

# Product data sheet

Specifications



Harmony, Solid state relay, 75 A, DIN rail mount, zero voltage switching, thermal pad and smart diagnostic, input 4...32 V DC, output 48...660 V AC

SSP1A475BDS

Product availability : Stock - Normally stocked in distribution facility

**Price\* : 103.48 USD**

## Main

Range of Product	Harmony Solid State Relays
Product or Component Type	Solid state relay up to 75 A
Provided accessory	Thermal pad
Device short name	SSP1
Mounting Support	Panel
Number of phases	1 phase
Line Rated Current	75 A
Solid state output type	Zero voltage switching SCR output
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...75 A
Transient overvoltage	1200 V
Surge current	1000 A 16.6 ms
Maximum I <sup>2</sup> t for fusing	4150 A <sup>2</sup> .s for 8.33 ms at 60 Hz 4555 A <sup>2</sup> .s for 10 ms at 50 Hz
Co-ordination type	Type 1 - 50 A miniature circuit breaker (MCB) B Type 2 - 40 A miniature circuit breaker (MCB) B
Maximum leakage current	1 mA off-state
Maximum voltage drop	<1.15 V on-state

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

<b>DV/Dt</b>	500 V/ $\mu$ s off-state at maximum voltage
<b>Power factor</b>	0.5 (with maximum load)
<b>Motor controller rating</b>	1.5 hp 120 V AC 3 hp 240 V AC 7.5 hp 480 V AC
<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 4 kV AC for input or output to case
<b>[Uimp] rated impulse withstand voltage</b>	6 kV output to case 6 kV input to output
<b>Tightening torque</b>	1.5...1.7 N.m for input 2...2.2 N.m for output 17.7...19.47 lb.in for output 13.27...15.04 lb.in for input 0.5...0.6 N.m for auxillary terminal 4.4...5.3 lb.in for auxillary terminal
<b>Connections - terminals</b>	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
<b>Auxiliary/Alarm connection terminal</b>	Screw-type connector, 0.5...1.5 mm <sup>2</sup> AWG 20...AWG 16) slotted Philips
<b>Thermal resistance</b>	0.3 °C/W junction to case
<b>LED indicator</b>	LED, steady, green ON status control input/test button actuated LED, steady, amber ON status load LED, flashing, amber control input to energise load LED, steady, red open-circuit control input LED, flashing, red load cut-off/short-circuit
<b>Maximum alarm output current</b>	30 mA 32 V DC
<b>Minimum load current</b>	150 mA
<b>IP degree of protection</b>	IP20
<b>Electromagnetic compatibility</b>	Electrostatic discharge 6 kV criteria A contact discharge conforming to IEC 61000-4-2 Electrostatic discharge 8 kV criteria A air discharge conforming to IEC 61000-4-2 Radiated radio-frequency electromagnetic field immunity test criteria A output ports conforming to IEC 61000-4-3 Radiated radio-frequency electromagnetic field immunity test criteria B alarm port conforming to IEC 61000-4-3 Electrical fast transient/burst immunity test 1 kV, 5/100 kHz criteria B output ports conforming to IEC 61000-4-4 Surge immunity test 1 kV criteria A output ports line to line conforming to IEC 61000-4-5 Surge immunity test 2 kV criteria A output ports line to earth conforming to IEC 61000-4-5
<b>Safety reliability data</b>	B10d = 1731395 MTTFd = 1875.9 years
<b>Net Weight</b>	3.43 oz (97.1 g)
<b>Device presentation</b>	Complete product
<b>Environment</b>	
<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>	CSA EAC UL CE
<b>Marking</b>	CSA

UL  
EAC  
CE

<b>Standards</b>	UL 508 EN/IEC 60950-1 EN/IEC 62314 CSA C22.2 No 14-13
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## Ordering and shipping details

<b>Category</b>	22375-INTERFACE MODULE(ABA,R,S)
<b>Discount Schedule</b>	CP2
<b>GTIN</b>	3606485442259
<b>Returnability</b>	No

## Packing Units

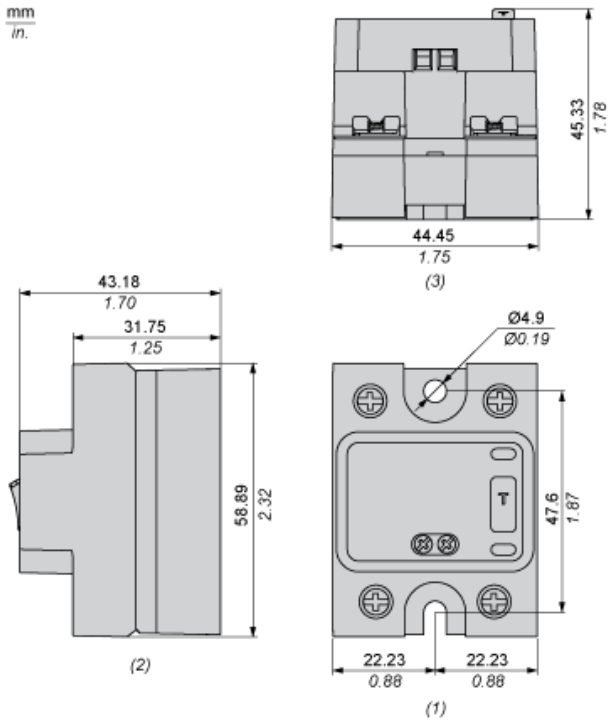
<b>Unit Type of Package 1</b>	PCE
<b>Number of Units in Package 1</b>	1
<b>Package 1 Height</b>	1.81 in (4.6 cm)
<b>Package 1 Width</b>	1.77 in (4.5 cm)
<b>Package 1 Length</b>	2.32 in (5.9 cm)
<b>Package 1 Weight</b>	4.23 oz (120 g)
<b>Unit Type of Package 2</b>	S01
<b>Number of Units in Package 2</b>	28
<b>Package 2 Height</b>	5.91 in (15 cm)
<b>Package 2 Width</b>	5.91 in (15 cm)
<b>Package 2 Length</b>	15.75 in (40 cm)
<b>Package 2 Weight</b>	8.43 lb(US) (3.825 kg)

## Offer Sustainability

<b>Sustainable offer status</b>	Green Premium product
<b>California proposition 65</b>	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>
<b>REACH Regulation</b>	<a href="#">REACH Declaration</a>
<b>EU RoHS Directive</b>	Pro-active compliance (Product out of EU RoHS legal scope) <a href="#">EU RoHS Declaration</a>
<b>Mercury free</b>	Yes
<b>China RoHS Regulation</b>	<a href="#">China RoHS declaration</a>
<b>RoHS exemption information</b>	<a href="#">Yes</a>
<b>Environmental Disclosure</b>	<a href="#">Product Environmental Profile</a>
<b>Circularity Profile</b>	<a href="#">End of Life Information</a>

## Dimensions

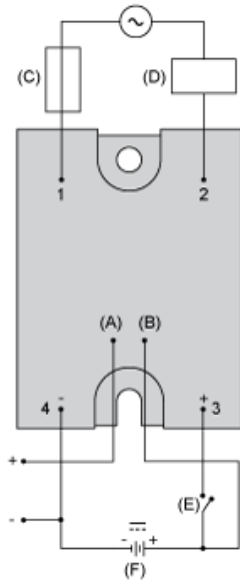
mm  
in.



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

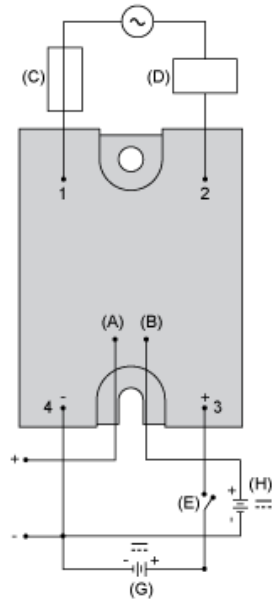
**Wiring Diagram**

**Single Supply Connection**



- (F) Control/Auxiliary supply (4...32 V DC)
- (A) Alarm output terminal (4...32 V DC)
- (B) Auxiliary supply terminal
- (C) Fuse or circuit-breaker
- (D) Load
- (E) Switch to energize load

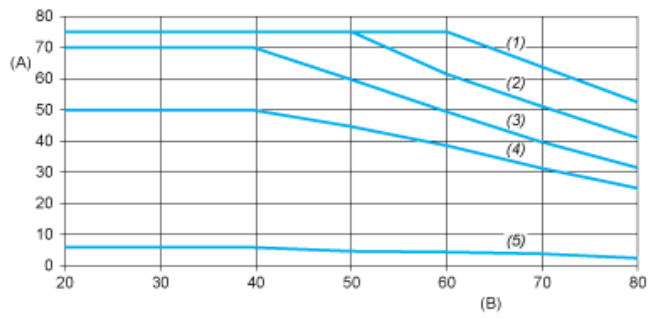
**Dual Supply Connection**



- (G) Control supply (4...32 V DC)
- (H) Auxiliary supply (4...32 V DC)
- (A) Alarm output terminal (4...32 V DC)
- (B) Auxiliary supply terminal
- (C) Fuse or circuit-breaker
- (D) Load
- (E) Switch to energize load

**Derating Curves**

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- A :** Load Current (Arms)
- B :** Ambient Temperature (°C)
- (1)** For Heatsink SSRHP02
- (2)** For Heatsink SSRHP05
- (3)** For Heatsink SSRHP07
- (4)** For Heatsink SSRHD10
- (5)** No Heatsink

**Recommended replacement(s)**