

SSP3A250BDRT

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



Main

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

Complementary

Control type	Without test button
Minimum switching voltage	4 V DC turn-on
Maximum switching voltage	1 V DC turn-off
Response time	8.33 ms (turn-off) 0.1 ms (turn-on)
Input current	15...35 mA
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 ² t for fusing	2520 A ² .S for 10 ms at 50 Hz 2320 A ² .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
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 mm ² , (AWG 24...AWG 14) for input Screw terminals: 1 x 1.5...1 x 10 mm ² , (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[RETURN]CSA[RETURN]EAC[RETURN]UL[RETURN]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

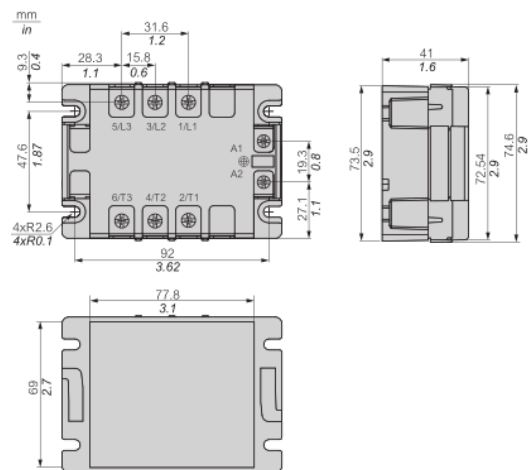
Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	4.000 cm
Package 1 Width	8.500 cm
Package 1 Length	12.000 cm
Package 1 Weight	271.000 g
Unit Type of Package 2	S02
Number of Units in Package 2	27
Package 2 Height	15.000 cm
Package 2 Width	30.000 cm
Package 2 Length	40.000 cm
Package 2 Weight	7.726 kg

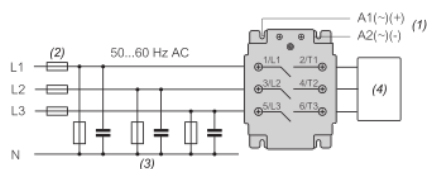
Offer Sustainability

REACH Regulation	 REACH Declaration
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope)
Lead free	Yes
China RoHS Regulation	 China RoHS Declaration
RoHS exemption information	 Yes

Dimensions

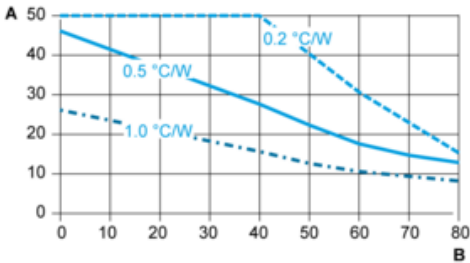


Wiring



- (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.

Derating Curves



A : Load Current (Amperes)

B : Ambient Temperature (°C)