Product data sheet
Characteristics

RM22LG11MT
Harmony, Modular liquid level control relay, 8 A, 1 CO, 380…415 V AC/DC

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 type	Without
Switching capacity in VA	2000 VA
Measurement range	5...100 kOhm
Contacts type and composition	2 C/O

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	380...415 V AC 50/60 Hz
Supply voltage limits	323…456.5 V AC
Operating limits	- 15 % + 10 % Un
Power consumption in VA	8 VA AC
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 mm² (AWG 20...AWG 14) solid without cable end Screw terminals, 2 x 0.2...2 x 1.5 mm² (AWG 24...AWG 16) flexible with cable end Screw terminals, 1 x 0.5...1 x 3.3 mm² (AWG 20...AWG 12) solid without cable end Screw terminals, 1 x 0.2...1 x 2.5 mm² (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 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	MTTFd = 125.5 years B10d = 120000
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	CSA GL RCM UL EAC CE CCC
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

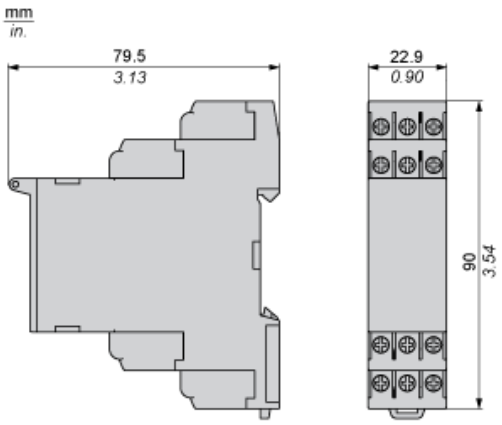
Packing Units

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

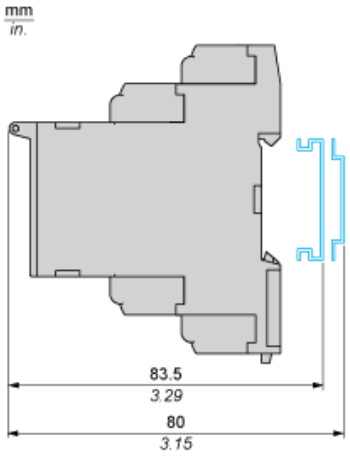
Sustainable offer status	Green Premium product
REACh Regulation	REACh Declaration
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration
Mercury free	Yes
RoHS exemption information	Yes
China RoHS Regulation	China RoHS Declaration
Environmental Disclosure	Product 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



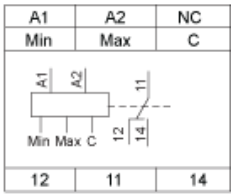
Mounting and Clearance

Rail Mounting



Level Control Relay

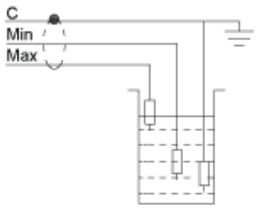
Wiring Diagram



A1,A2 : 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
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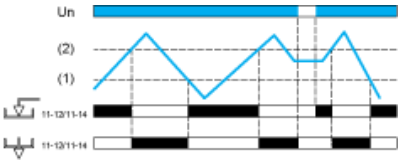
C : References or Tank earth electrode
11-14,12 : 1st C/O contact of output relay

Function Diagrams

Control of Two Levels

Fill/Empty function

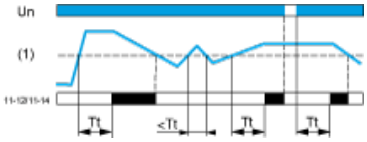


Legend

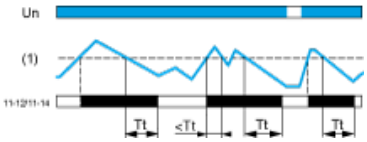
Un Nominal supply voltage
(1) Min. level
(2) Max. level
11-12/11-14, 21-22/21-24 Output relay connections
Relay status: black color = energized.

Control of One Level

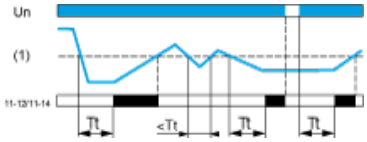
Empty function T on



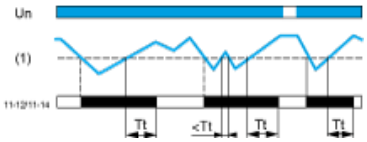
Empty function T off



Fill function T on



Fill function T off



Legend

Tt 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.