

Model Number  
**485B39**

# DIGITAL ICP<sup>®</sup> - USB SIGNAL CONDITIONER

Revision: D  
ECN #:

## PERFORMANCE

	ENGLISH	SI
Channel Count	2	2
Voltage Range (nominal)	± 10 V pk <sup>1</sup>	± 10 V pk <sup>1</sup>
ADC Resolution	24-bit <sup>2</sup>	24-bit <sup>2</sup>
Frequency Range (± 5 %)	0.8 Hz to 20.7 kHz	0.8 Hz to 20.7 kHz
Sample Rate	48, 44.1, 32, 22.05, 16, 11.025, 8 kHz	48, 44.1, 32, 22.05, 16, 11.025, 8 kHz
Antialiasing Lowpass Filter (-3 dB) at 48 kHz	22.9 kHz <sup>3</sup>	22.9 kHz <sup>3</sup>
AC High Pass Filter (-3 dB)	1 Hz to 0.5 Hz <sup>4</sup>	1 Hz to 0.5 Hz <sup>4</sup>
Digital Output Interface	USB class 1 audio	USB class 1 audio

## ENVIRONMENTAL

	ENGLISH	SI
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

## ELECTRICAL

	ENGLISH	SI
ICP Sensor Power Constant Current (± 5%)	4 mA at 24 Vdc	4 mA at 24 Vdc
DC Power (USB)	< 500 mW (5 V at 100 mA)	< 500 mW (5 V at 100 mA)
Settling Time	1.5 seconds	1.5 seconds
Electrical Isolation (case)	Grounded	Grounded
RMS Noise – time domain (typical)	225 µV	225 µV
Spectral Noise (0.1 to 10 Hz) (typical)	40 µV/√Hz	-88 dB/√Hz
Spectral Noise (10 to 20000 Hz) (typical)	5 µV/√Hz	-106 dB/√Hz

## MECHANICAL

	ENGLISH	SI
Housing Material	Stainless steel	Stainless steel
Size (length x width x height)	2.4 in x 1.5 in x 0.7 in	60 mm x 39 mm x 19 mm
Weight	4.4 oz	125 grams
Sensor Inputs	2 BNC jacks	2 BNC jacks
Digital Output	11 in integral USB cable	28 cm integral USB cable
USB Connector	Type A	Type A

## NOTES:

- <sup>1</sup> ± 8 V pk, guaranteed
- <sup>2</sup> 16-bit selectable by software
- <sup>3</sup> Proportional to sample rate
- <sup>4</sup> Sample rate dependent (48 kHz to 8 kHz)

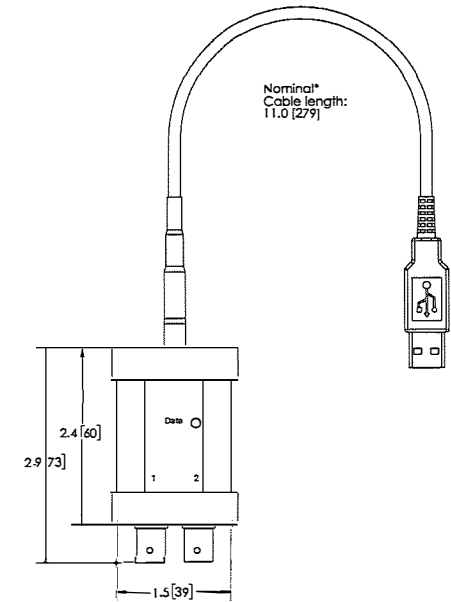
## INCLUDED ACCESSORIES:

A8731 – USB-A to USB-C adaptor

## OPTIONAL ACCESSORIES:

MD821AM/A – USB-A to Lightning camera adaptor

## PRODUCT DRAWING



Dimensions in inches [mm]

## OPTIONAL VERSIONS

- V485B39 – Voltage inputs (no ICP supply current)
- IV485B39 – ICP (CH 1), voltage (CH 2)

All specifications are at room temperature unless otherwise specified.

ICP is a registered trademark of PCB Piezotronics, Inc.

In the interest of constant product improvement, specifications may change without notice.



Project Engineer:

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Date: 2/21/24

Product Manager:

*MAP*

Date: 2/22/24

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Date: 2/22/24

Spec Number:

PS-0149

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