



FLIGHT HERITAGE DIGITALLY CORRECTED DIFFERENTIAL PRESSURE TRANSDUCER



Model 8300
Flight Heritage Digitally Corrected
Differential Pressure Transducer

MODEL 8300

FEATURES:

- Accuracy option to 0.05% FSO
- Lightweight, <8 oz (0.2 kg)
- 0 to 5 Vdc or 4-20mA output
- 1000 PSI line pressure rating
- Ranges from 0-1 thru 0-500 PSID

APPLICATIONS:

- Aviation and suborbital spacecraft
- Space qualified flight
- Commercial and military satellites
- Launch vehicles
- Test stand applications

PRODUCT OVERVIEW:

The Model 8300 series from GP:50 is a flight heritage, differential pressure transducer, providing high reliability with high accuracy. The compact, proprietary sensor design provides years of reliable measurement required for commercial aviation, military, aerospace, UAV, satellite, and defense applications.

FIELD OPTIONS:

- 4-wire isolated outputs
- Bi-directional operation
- Oxygen compatible design

GP:50 MODEL 8300

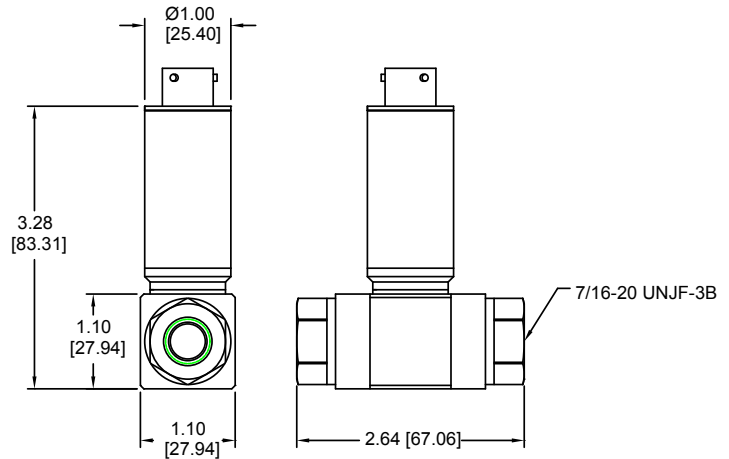
DIMENSIONAL DRAWING

All dimensions are in inches (mm)

STANDARD WIRING

PIN	4-20mA	4-WIRE MV/V & VDC ISOLATED	4-WIRE VDC NON-ISOLATED	3-WIRE VDC
1/RED	+EXC/SIG	+EXC	+EXC	+EXC
2/GRN	N/C	+SIG	+SIG	+SIG
3/WHT	N/C	-SIG	-SIG*	N/C
4/BLK	-EXC/SIG	-EXC	-EXC*	-EXC/SIG
5/BLU	N/C	N/C	N/C	N/C
6/BRN	N/C	N/C	N/C	N/C

* COMMONS JUMPERED



REFERENCE SPECIFICATIONS

ELECTRICAL

- **Output Signal:** 0 to 5 Vdc, 0 to 10 Vdc digitally corrected
- **Supply Voltage:** 18 to 36 Vdc (unregulated)
- **Response Time:** ~500 Hz
- **Circuit Protection:** Meets MIL-STD-461 EMI/RFI, Reverse polarity
- **Connection:** PTIH-10-6P standard, options available

ACCURACY

- **Static Accuracy:** $< \pm 0.10\%$ FSO, $+/-0.05\%$ FSO available
- **Zero-repeatability:** $< \pm 0.04\%$ FSO
- **Hysteresis:** $< \pm 0.05\%$ FSO
- **Zero/Span Balance:** $\pm 0.1\%$ FSO
- **Line Pressure Effect (Zero):** $< \pm 1.0\%$ FSO/1,000 PSI

MATERIALS OF CONSTRUCTION

- **Wetted Parts:** 316L stainless steel
- **Housing:** 300 series stainless steel
- **Internal Fill:** Silicon Oil (Fomblin Oil Available)

MECHANICAL (Other options available)

- **Process connection:** AS5202-04 standard
- **Proof Pressure:** 3X pressure range (Higher available)
- **Burst Pressure:** 5X pressure range
- **Static Line Pressure:** 1000 PSI
- **Random Vibration:** > 25 G RMS (20 Hz to 2,000 Hz)
- **Approximate Weight:** 8 oz (0.2 kg)
(some options may affect weight)
- **Orientation Effect ≤ 2 PSI:** $\pm 3.5\%$ FSO, Rotated 90° from Horizontal

PRESSURE RANGES

- 0 to 1 thru 0 to 500 PSID (0.07 Bar thru 34.5 BAR)
Bi-directional or uni-directional

THERMAL SPECIFICATION

- **Compensated Range:** 0°F to $+180^\circ\text{F}$ (-18°C to $+83^\circ\text{C}$)
(other available)
- **Operating Range:** -40°F to $+250^\circ\text{F}$ (-40°C to $+121^\circ\text{C}$)
- **Storage Ambient:** -65°F to $+250^\circ\text{F}$ (-54°C to $+121^\circ\text{C}$)
- **Effect on Zero/Span:**
Standard: $\pm 0.50\%$ FSO/100 $^\circ\text{F}$
Improved: $\pm 0.25\%$ FSO/100 $^\circ\text{F}$

**Standard configurations shown.
Please consult factory for other options.**

All specifications are for reference purposes only. In the interests of continuous product improvement, all specifications are subject to change without notice. Please contact GP:50 for assistance with your application.

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