Level Probe

BLP1

The level probe BLP1 was designed for severe conditions, especially for navigation or offshore applications.
Due to the housing material CuNiFe, a special copper-nickel alloy, in combination with several mounting types, the BLP1 can be used with all media occurring in the field of navigation, and with various tank, container and basin configurations.

Features

- Accuracy acc. to IEC 60770 0.25% / 0.35% FSO
- Level probe made of CuNiFe alloy (1.4404 on request)
- Excellent seawater resistance
- Installation in tank as submersible probe with cable, with stainless steel pipe or with mounting bracket
- Installation outside the tank by means of threaded connection
  and optionally with adapter flange DN25 or DN40
- Due to flush measuring diaphragm even suitable for high viscosity media (removable protection cap)
- Low temperature error, long-term stability
- High resistance to electrical faults (incorrect wiring, short circuit and overvoltage)
- Rugged and reliable
- Option: II 1 G Ex ia IIB T4

Applications

Ballast containers
Fuel and oil tanks
Service and waste water tanks
Draft measuring systems
Tank level measuring systems

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Technical Data

Materials: **Housing:** **Diaphragm:** **Seals:** **Cable sheath:**	Copper-nickel alloy (CuNi10FE1Mn) Option: stainless steel 1.4404 standard: ceramics Al2O3 96 % FKM, option: FFKM TPE, seawater-proof, halogen-free, temperature resistant up to 125 °C											
Protection class:	IP68 (DIN 40050)											
Weight (without cable):	approx. 400 g											
Measuring range: **Nominal pressure PN [bar] rel.:**	0.06	0.1	0.25	0.4	0.6	1	1.6	2.5	4	6	10	20
Filling height FH [mWC]:	0.60	1.0	2.50	4.0	6.0	10	16.0	20.0	40	60	100	200
perm. overpressure Pmax [bar]	2.00	2.0	2.00	4.0	4.0	7	7.0	15.0	15	25	40	60
Linearity error: **Standard:** **Option:**	acc. to IEC 60770 - limit point adjustment (nonlinearity, hysteresis, repeatability) ≤ ±0.35 % FSO ≤ ±0.25 % FSO											
Load:	2-wire system: [UB (V) – 10 V] / 0.02 A											
Influence effects: **Auxiliary energy:** **Load:**	≤ ±0.05% FSO / 10 V ≤ ±0.05% FSO / k.Ω											
Electrical connection:	Special cable with integrated air tube for atmospheric reference											
Cable protection: **Standard:** **Special design:**	without cable protection Stainless steel pipe (available as compact product with stainless steel pipe with a total length of up to 2 m)											
Auxiliary energy: **Standard:** **Option:**	Operating voltage: 10 ... 32 V DC Ex protection: 12 ... 28 V DC											
Output signal: **Standard:** **Current:**	2-wire system 4 ... 20 mA											
Temperature:	PT100 (3-wire)											
Long-term stability:	≤ ±0.1% FSO /year											
Temperature error: **error for offset and span:** **in compensated range:**	< ±1 % FSO 5 ... 85 °C											
Temperature range: **Operating temperature:** **Storage:**	-25 °C ... +125 °C -40 °C ... +125 °C											
Mechanical stability:	Vibration acc. to IEC 60 068-2-6											
Option Ex protection II 1 G Ex ia IIB T4:	Safety data: U_i = 28 V; I_i = 93 mA; P_i = 660 mW, C_i = 105 nF; L_i = 5 µH; 140 nF opposite GND ATEX Cert. no IBExU07ATEX1179											
Mounting accessories (not included in the scope of delivery):	Mounting clamp made of CuNiFe, stainless steel Mounting flange for fixing submersible level transmitter made of stainless steel DN25 / PN40											

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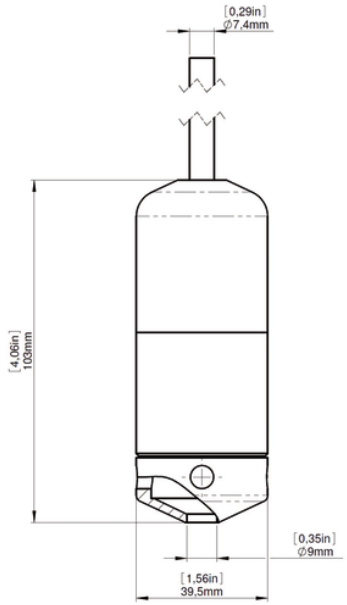
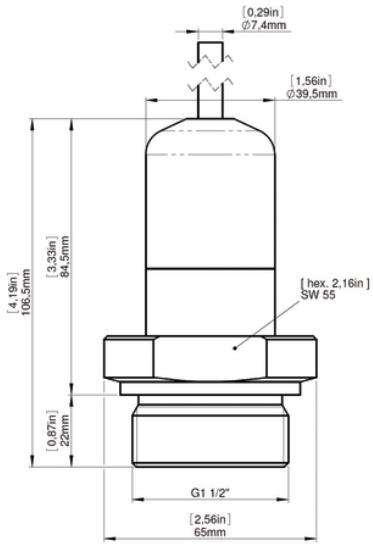
Dimensions (mm / *inch*)

Submersible version



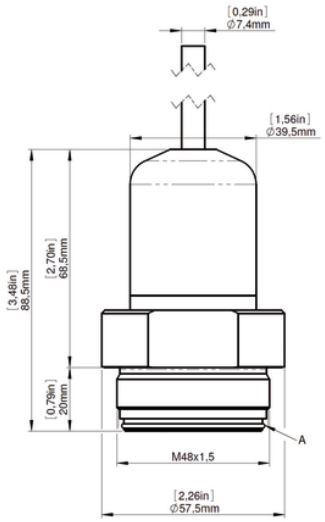
930-0124 A

Screw-in version



930-0125 B

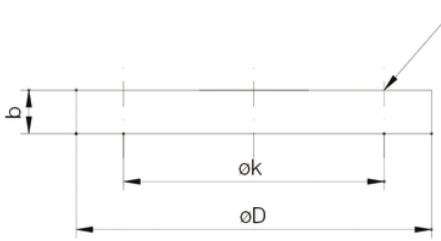
Flange version



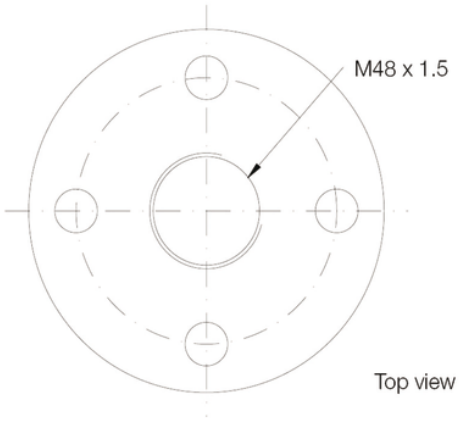
A	O-Ring 40x2 Vi100,S

930-0127 A

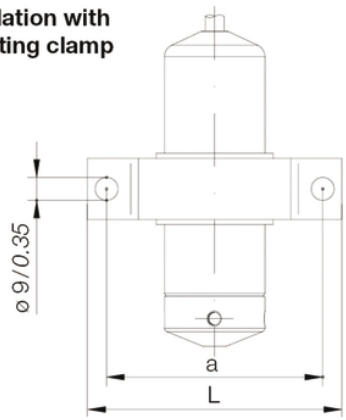
Adapter flanges of stainless steel (accessory)



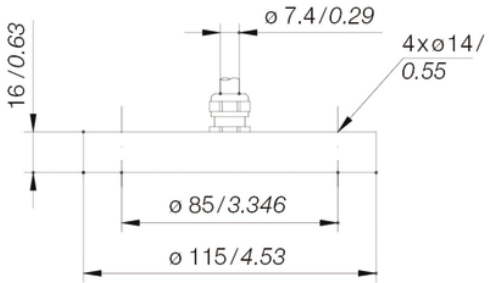
Dimensions in mm		
	DN25	DN50
Order no.	906-0984	906-0985
b	18	18
k	85	110
D	115	150
d	14	18



Installation with mounting clamp



Mounting flange DN25 for submersible probe



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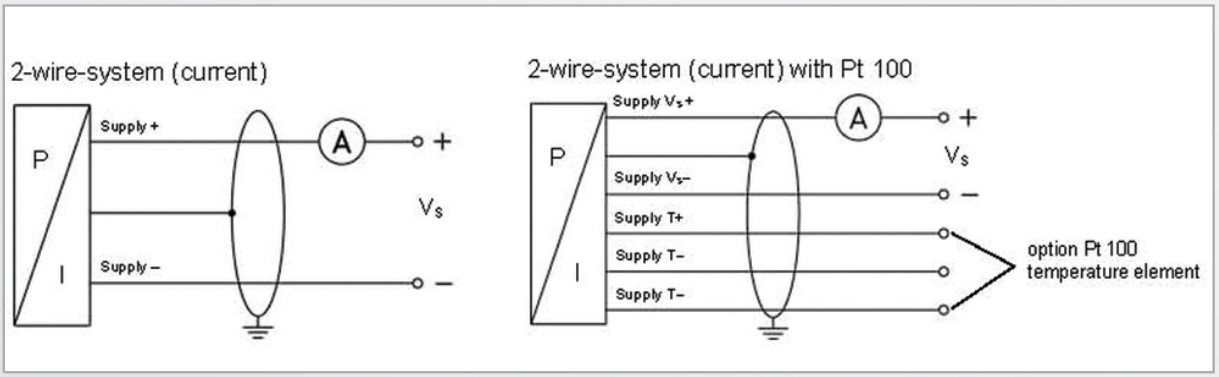
Clamp Material

Clamp material	Dimension	
	a	L
CuNiFe	82/3.22	100/3.93
Stainless steel	100/3.93	130/5.11

Connection Chart

Pin configuration	Electrical connections Cable colors according to DIN 47100
2-wire-system: Supply + Supply – Earth	 white brown Cable shield
Option PT100 Supply + Supply – Supply –	 yellow grey pink

Wiring Diagrams



Example for Order Number

Example for order number

Type	Process connection	Measuring range	Housing	Cable	Sealing	Options
BLP1	S	6 mW	CNF	T10M	F	Ex

Your order number

BLP1						

Order Code

Type	Process connection	Measuring range	Housing	Cable	Sealing	Options
BLP1	Submersible probe (S)	X bar (Xb)	CuNiFe (CNF)	TPE X meter (TXM)	FKM (F)	Exi-approval (Ex)
	M48 x 1.5 flange (F)	X mWs (XmW)	Stainless steel (SS)		FFKM (FF)	PT100 (PT) only without Exi
	G1 1/2'' screw in Probe (E)					

Accessories

Order Number	Description
906-0984	Adapter flange DN25/PN16 for flange probe
906-0985	Adapter flange DN40/PN16 for flange probe
0499-022	Mounting flange for fixing submersible probe made of stainless steel DN25/PN40

Subject to technical changes.