



## 85HP/86HP Series

### Piezoresistive Pressure Sensor

Current Output, High Accuracy, Hermetic

#### WORLD CLASS PERFORMANCE

The 85HP and 86HP series sensors are ideally suited for severe industrial OEM applications requiring long wire runs. Housed in corrosion resistant stainless steel, these sensors include a hermetic front end with a variety of electrical and pressure connection options.

Sensata Technologies has been a leading global supplier of pressure sensors & switches for over 50 years.

#### Features & Benefits

- High accuracy over wide operating temperature range.
- Low total error band
- Media compatible stainless steel housing
- Repeatability <0.05%
- Wide operating temperature range
- Small size

#### Applications

- Process Control & Automation
- Compressors & Pumps
- Hydraulics & Pneumatics
- Agriculture & Construction Equipment
- Transportation & Off Road Vehicles
- Engine Controls & Monitors
- Air Conditioning & 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 (-20°C to 100°C)

85HP

Option A: (Standard Accuracy)  
±0.02% F.S. / °C typ

86HP

Option B:  
±0.008% F.S./°C typ  
Option C:  
±0.006% F.S./°C typ

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

Storage Temperature: -40°C to +120°C

##### Electrical

Supply Voltage ..... 10-32 Vdc

Output Current ..... 4-20 mA

Output Load range .....  $\frac{(V_s - 10 \text{ Vdc})}{20 \text{ mA}}$

Output Response Time ..... 2 ms

Overvoltage Protection ..... 32 Vdc

Reverse Voltage Protection ..... -30 Vdc

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 ..... 20g rms  
(up to 1kHz)

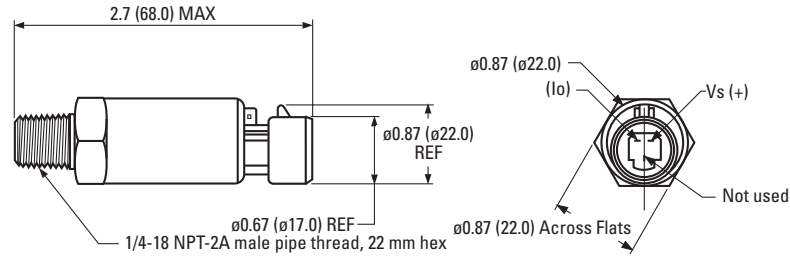
Drop (any axis) ..... 1m

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### Current Output, High Accuracy, Hermetic

#### Dimensions (Typical) in (mm)



#### Ordering Information

##### EXAMPLE

	85HP	06	2	X	00500	S	S	0	A
Series	85HP								
Pressure Connection	1/4-18 NPT-2A male pipe, 22 mm								
Electrical Connection	Standard Packard Metri-Pack								
Device Input-Output	Power Input: 4.5-5.5 Vdc, Device Output 0.5-4.5 Vdc								
Pressure Range	0-0500 psi								
Pressure Reference	Sealed Gage								
EMC	Standard-(300 V/m, 1 MHz-400 MHz)								
Potted Wire Lead Length	1M								
Total Thermal Effect Standard	Standard Accuracy								

#### STANDARD OPTIONS

Series	85HP Standard Accuracy	86HP High Accuracy
Pressure Connection	05 3/8-24 UNF-2A male o-ring thread per SAE J514, 22 mm hex 06 1/4-18 NPT-2A male pipe, 22 mm hex 07 7/16-20 UNF-2A male o-ring per SAE J514, 22 mm hex	12 M14 x 1.5 male o-ring thread per ISO 6149, 22 mm hex 14 1/8-27 NPT-2A male pipe, 22 mm hex 15 7/16-20 UNF-2B female with Schraeder deflator
Electrical Connection	2 Standard Packard Metri-Pack™ 3 Hirschman Mini DIN (GDSN 307)	4 Wire leads 6 Hirschman DIN (43650)
Device Input-Output	Supply Voltage Y Vs... 10-32 Vdc	Output Current Io... 4-20 mA
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
EMC	S 20 v/m, 1 MHz-400 MHz	
Wire Leads	0 No wire (Packard, DIN)	1 1 meter length      2 2 meter length
Total Thermal Effect (-20°C TO +100°C)	85HP A ±0.01% F.S./°C typ	86HP B ±0.008% F.S./°C typ C ±0.006% F.S./°C typ

#### SPECIAL OPTIONS

(Contact factory for availability)

Packard Metri-Pack is a trademark of Delphi Packard Electric Systems



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