

## Product Bulletin

# 84HP Series Hermetic Pressure Transducer Voltage Output, Premium Accuracy, Piezoresistive Technology

[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.

## Features

High accuracy +/- 0.25% F.S. typ.....  
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°C up to +125°C)  
Reverse polarity protection.....  
Small size.....  
Repeatability <0.05%.....

## Benefits

*Precise measurement for severe industrial OEM applications*  
*High accuracy over 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:  
+/- 0.008% F.S. / °C typ  
(-20°C to +100°C)  
Option C:  
+/- 0.006% F.S. / °C typ  
(-20°C to +100°C)  
Storage Temperature:  
-40°C to +150°C

### Electrical

Ratiometric Output  
Vs... 4.5-5.5Vdc Vo... 0.5-4.5Vdc  
Vs... 4.75-5.25Vdc Vo... 0.25-4.75Vdc  
Voltage Regulated Output  
Vs... 9-32Vdc Vo... 0.5-4.5Vdc  
\*\*Vs... 9-32Vdc Vo... 1-6Vdc  
\* \*\*Vs... 12-32Vdc Vo... 0-10Vdc  
\*\*Vs... 9-32Vdc Vo... 1-5Vdc  
\* Operating Temperature: -40°C to +100°C  
\*\*\* Sink: 0.2mA  
Supply current ..... 8 - 15mA  
Output current  
Source..... 1.1 mA  
Sink..... 0.1 mA  
Pull Down Load Resistor ..... 5.0K ohms min.  
Output Response Time..... 1ms  
Overvoltage Protection ..... Yes  
Reverse Voltage Protection ..... Yes  
Short Circuit Protected ..... Yes

### Physical

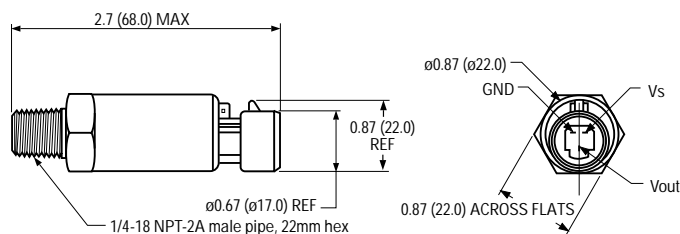
Proof Pressure Up to 1,500 psi..... 2X  
Up to 7,000 psi..... 1.5X  
Up to 30,000 psi..... 1.2X  
Burst Pressure 3X minimum  
Cycle Life 100M F.S. cycles,  
25-80°C  
Random Vibration (20-2800 Hz) 35g rms  
Drop (any axis) 1m  
Electrical Connection Packard Metri-Pack™  
Hirschman DIN  
Wire leads  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

# 84HP Series

## Hermetic Pressure Transducer

### Dimensions (Typical)

in (mm)



### Ordering Information

EXAMPLE:

Series	84HP	06	2	X	00500	S	S	0	A
Pressure Connection	1/4-18NPT-2A male pipe								
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

STANDARD OPTIONS Series	84HP			
Pressure Connection	05	3/8 - 24UNF-2A male o-ring per SAE J514		
	06	1/4 - 18NPT-2A male pipe		
	07	7/16 - 20UNF-2A male o-ring per SAE J514		
	13	1/4" SAE tube fitting, female flare, 7/16-20 UNF-2B		
	14	1/8-27 NPT-2A male pipe		
	15	7/16-20 UNF-2B female with Schraeder deflator		
	16	M18 x 1.5 male w/sealing cone (+10K psi applications)		
	17	M14 x 1.5 male per ISO 261		
Electrical Connection	2	Standard Packard Metri-Pack™	6	Hirschman DIN
	3	Hirschman Mini DIN	7	Truncated cone cable
	4	Wire leads (24 AWG)		
Voltage Input - Output	X	Vs... 4.5-5.5Vdc	Vo... 0.5-4.5Vdc	} Ratiometric
	Z	Vs... 4.75-5.25Vdc	Vo... 0.25-4.75Vdc	
	T	Vs... 9-32Vdc	Vo... 0.5-4.5Vdc	} Non-Ratiometric
	S	Vs... 9-32Vdc	Vo... 1-6Vdc	
	W	Vs... 12-32Vdc	Vo... 0-10Vdc	
	R	Vs... 9-32Vdc	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) Metric ranges in bar (M 0010 = 10 bar)			
Pressure Reference	S	Sealed Gage (Specify for > 500 psi)		
	G	Vented Gage (Specify for <= 500 psi)		
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		
Wire Leads	0	no wire (Packard DIN)		
	1	1 meter length		
	2	2 meter length		
Total Thermal Effect	B	+/-0.008% F.S./°C typ (-20°C to +100°C)		
	C	+/-0.006% F.S./°C typ (-20°C to +100°C)		

#### SPECIAL OPTIONS

(Contact factory  
for availability)

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