



MODEL 121

RUGGED, INDUSTRIAL, DYNAMIC ICP® PRESSURE SENSORS

- All-welded, Hermetically Sealed, Stainless Steel Construction
- Solid-state, Piezoelectric, Quartz Crystal Sensing Elements with Built-in, Microelectronic Signal Conditioning
- Electrical Case Isolation Prevents Noise Interference and Ground Loop Problems
- 1/4" NPT Process Fitting for Ease of Installation (Metric Optional)
- Rugged, 2-pin MIL Connector or Submersible, Integral Cable



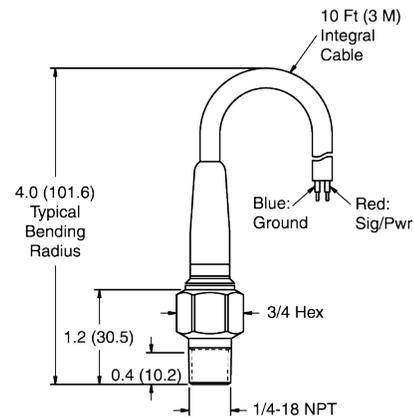
MONITOR AND DETECT PULSATIONS AND SURGES IN LIQUID OR PNEUMATIC SYSTEMS FOR TROUBLESHOOTING, PREDICTIVE MAINTENANCE, AND PROCESS IMPROVEMENT

Piezoelectric pressure sensors offer the unique ability to respond to very rapid pressure spikes, pulsations and surges. They can also sense minute pressure fluctuations while being subjected to very high static pressures. The Series 121 Industrial Dynamic ICP® Pressure Sensors satisfy such measurement requirements in monitoring, diagnostic, troubleshooting, and control applications in harsh, factory environments. Applications include: leak detection; locating sources of damaging water hammer and cavitation; troubleshooting pulsations in liquid delivery systems; and fine tuning pumping system and valve behavior to improve efficiencies and reduce maintenance.

As with all PCB® instrumentation, these sensors are complemented with toll-free applications assistance, 24-hour customer service, and are backed by a no-risk policy that guarantees satisfaction or your money refunded.

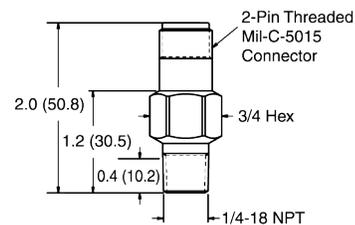
INDIVIDUAL SPECIFICATIONS						
Available Models / Range	100 psi (700 kPa)		1000 psi (7000 kPa)		5000 psi (35,000 kPa)	
2-pin, MIL-C-5015 Connector	121A21		121A22		121A23	
Molded, Integral 2-conductor Cable	121A31		121A32		121A33	
Performance	English	SI	English	SI	English	SI
Sensitivity ($\pm 20\%$)	50 mV/psi	psi 7.25 mV/kPa	5 mV/psi	0.725 mV/kPa	1 mV/psi	0.145 mV/kPa
Dynamic Measurement Range	100 psi	700 kPa	1000 psi	7000 kPa	5000 psi	35,000 kPa
Broadband Resolution	0.004 psi	0.028 kPa	0.01 psi	0.07 kPa	0.04 psi	0.28 kPa
Maximum Dynamic Pressure	200 psi	1400 kPa	1000 psi	7000 kPa	7200 psi	50,000 kPa
Maximum Combined Pressure	600 psi	4200 kPa	6000 psi	41,000 kPa	7200 psi	50,000 kPa
Resonant Frequency	≥ 200 kHz	≥ 200 kHz	≥ 200 kHz	≥ 200 kHz	≥ 200 kHz	≥ 200 kHz
Rise Time	≤ 2 μ sec	≤ 2 μ sec	≤ 2 μ sec	≤ 2 μ sec	≤ 2 μ sec	≤ 2 μ sec
Low Frequency Response (-5%)	0.5 Hz	0.5 Hz	0.005 Hz	0.005 Hz	0.005 Hz	0.005 Hz
Discharge Time Constant	≥ 1 sec	≥ 1 sec	≥ 100 sec	≥ 100 sec	≥ 100 sec	≥ 100 sec
Non-Linearity	$\leq 2\%$ FS	$\leq 2\%$ FS	$\leq 2\%$ FS	$\leq 2\%$ FS	$\leq 2\%$ FS	$\leq 2\%$ FS

COMMON SPECIFICATIONS		
Environmental	English	SI
Acceleration Sensitivity	≤ 0.04 psi/g	≤ 0.028 kPa/m/s ²
Dynamic Measurement Range	-65 to +250 °F	-54 to +121 °C
Broadband Resolution	≤ 0.06 %/°F	≤ 0.108 %/°C
Electrical		
Output Polarity (positive pressure)	Positive	Positive
Excitation Voltage	≥ 200 kHz	≥ 200 kHz
Excitation Constant Current	≤ 2 μ sec	≤ 2 μ sec
Output Impedance	0.5 Hz	0.5 Hz
Output Bias Voltage	≥ 1 sec	≥ 1 sec
Electrical Case Isolation	$\leq 2\%$ FS	$\leq 2\%$ FS
Mechanical		
Size	See Drawing	See Drawing
Weight (approximate, without cable)	2 oz	56 gm
Mounting Thread	1/4-18 NPT*	1/4-18 NPT*
Sensing Element	Quartz	Quartz
Case Material	Stainless Steel	Stainless Steel
Sealing (welded)	Hermetic	Hermetic
Options (indicate using prefix letter shown)		
* M - Metric installation via M14 \times 1.25 straight thread		



Models 121A31, 121A32, 121A33

with integral cable



Models 121A21, 121A22, 121A23

with 2-pin MILconnector