

## Product Bulletin

# 84HP Series Hermetic Pressure Transducer

**Voltage Output, Premium Accuracy,  
Enhanced Package**

[www.tisensors.com](http://www.tisensors.com)



The 84HP Series is ideally suited for severe industrial OEM applications. This is a *premium accuracy*, high level Vdc output that requires no end user amplification. Housed in

corrosion resistant stainless steel, includes a hermetic front end, with electric connectors. This transducer is available in sealed gage and vented

gage from 15 psi up to 30,000 psi with a variety of packages options. Contact factory regarding agency approvals.

## Features

High accuracy +/- 0.25%.....  
Static Error Band  
Low total error band.....  
Stainless steel housing.....  
EMC protected to 300V/M.....  
Wide operating temperature range.....  
(-20° up to +100°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  
Option B:  
+/- 0.005% F.S. / °C typ  
(-20°C to +100°C)

Option C:  
+/- 0.004% 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 ..... 8.2K 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 Protected ..... Yes

### 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  
(20-2800 Hz) 35g rms

Drop (any axis) 1m

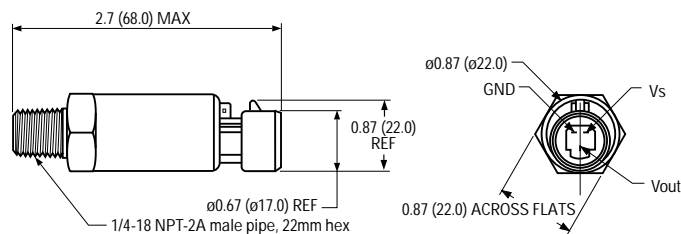
Electrical Connection Packard Metri-Pack™  
Hirschman DIN  
wire leads

# 84HP Series

## Hermetic Pressure Transducer

### Dimensions (Typical)

in (mm)



### Ordering Information

EXAMPLE:

		<b>84 HP</b>	<b>06</b>	<b>2</b>	<b>X</b>	<b>00500</b>	<b>S</b>	<b>S</b>	<b>0</b>	<b>B</b>
Series	84HP									
Pressure Connection	1/8-18NPT-2A male pipe, 22mm 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	1m									
Total Thermal Effect B										

#### STANDARD OPTIONS

Series	<b>84HP</b>
Pressure Connection	<b>05</b> 3/8 - 24UNF-2A male o-ring per SAE J514, 22mm hex <b>06</b> 1/4 - 18NPT-2A male pipe, 22mm hex <b>07</b> 7/16 - 20UNF-2A male o-ring per SAE J514, 22mm hex <b>12</b> M14 x 1.5 male o-ring thread per ISO 6149, 22mm hex <b>13</b> 1/4" SAE tube fitting, female flare, 7/16-20 UNF-2B <b>14</b> 1/8-27 NPT-2A male pipe, 22mm hex <b>15</b> 7/16-20 UNF-2B female Schraeder deflator

Electrical Connection	<b>2</b> Standard Packard Metri-Pack™ <b>3</b> Hirschman DIN <b>4</b> Wire leads
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Voltage Input - Output	<b>X</b> Vs... 4.5-5.5Vdc Vo... 0.5-4.5Vdc <b>T</b> Vs... 8-30Vdc Vo... 0.5-4.5Vdc <b>S</b> Vs... 9-32Vdc Vo... 1-6Vdc <b>W</b> Vs... 12-30Vdc Vo... 0-10Vdc <b>Z</b> Vs... 4.75-5.25Vdc Vo... 0.25-4.75Vdc <b>R</b> Vs... 9-30Vdc Vo... 1-5Vdc
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Pressure Ranges	0-15 psig through 0- 500 psig 0-500 psis through 0-30,000 psis (psis = sealed gage) (psig = vented gage)
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Pressure Reference	<b>S</b> Sealed Gage <b>G</b> Vented Gage
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EMC	<b>S</b> 300v/m, 1MHz-400Mhz <b>B</b> Meets Level 1 requirement of GMW 3097GS, radiated immunity Level 1 requirement of GMW 3097GS, bulk current injection noise <b>C</b> Meets Level 2 requirement of GMW 3097GS, radiated immunity Class B requirement of GMW 9112P, bulk current injection noise
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Total Thermal Effect	<b>B</b> +/-0.005% F.S./°C typ (-20°C to +100°C) <b>C</b> +/-0.004% F.S./°C typ (-20°C to +100°C)
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#### SPECIAL OPTIONS

(Contact factory  
for availability)

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