

# 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% / 0.1% 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



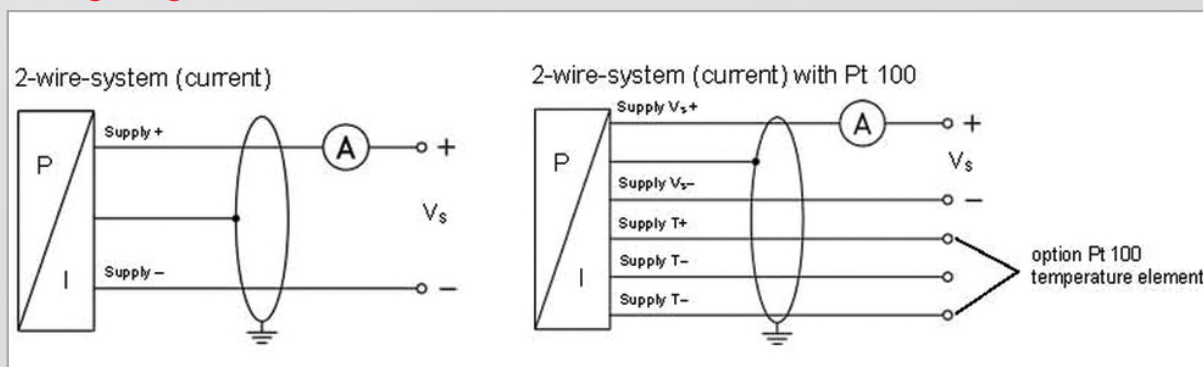
## Clamp Material

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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## Technical Data

<b>Materials:</b>	Copper-nickel alloy (CuNi10FE1Mn)														
<b>Housing:</b>	Option: stainless steel 1.4404														
<b>Diaphragm:</b>	standard: ceramics Al <sub>2</sub> O <sub>3</sub> 96 %														
<b>Seals:</b>	FKM, option: FFKM														
<b>Cable sheath:</b>	TPE, seawater-proof, halogen-free, temperature resistant up to 125 °C														
<b>Protection class:</b>	IP68 (DIN 40050)														
<b>Weight (without cable):</b>	approx. 400 g														
<b>Measuring range:</b>	0.04	0.06	0.1	0.16	0.25	0.4	0.6	1.0	1.6	2.5	4	6	10	16	20
<b>Nominal pressure PN [bar] rel.:</b>	0.4	0.6	1	1.6	2.5	4	6	10	16	25	40	60	100	160	200
<b>Filling height FH [mWC]:</b>	2	2	4	4	6	6	8	8	15	25	25	35	35	45	45
<b>perm. overpressure Pmax [bar]</b>															
<b>Linearity error:</b>	acc. to IEC 60770 - limit point adjustment (nonlinearity, hysteresis, repeatability)														
<b>Standard:</b>	≤ ±0.25 % FSO														
<b>Option:</b>	≤ ±0.1% FSO														
<b>Load:</b>	2-wire system: [ UB (V) – 10 V] / 0.02 A														
<b>Influence effects:</b>															
<b>Auxiliary energy:</b>	≤ ±0.05% FSO / 10 V														
<b>Load:</b>	≤ ±0.05% FSO / kΩ														
<b>Electrical connection:</b>	Special cable with integrated air tube for atmospheric reference														
<b>Cable protection:</b>															
<b>Standard:</b>	without cable protection														
<b>Special design:</b>	Stainless steel pipe (available as compact product with stainless steel pipe with a total length of up to 2 m)														
<b>Auxiliary energy:</b>															
<b>Standard:</b>	Operating voltage: 9 ... 32 V DC														
<b>Option:</b>	Ex protection: 14 ... 28 V DC														
<b>Output signal:</b>															
<b>Standard:</b>	2-wire system														
<b>Current:</b>	4 ... 20 mA														
<b>Temperature:</b>	PT100 (3-wire)														
<b>Long-term stability:</b>	≤ ±0.1% FSO /year														
<b>Temperature error:</b>															
<b>error for offset and span:</b>	≤ ± 0.1 % FSO														
<b>in compensated range:</b>	-20 ... 88 °C														
<b>Temperature range:</b>															
<b>Operating temperature:</b>	-25 °C ... +125 °C														
<b>Storage:</b>	-40 °C ... +125 °C														
<b>Mechanical stability:</b>	4 g Vibration acc. to IEC 60 068-2-6														
<b>Approvals:</b>	DNV-GL Optional: ATEX Cert. No IBExU10ATEX1142 X / Ex II 1G Ex ia IIB T4 Ga, ambient 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).														
<b>Mounting accessories (not included in the scope of delivery):</b>	Mounting clamp made of CuNiFe, stainless steel Mounting flange for fixing submersible level transmitter made of stainless steel DN25 / PN40														

## Accessories

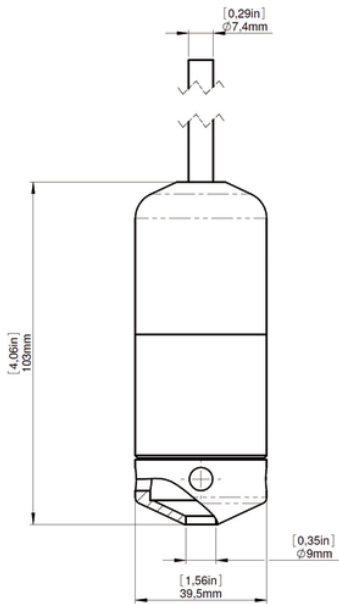
Order Number	Description
906-0984	Adapter flange DN25 / PN40 for flange probe
906-0985	Adapter flange DN50 / PN40 for flange probe
0499-022	Mounting flange for fixing submersible probe made of stainless steel DN25/PN40

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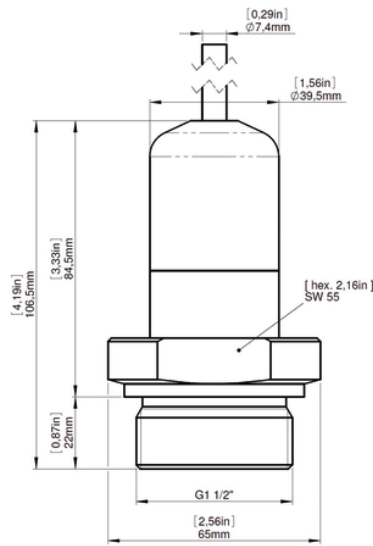
## Dimensions (mm / inch)

Submersible version



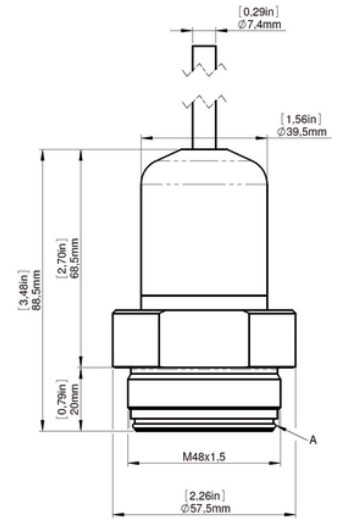
930-0124 A

Screw-in version



930-0125 B

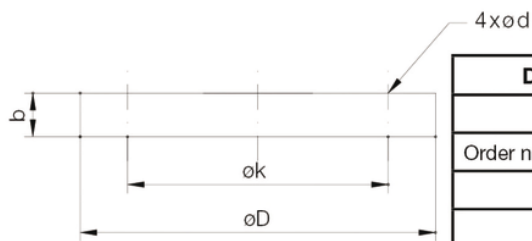
Flange version



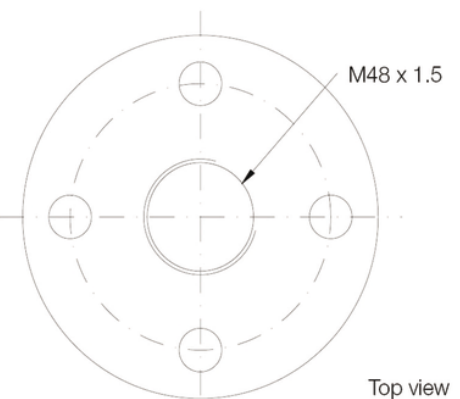
A O-Ring 40x2 V100.S

930-0127 A

### Adapter flanges of stainless steel (accessory)

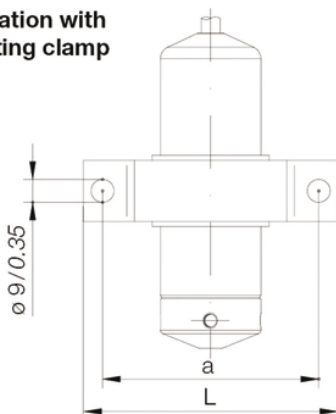


Dimensions in mm		
	DN25	DN50
Order no.	906-0984	906-0985
b	18	18
k	85	110
D	115	150
d	14	18



Top view

### Installation with mounting clamp



### Mounting flange DN25 for submersible probe

