

Data sheet - BLS Level Sensor

Types 10, 11, 30 
Type 20

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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

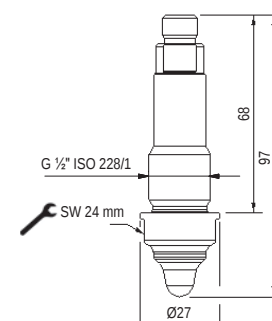
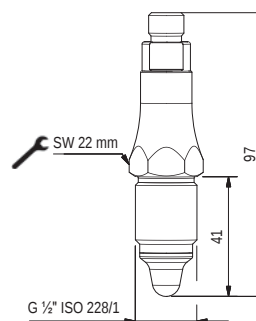
Output

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) ± 0.5 V, $R_{load} \geq 10$ kOhm
Off leak current	± 100 μ A max.

Factory Settings

Damping	0.1 s
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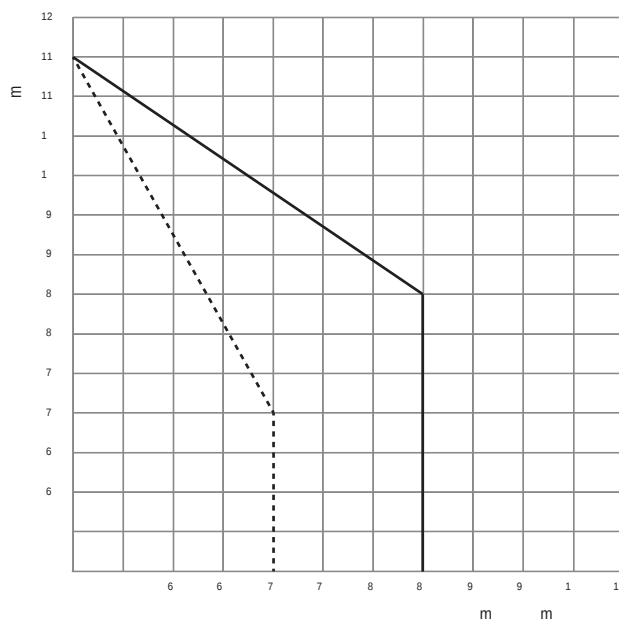

BLS 10, 11, 30 

BLS 20


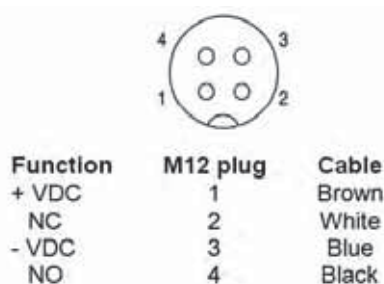
Conformity of standards

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)

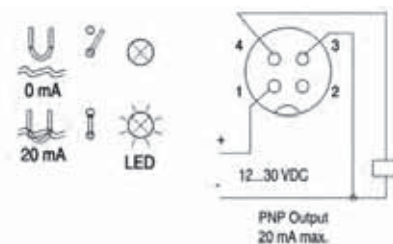
Process temperature versus ambient temperature



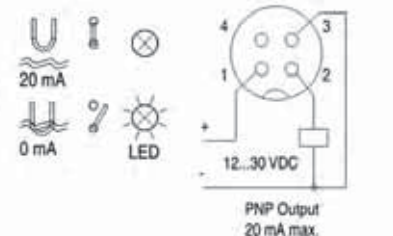
Electrical connection



Normally open (NO)



Normally closed (NC)



Typical applications

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

BLS Level Sensor for DK-values (ϵ) ≥ 2.5 i.e. for almost all liquides, bulk goods, foams, sticky, pasty or high or low viscosity.

