

Sanitary Differential Level Transmitter (TDL)

Introduction

The Anderson-Negele TDL transmitter combines all the benefits of a completely

Important note:

We have discontinued the TD Level Transmitter (TDL). To ensure smooth transition, the HD Level Sensor that is compatible with the TD Level Transmitter continues to be available.

where pressure and/or vacuum conditions exist.

Complete specifications and ordering information are available on the reverse. For more information please visit our Web Site at www.anderson-negele.com, or contact your local Authorized Anderson-Negele Distributor.

Authorizations



Features

- Electronic sensors eliminate hard-to-install capillaries and solves temperature and position compensation issues
- Dual transmitter output eliminates one transmitter and its associated process penetration
- Smaller diaphragm size simplifies spud and sensor installation
- Meets intrinsic safety requirements, HART protocol optional
- Operates on 24 Vdc power
- Multifunction integral LCD display is standard
- Quick Disconnect Receptacles with optional Field Wireable Connectors



Specifications**DIFFERENTIAL (LEVEL) OUTPUT**

Low Range:	0-50" w.c. min span 0-415" w.c. max span
Medium Range:	0-100" w.c. min span 0-830" w.c. max span
High Range:	0-170" w.c. min span 0-1385" w.c. max span

SECONDARY OUTPUT (PRESSURE AND/OR VACUUM)

Low Range (HD1):	
Min Span:	50" w.c.
Max Span:	775" w.c.
Min Low End:	-360" w.c. (=26.48" Hg)
Max Low End:	0" (zero-inches) w.c.

Medium Range (HD2):

Min Span:	100" w.c.
Max Span:	1,190" w.c.
Min Low End:	-360" w.c. (=26.48" Hg)
Max Low End:	0" w.c.

High Range (HD3):

Min Span:	170" w.c.
Max Span:	1,745" w.c.
Min Low End:	-360" w.c. (=26.48" Hg)
Max Low End:	0" w.c.

PERFORMANCE SPECIFICATIONS

Calibrated Accuracy:	± 0.25% of URL (1" w.c. for low range, 2" w.c. for medium range; 3.5" for high range)
Repeatability:	± 0.08% of URL
Calibration Stability:	Within ±0.2% of URL for one (1) year minimum
Resolution:	Less than 0.1% of URL
Hysteresis:	± 0.07% of URL
Linearity:	± 0.1% of URL (Best Fit Straight Line)
Over-Range Capacity:	60 psig - low/med range 100 - psig high range

TEMPERATURE SPECIFICATIONS

Process Temp. Limits:	0°- 300°F (-18°-149°C)
Ambient Temp. Limits (sensor only):	15°- 150°F (-9°C-65°C)
Compensated Temp. Range (sensor only):	(Process) 0°- 270°F (-18°C-132°C) (Ambient) 15°- 150°F (-9°C-65°C)
Ambient Temp. Limits (trans. enclosure):	15° to 120°F (-9°C-48°C)
Temperature Stability:	±0.2% of Upper Range Limit (URL) per 10°F (5.5°C)

ELECTRICAL

Signal Output:	4-20 mA DC for level output; 4-20 mA DC for pressure/vacuum/total output
Transmitter Enclosure Power:	External Source, 18-30 VDC, 92mA (spec where power supply utilized for Transmitter only)
Loop Power:	External Source, 12-30 VDC, 25mA (req'd for each loop) (spec where power supply utilized for Output Loops only)
Common Power Supply:	18-30 VDC, 150mA (spec where power supply utilized for both Loops and Transmitter)
Cable Recommended:	2 conductor, stranded, 18-24 AWG, shielded with ground. 0.17 - 0.26" Cable Sheath OD for use with field wiring connector. Anderson molded cord set recommended for best EMI and waterprotection.
Receptacle:	5-pin M12 Quick Disconnect Receptacle

MATERIAL AND CONSTRUCTION

Transmitter Housing:	304 Stainless Steel
Dimensions:	7.87" W x 9.84" H x 5.91" D
Integral LCD:	Liquid Crystal, 0.625" high digit
Window Material:	Polycarbonate
Sensor Material:	304 and 316 SS finished to maximum Ra = 32 microinches
Wetted Parts:	316L SS, electropolished to maximum Ra = 15 microinches
Wetted Parts-Special:	Hastelloy "C" diaphragm optional

AGENCY APPROVALS

Hazardous Locations:	Intrinsically safe for use in Class1, Div. 1, Groups A-D (UL Listed)
Standards:	3-A compliant; Third party verified Designed and manufactured to sound engineering practices in accordance with Article 3.3 of the PED 97/23/EC CSA B51-03

Order Information

TRANSMITTER



Note:

The TD Level Transmitter TDL is no longer available.

The HD Level Sensor that is compatible with the TD Level Transmitter is still available in the following configurations:

SENSOR



- UPPER RANGE LIMIT (URL)**
 - 1 Low Range - 15 psi (415" w.c.) max.
 - 2 Medium Range - 30 psi (830" w.c.) max.
 - 3 High Range - 50 psi (1385" w.c.) max.

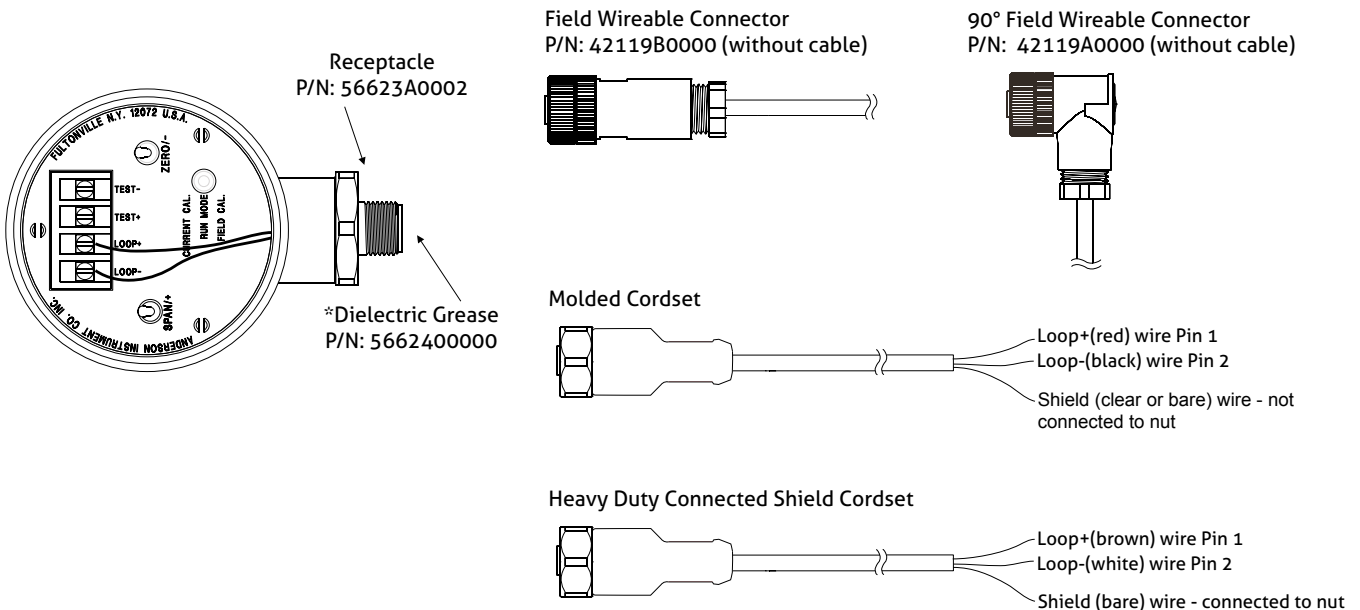
Note: Top and bottom sensors must be specified same URL.
- SENSOR LOCATION/TYPE**
 - 1 Bottom (Total Pressure)
 - 2 Top (Pressure and or Vacuum)
- FITTING**
 - 089 Anderson Flush Mount Long (71060-A3, A5, A7, A9)
 - 088 Anderson Flush Mount Short (71060-A4, A6, A8)
 - 004 1 1/2" Tri-Clamp®
 - 005 2" Tri-Clamp®
 - 007 3" Tri-Clamp®
 - 141 Rosemount / Foxboro Sanitary Spud - Short
 - 142 Rosemount / Foxboro Sanitary Spud - Long
 - 150 3" ANSI 150 Flange (4-hole) - Flush ¹
 - 151 3" ANSI 150 Flange (4-hole) - 2" extension ¹
 - 152 3" ANSI 150 Flange (4-hole) - 4" extension ¹
 - 153 3" ANSI 150 Flange (4-hole) - 6" extension ¹
- DIAPHRAGM**
 - 1 SS 316L Electropolished (Std.)
 - 2 Hastelloy "C" (Optional)

- SENSOR WIRING**
 - 02 Quick Disconnect Receptacle (QDR) w/10ft Standard Molded Cordset
 - R0 QDR & 90° FWC w/No Cable
 - 00 QDR w/No Cable, no FWC
 - 05 QDR w/25 ft Standard Molded Cordset
 - 10 QDR w/50 ft Standard Molded Cordset
 - 20 QDR w/100 ft Standard Molded Cordset
 - 99 1/2" NPT No QDR, no FWC and no Cable (No sensor warranty for water damage)

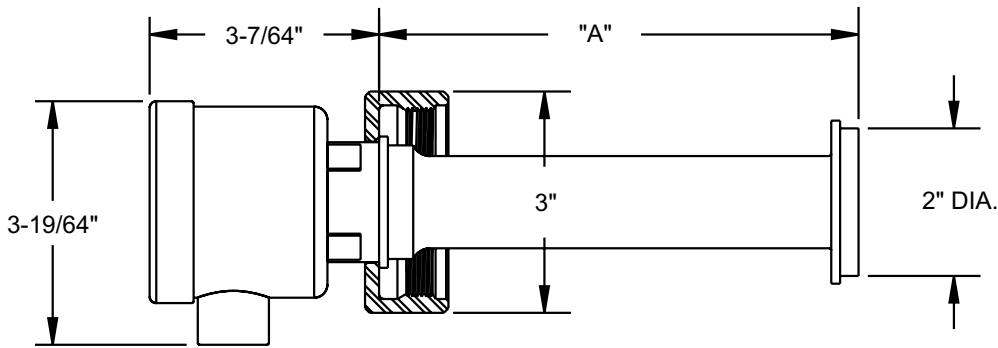
- MOUNTING**
 - 0 Horizontal
 - 1 Vertical (diaphragm up)
 - 2 Other (specify angle from horizontal)
 - 3 Inverted (diaphragm down)

¹ Not 3-A compliant

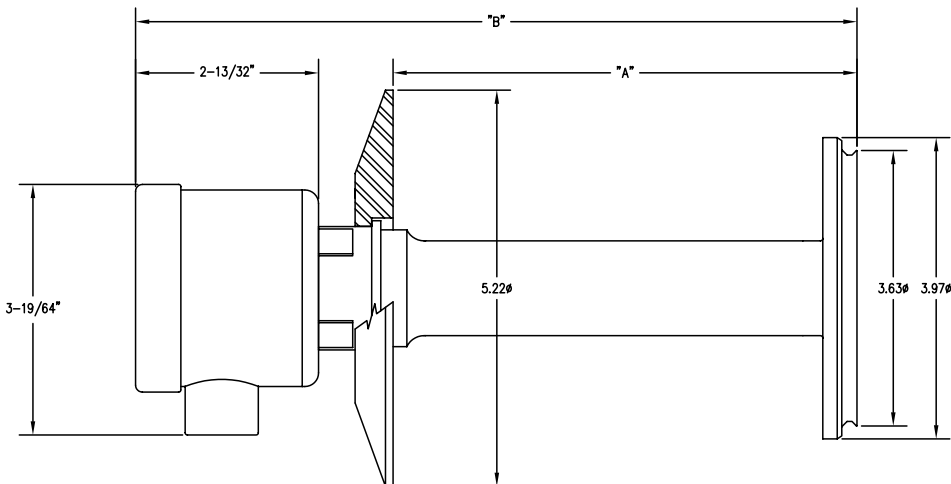
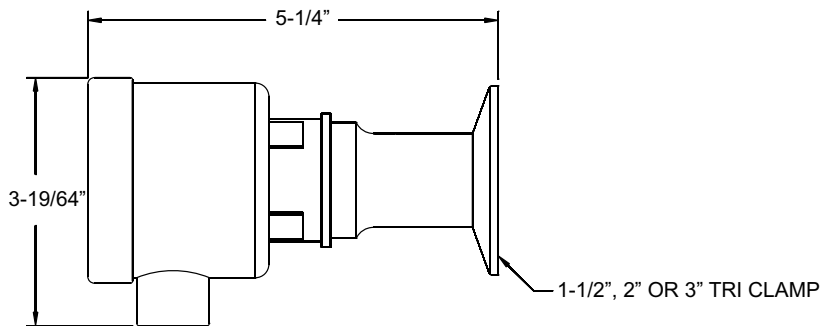
0.17-0.26" Cable Sheath Diameter



Sensor Fittings and Dimensions



ANDERSON SHELL TYPE	"A"
NON INSULATED	2-3/16
INSULATED	6-1/2



FITTING	"A" DIM.	"B" DIM.
ROSEMOUNT SHORT	2.11"	5-1/2"
ROSEMOUNT LONG	6.11"	9-1/2"