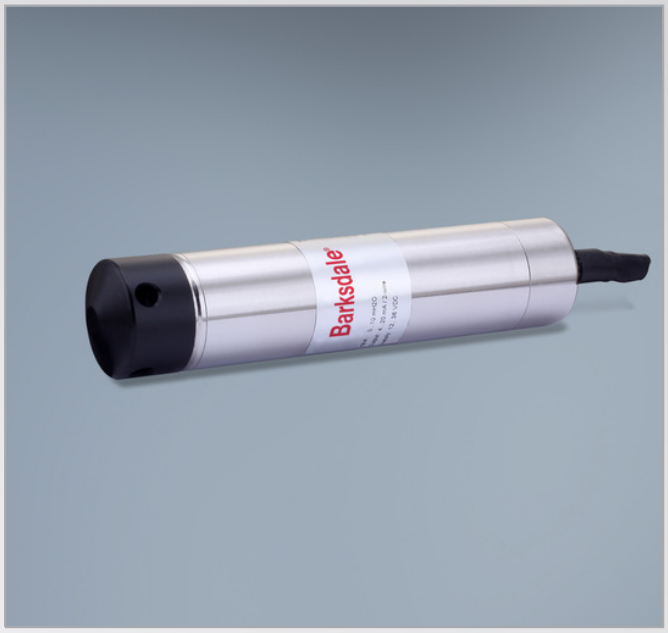
Level Probe

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 matierals can be offered according to the customer-specific operating conditions.



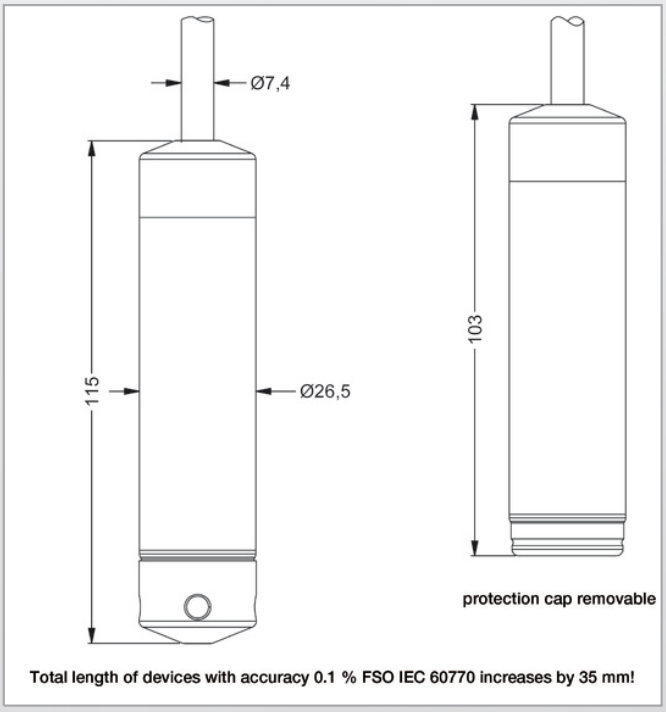
Features:

- Nominal pressure
  from 0 ... 4 mH_2O up to 0 ... 250 mH_2O (ceramic)
  from 0 ... 1 mH_2O up to 0 ... 250 mH_2O (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

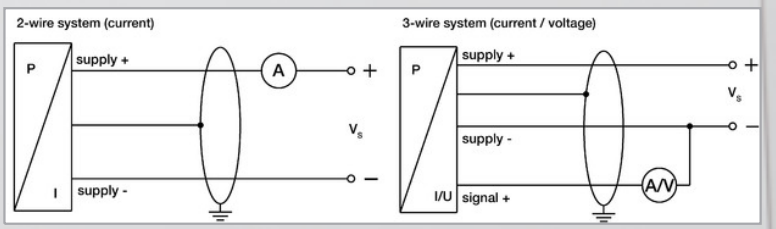
Dimensions (mm / *inch*)



Connection Chart

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

Wiring Diagrams



Level Probe

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Ceramic Sensor

Technical Data

Materials: Housing: Seals: Diaphragm: Protection cap:	stainless steel 1.4404 (316L) FKM, EPDM ceramics Al_2O_3 96 % POM									
Protection class:	IP68									
Weight (without cable):	approx. 250 g									
Measuring range:										
Nominal pressure PN [bar] rel.:	0.4	0.6	1	1.6	2.5	4	6	10	16	25
Level [mH_2O]:	4	6	10	16	25	40	60	100	160	250
Overpressure [bar]	2	2	2	4	4	10	10	20	40	40
Burst pressure ≥ [bar]	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: $R_{max} = [(V_S - V_S \text{ min}) / 0.02 \text{ A}]\Omega$ 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									
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									
CE-conformity:	EMC Directive: 2014/30/EU									

[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:													
Nominal pressure PN [bar] rel.:	0.1	0.16	0.25	0.4	0.6	1	1.6	2.5	4	6	10	16	25
Level [mH_2O]:	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] :	< 0.40											≥ 0.40	
Tolerance band [% FSO]:	≤ ± 0.1											≤ ± 0.75	
in compensated range [°C]:	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												
CE-conformity:	EMC Directive: 2014/30/EU												

[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

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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	

Subject to technical changes.