



## Pressure, Level & Temperature Transmitters & Transducers

2770 Long Road, Grand Island, NY 14072 USA

Tel. (716) 773-9300 • Fax (716) 773-5019

sales@gp50.com • www.gp50.com

## FLIGHT QUALIFIED DIFFERENTIAL PRESSURE TRANSDUCER

### Model 7300

Designed for the tough challenges and environmental rigors of space propulsion and aviation pressure testing.

### FEATURES:

- High accuracy and reliability
- Compact, rugged design
- Lightweight, <8oz.
- Non-Oil filled design

### Typical Applications:

- Satellites
- Launch Vehicles
- On-Board Military Vehicles

### Heritage Includes:

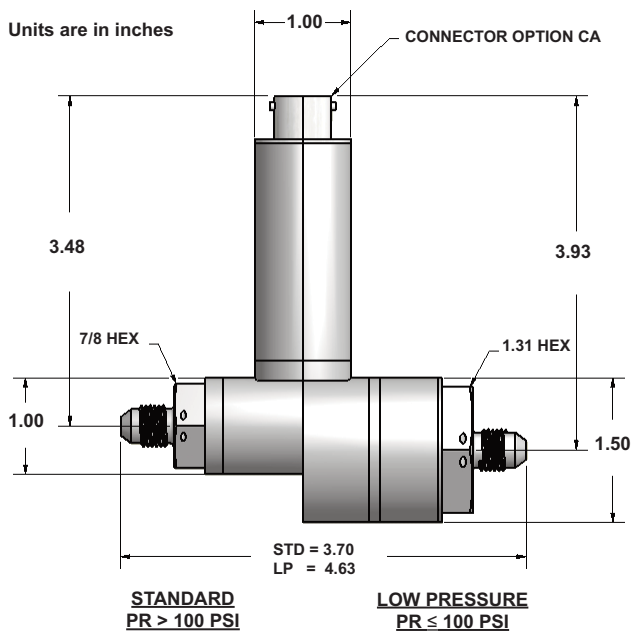
- NASA
- Lockheed Martin (EELV)
- Johns Hopkins APL
- Shuttle Upgrade
- Boeing
- Northrop Grumman - ABL



GP:50 Aerospace transducers are manufactured and tested to the following MIL-STD & MIL-Spec to insure the highest quality:

- NIST Traceability and Calibration..... ANSI-Z540-1
  - Workmanship ..... J-001 / NASA 8739.3 standards
  - Quality System ..... ISO 9001:2008
- Transducer Design Meets: MIL-STD-810F  
MIL-STD-461E

SEE INSTALLATION MANUAL FOR PINOUT ASSIGNMENT BASED ON ELECTRONICS OPTIONS



### WIRING CODE

| PIN | 4-20 MA  | 4-WIRE MV/V & VDC ISOLATED | 4- WIRE VDC NON-ISOLATED * | 3-WIRE VDC |
|-----|----------|----------------------------|----------------------------|------------|
| A/1 | +EXC/SIG | +EXC                       | +EXC                       | +EXC       |
| B/2 | N/C      | +SIG                       | +SIG                       | +SIG       |
| C/3 | N/C      | -SIG                       | -SIG *                     | N/C        |
| D/4 | -EXC/SIG | -EXC                       | -EXC *                     | -EXC/-SIG  |
| E/5 | N/C      | N/C                        | N/C                        | N/C        |
| F/6 | N/C      | N/C                        | N/C                        | N/C        |

\* COMMONS JUMPED

STANDARD WIRING.  
OPTIONS MAY AFFECT PIN OUT

A5SL-7300.00 Rev C

GP:50 reserves the right to make product improvements and amendments to the product specifications stated throughout this brochure without prior notification. Please contact the factory on all critical dimensions and specifications for verification.



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Specifications and options reflect standard product with amplified output. Non-amplified & other performance / mechanical / electrical / options available, consult factory for more information. Modifications may alter specs.

|                                                |                                                                              |
|------------------------------------------------|------------------------------------------------------------------------------|
| Ranges                                         | 15 thru 15,000 PSID (Bi-directional or uni-directional)                      |
| Proof Pressure (High & Low side)               | 2 X Pressure Range or 22,500 psi max, whichever is less.                     |
| Static Line Pressure                           | 2 X Pressure Range or 22,500 psi max, whichever is less.                     |
| Burst Pressure (High & Low side)               | 3 X Pressure Range or 22,500 psi max, whichever is less.                     |
| Zero Balance / Span Balance                    | ±1% FSO Each                                                                 |
| Static Accuracy                                | <±0.3% FSO RSS (BFSL)                                                        |
| Non-Repeatability                              | <±0.1% FSO                                                                   |
| Non-Linearity (Terminal)                       | <±0.2% FSO                                                                   |
| Hysteresis                                     | <±0.2% FSO                                                                   |
| Thermal Error                                  | Zero ±1.0% FSO / 100° F<br>Span ±1.0% FSO / 100° F                           |
| Total Error Band (all 5 parameters)            | ±2.3% FSO                                                                    |
| Line Pressure Effect (Zero)                    | <±1% FSO with line pressure applied                                          |
| Response Time                                  | < 4 ms                                                                       |
| Excitation                                     | 18V-36 Vdc (others available)                                                |
| Input Current                                  | 4 -Wire Isolated Vdc Options - 45mA nominal / Non-Isolated Vdc -10mA nominal |
| Output Current (VDC Units)                     | 2 mA max for <0.1% FSO attenuation                                           |
| Load Impedance (4-20mA Units)                  | 1,350 ohms max. at 36 Vdc, 750 ohms max. at 24 Vdc, 300 ohms max. at 18 Vdc  |
| Temperature Limits<br>Compensated<br>Operating | -10°F to +180°F (-23°C to +82°C)<br>-20°F to +190°F (-29°C to +88°C)         |
| Wetted Parts                                   | 316 SST & 17-4 SST (Inconel or Hastelloy optional)                           |
| Pressure Port                                  | MS 33656-4 (M) standard                                                      |
| Electrical Connector                           | PTIH-10-6P standard                                                          |
| Weight                                         | 8 oz. (some options may affect weight)                                       |
| Design meets MIL-STD-461/EMI/RFI               | Some options may affect EMI/RFI rating                                       |

## ORDERING GUIDE:

| MODEL | OUTPUT | RANGE | PRESSURE TYPE | OPTIONS |
|-------|--------|-------|---------------|---------|
| ●     | +      | ●     | +             | ●       |

Example: 7300-2-RH-D-CA/FD/GH

### OUTPUT

- 2 0-5 Vdc (Non-Isolated, 4 wire hookup)
- 3 4-20 mA (Recommended for long cable runs)
- 4 0-5 Vdc (Isolated, 4 wire hookup)
- 5 0-10 Vdc (Non-Isolated, 4 wire hookup)
- 6 0-10 Vdc (Isolated, 4 wire hookup)
- 9 0-5 Vdc (3 wire hookup)
- 10 0-10 Vdc (3 wire hookup)

Isolated= Input isolated from Output signal

### PRESSURE RANGE (PSI)

Contact factory for non-standard pressure ranges.

\*Can dia. 1.5"

|           |             |
|-----------|-------------|
| PP 0-15 * | RH 0-500    |
| PR 0-20 * | RK 0-1,000  |
| PO 0-25 * | RO 0-1,500  |
| PT 0-30 * | RR 0-2,000  |
| PV 0-50   | RT 0-3,000  |
| PZ 0-100  | RV 0-5,000  |
| RB 0-150  | RX 0-7,500  |
| RD 0-200  | SB 0-15,000 |
| RF 0-300  |             |

### PRESSURE TYPE

D Differential

Some options will affect dimensions, consult factory if important.  
Use the following codes to identify desired item.

### OPTIONS

#### CONNECTORS

|    |                   |
|----|-------------------|
| CA | PTIH-10-6P Bendix |
| CI | D38999/27YB98PN   |
| DB | D38999/27YA35PN   |

#### PORTS

|    |                        |
|----|------------------------|
| FA | MS33649-4, 7/16-20 (F) |
| FD | MS33656-4, 7/16-20 (M) |

#### MISC:

|    |                                                                                                              |
|----|--------------------------------------------------------------------------------------------------------------|
| GB | Alternate full scale outputs                                                                                 |
| GD | 10 X Proof Pressure (may affect overall performance, not available with options D, GF, GK, GP, less <50 psi) |
| GH | 100% Internal Shunt                                                                                          |
| GK | Inconel Pressure Cavity                                                                                      |
| GL | Cleaning for oxygen service                                                                                  |
| GP | Hastelloy Pressure Cavity                                                                                    |
| JA | 100 ohm 2 wire Platinum RTD, 0.0385 alpha                                                                    |
| JB | 1000 ohm 2 wire Platinum RTD, 0.0385 alpha                                                                   |
| ME | Shunt cal, 80% Internal                                                                                      |
| MS | Bi-Directional allows for both positive and negative output, for option 3, 12 mA zero.                       |