

LMK 807 LMK 809

Plastic Submersible Transmitter with Ceramic Sensor for Aggressive Media

- ▶ diameter:
LMK 807: 35 mm
LMK 809: 45 mm
- ▶ nominal pressure ranges:
LMK 807: 0 ... 6 mWC up to
0 ... 100 mWC
LMK 809: 0 ... 1.6 mWC up to
0 ... 6 mWC

Plastic submersible transmitters LMK 807 and LMK 809 are designed for level measurement particularly in highly contaminated and most of aggressive media.

Basic element of the plastic submersible probes is the flush mounted ceramic sensor, which makes cleaning easier when solid parts of the medium deposit on it. Pressure ranges from 0 ... 1.6 mWC up to 0 ... 6 mWC are designed as LMK 809 (Ø 45). Pressure ranges of LMK 807 (Ø 35) reach from 0 ... 6 mWC up to 0 ... 100 mWC.

Different cable and seal materials are available in order to achieve maximum media compatibility.

Preferred areas of use are:

- ▶ environmental engineering: sewage and water treatment plants
- ▶ depth or level measurement in wells and open waters
- ▶ ground water level measurement
- ▶ level measurement in open tanks, also in most of aggressive media

- ▶ wide area of use
- ▶ easy handling
- ▶ small thermal effect
- ▶ good linearity
- ▶ good long term stability
- ▶ accuracy:
0.25% FSO BFSL
(0.5% FSO IEC 60770)
- ▶ **option LMK 809: ceramic diaphragm Al_2O_3 99.9 %**
- ▶ **different housing materials**
- ▶ customer specific versions:
 - special pressure ranges
 - other versions on request

Characteristics



LMK 807 / 809
Plastic Submersible Transmitter

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Technical Data

Input pressure range ¹										
	LMK 809					LMK 807				
Nominal pressure gauge [bar]	0.16	0.25	0.4	0.6	1	1.6	2.5	4	6	10
Level [mWs]	1.6	2.5	4	6	10	16	25	40	60	100
Permissible overpressure [bar]	0.6	0.6	1.5	1.5	3	7	7	12	12	25

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

Performance	
Accuracy	IEC 60770 ² : $\leq \pm 0.5 \% \text{ FSO}$ BFSL: $\leq \pm 0.25 \% \text{ FSO}$
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
Response time	< 10 msec

Thermal effects	
Thermal error for offset and span in compensated range	$\leq \pm 0.2 \% \text{ FSO} / 10 \text{ K}$ -25 ... 70 °C

Electrical protection ³	
Reverse polarity protection	no damage, but also no function
Electromagnetic compatibility	emission and immunity according to EN 61326

Permissible temperatures		
Media	PVC: 0 ... 50 °C	PVDF: 0 ... 70 °C
Storage	PVC: -10 ... 50 °C	PVDF: -10 ... 70 °C

Electrical connection	
Cable with sheath material ⁴	PVC grey PUR black FEP black

¹ LMK 809 from 0.16 bar up to 0.6 bar; LMK 807 from 0.6 bar up to 10 bar

² accuracy according to IEC 60770 – limit point adjustment (non-linearity, hysteresis, repeatability)

³ additional external overvoltage protection unit in terminal box KL1 or KL2 with atmospheric pressure reference available on request (please ask for data sheet)

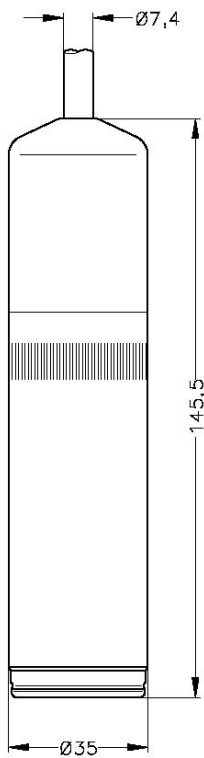
⁴ cable with integrated air tube for atmospheric pressure reference

LMK 807 / 809

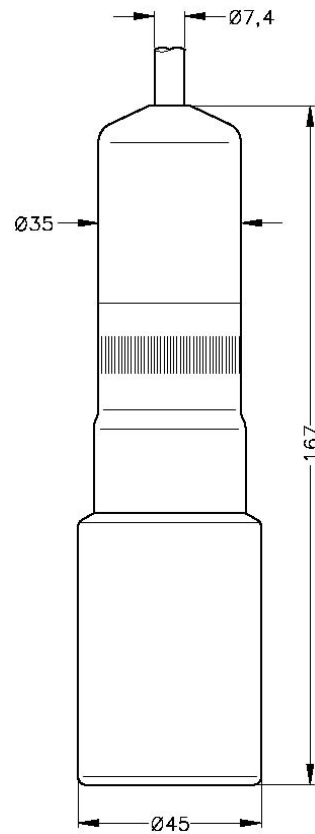
Plastic Submersible Transmitter

Technical Data

Dimensions



LMK 807



LMK 809

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Plastic Submersible Transmitter

Technical Data

Materials

Housing	PVC grey, PVDF	
Seals	FKM / EPDM / FFKM	
Diaphragm	standard:	ceramic Al ₂ O ₃ 96 %
	option LMK 809:	ceramic Al ₂ O ₃ 99.9 %
Cable sheath	PVC / PUR / FEP	

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	max. 25 mA	
Weight	approx. 200 g (without cable)	
Ingress protection	IP 68	

Mounting accessories (not part of delivery)

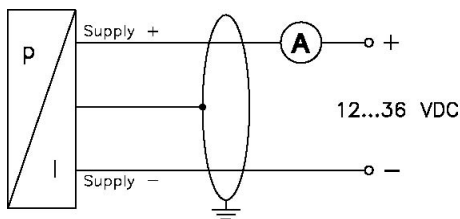
Screw fitting, of PVC
Terminal clamp, of stainless steel 1.4301 (304) or steel, zinc plated

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.

LMK807-809_E_010706

Ordering Code LMK 809

LMK 809

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Pressure		in bar	3	9	5																	
	in mWC	3	9	6																		
Input		[mWC]																				
	[bar]																					
	1,6	0,16	1	6	0	0																
	2,5	0,25	2	5	0	0																
	4,0	0,40	4	0	0	0																
	6,0	0,60	6	0	0	0																
	customer		9	9	9	9																
Housing		PVC																				
	PVDF																					
	customer																					
Diaphragm		Ceramics Al ₂ O ₃ 96%																				
	Ceramics Al ₂ O ₃ 99.9%																					
	customer																					
Output		4 ... 20 mA / 2-wire																				
	customer																					
Seals		FKM																				
	EPDM																					
	FFKM																					
	customer																					
Accuracy		0,5 %																				
	customer																					
Electrical connection		PVC-cable ¹																				
	PUR-cable ¹																					
	FEP-cable ¹																					
	customer																					
Cable length		in m																				
Special version		standard																				
	customer																					

¹ cable with integrated air tube for atmospheric pressure reference

