

# SSM1A455BD

Harmony, Solid state modular modular relay,  
55 A, DIN rail mount, zero voltage switching,  
input 4...32 V DC, output 48...660 V AC



## Main

|                           |                              |
|---------------------------|------------------------------|
| Range of Product          | Harmony Solid State Relays   |
| Product or Component Type | Solid state relay up to 75 A |
| Device short name         | SSM1                         |
| Number of phases          | 1 phase                      |
| Output switching mode     | Zero voltage switching       |

## Complementary

|                                     |                                                                                                                                                          |
|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Mounting Support                    | Symmetrical DIN rail                                                                                                                                     |
| Line Rated Current                  | 55 A                                                                                                                                                     |
| Output voltage                      | 48...660 V AC                                                                                                                                            |
| [Uc] control circuit voltage        | 4...32 V DC                                                                                                                                              |
| Tightening torque                   | 0.6...0.7 N.m for input<br>1.36...1.7 N.m for output                                                                                                     |
| Connections - terminals             | Screw terminals 1 x 0.2...1 x 3.3 mm <sup>2</sup> , AWG 24...AWG 12) input<br>Screw terminals 1 x 0.2...1 x 8.4 mm <sup>2</sup> , AWG 24...AWG 8) output |
| Maximum capacitance                 | 8 pF for input/output                                                                                                                                    |
| Insulation resistance               | 1000 MOhm at 500 V DC                                                                                                                                    |
| Local signalling                    | For input status LED (green)                                                                                                                             |
| Switching voltage                   | 4 V DC turn-on<br>1 V DC turn-off                                                                                                                        |
| Input current                       | 14...17 mA                                                                                                                                               |
| Solid state output type             | SCR output<br>Zero voltage switching                                                                                                                     |
| Load current                        | 0.15...55 A                                                                                                                                              |
| Transient overvoltage               | 1200 V                                                                                                                                                   |
| Surge current                       | 1000 A 16.6 ms                                                                                                                                           |
| Maximum voltage drop                | <1.7 V on-state                                                                                                                                          |
| Maximum I <sup>2</sup> t for fusing | 4150 A <sup>2</sup> .s for 8.3 ms                                                                                                                        |
| Maximum leakage current             | 1 mA off-state                                                                                                                                           |
| DV/dt                               | 500 V/μs off-state at maximum voltage                                                                                                                    |
| Response time                       | 0.5 cycle (turn-on)<br>0.5 cycle (turn-off)                                                                                                              |
| Overvoltage category                | III                                                                                                                                                      |
| Net Weight                          | 1.05 lb(US) (0.476 kg)                                                                                                                                   |

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## Environment

|                                       |                                                                 |
|---------------------------------------|-----------------------------------------------------------------|
| Dielectric strength                   | 4 KV AC for input/output<br>4 kV AC for input or output to case |
| Pollution degree                      | 2                                                               |
| Standards                             | UL 508<br>IEC 60950-1<br>CSA C22.2 No 14                        |
| Product Certifications                | UL<br>CSA<br>EAC                                                |
| Marking                               | UL<br>EAC<br>CE<br>CSA                                          |
| IP degree of protection               | IP20                                                            |
| Ambient air temperature for operation | -40...176 °F (-40...80 °C)                                      |
| Ambient Air Temperature for Storage   | -40...257 °F (-40...125 °C)                                     |

## Ordering and shipping details

|                       |                                   |
|-----------------------|-----------------------------------|
| Category              | 22375 - INTERFACE MODULE(ABA,R,S) |
| Discount Schedule     | CP2                               |
| GTIN                  | 3606485441689                     |
| Nbr. of units in pkg. | 1                                 |
| Package weight(Lbs)   | 18.24 oz (517 g)                  |
| Returnability         | Yes                               |
| Country of origin     | MX                                |

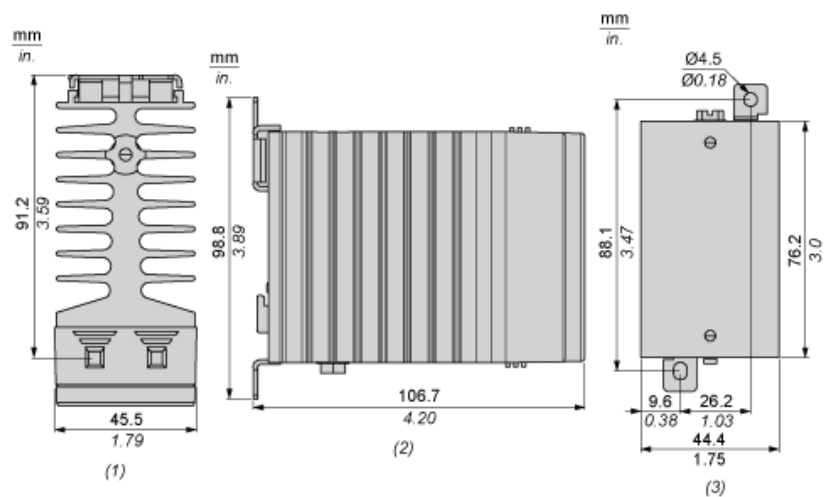
## Packing Units

|                              |                         |
|------------------------------|-------------------------|
| Unit Type of Package 1       | PCE                     |
| Package 1 Height             | 2.36 in (6 cm)          |
| Package 1 width              | 4.33 in (11 cm)         |
| Package 1 Length             | 4.65 in (11.8 cm)       |
| Unit Type of Package 2       | S02                     |
| Number of Units in Package 2 | 12                      |
| Package 2 Weight             | 14.69 lb(US) (6.664 kg) |
| Package 2 Height             | 5.91 in (15 cm)         |
| Package 2 width              | 11.81 in (30 cm)        |
| Package 2 Length             | 15.75 in (40 cm)        |

## Offer Sustainability

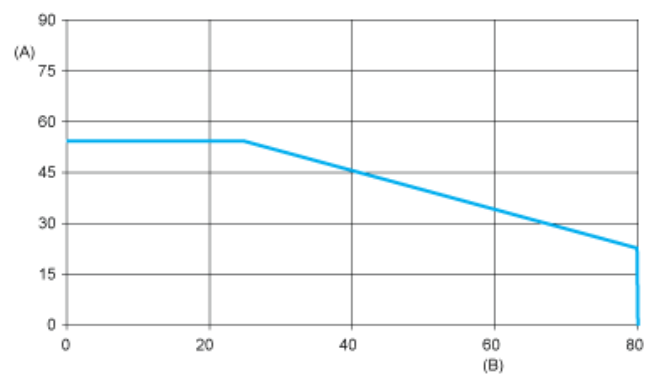
|                            |                                                                                                                                                                                                                                                                                             |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sustainable offer status   | Green Premium product                                                                                                                                                                                                                                                                       |
| 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 <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a> |
| REACH Regulation           | <a href="#">REACH Declaration</a>                                                                                                                                                                                                                                                           |
| EU RoHS Directive          | Pro-active compliance (Product out of EU RoHS legal scope) <a href="#">EU RoHS Declaration</a>                                                                                                                                                                                              |
| Mercury free               | Yes                                                                                                                                                                                                                                                                                         |
| RoHS exemption information | <a href="#">Yes</a>                                                                                                                                                                                                                                                                         |
| China RoHS Regulation      | <a href="#">China RoHS Declaration</a>                                                                                                                                                                                                                                                      |
| Environmental Disclosure   | <a href="#">Product Environmental Profile</a>                                                                                                                                                                                                                                               |
| Circularity Profile        | <a href="#">End Of Life Information</a>                                                                                                                                                                                                                                                     |
| WEEE                       | The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins.                                                                                                                                                                |

Dimensions



- (1) Top view
- (2) Side view
- (3) Front view

### Derating Curves



A : Load Current (Amperes)  
B : Ambient Temperature (°C)

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