



## Main

Range of product	Harmony Relay
Product or component type	Solid state relay
Device short name	SSD1
Number of channels	1
Number of phases	1 phase
Product configuration type	Contacteur configuration with pluggable screw input
Mounting support	35 mm symmetrical DIN rail conforming to EN/IEC 60715
Rated current	60 A
Contact type	1 NO

## Complementary

Operating frequency	47...440 Hz
Rated duty	Uninterrupted
Output voltage	48...600 V AC
Control circuit voltage	90...280 V AC/DC
Tightening torque	0.5 N.m for control input 5 lb.in for control input 2...2.2 N.m for load output 18...20 lb.in for load output
Connections - terminals	Plug-inscrew terminals, clamping connection capacity:0.08...3.30 mm <sup>2</sup> , AWG 28...AWG 12 for input Clamp terminal, clamping connection capacity:10...26.67 mm <sup>2</sup> , AWG 8...AWG 3 for output
Dielectric strength	4 kV AC for input/output circuit 4 kV AC for input or output to case
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
Pick-up voltage	90 V AC/DC turn-on

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

Drop-out voltage	5 V AC/DC turn-off
Input current range	3...4 mA
Solid state output type	SCR output
Solid state switching type	Zero voltage switching
Load current	0.15...60 A
Transient overvoltage	1200 V
Inrush current	1350 A at 60 Hz
Maximum voltage drop	<1.2 V on-state
Motor controller rating	1.5 kW/2 hp at 120 V AC 3.73 kW/5 hp at 240 V AC 7.46 kW/10 hp at 480 V AC
Electromagnetic compatibility	Electrostatic discharge 6 kV criteria A contact discharge conforming to IEC 61000-4-2 Electrostatic discharge 8 kV criteria A 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 IEC 61000-4-4 Electrical fast transient/burst immunity test 1 kV, 5/100 kHz criteria B input ports conforming to IEC 61000-4-4 Radiated radio-frequency electromagnetic field immunity test 10 V/m, 80 MHz...1 GHz criteria A conforming to IEC 61000-4-3 Radiated radio-frequency electromagnetic field immunity test 3 V/m, 1.4...2 GHz criteria A conforming to IEC 61000-4-3 Radiated radio-frequency electromagnetic field immunity test 1 V/m, 2...2.7 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 line conforming to IEC 61000-4-5 Surge immunity test 2 kV criteria B input ports line to earth conforming to IEC 61000-4-5 Radiated emission environment B for AC input supply conforming to IEC 60947-4-3 Conducted emission environment A for AC input supply conforming to IEC 60947-4-3 Immunity to microbreaks and voltage drops 30 %, 500 ms criteria A conforming to IEC 61000-4-11 Immunity to microbreaks and voltage drops 100 %, 20 ms criteria B conforming to IEC 61000-4-11
Device form designation	Form 5 semiconductor output DOL contactor
Maximum I <sup>2</sup> t for fusing	8320 A <sup>2</sup> .s for 10 ms 7593 A <sup>2</sup> .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	20 ms (turn-on) 30 ms (turn-off)
Power factor	0.5 with maximum load
Short circuit protection coordination	Type 1 Type 2
Overvoltage category	III
Width	45 mm
Height	111.5 mm
Depth	154.4 mm
Net weight	0.507 kg
Device presentation	Complete product

## Environment

Flammability rating	V-0 conforming to UL 94
Vibration resistance	0.35 mm (f = 10...150 Hz) conforming to EN/IEC 60068-2-6
Shock resistance	50 gn for 11 ms (peak acceleration) , longitudinal position conforming to EN/IEC 60068-2-27 30 gn for 11 ms (peak acceleration) , vertical position conforming to EN/IEC 60068-2-27
Pollution degree	2
Standards	IEC 61373:class B: category 1 IEC 60947-4-3 IEC 62314 IEC 60950-1 CSA C22.2 No 14-13 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

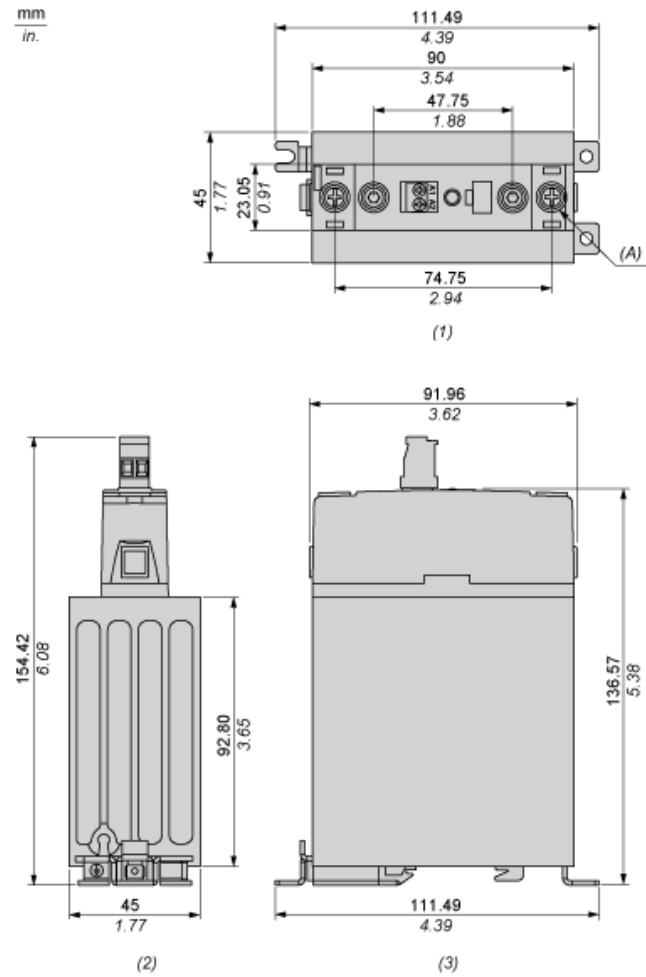
Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Weight	560 g
Package 1 Height	4.5 cm
Package 1 width	11.15 cm
Package 1 Length	15.44 cm

### Offer Sustainability

Sustainable offer status	Green Premium product
REACH Regulation	<a href="#">REACH Declaration</a>
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) <a href="#">EU RoHS Declaration</a>
Mercury free	Yes
RoHS exemption information	<a href="#">Yes</a>
China RoHS Regulation	<a href="#">China RoHS declaration</a>
Environmental Disclosure	<a href="#">Product Environmental Profile</a>
Circularity Profile	<a href="#">End of Life Information</a>
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins

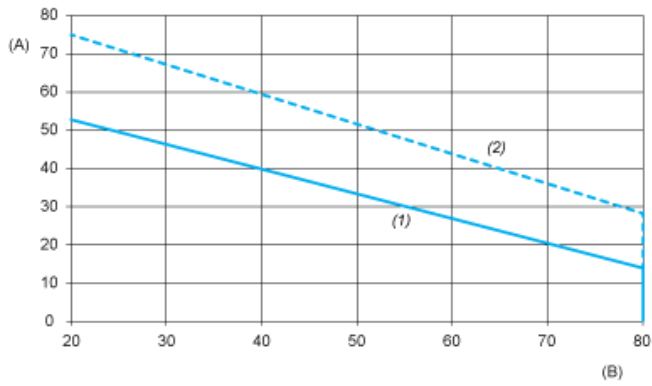
Dimensions

Dimensional Tolerances:  $\pm 0.5$  mm / 0.02 In.



- (1) Front view
- (2) Top view
- (3) Side view
- (A) Screw 8-32 Stud (2 Places)

Derating Curves



- A : Load Current (Amperes)
- B : Ambient Temperature (°C)
- 1 : Multiple units, no minimum spacing between components
- 2 : Installed single unit, distance to adjacent components more than 22.5 mm