

ILMP 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 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
Tolerance band	[% FSO]	≤ ± 1
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

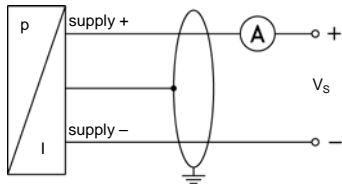
Materials (media wetted)	
Housing	PVC grey
Seals	FKM EPDM
Diaphragm	stainless steel 1.4435 (316L)
Protection cap	POM

Miscellaneous	
Option SIL ⁴ 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

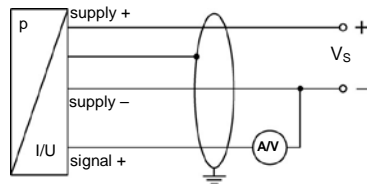
⁴ only for 4...20mA / 2-wire

Wiring diagrams

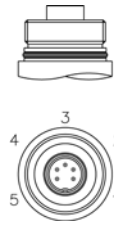
2-wire-system (current)



3-wire-system (current / voltage)



connector



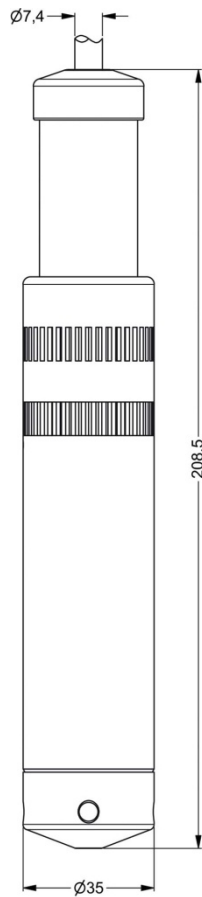
Pin configuration

Electrical connection	Binder serie 723 ⁵ (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)

⁵ in separated version

Dimensions (in mm)

standard

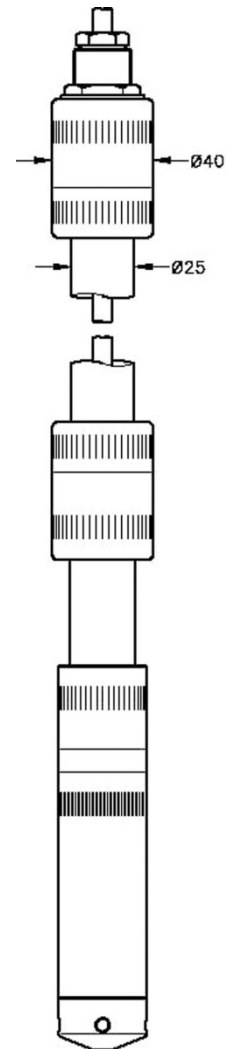


standard version
without cable protection

option



separate version



cable protection with PVC pipe

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

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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													consult
Diaphragm																				
	Stainless steel 1.4435 (316L)						1													
	customer						9													consult
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													consult
Seals																				
	FKM						1													
	EPDM						3													
	customer						9													consult
Electrical connection																				
	PVC-cable ¹						1													
	PUR-cable ¹						2													
	FEP-cable ¹						3													
	customer						9													consult
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													consult
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			consult

This price list contains product specification; properties are not guaranteed. Detailed information about options are defined in the datasheet. Subject to change without notice.

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