



Main

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| Range of Product | Harmony Control Relays |
| Product or Component Type | Current control relay |
| Relay Type | Current control relay |
| Relay name | RM35JA |
| Relay monitored parameters | Overcurrent or undercurrent in window mode Overcurrent or undercurrent detection |
| Time delay | Adjustable 0.1...30 s, +/- 10 % of the full scale value on crossing the threshold Tt |
| Switching capacity in VA | 2000 VA |
| Minimum switching current | 10 mA 5 V DC |
| Maximum switching current | 8 A AC |
| Maximum power consumption in VA | 3.5 VA |
| Measurement range | 0.15...1.5 A E1-M terminals 0.5...5 A E2-M terminals 1.5...15 A E3-M terminals 150 mA...15 A current AC/DC 50/60 Hz |
| Utilisation category | AC-15 IEC 60947-5-1 DC-13 IEC 60947-5-1 AC-1 IEC 60947-4-1 DC-1 IEC 60947-4-1 |
| Contacts type and composition | 2 C/O |

Complementary

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|---|---|
| Reset time | 1500 ms at maximum voltage |
| Maximum switching voltage | 250 V AC |
| [Us] Rated Supply Voltage | 24...240 V AC/DC 50/60 Hz +/- 10 % |
| 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 | 0.005 Ohm E3-M terminals 0.015 Ohm E2-M terminals 0.05 Ohm E1-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 | 0.015 Ohm 0.005 Ohm 0.05 Ohm |
| Setting accuracy of the switching threshold | +/- 10 % of the full scale |
| Switching threshold drift | <= 0.05 % per degree centigrade depending permissible ambient air temperature <= 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 <= 1 % within the supply voltage range |

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| Hysteresis | 5...50 % adjustable threshold setting 3 % fixed full scale for window mode |
| Delay at power up | 0.3 s |
| Repeat accuracy | +/- 0.5 % input and measurement circuit +/- 2 % time delay |
| Measurement error | < 1 % over the whole range with voltage variation 0.05 %/°C with temperature variation |
| Response time | <= 500 ms (on crossing the threshold) |
| Threshold setting | 10...100 % |
| Overvoltage category | III IEC 60664-1 III UL 508 |
| Insulation resistance | > 100 MOhm 500 V DC IEC 60255-27 |
| Insulation | Between supply and measurement |
| Connections - terminals | Screw terminals, 2 x 0.5...2 x 2.5 mm ² AWG 20...AWG 14) solid without cable end Screw terminals, 2 x 0.2...2 x 1.5 mm ² AWG 24...AWG 16) flexible with cable end Screw terminals, 1 x 0.5...1 x 3.3 mm ² AWG 20...AWG 12) solid without cable end Screw terminals, 1 x 0.2...1 x 2.5 mm ² AWG 24...AWG 14) 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 relay ON LED (yellow) For power ON LED (green) |
| Mounting support | 35 mm DIN rail conforming to EN/IEC 60715 |
| Electrical durability | 100000 cycles |
| Mechanical durability | 10000000 cycles |
| Safety reliability data | MTTFd = 296.8 years B10d = 270000 |
| Contacts material | Cadmium free |
| Width | 1.38 in (35 mm) |
| Product Weight | 0.26 lb(US) (0.12 kg) |

Environment

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|---------------------------------------|---|
| Immunity to microbreaks | 50 ms |
| Electromagnetic compatibility | Immunity for residential, commercial and light-industrial environments EN/IEC 61000-6-1 Immunity for industrial environments EN/IEC 61000-6-2 Emission standard for industrial environments EN/IEC 61000-6-4 Electrostatic discharge 6 kV (contact discharge) level 3 IEC 61000-4-2 Electrostatic discharge 8 kV (air discharge) level 3 IEC 61000-4-2 Radiated radio-frequency electromagnetic field immunity test 10 V/m level 3 IEC 61000-4-3 Electrical fast transient/burst immunity test 4 kV (direct) level 4 IEC 61000-4-4 Electrical fast transient/burst immunity test 2 kV (capacitive coupling) level 4 IEC 61000-4-4 Surge immunity test 4 kV (common mode) level 4 IEC 61000-4-5 Surge immunity test 2 kV (differential mode) level 4 IEC 61000-4-5 Conducted and radiated emissions class B group 1 CISPR 11 Conducted and radiated emissions class B CISPR 22 Emission standard for residential, commercial and light-industrial environments (except radiated emission) EN/IEC 61000-6-3 |
| Standards | EN/IEC 60255-1 |
| Product Certifications | CE GL CCC EAC RCM UL CSA |
| Ambient Air Temperature for Storage | -40...158 °F (-40...70 °C) |
| Ambient air temperature for operation | -4...122 °F (-20...50 °C) 60 Hz -4...140 °F (-20...60 °C) 50 Hz |
| Environmental characteristic | 3K3 C |
| Relative humidity | 93...97 % 77...131 °F (25...55 °C) IEC 60068-2-30 |

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| Vibration resistance | 0.075 mm 10...58.1 Hz) not in operation IEC 60068-2-6 1 gn 10...58.1 Hz) not in operation IEC 60068-2-6 0.035 mm 58.1...150 Hz) in operation IEC 60068-2-6 0.5 gn 58.1...150 Hz) in operation IEC 60068-2-6 |
| Shock resistance | 15 gn 11 ms) not in operation IEC 60068-2-27 5 gn 11 ms) in operation IEC 60068-2-27 |
| IP degree of protection | IP20 IEC 60529 terminals) IP50 IEC 60529 front panel) IP30 IEC 60529 housing) |
| Pollution degree | 3 IEC 60664-1 3 UL 508 |
| Dielectric test voltage | 2.5 kV AC 50 Hz, 1 min IEC 60255-27 |

Ordering and shipping details

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|-------------------|--------------------------------------|
| Category | 22380-RELAYS-MEASUREMENT (RM17-RM35) |
| Discount Schedule | CP2 |
| GTIN | 3606480792304 |
| Returnability | Yes |
| Country of origin | ID |

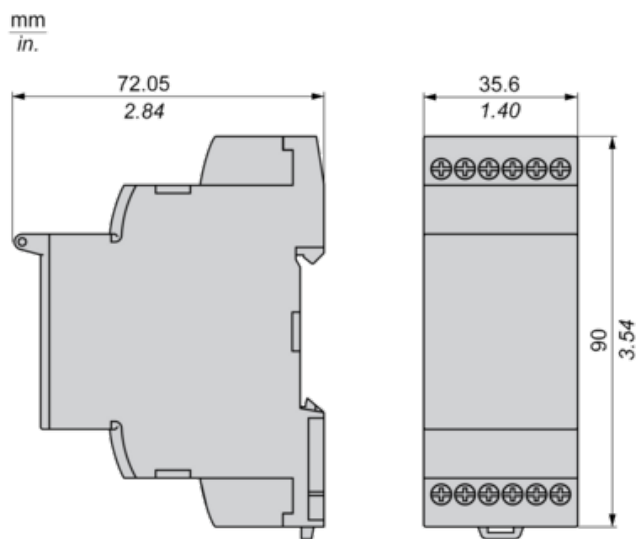
Packing Units

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|------------------------------|-------------------------|
| Unit Type of Package 1 | PCE |
| Number of Units in Package 1 | 1 |
| Package 1 Height | 3.07 in (7.8 cm) |
| Package 1 Width | 1.77 in (4.5 cm) |
| Package 1 Length | 3.74 in (9.5 cm) |
| Package 1 Weight | 4.62 oz (131 g) |
| Unit Type of Package 2 | S02 |
| Number of Units in Package 2 | 32 |
| Package 2 Height | 5.91 in (15 cm) |
| Package 2 Width | 11.81 in (30 cm) |
| Package 2 Length | 15.75 in (40 cm) |
| Package 2 Weight | 10.24 lb(US) (4.647 kg) |
| Package 3 Height | 19.69 in (50.0 cm) |

Offer Sustainability

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|----------------------------|---|
| 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 www.P65Warnings.ca.gov |
| REACH Regulation | REACH Declaration |
| EU RoHS Directive | Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration |
| Mercury free | Yes |
| China RoHS Regulation | China RoHS Declaration |
| RoHS exemption information | Yes |
| Environmental Disclosure | Product Environmental Profile |
| Circularity Profile | End Of Life Information |
| WEEE | The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins. |

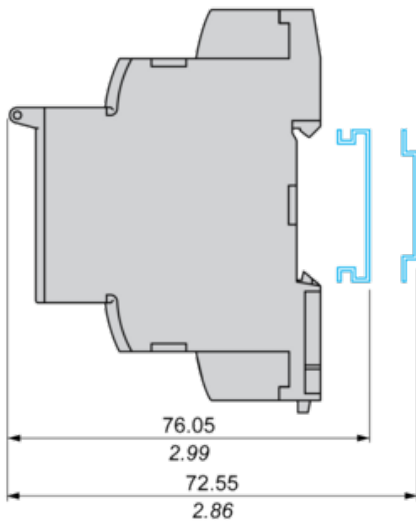
Dimensions



Mounting and Clearance

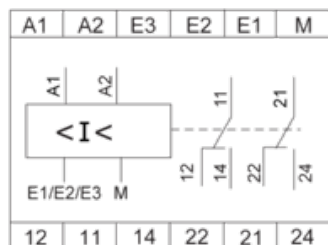
Rail Mounting

mm
in.



Current Measurement Relay

Wiring Diagram



A1,A2 : Supply voltage

E1,E2,E3,M : Currents to be measured

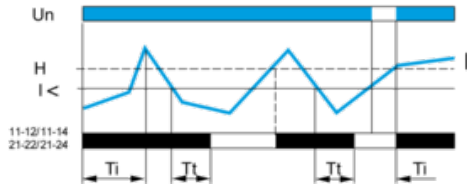
11-14,12 : 1st C/O contact of output relay

21-24,22 : 2nd C/O contact of output relay

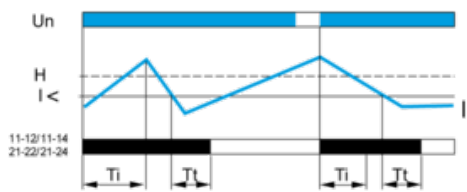
Function Diagrams

Undercurrent Detection

Without memory ("No Memory" mode)

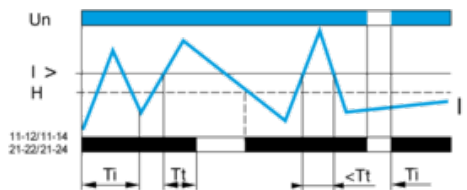


With memory ("Memory" mode)

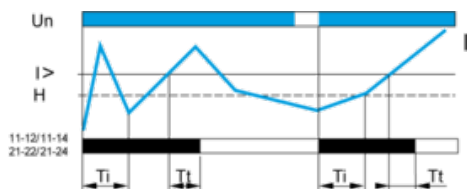


Overcurrent Detection

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.