

# Float switch

## For horizontal installation, miniature design

### Model HLS-M

WIKA data sheet LM 30.06

#### Applications

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

#### Special features

- Lateral installation in the tank
- Operating limits:
  - Operating temperature:  $T = -40 \dots +120 \text{ }^\circ\text{C}$
  - Operating pressure:  $P = 5 \text{ bar}$
  - Limit density:  $\rho \geq 800 \text{ kg/m}^3$
- Plastic and stainless steel versions
- Space-saving installation
- Switch consists of only one component



Fig. top: Plastic version, model HLS-M11

Fig. bottom: Stainless steel version, model HLS-M22

#### Description

With its compact design, the model HLS-M 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 float switch is simple to mount and maintenance-free, so the costs of mounting, commissioning and operation are low.

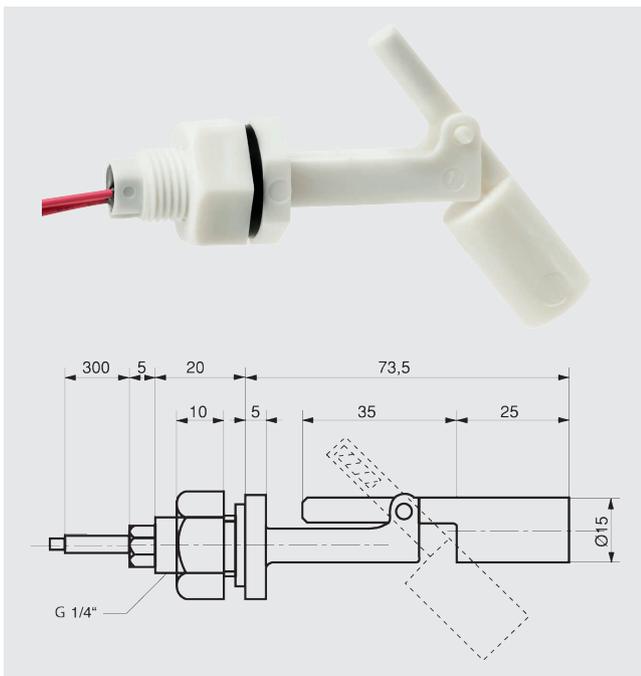
## Model overview

Float switch model	Description	Installation	Electrical connection
HLS-M11	Plastic version	From inside	Cable
HLS-M12	Plastic version	From outside	Cable
HLS-M21	Stainless steel version	From inside	Cable
HLS-M22	Stainless steel version	From outside	Cable
HSL-M23	Stainless steel version	From outside	Connector

## Approvals

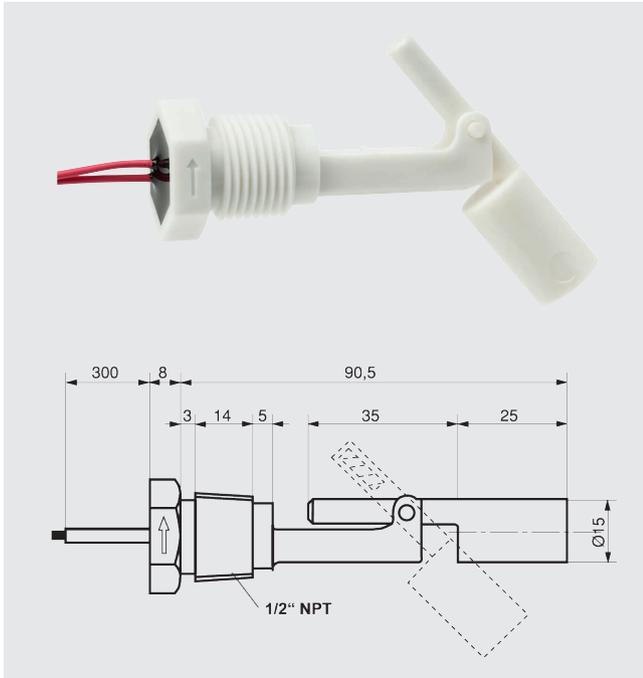
Logo	Description	Country
CE	EU declaration of conformity RoHS directive	European Union

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



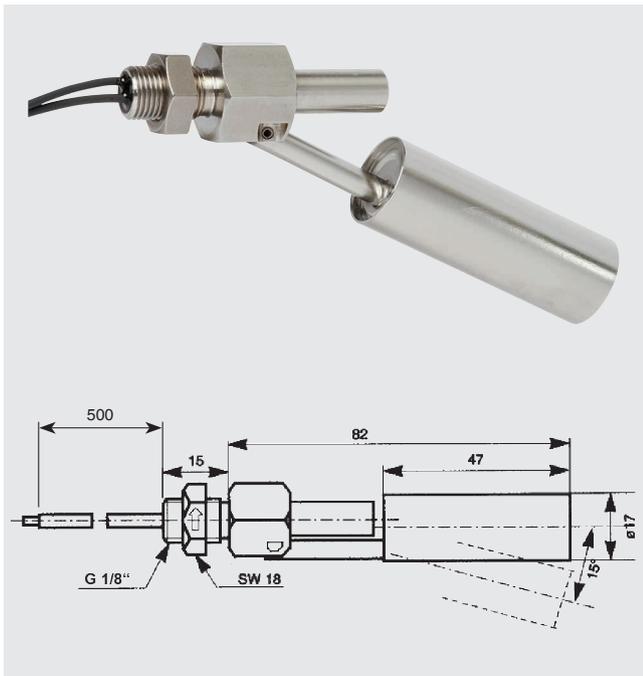
Specifications	
<b>Switching power</b>	< AC 25 V; 25 VA; 0.5 A < DC 60 V; 25 W; 0.5 A
Normally open contact (can be used as normally closed contact by a 180° rotation)	<b>Attention:</b> Operation only at safety extra-low voltage, e.g. with contact protection relay
<b>Mounting position</b>	Horizontal
<b>Limit density</b>	≥ 800 kg/m <sup>3</sup>
<b>Medium temperature</b>	-10 ... +80 °C
<b>Ingress protection</b>	IP65
<b>Max. operating pressure</b>	1 bar
<b>Material</b>	Polypropylene
<b>Process connection</b>	Male thread G 1/4"
<b>Mounting</b>	For installation in the tank from inside
<b>Float</b>	Outer diameter 15 mm Length 25 mm
<b>Electrical connection</b>	Cable connection PVC stranded wires, 2 x 0.5 mm <sup>2</sup> Cable length 0.3 m
<b>Order number</b>	117612

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



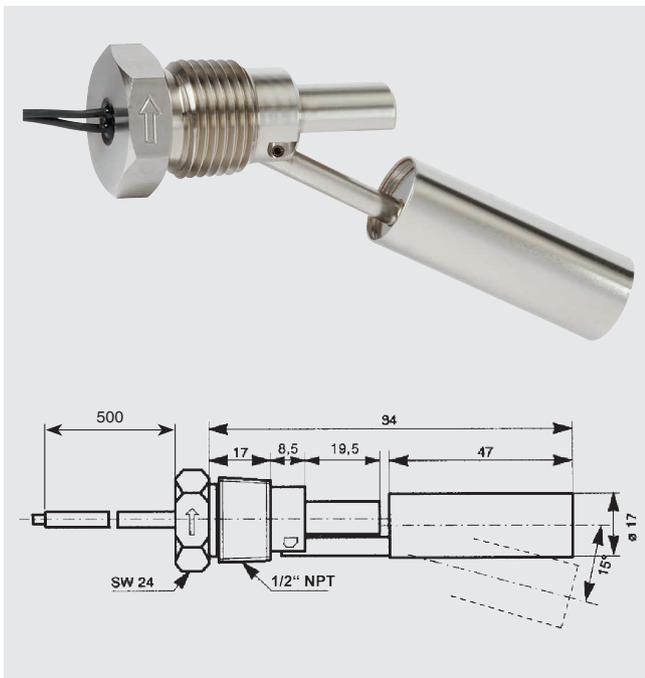
Specifications	
<b>Switching power</b> Normally open contact (can be used as normally closed contact by a 180° rotation)	< AC 25 V; 25 VA; 0.5 A < DC 60 V; 25 W; 0.5 A <b>Attention:</b> Operation only at safety extra-low voltage, e.g. with contact protection relay
<b>Mounting position</b>	Horizontal
<b>Limit density</b>	≥ 800 kg/m <sup>3</sup>
<b>Medium temperature</b>	-10 ... +80 °C
<b>Ingress protection</b>	IP65
<b>Max. operating pressure</b>	1 bar
<b>Material</b>	Polypropylene
<b>Process connection</b>	Male thread 1/2" NPT
<b>Mounting</b>	For installation in the tank from outside
<b>Float</b>	Outer diameter 15 mm Length 25 mm
<b>Electrical connection</b>	Cable connection PVC stranded wires, 2 x 0.5 mm <sup>2</sup> Cable length 0.3 m
<b>Order number</b>	118329

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



Specifications	
<b>Switching power</b> Normally open contact (can be used as normally closed contact by a 180° rotation)	< AC 50 V; 25 VA; 0.5 A < DC 75 V; 25 W; 0.5 A <b>Attention:</b> Operation only at safety extra-low voltage, e.g. with contact protection relay
<b>Mounting position</b>	Horizontal
<b>Limit density</b>	≥ 800 kg/m <sup>3</sup>
<b>Medium temperature</b>	-40 ... +120 °C
<b>Ingress protection</b>	IP65
<b>Max. operating pressure</b>	5 bar
<b>Material</b>	Stainless steel 1.4301
<b>Process connection</b>	Male thread G 1/8"
<b>Mounting</b>	For installation in the tank from inside
<b>Float</b>	Outer diameter 17 mm Length 47 mm
<b>Electrical connection</b>	Cable connection PVC stranded wires, 2 x 0.5 mm <sup>2</sup> Cable length 0.5 m
<b>Order number</b>	118330

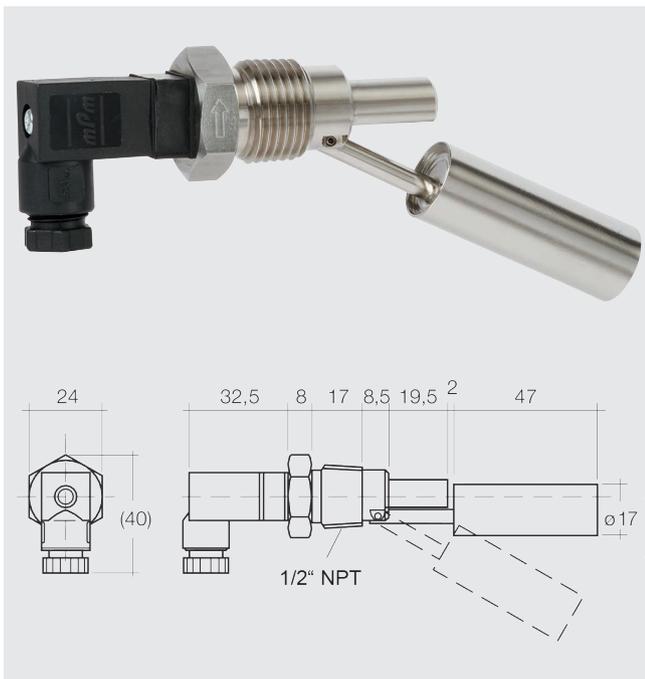
## Stainless steel version, for installation from outside, cable outlet Model HLS-M22



Specifications	
<b>Switching power</b> Normally open contact (can be used as normally closed contact by a 180° rotation)	< AC 50 V; 25 VA; 0.5 A < DC 75 V; 25 W; 0.5 A <b>Attention:</b> Operation only at safety extra-low voltage, e.g. with contact protection relay
<b>Mounting position</b>	Horizontal
<b>Limit density</b>	≥ 800 kg/m <sup>3</sup>
<b>Medium temperature</b>	-40 ... +120 °C
<b>Ingress protection</b>	IP65
<b>Max. operating pressure</b>	5 bar
<b>Material</b>	Stainless steel 1.4301
<b>Process connection</b>	Male thread 1/2" NPT
<b>Mounting</b>	For installation in the tank from outside
<b>Float</b>	Outer diameter 17 mm Length 47 mm
<b>Electrical connection</b>	Cable connection PVC stranded wires, 2 x 0.5 mm <sup>2</sup> Cable length 0.5 m
<b>Order number</b>	013955

Special version HLS-M22H for temperature range -40 ... +180 °C on request

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



Specifications	
<b>Switching power</b> Normally open contact (can be used as normally closed contact by a 180° rotation)	< AC 50 V; 25 VA; 0.5 A < DC 75 V; 25 W; 0.5 A <b>Attention:</b> Operation only at safety extra-low voltage, e.g. with contact protection relay
<b>Mounting position</b>	Horizontal
<b>Limit density</b>	≥ 800 kg/m <sup>3</sup>
<b>Medium temperature</b>	-40 ... +120 °C
<b>Ingress protection</b>	IP65
<b>Max. operating pressure</b>	5 bar
<b>Material</b>	Stainless steel 1.4301
<b>Process connection</b>	Male thread 1/2" NPT
<b>Mounting</b>	For installation in the tank from outside
<b>Float</b>	Outer diameter 17 mm Length 47 mm
<b>Electrical connection</b>	Plug connection Rectangular connector per EN 175301-803, 2-pin
<b>Order number</b>	118332

## Ordering information

To order the described product the order number is sufficient.

Alternatively:

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

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