

Series IT30XX

Intelligent Pressure Transducers



Description

The IT30XX is a family of digital, high-speed units providing large buffer capacities. These units can be utilized with many communication languages along with their ever-changing protocols. An on-board, real-time clock provides programmable monitoring along with low-power sleep states for battery operation. The units can also be accessed via PC for additional remote data collection.

The digital “state-of-the-art” electronics and communications are combined with rugged, reliable strain-gage technology to provide a highly accurate, well-built, and reliable sensor. Other features optionally provided include multiple ranges and temperature outputs.

This product’s flexibility and versatility, combined with years of proven field operation, will provide an “Application-Solution” for your most demanding specifications.

The brief specifications listed on the back are but a few of the more important parameters of these units. Contact STI to discuss your particular application.

Standard Features

- Ranges up to 30,000 PSI
- High accuracy 0.1% FSO
- Fast sampling (100Ks/s)
- 130K+ readings buffer
- Multiple event sleep mode
- Real-time clock
- RS-232 interface
- SCPI command syntax
- 80% shunt output
- Certified with NIST traceable standards
- -40° to 85°C thermal compensation
- All stainless-steel construction
- Small Size

Optional Features

- RS-485 Interface
- CAN/ISO 11898
- Customer Specified Connector
- Alternate Materials of Construction
- PC Interface Kits
- Battery Operation

Your Application-Solution SourceSM

IT30XX

Series IT30XX Specifications

Baseline Configuration Specs Represented.
Modifications Encouraged - See Below
Custom Designs Available

Performance

Static Accuracy

0.1% FSO (combined effects of non-linearity, hysteresis, non-repeatability and thermal shift).

Resolution

.025% FSO.

Conversion Rate

100 KHz maximum.

Output Rate Utilizing:

RS-232 1.5 to 2.5 minutes.
RS-485 20-30 seconds.
CANBUS 3-4 seconds.

Mechanical Characteristics

Standard Ranges

0 - 5, 10, 25, 30, 50, 75, 100, 200, 500, 750, 1000, 1500, 2000, 3000, 5000, 7500, 10000, 15000, 20000, 25000 and 30000 PSIA / PSIG / PSID.

Proof Pressure

1.5 times FSO range minimum.
1000 PSI for differential units.

Burst Pressure

2.0 times FSO range minimum.

Operating Media

Fluids and gases compatible with stainless steel. Inconel and other materials optional.

Enclosure

Body and pressure cavity of stainless steel, hermetically sealed.

Pressure Fitting

1/4" NPT Male or Female.
7/16"-20 per MS33649-4 (Female).
7/16"-20 per MS33656-4 (Male).
AE F250-C, 9/16-18 UNF for ranges 15,000 PSI & up.

Weight

Approximately 9 ounces.

Electrical Characteristics

Digital Output

RS-232, RS-485 or CANBUS.

Communications

RS-232 (full duplex), RS-485 (half duplex).
RS-232/485: PT1H-10-6P

Command Syntax

Standard Commands for Programmable Instruments (SCPI).

Supported Measurements

Pressure and Temperature.

Measurement Modes

Query/Response and buffered output.

Units of Measure

Pressure: PSI.
Temperature: °F.

Measurement Buffer

Capacity: 131, 072 readings.

Data Retention

10+ years (real-time clock active).

Shunt Output

80% FSO.

Electrical Receptacle

RS-232, RS-485

PTIH-10-6P stainless steel connector or equivalent.

Power Requirements

8-40 Vdc, 200mW.

Wiring (RS-232/485)

POWER: A. TXD/INV: D.
COMMON: B. RXD/NON INV: E.
SIGNAL: C. SHUNT: F.

Standard configuration shown.

Options available.

Environmental Characteristics

Compensated Temperature Range

-30°F to +170°F.

Operating Temperature Range

-40°F to +185°F.

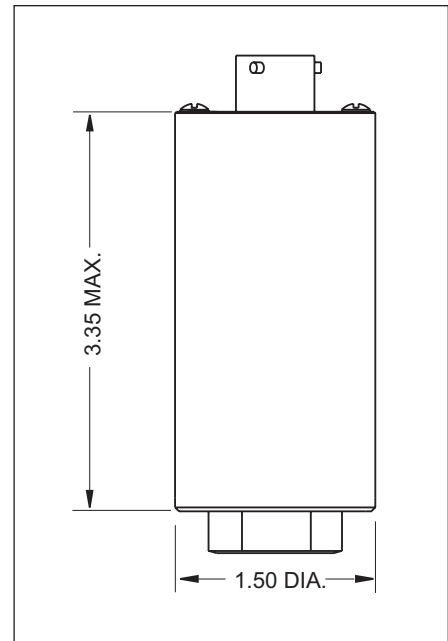
Natural Frequency

5 PSI: 3 KHz.
30K PSI: 150 KHz.

Acceleration Response

5 PSI: $\leq \pm 0.1\%$ FSO/G.
30K PSI: $\leq \pm 0.0015\%$ FSO/G.

Dimensions (inches)



MODEL IDENTIFICATION

| | | | | | |
|----------|----------|----------|---------------|----------|----------------|
| I | T | 3 | 0 | X | X |
| | SERIES | | ANALOG OUTPUT | | DIGITAL OUTPUT |
| | | | 1 = None | | 0 = None |
| | | | | | 1 = RS-485 |
| | | | | | 2 = RS-232 |
| | | | | | 4 = CANbus |



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.

Find More Information at:
stellartech.com

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

237 Commerce Drive • Amherst, NY 14228 • USA

Tel: 716.250.1900 • Fax: 716.250.1909

Email: info@stellartech.com

ISO 9001:2000

