Product data sheet
Characteristics

SSD1A320BDC1
DIN rail mount relay, Harmony Solid State Relays, 20A, zeroVoltage switching, relay configuration, input 4...32V DC, output 48...600V AC



Main

Range of product	Harmony Solid State Relays
Product or component type	Modular DIN rail relay
Device short name	SSD1
Number of channels	1
Network number of phases	1 phase
Product configuration type	Relay configuration
Mounting support	35 mm symmetrical DIN rail conforming to IEC 60715
[In] rated current	20 A
Output switching mode	Zero voltage switching

Complementary

Network frequency	47...440 Hz
Rated duty	Uninterrupted
Output voltage	48...600 V AC
[Uc] control circuit voltage	4...32 V DC
Tightening torque	1.5...1.7 N.m for control input 13...15 lb.in for control input 1.5...1.7 N.m for load output 13...15 lb.in for load output
Connections - terminals	Screw terminals, clamping connection capacity:1...6 mm², 18 AWG...10 AWG for input screw terminals, clamping connection capacity:1...6 mm², 18 AWG...10 AWG for output
Dielectric strength	4 KV AC for input/output circuit 4 KV AC for input or output to case
[Uimp] rated impulse withstand voltage	6 KV for input/output circuit 6 KV for input or output to case
Insulation resistance	1000 MOhm at 500 V DC
Local signalling	LED (green) for control voltage
Minimum switching voltage	4 V DC turn-on
Maximum switching voltage	1 V DC turn-off
Input current limits	5…15 MA
Solid state output type	Zero voltage switching
Load current	0.2…20 A
Absolute maximum voltage	1200 V
Inrush current	352 A at 60 Hz
Maximum voltage drop	<1.3 V on-state

Motor power kW	0.37 KW/0.5 Hp at 120 V AC 1.12 KW/1.5 Hp at 240 V AC 2.24 KW/3 Hp at 480 V AC
Electromagnetic compatibility	Electrostatic discharge 6 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 level 3 conforming to IEC 61000-4-6 Electrical fast transient/burst immunity test 2 kV, 5/100 kHz criteria B output ports conforming to IE Electrical fast transient/burst immunity test 1 kV, 5/100 kHz criteria B input ports conforming to IEC Radiated radio-frequency electromagnetic field immunity test 10 V/m, 80 MHz...1 GHz criteria A c Radiated radio-frequency electromagnetic field immunity test 3 V/m, 1.4...6 GHz criteria A conform 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 Radiated emission environment A for DC input supply conforming to CISPR 11 Conducted emission environment A for DC input supply conforming to CISPR 11
Contact form	Form 5 semiconductor output DOL contactor
Maximum I^2t for fusing	3200 $A^2.S$ for 10 ms 3213 $A^2.S$ for 8.33 ms
Maximum leakage current	1 MA off-state
DV/dt	500 V/µs off-state at maximum rated voltage
Response time	0.5 cycle (turn-on) 0.5 cycle (turn-off)
Power factor	0.5 with maximum load
Coordination type	Type 1 Type 2
Overvoltage category	III
Width	22.5 Mm
Height	95.0 Mm
Depth	117.0 Mm
Control type	Without test button
Net weight	0.3 Kg
Device presentation	Complete product
Protection device type	TVS
Load type	LCA
Rated frequency (fr)	47...440 Hz
Utilisation category	AC-51 20 A conforming to IEC 60947-4-3
[Ui] rated insulation voltage	600 V

Environment

Flame retardance	V-0 conforming to UL 94
Vibration resistance	0.75 mm (f = 10…150 Hz) conforming to IEC 60068-2-6
Shock resistance	15 gn for 11 ms (peak acceleration) , longitudinal position conforming to IEC 60068-2-27 15 gn for 11 ms (peak acceleration) , vertical position conforming to IEC 60068-2-27
Pollution degree	2
Standards	IEC 60947-4-3 IEC 62314 CSA C22.2 No 14-18 UL 508
IP degree of protection	IP20
Ambient air temperature for operation	-40…80 °C
Ambient air temperature for storage	-40…100 °C

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	2.500 Cm
Package 1 Width	9.200 Cm
Package 1 Length	14.000 Cm
Package 1 Weight	326.000 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	8.103 Kg

Offer Sustainability

Recyclability potential, in %	96
Total lifecycle Carbon footprint	5 kg CO2 eq.
Carbon footprint of the manufacturing phase [A1 to A3]	1.8441579386677858
Carbon footprint of the manufacturing phase [A1 to A3]	2 kg CO2 eq.
Carbon footprint of the distribution phase [A4]	0.0603445030006339
Carbon footprint of the distribution phase [A4]	0.1 kg CO2 eq.
Carbon footprint of the installation phase [A5]	0.04658785714749253
Carbon footprint of the installation phase [A5]	0 kg CO2 eq.
Carbon footprint of the use phase [B2, B3, B4, B6]	2.445542466985405
Carbon footprint of the use phase [B2, B3, B4, B6]	2 kg CO2 eq.
Mercury free	Yes
Sustainable packaging	Yes
Carbon footprint of the end-of-life phase [C1 to C4]	0.38473544648603525
Carbon footprint of the end-of-life phase [C1 to C4]	0.4 kg CO2 eq.
Environmental Disclosure	Product Environmental Profile
Total lifecycle Carbon footprint	5
Packaging made with recycled cardboard	Yes
Packaging without single use plastic	Yes
SCIP Number	134201bc-d293-4667-9cca-10a7f11729e0
REACh Regulation	Reference contains Substances of Very High Concern above the threshold
EU RoHS Directive	Compliant By Exemption
California proposition 65	WARNING: This product can expose you to chemicals including: Lead and lead compounds, w
End of life manual availability	End Of Life Information
Take-back	No

Contractual warranty

Warranty (in months)	18

Product Life Status : Commercialised