

# LMK 306



## Stainless Steel Probe

Ceramic Sensor

accuracy according to IEC 60770:  
0.5 % FSO

### Nominal pressure

from 0 ... 6 mH<sub>2</sub>O up to 0 ... 200 mH<sub>2</sub>O

### Output signals

2-wire: 4 ... 20 mA  
others on request

### Special characteristics

- ▶ diameter 17 mm
- ▶ suitable for hydrostatic level measurement e.g. in 3/4" pipes
- ▶ good linearity
- ▶ good long term stability

### Optional versions

- ▶ different cable materials
- ▶ customer specific versions e.g. special pressure ranges

The slimline probe LMK 306 with ceramic sensor has been especially designed for the continuous level measurement at confined space conditions. Permissible media are clean or slightly contaminated water and thin fluids.

Different cable sheath materials are available in order to achieve maximum media compatibility.

### Preferred areas of use are

#### Water

level measurement at confined space conditions



ground water monitoring  
depth or level measurement in wells  
drinking water abstraction

level measurement in open and closed tanks



Input pressure range										
Nominal pressure gauge	[bar]	0.6	1	1.6	2.5	4	6	10	16	20
Level	[mH <sub>2</sub> O]	6	10	16	25	40	60	100	160	200
Overpressure	[bar]	2	2	4	4	10	10	20	40	40
Burst pressure ≥	[bar]	4	4	5	5	12	12	25	50	50

Output signal / Supply	
2-wire	4 ... 20 mA / V <sub>S</sub> = 12 ... 36 V <sub>DC</sub>

Performance	
Accuracy	≤ ± 0.5 % FSO
Permissible load	$R_{max} = [(V_S - V_{Smin}) / 0.02 A] \Omega$
Influence effects	supply: 0.05 % FSO / 10 V      load: 0.05 % FSO / kΩ
Response time	≤ 10 msec

<sup>1</sup> accuracy according to IEC 60770 – limit point adjustment (non-linearity, hysteresis, repeatability)

Thermal effects (Offset and Span) / Permissible temperatures	
Thermal error	≤ ± 0.2 % FSO / 10 K      in compensated range -25 ... 70 °C
Permissible temperatures	Medium/ electronics/ environment/ storage: -20 ... 80 °C *

\*If the cable is intended for use in a smaller temperature range, the use of the probe is limited by this range.

Electrical protection <sup>2</sup>	
Short-circuit protection	permanent
Reverse polarity protection	no damage, but also no function
Electromagnetic protection	emission and immunity according to EN 61326

<sup>2</sup> additional external overvoltage protection unit in terminal box KL 1 or KL 2 with atmospheric pressure reference available on request

Electrical connection	
Cable with sheath material <sup>3</sup>	PVC (-5 ... 70 °C) grey (-25 ... 70 °C in fixed condition) Ø 7,4 mm PUR (-25 ... 80 °C) black Ø 7,4 mm FEP <sup>4</sup> (-25 ... 75 °C) black Ø 7,4 mm    others on request
Cable capacitance	signal line/shield also signal line/signal line: 160 pF/m
Cable inductance	signal line/shield also signal line/signal line: 1 µH/m
Bending radius	static installation: 10-fold cable diameter dynamic application: 20-fold cable diameter

<sup>3</sup> shielded cable with integrated ventilation tube for atmospheric pressure reference

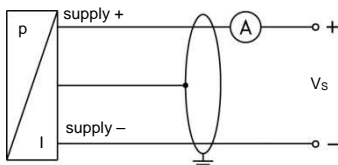
<sup>4</sup> do not use freely suspended probes with an FEP cable if effects due to highly charging processes are expected

Materials (media wetted)	
Housing	stainless steel 1.4404 (316L)
Seals	FKM
Diaphragm	ceramics Al <sub>2</sub> O <sub>3</sub> 96 %
Protection cap	POM-C
Cable sheath	PVC, PUR, FEP

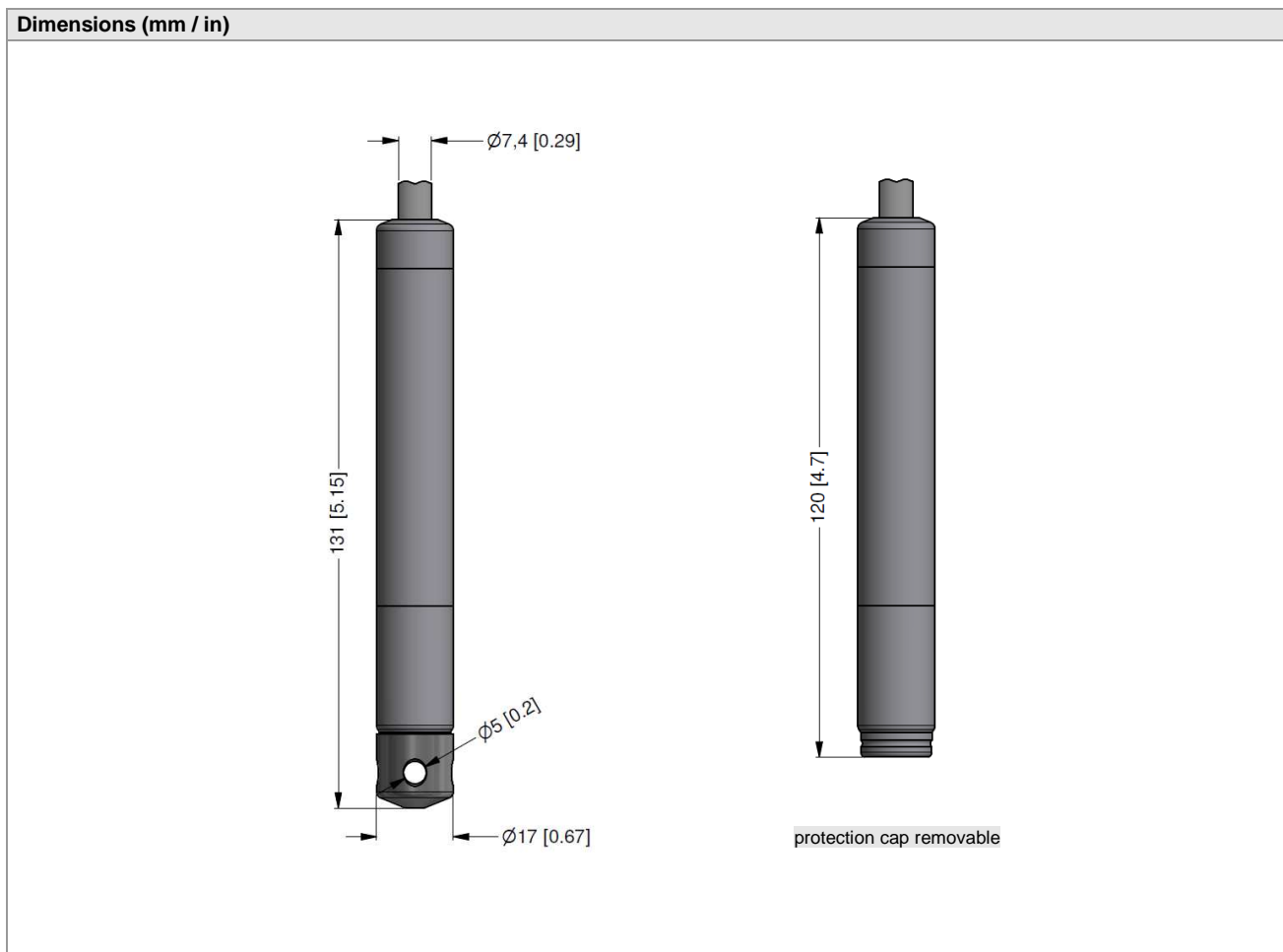
Miscellaneous	
Current consumption	max. 25 mA
Weight	approx. 100 g (without cable)
Ingress protection	IP 68
CE-conformity	EMC Directive: 2014/30/EU

### Wiring diagram

2-wire-system (current)



Pin configuration	
Electrical connection	cable colours (IEC 60757)
Supply +	WH (white)
Supply -	BN (brown)
Shield	GNYE (green-yellow)



## Accessories

Terminal clamp		
<b>Technical data</b>		
Suitable for	all probes with cable $\text{Ø} 5.5 \dots 10.5$ mm	
Material of housing	standard: steel, zinc plated      optionally: stainless steel 1.4301 (304)	
Material of clamping jaws and positioning clips	PA (fibre-glass reinforced)	
Dimensions (mm)	174 x 45 x 32	
Hook diameter	20 mm	
<b>Ordering type</b>	<b>Ordering code</b>	<b>Weight</b>
Terminal clamp, steel, zinc plated	Z100528	approx. 160 g
Terminal clamp, stainless steel 1.4301 (304)	Z100527	

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## Ordering code LMK 306

3.4.2020

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Pressure																					
in bar		3	7	0																	
in H <sub>2</sub> O		3	7	1																	
Input		[mH <sub>2</sub> O]	[bar]																		
		0 ... 6	0 ... 0,6	6	0	0	0														
		0 ... 10	0 ... 1	1	0	0	1														
		0 ... 16	0 ... 1,6	1	6	0	1														
		0 ... 25	0 ... 2,5	2	5	0	1														
		0 ... 40	0 ... 4	4	0	0	1														
		0 ... 60	0 ... 6	6	0	0	1														
		0 ... 100	0 ... 10	1	0	0	2														
		0 ... 160	0 ... 16	1	6	0	2														
		0 ... 200	0 ... 20	2	0	0	2														
Customer				9	9	9	9														
Housing material																					
Stainless steel 1.4404 (316 L)								1													
Customer								9													
Diaphragm material																					
Ceramic Al <sub>2</sub> O <sub>3</sub> 96 %									2												
Customer									9												
Output signal																					
4 ... 20 mA / 2-wire										1											
Customer										9											
Seals																					
Viton (FKM)											1										
Customer											9										
Accuracy																					
0,5 %												5									
Customer												9									
Electrical connection																					
PVC - cable (grey, Ø 7,4 mm, price for 1 m)													1								
PUR - cable (black, Ø 7,4 mm, price for 1 m)													2								
FEP - cable with PTFE sheath (black, Ø 7,4 mm, price for 1 m)													3								
Customer													9								
Cable length																					
in m														9	9	9					
Special version																					
Standard																			0	0	0
Customer																			9	9	9
Accessories for submersible transmitter																					
Terminal clamp - zinc plated																				1003440	
Terminal clamp - Stainless Steel 1.4301																				1000278	
Mounting screw PG16 - plastic																				5002200	

0,-...without additional charge

1 - maximum length of PVC cable – 25 m, PUR, FEP, TPE – 40 m

On request...in accordance with the producer

Surcharges for calibration are not subject to any discounts. Subject to change.

This document contains the specification for ordering the product; detailed technical parameters of the product and its possible variants are given in the data sheet. BD SENSORS reserves the right to change sensor specifications without further notice.



BD SENSORS s.r.o.  
Hradištská 817  
CZ – 687 08 Buchlovice

Tel.: +420 572 411 011  
Fax: +420 572 411 497

www.bdsensors.cz  
info@bdsensors.cz

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