LEFOO

LFT3010

ANTI-SEDIMENT LEVEL TRANSMITTER

PRODUCT OPERATION MANUAL

PRODUCT FEATURES

The LFT3010 Anti-Sediment Level Transmitter features a fully sealed, submersible design. It integrates a pressure sensor tested for long-term stability and reliability with a high-precision signal conditioning circuit, all housed in a stainless steel enclosure.

Key design highlights:fully welded housing with multi-layer sealing at all connection points (housing, cable, etc.) ; internally potted electronics for extended service life; custom-designed removable filter ring that; prevents entanglement from aquatic plants; resists clogging from sediment and particulates; is easy to disassemble, clean, and reuse .

This transmitter is ideal for long-term, stable level monitoring in environments with sediment accumulation and aquatic vegetation.

SPECIFICATION

Measurement Range ①	
Range	0～1…500mH2O/0~10kPa…5MPa
Overload Pressure	1.5× full scale
Media	
Media Type	Liquids compatible with wetted materials
Output Signal & Power Supply	
Output Signal & Power Supply	2-wire：4~20mA / Vs=8~30V
	2-wire：4~20mA+HART / Vs=12~32V
	3-wire：0～5V/Vs=8.5~30V or Vs=3.1~8V (≥ max output + 0.4V) ②
	3-wire：0～10V / Vs=12~30V
	4-wire：Modbus-RTU/RS485 / Vs=10~30V
	2-wire：1 relay switch / Vs=18~30V

Performance	
Accuracy③	±0.5%F.S @25°C (Standard Accuracy)
	±0.2%F.S @25°C (High Accuracy)
Long-Term Stability	±0.25%F.S/year (0.5 Level Standard Accuracy)
	±0.2%F.S/year (0.2 Level Standard Accuracy)

Note①：Units can be converted to ftH_2O@4°C,inH_2O@4°C, m, mm, etc. For m/mm units, specify the medium's density.

Note②：In condition that max voltage output higher by 0.4V

Note③：Accuracy conforms to IEC 60770 (non-linearity, hysteresis, repeatability)

Compensation Temp		
Compensation Range	0~70°C (0.5 Level Standard Accuracy)	
	-10~80°C (0.2 Level High Accuracy)	
	Note: For a range of ≤20kPa, please consult.	
Zero Temp Drift	±1.0% F.S.@25°C(≤20kPa:±1.5%F.S.@0~70°C)④	
Span Temp Drift	±1.0% F.S.@25°C(≤20kPa:±1.5%F.S.@0~70°C)④	
Environmental Conditions		
Temperature Range	Operating Temp：-40~80°C	
	Media Temp：-40~80°C	
	Storage Temp：-40~85° C	
Protection Rating	IP68	
Electrical Protection		
Reverse Polarity	Protected (no damage, circuit inactive)	
Insulation Performance		
Insulation Resistance	>20MΩ，500VDC	
Dielectric Strength	<2mA @ 500VDC⑤	

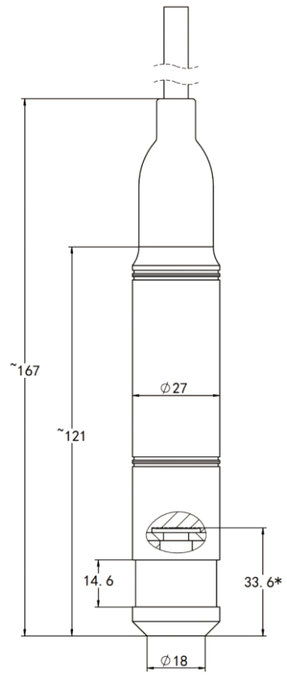
Note④：For low-pressure ranges (≤20 kPa), temperature drift is ±1.5%F.S. @0~70 °C

Note⑤：Apply a test voltage of 500VAC at 50Hz for 1 minute without breakdown or arcing

ELECTRICAL PROTECTION

Component	Material
Probe Housing	Stainless Steel 304
	Stainless Steel 316L
Sensor	Silicon Piezoresistive, 316L Stainless Steel
Sensor Seal	FKM (−20 to 200 °C)
	NBR (−40 to 120 °C)
Cable	PU, Ø7.2 ± 0.2 mm
	NBR, Ø7.2 ± 0.2 mm
Filter Ring	316L Stainless Steel
	Ceramic

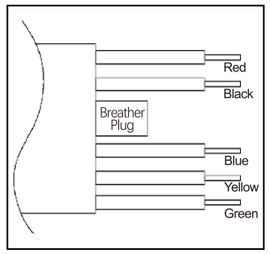
DIMENSION



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

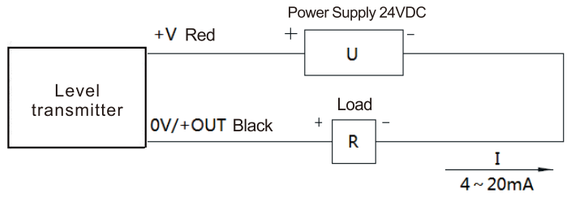
ELECTRICAL CONNECTION

ELECTRICAL CONNECTION

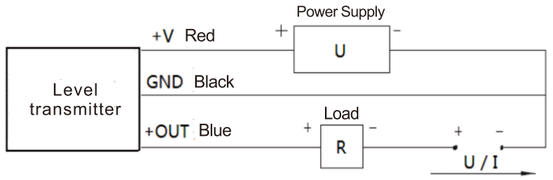


Wire Color	2-Wire 4–20 mA	3-Wire Voltage	Modbus-RTU/RS485
Red	+V (Power)	+V (Power)	+V (Power)
Black	0V / +OUT	GND（Common）	0V
Blue		+OUT (Signal)	
Yellow			RS485-A
Green			RS485-B

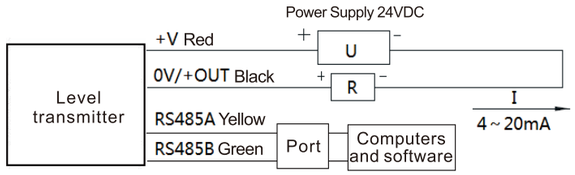
⚠ For gauge pressure models, ensure the breather plug remains dry and intact.



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



Wiring diagram of the three-wire voltage output type transmitter



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