

LMK 807

Plastic Probe for Aggressive Media

Ceramic Sensor

accuracy according to
IEC 60770: 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
- ▶ excellent 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 version e. g. special pressure ranges

The plastic submersible probe LMK 807 is designed for continuous level measurement for waste water or and different 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

Output signal / Supply	
Standard	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	$R_{max} = [(V_S - V_{Smin}) / 0.02 A] \Omega$
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 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: 0 ... 50 °C storage: -10 ... 50 °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 (0 ... 50 °C) grey PUR (0 ... 50 °C) black FEP ⁴ (0 ... 50 °C) black

³ cable with integrated air tube for atmospheric pressure reference

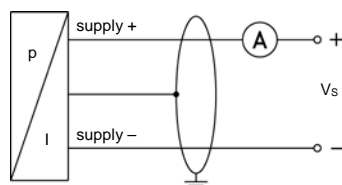
⁴ do not use freely suspended probes with an FEP cable if effects due to highly charging processes are expected

Materials (media wetted)	
Housing	PP-HT
Seals	FKM / EPDM / FFKM
Diaphragm	ceramics Al ₂ O ₃ 96 %

Miscellaneous	
Option SIL 2 version	according to IEC 61508 / IEC 61511
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: 1μH/m
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)



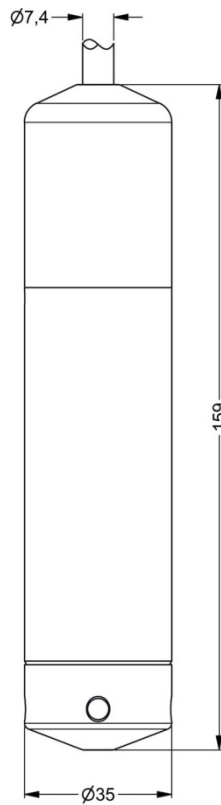
Pin configuration	
Electrical connection	cable colours (IEC 60757)
Supply +	wh (white)
Supply -	bn (brown)
Shield	gnye (green-yellow)

LMK 807

Plastic Submersible Probe

Accessories

Dimensions (in mm)



Accessories

Terminal clamp		
Technical Data		
Suitable for	all probes with cable $\varnothing 5.5 \dots 10.5$ mm	
Material	standard: steel, zinc plated optionally: stainless steel 1.4301 (304)	
Weight	approx. 160 g	
Ordering type		Ordering code
Terminal clamp, of steel, zinc plated		Z100528
Terminal clamp, of stainless steel 1.4301 (304)		Z100527

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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	0.40	4	0	0	0													
		6.0	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													
		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						1												
		SIL2 4 ... 20 mA / 2-wire						1S												
		customer						9												consult
Seals		FKM						1												
		EPDM						3												
		FFKM						7												
		customer						9												consult
Accuracy		0.5 %						5												
		customer						9												consult
Electrical connection		PVC-cable ¹						1												
		PUR-cable ¹						2												
		FEP-cable ¹						3												
		customer						9												consult
Cable length		in m						9	9	9										
Special version		standard									0	0	0							
		customer									9	9	9							consult

¹ cable with integrated air tube for atmospheric pressure reference

