

## Well Watcher™ 750 Series

### Submersible Transmitter



#### Convenient To Use

- Easy to install and employ assures correct results
- Non-clogging, removable snubnosed end saves maintenance
- Solid state semiconductor sensor provides accuracy and reliability
- Two wire 4-20mA output

#### Protection For Any Location

- Rugged 316 stainless steel housing with excellent environmental protection
- Removable snubnosed end protects sensing element
- Reverse polarity and surge protected
- Vented to atmosphere through surface end of cable
- Lightning protectors available

#### Available For Many Applications

- Tanks
- Rivers
- Water wells
- Flood Channels
- Ponds
- Lakes
- Landfills

The 750 Series Submersible Level Transmitter is specially designed to provide the convenience of direct submergence in many types of liquids for quick, accurate and reliable level measurement.

The simple design and rugged construction of this solid state instrument provides long lasting service with virtually no maintenance.

The 750 Series Transmitter indicates the level of liquid by continuously measuring hydrostatic pressure via its sensing element, an ion implanted silicon semiconductor chip with integral Wheatstone Bridge circuit. Once the sensor measures the pressure, the data is transmitted by a 4 to 20 mA output signal. This design provides for excellent linearity and repeatability, low hysteresis and long term stability.

The 750 Series is simple to install, too. Simply lower the transmitter into a vessel or well. It's that easy. All the electronics are mounted in a submersible 316 stainless steel housing.

The transmitter is available calibrated for any span needed, from 0 to 3 psi or 0 to 0.2 bar (0 to 7 feet or 0 to 2.1 meters of water) to 0 to 300 psi or 0 to 20 bar (0 to 690 feet or 0 to 211 meters of water).

To complete your liquid level measurement and control system, use the AMETEK Drexelbrook Model CDM Controller with Digital Meter in addition to the 750 Series Submersible Transmitter.



# Continuous Level Measurement

## Well Watcher™ 750 Series

### Specifications

#### Range Limits:

Reference Model Code

#### Output:

4 to 20 mA, 2 wire, current limited to 30 mA dc

#### Power Supply:

12 to 40 Vdc with reverse polarity surge protection; Limit to 28 Vdc for CSA I.S.

#### Loop Resistance:

1400 ohms maximum at 40 volts

#### Temperature Range:

- Ambient Operating: CSA intrinsically safe T3C = 32°F to 140°F (0°C to 60°C)
- Silicone Fill: -25°F to 180°F (-32°C to 82°C)
- Mineral Fill: 10°F to 140°F (-12°C to 60°C)
- Storage: -40°F to 180°F (-40°C to 82°C)

#### Accuracy:

+0.25% full scale, Best Fit Straight Line (BFSL) including linearity, hysteresis & repeatability; +0.50% full scale (6 psi range only)

#### Stability:

+0.5% full scale per six months

#### Zero Offset:

+0.50% full scale set at 77°F (25°C)

#### Full Scale:

+0.50% full scale set at 77°F (25°C)

#### Temperature Effects:

- Compensated: 23°F to 130°F (-5°C to 55°C); +1% Upper Range Limit (URL) for 77°F (25°C) temperature change within compensated range.

#### Power Supply Effect:

+0.005% full scale per Volt

#### Proof Pressure:

200% of Upper Range Limit

#### Burst Pressure:

>2 times Upper Range Limit

#### Media Compatibility:

Any media compatible with materials listed above. If liquid freezes while submerged, damage will occur.

#### Construction:

- Diaphragm: Type 316L stainless steel
- Housing Type: 316 stainless steel
- Nut/Washer Type: 316 stainless steel
- Cable Grommet: Viton
- Housing O Ring: Viton
- Cable Jacket: Polyurethane
- Snub Nose: Nylon 6/6, removeable (1/2 inch NPT)

#### Electrical Connection:

20 AWG Shielded Cable

#### Weight:

1.0 lb. (454 g)

#### Approvals:

Meets CSA requirements for intrinsically safe operation in hazardous locations as designated by Class I, Div 1, Groups A, B, C, & D and Class II, Groups E, F & G. Temperature Code T3C (when used with approved barrier).

### Model Numbering

750 S B-0015 N L S - (XXX.X)

Consult factory for availability of different input/output options

Calibrated ranges can be specified after the model code; the specific range should be between the upper and lower ranges in the category selected.

#### Example:

750-S-B-0015-N-L-S  
(100 Ft. of Cable)

Model 750 snubnose submersible transmitter, 12 to 40 VDC input, 4 to 20 mA output, to measure 15 psi, standard nut, cable electrical connection, 316L stainless steel diaphragm, silicone fill, 100 ft. of cable

#### SENSING PORT

S = Snub nose

#### INPUT/OUTPUT

B = 12 to 40 VDC/4 to 20 mA

#### RANGE

0006 = 0 to 6 psi/0 to 0.4 bar  
(0 to 14 ft./0 to 4.2 m water)

0015 = 0 to 15 psi/0 to 1 bar  
(0 to 35 ft./0 to 10.5 m water)

0030 = 0 to 30 psi/0 to 2 bar  
(0 to 69 ft./0 to 21.1 m water)

0060 = 0 to 60 psi/0 to 4 bar  
(0 to 138 ft./0 to 42.2 m water)

0100 = 0 to 100 psi/0 to 7 bar  
(0 to 230 ft./0 to 70.3 m water)

0150 = 0 to 150 psi/0 to 10 bar  
(0 to 345 ft./0 to 105.4 m water)

0200 = 0 to 200 psi/0 to 14 bar  
(0 to 460 ft./0 to 140.5 m water)

0300 = 0 to 300 psi/0 to 20 bar  
(0 to 690 ft./0 to 211.0 m water)

#### ELECTRICAL CONNECTION

N = Standard nut/cable

R = Cable support with standard nut/cable

C = Conduit adapter

#### DIAPHRAGM

L = 316L stainless steel

H = Hasteloy C

#### FILL

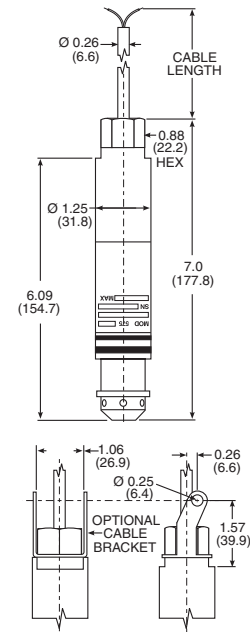
S = Silicone oil

M = Mineral oil

#### CABLE LENGTH

(Specify length in feet)

### Dimensions



NOTE: For maximum reliability and long term performance, AMETEK recommends the use of a lightning protector with this level transmitter. For ordering information consult factory.

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