



Submersible Liquid Level Transmitters

Type LS-10 - 100 INWC to 100 PSI

Tronic

- Standard ranges available from stock
- Rated IP 68 for permanent submersion
- 4-20 mA 2-wire output signal
- Vented polyurethane cable withstands 220 pounds of strain
- Fast delivery of custom cable lengths

WIKAI LS-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 $\leq 0.25\%$ 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 300 feet.

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**
0-100 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

(27.7 INWC = 1 PSI)

Notes:

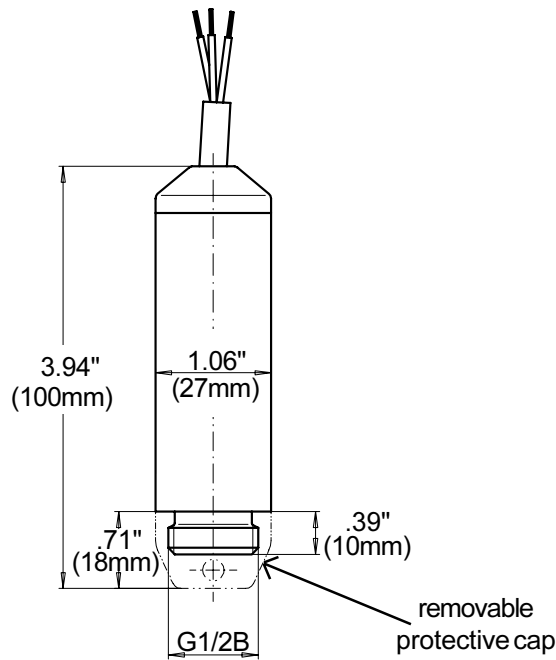
* Maximum pressure, causing no permanent changes in specifications but may lead to zero and span shifts.

** Burst pressure, leading to destruction of transmitter.

APE LS-10
(APE 81.21)

Specifications	Units	Type LS-10
Sensing principle Pressure ranges Pressure reference	PSI	piezoresistive standard ranges as listed relative pressure through vent tube in cable
Pressure connection Materials: wetted parts: -case -cable -protective cap -internal transmitting liquid		G1/2B with .43" (11mm) diameter pressure port and removable protective cap 1.4571 stainless steel (316 ss) PUR (polyurethane) polyamide silicone oil
Supply voltage U _B Output and load limitations: Output signal and maximum load Response time (10...90%)	DC Volts milliseconds	10 - 30 4-20 mA 2-wire system $R_A[\text{Ohm}] \leq ((U_B [\text{V}] - 10\text{V}) / 0.02 \text{ A}) - (0.042 \text{ ohms per foot of cable})$ ≤ 1
Accuracy (linearity, including hysteresis and repeatability) Repeatability Hysteresis 1 year stability	% of span % of span % of span	$\leq 0.25\%$ (B.F.S.L.) (Calibrated in vertical mounting position with process connection down) ≤ 0.05 ≤ 0.1 ≤ 0.2 (under reference conditions)
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) -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 ≤ 0.2 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)
Shock resistance Vibration resistance	g g	1000 per IEC 770 for mechanical shock 50 per IEC 770 for vibration under resonance conditions
Electrical connection Weight -Head assembly -cable Dimensions Electrical protection Environmental protection	 oz oz per foot	Vented polyurethane cable, tensile strength 220 lbs approximately 6 (0.18 Kg) approximately .85 (0.08 kg per meter) see drawing protected against reverse polarity, short circuit, and overvoltage IP 68 (NEMA 6P) submersible to 350 feet

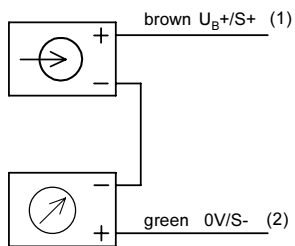
Dimensions



Wiring

2-wire system

flying lead



2-wire system

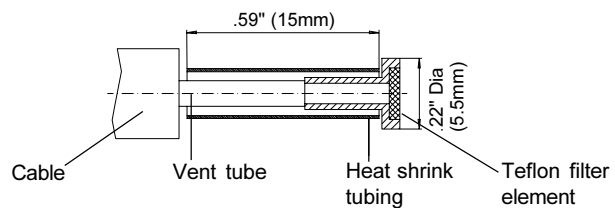
Wire	Coding	Wire Color
Supply +	U _B + / S+	brown
Signal -	0V / S-	green

Accessories

Vent tube filter

Part # 7193131

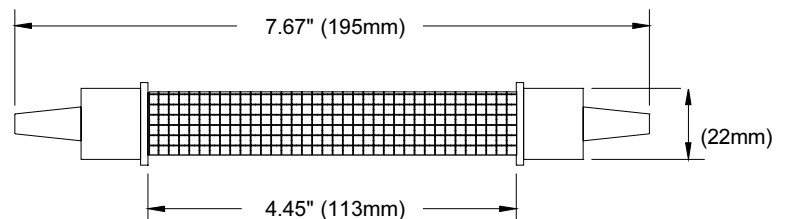
The Teflon vent tube filter protects the vent opening against the entry of dirt and moisture. It is installed on the vent tube using the supplied heat shrink tubing.

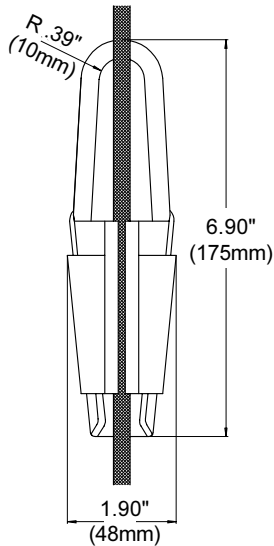


Desiccant drying cartridge

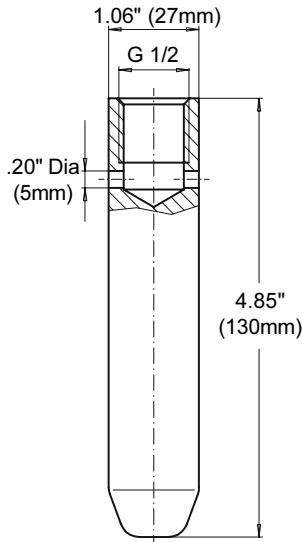
Part # 9836700

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



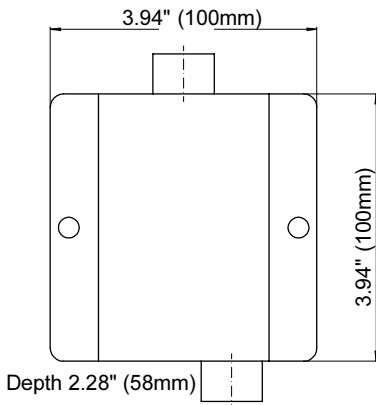
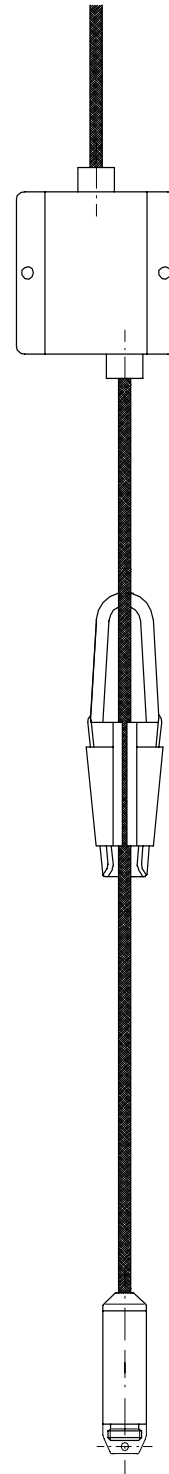


Cable clamp Part# 2074257
 The cable clamp secures the cable without bending or kinking that can damage the vent tube or outer jacket.

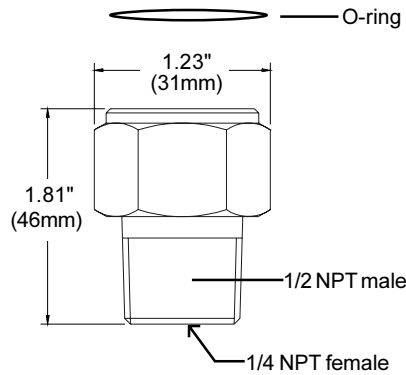


Additional weight Part# 1524399
 The additional weight replaces the protective cap and helps to stabilize the transmitter in turbulent conditions. Weight: approximately 1.1 lb, 316ss.

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.

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Total Performance™

Ordering Information:

State computer part number (if available) / type number / range / output / process connection / electrical connection / other required options.

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



WIKAL Instrument Corporation

1000 Wiegand Boulevard
 Lawrenceville, Georgia 30043-5868

Tel: 770-513-8200 Fax: 770-277-2641

http://www.wika.com e-mail: Tronic@wika.com