

# Product data sheet

Specifications



solid state relay, Easy Harmony  
Solid State Relays, input 5 to 24V  
DC, output 24 to 480V AC, 90A,  
Zero cross switching

SSP1A190BDE

Product availability: Stock - Normally stocked in distribution facility

## Main

|                                 |                                 |
|---------------------------------|---------------------------------|
| Range of Product                | Easy Harmony Solid State Relays |
| Product or Component Type       | Solid state relay up to 90 A    |
| Provided accessory              | Thermal pad                     |
| Device short name               | SSP1E                           |
| Mounting Support                | Panel                           |
| Number of phases                | 1 phase                         |
| Contacts type and configuration | 1 NO                            |
| Line Rated Current              | 90 A                            |
| Solid state output type         | SCR output                      |
| Output switching mode           | Zero voltage switching          |

## Complementary

|                           |                                       |
|---------------------------|---------------------------------------|
| Control Type              | Electronic controller                 |
| Control input voltage     | 4...32 V DC                           |
| Minimum switching voltage | 4 V DC turn-on                        |
| Maximum switching voltage | 2 V DC turn-off                       |
| Response time             | 0.5 cycle (turn-on)                   |
| Input voltage             | 5...24 V DC                           |
| Output voltage limits     | 24...480 V AC                         |
| Output voltage            | 20...505 V AC                         |
| Load current              | 1...90 A                              |
| Transient overvoltage     | 530 V                                 |
| Surge current             | 900 A 1/2 Cycle                       |
| Maximum I²t for fusing    | 4600 A².s for 10 ms at 50 Hz          |
| Maximum leakage current   | 1 mA off-state                        |
| Maximum voltage drop      | <1.6 V on-state                       |
| DV/dt                     | 500 V/µs off-state at maximum voltage |
| Power factor              | 0.8 (with maximum load)               |
| Insulation resistance     | 500 MOhm at 500 V DC                  |

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications

|                                        |                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dielectric strength                    | 3.8 kV AC for input/output<br>2 kV AC for output connection                                                                                                                                                                                                                                                                                                                                                         |
| [Uimp] rated impulse withstand voltage | 8 kV output to case<br>6 kV input to output                                                                                                                                                                                                                                                                                                                                                                         |
| Tightening torque                      | 1.5...1.7 N.m for input<br>2...2.4 N.m for output                                                                                                                                                                                                                                                                                                                                                                   |
| Connections - terminals                | Screw terminals 0.2...3.3 mm², AWG 24...AWG 12) with cable end<br>Screw terminals 0.5...5.26 mm², AWG 20...AWG 10) with cable end<br>Screw terminals 0.2...3.3 mm², AWG 24...AWG 12) without cable end<br>Screw terminals 0.5...8.26 mm², AWG 20...AWG 8) without cable end<br>Forked type tag connectors 9.2 x 4 mm<br>Ring lugs 9.2 x 4 mm<br>Forked type tag connectors 11.7 x 4.5 mm<br>Ring lugs 11.7 x 4.5 mm |
| LED indicator                          | LED, green input                                                                                                                                                                                                                                                                                                                                                                                                    |
| IP degree of protection                | IP10                                                                                                                                                                                                                                                                                                                                                                                                                |
| Net Weight                             | 4.06 oz (115 g)                                                                                                                                                                                                                                                                                                                                                                                                     |
| Width                                  | 2.3 in (59 mm)                                                                                                                                                                                                                                                                                                                                                                                                      |
| Height                                 | 1.8 in (45 mm)                                                                                                                                                                                                                                                                                                                                                                                                      |
| Depth                                  | 1.1 in (29 mm)                                                                                                                                                                                                                                                                                                                                                                                                      |
| Device presentation                    | Complete product                                                                                                                                                                                                                                                                                                                                                                                                    |

## Environment

|                                       |                                                               |
|---------------------------------------|---------------------------------------------------------------|
| Ambient Air Temperature for Operation | -22...176 °F (-30...80 °C)                                    |
| Ambient Air Temperature for Storage   | -22...212 °F (-30...100 °C)                                   |
| Pollution degree                      | 2                                                             |
| Overvoltage category                  | III                                                           |
| Product Certifications                | UL<br>CE<br>UKCA<br>TÜV<br>RoHS<br>REACH                      |
| Marking                               | UL<br>CE<br>UKCA<br>TÜV                                       |
| Standards                             | UL 508<br>EN/IEC 60947-4-3<br>EN/IEC 62314<br>CSA C22.2 No 14 |

## Ordering and shipping details

|                   |               |
|-------------------|---------------|
| Category          | US10CP222375  |
| Discount Schedule | 0CP2          |
| GTIN              | 3606487050650 |
| Returnability     | Yes           |
| Country of origin | CN            |

## Packing Units

|                              |     |
|------------------------------|-----|
| Unit Type of Package 1       | PCE |
| Number of Units in Package 1 | 1   |

|                              |                       |
|------------------------------|-----------------------|
| Package 1 Height             | 1.14 in (2.9 cm)      |
| Package 1 Width              | 1.77 in (4.5 cm)      |
| Package 1 Length             | 1.14 in (2.9 cm)      |
| Package 1 Weight             | 4.06 oz (115 g)       |
| Unit Type of Package 2       | BB1                   |
| Number of Units in Package 2 | 8                     |
| Package 2 Height             | 1.50 in (3.8 cm)      |
| Package 2 Width              | 4.92 in (12.5 cm)     |
| Package 2 Length             | 7.32 in (18.6 cm)     |
| Package 2 Weight             | 34.6 oz (982 g)       |
| Unit Type of Package 3       | S02                   |
| Number of Units in Package 3 | 64                    |
| Package 3 Height             | 5.91 in (15 cm)       |
| Package 3 Width              | 11.81 in (30 cm)      |
| Package 3 Length             | 15.75 in (40 cm)      |
| Package 3 Weight             | 26.7 lb(US) (12.1 kg) |

# 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

|                                                |      |
|------------------------------------------------|------|
| Carbon footprint (kg CO2 eq, Total Life cycle) | 4124 |
|------------------------------------------------|------|

|                          |                                               |
|--------------------------|-----------------------------------------------|
| Environmental Disclosure | <a href="#">Product Environmental Profile</a> |
|--------------------------|-----------------------------------------------|

## Use Better

### Materials and Substances

|                                        |    |
|----------------------------------------|----|
| Packaging made with recycled cardboard | No |
|----------------------------------------|----|

|                                      |    |
|--------------------------------------|----|
| Packaging without single use plastic | No |
|--------------------------------------|----|

|                   |                                                            |
|-------------------|------------------------------------------------------------|
| EU RoHS Directive | Pro-active compliance (Product out of EU RoHS legal scope) |
|-------------------|------------------------------------------------------------|

|                  |                                   |
|------------------|-----------------------------------|
| REACH Regulation | <a href="#">REACH Declaration</a> |
|------------------|-----------------------------------|

|                       |                                        |
|-----------------------|----------------------------------------|
| China RoHS Regulation | <a href="#">China RoHS declaration</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 Again

 Repack and remanufacture

Circularity Profile

[End of Life Information](#)

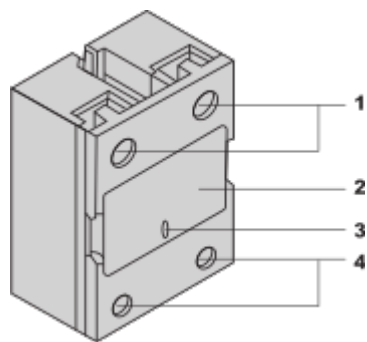
Take-back

No

Technical Description

Description

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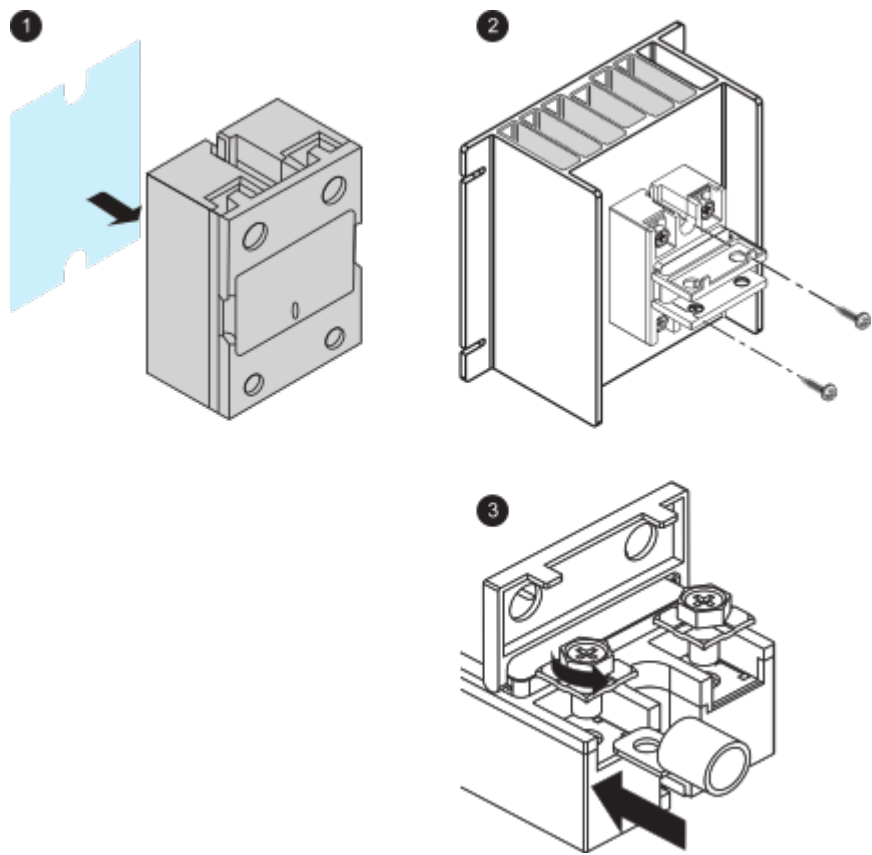


- (1) Load output connection screw terminals.
- (2) Indication area for product label or markings.
- (3) Control input voltage LED indicator.
- (4) Control input connection screw terminals.

Mounting and Clearance

Mounting

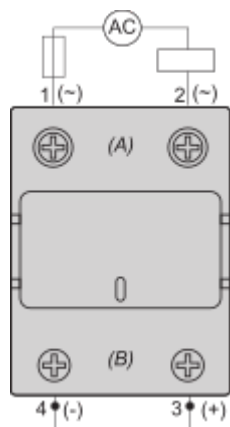
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- NOTE 1:** Tear the films on both side of the thermal pad and attach one side to the metal back of the relay.
- NOTE 2:** Attach the relay to the heatsink. Heatsink fins should always be positioned in vertical orientation in order to ensure proper heat ventilation. The product may be hot, please allow time for product to cool before touching.
- NOTE 3:** Maximum screw torque follow the spec using less than 500 RPM electric / pneumatic screwdriver. Fully un-tightened the screw for lug installation.

Connections and Schema

Wiring



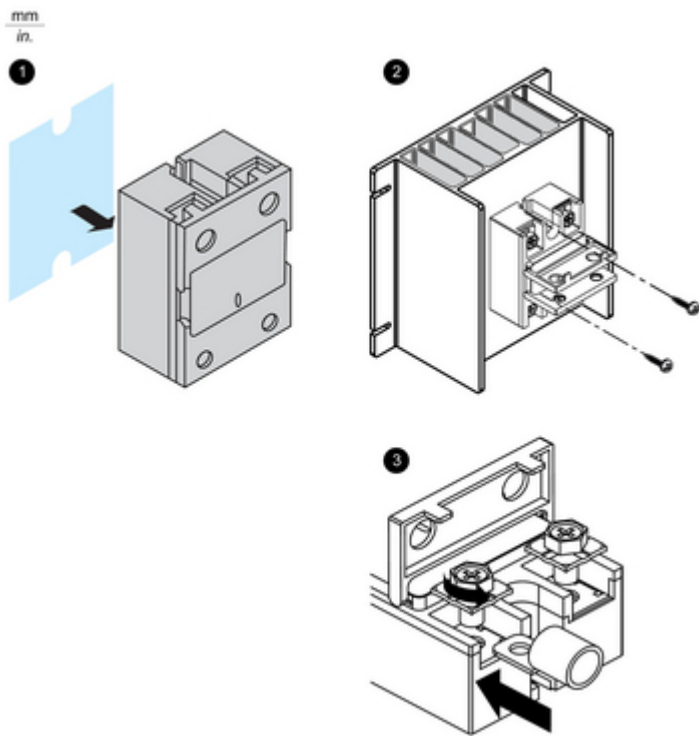
(A) LOAD  
(B) INPUT



Technical Illustration

Dimensions

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Technical Illustration

Wiring diagram

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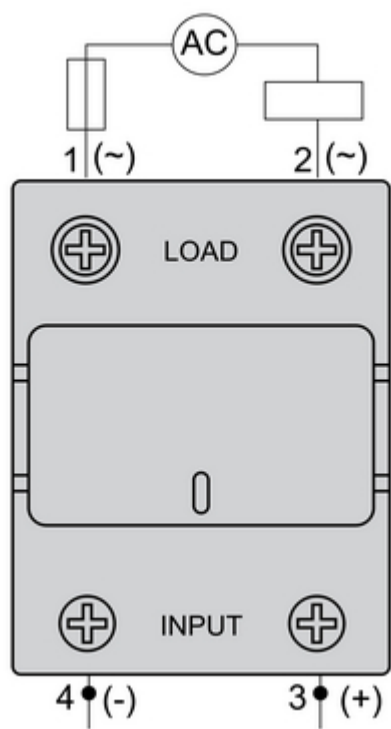


Image of product / Alternate images

Alternative

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