

# Product data sheet

## Characteristics

# SSP1A450BDT

Harmony, Solid state relay, 50 A, panel mount,, zero voltage switching, thermal pad, input 4...32 V DC, output 48...660 V AC



### Main

Range of Product	Harmony Solid State Relays
Product or Component Type	Solid state relay up to 50 A
Provided accessory	Thermal pad
Device short name	SSP1
Mounting Support	Panel
Number of phases	1 phase
Line Rated Current	50 A
Solid state output type	SCR output Zero voltage switching
Output switching mode	Zero voltage switching

### Complementary

[Uc] control circuit voltage	4...32 V DC
Minimum switching voltage	4 V DC turn-on
Maximum switching voltage	1 V DC turn-off
Response time	0.5 cycle (turn-on) 0.5 cycle (turn-off)
Input current	7...12 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 $I^2t$ for fusing	1770 A <sup>2</sup> .s for 10 ms at 50 Hz 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 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 2 Hp 240 V AC 5 hp 480 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 4 kV AC for input or output to case
[Uiimp] rated impulse withstand voltage	6 kV output to case 6 kV input to output
Tightening torque	1.5...1.7 N.m for input 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 input Screw terminals 0.5...5.26 mm <sup>2</sup> , AWG 20...AWG 10) with cable end output Screw terminals 0.2...3.3 mm <sup>2</sup> , AWG 24...AWG 12) without cable end input Screw terminals 0.5...8.26 mm <sup>2</sup> , AWG 20...AWG 8) without cable end output Forked type tag connectors 9.2 x 4 mm input Ring lugs 9.2 x 4 mm input Forked type tag connectors 11.7 x 4.5 mm output Ring lugs 11.7 x 4.5 mm output
Thermal resistance	0.45 °C/W junction to case

The information provided in this documentation contains general descriptions and/or technical characteristics of the performance of the products contained herein. 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. It is the duty of any such user or integrator to perform the appropriate and complete risk analysis, evaluation and testing of the products with respect to the relevant specific application or use thereof. Neither Schneider Electric Industries SAS nor any of its affiliates or subsidiaries shall be responsible or liable for misuse of the information contained herein.

Thermal pad impedance	0.48 °C-in <sup>2</sup> /W at 25 psi
LED indicator	LED, green input
IP degree of protection	IP20
Safety reliability data	B10d = 1731395 MTTFd = 1875.9 years
Net Weight	3.15 oz (89.2 g)
Device presentation	Complete product

## Environment

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

## Ordering and shipping details

Category	22375-INTERFACE MODULE(ABA,R,S)
Discount Schedule	CP2
GTIN	3606485442068
Nbr. of units in pkg.	1
Package weight(Lbs)	3.39 oz (96.0 g)
Returnability	No
Country of origin	MX

## Packing Units

Unit Type of Package 1	PCE
Package 1 Height	1.50 in (3.8 cm)
Package 1 width	1.89 in (4.8 cm)
Package 1 Length	2.56 in (6.5 cm)
Unit Type of Package 2	S01
Number of Units in Package 2	30
Package 2 Weight	7.17 lb(US) (3.25 kg)
Package 2 Height	5.91 in (15 cm)
Package 2 width	5.91 in (15 cm)
Package 2 Length	15.75 in (40 cm)

## Offer Sustainability

Sustainable offer status	Green Premium product
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 <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a>
REACH Regulation	 <a href="#">REACH Declaration</a>
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope)  <a href="#">EU RoHS Declaration</a>
Mercury free	Yes
RoHS exemption information	 Yes

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China RoHS Regulation

 China RoHS Declaration

Environmental Disclosure

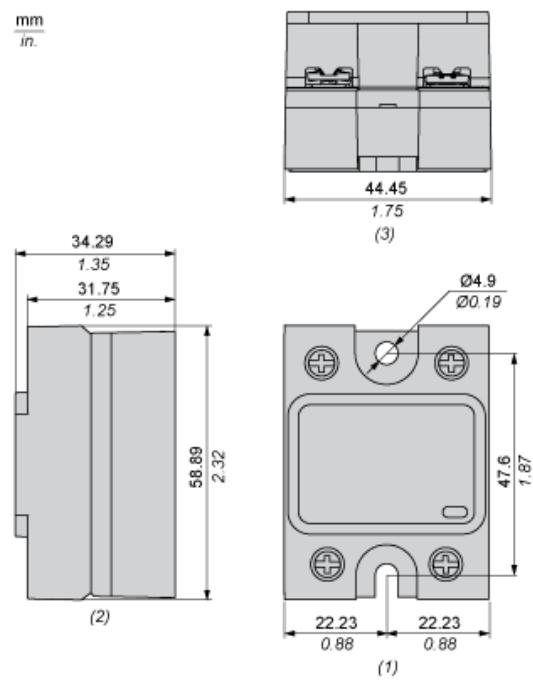
 Product Environmental Profile

Circularity Profile

 End Of Life Information

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## Dimensions

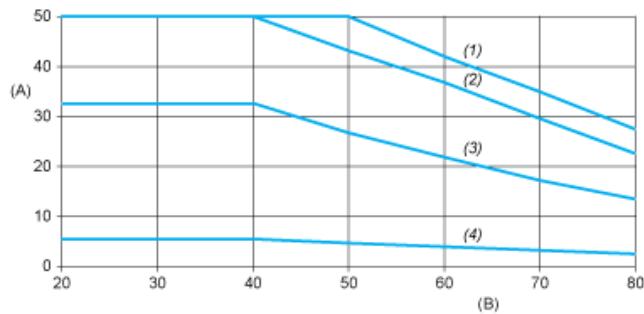


- (1) Front view
- (2) Side view
- (3) Bottom view

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### 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

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