

LMK 858

Detachable Plastic Submersible Probe

Ceramic Sensor

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



Nominal pressure

from 0 ... 40 cmH₂O up to 0 ... 100 mH₂O

Output signals

2-wire: 4 ... 20 mA
3-wire: 0 ... 10 V
others on request

Special characteristics

- ▶ diameter 45 mm
- ▶ cable and probe detachable
- ▶ chemical resistance
- ▶ housing PP-HT


Optional versions


- ▶ cable protection via PVC pipe
- ▶ diaphragm 99.9 % Al₂O₃
- ▶ different kinds of cable
- ▶ different kinds of seal materials
- ▶ cable protection on request

The detachable 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 in most of acids and lyes

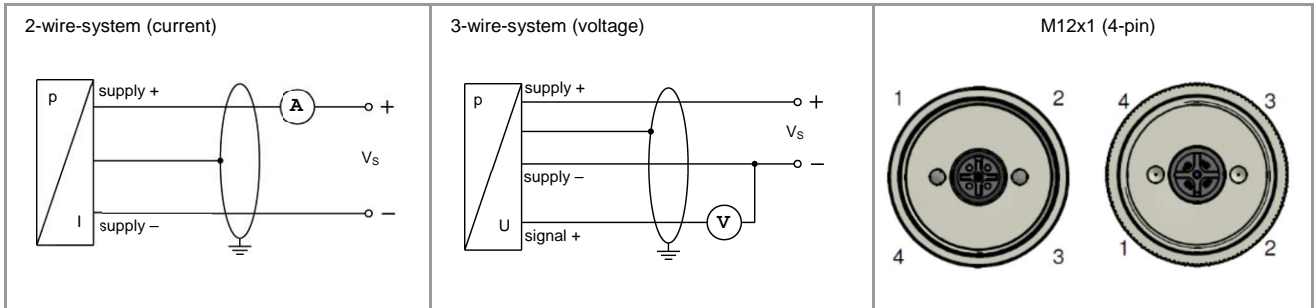


Input pressure range																
Nominal pressure gauge	[bar]	0.04	0.06	0.1	0.16	0.25	0.4	0.6	1	1.6	2.5	4	6	10		
Level	[mH ₂ O]	0.4	0.6	1	1.6	2.5	4	6	10	16	25	40	60	100		
Overpressure	[bar]	2	2	4	4	6	6	8	8	15	25	25	35	35		
Output signal / Supply																
Standard	2-wire:	4 ... 20 mA / V _S = 9 ... 32 V _{DC}						option 3-wire:	0 ... 10 V / V _S = 12.5 ... 32 V _{DC}							
Performance																
Accuracy		IEC 60770 ¹														
	standard:	≤ ± 0.35 % FSO														
	option:	≤ ± 0.25 % FSO														
Permissible load		$R_{max} = [(V_S - V_{S min}) / 0.02 A] \Omega$														
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														
¹ 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/ electronics/ environment/ storage: -20 ... 80 °C *														
<i>*If the cable is intended for use in a smaller temperature range, the use of the probe is limited by this range.</i>																
Electrical protection ²																
Short-circuit protection		permanent														
Reverse polarity protection		no damage, but also no function														
Lightning protection		2-wire: integrated						3-wire: without								
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 (-5 ... 70 °C) grey (-25 ... 70 °C in fixed condition)									Ø 7,4 mm					
		PUR (-25 ... 80 °C) black									Ø 7,4 mm					
		FEP ⁴ (-25 ... 75 °C) black									Ø 7,4 mm					
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														
Bending radius		static installation: 10-fold cable diameter dynamic application: 20-fold cable diameter														
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 / others on request														
Diaphragm		standard: ceramics Al ₂ O ₃ 96 % option: ceramics Al ₂ O ₃ 99.9 %														
Cable sheath		PVC, PUR, FEP, others on request														
Miscellaneous																
Option cable protection (on request)		prepared for mounting with PP-HT pipe Ø 25 mm; available as compact product (standard: pipe with a total length up to 2 m possible)														
Current consumption		max. 25 mA														
Weight		approx. 400 g (without cable)														
Ingress protection		IP 68														
CE-conformity		EMC Directive: 2014/30/EU														
Wiring diagram																

LMK 858

Plastic Probe

Technical Data

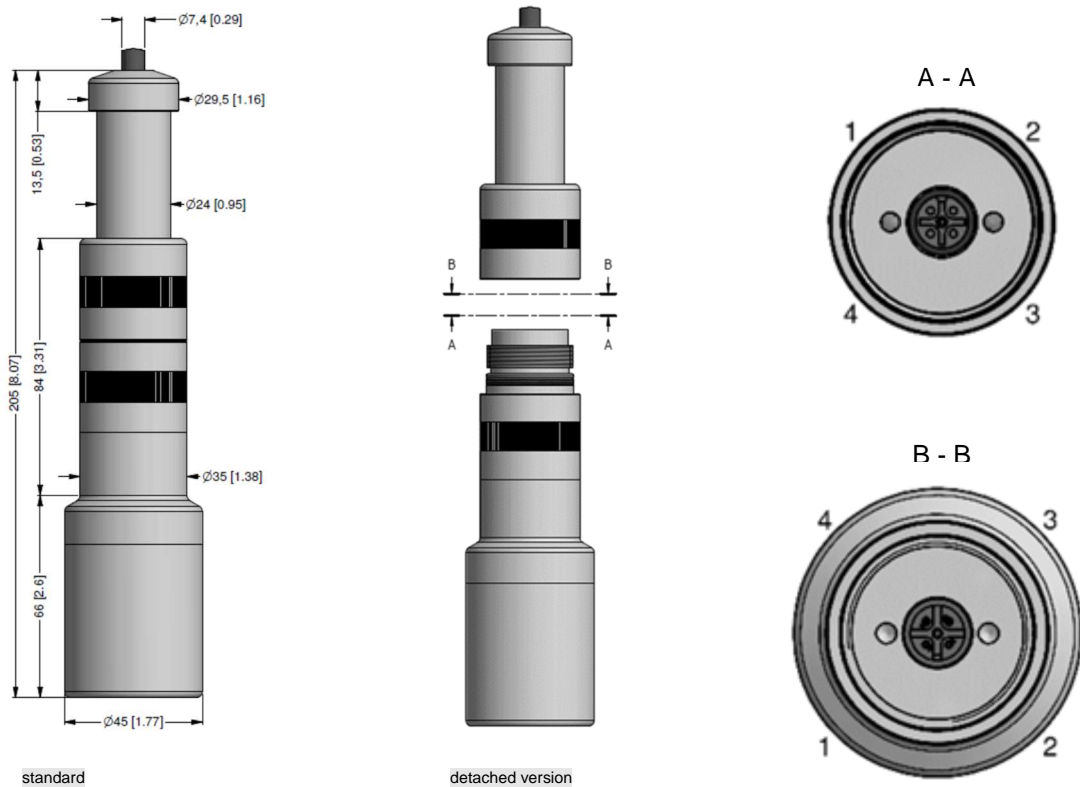


Pin configuration

Electrical connection	M12x1 (4-pin) ⁵	cable colours (DIN 47100)
Supply +	3	wh (white)
Supply -	4	bn (brown)
Signal + (only for 3-wire)	1	gn (green)
Shield	2	gn/ye (green / yellow)

⁵ in detached version

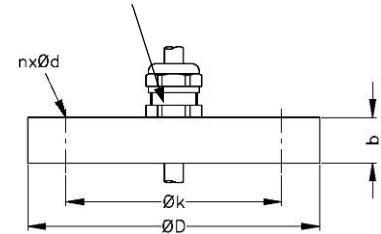
Dimensions (in mm)



Accessories

Assembling flange with cable gland		
Technical Data		
Suitable for	all probes	
Flange material	stainless steel 1.4404 (316L)	
Material of cable gland	standard: brass, zinc plated on request: stainless steel 1.4305 (303); plastic	
Seal insert	material: TPE (ingress protection IP 68)	
Hole pattern	according to DIN 2507	
Version	Size (in mm)	Weight
DN25 / PN40	D = 115, k = 85, b = 18, n = 4, d = 14	1.4 kg
DN50 / PN40	D = 165, k = 125, b = 20, n = 4, d = 18	3.2 kg
DN80 / PN16	D = 200, k = 160, b = 20, n = 8, d = 18	4.8 kg
Ordering type		Ordering code
Assembling Flange DN25 / PN40		5000275
Assembling Flange DN50 / PN40		5000278
Assembling Flange DN80 / PN16		5000279

cable gland M16x1.5 with seal insert (for cable-Ø 4 ... 11 mm)



Terminal clamp		
Technical Data		
Suitable for	all probes with cable Ø 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, of steel, zinc plated		1003440
Terminal clamp, of stainless steel 1.4301 (304)		1000278



Ordering code LMK 858

3.4.2020

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Pressure																
in bar		4	1	5												
in m H ₂ O		4	1	6												
Input	[mH ₂ O]	[bar]														
	0...0.4	0...0,04	0	4	0	0										
	0...0.6	0...0,06	0	6	0	0										
	0...1.0	0...0,1	1	0	0	0										
	0...1.6	0...0,16	1	6	0	0										
	0...2.5	0...0,25	2	5	0	0										
	0...4.0	0...0,4	4	0	0	0										
	0...6.0	0...0,6	6	0	0	0										
	0...10	0...1.0	1	0	0	1										
	0...16	0...1,6	1	6	0	1										
	0...25	0...2,5	2	5	0	1										
	0...40	0...4.0	4	0	0	1										
	0...60	0...6.0	6	0	0	1										
	0...100	0...10	1	0	0	2										
Customer			9	9	9	9										
Housing material																
PP-HT							R									
PVDF (accuracy 0,5 %)							B									
Customer							9									
Diaphragm material																
Ceramic Al ₂ O ₃ 96 %							2									
Ceramic Al ₂ O ₃ 96 % with PTFE foil (accuracy ≥ 1 %)							3									
Ceramic Al ₂ O ₃ 99,9 %							C									
Customer							9									
Output signal																
4 ... 20 mA / 2-wire							1									
0 ... 10 V / 3-wire ¹							3									
Customer							9									
Seals																
Viton (FKM)							1									
EPDM							3									
FFKM							7									
Customer							9									
Electrical connection																
Without cable part							0									
PVC - cable (grey, Ø 7,4 mm, price for 1 m)							1									
PUR - cable (black, Ø 7,4 mm, price for 1 m)							2									
FEP - cable with PTFE sheath (black, Ø 7,4 mm, price for 1 m)							3									
Customer							9									
Accuracy																
0,5 % (PVDF housing)							5									
0,35 % (standard)							3									
0,25 %							2									
0,35 % including Calibration Certificate							S									
Customer							9									
Cable length																
in m										9	9	9				
Special version																
Standard													0	0	0	
Prepared for mounting with protecting pipe Ø 20 mm													1	0	6	
Customer													9	9	9	

Accessories for submersible transmitter			
Cabel part + price for cabel in m		5000695	5000722
Terminal clamp - zinc plated		1003440	



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The company BD SENSORS s.r.o. is certified by TÜV SÜD Czech according to the standard ISO 9001.



Terminal clamp - Stainless Steel 1.4301	1000278
Mounting screw PG16 - plastic	5002200

0,- ... without additional charge

1 - maximum length of PVC cable – 25 m, PUR, FEP, TPE – 40 m

On request ... in accordance with the producer

Surcharges for calibration are not subject to any discounts. Subject to change.

This document contains the specification for ordering the product; detailed technical parameters of the product and its possible variants are given in the data sheet. BD SENSORS reserves the right to change sensor specifications without further notice.



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