Combustion Pressure Sensor
A Miniature, Economical Drop-in Replacement

**Highlights**
- Drop-in replacement for competitor models
- Small M5 package
- High sensitivity
- Durable stainless steel housing
- Low thermal shock
- Functions in high temperatures up to 752°F (400°C)
- Measurement range up to 3.5 kpsi (241 bar)

**Applications**
- Combustion Pressure Monitoring
- Research & Development
- On-board Measurements
- Thermodynamic Measurements
- Friction Loss Analysis
- Small Engine Development
- Complex Cylinder Head Geometry
- Combustion Analysis
- Powertrain Development
- Stationary Engine
- Works with Gasoline, Diesel, Natural Gas, Propane, Ethanol and Biofuel Engines

The PCB® Model 115A04 high-temperature pressure sensor is the industry's latest economical alternative for accurately measuring cylinder pressure in combustion events.

Ideal for measuring dynamic combustion pressure in engines using gasoline, diesel or alternative fuels, the Model 115A04 was designed for internal combustion engine applications that require a small package size, and high pressure, temperature and sensitivity.

**Wide Amplitude and Frequency Range**
This competitively priced charge output sensor includes naturally stable sensing elements, so it is a highly accurate way to measure dynamic pressure variations over a wide amplitude and frequency range. This sensor offers a measurement range up to 3.5 kpsi (241 bar) and is survivable to 752°F (400°C).

**Durable and Dependable**
This competitively priced charge output sensor measures to 250°C and is survivable up to 400°C. Its stainless steel housing and welded hermetic diaphragm help ensure durability in harsh testing environments.

In addition to traditional gas and diesel engine applications, the Model 115A04 is also used for internal combustion testing of small engines, motorcycle and ATV engines, stationary marine equipment, and power-generating engines. It comes with a standard one-meter FKM cable which terminates into a BNC connector and can be integrated with other manufacturer’s systems and accessories.

**Exceptional Service**
We offer world-class customer service, provided 24 hours a day by live customer service representatives, so when you call any time of the day or night, you can speak with a real person. As with all PCB® instrumentation, our combustion sensors are complemented with toll-free applications assistance and are backed by our no risk policy that guarantees your satisfaction or your money back.
Model 115A04

### Specifications

#### PERFORMANCE

- **Sensitivity (±15%)**
  1.40 pC/psi (20.3 pC/bar)

- **Measurement Range**
  3.5 kpsi (241.1 bar)

- **Maximum Pressure**
  4.35 kpsi (300 bar)

- **Resonant Frequency**
  >125 kHz

- **Non-Linearity**
  <0.3% FS

#### ENVIRONMENTAL

- **Acceleration Sensitivity**
  <0.007 psi/g
  <0.0005 bar/g axial

- **Temperature Range (Operating)**
  -4° to 662°F (-20° to 250°C)

- **Temperature Range (Survivable Limit)**
  -58° to 752°F (-50° to 400°C)

- **Thermal Sensitivity Shift (20° to 250°C)**
  2%

- **Thermal Sensitivity Shift (200° C ±50°C)**
  1%

- **Thermodynamic Error (P psi)**
  <2%

- **Thermodynamic Error (P max)**
  <1%

- **Thermodynamic Error (P short term drift)**
  <7.25 psi

- **Maximum Shock**
  2000 g pk

#### ELECTRICAL

- **Capacitance (with cable)**
  128 pF (10.5 pF typical w/o cable)

- **Insulation Resistance (at room temperature)**
  $\geq 10^{13} \Omega$

#### PHYSICAL

- **Housing material**
  17-4 Stainless Steel

- **Diaphragm**
  17-4 Stainless Steel

- **Sealing**
  Welded Hemetic

- **Electrical Connector**
  M4 x 0.35 Coaxial

- **Weight (without cable)**
  0.085 oz (2.4 gm), 1.4 ounces with cable

- **Cable type**
  006M40 (FKM) - 1 meter in length

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Model 443B02

1-channel system, dual-mode charge amplifier system, line powered

For ICP® and charge output sensors, the Model 443B02 signal conditioner includes medium and long discharge time constant settings. This modular series system consists of a signal conditioner module, power supply module, and a chassis.