



LMK 809

**Probe
for Aggressive Media**

Ceramic Diaphragm

**accuracy:
0.35 % FSO IEC 60770**

Product characteristics

- ▶ diameter 45 mm
- ▶ nominal pressure ranges
from 0 ... 4 mH₂O
up to 0 ... 100 mH₂O
- ▶ chemical resistance
- ▶ high overpressure resistance

Optional versions

- ▶ housing material PP or PVDF
- ▶ different kinds of cable
- ▶ different kinds of elastomers

The submersible probe **LMK 809** is designed for continuous level measurement in waste water or in most of aggressive media. Basic element is a capacitiv ceramic sensor.

Preferred areas of use are

Sewage



waste water treatment
water recycling
dumpsite

Aggressive media



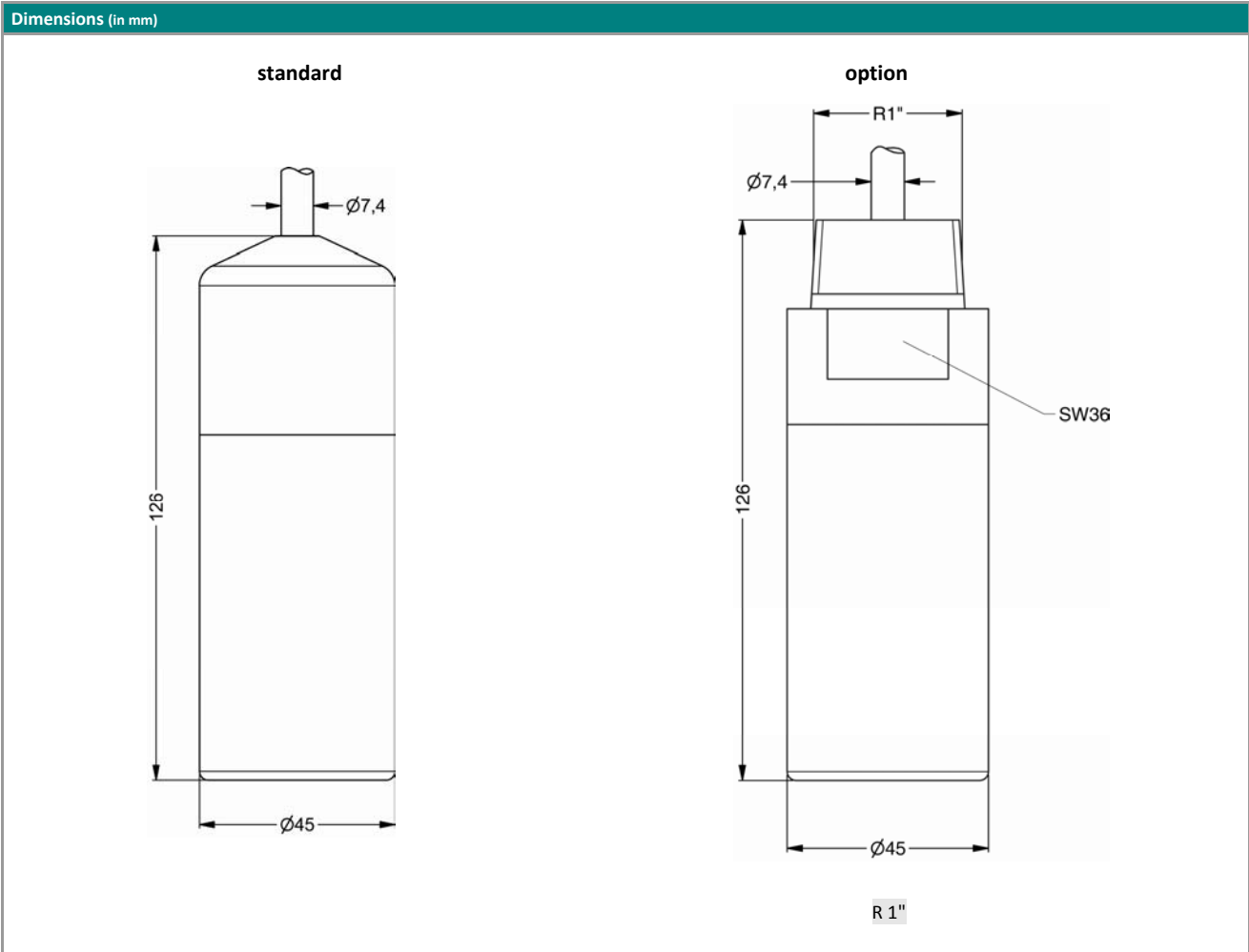
level measurement in most of acids and bases

Probe

LMK 809



Input pressure range																
Nominal pressure gauge	[bar]	0.04	0.06	0.1	0.16	0.25	0.4	0.6	1	1.6	2.5	4	6	10		
Level	[mH ₂ O]	0.4	0.6	1	1.6	2.5	4	6	10	16	25	40	60	100		
Overpressure	[bar]	2	2	4	4	6	6	8	8	15	25	25	35	35		
Output signal / Supply																
Standard	2-wire: 4 ... 20 mA / V _S = 11 ... 32 V _{DC}															
Performance																
Accuracy	IEC 60770 ¹ : <= ± 0.35 % FSO															
Permissible load	R _{max} = [(V _S - V _{S min}) / 0.02] Ohm															
Influence effects	supply: 0.05 % FSO / 10 V load: 0.05 % FSO / kOhm															
Long term stability	<= 0.1 % FSO / year															
Turn-on time	700 msec															
Mean response time	< 200 msec										mean measuring rate: 5/sec					
Max. response time	380 msec															
¹ accuracy according to IEC 60770 – limit point adjustment (non-linearity, hysteresis, repeatability)																
Thermal effects (Offset and Span)																
Thermal error	< ± 0.1 % FSO / 10 K in compensated range 0 ... 70 °C															
Permissible temperatures																
Permissible temperatures	medium: PP:	0 ... 75 °C								PVDF:	0 ... 75 °C					
	storage: PP:	0 ... 75 °C								PVDF:	-10 ... 75 °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	PUR black FEP black															
³ cable with integrated air tube for atmospheric pressure reference																
Materials (media wetted)																
Housing	standard: PP option: PVDF															
Seals	FKM / EPDM / FFKM															
Diaphragm	ceramics Al ₂ O ₃ 99.9 %															
Cable sheath	PUR / FEP															
Miscellaneous																
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. 21 mA															
Weight	approx. 320 g (without cable)															
Ingress protection	IP 68															
CE-conformity	EMC Directive: 2004/108/EC															
Wiring diagram																
2-wire-system (current)																
Pin configuration																
Electrical connection	cable colours (DIN 47100)															
	Supply +	wh (white)														
	Supply -	bn (brown)														
	Shield	gn/ye (green / yellow)														



Accessories:

Cable gland	
Technical Data	
Suitable for	all probes with cable \varnothing 7.4 mm through-hole \varnothing 25.8 mm for mounting required; max. clamping range 12 mm
Material	standard: stainless steel optionally: PVC
Weight	stainless steel: approx. 150g PVC: approx. 80g
Ingress protection	IP 68
Ordering type	Ordering code
Srew fitting, stainless steel	5000280
Srew fitting, PVC	5000281
Cable 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, of steel, zinc plated	1000280
Terminal clamp, of stainless steel 1.4301 (304)	1000278

