



## User's Manual

### RECEPTION

Check that the level instrument is mechanically correct by means of the following inspection:

- The float (4) slides smoothly along the rod (3) (do it carefully by hand in moving the float up and down).
- The rod (3) does not have any shock and is not bent.
- The bottom float stop (7) at the rod is in place.

Check with a multimeter that when the float slides along the rod, the reed switch is activated in changing the output from NO to NC or vice versa (depending on the wiring according to attached diagram).

Check that the switching points correspond to the required ones.

Check that the float density is inferior than the density of the liquid and that the float is in the correct position (the mark UP engraved at the top of the float indicates that this side of the float must be up).

### INSTALLATION

The mounting of the level switch is vertical. The float level varies accordingly with the level of the liquid.

Mount the seal on the flange or the coupling thread.

Introduce with care the float through the mounting hole until the flange or coupling thread couples with the tank. Fix the flange with the appropriate nuts & bolts.

You could mount, if the installation so require, the float by the inside of the tank, in removing the bottom float stop (7).

In the case of a coupling thread, turn until tight. **Do not apply torques greater than 60 Nm.**

### REED SWITCHES

The LC's series has two types of contacts for level indication, RSC and Bi-stable RBC. The difference is in the status of the contact once the float has passed the contact.

#### Series RSC

The RSC is a reed switch without "memory". It is only activated in presence of the magnetic field of the float. If the float moves away from position of the switch, the switch returns to its non-active position, which is the same for the float being above or below the switch.

This system provides an indication of when the level is at the same position as the reed switch

but will not provide an indication of the level away from this point. That is, it provides an indication of actual level but not high or low level.

#### Series Bi-stable RBC

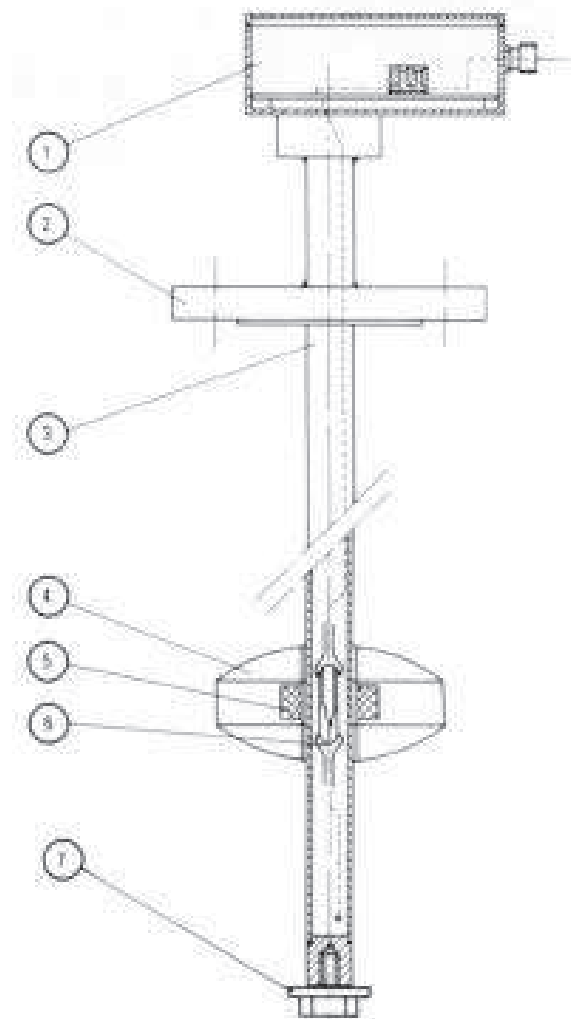
The bi-stable RBC reed switch remains in its switched position after the float has passed. It will remain in one position when the float is below and remains in the opposite position while the float is above the reed switch. This provides a High/Low indication but not indicate the exact position of the level.



## Technical Data

- Mounting: Vertical.
- Connection: DN-40 PN-16 DIN 2501 Flange.  
R 1½" BSP thread.  
(Others available on request).
- Maximum length: AISI-316 ... 6000 mm.  
PVC, PTFE ... 2500 mm.  
PVC, PTFE ... 6000 mm  
(internal AISI-316).
- Precision:  $\pm 2$  mm.
- Hysteresis:  $\pm 4$  mm.
- Working pressure:  
PN-16 AISI-316.  
PVC, PTFE with internal AISI-316 tube.  
PN-10 PVC, PTFE.
- Liquid temperature:  
-20°C...+150°C en AISI-316, PTFE.  
0°C...+50°C PVC.
- Ambient temperature:  
-20°C...+60°C AISI-316, PTFE.  
0°C...+50°C PVC.
- Liquid density: From 0,45 to 3 kg/l.
- Liquid viscosity: Maximum 1500 cSt.
- Contacts: Reed 1 A 220 V.  
(maximum 9 with minimum separation  
of 20 mm)

Conforms with Directive 73 / 23 / CEE



## CONSTRUCTION

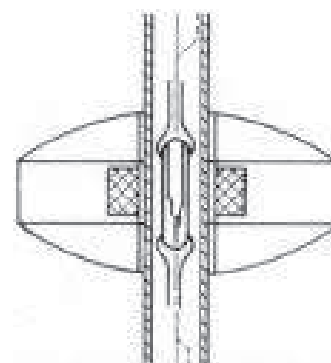
No.	Piece	Materials		
		LC-.../INOX	LC-.../PVC	LC-.../PTFE
1	Enclosure	DIN 43650/ Aluminium	DIN 43650/ Aluminium	DIN 43650/ Aluminium
2	Connection	AISI-316	PVC	PTFE
3	Rod	AISI-316	PVC	PTFE
4	Float	AISI-316	PVC	PTFE
5	Magnet	Alnico	Alnico	Alnico
6	Reed switch	-	-	-
7	Float stop	AISI-316	PVC	PTFE

## OPERATION

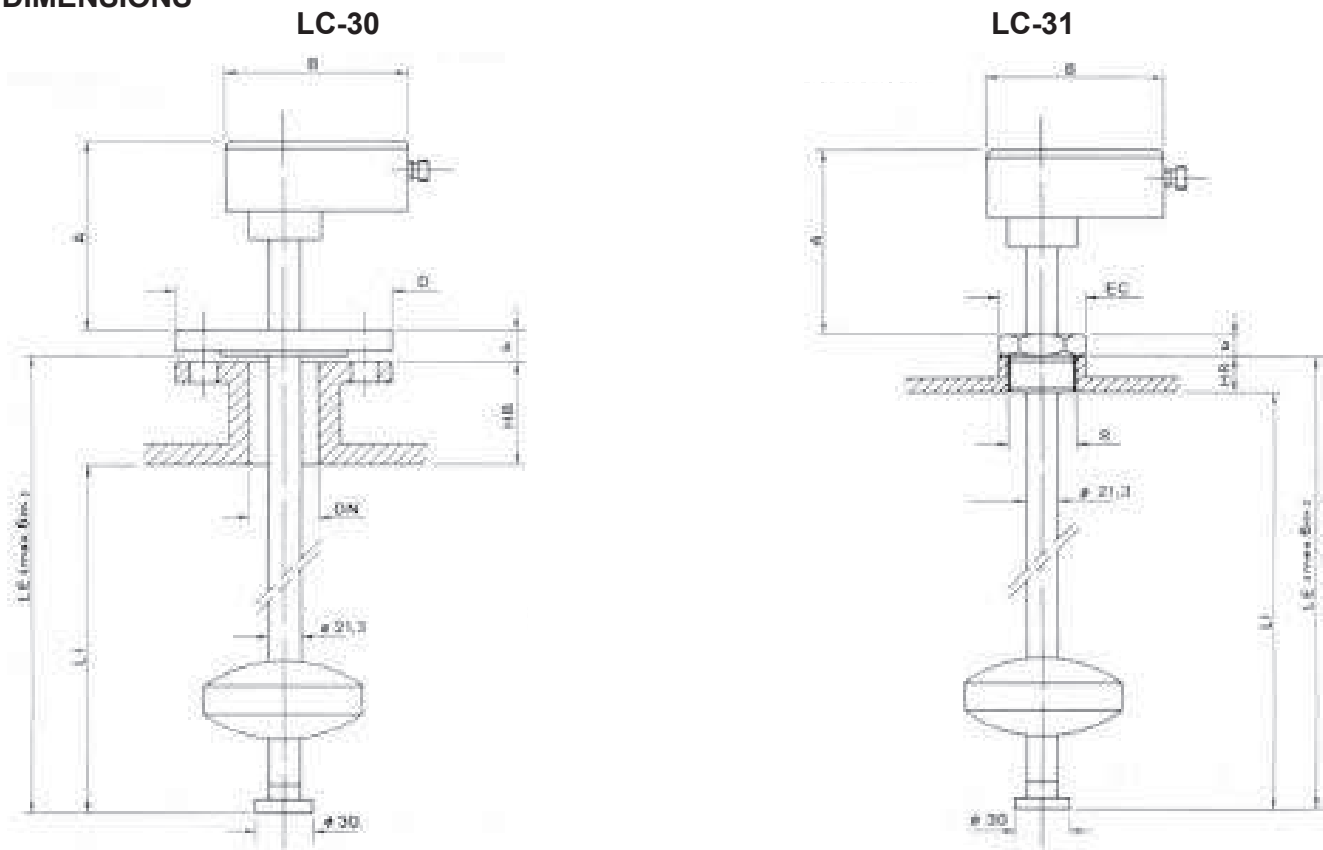
Inside the guide tube, reed switches are mounted at the alarm/control points..

As the float passes the position where a reed switch is located, the magnetic field from the float activates the switch.

The maximum number of alarm or control points is 9.



DIMENSIONS



LC-30

DN	PN	D	k	g	Lxno.	b	A	B	HB	LE	LI
25*	40	115	85	68	14x4	18	160	125	Related to the individual measuring range.		
40	16	150	110	88	18x4	18	160	125			
100*	16	220	180	158	18x8	20	160	125			
150*	16	285	240	212	23x8	22	160	125			

( \* on request )

LC-31

R	EC	b	A	B	HR	LE	LI
1 ½"	60	22	160	125	30	Related to range	

WIRING

The wiring should be made according to the attached diagram.

When using inductive loads, such as relays or electro-valve coils, surge arresters should be installed to protect the reed contacts.

With a dc supply, a diode should be used.

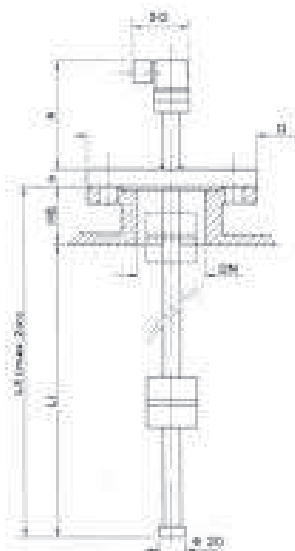
For an ac supply, an RC circuit can be used as shown, although a varistor (VDR) is better and is easier to select the right value.

The VDR should have a breakdown voltage greater than 1.5 times the rms voltage.

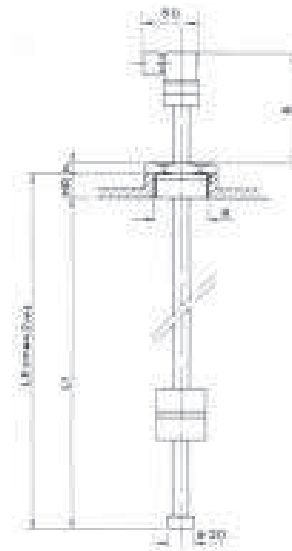
The standard varistor ratings specify the rms working voltage for the varistor, for example a S05K25 varistor will be for 25 V<sub>rms</sub> working and will have a breakdown voltage of 39 V at 1 mA.

## DIMENSIONS

**LC-M12**



**LC-M11**



**LC-M12**

DN	PN	D	k	g	Lxno.	b	A	HB	LE	LI
25	16	115	85	68	14x4	18	100	Related to range		

**LC-M11**

R	EC	b	A	HR	LE	LI
1 1/2"	60	22	100	30	Related to range	

## WARRANTY

TECFLUID guarantees all the products for a period of 24 months from their sale, against all faulty materials, manufacturing or performance. This warranty does not cover failures which might be imputed to misuse, use in an application different to that specified in the order, the result of service or modification carried out by personnel not authorized by Tecfluid, wrong handling or accident.

This warranty is limited to cover the replacement or repair of the defective parts which have not damaged due to misuse, being excluded all responsibility due to any other damage or the effects of wear caused by the normal use of the devices.

Any consignment of devices for repair must observe a procedure which can be consulted in the website [www.tecfluid.fr](http://www.tecfluid.fr), "After-Sales" section.

All materials sent to our factory must be correctly packaged, clean and completely exempt of any liquid, grease or toxic substances.

The devices sent for repair must enclose the corresponding form, which can be filled in via website from the same "After-Sales" section.

Warranty for repaired or replaced components applies 6 months from repair or replacement date. Anyway, the warranty period will last at least until the initial supply warranty period is over.

## TRANSPORTATION

All consignments from the Buyer to the Seller's installations for their credit, repair or replacement must always be done at freight cost paid unless previous agreement.

The Seller will not accept any responsibility for possible damages caused on the devices during transportation.

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