

Product data sheet

Specifications



Harmony, Solid state modular relay, 12 A, DIN rail mount, random switching, input 90...140 V AC, output 24...280 V AC

SSM1A112F7R

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	Random voltage switching

Complementary

Mounting support	Symmetrical DIN rail
[In] rated current	12 A
Output voltage	24...280 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 mm ² , (AWG 22...AWG 16) for input Screw terminals: 1 x 0.3...1 x 2.5 mm ² , (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	Random voltage switching SCR output
Load current	0.15...12 A
Transient overvoltage	600 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 I ² t for fusing	2560 A ² .s for 10 ms at 50 Hz 2330 A ² .s for 8.33 ms at 60 Hz

Maximum leakage current	0.1 mA off-state
DV/Dt	500 V/ μ s off-state at maximum voltage
Response time	30 ms (turn-off) 20 ms (turn-on)
Power factor	0.5 (with maximum load)
Overtoltage category	III
Width	18 mm
Height	90.3 mm
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 62314 IEC 60950-1 IEC 61000
Product certifications	CSA UL
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

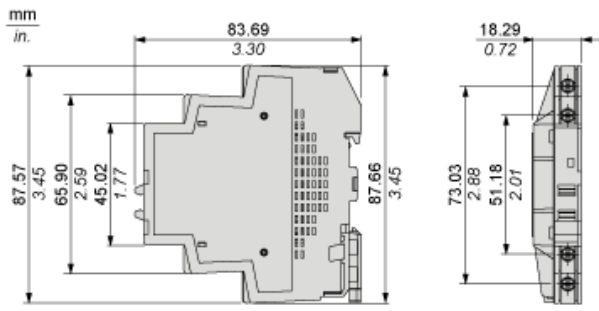
Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Weight	98.0 g
Package 1 Height	2.5 cm
Package 1 width	9 cm
Package 1 Length	9.5 cm
Unit Type of Package 2	S02
Number of Units in Package 2	72
Package 2 Weight	7.426 kg
Package 2 Height	15 cm
Package 2 width	30 cm
Package 2 Length	40 cm

Offer Sustainability

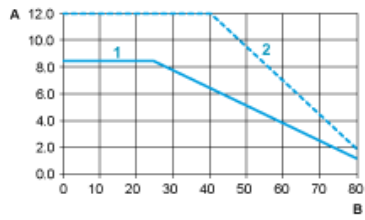
Sustainable offer status	Green Premium product
REACH Regulation	REACH Declaration
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration
Mercury free	Yes

RoHS exemption information	Yes
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



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