

## Product data sheet

### Characteristics

# SSM1D312BD

Harmony Solid State Relays, Solid state modular relay, 12A, DIN rail mount, DC switching, input 4...32V DC, output 1...100V DC



#### 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     | DC switching                 |

#### Complementary

|                              |   |
|------------------------------|---|
| Mounting support             | Symmetrical DIN rail  |
| [In] rated current           | 12 A  |
| Output voltage               | 1...100 V DC  |
| [Uc] control circuit voltage | 4...32 V DC   |
| 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 mm <sup>2</sup> , (AWG 22...AWG 16) for input<br>Screw terminals: 1 x 0.3...1 x 2.5 mm <sup>2</sup> , (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    | 4 V DC turn-on  |
| Maximum switching voltage    | 1 V DC turn-off   |
| Input current                | 9...11 mA   |
| Solid state output type      | DC switching<br>Mosfet output   |
| Load current                 | 0.0025...12 A   |
| Transient overvoltage        | 100 V   |
| Surge current                | 100 A for 10 ms   |
| Maximum voltage drop         | <0.5 V on-state   |
| Resistance                   | 0.045 Ohm on-state  |
| Maximum leakage current      | 0.1 mA off-state  |
| Response time                | 0.6 ms (turn-on)<br>0.3 ms (turn-off)   |
| Overvoltage category         | III   |
| Width                        | 18 mm   |
| Height                       | 90.3 mm   |
| Depth                        | 83.7 mm   |
| Net weight                   | 0.09 kg   |

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## Environment

|                                       |   |
|---------------------------------------|---|
| Flame retardance                      | V0 conforming to UL 94  |
| Dielectric strength                   | 4 KV DC for input/output<br>4 kV DC for input or output to case |
| Pollution degree                      | 2   |
| Standards                             | IEC 60950-1<br>IEC 62314<br>IEC 61000                           |
| Product certifications                | CSA[RETURN]UL   |
| Marking                               | CE  |
| IP degree of protection               | IP20  |
| Ambient air temperature for operation | -30...80 °C   |
| Ambient air temperature for storage   | -30...100 °C  |

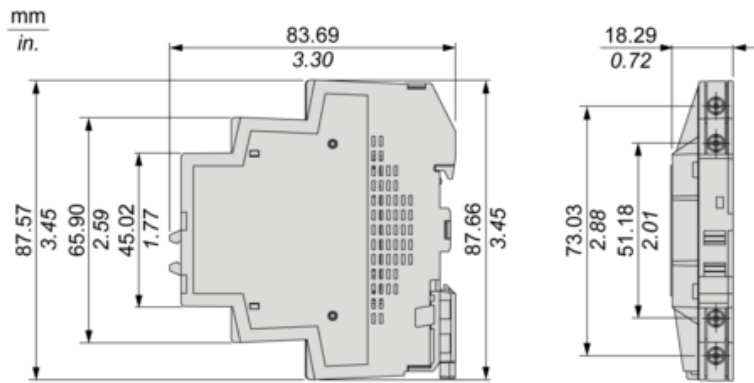
## Packing Units

|                              |          |
|------------------------------|----------|
| Unit Type of Package 1       | PCE      |
| Number of Units in Package 1 | 1        |
| Package 1 Height             | 2 cm     |
| Package 1 Width              | 9 cm     |
| Package 1 Length             | 9.5 cm   |
| Package 1 Weight             | 91 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             | 7.012 kg |

## Offer Sustainability

|                            |  |
|----------------------------|--|
| Sustainable offer status   | Green Premium product                                      |
| REACH Regulation           | <a href="#">REACH Declaration</a>                          |
| EU RoHS Directive          | Pro-active compliance (Product out of EU RoHS legal scope) |
| Mercury free               | Yes  |
| China RoHS Regulation      | <a href="#">China RoHS Declaration</a>                     |
| RoHS exemption information | <a href="#">Yes</a>  |
| Environmental Disclosure   | <a href="#">Product Environmental Profile</a>              |
| Circularity Profile        | <a href="#">End Of Life Information</a>                    |

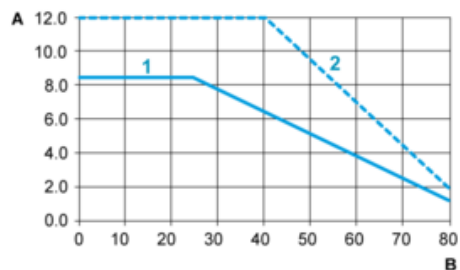
## Dimensions



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Derating Curves

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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