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

Product availability: Stock - Normally stocked in distribution facility

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
Line 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, 22 AWG...16 AWG) input Screw terminals 1 x 0.3...1 x 2.5 mm², 22 AWG...14 AWG) output
maximum capacitance	10 pF for input/output
Insulation resistance	1000 MOhm at 500 V DC
Local signalling	LED (green) for input status
pick-up voltage	4 V DC turn-on
drop-out 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 16.6 ms 750 A 20 ms
Maximum voltage drop	<1.3 V on-state
Maximum Horse Power Rating	0.33 hp 104 °F (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

Price is “List Price” and may be subject to a trade discount – check with your local distributor or retailer for actual price.

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 leakage current	0.2 mA off-state
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	0.7 in (18.5 mm)
Height	3.4 in (87.5 mm)
test button	Without test button
Depth	3.3 in (83.5 mm)
Net Weight	0.165 lb(US) (0.075 kg)
Device presentation	Complete product
[Ui] Rated Insulation Voltage	600 V

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	-22…176 °F (-30…80 °C)
Ambient Air Temperature for Storage	-22…212 °F (-30…100 °C)

Ordering and shipping details

Category	US10CP222375
Discount Schedule	0CP2
GTIN	3606480579608
Returnability	Yes
Country of origin	MX

Packing Units

Unit Type of Package 1	PCE
Nbr. of units in pkg.	1
Package 1 Height	0.8 in (2.0 cm)
Package 1 Width	3.5 in (9.0 cm)
Package 1 Length	3.5 in (9.0 cm)
Package weight(Lbs)	3.5 oz (98.0 g)
Unit Type of Package 2	S02

Number of Units in Package 2	72
Package 2 Height	5.9 in (15 cm)
Package 2 Width	11.8 in (30 cm)
Package 2 Length	15.7 in (40 cm)
Package 2 Weight	16.504 lb(US) (7.486 kg)

Contractual warranty

Warranty (in months)	18

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	**4 kg CO2 eq.**
Carbon footprint of the manufacturing phase [A1 to A3]	**0.5 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]	**3 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**
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**

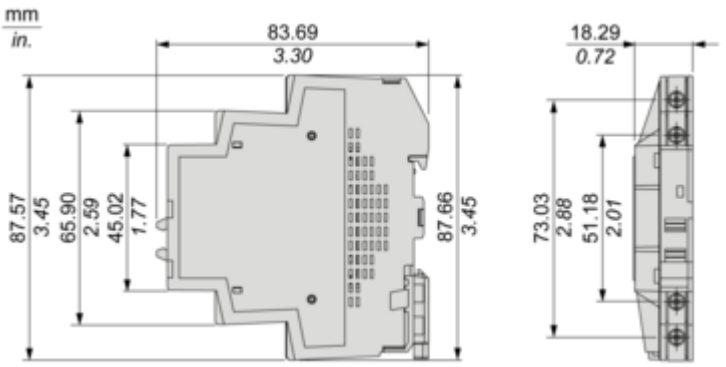
Use Again

Repack and remanufacture

Recyclability potential, in %	**94**
Take-back	**No**

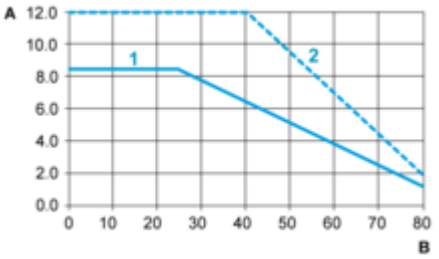
Dimensions Drawings

Dimensions



Performance Curves

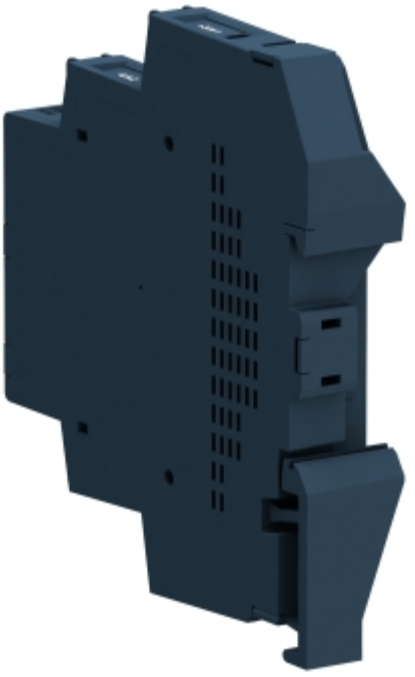
Derating Curves



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

Image of product / Alternate images

Alternative




Amps
12.0
8.0
4.0
20
40
60
80
Ambient Temperature (°C)
MULTIPLE UNITS
(NO SPACING)
INSTALLED SINGLE UNIT
CAUTION
HOT SURFACE

