

Level Probe

BLP2

The level transmitter BLP2 is designed for continuous level measurement in water or waste water applications.

Two versions are available:

- a) with ceramic sensor b) with stainless steel sensor

accuracy according to IEC 60770:

0.5 % FSO (ceramic)

0.1 % / 0.35 % / 0.5 % FSO (stainless steel)

Suitable for all fluids which are compatible with media wetted materials. Different cable and elastomer materials can be offered according to the customer-specific operating conditions.

Features:

- ▶ Nominal pressure
 - ▶ from 0 ... 4 mH₂O up to 0 ... 250 mH₂O (ceramic) from 0 ... 1 mH₂O up to 0 ... 250 mH₂O (stainless steel)
- ▶ Output signals
 - ▶ 2-wire: 4 ... 20 mA
 - ▶ 3-wire: 0 ... 20 mA / 0 ... 10 V
- ▶ Diameter 27 mm (ceramic), 26.5 mm (stainless steel)
- ▶ Good linearity
- ▶ Good long term stability

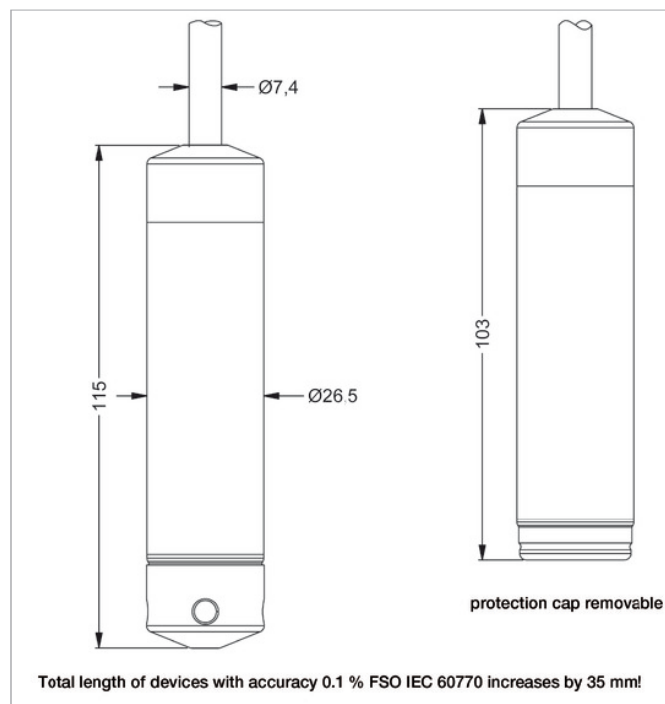
Applications

Ballast containers

Fuel and oil tanks

Service and waste water tanks

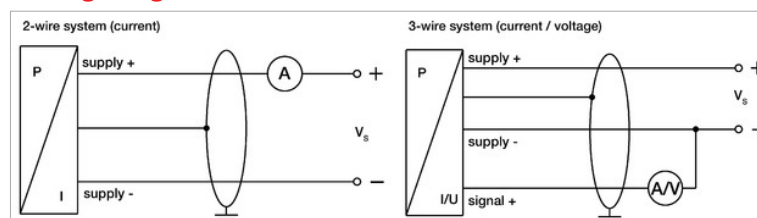
Dimensions (mm / inch)



Connection Chart

Pin configuration	Electrical connections Cable colors (IEC 60757)
Supply +	white
Supply -	brown
Signal + (only 3-wire)	green
Shield	green-yellow

Wiring Diagrams



Level Probe

BLP2

Ceramic Sensor

Technical Data

Materials:	stainless steel 1.4404 (316L) FKM, EPDM ceramics Al ₂ O ₃ 96 % POM									
Housing:										
Seals:										
Diaphragm:										
Protection cap:	IP68									
Protection class:	approx. 250 g									
Weight (without cable):										
Measuring range:										
Nominal pressure PN [bar] rel.:	0.4	0.6	1	1.6	2.5	4	6	10	16	25
Level [mH ₂ O]:	Over- pres- sure [bar]	4	6	10	16	25	40	60	100	160 250
Burst pressure ≥ [bar]	2	2	2	4	4	10	10	20	40	40
	4	4	4	5	5	12	12	25	50	50
Output signal:										
Standard: Option 3-wire:	2-wire: 4 ... 20 mA 3-wire: 0 ... 20 mA / 0 ... 10 V									
Accuracy:	≤ ±0.5% FSO									
Permissible load:	current 2-wire: R _{max} = [(V _s - V _s min) / 0.02 A]Ω current 3-wire: R _{max} = 500 Ω voltage 3-wire: R _{min} = 10 k Ω									
Influence effects: Supply: Load:	≤ ±0.05% FSO / 10 V ≤ ±0.05% FSO / kΩ									
Response time ¹	≤ 10 msec									
Electrical connection:										
Cable with sheath material ² :	PVC (-5 ... 70° C) grey PUR (-10 ... 70° C) black FEP ³ (-10 ... 70° C) black									
Auxiliary energy:										
Standard: Option 3-wire:	Operating voltage: V _s = 8 ... 32 V DC V _s = 14 ... 30 V DC									
Temperature error (offset and span):	≤ ±0.2 % FSO / 10 K in compensated range: -25 ... 70 °C									
Temperature range:										
Operating temperature: Storage:	-10 °C ... +70 °C -25 °C ... +70 °C									

¹ accuracy according to IEC 60770 - limit point adjustment (non-linearity, hysteresis, repeatability)

² shielded cable with integrated air tube for atmospheric pressure reference

³ do not use freely suspended probes with an FEP cable if effects due to highly charging processes are expected

Level Probe

BLP2

Stainless Steel Sensor

Technical Data

Materials: Housing: Seals: Diaphragm: Protection cap:	stainless steel 1.4404 (316L) FKM, EPDM stainless steel 1.4435 (316L) POM-C												
Protection class:	IP68												
Weight (without cable):	approx. 200 g												
Measuring range:													
	0.1	0.16	0.25	0.4	0.6	1	1.6	2.5	4	6	10	16	25
Nominal pressure PN [bar] rel.: Level [mH ₂ O]:	1	1.6	2.5	4	6	10	16	25	40	60	100	160	250
Overpressure [bar]	0.5	1	1	2	5	5	10	10	20	40	40	80	80
Burst pressure [bar]	1.5	1.5	1.5	3	7.5	7.5	15	15	25	50	50	120	120
Output signal / Supply	2-wire: 4 ... 20 mA 3-wire: 0 ... 20 mA												
Accuracy:													
Standard: Option:	nominal pressure < 0.4 bar: ≤ ± 0.5 % FSO nominal pressure ≥ 0.4 bar: ≤ ± 0.35 % FSO all nominal pressure: ≤ ± 0.1 % FSO, on request												
Permissible load:	current 2-wire: R _{max} = [(V _s - V _s min) / 0.02 A]Ω current 3-wire: R _{max} = 500 Ω voltage 3-wire: R _{min} = 10 k Ω												
Influence effects: Supply: Load:	≤ ± 0.05% FSO / 10 V ≤ ± 0.05% FSO / kΩ												
Long term stability:	≤ ± 0.1% FSO / year at reference conditions												
Response time ¹	≤ 10 msec (2-wire) ≤ 3 msec (3-wire)												
Electrical connection: Cable with sheath material ² :	PVC (-5 ... 70 °C) grey PUR (-10 ... 70 °C) black FEP ₃ (-10 ... 70 °C) black												
Auxiliary energy: Standard: Option 3-wire:	Operating voltage: V _s = 8 ... 32 V DC V _s = 14 ... 30 V DC												
Temperature error:													
Nominal pressure PN [bar] : Tolerance band [% FSO]: in compensated range [°C]:	< 0.40								≥ 0.40				
	≤ ± 0.1								≤ ± 0.75				
	0 ... 70												
Temperature range: Operating temperature: Storage:	-10 °C ... +70 °C -25 °C ... +70 °C												
Current consumption:	signal output current: max 25 mA signal output voltage: max. 7 mA												
Mounting accessories (not included in the scope of delivery):	Mounting clamp, Mounting flange for fixing submersible level transmitter made of stainless steel DN25 / PN40												

¹ accuracy according to IEC 60770 - limit point adjustment (non-linearity, hysteresis, repeatability)

² shielded cable with integrated air tube for atmospheric pressure reference

³ do not use freely suspended probes with an FEP cable if effects due to highly charging processes are expected

Level Probe

BLP2

Order Code

BLP2

Base model

Sensor type

C

Ceramic sensor 0.5% FSO

P

SS (Piezo) sensor 0.5/0.35% FSO

Range

mWs bar

1 0.1

0...1 mWs (0...0.1 bar) - piezo sensor only

1.6 0.16

0...1,6 mWs (0...0.16 bar) - piezo sensor only

2.5 0.25

0...2,5 mWs (0...0.25 bar) - piezo sensor only

4 0.4

0...4 mWs (0...0.4 bar)

6 0.6

0...6 mWs (0...0.6 bar)

10 1

0...10 mWs (0...1 bar)

16 1.6

0...16 mWs (0...1.6 bar)

25 2.5

0...25 mWs (0...2.5 bar)

40 4

0...40 mWs (0...4 bar)

60 6

0...60 mWs (0...6 bar)

100 10

0...100 mWs (0...10 bar)

160 16

0...160 mWs (0...16 bar)

250 25

0...250 mWs (0...25 bar)

Electrical Connection

PVxM

PVC cable x meter

PUxM

PUR cable x meter

Sealing

F

FKM

Output

4-20 mA (2-wires)

20 0-20 mA (3-wires)

10 0-10 V (3-wires)

Order code
example:

BLP2 / C / 6mWs / PU10M / F / 20