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Liquid level sensor/transmitter 24V AC or DC Liq. temp max 80°C Ambient temp -30-50°C	Oil	R744 CO2 R600 Butane R600a Isobutane R290 Propane	Synthetic refrigerants HFC/HFO/CFC	R717 NH3, Water, Alcohols	Dirty water In a metal vessel/tank
Rigid probe analog output only	HBLC-OIL 200-3000 mm  	HBLC-CO2 200-3000 mm  	HBLC-HFC 200-3000 mm  	HBLC-A2 (max 50°C recommended) HBLC-A3 all temperatures 200-3000 mm   	HBLC 200-2000 mm  
Rigid probe analog and direct control output	HBSLC-OIL/C HBSLC-OIL/S HBSLC-OIL/PWM 200-3000 mm 	HBSLC-CO2/C HBSLC-CO2/S HBSLC-CO2/PWM 200-3000 mm 	HBSLC-HFC/C HBSLC-HFC/S HBSLC-HFC/PWM 200-3000 mm 	HBSLT-A2/C HBSLT-A2/S HBSLT-A2/PWM 200-3000 mm  	HBSLC/C HBSLC/S HBSLC/PWM 200-2000 mm 
Wire/Flex probe analog output only	HBLT-FLEX 300-2000 mm  	HBLT-FLEX 300-2000 mm  	HBLT-W-Wire 600-6000 mm  	HBLT-W-Wire 600-6000 mm  	HBLT-W-Wire 600-6000 mm  
Wire/Flex probe analog and direct control output	HBSLT-FLEX/C HBSLT-FLEX/S HBSLT-FLEX/PWM 300-2000 mm 	HBSLT-FLEX/C HBSLT-FLEX/S HBSLT-FLEX/PWM 300-2000 mm 	HBSLT-W-Wire/C HBSLT-W-Wire/S HBSLT-W-Wire/PWM 600-6000 mm 	HBSLT-W-Wire/C HBSLT-W-Wire/S HBSLT-W-Wire/PWM 600-6000 mm 	HBSLT-W-Wire/C HBSLT-W-Wire/S HBSLT-W-Wire/PWM 600-6000 mm 
Low-cost probe analog output only	HBLC- thin 200-1600 mm  	On request	HBLC- Fgas 200-1600 mm  	HBLC 200-2000 mm  	HBLC 200-2000 mm  
Low-cost probe analog and direct control output	On request	On request	On request	HBLC/C HBLC/S HBLC/PWM 200-2000 mm 	HBLC/C HBLC/S HBLC/PWM 200-2000 mm 

 Indicate the switch is available in an ATEX/IECEx version

 Connection diameter available

Settings and Connections

Settings

All the sensors has numerous settings for making the measurement more accurate provide alarms etc.

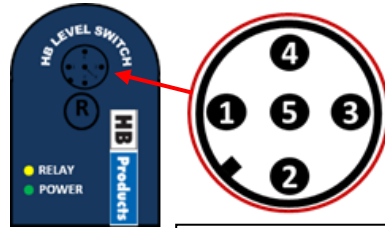
The sensor can be connected to a PC with HB tool installed using an USB/M12 connection cable.

The tool can be downloaded for free from our web page.

Sensors with analog output

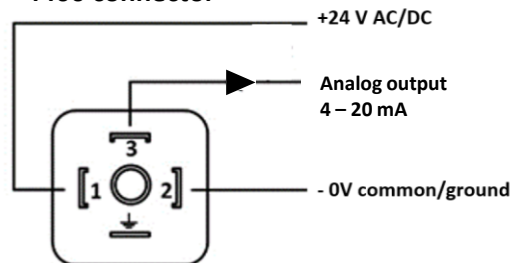
All sensors has an analog output

Sensor with M12 connector



- 1: +24 VDC or 24VAC (Brown)
- 2: - common or 24VAC (White)
- 3: Remote input 4-20 mA (Blue)
- 4: Analog output 4-20 mA (Black)
- 5: Run-in signal (Grey)

Sensor with ISO 4400 connector



Sensors with direct valve control and analog output

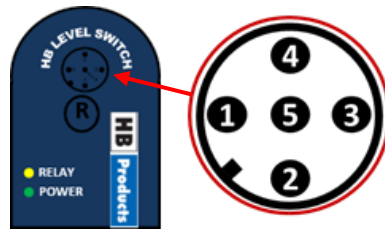
Sensors with an output cable can control a valve directly. Three different versions exist

/C for modulating valve

/S for stepper motor

/PWM for pulse modulating valve

24V versions



- 1: +24 VDC or 24VAC (Brown)
- 2: - common or 24VAC (White)
- 3: Remote input 4-20 mA (Blue)
- 4: Analog output 4-20 mA (Black)
- 5: Run-in signal (Grey)

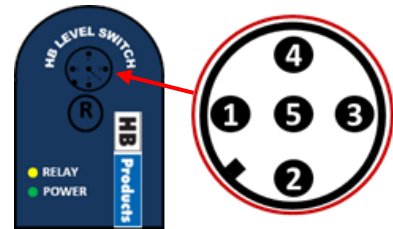
Valve



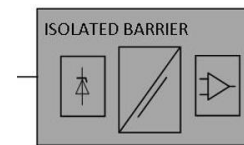
ATEX/IECEx approved sensors with IEC 61076-2-101 M12 plug

Most of the 24V sensors are available in an ATEX/IECEx approved version. The switch has a two-wire analog output which will grow linear to the level from 4 to 20 mA. The switch has settings which can be changed when connecting it to the HB-tool.

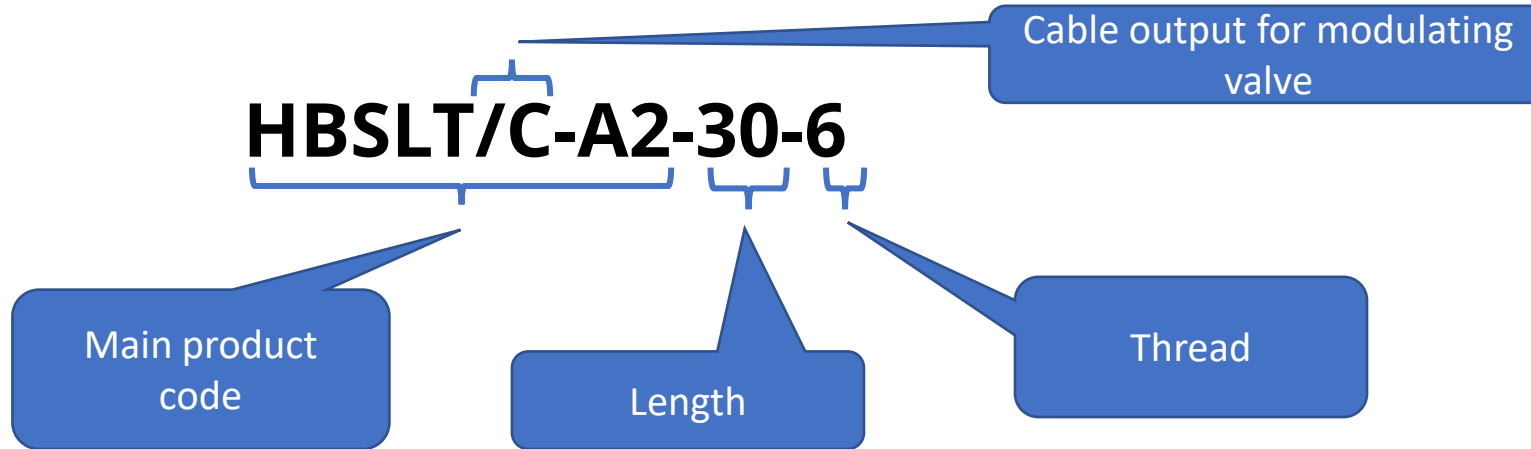
The sensor is used together with a barrier to comply with ATEX/IECEx requirements.



- 1: +24 VDC (Brown)
- 2: not used
- 3: not used
- 4: Analog output (Black)
- 5: not used



Product ordering codes and thread connections



Other commonly used codes

U: union connection instead of V track with set screws (standard)

L: Long version

IP: ice proof (low temperature version)

LT: Low temperature version

MT: Medium temperature version

HT: High temperature version

HP: Heat pump version

HFC: suited for HFC, HFO, CFC and other synthetic refrigerants

/C: Built in controller for modulating valve

/S: Built in controller for stepper motor valve

/PWM: Built in controller for pulse width modulating valve

SSR-1: Solid state relay output for 24V DC/AC supply

SSR-2: Solid state relay output for 90-240 V AC supply

Thread codes (stamped on the sensor)

1 = ½" NPT

2 = ¾" NPT

3 = ½" BSPT

4 = ¾" BSPT

5 = ½" BSPP

6 = ¾" BSPP

7 = 1 1/8" UNEF

8 = 1" BSPP

9 = 1" NPT

10 = 1 ¼" BSPP

11 = 1 ½" BSPP

12 = 1 ½" NPT

13 = ¼" BSPP

14 = ¼" NPT

15 = 3/8" NPT

16 = 1 ¼" UNF



NPT (National Pipe Taper)

BSPT (British Standard Pipe Taper ("R"))

BSPP (British Standard Pipe Parallel ("G"))

UNEF (Unified National Extra Fine)

UNF (Unified National Fine)