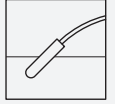


# Float Switch

## LFL2-BK-U-TPK5-EMS



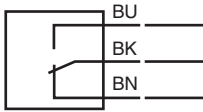
- Switch element: microswitch, **mercury-free**
- Limit value detection for fluids
- Ball design: high buoyancy



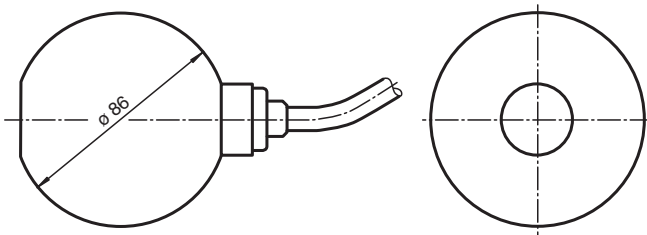
### Function

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	$\geq 5 \times 10^4$ switching cycles

#### Directive conformity

Low voltage
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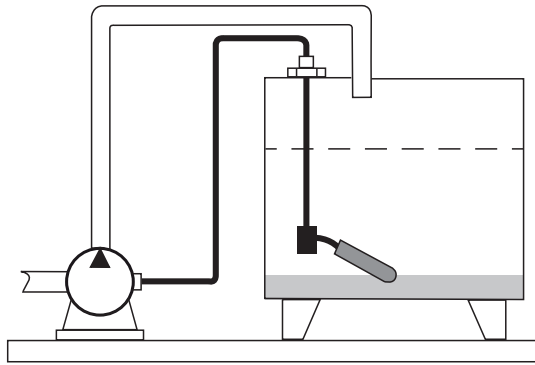
Release date: 2025-07-02 Date of issue: 2025-07-02 Filename: 70139370\_eng.pdf

## Technical Data

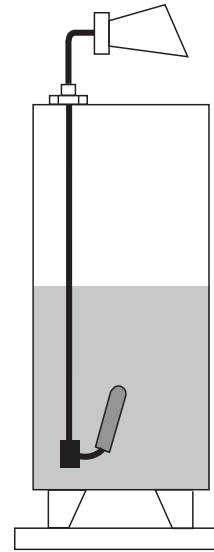
Directive 2014/35/EU	EN 60947-5-1:2017
<b>Conformity</b>	
Degree of protection	IEC 60529:2001
<b>Application</b>	
Description	microswitch with switching ball, change-over contact
<b>Function and system design</b>	
Equipment architecture	This device may be used with any sequential circuit, as long as 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 many acids and lyes 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 5 m
<b>Mechanical construction</b>	
Material	float: PP (Polypropylene) cable: TPK (3 x 0.75 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	Observe the certificates, declarations of conformity, instruction manuals, and manuals where applicable. For information see <a href="http://www.pepperl-fuchs.com">www.pepperl-fuchs.com</a> .

**Application**

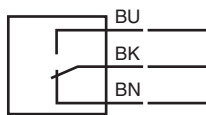
Level control via pump



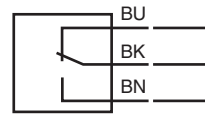
Level message via switching signal



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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