

SSP1A4125BDS

Harmony, Solid state relay, 125 A, panel mount, zero voltage switching, thermal pad and smart diagnostic, input 4...32 V DC, output 48...660 V AC



Main

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|---------------------------|--------------------------------------|
| Range of Product | Harmony Solid State Relays |
| Product or Component Type | Solid state relay up to 125 A |
| Provided accessory | Thermal pad |
| Device short name | SSP1 |
| Mounting Support | Panel |
| Number of phases | 1 phase |
| Line Rated Current | 125 A |
| Solid state output type | SCR output Zero voltage switching |
| Output switching mode | Zero voltage switching |

Complementary

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| [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...125 A |
| Transient overvoltage | 1200 V |
| Surge current | 1750 A 16.6 ms |
| Maximum I ² t for fusing | 12709 A ² .S for 8.33 ms at 60 Hz 13950 A ² .s for 10 ms at 50 Hz |
| Co-ordination type | Type 1 - 80 A miniature circuit breaker (MCB) B Type 2 - 63 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 | 2 Hp 120 V AC 5 Hp 240 V AC 10 hp 480 V AC |
| Insulation resistance | 1000 MOhm 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 |
| [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 auxiliary terminal 4.4...5.3 lb.in for auxiliary terminal |

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| 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 | 0.22 °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 | MTTFd = 1875.9 years B10d = 1731395 |
| Net Weight | 3.43 oz (97.1 g) |
| Device presentation | Complete product |

Environment

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| 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 | CE EAC UL CSA |
| Marking | CE EAC CSA UL |
| Standards | CSA C22.2 No 14-13 EN/IEC 62314 UL 508 EN/IEC 60950-1 |







Ordering and shipping details

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|-----------------------|---------------------------------|
| Category | 22375-INTERFACE MODULE(ABA,R,S) |
| Discount Schedule | CP2 |
| GTIN | 3606485442273 |
| Nbr. of units in pkg. | 1 |
| Package weight(Lbs) | 4.02 oz (114.0 g) |
| Returnability | Yes |

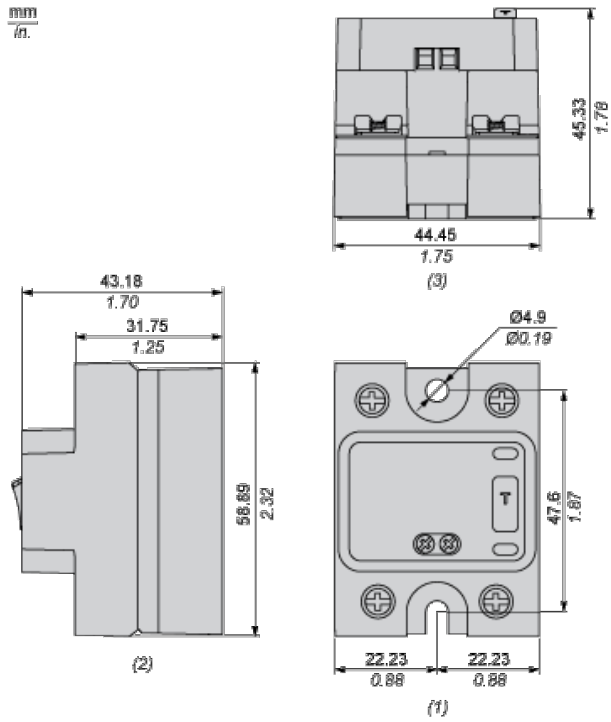
Packing Units

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|------------------------------|------------------------|
| Unit Type of Package 1 | PCE |
| Package 1 Height | 1.89 in (4.8 cm) |
| Package 1 width | 1.85 in (4.7 cm) |
| Package 1 Length | 2.60 in (6.6 cm) |
| Unit Type of Package 2 | S01 |
| Number of Units in Package 2 | 28 |
| Package 2 Weight | 7.74 lb(US) (3.511 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

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|----------------------------|---|
| 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 |
| RoHS exemption information |  Yes |
| China RoHS Regulation |  China RoHS Declaration |
| Environmental Disclosure |  Product Environmental Profile |
| Circularity Profile |  End Of Life Information |

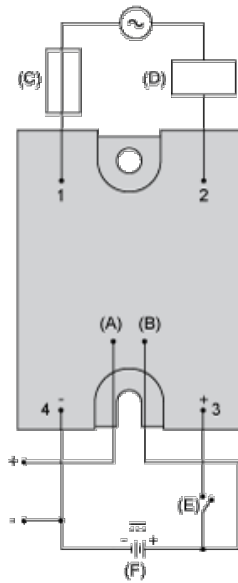
Dimensions



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

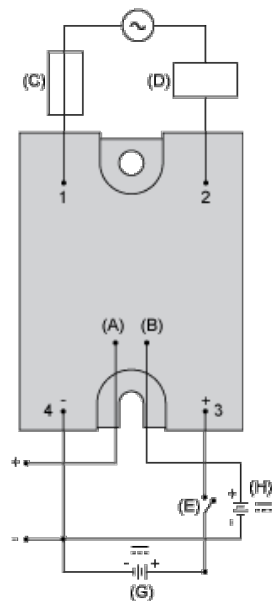
Wiring Diagram

Single Supply Connection



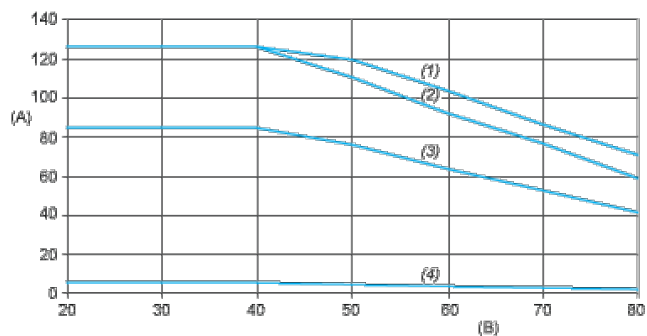
- (F) Control/Auxiliary supply (4...32 V DC)
- (A) Alarm output terminal (4...32 V DC)
- (B) Auxiliary supply terminal
- (C) Fuse or circuit-breaker
- (D) Load
- (E) Switch to energize load

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 SSRHP02
- (2) For Heatsink SSRHP05
- (3) For Heatsink SSRHP07
- (4) No Heatsink