

# Product data sheet

## Characteristics

# SSP1A125M7

Harmony, Solid state relay, 25 A, DIN rail mount, zero voltage switching, input 90...280 V AC, output 24...300 V AC



### Main

|                           |                                      |
|---------------------------|--------------------------------------|
| Range of product          | Harmony Solid State Relays           |
| Product or component type | Solid state relay up to 30 A         |
| Device short name         | SSP1                                 |
| Mounting support          | Panel                                |
| Number of phases          | 1 phase                              |
| [In] rated current        | 25 A                                 |
| Solid state output type   | SCR output<br>Zero voltage switching |
| Output switching mode     | Zero voltage switching               |

### Complementary

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

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|                         |  |
|-------------------------|--|
| IP degree of protection | IP20                                   |
| Safety reliability data | B10d = 1731395<br>MTTFd = 1875.9 years |
| Net weight              | 89.2 g                                 |
| Device presentation     | Complete product                       |

### 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[RETURN]CSA[RETURN]UL[RETURN]EAC                       |
| Marking                               | CE<br>EAC<br>CSA<br>UL                                   |
| Standards                             | IEC 62314<br>UL 508<br>IEC 60950-1<br>CSA C22.2 No 14-13 |

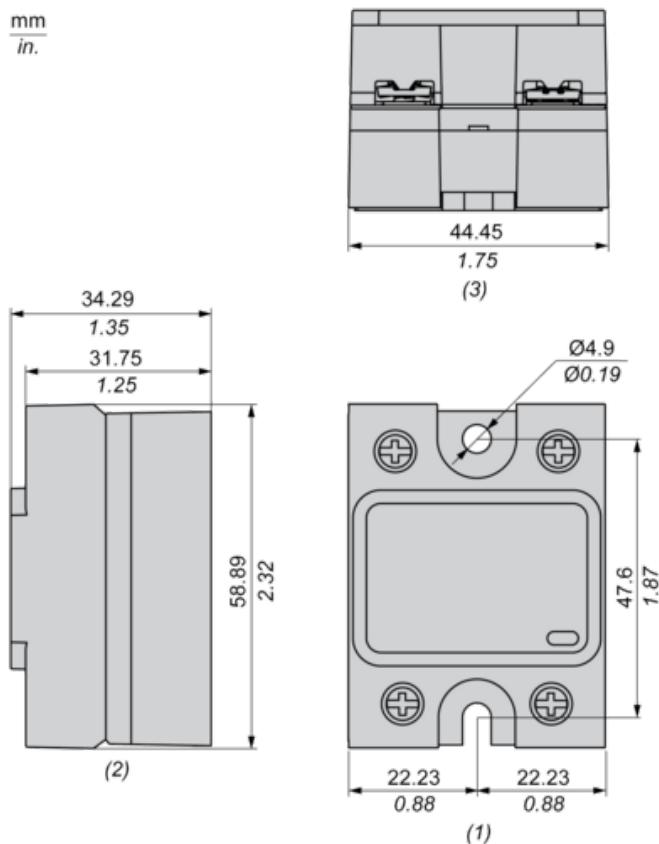
### Packing Units

|                              |         |
|------------------------------|---------|
| Unit Type of Package 1       | PCE     |
| Number of Units in Package 1 | 1       |
| Package 1 Height             | 3.8 cm  |
| Package 1 Width              | 4.8 cm  |
| Package 1 Length             | 6.7 cm  |
| Package 1 Weight             | 98.0 g  |
| Unit Type of Package 2       | S01     |
| Number of Units in Package 2 | 30      |
| Package 2 Height             | 15.0 cm |
| Package 2 Width              | 15.0 cm |
| Package 2 Length             | 40.0 cm |
| Package 2 Weight             | 3.24 kg |

### Offer Sustainability

|                            |   |
|----------------------------|---|
| Sustainable offer status   | Green Premium product   |
| REACH Regulation           |  <a href="#">REACH Declaration</a>             |
| EU RoHS Directive          | Pro-active compliance (Product out of EU RoHS legal scope)  |
| Mercury free               | Yes   |
| China RoHS Regulation      |  <a href="#">China RoHS Declaration</a>        |
| RoHS exemption information |  Yes   |
| Environmental Disclosure   |  <a href="#">Product Environmental Profile</a> |
| Circularity Profile        |  <a href="#">End Of Life Information</a>       |

Dimensions



(1) Front view

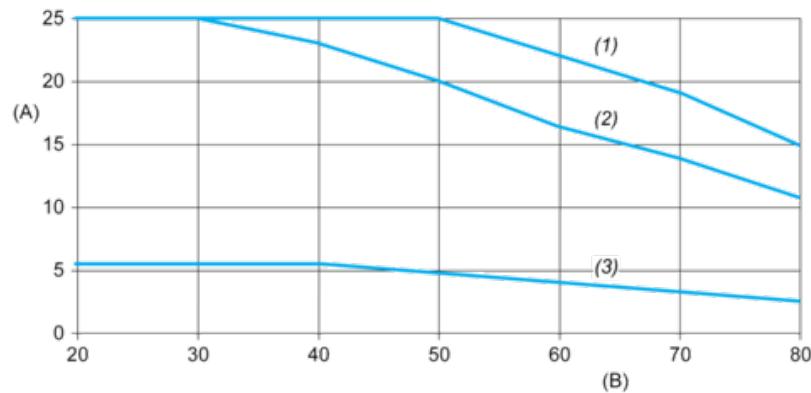
(2) Side view

(3) Bottom view

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Derating Curves

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A : Load Current (Amps)

B : Ambient Temperature (°C)

(1) For Heatsink SSRHP17

(2) For Heatsink SSRHP25

(3) No Heatsink