

# SSD1A345M7RC2

Harmony, Solid state relay, 45 A, DIN rail mount, random switching, input 90...280 V AC/DC, output 48...600 V AC



## Main

Range of Product	Harmony Solid State Relays
Product or Component Type	Solid state relay up to 50 A
Device short name	SSD1
Number of Channels	1
Number of phases	1 phase
Product configuration type	Contact configuration with pluggable screw input type
Mounting support	35 mm symmetrical DIN rail conforming to EN/IEC 60715
Rated current	45 A
Output switching mode	Random voltage switching

## 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	For control voltage LED (green)
Pick-up voltage	90 V AC/DC turn-on
Drop-out voltage	5 V AC/DC turn-off
Input current range	3...4 mA
Solid state switching type	Random voltage switching
Load current	0.1...45 A
Transient overvoltage	1200 V
Inrush current	750 A at 60 Hz
Maximum voltage drop	<1.25 V on-state
Motor controller rating	0.75 KW/1 Hp at 120 V AC 2.24 KW/3 Hp at 240 V AC 3.73 kW/5 hp at 480 V AC

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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	2563 A <sup>2</sup> .S for 10 ms 2343 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)
Load Power Factor Range	0.5 with maximum load
Short circuit protection coordination	Type 1 Type 2
Overvoltage category	III
Width	1.77 in (45 mm)
Height	4.39 in (111.5 mm)
Depth	6.08 in (154.4 mm)
Net Weight	1.12 lb(US) (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...176 °F (-40...80 °C)
Ambient Air Temperature for Storage	-40...212 °F (-40...100 °C)

## Ordering and shipping details

Category	22375-INTERFACE MODULE(ABA,R,S)
Discount Schedule	CP2
GTIN	3606489808068
Returnability	No

## Packing Units

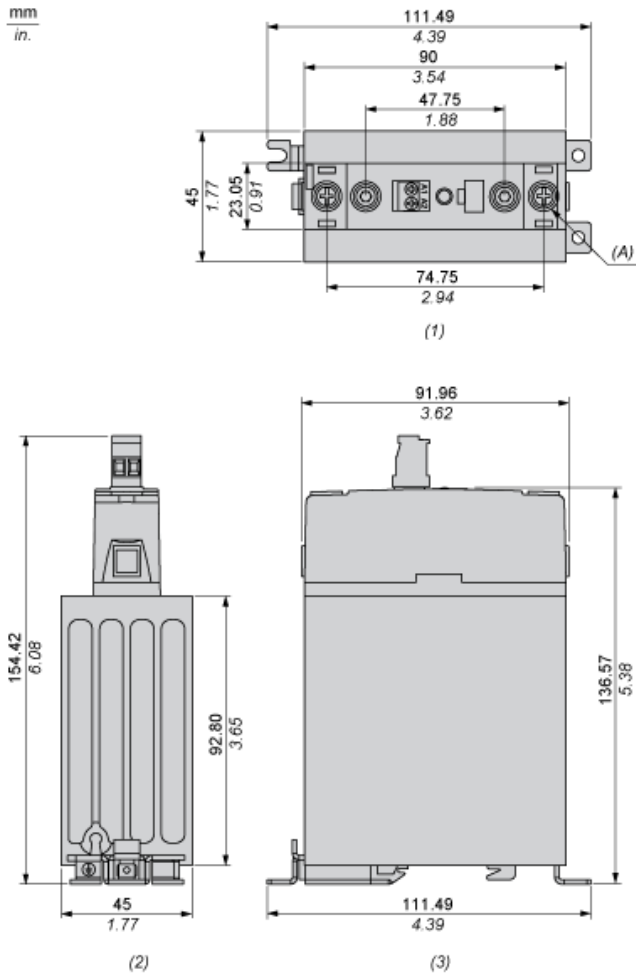
Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	2.09 in (5.3 cm)
Package 1 Width	4.76 in (12.1 cm)
Package 1 Length	5.71 in (14.5 cm)
Package 1 Weight	19.68 oz (558.0 g)
Unit Type of Package 2	S02
Number of Units in Package 2	10
Package 2 Height	5.91 in (15.0 cm)
Package 2 Width	11.81 in (30.0 cm)
Package 2 Length	15.75 in (40.0 cm)
Package 2 Weight	13.30 lb(US) (6.032 kg)

## Offer Sustainability

Sustainable offer status	Green Premium product
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 <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a>
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
China RoHS Regulation	<a href="#">China RoHS Declaration</a>
RoHS exemption information	<a href="#">Yes</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