

Data sheet - BLS Level Sensor

Types 10, 11, 30

Type 20

For the detection of liquids and granular solids with a DK (€) value ≥ 2.5 . The sensor detects the level in tanks and pipes independent of its mounting position. It can also be used for media separation and to protect pumps from dry run. A blue LED indicates the output status.

Sensor

Radiated signal	100...180 MHz
Process connection	G 1/2", ISO 228/1
Senspr tip	PEEK
Housing	1.4404/AISI 316L, 1.4301/AISI 304 (BLS11)
Ambient temperature	-40 to +85 °C
Operating temperature	-40 to +115 °C
Enclosure	IP67 (IEC 529)
Nominal pressure	Max. 100 bar
Vibrations	IEC 60068-2-6, GL test2
Installation	Any position

Electrical connection

Cable	5 meter, 4 wire (BLS 20)
Plug M12	Plastic

Electrical data

Power supply	12...30 VDC, 35 mA max.
Damping	0...10 s, Factory setting 0.1 s
Power-up time	< 2 s
Hysteresis	± 1 mm
Repeatability	± 1 mm
Reaction time	0.1 s (100 ms)

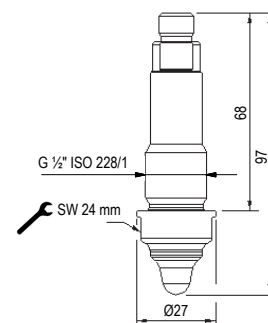
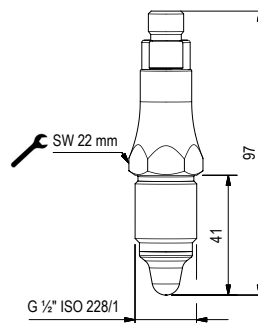
Ex-Approval

Standard	Ex ia IIC T5, ATEX II 1G (BLS 30)
Supply range	24...30 VDC
Temperature class	T1...T5: $-40 < T_{amb} < 74$ °C
Internal inductivity	$L_i \leq 10$ μ H
Internal capacity	$C_i \leq 43$ nF
Barrier data	$U \leq 30$ VDC, $I < 0.1$ A, $P < 0.75$ W

Output

Output (active)	Max. 20 mA, short-circuit and high-temperature protected
Output type	PNP
Output polarity	NO and NC
Active "High"	PNP, (VDC -1.5 V) $\pm$ 0.5 V, R_{load} 10 kOhm
Off leak current	± 100 μ A max.

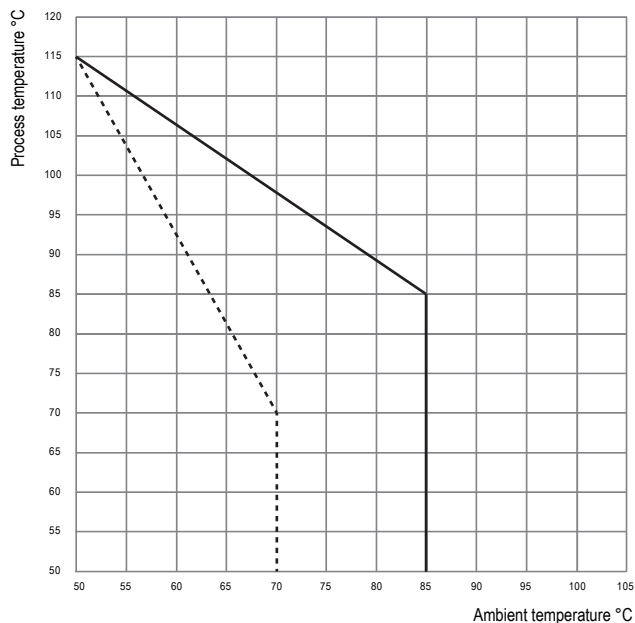

BLS 10, 11, 30 

BLS 20


Conformity of standards

BLS Level Sensors are in acc. with the standards:
 DNV Marine Approval
 EN 50155 Railway
 3A, EHEDG, FDA
 EMC Immunity acc. to EN 61326
 EMC Emission acc. to EN 61326
 WHG (on demand, pending)

Process temperature vs. ambient temperature

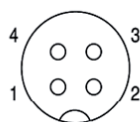


— BLS 10, 11

- - - BLS 20

Level Sensor type BLS 20 with 5 m cable
max. ambient temp. = 70 °C

Electrical connection

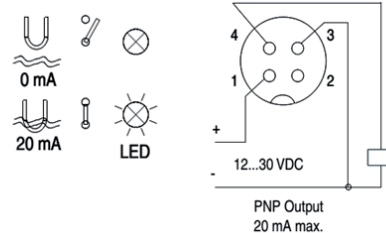


Function
+ VDC
NC
- VDC
NO

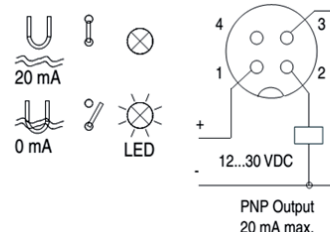
M12 plug
1
2
3
4

Cable
Brown
White
Blue
Black

Normally open (NO)



Normally closed (NC)



Typical applications

- Level detection for storage tanks, containers and pipelines.
- Detection of different media.
- Protecting pumps from running dry.

BLS Level Sensor for DK-values ($\mathcal{E}$) ≥ 2.5 i.e. for almost all liquides, bulk goods, foams, sticky, pasty or high or low viscosity.

