

LEFOO

LFT3013  
CERAMIC PIEZORESISTIVE  
LEVEL TRANSMITTER  
PRODUCT OPERATION MANUAL



The LFT3013 is a fully sealed, submersible level transmitter that uses a corrosion-resistant ceramic piezoresistive pressure sensor. The probe, immersed in the measured medium, is made of 316L stainless steel or titanium alloy. The vented cable is made of PTFE or polyurethane, making it ideal for: Sewage; Seawater; Other demanding liquid level measurement applications.

The housing is fully welded, and all connection points (housing, cable, etc.) are sealed with multi-layer protection. Internal components are potted to ensure long service life and reliable performance in: Chemical industry; Water treatment; Environmental protection; Pharmaceuticals; Industrial process control.

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SPECIFICATION

Range						
Rated Pressure Range (Gauge, kPa)	50	100	200	500	1000	2000
Minimum Range (Gauge, kPa)	20	60	120	250	500	1000
Overload Pressure(kPa)	100	200	400	1000	1500	3500
Note: Units can be converted to mH <sub>2</sub> O@4°C, inH <sub>2</sub> O@4°C, m, mm, etc. For m/mm units, specify the medium's density value.						

Media	
Media Type	Liquids compatible with wetted materials
Output Signal & Power Supply	
Output Signal & Power Supply	2-wire: 4~20mADC / Vs=10~30VDC
	2-wire: 4~20mADC+HART / Vs=12~32VDC
	3-wire: 0~5VDC,etc. / Vs=10~30VDC
	4-wire: Modbus-RTU/RS485/Vs=3~8VDC or 10~30VDC

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Performance	
Accuracy <sup>®</sup>	±0.5% F.S. (typical)
Load Resistance	4~20mADC 2-wire: RL≤ (U-10) /0.02Ω
	4~20mADC+HART 2-wire: RL≤ (U-12) /0.02Ω
	3-wire Voltage: RL≥10kΩ
Long-Term Stability	±0.25%F.S./year
Note①: Accuracy conforms to IEC 60770 (non-linearity, hysteresis, repeatability)	
Temperature Characteristics	
Zero Temp Coefficient	≤±0.04% F.S./°C (25~70°C, ref. 25°C)
Span Temp Coefficient	≤±0.02% F.S./°C (-10~70°C, ref. 25°C)
Environmental Conditions	
Temperature Range	Operating Temp: -20~80°C
	Media Temp : -20~80°C
	Storage Temp: -20~80°C
Protection Rating	IP68
Electrical Protection	
Short-Circuit Protection	Supported
Reverse Polarity Protection	No damage, circuit inactive
Insulation Performance	
Insulation Resistance	>100MΩ, 500VDC
Dielectric Strength	500VAC, 50Hz, 1min (no breakdown or arcing)

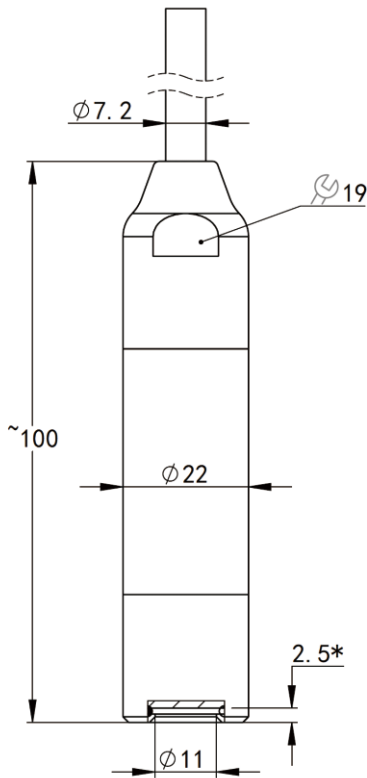
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ELECTRICAL PROTECTION

Component	Material
Probe Housing	316L Stainless Steel
	Titanium Alloy
Sensor	Ceramic Al <sub>2</sub> O <sub>3</sub> 96%
O-Ring	FKM (-20 to 200°C)
	FFKM (-25 to 300°C)
Cable	PTFE (Ø7.2±0.2mm)
	PU (Ø7.2±0.2mm)

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DIMENSION

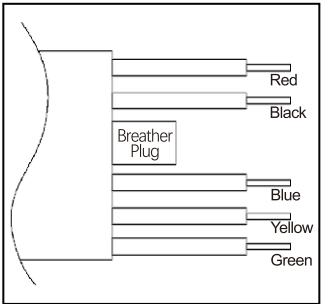


\*This dimension is the distance from the sensing diaphragm to the bottom

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ELECTRICAL CONNECTION

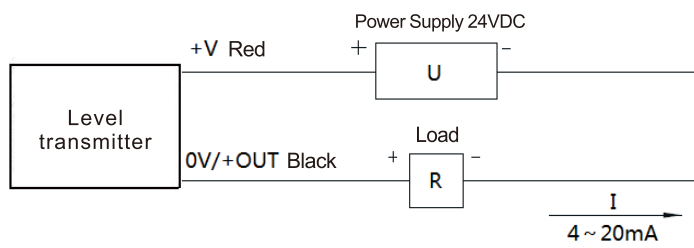
ELECTRICAL CONNECTION



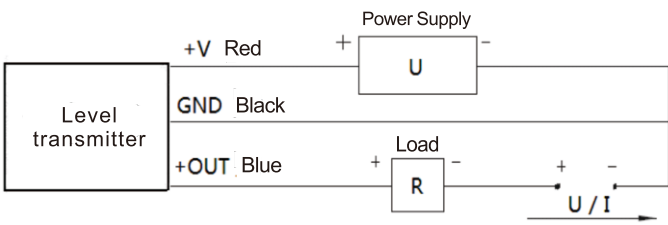
Wire Color	2-Wire 4~20 mA	3-Wire Voltage	Modbus-RTU/RS485
Red	+V (Power)	+V (Power)	+V (Power)
Black	0V / +OUT	GND (Common)	0V
Blue		+OUT (Signal)	
Yellow			RS485-A
Green			RS485-B

⚠ For gauge pressure models, ensure the breather plug remains dry and intact.

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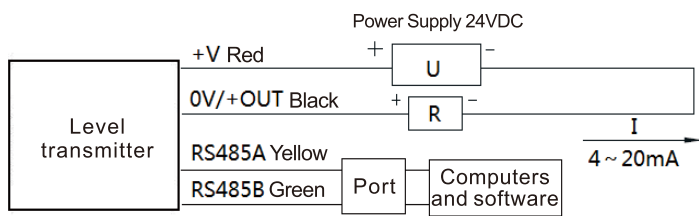


Wiring diagram of the 4-20mA two-wire output transmitter



Wiring diagram of the three-wire voltage output type transmitter

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Wiring diagram of the Modbus-RTU/RS485 output type transmitter

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