

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 probe 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}						SIL-version: V _S = 14 ... 28 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: 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 at reference conditions												
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 ⁴ (0 ... 50 °C) black												
Cable protection	standard: without cable protection optional: prepared for mounting of a PP-HT pipe with diameter 25 mm												
³ cable with integrated air tube for atmospheric pressure reference													
⁴ do not use freely suspended probes with an FEP cable if effects due to highly charging processes are expected													
Materials (media wetted)													
Housing	PP-HT												
Seals	FKM EPDM												
Diaphragm	stainless steel 1.4435 (316L)												
Protection cap	POM												
Miscellaneous													
Option SIL 2 application ⁵	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	approx. 400 g (without cable)												
Ingress protection	IP 68												
CE-conformity	EMC Directive: 2014/30/EU												
⁵ only for 4...20 mA / 2-wire													

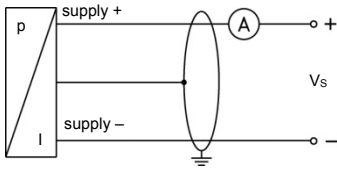
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Plastic Probe

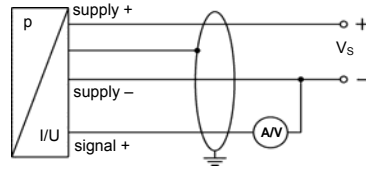
Technical Data

Wiring diagrams

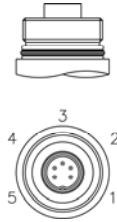
2-wire-system (current)



3-wire-system (current / voltage)



connector



Pin configuration

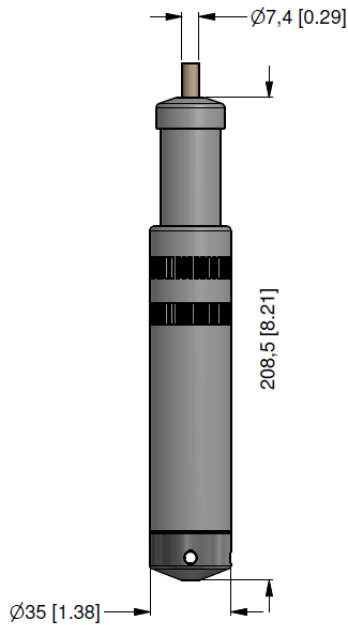
Electrical connection	Binder serie 723 ⁶ (5-pin)	cable colours (IEC 60757)
Supply +	3	wh (white)
Supply - (only 2-wire)	1	bn (brown)
Supply - (only 3-wire)	4	bn (brown)
Signal + (only 3-wire)	1	gn (green)
Shield	5	gnye (green-yellow)

⁶ in separated version

Dimensions (in mm/in)

standard

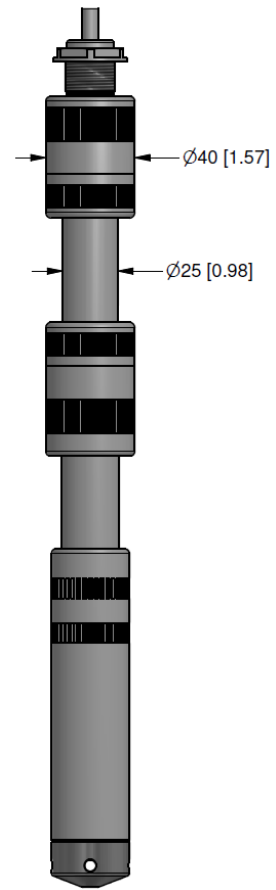
optionally



standard version
without cable protection



separability of
probe head and cable assembly



cable protection with PP-HT pipe

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