

LCF series two point float level controller



Flowtechnik's level controller LCF combines a 2-point float-type level probe LCSFC and a standard LC05 controller installed inside an ABS protection 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 0.45 g/cm³, 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.

- 2-level control with 1 relay output
- User-selectable filling or drainage control
- Various float types & adjustment options
- 135 °C maximum liquid temperature
- Mains or low-voltage power supply

Technical & Dimensional Information

Input type	float position – low or high
Relay electromechanical o/p	8A/250V w/ NO/NC contact
Solid state relay (1)	1A/250VAC
MOS gate (1)	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

Mains supply voltage	230 VAC or 115 VAC
Isolated low voltage	12...24 VAC/DC (1) or 24 VAC
Non-isolated low voltage	24 VDC
Consumption	max. 2 VA
Ambient temperature	-10...65 °C
Case material	ABS plastic
Dimensions	80x80x60 mm (w/o glands)
Protection class	IP66

Model	LCF											
Specifications												
Float type	N1	P1	P10	P2	P3	P4	S0/S16/S10	S2	S3	S4	S5	S6
Float material	NBR	PP	PP	PP	PP	PP	PVCF	SS	SS	SS	SS	SS
Liquid density [g/cm ³]	> 0.80	> 0.80	> 0.72	> 0.80	> 0.80	> 0.70	> 0.80	> 0.70	> 0.65	> 0.55	> 0.55	> 0.50
Ext. tube diameter [ø"]	8 mm	8 mm	10 mm	12 mm	18 mm	16 mm	8 mm	10 mm	14 mm	14 mm	15/16 mm	16/18 mm
Probe length [L0] [mm]	100...1000	100...1500	100...2500	200...4300	100...1500	100...2000	200...3000	200...3000	200...3000	300...4000	300...5000	
Min. end-to-float distance [A] [mm]	23	21	15	37	47	47	22/25/25/29	34	40	39	50	70
Min. float running distance [B] [mm]	27	24	17	62	62	62	25/28/32/34	40	57	64	75	110
Process temperature	-20...100 °C					-20...80 °C		-20...135 °C				
Max. process pressure	0 bar		5 bar		5 bar		3 bar		2 bar		5/10/30/50 bar	
Wetted parts	stainless steel or plastic											
Process connection	min. 3/8" (Ø43)	min. 1/2" (Ø53)	min. 1" (Ø63)	min. 1 1/2" (Ø73)	min. 1 1/2" (Ø73)	min. 1 1/2" (Ø73)	min. 1 1/2" (Ø73)	min. 1 1/2" (Ø73)	min. 2" (Ø51)	min. 2" (Ø51)	min. 2" (Ø51)	min. 3" or Range

Options & Ordering Information

Feature or option	Order Code LCF-X.X.X.X.X.X.X
Power Supply	A - 230 VAC, B - 115 VAC, D - 24 VDC, non-isolated, Q - 12...24 V, isolated*, R - 24 VAC
Float	N1 - plastic, ø17.5x25, P1 - plastic, ø25x25, P2 - plastic, ø30x45, P3 - plastic, ø48x45, S1 - stainless steel, ø28x28, S2 - stainless steel, ø41x38, S3 - stainless steel, ø45x55, S4 - stainless steel, ø52x52, S5 - stainless steel, ø73x73, S6 - stainless steel, ø75x108, S7 - stainless steel, ø30x28, S8 - stainless steel, ø100x100, S9 - stainless steel, ø150x150, S10 - stainless steel, ø30x32, S20 - stainless steel, ø22x40
Relay Output	C - relay NO/NC, D - SSR*, J - for external SSR, M - isolated MOS gate*
Operating Lengths (mm)**	L0/L1/L2
Process connection	X - none, Q4 - G1/2", Q6 - G3/4", Q10 - 1/2" NPT, Q11 - 3/4" NPT, Q12 - G1", Q13 - G1 1/2", Q14 - G2", Q15 - 1" NPT, Q16 - 1 1/2" NPT, Q17 - 2" NPT, Q21 - G3", Q22 - 3" NPT, F - flange (specify!), Z - other (specify!)
Sheath material	M1 - 1.4301, M2 - 1.4541, M3 - 1.4571, M9 - 1.4404
Vertical adjustment	X - none, A - vertical adjustment via stainless steel ferrule installed

* Contact Flowtechnik

** 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! 1st contact - 'L1'; e.g.: LCF - A.S1.C.500/50/200.Q12.M1