

# Product data sheet

## Characteristics

Available at: [www.power-io.com](http://www.power-io.com)

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# SSP1A125M7T

solid state relay-panel mount-thermal pad-input

90-280VAC,output 24-300V AC,25 A



### Main

|                                 |                                      |
|---------------------------------|--------------------------------------|
| Range of product                | Zelio Relay                          |
| Product or component type       | Solid state relay                    |
| Provided accessory              | Thermal pad                          |
| Device short name               | SSP1                                 |
| Mounting support                | Panel                                |
| Number of phases                | 1 phase                              |
| Contacts type and configuration | 1 NO                                 |
| [In] rated current              | 25 A                                 |
| Solid state output type         | Zero voltage switching<br>SCR output |

### Complementary

|  |   |
|--|---|
| Control circuit voltage                | 90...280 V AC   |
| Switching voltage                      | $\geq 90$ V AC turn-on<br>$\leq 10$ V AC turn-off   |
| Response time                          | 25 ms turn-on<br>30 ms turn-off   |
| Input current                          | 5...10 mA   |
| Output voltage                         | 24...300 V AC   |
| Load current                           | 0.15...25 A   |
| Transient overvoltage                  | 600 V   |
| Surge current                          | $\leq 250$ A for 16.6 ms  |
| Maximum $I^2t$ for fusing              | 285 A <sup>2</sup> .s for 10 ms at 50 Hz half cycle<br>259 A <sup>2</sup> .s for 8.33 ms at 60 Hz half cycle  |
| Co-ordination type                     | Type 2 - 20 A miniature circuit breaker (MCB) - curve B<br>Type 1 - 25 A miniature circuit breaker (MCB) - curve B  |
| Leakage current                        | $\leq 1$ mA off-state   |
| Voltage drop                           | 1.15 V on-state   |
| DV/Dt                                  | 500 V/ $\mu$ s off-state at maximum voltage   |
| Power factor                           | 0.5 with maximum load   |
| Motor controller rating                | 1 hp 240 V AC<br>0.5 hp 120 V AC  |
| Insulation resistance                  | 1000 MOhm at 500 V DC   |
| Maximum capacitance                    | 8 pF for input/output   |
| Dielectric strength                    | 4 kV AC for input or output to case<br>4 kV AC for input/output   |
| [Uimp] rated impulse withstand voltage | 6 kV input to output<br>6 kV output to case   |
| Tightening torque                      | 2...2.2 N.m for output<br>1.5...1.7 N.m for input   |
| Connections - terminals                | Ring lugs : 11.7 x 4.5 mm for output<br>Forked type tag connectors : 11.7 x 4.5 mm for output<br>Ring lugs : 9.2 x 4 mm for input<br>Forked type tag connectors : 9.2 x 4 mm for input<br>Screw terminals : 0.5...8.26 mm <sup>2</sup> , (AWG 20...AWG 8) without cable end for output<br>Screw terminals : 0.2...3.3 mm <sup>2</sup> , (AWG 24...AWG 12) without cable end for input<br>Screw terminals : 0.5...5.26 mm <sup>2</sup> , (AWG 20...AWG 10) with cable end for output<br>Screw terminals : 0.2...3.3 mm <sup>2</sup> , (AWG 24...AWG 12) with cable end for input |
| Thermal resistance                     | 0.8 °C/W junction to case   |
| Thermal pad impedance                  | 0.48 °C-in <sup>2</sup> /W at 25 psi  |
| LED indicator                          | LED green for input status  |

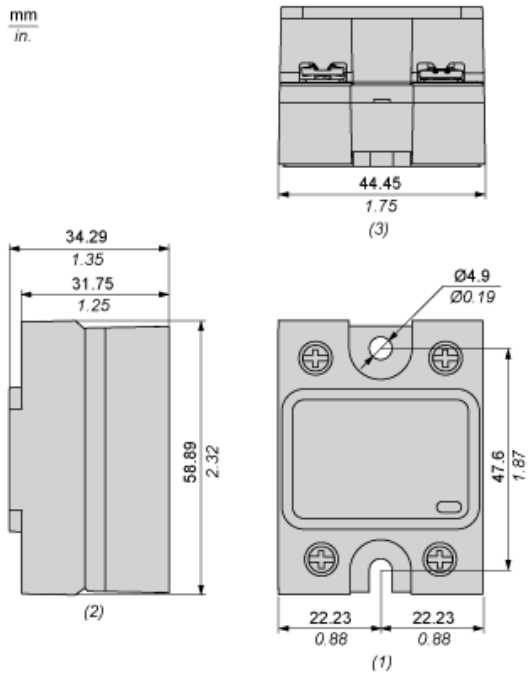
|                         |        |
|-------------------------|--------|
| IP degree of protection | IP20   |
| Product weight          | 89.2 g |

## Environment

|                                       |  |
|---------------------------------------|--|
| Ambient air temperature for operation | -40...80 °C  |
| Ambient air temperature for storage   | -40...125 °C   |
| Pollution degree                      | 2  |
| Overvoltage category                  | III  |
| Product certifications                | CE<br>CSA<br>RoHS<br>UL<br>REACH<br>EAC                        |
| Marking                               | CE<br>CSA<br>UL<br>EAC   |
| Standards                             | EN/IEC 60950-1<br>UL 508<br>EN/IEC 62314<br>CSA C22.2 No 14-13 |

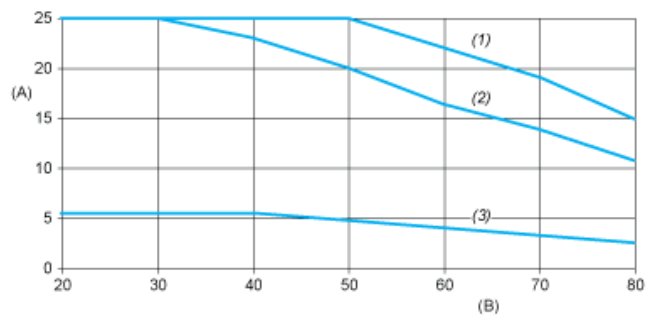
Dimensions

mm  
in.



- (1) Front view
- (2) Side view
- (3) Bottom view

Derating Curves



- A : Load Current (Arms)
- B : Ambient Temperature (°C)
- (1) For Heatsink SSRHP17
- (2) For Heatsink SSRHP25
- (3) No Heatsink