

Product data sheet

Specifications



current control relay, Harmony Control Relays, 5A, 2CO, 0.15...15A, 24...240V AC DC

RM35JA32MR

Main

Range of product	Harmony Control Relays
Relay type	Current control relay
Product or component 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 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	150 mA...15 A AC/DC
Utilisation category	AC-15 conforming to IEC 60947-5-1 DC-13 conforming to IEC 60947-5-1 AC-1 conforming to IEC 60947-4-1 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	0.005 Ohm at E3-M terminals 0.015 Ohm at E2-M terminals 0.05 Ohm at 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
Hysteresis	5...50 % adjustable of threshold setting 3 % fixed of full scale for window mode
delay at power up	0.3 s
Repeat accuracy	+/- 0.5 % for input and measurement circuit +/- 2 % for 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 conforming to IEC 60664-1 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 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	0.6...1 N.m conforming to IEC 60947-1
Housing material	Self-extinguishing plastic
Local signalling	LED (yellow) for relay ON LED (green) for power ON
Mounting support	35 mm DIN rail conforming to IEC 60715
Electrical durability	100000 cycles
Mechanical durability	10000000 cycles
[Un] rated nominal voltage	24...240 V AC/DC 50/60 Hz, non self-powered
Safety reliability data	MTTFd = 296.8 years B10d = 270000
Contacts material	Cadmium free
Width	35 mm
Control type	With test button
Net weight	0.12 kg

Environment

Immunity to microbreaks	50 ms
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Electromagnetic compatibility	<p>Immunity for residential, commercial and light-industrial environments conforming to IEC 61000-6-1</p> <p>Immunity for industrial environments conforming to IEC 61000-6-2</p> <p>Emission standard for industrial environments conforming to IEC 61000-6-4</p> <p>Electrostatic discharge - test level: 6 kV level 3 (contact discharge) conforming to IEC 61000-4-2</p> <p>Electrostatic discharge - test level: 8 kV level 3 (air discharge) conforming to IEC 61000-4-2</p> <p>Radiated radio-frequency electromagnetic field immunity test - test level: 10 V/m level 3 conforming to IEC 61000-4-3</p> <p>Electrical fast transient/burst immunity test - test level: 4 kV level 4 (direct) conforming to IEC 61000-4-4</p> <p>Electrical fast transient/burst immunity test - test level: 2 kV level 4 (capacitive coupling) conforming to IEC 61000-4-4</p> <p>Surge immunity test - test level: 4 kV level 4 (common mode) conforming to IEC 61000-4-5</p> <p>Surge immunity test - test level: 2 kV level 4 (differential mode) conforming to IEC 61000-4-5</p> <p>Conducted and radiated emissions class B group 1 conforming to CISPR 11</p> <p>Conducted and radiated emissions class B conforming to CISPR 22</p> <p>Emission standard for residential, commercial and light-industrial environments (except radiated emission) conforming to IEC 61000-6-3</p>
Standards	IEC 60255-1
Product certifications	<p>CE</p> <p>GL</p> <p>CCC</p> <p>EAC</p> <p>RCM</p> <p>UL</p> <p>CSA</p>
Ambient air temperature for storage	-40...70 °C
Ambient air temperature for operation	<p>-20...50 °C at 60 Hz</p> <p>-20...60 °C at 50 Hz</p>
Environmental characteristic	3K3 C
Relative humidity	93...97 % at 25...55 °C conforming to IEC 60068-2-30
Vibration resistance	<p>0.075 mm (f= 10...58.1 Hz) not in operation conforming to IEC 60068-2-6</p> <p>1 gn (f= 10...58.1 Hz) not in operation conforming to IEC 60068-2-6</p> <p>0.035 mm (f= 58.1...150 Hz) in operation conforming to IEC 60068-2-6</p> <p>0.5 gn (f= 58.1...150 Hz) in operation conforming to IEC 60068-2-6</p>
Shock resistance	<p>15 gn (duration = 11 ms) for not in operation conforming to IEC 60068-2-27</p> <p>5 gn (duration = 11 ms) for in operation conforming to IEC 60068-2-27</p>
IP degree of protection	<p>IP20 (terminals) conforming to IEC 60529</p> <p>IP50 (front panel) conforming to IEC 60529</p> <p>IP30 (housing) conforming to IEC 60529</p>
Pollution degree	<p>3 conforming to IEC 60664-1</p> <p>3 conforming to UL 508</p>
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	7.800 cm
Package 1 Width	4.500 cm
Package 1 Length	9.500 cm
Package 1 Weight	140.000 g
Unit Type of Package 2	S02
Number of Units in Package 2	32
Package 2 Height	15.000 cm

Package 2 Width	30.000 cm
Package 2 Length	40.000 cm
Package 2 Weight	4.743 kg
Unit Type of Package 3	P06
Number of Units in Package 3	512
Package 3 Height	75.000 cm
Package 3 Width	60.000 cm
Package 3 Length	80.000 cm
Package 3 Weight	84.388 kg

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

Carbon footprint (kg.eq.CO2 per CR, Total Life cycle) 44

Environmental Disclosure [Product Environmental Profile](#)

Use Better

Materials and Substances

[EU RoHS Directive](#) Pro-active compliance (Product out of EU RoHS legal scope)

REACH Regulation [REACH Declaration](#)

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

Use Again

Repack and remanufacture

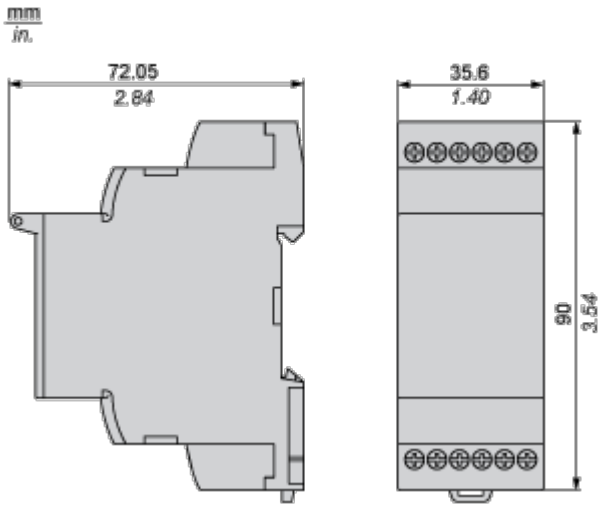
Circularity Profile [End of Life Information](#)

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

Take-back No

Dimensions Drawings

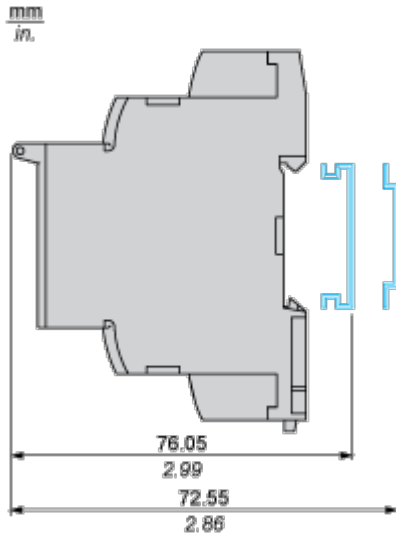
Dimensions



Mounting and Clearance

Mounting and Clearance

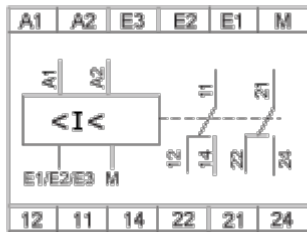
Rail Mounting



Connections and Schema

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

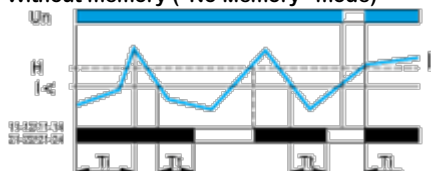
21-24,22 : 2nd C/O contact of output relay

Technical Description

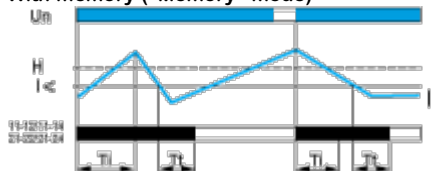
Function Diagrams

Undercurrent Detection

Without memory ("No Memory" mode)

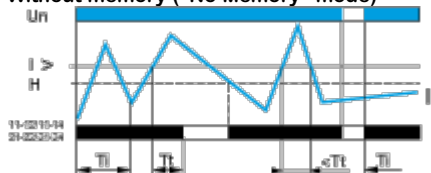


With memory ("Memory" mode)

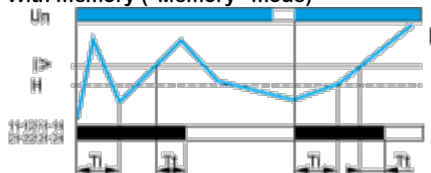


Overcurrent Detection

Without memory ("No Memory" mode)



With memory ("Memory" mode)



Legend

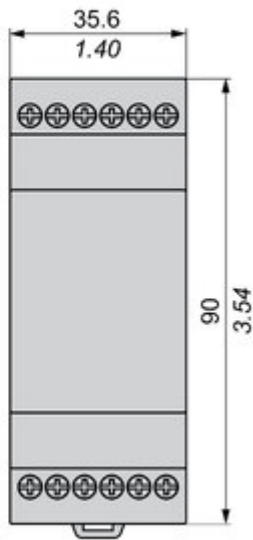
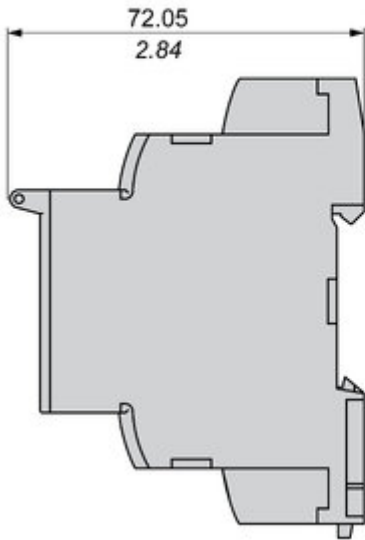
- Ti Starting inhibition time delay
- Tt Time delay after crossing of threshold
- Un Supply voltage
- I Monitored current
- H Hysteresis
- I> Overcurrent threshold
- I< Undercurrent threshold
- 11-12/11-14, 21-22/21-24 Output relay connections
- Relay status: black color = energized.

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.

Technical Illustration

Dimensions

mm
in.



Offer Marketing Illustration

Product benefits / Features

Features

Harmony Control Relay



 Wide monitoring parameters (phase, current, voltage, liquid level, frequency, speed, temperature, and pump control) to meet your application needs.

 Experience unprecedented accuracy, predictive maintenance, and superior security.

 True RMS measurement that minimizes the possibility of unexpected trips from highly polluted networks (except RM17TG and RM22TG)

 Green Premium labelled products, promising compliance with the latest regulations, transparency on environmental impacts, as well as circular and low-CO₂ product

 Compatible with a wide range of applications, such as hoisting, packaging, lifts, textile, pumping, and water.

Offer Marketing Illustration

Product benefits / Features

Technical Benefits

Harmony Control Relay

Compliant with IEC 60255-1 standard, and a wide array of product certifications such as UL, CE, CSA, EAC.

Different product width to meet your needs:
17.5 mm/0.69 in.,
22.5 mm/0.88 in.,
35 mm/1.38 in.

Diagnostic button to check downstream circuit immediately, shorten the commission and troubleshooting time

Dust and unintended human intervention avoided thanks to the IP50 lead-sealable settings protection cover.

A Dial-Pointer LED indicator that enhances ease of operation in difficult environments such as dusty or low-light conditions



Image of product / Alternate images

Alternative



