Product data sheet
Characteristics

RM22LG11MR
Harmony, Modular liquid level control relay, 8 A, 1 CO, 24…240 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 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 % 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	3280.84 ft (1000 m) probe and delay
Cable capacitance	1 NF HS (High Sensitivity) probe cable 2.2 NF St (Standard Sensitivity) probe cable 4.7 nF LS (Low Sensitivity) probe cable
Overvoltage category	III IEC 60664-1
Insulation resistance	> 100 MOhm 500 V DC 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	5.31…8.85 lbf.in (0.6…1 N.m) IEC 60947-1

The information provided in this documentation contains general descriptions and/or technical characteristics of the performance 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.
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Housing material	Self-extinguishing plastic
Status LED	Relay ON LED Yellow) Power ON LED Green)
Mounting support	35 mm DIN rail conforming to EN/IEC 60715
Electrical durability	100000 cycles
Mechanical durability	10000000 cycles
Utilisation category	AC-15 IEC 60947-5-1 DC-13 IEC 60947-5-1 AC-1 IEC 60947-4-1 DC-1 IEC 60947-4-1
Safety reliability data	B10d = 120000 MTTFd = 125.5 years
Contacts material	Cadmium free
Width	0.89 in (22.5 mm)
Net Weight	0.22 lb(US) (0.1 kg)

Environment

Immunity to microbreaks	100 Ms DC 90 ms AC
Electromagnetic compatibility	Immunity for residential, commercial and light-industrial environments EN/IEC 61000-6-1 Immunity for industrial environments EN/IEC 61000-6-2 Emission standard for residential, commercial and light-industrial environments EN/IEC 61000-6-3 Emission standard for industrial environments EN/IEC 61000-6-4 Electrostatic discharge 6 kV contact discharge)level 3 IEC 61000-4-2 Electrostatic discharge 8 kV air discharge)level 3 IEC 61000-4-2 Radiated radio-frequency electromagnetic field immunity test 10 V/mlevel 3 IEC 61000-4-3 Electrical fast transient/burst immunity test 4 kV direct)level 4 IEC 61000-4-4 Electrical fast transient/burst immunity test 2 kV capacitive coupling)level 4 IEC 61000-4-4 Surge immunity test 4 kV common mode)level 4 IEC 61000-4-5 Surge immunity test 2 kV differential mode)level 4 IEC 61000-4-5 Conducted and radiated emissionsclass B group 1 CISPR 11 Conducted and radiated emissionsclass B CISPR 22
Standards	EN/IEC 60255-1
Product Certifications	GL RCM CCC CSA UL EAC CE
Ambient Air Temperature for Storage	-40…158 °F (-40…70 °C)
Ambient air temperature for operation	-4…122 °F (-20…50 °C) 60 Hz -4…140 °F (-20…60 °C) 50 Hz AC/DC
Relative humidity	93…97 % 77…131 °F (25…55 °C) IEC 60068-2-30
Vibration resistance	0.075 mm 10…58.1 Hz) not in operation IEC 60068-2-6 1 gn 10…58.1 Hz) not in operation IEC 60068-2-6 0.035 mm 58.1…150 Hz) in operation IEC 60068-2-6 0.5 gn 58.1…150 Hz) in operation IEC 60068-2-6
Shock resistance	15 gn 11 ms) not in operation IEC 60068-2-27 5 gn 11 ms) in operation IEC 60068-2-27
IP degree of protection	IP20 IEC 60529 terminals) IP40 IEC 60529 housing) IP50 IEC 60529 front panel)
Pollution degree	3 IEC 60664-1
Dielectric test voltage	2.5 kV AC 50 Hz, 1 min IEC 60255-27

Ordering and shipping details

Category	22380 - RELAYS-MEASUREMENT (RM17-RM35)
Discount Schedule	CP2
GTIN	3606480792328
Nbr. of units in pkg.	1
Package weight(Lbs)	3.84 oz (109 g)

Returnability	Yes
Country of origin	ID

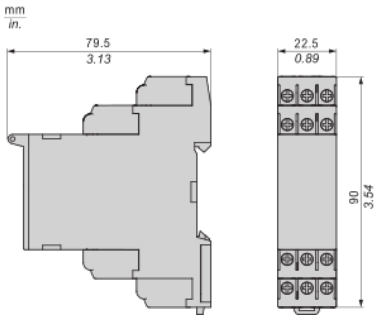
Packing Units

Unit Type of Package 1	PCE
Package 1 Height	1.02 in (2.6 cm)
Package 1 width	3.23 in (8.2 cm)
Package 1 Length	3.74 in (9.5 cm)
Unit Type of Package 2	S02
Number of Units in Package 2	40
Package 2 Weight	11.02 lb(US) (4.999 kg)
Package 2 Height	5.91 in (15 cm)
Package 2 width	11.81 in (30 cm)
Package 2 Length	15.75 in (40 cm)
Unit Type of Package 3	P06
Number of Units in Package 3	640
Package 3 Weight	195.07 lb(US) (88.484 kg)
Package 3 Height	29.53 in (75 cm)
Package 3 width	23.62 in (60 cm)
Package 3 Length	31.50 in (80 cm)

Offer Sustainability

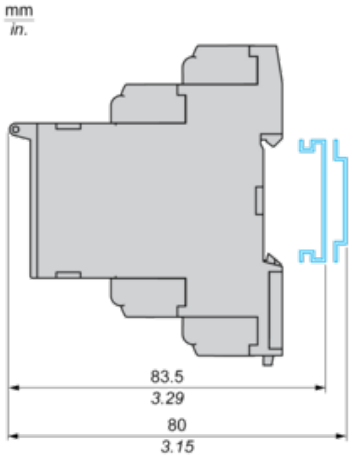
Sustainable offer status	Green Premium product
California proposition 65	WARNING: This product can expose you to chemicals including: Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov
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



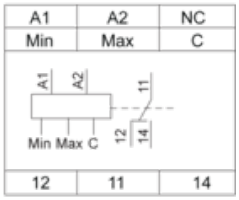
Mounting and Clearance

Rail Mounting



Level Control Relay

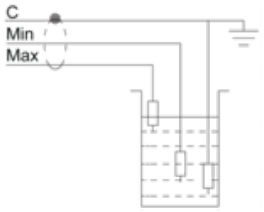
Wiring Diagram



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

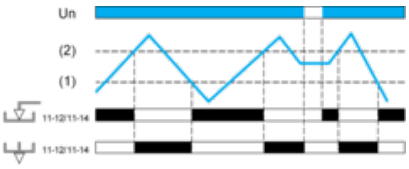


A1,A2 : Supply voltage
Max : High level
Min : Low level
C : References or Tank earth electrode
11-14,12 : 1st C/O contact of output relay

Function Diagrams

Control of Two Levels

Fill/Empty function

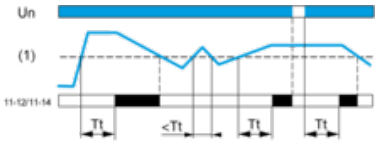


Legend

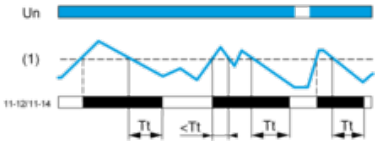
Un Nominal supply voltage
(1) Min. level
(2) Max. level
11-12/11-14, 21-22/21-24 Output relay connections
Relay status: black color = energized.

Control of One Level

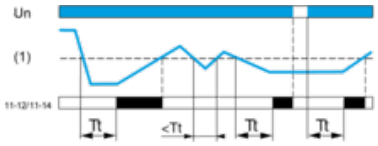
Empty function T on



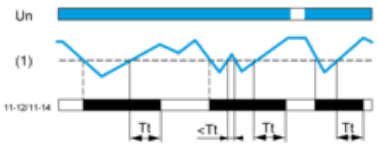
Empty function T off



Fill function T on



Fill function T off



Legend

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.