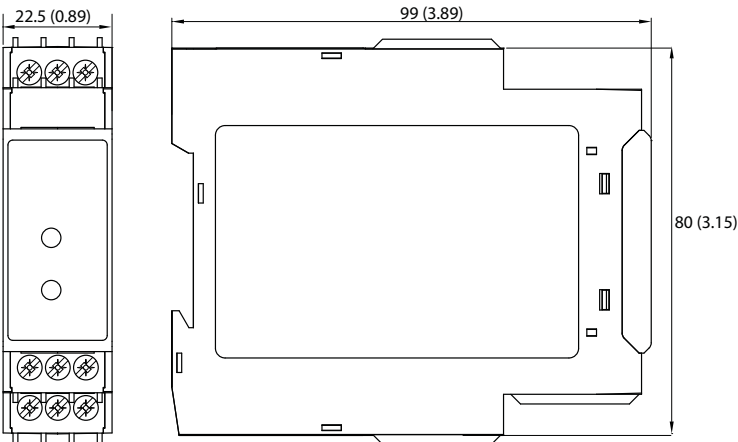
Bulletin 817S Function Diagram



Approximate Dimensions

Dimensions shown are in millimeters (inches) Dimensions are not intended for manufacturing purposes.

Bulletin 809S, 813S Single-Phase Relays/Bulletin 817S Thermistor Relays



Bulletin 813S, 814S Three-Phase Relays

