Product datasheet

Specifications



solid state relay - panel-input 4-32VDC, output 48-530VAC, 50A- Thermal Interface

SSP3A250BDT

Main

Range of product	Harmony Solid State Relays
Provided accessory	Thermal pad
Product or component type	Panel mount relay
Device short name	SSP
Mounting support	Panel
Number of phases	3 phases
[In] rated current	50 A
Solid state output type	Zero voltage switching
Output switching mode	Zero voltage switching

Complementary

test button	Without 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	8.33 ms (turn-on) 8.33 ms (turn-off)
Input current	15…35 mA
Output voltage	42...660 V AC
Load current	0.4…50 A
Transient overvoltage	1200 V
Surge current	715 A for 20 ms 750 A for 16.6 ms
Maximum I²t for fusing	2520 A².s for 10 ms at 50 Hz 2320 A².s for 8.3 ms at 60 Hz
Co-ordination type	TVS
Maximum leakage current	3 mA off-state
Maximum voltage drop	<1.6 V on-state
DV/dt	500 V/µs off-state at maximum voltage
Power factor	0.5 (with maximum load)
Motor controller rating	1.5 hp 40 °C 120 V AC 3 hp 40 °C 240 V AC 7.5 hp 40 °C 480 V AC 10 hp 40 °C 600 V AC

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 power kW	1.1 kW at 40 °C 120 V AC 2.2 kW at 40 °C 240 V AC 5.5 kW at 40 °C 480 V AC 7.5 kW at 40 °C 600 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	0.8 kV for input to case 6 kV for input/output circuit 6 kV for input/output to case
Tightening torque	1.2 N.m for input 2.5 N.m for output
Connections - terminals	Screw terminals: 1 x 0.2...1 x 2.5 mm², (AWG 24...AWG 14) for input Screw terminals: 1 x 1.5...1 x 10 mm², (AWG 16...AWG 8) for output
Thermal resistance	0.15 °C/W
LED indicator	LED, green for input
IP degree of protection	IP20
Electromagnetic compatibility	Electrostatic discharge 4 kV criteria B contact discharge conforming to IEC 61000-4-2 Electrostatic discharge 8 kV criteria B air discharge conforming to IEC 61000-4-2 Conducted RF disturbances 10 V, 0.15...80 MHz criteria A conforming to IEC 61000-4-6 Radiated radio-frequency electromagnetic field immunity test 10 V/m, 80 MHz...1 GHz criteria A conforming to IEC 61000-4-3 Surge immunity test 1 kV criteria B output ports line to line conforming to IEC 61000-4-5 Surge immunity test 2 kV criteria B output ports line to earth conforming to IEC 61000-4-5 Surge immunity test 1 kV criteria B input ports line to earth conforming to IEC 61000-4-5 Electrical fast transient/burst immunity test 2 kV, 5kHz criteria B output ports conforming to IEC 61000-4-4 Immunity to voltage dips 0 %/20 ms criteria B conforming to IEC 61000-4-11 Immunity to voltage dips 40 %/200 ms criteria C conforming to IEC 61000-4-11 Immunity to voltage dips 70 %/500 ms criteria C conforming to IEC 61000-4-11 Immunity to short interruption 0 %/5 s criteria C conforming to IEC 61000-4-11 Electrical fast transient/burst immunity test 1 kV, 5kHz criteria B input ports conforming to IEC 61000-4-4 Radiated radio-frequency electromagnetic field immunity test 3 V/m, 1.4...6 GHz criteria A conforming to IEC 61000-4-3 Radiated emission 30...1000 Mhz environment A conforming to IEC 60947-1 Conducted emission 0.15...30 Mhz environment A conforming to IEC 60947-1
Net weight	0.37 kg
Width	104 mm
Height	74.6 mm
Depth	41 mm
Device presentation	Complete product

Environment

Flame retardance	V0 conforming to UL 94
Ambient air temperature for operation	-40…80 °C
Ambient air temperature for storage	-40…125 °C
Pollution degree	2
Overvoltage category	III

Product certifications	CE CSA EAC UL UKCA
Marking	CE
Standards	IEC/EN 62314 IEC/EN 60947-4-2 IEC/EN 60947-4-3 UL 60947-4-2 C22.2 No. 14

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	4.500 cm
Package 1 Width	8.100 cm
Package 1 Length	11.600 cm
Package 1 Weight	380.000 g
Unit Type of Package 2	S02
Number of Units in Package 2	24
Package 2 Height	15.000 cm
Package 2 Width	30.000 cm
Package 2 Length	40.000 cm
Package 2 Weight	9.568 kg

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	5140
Environmental Disclosure	Product Environmental Profile

Use Better

Materials and Substances

Packaging made with recycled cardboard	Yes
Packaging without single use plastic	Yes
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope)

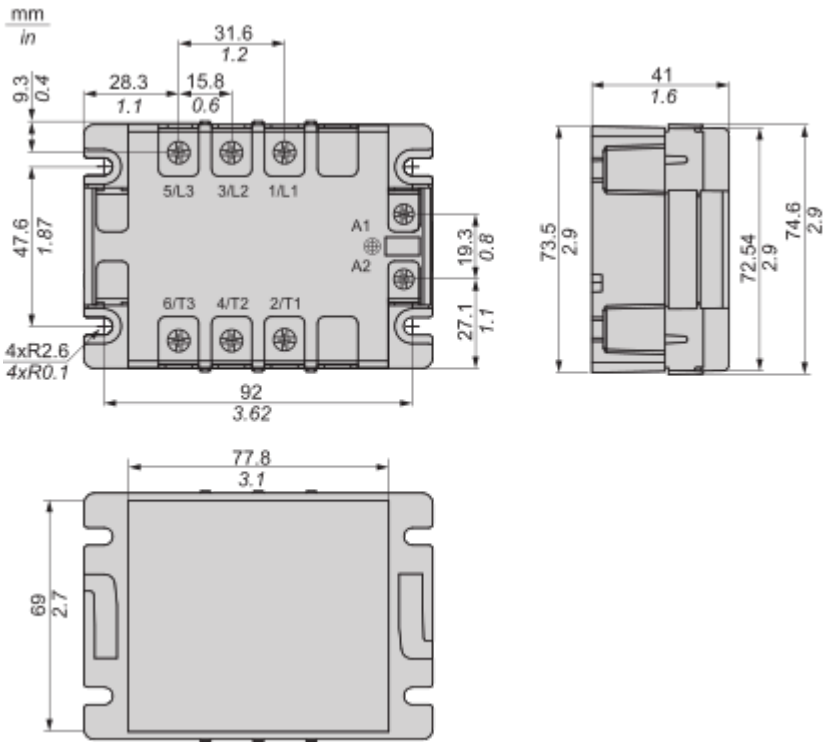
Use Again

Repack and remanufacture

End of life manual availability	End of Life Information
Take-back	No

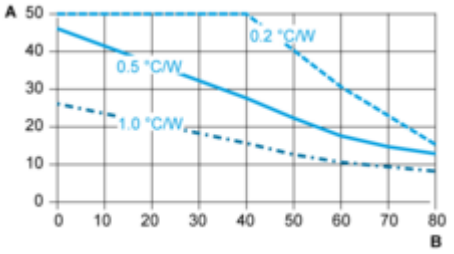
Dimensions Drawings

Dimensions



Performance Curves

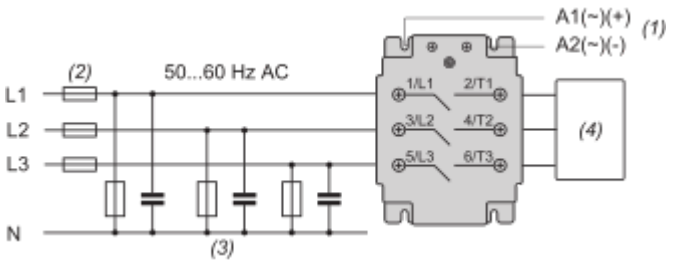
Derating Curves



A : Load Current (Amperes)
B : Ambient Temperature (°C)

Connections and Schema

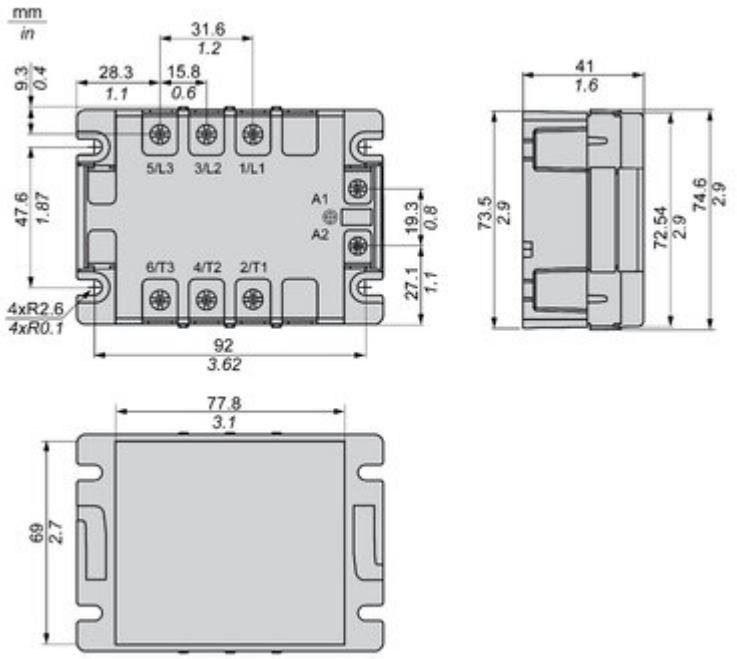
Wiring



(1) Setting control voltage in between turn on and turn off voltage may cause malfunction or damage the SSR.
(2) Recommended fuses.
(3) Recommended to install filters if Conductive Emission (CE) Class A is required.
(4) Load.

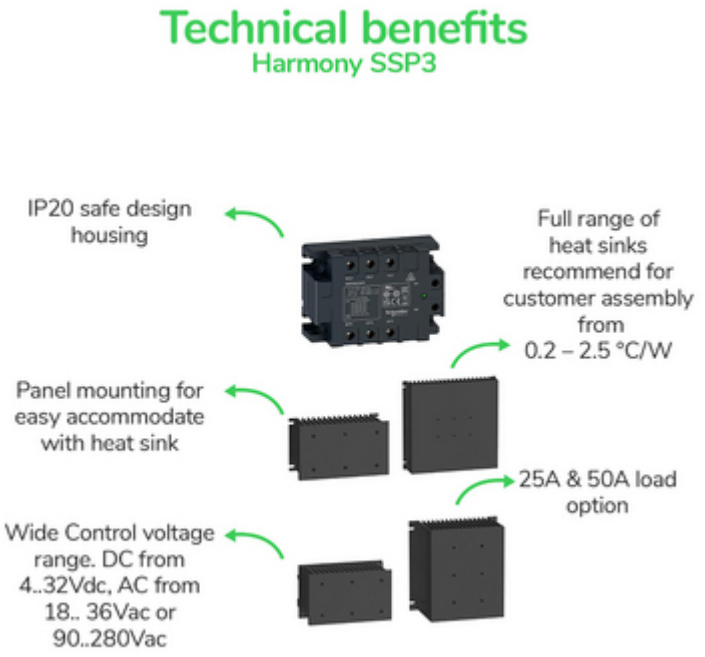
Technical Illustration

Dimensions



Offer Marketing Illustration

Product benefits / Features



Offer Marketing Illustration

Product benefits / Features



Image of product / Alternate images

Alternative












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Image of product in real life situation

