

# SSD1A335M7RC2

Harmony, Solid state relay, 35 A, DIN rail mount, random switching, input 90...280 V AC/DC, output 48...600 V AC



## Main

|                            |                                                         |
|----------------------------|---------------------------------------------------------|
| Range of Product           | Harmony Solid State Relays                              |
| Product or Component Type  | Solid state relay up to 40 A                            |
| Device short name          | SSD1                                                    |
| Number of Channels         | 1                                                       |
| Number of phases           | 1 phase                                                 |
| Product configuration type | Contactor configuration with pluggable screw input type |
| Mounting support           | 35 mm symmetrical DIN rail conforming to EN/IEC 60715   |
| Rated current              | 35 A                                                    |
| Output switching mode      | Random voltage switching                                |

## Complementary

|                                 |                                                                                                                                                                                            |
|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operating frequency             | 47...440 Hz                                                                                                                                                                                |
| Rated duty                      | Uninterrupted                                                                                                                                                                              |
| Output voltage                  | 48...600 V AC                                                                                                                                                                              |
| Control circuit voltage         | 90...280 V AC/DC                                                                                                                                                                           |
| Tightening torque               | 0.5 N.m for control input<br>5 lb.in for control input<br>2...2.2 N.m for load output<br>18...20 lb.in for load output                                                                     |
| Connections - terminals         | Plug-inscrew terminals, clamping connection capacity:0.08...3.30 mm², AWG 28...AWG 12 for input<br>Telescopic screw, clamping connection capacity:0.75...10 mm², AWG 20...AWG 8 for output |
| Dielectric strength             | 4 KV AC for input/output circuit<br>4 kV AC for input or output to case                                                                                                                    |
| Rated impulse withstand voltage | 6 KV for input/output circuit<br>6 kV for input or output to case                                                                                                                          |
| Insulation resistance           | 1000 MOhm at 500 V DC                                                                                                                                                                      |
| Local signalling                | For control voltage LED (green)                                                                                                                                                            |
| Pick-up voltage                 | 90 V AC/DC turn-on                                                                                                                                                                         |
| Drop-out voltage                | 5 V AC/DC turn-off                                                                                                                                                                         |
| Input current range             | 6...10 mA                                                                                                                                                                                  |
| Solid state switching type      | Random voltage switching                                                                                                                                                                   |
| Load current                    | 0.15...35 A                                                                                                                                                                                |
| Transient overvoltage           | 1200 V                                                                                                                                                                                     |
| Inrush current                  | 1350 A at 60 Hz                                                                                                                                                                            |
| Maximum voltage drop            | <1.15 V on-state                                                                                                                                                                           |
| Motor controller rating         | 1.5 KW/2 Hp at 120 V AC<br>3.73 KW/5 Hp at 240 V AC<br>7.46 kW/10 hp at 480 V AC                                                                                                           |

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|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Electromagnetic compatibility         | <p>Electrostatic discharge 6 kV criteria A contact discharge conforming to IEC 61000-4-2</p> <p>Electrostatic discharge 8 kV criteria A air discharge conforming to IEC 61000-4-2</p> <p>Conducted RF disturbances 10 V, 0.15...80 MHz criteria A level 3 conforming to IEC 61000-4-6</p> <p>Electrical fast transient/burst immunity test 2 kV, 5/100 kHz criteria B output ports conforming to IEC 61000-4-4</p> <p>Electrical fast transient/burst immunity test 1 kV, 5/100 kHz criteria B input ports conforming to IEC 61000-4-4</p> <p>Radiated radio-frequency electromagnetic field immunity test 10 V/m, 80 MHz...1 GHz criteria A conforming to IEC 61000-4-3</p> <p>Radiated radio-frequency electromagnetic field immunity test 3 V/m, 1.4...2 GHz criteria A conforming to IEC 61000-4-3</p> <p>Radiated radio-frequency electromagnetic field immunity test 1 V/m, 2...2.7 GHz criteria A conforming to IEC 61000-4-3</p> <p>Surge immunity test 1 kV criteria A output ports line to line conforming to IEC 61000-4-5</p> <p>Surge immunity test 2 kV criteria A output ports line to earth conforming to IEC 61000-4-5</p> <p>Surge immunity test 1 kV criteria A input ports line to line conforming to IEC 61000-4-5</p> <p>Surge immunity test 2 kV criteria A input ports line to earth conforming to IEC 61000-4-5</p> <p>Radiated emission environment B for AC input supply conforming to IEC 60947-4-3</p> <p>Conducted emission environment A for AC input supply conforming to IEC 60947-4-3</p> <p>Immunity to microbreaks and voltage drops 30 %, 500 ms criteria A conforming to IEC 61000-4-11</p> <p>Immunity to microbreaks and voltage drops 100 %, 20 ms criteria B conforming to IEC 61000-4-11</p> |
| Device form designation               | Form 5 semiconductor output DOL contactor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Maximum I <sup>2</sup> t for fusing   | 8320 A <sup>2</sup> .S for 10 ms<br>7593 A <sup>2</sup> .s for 8.33 ms                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Maximum leakage current               | 1 mA off-state                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| DV/dt                                 | 500 V/μs off-state at maximum rated voltage                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Response time                         | 20 ms (turn-on)<br>30 ms (turn-off)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Load Power Factor Range               | 0.5 with maximum load                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Short circuit protection coordination | Type 1<br>Type 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Overvoltage category                  | III                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Width                                 | 0.89 in (22.5 mm)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Height                                | 3.62 in (91.9 mm)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Depth                                 | 5.27 in (133.8 mm)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Net Weight                            | 0.66 lb(US) (0.301 kg)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Device presentation                   | Complete product                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

## Environment

|                                       |                                                                                                                                                                                        |
|---------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Flammability rating                   | V-0 conforming to UL 94                                                                                                                                                                |
| Vibration resistance                  | 0.75 mm (f = 10...150 Hz) conforming to EN/IEC 60068-2-6                                                                                                                               |
| Shock resistance                      | 50 gn for 11 ms (peak acceleration) , longitudinal position conforming to EN/IEC 60068-2-27<br>30 gn for 11 ms (peak acceleration) , vertical position conforming to EN/IEC 60068-2-27 |
| Pollution degree                      | 2                                                                                                                                                                                      |
| Standards                             | IEC 61373:class B: category 1<br>IEC 60947-4-3<br>IEC 62314<br>IEC 60950-1<br>CSA C22.2 No 14-13<br>UL 508                                                                             |
| IP degree of protection               | IP20                                                                                                                                                                                   |
| Ambient Air Temperature for Operation | -4...176 °F (-20...80 °C)                                                                                                                                                              |
| Ambient Air Temperature for Storage   | -40...212 °F (-40...100 °C)                                                                                                                                                            |

## Ordering and shipping details

|                   |                                 |
|-------------------|---------------------------------|
| Category          | 22375-INTERFACE MODULE(ABA,R,S) |
| Discount Schedule | CP2                             |
| GTIN              | 3606489807986                   |
| Returnability     | Yes                             |

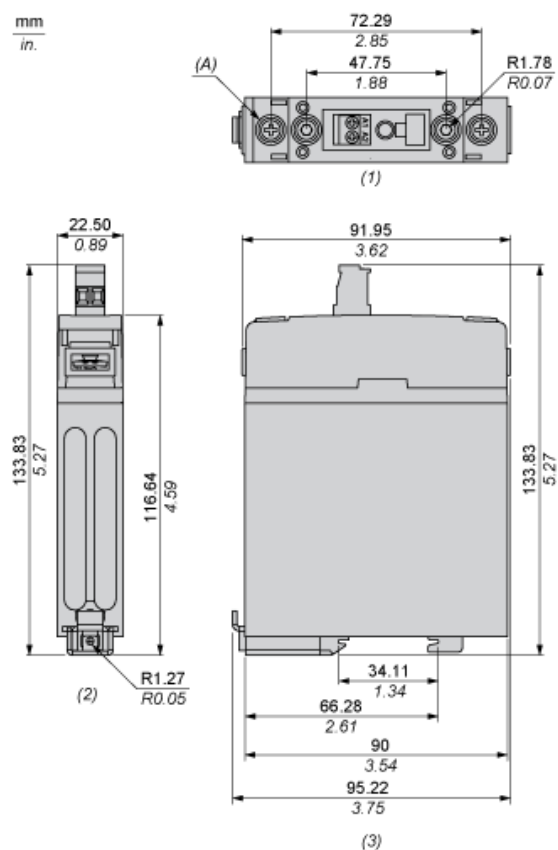
## Packing Units

|                              |                         |
|------------------------------|-------------------------|
| Unit Type of Package 1       | PCE                     |
| Number of Units in Package 1 | 1                       |
| Package 1 Height             | 1.02 in (2.6 cm)        |
| Package 1 Width              | 3.78 in (9.6 cm)        |
| Package 1 Length             | 5.51 in (14.0 cm)       |
| Package 1 Weight             | 11.43 oz (324.0 g)      |
| Unit Type of Package 2       | S02                     |
| Number of Units in Package 2 | 24                      |
| Package 2 Height             | 5.91 in (15.0 cm)       |
| Package 2 Width              | 11.81 in (30.0 cm)      |
| Package 2 Length             | 15.75 in (40.0 cm)      |
| Package 2 Weight             | 18.17 lb(US) (8.243 kg) |

## Offer Sustainability

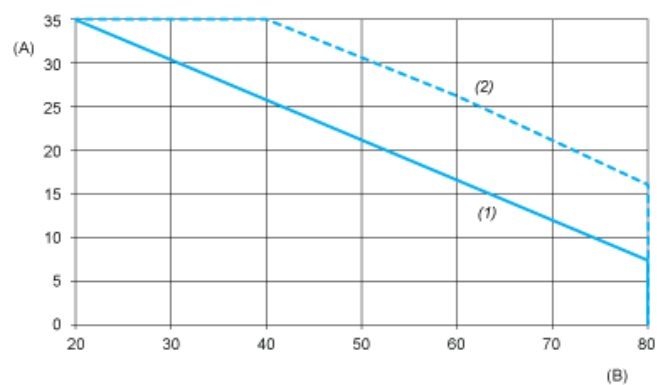
|                            |                                                                                                                                                                                                                                                                                             |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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                                                                                                                                                                                                                                                                                         |
| 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>                                                                                                                                                                                                                                                     |
| WEEE                       | The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins.                                                                                                                                                                |

## Dimensions



- (1) Front view
- (2) Top view
- (3) Side view
- (A) Screw 8-32 Stud Elevator Profile 1/4 48 UNS (2 Places)

### 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 22.5 mm