



LMK 307

Stainless Steel Probe

Ceramic Sensor

**accuracy according to IEC 60770:
0.5 % FSO**

Stainless Steel Probe

LMK 307

Nominal pressure

from 0 ... 4 mH₂O
up to 0 ... 250 mH₂O

Special characteristics

- ▶ diameter 27 mm
- ▶ good linearity
- ▶ good long term stability
- ▶ easy handling

Optional versions

- ▶ IS-protection
- ▶ SIL 2 (Safety Integrity Level) according to IEC 61508 / IEC 61511
- ▶ different kinds of cables and elastomers
- ▶ customer specific versions e. g. special pressure ranges

The level transmitter LMK 307 is designed for continuous level measurement in water or waste water applications. Basic element is a flush mounted ceramic sensor.

Suitable for all fluids which are compatible with media wetted materials. Different cable and elastomer materials can be offered according to the customer-specific operating conditions.

Preferred areas of use are

Water



drinking water system
ground water monitoring
storm water reservoir

Sewage



waste water treatment
water recycling
dumpsite

Fuel / Oil



fuel storage
tank farm
biogas plants



Input pressure range											
Nominal pressure gauge [bar]	0.4	0.6	1	1.6	2.5	4	6	10	16	25	
Level [mH ₂ O]	4	6	10	16	25	40	60	100	160	250	
Overpressure [bar]	1	2	2	4	4	10	10	20	40	40	
Burst pressure [bar]	2	4	4	5	5	12	12	25	50	50	
Output signal / Supply											
Standard	2-wire: 4 ... 20 mA / V _s = 8 ... 32 V _{DC}										
Option IS-protection	2-wire: 4 ... 20 mA / V _s = 10 ... 28 V _{DC}										
Options 3-wire	3-wire: 0 ... 20 mA / V _s = 14 ... 30 V _{DC} 0 ... 10 V / V _s = 14 ... 30 V _{DC}										
Performance											
Accuracy	≤ ± 0.5 % FSO										
Permissible load	current 2-wire: R _{max} = [(V _s - V _{s min}) / 0.02] Ω current 3-wire: R _{max} = 500 Ω voltage 3-wire: R _{min} = 10 k Ω										
Influence effects	supply: 0.05 % FSO / 10 V load: 0.05 % FSO / kΩ										
Response time	< 10 msec										
¹ accuracy according to IEC 60770 – limit point adjustment (non-linearity, hysteresis, repeatability)											
Thermal effects (Offset and Span)											
Thermal error	≤ ± 0.2 % FSO / 10 K in compensated range -25 ... 70 °C										
Permissible temperatures											
Permissible temperatures	medium: -10 ... 70 °C storage: -25 ... 70 °C										
Electrical protection ²											
Short-circuit protection	permanent										
Reverse polarity protection	no damage, but also no function										
Electromagnetic protection	emission and immunity according to EN 61326										
² 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 ³	PVC (-5 ... 70 °C) grey PUR (-10 ... 70 °C) black FEP (-10 ... 70 °C) black										
³ shielded cable with integrated air tube for atmospheric pressure reference											
Materials (media wetted)											
Housing	stainless steel 1.4404 (316L)										
Seals	FKM EPDM										
Diaphragm	ceramic Al ₂ O ₃ 96 %										
Protection cap	POM										
Explosion protection (only for 4 ... 20 mA / 2-wire)											
Approval DX19-LMK 307	IBExU10ATEX1068X zone 0: II 1 G Ex ia IIC T4 Ga zone 20: II 1D Ex iaD 20 T85 °C										
Safety technical maximum values	U _i = 28 V, I _i = 93 mA, P _i = 660 mW, C _i ≈ 0nF, L _i ≈ 0 μH										
Permissible media temperature	in zone 0: -10 ... 60 °C with p _{atm} 0.8 bar up to 1.1 bar in zone 1: -10 ... 70 °C										
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										
Miscellaneous											
Option SIL 2 application	according to IEC 61508 / IEC 61511										
Current consumption	signal output current: max. 25 mA signal output voltage: max. 7 mA										
Weight	approx. 250 g (without cable)										
Ingress protection	IP 68										
CE-conformity	EMC Directive: 2004/108/EC										

LMK 307

Stainless Steel Probe

Technical Data

Wiring diagrams

2-wire-system (current)

3-wire-system (current / voltage)

Pin configuration

Electrical connection	cable colours (DIN 47100)
Supply +	wh (white)
Supply -	bn (brown)
Signal + (only 3-wire)	gn (green)
Shield	gn/ye (yellow / green)

Dimensions (in mm)

protection cap removable

Accessories

Terminal 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 code
Terminal clamp, steel, zinc plated	Z100528
Terminal clamp, stainless steel 1.4301 (304)	Z100527

