



LMK 807

Plastic Probe for Aggressive Media

Ceramic Sensor

accuracy according to IEC 61298-2:
0.5 % FSO

Nominal pressure

from 0 ... 4 mH₂O up to 0 ... 100 mH₂O

Output signals

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

Special characteristics

- ▶ diameter 35 mm
- ▶ good long term stability
- ▶ easy handling

Optional versions

- ▶ 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 plastic submersible probe LMK 807 is designed for continuous level measurement for highly polluted and aggressive media.

Basic element of the plastic submersible probe is the flush mounted ceramic sensor, which makes cleaning easier when solid parts of the medium deposit on it. Different cable and elastomer materials are available in order to achieve maximum media compatibility.

Preferred areas of use are

Sewage



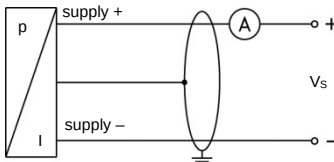
waste water treatment
water recycling
dumpsite



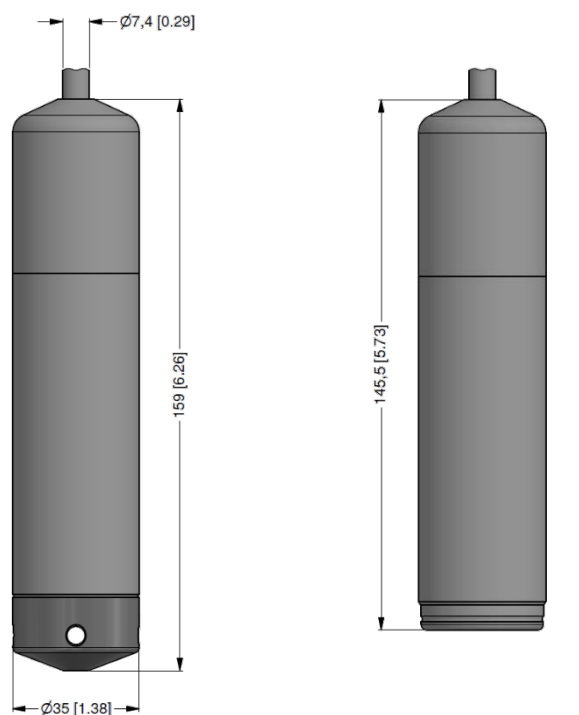
Aggressive media

level measurement
in most of acids and lyes



Input pressure range									
Nominal pressure gauge	[bar]	0.4	0.6	1	1.6	2.5	4	6	10
Level	[mH ₂ O]	4	6	10	16	25	40	60	100
Overpressure	[bar]	1	2	2	4	4	10	10	20
Burst pressure ≥	[bar]	2	4	4	5	5	12	12	25
Max. ambient pressure (housing): 20 bar									
Output signal / Supply									
2-wire		4 ... 20 mA / V _S = 8 ... 32 V _{DC}				SIL-version: V _S = 14 ... 28 V _{DC}			
Performance									
Accuracy ¹		≤ ± 0.5 % FSO							
Permissible load		R _{max} = [(V _S – V _{S min}) / 0.02 A] Ω							
Influence effects		supply: 0.05 % FSO / 10 V				load: 0.05 % FSO / kΩ			
Long term stability		≤ ± 0.1 % FSO / year at reference conditions							
Response time		≤ 10 msec							
¹ accuracy according to IEC 61298-2 – limit point adjustment (non-linearity, hysteresis, repeatability)									
Thermal effects (Offset and Span)									
Thermal error		≤ ± 0.2 % FSO / 10 K				in compensated range 0 ... 70 °C			
Permissible temperatures									
Permissible temperatures		medium / electronic / environment / storage:				0 ... 60 °C			
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							
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 Ø 7.4 mm PUR (-25 ... 70 °C) black Ø 7.4 mm FEP ⁴ (-25 ... 70 °C) black Ø 7.4 mm others on request							
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							
³ shielded cable with integrated ventilation tube for atmospheric pressure reference									
⁴ do not use freely suspended probes with an FEP cable if effects due to highly charging processes are expected									
Materials (media wetted)									
Housing		PP-HT							
Seals		FKM, EPDM, FFKM							
Diaphragm		ceramics Al ₂ O ₃ 96 %							
Protection cap		POM-C							
Cable sheath		PVC, PUR, FEP							
Miscellaneous									
Option SIL 2 version		according to IEC 61508 / IEC 61511							
Current consumption		max. 25 mA							
Weight		approx. 200 g (without cable)							
Ingress protection		IP 68							
CE-conformity		EMC Directive: 2014/30/EU							
Wiring diagram									
2-wire-system (current)									
									
Pin configuration									
Electrical connection		cable colours (IEC 60757)							
Supply +		WH (white)							
Supply –		BN (brown)							
Shield		GNYE (green-yellow)							

Dimensions (mm / in)



protection cap removable

Accessories

Terminal clamp



Technical data

Suitable for	all probes with cable Ø 5.5 ... 10.5 mm		
Material of housing	standard: steel, zinc plated	optionally: stainless steel 1.4301 (304)	
Material of clamping jaws and positioning clips	PA (fibre-glass reinforced)		
Dimensions (mm)	174 x 45 x 32		
Hook diameter	20 mm		
Ordering type	Ordering code	Weight	
Terminal clamp, steel, zinc plated	Z100528	approx. 160 g	
Terminal clamp, stainless steel 1.4301 (304)	Z100527		

Ordering code LMK 807

LMK 807

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Pressure						
		in bar	3	9	0	
		in mH ₂ O	3	9	1	
Input	[mH ₂ O]	[bar]				
	4	0.4		4	0	0
	6	0.6		6	0	0
	10	1.0		1	0	0
	16	1.6		1	6	0
	25	2.5		2	5	0
	40	4.0		4	0	0
	60	6.0		6	0	0
	100	10		1	0	0
customer			9	9	9	9
consult						
Housing	PP-HT			R		
customer			9			
consult						
Diaphragm	ceramics Al ₂ O ₃ 96 %			2		
customer			9			
consult						
Output	4 ... 20 mA / 2-wire			1S		
SIL2	4 ... 20 mA / 2-wire			9		
customer						
consult						
Seals	FKM			1		
		EPDM		3		
		FFKM		7		
customer				9		
consult						
Accuracy	0.5 % FSO			5		
customer				9		
consult						
Electrical connection	PVC-cable (grey, Ø 7.4 mm)			1		
PUR-cable (black, Ø 7.4 mm)				2		
FEP-cable (black, Ø 7.4 mm)				3		
customer				9		
consult						
Cable length	in m			9	9	9
Special version	standard					
customer						
				0	0	0
				9	9	9
consult						

¹ shielded cable with integrated ventilation tube for atmospheric pressure reference