

DREXELBROOK®

Model SST

Submersible Level Transmitter

**Model SST
Slim-Line
Transmitter**
silicone potted
for moisture
protection



Description

The Model SST Submersible Level Transmitter provides the same high quality level measurement capability as our other level products, but in a smaller package. The 0.69 inch diameter housing allows the unit to fit into small bore applications. The simple design and rugged construction of this solid state instrument provide long lasting service with virtually no maintenance.

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

The Model SST is easy 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 15 psi or 0 to 1 bar (0 to 34 feet or 0 to 10.5 meters of water) to 0 to 150 psi or 0 to 10 bar (0 to 345 feet or 0 to 105 meters of water).

Features

- 0.69 inch diameter to fit in small bore systems
- Solid state semiconductor sensor for accuracy and reliability
- Rugged 316 stainless steel diaphragm and housing with excellent environmental protection
- Easy to install and use
- Removable, non clogging snubnose end protects sensing elements
- 2 wire 4 to 20 mA output
- Silicone potted internally and at cable end for moisture protection
- Reverse polarity, surge, and lightning protection
- Anti-snag feature for easy probe removal

Applications

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Model SDT

Submersible Level Transmitter

Specifications

Feet of Water*: 0/34, 0/69, 0/138, 0/230, 0/345

Meters of Water*: 0/10.5, 0/21, 0/42, 0/70, 0/105

Bar*: 0/1, 0/2, 0/4, 0/7, 0/10

PSI*: 0/15, 0/30, 0/60, 0/100, 0/150

Output: 4 to 20 mA, 2 wire, current limited to 30 mA DC

Power Supply: 11 to 30 VDC with reverse polarity surge protection

Loop Resistance: 900 ohms maximum

Temperature Range:

Ambient Operating: -13° to 167°F (-15° to 75°C) for liquids. *Media must not freeze!*

Burst Pressure: 150% of full scale

Total Error Band: ±1% full scale (includes null and span set and temperature effects) over compensated temperature range 32° to 122°F (0° to 50°C)

1 Year Stability: <0.25% full scale

Accuracy: ±0.3% full scale, BFSL (including linearity, hysteresis and repeatability)

Power Supply Effect: ±0.005% full scale per volt with reverse polarity and lightning protection (proper grounding required)

Atmospheric Reference (through integrated vent tube): Please vent to clean, dry environment

Construction:

Diaphragm: Type 316L stainless steel

Housing Type: 316 stainless steel

Nut/Washer Type: 316 stainless steel

Cable Grommet: Viton®

Cable Jacket: Polyurethane

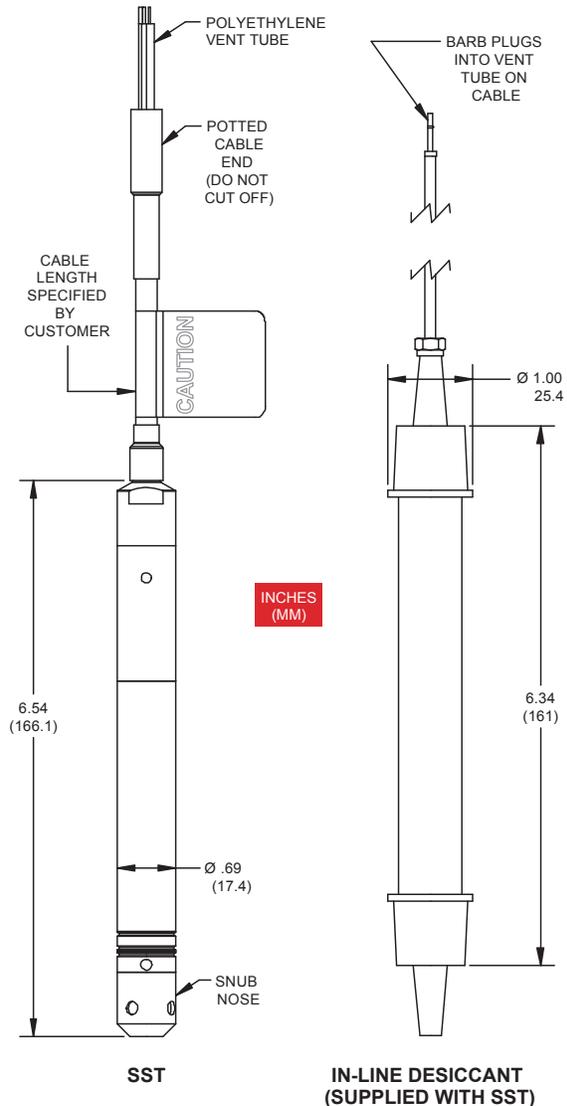
Snub Nose: Delrin, 9/16-18 thread (removable)

Media Compatibility: Reference materials of construction

Electrical Connection: Attached 22 gauge polyurethane shielded cable with breathing vent tube. Unspliced lengths available up to 5000 ft. (1662 m)

Weight: 8 oz. (227 g) max. (transmitter only, does not include cable)

* Please contact the factory for other ranges.



WIRE LEGEND	
COLOR	FUNCTION
RED	V+
BLACK	V-
GREEN/SHIELD	CASE GROUND

Model SDT

Submersible Level Transmitter

Model Numbering

● SST level transmitter			
SST	Slim-line submersible level transmitter		
● Sensing port			
S	9/16-18 thread with Delrin snubnose		
● Input/output			
B	11 to 30 VDC/4 to 20 mA		
● Pressure ranges* (enter as PSI or BAR range)			
	PSI	BAR	Reference Equivalents
	0006	B0.4	0-13.8 ft. water 0-4.2 meters water
	0015	B001	0-34.6 ft. water 0-10.5 meters water
	0030	B002	0-69.2 ft. water 0-21.1 meters water
	0060	B004	0-138 ft. water 0-42.2 meters water
	0100	B007	0-230 ft. water 0-70.3 meters water
	0150	B010	0-345 ft. water 0-105.4 meters water
● Electrical connection**			
P	Potted internally and at cable end		
● Diaphragm material			
L	316L stainless steel (standard)		
● Fill Fluid			
S	Silicon oil (standard)		
● Grommet material			
V	VITON® (standard)		
● Cable length			
Specify cable length in feet as a second line item Cable #K515072 (polyurethane jacket with vent tube)			
SST	S	B	0030
P	L	S	V
			(100 feet)
			K515072 CABLE
			* Please contact the factory for other ranges.
			** Please contact the factory for electrical connection options.

Above Example: 30 psi range SST potted with 100 feet of submersible cable

DISPOSABLE CARTRIDGE

Part number K234436

Desiccant assembly with tubing and hardware
(initial assembly supplied with SST Transmitter)



REPLACEMENT CARTRIDGE ONLY AVAILABLE

Part number K234446

(Requires some assembly of parts from original
equipment desiccant)

Phone: +1 215-674-1234 • Fax: +1 215-674-2731

E-mail: drexelbrook.info@ametek.com

205 Keith Valley Road | Horsham PA 19044 U.S.A.

AMETEK®
DREXELBROOK

www.Drexelbrook.com

Model SDT Submersible Level Transmitter

Options and Accessories

Display Meters, Surge Protectors, Junction Boxes and Desiccants

DISPLAY METERS AND SYSTEMS

Model DDMC Digital Meter/Controller

Dual display meter provides power to the sensor with alarm and 4-20 mA analog output options. Standard panel mount housing or a NEMA 4X weathertight housing for field mounting is available. The weathertight housing also provides internal mounting locations for lightning and surge protectors.



LEVEL MATE™ III Level Measurement System

The complete LEVEL MATE III system includes a level sensor (various models are available), cable and a meter/ controller all packaged in a NEMA 4X enclosure. Everything is factory programmed for easy installation and the LEVEL MATE III has an extended 2-year warranty.



Inside view of the NEMA 4X enclosure showing the desiccant and optional surge protectors. Unit is factory wired so that the user needs to connect power and sensor only.

LIGHTNING AND SECONDARY SURGE PROTECTORS

Lightning protection units are available to help protect systems and components from lightning and secondary surges. These LP units are available in both 30 VDC (LMA912) for 24 VDC supply on excitation/signal lines and analog meter output lines to protect the meter and/or the transmitter as well as 115 VAC (LMA918) and 230 VAC (LMA919) to protect the meter on AC power input lines.

JUNCTION BOXES

Model SBJ100 with Reusable Desiccant

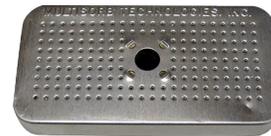
These boxes are used on long cable runs and provide quicker access to atmospheric reference. SBJ100 provides a clean, dry enclosure with an internal, reusable desiccant canister.



Back view of SBJ100 junction box that shows the reusable desiccant canister.

DESICCANTS

An initial desiccant is supplied with the SBJ100 and the LEVEL MATE III enclosure. The desiccant canister is reusable with visible color change when the time comes to replace the desiccant.



Disposable in-line cartridges are also available for use with sensors with a separate vent tube only.

NOTE: the in-line cartridges will not fit in the SBJ100 junction box.

