MODEL **485B39**

DIGITAL ICP® 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

- Compatible with 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

- Binaural recordings

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

- Industrial IoT applications

- Educational laboratory experiments

SIGNAL CONDITIONING IN YOUR POCKET

A pocket-sized, dual-channel ICP® (IEPE) digital signal conditioner, Model 485B39 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 powers 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.

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.

CE
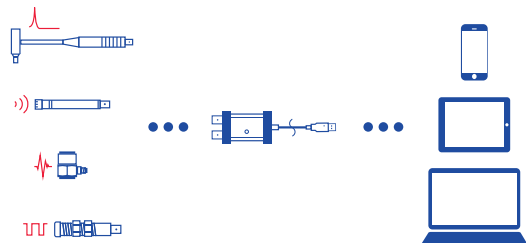
SPECIFICATIONS

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	Type A

Optional Versions

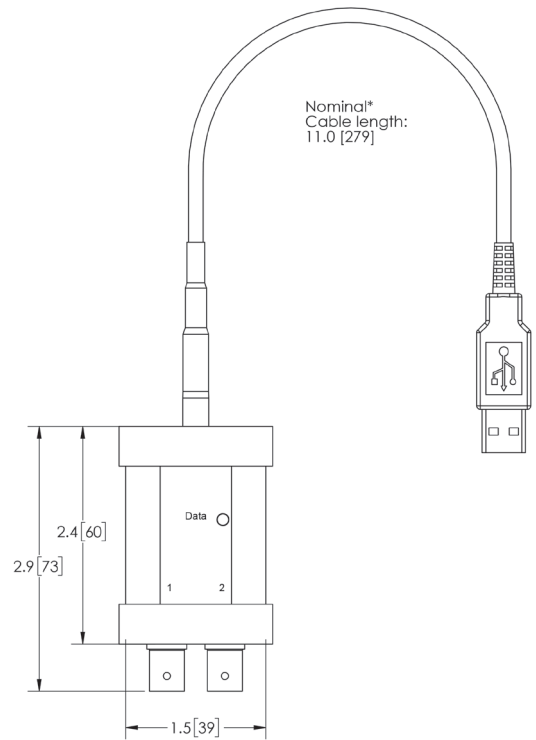| |
|---|
| V485B39 – Voltage Inputs (No ICP Supply Current) |
| IV485B39 – ICP (CH 1), Voltage (CH 2) |

Optional Accessories

MD821AM/A USB A to Lightning Camera Adaptor
USB A to USB OTG Adaptor
Inline ICP® Charge Converter (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)

Model 485B39
Outline Drawing
Dimensions in inches [mm]

DS-0186 revD_A4