

Level switches Series LC



Float level switch for liquids

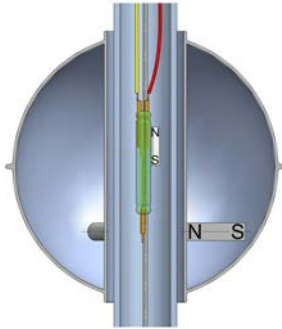
- Simple construction
- Top mounted, or side mounted by means of external chamber
- Watertight and safe installation
- Excellent chemical resistance
- Accuracy: ± 2 mm
- Connections:
 - EN 1092-1 flange. Other flange standards on request (ANSI, JIS,...)
 - Threaded connections BSP or NPT
- Materials: EN 1.4404 (AISI 316L), PVC, PP, PVDF, PTFE
- Level detection:
 - 1 ... 6 reed switches, depending on length and model



Working principle

By means of float with magnetic field and reed switches.

One or more reed switches are placed at a specific height inside a guide tube. The changes in liquid level modify the float position in this guide tube, so that when it reaches the switch position, it changes its status, providing an output signal for level detection.



Applications

- Pumps start-stop
- Control of industrial processes and dosing tanks
- Storage for food and beverage industry
- Level control in shipping industry
- Chemical and textile industry

Models

- **Models LCM:** guide tube length shorter than 2000 mm. Maximum 3 RBC reed switches (or 3 RBC + 1 SPST on request). Minimum liquid density 0.8 kg/l
- **Models LC:** guide tube length longer than 2000 mm or more than 3 RBC reed switches. Minimum liquid density 0.6 kg/l

- LC ... LCM30 flanged connection
- LC ... LCM31 threaded connection

Technical data

- **Accuracy:** ± 2 mm
- **Hysteresis:** ± 4 mm
- **Liquid density:**
 - Models LCM: ≥ 0.8 kg/l
 - Models LC: ≥ 0.6 kg/l
- **Maximum liquid viscosity:** 1500 cSt
- **Measuring range:**
 - Models LCM: 150 ... 2000 mm
 - Models LC:
 - EN 1.4404 (AISI 316L): 150 ... 6000 mm
 - PVC / PP / PTFE / PVDF: 150 ... 2500 mm
 - PVC / PP / PTFE / PVDF, with AISI 316L inside: 150 ... 6000 mm

Others on request

- **Liquid temperature:**
 - EN 1.4404 (AISI 316L): $-20^{\circ}\text{C} \dots +150^{\circ}\text{C}$
 - PTFE, PVDF: $-20^{\circ}\text{C} \dots +150^{\circ}\text{C}$
 - PVC: $0^{\circ}\text{C} \dots +50^{\circ}\text{C}$
 - PP: $-10^{\circ}\text{C} \dots +90^{\circ}\text{C}$
- **Ambient temperature:**
 - EN 1.4404 (AISI 316L): $-20^{\circ}\text{C} \dots +60^{\circ}\text{C}$
 - PTFE, PVDF: $-20^{\circ}\text{C} \dots +60^{\circ}\text{C}$
 - PVC: $0^{\circ}\text{C} \dots +50^{\circ}\text{C}$
 - PP: $-10^{\circ}\text{C} \dots +60^{\circ}\text{C}$
- **Working pressure:**
 - EN 1.4404 (AISI 316L) and PVC / PP / PTFE with AISI 316L inside: PN16
 - PVC / PP / PTFE: PN10

Others on request

- **Connections:**
 - Models LCM:
 - EN 1092-1 DN50 flange
 - G1½ or 1½" NPT thread
 - Models LC: EN 1092-1 DN100 flange
- Others on request
- **Ingress protection:** IP67 for plastic housing. IP65 for connector DIN43650 and aluminium housing.
- **Mounting:** vertical on top of the tank or in a side chamber
- **Special design** with bent rod on request
- **Suitable for hazardous area**, considered as "Simple apparatus" intrinsically safe

Limit switches

- **Switches RBC or RSC.**

Technical data:

- Reed switch 1A 220V 60VA
- Maximum 6 switches
- Minimum distance between switches = 70 mm

- **Bi-stable model RBC:** When the float passes the switch position in one direction, it changes its status and keeps it until the float passes again in the opposite direction. This way the switch status shows directly whether the float is above or below the switching position.

One float can activate several switches. Each one will indicate its status independently.

- **Mono-stable model RSC:** The switch changes its status only when the float is at its position. Since the switch must indicate whether the liquid level is above or below the switching point, a float stop that prevents the float to rise above the switching position is mounted.

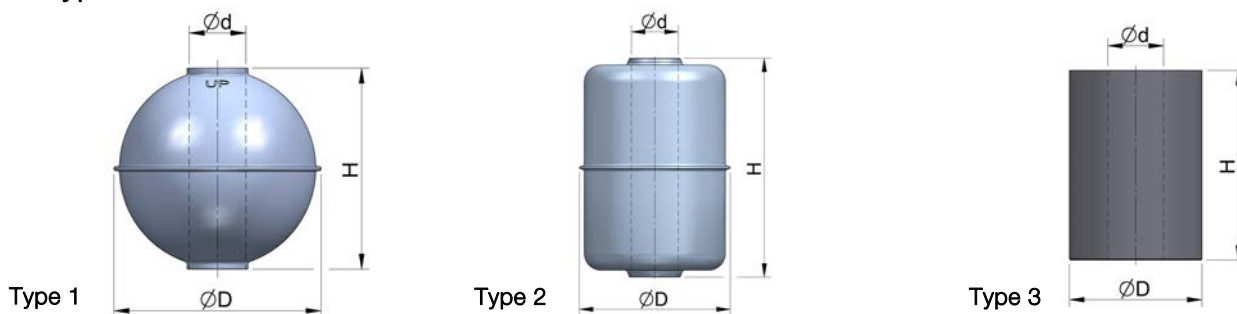
If the level detector is equipped with more than one switch, one float for each switch is required.



Level switches

Series LC

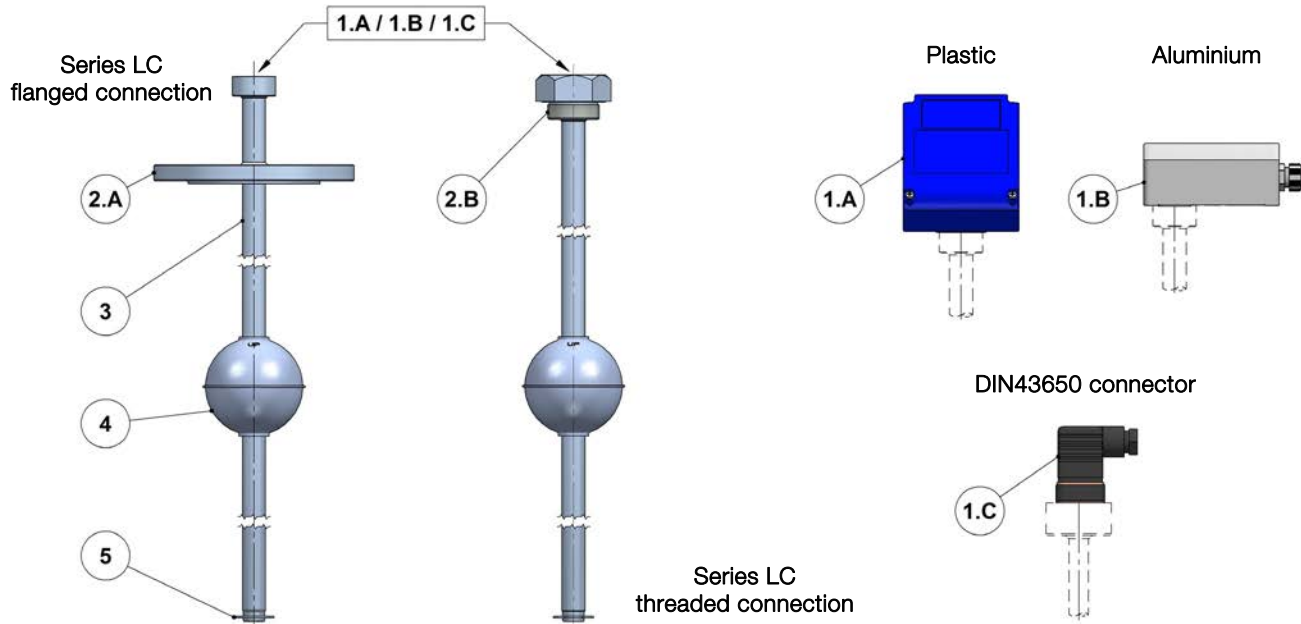
Float types



	Floats models LC						Floats models LCM				
	Type 1		Type 3				Type 1	Type 2	Type 3		
Material	EN 1.4404	EN 1.4404	PVC	PP	PVDF	PVDF	EN 1.4404	EN 1.4404	PVC	PP	PVDF
PN	25	25	10	10	10	10	25	25	10	10	10
d_{min}	0.6	0.65	0.8	0.7	0.8	1.0	0.75	0.8	0.8	0.7	1.0
T_{max}	150	150	45	90	135	135	150	150	45	90	135
ØD	115	95	63	63	63	63	52	44	45	45	45
H	112	92	90	90	150	90	52	64	70	70	70
Ød	26	26	26.5	26.5	27	27	13.5	13,5	17	21	17

EN 1.4404 = AISI 316L

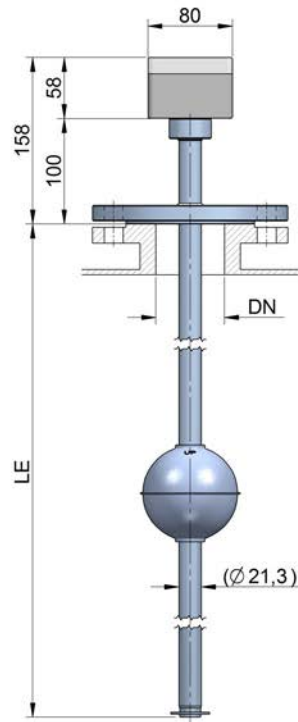
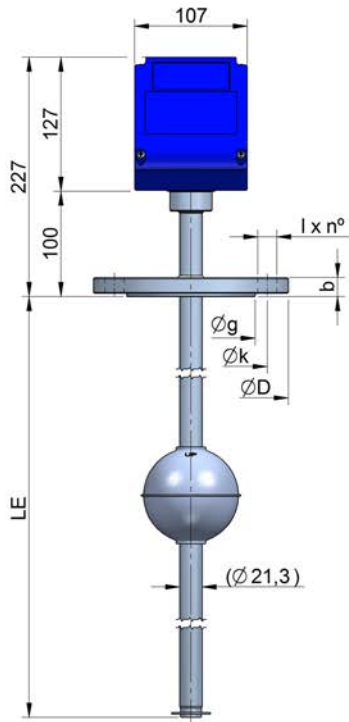
Materials



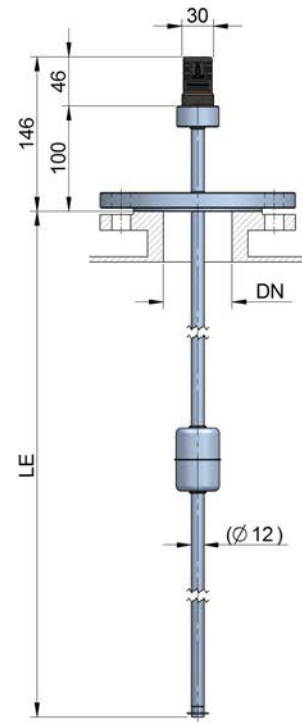
N°	Description	Materials		
		LC ... LCM / INOX	LC ... LCM / PVC ... PP ... PVDF	LC ... LCM / PTFE
1.A / 1.B	Housing	Polycarbonate / Aluminium		
1.C	Connector	Polyamide		
2.A / 2.B	Flange / Thread	EN 1.4404 (AISI 316L)	PVC ... PP ... PVDF	PTFE
3	Guide tube	EN 1.4404 (AISI 316L)	PVC ... PP ... PVDF	PTFE
4	Float	EN 1.4404 (AISI 316L)	PVC ... PP ... PVDF	PTFE
5	Float stop	EN 1.4404 (AISI 316L)	PVC ... PP ... PVDF	PTFE

Dimensions

Models LC

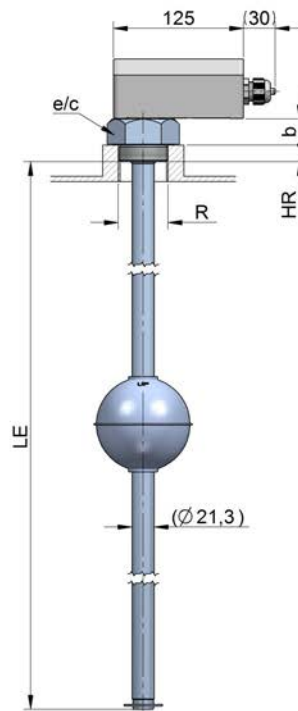
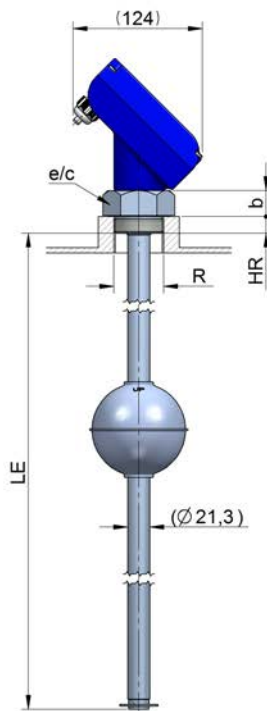


Models LCM

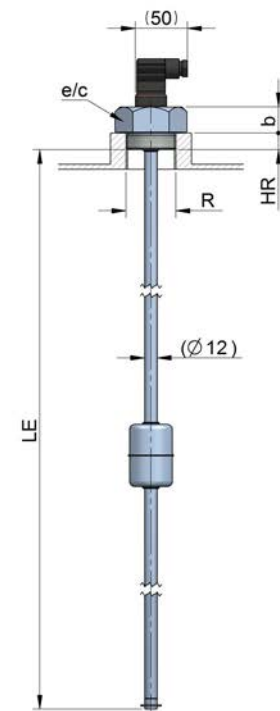


Models	DN	PN	D	g	k	l x n°	b	LE
LCM	50	40	165	102	125	18 x 4	20	Acc. to order
LC	100	16	220	158	180	18 x 8	20	

Models LC



Models LCM



Models	R	e/c	b	HR	LE
LC / LCM	G1½	60	25	16	Acc. to order

The different housings can be used with all models of level switches. Drawings are shown only for dimensional data. Standard connections are shown. Others on request.

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