



## LL-10 SERIES – POWER LOOP

### SPECIFICATIONS

- **A direct replacement for mechanical float type liquid level devices**
- **Proven ultrasonic technology**
- **Solid state integral electronics**
- **Designed for years of maintenance-free service**

The Solid State Float™ LL-10 series liquid level switch is a direct replacement for mechanical float type liquid level devices. It employs proven ultrasonic technology and solid state integral electronics. The Solid State Float™ provides reliable operation in virtually any liquid and eliminates failures due to finite mechanical life inherent in the mechanical float design. With fully epoxy sealed electronics, combined with ultrasonic sensing technology, Solid State Float™ is designed for years of maintenance-free service.

### FEATURES

#### Standard Features

- High pressure up to 1000 PSIG (6895 Kpa)
- Output: Wet 16±1; Dry 4±1
- No moving parts, easy to install
- Input 5 to 30 VDC
- Digital filter techniques enhance performance

#### Optional Features

- Electropolishing
- Higher temperature up to 212 °F (100 °C)
- Relay output, 0.5 amp SPDT

### APPLICATIONS

- Pump protection
- Storage tanks
- Compressors
- Medical and laboratory equipment
- Hydraulic supply lines
- Oil film detection
- Coolant reservoirs
- Boiler water cutoff
- Sewage systems
- Pipe lines
- Hydraulic and lube reservoirs
- Chillers

**PERFORMANCE SPECIFICATIONS**

Parameter	Typical Value
Repeatability	2 mm or better
Delay	0.5 seconds
Input Voltage	5 to 30 VDC
Input Power	100 mA max standard
Leakage Current	Less than 50 $\mu$ A
Output (standard)	Power Loop Output: Wet 20 $\pm$ 1; Dry 4 $\pm$ 1 mA
Mounting	3/4" NPT

Parameter	Typical Value
Protection	Transient, reverse polarity
Sensor Material	316L Stainless Steel
Temperature	-20 to +176° F (-29 to 80 °C)
Operating Pressure	Up to 1000 PSIG (6895 Kpa)
Cable Length	1, 4, 10, or 20 foot long cables available

**MECHANICAL DIMENSIONS IN INCHES [MM]**

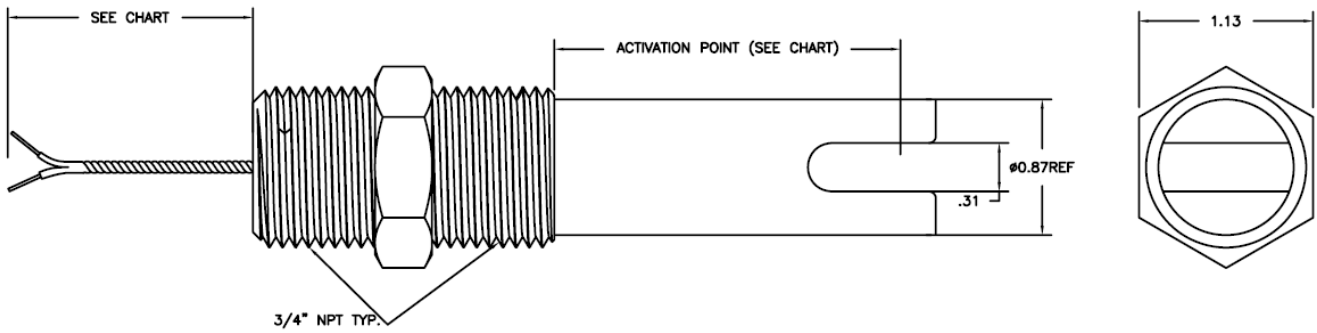


Figure 1: LL-10 series element

**SCHEMATICS**

**Typical Wiring Diagram – Relay Output**

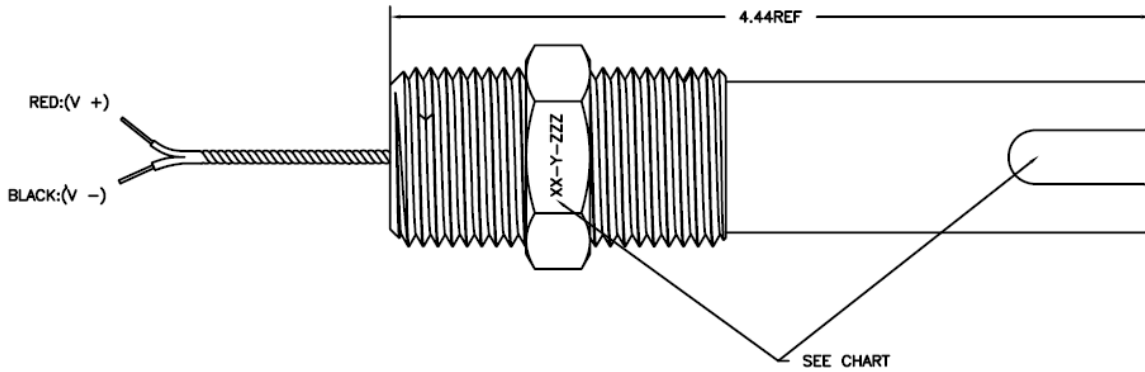
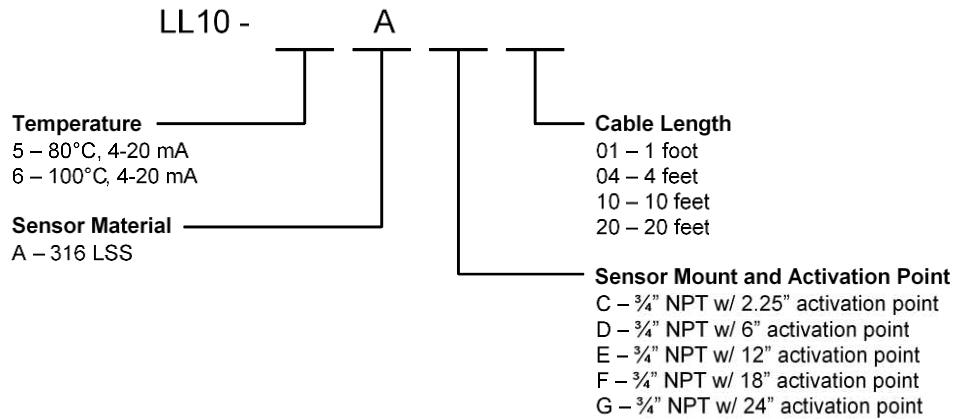


Figure 2: Typical wiring diagram for LL-10 series element

**ORDERING INFORMATION**



**NORTH AMERICA**

Measurement Specialties, Inc.,  
a TE Connectivity Company  
1000 Lucas Way  
Hampton, VA 23666  
Tel: 1-800-745-8008  
Fax: 1-757-766-4297  
Sales: piezo@meas-spec.com

**EUROPE**

MEAS Deutschland GmbH  
a TE Connectivity Company  
Hauert 13  
44227 Dortmund  
Germany  
Sales & Customer Service: +49 (0)231 9740 21  
Technical Support: +44 (0)138 38700 01  
Email: piezoeurope@meas-spec.com

**ASIA**

Measurement Specialties (China), Ltd.,  
a TE Connectivity Company  
No. 26 Langshan Road,  
High-Tech Park (North)  
Nanshan District, Shenzhen 518057  
Tel: +86 755 3330 5068  
Email: sales.china@meas-spec.com

**TE.com/sensorsolutions**

Measurement Specialties, Inc., a TE Connectivity company.

Measurement Specialties, TE Connectivity, TE Connectivity (logo) and EVERY CONNECTION COUNTS are trademarks. All other logos, products and/or company names referred to herein might be trademarks of their respective owners.

The information given herein, including drawings, illustrations and schematics which are intended for illustration purposes only, is believed to be reliable. However, TE Connectivity makes no warranties as to its accuracy or completeness and disclaims any liability in connection with its use. TE Connectivity's obligations shall only be as set forth in TE Connectivity's Standard Terms and Conditions of Sale for this product and in no case will TE Connectivity be liable for any incidental, indirect or consequential damages arising out of the sale, resale, use or misuse of the product. Users of TE Connectivity products should make their own evaluation to determine the suitability of each such product for the specific application.

© 2015 TE Connectivity Ltd. family of companies All Rights Reserved.