Delphi Turbo Pressure Sensors

Delphi Turbo Pressure Sensors provide precise measurements of manifold turbo pressure and other high output gasoline and diesel engine performance characteristics, in operating pressure ranges up to 3.5 bar, 350 kPa, 3.5 Atm, or 50 psi.

Delphi Turbo Pressure Sensors are designed to perform in harsh environments such as extreme temperatures and vibration, thermal and mechanical shock, and chemical contamination. They provide voltage output proportional to the gauge pressure in turbo pressure systems.

Delphi Turbo Pressure Sensors

Benefits

- Electronic compensation for precise measurements in a variety of environments
  - Reliable and robust
  - Low part count
  - Automotive grade
  - ISO/TS 16949 certified
- Mounting flexibility
- Designed for under-hood environments
- Appropriate for a wide range of automotive and non-automotive applications
- Patented direct mount, eliminating the need for a bracket
- Temperature compensation
- Electromagnetic interference (EMI) protection
- Solid state microelectronic technology
- Trim to customer specification

Typical Applications

Delphi Turbo Pressure Sensors can be used in turbo-charged and super-charged gasoline engine intake manifold pressure applications. They can also be used in high output diesel engine applications.

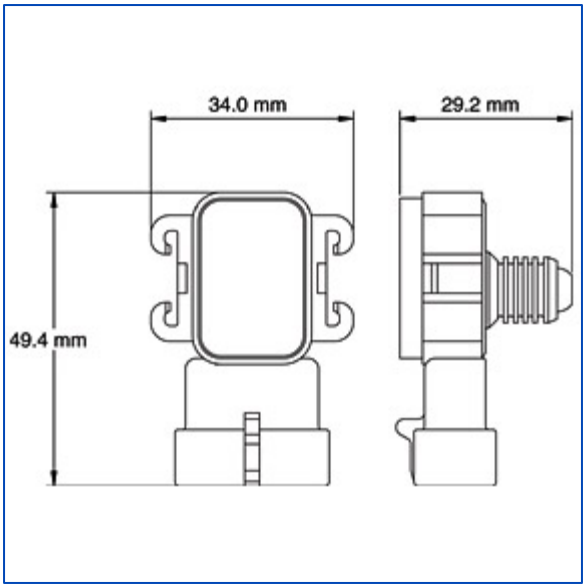
Delphi Turbo Pressure Sensors can be used in other non-automotive gaseous pressure applications within appropriate ranges.

Performance Advantages

Delphi Turbo Pressure Sensors feature cutting-edge sensing technology and a patented Delphi Application Specific Integrated Circuit (ASIC) design. They are built in-house and provide highly robust and reliable operation. Combined with Delphi's vast manufacturing experience, they offer quality and customer satisfaction.

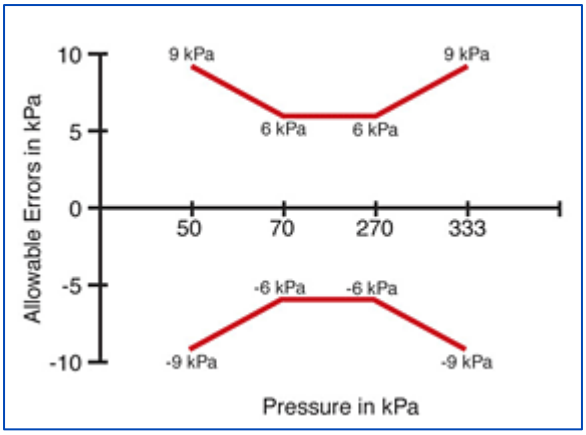
Delphi Turbo Pressure Sensors are cost-effective and their patented, direct-mount design can also contribute to system savings. They can be tailored to meet specific customer requirements.

Delphi Turbo Pressure Sensor



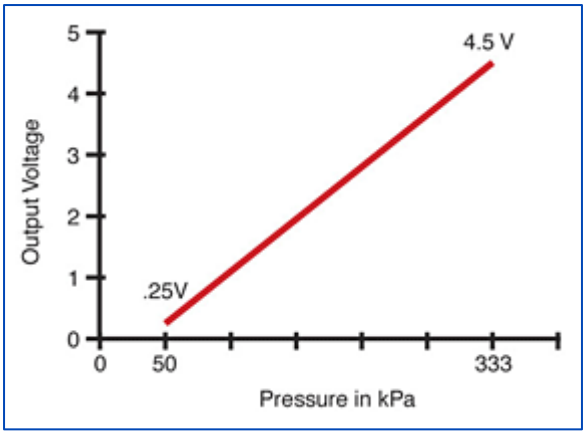
Delphi Turbo Pressure Sensors offer compact size to help meet packaging objectives. They also feature a direct mounting capability to eliminate the need for separate mounting brackets.

Allowable Pressure Error



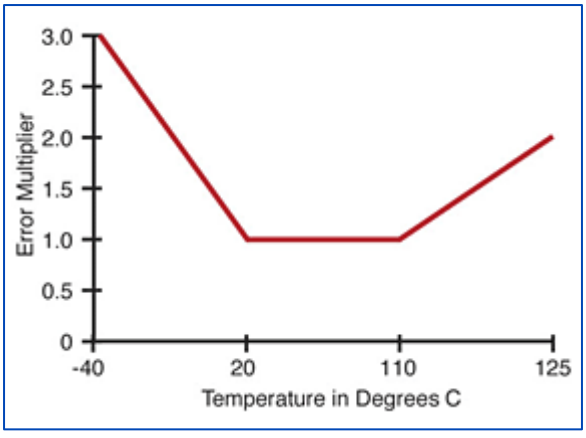
The total output pressure error for Delphi Turbo Pressure Sensors includes error due to linearity, hysteresis and ratiometricity.

Transfer Curve



This chart shows the typical sensor voltage for Delphi Turbo Pressure Sensors over a 3.3 bar pressure range.

Temperature Error Multiplier



This graph shows the temperature multiplier to the allowable pressure error over the operating temperature range for Delphi Turbo Pressure Sensors.

Performance Data for Standard Calibration

Pressure Range	
Operating	10 kPa to 350 kPa (2.0, 2.5, 3.3 and 3.5 bar available)
Maximum	667 kPa
Full scale accuracy	1% to 5%

Temperature Range	
Operating	-40°C to 125°C
Storage	-50°C to 150°C

Electrical Characteristics	
Supply voltage	5.0 ± 0.1 V_{DC}
Supply current	<10 mA_{DC}
Maximum output current	Sink 1 mA_{DC} Source 0.1 mA_{DC}
Output impedance	<10 Ω
Output voltage	0.2 to 4.9 V_{DC}

Note: Custom calibrations are available upon request.

Delphi offers a Turbo Pressure Sensor that features bolt- or bracket-mounting capabilities.

The Delphi Advantage

Delphi has one of the industry's most complete portfolios of sensors and a thorough understanding of systems integration. Delphi offers global manufacturing capabilities for sensors and more than 30 years' experience in powertrain sensors research and production. Delphi can provide manufacturers with the necessary support and high quality, high-value products tailored to specific customer requirements.

As a global leader in engine management systems technology, Delphi can help manufacturers around the world meet emissions requirements, improve fuel economy and enhance performance. Delphi is a source for high value solutions and our systems expertise is built into every product. Delphi's flexible engineering approach encourages collaboration. And, Delphi has a thorough understanding of automotive markets around the world and a global network of resources.