

Model 675

Shark Cage Submersible Level Transmitter



Description

The Model 675 is specifically designed for slurry and highly viscous applications where clogging of the sensor area is common. The Model 675 uses a 3.5" flush diaphragm to prevent unwanted clogging of the sensing area. This submersible level device is made of 316 SS which offers outstanding environmental protection and is available in depths up to 138 feet of water.

The non-fouling flush diaphragm and cage assembly are designed to eliminate unwanted buildup of debris, fats, oils, greases, and other bio-solids by eliminating any potential gaps on the measurement area. The high integrity seal's heavy construction eliminates the effects of turbulence on the sensor.

The 675 Series Transmitters indicate 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 reliability in remote and inaccessible locations.

The Model 675 is approved 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. when used with an approved barrier.

All Model 675 transmitters are equipped with a sealed cable termination area and moisture absorbing desiccant canister. The purpose is to restrict moisture from entering the transmitter through the cable vent.

Features

- Oversized 3.5" flush diaphragm to prevent clogging
- 0.25% Full Scale Accuracy
- Intrinsically Safe for Class 1 Division 1
- Custom Pressure Ranges & Cable Lengths
- Extremely rugged 316L SS construction
- Two-wire, 4-20 mA standard output
- Reverse polarity and surge protection

Applications

- Lift Stations
- Sewage Levels
- Slurries
- Storm Runoffs
- Pump Control

Model 675

Specifications:

Ranges:

- User customizable ranges between 0-6 psi (13.8 ft of water) and 0-60 psi (138 ft of water)

Output:

- 4 to 20 mA, 2 wire, current limited to 30 mA DC

Power Supply:

- 12 to 40 VDC with reverse polarity surge protection; Limited to 28 VDC for Intrinsic Safety with Approved Power Supply.

Loop Resistance:

1400 ohms maximum at 40 volts

Temperature Range: **

- Ambient Operating: -25° to 180°F (-32° to 82°C)
 - Storage: -40° to 180°F (-40° to 82°C)
- ** If submerged in a liquid that has frozen, damage will result. Limit high temperature to 140°F (60°C) for intrinsically safe operation.

Overrange Effect:

- $\pm 0.15\%$ full scale at 200% of maximum range

Overrange Limit:

- 200% of maximum range

Burst Pressure:

- 3X Upper Range Limit

Accuracy:

- $\pm 0.25\%$ full scale, BFS (including linearity, hysteresis and repeatability)

Zero Offset:

- $\pm 1.00\%$ full scale set at 77°F (25°C)

Span:

- $\pm 0.50\%$ full scale set at 77°F (25°C)

Temperature Effects:

- Compensated: 32° to 122°F (0°C to 50°C);
- Maximum: $\pm 2.5\%$ URL output change for $\pm 25^\circ\text{C}$ temperature change within compensated range when calibrated at 25°C. Consult factory for lower or alternate pressure ranges.

Power Supply Effect:

- $\pm 0.005\%$ full scale per volt

Diaphragm Seal:

- 316L SS construction with 4.75" OD and 3.5" sensing area

Construction:

- Diaphragm: 316L stainless steel
- Housing Type: 316 stainless steel
- Nut/Washer Type: 316 stainless steel
- Cable Grommet: Viton standard. Please contact factory for other options.
- Housing O Ring: Viton standard. Please contact factory for other options.
- Cable Jacket: Polyurethane (Standard). See Model Code.

Media Compatibility:

- Reference materials of construction

Electrical Connection:

- Attached 22 gauge, vented, polyurethane, shielded, cable. Unspliced lengths available up to 5000 ft. (1662 m)

Weight:

- 7 lb. 3 oz (Without cable)

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).

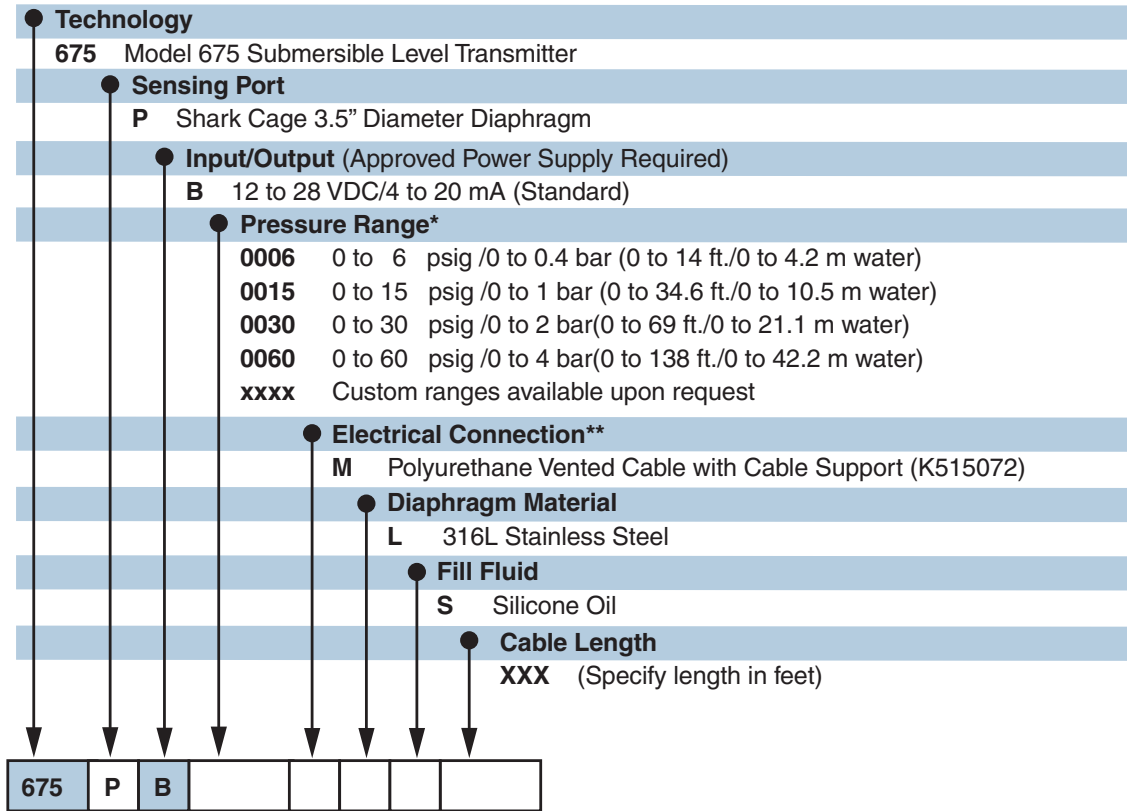


Option and Accessories:

- DMC Meter Controller and Housing
- Stainless Steel Support Cable (K515183)
- LMA912 - DC Lightning and Surge Protector
- LMA918 - 120 VAC Lightning and Surge Protector
- Dessicant Canister (K234436)

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Model Numbering



* Decimal Points for Non-Unit Ranges May Be Used
Decimal Point Requires One Model Code Position, ie 1.08 = 4 Positions

Moisture Absorbing Desiccant Canister

This Ametek submersible transmitter utilizes a vented cable which allows the sensor to compensate for changes in atmospheric pressure. This vent tube can also provide a harmful path for moisture into the electronics, accelerating corrosion and sensor failure. Ametek rectifies this issue by equipping each transmitter with a sealed termination area and moisture absorbing desiccant canister. The canister elements will change from a blue color to pink when it is time to be replaced. The purpose is to restrict moisture from entering the transmitter from the cable vent tube. Spare desiccants are available for ordering. Reference Ametek model number #K234436.



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Dimensions

