

Model SDT

Submersible Level Transmitter



Description

The Model SDT Submersible Level Transmitter is specially designed to provide the convenience of direct submergence in many types of liquid for quick, accurate and reliable level measurement. The SDT provides a lower cost, lighter weight option for submersible level applications. The simple design and rugged construction of this solid state instrument provide long lasting service with virtually no maintenance.

The Model SDT Transducer indicates the level of liquid by continuously measuring hydrostatic pressure via its isolated sensing element, an ion implanted silicon semiconductor sensor. Once the sensor measures the pressure, the data is transmitted by a 4 to 20 mA, 0.5 to 4.5 VDC, 1 to 5 VDC, 1 to 6 VDC, or 0 to 5 VDC output

signal. This design provides for excellent linearity and repeatability, low hysteresis and long term stability.

The Model SDT is easy to install; simply lower the transducer into a vessel or well. It's that easy. All the electronics are mounted in a submersible 316 stainless steel housing. A special cable support bracket is also available. This gives extra stability to the transducer when used with longer lengths of cable (up to 2500 feet) or when used in an agitated liquid. A conduit adapter is also available.

The transducer is available calibrated for any span needed, from 0 to 1 psi or 0 to 0.07 bar (0 to 2.31 feet or 0 to 0.7 meters of water) to 0 to 300 psi or 0 to 20 bar (0 to 690 feet or 0 to 211 meters of water)

Features

- Low cost
- Solid state semiconductor sensor for accuracy and reliability
- Lightweight and compact size
- Rugged 316 stainless steel housing with excellent environmental protection
- Advanced digital compensation
- Easy to install and use
- Optional temperature measurement capability
- Vented to the atmosphere through the surface end of the cable
- Reverse polarity and surge protected
- 2 wire, 4 to 20 mA output standard; other outputs available

Applications

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

Model SDT Submersible Level Transmitter

Specifications

Feet of Water: 0 to 2.31, 0 to 14, 0 to 35, 0 to 69, 0 to 138, 0 to 230, 0 to 345, 0 to 460, 0 to 690 feet of water

Meters of Water: 0 to 0.7, 0 to 4.2, 0 to 10.5, 0 to 21.1, 0 to 70.3, 0 to 105.4, 0 to 140.5, and 0 to 211 meters of water

Bar: 0 to 0.07, 0 to 0.4, 0 to 1, 0 to 2, 0 to 4, 0 to 7, 0 to 10, 0 to 14, and 0 to 20

PSI: 0 to 1, 0 to 6, 0 to 15, 0 to 30, 0 to 60, 0 to 100, 0 to 150, 0 to 200, and 0 to 300 psi

Burst Pressure: 3 times full scale

Accuracy: (at 25°C including linearity (BFSL), hysteresis, and repeatability): ±0.2% full scale typical, ±0.3% full scale max; 0 to 1 psi ±1% full scale max; and 0 to 6 psi ±0.5% full scale max

Stability (per year): <0.25% full scale; 0 to 1 psi <1% full scale; and 0 to 6 psi <0.5% full scale

Operating Temperature Range: -25° to 60°C (-13° to 140°F), media must not freeze

Compensated Temperature Range: -25° to 60°C (-13° to 140°F)

Total Error Band: (includes temperature effects, zero, and span set): ±1% full scale; 0 to 1 psi ±2.5% full scale; and 0 to 6 psi ±1.5% full scale

Shock: 30G

Vibration: 10G, 55 to 2000 Hz

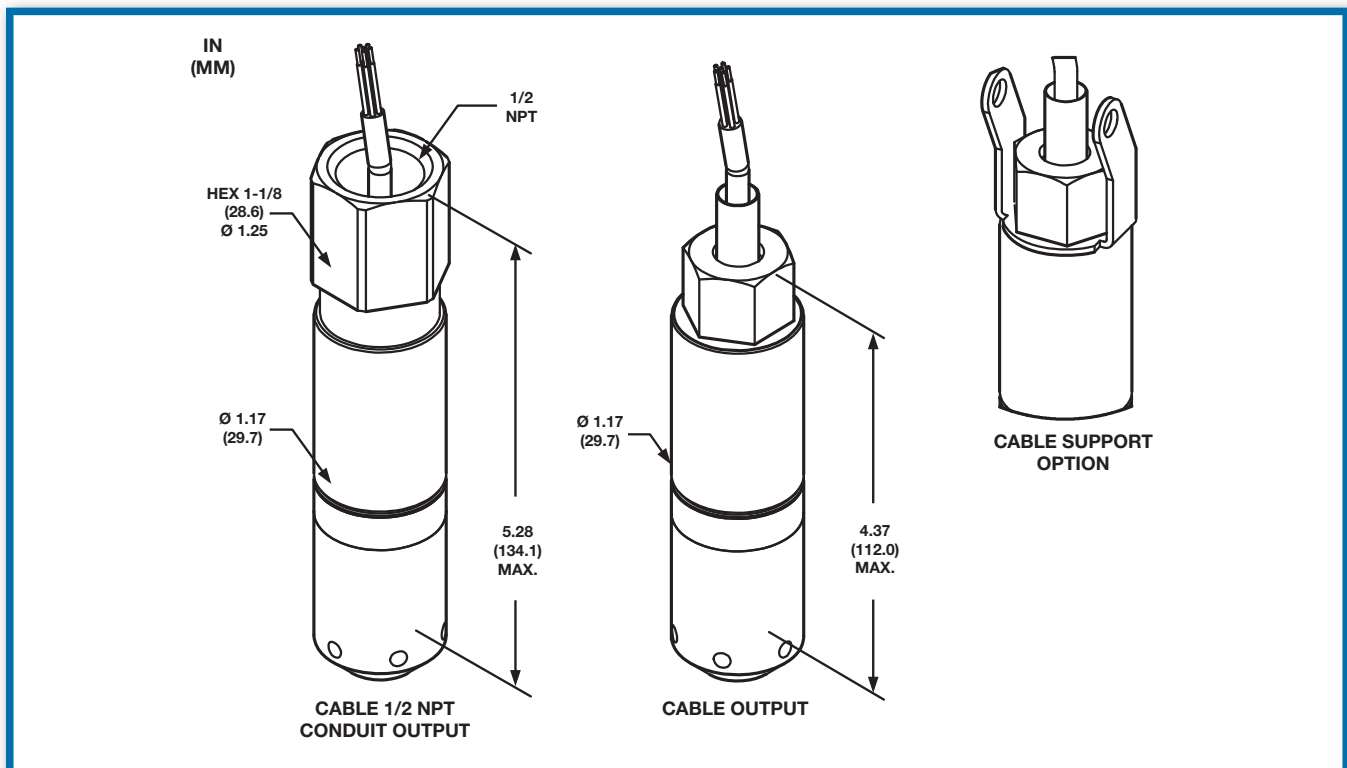
Wetted Material: 316L stainless steel, cable and seal as selected below, Delrin snubnose

Process Connection: 1/4-18 NPT male with mounted Delrin thread protective snubnose end

Cable Seal: VITON® standard; Neoprene optional

Input/Output					
Output*	0.5-4.5 VDC	1-5 VDC	1-6 VDC	0-5 VDC	4-20 mA
Input Supply Voltage	9-30 VDC	9-30 VDC	9-30 VDC	9-30 VDC	11-30 VDC
Null Offset (±1% Span)	0.5 VDC	1.0 VDC	1.0 VDC	0.0 VDC	4 mA
Span (±1% Span)	4.0 VDC	4.0 VDC	5.0 VDC	5.0 VDC	16 mA
Load Limitation	50K Ω min.	50K Ω min.	50K Ω min.	50K Ω min.	900 Ω max.

Dimensions



Cable Jacket: Polyurethane standard; Polyurethane/EMI, Polyolefin and TEFLON® optional

Electrical Connection: 24 AWG, 6 conductor cable (specify length) (cable must be vented to a dry environment)

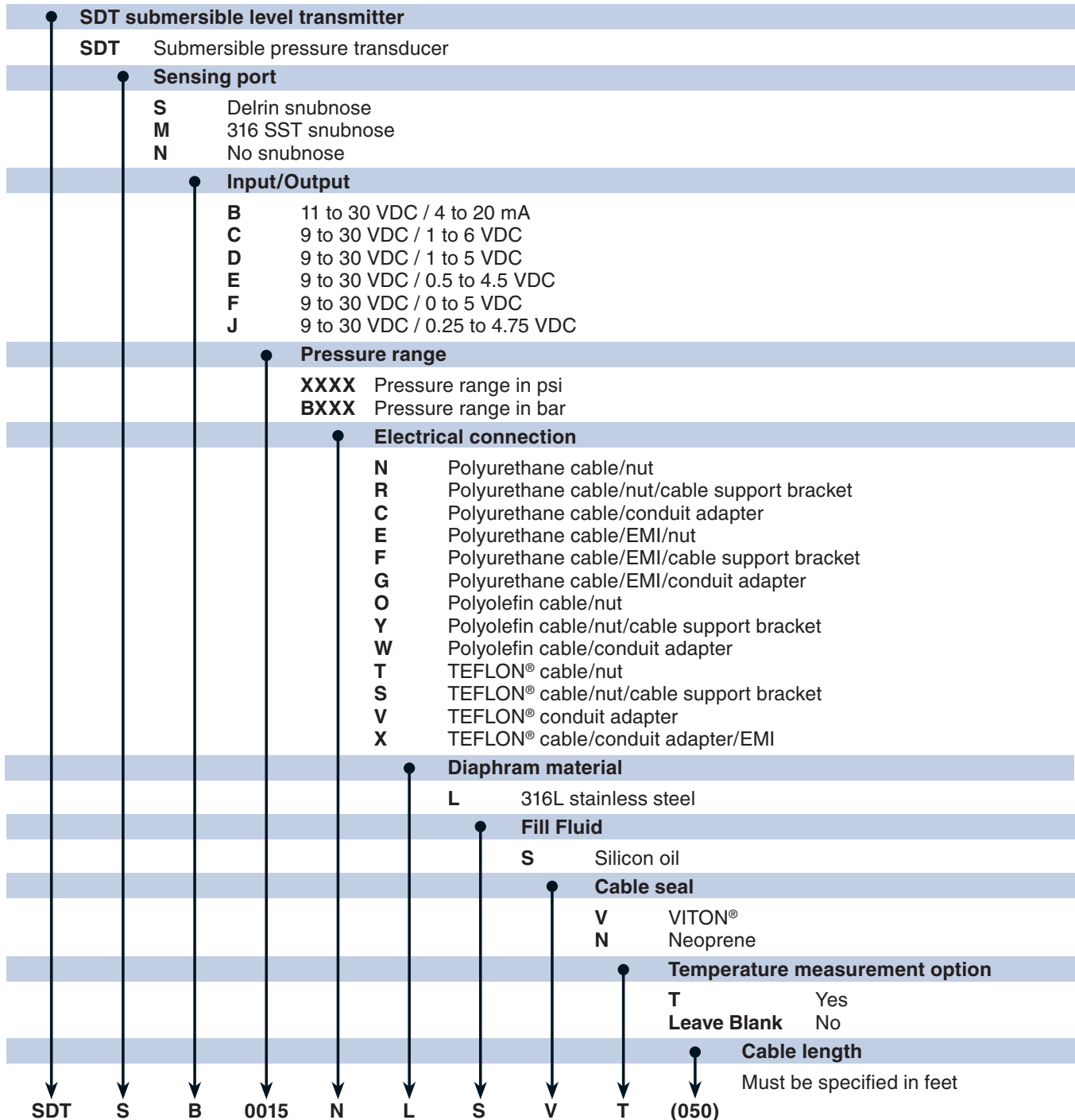
Temperature Measurement: LM335AZ (blue-cathode; brown-anode) select temperature option code "T"

Weight: 8.9 oz. without bracket (252 g)

Removable Snubnose: Delrin, prevents damage to diaphragm. Periodic cleaning may be required

Option: SJB-100 junction box with desiccant; DMC Meter/Controller with housing

Model Numbering:



Model SDT Submersible Level Transmitter



820 Pennsylvania Boulevard • Feasterville, PA 19053 • U.S.A.
Tel: 215-355-6900 • Fax: 215-354-1802 • www.ametekpmt.com

© AMETEK, Inc. All rights reserved • Printed in the U.S.A. • PDF608 (110089) K796460