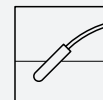




# Float Switch

## LFL2-BK-U-PUR5-EMS



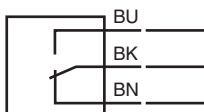
- Switch element: microswitch, **mercury-free**
- Limit value detection for fluids
- Ball design: high buoyancy



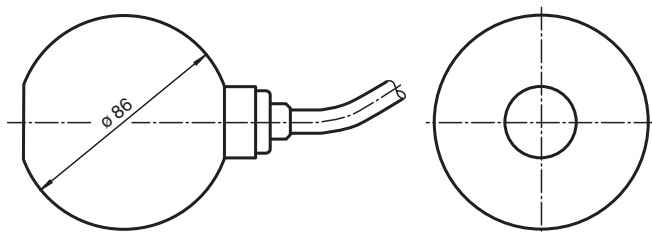
### Function

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

#### 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

Release date: 2020-10-05 Date of issue: 2020-10-05 Filename: 262202\_eng.pdf

Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

Pepperl+Fuchs Group  
www.pepperl-fuchs.com

USA: +1 330 486 0002  
pa-info@us.pepperl-fuchs.com

Germany: +49 621 776 2222  
pa-info@de.pepperl-fuchs.com



Singapore: +65 6779 9091  
pa-info@sg.pepperl-fuchs.com

 **PEPPERL+FUCHS**

## Technical Data

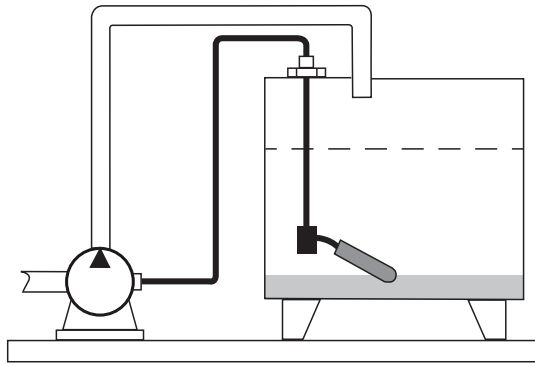
Pulse withstand voltage	4 kV
Electrical life	≥ 5 x 10 <sup>4</sup> switching cycles
<b>Directive conformity</b>	
Low voltage	
Directive 2014/35/EU	EN 60947-5-1:2004 + Cor.:2005 + A1:2009
<b>Conformity</b>	
Degree of protection	IEC 60529:2001
<b>Application</b>	
Description	microswitch with switching 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>Operating conditions</b>	
<b>Installation conditions</b>	
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.
<b>Process conditions</b>	
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 5 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 -14° ±10°
<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> .

## Accessories

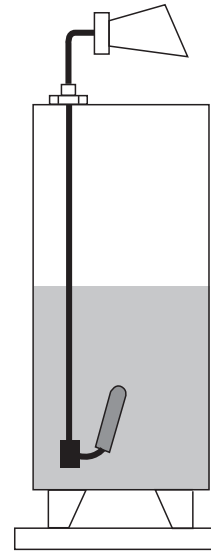
	<b>LFL-Z132-EMS</b>	Gland screw connection
	<b>LFL-Z32-EMS</b>	Ballast weight for float switch

## Application

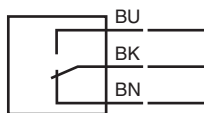
Level control via pump



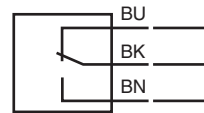
Level message via switching signal



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.*