STELLAR TECHNOLOGY

ISO 9001/AS9100 Certified

YOUR ENGINEERED SOLUTION SOURCE SM

FT31XX

CLEAN-IN-PLACE PRESSURE TRANSDUCERS / PRESSURE TRANSMITTERS

DESCRIPTION

The Series FT31XX clean-in-place (CIP) pressure transmitters are designed specifically to meet the rigorous demands of those wet hostile environments of industrial process applications requiring a flush diaphragm and Tri-Clover flange clamps.

These pressure transmitters incorporate one-piece, non-welded diaphragms. In addition, there is no oil fill to contaminate the process material.
Users can select from analog outputs of 4-20 mA, numerous voltage outputs, as well as digital outputs ranging from RS232 and RS485 to CANbus. The FT31XX offers isolated voltage output as standard for voltage output units. All internal electronics are fully potted for shock and vibration resistance and thermal stability. Designed of all welded stainless steel, the Series FT31XX pressure ranges extend from 50 psig to 600 psig.

A comprehensive selection of options includes electrical terminations, temperature compensation ranges, media materials, zero and span pots, secondary containment, and intrinsically safe ratings. Each unit is shipped with a standard 15 point calibration record traceable to NIST.

A US Manufacturer of: Pressure, Temperature, Load/ Force/Torque, and Displacement Sensors.

STANDARD FEATURES

- One-piece Flush Diaphragm Flanges for 1.5 in. and 2 in. Tri-Clover Clamps
- All Stainless Steel Construction
- No Oil Fill
- High Level Outputs (Analog & Digital)
- Accuracy to 0.25% FSO
- 1/2 NPTM Conduit/Cable Electrical Termination
- Immune to Orientation Sensitivity
- Isolated Voltage Output (For Voltage Output Units)
- Sealed Gage Pressure Ranges to 600 psig
- Low Sensitivity to Shock and Vibration
- 15 Point Calibration Record Traceable to NIST

OPTIONAL FEATURES

- Wetted Material (Inconel, Hastelloy)
- Secondary Containment
- Instrinsically Safe 4-20 mA Available
- Customer Specified Electrical Terminations
- Zero and Span Pots
- Extended Temperature Compensation Ranges
- Special Calibrations
- Material Traceability
- Additional Shock and Vibration Protection

PERFORMANCE

STATIC ACCURACY
± 0.25% FSO by BFSL

RESOLUTION
Analog: Infinite.
Digital: .025% FSO.

THERMAL ERROR
< ± 0.020% FS/°F (typical).

ZERO BALANCE
± 1% FSO at 70°F.

SPAN
± 1% FSO at 70°F.

FREQUENCY RESPONSE
Consult Factory.

MECHANICAL CHARACTERISTICS

STANDARD RANGES
0 - 50, 75, 100, 200, 500, 600 PSIG.

PROOF PRESSURE
1.5 X range.

BURST PRESSURE
2.0 X range.

OPERATING MEDIA
Fluids and gases compatible with 17-4 stainless steel (standard).
Inconel, Hastelloy, available as options.

WETTED PARTS
17-4 stainless steel (standard).
Inconel, Hastelloy, available as options
(Ra max.= 25 microinches, 0.6 microns)

ENCLOSURE
Body of stainless steel.

PRESSURE FITTING
1.5", 2" Tri-Clover Flange with integral one-piece flush diaphragm (No welds on the diaphragm)

WEIGHT
Approximately 14 oz.

ENVIRONMENTAL CHARACTERISTICS

COMPENSATED TEMPERATURE RANGE
0°F to +185°F. Options available.

OPERATING TEMPERATURE RANGE
-65°F to +250°F(Process Temperature @ sensor).
-40°F to +185°F (Ambient Temperature).

ELECTRICAL CHARACTERISTICS

ANALOG OUTPUTS

EXCITATION
4-20mA Current Loop:
9-36 Vdc for 2-wire.
9-36 Vdc for 3-wire.
Isolated Voltage Output (0-5 Vdc, 0-10 Vdc):
14-32 Vdc (standard).
8-18 Vdc (No charge option).
Non-Isolated Voltage Output:
8-40 Vdc for 1-5 Vdc, 3-wire (standard).
8-40 Vdc for 1-6 Vdc, 3-wire (No charge option).
8-40 Vdc for 0-5 Vdc, 4-wire (No charge option).
Additional outputs and related excitations available.

DIGITAL OUTPUTS

EXCITATION
RS-232, RS-485
8-30 Vdc.
CANbus
4-18 Vdc (standard).
14-32 Vdc (optional).

PROGRAMMING
PC.

DUAL OUTPUTS (ANALOG & DIGITAL)

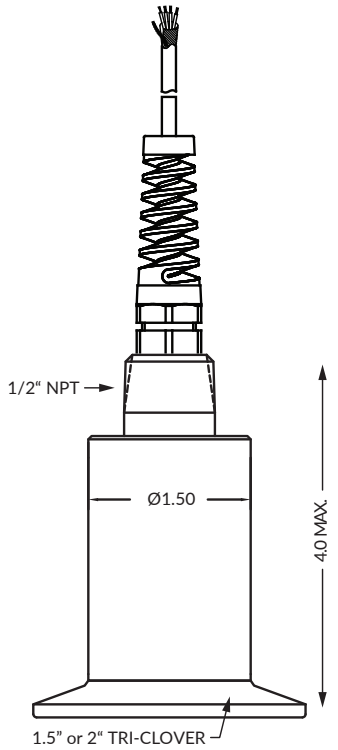
EXCITATION
Isolated Voltage plus Digital: 14-32 Vdc.
Non-Isolated Voltage plus Digital: 8-30 Vdc.

COMMON

INSULATION RESISTANCE
> 100 megohms at 50 Vdc at 70°F.

ELECTRICAL TERMINATION
1/2 -14 NPT Male conduit exit with 3 ft. of 4-conductorTeflon cable with shield and drain wire.
Optional electrical terminations available.

ELECTRICAL PROTECTION
- EMI Protected. (Optional for Isolated Voltage).
- Surge Protection to 500 Vdc. (Optional for Isolated Voltage).
- Reverse polarity protected.
- Short circuit protected.



MODEL IDENTIFICATION

F T 3 1 X X

Series

ANALOG OUTPUT
0 Isolated voltage
1 None
2 Non-Isolated voltage
5 4-20 mA 2-wire Loop (not available with digital output)
6 4-20 mA 3-wire

DIGITAL OUTPUT
0 None
1 RS-485
2 RS-232
4 CANbus

CE

MODIFICATIONS AND WARRANTY
MODIFICATIONS: We realize transducer applications vary greatly and as such our designs are flexible. Choice of pressure port, electrical termination, material compatibility and performance characteristics are a few of the many options available. Specifications on this datasheet represent the standard configuration only. Product and company names listed are trademarks of their respective companies. Specifications subject to change without notice.
WARRANTY: Stellar Technology warrants that its product shall be free from defective workmanship and/or material for a twelve month period from the date of shipment, provided that Stellar Technology's obligation hereunder shall be limited to correcting any defective material FOB our factory. No allowance will be made for any expenses incurred for correcting any defective workmanship and/or material without written consent by Stellar Technology. This warranty is in lieu of all other warranties expressed or implied.

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Due to the nature of technology, changes are inevitable. For latest technical specifications, see our website.

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