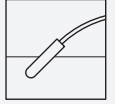




Float Switch

LFL2-**-U



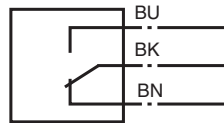
- Switch element: microswitch, **mercury-free**
- Limit value detection for fluids
- Sleeve design: small diameter, mounting through G1 tap hole possible
- Ball design: high buoyancy



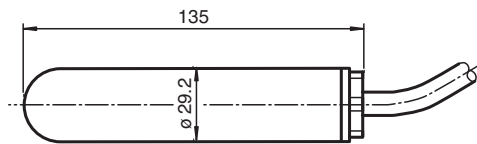
Function

The microswitch (change-over contact) is integrated in a PP float and is activated in the event of deviations from the horizontal position. The switching ball in the float, which moves along an axis, activates the microswitch.

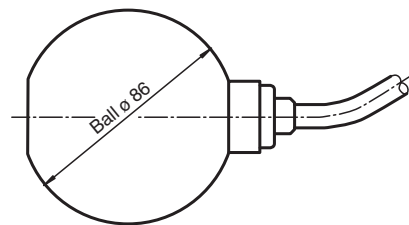
Connection



Dimensions



Sleeve design LFL2-CK-U



Ball design LFL2-BK-U

Technical Data

General specifications

Construction type	microswitch with switching ball, change-over contact
Series	LFL2-**-U

Electrical specifications

Contact loading	250 V AC/3 A; 150 V DC/0.25 A resistive load; 60 V DC/1 A resistive load
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Technical Data

Rated insulation voltage	300 V
Pulse withstand voltage	4 kV
Electrical life	≥ 5 x 10 ⁴ switching cycles
Output	
Connection	volt-free change-over contact
Directive conformity	
Low voltage	
Directive 2014/35/EU	EN 60947-5-1:2017
Conformity	
Degree of protection	IEC 60529:2001
Function and system design	
Equipment architecture	This device may be used with any sequential circuit, as long as the circuit can support the electrical circuit values of the switching elements.
Operating conditions	
Installation conditions	
Installation instructions	range of application and minimum length between mounting and float: - PVC version: ≥ 50 mm (2 inch), preferred for water - PUR version: ≥ 100 mm (4 inch), preferred for fuels, heating oils, oily fluids - CSM/CM version: ≥ 100 mm (4 inch), preferred for many acids and lyes - TPK version: ≥ 100 mm (4 inch), preferred for many acids and lyes mounting: - The float switch is mounted either from sideways through a cable gland ≥ G1A into the vessel or - by means of a counter weight or rods (e. g. float switch combination) from the top. The pivot of the cable should always be horizontal.
Process conditions	
Process pressure (static pressure)	sleeve design: ≤ 3 bar at 20 °C (68 °F) ball design: ≤ 2 bar at 20 °C (68 °F)
Density	sleeve design: ≥ 0.8 g/cm³ ball design: ≥ 0.6 g/cm³
Ambient conditions	
Ambient temperature	PVC version: 5 ... 70 °C (41 ... 158 °F) PUR version: 5 ... 70 °C (41 ... 158 °F) CSM/CM version: -20 ... 70 °C (-4 ... 158 °F) TPK version: 5 ... 70 °C (41 ... 158 °F)
Storage temperature	-25 ... 70 °C (-13 ... 158 °F)
Altitude	≤ 2000 m above MSL
Mechanical specifications	
Degree of protection	IP68
Mechanical construction	
Material	float: PP (Polypropylene) cable: - PVC version: PVC cable, highly flexible (3 x 0.75 mm²) - PUR version: PUR cable, highly flexible (3 x 0.50 mm²) - CSM/CM version: CSM/CM cable (chlorinated polyethylene, (3 x 0.75 mm²)) - TPK version: TPK cable, (3 x 0.75 mm²)
Switching point	switch angle, measured against the horizontal: - upper switch point +25° ±10° - lower switch point -14° ±10°
General information	
Supplementary information	Observe the certificates, declarations of conformity, instruction manuals, and manuals where applicable. For information see www.pepperl-fuchs.com .
Accessories	
Designation	- LFL-Z231, counter nut, G1A, PVC - LFL-Z32, counter weight, grey cast iron with plastic coating (Polycarbonate) - LFL-Z33, counter weight, grey cast iron with ECTFE coating (Halar) - LFL-Z131, gland screw connection G1A, PVC - LFL-Z132, gland screw connection G1A, brass - LFL-Z161, gland screw connection G2A, PVC - LFL-Z431, gland screw connection 1 NPT, PVC - LFL-Z461, gland screw connection 2 NPT, PVC

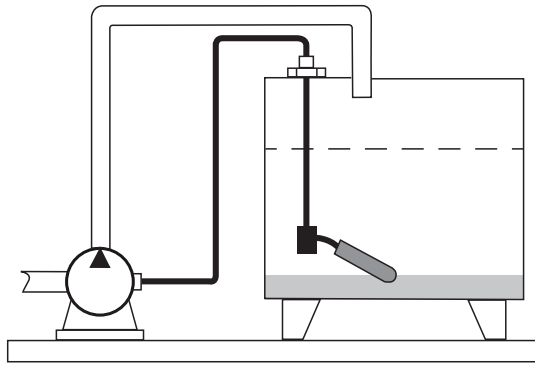
Type Code

This overview does not mark options which are mutually exclusive.

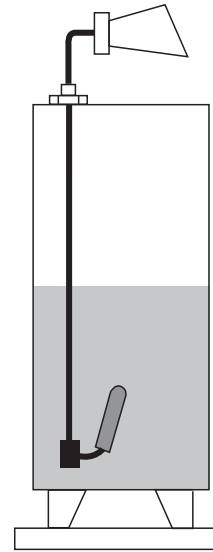
L	F	L	2	–	(1)	K	–	U	–	(2)	(3)
LFL		Device									
LFL		Float switch									
2		Switching element									
2		Micro switch with switching ball									
(1)		Float									
B		Ball									
C		Sleeve									
K		Float material									
K		Plastic PP									
U		Electrical output									
U		Changeover contact, 250 V AC, 150 V DC									
(2)		Cable material									
CSM		CSM/CM									
PUR		PUR									
PVC		PVC									
TPK		TPK									
(3)		Cable length									
03		3 m									
05		5 m									
10		10 m									

Application

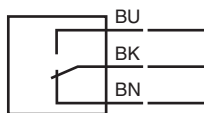
Level control via pump



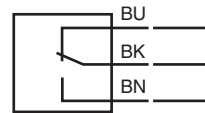
Level message via switching signal



Minimum fail safe mode connection



Maximum fail safe mode connection



Mounting

Mount the float switch in the following way:

- Insert the float switch into the tank through a tapped hole G1A.
- Screw the float switch with the gland screw connection G1A.
- If it is installed from above, use the counter weight LFL-Z32 or LFL-Z33 for mounting.



The fulcrum of the cable should always be horizontal.

The cable length between the fixture and the floating body is dependent on the cable type.

When using the counter weight, place an extra strain relief (e. g. a knot in the cable) behind the gland screw connection – on the outside of the tank.