

Product information

Level, calorimetry - Hygienic Design

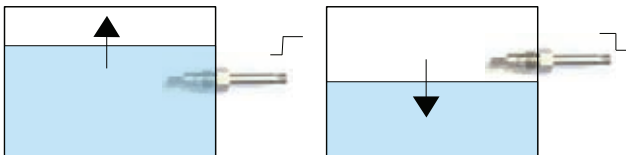
**Level Switch or
Drip Sensor
HLK12-S**



- Independent of conductivity, colour, ...
- Suitable for fluids and finer granulates
- Deposit must be permeable to water (e.g. sugar...)
- Programmable hysteresis
- Suitable for very variable fluids
- Programmable switching and switch-back delays
- Very simple to use

Characteristics



The tips of the sensors of the HLK12 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...).



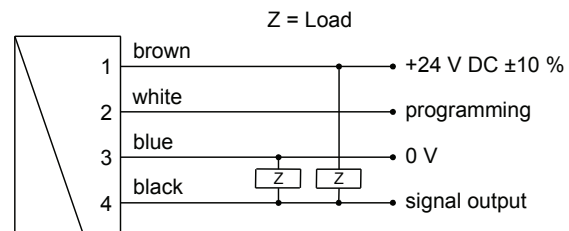
The same design can be used as a calorimetric flow sensor, or as an electronic temperature switch, or as a drip sensor for guidable leaks.

Technical data

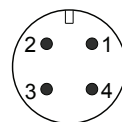
Process connection	GHMadapt G 1/2
Medium temperature	0..+70 °C
Ambient temperature	0..+60 °C
CIP- / SIP Temperature	140 °C, < 30 min.
Process pressure	PN 50 bar
Tolerance	±2 mm (dependent on contamination)
Repeatability	±0.5 mm (for the same fluid and the same deposit)
Supply voltage	24 V DC ±10 % (controlled)
Power consumption	< 1 W
Switching output	transistor output "push-pull", compatible with PNP and NPN, (resistant to short circuits and polarity reversal) I _{out} = 100 mA max.

LED	yellow LED (On = Normal / Off = Alarm, flashes = programming or error)
Ingress protection	IP 67
Electrical connection	for round plug connector M12x1, 4-pole
Materials medium-contact	sensor tip 1.4435, FDA-compliant
Non-medium-contact materials	Housing 1.4571 Pressure screw 1.4404 Plug PA Contacts gold-plated
Weight	approx. 100 g incl. pressure screw
Installation location	dependent on direction of rotation (see marking) Avoid bubbles or deposits on the sensor. Best installation position therefore at the side.
Conformity	CE, EHEDG  

Wiring

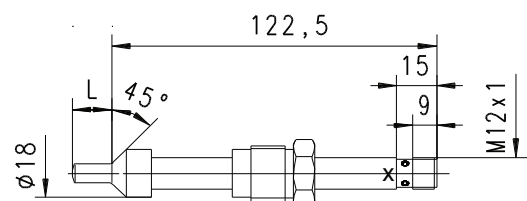


Connection example: PNP NPN



The use of shielded cabling is recommended.

Dimensions



For T-pieces (recommended) and weld-on sockets in the GHMadapt series, see "Accessories".

Product information

Level, calorimetry - Hygienic Design

Handling and Operation

The air reference value is stored via "teaching". Any deviation (incl. programmable tolerance) from this is evaluated as a switching value.

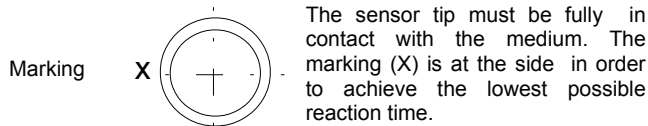
- Keep the transmitter in air (no flow!)
- Apply an impulse of at least 0.5 seconds and max. 2 seconds duration to pin 2 (e.g. via a bridge to the auxiliary voltage or a pulse from the PLC), in order to accept value as the switching value.
- When the teaching is complete, pin 2 should be connected to 0 V, so as to prevent unintended programming.

Note: Requirement for programmability must be stated when ordering, otherwise the device cannot be programmed.

A USB interface with associated software is available as a convenient option for programming all parameters by PC, and for adjustment.

Installation

The sensor is inserted into the boring together with a sealing cone, oriented, and fastened in place with a pressure screw.



The torque on the pressure screw should be between 5..10 Nm.

Ordering code

HLK12 -

1.	2.	3.	4.	5.	6.
S	015				

○=Option

1.	Limit switch	
	S	transistor output "push-pull"
2.	Sensor tip length	
	015	L = 15 mm
3.	Programming	
	N	cannot be programmed (no teaching)
	P	<input type="radio"/> programmable (teaching possible)
4.	Function	
	L	minimum-switch
	H	maximum-switch
5.	Switching signal	
	O	standard
	I	<input type="radio"/> inverted
6.	Optional	
	H	CIP- / SIP version, 140 °C, 30 minutes max.

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 (KH...) see additional information "Accessories"