



LMK858 PVC Submersible Level Transmitter



LMK 858

AGGRESSIVE MEDIA

Ø 45 mm

SUBMERSIBLE TRANSMITTER

CAPACITIVE CERAMIC SENSOR

HYDROSTATIC LEVEL MEASUREMENT

0,6 mWC up to 100 mWC



SUBMERSIBLE TRANSMITTER LMK 858

The level transmitter LMK 858 has been developed for continuous level measurement for all aggressive media as acids and lye. These extreme operation conditions are possible by using a pressure sensor made of ceramics as basic element and by use of plastics highly resistant against chemicals.

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

For sealing and cable different materials are available. A cable protection, available in two versions, is essential for application of the LMK 858 in aggressive media.

In order to reduce stockpiling and maintenance, transmitter and cable assembly are plugged together with a connector. The transmitter can be easily exchanged.

The cable assembly is available in different versions:

- cable only
- cable with rigid PVC pipe.

Different mounting versions make adaptation to construction and other on-site conditions easy.

Preferred areas of use are:

- environmental technology: sewage treatment, water supply
- level measurement in open tanks with aggressive liquids as acids and lye
- chemical and pharmaceutical industries
- galvanic coating.

Our application engineers would like to assist you in choosing the best combination suited for your specific application.

- Pressure ranges between 0 ... 0,6 mWC and 0 ... 100 mWC
- Customer-designed pressure ranges e.g. 0 ... 55 mWC
- Accuracy acc. to IEC 60770: 0,35% FSO (BFSL: 0,175% FSO)
Optional: 0,25% FSO (BFSL: 0,125% FSO)
- Output signals 4 ... 20 mA / 2w and 0 ... 10 V / 3w
- transmitter and cable assembly plugged
- cable protection with rigid PVC pipe optional
- Suitable for water and all fluids which are compatible with PVC and ceramics Al₂O₃
- Flush diaphragm
- Small thermal effect
- Excellent long term stability
- High resistance against electrical faults caused by incorrect wiring, short-circuit and overvoltage
- Rugged and reliable under most conditions
- Long operating life
- Customer-designed applications



TECHNICAL DATA

LMK 858

INPUT PRESSURE RANGE

Nominal pressure P _N gauge	[bar]	0,06	0,1	0,25	0,4	0,6	1	1,6	2,5	4	6	10
Level	[mWC]	0,6	1,0	2,5	4	6	10	16	20	40	60	100
Overpressure P _{max}	[bar]	2	2	2	4	4	7	7	15	15	25	40

SUPPLY

Voltage	12 ... 36 VDC
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OUTPUT SIGNAL

Standard : 2-wire-system	Current: 4 ... 20 mA
Optional : 3-wire-system	Voltage : 0 ... 10 V

PERFORMANCE

Accuracy according to IEC 60770 - Limit Point Adjustment (Nonlinearity, Hysteresis, Repeatability):	Standard: $\leq \pm 0,35\%$ FSO (BFSL: Standard: $\leq \pm 0,175\%$ FSO)	Optional: $\leq \pm 0,25\%$ FSO Optional: $\leq \pm 0,125\%$ FSO
Permissible Load	[Ω]	2-Wire : Current [U _B (V) – 12V] / 0.02 A
Influence Effects		Supply : $\leq \pm 0.05\%$ FSO / 10 V Load : $\leq \pm 0.05\%$ FSO / k Ω

THERMAL EFFECTS

Tolerance for offset and span	$< \pm 0,15\%$ FSO / 10 K
in compensated range	0 ... 50°C

ELECTRICAL PROTECTION ¹⁾

Insulation resistance	>100 M Ω
Short-Circuit protection	Permanent
Miswiring	No Damage, but also no Function
Overvoltage protection	Standard: –120 ... 150 VDC (1 sec. at 25°C) Optional: U _S = 2 kV asym. / 1 kV sym. (acc. to EN 61000-4-5 u. EN 50082-2)
Electromagnetic compatibility : Emission acc. to EN 50081-2; Immunity acc. to EN 50082-2	
Error in RF Field 10 V/m	$\leq \pm 0.5\%$ FSO ²⁾
Error with induced RF-Current (Capacitive Coupling) 10 V	$\leq \pm 1.0\%$ FSO

ELECTRICAL CONNECTION

Cable with Integrated Air Tube for Atmospheric Reference	PVC- / PUR-sheath
Other Cable Versions	on request

PERMISSIBLE TEMPERATURES

Medium	[°C]	0 ... 50
Storage	[°C]	–10 ... 50

CABLE PROTECTION

Standard	Without Cable Protection
Special versions	Rigid PVC Pipe \varnothing 25 mm

MATERIALS

Housing	PVC Gray
Diaphragm	Ceramics Al ₂ O ₃ 96 %
Seals	FKM / Optional: EPDM / Others: On Request
Cable sheath	PVC Gray / Optional: PUR Black / Optional: FEP

MISCELLANEOUS

Current consumption	Signal output current : < 25 mA	Signal output voltage : < 15m A
Ingress protection	IP 68	
Weight	ca. 400 g (without cable)	

ACCESSORIES FOR MOUNTING

Assembly fitting (Stainless steel)	
Terminal Clamp	

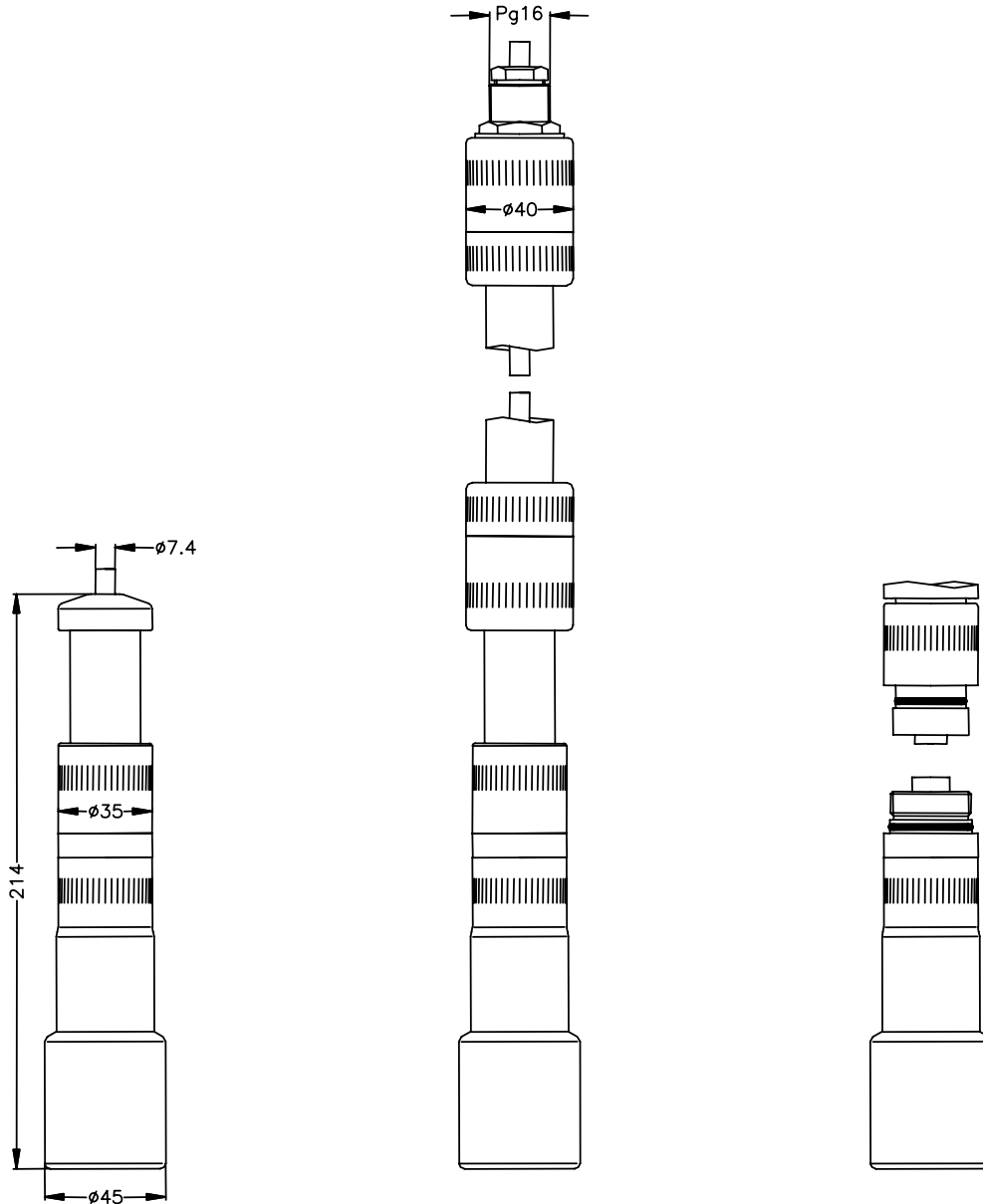
¹⁾ additional external overvoltage-protection unit with pressure compensation KL1 or KL2 available (please ask for data sheet)

²⁾ reduced protection against RF-field 10V/m



DIMENSIONS / CONNECTIONS

LMK 858



Standard Version
Without Cable Protection

Special Versions for Cable Protection
Rigid PVC Pipe

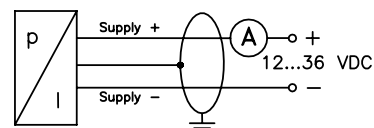
Additional Features
Transmitter and Cable Assembly
Plugged

Pin configuration

Electrical connection	
Cable colors acc. to DIN 47100	
2-wire-system:	
Supply +	white
Supply -	brown
Ground	Cable shield

Wiring diagrams

2-wire: 4...20 mA





ORDERING CODE

LMK 858

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Pressure		in bar	4	1	5											
		in mWC	4	1	6											
Input	[bar]	[mWC]														
	0,06	0,6	0	6	0	0										
	0,1	1,0	1	0	0	0										
	0,25	2,5	2	5	0	0										
	0,4	4,0	4	0	0	0										
	0,6	6,0	6	0	0	0										
	1,0	10	1	0	0	1										
	1,6	16	1	6	0	1										
	2,5	25	2	5	0	1										
	4,0	40	4	0	0	1										
	6,0	60	6	0	0	1										
	10,0	100	1	0	0	2										
	Customer	.....	X	X	X	X										
Housing																
	PVC gray	.....				A										
	Customer	.....				X										
Diaphragm																
	Ceramic Al ₂ O ₃	.....				2										
	Customer	.....				X										
Output																
	4 ... 20 mA / 2-wire	.....				1										
	Customer	.....				X										
Seals																
	FKM	.....				1										
	EPDM	.....				3										
	Customer	.....				X										
Electrical connection																
	PVC-cable ¹⁾				1										
	PUR-cable ¹⁾				2										
	FEP-cable ¹⁾				3										
	Customer	.....				X										
Accuracy																
	0,35%	.....				3										
	0,25%	.....				2										
	Customer	.....				X										
Cable length ³⁾												X	X	X		
Special versions																
	Standard	.....												0	0	0
	Over voltage protection	.....												0	3	0
Cable protection	PVC-pipe ³⁾												1	0	6
	Customer	.....												X	X	X

¹⁾ Cable with air tube

²⁾ prepared for pipe assembly; delivery of tube only on request

³⁾ in meter e.g. 2m=002; 15m=015

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