

Product data sheet

Characteristics

SSM1A312BDR

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



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 | 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 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 | 4 V DC turn-on |
| Maximum switching voltage | 1 V DC turn-off |
| Input current | 9...11 mA |
| Solid state output type | SCR output Random 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 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 | 0.2 mA off-state |
| DV/dt | 500 V/μs off-state at maximum voltage |
| Response time | 0.5 cycle (turn-off) 0.1 ms (turn-on) |
| Power factor | 0.5 (with maximum load) |
| Oversupply category | III |
| Width | 18 mm |
| Height | 90.3 mm |

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| | |
|------------|---------|
| 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 | UL[RETURN]CSA |
| Marking | CE |
| IP degree of protection | IP20 |
| Ambient air temperature for operation | -30...80 °C |
| Ambient air temperature for storage | -30...100 °C |

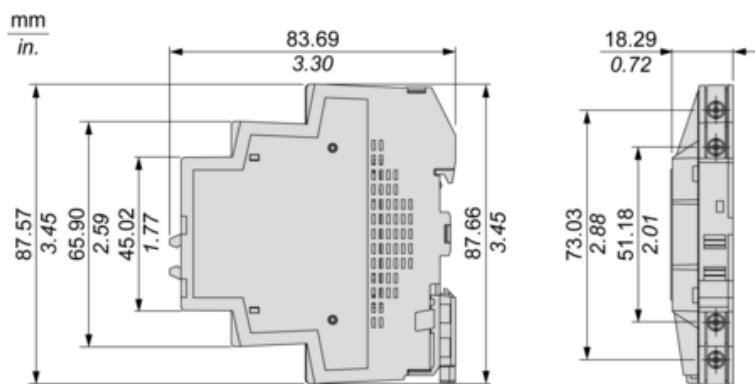
Packing Units

| | |
|------------------------------|----------|
| 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 | 9.0 cm |
| Package 1 Weight | 98.0 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 | 7.486 kg |

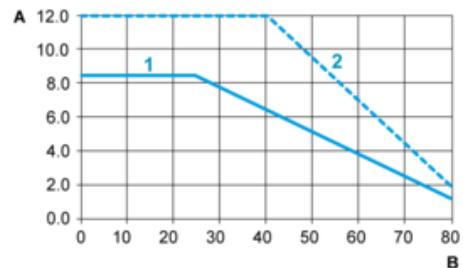
Offer Sustainability

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

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