Product data sheet

Specifications

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

RM35JA31MW

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 0.3...30 s, 0 + 10 % Tt- time delay upon fault Adjustable 1...20 s, 0 + 10 % Ti- inhibition time delay upon startup
Switching Capacity In Va	1250 VA
Minimum Switching Current	10 mA at 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 conforming to IEC 60947-5-1 AC-13 conforming to IEC 60947-5-1 AC-14 conforming to IEC 60947-5-1 AC-15 conforming to IEC 60947-5-1 DC-12 conforming to IEC 60947-5-1 DC-13 conforming to IEC 60947-5-1 DC-14 conforming to 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 at E2-M terminals 5 Ohm at E1-M terminals 0.2 Ohm at 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 % of threshold setting

Delay At Power Up	0.3 s
Measurement Accuracy	+/- 10 % of the full scale value
Repeat Accuracy	+/- 0.5 % for input and measurement circuit +/- 2 % for time delay
Measurement Error	0.05 %/°C with temperature variation 1 by volt over the whole range with voltage variation
Polarity	No DC
Threshold Setting	10...100 %
Marking	CE : EMC 89/336/EEC CE : 73/23/EEC
Overvoltage Category	III conforming to IEC 60664-1
Insulation Resistance	> 500 MOhm at 500 V DC between supply and relay output conforming to IEC 60255-5 > 500 MOhm at 500 V DC between measurement and relay output conforming to IEC 60664-1 > 1 MOhm at 500 V DC between supply and measurement conforming to IEC 60255-5 > 500 MOhm at 500 V DC between supply and relay output conforming to IEC 60664-1 > 500 MOhm at 500 V DC between measurement and relay output conforming to IEC 60255-5 > 1 MOhm at 500 V DC between supply and measurement conforming to IEC 60664-1
[Ui] Rated Insulation Voltage	250 V conforming to 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 Screw terminals, 2 x 0.5...2 x 2.5 mm² (AWG 20...AWG 14) solid without cable end Screw terminals, 1 x 0.2...1 x 2.5 mm² (AWG 24...AWG 12) flexible with cable end Screw terminals, 2 x 0.2...2 x 1.5 mm² (AWG 24...AWG 16) flexible with cable end
Tightening Torque	0.6…1 N.m conforming to IEC 60947-1
Housing Material	Self-extinguishing plastic
Local Signalling	LED (green) for power ON LED (yellow) for relay ON
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 B10d = 270000
Contacts Material	Cadmium free
Width	35 mm
Control Type	Without test button
Net Weight	0.13 kg

Environment

Immunity To Microbreaks	50 ms
Electromagnetic Compatibility	Emission standard for industrial environments conforming to IEC 61000-6-4 Emission standard for residential, commercial and light-industrial environments conforming to IEC 61000-6-3 Immunity for industrial environments conforming to NF EN/IEC 61000-6-2
Standards	IEC 60255-6

Product Certifications	GL CSA GOST UL C-Tick
Ambient Air Temperature For Storage	-40…70 °C
Ambient Air Temperature For Operation	-20…50 °C
Relative Humidity	95 % at 55 °C conforming to IEC 60068-2-30
Vibration Resistance	0.35 mm (f= 5…57.6 Hz) conforming to IEC 60068-2-6 1 gn (f= 57.6…150 Hz) conforming to IEC 60255-21-1
Shock Resistance	15 gn for 11 ms conforming to IEC 60255-21-1
Ip Degree Of Protection	IP20 (terminals) conforming to IEC 60529 IP30 (casing) conforming to IEC 60529
Pollution Degree	3 conforming to IEC 60664-1
Dielectric Test Voltage	2 kV, 1 min AC 50 Hz conforming to IEC 60255-5 2 kV, 1 min AC 50 Hz conforming to IEC 60664-1
Non-Dissipating Shock Wave	4 kV conforming to IEC 60255-5 4 kV conforming to IEC 60664-1 4 kV conforming to IEC 61000-4-5

Packing Units

Unit Type Of Package 1	PCE
Number Of Units In Package 1	1
Package 1 Height	4.500 cm
Package 1 Width	7.800 cm
Package 1 Length	9.500 cm
Package 1 Weight	138.000 g
Unit Type Of Package 2	S03
Number Of Units In Package 2	48
Package 2 Height	30.000 cm
Package 2 Width	30.000 cm
Package 2 Length	40.000 cm
Package 2 Weight	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

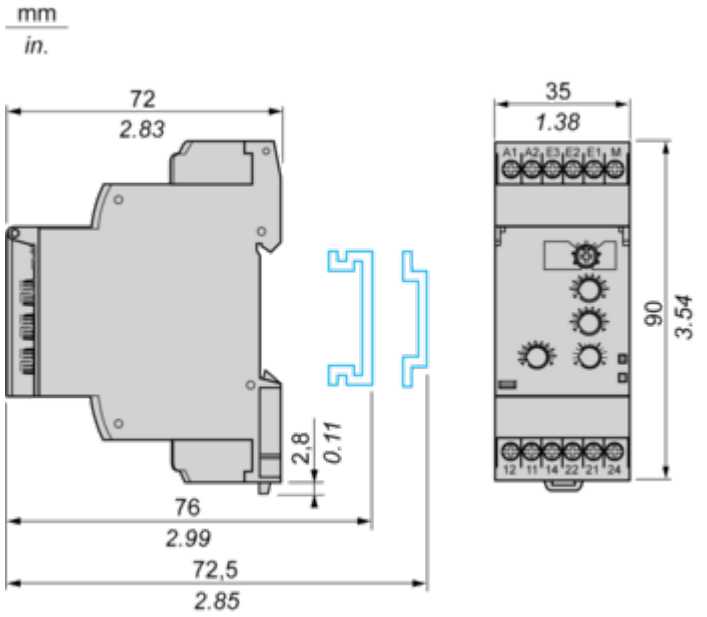
Certifications & Standards

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

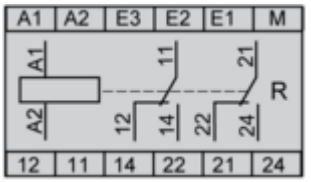
Dimensions and Mounting



Connections and Schema

Current Control Relays

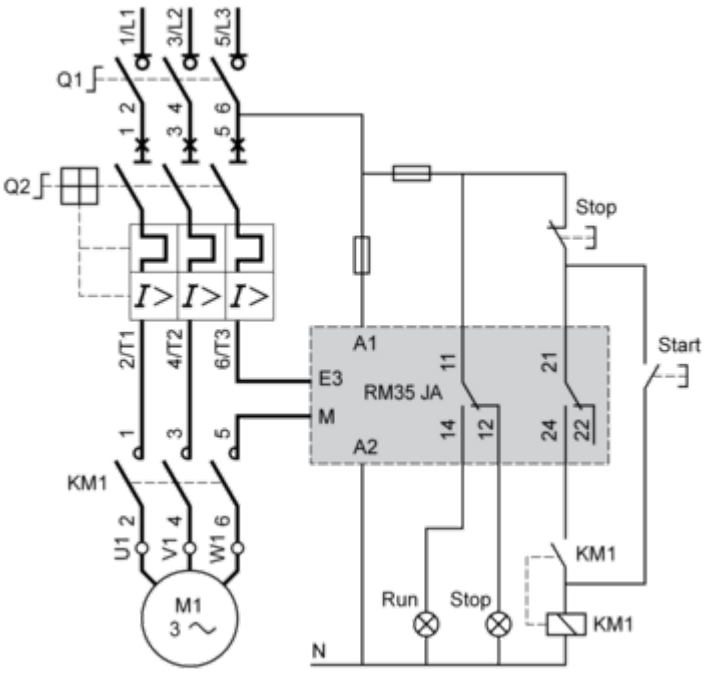
Wiring Diagram



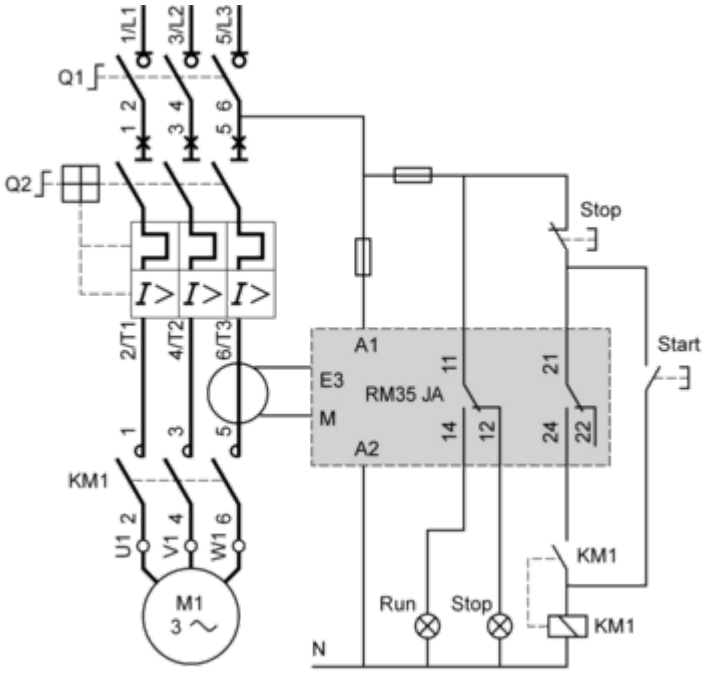
Application Schemes

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

Current measured ≤ 15 A



Current measured > 15 A

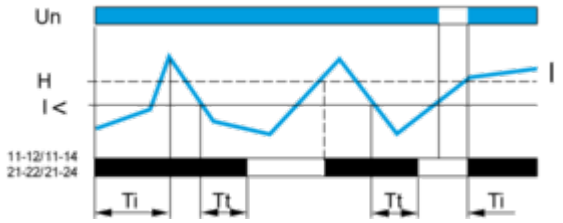


Technical Description

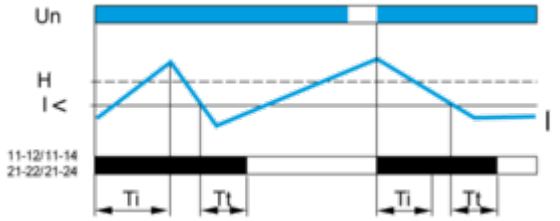
Function Diagrams

Undercurrent Detection

Without memory ("No Memory" mode)

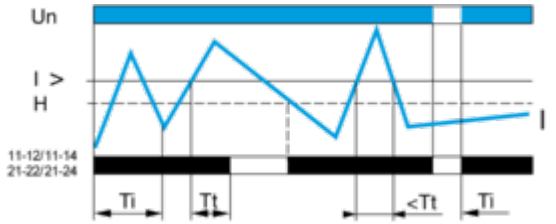


With memory ("Memory" mode)

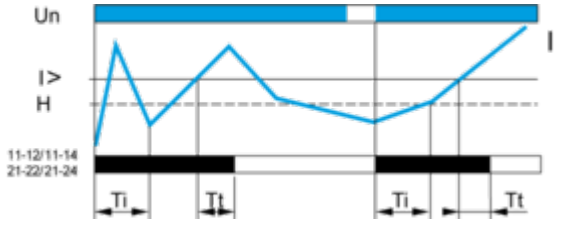


Overcurrent Detection

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.