

# Product datasheet

Specifications



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

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 %

Delay at power up	650 ms
Measurement accuracy	+/- 10 % of the full scale value
Repeat accuracy	+/- 0.5 % for input and measurement circuit +/- 1 % for time delay
Measurement error	< 1 % over the whole range with voltage variation 0.05 %/°C with temperature variation
Response time	< 200 ms (in the event of a fault)
Quality labels	CE
Overvoltage category	III conforming to IEC 60664-1
Insulation resistance	> 500 MOhm at 500 V DC conforming to IEC 60255-5 > 500 MOhm at 500 V DC conforming to IEC 60664-1
[Ui] rated insulation voltage	400 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...2 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	10000 cycles
Mechanical durability	30000000 cycles
Operating rate	<= 360 operations/hour full load
Safety reliability data	B10d = 300000 MTTFd = 319.6 years
Width	35 mm
Net weight	0.08 kg
Functionality	Overvoltage and undervoltage detection
Compatibility code	RM3
<b>Environment</b>	
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 60255-1
Product certifications	C-Tick GOST CSA GL UL
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
Non-dissipating shock wave	4 kV

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	9.700 cm
Package 1 Weight	133.000 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	6.649 kg

Offer Sustainability

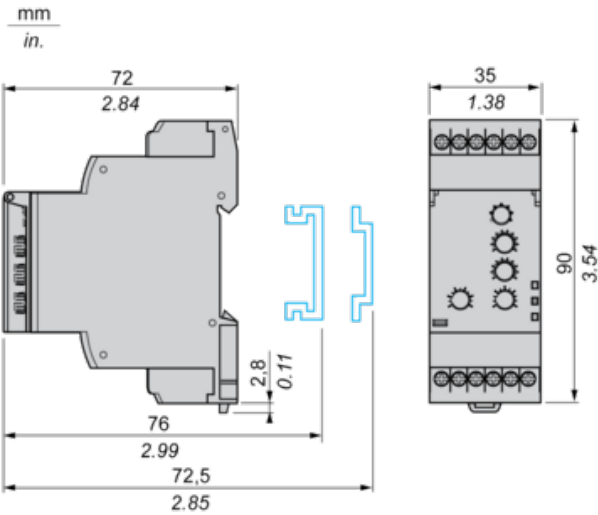
Sustainable offer status	Green Premium product
REACH Regulation	<a href="#">REACH Declaration</a>
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) <a href="#">EU RoHS Declaration</a>
Mercury free	Yes
China RoHS Regulation	<a href="#">China RoHS declaration</a>
RoHS exemption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

Contractual warranty

Warranty	18 months
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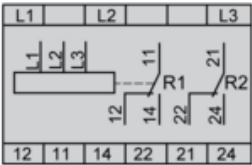
3-Phase Voltage Control Relays

Dimensions and Mounting



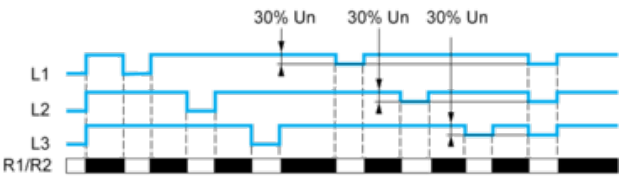
3-Phase Voltage Control Relays

Wiring Diagram

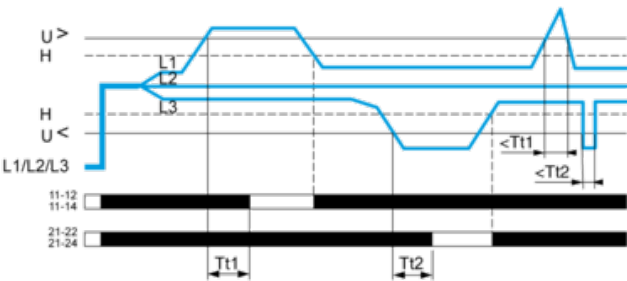


Function Diagrams

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



Control of Overvoltage and Undervoltage



Legend

- $U_n$  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.

Recommended replacement(s)