

Submersible Level Transmitter

Type UPA2-LMK 457-GL

Submersible level transmitter made of CuNiFe alloy, seawater-proof

The hydrostatic level probe UPA2-LMK 457-GL 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 LMK 457 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 (1.4571 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 with 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 EEx ia IIC T4

Applications

Ballast containers
Fuel and oil tanks
Service and waste water tanks



Index B



Subject to technical changes.

Technical Data

Index B

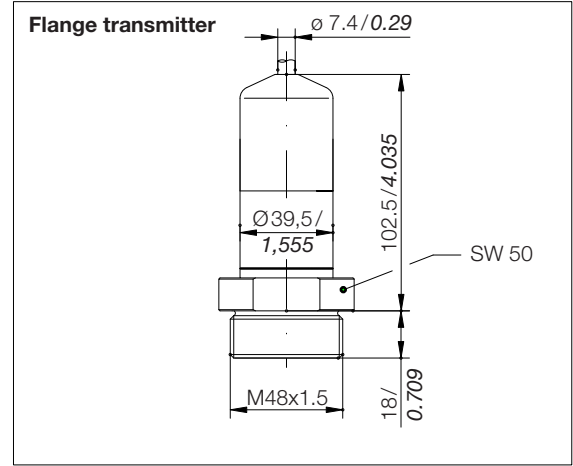
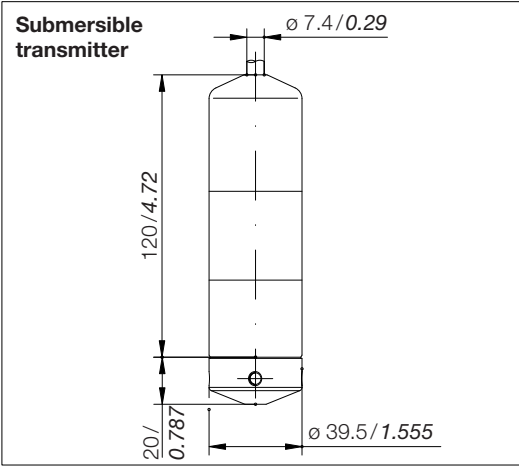
Materials: Housing: Terminal box HT version: Diaphragm: Seals: Cable sheath :	Copper-nickel alloy (CuNi10FE1Mn) Option: stainless steel 1.4571 Aluminium diecast Ceramics Al ₂ O ₃ 96 % FKM, option: FFKM TPE, seawater-proof, halogen-free, temperature resistant up to 125 °C																																				
Protection class:	IP68 (DIN 40050)																																				
Weight (without cable):	approx. 400 g (approx. 600 g HT version)																																				
Measuring range: Nominal pressure P _N [bar] rel.: Filling height FH [mWC]: perm. overpressure P _{max} [bar]	<table border="1"> <tr> <td>0.06</td><td>0.1</td><td>0.25</td><td>0.4</td><td>0.6</td><td>1</td><td>1.6</td><td>2.5</td><td>4</td><td>6</td><td>10</td><td>20</td> </tr> <tr> <td>0.60</td><td>1.0</td><td>2.50</td><td>4.0</td><td>6.0</td><td>10</td><td>16.0</td><td>20.0</td><td>40</td><td>60</td><td>100</td><td>200</td> </tr> <tr> <td>2.00</td><td>2.0</td><td>2.00</td><td>4.0</td><td>4.0</td><td>7</td><td>7.0</td><td>15.0</td><td>15</td><td>25</td><td>40</td><td>60</td> </tr> </table>	0.06	0.1	0.25	0.4	0.6	1	1.6	2.5	4	6	10	20	0.60	1.0	2.50	4.0	6.0	10	16.0	20.0	40	60	100	200	2.00	2.0	2.00	4.0	4.0	7	7.0	15.0	15	25	40	60
0.06	0.1	0.25	0.4	0.6	1	1.6	2.5	4	6	10	20																										
0.60	1.0	2.50	4.0	6.0	10	16.0	20.0	40	60	100	200																										
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) - 12 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: 12...36 V DC Ex protection: 12...28 V DC																																				
Output signal: Standard: Current:	2-wire system 4 ... 20 mA																																				
Long-term stability:	≤ ±0.1% FSO/year																																				
Temperature sensor: error for offset and span: in compensated range:	< ±1 % FSO 5... 85 °C																																				
Temperature range: Operating temperature: Storage:	<table border="0"> <tr> <td></td> <td style="text-align: center;">HT version</td> </tr> <tr> <td>-25 °C ... +85 °C</td> <td>-25 °C ... +125 °C</td> </tr> <tr> <td>-40 °C ... +125 °C</td> <td>-40 °C ... +125 °C</td> </tr> </table>		HT version	-25 °C ... +85 °C	-25 °C ... +125 °C	-40 °C ... +125 °C	-40 °C ... +125 °C																														
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Mechanical stability	Vibration acc. to IEC 60 068-2-6																																				
Option Ex protection II 1 G EEx ia CII T4:	Safety data: U _i = 28 V; I _i = 93 mA; P _i = 660 mW																																				
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																																				

Subject to technical changes.

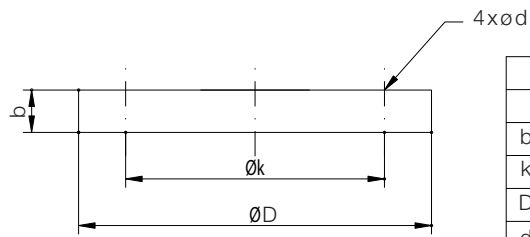
Submersible transmitter

Type UPA2-LMK 457-GL

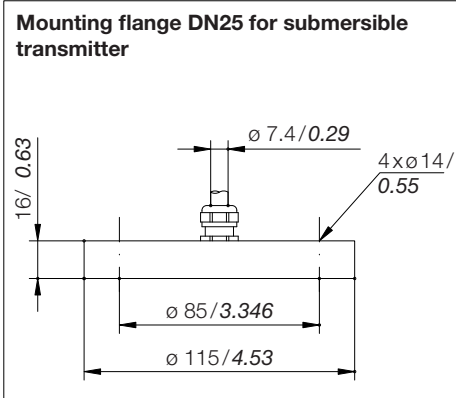
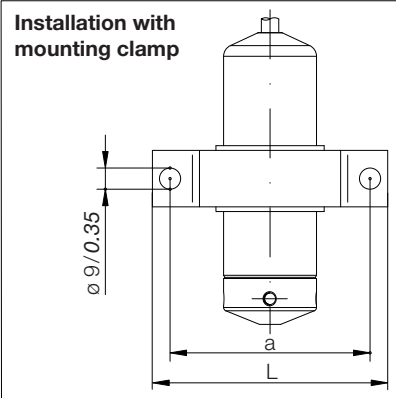
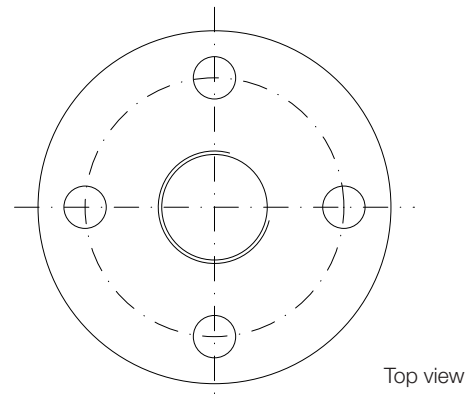
Dimensions (in mm / Inch)



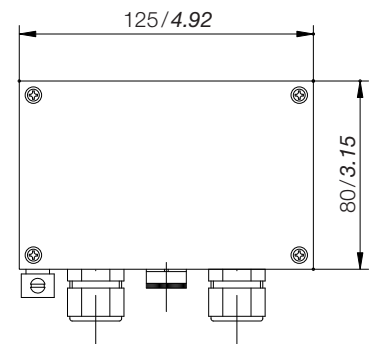
Flange version (exclusively stainless steel design)



Dimensions in mm		
	DN25	DN40
b	18	18
k	85	110
D	115	150
d	14	18



Terminal box KL 1E



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

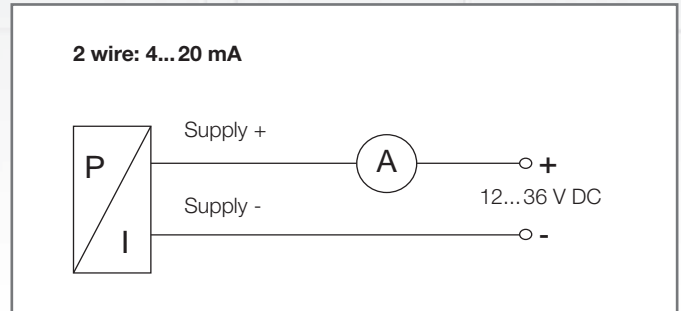
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Electrical Connection

Pin configuration	Electrical connections Cable colors according to DIN 47100
2-wire-system: Supply + Supply - Earth	white brown Cable shield

Connection diagram



Ordering

Example for order number

Type	Series	Unit	Measuring range	Housing material	Type of construct.	Output signal	Sealing	Electr. connect.	Accuracy	Cable length	Option
UPA2	LMK 457-GL	bar	1000	1	3	1	1	4	2	003	HT

Your order number

Type	Series	Unit	Measuring range	Housing material	Type of construct.	Output signal	Sealing	Electr. connect.	Accuracy	Cable length	Option
UPA2	LMK 457-GL										

Order codes

Unit	Measuring range [bar] [mWS]			Housing material	Type of construction	Output signal	Sealing	Electrical connection	Accuracy	Cable length [m]	Option
bar or mWC	0.06	0.6	600	(K) CuNiFe alloy	(1) Submersible transmitter	(1) 4...20 mA 2-wire system	(1) FKM	(4) Special TPE cable	(3) 0.35 % Standard	(e. g.: 3 m = 003)	HT
	0.10	1.0	1000								
	0.25	2.5	2500								
	0.40	4.0	4000	(1) Stainless steel 1.4571	(3) Flange transmitter DN25 / PN40*	(E) 4...20 mA 2-wire system Ex protection II 1 G EExia IIC T4	(2) 0.25 % Option				
	0.60	6.0	6000								
	1.00	10.0	1001								
	1.60	16.0	1601								
	2.50	25.0	2501								
	4.00	40.0	4001								
	6.00	60.0	6001								
	10.00	100.0	1002								
	16.00	160.0	1602								
20.00	200.0	2002	(4) Flange transmitter DN40 / PN40*								

* Flange exclusively of stainless steel 1.4571

Accessories

Order Number	Description
0499-050	Mounting clamp made of CuNiFe
0499-021	Mounting clamp made of stainless steel
0499-022	Mounting flange for fixing submersible level transmitter made of galvanized stainless steel DN25/PN40