

Product data sheet

Specifications



Harmony, Solid state relay, 25 A, panel mount, zero voltage switching, thermal pad and smart diagnostic, input 3...32 V DC, output 24...300 V AC

SSP1A125BDS

Product availability : Stock - Normally stocked in distribution facility

Price* : 77.99 USD

Main

Range of Product	Harmony Solid State Relays
Product or Component Type	Solid state relay up to 30 A
Provided accessory	Thermal pad
Device short name	SSP1
Mounting Support	Panel
Number of phases	1 phase
Line Rated Current	25 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	10 mA at 12 V DC
Output voltage	24...300 V AC
Load current	0.15...25 A
Transient overvoltage	600 V
Surge current	250 A 16.6 ms
Maximum I ² t for fusing	259 A ² .s for 8.33 ms at 60 Hz 258 A ² .s for 10 ms at 50 Hz
Co-ordination type	Type 1 - 25 A miniature circuit breaker (MCB) B Type 2 - 20 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.

DV/Dt	500 V/ μ s off-state at maximum voltage
Power factor	0.5 (with maximum load)
Motor controller rating	0.5 hp 120 V AC 1 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 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
Connections - terminals	Screw terminals 0.2...3.3 mm ² , AWG 24...AWG 12) with cable end input Screw terminals 0.5...5.26 mm ² , AWG 20...AWG 10) with cable end output Screw terminals 0.2...3.3 mm ² , AWG 24...AWG 12) without cable end input Screw terminals 0.5...8.26 mm ² , 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
Auxiliary/Alarm connection terminal	Screw-type connector, 0.5...1.5 mm ² AWG 20...AWG 16) slotted Philips
Thermal resistance	0.8 °C/W junction to case
LED indicator	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
Maximum alarm output current	30 mA 32 V DC
Minimum load current	150 mA
IP degree of protection	IP20
Electromagnetic compatibility	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
Safety reliability data	B10d = 1731395 MTTFd = 1875.9 years
Net Weight	3.43 oz (97.1 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	EAC CSA UL CE
Marking	EAC UL

CSA
CE

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

Category	22375-INTERFACE MODULE(ABA,R,S)
Discount Schedule	CP2
GTIN	3606485442228
Returnability	Yes

Packing Units

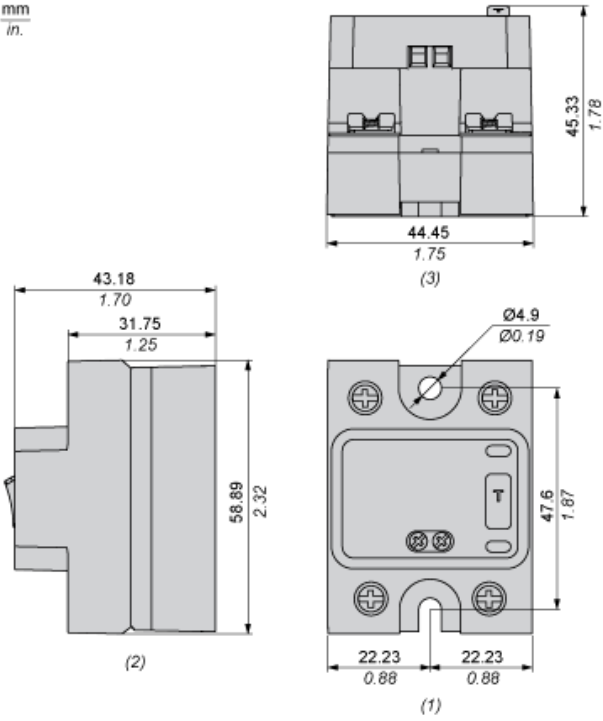
Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	1.89 in (4.8 cm)
Package 1 Width	1.85 in (4.7 cm)
Package 1 Length	2.56 in (6.5 cm)
Package 1 Weight	3.84 oz (109.0 g)
Unit Type of Package 2	S01
Number of Units in Package 2	28
Package 2 Height	5.91 in (15.0 cm)
Package 2 Width	5.91 in (15.0 cm)
Package 2 Length	15.75 in (40.0 cm)
Package 2 Weight	7.51 lb(US) (3.408 kg)

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 www.P65Warnings.ca.gov
REACH Regulation	REACH Declaration
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration
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

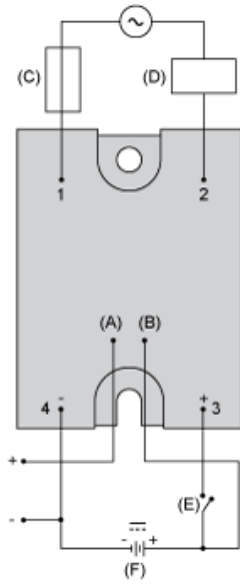
mm
in.



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

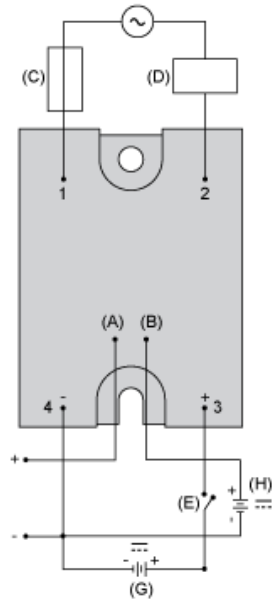
Wiring Diagram

Single Supply Connection



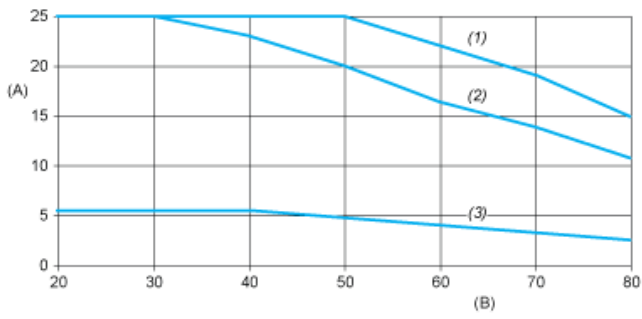
- (F) Control/Auxiliary supply (4...32 V DC)
- (A) Alarm output terminal (4...32 V DC)
- (B) Auxiliary supply terminal
- (C) Fuse or circuit-breaker
- (D) Load
- (E) Switch to energize load

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



- A :** Load Current (Arms)
- B :** Ambient Temperature (°C)
- (1)** For Heatsink SSRHP17
- (2)** For Heatsink SSRHP25
- (3)** No Heatsink

Recommended replacement(s)