

Product Bulletin

**81HP Series
Hermetic Pressure Transducer
Voltage Output, High Accuracy,
Standard Package**



The 81HP Series is ideally suited for severe industrial OEM applications. This is a high accuracy, high level Vdc output that requires no end user amplification. Housed in corrosion

resistant stainless steel, the 81HP includes a hermetic front end with a variety of electrical connectors. This transducer is available in sealed gage

and vented gage from 15 psi up to 30,000 psi with several package options. Contact the factory regarding agency approvals.

Features

- Low total error band.....
- Stainless steel housing.....
- EMC protected to 300 V/M.....
- Wide operating temperature range..... (-40° up to +125°C)
- Reverse polarity protection.....
- Small size.....
- Repeatability <0.05%.....
- High accuracy +/- 0.25% F.S. typ..... Static Error Band

Benefits

- High accuracy through wide operating temperature range*
- Media Compatible*
- High reliability in noisy environments*
- Wide range of applications*
- Robust installation*
- More mounting options*
- Measurement confidence*
- Precise measurement for severe industrial OEM applications*

Applications

- Compressors & Pumps
- Hydraulics & Pneumatics
- Agriculture & Construction Equipment
- Transportation & Off Road Vehicles
- Engine Controls & Monitors
- HVAC /Refrigeration
- Alternative Energy Management
- Load Management
- Process Control & Automation

Technical Specifications

Pressure Ranges

- 15 psig - 500 psig
- 50 psis - 30,000 psis

Performance

- Accuracy... +/-0.25% F.S. typ (static error band @ 25°C)
- Total Thermal Effect Standard: +/- 0.007% F.S. / °C typ (-20°C to +100°C)
- Operating temperature: -40°C to 125°C
- Storage temperature: -40°C to 150°C

Electrical

- Vs... 4.5-5.5Vdc
- Vs... 8-30Vdc
- Vs... 9-32Vdc
- Vs... 12-30Vdc
- Vs... 4.75-5.25Vdc
- Vs... 9-30Vdc
- Supply current..... 8 - 13mA
- Output current
- Source..... 1.1 mA
- Sink..... 0.1 mA
- Output Load Range..... 8.2K ohms - no load
- Output Response Time..... 1ms
- Overvoltage protection..... 32 VDC
- Reverse Voltage Protection..... -5 VDC
- EMC(1MHz - 400 MHz)..... 300 V/m (400MHz-1GHz)..... 200 V/m
- Short Circuit Protected Yes

- Vo... 0.5-4.5Vdc
- Vo... 0.5-4.5Vdc
- Vo... 1-6Vdc
- Vo... 0-10Vdc
- Vo... 0.25-4.75Vdc
- Vo... 1-5Vdc

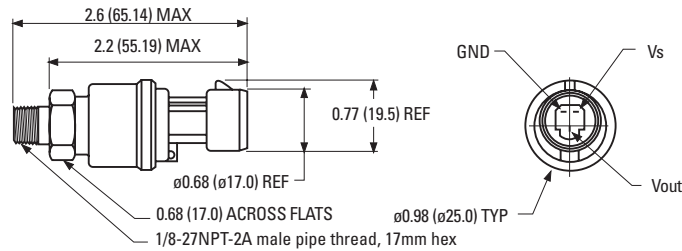
Physical

- Proof Pressure
- Up to 1,500 psi..... 2X
- Up to 7,000 psi..... 1.5X
- Up to 30,000 psi..... 1.2X
- Burst Pressure
- 3X
- Cycle Life
- 10M F.S. cycles, 25-80°C
- Random Vibration (up to 1kHz)
- 15g
- Drop (any axis)
- 1m
- Electrical Connection
- Packard Metri-Pack™ Hirschman DIN wire leads

81HP Series Hermetic Pressure Transducer

Dimensions (Typical)

in (mm)



Ordering Information

EXAMPLE:

| | | | | | | | | | |
|-------------------------------|---|----|---|---|-------|---|---|---|---|
| Series | 81HP | 02 | 2 | X | 00500 | S | S | 0 | A |
| Pressure Connection | 1/8-27NPT-2A male pipe thread, 17mm hex | | | | | | | | |
| Electrical Connection | Standard Packard Metri-Pack | | | | | | | | |
| Voltage Input- Output | Power Input: 4.5-5.5Vdc, Device Output 0.5-4.5Vdc | | | | | | | | |
| Pressure Range | 0-500psi | | | | | | | | |
| Pressure Reference | sealed gage | | | | | | | | |
| EMC | standard-(300v/m 1MHz-400MHz) | | | | | | | | |
| Potted Wire Lead Length | 0 | | | | | | | | |
| Total Thermal Effect Standard | | | | | | | | | |

STANDARD OPTIONS

| | |
|------------------------|---|
| Series | 81HP |
| Pressure Connection | 02 1/8 - 27NPT-2A male pipe thread, 17mm hex 03 1/4 - 18UNF-2A male pipe thread, 17mm hex 04 7/16 - 20UNF-2A male o-ring per SAE J1926/2, 17mm hex 10 3/8 - 24UNF-2A male o-ring per SAE J1926/2, 17mm hex |
| Electrical Connection | 2 Standard Packard Metri-Pack™ 3 Hirschman DIN 4 wire leads |
| Voltage Input - Output | X Vs... 4.5-5.5Vdc Vo... 0.5-4.5Vdc T Vs... 8-30Vdc Vo... 0.5-4.5Vdc S Vs... 9-32Vdc Vo... 1-6Vdc W Vs... 12-30Vdc Vo... 0-10Vdc Z Vs... 4.75-5.25Vdc Vo... 0.25-4.75Vdc R Vs... 9-30Vdc Vo... 1-5Vdc |
| Pressure Ranges | 15psig - 500psig 50psis - 30,000psis (psis = sealed gage) (psig = vented gage) |
| Pressure Reference | S Sealed Gage G Vented gage |
| EMC | S 300v/m 1MHz-400Mhz B Meets Level 1 requirement of GMW 3097GS, radiated immunity Level 1 requirement of GMW 3097GS, bulk current injection noise C Meets Level 2 requirement of GMW 3097GS, radiated immunity Class B requirement of GMW 9112P, bulk current injection noise |
| Total Thermal Effect | A +/-0.007% F.S./°C typ (-20°C to +100°C) |

SPECIAL OPTIONS

(Contact factory for availability)

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81HP



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