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.



DNV·GL CE Ex

Features

- Accuracy acc. to IEC 60770 0.25% / 0.1% FSO
- Marine approval: DNV-GL
- 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 DN50
- 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: Ex II 1G Ex ia IIB T4 Ga

Applications

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

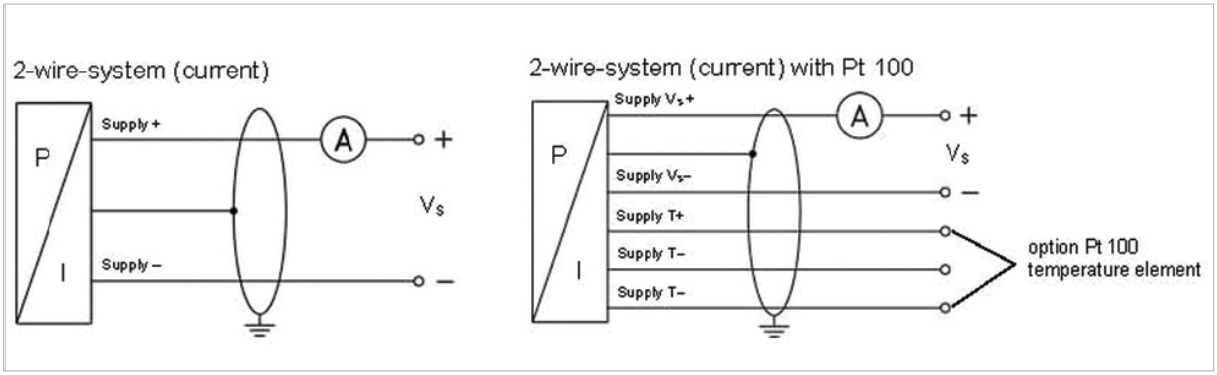
Clamp Material

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



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Level Probe BLP1

Technical Data

Materials: Housing: Diaphragm: Seals: Cable sheath:	Copper-nickel alloy (CuNi10FE1Mn) Option: stainless steel 1.4404 standard: ceramics Al_2O_3 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.:	0.04	0.06	0.1	0.16		0.4	0.6	1.0	1.6	2.5	4	6	10	16	20
Filling height FH [mWC]:	0.4	0.6	1	1.6	2.5	4	6	10	16	25	40	60	100	160	200
perm. overpressure Pmax [bar]	2	2	4	4	6	6	8	8	15	25	25	35	35	45	45
Linearity error: Standard: Option:	acc. to IEC 60770 - limit point adjustment (nonlinearity, hysteresis, repeatability) ≤ ±0.25 % FSO ≤ ±0.1% 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 / kΩ														
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: 9 ... 32 V DC Ex protection: 14 ... 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:	≤ ± 0.1 % FSO -20 ... 88 °C														
Temperature range: Operating temperature: Storage:	-25 °C ... +125 °C -40 °C ... +125 °C														
Mechanical stability:	4 g Vibration acc. to IEC 60 068-2-6														
Approvals:	DNV-GL Optional: ATEX Cert. No IBExU10ATEX1142 X / Ex II 1G Ex ia IIB T4 Ga, amibient temperature range: -25°C ≤ Ta ≤ +70°C The device may only be operated in an explosive atmosphere that requires category 1 equipment if atmospheric conditions are present (temperature -20°C to +60°C, pressure from 0.8 bar to 1.1 bar).														
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														

Accessories

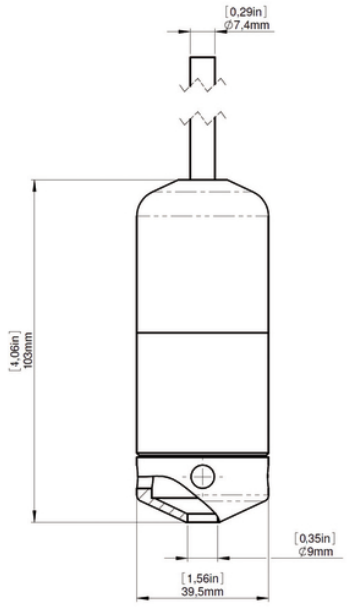
Order Number	Description
906-0984	Adapter flange DN25 / PN40 for flange probe
906-0985	Adapter flange DN50 / PN40 for flange probe
0499-022	Mounting flange for fixing submersible probe made of stainless steel DN25/PN40

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Level Probe BLP1

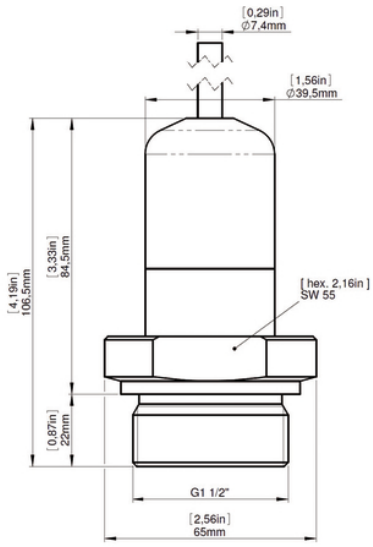
Dimensions (mm / inch)

Submersible version



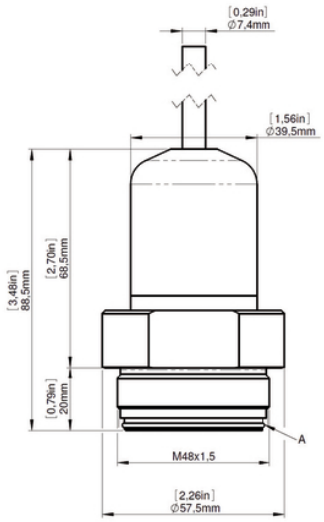
930-0124 A

Screw-in version



930-0125 B

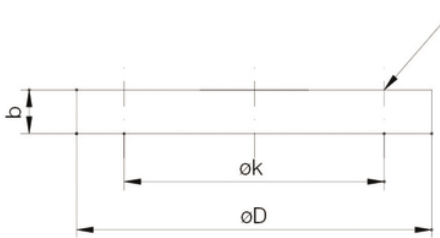
Flange version



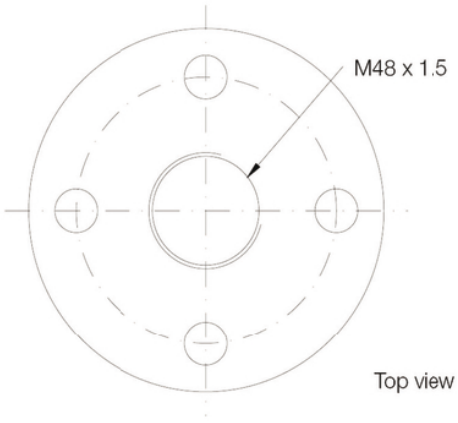
A	O-Ring 40x2 Vi100,S

930-0127 A

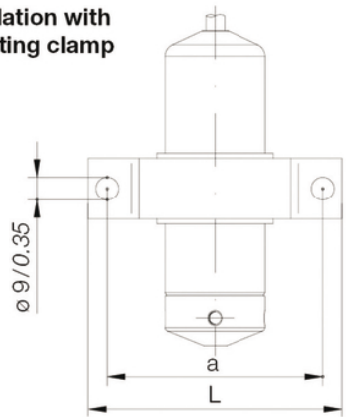
Adapter flanges of stainless steel (accessory)



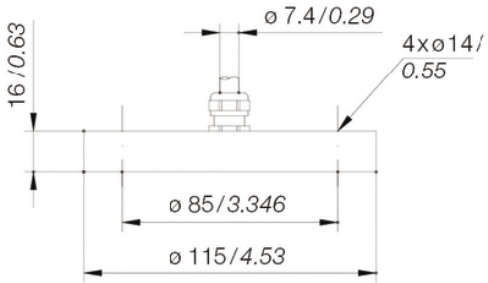
Dimensions in mm		
	DN25	DN50
Order no.	906-0984	906-0985
b	18	18
k	85	110
D	115	150
d	14	18



Installation with mounting clamp



Mounting flange DN25 for submersible probe



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Level Probe BLP1

Order Code

BLP1										Base model
										Process Connection
	S									Submersible probe
	F									Flange M48x1,5
	E									G11/2" screw-in probe
										Range
		mWs	bar							
		0,4	0,04							0…0,4 mWs (0…0,04 bar)
		0,6	0,06							0…0,6 mWs (0…0,06 bar)
		1,0	0,10							0…1 mWs (0…0,1 bar)
		1,6	0,16							0…1,6 mWs (0…0,16 bar)
		2,5	0,25							0…2,5 mWs (0…0,25 bar)
		4	0,4							0…4 mWs (0…0,4 bar)
		6	0,6							0…6 mWs (0…0,6 bar)
		10	1,0							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							0…40 mWs (0…4 bar)
		60	6,0							0…60 mWs (0…6 bar)
		100	10							0…100 mWs (0…10 bar)
		160	16							0…160 mWs (0…16 bar)
		200	20							0…200 mWs (0…20 bar)
										Housing
				SS						Stainless steel 1.4404 (316L)
				CNF						CuNiFe1MN
										Electrical connection
					TxM					TPE cable x meter (to order separately)
										Sealing
						F				FKM
						FF				FFKM
										Option
								EX		Exi Approval
								PT100		PT100 (not Exi)

Order code example:														
BLP1	/	S	/	6mWS	/	SS	/	T10M	/	F	/	PT100		

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