SSP1A150BD

single phase relay, Harmony Solid State Relays, 50A, panel mount, zero voltage switching, input 3 to 32V DC, output 24 to 300V AC

Green Premium™

Main

Range of product	Harmony Solid State Relays
Product or component type	Solid state relay up to 50 A
Device short name	SSP1
Mounting support	Panel
Number of phases	1 phase
[In] rated current	50 A
Solid state output type	Zero voltage switching SCR output
Output switching mode	Zero voltage switching

Complementary

Minimum switching voltage	3 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	10 mA at 12 V DC
Load current	0.15…50 A
Transient overvoltage	600 V
Surge current	625 A for 16.6 ms
Maximum I²t for fusing	1621 A².S for 8.33 ms at 60 Hz 1770 A².s for 10 ms at 50 Hz
Co-ordination type	Type 1 - 40 A miniature circuit breaker (MCB) - curve B Type 2 - 32 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	0.75 Hp 120 V AC 2 hp 240 V AC
Insulation resistance	1000 MOhm at 500 V DC
Maximum capacitance	10 pF for input/output
Dielectric strength	4 KV AC for input/output 4 kV AC for input or output to case
[Uimp] 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 mm², (AWG 24...AWG 12) with cable end for input Screw terminals: 0.5...5.26 mm², (AWG 20...AWG 10) with cable end for output Screw terminals: 0.2...3.3 mm², (AWG 24...AWG 12) without cable end for input Screw terminals: 0.5...8.26 mm², (AWG 20...AWG 8) without cable end for output Forked type tag connectors: 9.2 x 4 mm for input Ring lugs: 9.2 x 4 mm for input Forked type tag connectors: 11.7 x 4.5 mm for output Ring lugs: 11.7 x 4.5 mm for output
Thermal resistance	0.45 °C/W junction to case

LED indicator	LED, green for input
IP degree of protection	IP20
Safety reliability data	MTTFd = 1875.9 years B10d = 1731395
Net weight	89.2 g
Device presentation	Complete product

Environment

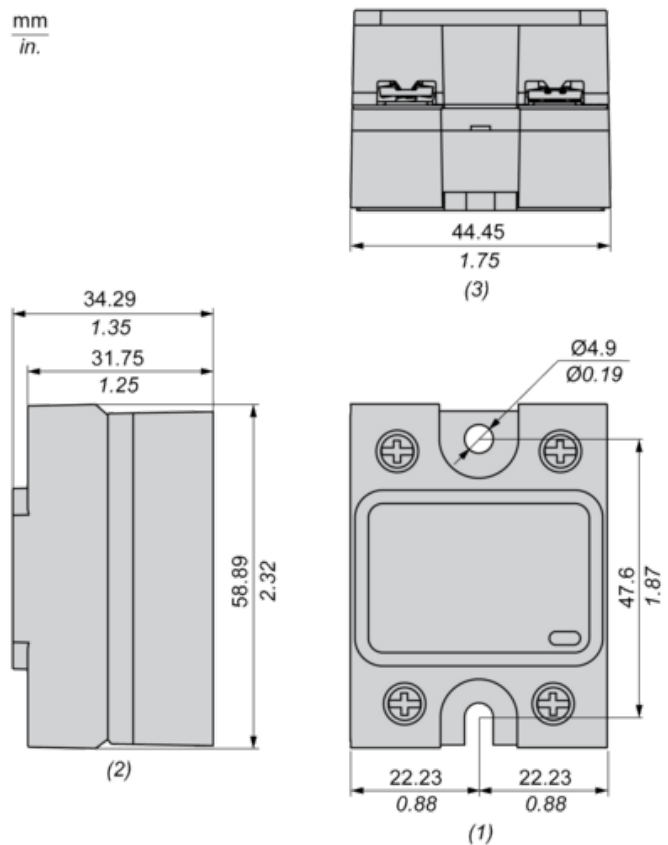| Ambient air temperature for operation	-40…80 °C
Ambient air temperature for storage	-40…125 °C
Pollution degree	2
Overvoltage category	III
Product certifications	EAC[RETURN]CSA[RETURN]UL[RETURN]CE
Marking	EAC CE UL CSA
Standards	UL 508 CSA C22.2 No 14-13 IEC 62314 IEC 60950-1

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	6.5 cm
Package 1 Weight	98 g
Unit Type of Package 2	S01
Number of Units in Package 2	30
Package 2 Height	15 cm
Package 2 Width	15 cm
Package 2 Length	40 cm
Package 2 Weight	3.272 kg

Offer Sustainability

Sustainable offer status	Green Premium product
REACh Regulation	REACh Declaration
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope)
Mercury free	Yes
China RoHS Regulation	China RoHS Declaration
RoHS exemption information	Yes
Environmental Disclosure	Product Environmental Profile
Circularity Profile	End Of Life Information

Dimensions

$\dfrac{mm}{in.}$

44.45
1.75
(3)

34.29
1.35
31.75
1.25

58.89
2.32

(2)

Ø4.9
Ø0.19

47.6
1.87

22.23
0.88
22.23
0.88
(1)

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

Derating Curves
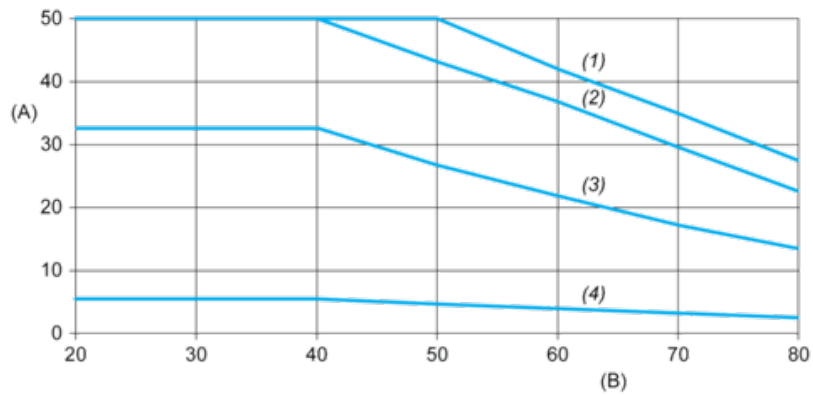
A : Load Current (Arms)

B : Ambient Temperature (°C)

(1) For Heatsink SSRHP07

(2) For Heatsink SSRHD10

(3) For Heatsink SSRHP17

(4) No Heatsink

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