Product data sheet

Specifications



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

SSP1A4125BDS

Product availability: Stock - Normally stocked in distribution facility

Main

Range of Product	Harmony Solid State Relays
Provided accessory	Thermal pad
Product or Component Type	Panel mount relay
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

test button	With test button
[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 I²t for fusing	12709 A².s for 8.33 ms at 60 Hz 13950 A².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)

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

Disclaimer: 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

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 auxillary terminal 4.4...5.3 lb.in for auxillary terminal
Connections - terminals	Screw terminals 0.2...3.3 mm², 24 AWG...12 AWG) with cable end input Screw terminals 0.5...5.26 mm², 20 AWG...10 AWG) with cable end output Screw terminals 0.2...3.3 mm², 24 AWG...12 AWG) without cable end input Screw terminals 0.5...8.26 mm², 20 AWG...8 AWG) 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 mm² 20 AWG...16 AWG)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	3.4 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	CE EAC UL CSA
Marking	CE EAC CSA UL
Standards	CSA C22.2 No 14-13 IEC 62314 UL 508 IEC 60950-1

Ordering and shipping details

Category	US10CP222375
Discount Schedule	0CP2
GTIN	3606485442273
Returnability	Yes
Country of origin	US

Packing Units

Unit Type of Package 1	PCE
Nbr. of units in pkg.	1
Package 1 Height	1.9 in (4.8 cm)
Package 1 Width	1.9 in (4.7 cm)
Package 1 Length	2.6 in (6.6 cm)
Package weight(Lbs)	4.02 oz (114.0 g)
Unit Type of Package 2	S01
Number of Units in Package 2	28
Package 2 Height	5.9 in (15.0 cm)
Package 2 Width	5.9 in (15.0 cm)
Package 2 Length	15.7 in (40.0 cm)
Package 2 Weight	7.740 lb(US) (3.511 kg)

Contractual warranty

Warranty (in months)	18

Environmental Data

Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing “Use Better, Use Longer, Use Again” campaign to extend product lifetimes and recyclability.

Environmental Data explained >

How we assess product sustainability >

Environmental footprint

Total lifecycle Carbon footprint	**11 kg CO2 eq.**
Carbon footprint of the manufacturing phase [A1 to A3]	**1 kg CO2 eq.**
Carbon footprint of the distribution phase [A4]	**0 kg CO2 eq.**
Carbon footprint of the installation phase [A5]	**0 kg CO2 eq.**
Carbon footprint of the use phase [B2, B3, B4, B6]	**10 kg CO2 eq.**
Carbon footprint of the end-of-life phase [C1 to C4]	**0 kg CO2 eq.**
Environmental Disclosure	**Product Environmental Profile**

Use Better

Materials and Substances

Packaging made with recycled cardboard	**Yes**
Packaging without single use plastic	**Yes**
SCIP Number	**134201bc-d293-4667-9cca-10a7f11729e0**
EU RoHS Directive	**Compliant By Exemption**
REACh Regulation	**Reference contains Substances of Very High Concern above the threshold**
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**

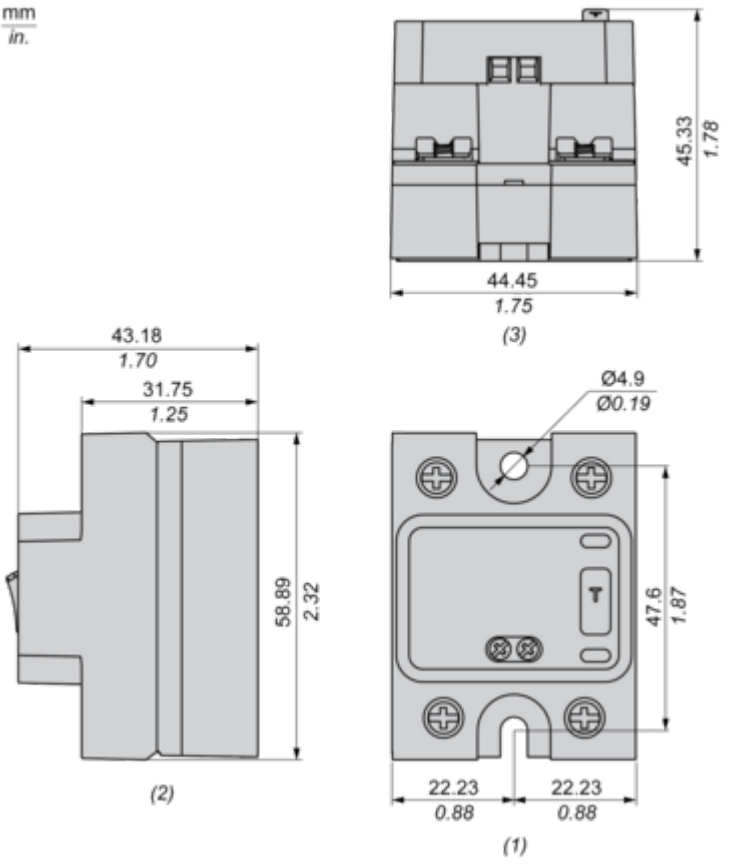
Use Again

Repack and remanufacture

Recyclability potential, in %	**56**
Circularity Profile	**End of Life Information**
Take-back	**No**

Dimensions Drawings

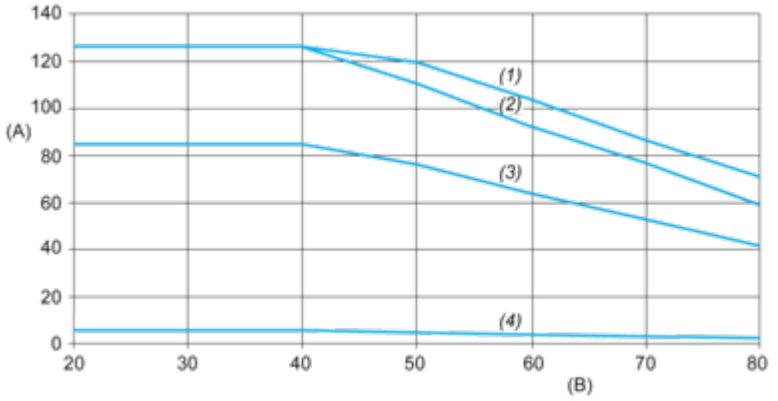
Dimensions



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

Performance Curves

Derating Curves

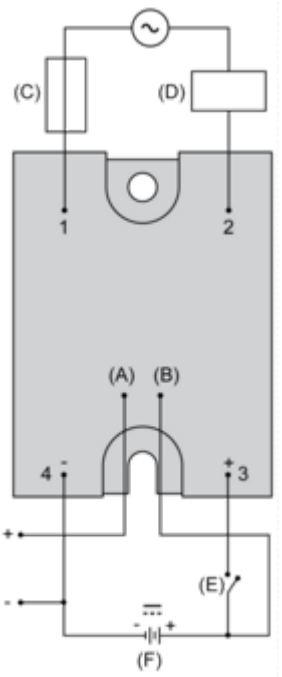


A : Load Current (Arms)
B : Ambient Temperature (°C)
(1) For Heatsink SSRHP02
(2) For Heatsink SSRHP05
(3) For Heatsink SSRHP07
(4) No Heatsink

Connections and Schema

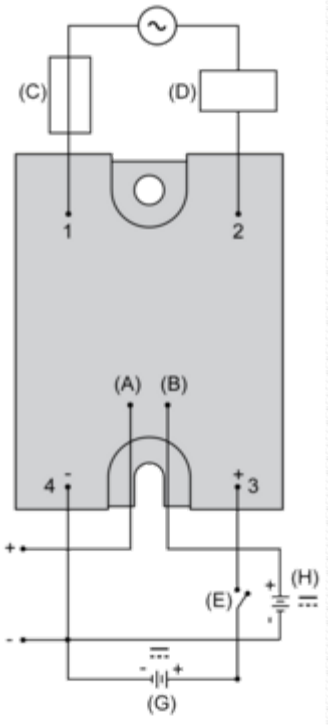
Wiring Diagram

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

Image of product / Alternate images

Alternative








SSP1AXX


~1
2~
Load
Aux
Alarm Supply
Schneider Electric
Input
-4
3+

