

Product data sheet

Specifications



DIN rail mount relay, Harmony Solid State Relays, 45A, zeroVoltage switching, contactor configuration , input 4 to 32V DC, output 48 to 600V AC

SSD1A345BDC3

Main

Range of product	Harmony Solid State Relays
Product or component type	Modular DIN rail relay
Device short name	SSD1
Number of channels	1
Number of phases	1 phase
Product configuration type	Contactor configuration with pluggable spring input
Mounting support	35 mm symmetrical DIN rail IEC 60715
rated current	45 A
Output switching mode	Zero voltage switching

Complementary

operating frequency	47...440 Hz
Rated duty	Uninterrupted
Output voltage	48...600 V AC
control circuit voltage	4...32 V DC
Tightening torque	2...2.2 N.m load output 18...20 lb.in load output
Connections - terminals	Plug-inspring terminals, clamping connection capacity:0.13...3.30 mm², AWG 26...AWG 12 for input Clamp terminal, clamping connection capacity:10...26.67 mm², AWG 8...AWG 3 for output
Dielectric strength	4 kV AC input/output circuit 4 kV AC input or output to case
rated impulse withstand voltage	6 kV input/output circuit 6 kV input or output to case
Insulation resistance	1000 MOhm 500 V DC
Local signalling	LED (green) for control voltage
pick-up voltage	4 V DC turn-on
drop-out voltage	1 V DC turn-off
input current range	10...15 mA
solid state switching type	Zero voltage switching
Load current	0.1...45 A
transient overvoltage	1200 V
Inrush current	750 A at 60 Hz

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

Maximum voltage drop	<1.25 V on-state
motor controller rating	0.75 kW 1 hp 120 V AC 2.24 kW 3 hp 240 V AC 3.73 kW 5 hp 480 V AC
Electromagnetic compatibility	Electrostatic discharge 6 kV criteria A contact discharge IEC 61000-4-2 Electrostatic discharge 8 kV criteria A air discharge IEC 61000-4-2 Conducted RF disturbances 10 V, 0.15...80 MHz criteria A level 3 IEC 61000-4-6 Electrical fast transient/burst immunity test 2 kV, 5/100 kHz criteria B output ports IEC 61000-4-4 Electrical fast transient/burst immunity test 1 kV, 5/100 kHz criteria B input ports IEC 61000-4-4 Radiated radio-frequency electromagnetic field immunity test 10 V/m, 80 MHz...1 GHz criteria A IEC 61000-4-3 Radiated radio-frequency electromagnetic field immunity test 3 V/m, 1.4...2 GHz criteria A IEC 61000-4-3 Radiated radio-frequency electromagnetic field immunity test 1 V/m, 2...2.7 GHz criteria A IEC 61000-4-3 Surge immunity test 1 kV criteria B output ports line to line IEC 61000-4-5 Surge immunity test 2 kV criteria B output ports line to earth IEC 61000-4-5 Radiated emission environment B for DC input supply IEC 60947-4-3 Conducted emission environment B for DC input supply IEC 60947-4-3 Immunity to microbreaks and voltage drops 30 %, 500 ms criteria A IEC 61000-4-11 Immunity to microbreaks and voltage drops 100 %, 20 ms criteria B IEC 61000-4-11
device form designation	Form 5 semiconductor output DOL contactor
Maximum I²t for fusing	2563 A².s 10 ms 2343 A².s 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
short circuit protection coordination	Type 1 Type 2
Overvoltage category	III
Width	1.8 in (45 mm)
Height	4.4 in (111.5 mm)
Depth	6.08 in (154.4 mm)
test button	Without test button
Net weight	1.118 lb(US) (0.507 kg)
Device presentation	Complete product

Environment

Flammability rating	V-0 UL 94
Vibration resistance	0.35 mm (f = 10...150 Hz) conforming to IEC 60068-2-6
Shock resistance	50 gn for 11 ms (peak acceleration) , longitudinal position conforming to IEC 60068-2-27 30 gn for 11 ms (peak acceleration) , vertical position conforming to 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)

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	4.7 in (12.0 cm)
Package 1 Length	5.7 in (14.5 cm)
Package 1 Weight	19.8 oz (560.0 g)
Unit Type of Package 2	S02
Number of Units in Package 2	10
Package 2 Height	5.9 in (15.0 cm)
Package 2 Width	11.8 in (30.0 cm)
Package 2 Length	15.7 in (40.0 cm)
Package 2 Weight	13.356 lb(US) (6.058 kg)

Contractual warranty

Warranty (in months)	18
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Environmental Data

Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing “Use Better, Use Longer, Use Again” campaign to extend product lifetimes and recyclability.

[Environmental Data explained >](#)

[How we assess product sustainability >](#)



Environmental footprint

Total lifecycle Carbon footprint	493 kg CO2 eq.
Carbon footprint of the manufacturing phase [A1 to A3]	7 kg CO2 eq.
Carbon footprint of the distribution phase [A4]	0.1 kg CO2 eq.
Carbon footprint of the installation phase [A5]	0 kg CO2 eq.
Carbon footprint of the use phase [B2, B3, B4, B6]	486 kg CO2 eq.
Carbon footprint of the end-of-life phase [C1 to C4]	0.1 kg CO2 eq.

Use Better



Materials and Substances

Packaging made with recycled cardboard	Yes
Packaging without single use plastic	Yes
SCIP Number	134201bc-d293-4667-9cca-10a7f11729e0
EU RoHS Directive	Compliant By Exemption
REACH Regulation	Reference contains Substances of Very High Concern above the threshold

Use Longer



Lifetime extension

Repair	No
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Use Again



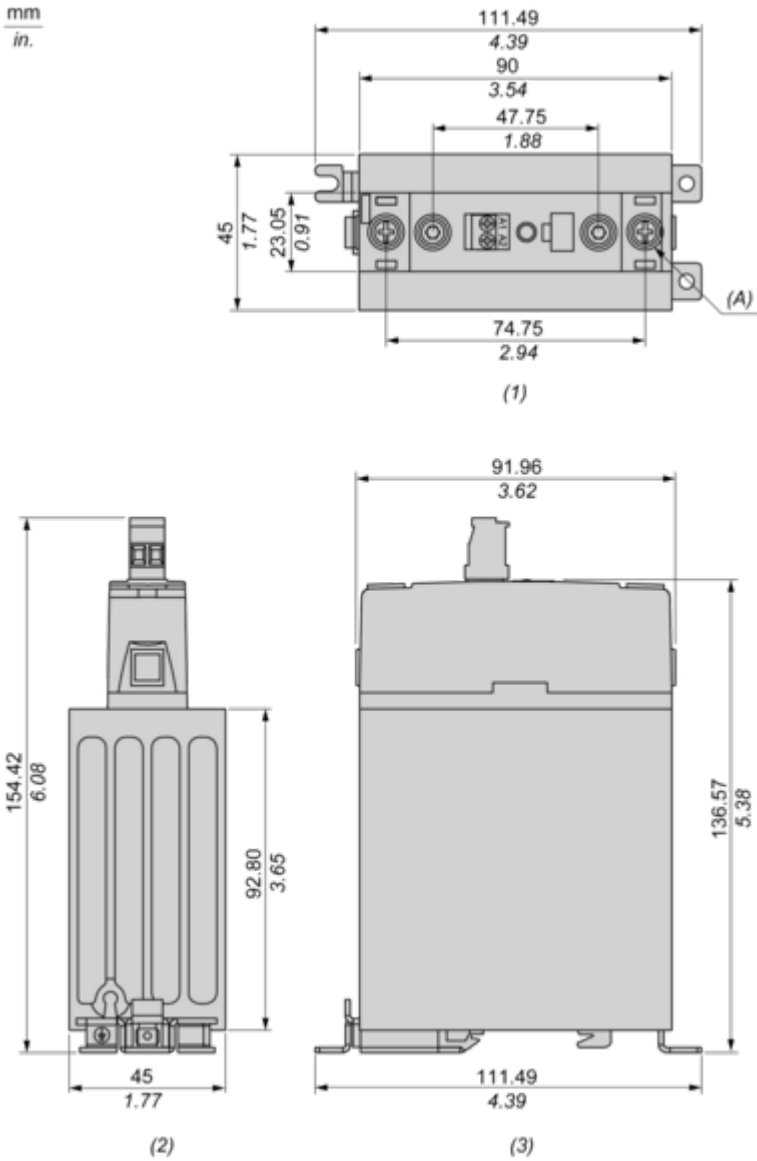
Repack and remanufacture

Take-back	No
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Dimensions Drawings

Dimensions

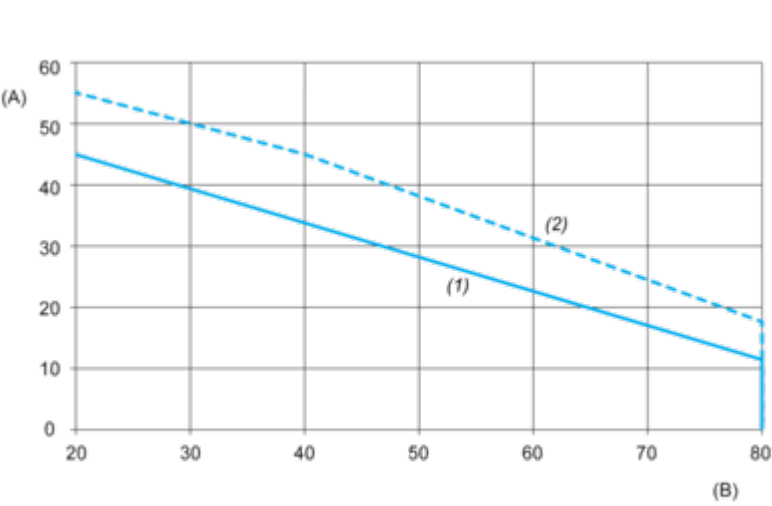
Dimensional Tolerances:±0.5 mm / 0.02 In.



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

Performance Curves

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

Technical Illustration

Dimensions

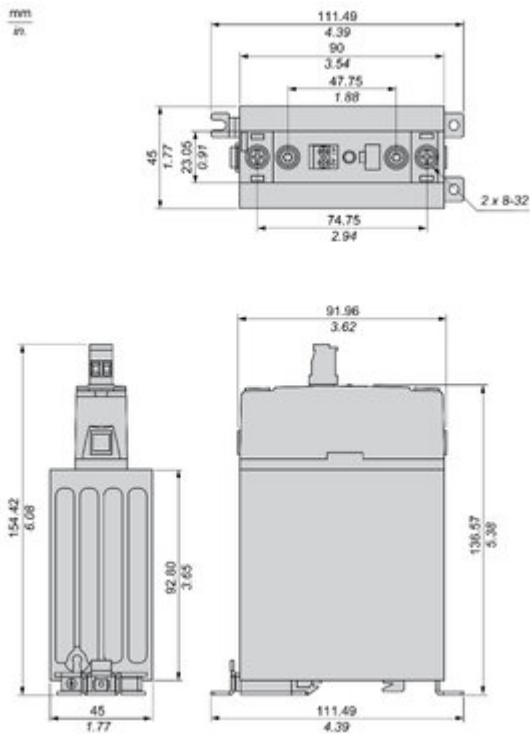


Image of product / Alternate images

Alternative

