



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 mWC
up to 0 ... 250 mWC

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.

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 an accuracy up to 0.175 % 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

CE

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 [mWC]	1	1.6	2.5	4	6	10	16	25	40	60	100	160	250
Permissible overpressure [bar]	0.5	0.5	1	1	3	3	6	6	20	20	20	60	100

Output signal / Supply

Standard 2-wire: 4 ... 20 mA / $V_s = 12 \dots 36 V_{DC}$

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
Permissible load	$R_{max} = [(V_s - V_{smin}) / 0.02] \Omega$		
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 ... 85	

Electrical protection²

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)

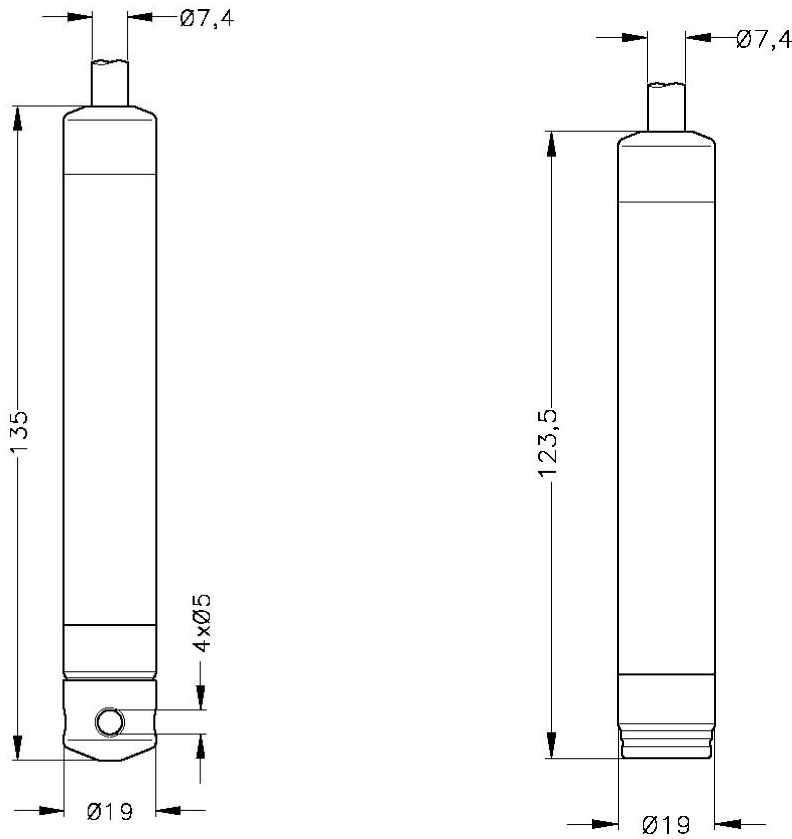
³ cable with integrated air tube for atmospheric pressure reference

LMP 305

Stainless Steel Level Transmitter

Technical Data

Dimensions



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

Cable capacitance	signal line/shield: 150 pF/m	signal line/signal line: 100 pF/m
Cable inductance	signal line/shield: 1.0 µH/m	signal line/signal line: 1.0 µH/m
Current consumption	signal output current: max. 25 mA	
Weight	approx. 100 g (without cable)	
Ingress protection	IP 68	

LMP 305

Stainless Steel Level Transmitter

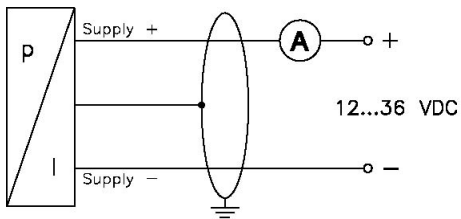
Technical Data

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.

Ordering code LMP 305

LMP 305

□	□	□	-	□	□	□	-	□	-	□	-	□	-	□	-	□	-	□	□	□	-	□	□
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Pressure		in bar	4	0	0																			
		in mWC	4	0	1																			
Input	[mWC]	[bar]																						
	1	0,10	1	0	0	0																		
	1,6	0,16	1	6	0	0																		
	2,5	0,25	2	5	0	0																		
	4	0,40	4	0	0	0																		
	6	0,60	6	0	0	0																		
	10	1,0	1	0	0	1																		
	16	1,6	1	6	0	1																		
	25	2,5	2	5	0	1																		
	40	4,0	4	0	0	1																		
	60	6,0	6	0	0	1																		
	100	10	1	0	0	2																		
	160	16	1	6	0	2																		
	250	25	2	5	0	2																		
		customer	9	9	9	9																		
Housing																								
	Stainless steel 1.4571 (316Ti)					1																		
	customer					9																		
Diaphragm																								
	Stainless steel 1.4435 (316L)					1																		
	customer					9																		
Output																								
	4 ... 20 mA / 2-wire					1																		
	customer					9																		
Seals																								
	FKM					1																		
	EPDM					3																		
	customer					9																		
Accuracy																								
	standard for $P_N > 0,4$ bar	0,35 %				3																		
	standard for $P_N \leq 0,4$ bar	0,5 %				5																		
	option for $P_N > 0,4$ bar	0,25 %				2																		
	customer					9																		
Electrical connection																								
	PVC-cable ¹					1																		
	PUR-cable ¹					2																		
	FEP-cable ¹					3																		
	customer					9																		
Cable length																								
	in m					9	9	9																
Special version																								
	standard																					0	0	0
	customer																					9	9	9

¹ cable with integrated air tube for atmospheric pressure reference

