

# LMK 808



## Separable Plastic Probe

Ceramic Sensor

accuracy according to IEC 60770:  
standard: 0.35 % FSO  
option: 0.25 % FSO

### Nominal pressure

from 0 ... 1 mH<sub>2</sub>O up to 0 ... 100 mH<sub>2</sub>O

### Output signals

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

### Special characteristics

- ▶ diameter 35 mm
- ▶ diaphragm  
ceramics 99.9% Al<sub>2</sub>O<sub>3</sub>
- ▶ cable assembly and  
probe head separable
- ▶ good long-term stability
- ▶ especially for waste water

### Optional versions

- ▶ different kinds of elastomer
- ▶ customer specific versions  
e. g. special pressure ranges
- ▶ mounting accessories

The separable plastic submersible probe LMK 808 was developed for level measurement in water and wastewater. The basis of the probe is an extremely robust, almost maintenance-free capacitive ceramic sensor.

In addition, an overvoltage protection was integrated into the separable probe head and an effective protection against damage to the cable developed by rodents.

In order to facilitate stock-keeping and maintenance the probe head is plugged to the cable assembly with a connector and can be changed easily.

### Preferred areas of use



#### Water

groundwater and level monitoring  
sea water



#### Sewage

waste water treatment  
water recycling



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Technical Data

Input pressure range												
Nominal pressure gauge	[bar]	0.1	0.16	0.25	0.4	0.6	1	1.6	2.5	4	6	10
Level	[mH <sub>2</sub> O]	1	1.6	2.5	4	6	10	16	25	40	60	100
Overpressure	[bar]	3	4	5	5	7	7	12	20	20	20	20
Burst pressure ≥	[bar]	4	6	8	8	9	9	18	25	25	30	30
Permissible vacuum	[bar]	-0.2	-0.3	-0.5				-1				

Output signal / Supply	
2-wire	4 ... 20 mA / V <sub>S</sub> = 13 ... 30 V <sub>DC</sub>

Performance	
Accuracy <sup>1</sup>	standard: ≤ ± 0.35 % FSO option: ≤ ± 0.25 % FSO others on request
Permissible load	R <sub>max</sub> = [(V <sub>S</sub> - V <sub>S min</sub> ) / 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
Turn-on time	up to 1.5 sec
Mean response time	≤ 20 ms
Measuring rate	200 Hz

<sup>1</sup> accuracy according to IEC 60770 – limit point adjustment (non-linearity, hysteresis, repeatability)

Thermal effects (Offset and Span)	
Tolerance band	≤ 1.0% FSO for nominal pressure ranges in compensated range: -20 ... 80 °C

Permissible temperatures	
Permissible temperatures	medium / electronics / environment / storage: -25 ... 80 °C

Electrical protection <sup>2</sup>	
Short-circuit protection	permanent
Reverse polarity protection	no damage, but also no function
Electromagnetic compatibility	emission and immunity according to EN 61326

<sup>2</sup> additional external overvoltage protection unit in terminal box KL 1 or KL 2 with atmospheric pressure reference available on request

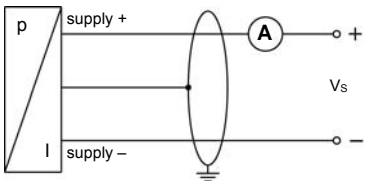
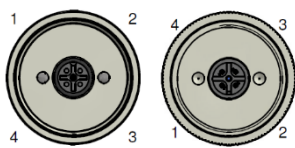
Overvoltage protection	
Series resistance	9.4 Ω for each positive and negative wire
Nominal discharge current	8 kA (8/20 μs)
Max. rated current	30 mA

Electrical connection	
Cable with sheath material <sup>3</sup>	TPE-U blue Ø 7.4 mm (suitable for drinking water) 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/
Bending radius	static installation: 10-fold cable diameter dynamic application: 20-fold cable diameter

<sup>3</sup> shielded cable with integrated air tube for atmospheric pressure reference

Materials (media wetted)	
Housing	PP-HT others on request
Seals (O-rings)	standard: FKM option: EPDM others on request
Diaphragm	ceramics Al <sub>2</sub> O <sub>3</sub> 99.9%
Protection cap	POM-C
Cable sheath	TPE-U

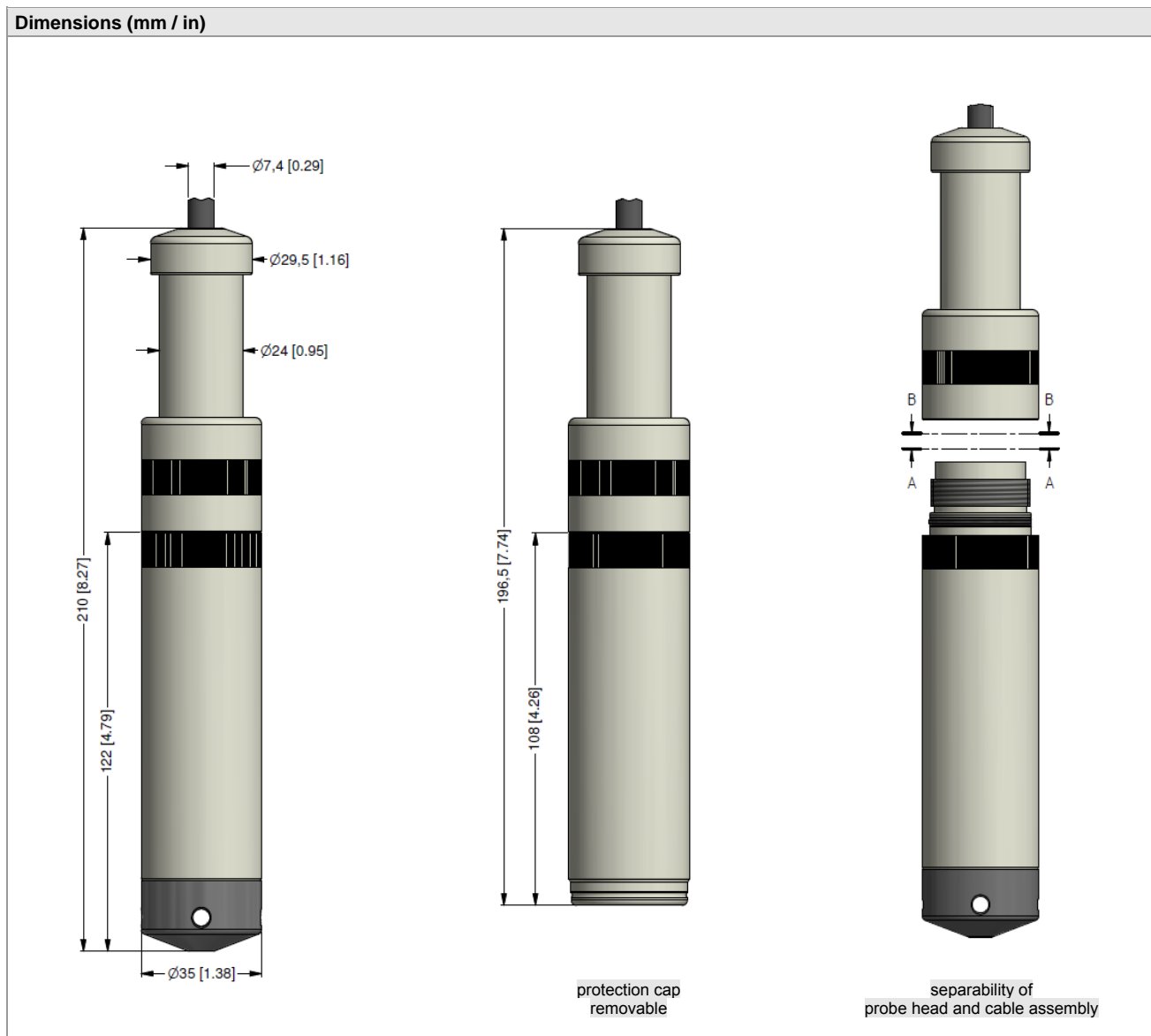
Miscellaneous	
Current consumption	max. 22 mA
Weight	approx. 300 g (without cable)
Ingress protection	IP 68
CE-conformity	EMC Directive: 2014/30/EU

Wiring diagram		Pin configuration			
2-wire-system (current) 	Electrical connection	M12x1 (4-pin) <sup>6</sup> A-A      B-B 	cable colours (IEC 60757)  WH (white) BN (brown) GNYE (green-yellow)		
		Supply +		3	WH (white)
		Supply -		4	BN (brown)
	Shield	2	GNYE (green-yellow)		

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## Accessories

Terminal clamp		
Technical data		
Suitable for	all probes with cable $\varnothing$ 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	

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