

**Model Number**  
176A02

# CHARGE OUTPUT PRESSURE SENSOR

Revision: F  
ECN #: 51929

**Performance**

	ENGLISH	SI	
Sensitivity(+/- 20 %)	6 pC/psi	87 pC/bar	
Measurement Range	725 psi	50 bar	
Maximum Pressure(Total)	5,200 psi	358.5 bar	
Resonant Frequency	≥ 100 kHz	≥ 100 kHz	
Transverse Resonance	> 15 kHz	> 15 kHz	
Frequency Response(± 5.0 %)	20,000 Hz	20,000 Hz	[1][2]
Non-Linearity	≤ 1 % FS	≤ 1 % FS	[3]

**Environmental**

	ENGLISH	SI	
Acceleration Sensitivity	≤ 0.0036 psi/g	≤ .00025 bar/g	
Temperature Range(Continuous)	-94 to 1,200 °F	-70 to 650 °C	
Temperature Range(Connector)	-76 to 500 °F	-60 to 260 °C	
Temperature Response	See Graph	See Graph	[4]
Hazardous Area Approval	See Manual	See Manual	
Radiation Exposure Limit(Integrated Neutron Flux)	1E10 N/cm <sup>2</sup>	1E10 N/cm <sup>2</sup>	
Radiation Exposure Limit(Integrated Gamma Flux)	1E8 rad	1E8 rad	

**Electrical**

	ENGLISH	SI	
Output Polarity	Differential	Differential	
Capacitance(with cable pin - pin)	150 pF	150 pF	[4]
Internal Resistance(room temp)	≥ 10 <sup>12</sup> Ohm	≥ 10 <sup>12</sup> Ohm	
Insulation Resistance(room temp)	≥ 10 <sup>12</sup> Ohm	≥ 10 <sup>12</sup> Ohm	
Internal Resistance(1200°F/650°C)	≥ 50,000 Ohm	≥ 50,000 Ohm	
Insulation Resistance(1200°F/650°C)	≥ 100,000 Ohm	≥ 100,000 Ohm	

**Physical**

	ENGLISH	SI	
Sensing Element	UHT-12™	UHT-12™	
Sensing Geometry	Compression	Compression	
Housing Material	Nickel Alloy	Nickel Alloy	
Sealing	Welded Hermetic	Welded Hermetic	
Electrical Connector	7/16-27 2-Pin	7/16-27 2-Pin	
Cable Type	Hardline	Hardline	
Cable Length	10 ft	3 m	
Weight(with cable)	4.6 oz	130 gm	[4]

**OPTIONAL VERSIONS**

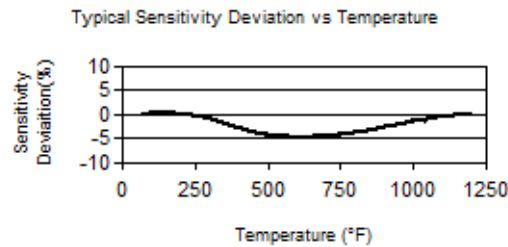
Optional versions have identical specifications and accessories as listed for the standard model except where noted below. More than one option may be used.

**NOTES:**

- [1]Low frequency response is determined by external signal conditioning electronics.
- [2]Upper frequency response is calculated from Resonant Frequency.
- [3]Zero-based, least-squares line method.
- [4]Typical.
- [5]See PCB Declaration of Conformance PS058 for details.

**SUPPLIED ACCESSORIES:**

Model 060A59 Mounting Adaptor, 20 mm Hex, M18 x 1.5 Threads (1)



[5]



All specifications are at room temperature unless otherwise specified.  
In the interest of constant product improvement, we reserve the right to change specifications without notice.

Entered: ND	Engineer: RPF	Sales: TT	Approved: RPF	Spec Number:
Date: 07/17/2023	Date: 07/17/2023	Date: 07/17/2023	Date: 07/17/2023	57333

**PCB PIEZOTRONICS** Phone: 716-684-0001  
AN AMPHENOL COMPANY Fax: 716-684-0987  
E-Mail: info@pcb.com

3425 Walden Avenue, Depew, NY 14043