



Fields of application

- Level measurements in vessels, tanks, water technology plants

Description

The economical level probe PT-LM has been designed for measuring standard levels and filling levels in water plants, in oil or other non-aggressive mediums. Measurements can be carried out in a water depth of up to 250 meters.

Optionally, a version of the level probe covered with platinum membrane or other special coating is available for measurements in aggressive liquids.

The level probe can be handled easily, it is very stable and is delivered with an stainless steel casing and connected cable (integrated pressure compensation).

2 variants of cap configuration are available (as weight made of steel and as plastic cap).

The transmitters are characterized by a good long-term stability. Optionally they can be delivered with 0.25 % FS or 0.1 % FS.

Options

- PTFE cable
- overvoltage protection for lightning protection
- temperature measurement

Safety information

During installation, putting into service and operation of these pressure sensors, it is necessary to observe the relevant safety regulations that are in force in the country of the user (as for example, VDE 0100).

Technical data

Measuring range (bar) from 1 m W.G. up *)	0,10 16,0	0,25 25,0	0,40	1,0	1,6	2,5	4,0	6,0	10,0
Overload range *)	2 times from 500 bar up: 1.2 times								
Bursting pressure *)	3 times from 500 bar up: 1.5 times								
Pressure type	➤ relative pressure ➤ absolute pressure								
Pressure connection *)	G 1/4 " form E								
Materials used									
Material of parts with contact to measuring medium: Case: Sensor element:	parts are made from CrNiCuNb 17-4 PH , silicon, O-ring ➤ stainless steel for > 1 bar ➤ plastics for < 1 bar hermetically tight welded stainless steel membrane (without oil receiver) thin-film technology (Poly-Si on SiO ₂)								
Weight	550 g (without connecting cable)								
Cable	PUR with pressure compensating tube, electr. connection with Deutsch-plug, mixed signal ASIC with PIC-controller								
Electrical parameters									
Output signals *)	A		B		C		D		
	4 ... 20 mA		4 ... 20 mA		0 ... 10 V		1 ... 5 V		
	V _s = 12 ... 30 V		V _s = 12 ... 30 V		V _s = 12...30 V		V _s = 12...30 V		
	R _I =(U _b - 12 V) / 20 mA		R _I =(U _b - 12 V) / 20 mA		R _I =5 kΩ		R _I =5 kΩ		
	2 conductors		2 conductors		2 conductors		2 conductors		
Insulation resistance at 50 V	100 M Ω								
Linearity error at RT *)	± 0.5 % FS ➤ max. (with setting of boundary points) 0.25 % FS - BFSL (PWM - 500 Hz, f = 0.2 kHz to 1.2 kHz)								
Ambient values									
➤ compensated range ➤ storage temperature ➤ temperature of medium	- 10 ... + 65 °C - 30 ... + 80 °C + 5 ... + 70 °C								
Total error temperature *) ***) ****)	-10 ... +65 °C typ. <± 0.7 % FS max. 1% FS								
Electromagnetic compatibility Testing acc. to DIN EN 55022 and DIN EN 61000-4-3	25 V / m								
Type of protection	IP 68 up to 250 m submergence								
Special features	load-dump protection EMV-proof up to 300 V / m								

*) others on request

***) integral deviation of linearity (FS = Full Scale, BFSL = Best Fit Straight Line)

****) total error contains non-linearity, hysteresis, reproducibility and temperature influence

*****) special versions with optionally higher accuracy on client's request

Errors excepted; subject to alterations in the sense of technical improvement.