

RM35UB330

voltage control relay RM35-U - range 194..528 V AC



Main

Range of product	Zelio Control
Product or component type	Modular measurement and control relays
Relay type	Voltage control relay
Product specific application	For 3-phase supply
Relay name	RM35UB3
Relay monitored parameters	Absence of neutral Overvoltage and undervoltage between neutral 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	<= 22 VA 400 V AC 50 Hz
Measurement range	194...528 V voltage AC 50/60 Hz
Utilisation category	DC-14 conforming to IEC 60947-5-1 DC-13 conforming to IEC 60947-5-1 DC-12 conforming to IEC 60947-5-1 AC-15 conforming to IEC 60947-5-1 AC-14 conforming to IEC 60947-5-1 AC-13 conforming to IEC 60947-5-1 AC-12 conforming to IEC 60947-5-1

Complementary

Reset time	1500 ms for time delay
Maximum switching voltage	250 V AC/DC
[Us] rated supply voltage	220...480 V AC
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
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	+/- 1 % for time delay +/- 0.5 % for input and measurement circuit
Measurement error	0.05 %/°C with temperature variation < 1 % over the whole range with voltage variation
Response time	< 200 ms in the event of a fault
Marking	CE : 73/23/EEC CE : EMC 89/336/EEC
Overvoltage category	III conforming to IEC 60664-1
Insulation resistance	> 500 MOhm at 500 V DC conforming to IEC 60664-1 > 500 MOhm at 500 V DC conforming to IEC 60255-5
[Ui] rated insulation voltage	400 V conforming to IEC 60664-1

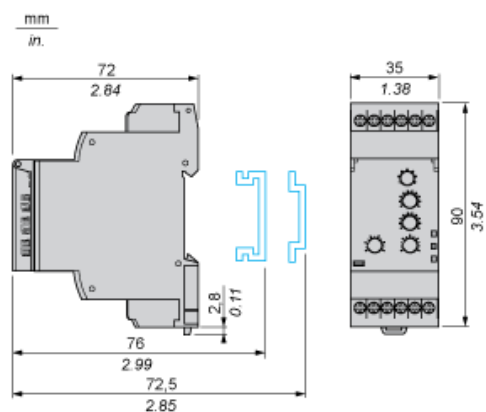
Supply frequency	50/60 Hz +/- 10 %
Operating position	Any position without derating
Connections - terminals	Screw terminals 2 x 0.2...2 x 1.5 mm ² - AWG 24...AWG 16, flexible cable with cable end Screw terminals 1 x 0.2...2 x 2.5 mm ² - AWG 24...AWG 12, flexible cable with cable end Screw terminals 2 x 0.5...2 x 2.5 mm ² - AWG 20...AWG 14, solid cable without cable end Screw terminals 1 x 0.5...1 x 4 mm ² - AWG 20...AWG 11, solid cable without cable end
Tightening torque	0.6...1 N.m conforming to IEC 60947-1
Housing material	Self-extinguishing plastic
Status LED	1 LED yellow for relay ON 1 LED green for power ON
Mounting support	35 mm symmetrical DIN rail conforming to EN/IEC 60715
Electrical durability	10000 cycles
Mechanical durability	<= 30000000 cycles
Operating rate	<= 360 operations/hour under full load
Width	35 mm
Product weight	0.08 kg

Environment

Electromagnetic compatibility	Immunity for industrial environments conforming to NF EN/IEC 61000-6-2 Emission standard for residential, commercial and light-industrial environments conforming to EN/IEC 61000-6-3 Emission standard for industrial environments conforming to EN/IEC 61000-6-4
Standards	EN/IEC 60255-1
Product certifications	CSA C-Tick GL GOST UL
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	1 gn (f = 57.6...150 Hz) conforming to IEC 60068-2-6/IEC 60255-21-1 0.35 mm (f = 5...57.6 Hz) conforming to IEC 60068-2-6/IEC 60255-21-1
Shock resistance	5 gn conforming to IEC 60068-2-27
IP degree of protection	IP30 (casing) conforming to IEC 60529 IP20 (terminals) conforming to IEC 60529
Pollution degree	3 conforming to IEC 60664-1
Dielectric test voltage	2 kV AC 50 Hz, 1 min
Non-dissipating shock wave	4 kV

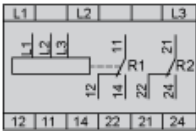
3-Phase Voltage Control Relays

Dimensions and Mounting



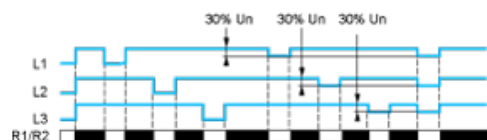
3-Phase Voltage Control Relays

Wiring Diagram



Function Diagrams

Phase Failure Detection ($U \text{ measured} < 0.7 \times \text{nominal supply voltage}$)



U_n Nominal supply voltage

L1, Phases of the supply voltage monitored

L2,

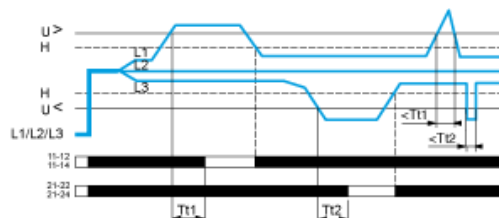
L3

R1/ Output relays connections (refer to Connections and Schema)

R2

Relay status: black color = energized.

Control of Overvoltage and Undervoltage



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, Phases of the supply voltage monitored

L2,

L3

11-12R1 output relay connections (refer to Connections and Schema)

11-14

21-22R2 output relay connections (refer to Connections and Schema)

21-24

Relay status: black color = energized.

The overvoltage and undervoltage thresholds are adjustable from 2...20% of U_n (nominal supply voltage):

U_n Phase/phase		208 V	220 V	380, 400, 415, 440 V	480 V
Voltage threshold (%)	>	-	+ 2...+ 20	+ 2...+ 20	+ 2...+ 10
	<	-	- 12...- 2	- 20...- 2	- 20...- 2

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