



Main

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|-------------------------------|-------------------------------|
| Range of product | Harmony Control Relays |
| Product or component type | Level control relay |
| Relay type | Level control relay |
| Relay name | RM22L |
| Relay monitored parameters | Detection by resistive probes |
| Time delay type | Without |
| Switching capacity in VA | 2000 VA |
| Measurement range | 5...100 kOhm |
| Contacts type and composition | 2 C/O |

Complementary

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|--|--|
| 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 | 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 | 5...100 kOhm St (Standard 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 2.2 NF at St (Standard Sensitivity) for probe cable 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 ² (AWG 20...AWG 14) solid without cable end Screw terminals, 2 x 0.2...2 x 1.5 mm ² (AWG 24...AWG 16) flexible with cable end Screw terminals, 1 x 0.5...1 x 3.3 mm ² (AWG 20...AWG 12) solid without cable end Screw terminals, 1 x 0.2...1 x 2.5 mm ² (AWG 24...AWG 14) flexible with cable end |

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| Tightening torque | 0.6...1 N.m conforming to IEC 60947-1 |
| Housing material | Self-extinguishing plastic |
| Status LED | LED (yellow) relay ON 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 DC-13 conforming to IEC 60947-5-1 AC-1 conforming to IEC 60947-4-1 DC-1 conforming to IEC 60947-4-1 |
| Safety reliability data | B10d = 120000 MTTFd = 125.5 years |
| Contacts material | Cadmium free |
| Width | 22.5 mm |
| Net weight | 0.1 kg |

Environment

| | |
|---------------------------------------|--|
| Immunity to microbreaks | 100 Ms DC 90 ms AC |
| Electromagnetic compatibility | Immunity for residential, commercial and light-industrial environments conforming to EN/IEC 61000-6-1 Immunity for industrial environments conforming to 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 Electrostatic discharge - test level: 6 kV level 3 (contact discharge) conforming to IEC 61000-4-2 Electrostatic discharge - test level: 8 kV level 3 (air discharge) conforming to IEC 61000-4-2 Radiated radio-frequency electromagnetic field immunity test - test level: 10 V/m level 3 conforming to IEC 61000-4-3 Electrical fast transient/burst immunity test - test level: 4 kV level 4 (direct) conforming to IEC 61000-4-4 Electrical fast transient/burst immunity test - test level: 2 kV level 4 (capacitive coupling) conforming to IEC 61000-4-4 Surge immunity test - test level: 4 kV level 4 (common mode) conforming to IEC 61000-4-5 Surge immunity test - test level: 2 kV level 4 (differential mode) conforming to IEC 61000-4-5 Conducted and radiated emissions class B group 1 conforming to CISPR 11 Conducted and radiated emissions class B conforming to CISPR 22 |
| Standards | EN/IEC 60255-1 |
| Product certifications | GL RCM CCC CSA UL EAC CE |
| Ambient air temperature for storage | -40...70 °C |
| Ambient air temperature for operation | -20...50 °C at 60 Hz -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 1 gn (f= 10...58.1 Hz) not in operation conforming to IEC 60068-2-6 0.035 mm (f= 58.1...150 Hz) in operation conforming to IEC 60068-2-6 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 5 gn (duration = 11 ms) for in operation conforming to IEC 60068-2-27 |
| IP degree of protection | IP20 (terminals) conforming to IEC 60529 IP40 (housing) conforming to IEC 60529 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 |

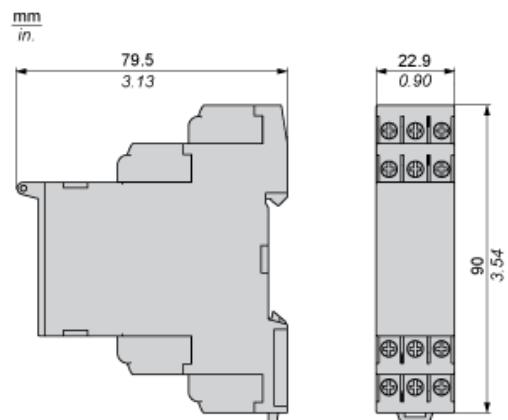
Packing Units

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|------------------|----------|
| Package 1 Weight | 0.100 kg |
| Package 1 Height | 0.260 dm |
| Package 1 width | 0.820 dm |
| Package 1 Length | 0.950 dm |

Offer Sustainability

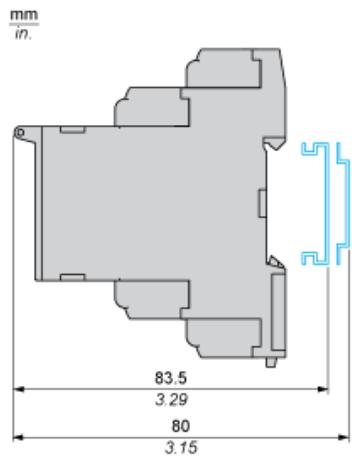
| | |
|----------------------------|--|
| Sustainable offer status | Green Premium product |
| REACH Regulation |  REACH Declaration |
| EU RoHS Directive | Pro-active compliance (Product out of EU RoHS legal scope)  EU RoHS Declaration |
| Mercury free | Yes |
| RoHS exemption information |  Yes |
|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

Dimensions



Mounting and Clearance

Rail Mounting



Level Control Relay

Wiring Diagram

| A1 | A2 | NC |
|-----|-----|----|
| Min | Max | C |
| | | |
| Min | Max | C |
| 12 | 11 | 14 |

A1,A2 : Supply voltage

Max : High level

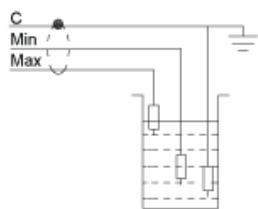
Min : Low level

C : References or Tank earth electrode

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

Control by Electrodes

Wiring Diagram



A1,A2 : Supply voltage

Max : High level

Min : Low level

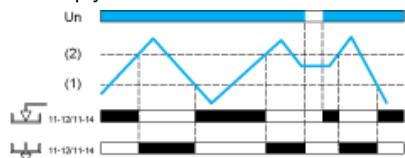
C : References or Tank earth electrode

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

Function Diagrams

Control of Two Levels

Fill/Empty function



Legend

Un Nominal supply voltage

(1) Min. level

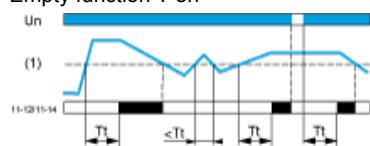
(2) Max. level

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

Relay status: black color = energized.

Control of One Level

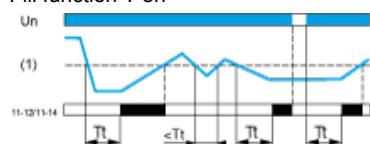
Empty function T on



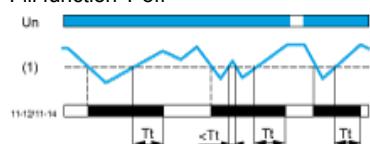
Empty function T off



Fill function T on



Fill function T off



Legend

T_t Time delay after crossing of threshold

Un Supply voltage

(1) Level threshold

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

Relay status: black color = energized.