

## GT10XX Series

### Aerospace Pressure Transducers

[Request a Quote](#)

#### Description

GT10XX Series pressure transducer is a reliable and rugged pressure sensor with high level analog and/or digital outputs. Customers can select 4-20 mA current outputs, numerous voltage outputs, as well as digital outputs including RS232, RS485, and CANbus. These pressure transducers are ideal for applications involving dynamic and static pressures measurements requiring high frequency response such as rocket engine testing and jet engine testing. The major mechanical design feature is a fully cleanable pressure cavity with replaceable stainless steel diaphragms. GT10XX Series is designed with a unique sensing element which is isolated from the diaphragm thus providing improved thermal stability during the initial phases of testing. Other design features include long term stability, low sensitivity to both mechanical shock and vibration and thermal shock, excellent response to transient pressures, infinite resolution and built in over pressure protection. Each GT10XX pressure transducer is shipped with a 19 point calibration record traceable to NIST as standard.

#### Standard Features

- High Level Output (Analog & Digital)
- Fully Cleanable Pressure Cavity
- Replaceable Stainless Steel Diaphragms
- Thermal Stability
- 316 SS Wetted Material thru 2000 psi
- Built In Over Pressure Protection
- High-Level Outputs – Analog and Digital
- Low Sensitivity to Shock and Vibration
- Pressure Ranges to 20,000 psig
- All Stainless Steel Construction
- 19 Point Calibration Record Traceable to NIST



#### Optional Features

- Improved Thermal Coefficients
- Customer Specified Pressure Ports
- Customer Specified Electrical Connections
- Extended Temperature Compensation Ranges
- Alternate Materials for Media Compatibility
- Special Calibrations
- Additional Shock and Vibration Protection

# LORD DATA SHEET

## PERFORMANCE

### Static Accuracy

Linearity:  $\pm 0.25\%$  FSO

Hysteresis:  $\pm 0.25\%$  FSO

Repeatability:  $\pm 0.10\%$  FSO

### Resolution

Analog: Infinite

Digital: 0.025% FSO

### Thermal Zero Shift

$< \pm 0.010\%$  FSO/ $^{\circ}$ F

### Thermal Span Shift

$< \pm 0.005\%$  FSO/ $^{\circ}$ F

### Zero Balance

$\pm 1\%$  FSO at 70 $^{\circ}$ F

### Span

$\pm 1\%$  FSO at 70 $^{\circ}$ F

### Natural Frequency

200 Hz at 1 psi to 150 kHz at 20000 psi

### Acceleration Response

Less than  $\pm 0.30\%$  FS/G at 1 psi to

$\pm 0.0015\%$  FS/G at 20000 psi

## MECHANICAL CHARACTERISTICS

### Standard Ranges

10, 15, 20, 30, 50, 75, 100, 200, 300, 500, 750,

1000, 1500, 2000, 3000, 3500, 4000, 5000,

7500, 10000, 15000, 20000 psia or psig sealed

### Proof Pressure

5-10 psi ranges: 300 psi

15-100 psi ranges: 500 psi

200-2K psi ranges: 3.0 X range

3K psi range & up: 1.5 X range

### Operating Media

Fluids and gases compatible with 316

stainless steel for ranges thru 2000 psi and

17-4 PH stainless steel for ranges 3000 psi thru 20000 psi

### Pressure Fitting

**For ranges up to & including 10000 psi:**

7/16"-20 per AS5202E4 / MS33649-4

(Female)

**For ranges 15K psi and 20K psi**

AE F250-C, 9/16"-18 UNF (Female)

Note: Pressure cap is removable.

## Enclosure

Body and pressure cavity of stainless steel, environmentally sealed

## Weight

Approximately 4.5 lbs.

## ELECTRICAL CHARACTERISTICS

### ANALOG OUTPUTS

#### Excitation

4-20mA Current Loop: 9-36 Vdc

Isolated Voltage Output (0-5 Vdc, 0-10 Vdc):

25-35 Vdc (standard)

14-32 Vdc (185 $^{\circ}$ F Max Ambient)  
(No charge option)

8-18 Vdc (185 $^{\circ}$ F Max Ambient)  
(No charge option)

Non-Isolated Voltage Output:

8-40 Vdc for 1-5 Vdc, 3-wire (standard)

*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)

### DUAL OUTPUTS (Analog & Digital)

#### Excitation

Non-Isolated Voltage plus Digital: 8-30 Vdc

## COMMON

### Insulation Resistance

$> 100$  megohms at 50 Vdc at 70 $^{\circ}$ F

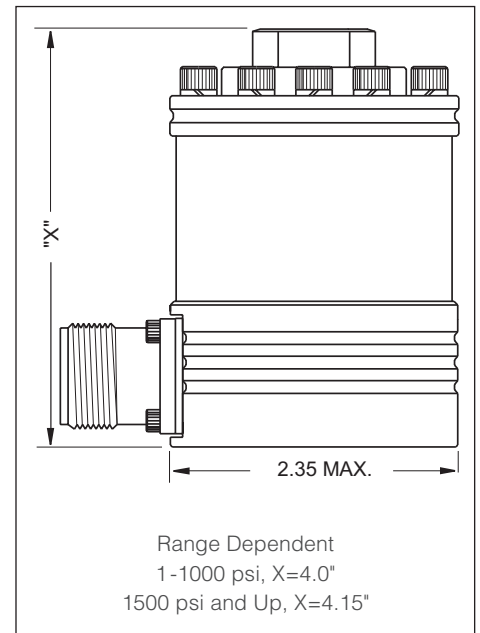
### Electrical Termination

MS3102-14S-2P stainless steel connector or equivalent

*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

<b>G</b>	<b>T</b>	<b>1</b>	<b>0</b>	<b>X</b>	<b>X</b>
Series		Analog Output			Digital Output
		0 = Isolated Voltage			0 = None
		1 = None			1 = RS-485
		2 = Non-Isolated Voltage			2 = RS-232
		5 = 4-20 mA, 2-wire Loop (not available with Digital Output)			4 = CANbus
		6 = 4-20 mA, 3-wire			

## ENVIRONMENTAL CHARACTERISTICS

### Compensated Temperature Range

-30 $^{\circ}$ F to +170 $^{\circ}$ F

### Operating Temperature Range

-100 $^{\circ}$ F to +300 $^{\circ}$ F (Process Temperature @ sensor)

-40 $^{\circ}$ F to +185 $^{\circ}$ F (Ambient Temperature)

Values stated in this technical data sheet represent typical values as not all tests are run on each lot of material produced. For formalized product specifications for specific product end uses, contact the Customer Support Center.

Information provided herein is based upon tests believed to be reliable. In as much as LORD Corporation has no control over the manner in which others may use this information, it does not guarantee the results to be obtained. In addition, LORD Corporation does not guarantee the performance of the product or the results obtained from the use of the product or this information where the product has been repackaged by any third party, including but not limited to any product end-user. Nor does the company make any express or implied warranty of merchantability or fitness for a particular purpose concerning the effects or results of such use.

"Ask Us How" is a trademark of LORD Corporation or one of its subsidiaries.

## LORD Corporation

### World Headquarters

111 Lord Drive

Cary, NC 27511-7923

USA

Customer Support Center (in United States & Canada)

+1 877 ASK LORD (275 5673)

www.lord.com

For a listing of our worldwide locations, visit LORD.com.

## LORD Sensing Stellar Technology

237 Commerce Drive

Amherst, NY 14228 • USA

Tel: 716.250.1900 • Fax: 716.250.1909

www.stellartech.com

Email: info@stellartech.com

ISO 9001/AS9100

**LORD SENSING**  
Stellar Technology