PLACID INSTRUMENTS

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PRECISION SOUND AND VIBRATION INSTRUMENTS AND SENSORS

PLACID FOUR-CHANNEL DATA ACQUISITION UNIT

PQ401-B

Compact 24-bit acquisition for sound and vibration – IEPE or voltage inputs, streamed over Ethernet

4 channels · up to 192 kS/s per channel

IEPE / voltage

Ethernet · TCP/IP



INTRODUCTION

The PQ401-B is a compact four-channel data acquisition unit with simultaneous 24-bit sampling at up to 192 kS/s per channel. Each BNC input accepts IEPE sensors (constant-current supply built in) or voltage signals up to ±10 V. The data are streamed over Ethernet with an open TCP/IP protocol, so the unit works directly with PLACID Studio or with your own applications in C, C#, MATLAB or Python.

APPLICATIONS & SPECIFICATIONS

APPLICATIONS

- Sound & vibration measurement and data logging
- Noise monitoring – environmental and industrial
- Machine condition monitoring – motors, pumps, machine tools
- Structural dynamics – impact hammer FRF and modal testing
- Automotive & aerospace testing
- Acoustics – sound power, intensity, room acoustics
- Field use with DC 12 V or an external battery pack

Complete system: PQ401-B + PLACID Studio (sound level meter and basic vibration modules included; further analysis modules optional). Open TCP/IP protocol and SDK for C, C#, MATLAB and Python.

DATASHEET PQ401-B

Input channels	4, sampled simultaneously
Input interface	BNC
Input type	Voltage / IEPE
Input coupling	AC / DC
Resolution	24-bit
Sampling rate	up to 192 kS/s per channel
Anti-aliasing filter	Yes
Maximum input voltage	±10 V
Random noise	0.03 mVrms
Dynamic range	114 dB
IEPE supply	4 mA / 24 V
Data interface	Ethernet, TCP/IP (open protocol)
Software development kit	C, C#, MATLAB, Python
Power supply	DC 12 V / external battery
Dimensions	110 × 107 × 28 mm
Weight	520 g

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