



FLOW  
LEVEL  
PRESSURE  
ANALYTICAL  
TEMPERATURE  
INSTRUMENTATION  
PASTEURIZATION CONTROLS

## Sanitary Differential Level Transmitter (TDL)

*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*

The Anderson TDL transmitter combines all the benefits of a completely electronic DP level transmitter with features that improve performance and application breadth. By incorporating our proven SL Driftless Level transmitters as primary inputs, installation, calibration, and long-term stability are all greatly enhanced versus competitive solutions. Furthermore, we designed the new transmitter to operate on 24 Volt DC power, meet intrinsic safety requirements for hazardous locations, and provided a HART protocol option.

With its NEMA 4X Stainless Steel enclosure and integral LCD Display, the transmitter can be mounted anywhere it's most convenient using standard electronic cabling for sensor and output wiring. Dual outputs are standard, with DP (level) as the primary output, with the secondary selectable for "top" (pressure and/or vacuum) or bottom (total tank pressure). In most applications this can save up to \$1800 by eliminating a secondary transmitter and process connection.

Finally, we've added additional sensor fittings for simple

retrofitting to sanitary tank spuds and ANSI flanges. The new TDL is now ready for virtually any level application 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.andinst.com](http://www.andinst.com), or contact your local Authorized Anderson Distributor.



# Sanitary Differential Level Transmitter 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:  $\pm 0.25\%$  of URL  
(1" w.c. for low range,  
2" w.c. for medium range;  
3.5" for high range)  
Repeatability:  $\pm 0.08\%$  of URL  
Stability:  $\pm 0.2\%$  of URL per 10°F (-12°C)  
Resolution: Less than 0.1% of URL  
Hysteresis:  $\pm 0.07\%$  of URL  
Linearity:  $\pm 0.1\%$  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 Shock (system): -1" to +4" w.c.  
per 100°F (38°C)  
instantaneous change.  
Within spec in five min.

## 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.  
Receptacle: Turck minifast (R) 3-pin,  
NEMA 4x/IP65 connected or  
disconnected.

## MATERIAL AND CONSTRUCTION

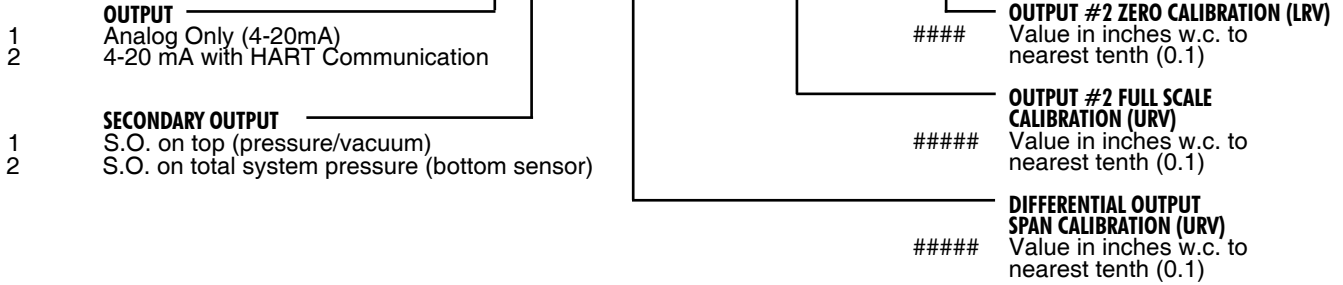
Ratings: NEMA 4X, IP65  
Transmitter Housing: 304 Stainless Steel  
Dimensions: 7.87" W x 9.84" H x 5.91" D  
Integral LCD: Liquid Crystal, 0.625" high digit  
Window Material: Polycarbonate  
Sensor Material: 304 and 316 SS finished to  
maximum  $R_a = 32$  microinches  
Wetted Parts: 316L SS, electropolished to  
maximum  $R_a = 15$  microinches  
Wetted Parts-Special: Hastelloy "C" diaphragm  
optional

## AGENCY APPROVALS

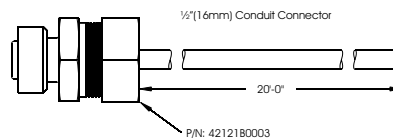
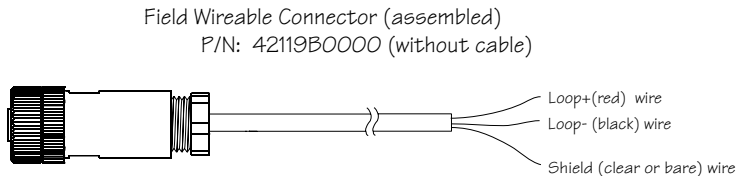
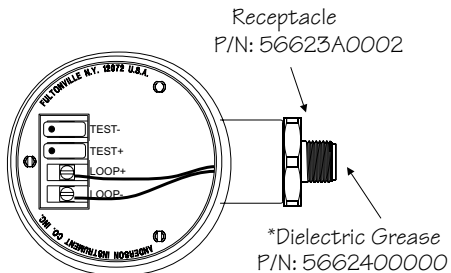
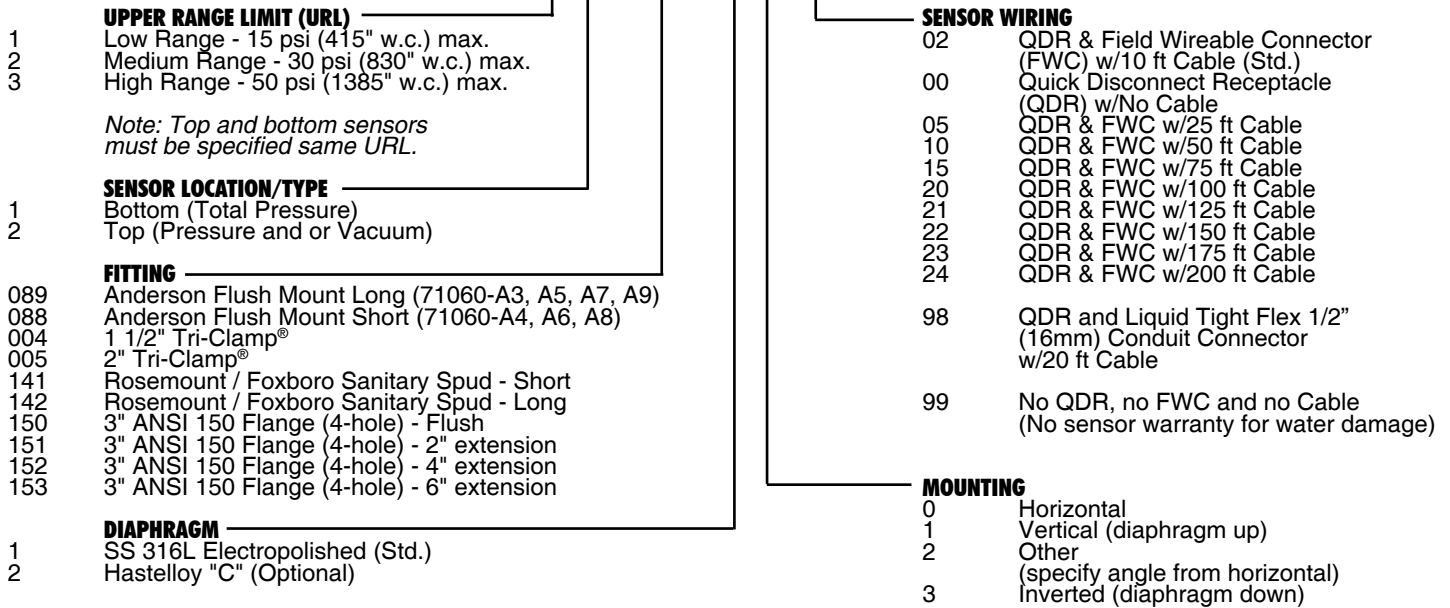
Hazardous Locations: Intrinsically safe for use in  
Class 1, Div. 1, Groups A-D  
(UL Listed)  
Electromagnetic  
Compatibility: CE Compliant (accuracy degrades  
up to 1.1% due to line conducted  
disturbance by RF Field in frequency  
range 0.8 to 1.8 MHz).  
Standards: 3-A compliant; Third party verified in  
accordance with standard 74-00  
Designed and manufactured to sound  
engineering practices in accordance  
with Article 3.3 of the PED 97/23/EC

# HOW TO ORDER

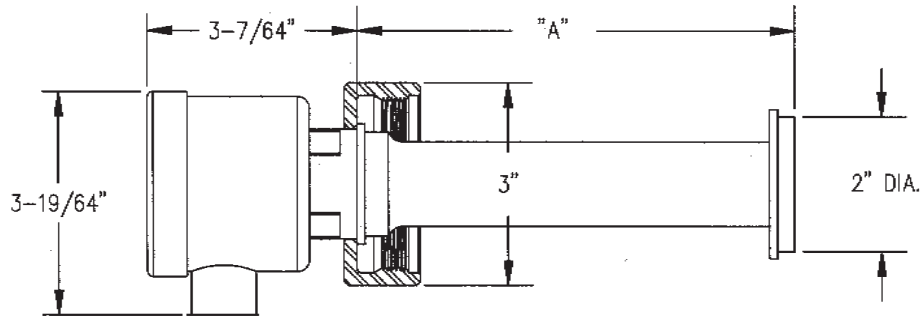
## TRANSMITTER



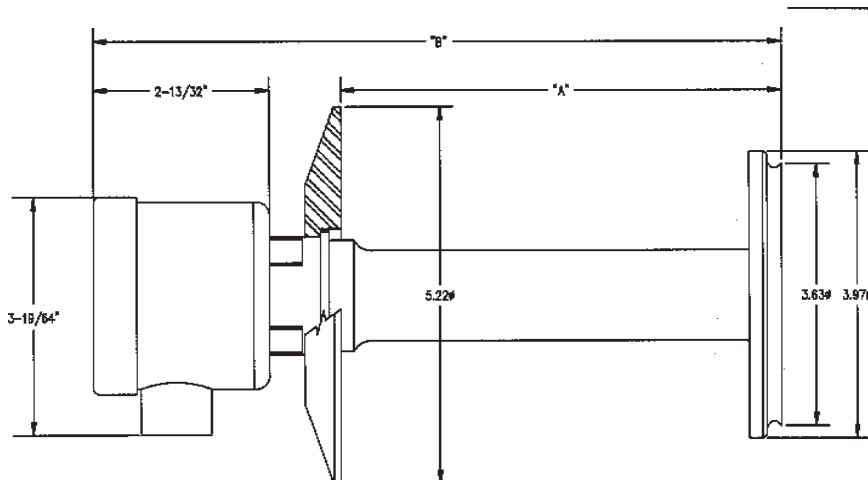
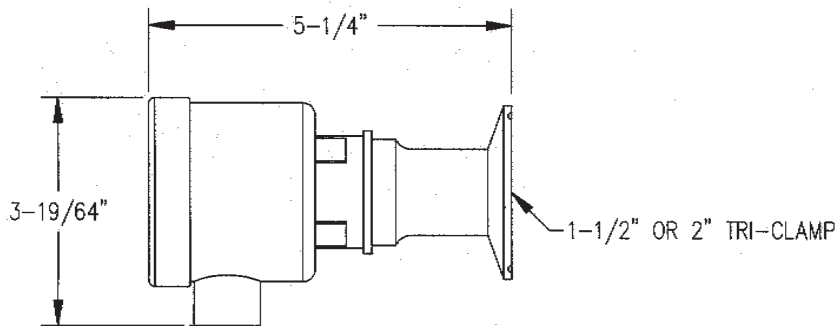
## SENSOR



# 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"

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