

# Product datasheet

Specifications



## Modular 3-phase voltage control relay, 5 A, 2 CO, 220...480 V AC

Local distributor code: 389835035 RM35UB330

### Main

Range of product	Harmony Control Relays
Product or component type	Voltage control relay
Relay type	Voltage control relay
Product specific application	For 3-phase supply
Relay name	RM35UB3
Relay monitored parameters	Overvoltage and undervoltage between phases
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...22 VA at 400 V AC 50 Hz
Measurement range	194...528 V voltage AC 50/60 Hz
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	220...480 V AC 50/60 Hz +/- 10 %
Supply voltage limits	194...528 V AC
Voltage detection threshold	194 V
Control circuit frequency	50...60 Hz +/- 15 %
Output contacts	1 C/O + 1 C/O, 1 per threshold
Nominal output current	5 A
Maximum measuring cycle	150 ms measurement cycle as true rms value
Hysteresis	2 %

<b>Delay at power up</b>	650 ms
<b>Measurement accuracy</b>	+/- 10 % of the full scale value
<b>Repeat accuracy</b>	+/- 0.5 % for input and measurement circuit +/- 1 % for time delay
<b>Measurement error</b>	< 1 % over the whole range with voltage variation 0.05 %/°C with temperature variation
<b>Response time</b>	< 200 ms (in the event of a fault)
<b>Quality labels</b>	CE
<b>Overvoltage category</b>	III conforming to IEC 60664-1
<b>Insulation resistance</b>	> 500 MOhm at 500 V DC conforming to IEC 60255-5 > 500 MOhm at 500 V DC conforming to IEC 60664-1
<b>[Ui] rated insulation voltage</b>	400 V conforming to IEC 60664-1
<b>Operating position</b>	Any position without derating
<b>Connections - terminals</b>	Screw terminals, 1 x 0.5...1 x 4 mm <sup>2</sup> (AWG 20...AWG 11) solid without cable end Screw terminals, 2 x 0.5...2 x 2.5 mm <sup>2</sup> (AWG 20...AWG 14) solid without cable end Screw terminals, 1 x 0.2...2 x 2.5 mm <sup>2</sup> (AWG 24...AWG 12) flexible with cable end Screw terminals, 2 x 0.2...2 x 1.5 mm <sup>2</sup> (AWG 24...AWG 16) flexible with cable end
<b>Tightening torque</b>	0.6...1 N.m conforming to IEC 60947-1
<b>Housing material</b>	Self-extinguishing plastic
<b>Local signalling</b>	LED (green) for power ON LED (yellow) for relay ON
<b>Mounting support</b>	35 mm symmetrical DIN rail conforming to EN/IEC 60715
<b>Electrical durability</b>	10000 cycles
<b>Mechanical durability</b>	30000000 cycles
<b>Operating rate</b>	<= 360 operations/hour full load
<b>Safety reliability data</b>	B10d = 300000 MTTFd = 319.6 years
<b>Width</b>	35 mm
<b>Net weight</b>	0.08 kg
<b>Functionality</b>	Overvoltage and undervoltage detection
<b>Compatibility code</b>	RM3

## Environment

<b>Electromagnetic compatibility</b>	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
<b>Standards</b>	EN/IEC 60255-1
<b>Product certifications</b>	C-Tick GOST CSA GL UL
<b>Directives</b>	73/23/EEC - low voltage directive 89/336/EEC - electromagnetic compatibility
<b>Ambient air temperature for storage</b>	-40...70 °C
<b>Ambient air temperature for operation</b>	-20...50 °C
<b>Relative humidity</b>	95 % at 55 °C conforming to IEC 60068-2-30
<b>Vibration resistance</b>	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
<b>Shock resistance</b>	5 gn conforming to IEC 60068-2-27
<b>IP degree of protection</b>	IP20 (terminals) conforming to IEC 60529

IP30 (casing) conforming to IEC 60529

<b>Pollution degree</b>	3 conforming to IEC 60664-1
<b>Dielectric test voltage</b>	2 kV, 1 min AC 50 Hz
<b>Non-dissipating shock wave</b>	4 kV

## Packing Units

<b>Unit Type of Package 1</b>	PCE
<b>Number of Units in Package 1</b>	1
<b>Package 1 Weight</b>	126.0 g
<b>Package 1 Height</b>	4.5 cm
<b>Package 1 width</b>	7.8 cm
<b>Package 1 Length</b>	9.7 cm
<b>Unit Type of Package 2</b>	S03
<b>Number of Units in Package 2</b>	48
<b>Package 2 Weight</b>	6.649 kg
<b>Package 2 Height</b>	30 cm
<b>Package 2 width</b>	30 cm
<b>Package 2 Length</b>	40 cm

## Offer Sustainability

<b>Sustainable offer status</b>	Green Premium product
<b>REACH Regulation</b>	<a href="#">REACH Declaration</a>
<b>EU RoHS Directive</b>	Pro-active compliance (Product out of EU RoHS legal scope) <a href="#">EU RoHS Declaration</a>
<b>Mercury free</b>	Yes
<b>RoHS exemption information</b>	<a href="#">Yes</a>
<b>China RoHS Regulation</b>	<a href="#">China RoHS declaration</a>
<b>Environmental Disclosure</b>	<a href="#">Product Environmental Profile</a>
<b>Circularity Profile</b>	<a href="#">End of Life Information</a>

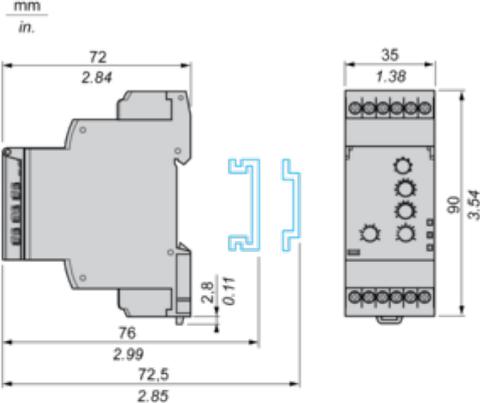
## Contractual warranty

<b>Warranty</b>	18 months
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**3-Phase Voltage Control Relays**

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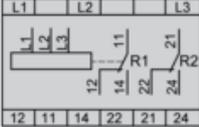
**Dimensions and Mounting**



**3-Phase Voltage Control Relays**

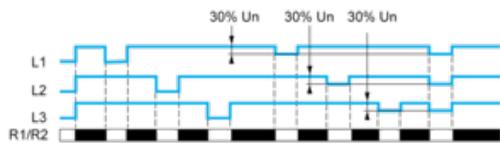
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**Wiring Diagram**

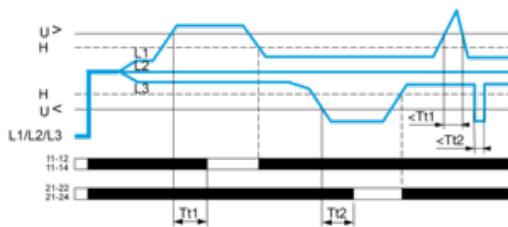


**Function Diagrams**

**Phase Failure Detection (U measured < 0.7 x nominal supply voltage)**



**Control of Overvoltage and Undervoltage**



**Legend**

- Un Nominal supply voltage
- Tt1 Overvoltage threshold delay (adjustable on front panel from 0.3 s to 30 s)
- Tt2 Undervoltage threshold delay (adjustable on front panel 0.3 s to 30 s)
- H Hysteresis
- U> Overvoltage threshold
- U< Undervoltage threshold
- L1, L2, L3 Phases of the supply voltage monitored
- 11-12, 11-14 R1 output relay connections (refer to Connections and Schema)
- 21-22, 21-24 R2 output relay connections (refer to Connections and Schema)
- Relay status: black color = energized.