

LMP 305



Slimline Probe

Stainless Steel Sensor

accuracy according to EN IEC 62828-2:
standard: 0.35 % span
option: 0.25 % span

Nominal pressure

from 0 ... 1 mH₂O up to 0 ... 250 mH₂O

Output signals

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

Special characteristics

- ▶ diameter 19 mm for cramped areas
- ▶ small thermal effect
- ▶ excellent long term stability
- ▶ excellent linearity

Optional versions

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

The slimline probe LMP 305 with silicon stainless steel sensor is designed for continuous level measurement in confined space conditions. Permissible media are clean or waste water and thin fluids.

A piezoresistiv stainless steel sensor with low thermal error, an excellent linearity and a long term stability, is basis of LMP 305.

Preferred areas of use are

Water

level measurement in confined space conditions



ground water monitoring
depth or level measurement in wells and open waters
drinking water system
level measurement in container



Input pressure range														
Nominal pressure gauge	[bar]	0.1	0.16	0.25	0.4	0.6	1	1.6	2.5	4	6	10	16	25
Level	[mH ₂ O]	1	1.6	2.5	4	6	10	16	25	40	60	100	160	250
Overpressure	[bar]	1	1	1	1	3	3	6	6	20	20	60	60	100
max. ambient pressure (housing)		40 bar												

Output signal / Supply	
Standard	2-wire: 4 ... 20 mA / V _S = 12 ... 36 V _{DC}

Performance	
Accuracy	standard: nominal pressure > 0.4 bar: ≤ ± 0.35 % span nominal pressure ≤ 0.4 bar: ≤ ± 0.50 % span option: nominal pressure > 0.4 bar: ≤ ± 0.25 % span
Permissible load	$R_{max} = [(V_S - V_{S min}) / 0,02 A] \Omega$
Influence effects	supply: 0.05 % span / 10 V load: 0.05 % span / kΩ
Long term stability	≤ ± 0.1 % span / year
Response time	< 10 msec

¹ accuracy according to EN IEC 62828-2– limit point adjustment (non-linearity, hysteresis, repeatability)

Thermal effects (Offset and Span)						
Nominal pressure P _N	[bar]	≤ 0.1	≤ 0.25	≤ 0.4	≤ 1	> 1
Tolerance band	[% span]	≤ ± 2	≤ ± 1.5	≤ ± 1	≤ ± 1	≤ ± 0.75
TC, average	[% span / 10 K]	± 0.3	± 0.2	± 0.14	± 0.1	± 0.07
in compensated range	[°C]	0 ... 50			0 ... 70	

Permissible temperatures	
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 ²	
Short-circuit protection	permanent
Reverse polarity protection	no damage, but also no function
Electromagnetic compatibility	emission and immunity according to EN 61326
Integrated overvoltage protection (ground wire) in accordance with CSN EN 61000-4-5 (1 kV) ³	

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

³ version with the output signal 4 ... 20 mA / 2-wire

Electrical connection			
Cable with sheath material ⁴	PVC (-5 ... 70 °C) grey (-25 ... 70 °C in fixed condition)	Ø 7,4 mm	
	PUR (-25 ... 80 °C) black (with drinking water certificate)	Ø 7,4 mm	
	FEP ⁵ (-25 ... 75 °C) black	Ø 7,4 mm	
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		

⁴ cable with integrated air tube for atmospheric pressure reference

⁵ 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 / EPDM
Diaphragm	stainless steel 1.4435 (316L)
Protection cap	POM-C
Cable sheath	PVC / PUR / FEP

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



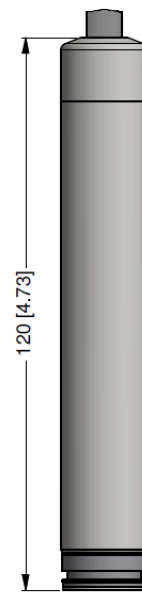
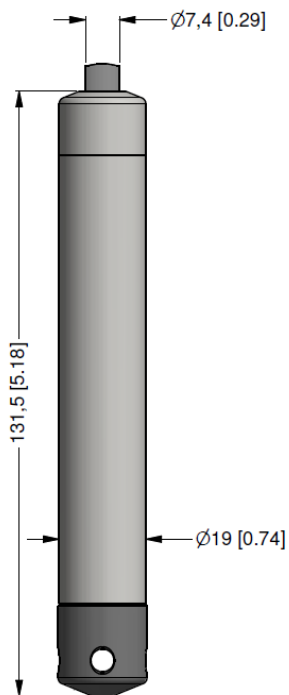
LMP 305

Stainless Steel Probe

Technical Data

Pin configuration	
Electrical connection	cable colours (DIN 47100)
Supply +	wh (white)
Supply -	bn (brown)
Shield	gn/ye (green / yellow)

Dimensions (in mm)



Protection cap removable

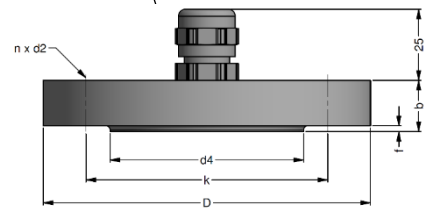
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Mounting flange with cable gland

Technical data

Suitable for	all probes	
Flange material	stainless steel 1.4404 (316L)	
Material of cable gland	standard: brass, nickel plated	
	on request: stainless steel 1.4305 (303); plastic	
Seal insert	material: TPE (ingress protection IP 68)	
Hole pattern	according to DIN 2507	
Version	Size (in mm)	Weight
DN25 / PN40	D = 115, k = 85, b = 18, n = 4, d = 14	1.4 kg
DN50 / PN40	D = 165, k = 125, b = 20, n = 4, d = 18	3.2 kg
DN80 / PN16	D = 200, k = 160, b = 20, n = 8, d = 18	4.8 kg

cable gland M16x1.5 with seal insert (for cable- \varnothing 4 ... 11 mm)



Ordering type

Ordering type	Ordering code
DN25 / PN40 with cable gland brass, nickel plated	5000275
DN50 / PN40 with cable gland brass, nickel plated	5000278
DN80 / PN16 with cable gland brass, nickel plated	5000279

Cable clamp

Technical Data

Suitable for	all probes with cable \varnothing 5.5 ... 10.5 mm	
Material	standard: steel, zinc plated	
	optionally: stainless steel 1.4301 (304)	
Weight	approx. 160 g	



Ordering type

Ordering type	Ordering code
Terminal clamp, of steel, zinc plated	1003440
Terminal clamp, of stainless steel 1.4301 (304)	1000278

Display program

CIT 200

Process display with LED display

CIT 250

Process display with LED display and contacts

CIT 300

Process display with LED display, contacts and analogue output

CIT 350

Process display with LED display, bargraph, contacts and analogue output

CIT 400

Process display with LED display, contacts, analogue output and Ex-approval

CIT 600

Multichannel process display with graphics-capable LC display

CIT 650

Multichannel process display with graphics-capable LC display and datalogger

CIT 700

Multichannel process display with graphics-capable TFT monitor, touchscreen and contacts

PA 440

Field display with 4-digit LC display

For further information please contact our sales department or visit our homepage: <http://www.bdsensors.com>



Ordering code LMP 305

23.08.2024

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Pressure																			
in bar			4	0	0														
in m H ₂ O			4	0	1														
Input	[mH₂O]	[bar]																	
	0 ... 1	0 ... 0,1				1	0	0	0										
	0 ... 1,6	0 ... 0,16				1	6	0	0										
	0 ... 2,5	0 ... 0,25				2	5	0	0										
	0 ... 4	0 ... 0,4				4	0	0	0										
	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 ... 250	0 ... 25				2	5	0	2										
Customer						9	9	9	9										
Housing material																			
Stainless steel 1.4404 (316L)										1									
Diaphragm material																			
Stainless steel 1.4435 (316L)										1									
Output																			
4 ... 20 mA / 2-wire											1								
Customer											9								
Seals																			
Viton (FKM)											1								
EPDM											3								
Customer											9								
Accuracy																			
0,5 % (P _N ≤ 0,4 bar)												5							
0,35 % (P _N > 0,4 bar)												3							
0,25 % (P _N > 0,4 bar)												2							
Customer												9							
Electrical connection																			
PVC - cable (grey, Ø 7,4 mm, price for 1 m) ¹													1						
PUR - cable (black, Ø 7,4 mm, price for 1 m) ¹														2					
FEP - cable with PTFE sheath (black, Ø 7,4 mm, price for 1 m) ¹															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

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.

BD SENSORS reserves the right to change sensor specifications without further notice.



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The company BD SENSORS s.r.o. is certified by Bureau Veritas Czech according to the standard ISO 9001.

1 shielded cable with integrated ventilation tube for atmospheric pressure reference



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