



ILMK 806

Plastic Probe for Aggressive Media

Ceramic Sensor

accuracy according to IEC 60770:
0.5 % FSO

Nominal pressure

from 0 ... 6 mH₂O up to 0 ... 200 mH₂O

Output signals

2-wire: 4 ... 20 mA
others on request

Special characteristics

- ▶ diameter 21 mm
- ▶ suitable for hydrostatic level measurement e. g. in 3/4" pipes
- ▶ good linearity
- ▶ good long term stability

Optional versions

- ▶ different cable materials
- ▶ customer specific versions
e. g. special pressure ranges

The ILMK 806 with ceramic sensor and diameter of only 21 mm has been especially designed for the continuous level measurement at confined space conditions. Permissible media are highly polluted and aggressive fluids.

Basic element of the plastic submersible probe is a flush mounted ceramic sensor, which makes cleaning easier when solid parts of the medium deposit on it. Different cable and elastomer materials are available in order to achieve maximum media compatibility.

Preferred areas of use are

Sewage



waste water treatment
water recycling
dumpsites



Aggressive media

level measurement
in most of acids and lyes



Input pressure range										
Nominal pressure gauge	[bar]	0.6	1	1.6	2.5	4	6	10	16	20
Level	[mH ₂ O]	6	10	16	25	40	60	100	160	200
Overpressure	[bar]	2	2	4	4	10	10	20	40	40
Burst pressure \geq	[bar]	4	4	5	5	12	12	25	50	50
Max. ambient pressure (housing): 30 bar										

Output signal / Supply	
2-wire	4 ... 20 mA / $V_S = 12 \dots 32 \text{ V}_{DC}$

Performance	
Accuracy ¹	$\leq \pm 0.5 \% \text{ FSO}$
Permissible load	$R_{max} = [(V_S - V_{S_{min}}) / 0.02 \text{ A}] \Omega$
Influence effects	supply: 0.05 % FSO / 10 V load: 0.05 % FSO / k Ω
Response time	$\leq 10 \text{ msec}$

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

Thermal effects (Offset and Span) / Permissible temperatures	
Thermal error	$\leq \pm 0.4 \% \text{ FSO} / 10 \text{ K}$ in compensated range 0 ... 70 °C
Permissible temperatures	medium / electronics / environment / storage: -25 ... 80 °C

Electrical protection ²	
Short-circuit protection	permanent
Reverse polarity protection	no damage, but also no function
Electromagnetic protection	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 (-5 ... 70 °C) grey $\varnothing 7.4 \text{ mm}$ PUR (-25 ... 70 °C) black $\varnothing 7.4 \text{ mm}$ FEP ⁴ (-25 ... 70 °C) black $\varnothing 7.4 \text{ mm}$ others on request
Cable capacitance	signal line/shield also signal line/signal line: 160 pF/m
Cable inductance	signal line/shield also signal line/signal line: 1 $\mu\text{H}/\text{m}$
Bending radius	static installation: 10-fold cable diameter dynamic application: 20-fold cable diameter

³ shielded cable with integrated ventilation 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 others on request
Seals	FKM
Diaphragm	ceramics Al ₂ O ₃ 96 %
Protection cap	POM-C
Cable sheath	PVC, PUR, FEP

Miscellaneous	
Current consumption	max. 25 mA
Weight	approx. 100 g (without cable)
Ingress protection	IP 68
CE-conformity	EMC Directive: 2014/30/EU

Wiring diagram

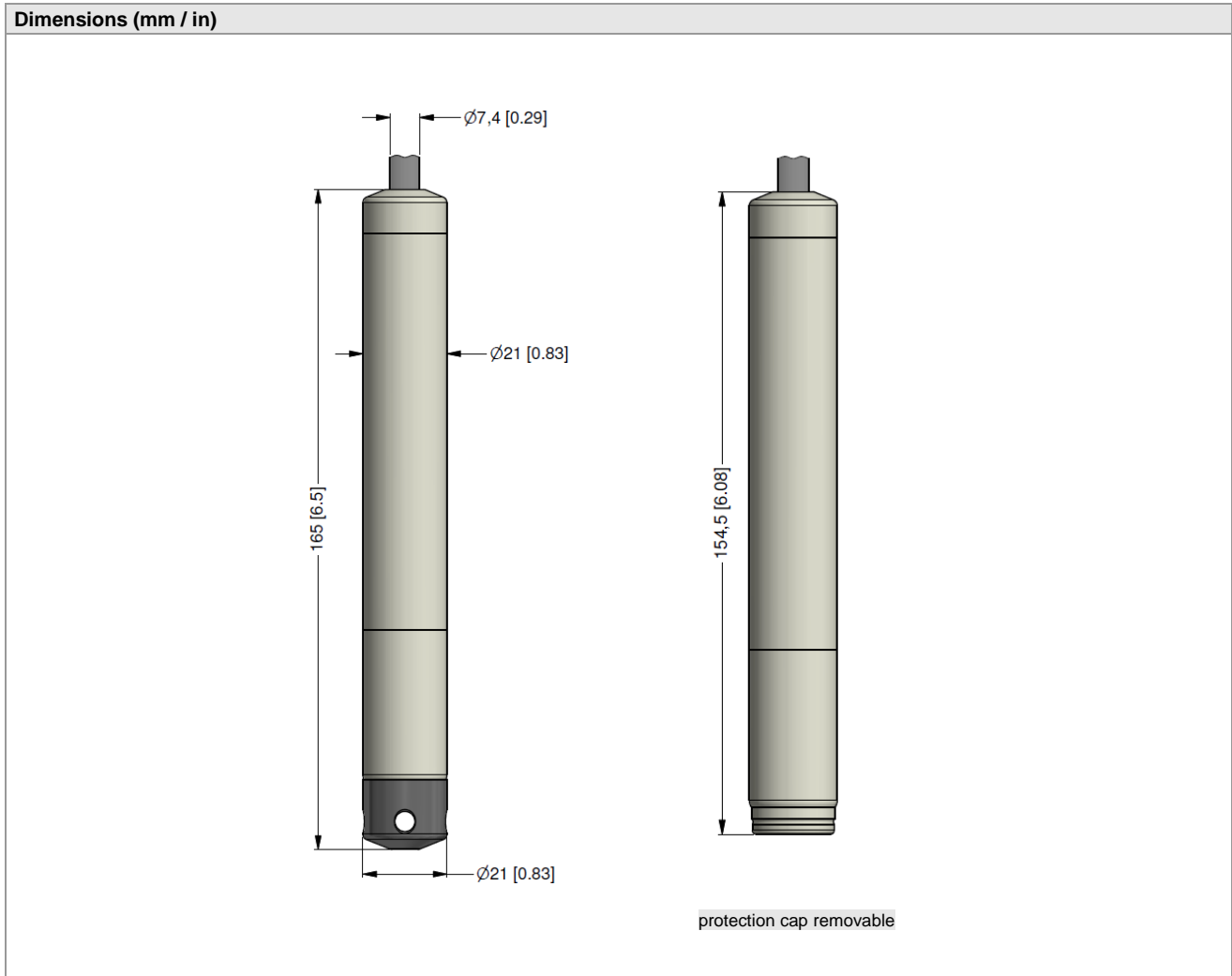


Pin configuration	
Electrical connection	cable colours (IEC 60757)
Supply +	WH (white)
Supply -	BN (brown)
Shield	GNYE (green-yellow)

ILMK 806

Plastic Probe

Technical Data



Accessories

Terminal clamp		
Technical data		
Suitable for	all probes with cable \varnothing 5.5 ... 10.5 mm	
Material of housing	standard: steel, zinc plated	optionally: stainless steel 1.4301 (304)
Material of clamping jaws and positioning clips	PA (fibre-glass reinforced)	
Dimensions (mm)	174 x 45 x 32	
Hook diameter	20 mm	
Ordering type	Ordering code	Weight
Terminal clamp, steel, zinc plated	Z100528	approx. 160 g
Terminal clamp, stainless steel 1.4301 (304)	Z100527	

Ordering code ILMK 806

ILMK 806

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Pressure																				
	in bar	3	7	5																
	in mH ₂ O	3	7	6																
Input		[mH ₂ O]	[bar]																	
	6	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													
	160	16		1	6	0	2													
	200	20		2	0	0	2													
	customer			9	9	9	9													consult
Housing																				
	PP-HT						R													
	customer						9													consult
Diaphragm																				
	ceramics Al ₂ O ₃ 96%						2													
	customer						9													consult
Output																				
	4 ... 20 mA / 2-wire						1													
	customer						9													consult
Seals																				
	FKM						1													
	customer						9													consult
Accuracy																				
	0.5 % FSO						5													
	customer						9													consult
Electrical connection																				
	PVC-cable (grey, Ø 7.4 mm) ¹						1													
	PUR-cable (black, Ø 7.4 mm) ¹						2													
	FEP-cable (black, Ø 7.4 mm) ¹						3													
	customer						9													consult
Cable length																				
	in m																			
	customer																			consult
Special version																				
	standard																			
	customer																			consult

¹ shielded cable with integrated ventilation tube for atmospheric pressure reference