

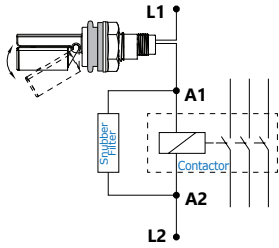
Operation

NO Normally Open

Float downwards



Typical connection to contactor



Switch **NO - 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:

01 (one) year 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.icos.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.

Siemens 3RT1015 Contactor

Initial: 31.7VA
Rated: 5.1VA

Weg CW07 Mini Contactor*

Initial: 19.3VA
Rated: 5.5VA

Schneider CA2KN Contactor

Initial: 30VA
Rated: 4.5VA

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

*On accessories.icos.us check models and prices of Filters and Mini Contactor

Contrasseco Sensor C1 M12



WARNING!

Recommendations for installation of ICOS Level Sensors

For Pumps Protection, refer to the back of this manual.

Connection with cable length 20 to 40 meters:

For distances longer than 40m, use 24Vdc voltage (without the resistor)

Conexión con:
- Timing Relay
- Frequency Inverter

For installation with Relay Coupler, use 4K7 10W resistor

Resistor **22R 5W** in series is required



Resistor **220R 5W** in series is required



Connection with Contactor 24Vdc

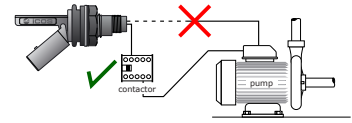
KD Filter is required



Connection with Contactor

Initial Power
Rated Power

Should be less than **20W**



*For sale on accessories.icos.us

Questions? Call us **BEFORE** you install:

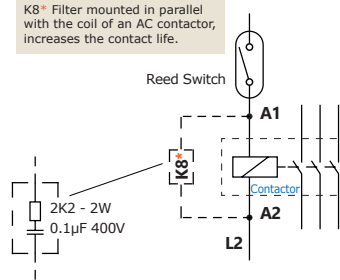
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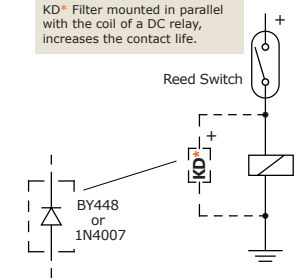
PROTECTION PROCEDURES BELOW DESCRIBED CAN IMPROVE THE REED SWITCH PERFORMANCE

• Switching inductive loads

K8* Filter mounted in parallel with the coil of an AC contactor, increases the contact life.

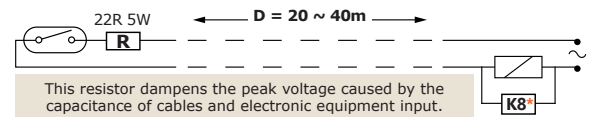


KD* Filter mounted in parallel with the coil of a DC relay, increases the contact life.



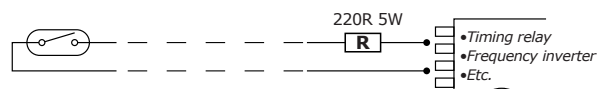
? Risk of failure (**welding of the Reed Switch Contact**) due to CAPACITANCE, which can occur depending on the distance and cable used in the connection to the contactor.

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



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.

Sensor to Detect Lack of Water in Pipelines



Technical Specifications	C1 M12
Material (Body - Display)	Transparent PC
Material (Sensor)	PPA
Operating temperature range	1°C to 60°C
Maximum operating pressure	7bar
Output connection	M12 Plug (2 pins)
Inlet/outlet port	1 1/2" BSPT
Sealing	Sealant tape
Maximum switching voltage	220Vac
Maximum switching capacity	20W/VA

Contrasseco Sensor C1 M12

Manual: Model for Pump Protection



IMPORTANT !
YOU MUST CHECK BEFORE INSTALLATION

Mounting on Outlet Pumps

Install on the outlet pumps according to the Mounting Options* below

Connection

Installation on inlet/outlet port 1 1/2" BSPT, with sealant tape

Float

Install the sensor with the float down (NO), watch the arrow printed on body, according to the Mounting Options* below

Maximum Switching Voltage

220Vac

NEVER CONNECT THE SENSOR DIRECTLY TO THE PUMP!

Constructive Materials

PC Polycarbonate: High impact resistance.
PPA Polyphthalamide: Best mechanical and temperature resistance.
Do NOT use in contact with solvents or diluents.

Questions? Contact us **BEFORE** you install:
sensor@icos.us | +55 (15) 3032.9190

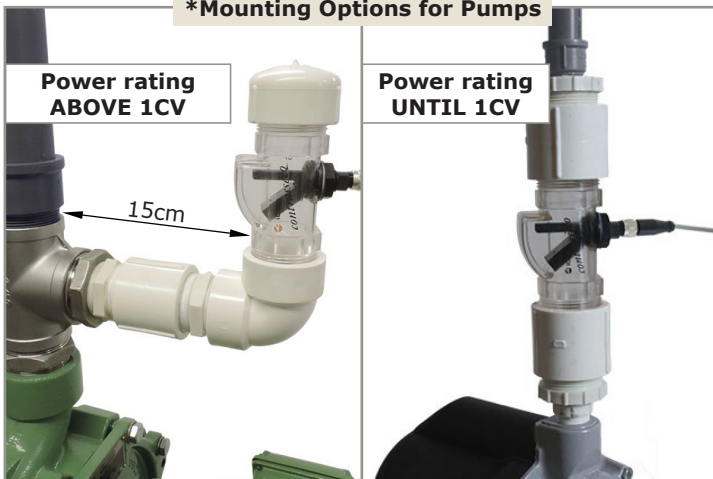
[On datasheets.icos.us](http://datasheets.icos.us) available technical specifications

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How to Assemble the Contrasseco Sensor to Protect The Centrifugal Pump Against Dry Running

*Mounting Options for Pumps

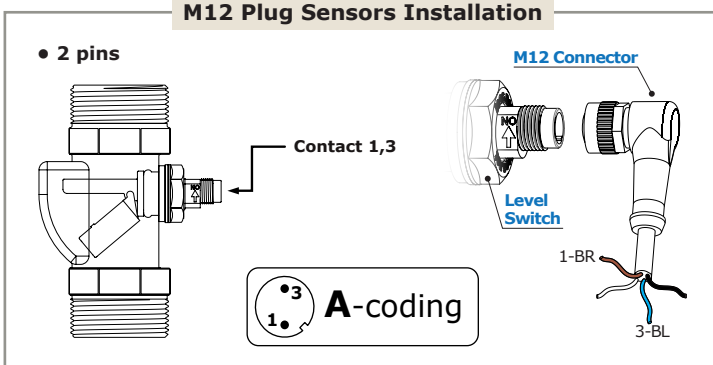


Power rating ABOVE 1CV

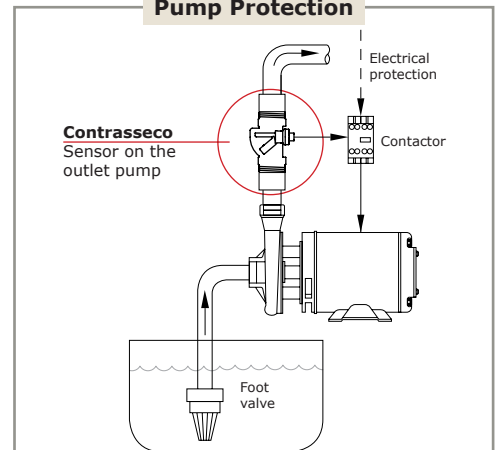
Power rating UNTIL 1CV

15cm

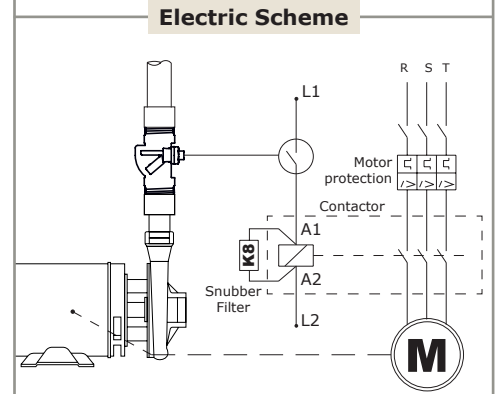
M12 Plug Sensors Installation



Pump Protection



Electric Scheme



Dimensions in millimeters

[On contrasseco.icos.us](http://contrasseco.icos.us) check prices of Contrasseco Sensor

Flow Switches and Level Switches for liquids

Make it Easy