

Product Datasheet

Characteristic

SSP1A450BDT

single phase relay, Harmony Solid State Relays, 50A, panel mount, zero voltage switching, thermal pad, input 4 to 32V DC, output 48 to 660V AC



Main

Range of product	Harmony Solid State Relays
Provided equipment	Thermal pad
product or component type	Panel mount relay
Device short name	SSP1
mounting support	Panel
Network number of phases	1 phase
[In] rated current	50 A
solid state output type	SCR output Zero voltage switching
Output switching mode	Zero voltage switching

Complementary

Control type	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	0.5 cycle (turn-on) 0.5 cycle (turn-off)
Input current limits	7...12 mA
Output voltage	48...660 V AC
Load current	0.15...50 A
Absolute maximum voltage	1200 V
Surge current	625 A for 16.6 ms
Maximum I ² t for fusing	1770 A ² .s for 10 ms at 50 Hz 1629 A ² .s for 8.33 ms at 60 Hz
Protection device type	Type 1 - 40 A miniature circuit breaker (MCB) - curve B Type 2 - 32 A miniature circuit breaker (MCB) - curve 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
Cos phi	0.5 (with maximum load)

Motor power hp	0.75 hp 120 V AC 2 hp 240 V AC 5 hp 480 V AC
Insulation resistance	1000 MOhm at 500 V DC
Capacitance unbalance	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
Connections - terminals	Screw terminals: 0.2...3.3 mm ² , (AWG 24...AWG 12) with cable end for input Screw terminals: 0.5...5.26 mm ² , (AWG 20...AWG 10) with cable end for output Screw terminals: 0.2...3.3 mm ² , (AWG 24...AWG 12) without cable end for input Screw terminals: 0.5...8.26 mm ² , (AWG 20...AWG 8) without cable end for output Forked type tag connectors: 9.2 x 4 mm for input Ring lugs: 9.2 x 4 mm for input Forked type tag connectors: 11.7 x 4.5 mm for output Ring lugs: 11.7 x 4.5 mm for output
Thermal resistance	0.45 °C/W junction to case
Thermal impedance	0.48 °C-in ² /W at 25 psi
Local signalling	LED, green for input
IP degree of protection	IP20
Safety reliability data	B10d = 1731395 MTTFd = 1875.9 years
net weight	89.2 g
device presentation	Complete product

Environment

Ambient air temperature for operation	-40...80 °C
Ambient air temperature for storage	-40...125 °C
Pollution degree	2
Overvoltage category	III
Product certifications	UL CE EAC CSA
marking	EAC UL CE CSA
Standards	CSA C22.2 No 14-13 UL 508 IEC 60950-1 IEC 62314

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	3.800 cm
Package 1 Width	4.800 cm
Package 1 Length	6.500 cm
Package 1 Weight	97.000 g
Unit Type of Package 2	S01
Number of Units in Package 2	30
Package 2 Height	15.000 cm
Package 2 Width	15.000 cm
Package 2 Length	40.000 cm
Package 2 Weight	3.250 kg

Offer Sustainability

Sustainable offer status	Green Premium product
REACH Regulation	Reference contains Substances of Very High Concern above the threshold
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope)
Mercury free	Yes
China RoHS Regulation	X
RoHS exemption information	Yes
Environmental Disclosure	ENVPEP1505006EN
Circularity Profile	ENVEOLI1505006EN