

## Float Level Probe with Controller LCF

- ◆ 2-level control with 1 relay output
- ◆ User-selectable filling or drainage control
- ◆ Various float types
- ◆ 135 °C maximum liquid temperature
- ◆ Mains or low-voltage power supply
- ◆ Vertical adjustment option
- ◆ Cost saving solutions

COMECO's level controller LCF combines a 2-point float-type level probe LCSFC and a standard LC05 controller installed inside an ABS protective enclosure with IP66. Large variety of versions based on different plastic and stainless steel floats is available. Floats with different dimensions and specific gravity are available for liquid density down to 0.5 g/cm<sup>3</sup>, temperature up to 135 °C, and pressure up to 50 bar. Various process connections as well as an option for vertical adjustment are available. LCF can be used for liquid filling or emptying control by switching on and off vessel supply or drainage devices such as pumps and magnet valves. The controller allows the operator to select relevant output relay action for either supply or drainage control. Thanks to the compact combination of probe and in-head controller, LCF can be very useful for building cost-saving level control applications.



### Probe specifications

Model	LCF												
<b>Specifications</b>													
<b>Float type</b>	N1	P1	P10	P2	P3	P4	S0/S1/S7/S10	S2	S3/S4	S11	S5	S6	
<b>Float material</b>	NBR	PP	PP	PP	PP	PVDF	SS	SS	SS	SS	SS	SS	
<b>Liquid density [g/cm<sup>3</sup>]</b>	> 0.80	> 0.60	> 0.72	> 0.60	> 0.50	> 0.70	> 0.80	> 0.70	> 0.65/>0.55	> 0.45	> 0.55	> 0.50	
<b>Ext. tube diameter ('d')</b>	8 mm	8 mm	10 mm	12 mm	16 mm	16 mm	8 mm	10 mm	14 mm	14 mm	16/18 mm	16/18 mm	
<b>Probe length ('L0') [mm]</b>	100...1000	100...1500	100...2500	200...4000	100...1000	100...2000	200...3000	80...4000	300...4000	300...5000			
<b>Min. end-to-float distance ('A') [mm]</b>	23	21	15	37	47	47	22/25/25/29	34	40/39	37	50	70	
<b>Min. float running distance ('B') [mm]</b>	27	24	17	52	62	62	25/30/30/34	40	57/54	60	75	110	
<b>Process temperature</b>	-20...100 °C		-20...80 °C			-30...125 °C		-20...135 °C					
<b>Max. process pressure</b>	0 bar	5 bar	5 bar	3 bar	3 bar	2 bar	8/10/30/50 bar	30 bar	12/30 bar	15 bar	30 bar	10 bar	
<b>Wetted parts</b>	stainless steel or plastic												
<b>Process connection</b>	min. 1/2" (M20)	min. 1" (M33)	min. 1" (M33)	min. 1" (M33)	min. 1 1/4"		min. 1" (M33)	min. 1/2"	min. 2"	min. 2"	min. 3" or flange		

### Controller specifications

#### Input

**Input type** float position – low or high

#### Output

**Relay electromechanical** 8A/250V w/ NO/NC contact  
**Solid state relay<sup>(1)</sup>** 1A/250VAC  
**MOS gate<sup>(1)</sup>** 0.1A/60V, optically isolated  
**Output for external SSR** 5...24 V, 30 mA  
**Control algorithm** ON/OFF,  
**Operation mode** filling or emptying, user-selectable

#### Indication

**LEDs** red LED for output state

#### Power supply

**Mains supply voltage** 230 VAC or 115 VAC  
**SMPS voltage<sup>(1)</sup>** 90...250 VAC/DC  
**Isolated low voltage** 12...24 VAC/DC<sup>(1)</sup> or 24 VAC  
**Non-isolated low voltage** 24 VDC  
**Consumption** max. 2 VA

#### Operating conditions

**Ambient temperature** -10...65 °C  
**Ambient humidity** 0...85 %RH

#### Design and materials

**Case material** ABS plastic  
**Wiring** screw terminals via PG9 cable glands  
**Dimensions** 80x80x60 mm (w/o glands)  
**Protection class** IP66

<sup>(1)</sup> Ask for availability!

**Ordering code** LCF - G0.G1.G5.G6.G9.G10 - #1

Code	Feature or option	Code values
G0	Power supply	A - 230 VAC, B - 115 VAC, C - 90...250 V <sup>(1)</sup> , D - 24 VDC, non-isolated, Q - 12...24 V, isolated <sup>(1)</sup> , R - 24 VAC
G1	Float	N1 - NBR, ø15x25, P1 - PP, ø24x22, P2 - PP, ø29x50, P3 - PP, ø38x60, P4 - PVDF, ø38x60, P10 - PP, ø29x11, S0 - stainless steel, ø25x25, S1 - stainless steel, ø28x28, S2 - stainless steel, ø40x42, S3 - stainless steel, ø45x55, S4 - stainless steel, ø52x52, S5 - stainless steel, ø73x73, S6 - stainless steel, ø75x108, S7 - stainless steel, ø30x28, S10 - stainless steel, ø30x32, S11 - stainless steel, ø51x61 S20 - stainless steel, ø22x40
G5	Relay output	C - relay NO/NC, D - SSR <sup>(1)</sup> , J - for external SSR, M - isolated MOS gate <sup>(1)</sup>
G6	Operating lengths [mm] <sup>(2)</sup>	L0/L1/L2
G9	Process connection	X - none, Q2 - M20x1.5, Q4 - G1/2", Q5 - M27x2, Q6 - G3/4", Q10 - 1/2" NPT, Q11 - 3/4" NPT, Q12 - G1", Q13 - G1½", Q14 - G2", Q15 - 1" NPT, Q16 - 1½" NPT, Q17 - 2" NPT, Q21 - G3", Q22 - 3" NPT, Q25 - M33x2, Q27 - G1¼", Q28 - 1¼" NPT, F - flange (specify!), Z - other (specify!)
G10	Sheath material	M1 - 1.4301, M2 - 1.4541, M3 - 1.4571, M9 - 1.4404, M15 - 1.4362
#1	Vertical adjustment	X - none, A (SS) - vertical adjustment via stainless steel ferrule installed, A (BR) - vertical adjustment via bronze ferrule installed, A (TF) - vertical adjustment via teflon ferrule installed

<sup>(2)</sup> Specify the exact length (step 50 mm) from the thread, flange, or box bottom to the respective contact according to the limits given in the specification table, strictly observing 'A' and 'B' minimum distances! 1<sup>st</sup> contact → 'L1'; e.g.: LCF - A.S1.C.500/50/200.Q12.M1