

Product Bulletin

83HP Series

Hermetic Pressure Transducer

Voltage Output, High Accuracy, Enhanced Package

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The 83HP 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 83HP 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

High accuracy +/- 0.25%.....
Static Error Band
Low total error band.....
(-20°C to 100°C)
Stainless steel housing.....
EMC protected to 300V/m.....
Wide operating temperature range.....
(-40° up to +125°C)
Reverse polarity protection.....
Small size.....
Repeatability <0.05%.....

Benefits

Precise measurement for severe industrial OEM applications
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

Applications

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

Technical Specifications

Pressure Ranges

0-15 psig through 0-500 psig
0-500 psis through 0-30,000 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

*Operating Temperature: -40°C to +100°C

**Sink.....0.2mA

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 to Ground.....4.0K ohms min.
Output Response Time.....1ms
Overvoltage Protection.....30 Vdc
Reverse Voltage Protection.....-5 Vdc
EMC(1MHz - 400 MHz).....300 V/m
(400MHz-1GHz).....200 V/m
Short Circuit ProtectedYes

Physical

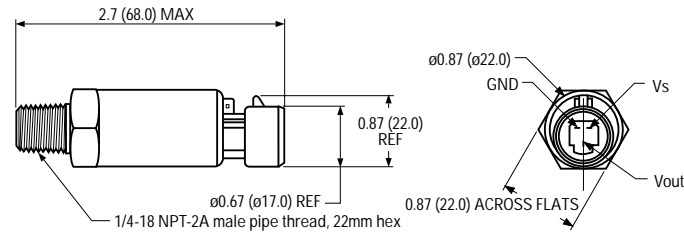
Proof Pressure Up to 1,500 psi.....2X
Up to 7,000 psi.....1.5X
Up to 30,000 psi.....1.2X
Burst Pressure 3X
Cycle Life 100M F.S. cycles,
25-80°C
Random Vibration (20-2800Hz) 35g rms
Drop (any axis) 1m
Electrical Connection Packard Metri-Pack™
Hirschman DIN
wire leads

83HP Series

Hermetic Pressure Transducer

Dimensions (Typical)

in (mm)



Ordering Information

EXAMPLE:

Series
Pressure Connection
Electrical Connection
Voltage Input-Output
Pressure Range
Pressure Reference
EMC
Potted Wire Lead Length
Total Thermal Effect Standard

83HP 06 2 X 00500 S S 0 A
1/4-18NPT-2A male pipe, 22mm hex
Standard Packard Metri-Pack
Power Input: 4.5-5.5Vdc, Device Output 0.5-4.5Vdc
0-500psi
sealed gage
standard-(300v/m, 1MHz-400MHz)
1m

STANDARD OPTIONS

Series	83HP
Pressure Connection	05 3/8 - 24UNF-2A male o-ring per SAE J514, 22mm hex 06 1/4 - 18NPT-2A male pipe, 22mm hex 07 7/16 - 20UNF-2A male o-ring per SAE J514, 22mm hex 12 M14 x 1.5 male o-ring thread per ISO 6149, 22mm hex 13 1/4" SAE tube fitting, female flare, 7/16-20 UNF-2B 14 1/8-27 NPT-2A male pipe, 22mm hex 15 7/16-20 UNF-2B female Schraeder deflator
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	0-15 psig through 0-500 psig 0-500 psis through 0-30,000 psis (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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