

# Product data sheet

Specifications



## Repacked current control relay, Harmony Control Relays, 4mA...1 A, 2CO, 24...240V AC DC

RM22JA31MRW



This repacked option saves 2.518 over the standard condition

### Main

|                                 |                                                                                                                                                |
|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| Range of product                | Harmony Control Relays                                                                                                                         |
| Relay type                      | Current control relay                                                                                                                          |
| Product or component type       | Current control relay                                                                                                                          |
| Relay name                      | RM22JA                                                                                                                                         |
| Relay monitored parameters      | Overcurrent or undercurrent detection<br>Overcurrent or undercurrent in window mode                                                            |
| Time delay type                 | Adjustable 0.1...30 s, +/- 10 % of the full scale value Tt- time delay upon fault                                                              |
| Switching capacity in VA        | 2000 VA                                                                                                                                        |
| Minimum switching current       | 10 mA at 5 V DC                                                                                                                                |
| Maximum switching current       | 8 A AC                                                                                                                                         |
| Maximum power consumption in VA | 3.5 VA                                                                                                                                         |
| Measurement range               | 4 mA...1 A current AC/DC 50/60 Hz                                                                                                              |
| Utilisation category            | AC-15 conforming to IEC 60947-5-1<br>DC-13 conforming to IEC 60947-5-1<br>AC-1 conforming to IEC 60947-4-1<br>DC-1 conforming to IEC 60947-4-1 |
| Contacts type and composition   | 2 C/O                                                                                                                                          |

### Complementary

|                                             |                                                                                     |
|---------------------------------------------|-------------------------------------------------------------------------------------|
| Reset time                                  | 1500 ms at maximum voltage                                                          |
| Maximum switching voltage                   | 250 V AC                                                                            |
| Supply voltage limits                       | 20.4...264 V AC/DC                                                                  |
| operating voltage tolerance                 | - 15 % + 10 % Un                                                                    |
| Maximum power consumption in W              | 1.5 W DC                                                                            |
| Resistance across terminals                 | 2.5 Ohm at E1-M terminals<br>0.5 Ohm at E2-M terminals<br>0.1 Ohm at E3-M terminals |
| Output contacts                             | 2 C/O                                                                               |
| Nominal output current                      | 8 A                                                                                 |
| Maximum measuring cycle                     | 100 ms measurement cycle as true rms value                                          |
| Internal input resistance                   | 0.5 Ohm<br>2.5 Ohm<br>0.1 Ohm                                                       |
| Setting accuracy of the switching threshold | +/- 10 % of the full scale                                                          |

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

|                                |                                                                                                                                                                                                                                                                                                                                                                                              |
|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Switching threshold drift      | <= 0.05 % per degree centigrade depending permissible ambient air temperature<br><= 1 % within the supply voltage range                                                                                                                                                                                                                                                                      |
| Setting accuracy of time delay | 10 P                                                                                                                                                                                                                                                                                                                                                                                         |
| Time delay drift               | <= 0.05 % per degree centigrade depending permissible ambient air temperature<br><= 1 % within the supply voltage range                                                                                                                                                                                                                                                                      |
| Hysteresis                     | 5...50 % adjustable of threshold setting<br>3 % fixed of full scale for window mode                                                                                                                                                                                                                                                                                                          |
| delay at power up              | 0.3 s                                                                                                                                                                                                                                                                                                                                                                                        |
| Repeat accuracy                | +/- 0.5 % for input and measurement circuit<br>+/- 0.2 % for time delay                                                                                                                                                                                                                                                                                                                      |
| Measurement error              | < 1 % over the whole range with voltage variation<br>0.05 %/°C with temperature variation                                                                                                                                                                                                                                                                                                    |
| Response time                  | <= 500 ms                                                                                                                                                                                                                                                                                                                                                                                    |
| Threshold setting              | 10...100 %                                                                                                                                                                                                                                                                                                                                                                                   |
| Overvoltage category           | III conforming to IEC 60664-1<br>III conforming to UL 508                                                                                                                                                                                                                                                                                                                                    |
| Insulation resistance          | > 100 MOhm at 500 V DC conforming to IEC 60255-27                                                                                                                                                                                                                                                                                                                                            |
| Insulation                     | Between supply and measurement                                                                                                                                                                                                                                                                                                                                                               |
| Connections - terminals        | Screw terminals, 2 x 0.5...2 x 2.5 mm <sup>2</sup> (AWG 20...AWG 14) solid without cable end<br>Screw terminals, 2 x 0.2...2 x 1.5 mm <sup>2</sup> (AWG 24...AWG 16) flexible with cable end<br>Screw terminals, 1 x 0.5...1 x 3.3 mm <sup>2</sup> (AWG 20...AWG 12) solid without cable end<br>Screw terminals, 1 x 0.2...1 x 2.5 mm <sup>2</sup> (AWG 24...AWG 14) flexible with cable end |
| Tightening torque              | 0.6...1 N.m conforming to IEC 60947-1                                                                                                                                                                                                                                                                                                                                                        |
| Housing material               | Polycarbonate                                                                                                                                                                                                                                                                                                                                                                                |
| Local signalling               | LED (yellow) for relay ON<br>LED (green) for power ON                                                                                                                                                                                                                                                                                                                                        |
| Mounting support               | 35 mm DIN rail conforming to IEC 60715                                                                                                                                                                                                                                                                                                                                                       |
| Electrical durability          | 100000 cycles                                                                                                                                                                                                                                                                                                                                                                                |
| Mechanical durability          | 10000000 cycles                                                                                                                                                                                                                                                                                                                                                                              |
| [Us] rated supply voltage      | 24...240 V AC/DC 50/60 Hz, non self-powered                                                                                                                                                                                                                                                                                                                                                  |
| Safety reliability data        | MTTFd = 296.8 years<br>B10d = 270000                                                                                                                                                                                                                                                                                                                                                         |
| Contacts material              | Cadmium free                                                                                                                                                                                                                                                                                                                                                                                 |
| Width                          | 22.5 mm                                                                                                                                                                                                                                                                                                                                                                                      |
| Control type                   | With test button                                                                                                                                                                                                                                                                                                                                                                             |
| Product weight                 | 0.11 kg                                                                                                                                                                                                                                                                                                                                                                                      |

## Environment

|                         |       |
|-------------------------|-------|
| Immunity to microbreaks | 50 ms |
|-------------------------|-------|

|                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Electromagnetic compatibility         | Immunity for residential, commercial and light-industrial environments conforming to IEC 61000-6-1<br>Immunity for industrial environments conforming to IEC 61000-6-2<br>Emission standard for residential, commercial and light-industrial environments conforming to IEC 61000-6-3<br>Emission standard for industrial environments conforming to IEC 61000-6-4<br>Electrostatic discharge - test level: 6 kV level 3 (contact discharge) conforming to IEC 61000-4-2<br>Electrostatic discharge - test level: 8 kV level 3 (air discharge) conforming to IEC 61000-4-2<br>Radiated radio-frequency electromagnetic field immunity test - test level: 10 V/m level 3 conforming to IEC 61000-4-3<br>Electrical fast transient/burst immunity test - test level: 4 kV level 4 (direct) conforming to IEC 61000-4-4<br>Electrical fast transient/burst immunity test - test level: 2 kV level 4 (capacitive coupling) conforming to IEC 61000-4-4<br>Surge immunity test - test level: 4 kV level 4 (common mode) conforming to IEC 61000-4-5<br>Surge immunity test - test level: 2 kV level 4 (differential mode) conforming to IEC 61000-4-5<br>Conducted and radiated emissions class B group 1 conforming to CISPR 11<br>Conducted and radiated emissions class B conforming to CISPR 22 |
| Standards                             | IEC 60255-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Product certifications                | CSA<br>CE<br>EAC<br>CCC<br>GL<br>RCM<br>UL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Ambient air temperature for storage   | -40...70 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Ambient air temperature for operation | -20...50 °C at 60 Hz<br>-20...60 °C at 50 Hz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Relative humidity                     | 93...97 % at 25...55 °C conforming to IEC 60068-2-30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Vibration resistance                  | 0.075 mm (f= 10...58.1 Hz) not in operation conforming to IEC 60068-2-6<br>1 gn (f= 10...58.1 Hz) not in operation conforming to IEC 60068-2-6<br>0.035 mm (f= 58.1...150 Hz) in operation conforming to IEC 60068-2-6<br>0.5 gn (f= 58.1...150 Hz) in operation conforming to IEC 60068-2-6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Shock resistance                      | 15 gn (duration = 11 ms) for not in operation conforming to IEC 60068-2-27<br>5 gn (duration = 11 ms) for in operation conforming to IEC 60068-2-27                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| IP degree of protection               | IP20 (terminals) conforming to IEC 60529<br>IP40 (housing) conforming to IEC 60529<br>IP50 (front panel) conforming to IEC 60529                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Pollution degree                      | 3 conforming to IEC 60664-1<br>3 conforming to UL 508                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Dielectric test voltage               | 2.5 kV, 1 min AC 50 Hz conforming to IEC 60255-27                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

## Packing Units

|                              |         |
|------------------------------|---------|
| Unit Type of Package 1       | PCE     |
| Number of Units in Package 1 | 1       |
| Package 1 Height             | 2.6 cm  |
| Package 1 Width              | 8.2 cm  |
| Package 1 Length             | 9.5 cm  |
| Package 1 Weight             | 121.0 g |

## 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 |              |
|-----------------------------------------------------------------------------------------------------------|--------------|
| Lower carbon footprint                                                                                    | 3 kg CO2 eq. |

Use Better

|  Materials and Substances |                                                                                        |
|------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| SCIP Number                                                                                                | 5e3fdf99-611b-4d07-ad17-6eba84ab488b                                                   |
| REACH Regulation                                                                                           | <a href="#">Reference contains Substances of Very High Concern above the threshold</a> |

Use Longer

|  Lifetime extension |    |
|------------------------------------------------------------------------------------------------------|----|
| Repair                                                                                               | No |

Image of product / Alternate images

Alternative







