



# LMK 858

## Separable Plastic Submersible Probe

### Ceramic Sensor

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

#### **Nominal pressure**

from 0 ... 40 cmH<sub>2</sub>O  
up to 0 ... 100 mH<sub>2</sub>O

#### **Special characteristics**

- ▶ cable and probe separable
- ▶ diameter 45 mm
- ▶ chemical resistance
- ▶ housing PVC

#### **Optional versions**

- ▶ cable protection via PVC pipe
- ▶ diaphragm 99.9 % Al<sub>2</sub>O<sub>3</sub>
- ▶ different kinds of cable
- ▶ different kinds of elastomeres

The separable plastic submersible probe LMK 858 is designed for level measurement in most aggressive media.

Usage in more viscous media as for example sludge is possible because of the semi-flush diaphragm.

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**

##### Sewage



Waste water treatment  
Water recycling  
Dumpsite

##### Aggressive media



Level measurement for most acids  
and lyes

LMK 858 Plastic Probe

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Input pressure range													
Nominal pressure gauge [bar]	0.04	0.06	0.1	0.16	0.25	0.4	0.6	1	1.6	2.5	4	6	10
Level [mH <sub>2</sub> O]	0.4	0.6	1	1.6	2.5	4	6	10	16	25	40	60	100
Overpressure [bar]	2	2	4	4	6	6	8	8	15	25	25	35	35
Output signal / Supply													
Standard	2-wire: 4 ... 20 mA / V <sub>s</sub> = 9 ... 32 V <sub>DC</sub>							Option 3-wire: 0 ... 10 V / V <sub>s</sub> = 12.5 ... 32 V <sub>DC</sub>					
Performance													
Accuracy	standard: option:							IEC 60770 <sup>1</sup> ≤ ± 0.35 % FSO ≤ ± 0.25 % FSO					
Permissible load	R <sub>max</sub> = [(V <sub>s</sub> - V <sub>smin</sub> ) / 0.02] Ω												
Influence effects	supply: 0.05 % FSO / 10 V load: 0.05 % FSO / kΩ												
Long term stability	≤ ± 0.1 % FSO / year												
Turn-on time	700 msec												
Mean response time	< 200 msec							measuring rate 5/sec					
Max. response time	380 msec												
<sup>1</sup> accuracy according to IEC 60770 – limit point adjustment (non-linearity, hysteresis, repeatability)													
Thermal effects (Offset and Span)													
Thermal error	≤ ± 0.1 % FSO / 10 K in compensated range 0 ... 50 °C												
Permissible temperatures													
Permissible temperatures	medium: -10 ... 50 °C electronic / environment: -10 ... 50 °C storage: -10 ... 50 °C												
Electrical protection <sup>2</sup>													
Short-circuit protection	permanent												
Reverse polarity protection	no damage, but also no function												
Electromagnetic compatibility	emission and immunity according to EN 61326												
<sup>2</sup> 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 <sup>3</sup>	PVC (-5 ... 50 °C) grey PUR (-10 ... 50 °C) black FEP (-10 ... 50 °C) black												
Cable protection	standard: without cable protection optional: prepared for mounting of a PVC pipe with diameter 25 mm												
<sup>3</sup> cable with integrated air tube for atmospheric pressure reference													
Materials (media wetted)													
Housing	PVC grey												
Seals	FKM / EPDM / others on request												
Diaphragm	standard: ceramics Al <sub>2</sub> O <sub>3</sub> 96 % option: ceramics Al <sub>2</sub> O <sub>3</sub> 99.9 %												
Miscellaneous													
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	max. 25 mA												
Weight	approx. 400 g (without cable)												
Ingress protection	IP 68												
CE-conformity	EMC Directive: 2004/108/EC												
Wiring diagram													
2-wire-system (current)					3-wire-system (voltage)					connector			

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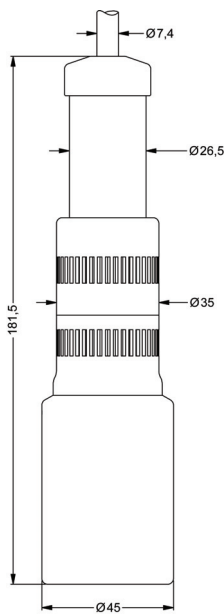
Plastic Probe

Technical Data

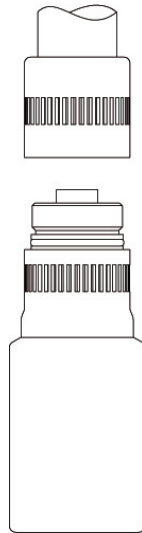
Pin configuration			
Electrical connection	Binder series 723 <sup>4</sup> (5-pin)		cable colours (DIN 47100)
	2 - wire	3 - wire	
Supply +	3	3	wh (white) bn (brown) gn (green)
Supply -	1	4	
Signal + (only for 3-wire)	-	1	
Shield	5	5	gn/ye (green / yellow)

<sup>4</sup> in separated version

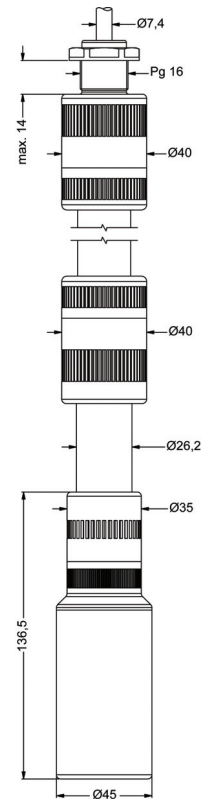
### Dimensions (in mm)



standard



separated version



special version for cable protection with PVC pipe

### Terminal clamp

Technical Data		
Suitable for	all probes with cable $\varnothing$ 5.5 ... 10.5 mm	
Material	standard: steel, zinc plated optionally: stainless steel 1.4301 (304)	
Weight	approx. 160 g	
Ordering type		Ordering code
Terminal clamp, steel, zinc plated		Z100528
Terminal clamp, stainless steel 1.4301 (304)		Z100527

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

**Ordering code LMK 858**

**LMK 858**

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<b>Pressure</b>									
	in bar	4	1	5					
	in mH <sub>2</sub> O	4	1	6					
<b>Input</b>									
	[mH <sub>2</sub> O]								
	[bar]								
	0.40	0.04	0	4	0	0			
	0.60	0.06	0	6	0	0			
	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
<b>Housing</b>									
	PVC					A			
	customer					9			consult
<b>Diaphragm</b>									
	Ceramics Al <sub>2</sub> O <sub>3</sub> 96%					2			
	Ceramics Al <sub>2</sub> O <sub>3</sub> 99.9%					C			
	customer					9			consult
<b>Output</b>									
	4 ... 20 mA / 2-wire					1			
	0 ... 10 V / 3-wire					3			
	customer					9			consult
<b>Seals</b>									
	FKM					1			
	EPDM					3			
	customer					9			consult
<b>Electrical connection</b>									
	PVC-cable <sup>1</sup>					1			
	PUR-cable <sup>1</sup>					2			
	FEP-cable <sup>1</sup>					3			
	customer					9			consult
<b>Accuracy</b>									
	standard	0.35 %				3			
	option	0.25 %				2			
	customer					9			consult
<b>Cable length</b>									
	in m					9	9	9	
<b>Special version</b>									
	standard					0	0	0	
	prepared for mounting with PVC pipe <sup>2</sup>					1	0	6	
	customer					9	9	9	consult

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

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