



LMK 858

Detachable Plastic Submersible Probe

High Purity Ceramic Sensor

accuracy according to EN IEC 62828-2:
standard: 0.35 % span
option: 0.25 % span

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
- ▶ detachable cable assembly from probe head
- ▶ chemical resistance
- ▶ housing PP-H or PVDF

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 **LMK 858 plastic submersible probe** is designed for **continuous level measurement** in wastewater and aggressive media. At its core is a **polished, ceramic capacitive sensor**, offering **excellent chemical and mechanical resistance**.

Thanks to its **semi-flush diaphragm**, the probe is easy to clean and resists build-up of solid particles. Its **key feature is a detachable cable assembly**, allowing quick replacement of the probe head without removing the entire cable.

A wide range of cable and seal materials ensures optimal compatibility with various media. **Typical** applications include **wastewater treatment plants** and industrial processes requiring reliable level monitoring in **heavily contaminated or chemically aggressive liquids**.

Preferred areas of use are



Sewage

waste water, treatmentwater recycling, dumpsite



Aggressive media

level measurement in most of acids and lyes



Permissible pressure ranges for probe materials:														
PP-H (medium temperature 0 ... +25 °C)														
PVDF (medium temperature -30 ... +60 °C)														
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	10	10	10	10	10	
Max. ambient pressure (housing) 10 bar														
Permissible pressure ranges for probe material PP-H (medium temperature +25 ... +50 °C)														
Nominal pressure gauge [bar]	0.04	0.06	0.1	0.16	0.25	0.4	0.6	1	1.6	2.5	-	-	-	
Level [mH ₂ O]	0.4	0.6	1	1.6	2.5	4	6	10	16	25	-	-	-	
Overpressure [bar]	2	2	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	
Max. ambient pressure (housing): 2.5 bar														

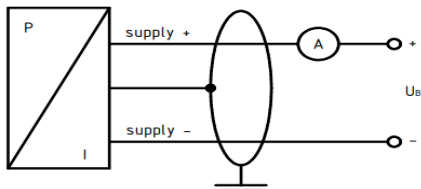
Output signal / Supply	
Standard	2-wire: 4 ... 20 mA / V _S = 9 ... 32 V _{DC}
Option 3-wire	3-wire: 0 ... 10 V / V _S = 12.5 ... 32 V _{DC}
Performance	
Accuracy ¹	standard: ≤ ± 0.35 % span option: ≤ ± 0.25 % span
Permissible load	R _{max} = [(V _S – V _{S min}) / 0.02 A] Ω
Influence effects	supply: 0.05 % span / 10 V load: 0.05 % span / kΩ
Long term stability	≤ ± 0.1 % span / year
Turn-on time	700 msec
Mean response time	< 200 msec
Max. response time	380 msec
¹ accuracy according to EN IEC 62828-2– limit point adjustment (non-linearity, hysteresis, repeatability)	
Thermal effects (Offset and Span)	
Thermal error	≤ ± 0.1 % span / 10 K in compensated range -20 ... 80 °C
Permissible temperatures (Medium/ electronics/ environment/ storage)	
PVDF	-30 ... 60 °C ²
PP-H	pressure range 0 ... 10 bar: 0 ... 25 °C pressure range 0 ... 2.5 bar: 0 ... 50 °C
² If the cable is intended for use in a smaller temperature range, the use of the probe is limited by this range.	
Electrical protection ³	
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
³ 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 ⁴	PVC (-40 ... 80 °C) grey Ø 7.4 mm PUR (-40 ... 80 °C) black (with drinking water certificate) Ø 7.4 mm FEP ⁵ (-40 ... 80 °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
⁴ cable with integrated air tube for atmospheric pressure reference	
⁵ do not use freely suspended probes with an FEP cable if effects due to highly charging processes are expected	
Materials (media wetted)	
Housing	standard: PP-H option: PVDF
Seals	FKM / EPDM (with drinking water certificate) / FFKM
Diaphragm	standard: ceramics Al ₂ O ₃ 96 % option: ceramics Al ₂ O ₃ 99.9 %
Cable sheath	PVC, PUR, FEP

Miscellaneous

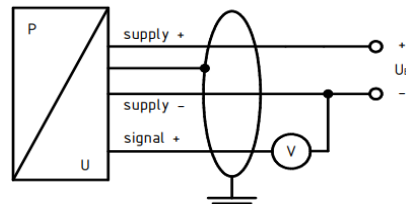
Option cable protection (on request)	prepared for mounting with PP-H, PVDF pipe Ø 25 mm; available as compact product (standard: pipe with a total length up to 2 m possible)
Current consumption	max. 25 mA
Weight	approx. 400 g (without cable)
Ingress protection	IP 68
CE-conformity	EMC Directive: 2014/30/EU

Wiring diagram

2-wire-system (current)



3-wire-system (voltage)

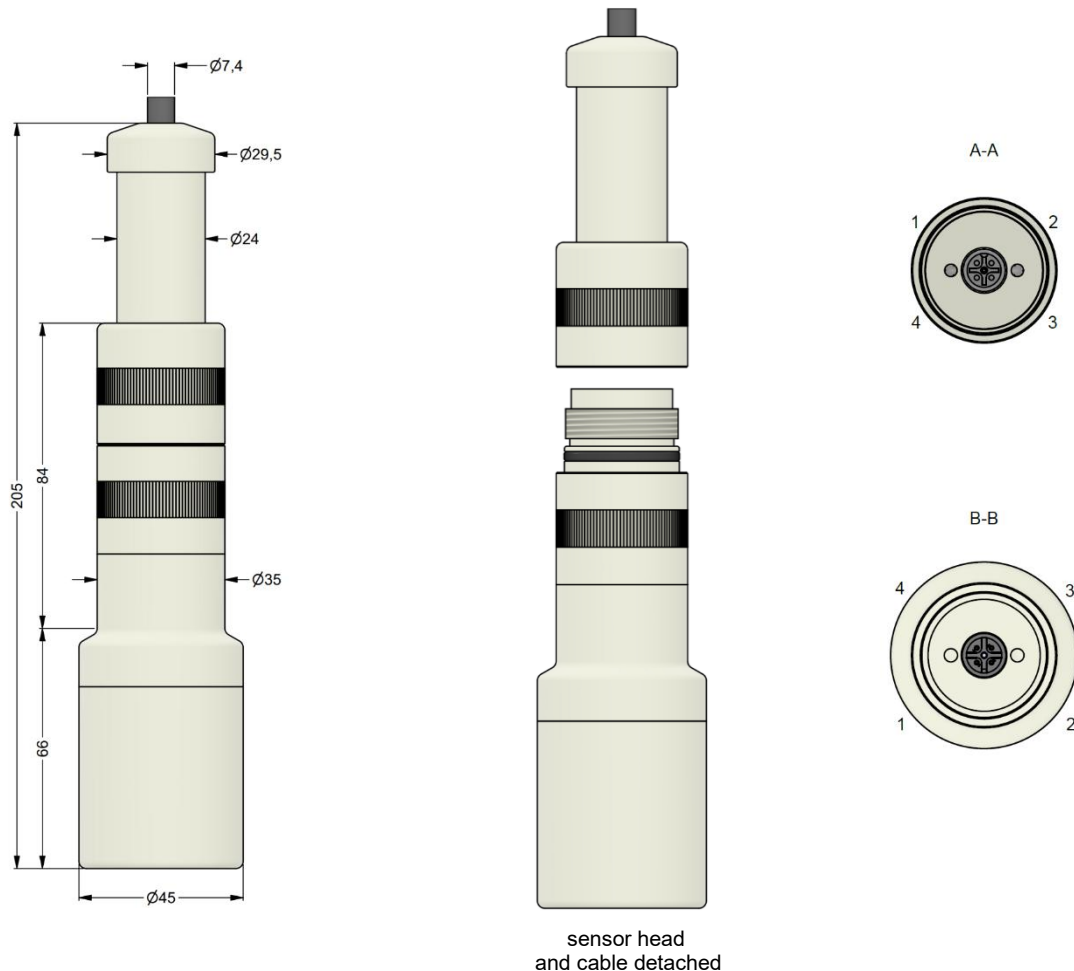


Pin configuration

Electrical connection	M12x1 (4-pin) ⁶	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)

⁶ in detached version

Dimensions (in mm)

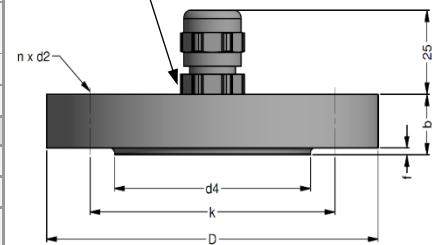


This data sheet contains product specification. properties are not guaranteed. Subject to change without notice.

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

30.04.2026

LMK 858

			-				-		-		-		-		-				-			
--	--	--	---	--	--	--	---	--	---	--	---	--	---	--	---	--	--	--	---	--	--	--

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-H									R1													
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 ≥ 0,35%)									3													
Ceramic Al ₂ O ₃ 99,9 %									C													
Customer									9													
Output signal																						
4 ... 20 mA / 2-wire									1													
0 ... 10 V / 3-wire ³									3													
Customer									9													
Seals																						
Viton (FKM)									1													
EPDM									3													
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 (4-pin) + price for cabel in m	5032954
Terminal clamp - zinc plated	1003440
Terminal clamp - Stainless Steel 1.4301	1000278
Mounting screw PG16 - plastic	5002200

0,- ... without additional charge

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.

1 shielded cable with integrated ventilation tube for atmospheric pressure reference

2 pipe is not part of the supply

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