



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 mWC up to 0 ... 100 mWC (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

CE

LMP 808
Plastic Submersible Transmitter

LMP 808

Plastic Submersible Transmitter

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 [mWC]	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 / $V_s = 12 \dots 36 V_{DC}$
Optional	3-wire: 0 ... 20 mA / $V_s = 14 \dots 36 V_{DC}$ 0 ... 10 V / $V_s = 14 \dots 36 V_{DC}$

Performance			
Accuracy	standard: nominal pressure > 0.4 bar: nominal pressure ≤ 0.4 bar: option: nominal pressure > 0.4 bar:	IEC 60770 ¹	BFSL
		≤ ± 0.35 % FSO	≤ ± 0.175 % FSO
		≤ ± 0.50 % FSO	≤ ± 0.250 % FSO
		≤ ± 0.25 % FSO	≤ ± 0.125 % FSO
Permissible load	current 2-wire:	$R_{max} = [(V_s - V_{smin}) / 0.02] \Omega$	
	current 3-wire:	$R_{max} = 500 \Omega$	
	voltage 3-wire:	$R_{min} = 10 k\Omega$	
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_N [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 ²	
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 ³	PVC grey PUR black FEP black
Cable protection	standard: without cable protection optional: prepared for mounting of a PVC pipe with diameter 25 mm

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

² additional external overvoltage protection unit in terminal box KL1 or KL2 with atmospheric pressure reference available on request (please ask for data sheet)

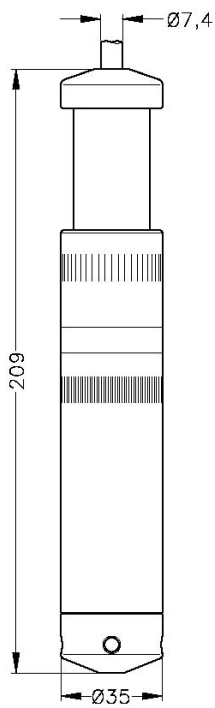
³ cable with integrated air tube for atmospheric pressure reference

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Technical Data

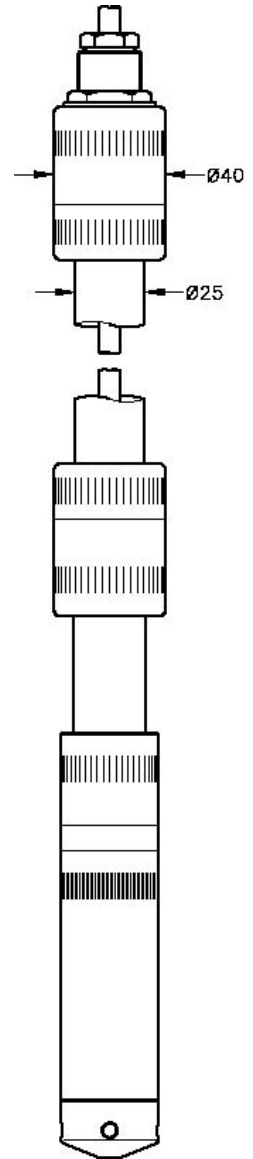
Dimensions



Standard version
without cable protection



Transmitter head and
cable assembly plugged



Special version cable protection
with PVC pipe

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Technical Data

Materials

Housing	PVC grey
Seals	FKM / EPDM
Diaphragm	stainless steel 1.4435 (316L)
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 μ H/m	signal line/signal line: 1.0 μ H/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

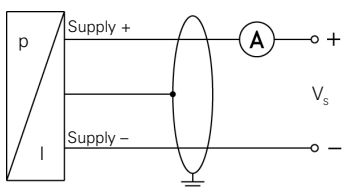
Terminal clamp, of stainless steel 1.4301 (304) or steel, zinc plated

Pin configuration

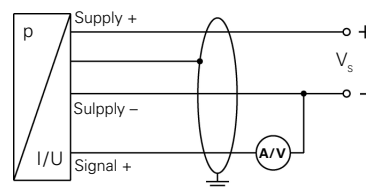
Electrical connection		Binder Serie 723 ⁴ (5-pin)	cable colours (DIN 47100)
2-wire-system	Supply +	3	white
	Supply -	1	brown
	Ground	5	yellow / green (shield)
3-wire-system	Supply +	3	white
	Supply -	4	brown
	Signal +	1	green
	Ground	5	yellow / green (shield)

Wiring diagram

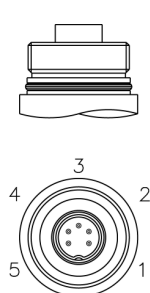
2-wire-system (current)



3-wire-system (current / voltage)



connector⁴



⁴ in separated version

Ordering Code LMP 808

LMP 808

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Pressure		in bar	4	1	0															
		in mWC	4	1	1															
Input		[mWC]																		
		[bar]																		
	1,0	0,10	1	0	0	0														
	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														
	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														
Housing		PVC																		
		customer																		
Diaphragm		Stainless steel 1.4435 (316L)																		
		customer																		
Output		4 ... 20 mA / 2-wire																		
		0 ... 20 mA / 3-wire																		
		0 ... 10 V / 3-wire																		
		customer																		
Seals		FKM																		
		EPDM																		
		customer																		
Electrical connection		PVC-cable ¹																		
		PUR-cable ¹																		
		FEP-cable ¹																		
		customer																		
Accuracy		standard for P _N > 0,4 bar																		
		0,35 %																		
		standard for P _N ≤ 0,4 bar																		
		0,5 %																		
		option for P _N > 0,4 bar																		
		0,25 %																		
		customer																		
Cable length		in m																		
Special version		standard																		
		prepared for mounting with PVC pipe ²																		
		customer																		

¹ cable with integrated air tube for atmospheric pressure reference
² PVC pipe is not part of the supply

