THE MODAL SHOP
AN AMPHENOL COMPANY

485B39 SERIES

DIGIDAQ™ USB SIGNAL CONDITIONER

- Easily acquire, save, and share data on-the-go

- Plug & play, portable sensor digitization

- High-quality, 24-bit, broad-frequency measurements

- 2-channel ICP (IEPE) sensor inputs (also available with voltage or mixed voltage/ICP inputs as Models V485B39 and IV485B39)

- Available with cable terminating in USB-A or USB-C

- Compatible with Python, MATLAB®, LabVIEW™, and a variety of time and frequency signal analysis programs

- Windows, iOS, Android, macOS, and Linux ready
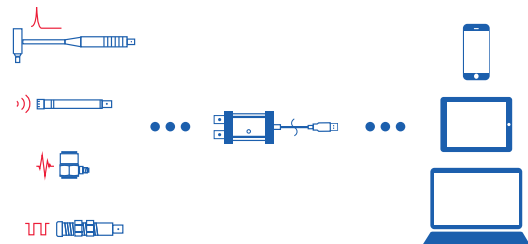
TYPICAL APPLICATIONS

- General dynamic signal digitizing

- Sound & vibration measurements: isolation, transmissibility, correlation studies, resonance testing, and troubleshooting

- Industrial IoT applications

- Educational laboratory experiments

- Binaural recordings

DIGITAL SENSING IN YOUR POCKET

An ultra compact, dual-channel digital signal conditioner, the 485B39 Series offers standard USB audio digital output. Plug & play signal conditioning makes for quick setup and intuitive functionality without the need for driver installation. The 485B39 can power ICP sensors through BNC connections while digitizing their signals over USB. Simply plug the unit into a USB port and view signals from accelerometers, microphones, hammers, or any other ICP-type sensor. Options are also available for voltage inputs, or a combination of ICP and voltage.

Existing third party Windows®, iOS®, Android™, macOS®, or Linux® software can be used to acquire time waveforms, frequency spectra, overall RMS measurements, and octave measurements or simply record data for further analysis. The small form factor, versatility, and powerful software options make this the perfect tool for taking measurements on-the-go. Whether you're just learning about sensing, taking measurements on a daily basis, or simply want to add digital, portable functionality to your existing sensors, the 485B39 is a practical addition to your tool set.

The 485B39 Series offer USB-C options for direct connectivity to popular USB-C ready devices, eliminating the need for USB adaptors.

SPECIFICATIONS

Performance

Channel Count	2
Voltage Range (Nominal)	±10 V pk [1]
ADC Resolution	24-bit [2]
Frequency Range (± 5 %)	0.8 Hz to 20.7 kHz
Sample Rate	48, 44.1, 32, 22.05, 16, 11.025, 8 kHz
Anti-Aliasing Low-Pass Filter (-3 dB) at 48 kHz	22.9 kHz [3]
AC High-Pass Filter (-3 dB) (48 kHz to 8 kHz)	1 Hz to 0.5 Hz [4]
Digital Output Interface	USB Class 1 Audio

Physical

Temperature Range (Operating)	14 °F to +176 °F (-10 °C to +80 °C)
Temperature Range (Storage)	-40 °F to +176 °F (-40 °C to +80 °C)
Excitation Voltage to Sensor (± 5 %)	24 VDC
Constant Current Excitation (± 5 %)	4 mA
DC Power (USB)	< 500 mW (5 V at 100 mA)
Settling Time	1.5 s
Electrical Isolation (case)	Grounded
Data / Power Indicator	Green LED
Housing Material	Stainless Steel
Size (length x width x height)	2.4" x 1.5" x 0.7" (60 mm x 39 mm x 19 mm)
Weight	4.4 oz (125 grams)
Sensor Inputs	2 BNC Jacks
Digital Output	11" Integral Cable (28 cm Integral Cable)
USB Connector	USB-A or USB-C [5]

Ordering Options

485B39 – ICP Inputs, USB-A Connector

V485B39 – Voltage Inputs (No ICP Supply Current), USB-A Connector

IV485B39 – ICP (CH 1), Voltage (CH 2), USB-A Connector

485B39-C – ICP Inputs, USB-C Connector

V485B39-C – Voltage Inputs (No ICP Supply Current), USB-C Connector

IV485B39-C – ICP (CH 1), Voltage (CH 2), USB-C Connector

Optional Accessories

MD821AM/A USB A to Lightning Camera Adaptor
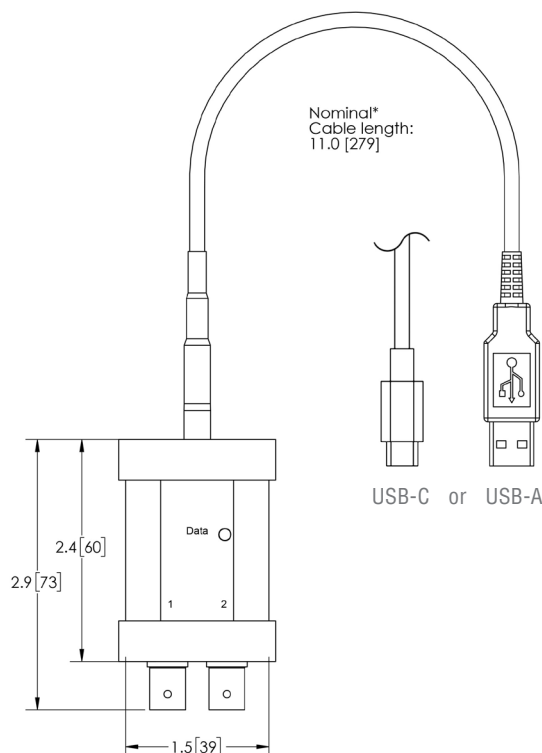
Inline ICP® Charge Converter (PCB 422Exx Series)

[1] ±8 V pk guaranteed
[2] 16-bit selectable by software
[3] Proportional to sample rate
[4] Sample rate dependent (48 kHz to 8 kHz)
[5] Model dependant, adaptor included

DigiDAQ™
Outline Drawing
Dimensions in inches [mm]