

Product data sheet

Specifications



single phase relay, Harmony Solid State Modular Relays, 12A, DIN rail mount, random switching, input 4 to 32V DC, output 48 to 600V AC

SSM1A312BDR

Main

Range of product	Harmony Solid State Relays
Device short name	SSM
Product or component type	Modular DIN rail relay
Number of channels	1
Number of phases	1 phase
Output switching mode	Random voltage switching

Complementary

Product configuration type	Relay configuration
Mounting support	Symmetrical DIN rail
[In] rated current	12 A
Output voltage	48...600 V AC
[Uc] control circuit voltage	4...32 V DC
Tightening torque	0.5...0.8 N.m for input 0.5...0.8 N.m for output
Connections - terminals	Screw terminals: 1 x 0.3...1 x 1.5 mm², (AWG 22...AWG 16) for input Screw terminals: 1 x 0.3...1 x 2.5 mm², (AWG 22...AWG 14) for output
maximum capacitance	10 pF for input/output
Insulation resistance	1000 MOhm at 500 V DC
Local signalling	LED (green) for input status
Minimum switching voltage	4 V DC turn-on
Maximum switching voltage	1 V DC turn-off
input current	9...11 mA
Solid state output type	SCR output Random voltage switching
Load current	0.15...12 A
transient overvoltage	1200 V
Surge current	715 A for 16.6 ms 750 A for 20 ms
Maximum voltage drop	<1.3 V on-state
Motor power hp	0.33 hp 40 °C 240 V AC
Maximum I²t for fusing	2560 A².s for 10 ms at 50 Hz 2330 A².s for 8.33 ms at 60 Hz
Maximum leakage current	0.2 mA off-state

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

DV/dt	500 V/μs off-state at maximum voltage
Response time	0.5 cycle (turn-off) 0.1 ms (turn-on)
power factor	0.5 (with maximum load)
Overvoltage category	III
Width	18 mm
Height	90.3 mm
test button	Without test button
Depth	83.7 mm
Product weight	0.09 kg

Environment

Flame retardance	V0 conforming to UL 94
Dielectric strength	4 kV AC for input/output 4 kV AC for input or output to case
Pollution degree	2
Standards	IEC 62314 IEC 60950-1 IEC 61000
Product certifications	UL CSA
Marking	CE
IP degree of protection	IP20
Ambient air temperature for operation	-30...80 °C
Ambient air temperature for storage	-30...100 °C

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	2.0 cm
Package 1 Width	9.0 cm
Package 1 Length	9.0 cm
Package 1 Weight	98.0 g
Unit Type of Package 2	S02
Number of Units in Package 2	72
Package 2 Height	15.0 cm
Package 2 Width	30.0 cm
Package 2 Length	40.0 cm
Package 2 Weight	7.486 kg

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	
Environmental Disclosure	Product Environmental Profile

Use Better

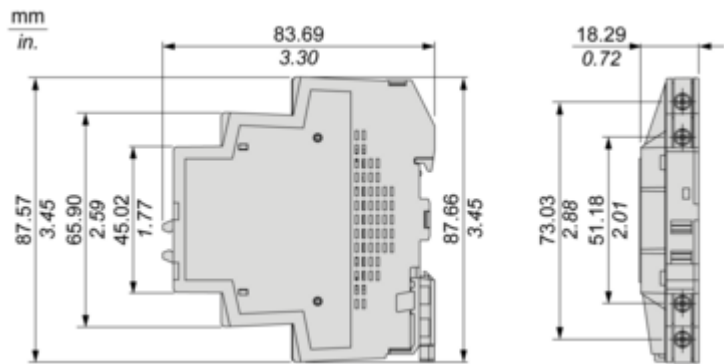
Materials and Substances	
Packaging made with recycled cardboard	Yes
Packaging without single use plastic	Yes
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope)
SCIP Number	134201bc-d293-4667-9cca-10a7f11729e0
California proposition 65	WARNING: This product can expose you to 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 www.P65Warnings.ca.gov

Use Again

Repack and remanufacture	
End of life manual availability	End of Life Information
Take-back	No

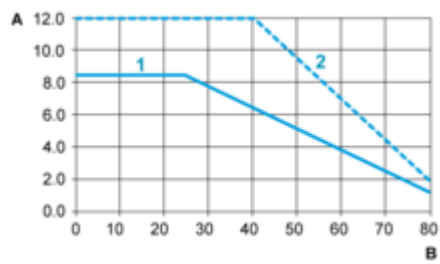
Dimensions Drawings

Dimensions



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 18 mm

Technical Illustration

Dimensions

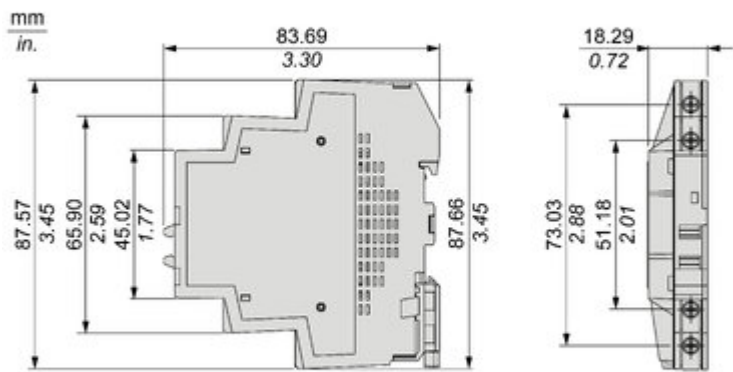


Image of product / Alternate images

Alternative



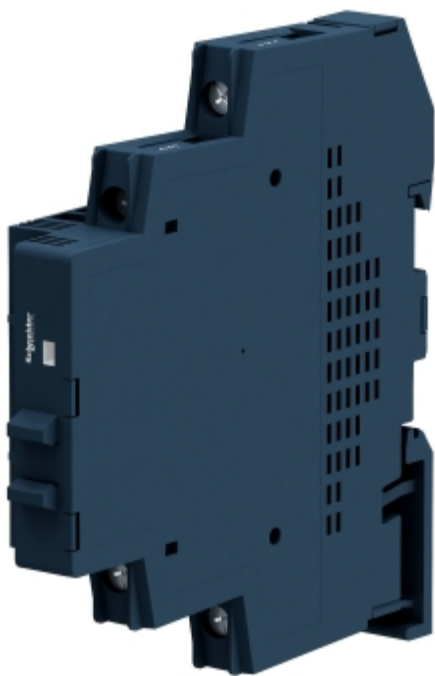


Image of product in real life situation

