Product data sheet
Characteristics

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	<= 2.9 VA AC
Measurement range	194...528 V voltage AC 50/60 Hz
Electrical connection	1 conductor cable 0.2...2.5 mm² AWG24...AWG12 flexible cablewith cable end conforming to IEC 60947-1 1 conductor cable 0.5...4 mm² AWG20...AWG11 solid cablewithout cable end conforming to IEC 60947-1 2 conductors cable 0.2...1.5 mm² AWG24...AWG16 flexible cablewith cable end conforming to IEC 60947-1 2 conductors cable 0.5...2.5 mm² AWG20...AWG14 solid cablewithout cable end conforming to IEC 60947-1
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

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	0.5 s
Measurement accuracy	+/- 10 % of the full scale value

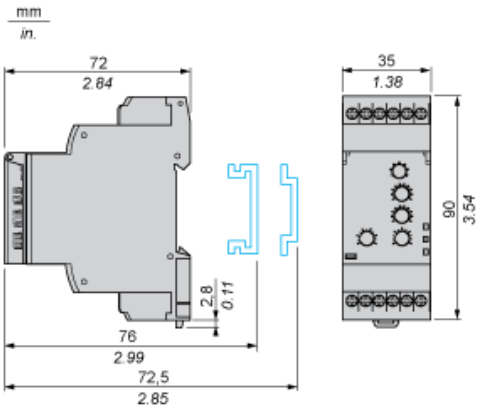
Repeat accuracy	+/- 0.5 % for input and measurement circuit +/- 1 % for time delay
Measurement error	< 1 % over the whole range with voltage variation 0.05 %/°C with temperature variation
Response time	< 200 ms in the event of a fault
Marking	CE : 73/23/EEC CE : EMC 89/336/EEC
Overvoltage category	III conforming to IEC 60664-1
Insulation resistance	> 500 MOhm at 500 V DC conforming to IEC 60255-5 > 500 MOhm at 500 V DC conforming to IEC 60664-1
[Ui] rated insulation voltage	400 V conforming to IEC 60664-1
Supply frequency	50/60 Hz +/- 10 %
Operating position	Any position without derating
Tightening torque	0.6...1 N.m conforming to IEC 60947-1
Housing material	Self-extinguishing plastic
Status LED	1 LED green for power ON 1 LED yellow for relay 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

Immunity to microbreaks	50 ms
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	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	0.35 mm (f = 5...57.6 Hz) conforming to IEC 60068-2-6/IEC 60255-21-1 1 gn (f = 57.6...150 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	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 AC 50 Hz, 1 min
Non-dissipating shock wave	4 kV
RoHS EUR status	Compliant
RoHS EUR conformity date	0701

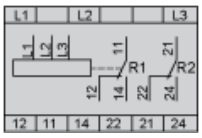
3-Phase Voltage Control Relays

Dimensions and Mounting



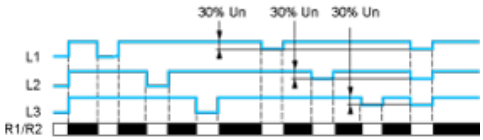
3-Phase Voltage Control Relays

Wiring Diagram



Function Diagrams

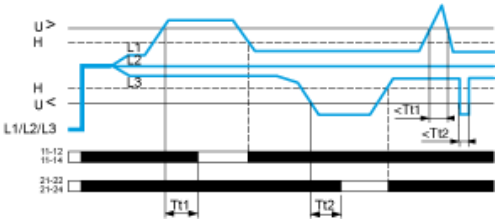
Phase Failure Detection (U measured < 0.7 x nominal supply voltage)



Un Nominal supply voltage
L1, L2, L3 Phases of the supply voltage monitored
R1/R2 Output relays connections (refer to Connections and Schema)

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, 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.

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

Un 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	