

## Level Sensors with Magnetic Floats



### APPLICATIONS

- Liquid container monitoring in household appliances, automotive applications, test and measurement, and control technology.

### FEATURES

- Depending on mounting position/movement direction, the sensor opens or closes with the rising, respectively the sinking liquid level
- Different versions available for mounting from inside or from outside
- High power switches available

### DESCRIPTION

Standard liquid level sensor. The sensor has to be mounted horizontally for best results.

Following materials are available:

**PP** (Polypropylene) for water applications and dilute acids

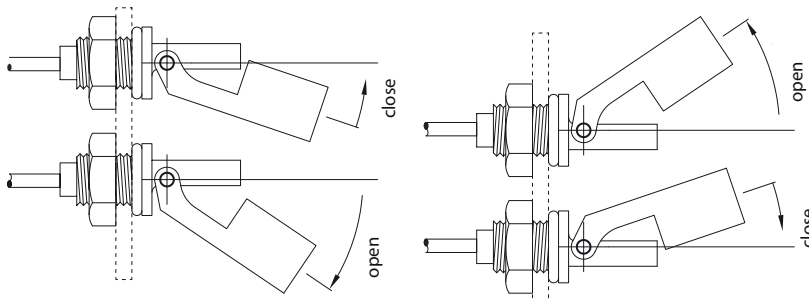
**PA** (Polyamide) for use in oil, gasoline (petrol) and brake fluid

The standard termination is a PVC cable with a cross section of 0.14 mm<sup>2</sup> and a length of 500 mm. The cable can be modified on request.

### MATERIALS

PA version	
Stem, nut	Polyamide black
Float	Polyamide black
Seal	Nitrile rubber
PP version	
Stem, nut	Polypropylene white
Float	Polypropylene white
Seal	Nitrile rubber

### MOVEMENT DIRECTION

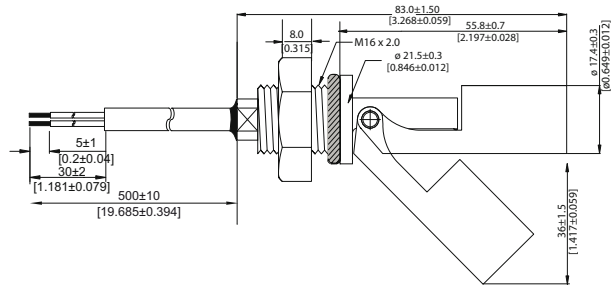


VERSIONS & DIMENSIONS

All dimensions in mm [inch]

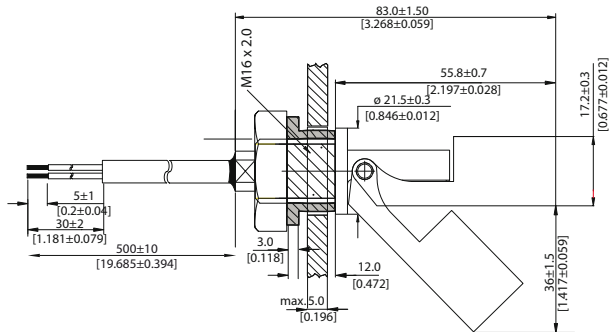
**Standard**

- Mounting from inside, thread M16 x 2.0
- Insertion hole:  $\varnothing$  16.5 mm
- Sealing from inside with O-ring.



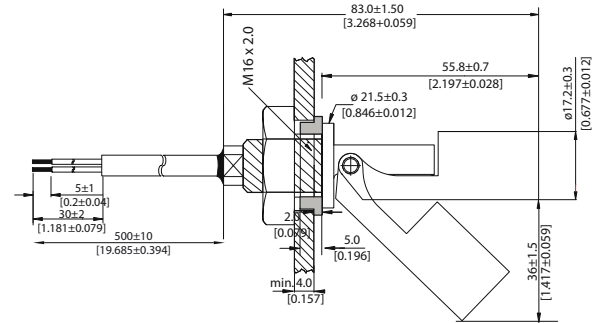
**DL Type**

- Mounting from outside, thread M16 x 2.0
- Insertion hole:  $\varnothing$  22 mm - 24mm
- 12 mm wide sealing, suitable for low filling pressure
- Wall thickness max. 5 mm



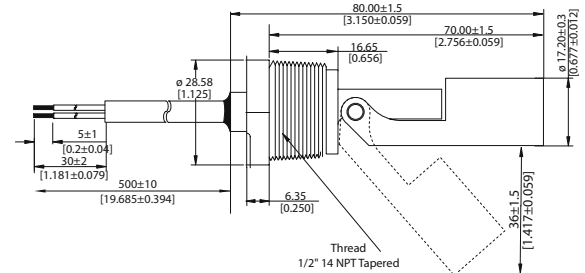
**DK Type**

- Mounting from outside, thread M16 x 2.0
- Insertion hole:  $\varnothing$  22 mm
- 5 mm narrow sealing, suitable for high filling pressure
- Wall thickness min. 4 mm



**GZ Type**

- Mounting from outside, tapered thread 1/2" (no sealing necessary)
- Insertion hole: 1/2" thread



## Level Sensors with Magnetic Floats

### CONTACT DATA

All Data at 20° C	Switch Model → Contact Form →	Switch 66 Form A			Switch 85 Form A			
Contact Ratings	Conditions	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Switching Power	Any DC combination of V & A not to exceed their individual max.'s			10			100	W
Switching Voltage	DC or peak AC			200			1000	V
Switching Current	DC or peak AC			0.5			1.0	A
Carry Current	DC or peak AC			1.25			2.5	A
Static Contact Resistance	w/ 0.5 V & 10 mA			150			150	mΩ
Dynamic Contact Resistance	Measured w/ 0.5 V & 50 mA , 1.5 ms after closure			200			200	mΩ
Insulation Resistance across Contacts	100 volts applied	10 <sup>10*</sup>			10 <sup>11</sup>			Ω
Breakdown Voltage across Contact	Voltage applied for 60 sec. min.	225 *			700			VDC
Operation Time incl. Bounce	Measured w/ 50 % overdrive			0.5			1.0	ms
Release Time	Measured w/ no coil suppression			0.1			0.1	ms
Capacitance	at 10 kHz cross contact		0.2			0.7		pF
<b>Environmental Data</b>								
Shock Resistance	1/2 sinus wave duration 11 ms			50			50	g
Vibration Resistance	From 10 - 2000 Hz			20			20	g
Ambient Temperature	10°C/ minute max. allowable	-20		90	-20		130	°C
Stock Temperature	10°C/ minute max. allowable	-20		100	-55		130	°C
Soldering Temperature	5 sec. dwell			260			260	°C
Please note: The indicated electrical data are maximum values and can vary downwards when using a more sensitive switch.								
* Insulation resistance of 10 <sup>12</sup> and breakdown voltage of 480 VDC is available. These ranges refer to the uncut / unmodified Reed Switches described in our Reed Switch section. Consult factory if more detail is required.								

**ORDER INFORMATION**

Series	Version	Contact Form	Switch Model	Material	Cable Length (mm)	Termination
<b>LS03 -</b>		<b>XX</b>	<b>XX -</b>	<b>XX -</b>	<b>XXX</b>	<b>X</b>
<b>Option</b>	(Standard)	1 Form A	66, 85	PA, PP	500 *	W
	/ DL -		66, 85			
	/ DK -		66, 85			
	/ GZ -		66, 85			
* Other cable lengths available.						

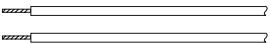
**Part Number Example**

**LS03/DL - 1A66 - PA - 500 W**

- DL** is the version
- 1A** is the contact form
- 66** is the switch model
- PA** is the material
- 500** is the cable length (mm)
- W** is the termination

**TERMINATION**

For wire and termination details please contact factory.

<b>W</b>		The cable cut length includes: 5 mm of wire stripped and tinned
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