

# Model LT1000-13/16/19/22 series

OEM Submersible Level Transmitter  
Stainless steel sensor  
Probe diameter Ø13/Ø16/Ø19/Ø22mm

**Materontek**  
Sensing and Internet of Things

The probe LT1000 with stainless steel sensor has been especially designed for the continuous level measurement at confined space conditions. 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 300 m water column.

## Features

- ❑ Measuring ranges from 5mH<sub>2</sub>O to 300 mH<sub>2</sub>O
- ❑ IP68, Submersible level measurement
- ❑ Built-in PT100 temperature sensor (optional) for simultaneous level and temperature Measurement
- ❑ 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
- ❑ Well monitoring



## Technical data

### Measuring range

Nominal pressure [mH <sub>2</sub> O]	5	8	10	20	25	30	40	50	60	80	100	150	200	250	280	300
Overpressure [mH <sub>2</sub> O]	10	12	15	25	30	35	45	60	70	90	110	170	220	270	300	320

### 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	
Temp. coeff - Zero	±0.75[Typ.], ±1.5[Max.]	
Temp. coeff - Span	±0.75[Typ.], ±1.5[Max.]	
Vibration	20 g RMS(20 to 2000Hz)	
Shock	100 g(10ms)	
Cycles	10x10 <sup>5</sup>	
Long Term Stability	0.2 %FS	

### Electrical @25°C

Output signal / Supply	2-wire 4...20mA / V <sub>S</sub> = 9... 30VDC
	2-wire HART+4...20mA / V <sub>S</sub> = 12... 30VDC
	3-wire 1...5VDC / V <sub>S</sub> = 9... 30VDC
	3-wire 0.5...4.5VDC / V <sub>S</sub> = 9... 30VDC
	3-wire 0...10VDC / V <sub>S</sub> = 15... 30VDC
	3-wire 0.5...4.5VDC / V <sub>S</sub> = 5VDC
	4-wire I2C / V <sub>S</sub> = 3.3...5VDC
	4-wire MODBUS RTU / V <sub>S</sub> = 9...30VDC
Insulation Resistance	100 MΩ@100VDC
EMC Test	IEC61000-6-2/IEC61000-6-3
Reverse polarity protection	No damage - no function

### Physical Specifications

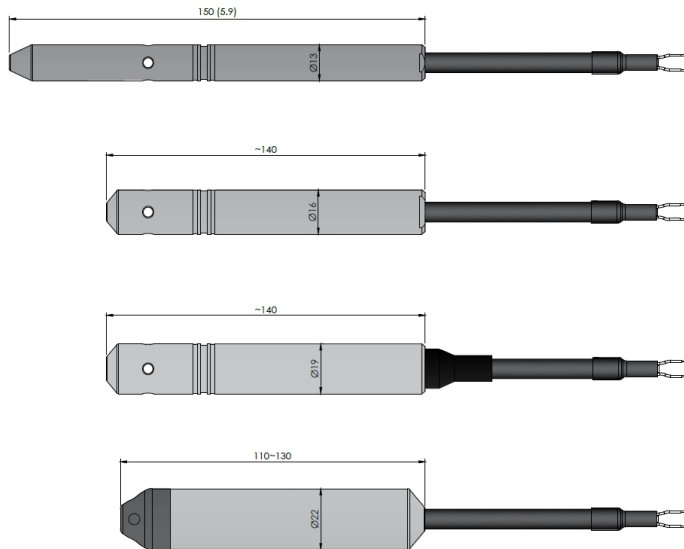
Housing	316 stainless steel
Diaphragm	316L stainless steel
Protection cap	Stainless steel, POM-C
Cable sheath	PUR, PE, PTFE
Oil Filling	Silicone oil
Protection	IP68
Weight	~250g (without cable)

# Model LT1000-13/16/19/22 series

OEM Submersible Level Transmitter  
Stainless steel sensor  
Probe diameter Ø13/Ø16/Ø19/Ø22mm

**Materontek**  
Sensing and Internet of Things

## Dimensions All dimensions in mm(in)



## Electrical connections

Cable outlet	4...20mA 2-wire	1...5VDC 3-wire	0.5...4.5VDC 3-wire	RS485 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

Model	Range	Type	Output	Cable	Cable length
<b>LT1000-13</b> Probe dia.= Ø13mm	<b>01</b> 5mH <sub>2</sub> O	<b>G</b> Gauge	<b>42</b> 4...20mA	<b>C1</b> PUR	<b>XXX</b> Cable length in
<b>LT1000-16</b> Probe dia.= Ø16mm	<b>02</b> 8mH <sub>2</sub> O	<b>A</b> Absolute	<b>15</b> DC1...5V	<b>C2</b> PE	
<b>LT1000-19</b> Probe dia.= Ø19mm	<b>03</b> 10mH <sub>2</sub> O		<b>04</b> DC0.5...4.5V	<b>C3</b> PTFE	
<b>LT1000-22</b> Probe dia.= Ø22mm	<b>04</b> 20mH <sub>2</sub> O		<b>25</b> DC0.5...2.5V		
	<b>05</b> 25mH <sub>2</sub> O		<b>05</b> DC0...5V		
	<b>06</b> 30mH <sub>2</sub> O		<b>01</b> DC0...10V		
	<b>07</b> 40mH <sub>2</sub> O		<b>10</b> DC1...10V		
	<b>08</b> 50mH <sub>2</sub> O		<b>H2</b> 4...20mA+HART		
	<b>09</b> 60mH <sub>2</sub> O		<b>IC</b> I2C interface		
	<b>10</b> 80mH <sub>2</sub> O		<b>R4</b> MODBUS RTU		
	<b>11</b> 100mH <sub>2</sub> O				
	<b>12</b> 150mH <sub>2</sub> O				
	<b>13</b> 200mH <sub>2</sub> O				
	<b>14</b> 250mH <sub>2</sub> O				
	<b>15</b> 280mH <sub>2</sub> O				
	<b>16</b> 300mH <sub>2</sub> O				

Accuracy	Label
<b>A1</b> 0.1%FS	<b>S</b> Standard
<b>A2</b> 0.25%FS	<b>N</b> Neutral packing
<b>A3</b> 0.5%FS(Standard)	<b>C</b> Custom label

## Accessory

Code A1: Cable strain relief clamp

