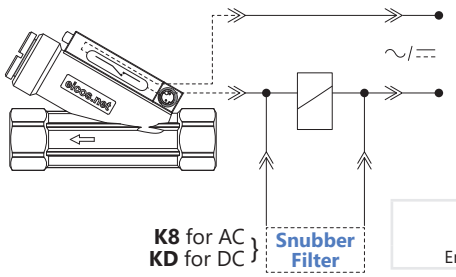
Typical Connection to Contactor



Installing the snubber filter extends the lifespan of the sensor's electrical contact.

! Never connect the sensor directly to a motor, pump, lamp or any other load over than 20W.

Always use a contactor or relay

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

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

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:** Use with *Schneider relay coupler model RSLZVA1* or equivalent.
- **Relay coupler (110Vac-220Vac):** Use *4K7 10W resistor* in series.

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.

Liquids with solid particles and/or fouling require prior testing. Use filter before the sensor to prevent the internal piston from locking. Not recommended for industrial water waste.

Liquids with ferrous and/or magnetic particles require technical analysis: the sensor contains magnetic components inside. Use a magnetic filter before the sensor to avoid deposition/settling that will prejudice its operation.

*On **datasheets.eicos.us** available technical specifications*

eicos
eicos.net

Manual
C.02/Oct2021

Flow Switches

Models for G 3/4" Port
FC Series

IMPORTANT !
YOU MUST CHECK BEFORE INSTALLATION

flowsensor.eicos.us | datasheets.eicos.us | videos.eicos.us

Follow the instructions below to protect and extend the shelf life of the sensor:

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

*Direct connection to the **sensor*** — **20m** — *Use **22R 5W*** resistor** in series* — **40m** — *Use **24Vdc Voltage***

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

- **ELECTRONIC EQUIPMENT:**
  › **Interface relay/relay coupler:** *Use **4K7 10W resistor.***
  › **Timing relay and frequency inverter:** *Use **220R 5W*** resistor.***

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***

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.

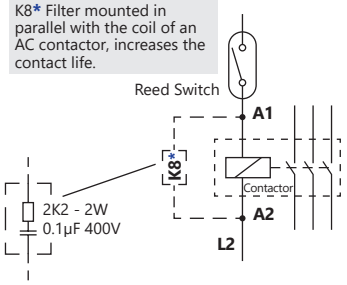
Siemens 3RT1015 Contactor
Initial: 31.7VA
Rated: 5.1VA

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

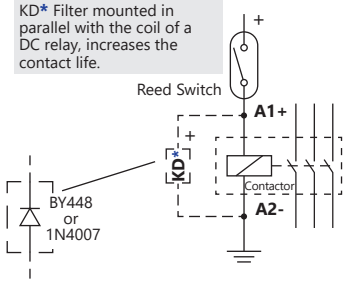
PROTECTION PROCEDURES BELOW DESCRIBED CAN IMPROVE THE REED SWITCH PERFORMANCE

- Switching inductive loads

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

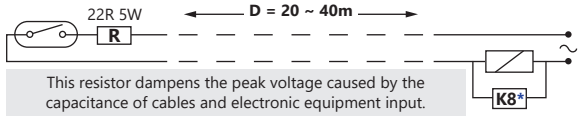


KD* Filter mounted in parallel with the coil of a DC relay, increases the contact life.



? 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.

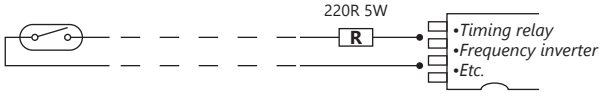
- Connecting the sensor to a contactor in long distances, use resistor:



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.

Suitable for Detection of Medium Flows

Fluid flow through the sensor triggers precise displacement of a magnetic piston acting on an electrical contact (Reed Switch).

Technical Specifications

Body	**PPA (Polyphthalamide)**
Spring	**AISI 302 stainless steel**
Internal clearance	**266mm²**
Maximum operating pressure	**25bar**
Operating temperature range	**0°C to 100°C | 140°C @1h**
Inlet/outlet port	**G 3/4" female (BSP - Parallel)**
Sealing	**NBR (nitrilic rubber) O'Ring**
Output connection	**M12 male connector (2 pins)**
	M12 female connector NOT included
Enclosure rating	**IP66**
Electrical contact	**Reed Switch 20W/VA (NA SPST)**
Weight	**300g**

Adjustable Actuation Ranges

FC34B02-M12

CONTACT	WATER @ 25°C (LPM) min.	WATER @ 25°C (LPM) 50%*	OIL 68 cSt @ 40°C (LPM) min.	OIL 68 cSt @ 40°C (LPM) 50%*
ON	2.0	13.0	-	-
OFF	1.0	11.0	-	-

FC34B04-M12

CONTACT	WATER @ 25°C (LPM) min.	WATER @ 25°C (LPM) 50%*	OIL 68 cSt @ 40°C (LPM) min.	OIL 68 cSt @ 40°C (LPM) 50%*
ON	3.5	25.0	2.0	20.0
OFF	2.5	20.0	1.0	16.0

FC34B06-M12

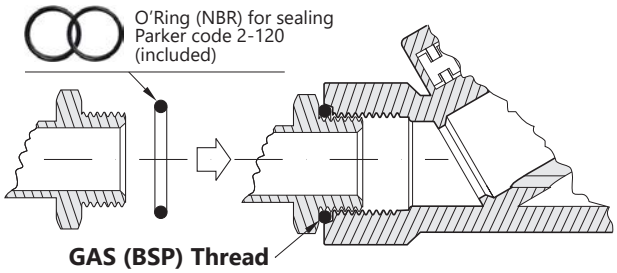
CONTACT	WATER @ 25°C (LPM) min.	WATER @ 25°C (LPM) 50%*	OIL 68 cSt @ 40°C (LPM) min.	OIL 68 cSt @ 40°C (LPM) 50%*
ON	8.0	40.0	4.0	36.0
OFF	5.0	30.0	2.0	30.0

* *Half-scale reference*

Installation

- In applications without excessive vibration;
- Minimum distance of 20mm from any ferrous surface;
- Mounting with parallel port connection and O'Ring.

Sealing



GAS (BSP) Thread

The sealing is made on the **ring.**
It's not necessary sealant tape or over tightening

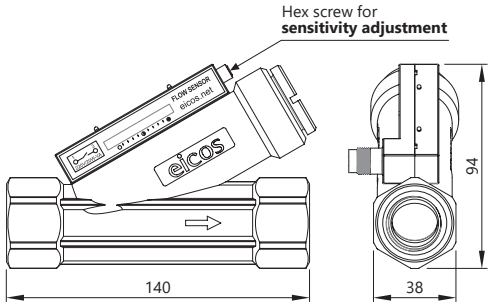
Check compatibility with NPT thread on datasheets.eicos.us

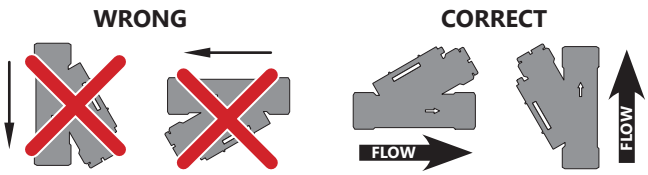
Flow Rate Sensitivity Adjustment

Results of the sensitivity test (fixed in the package)

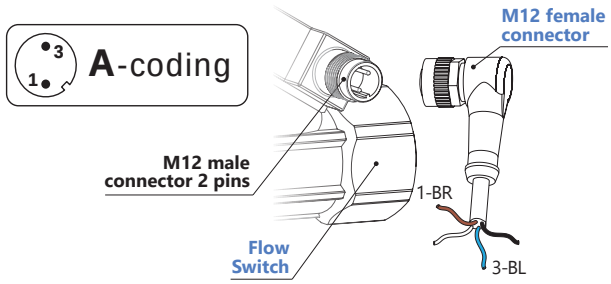
Mounting

Dimensions in millimeters.





Electrical Connection



Maintenance

1. Open the plug, remove the spring and clean using a brush if there is encrustation;
2. Mount the sensor again as illustrated beside;
3. Test the electrical contact using an ohmmeter, moving the magnetic piston.