# 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:

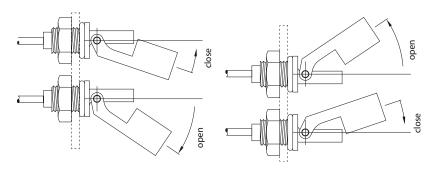
- **PP** (Polypropylene) for water applications and dilute acids
- **PA** (Polyamide) for use in oil, gasoline (petrol) and brake fluid

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			
PP version Stem, nut	Polypropylene white		
	Polypropylene white Polypropylene white		

#### **MOVEMENT DIRECTION**



## **Level Sensors with Magnetic Floats**

[0.677±0.012]

 $17.2\pm0.3$ 

### **VERSIONS & DIMENSIONS**

All dimensions in mm [inch]

5±1 [0.2±0.04]

500±10

[19.685±0.394]

30±2 [1.181±0.079]

#### Standard

- · Mounting from inside, thread M16 x 2.0
- Insertion hole: ø 16.5 mm
- · Sealing from inside with O-ring.

# ø 21.5±0.3 [0.846±0.012] 5±1 0.2±0.04 30+2 [1.181±0.079] 500±10 [19.685±0.394]

83.0±1.50 [3.268±0.059]

[0.846±0.012]

[0.472]

55.8±0.7 0.0±0.7 [2.197±0.028] <u>Ø 21.5±0.3</u>

# **DL Type**

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

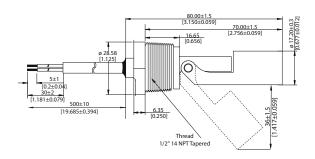
# 83.0±1.50 [3.268+0.059] M16 x 2.0 55.8±0.7 $[0.677\pm0.012]$ ø17.2±0.3 ø 21.5+0.3 [0.846+0.012] 5±1 [0.2±0.04] 30±2 [1.181±0.079] 500±10

3.0

[0.118]

#### **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.	Тур.	Max.	Min.	Тур.	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	Α
Carry Current	DC or peak AC			1.25			2.5	А
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
Environmental Data								
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.

<sup>\*</sup> 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.

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# **ORDER INFORMATION**

Series	Version	Contact Form	Switch Model	Material	Cable Length (mm)	Termination
LS03 -		XX	XX -	XX -	xxx	Х
	(Standard)	1 Form A	66, 85	PA, PP	500 *	W
	/ DL -		66, 85			
Option	/ DK -		66, 85			
/ G2	/ 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.

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