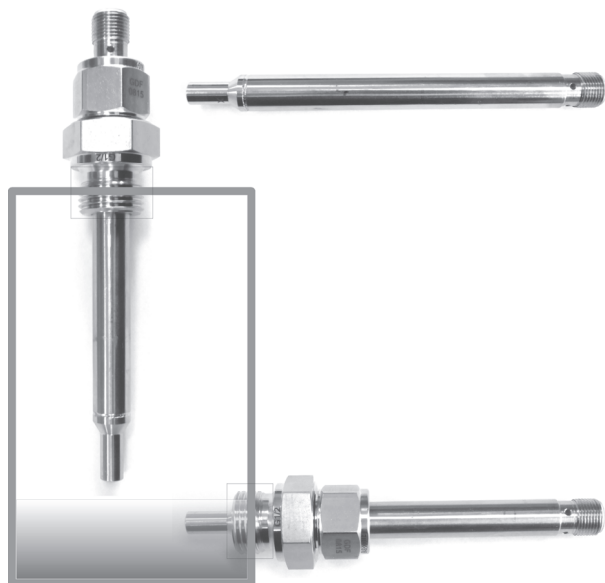


Product Information

LABO-LK012

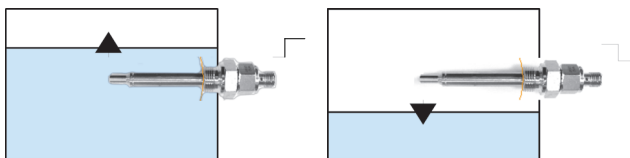
Level Switch or Drip Sensor LABO-LK012



- Complete electronic level switch in 12 mm housing
- Independent of conductivity, colour, ...
- Suitable for fluids and finer granulates
- Programmable hysteresis
- Suitable for very variable fluids
- Programmable power-on/power-off delays
- Very simple to use

Characteristics

The tips of the sensors of the LABO-LK012 family recognise a difference between fluid and air (gas). Temperature changes are compensated. The system is tolerant of contamination which lets water through (paper, mud, sugar solution, glue...).



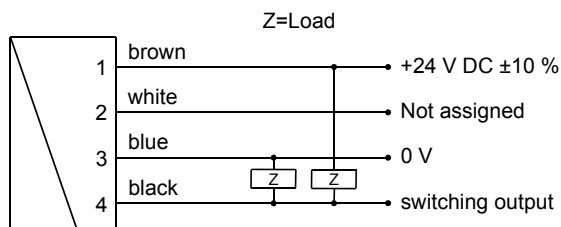
When set in sensitive mode, the LABO-LK012 sensor can be used as a drip sensor. Here, drops which hit the tip of the sensor create an output signal, and thereby indicate the presence of leaks.

The same design can be used as a calorimetric flow sensor, or as an electronic temperature switch.

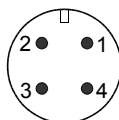
Technical data

Sensor	calorimetric measurement principle
Process connection	see "Dimensions"
Measurement accuracy	±2 mm (dependent on contamination)
Repeatability	±1 mm (dependent on contamination)
Medium temperature	-20...+70 °C
Ambient temperature	0...60 °C
Pressure resistance	PN 40 bar, with plastic cone PN 6 bar (Comply with tightening torques!)
Materials medium-contact	Housing 1.4571
Materials non-medium-contact	Plug PA6.6
Supply voltage	24 V DC ±10 % (controlled)
Power consumption	< 2,5 W
Switching output	transistor output "push-pull" (resistant to short circuits and polarity reversal) $I_{out} = 100 \text{ mA max.}$
LED	yellow LED (On = Normal / Off = Alarm, flashing = programming or error)
Ingress protection	IP 67
Electrical connection	for round plug connector M12x1, 4-pole
Ingress protection	IP 67
Weight	ca. 0.05 kg (excluding screwed connections)
Conformity	CE

Wiring



Connection example: PNP NPN

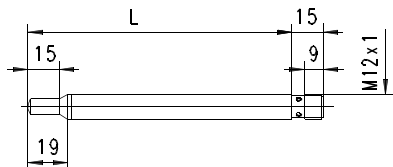


Before the electrical installation, it must be ensured that the supply voltage corresponds to the data sheet. It is recommended to use shielded wiring.

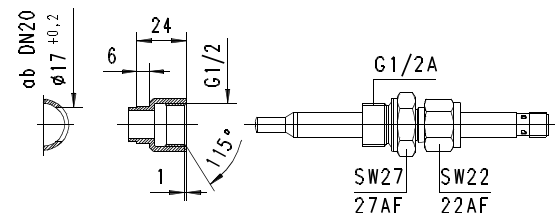
Product Information

LABO-LK012

Dimensions

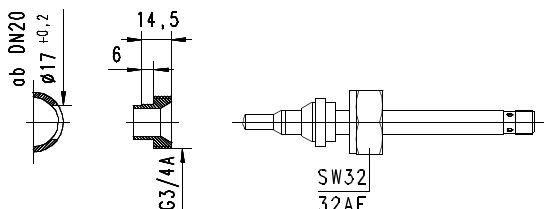


Optional accessories



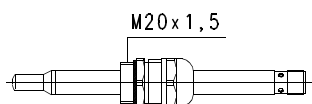
weld-on adapter

crimp screw joint
stainless steel



weld-on adapter

conical screw connection
plastic



crimp screw joint
plastic

Ordering code

LABO-LK012 - 1. S 2. 3. K1 4. N 5. 6.

○=Option

1. Limit switch	
S	push-pull (compatible with PNP and NPN)
2. Sensor tip length L	
100	100 mm
150	150 mm
200	200 mm
3. Connection material	
K1	stainless steel 1.4571
4. Programming	
N	cannot be programmed (no teaching)
5. Switching function	
L	minimum-switch
H	maximum-switch
6. Switching output level	
O	standard
I	inverted

Options

Switching delay
(from Normal to Alarm) s

Switchback delay
(from Alarm to Normal) s

Power-On delay
(after connecting the supply, time during which the switching output is not activated) s

Special hysteresis (standard = 2 % EW) %

If no details are provided when ordering, the standard setting is automatically selected.

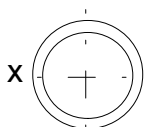
Accessories

- Cable/round plug connector (KB...) see additional information "Accessories"
- Device configurator ECI-1
- Screwed connections
- Weld-on adapter

Handling and operation

The instrument is preset for the differentiation of air and water. An adjustment to other media is possible using the device configurator ECI-1, which is available as an accessory. It also allows to set many other parameters.

Installation



The sensor tip must be fully in contact with the medium. The marking (X) is at the side in order to achieve the lowest possible reaction time.

Wherever possible, build-ups of contamination should be removed from the sensor tip, as they can affect the system's sensitivity.