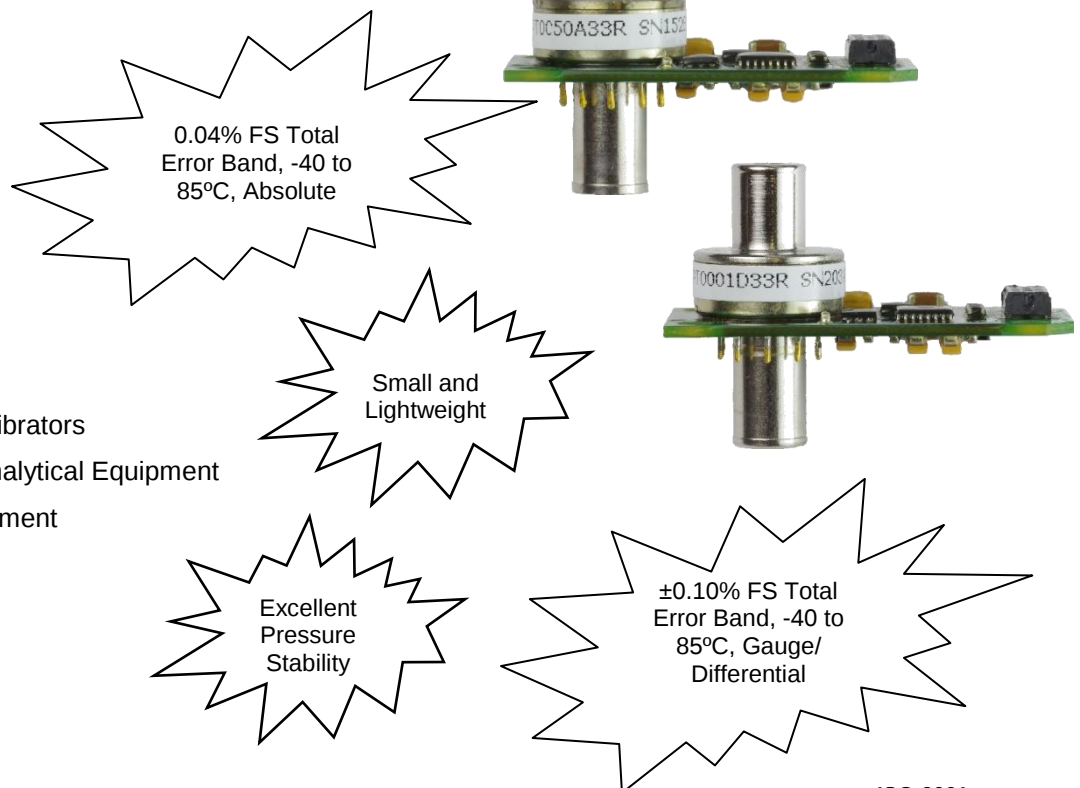


Integrated Pressure Transducer IPT

Honeywell's Integrated Pressure Transducer (IPT) provides high accuracy pressure data in an industry standard SPI digital format. The core of the IPT is a proven Honeywell silicon piezoresistive pressure sensor with both pressure and temperature sensitive elements. The IPT is small and lightweight and can be easily integrated by the user into a wide variety of applications that require high performance in a small package. Applying the coefficients stored in the on-board EEPROM to the normalized IPT pressure and temperature output yields highly accurate and stable pressure readings over the -40 to 85°C compensated temperature range.

APPLICATIONS:

- Air Data Computers
- Altimeters
- Cabin Air Pressure
- Engine Test Systems
- Flight Test Systems
- Meteorology
- Flow and Pressure Calibrators
- Instrumentation and Analytical Equipment
- Research and Development

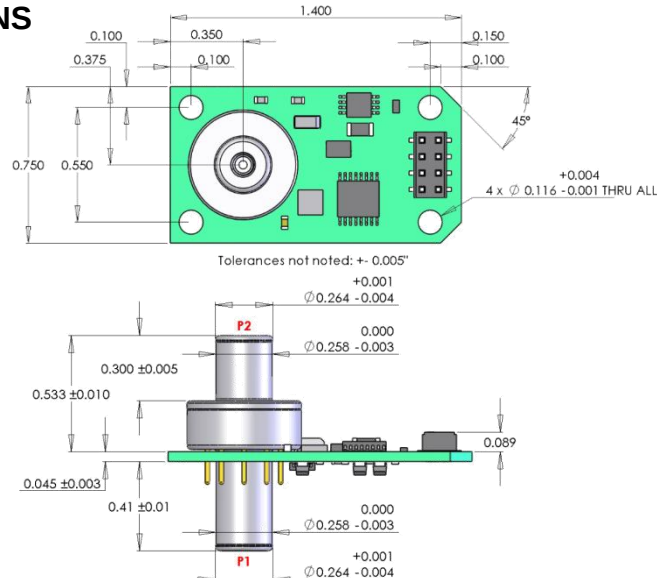
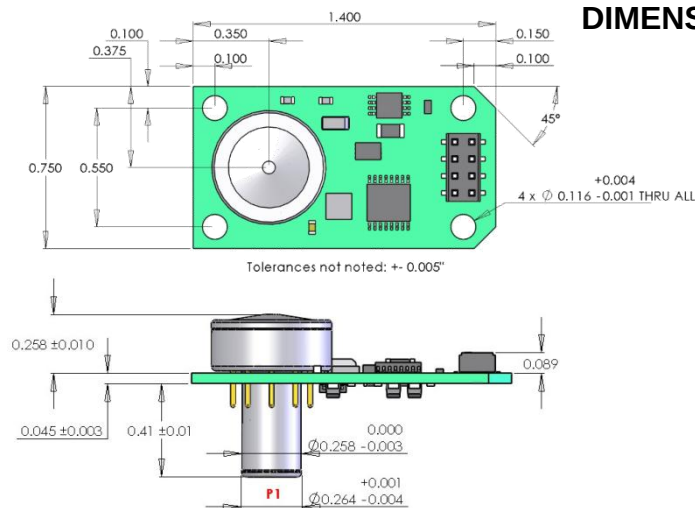


FEATURES AND BENEFITS

ISO-9001
ISO-14001

- | | |
|--|---|
| <ul style="list-style-type: none"> ▶ High Accuracy Over a Wide Temperature Range
From -40 to 85°C
±0.04% FS Total Error Band (absolute pressure),
to ±0.10% FS Total Error Band (gauge/ differential pressure) ⁽¹⁾ ▶ Digital SPI Output ▶ Small and Versatile | <ul style="list-style-type: none"> ▶ Stored Correction Coefficients in EEPROM – Ready to use; No additional pressure and temperature calibration necessary.
Simplifies System Design – No additional signal compensation needed to achieve a highly accurate pressure reading. ▶ Industry Standard Interface – Ready communication between a µController/µProcessor and the IPT. ▶ Volume ~ 1 in³ (16 cm³)
Lightweight – Less than 10 grams.
Media Interface – Handles most dry gas media. |
|--|---|

DIMENSIONS



SPECIFICATIONS

Performance Specifications⁽¹⁾

Total Error Band: (from -40 to 85°C)

±0.04%FS absolute

±0.10%FS gauge, differential

±0.20%FS 1 psi gauge

Temperature Range:

Operating: -40 to 85°C (-40 to 185°F)

Storage: -55 to 125°C (-67 to 257°F)

Pressure Sensor Temperature Error: ±1°C typ.

Long Term Stability⁽⁵⁾:

0.025% FS max per year

Mechanical Specifications

Pressure Ranges and Type:

See Ordering Information at right

Pressure Units: PSI⁽²⁾

Media Compatibility: Suitable for non-condensing, non-corrosive, and non-combustible gases.

Weight⁽³⁾: ~8.0 grams (absolute)

~9.7 grams (gauge, differential)

Electrical Specifications

Output:

24-bit pressure value

16-bit temperature value

256 x 8 EEPROM configuration

Power Requirements:

Supply Voltage: 4 to 12 VDC

Current Consumption:

6 mA typical, 7.5 mA max

Interface: 3.3V SPI (mode 1,1) SCLK ≤5 Mhz

Update Rate: 166 samples/second

Environmental Features

Overpressure: 3x FS

Burst Pressure: 3x FS

Mechanical Shock: DO-160E Section 7.0,

Category A, Figure 7.2, Operational Standard

Thermal Shock: Storage Temperature Cycling per JESD22-104, Section 5.0: -55°C to +125°C

Vibration: DO-160E Section 8, Category H,

Aircraft Type 2, Aircraft Zones 1 & 2

RoHS Compliant (2002/05/EC): Yes

ORDERING INFORMATION

IPT Integrated Pressure Transducer

IPT	FULL SCALE PRESSURE RANGE		
	Absolute	Gauge	Differential
0001	N/A	1 PSIG ⁽¹⁾	1 PSID
0002	N/A	2 PSIG	2 PSID</