

LMP 808

Separable Plastic Probe

Stainless Steel Sensor

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



Nominal pressure

from 0 ... 1 mH₂O up to 0 ... 100 mH₂O

Output signals

2-wire: 4 ... 20 mA

3-wire: 0 ... 20 mA / 0 ... 10 V

others on request

Special characteristics

- ▶ diameter 35 mm
- ▶ cable and sensor section separable
- ▶ excellent linearity
- ▶ small thermal effect

Optional versions

- ▶ SIL 2 (Safety Integrity Level) according to IEC 61508 / 61511
- ▶ mounting accessories as screw fitting and terminal clamp of stainless steel
- ▶ different kinds of cables and elastomers
- ▶ customer specific versions e. g. special pressure ranges

The separable plastic probe is designed for level measurement of water, waste water as well as fuels and oils. Basic element is a piezoresistive stainless steel sensor.

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.

Preferred areas of use are

Water / filtrated sewage

ground water level measurement

storm water systems

drinking water system

water treatment plants



Fuel / Oil

fuel storage

tank farm

biogas plants

process water recycling



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 ₂ O]	1	1.6	2.5	4	6	10	16	25	40	60	100
Overpressure	[bar]	0.5	1	1	2	5	5	10	10	20	40	40
Burst pressure ≥	[bar]	1.5	1.5	1.5	3	7.5	7.5	15	15	25	50	50
Output signal / Supply												
Standard	2-wire: 4 ... 20 mA / V _S = 8 ... 32 V _{DC}											
Options 3-wire	3-wire: 0 ... 20 mA / V _S = 14 ... 30 V _{DC} 0 ... 10 V / V _S = 14 ... 30 V _{DC}											
Performance												
Accuracy	standard: nominal pressure < 0.4 bar: ≤ ± 0.5 % FSO nominal pressure ≥ 0.4 bar: ≤ ± 0.35 % FSO option 1: nominal pressure ≥ 0.4 bar: ≤ ± 0.25 % FSO											
Permissible load	current 2-wire: R _{max} = [(V _S - V _S min) / 0.02 A] Ω current 3-wire: R _{max} = 500 Ω voltage 3-wire: R _{min} = 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											
¹ accuracy according to IEC 60770 – limit point adjustment (non-linearity, hysteresis, repeatability)												
Thermal effects (Offset and Span)												
Nominal pressure P _N	[bar]	< 0.40						≥ 0.40				
Tolerance band	[% FSO]	≤ ± 1						≤ ± 0.75				
in compensated range	[°C]	0 ... 50										
Permissible temperatures												
Permissible temperatures	medium: 0 ... 50 °C storage: -10 ... 50 °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	PVC (0 ... 50 °C) grey PUR (0 ... 50 °C) black FEP (0 ... 50 °C) black											
Cable protection	standard: without cable protection optional: prepared for mounting of a PVC pipe with diameter 25 mm											
³ cable with integrated air tube for atmospheric pressure reference												
Materials (media wetted)												
Housing	PVC grey											
Seals	FKM EPDM											
Diaphragm	stainless steel 1.4435 (316L)											
Protection cap	POM											
Miscellaneous												
Option 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: 1µH/m											
Current consumption	signal output current: max. 25 mA signal output voltage: max. 7 mA											
Weight	approx. 400 g (without cable)											
Ingress protection	IP 68											
CE-conformity	EMC Directive: 2004/108/EC											

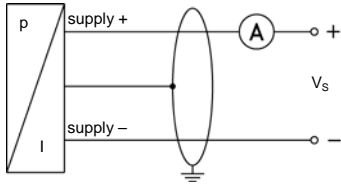
LMP 808

Plastic Probe

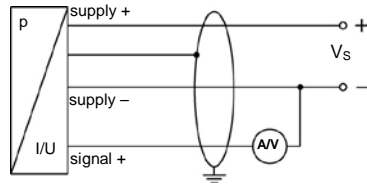
Technical Data

Wiring diagrams

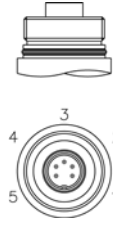
2-wire-system (current)



3-wire-system (current / voltage)



connector



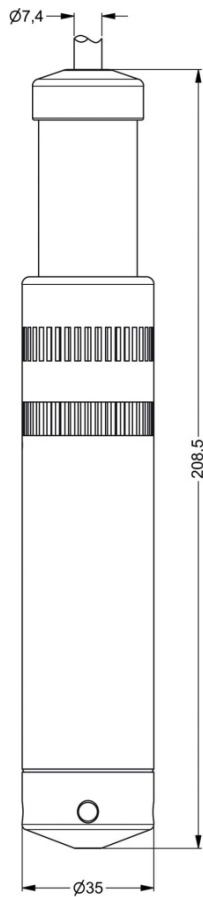
Pin configuration

Electrical connection	Binder serie 723 ⁴ (5-pin)	cable colours (DIN 47100)
Supply +	3	wh (white)
Supply - (only 2-wire)	1	bn (brown)
Supply - (only 3-wire)	4	bn (brown)
Signal + (only 3-wire)	1	gn (green)
Shield	5	gn/ye (green / yellow)

⁴ in separated version

Dimensions (in mm)

standard

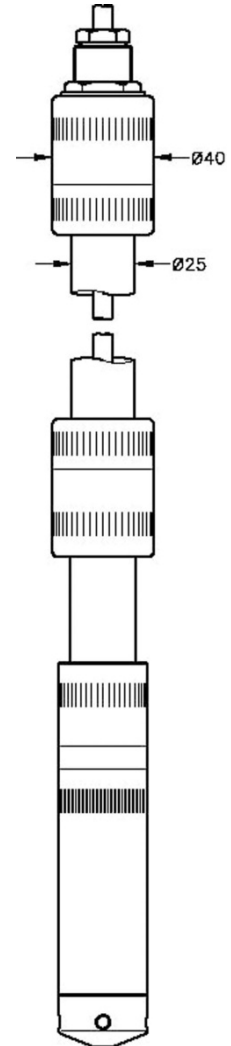


standard version
without cable protection

option



separate version



cable protection with PVC pipe

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

Ordering code LMP 808

LMP 808

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Pressure																				
	in bar		4	1	0															
	in mH ₂ O		4	1	1															
Input																				
	[mH ₂ O]	[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													consult
Housing																				
	PVC																			A
	customer																			9
Diaphragm																				
	Stainless steel 1.4435 (316L)																			1
	customer																			9
Output																				
	4 ... 20 mA / 2-wire																			1
	0 ... 20 mA / 3-wire																			2
	0 ... 10 V / 3-wire																			3
	SIL2 4 ... 20 mA / 2-wire																			1S
	customer																			9
Seals																				
	FKM																			1
	EPDM																			3
	customer																			9
Electrical connection																				
	PVC-cable ¹																			1
	PUR-cable ¹																			2
	FEP-cable ¹																			3
	customer																			9
Accuracy																				
	standard for P _N ≥ 0.4 bar	0.35 %																		3
	standard for P _N < 0.4 bar	0.5 %																		5
	option 1 for P _N ≥ 0.4 bar	0.25 %																		2
	customer																			9
Cable length																				
	in m																			9 9 9
Special version																				
	standard																			0 0 0
	prepared for mounting with PVC pipe ²																			1 0 6
	customer																			9 9 9

¹ cable with integrated air tube for atmospheric pressure reference

² PVC pipe is not part of the supply