

# Product datasheet

Specifications



solid state relay - DIN rail mount -  
input 90-140 V AC, output 24-280 V  
AC ,12A

SSM1A112F7R

⚠ Discontinued on: 15 Jun 2023

⚠ Discontinued

## 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

|                              |                                                                                                                                             |
|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| 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<br>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<br>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      | Random voltage switching<br>SCR output                                                                                                      |
| Load current                 | 0.15...12 A                                                                                                                                 |
| transient overvoltage        | 600 V                                                                                                                                       |
| Surge current                | 715 A for 16.6 ms<br>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<br>2330 A².s for 8.33 ms at 60 Hz                                                                              |
| Maximum leakage current      | 0.1 mA off-state                                                                                                                            |

Excluding VAT, FCA Jabal Ali & are subject to change – check with your local distributor.

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        | 30 ms (turn-off)<br>20 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                               |
| Net weight           | 0.09 kg                               |

## Environment

|                                       |                                                                 |
|---------------------------------------|-----------------------------------------------------------------|
| Flame retardance                      | V0 conforming to UL 94                                          |
| Dielectric strength                   | 4 kV AC for input/output<br>4 kV AC for input or output to case |
| Pollution degree                      | 2                                                               |
| Standards                             | IEC 62314<br>IEC 60950-1<br>IEC 61000                           |
| Product certifications                | CSA<br>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 Height             | 2.5 cm   |
| Package 1 Width              | 9 cm     |
| Package 1 Length             | 9.5 cm   |
| Package 1 Weight             | 98 g     |
| Unit Type of Package 2       | S02      |
| Number of Units in Package 2 | 72       |
| Package 2 Height             | 15 cm    |
| Package 2 Width              | 30 cm    |
| Package 2 Length             | 40 cm    |
| Package 2 Weight             | 7.426 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

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



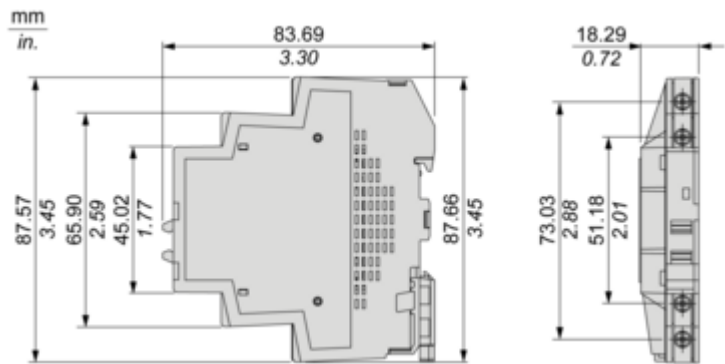
### Repack and remanufacture

End of life manual availability

[End of Life Information](#)

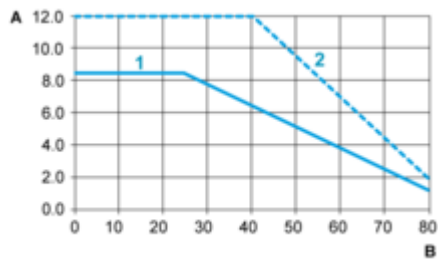
Dimensions Drawings

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

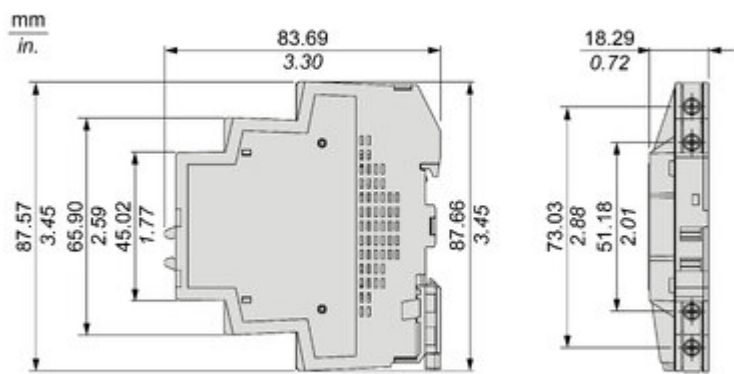


Image of product / Alternate images

Alternative

---



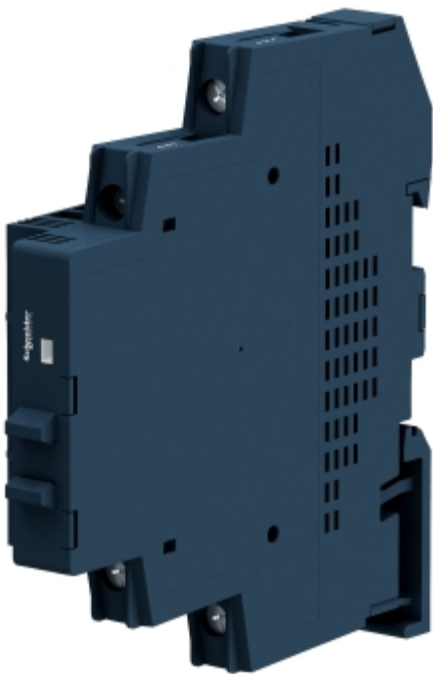


Image of product in real life situation

