

Operation

Bottom Mounting



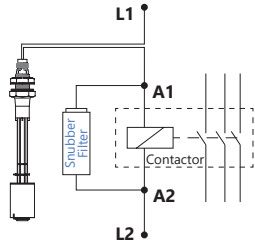
NO Normally Open NC Normally Closed



Top Mounting



Typical Connection to Contactor



Switch **NO/NC - SPST**
Output **Contact ON/OFF**
Enclosure Rating **IP66**

! Never connect the sensor to a motor, pump, lamp or any other load over 20W. Always use a contactor or relay.

The sensors work in all voltage and current ranges displayed in the table below:

Operating Voltage	Max. Switching Power	Max. Switching Current	Peak Current
110Vac	20VA	0.2A	0.5A @20ms
220Vac	20VA	0.1A	0.5A @20ms
5Vdc	2.5W	0.5A	1A @20ms
12Vdc	5W	0.5A	1A @20ms
24Vdc	10W	0.5A	1A @20ms

24Vac: NOT recommended

Term of Warranty

For installations according to this guide: 02 (two) years warranty. **INCORRECT INSTALLATION CANCELS THE WARRANTY.** All Sensors have been tested and approved during the manufacture process.

Chemical products require tests by the customer to verify compatibility with the constructive material of the sensor.

Liquids with ferrous particles require technical analysis: the Sensor has magnetic component inside.

On datasheets.eicos.us available technical specifications

+55 (15) 3032.9190

Electrical Contact of Sensors - Attention to Install

Reed Switch 20W/VA: Protect the Electrical Contact of your Sensor



Reed Switches are hermetically sealed contacts actuated by a magnetic field.

The life expectancy of a reed switch refers to a kind of load to be used. Reed Switches of the highest reliability are applied in our sensors, and their life expectancy can reach above two million operations. However, when they are switching lamps, inductive or capacitive loads, this number may decrease.

Switching Power

It is important to consider that the power specified by an electrical load is often referred to the permanent working state.

For higher power, use an auxiliary relay or contactor as recommended below, or similar.

Siemens 3RT1015 Contactor

Initial: 31.7VA

Rated: 5.1VA

Note: Reed Switches have reached over one million operations in tests with contactor and **K8*** snubber filter.

*On accessories.eicos.us check models and prices of Filters

Level Switches

Models for Vertical Mounting



IMPORTANT !
YOU MUST CHECK BEFORE INSTALLATION

• **AUXILIARY CONTACTOR (mini contactor) mind the distance:**



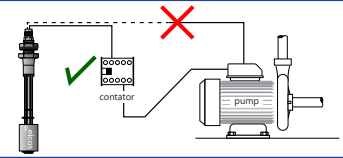
• **SOLENOID VALVE or POWER CONTACTOR:**
Use **mini contactor** or **auxiliary relay**.

• **ELECTRONIC EQUIPMENT:**

> Interface relay/relay coupler: Use **4K7 10W resistor**.
> Timing relay, level relay and frequency inverter: Use **220R 5W* resistor**.

• **CONNECTION WITH CONTACTOR:**

Initial Power
Rated Power
Should be less than **20W**.



AC Current: Use **K8* Filter** in parallel with the coil (A1 A2) of a contactor or relay.
DC Current: Use **KD* Filter** in parallel with the coil (A1 A2) of a contactor or relay.

*For sale on accessories.eicos.us

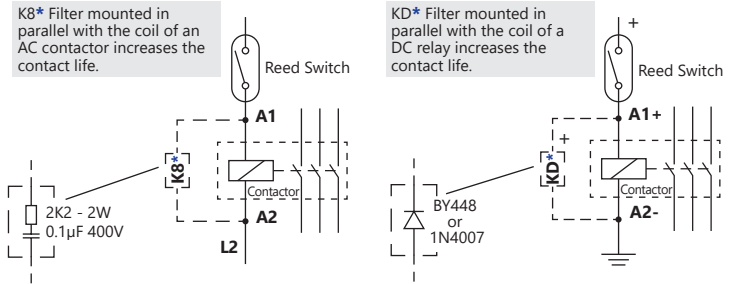
Questions? Call us BEFORE you install:

+55 (15) 3032.9190

levelsensor.eicos.us | datasheets.eicos.us | videos.eicos.us

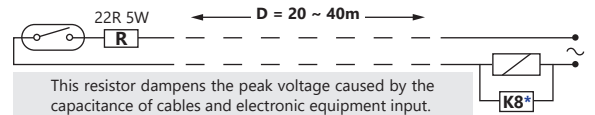
PROTECTION PROCEDURES BELOW DESCRIBED CAN IMPROVE THE REED SWITCH PERFORMANCE

• Switching inductive loads



? Risk of failure (welding of the Reed Switch Contact) due to CAPACITANCE, which can occur depending on the distance and cable used in the connection to the contactor.

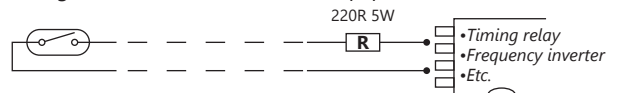
• Connecting the sensor to a contactor in long distances, use resistor:



This resistor dampens the peak voltage caused by the capacitance of cables and electronic equipment input.

! Important: For distances **greater than 40m**, use 24Vdc voltage.

• Connecting the sensor to an electronic equipment:



! Important: For installation with **relay coupler**, use 4K7 10W resistor.

For better sealing, the internal surface of the tank must be free of roughness.

Internal Vertical Mounting in Ø16mm Hole

With 150mm to 500mm Length + M12 Plug



CE

Technical Specifications

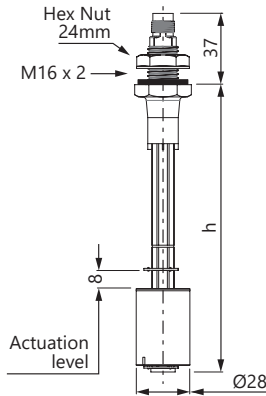
Material	PPA
Operating temperature range	-10°C to 90°C
Maximum operating pressure	2bar
Color	Black
Liquid minimum density (SG)	0.70
Sealing	NBR gasket
Output connection	M12 plug

PPA Polyphthalamide:
For water, oil and fuels.

- Electrical contact: Reed Switch 20W/VA;
- Mounting: internal in through hole with sealing gasket;
- NO or NC, by inverting the float position;
- Works on the top or bottom of the tank;
- 1 or 2 detection points;
- Stem length from 150mm to 500mm.

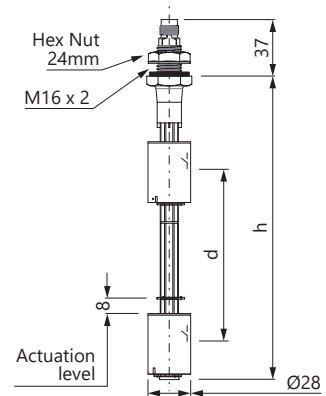
Models with 1 Detection Point and Electrical Output in M12 Plug (2 pins)

	Stem length (h)
LE151-M12	150mm
LE201-M12	200mm
LE251-M12	250mm
LE301-M12	300mm
LE351-M12	350mm
LE401-M12	400mm
LE451-M12	450mm
LE501-M12	500mm



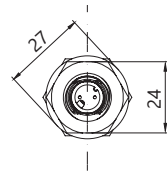
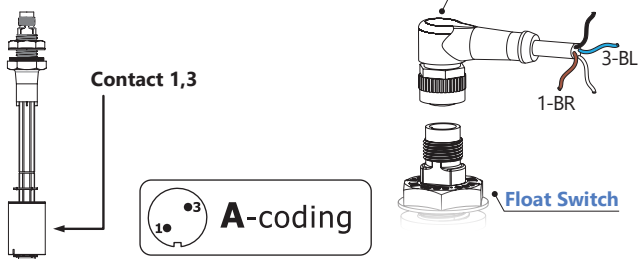
Models with 2 Detection Points and Electrical Output in M12 Plug (4 pins)

	Stem length (h)	Distance between points (d)
LE152-1-M12	150mm	63mm
LE202-1-M12	200mm	113mm
LE252-1-M12	250mm	163mm
LE302-1-M12	300mm	213mm
LE352-1-M12	350mm	263mm
LE402-1-M12	400mm	313mm
LE452-1-M12	450mm	363mm
LE502-1-M12	500mm	413mm

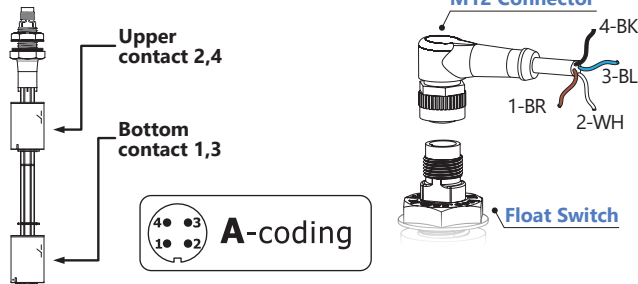


M12 Plug Sensors Installation

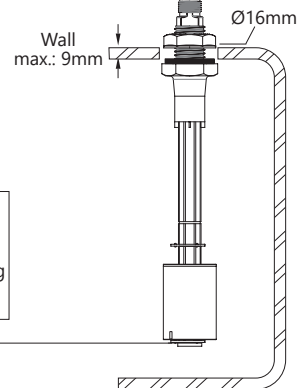
• 2 pins



• 4 pins



Wall max.: 9mm



Removable ring to switch the float position

Dimensions in millimeters

On levelsensor.icos.us check models and prices of Level Switches

Flow Switches and Level Switches for liquids