

RM35UA12MW

Harmony, Modular 1-phase voltage control relay, 5 A, 2 CO, range 1..100 V, 24..240 V AC/DC



Main

Range of product	Harmony Control Relays
Product or component type	Voltage control relay
Relay type	Multifunction voltage control relay
Relay name	RM35UA
Relay monitored parameters	Overvoltage or undervoltage detection
Time delay	Adjustable 0.3...30 s, 0 + 10 % on crossing the threshold
Switching capacity in VA	1250 VA
Minimum switching current	10 mA at 5 V DC
Maximum switching current	5 A AC/DC
Power consumption in VA	0...3.5 VA AC
Measurement range	1...100 V voltage
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/DC
[Us] rated supply voltage	24...240 V AC/DC 50/60 Hz +/- 10 %
Supply voltage limits	20.4...264 V AC/DC
Maximum power consumption in W	0.6 W DC
Immunity to microbreaks	10 ms
Control circuit frequency	40...70 Hz +/- 10 %
Resistance across terminals	110 MOhm at E2-M terminals 22 MOhm at E1-M terminals 220 mOhm 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	600 ms
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 % over the whole range with voltage variation
Polarity	Non reversible polarity on DC supply

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Sensitivity scale	1...10 V E1-M terminals 10...100 V E3-M terminals 5...50 V E2-M terminals
Threshold setting	10...100 %
Quality labels	CE
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 60664-1 600 V conforming to IEC 60664-1
Operating voltage tolerance	- 15 % + 10 % Un
Operating position	Any position without derating
Connections - terminals	Screw terminals, 1 x 0.5...1 x 4 mm ² (AWG 20...AWG 11) solid without cable end Screw terminals, 2 x 0.5...2 x 2.5 mm ² (AWG 20...AWG 14) solid without cable end Screw terminals, 1 x 0.2...2 x 2.5 mm ² (AWG 24...AWG 12) flexible with cable end Screw terminals, 2 x 0.2...2 x 1.5 mm ² (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 EN/IEC 60715
Electrical durability	100000 cycles
Mechanical durability	30000000 cycles
Operating rate	≤ 360 operations/hour full load
Safety reliability data	B10d = 290000 MTTFd = 308.2 years
Width	35 mm
Net weight	0.08 kg
Compatibility code	RM3

Environment

Electromagnetic compatibility	Emission standard for industrial environments conforming to EN/IEC 61000-6-4 Emission standard for residential, commercial and light-industrial environments conforming to EN/IEC 61000-6-3 Immunity for industrial environments conforming to NF EN/IEC 61000-6-2
Standards	EN/IEC 60255-6
Product certifications	GOST C-Tick UL GL CSA
Directives	73/23/EEC - low voltage directive 89/336/EEC - electromagnetic compatibility
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	5 gn conforming to IEC 60068-2-27
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 Weight	137 g
Package 1 Height	4.5 cm
Package 1 width	7.8 cm
Package 1 Length	9.5 cm
Unit Type of Package 2	S03
Number of Units in Package 2	48
Package 2 Weight	7.2 kg
Package 2 Height	30 cm
Package 2 width	30 cm
Package 2 Length	40 cm

Offer Sustainability

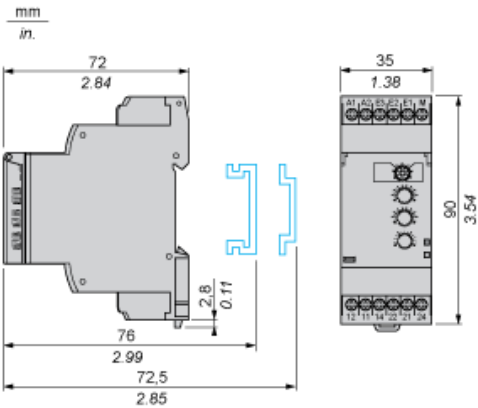
Sustainable offer status	Green Premium product
REACH Regulation	REACH Declaration
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration
Mercury free	Yes
RoHS exemption information	Yes
China RoHS Regulation	China RoHS Declaration
Environmental Disclosure	Product 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

Contractual warranty

Warranty	18 months
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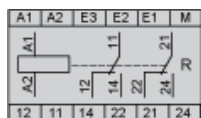
Multifunction Voltage Control Relays

Dimensions and Mounting



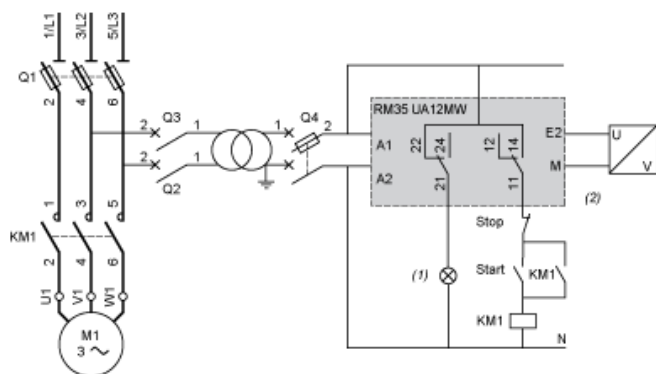
Multifunction Voltage Control Relays

Wiring Diagram



Application Scheme

Example: Overspeed Monitoring (Undervoltage Function)

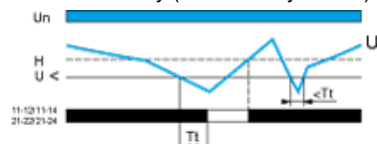


- (1) Overspeed
- (2) Tachogenerator

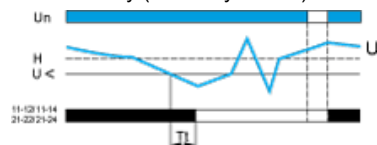
Function Diagrams

Undervoltage Control

Without memory ("No Memory" mode)



With memory ("Memory" mode)

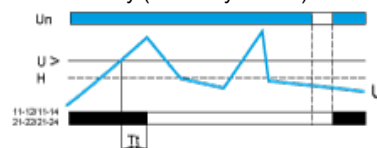


Overvoltage Control

Without memory ("No Memory" mode)



With memory ("Memory" mode)



Legend

Tt Time delay after crossing of threshold

Un Nominal supply voltage

U Monitored supply voltage

H Hysteresis

U> Overvoltage threshold

U< Undervoltage 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.