

# Product datasheet

Specifications



Harmony, Solid state relay, 20 A,  
DIN rail mount, zero voltage  
switching, input 4...32 V DC, output  
48...600 V AC

SSD1A320BDC1

EAN Code: 3606489807771

## 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	Relay configuration
Mounting support	35 mm symmetrical DIN rail conforming to IEC 60715
rated current	20 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	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...4 mm <sup>2</sup> , AWG 18...AWG 12 for input Screw terminals, clamping connection capacity:1...6 mm <sup>2</sup> , AWG 18...AWG 10 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	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	0.2...20 A
transient overvoltage	1200 V

<b>Inrush current</b>	300 A at 60 Hz
<b>Maximum voltage drop</b>	<1.3 V on-state
<b>motor controller rating</b>	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
<b>Electromagnetic compatibility</b>	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 A 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 Radiated emission environment B for DC input supply conforming to IEC 60947-4-3 Conducted emission environment B for DC 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
<b>device form designation</b>	Form 5 semiconductor output DOL contactor
<b>Maximum I<sup>2</sup>t for fusing</b>	409 A <sup>2</sup> .s for 10 ms 375 A <sup>2</sup> .s for 8.33 ms
<b>Maximum leakage current</b>	1 mA off-state
<b>DV/dt</b>	500 V/μs off-state at maximum rated voltage
<b>Response time</b>	0.5 cycle (turn-on) 0.5 cycle (turn-off)
<b>Power factor</b>	0.5 with maximum load
<b>short circuit protection coordination</b>	Type 1 Type 2
<b>Overvoltage category</b>	III
<b>Width</b>	22.5 mm
<b>Height</b>	95.4 mm
<b>Depth</b>	117.1 mm
<b>test button</b>	Without test button
<b>Product weight</b>	0.3 kg
<b>Device presentation</b>	Complete product

## Environment

<b>Flammability rating</b>	V-0 conforming to UL 94
<b>Vibration resistance</b>	0.75 mm (f = 10...150 Hz) conforming to IEC 60068-2-6
<b>Shock resistance</b>	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
<b>Pollution degree</b>	2

<b>Standards</b>	IEC 61373: class B: category 1 IEC 60947-4-3 IEC 62314 IEC 60950-1 CSA C22.2 No 14-13 UL 508
<b>IP degree of protection</b>	IP20
<b>Ambient air temperature for operation</b>	-40...80 °C
<b>Ambient air temperature for storage</b>	-40...100 °C

## Packing Units

<b>Unit Type of Package 1</b>	PCE
<b>Number of Units in Package 1</b>	1
<b>Package 1 Height</b>	2.500 cm
<b>Package 1 Width</b>	9.200 cm
<b>Package 1 Length</b>	14.000 cm
<b>Package 1 Weight</b>	326.000 g
<b>Unit Type of Package 2</b>	S02
<b>Number of Units in Package 2</b>	24
<b>Package 2 Height</b>	15.000 cm
<b>Package 2 Width</b>	30.000 cm
<b>Package 2 Length</b>	40.000 cm
<b>Package 2 Weight</b>	8.103 kg

## Logistical informations

<b>Country of origin</b>	MX
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## Contractual warranty

<b>Warranty (in months)</b>	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	239 kg CO2 eq.
Carbon footprint of the manufacturing phase [A1 to A3]	4 kg CO2 eq.
Carbon footprint of the distribution phase [A4]	0 kg CO2 eq.
Carbon footprint of the installation phase [A5]	0 kg CO2 eq.
Carbon footprint of the use phase [B2, B3, B4, B6]	235 kg CO2 eq.
Carbon footprint of the end-of-life phase [C1 to C4]	0 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	<a href="#">Compliant By Exemption</a>
REACH Regulation	<a href="#">Reference contains Substances of Very High Concern above the threshold</a>

## Use Longer



### Lifetime extension

Repair	No
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## Use Again

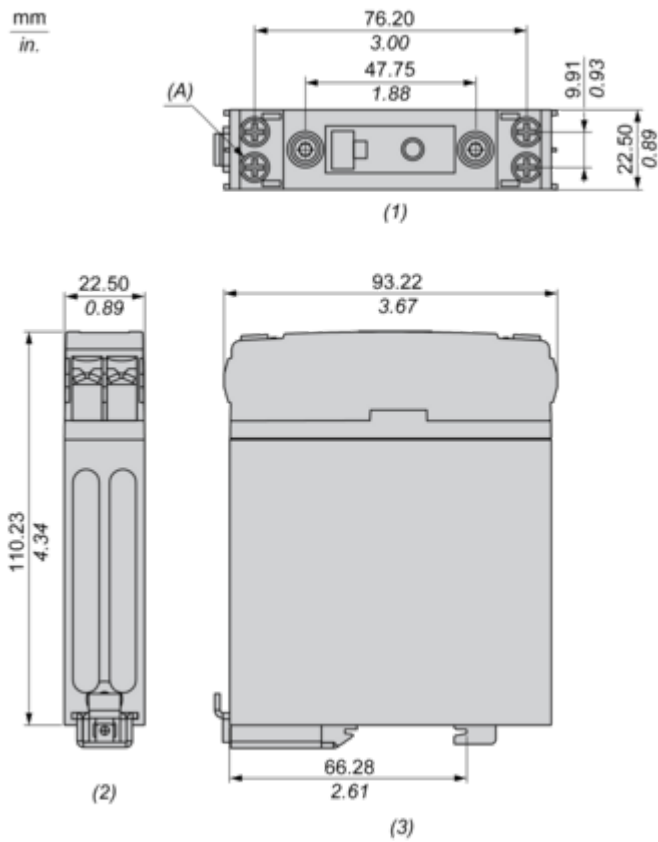


### Repack and remanufacture

Take-back	No
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Dimensions Drawings

Dimensions

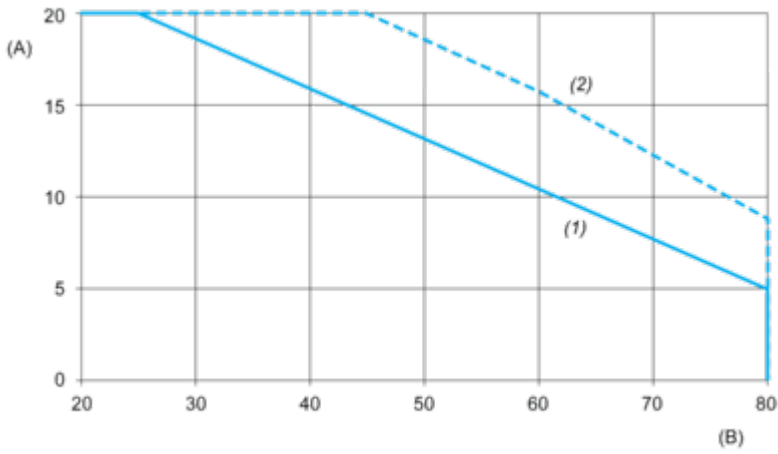


- (1) Front view
- (2) Top view
- (3) Side view
- (A) Screw M4 Stud (4 Places)

Performance Curves

Derating Curves

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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

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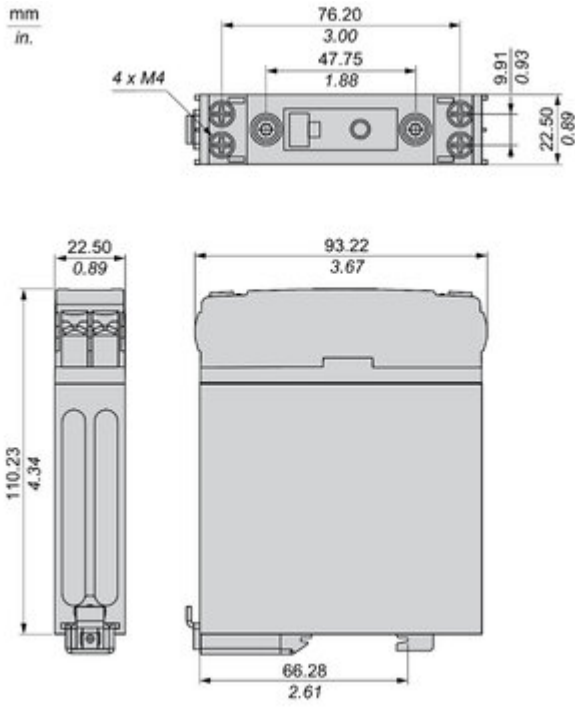


Image of product / Alternate images

Alternative

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