



- switching element: initiator with NAMUR - output
- limit value detection for liquids
- cylinder type: small diameter, mounting through G1" tap hole possible
- ball type: high buoyancy

**Cylinder type**

- LFL1-CK-N-PVC3
- LFL1-CK-N-PVC5
- LFL1-CK-N-PUR3
- LFL1-CK-N-PUR5
- LFL1-CK-N-CSM3
- LFL1-CK-N-CSM5

**Ball type**

- LFL1-BK-N-PVC3
- LFL1-BK-N-PVC5
- LFL1-BK-N-PUR3
- LFL1-BK-N-PUR5
- LFL1-BK-N-CSM3
- LFL1-BK-N-CSM5

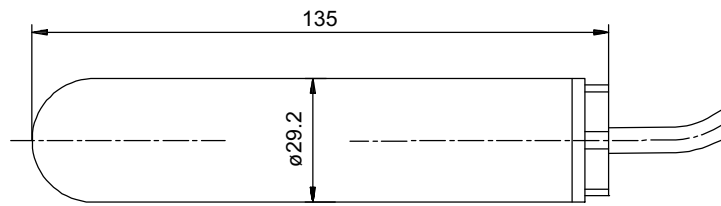
**Function principle**

The initiator (make switch) is build into a PP-float and switches when out of the horizontal line. The switching ball is running on-axis and changes the state of the switch by means of an inductance change of the initiator. The initiator provides a switching signal according to DIN 19 234 (NAMUR) as switching output.

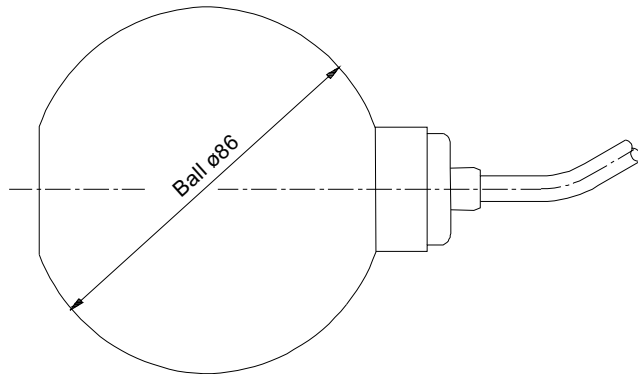
**Mounting**

The float is mounted either from side-wards through a cable gland  $\geq$  G1A into the vessel or by means of an additional mass, or rods (e.g. float switch combination) from the top.

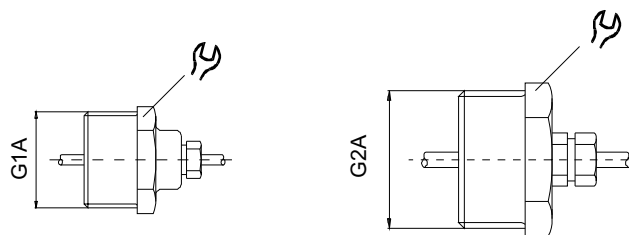
The pivot of the cable should always be horizontal. The minimum length of the cable between mounting and float is depending of the cable material (see technical data).



Cylinder type LFL1-CK

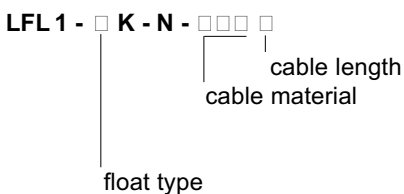


Ball type LFL1-BK



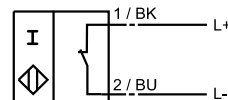
Accessories: cable gland

**Types**



**Connection**

cable colors  
black = L +  
blue = L -



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<b>Technical data</b>	
<b>Switching element</b> Switching function Nominal voltage Switching angle	Proximity switch with switching ball closes floating up (make switch) 8V, according to DIN 19 234 (NAMUR) e.g. via transformer isolated barrier *SR2* upper switching point +12 °, lower switching point -12 °, against the horizontal
<b>Process conditions</b>	
Temperature LFL1-□K-N-PVC□ LFL1-□K-N-PUR□ LFL1-□K-N-CSM□ Pressure (20 °C) Cylinder type Ball type Density ρ Cylinder type Ball type	-20 °C ... +70 °C (253 K ... 343 K) -20 °C ... +85 °C (253 K ... 358 K) -20 °C ... +85 °C (253 K ... 358 K)  ≤ 3 bar ≤ 2 bar  ≥ 0.8 g/cm <sup>3</sup> ≥ 0.6 g/cm <sup>3</sup>
<b>Material of the float</b>	PP (Polypropylene)
<b>Cable</b>	
Material and length LFL1-□K-N-PVC3 LFL1-□K-N-PVC5 LFL1-□K-N-PUR3 LFL1-□K-N-PUR5 LFL1-□K-N-CSM3 LFL1-□K-N-CSM5 Application range PVC PUR CSM Minimum length of the cable between mounting and float PVC PUR CSM	PVC-cable, highly flexible (2 x 0.75 mm <sup>2</sup> ), 3 m PVC-cable, highly flexible (2 x 0.75 mm <sup>2</sup> ), 5 m PUR-cable, highly flexible (2 x 0.50 mm <sup>2</sup> ), 3 m PUR-cable, highly flexible (2 x 0.50 mm <sup>2</sup> ), 5 m CSM-cable (Hypalon), highly flexible (2 x 0.75mm <sup>2</sup> ), 3 m CSM-cable (Hypalon), highly flexible (2 x 0.75mm <sup>2</sup> ), 5 m  preferably for water, waste water, and aggressive liquids preferably for fuel, and greasy liquids preferably for most acids and lies  ≥ 50 mm ≥ 100 mm ≥ 100 mm
<b>Mounting</b>	
from outside, sideways from top	with cable gland (cylinder type) with additional mass or float switch combination
<b>Accessories</b>	
LFL-Z131 LFL-Z132 LFL-Z161 LFL-Z231 LFL-Z31 LFL-Z431 LFL-Z432 LFL-Z461	<b>Ordering number</b> Cable gland G1A, PVC Cable gland G1A, brass Cable gland G2A, PVC Lock nut, G1A, PVC Counter weight 2" Cable gland 1"NPT, PVC Cable gland 1"NPT, brass Cable gland 2"NPT, PVC

A measuring system consists out of:

- a float switch LFL1-□K-N and a transformer isolated barrier, e.g. KFD2-SR2-Ex1.W