# Product data sheet

Specifications

## current control relay, Harmony Control Relays, 5A, 2CO, 2â€¦500mA, 24â€¦240V AC DC

RM35JA31MW

**Product availability: Stock - Normally stocked in distribution facility**

**Price*: 148.00 USD**

## Main

| | |
|---|---|
| **Range Of Product** | Harmony Control Relays |
| **Relay Type** | Current control relay |
| **Product Or Component Type** | Current control relay |
| **Relay Name** | RM35JA |
| **Time Delay** | Adjustable 0.3...30 s, 0 + 10 % Tt- time delay upon fault<br>Adjustable 1...20 s, 0 + 10 % Ti- inhibition time delay upon startup |
| **Switching Capacity In Va** | 1250 VA |
| **Minimum Switching Current** | 10 mA 5 V DC |
| **Maximum Switching Current** | 5 A AC |
| **Maximum Power Consumption In Va** | 3.5 VA AC |
| **Measurement Range** | 2...500 mA AC/DC E2-M terminals |
| **Utilisation Category** | AC-12 IEC 60947-5-1<br>AC-13 IEC 60947-5-1<br>AC-14 IEC 60947-5-1<br>AC-15 IEC 60947-5-1<br>DC-12 IEC 60947-5-1<br>DC-13 IEC 60947-5-1<br>DC-14 IEC 60947-5-1 |
| **Contacts Type And Composition** | 2 C/O |

## Complementary

| | |
|---|---|
| **Reset Time** | 1500 ms time delay |
| **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** | 0.6 W DC |
| **Control Circuit Frequency** | 40...70 Hz +/- 10 % |
| **Resistance Across Terminals** | 1 Ohm E2-M terminals<br>5 Ohm E1-M terminals<br>0.2 Ohm E3-M terminals |
| **Output Contacts** | 2 C/O |
| **Nominal Output Current** | 5 A |
| **Maximum Measuring Cycle** | 30 ms measurement cycle as true rms value |
| **Hysteresis** | 5…50 % threshold setting |

Price is “List Price” and may be subject to a trade discount – check with your local distributor or retailer for actual price.

| | |
|---|---|
| **Delay At Power Up** | 0.3 s |
| **Measurement Accuracy** | +/- 10 % of the full scale value |
| **Repeat Accuracy** | +/- 0.5 % input and measurement circuit<br>+/- 2 % time delay |
| **Measurement Error** | 0.05 %/°C with temperature variation<br>1 by volt over the whole range with voltage variation |
| **Polarity** | No DC |
| **Threshold Setting** | 10...100 % |
| **Marking** | CE : EMC 89/336/EEC<br>CE : 73/23/EEC |
| **Overvoltage Category** | III IEC 60664-1 |
| **Insulation Resistance** | > 500 MOhm 500 V DC between supply and relay output IEC 60255-5<br>> 500 MOhm 500 V DC between measurement and relay output IEC 60664-1<br>> 1 MOhm 500 V DC between supply and measurement IEC 60255-5<br>> 500 MOhm 500 V DC between supply and relay output IEC 60664-1<br>> 500 MOhm 500 V DC between measurement and relay output IEC 60255-5<br>> 1 MOhm 500 V DC between supply and measurement IEC 60664-1 |
| **[Ui] Rated Insulation Voltage** | 250 V IEC 60664-1 |
| **Operating Position** | Any position without derating |
| **Connections - Terminals** | Screw terminals, 1 x 0.5...1 x 4 mm² AWG 20...AWG 11) solid without cable end<br>Screw terminals, 2 x 0.5...2 x 2.5 mm² AWG 20...AWG 14) solid without cable end<br>Screw terminals, 1 x 0.2...1 x 2.5 mm² AWG 24...AWG 12) flexible with cable end<br>Screw terminals, 2 x 0.2...2 x 1.5 mm² AWG 24...AWG 16) flexible with cable end |
| **Tightening Torque** | 5.31…8.85 lbf.in (0.6…1 N.m) IEC 60947-1 |
| **Housing Material** | Self-extinguishing plastic |
| **Local Signalling** | for power ON LED (green)<br>for relay ON LED (yellow) |
| **Mounting Support** | 35 mm symmetrical DIN rail conforming to IEC 60715 |
| **Electrical Durability** | 100000 cycles |
| **Mechanical Durability** | 30000000 cycles |
| **Operating Rate** | <= 360 operations/hour full load |
| **[Un] Rated Nominal 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** | 1.38 in (35 mm) |
| **Control Type** | Without test button |
| **Net Weight** | 0.29 lb(US) (0.13 kg) |

# Environment

| | |
|---|---|
| **Immunity To Microbreaks** | 50 ms |
| **Electromagnetic Compatibility** | Emission standard for industrial environments conforming to IEC 61000-6-4<br>Emission standard for residential, commercial and light-industrial environments conforming to IEC 61000-6-3<br>Immunity for industrial environments conforming to NF EN/IEC 61000-6-2 |
| **Standards** | IEC 60255-6 |
| **Product Certifications** | GL<br>CSA<br>GOST<br>UL<br>C-tick |

| | |
|---|---|
| **Ambient Air Temperature For Storage** | -40…158 °F (-40…70 °C) |
| **Ambient Air Temperature For Operation** | -4…122 °F (-20…50 °C) |
| **Relative Humidity** | 95 % 131 °F (55 °C) IEC 60068-2-30 |
| **Vibration Resistance** | 0.35 mm 5…57.6 Hz)IEC 60068-2-6<br>1 gn 57.6…150 Hz)IEC 60255-21-1 |
| **Shock Resistance** | 15 gn 11 ms IEC 60255-21-1 |
| **Ip Degree Of Protection** | IP20 IEC 60529 terminals)<br>IP30 IEC 60529 casing) |
| **Pollution Degree** | 3 IEC 60664-1 |
| **Dielectric Test Voltage** | 2 kV AC 50 Hz, 1 min IEC 60255-5<br>2 kV AC 50 Hz, 1 min IEC 60664-1 |
| **Non-Dissipating Shock Wave** | 4 kV IEC 60255-5<br>4 kV IEC 60664-1<br>4 kV IEC 61000-4-5 |

## Ordering and shipping details

| | |
|---|---|
| **Category** | US10CP222380 |
| **Discount Schedule** | 0CP2 |
| **Gtin** | 3389119405218 |
| **Returnability** | Yes |
| **Country Of Origin** | ID |

## Packing Units

| | |
|---|---|
| **Unit Type Of Package 1** | PCE |
| **Number Of Units In Package 1** | 1 |
| **Package 1 Height** | 1.77 in (4.500 cm) |
| **Package 1 Width** | 3.07 in (7.800 cm) |
| **Package 1 Length** | 3.74 in (9.500 cm) |
| **Package 1 Weight** | 4.87 oz (138.000 g) |
| **Unit Type Of Package 2** | S03 |
| **Number Of Units In Package 2** | 48 |
| **Package 2 Height** | 11.81 in (30.000 cm) |
| **Package 2 Width** | 11.81 in (30.000 cm) |
| **Package 2 Length** | 15.75 in (40.000 cm) |
| **Package 2 Weight** | 16.20 lb(US) (7.350 kg) |

## Contractual warranty

| | |
|---|---|
| **Warranty** | 18 months |

## Sustainability

**Green Premium$^{TM}$ label** is Schneider Electric's commitment to delivering products with best-in-class environmental performance. Green Premium promises compliance with the latest regulations, transparency on environmental impacts, as well as circular and low-$CO_2$ products.

**Guide to assessing product sustainability** is a white paper that clarifies global eco-label standards and how to interpret environmental declarations.

Learn more about Green Premium >

Guide to assess a product's sustainability >

Transparency

RoHS/REACh

## Well-being performance

| | |
|---|---|
| Mercury Free | |
| Rohs Exemption Information | Yes |

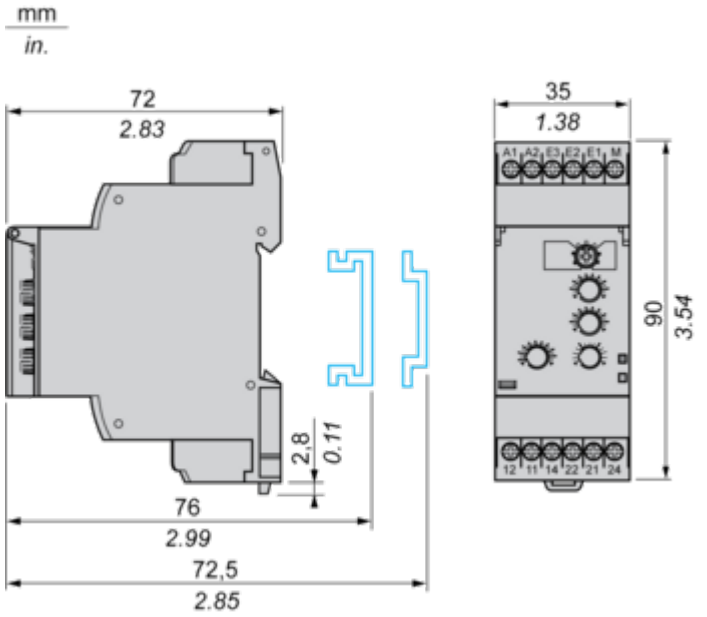
## Certifications & Standards

| | |
|---|---|
| **Reach Regulation** | REACh Declaration |
| **Eu Rohs Directive** | Pro-active compliance (Product out of EU RoHS legal scope) |
| **China Rohs Regulation** | China RoHS declaration |
| **Environmental Disclosure** | Product Environmental Profile |
| **Weee** | The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins. |
| **Circularity Profile** | End of Life Information |
| **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 www.P65Warnings.ca.gov |

Dimensions Drawings

## Current Control Relays

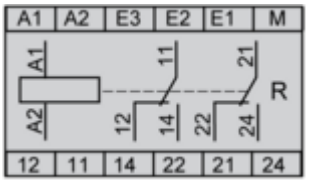
### Dimensions and Mounting



Connections and Schema

## Current Control Relays

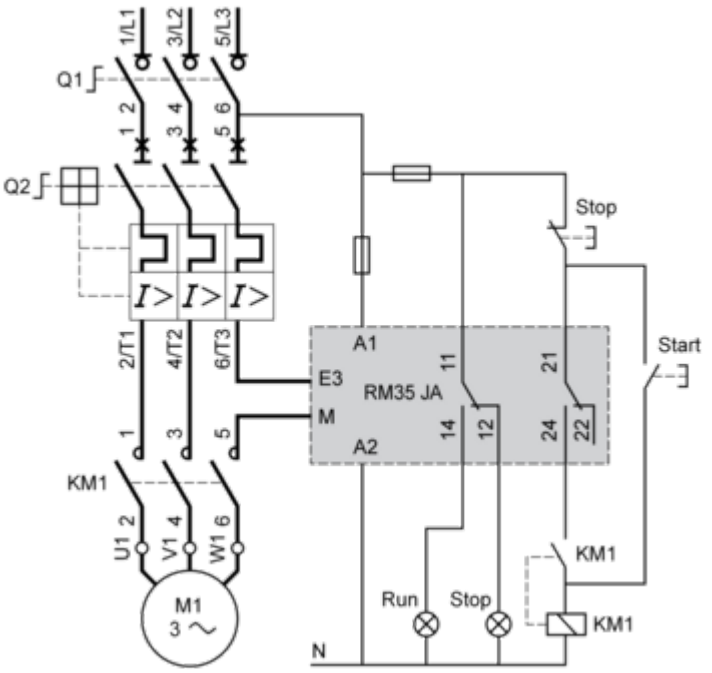
### Wiring Diagram



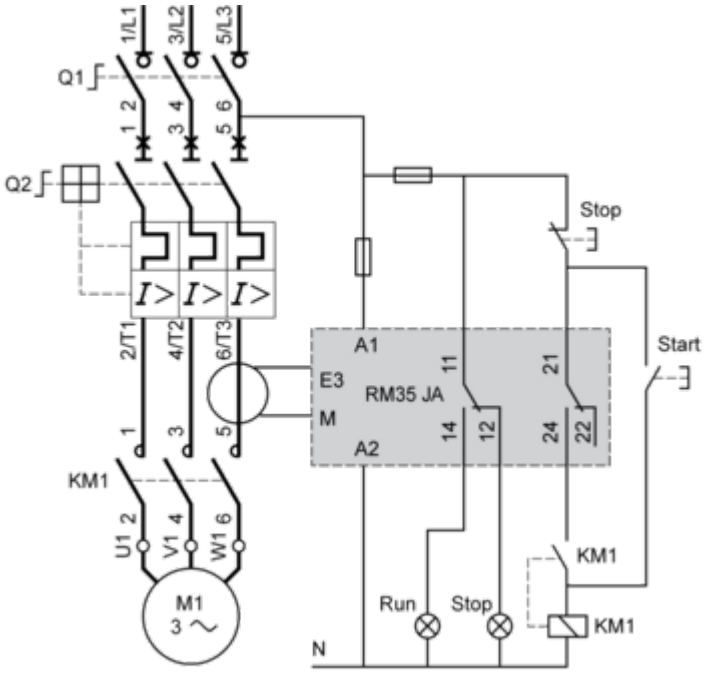
## Application Schemes

### Example: Detection of Jamming on a Crusher (Overcurrent Function)

Current measured ≤ 15 A




Current measured > 15 A

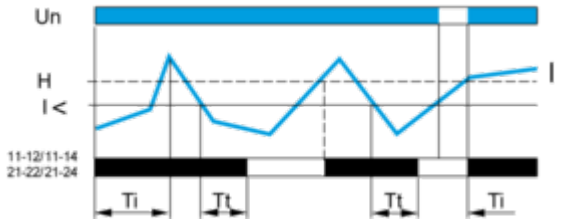


Technical Description

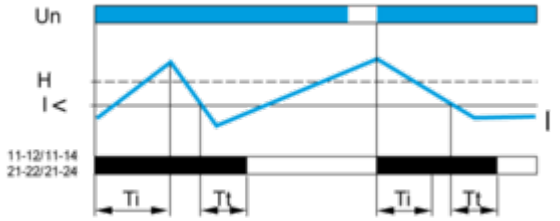
## Function Diagrams

### Undercurrent Detection

**Without memory ("No Memory" mode)**

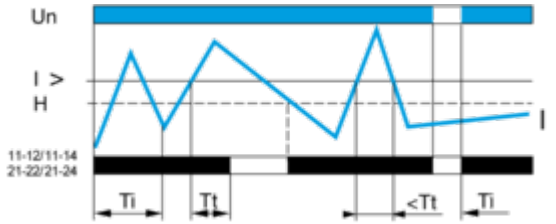



**With memory ("Memory" mode)**

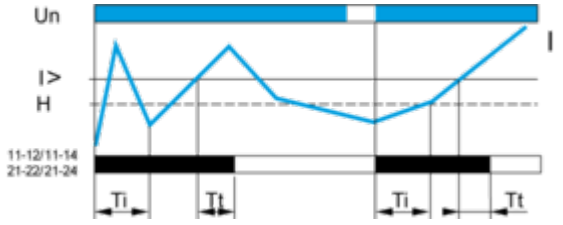



### Overcurrent Detection

**Without memory ("No Memory" mode)**




**With memory ("Memory" mode)**




### Legend

**Ti** Starting inhibition time delay
**Tt** Time delay after crossing of threshold
**Un** Supply voltage
**I** Monitored current
**H** Hysteresis
**I>** Overcurrent threshold
**I<** Undercurrent threshold
**11-12/11-14, 21-22/21-24** Output relay connections
**Relay status:** black color = energized.

**NOTE:** In "Memory" mode, the relay opens when crossing of the threshold is detected and then stays in that position. The power supply voltage must be switched off to reset the product.