

# Product datasheet

Specifications



## Modular liquid level control relay, 5 A, 2 CO, 24...240 V AC/DC

Local distributor code: 389834939 RM35LM33MW

### Main

Range of product	Harmony Control Relays
Product or component type	Level control relay
Relay type	Level control relay
Relay name	RM35L
Relay monitored parameters	Detection by resistive probes
Time delay	Adjustable 0.1...5 s, +/- 10 %
Switching capacity in VA	1250 VA
Minimum switching current	10 mA at 5 V DC
Maximum switching current	5 A AC/DC
Power consumption	5 VA AC
Measurement range	250 Ohm...1 MOhm
Utilisation category	AC-12 conforming to IEC 60947-5-1 AC-13 conforming to IEC 60947-5-1 AC-14 conforming to IEC 60947-5-1 AC-15 conforming to IEC 60947-5-1 DC-12 conforming to IEC 60947-5-1 DC-13 conforming to IEC 60947-5-1
Contacts type and composition	2 C/O

### Complementary

Reset time	1750 ms
Maximum switching voltage	250 V AC/DC
[Un] rated nominal voltage	24...240 V AC/DC 50/60 Hz +/- 10 %
Supply voltage limits	20.4...264 V AC/DC
Operating voltage tolerance	- 15 % + 10 % Un
Power consumption	1.5 W DC
Output contacts	2 C/O
Nominal output current	5 A
Delay at power up	0.6 s
Measurement accuracy	+/- 10 % of the full scale value +/- 20 % for the HS range
Repeat accuracy	+/- 2 % for time delay

<b>Measurement error</b>	0.5 %/°C with temperature variation
<b>Sensitivity scale</b>	0.25...5 kOhm LS (Low Sensitivity) 5...100 kOhm St (Standard Sensitivity) 50...1000 kOhm HS (High Sensitivity)
<b>Sensitivity adjustment</b>	5...100 %
<b>Maximum supply current for sensors</b>	1 mA
<b>Cable capacitance</b>	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)
<b>Marking</b>	CE : 73/23/EEC CE : EMC 89/336/EEC
<b>Overvoltage category</b>	III conforming to IEC 60664-1
<b>Insulation resistance</b>	> 500 MOhm at 500 V DC between supply and relay output conforming to IEC 60255-5 > 500 MOhm at 500 V DC between measurement and relay output conforming to IEC 60664-1 > 1 MOhm at 500 V DC between supply and measurement conforming to IEC 60255-5 > 500 MOhm at 500 V DC between supply and relay output conforming to IEC 60664-1 > 500 MOhm at 500 V DC between measurement and relay output conforming to IEC 60255-5 > 1 MOhm at 500 V DC between supply and measurement conforming to IEC 60664-1
<b>[Ui] rated insulation voltage</b>	250 V conforming to IEC 60664-1
<b>Operating position</b>	Any position without derating
<b>Connections - terminals</b>	Screw terminals, 1 x 0.5...1 x 4 mm <sup>2</sup> (AWG 20...AWG 11) solid without cable end 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 0.2...1 x 2.5 mm <sup>2</sup> (AWG 24...AWG 12) flexible with cable end
<b>Tightening torque</b>	0.6...1 N.m conforming to IEC 60947-1
<b>Housing material</b>	Self-extinguishing plastic
<b>Local signalling</b>	LED (yellow) for relay ON LED (green) for power ON LED (yellow) for timer ON
<b>Mounting support</b>	35 mm symmetrical DIN rail conforming to EN/IEC 60715
<b>Electrical durability</b>	100000 cycles
<b>Mechanical durability</b>	30000000 cycles
<b>Operating rate</b>	<= 360 operations/hour full load
<b>Safety reliability data</b>	B10d = 170000 MTTFd = 182.6 years
<b>Width</b>	35 mm

## Environment

<b>Immunity to microbreaks</b>	100 ms DC 90 ms AC
<b>Electromagnetic compatibility</b>	Emission standard for industrial environments conforming to EN/IEC 61000-6-4 Emission standard for residential, commercial and light-industrial environments conforming to EN/IEC 61000-6-3 Immunity for industrial environments conforming to NF EN/IEC 61000-6-2
<b>Standards</b>	EN/IEC 60255-6
<b>Product certifications</b>	CSA GL UL C-Tick GOST
<b>Ambient air temperature for storage</b>	-40...70 °C
<b>Ambient air temperature for operation</b>	-20...50 °C
<b>Relative humidity</b>	95 % at 55 °C conforming to IEC 60068-2-30
<b>IP degree of protection</b>	IP20 (terminals) conforming to IEC 60529 IP30 (casing) conforming to IEC 60529

<b>Pollution degree</b>	3 conforming to IEC 60664-1
<b>Dielectric test voltage</b>	2 kV, 1 min AC 50 Hz conforming to IEC 60255-5 2 kV, 1 min AC 50 Hz conforming to IEC 60664-1

## Packing Units

<b>Unit Type of Package 1</b>	PCE
<b>Number of Units in Package 1</b>	1
<b>Package 1 Weight</b>	134.0 g
<b>Package 1 Height</b>	4.7 cm
<b>Package 1 width</b>	7.8 cm
<b>Package 1 Length</b>	9.7 cm
<b>Unit Type of Package 2</b>	P06
<b>Number of Units in Package 2</b>	384
<b>Package 2 Weight</b>	65.66 kg
<b>Package 2 Height</b>	75 cm
<b>Package 2 width</b>	80 cm
<b>Package 2 Length</b>	60 cm
<b>Unit Type of Package 3</b>	S03
<b>Number of Units in Package 3</b>	48
<b>Package 3 Weight</b>	7.411 kg
<b>Package 3 Height</b>	30 cm
<b>Package 3 width</b>	30 cm
<b>Package 3 Length</b>	40 cm

## Offer Sustainability

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

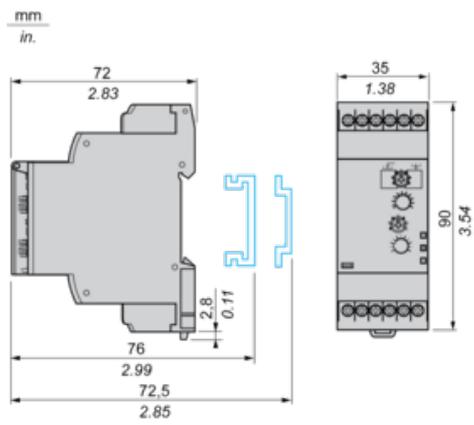
## Contractual warranty

<b>Warranty</b>	18 months
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**Level Control Relays**

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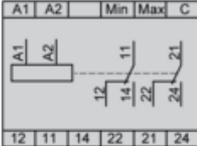
**Dimensions and Mounting**



Level Control Relays

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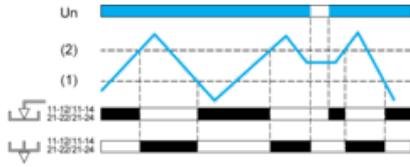
Wiring Diagram



**Function Diagrams**

**Control of Two Levels**

**Fill/Empty function**



**Legend**

$U_n$  Supply voltage

(1) Min. level

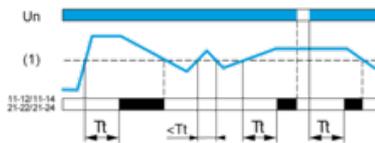
(2) Max. level

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

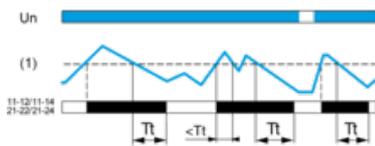
Relay status: black color = energized.

**Control of One Level**

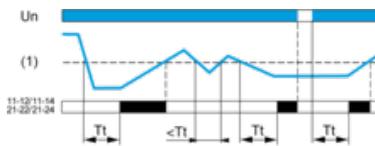
**Empty function T on**



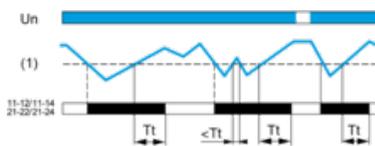
**Empty function T off**



**Fill function T on**



**Fill function T off**



**Legend**

$T_t$  Time delay after crossing of threshold

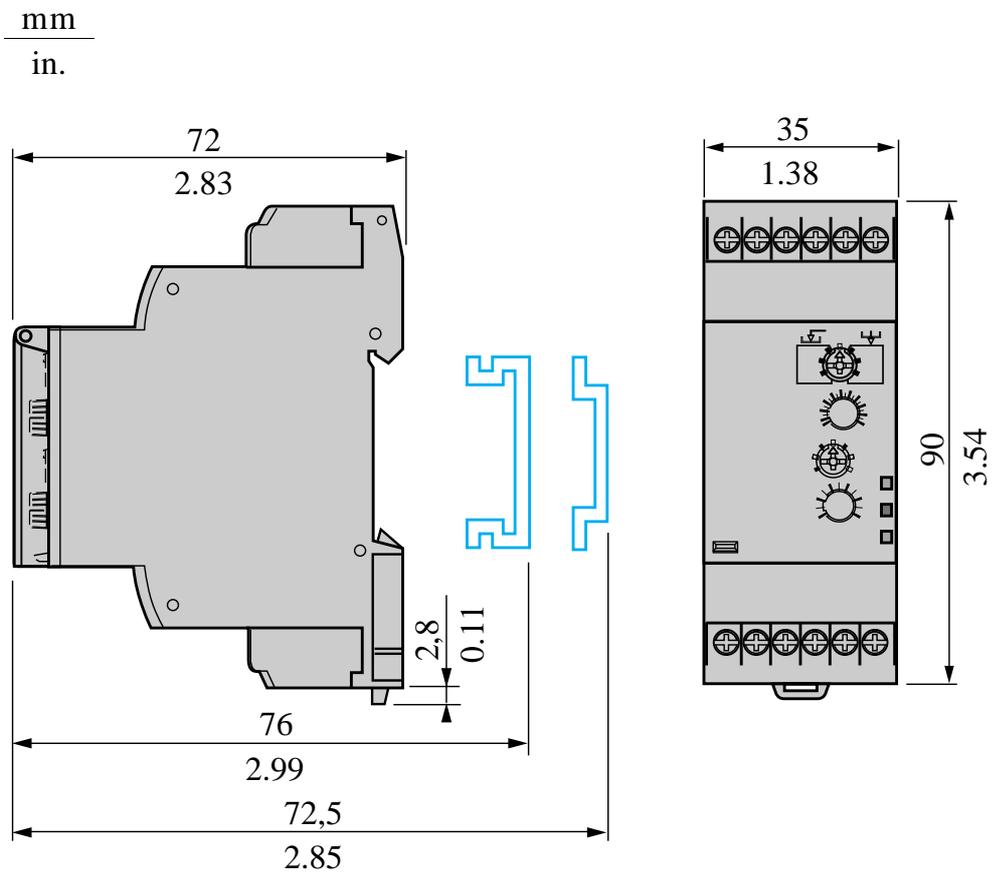
$U_n$  Supply voltage

(1) Level threshold

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

Relay status: black color = energized.

Dimensions



**Wiring Diagram**

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