



High Performance Submersible Liquid Level Transmitters Type LH-10 - 50 INWC to 400 PSI

Tronic

(Previous model number 891.13.535)

- 0.125% B.F.S.L. accuracy with 0.05% repeatability
- Rated IP 68 for permanent submersion
- Available with integral Pt 100 temperature sensor for simultaneous level and temperature monitoring
- Vented polyurethane cable withstands 220 pounds of strain
- For depth measurement to 1000 feet



WIKAI LH-10 submersible liquid level transmitters and transducers are engineered for a wide variety of industrial and municipal liquid level measurement applications. Each transmitter undergoes extensive quality control testing and calibration to achieve an accuracy $\leq 0.125\%$ full scale. The printed circuit boards use state-of-the-art surface mount technology for protection against mechanical shock and vibration. Each is temperature compensated to assure accuracy and long term stability when exposed to severe ambient temperature variations.

The transmitter features a watertight, vented polyurethane cable that can withstand over 220 pounds of strain. This allows the transmitter to be supported without any additional cabling. The transmitter meets NEMA 6P and IP 68 requirements for submersion up to 1000 feet.

Available options include Teflon cable, lightning protection, 6 volt supply for battery powered operation, and integrated Pt 100 element for temperature measurement.

This compact, rugged submersible pressure transmitter is suitable for applications in level measurement, water and wastewater treatment, well depth measurement, and offshore water depth measurement.



STANDARD RANGES

| RANGE | MAXIMUM* | BURST** |
|------------|----------|----------|
| 0-50 INWC | 30 PSI | 30 PSI |
| 0-100 INWC | 30 PSI | 30 PSI |
| 0-150 INWC | 30 PSI | 30 PSI |
| 0-250 INWC | 60 PSI | 60 PSI |
| 0-400 INWC | 70 PSI | 70 PSI |
| 0-5 PSI | 30 PSI | 30 PSI |
| 0-10 PSI | 60 PSI | 60 PSI |
| 0-15 PSI | 70 PSI | 70 PSI |
| 0-25 PSI | 145 PSI | 145 PSI |
| 0-30 PSI | 145 PSI | 145 PSI |
| 0-50 PSI | 245 PSI | 245 PSI |
| 0-100 PSI | 500 PSI | 500 PSI |
| 0-200 PSI | 1160 PSI | 1160 PSI |
| 0-400 PSI | 1160 PSI | 1160 PSI |

(27.7 INWC = 1 PSI)

Notes:

* Maximum pressure, causing no permanent changes in specifications but may lead to adjustable zero and span shifts.

** Burst pressure, leading to destruction of transmitter.

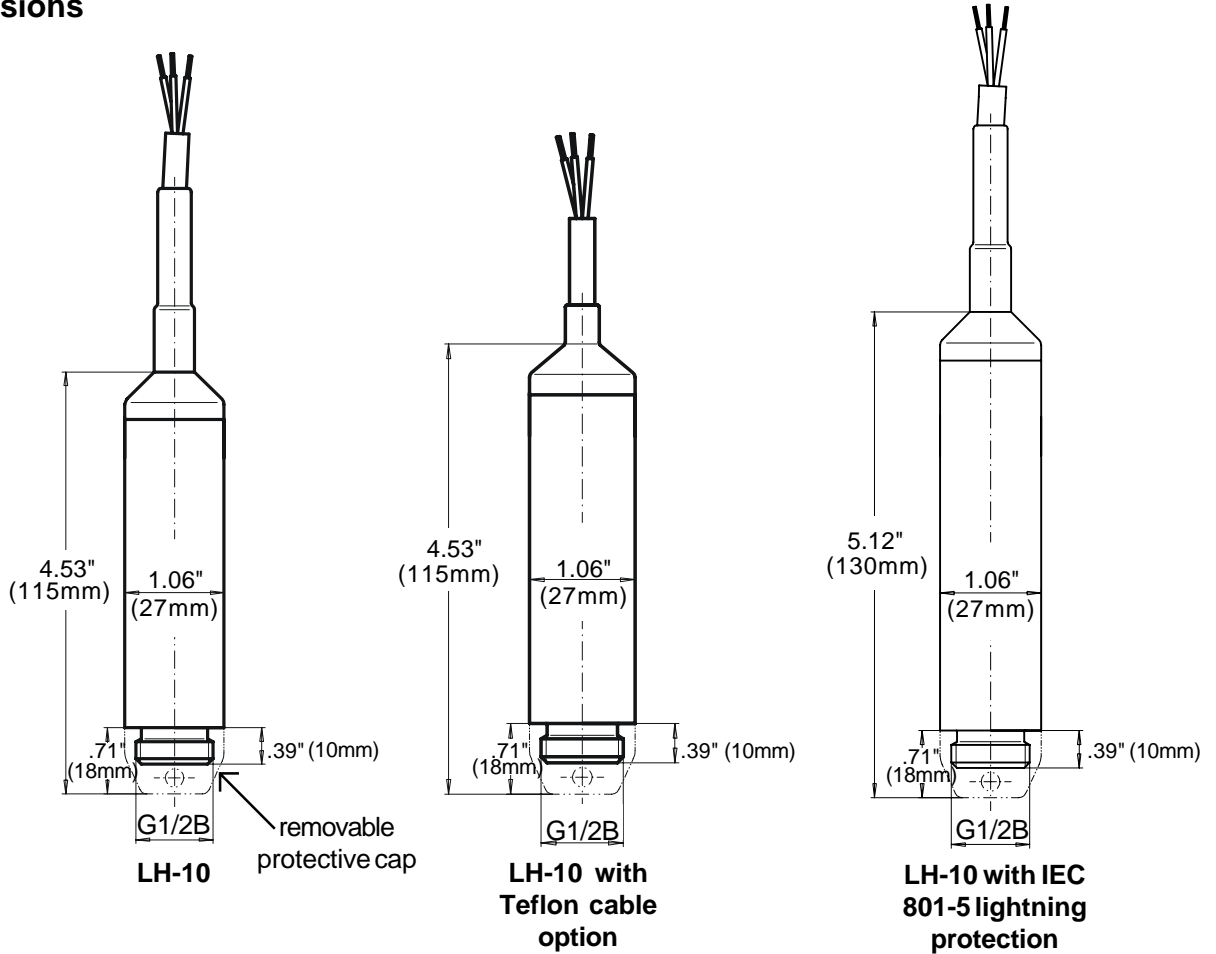
| Specifications | Units | Type LH-10 |
|---|---|--|
| Sensing principle Pressure ranges Pressure reference | PSI | piezoresistive standard ranges as listed {custom ranges available} relative pressure through vent tube in cable |
| Pressure connection Materials: wetted parts: -case -cable -protective cap -shrink hose -internal transmitting liquid | | G1/2B with .43" (11mm) diameter pressure port and removable protective cap 1.4571 (316 ss) stainless steel PUR (polyurethane) {Teflon cable up to 100 PSI} polyamid polyolefin (not included with Teflon cable option) silicone oil |
| Supply voltage U _B Output signals maximum load: -milliamp output signal -voltage output signal Response time (10...90%) | DC Volts milliseconds | 10 - 30 (14 - 30 with 0 - 10 V output signal) 4-20 mA 2-wire {0-20 mA 3-wire} {0-5 V 3-wire} {0-10 V 3-wire} {0.5-2.5V 3-wire for battery operation} {Pt 100 4-wire per DIN IEC 751} R _A [Ohm] ≤ ((U _B [V]-10V) / 0.02 A)-(0.042 ohms per foot of cable) R _A > 100 kOhms ≤ 1 |
| Accuracy (linearity, including hysteresis and repeatability) Repeatability Hysteresis 1 year stability | % of span % of span % of span | ≤0.125% (B.F.S.L.) ≤ 0.05 ≤ 0.1 ≤ 0.2 (under reference conditions) (Calibrated in vertical mounting position with process connection down) |
| Temperature Media Storage Compensated range Temperature error (reference 70°F) on zero point on span | % % | +15°F to +122°F (-10°C to +50°C) {+15°F to +185°F (-10°C to +85°C) with Teflon cable} -22°F to +176°F (-30°C to +80°C) +32°F to +122°F (0°C to +50°C) ≤ 0.2 per 18°F (10°C) change (≤ 0.4 per 18°F (10°C) for ranges ≤ 100 INWC) ≤ 0.2 per 18°F (10°C) change |
| CE conformity | | Interference emission per EN 50 081-1 (March 1993) and EN50 081-2 (March 1994), Interference immunity per EN 50 082-2 (March 1995) |
| Electrical connection Weight: -Head assembly -cable -Additional weight Dimensions Electrical protection Environmental protection | oz oz per foot lb | Vented polyurethane cable, tensile strength 220 lbs {Teflon cable} approximately 6.5 (0.20 Kg) approximately .85 (0.08 kg per meter) Approximately 1.1 (0.5 kg) see drawings protected against reverse polarity, short circuit, and overvoltage {lightning protection to IEC 801-5, 1.5kV} IP 68 (NEMA 6P) submersible to 1000 feet |

Notes: Items in curved brackets { } are available as special order options

¹ for pressure ranges ≥ 100 INWC

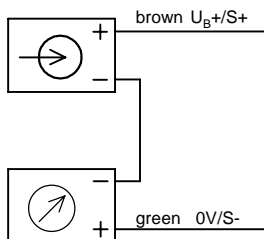
² 0.25% B.F.S.L. for 50 INWC range

Dimensions



Wiring

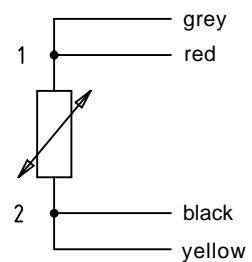
2-wire system



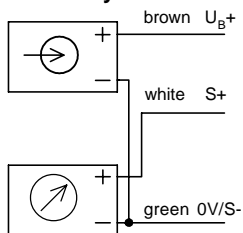
2-wire system

| Wire | Coding | Wire Color |
|----------|-----------------------|------------|
| Supply + | U _B + / S+ | brown |
| Signal - | 0V / S- | green |

Temperature sensor option Pt 100-element, 4-wire system



3-wire system



3-wire system

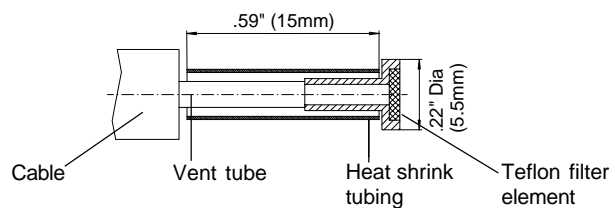
| Wire | Coding | Wire Color |
|----------------------|------------------|------------|
| Supply + | U _B + | brown |
| Supply - Signal - | 0V / S- | green |
| Signal + | S+ | white |

Accessories

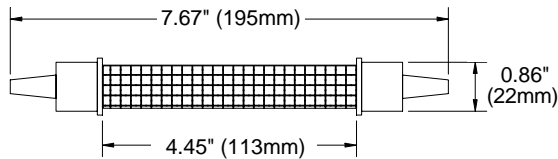
Vent tube filter

Part# 7193131

The optional Teflon vent tube filter protects the vent opening and protects against the entry of dirt and moisture. It is installed on the vent tube using the supplied heat shrink tubing.

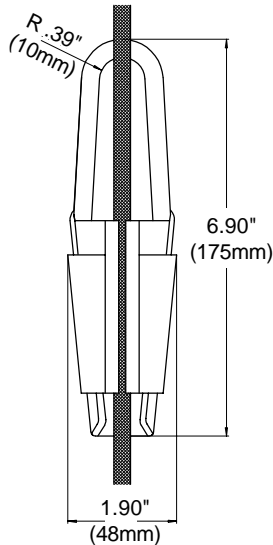


Accessories
(continued)



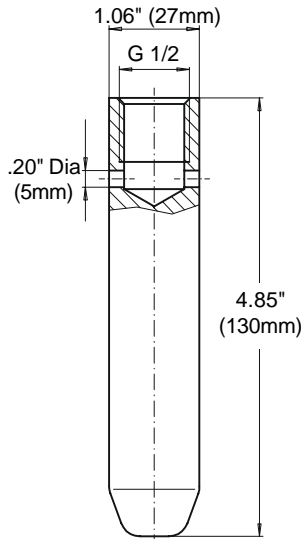
Desiccant drying cartridge part # 9836700

The optional desiccant drying cartridge helps prevent moisture buildup inside the vent tube



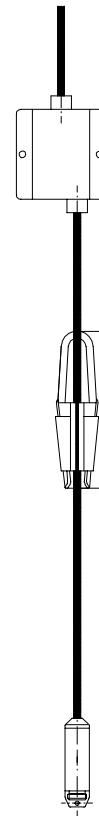
Cable clamp Part# 2074257

The cable clamp secures the cable without bending or kinking that can damage the vent tube or outer jacket.

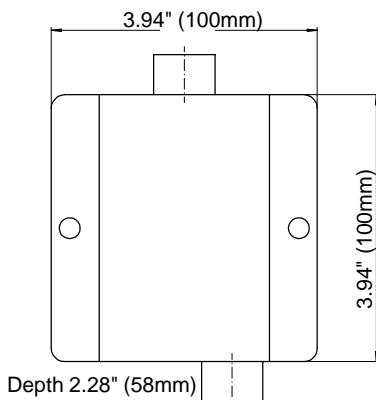


Additional weight Part# 1524399

The additional weight replaces the protective cap and helps to stabilize the transmitter in turbulent conditions. Weight: approximately 1.1 lb, 316ss.

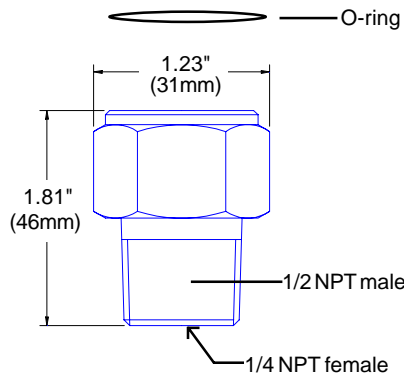


Mounting example



Cable junction box Part# 2074460

The cable junction box is rated NEMA 3S / IP 54 and is suitable for mounting outside tanks or shafts or inside dry control boxes.



NPT adapter Part# 1631322

The 316 ss G1/2 adapter replaces the protective cap and converts the threads to 1/2" NPT male external, 1/4" female internal threads. Includes O-ring.

**THE MEASURE OF
Total Performance™**

Ordering Information:

State computer part number (if available) / type number / size / range / connection size and location / options required.

Specifications given in this price list represent the state of engineering at the time of printing. Modifications may take place and the specified materials may change without prior notice



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