



Price\* : 81.93 GBP



## Main

|                            |  |
|----------------------------|--|
| Range of product           | Zelio Control  |
| Product or component type  | Modular measurement and control relays   |
| Relay type                 | Level control relay  |
| Relay name                 | RM22L  |
| Relay monitored parameters | Detection by resistive probes  |
| Time delay type            | Adjustable 0.1...30 s, +/- 10 % of the full scale value on crossing the threshold Tt |
| Switching capacity in VA   | 2000 VA  |
| Measurement range          | 250 Ohm...1 MOhm   |

## Complementary

|                                |   |
|--------------------------------|---|
| Reset time                     | 1750 ms   |
| Maximum switching voltage      | 250 V AC  |
| Minimum switching current      | 10 mA at 5 V DC                                   |
| Maximum switching current      | 8 A AC  |
| [Us] rated supply voltage      | 24...240 V AC/DC 50/60 Hz                         |
| Supply voltage limits          | 20.4...264 V AC/DC                                |
| Operating limits               | - 15 % + 10 % Un                                  |
| Power consumption in VA        | 5 VA AC   |
| Maximum power consumption in W | 1.5 W DC  |
| Output contacts                | 2 C/O   |
| Nominal output current         | 8 A   |
| Run-up delay at power-up       | 2.5 s<br>0.6 s                                    |
| Maximum electrode voltage      | 12 V AC   |
| Maximum electrode current      | 1 mA  |
| Repeat accuracy                | +/- 2 % for time delay                            |
| Measurement error              | < 1 % over the whole range with voltage variation |

|  |  |
|--|--|
|  | 0.05 %/°C with temperature variation   |
| Sensitivity scale                      | 0.25...5 kOhm LS (Low Sensitivity)<br>5...100 kOhm St (Standard Sensitivity)<br>50...1000 kOhm HS (High Sensitivity)   |
| Sensitivity adjustment                 | 5...100 %  |
| Maximum supply current for sensors     | 1 mA   |
| Maximum cable distance between devices | 1000 m between probe and delay   |
| Cable capacitance                      | 1 nF at HS (High Sensitivity) for probe cable<br>2.2 nF at St (Standard Sensitivity) for probe cable<br>4.7 nF at LS (Low Sensitivity) for probe cable   |
| Overvoltage category                   | III conforming to IEC 60664-1  |
| Insulation resistance                  | > 100 MOhm at 500 V DC conforming to IEC 60255-27  |
| Insulation                             | Between supply and measurement   |
| Mounting position                      | Any position   |
| Connections - terminals                | Screw terminals, 2 x 0.5...2 x 2.5 mm <sup>2</sup> (AWG 20...AWG 14) solid without cable end<br>Screw terminals, 2 x 0.2...2 x 1.5 mm <sup>2</sup> (AWG 24...AWG 16) flexible with cable end<br>Screw terminals, 1 x 0.5...1 x 3.3 mm <sup>2</sup> (AWG 20...AWG 12) solid without cable end<br>Screw terminals, 1 x 0.2...1 x 2.5 mm <sup>2</sup> (AWG 24...AWG 14) flexible with cable end |
| Tightening torque                      | 0.6...1 N.m conforming to IEC 60947-1  |
| Housing material                       | Self-extinguishing plastic   |
| Status LED                             | LED (yellow)relay ON:<br>LED (green)power ON:  |
| Mounting support                       | 35 mm DIN rail conforming to EN/IEC 60715  |
| Electrical durability                  | 100000 cycles  |
| Mechanical durability                  | 10000000 cycles  |
| Utilisation category                   | AC-15 conforming to IEC 60947-5-1<br>DC-13 conforming to IEC 60947-5-1<br>AC-1 conforming to IEC 60947-4-1<br>DC-1 conforming to IEC 60947-4-1   |
| Safety reliability data                | MTTFd = 182.6 years<br>B10d = 170000   |
| Contacts material                      | Cadmium free   |
| Width                                  | 22.5 mm  |
| Product weight                         | 0.11 kg  |

## Environment

|                               |  |
|-------------------------------|--|
| Immunity to microbreaks       | 100 ms DC<br>90 ms AC  |
| Electromagnetic compatibility | Immunity for residential, commercial and light-industrial environments conforming to EN/IEC 61000-6-1<br>Immunity for industrial environments conforming to 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<br>Electrostatic discharge - test level: 6 kV level 3 (contact discharge) conforming to IEC 61000-4-2<br>Electrostatic discharge - test level: 8 kV level 3 (air discharge) conforming to IEC 61000-4-2<br>Radiated radio-frequency electromagnetic field immunity test - test level: 10 V/m level 3 conforming to IEC 61000-4-3<br>Electrical fast transient/burst immunity test - test level: 4 kV level 4 (direct) conforming to IEC 61000-4-4<br>Electrical fast transient/burst immunity test - test level: 2 kV level 4 (capacitive coupling) conforming to IEC 61000-4-4<br>Surge immunity test - test level: 4 kV level 4 (common mode) conforming to IEC 61000-4-5<br>Surge immunity test - test level: 2 kV level 4 (differential mode) conforming to IEC 61000-4-5<br>Conducted and radiated emissions class B group 1 conforming to CISPR 11<br>Conducted and radiated emissions class B conforming to CISPR 22 |
| Standards                     | EN/IEC 60255-1   |
| Product certifications        | China RoHS<br>UL<br>RCM<br>CSA<br>GL<br>CCC  |

|                                       |  |
|---------------------------------------|--|
|                                       | CE<br>EAC  |
| Ambient air temperature for storage   | -40...70 °C  |
| Ambient air temperature for operation | -20...50 °C at 60 Hz<br>-20...60 °C at 50 Hz AC/DC   |
| Relative humidity                     | 93...97 % at 25...55 °C conforming to IEC 60068-2-30   |
| Vibration resistance                  | 0.075 mm (f= 10...58.1 Hz) not in operation conforming to IEC 60068-2-6<br>1 gn (f= 10...58.1 Hz) not in operation conforming to IEC 60068-2-6<br>0.035 mm (f= 58.1...150 Hz) in operation conforming to IEC 60068-2-6<br>0.5 gn (f= 58.1...150 Hz) in operation conforming to IEC 60068-2-6 |
| Shock resistance                      | 15 gn (duration = 11 ms) for not in operation conforming to IEC 60068-2-27<br>5 gn (duration = 11 ms) for in operation conforming to IEC 60068-2-27  |
| IP degree of protection               | IP20 (terminals) conforming to IEC 60529<br>IP40 (housing) conforming to IEC 60529<br>IP50 (front panel) conforming to IEC 60529   |
| Pollution degree                      | 3 conforming to IEC 60664-1  |
| Dielectric test voltage               | 2.5 kV, 1 min AC 50 Hz conforming to IEC 60255-27  |

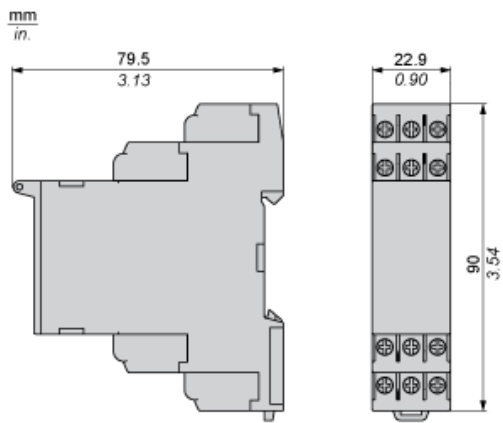
### Offer Sustainability

|                            |   |
|----------------------------|---|
| Sustainable offer status   | Green Premium product   |
| EU RoHS Directive          | Pro-active compliance (Product out of EU RoHS legal scope)<br><a href="#">EU RoHS Declaration</a>                           |
| Mercury free               | Yes   |
| RoHS exemption information | <a href="#">Yes</a>   |
| China RoHS Regulation      | <a href="#">China RoHS declaration</a>  |
| Environmental Disclosure   | <a href="#">Product Environmental Profile</a>   |
| Circularity Profile        | <a href="#">End of Life Information</a>   |
| WEEE                       | The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins |

### Contractual warranty

|          |           |
|----------|-----------|
| Warranty | 18 months |
|----------|-----------|

Dimensions

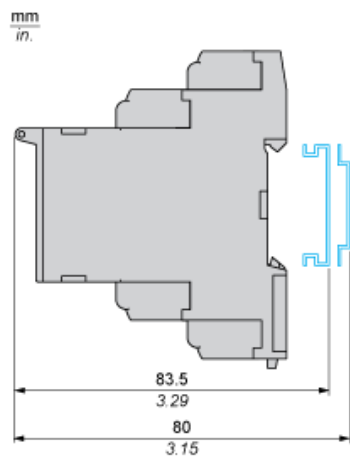


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Mounting and Clearance

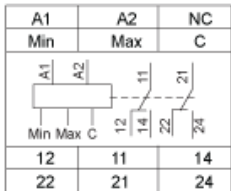
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Rail Mounting



Level Control Relay

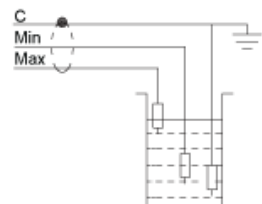
Wiring Diagram



A1,A2 : Supply voltage  
Max : High level  
Min : Low level  
C : References or Tank earth electrode  
11-14,12 : 1st C/O contact of output relay  
21-24,22 : 2nd C/O contact of output relay

## Control by Electrodes

### Wiring Diagram



A1,A2 : Supply voltage

Max : High level

Min : Low level

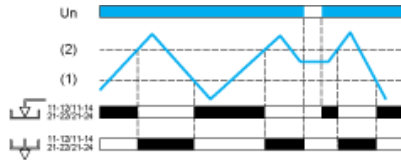
C : References or Tank earth electrode

11-14,12 : 1st C/O contact of output relay

## Function Diagrams

### Control of Two Levels

Fill/Empty function



### Legend

$U_n$  Supply voltage

(1) Min. level

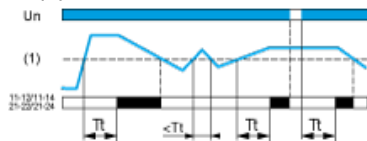
(2) Max. level

11-12/11-14, 21-22/21-24 Output relay connections

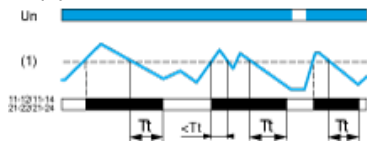
Relay status: black color = energized.

### Control of One Level

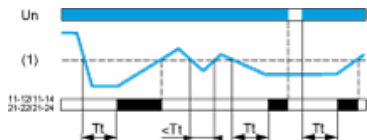
Empty function T on



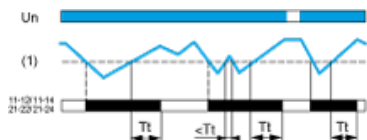
Empty function T off



Fill function T on



Fill function T off



### Legend

$T_t$  Time delay after crossing of threshold

$U_n$  Supply voltage

(1) Level threshold

11-12/11-14, 21-22/21-24 Output relay connections

Relay status: black color = energized.