



## LMP 808

### Separable Plastic Submersible Transmitter with Stainless Steel Sensor

- ▶ diameter: 35 mm
- ▶ transmitter head and cable assembly plugged
- ▶ nominal pressure ranges from 0 ... 1 mH<sub>2</sub>O up to 0 ... 100 mH<sub>2</sub>O (0 ... 100 mbar up to 0 ... 10 bar)

The LMP 808 plastic submersible transmitter is suited for continuous level measurement of liquids.

A piezoresistive stainless steel sensor, which features a small thermal effect and a good long term stability, is the basis of the LMP 808. In order to facilitate stock-keeping and maintenance the transmitter head is plugged to the cable assembly with a connector and can be changed easily.

In addition to the several cable materials (PVC, PUR and FEP) the customer has the possibility to consider different versions of cable protection.

Preferred areas of use are:

- ▶ environmental engineering: water treatment
- ▶ depth or level measurement in wells and open waters
- ▶ ground water level measurement
- ▶ level measurement in open tanks

- ▶ small thermal effect
- ▶ excellent linearity
- ▶ good long term stability
- ▶ accuracy:  
0.175% / 0.125% FSO BFSL  
(0.35 % / 0.25% FSO IEC 60770)
- ▶ customer specific versions:  
- special pressure ranges

Characteristics



**LMP 808**  
Plastic Submersible Transmitter

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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	
Permissible overpressure [bar]	1	1	1	1	3	3	6	6	20	20	60	

Output signal / Supply	
Standard	2-wire: 4 ... 20 mA / V <sub>s</sub> = 12 ... 36 V <sub>DC</sub>
Optional	3-wire: 0 ... 20 mA / V <sub>s</sub> = 14 ... 36 V <sub>DC</sub> 0 ... 10 V / V <sub>s</sub> = 14 ... 36 V <sub>DC</sub>

Performance			
Accuracy	standard: nominal pressure > 0.4 bar: nominal pressure ≤ 0.4 bar: option: nominal pressure > 0.4 bar:	IEC 60770 <sup>1</sup>	BFSL
		≤ ± 0.35 % FSO	≤ ± 0.175 % FSO
		≤ ± 0.50 % FSO	≤ ± 0.250 % FSO
		≤ ± 0.25 % FSO	≤ ± 0.125 % FSO
Permissible load	current 2-wire: R <sub>max</sub> = [(V <sub>s</sub> - V <sub>s min</sub> ) / 0.02] Ω current 3-wire: R <sub>max</sub> = 500 Ω voltage 3-wire: R <sub>min</sub> = 10 kΩ		
Influence effects	supply: 0.05 % FSO / 10 V load: 0.05 % FSO / kΩ		
Long term stability	≤ ± 0.1 % FSO / year		
Response time	< 10 msec		

Thermal errors (Offset and Span)					
Nominal pressure P <sub>N</sub> [bar]	≤ 0.1	≤ 0.25	≤ 0.4	≤ 1	> 1
Tolerance band [% FSO]	≤ ± 2	≤ ± 1.5	≤ ± 1	≤ ± 1	≤ ± 0.75
TC, average [% FSO / 10 K]	± 0.3	± 0.2	± 0.14	± 0.1	± 0.07
in compensated range [°C]			0 ... 50		

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

Permissible temperatures	
Medium	0 ... 50 °C
Storage	-10 ... 50 °C

Electrical connection	
Cable with sheath material <sup>3</sup>	PVC grey PUR black FEP black
Cable protection	standard: without cable protection optional: prepared for mounting of a PVC pipe with diameter 25 mm

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

<sup>2</sup> additional external overvoltage protection unit in terminal box KL 1 or KL 2 with atmospheric pressure reference available on request (please ask for data sheet)

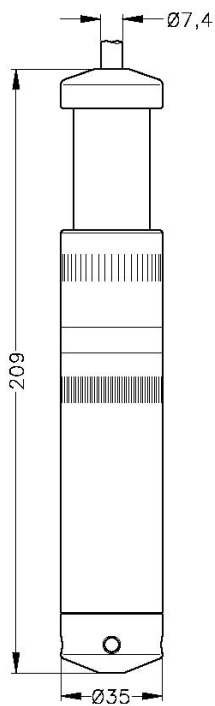
<sup>3</sup> cable with integrated air tube for atmospheric pressure reference

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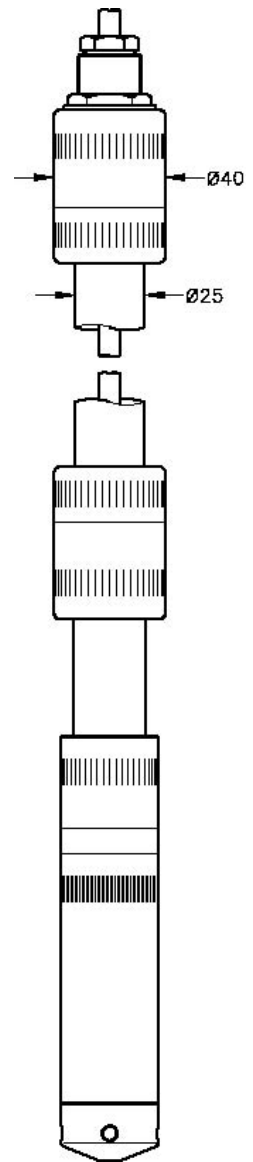
## Dimensions (in mm)



Standard version  
without cable protection



separability of transmitter  
head and cable assembly



Special version cable protection  
with PVC pipe

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## Materials

Housing	PVC grey
Seals	FKM / EPDM
Diaphragm	stainless steel 1.4435 (316L)
Cable sheath	PVC / PUR / FEP

## Miscellaneous

Optionally SIL 2 application	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: 1 µH/m
Current consumption	signal output current: max. 25 mA	signal output voltage: max. 7 mA
Weight	400 g (without cable)	
Ingress protection	IP 68	

## Mounting accessories (not part of delivery)

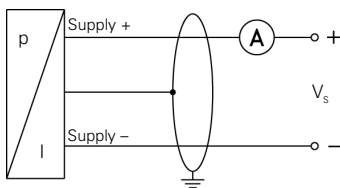
Screw fitting, of PVC
Terminal clamp, of stainless steel 1.4301 (304) or steel, zinc plated

## Pin configuration

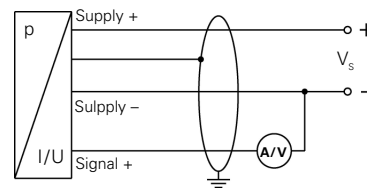
Electrical connection	Binder Serie 723 <sup>4</sup> (5-pin)	cable colours (DIN 47100)	
2-wire-system	Supply +	3	white
	Supply -	1	brown
	Ground	5	yellow / green (shield)
3-wire-system	Supply +	3	white
	Supply -	4	brown
	Signal +	1	green
	Ground	5	yellow / green (shield)

## Wiring diagram

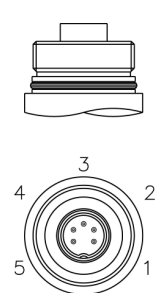
2-wire-system (current)



3-wire-system (current / voltage)



connector<sup>4</sup>



<sup>4</sup> in separated version

This data sheet contains product specification, properties are not guaranteed. Subject to change without notice.

