#### DRAFT MANUAL

# **Measurement & Float Level Switches**

Flexible leaf switch (ILS/REED)

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#### Use

Level devices with floats are used for all industries requiring a system of regulation and control where they must predetermine one or more thresholds to deliver a function by dry contact or continuous signal.

- Detection or measurement of level in a liquid medium.
- Implementation guick and easy, without removing the floats.
- Simple design offering a safe and reliable operation.

#### Introduction

A Float Detection Probe with Flexible Leaf Switch (ILS or REED) comprises:

- A Connection head or a direct output via wire.
- A Fixing system nearby: connection or flange.
- A sealed **Guide tube** immersed in the liquid medium, inside which are positioned one or more ILS (REED), at predetermined levels.
- On the tube, there are one or more **Floats**, equipped with permanent magnets, in which the travel is limited by the stop rings.

### A Float Level Transmitter comprises:

- A Connection head or a direct output via wire,
- A Fixing system in the process: connection or flange,
- A sealed Guide tube immersed in the liquid medium,
- A **Printed circuit**, mounted inside the tube, incorporating an ILS and Resistances chain.
- A **Float**, equipped with permanent magnets, sliding along a guide tube.



#### **Functions**

<u>Level Detection Sensor</u>: the float has a permanent magnet whose magnetic field approximates the contact leaves as long as it is in the area of influence of this field. N.B.: **ILS (Reed)** have a low breaking power. The use of a protection relay is recommended (see R2F2 Manual).

<u>Level Transmitter</u>: the float moves with the level and controls the ILS closure, entailing an ohmic variation of the resistor chain. This variation is used by a converter that delivers a 4/20 mA analogue signal.

## **Technical specifications**

These are detailed in the manuals specific to each device or family of devices.

	Manual code	Features
Detector	DF30	Brass or stainless steel to length < 1 metre
	DF40	All PVC
	DF60	Stainless Steel for lengths > 1 metre
	AUTODFB2P	Dual function - two points for Detection + Water level in the tank bottom
	AUTODFRI	Referenced MABEC (Automobile Industry)
	215 652	Mounting on Flange, with four detectors maximum
	OL	Miniature stainless steel floats Ø28, Ø25 plastic/Vertical or Horizontal
		OLV-25: Angled Guide tube for Side Mounting/All SS/float Ø28
	FH/SH	Ø52 stainless steel miniature floats/Vertical or Horizontal Installation
Transmitter	MF60	Level Transmitter with Float
	MF07	Converter 4/20 mA
Accessories	R2F2	Contact protection relay

# Other Float families

Magnetic transfer devices – see **H12 & ES40 manuals** Level Pears with Cable – see **PEAR manuals 1 to 3**.





