



### Main

|                              |                                                                                                                                                                                                                                                                 |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Range of product             | Zelio Control                                                                                                                                                                                                                                                   |
| Product or component type    | Modular measurement and control relays                                                                                                                                                                                                                          |
| Relay type                   | Voltage control relay                                                                                                                                                                                                                                           |
| Product specific application | For single-phase and DC supply                                                                                                                                                                                                                                  |
| Relay name                   | RM17UBE                                                                                                                                                                                                                                                         |
| Relay monitored parameters   | Overvoltage and undervoltage detection<br>Self-powered                                                                                                                                                                                                          |
| Time delay                   | Adjustable 0.1...10 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      | <= 3 VA AC                                                                                                                                                                                                                                                      |
| Measurement range            | 65...260 V voltage AC/DC                                                                                                                                                                                                                                        |
| Utilisation category         | DC-14 conforming to IEC 60947-5-1<br>DC-13 conforming to IEC 60947-5-1<br>DC-12 conforming to IEC 60947-5-1<br>AC-15 conforming to IEC 60947-5-1<br>AC-14 conforming to IEC 60947-5-1<br>AC-13 conforming to IEC 60947-5-1<br>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 | 110...240 V AC/DC, 50/60 Hz +/- 10 %                                                                 |
| Supply voltage limits     | 50...270 V AC/DC                                                                                     |
| Power consumption in W    | <= 1 W DC                                                                                            |
| Immunity to microbreaks   | 20 ms                                                                                                |
| Control circuit frequency | 50...60 Hz +/- 10 %                                                                                  |
| Output contacts           | 1 C/O                                                                                                |
| Nominal output current    | 5 A                                                                                                  |
| Measuring cycle           | <= 150 ms measurement cycle as true rms value                                                        |
| Hysteresis                | 3 % fixed of threshold setting                                                                       |
| Delay at power up         | <= 500 ms AC<br><= 100 ms DC                                                                         |
| Measurement accuracy      | +/- 10 % of the full scale value                                                                     |
| Repeat accuracy           | +/- 1 % for time delay<br>+/- 0.5 % for input and measurement circuit                                |
| Measurement error         | 0.2 %/°C with temperature variation<br>< 1 % over the whole range with voltage variation             |
| Polarity                  | Non reversible polarity on DC supply                                                                 |
| Quality labels            | CE                                                                                                   |
| Overvoltage category      | III conforming to IEC 60664-1                                                                        |
| Insulation resistance     | > 500 MOhm at 500 V DC conforming to IEC 60664-1<br>> 500 MOhm at 500 V DC conforming to IEC 60255-5 |

|                               |                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| [Ui] rated insulation voltage | 400 V conforming to IEC 60664-1<br>250 V conforming to IEC 60664-1                                                                                                                                                                                                                                                                                                                                                 |
| Operating position            | Any position without derating                                                                                                                                                                                                                                                                                                                                                                                      |
| Connections - terminals       | Screw terminals 2 x 0.2...2 x 1.5 mm <sup>2</sup> - AWG 24...AWG 16, flexible cable with cable end<br>Screw terminals 1 x 0.2...2 x 2.5 mm <sup>2</sup> - AWG 24...AWG 12, flexible cable with cable end<br>Screw terminals 2 x 0.5...2 x 2.5 mm <sup>2</sup> - AWG 20...AWG 14, solid cable without cable end<br>Screw terminals 1 x 0.5...1 x 4 mm <sup>2</sup> - 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                                                                                                                                                                                                                                                                                                                                                                                         |
| Local signalling              | LED yellow for relay ON<br>LED green for power 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 under full load                                                                                                                                                                                                                                                                                                                                                                             |
| Width                         | 17.5 mm                                                                                                                                                                                                                                                                                                                                                                                                            |
| Product weight                | 0.08 kg                                                                                                                                                                                                                                                                                                                                                                                                            |

## Environment

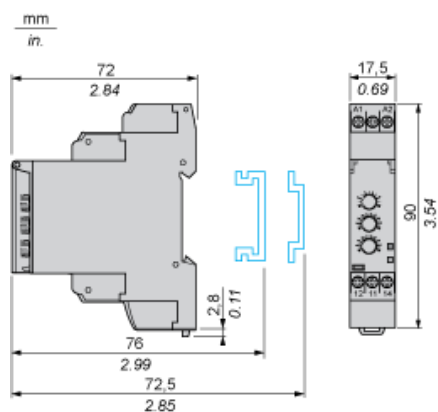
|                                       |                                                                                                                                                                                                                                                                          |
|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Electromagnetic compatibility         | Immunity for industrial environments conforming to NF EN/IEC 61000-6-2<br>Emission standard for residential, commercial and light-industrial environments conforming to EN/IEC 61000-6-3<br>Emission standard for industrial environments conforming to EN/IEC 61000-6-4 |
| Standards                             | EN/IEC 60255-6                                                                                                                                                                                                                                                           |
| Product certifications                | CSA<br>C-Tick<br>GL<br>GOST<br>UL                                                                                                                                                                                                                                        |
| Directives                            | 89/336/EEC - electromagnetic compatibility<br>73/23/EEC - low voltage directive                                                                                                                                                                                          |
| 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 60255-21-1<br>0.35 mm (f = 5...57.6 Hz) conforming to IEC 60068-2-6                                                                                                                                                           |
| Shock resistance                      | 5 gn conforming to IEC 60068-2-27                                                                                                                                                                                                                                        |
| IP degree of protection               | IP30 (casing) conforming to IEC 60529<br>IP20 (terminals) conforming to IEC 60529                                                                                                                                                                                        |
| Pollution degree                      | 3 conforming to IEC 60664-1                                                                                                                                                                                                                                              |
| Dielectric test voltage               | 2 kV AC 50 Hz, 1 min conforming to IEC 60664-1<br>2 kV AC 50 Hz, 1 min conforming to IEC 60255-5                                                                                                                                                                         |
| Non-dissipating shock wave            | 4 kV conforming to IEC 61000-4-5<br>4 kV conforming to IEC 60664-1<br>4 kV conforming to IEC 60255-5                                                                                                                                                                     |

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Single-Phase and DC Voltage Control Relays

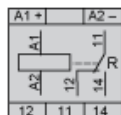
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Dimensions and Mounting

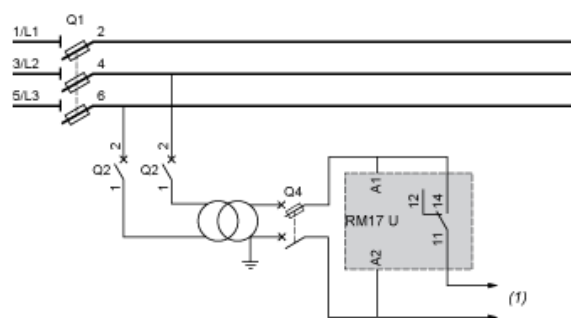


## Single-Phase and DC Voltage Control Relays

### Wiring Diagram



### Application Scheme



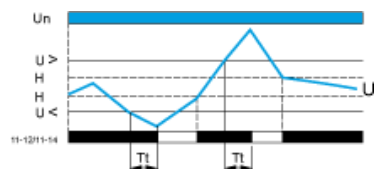
(1) To sensitive loads

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## Function Diagram

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### Control of Overvoltage and Undervoltage in Window 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 Output relay connections

Relay status: black color = energized.