

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 2 kV AC for output connection
[Uimp] rated impulse withstand voltage	8 kV output to case 6 kV input to output
Tightening torque	1.5...1.7 N.m for input 2...2.4 N.m for output
Connections - terminals	Screw terminals 0.2...3.3 mm², AWG 24...AWG 12) with cable end Screw terminals 0.5...5.26 mm², AWG 20...AWG 10) with cable end Screw terminals 0.2...3.3 mm², AWG 24...AWG 12) without cable end Screw terminals 0.5...8.26 mm², AWG 20...AWG 8) without cable end Forked type tag connectors 9.2 x 4 mm Ring lugs 9.2 x 4 mm Forked type tag connectors 11.7 x 4.5 mm 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 CE UKCA TÜV RoHS REACH
Marking	UL CE UKCA TÜV
Standards	UL 508 EN/IEC 60947-4-3 EN/IEC 62314 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
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Environmental Disclosure	Product Environmental Profile
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Use Better

Materials and Substances

Packaging made with recycled cardboard	No
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Packaging without single use plastic	No
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EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope)
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REACH Regulation	REACH Declaration
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China RoHS Regulation	China RoHS declaration
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California proposition 65	WARNING: 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 www.P65Warnings.ca.gov
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Use Again

 Repack and remanufacture

Circularity Profile

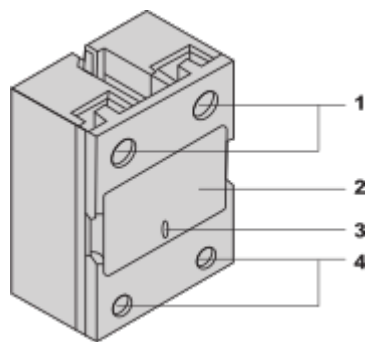
[End of Life Information](#)

Take-back

No

Technical Description

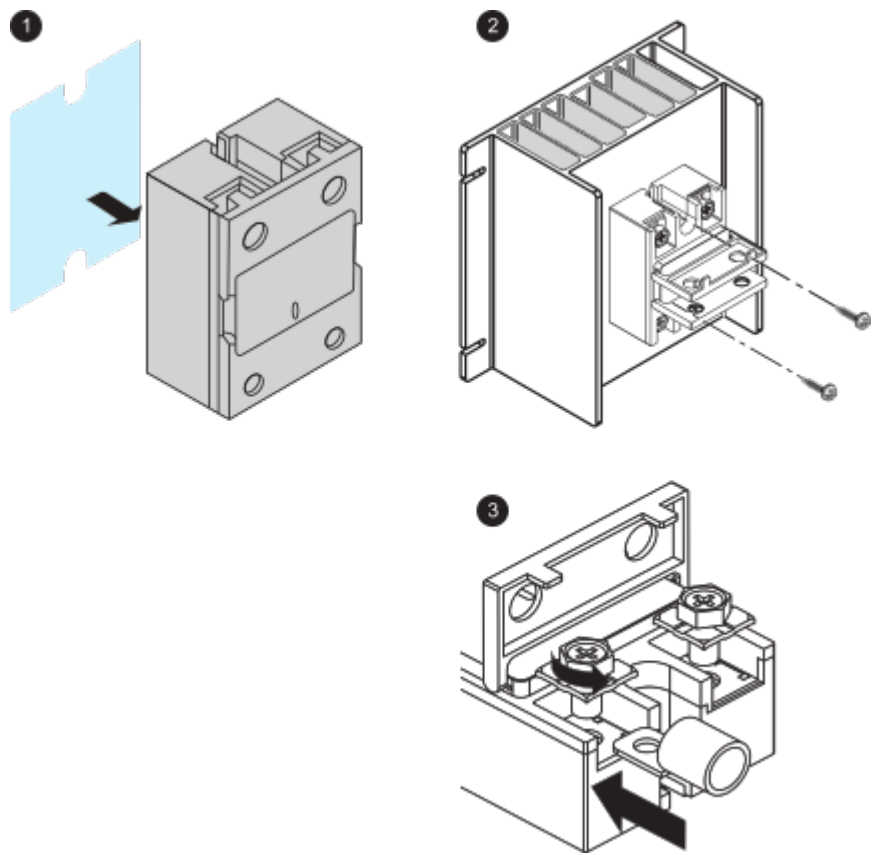
Description



- (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

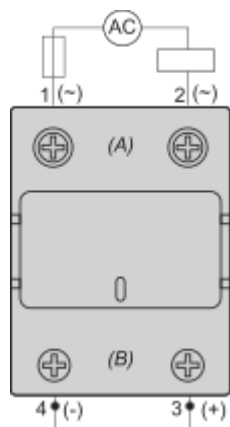
Mounting



- 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

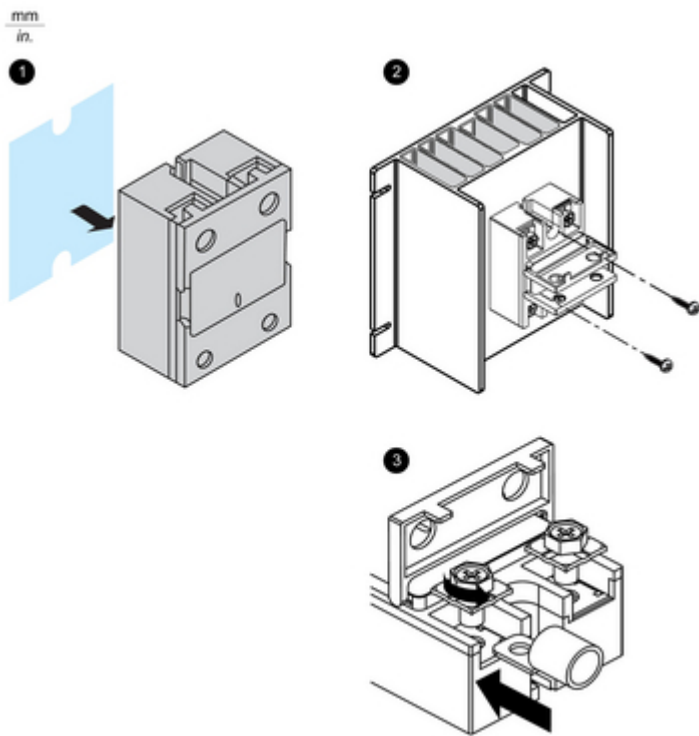
Wiring



(A) LOAD
(B) INPUT

Technical Illustration

Dimensions



Technical Illustration

Wiring diagram

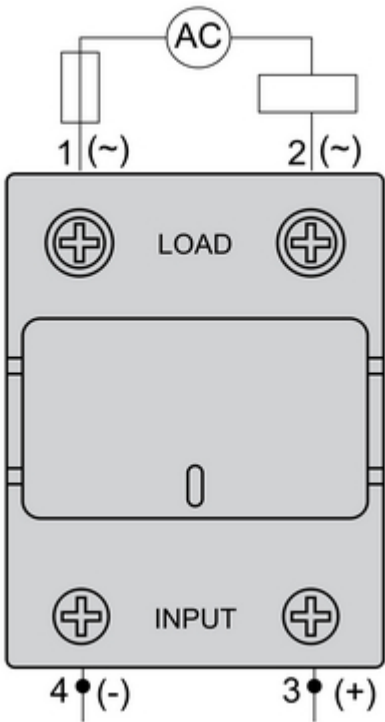


Image of product / Alternate images

Alternative



