

Product data sheet

Specifications



Solid state modular relay, Harmony, 12A, DIN rail mount, zero voltage switching, input 90-140V AC, output 48-600V AC

SSM1A312F7

! Discontinued

! Discontinued on: Jun 15, 2023

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	Zero voltage switching

Complementary

Mounting support	Symmetrical DIN rail
[In] rated current	12 A
Output voltage	48...600 V AC
[Uc] control circuit voltage	90...140 V AC
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	90 V AC turn-on
Maximum switching voltage	10 V AC turn-off
input current	3...5 mA
Solid state output type	SCR output Zero 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

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-on) 30 ms (turn-off)
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
Net 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 60950-1 IEC 61000 IEC 62314
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	9.5 cm
Package 1 Weight	100.0 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	7.588 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

Environmental Disclosure

[Product Environmental Profile](#)

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](#)

Use Longer



Lifetime extension

Repair

No

Use Again



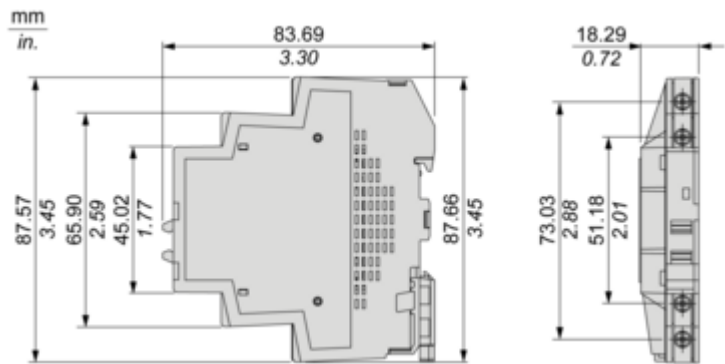
Repack and remanufacture

End of life manual availability

[End of Life Information](#)

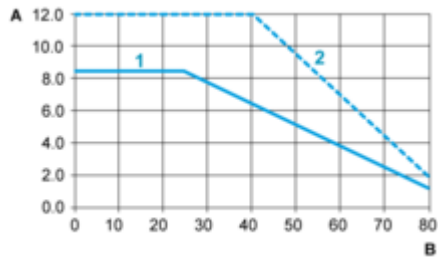
Dimensions Drawings

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

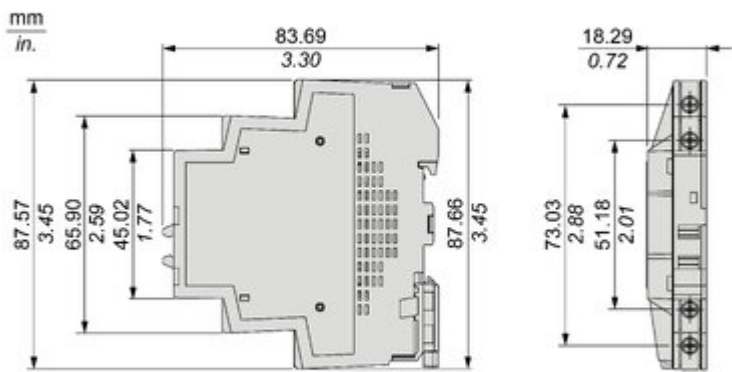


Image of product / Alternate images

Alternative

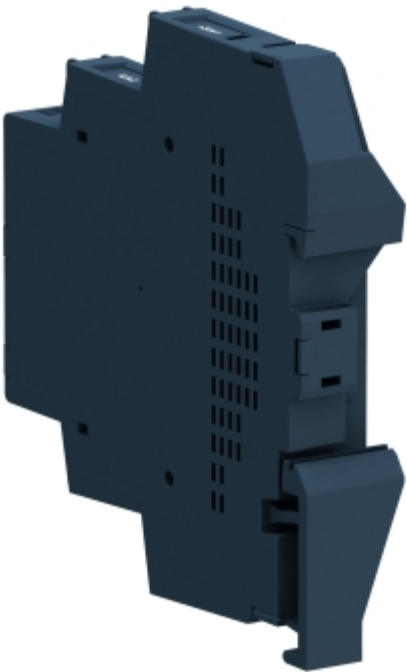




Image of product in real life situation

