



LMP 305

Slimline Stainless Steel Probe with Stainless Steel Sensor

- ▶ diameter: 19 mm
- ▶ hydrostatic level measurement for example in 1" observation pipes (ground water measurement)
- ▶ nominal pressure ranges:
from 0 ... 1 mH₂O
up to 0 ... 250 mH₂O

The slimline stainless steel probe LMP 305 with its diameter of only 19 mm is especially suited for applications with restricted space, for example in 1" pipes for ground water monitoring. It can be used with water as well as liquids of low viscosity. Compatible with stainless steel 1.4571 and the sealing material.

Basic element of the LMP 305 is a piezoresistive stainless steel sensor featuring excellent metrological properties as, for example, excellent long term stability. Thus it is possible to guarantee accuracy up to 0.125 % FSO BFSL.

Special pressure ranges can be delivered on request.

Preferred areas of use are:

- ▶ ground water level measurement
- ▶ depth or level measurement in wells and open waters
- ▶ level measurement under restricted space conditions

- ▶ small thermal effect
- ▶ excellent linearity
- ▶ good long term stability
- ▶ accuracy:
0.175 % / 0.125% FSO BFSL
(0.35 % / 0.25% FSO IEC 60770)
- ▶ customer specific versions:
- special pressure ranges

Characteristics



LMP 305
Stainless Steel Level Transmitter

LMP 305

Stainless Steel Level Transmitter

Technical Data

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
Permissible overpressure [bar]	1	1	1	1	3	3	6	6	20	20	60	60	100

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

Performance				
Accuracy	standard:	nominal pressure > 0.4 bar:	IEC 60770 ¹	BFSL
		nominal pressure ≤ 0.4 bar:	≤ ± 0.35 % FSO	≤ ± 0.175 % FSO
	option:	nominal pressure > 0.4 bar:	≤ ± 0.50 % FSO	≤ ± 0.250 % FSO
			≤ ± 0.25 % FSO	≤ ± 0.125 % FSO
Permissible load	R _{max} = [(V _s - V _{s min}) / 0.02] Ω			
Influence effects	supply:	0.05 % FSO / 10 V		
	load:	0.05 % FSO / kΩ		
Long term stability	≤ ± 0.1 % FSO / year			
Response time	< 10 msec			

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

Electrical protection ²	
Reverse polarity protection	no damage, but also no function
Electromagnetic compatibility	emission and immunity according to EN 61326

Permissible temperatures	
Medium	-10 ... 70 °C
Storage	-25 ... 70 °C

Electrical connection	
Cable with sheath material ³	PVC grey PUR black FEP black

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

² additional external overvoltage protection unit in terminal box KL1 or KL2 with atmospheric pressure reference available on request (please ask for data sheet)

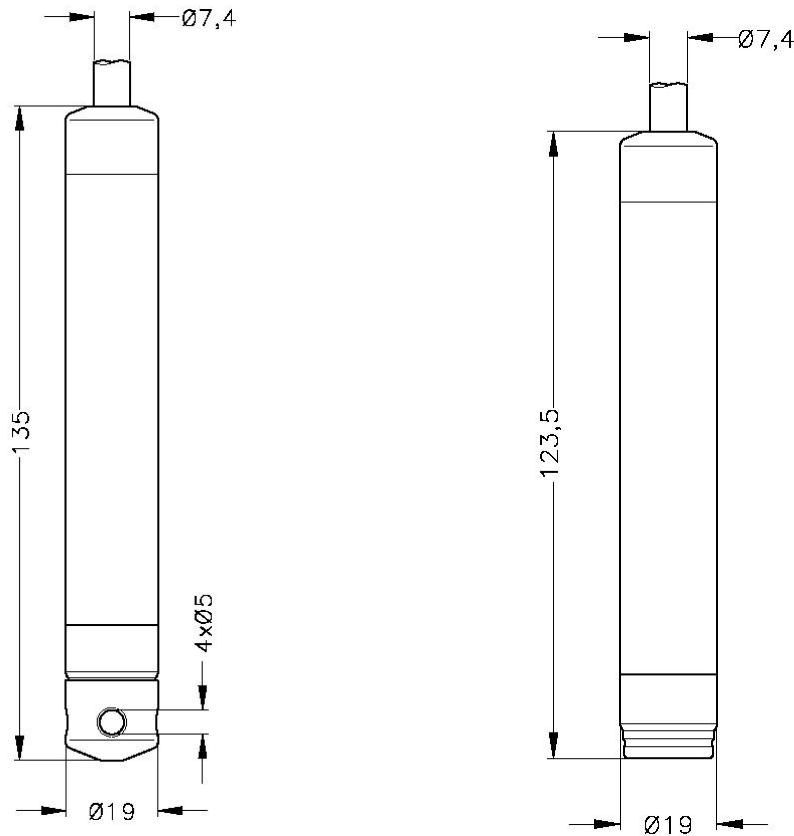
³ cable with integrated air tube for atmospheric pressure reference

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Technical Data

Dimensions (in mm)



Protective cap removable

Materials

Housing	stainless steel 1.4571 (316Ti)
Seals	FKM / EPDM
Diaphragm	stainless steel 1.4435 (316L)
Cable sheath	PVC / PUR / FEP / others on request

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

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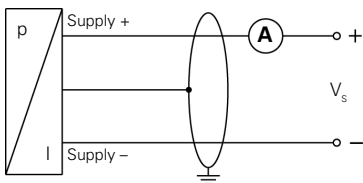
Technical Data

Pin configuration

Electrical connection		cable colours (DIN 47100)
2-wire-system	Supply +	white
	Supply -	brown
	Ground	yellow / green (shield)

Wiring diagram

2-wire-system (current)



This data sheet contains product specification, properties are not guaranteed. Subject to change without notice.

