

# Product data sheet

Specifications



single phase relay, Harmony Solid State Relays, 50A, panel mount, zero voltage switching, input 90 to 280V AC, output 48 to 660V AC

SSP1A450M7

**Product availability: Stock - Normally stocked in distribution facility**

## Main

|                           |                                      |
|---------------------------|--------------------------------------|
| Range of Product          | Harmony Solid State Relays           |
| Product or Component Type | Panel mount relay                    |
| Device short name         | SSP1                                 |
| Mounting Support          | Panel                                |
| Number of phases          | 1 phase                              |
| Line Rated Current        | 50 A                                 |
| Solid state output type   | SCR output<br>Zero voltage switching |
| Output switching mode     | Zero voltage switching               |

## Complementary

|                                     |  |
|-------------------------------------|--|
| test button                         | Without test button  |
| [Uc] control circuit voltage        | 90...280 V AC  |
| 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  |
| Output voltage                      | 48...660 V AC  |
| Load current                        | 0.15...50 A  |
| Transient overvoltage               | 1200 V   |
| Surge current                       | 625 A 16.6 ms  |
| Maximum I <sup>2</sup> t for fusing | 1770 A <sup>2</sup> .s for 10 ms at 50 Hz<br>1629 A <sup>2</sup> .s for 8.33 ms at 60 Hz           |
| Co-ordination type                  | Type 1 - 40 A miniature circuit breaker (MCB) B<br>Type 2 - 32 A miniature circuit breaker (MCB) 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             | 0.75 hp 120 V AC<br>2 hp 240 V AC<br>5 hp 480 V AC   |

Price is "List Price" and may be subject to a trade discount – check with your local distributor or retailer for actual price.

|   |   |
|---|---|
| <b>Insulation resistance</b>                  | 1000 MOhm at 500 V DC   |
| <b>Maximum capacitance</b>                    | 8 pF for input/output   |
| <b>Dielectric strength</b>                    | 4 kV AC for input/output<br>4 kV AC for input or output to case   |
| <b>[Uimp] rated impulse withstand voltage</b> | 6 kV output to case<br>6 kV input to output   |
| <b>Tightening torque</b>                      | 1.5...1.7 N.m for input<br>2...2.2 N.m for output   |
| <b>Connections - terminals</b>                | Screw terminals 0.2...3.3 mm <sup>2</sup> , 24 AWG...12 AWG) with cable end input<br>Screw terminals 0.5...5.26 mm <sup>2</sup> , 20 AWG...10 AWG) with cable end output<br>Screw terminals 0.2...3.3 mm <sup>2</sup> , 24 AWG...12 AWG) without cable end input<br>Screw terminals 0.5...8.26 mm <sup>2</sup> , 20 AWG...8 AWG) without cable end output<br>Forked type tag connectors 9.2 x 4 mm input<br>Ring lugs 9.2 x 4 mm input<br>Forked type tag connectors 11.7 x 4.5 mm output<br>Ring lugs 11.7 x 4.5 mm output |
| <b>Thermal resistance</b>                     | 0.45 °C/W junction to case  |
| <b>LED indicator</b>                          | LED, green input  |
| <b>IP degree of protection</b>                | IP20  |
| <b>Safety reliability data</b>                | B10d = 1731395<br>MTTFd = 1875.9 years  |
| <b>Product Weight</b>                         | 3.1 oz (89.2 g)   |
| <b>Device presentation</b>                    | Complete product  |

## Environment

|  |  |
|--|--|
| <b>Ambient Air Temperature for Operation</b> | -40...176 °F (-40...80 °C)                               |
| <b>Ambient Air Temperature for Storage</b>   | -40...257 °F (-40...125 °C)                              |
| <b>Pollution degree</b>                      | 2  |
| <b>Overvoltage category</b>                  | III  |
| <b>Product Certifications</b>                | EAC<br>CE<br>CSA<br>UL                                   |
| <b>Marking</b>                               | EAC<br>CE<br>UL<br>CSA                                   |
| <b>Standards</b>                             | IEC 60950-1<br>CSA C22.2 No 14-13<br>IEC 62314<br>UL 508 |

## Ordering and shipping details

|                          |               |
|--------------------------|---------------|
| <b>Category</b>          | US1000I22000  |
| <b>Discount Schedule</b> | 000I          |
| <b>GTIN</b>              | 3606485441955 |
| <b>Returnability</b>     | Yes           |
| <b>Country of origin</b> | MX            |

## Packing Units

|                               |     |
|-------------------------------|-----|
| <b>Unit Type of Package 1</b> | PCE |
|-------------------------------|-----|

|                                     |                         |
|-------------------------------------|-------------------------|
| <b>Nbr. of units in pkg.</b>        | 1                       |
| <b>Package 1 Height</b>             | 1.5 in (3.9 cm)         |
| <b>Package 1 Width</b>              | 1.9 in (4.7 cm)         |
| <b>Package 1 Length</b>             | 2.6 in (6.6 cm)         |
| <b>Package weight(Lbs)</b>          | 3.5 oz (99.0 g)         |
| <b>Unit Type of Package 2</b>       | S01                     |
| <b>Number of Units in Package 2</b> | 30                      |
| <b>Package 2 Height</b>             | 5.9 in (15.0 cm)        |
| <b>Package 2 Width</b>              | 5.9 in (15.0 cm)        |
| <b>Package 2 Length</b>             | 15.7 in (40.0 cm)       |
| <b>Package 2 Weight</b>             | 7.381 lb(US) (3.348 kg) |

## Contractual warranty

|                             |    |
|-----------------------------|----|
| <b>Warranty (in months)</b> | 18 |
|-----------------------------|----|



## Environmental Data

Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing “Use Better, Use Longer, Use Again” campaign to extend product lifetimes and recyclability.

[Environmental Data explained >](#)

[How we assess product sustainability >](#)



### Environmental footprint

|  |   |
|--|---|
| Total lifecycle Carbon footprint                       | 5 429 kg CO2 eq.                              |
| Carbon footprint of the manufacturing phase [A1 to A3] | 1 kg CO2 eq.                                  |
| Carbon footprint of the distribution phase [A4]        | 0 kg CO2 eq.                                  |
| Carbon footprint of the installation phase [A5]        | 0 kg CO2 eq.                                  |
| Carbon footprint of the use phase [B2, B3, B4, B6]     | 5 428 kg CO2 eq.                              |
| Carbon footprint of the end-of-life phase [C1 to C4]   | 0 kg CO2 eq.                                  |
| Environmental Disclosure                               | <a href="#">Product Environmental Profile</a> |

### Use Better



### Materials and Substances

|  |  |
|--|--|
| Packaging made with recycled cardboard | Yes  |
| Packaging without single use plastic   | Yes  |
| SCIP Number                            | 134201bc-d293-4667-9cca-10a7f11729e0   |
| EU RoHS Directive                      | <a href="#">Compliant By Exemption</a>   |
| REACH Regulation                       | <a href="#">Reference contains Substances of Very High Concern above the threshold</a>   |
| California proposition 65              | <b>WARNING:</b> This product can expose you to chemicals including: Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a> |

### Use Longer



### Lifetime extension

|        |    |
|--------|----|
| Repair | No |
|--------|----|

### Use Again



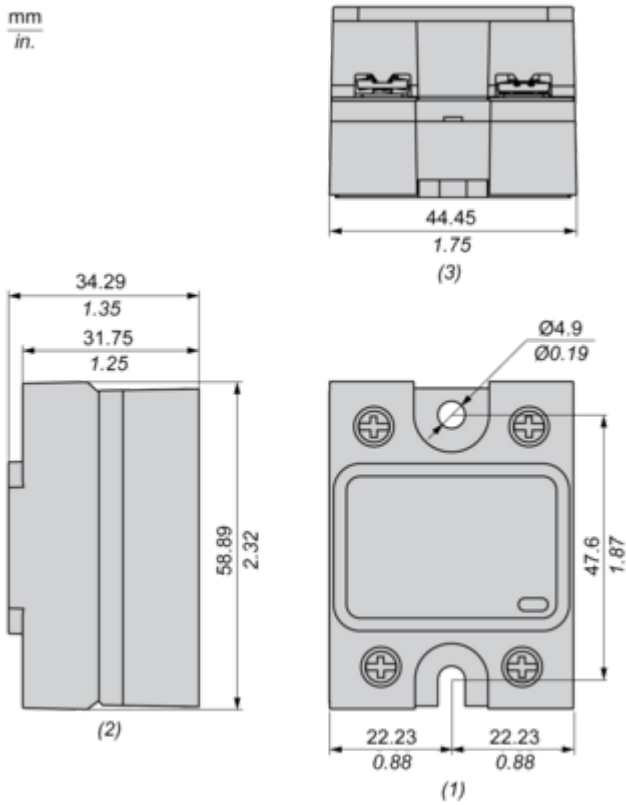
### Repack and remanufacture

|                               |   |
|-------------------------------|---|
| Recyclability potential, in % | 56                                      |
| Circularity Profile           | <a href="#">End of Life Information</a> |
| Take-back                     | No                                      |

Dimensions Drawings

Dimensions

mm  
in.

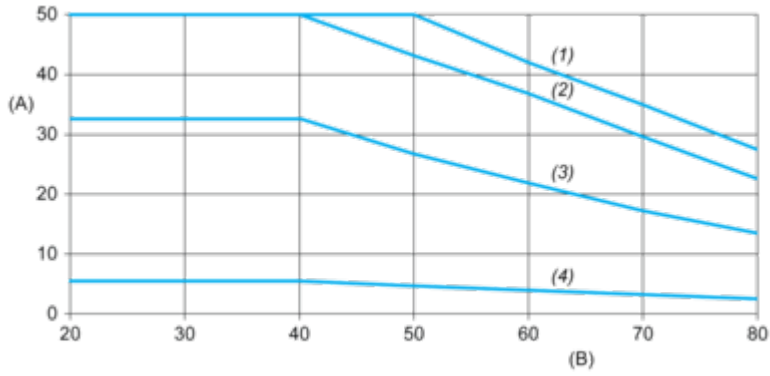


- (1) Front view
- (2) Side view
- (3) Bottom view

Performance Curves

Derating Curves

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- A : Load Current (Arms)
- B : Ambient Temperature (°C)
- (1) For Heatsink SSRHP07
- (2) For Heatsink SSRHD10
- (3) For Heatsink SSRHP17
- (4) No Heatsink

Technical Illustration

Dimensions

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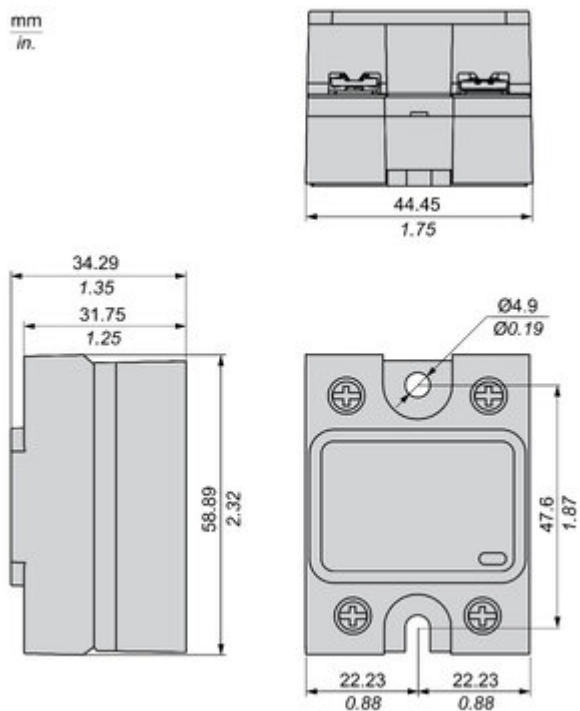


Image of product / Alternate images

Alternative

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