

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

### 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.

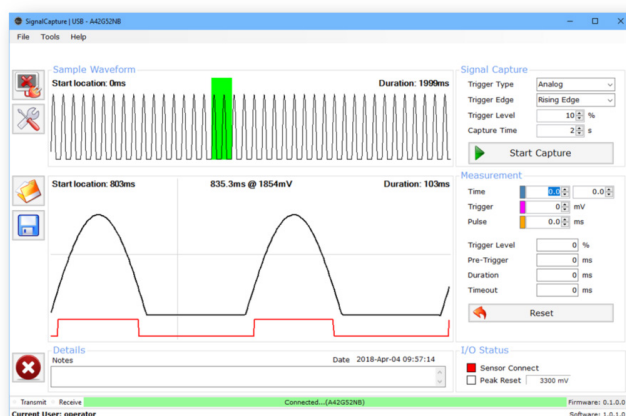
The Model 410D01 signal conditioner from PCB Piezotronics is designed for operation with Integrated Circuit Piezoelectric (ICP®) sensors and is ideally suited for monitoring manufacturing processes associated with assembly and product testing. With a choice of AC or DC coupling, both quasi-static and 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.



## 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.

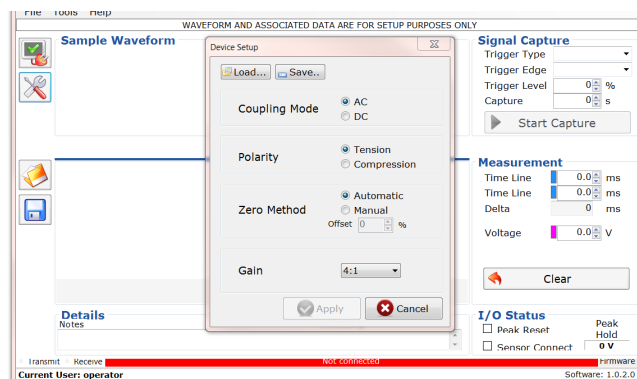


### SOFTWARE FEATURES

- 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



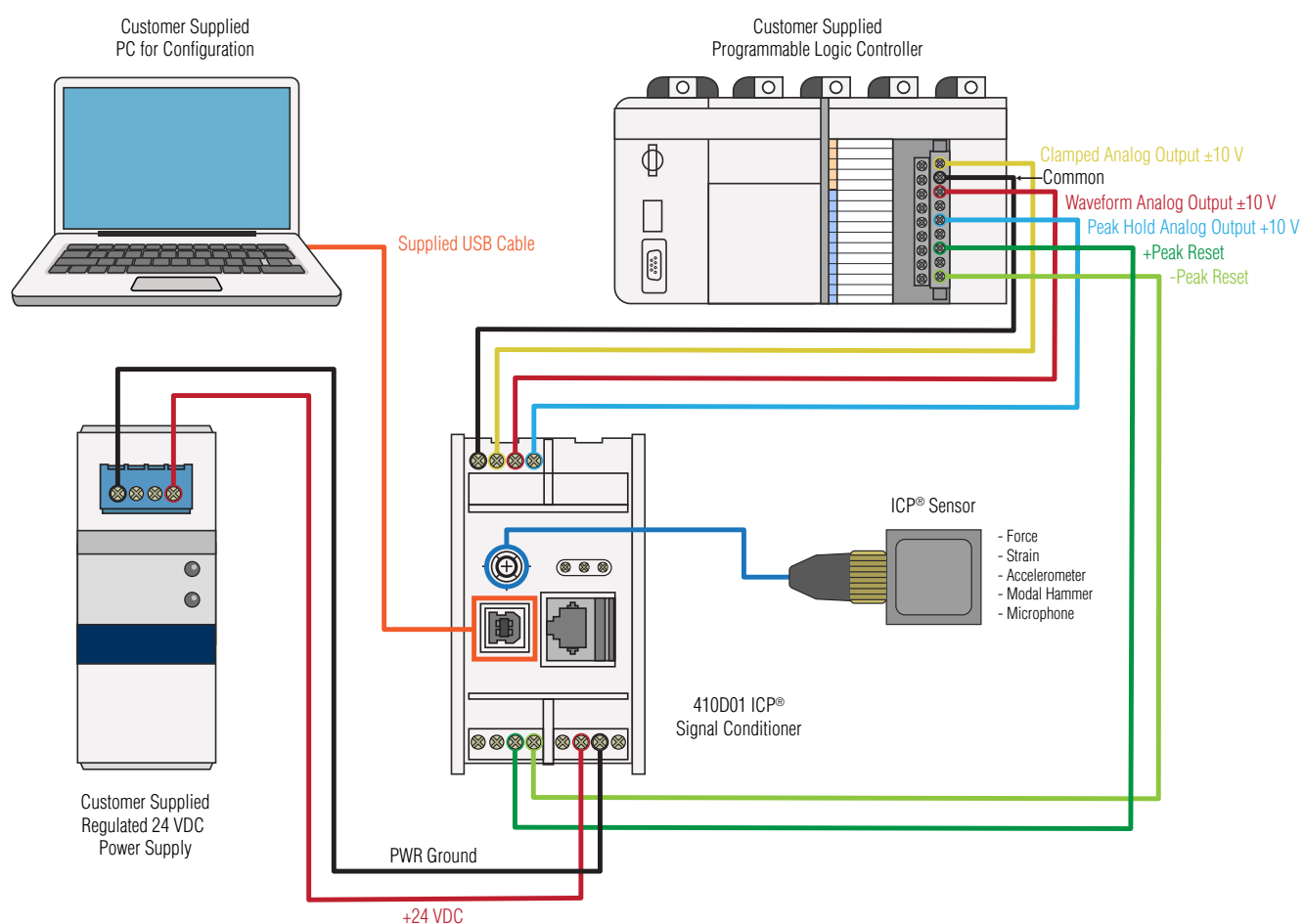
**DOWNLOAD SOFTWARE**



[www.pcb.com/410D01](http://www.pcb.com/410D01)



## 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)	
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 Out
5	N/C
6	N/C
7	Reset +
8	Reset -
9	+ 24 VDC
10	- 24 VDC
11	Power Ground
12	Power Ground

