

Model DH100 Pressure Transducer Downhole Oil and Gas Grade (High Temperature)



STANDARD FEATURES

- Pressure ranges 0-500 through 0-25,000 PSIA
- Accuracies to 0.1% BFSL
- Strain Gauge sensor technology for high temperature stability
- Unparalleled long-term stability
- Temperature compensation or uncompensated
- 0.5% total error band across temperature if used with the manufacturing correction coefficients.
- Custom designs available (contact factory)

OPTIONAL FEATURES

- Customer specified electrical terminations
- Custom customer specified calibrations

The PT Instruments Alliance Model DH100 is a bonded strain gage transducer designed for applications up to 400 °F. The transducer is small and lightweight to provide flexibility for a wide range of applications. The series DH100 is available in either connector or crimp-on electrical pin terminal configurations.

Performance @ 25°C (77°F)

Over pressure protection: 150% Rated Pressure
 Burst Pressure: 300% Rated Pressure
 Thermal Zero shift: .01% F.S. per °F max.
 Thermal Sensitivity shift: .01% F.S. per °F max.
 Non-linearity & Hysteresis combined: +/- .25% F.S.
 Max. (best straight line method)
 Repeatability: Within +/- .05% F.S. max.

Electrical Data

Excitation: 10 VDC
 Input Resistance: 1000 +/- 100 Ohms
 Output Resistance: 1000 +/- 100 Ohms
 Output at Zero Pressure: 0 +/- 5% F.S.
 Full Scale (F.S.) Sensitivity: 2.5mV/V +/- 10%

Environmental Data

Operating temp: -40 to +232°C (-40 to +450°F)
 Storage temp: -50 to +232°C (-60 to +450°F)
 Compensated range: -25 to +200°C (-13 to +392°F)
 Acceleration: 20 G's per MIL-STD-810,
 method 513.1, PROC. I
 Vibration: 20 G's per MIL-STD-810,
 method 514.1, PROC. V, PART I
 Shock: 30 G's per MIL-STD-810,
 method 516.1 PROC. IV

Mechanical data

Sensor wetted material: 15-5 PH stainless
 and Inconel X750/625/718
 Body and Pressure Cavity: Stainless Steel
 hermetically sealed
 Pressure connection: Mates with fitting per
 MS33656-4-E4
 Weight: 1.5 oz. nominal
 Length 1.5" Width .75"
 Electrical Connection: Crimp Pin
 (others available on application)

Model DH100 Strain Gauge Signal Conditioner Downhole Oil and Gas Grade

Ordering guide – Example: DH100-A-(0-500PSI)-2-M-5-CP

A	(0-500)	2	D	5	EC1
Pressure Port	Range	Units	Output	Accuracy	Connector
A=Double O-Ring B=SAE-4 (w/o-ring) C=Other D= MS33656-4-E4 E=Autoclave F250C	Specify Pressure Range in PSI, BAR, kPa	1=Absolute 2=Gauge 3=Vacuum 4=Sealed 5=Compound 6=Other	M=mV/V X=Other	5=0.5% BFSL* 2=0.2% 1=0.1%	EC1=12" pigtail ECX=Other CP=Crimp Pin standard

*BFSL = Best Fit Straight Line

Dimensions:

(For reference only: Actual dimensions may vary, contact PT Instruments for exact dimensions for your applications)



Model DSC100 Strain Gauge Signal Conditioner Downhole Oil and Gas Grade

Stability & repeatability:

Each DH100 pressure sensor is tested per Steps 1 through 5 below will exhibit a zero balance and sensitivity stability within 0.1% F.S. from Step 1 to Step 5. Zero balance and sensitivity from Step 2 will repeat that of Step 4 within $\pm 0.1\%$ F.S

Step 1: Stabilize unit 4 hours at +100°F. Record output at 0 to 100% F.S. in 25% F.S. pressure steps.

Step 2: Stabilize unit 4 hours at +350°F Record output at 0 to 100% F. S. in 25% F.S. pressure steps.

Step 3: Five pressure cycles from ambient to F.S. pressure and return. Hold 10 minutes at F.S. pressure steps.

Step 4: Within two hours after Step 3, record output at 0 to 100% F.S. in 25% F.S. pressure steps.

Step 5: Stabilize unit 12 hours minimum at +100°F. Record output at 0 to 100% FS. in 25% F.S. pressure steps.

Modifications: Specifications on this data sheet represent the standard configuration only. We recognize that transducer applications vary and our designs are flexible. We offer options on material compatibility, pressure port configuration, electrical termination and performance characteristics.

Warranty: PT Instruments warrants that its product shall be free from defective workmanship and/or materials for a 12 month period from the date of shipment provided that PT Instruments 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 PT Instruments. This warranty is in lieu of all other warranties expressed or implied.

PT Instruments
104 Tarpon Drive
Yorktown, VA 23692

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Phone: 757-806-1199
e-mail: info@ptinstruments.com

Specifications are subject to change without notice.

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