PCB PIEZOTRONICS
AN AMPHENOL COMPANY

MODEL **410D01**

ICP® SIGNAL CONDITIONER FOR PROCESS MONITORING

- Delivers excitation power for ICP® sensors
- Provides waveform, zero clamped, and peak track hold analog outputs
- Offers AC or DC signal coupling and choice of 7 gain settings

The Model 410D01 signal conditioner from PCB Piezotronics is designed for operation with Integrated Circuit Piezoelectric (ICP®) sensors and is ideally suited for monitoring manufacturing processes associated with assembly and product testing. With a choice of AC or DC coupling, both quasi-static and dynamic measurements up to 1 kHz are possible. The unit synchronizes with machine cycles through a reset feature while analog and peak hold outputs allow for real-time monitoring with machine control devices.

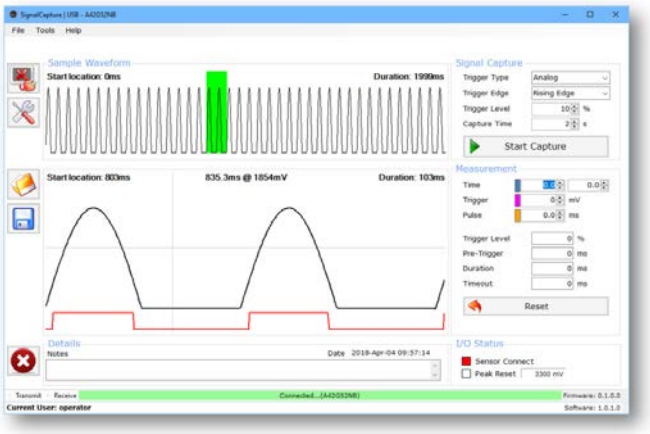
TYPICAL APPLICATIONS

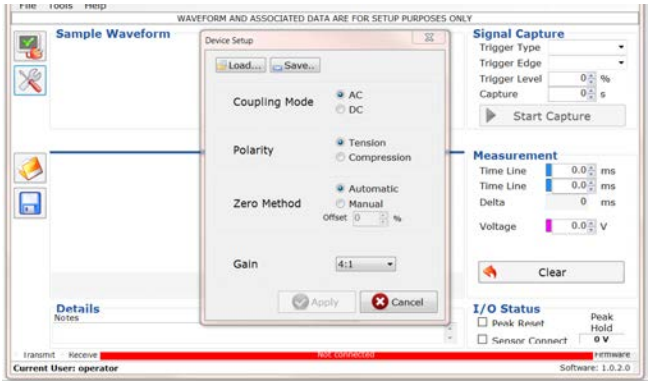
- Real Time Industrial Process Monitoring with ICP® Sensors
- Analog waveform output can be mapped against a signature or standard “pulse” with set tolerances
- Captures the dynamic positive peak value of every machine cycle when the reset feature is utilized and synchronized.

410D01 SOFTWARE & USE

The 410D01 includes our downloadable Signal Capture software allowing the end user to view a sample waveform, ensuring proper sensor operation with respect to the intended response. Collected sample waveforms may be saved for future reference.

The software also serves as a portal for instrument configuration. Selectable features include coupling mode, signal polarity, zero, and gain. Indicators for sensor connect and peak reset are provided for reference purposes.





SOFTWARE FEATURES

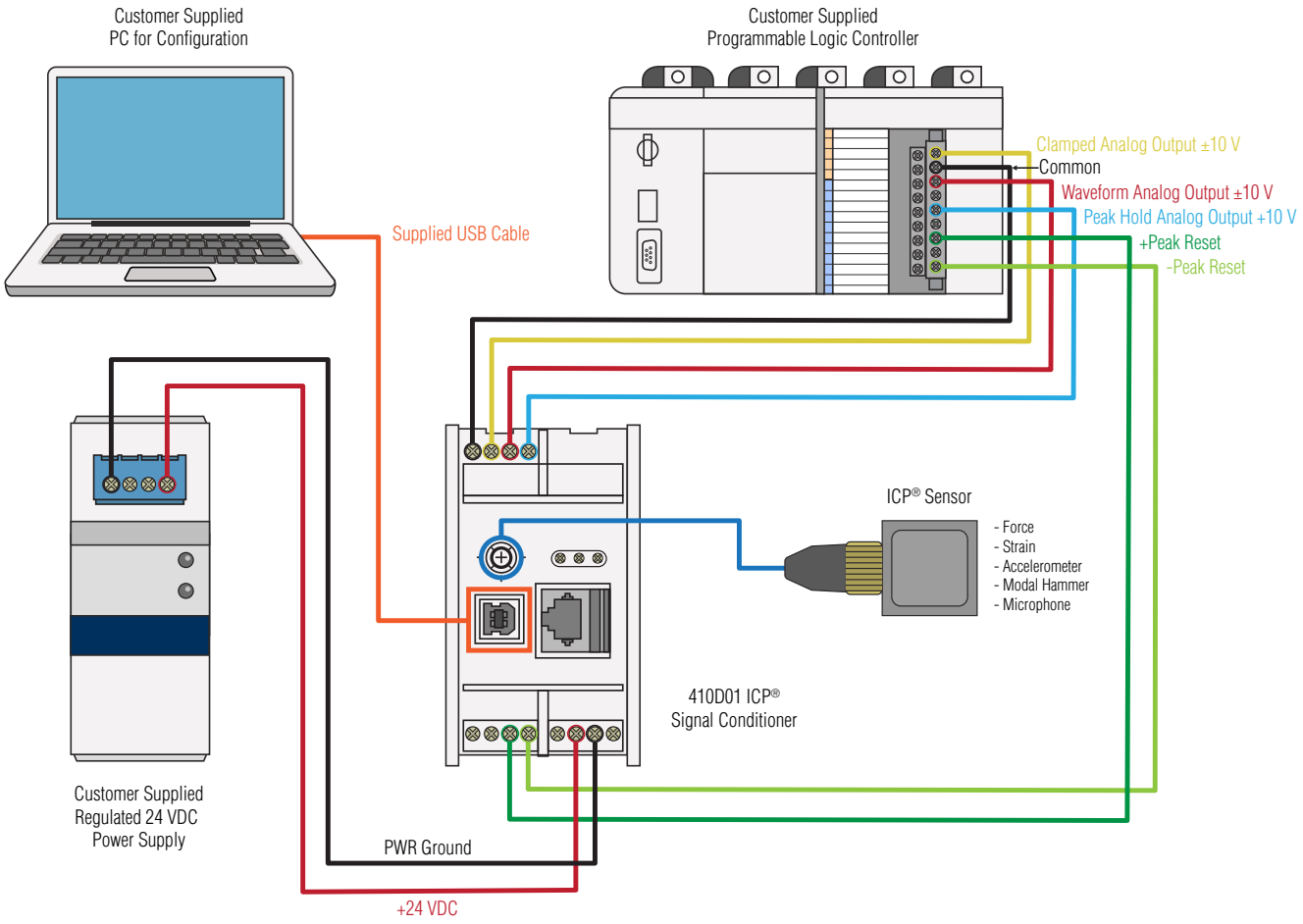
- Integrated User's Guide
- Captures up to 30 Seconds of Time Waveform Data
- Pulse-width and Amplitude Measurable with Scope Tool

IN THE BOX

- 410D01 Module
- USB Cable, Type A to Type B
- Operating Manual
- Quickstart Guide

DOWNLOAD SOFTWARE >

TYPICAL SYSTEM WIRING DIAGRAM

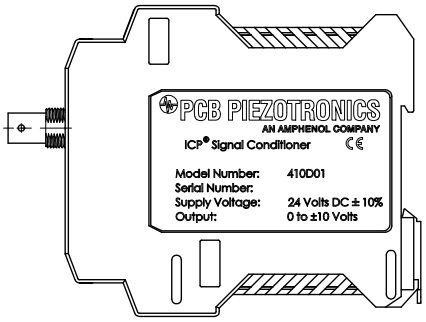


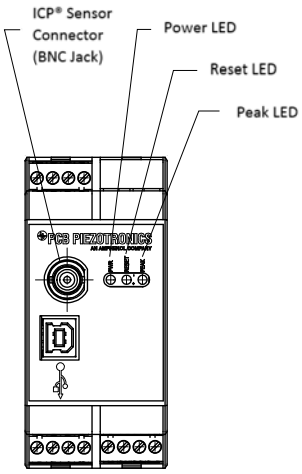
SPECIFICATIONS

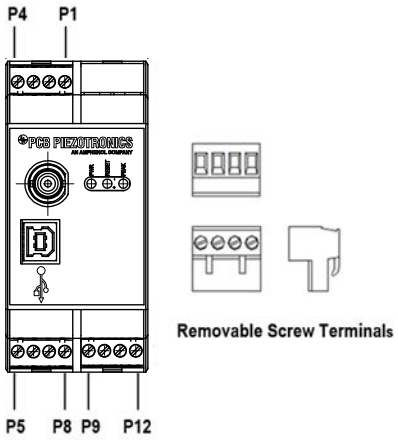
Model Number	410D01
Performance	**English (SI)**
Channels	1
Output Voltage (Instantaneous)	±10 V
Output Voltage (Peak)	0 to 10 V
High Frequency Response	1 kHz
Low Frequency Response, AC coupled (±5%)	1 Hz
Low Frequency Response, DC coupled	Governed by Sensor DTC
Output Voltage (Zero Clamp)	0 to 10 V
Voltage Gain (Incremental Steps)	x1, x2, x4, x8, x10, x16, x20
Environmental	
Temperature Range (Operating)	-40 to +158 °F (-40 to +70 °C)
Electrical	
Power Required (±10%)	24 VDC
Current Draw (Maximum)	350 mA
Excitation Voltage (To Sensor)	20 VDC
Constant Current Excitation (To Sensor)	4 mA
Broadband Electrical Noise (1 Hz to 10 kHz)	20 µV rms
Peak Hold Reset	Solid State Ready
Discharge Time Constant (AC coupled)	0.6 sec
Physical	
Size (Length x Height x Width)	4.46 x 3.9 x 1.78 in (113 x 99 x 45 mm)
Mounting	35 mm DIN Rail
Electrical Connector (Sensor Input)	BNC Jack
Electrical Connector (Analog Output, Waveform, Peak, Zero Clamp, Ground)	Removable Screw Terminals

PIN DESCRIPTIONS

Terminal	Connection
1	Peak Hold Out
2	Waveform Out
3	Clamp Out
4	Analog Ground
5	N/C
6	N/C
7	Reset +
8	Reset -
9	+ 24 VDC
10	- 24 VDC
11	Power Ground
12	Power Ground







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