

Product data sheet

Specifications



liquid level control relay RM4-L - 380..415 V AC

RM4LG01Q

⚠ Discontinued on: Dec 31, 2016

⚠ Discontinued

Main

Range of product	Harmony Relay
Relay type	Liquid level control relay
Product or component type	Industrial measurement and control relays
Relay name	RM4-L
Relay monitored parameters	Detection by resistive probes
time delay	Without
power consumption	2.9 VA AC
Contacts type and composition	1 C/O

Complementary

Maximum switching voltage	440 V AC
operating voltage tolerance	0.85...1.1 Uc
Output contacts	1 C/O
Maximum electrode voltage	24 V AC
Maximum electrode current	1 mA
Maximum cable capacity	0 mF
Sensitivity scale	5...100 kOhm
Marking	CE : LVD 73/23/EEC CE : EMC 89/336/EEC
Overvoltage category	III conforming to IEC 60664-1
[Ui] rated insulation voltage	500 V IEC
Supply disconnection value	> 0.1 Uc
Operating position	Any position without derating
Connections - terminals	Screw terminals, 2 x 1.5 mm ² flexible with cable end Screw terminals, 2 x 2.5 mm ² flexible without cable end
Tightening torque	5.3...9.7 lbf.in (0.6...1.1 N.m)
Mechanical durability	30000000 cycles
[Ith] conventional free air thermal current	8 A

Disclaimer: 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

[Ie] rated operational current	2 A 158 °F (70 °C) 24 V DC-13 IEC 60947-5-1/1991 2 A 158 °F (70 °C) 24 V DC-13 VDE 0660 3 A 158 °F (70 °C) 115 V AC-15 IEC 60947-5-1/1991 3 A 158 °F (70 °C) 115 V AC-15 VDE 0660 3 A 158 °F (70 °C) 24 V AC-15 IEC 60947-5-1/1991 3 A 158 °F (70 °C) 24 V AC-15 VDE 0660 3 A 158 °F (70 °C) 250 V AC-15 IEC 60947-5-1/1991 3 A 158 °F (70 °C) 250 V AC-15 VDE 0660 0.1 A 158 °F (70 °C) 250 V DC-13 IEC 60947-5-1/1991 0.1 A 158 °F (70 °C) 250 V DC-13 VDE 0660 0.3 A 158 °F (70 °C) 115 V DC-13 IEC 60947-5-1/1991 0.3 A 158 °F (70 °C) 115 V DC-13 VDE 0660
Switching capacity in mA	10 mA 12 V
Switching voltage	250 V AC
Contacts material	90/10 silver nickel contacts
Number of cables	2
Width	0.9 in (22.5 mm)
Terminals description ISO n°1	(B1-B2-B3)CO (A1-A2)CO (15-16-18)OC
Output relay state	According to chosen function
9 mm pitches	2.5
Net weight	0.364 lb(US) (0.165 kg)

Environment

Electromagnetic compatibility	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
Standards	IEC 60255-6
Product certifications	GL CSA UL
Ambient air temperature for storage	-40...185 °F (-40...85 °C)
Ambient air temperature for operation	-4...149 °F (-20...65 °C)
Relative humidity	15...85 % 3K3 IEC 60721-3-3
IP degree of protection	IP20 IEC 60529 terminals) IP50 IEC 60529 casing)
Pollution degree	3 IEC 60664-1
Dielectric test voltage	2.5 kV
Resistance to electrostatic discharge	6 kV contact IEC 61000-4-2 level 3 8 kV air IEC 61000-4-2 level 3
Resistance to electromagnetic fields	9.1 V/yd (10 V/m) IEC 61000-4-3 level 3
Resistance to fast transients	2 kV IEC 61000-4-4 level 3
Protection against electric shocks	2 kV level 3 IEC 61000-4-5
Disturbance radiated/conducted	CISPR 11 group 1 - class A CISPR 22 - class A

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1

Package 1 Height	1.06 in (2.7 cm)
Package 1 Width	3.2 in (8.2 cm)
Package 1 Length	3.3 in (8.5 cm)
Package 1 Weight	6.1 oz (174 g)

Contractual warranty

Warranty (in months)	18
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Environmental Data

Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing “Use Better, Use Longer, Use Again” campaign to extend product lifetimes and recyclability.

[Environmental Data explained >](#)

[How we assess product sustainability >](#)

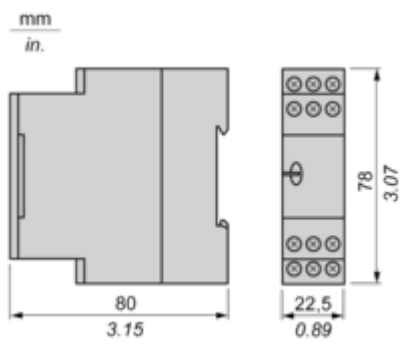
Use Longer

Lifetime extension	
Repair	No

Dimensions Drawings

Liquid Level Control Relays

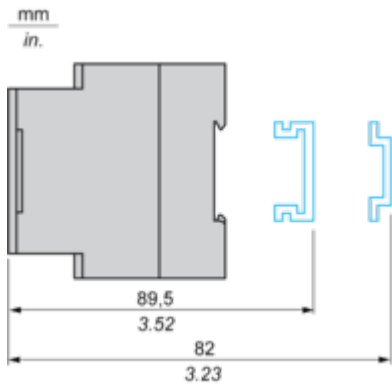
Dimensions



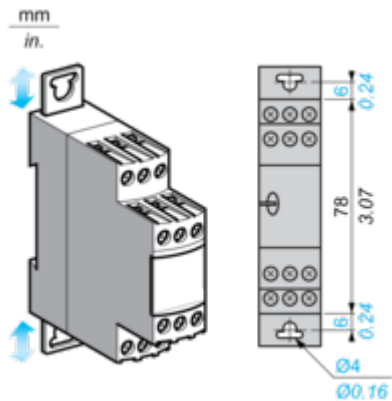
Mounting and Clearance

Liquid Level Control Relays

Rail mounting



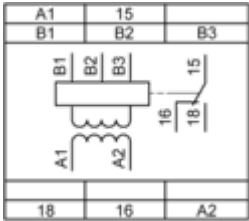
Screw fixing



Connections and Schema

Liquid Level Control Relays

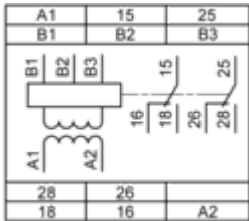
RM4LG01 Wiring Diagram



A1-A2, B1, B2, B3 Supply voltage Electrodes (see table below)
15-18,15-16 1st C/O contact of the output relay

Electrodes and level controlled	
B1	Reference or tank earth electrode
B2	High level
B3	Low level

RM4LA32 Wiring Diagram

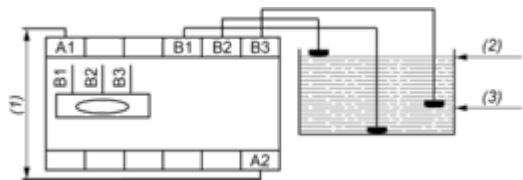


A1-A2, B1, B2, B3 Supply voltage Electrodes (see table below)
15-18,15-16 1st C/O contact of the output relay
25-28, 25-26 2nd C/O contact of the output relay

Electrodes and level controlled	
B1	Reference or tank earth electrode
B2	High level
B3	Low level

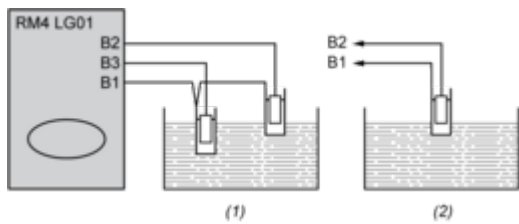
Connection Examples

Control by Electrodes



- (1) Supply voltage
- (2) High level
- (3) Low level

Control by Probes



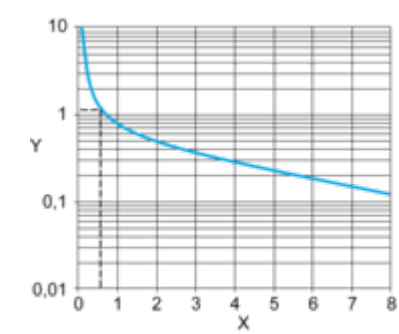
- (1) 2 levels
- (2) 1 level

Performance Curves

Electrical Durability and Load Limit Curves

AC Load

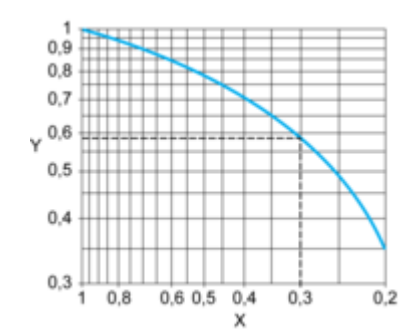
Curve 1: Electrical durability of contacts on resistive load in millions of operating cycles



X Current broken in A

Y Millions of operating cycles

Curve 2: Reduction factor k for inductive loads (applies to values taken from durability Curve 1)

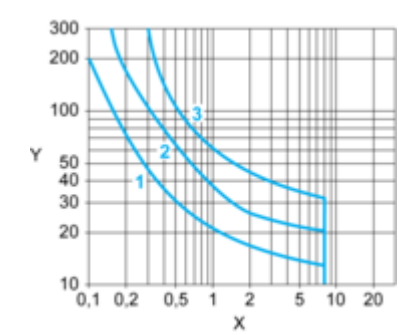


X Power factor on breaking (cos φ)

Y Reduction factor K

DC Load

Load limit curve



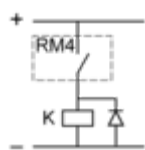
X Current in A

Y Voltage in V

1 L/R = 20 ms

2 L/R with load protection diode

3 Resistive load

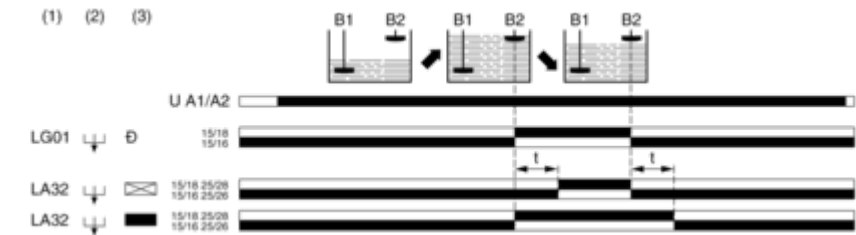


Technical Description

Function Diagrams

Empty Function

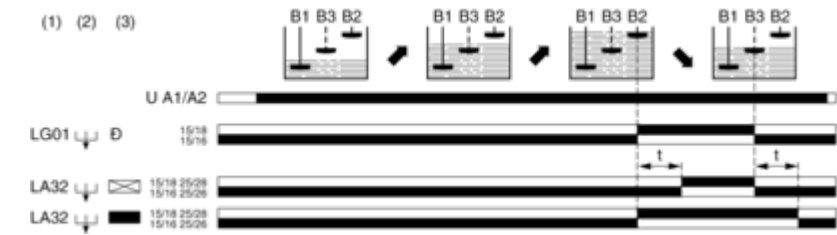
Maximum level detection (2 electrodes or 1 probe LA9RM201)



Legend

- U A1/A2 Supply voltage
- B1 Reference electrode
- B2 High/low level electrode
- (1) Type RM4
- (2) Function switch
- (3) Time delay switch
- 15/16, 15/18; 25/26, 25/28 Output relays connections
- Relay status: black color = energized.

Regulation between a maximum and a minimum level (3 electrodes or 2 probes LA9RM201)

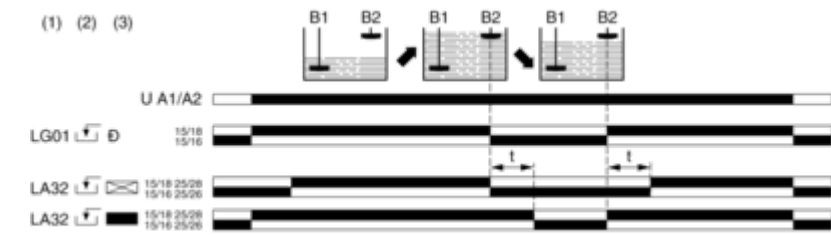


Legend

- U A1/A2 Supply voltage
- B1 Reference electrode
- B2 High level electrode
- B3 Low level electrode
- (1) Type RM4
- (2) Function switch
- (3) Time delay switch
- 15/16, 15/18; 25/26, 25/28 Output relays connections
- Relay status: black color = energized.

Fill Function

Maximum level detection (2 electrodes or 1 probe LA9RM201)

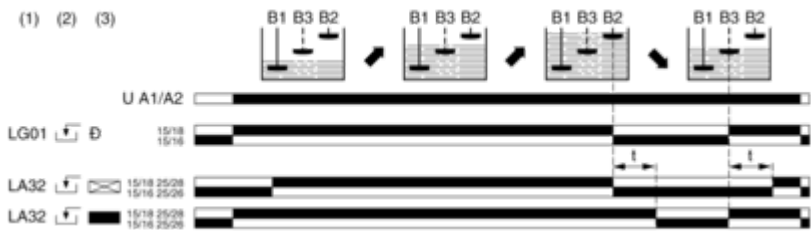


Legend

- U A1/A2 Supply voltage
- B1 Reference electrode
- B2 High/low level electrode

(1) Type RM4
(2) Function switch
(3) Time delay switch
15/16, 15/18; 25/26, 25/28 Output relays connections
Relay status: black color = energized.

Regulation between a maximum and a minimum level (3 electrodes or 2 probes LA9RM201)



Legend

U A1/A2 Supply voltage
B1 Reference electrode
B2 High level electrode
B3 Low level electrode
(1) Type RM4
(2) Function switch
(3) Time delay switch
15/16, 15/18; 25/26, 25/28 Output relays connections
Relay status: black color = energized.

NOTE: On RM4LA32, a time delay can be set on energization or de-energization of the output relay.