bonded strain gage

## TELEDYNE Pressure Transducers

PRESSURE RANGES: 0-300, 0-500, 0-750, 0-1000, 0-1500, 0-2000, 0-3000, 0-4000, 0-5000, 0-6000 psig

### specifications

PRESSURE MEDIA: Most liquids and gases including liquid oxygen, strong alkalies, and corrosive media such as red fuming nitric, nitrogen tetroxide, hydrazine, UDMH. PRESSURE RANGES (psig): 0-300, 0-500, 0-750, 0-1000, 0-1500, 0-2000, 0-3000, 0-4000, 0-5000, 0-6000. MAXIMUM PRESSURF

0.300 thru 0.750 psig ranges	3.0 times FS
0-1000 thru 0-2000 psig ranges	2.5 times FS
0-3000 psig range	2.0 times FS
0-4000 thru 0-6000 psig ranges	1.5 times FS

Pressures can be applied without damage or necessitating recalibration.

COMPENSATED TEMPERATURE RANGE:  $-30^{\circ}F$  to  $+170^{\circ}F$ (other ranges on special order at additional cost)

OPERATING TEMPERATURE RANGE:  $-100^{\circ}$ F to  $+225^{\circ}$ F. May be operated for short periods of time at temperatures in excess of those listed (for example,  $-320^{\circ}F$  to +300°F). The unit mass is such that a heat sink is provided to protect the sensing element.

ELECTRICAL ZERO: Maximum unbalance shall not exceed  $\pm 0.02$  my/v at +70°F. (Psig units zero balanced at an

atmospheric pressure of 14.7 psi.) **SENSITIVITY:** 3.0 mv/v or greater full scale open circuit output. Calibration factors from 2.00 mv/v to 3.00 mv/v for precalibrated systems, available on special order. THERMAL ZERO SHIFT: Not to exceed  $\pm 0.01\%$  of full scale per degree Fahrenheit while operating within the compensated temperature range.

THERMAL SENSITIVITY SHIFT: Not to exceed  $\pm 0.005\%$  of FS output per degree Fahrenheit while operating within the compensated temperature range.

BRIDGE INPUT VOLTAGE: 15 volts AC/DC maximum for 350 ohm strain gage bridge. Taber laboratory calibration values are based on an input voltage of 10 VDC. ACCELERATION: These instruments are insensitive to acceleration in all planes except axial. Axial plane sensitivity is less than 0.015% full scale per G for the 0-300 psig range and not greater than 0.01% of full scale per G for 0-500 thru 0-6000 psig ranges. Bonded strain gages limit spurious response from shock and vibration.

HYSTERESIS: Not to exceed 0.25% of FS output at any given point.

LINEARITY: Deviation not to exceed ±0.25% of FS output from a straight line function.

**INSULATION RESISTANCE:** Greater than 10,000 megohms at 50 VDC and 70°F from any receptacle pin to case. PRESSURE CAVITY VOLUME:

Pressure	At Zero	Increase From Zero
Range (psig)	Pressure	To Full Scale Pressure
300	.0882 cu. in.	.0075 cu. in.
500	.0760 cu. in.	.0053 cu. in.
750	.0882 cu. in.	.0075 cu. in.
1000	.0882 cu. in.	.0064 cu. in.
1500	.0760 cu. in.	.0040 cu. in.
2000	.0677 cu. in.	.0030 cu. in.
3000	.0851 cu. in.	.0034 cu. in.
4000	.0746 cu. in.	.0027 cu. in.
5000	.0862 cu. in.	.0029 cu. in.
6000	.0862 cu. in.	.0030 cu. in.
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**RESOLUTION:** Infinite.

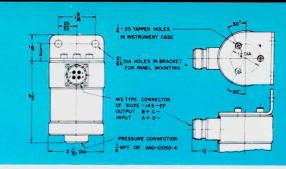
REPEATABILITY: Within 0.1% of FS output under identical

PRESSURE CONNECTION: Internal thread for AND-10050-4 is standard. Available on special order with 1/4-inch NPT or external thread MS 33656-4.

ELECTRICAL RECEPTACLE: Stainless Steel MS Type CF3102E-14S-2P configuration is standard. Other receptacles available on special order.

ENCLOSURE: Entire housing and pressure cavity is of high quality stainless steels. All electrical components are hermetically sealed against adverse environmental conditions.

WEIGHT: 3 lb. 5 oz.



	Model or Cat. No.	Price
TELEDYNE Pressure Transducer — Standard — Without Mounting Bracket. Calibration certificate supplied with each instrument giving millivolt output, at 6 points throughout the range of the instrument. RANGE: 0-300, 0-500, 0-750, 0-1000, 0-1500, 0-2000 psig. RANGE: 0-3000, 0-4000, 0-5000, 0-6000 psig.	206	Refer to Price List PL-100
TELEDYNE Dual Bridge Pressure Transducer — Equipped with dual bridge. Although each bridge is actuated by the same pressure, each is electrically independent of the other. Two electrical connectors (rather than one) permit this unit to be used for both recording and control.  RANGE: 0-300, 0-500, 0-750, 0-1000, 0-1500, 0-2000 psig.	206-DB	Refer to Price List PL-100
TELEDYNE Pressure Transducer —  Sensitivity Adjustment by the Shunted Output Method additional cost  Sensitivity Adjustment by the R <sub>C</sub> Method (The application of a standard resistor across the two negative terminals will produce a simulated output of a specific pressure) additional cost		Refer to Price List PL-100
Bracket For Panel Mounting — Complete with screws. (Illustrated above.)	227-89	
Diaphragm Replacement Set — Includes dia- phragms, cap screws and lockwashers. Specify Model Number and Pressure Range. For Pressure Ranges up to 2000 psig For Pressure Range 3000 psig and above		Refer to Price List PL-100
External Thread Pressure Cap per MS33656-4	P176-260B	
Mating Electrical Plug	10-72614-2S	

The Taber Instrument Corporation reserves the right to make changes without notice at any time in colors, materials, specifications, and models, and to discontinue models.

When ordering, be sure to specify the following: (1) Model number. (2) Pressure range. (3) Pressure connection. (4) Electrical receptacle and wiring. (5) Sensitivity adjustment. (6) Specifications: If standard specifications so state; if deviate from standard, list specific deviations. (7) List accessories (if any) such as mating electrical plug as separate items.

NOTE: Complete ordering information is necessary to permit prompt and efficient

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#### warranty

Warranty

Taber Instrument warrants all parts and equipment supplied by it to be free from defects in workmanship or material under normal use and service. All such parts and equipment supplied subject to this warranty, and the Company's obligation thereunder is limited to repairing or replacing at its factory any part thereof which shall be returned, transportation charges prepaid, within one year from date of shipment, and which our examination shall disclose to our satisfaction to have been thus defective. This warranty is expressly in lieu of all other warranties expressed or implied, and of all obligations or liabilities on its part for damages following the use or misuse of the articles supplied. Any unauthorized disassembly or attempt at repair shall void this warranty. No agent is authorized to assume for it any liability except as set forth above.

Warranty specifications and qualitative calibration data, as supplied with each transducer, are based on tests performed on and values obtained with N.B.S. traceable laboratory standards and test equipment of the Taber Instrument Corporation.

#### service information

A complete department is maintained for recalibrating, repairing or rebuilding TELEDYNE Pressure Transducers. Instruments should be carefully packed and forwarded with a letter describing the malfunction to TABER INSTRUMENT CORPORATION, North Tonawanda, N. Y., U.S.A.

AEROSPACE ELECTRONICS DIVISION

# Taber Instrument Corporation

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