

Model LT1000 series

OEM Submersible Level Transmitter
Stainless steel sensor
Mass production, automated calibration

Materontek
Sensing and Internet of Things

The LT1000 submersible level transmitter has been designed for level measurement in contact with the medium in harsh operating conditions. It offers an accuracy of 0.5 %FS and with an ingress protection of IP 68, is suitable for permanent level measurements up to 100 m water column.

Features

- Measuring ranges from 2mH₂O to 120 mH₂O
- IP68, Submersible level measurement
- Low-cost, simple level measurement
- Accuracy: ±0.5%FSO(Typ.)
- Calibrated and temperature compensated
- Stainless steel pressure sensor
- Output 4...20mA, DC1...5V, DC 0.5...4.5V, MODBUS RTU

Application

- Drinking water systems
- Ground water monitoring
- Domestic water tanks
- Rain spillway basin



CE

Technical data

Measuring range

Nominal pressure [mH ₂ O]	2	4	5	8	10	12	15	20	25	30	40	50	60	80	100	120
Overpressure [mH ₂ O]	3	6	7	12	15	15	20	30	35	40	50	60	70	100	110	130

Performance

Accuracy*	0.5 %FS@25°C	*Linearity (best straight line) + Hysteresis + Repeatability
Operating Temperature	-10 to 50°C	
Compensated Temperature Range	-10 to 50°C	
Vibration	20 g RMS(20 to 2000Hz)	
Shock	100 g(10ms)	
Cycles	10x10 ⁵	
Long Term Stability	0.2 %FS	

Electrical @25°C

Output signal / Supply	2-wire	4...20mA / V _S = 9... 30VDC
	2-wire	HART+4...20mA / V _S = 12... 30VDC
	3-wire	1...5VDC / V _S = 9... 30VDC
	3-wire	0.5...4.5VDC / V _S = 9... 30VDC
	3-wire	0.5...4.5VDC / V _S = 5VDC
	4-wire	I2C / V _S = 3.3...5VDC
	4-wire	MODBUS RTU / V _S = 9...30VDC
Insulation Resistance	100 MΩ@100VDC	
EMC Test	IEC61000-6-2/IEC61000-6-3	
Reverse polarity protection	No damage – no function	

Physical Specifications

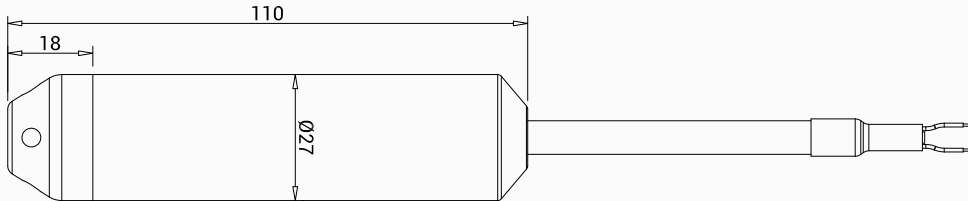
Housing	316 stainless steel
Diaphragm	316L stainless steel
Protection cap	Stainless steel, POM-C
Cable sheath	PUR, PE, PTFE
Oil Filling	Silicone oil
Protection	IP68
Weight	~250g (without cable)

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Dimensions (All dimensions in mm)



Electrical connections

Cable outlet	4...20mA/HART 2-wire	1...5VDC 3-wire	0.5...4.5VDC 3-wire	MODBUS 4-wire
+Vcc	Red	Red	Red	Red
OUT/RS485A/SDA	Green	Yellow	Yellow	Yellow
GND	NA	Green	Green	Green
RS485 B/SCL				Blue

Ordering code

Part Number: LT1000-02G42G4E1

Model	Range	Type	Output	Cable	Cable length	Protection cap
LT1000	01 2mH ₂ O	G Gauge	42 4...20mA	C1 PUR	XXX Cable length in m	S Stainless steel
	02 4mH ₂ O		15 DC1...5V	C2 PE		P POM-C
	03 5mH ₂ O		05 DC0.5...4.5V	C3 PTFE		
	04 8mH ₂ O		R4 MODBUS RTU			
	05 10mH ₂ O		H2 4...20mA+HART			
	06 12mH ₂ O		IC I2C interface			
	07 15mH ₂ O					
	08 20mH ₂ O					
	09 25mH ₂ O					
	10 30mH ₂ O					
	11 40mH ₂ O					
	12 50mH ₂ O					
	13 60mH ₂ O					
	14 80mH ₂ O					
	15 100mH ₂ O					
	16 120mH ₂ O					

Accessory

Code A1: Cable strain relief clamp

