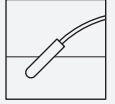


# Float Switch

## LFL2-BK-U-PUR15-EMS



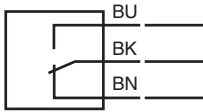
- Switch element: microswitch, **mercury-free**
- Limit value detection for fluids
- Ball design: high buoyancy



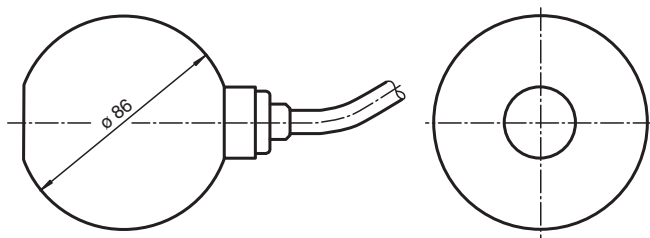
### Function

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



### Technical Data

General specifications	
Series	LFL2-**-U
Construction type	ball design
Electrical specifications	
Contact loading	250 V AC/3 A; 150 V DC/0.25 A resistive load; 60 V DC/1 A resistive load
Rated insulation voltage	300 V
Pulse withstand voltage	4 kV
Electrical life	≥ 5 x 10 <sup>4</sup> switching cycles
Directive conformity	
Low voltage	

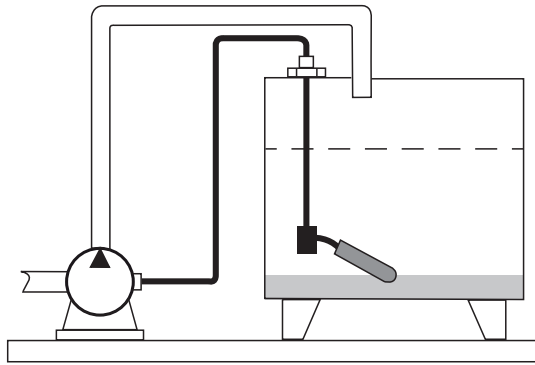
Release date: 2025-07-02 Date of issue: 2025-07-02 Filename: 70124504\_eng.pdf

## Technical Data

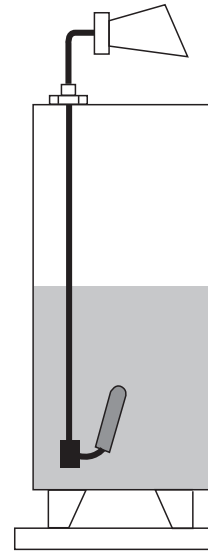
Directive 2014/35/EU		EN 60947-5-1:2004 + Cor.:2005 + A1:2009
<b>Conformity</b>		
Degree of protection		IEC 60529:2001
<b>Application</b>		
Description		microswitch with switching ball, change-over contact
<b>Function and system design</b>		
Equipment architecture		This device may be used with any sequential circuit, as long as the circuit can support the electrical circuit values of the switching elements.
<b>Approvals and certificates</b>		
CCC approval		Certified by China Compulsory Certification (CCC)
<b>Operating conditions</b>		
Installation conditions		
Installation instructions		range of application and minimum length between mounting and float: ≥ 100 mm (4 inch), preferred for fuels, heating oils, oily fluids mounting: The float switch is mounted 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)		≤ 2 bar (29 psi) at 20 °C (68 °F)
Density		≥ 0.6 g/cm <sup>3</sup>
<b>Ambient conditions</b>		
Ambient temperature		5 ... 70 °C (41 ... 158 °F)
Storage temperature		-25 ... 70 °C (-13 ... 158 °F)
Altitude		≤ 2000 m above MSL
<b>Mechanical specifications</b>		
Degree of protection		IP68
Cable		
Length	L	15 m
<b>Mechanical construction</b>		
Material		float: PP (Polypropylene) cable: PUR, highly flexible (3 x 0.50 mm <sup>2</sup> )
Switching point		switch angle, measured against the horizontal: - upper switch point 25° ±10° - lower switch point 6° ±6°
<b>General information</b>		
Supplementary information		Statement of Conformity, Declaration of Conformity, Attestation of Conformity and instructions have to be observed where applicable. For information see <a href="http://www.pepperl-fuchs.com">www.pepperl-fuchs.com</a> .

**Application**

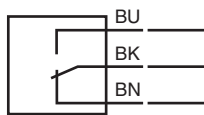
Level control via pump



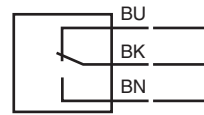
Level message via switching signal



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.*

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