



FEATURES

- USB 2.0 communication link
- USB bus-powered
- Input/output short circuit protection
- Streaming ASCII output
- CE approved
- Supports mV/V and TTL (Encoder) type as input

IMPORTANT NOTE: ONLY CONNECT DEVICE TO USB 2.0 PORT

SPECIFICATIONS

GENERAL

Sampling Rate	Up to 200 samples per second
Bandwidth (Hz)	Sampling Rate (SPS)/4
Internal Resolution	24 bits
Resolution (noise free)	See chart on page 2
Nonlinearity	± 0.005% of full-scale range
Output	Digital packetized data
Integrated Digital Filter	50 Hz/60 Hz rejection (100 dB)
On-chip Memory	1 kilobyte
Stored Calibration	Up to 16 points
Weight	Approximate 10 g

ENCODER INPUT

Encoder Input	Quadrature Leading and Lagging Pulse (TTL)
Speed Measurement	Up to 150k Pulses Per Second ¹
Angle Measurement (α)	Up to 10k Pulses Per Rotation (PPR) ¹
Angle/Speed Measurement (update rate)	10 ms

STRAIN GAUGE mV/V INPUT

Bridge Excitation	4.5 VDC
Standard Input Range	± 4 mV/V
Optional Input Range	Up to ± 500 mV/V
Min. Bridge Resistance	50 Ohm
Max. Bridge Resistance	5000 Ohm

POWER SUPPLY

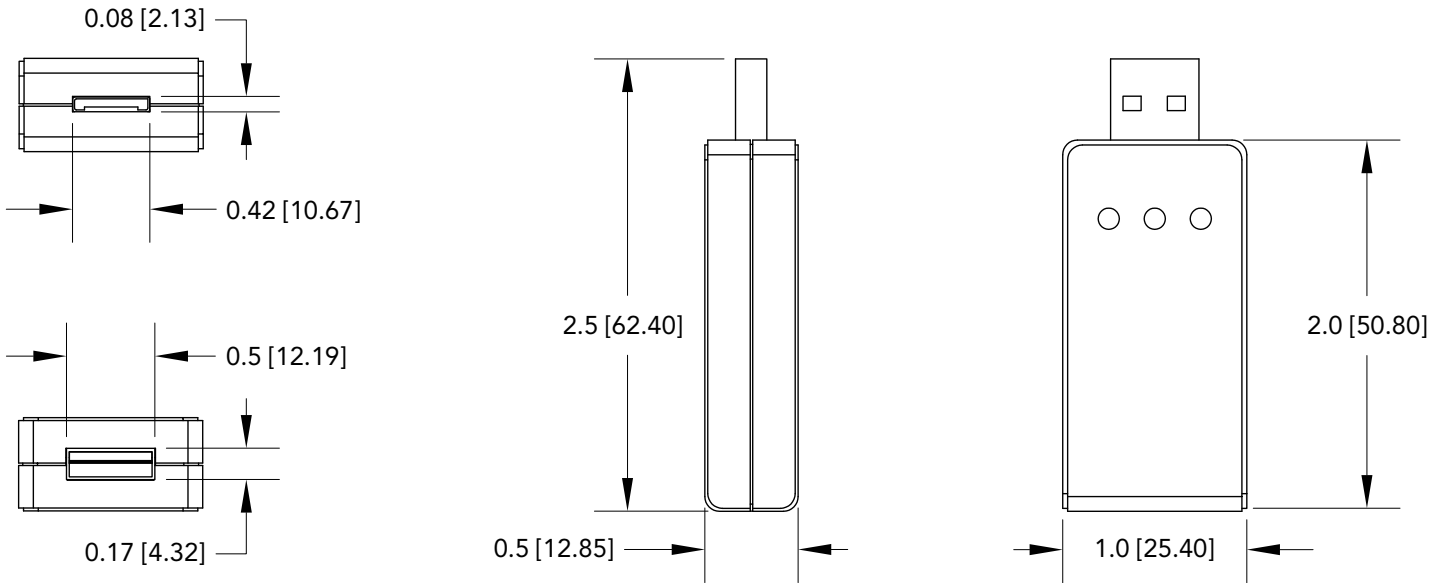
Voltage Rating	USB Bus (5V ± 5%)
Current Consumption	90 mA with 350 Ohm bridge

CONNECTORS

Mating Connector	Hirose LX40-12P
Connector Receptacle	Hirose LX60-12S
USB 2.0 Connector	Type A plug

¹ Speed = Δ α × 60 / PPR

DIMENSIONS inches [mm]



SPECIFICATIONS (continued)

ENVIRONMENT

Operating Temperature	-13 to 185°F [-25 to 85°C]
Storage Temperature	-40 to 257°F [-40 to 125°C]

CONFORMITY

RoHS	2011/65/EU
CE	EN 61326-1:2006

LED INDICATORS

Blinking Blue (10 Hz)	Module Auto-Calibration
Blinking Blue (1 Hz)	Module Normal Operation
Green	USB Power
Red	USB Data Link

RESOLUTION

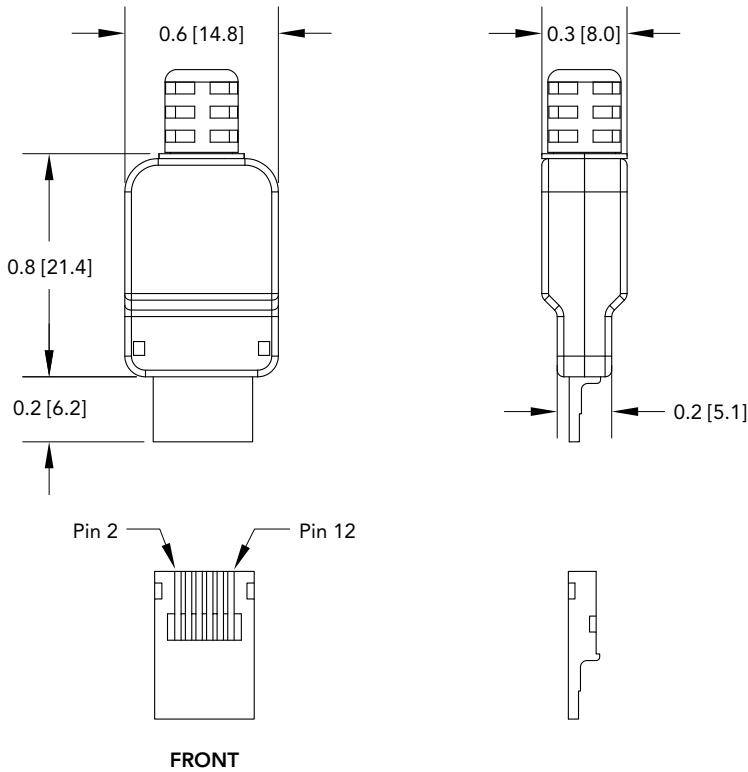
SAMPLES PER SECOND (SPS) mV/V RESOLUTION

10	16.6
100	15.6
200	13.0

ACCESSORIES

- FUTEK's SENSIT™ Software (FSH03189)**
 14 Day Trial - Available to download on FUTEK website. A license is required, per seat, after 14 days to benefit the features such as data logging, graphing, etc. Trial version turns into basic read-out ONLY after 14 days and a product key is required to enable the features.

DIMENSIONS inches [mm]



BUSHING SIZES inches [mm]

0.16 [4.0]
0.18 [4.5]
0.20 [5.0]

HIROSE MALE (sensor side) ZCO940 item number FSH03320

PIN #	USB410
1	+SIGNAL
2	-SIGNAL
5	P1-LEADING PULSE
6	P2-LAGGING PULSE
9	N/A
10	N/A
11	VCC / +EXC
12	GND / -EXC/SHIELD ¹

¹ Use Y connection on pin 12 to make connecting the -EXCITATION and SHIELD easier.

Drawing Number: FI1381-B

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10 Thomas, Irvine, CA 92618 USA

Tel: (949) 465-0900

Fax: (949) 465-0905

www.futek.com



RoHS



U.S. Manufacturer