

# RM35UA13MW

multifunction voltage control relay RM35-U - range  
15..600 V



## Main

|                            |                                                                                                                                                                                                                                                                 |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Range of product           | Zelio Control                                                                                                                                                                                                                                                   |
| Product or component type  | Modular measurement and control relays                                                                                                                                                                                                                          |
| Relay type                 | Multifunction voltage control relay                                                                                                                                                                                                                             |
| Relay name                 | RM35UA                                                                                                                                                                                                                                                          |
| Relay monitored parameters | Overvoltage or undervoltage detection                                                                                                                                                                                                                           |
| Time delay type            | 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...3.5 VA AC                                                                                                                                                                                                                                                   |
| Measurement range          | 15...600 V voltage                                                                                                                                                                                                                                              |
| Utilisation category       | AC-12 conforming to IEC 60947-5-1<br>AC-13 conforming to IEC 60947-5-1<br>AC-14 conforming to IEC 60947-5-1<br>AC-15 conforming to IEC 60947-5-1<br>DC-12 conforming to IEC 60947-5-1<br>DC-13 conforming to IEC 60947-5-1<br>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   | 24...240 V AC/DC, 50/60 Hz +/- 10 %                                                           |
| Supply voltage limits       | 20.4...264 V AC/DC                                                                            |
| Power consumption in W      | <= 0.6 W DC                                                                                   |
| Immunity to microbreaks     | 10 ms                                                                                         |
| Control circuit frequency   | 40...70 Hz +/- 10 %                                                                           |
| Resistance across terminals | 150 mOhm E1-M terminals<br>300 mOhm E2-M terminals<br>600 mOhm E3-M terminals                 |
| Output contacts             | 2 C/O                                                                                         |
| Nominal output current      | 5 A                                                                                           |
| Measuring cycle             | <= 30 ms measurement cycle as true rms value                                                  |
| Hysteresis                  | 5...50 % of threshold setting                                                                 |
| Run-up delay at power-up    | <= 600 ms                                                                                     |
| Measurement accuracy        | +/- 10 % of the full scale value                                                              |
| Repeat accuracy             | +/- 0.5 % for input and measurement circuit<br>+/- 2 % for time delay                         |
| Measurement error           | +/- 0.05 %/°C with temperature variation<br>< 1 % over the whole range with voltage variation |
| Polarity                    | Non reversible polarity on DC supply                                                          |
| Sensitivity scale           | 15...150 V E1-M terminals<br>30...300 V E2-M terminals<br>60...600 V E3-M terminals           |
| Threshold setting           | 10...100 %                                                                                    |
| Quality labels              | CE                                                                                            |
| Overvoltage category        | III conforming to IEC 60664-1                                                                 |
| Insulation resistance       | > 500 MOhm at 500 V DC between supply and relay output conforming to IEC 60255-               |

The information provided in this documentation contains general descriptions and/or technical characteristics of the products contained herein. This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications. It is the duty of any such user or integrator to perform the appropriate and complete risk analysis, evaluation and testing of the products with respect to the relevant specific application or use thereof. Neither Schneider Electric Industries SAS nor any of its affiliates or subsidiaries shall be responsible or liable for misuse of the information contained herein.

|                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                | 5<br>> 500 MOhm at 500 V DC between measurement and relay output conforming to IEC 60664-1<br>> 1 MOhm at 500 V DC between supply and measurement conforming to IEC 60255-5<br>5<br>> 500 MOhm at 500 V DC between supply and relay output conforming to IEC 60664-1<br>> 500 MOhm at 500 V DC between measurement and relay output conforming to IEC 60255-5<br>> 1 MOhm at 500 V DC between supply and measurement conforming to IEC 60664-1 |
| [Ui] rated insulation voltage  | 250 V conforming to IEC 60664-1<br>600 V conforming to IEC 60664-1                                                                                                                                                                                                                                                                                                                                                                             |
| Control circuit voltage limits | - 15 % + 10 % Un                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Operating position             | Any position without derating                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Connections - terminals        | Screw terminals 1 x 0.5...1 x 4 mm <sup>2</sup> - AWG 20...AWG 11, solid cable without 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 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                             |
| Tightening torque              | 0.6...1 N.m conforming to IEC 60947-1                                                                                                                                                                                                                                                                                                                                                                                                          |
| Housing material               | Self-extinguishing plastic                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Local signalling               | LED green for power ON<br>LED yellow for relay 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                                                                                                                                                                                                                                                                                                                                                                                                         |
| Safety reliability data        | MTTFd = 308.2 years<br>B10d = 290000                                                                                                                                                                                                                                                                                                                                                                                                           |
| Width                          | 35 mm                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Product weight                 | 0.08 kg                                                                                                                                                                                                                                                                                                                                                                                                                                        |

## Environment

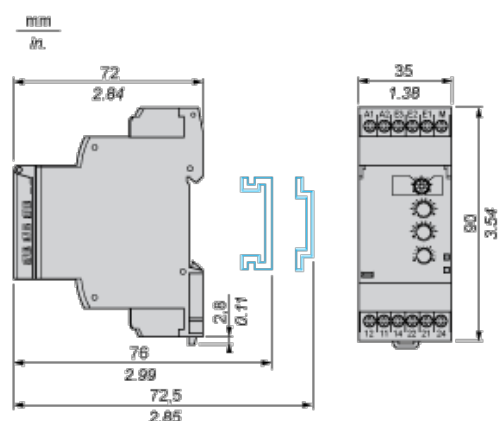
|                                       |                                                                                                                                                                                                                                                                          |
|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| electromagnetic compatibility         | Emission standard for industrial environments conforming to EN/IEC 61000-6-4<br>Emission standard for residential, commercial and light-industrial environments conforming to EN/IEC 61000-6-3<br>Immunity for industrial environments conforming to NF EN/IEC 61000-6-2 |
| 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                  | 0.35 mm (f = 5...57.6 Hz) conforming to IEC 60068-2-6<br>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<br>IP30 (casing) 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 60255-5<br>2 kV AC 50 Hz, 1 min conforming to IEC 60664-1                                                                                                                                                                         |
| non-dissipating shock wave            | 4 kV conforming to IEC 60255-5<br>4 kV conforming to IEC 60664-1<br>4 kV conforming to IEC 61000-4-5                                                                                                                                                                     |

## Offer Sustainability

|                                  |                                                                       |
|----------------------------------|-----------------------------------------------------------------------|
| Sustainable offer status         | Green Premium product                                                 |
| RoHS (date code: YYWW)           | Compliant - since 0701 - Schneider Electric declaration of conformity |
| REACH                            | Reference not containing SVHC above the threshold                     |
| Product environmental profile    | Available                                                             |
| Product end of life instructions | Available                                                             |

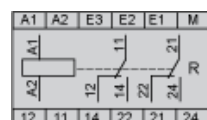
## Multifunction Voltage Control Relays

### Dimensions and Mounting



## Multifunction Voltage Control Relays

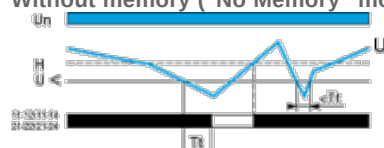
### Wiring Diagram



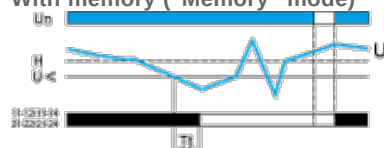
## Function Diagrams

### Undervoltage Control

Without memory ("No Memory" mode)

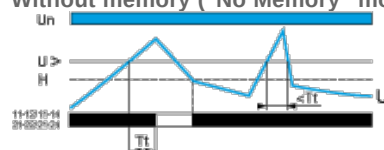


With memory ("Memory" mode)

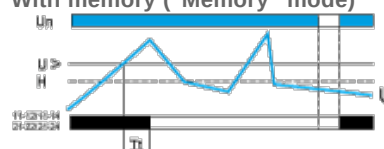


### Overvoltage Control

Without memory ("No Memory" mode)



With memory ("Memory" 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, 21-22/21-24** Output relay connections

**Relay status:** black color = energized.

**NOTE:** In "Memory" mode, the relay opens when crossing of the threshold is detected and then stays in that position. The power supply voltage must be switched off to reset the product.