



LMP 305

Stainless Steel Submersible Transmitter

- ▶ piezoresistive 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 LMP 305 level transmitter 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.

The LMP 305 is suited for all media compatible with stainless steel 1.4571 (316Ti) and the standard FKM sealing material.

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
- ▶ excellent 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 / $V_s = 12 \dots 36 V_{dc}$
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Performance

Accuracy ¹	standard: $\leq \pm 0.35 \% \text{ FSO}$ nominal pressure $\leq 0.4 \text{ bar}$: $\leq \pm 0.5 \% \text{ FSO}$ option (nominal pressure $> 0.4 \text{ bar}$): $\leq \pm 0.25 \% \text{ FSO}$	(BFSL: $\leq \pm 0.175 \% \text{ FSO}$) (BFSL: $\leq \pm 0.25 \% \text{ FSO}$) (BFSL: $\leq \pm 0.125 \% \text{ FSO}$)
Permissible load	$R_{max} = [(V_s - V_{smin}) / 0.02] \Omega$	
Influence effects	supply: 0.05 % FSO / 10 V load: 0.05 % FSO / k Ω	
Long term stability	$\leq \pm 0.1 \% \text{ FSO} / \text{year}$	

Thermal errors (Offset and Span)

Nominal pressure P_N	$\leq 0.1 \text{ bar}$	$\leq 0.25 \text{ bar}$	$\leq 0.4 \text{ bar}$	$\leq 1 \text{ bar}$	$> 1 \text{ bar}$
Tolerance band	$\leq \pm 2 \% \text{ FSO}$	$\leq \pm 1.5 \% \text{ FSO}$	$\leq \pm 1 \% \text{ FSO}$	$\leq \pm 1 \% \text{ FSO}$	$\leq \pm 0.75 \% \text{ FSO}$
TC, average [% FSO / 10 K]	± 0.3	± 0.2	± 0.14	± 0.1	± 0.07
in compensated range	0 ... 50 °C			-20 ... 85 °C	

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
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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)

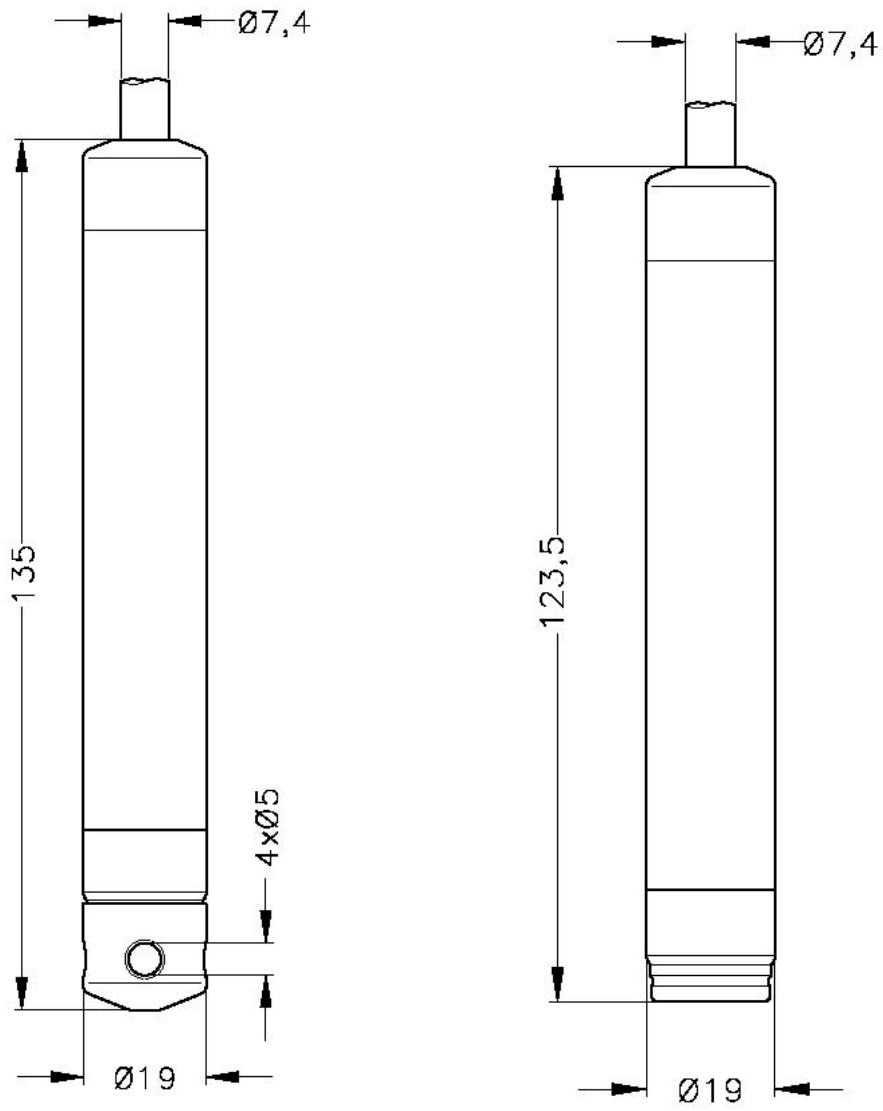
³ cable with integrated air tube for atmospheric pressure reference

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Dimensions



Protective cap removable

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Materials

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

Miscellaneous

Current consumption	signal output current: max. 25 mA
Ingress protection	IP 68
Weight	approx. 100 g (without cable)

Pin configuration

Electrical connection		Cable colours (DIN 47100)
2-wire-system	Supply +	white
	Supply -	brown
	Ground	yellow / black

Wiring diagram

2-wire-system (current)

