# Product datasheet Characteristics

## RM35LM33MW

liquid level control relay RM35-L - 24..240 V AC/DC



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Range of product	Zelio Control	
Product or component type	Modular measurement and control relays	
Relay type	Level control relay	
Relay name	RM35L	
Relay monitored parameters	Detection by resistive probes	
Time delay	Adjustable 0.15 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 Ohm1 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	

#### Complementary

Complementary		-
Reset time	1750 ms	
Maximum switching voltage	250 V AC/DC	7
[Un] rated nominal voltage	24240 V AC/DC 50/60 Hz +/- 10 %	<u> </u>
Supply voltage limits	20.4264 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	

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<b>+</b> /-	70	-7/∩	1()[	1111	-	rance

Repeat accuracy	+/- 2 % for time delay	
Measurement error	0.5 %/°C with temperature variation	
Maximum cable distance between devices	100 m	
Sensitivity scale	0.255 kOhm LS (Low Sensitivity) 5100 kOhm St (Standard Sensitivity) 501000 kOhm HS (High Sensitivity)	
Sensitivity adjustment	5100 %	
Maximum supply current for sensors	1 mA	
Cable capacitance	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)	
Marking	CE: 73/23/EEC CE: EMC 89/336/EEC	
Overvoltage category	III conforming to IEC 60664-1	
Insulation resistance	<ul> <li>&gt; 500 MOhm at 500 V DC between supply and relay output conforming to IEC 60255-5</li> <li>&gt; 500 MOhm at 500 V DC between measurement and relay output conforming to IEC 60664-1</li> <li>&gt; 1 MOhm at 500 V DC between supply and measurement conforming to IEC 60255-5</li> <li>&gt; 500 MOhm at 500 V DC between supply and relay output conforming to IEC 60664-1</li> <li>&gt; 500 MOhm at 500 V DC between measurement and relay output conforming to IEC 60255-5</li> <li>&gt; 1 MOhm at 500 V DC between supply and measurement conforming to IEC 60664-1</li> </ul>	
[Ui] rated insulation voltage	250 V conforming to IEC 60664-1	
Operating position	Any position without	
Connections - terminals	Screw terminals, 1 x 0.51 x 4 mm² (AWG 20AWG 11) solid without cable end Screw terminals, 2 x 0.52 x 2.5 mm² (AWG 20AWG 14) solid without cable end Screw terminals, 2 x 0.22 x 1.5 mm² (AWG 24AWG 16) flexible with cable end Screw terminals, 1 x 0.21 x 2.5 mm² (AWG 24AWG 12) flexible with cable end	
Tightening torque	0.61 N.m conforming to IEC 60947-1	
Housing material	Self-extinguishing plastic	
Local signalling	LED (yellow)relay ON: LED (green)power ON: LED (yellow)timer ON:	
Mounting support	35 mm symmetrical DIN rail conforming to EN/IEC 60715	
Electrical durability	100000 cycles	
Mechanical durability	30000000 cycles	
Operating rate	<= 360 operations/hour full load	
Safety reliability data	B10d = 170000 MTTFd = 182.6 years	
Width	35 mm	

### Environment

Immunity to microbreaks	100 ms DC 90 ms AC	
Electromagnetic compatibility	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	
Standards	EN/IEC 60255-6	
Product certifications	CSA GL UL C-Tick GOST	
Ambient air temperature for storage	-4070 °C	
Ambient air temperature for operation	-2050 °C	
Relative humidity	95 % at 55 °C conforming to IEC 60068-2-30	
Vibration resistance	0.35 mm (f= 557.6 Hz) conforming to IEC 60068-2-6 1 gn (f= 57.6150 Hz) conforming to IEC 60255-21-1	
Shock resistance	15 gn for 11 ms conforming to IEC 60255-21-1	
IP degree of protection	IP20 (terminals) conforming to IEC 60529	

### IP30 (casing) conforming to IEC 60529

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

## Offer Sustainability

Sustainable offer status Green Premium product			
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		

### Contractual warranty

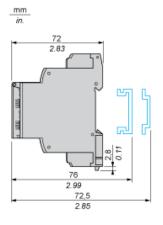
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Warranty		18 months

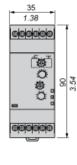
# Product datasheet Dimensions Drawings

## RM35LM33MW

## Level Control Relays

## **Dimensions and Mounting**



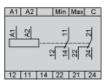


# Product datasheet Connections and Schema

## RM35LM33MW

## Level Control Relays

## Wiring Diagram



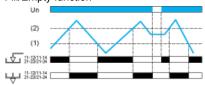
# Product datasheet Technical Description

## RM35LM33MW

### **Function Diagrams**

#### Control of Two Levels

### Fill/Empty function



#### Legend

Un Supply voltage

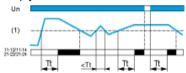
- (1) Min. level
- (2) Max. level

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

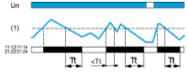
Relay status: black color = energized.

#### Control of One Level

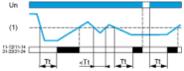
#### Empty function T on



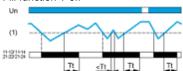
#### Empty function T off



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.