

# Product data sheet

Specifications



three phase relay, Harmony Solid State Relays, 50A, panel mount, zero voltage switching, thermal pad, input 4 to 32V DC, output 42 to 660V AC

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  $I^2t$  for fusing 2520 A<sup>2</sup>.s for 10 ms at 50 Hz  
2320 A<sup>2</sup>.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)

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

<b>Motor controller rating</b>	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
<b>Motor power kW</b>	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
<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>[Uiimp] rated impulse withstand voltage</b>	0.8 kV for input to case 6 kV for input/output circuit 6 kV for input/output to case
<b>Tightening torque</b>	1.2 N.m for input 2.5 N.m for output
<b>Connections - terminals</b>	Screw terminals: 1 x 0.2...1 x 2.5 mm <sup>2</sup> , (AWG 24...AWG 14) for input Screw terminals: 1 x 1.5...1 x 10 mm <sup>2</sup> , (AWG 16...AWG 8) for output
<b>Thermal resistance</b>	0.15 °C/W
<b>LED indicator</b>	LED, green for input
<b>IP degree of protection</b>	IP20
<b>Electromagnetic compatibility</b>	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
<b>Product weight</b>	0.37 kg
<b>Width</b>	104 mm
<b>Height</b>	74.6 mm
<b>Depth</b>	41 mm
<b>Device presentation</b>	Complete product

## Environment

<b>Flame retardance</b>	V0 conforming to UL 94
<b>Ambient air temperature for operation</b>	-40...80 °C
<b>Ambient air temperature for storage</b>	-40...125 °C
<b>Pollution degree</b>	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)**

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

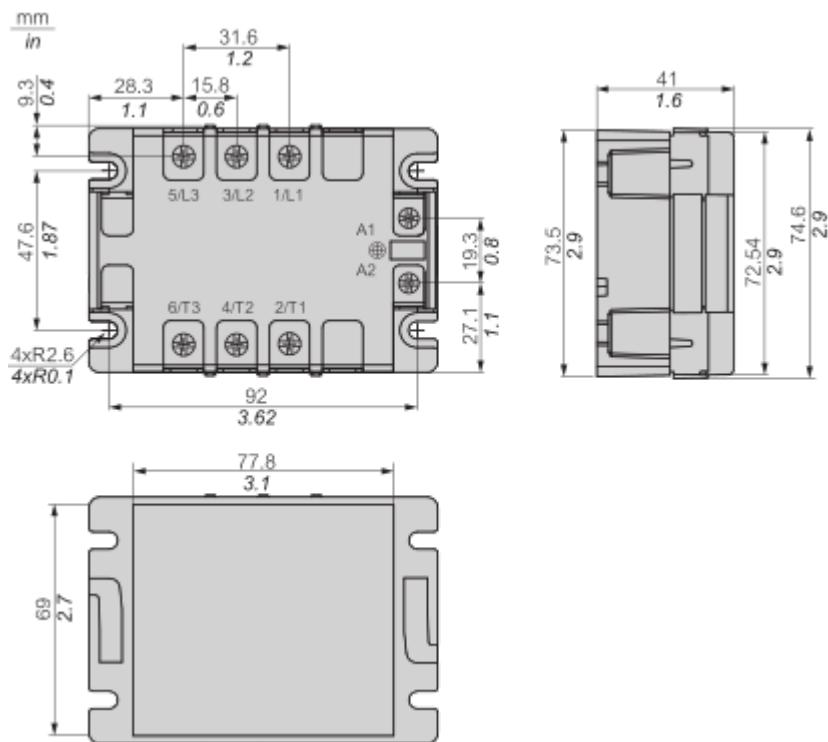
### Repack and remanufacture

End of life manual availability [End of Life Information](#)

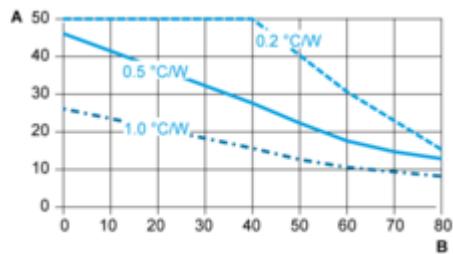
Take-back **No**

## Dimensions Drawings

## Dimensions



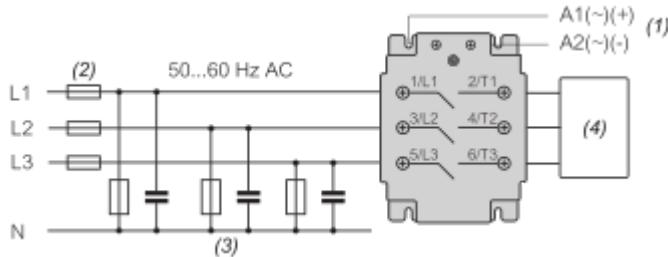
## Performance Curves

Derating Curves

A : Load Current (Ampères)

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

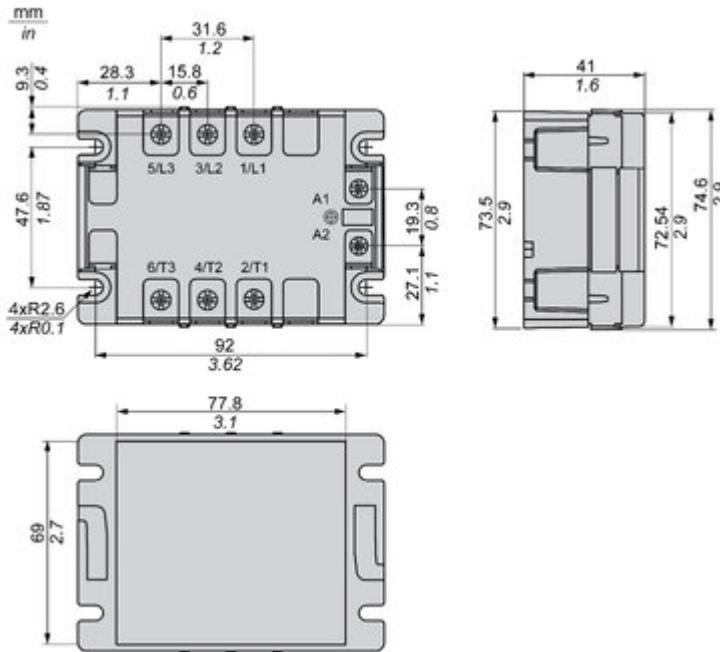
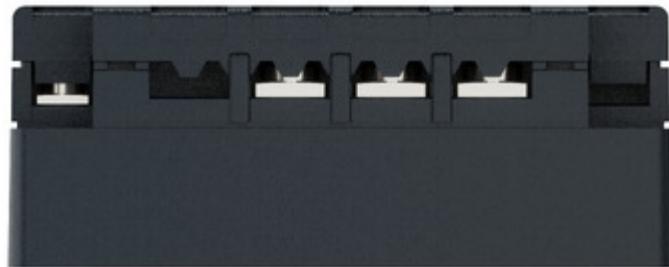


Image of product / Alternate images

Alternative

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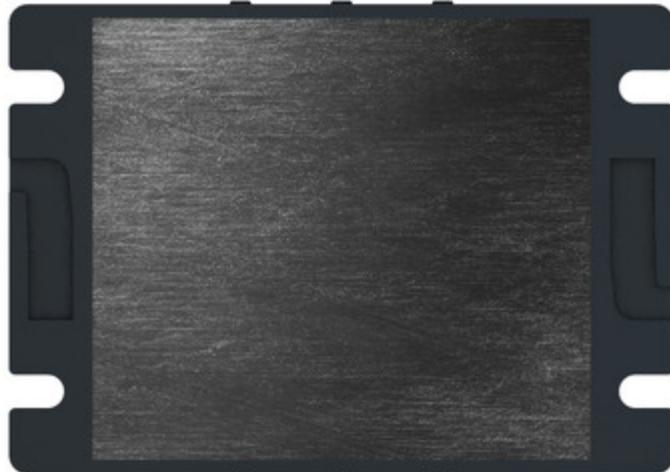


Image of product in real life situation

