

Product data sheet

Specifications



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

SSM1A312BD

Product availability: Stock - Normally stocked in distribution facility

Price*: 34.60 USD

Main

Range Of Product	Harmony Solid State Relays
Product Or Component Type	Solid state relay up to 20 A
Device Short Name	SSM
Number Of Channels	1
Number Of Phases	1 phase
Output Switching Mode	Zero voltage switching

Complementary

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, AWG 22...AWG 16) input Screw terminals 1 x 0.3...1 x 2.5 mm², AWG 22...AWG 14) output
Maximum Capacitance	10 pF for input/output
Insulation Resistance	1000 MOhm at 500 V DC
Local Signalling	for input status LED (green)
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 Zero 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

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 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
Dv/Dt	500 V/µs off-state at maximum voltage
Response Time	0.5 cycle (turn-on) 0.5 cycle (turn-off)
Power Factor	0.5 (with maximum load)
Overvoltage Category	III
Width	0.71 in (18 mm)
Height	3.56 in (90.3 mm)
Depth	3.30 in (83.7 mm)
Net Weight	0.20 lb(US) (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 60950-1 IEC 61000 IEC 62314
Product Certifications	CSA UL
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	3606480579523
Returnability	Yes
Country Of Origin	MX

Packing Units

Unit Type Of Package 1	PCE
Number Of Units In Package 1	1
Package 1 Height	0.79 in (2.0 cm)
Package 1 Width	3.54 in (9.0 cm)
Package 1 Length	3.54 in (9.0 cm)
Package 1 Weight	3.32 oz (94.0 g)
Unit Type Of Package 2	S02
Number Of Units In Package 2	72

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	15.88 lb(US) (7.204 kg)

Sustainability



Green Premium™ label is Schneider Electric’s commitment to delivering products with best-in-class environmental performance. Green Premium promises compliance with the latest regulations, transparency on environmental impacts, as well as circular and low-CO₂ products.

Guide to assessing product sustainability is a white paper that clarifies global eco-label standards and how to interpret environmental declarations.

[Learn more about Green Premium >](#)

[Guide to assess a product’s sustainability >](#)



Transparency RoHS/REACH

Well-being performance

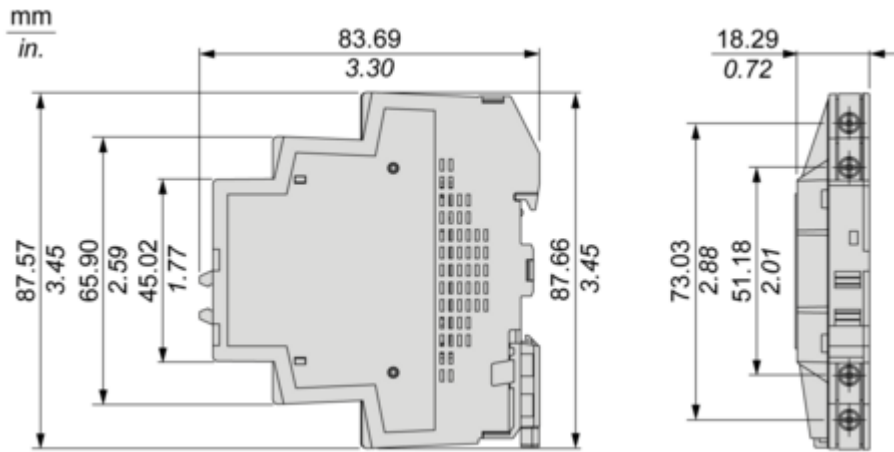
 Mercury Free

 RoHS Exemption Information [Yes](#)

Certifications & Standards

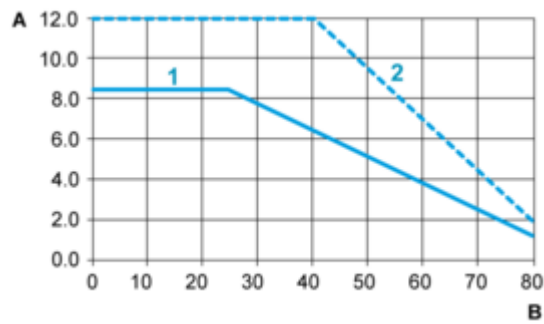
Reach Regulation	REACH Declaration
Eu Rohs Directive	Pro-active compliance (Product out of EU RoHS legal scope)
China Rohs Regulation	China RoHS declaration
Environmental Disclosure	Product Environmental Profile
Circularity Profile	End of Life Information
California Proposition 65	WARNING: This product 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

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