

Magnetic float switch

For horizontal installation, miniature design

Model HLS-M

TC Fluid Control data sheet LM 30.06

Applications

- For level monitoring and level indication of liquids
- Level measurement for almost all liquid media
- Pump and level control
- Alarm signals
- Dry-run and overflow protection

Special features

- Lateral installation in the tank
- Plastic and stainless steel versions
- Space-saving installation
- Switch consists of only one component



Fig. top: Plastic version, for installation from inside, cable outlet

Fig. bottom: Stainless steel version, for installation from outside, cable outlet

Description

With its compact design, the model HLS-M magnetic float switch for horizontal installation in miniature design is ideally suited for use in small tanks, for indicating minimum/maximum levels.

The float is attached to a supported, swivelling lever and moves with the level of the medium being measured. By means of a permanent magnet, when a preset switch point is reached, a reed contact (inert gas contact) is actuated.

By using a magnet and reed contact the switching operation is non-contact, free from wear and needs no power supply. The contacts are potential-free.

The switching function refers to a rising liquid level: Standard use as normally open contact (can be used as normally closed contact by a 180° rotation).

The magnetic float switch is simple to mount and maintenance-free, so the costs of mounting, commissioning and operation are low.

The following five magnetic float switches are available:

Float switch model	Design	Installation	Electrical connection
HLS-M11	Plastic	from inside	Cable
HLS-M12	Plastic	from outside	Cable
HLS-M21	Stainless steel	from inside	Cable
HLS-M22	Stainless steel	from outside	Cable
HLS-M23	Stainless steel	from outside	Connector

Plastic version, for installation from inside, cable outlet, model HLS-M11

Specifications

Switching power

Normally open contact AC 50 V; 25 VA; 0.5 A
 (can be used as normally closed contact by a 180° rotation)

DC 50 V; 25 W; 0.5 A
Attention: Operation only at safety extra-low voltage, e.g. with contact protection relay

Mounting position

horizontal

Medium density

≥ 800 kg/m³

Medium temperature

-10 ... +80 °C

Ingress protection

IP 65

Max. operating pressure

1 bar

Material

Polypropylene

Process connection

Male thread G 1/4"

Mounting

for installation in the tank from inside

Float

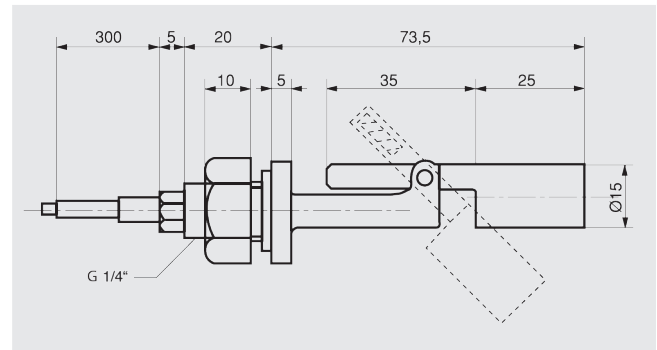
Outer diameter 15 mm
 Length 25 mm

Electrical connection

Cable connection PVC wires, 2 x 0.5 mm²
 Cable length: 0.3 m



Dimensions in mm



Order no.: 117612

Plastic version, for installation from outside, cable outlet, model HLS-M12

Specifications

Switching power

Normally open contact AC 50 V; 25 VA; 0.5 A
 (can be used as normally closed contact by a 180° rotation)

DC 50 V; 25 W; 0.5 A
Attention: Operation only at safety extra-low voltage, e.g. with contact protection relay

Mounting position

horizontal

Medium density

≥ 800 kg/m³

Medium temperature

-10 ... +80 °C

Ingress protection

IP 65

Max. operating pressure

1 bar

Material

Polypropylene

Process connection

Male thread 1/2" NPT

Mounting

for installation in the tank from outside

Float

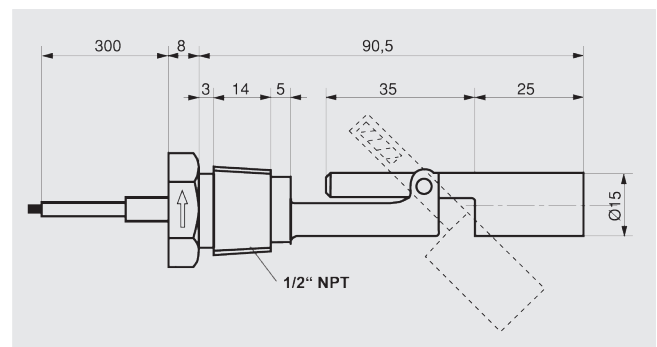
Outer diameter 15 mm
 Length 25 mm

Electrical connection

Cable connection PVC wires, 2 x 0.5 mm²
 Cable length: 0.3 m



Dimensions in mm



Order no.: 118329

Stainless steel version, for installation from inside, cable outlet, model HLS-M21

Specifications

Switching power

Normally open contact
(can be used as normally closed contact by a 180° rotation)

AC 50 V; 25 VA; 0.5 A
DC 50 V; 25 W; 0.5 A

Attention: Operation only at safety extra-low voltage, e.g. with contact protection relay

Mounting position

horizontal

Medium density

≥ 800 kg/m³

Medium temperature

-40 ... +120 °C

Ingress protection

IP 65

Max. operating pressure

5 bar

Material

Stainless steel 1.4301

Process connection

Male thread G 1/8"

Mounting

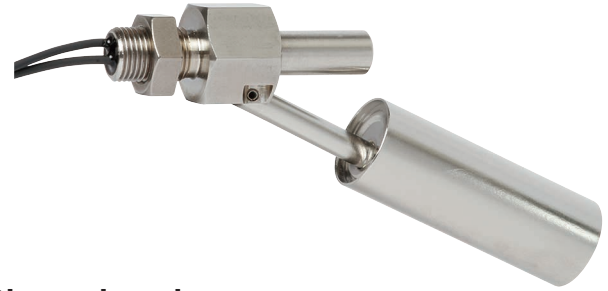
for installation in the tank from inside

Float

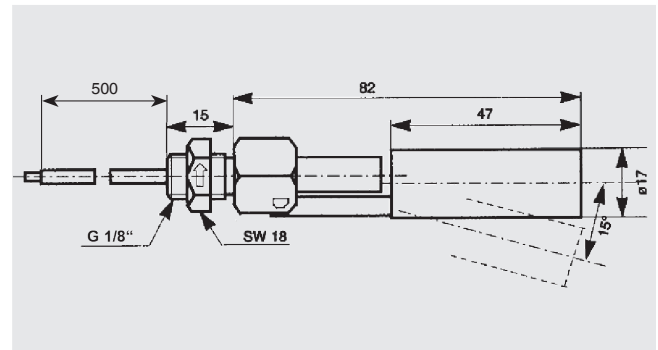
Outer diameter 17 mm
Length 47 mm

Electrical connection

Cable connection
PVC wires, 2 x 0.5 mm²
Cable length: 0.5 m



Dimensions in mm



Order no.: 118330

Stainless steel version, for installation from outside, cable outlet, model HLS-M22

Specifications

Switching power

Normally open contact
(can be used as normally closed contact by a 180° rotation)

AC 50 V; 25 VA; 0.5 A
DC 50 V; 25 W; 0.5 A

Attention: Operation only at safety extra-low voltage, e.g. with contact protection relay

Mounting position

horizontal

Medium density

≥ 800 kg/m³

Medium temperature

-40 ... +120 °C

Ingress protection

IP 65

Max. operating pressure

5 bar

Material

Stainless steel 1.4301

Process connection

Male thread 1/2" NPT

Mounting

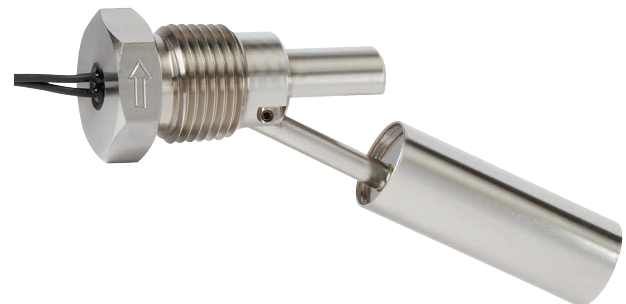
for installation in the tank from outside

Float

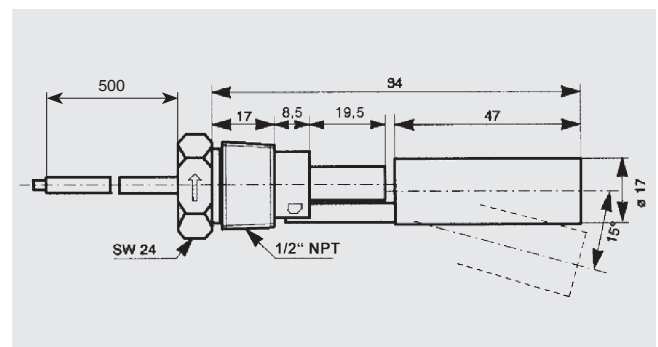
Outer diameter 17 mm
Length 47 mm

Electrical connection

Cable connection
PVC wires, 2 x 0.5 mm²
Cable length: 0.5 m



Dimensions in mm



Order no.: 013955

Stainless steel version, for installation from outside, plug connection, model HLS-M23

Specifications

Switching power

Normally open contact AC 50 V; 25 VA; 0.5 A
(can be used as normally closed contact by a 180° rotation) DC 50 V; 25 W; 0.5 A

Attention: Operation only at safety extra-low voltage, e.g. with contact protection relay

Mounting position horizontal

Medium density $\geq 800 \text{ kg/m}^3$

Medium temperature -40 ... +120 °C

Ingress protection IP 65

Max. operating pressure 5 bar

Material Stainless steel 1.4301

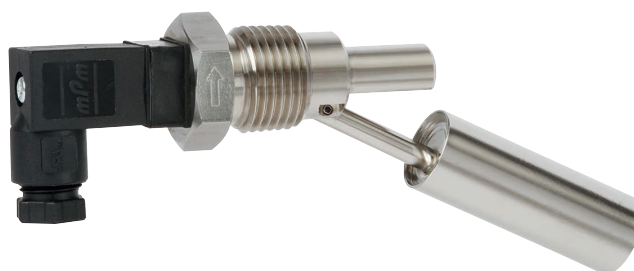
Process connection Male thread 1/2" NPT

Mounting for installation in the tank from outside

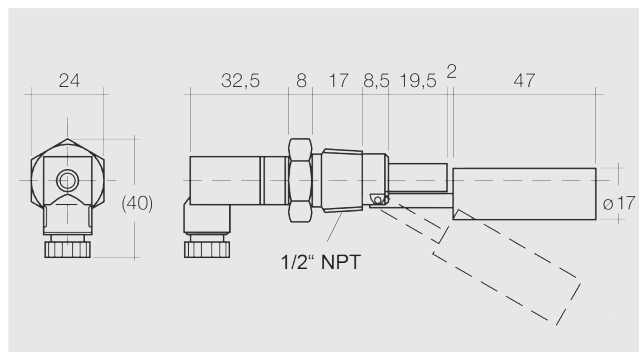
Float Outer diameter 17 mm
Length 47 mm

Electrical connection

Plug connection Rectangular connector
EN 175301-803, 2-pin



Dimensions in mm



Order no.: 118332

Options

- Other versions on request
- Other cable lengths on request

CE conformity

EMC directive

2004/108/EC, EN 61000-6-4 and EN 61000-6-2

Ordering information

To order the described product the order number is sufficient.

Alternatively:

Model / Material / Process connection / Electrical connection / Mounting / Pressure, temperature, density / Options

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