



### Main

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	Adjustable 0.1...30 s, +/- 10 % of the full scale value on crossing the threshold Tt
Switching capacity in VA	2000 VA
Minimum switching current	10 mA at 5 V DC
Maximum switching current	8 A AC
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
Contacts type and composition	2 C/O

### Complementary

Maximum switching voltage	250 V AC
[Un] rated nominal voltage	24...240 V AC/DC 50/60 Hz
Supply voltage limits	20.4...264 V AC/DC
Power consumption	1.5 W DC
Output contacts	2 C/O
Nominal output current	8 A
Delay at power up	2.5 S 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
Maximum cable distance between devices	1000 m between probe and delay
Sensitivity scale	0.25...5 kOhm LS (Low Sensitivity) 5...100 kOhm St (Standard Sensitivity) 50...1000 kOhm HS (High Sensitivity)
Sensitivity adjustment	5...100 %
Maximum supply current for sensors	1 mA
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	Between supply and measurement

Connections - terminals	Screw terminals, 2 x 0.5...2 x 2.5 mm <sup>2</sup> (AWG 20...AWG 14) solid without cable end Screw terminals, 2 x 0.2...2 x 1.5 mm <sup>2</sup> (AWG 24...AWG 16) flexible with cable end Screw terminals, 1 x 0.5...1 x 3.3 mm <sup>2</sup> (AWG 20...AWG 12) solid without cable end 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
Mounting support	35 mm DIN rail conforming to EN/IEC 60715
Mounting position	Any position
Electrical durability	100000 cycles
Mechanical durability	10000000 cycles
Contacts material	Cadmium free
Safety reliability data	MTTFd = 182.6 years B10d = 170000
Width	22.5 mm
Net weight	0.11 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	UL RCM CSA GL CCC CE EAC
Ambient air temperature for storage	-40...70 °C
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

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	2.6 cm
Package 1 Width	8.2 cm
Package 1 Length	9.5 cm
Package 1 Weight	122.0 g
Unit Type of Package 2	S02
Number of Units in Package 2	40
Package 2 Height	15.0 cm
Package 2 Width	30.0 cm
Package 2 Length	40.0 cm
Package 2 Weight	5.492 kg
Unit Type of Package 3	P06
Number of Units in Package 3	640
Package 3 Height	60.0 cm
Package 3 Width	80.0 cm
Package 3 Length	60.0 cm
Package 3 Weight	95.14 kg

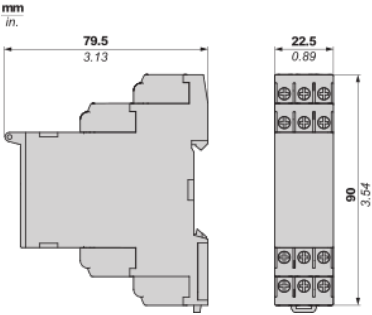
## Offer Sustainability

Sustainable offer status	Green Premium product
REACH Regulation	<a href="#">REACH Declaration</a>
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) <a href="#">EU RoHS Declaration</a>
Mercury free	Yes
China RoHS Regulation	<a href="#">China RoHS Declaration</a>
RoHS exemption information	<a href="#">Yes</a>
Environmental Disclosure	<a href="#">Product Environmental Profile</a>
Circularity Profile	<a href="#">End Of Life Information</a>

## Contractual warranty

Warranty	18 Monate
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Dimensions



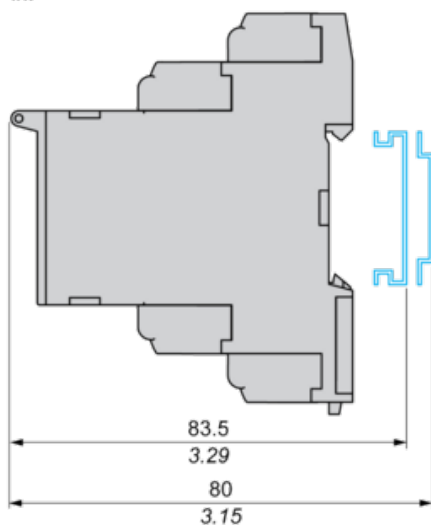
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Mounting and Clearance

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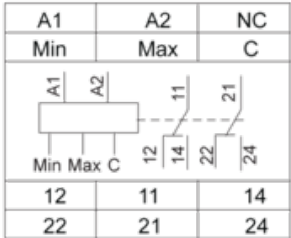
Rail Mounting

mm  
in.



Level Control Relay

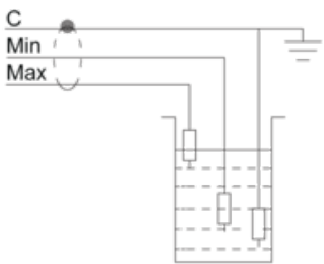
Wiring Diagram



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

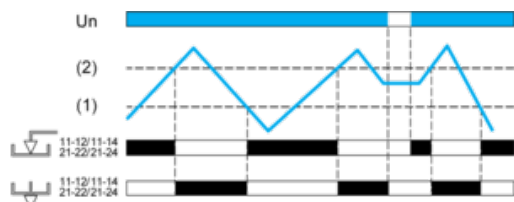


A1,A2 : Supply voltage  
Max : High level  
Min : Low level  
C : References or Tank earth electrode  
11-14,12 : 1st C/O contact of output relay

## Function Diagrams

### Control of Two Levels

Fill/Empty function



### Legend

$U_n$  Supply voltage

(1) Min. level

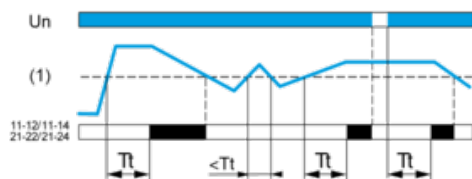
(2) Max. level

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

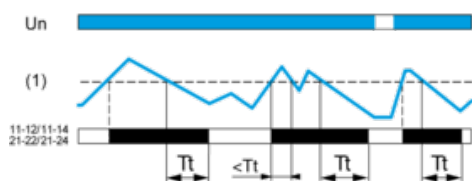
Relay status: black color = energized.

### Control of One Level

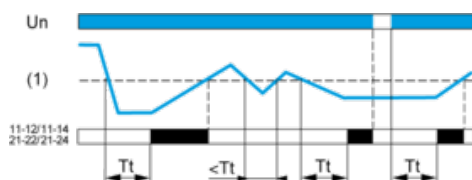
Empty function T on



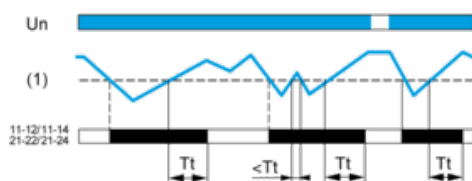
Empty function T off



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.