FUTEK
ADVANCED SENSOR TECHNOLOGY, INC.

Intelligent Digital Handheld Display

NOTABLE FEATURES

- 21k Point Data Logging
- Speed/ Angle/ Power Measurement[1]
- Bridge Resistance Measurement
- Keypad Options (Track/Hold, Peak/Valley Reset, Unit, Tare/ Gross, Shunt, Battery, Display, Menu)
- First Peak/Valley Feature
- User Friendly Navigation Menu
- Shunt Calibration
- Universal Unit Conversion
- 14 Sensor Profile Storage
- Supports IEEE1451.4 Standard (TEDS Templates 30 & 33)

WEIGHT

- 1.85 lb. (840 g)

INPUT

- Input Range up to ± 500mV/V (Strain Gauge)
- Input Range ±12VDC (Amplified Input)
- Input Range up to 30 mA (Amplified Input)
- Leading and Lagging TTL input[1]

OUTPUT

- USB Output
- ASCII Stream
- Precision 5.000V Excitation
- 24V/ 5V Supply
- Analog Voltage (0-5 or ± 5 VDC)
- Analog Current (0-20, 4-20, 0-25, 5-25 mA)
- Selectable Voltage and Current Configuration
- Two Individual Relay Outputs

FUTEK's IHH500 Handheld Display is a universal indicator compatible with strain gauge sensors. Whether your application involves load cells, pressure sensors or torque sensors, our IHH500 is durable enough for continual automation applications and precise enough for delicate medical testing. In addition to its universal sensor compatibility, the IHH500 is fully suited to work with our SENSIT Test & Measurement Software. With SENSIT, users can enjoy features such as data logging and live graphing via a Personal Computer (PC).

Each application calls for specific requirements. Knowing this, FUTEK's Electrical Engineering Team developed two versions of our IHH500 to accommodate your application's needs. Allow us to introduce our IHH500 Pro and Elite models. Both house the same specifications as far as resolution, accuracy, and sampling rate. What differs are the additional instruments, software, and accessories that can further advance and simplify your test-measurement system.

FUTEK's SENSIT software is a perfect addendum to our IHH500 Handheld Display. From the ability to remotely monitor or change settings on the IHH500 from the comfort of your computer screen to the powerful live graphing and data logging features, SENSIT paired with this handheld display allows application engineers to monitor up to 16 sensors.

DIMENSIONS inches [mm]

4.0 [101.24]

1.7 [43.61]

6.0 [153.43]
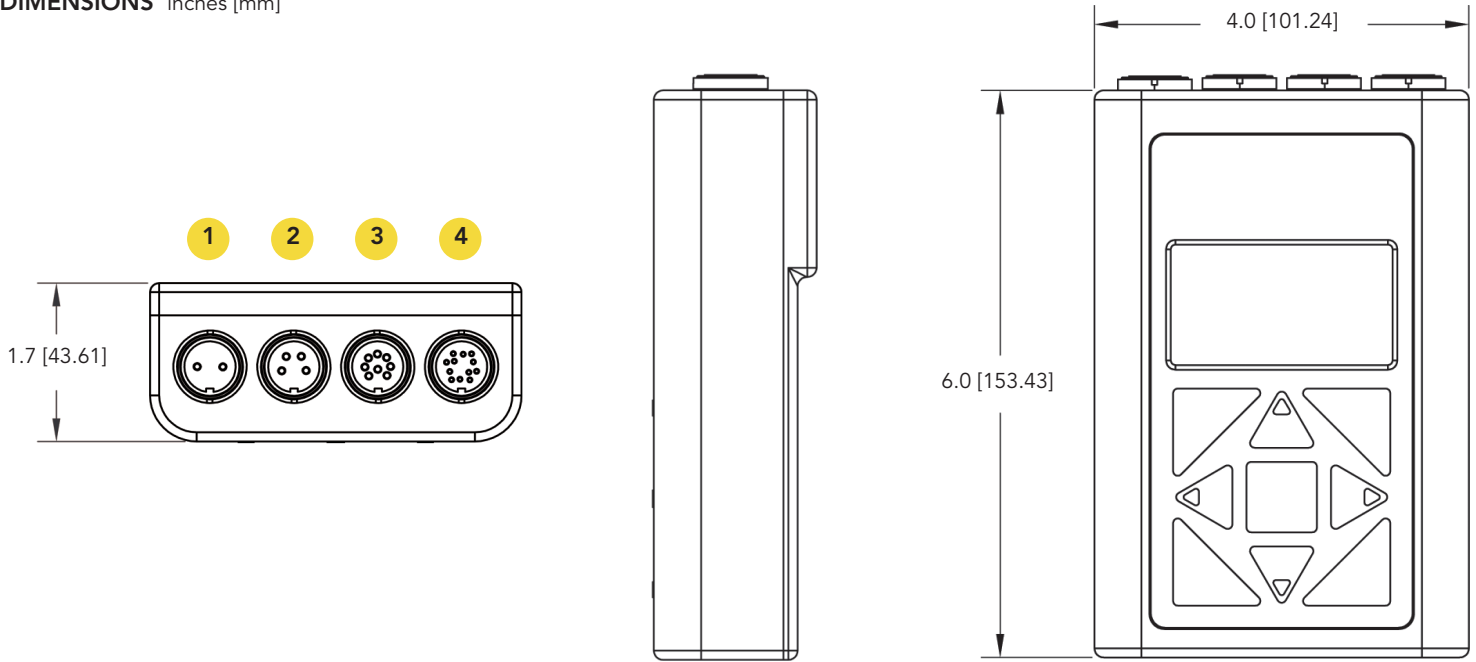
CONNECTORS

#	TYPE	BINDER
1	POWER CONNECTOR	09 0104 99 02
	MATING CONNECTOR	99 5101 00 02
2	USB CONNECTOR	09 0112 99 04
	MATING CONNECTOR[3]	99 5109 00 04
3	OUTPUT CONNECTOR	09 0174 99 08
	MATING CONNECTOR[2]	99 5171 00 08
4	SENSOR CONNECTOR	09 0132 90 12
	MATING CONNECTOR[2]	99 5129 00 12

PERFORMANCE

24 bits internal resolution

Up to 20 bits (±500,000 counts) noise free resolution

5 to 4,800 samples per second selectable rate

High accuracy (Better than ±0.01% of Full Scale Reading)

Low non-linearity (Better than ±0.01% of Full Scale Reading)

Minimum Bridge Resistance: 30 ohm

Input range up to ±500mV/V (Strain Gauge)

Input range ±12VDC (Amplified Input)

Input range up to 30 mA (Amplified Input)

USB Output

ASCII Stream

24V/5V Supply

Analog Voltage and Current Output

BATTERY

Rechargeable Battery Operated

Battery Life up to 30 Hours (Depending on the Load)

Battery Lifetime Monitoring

BATTERY CHARGER

Input: 100-240 VAC - 0.5 A 50/60 Hz

Output: 12 VDC - 1.2 A

LCD

16 × 4 character LCD with Selectable Height (0.18 [4.75] and 0.49 [12.55])

6 Digit Display Plus Sign and Decimal Point or 7 Digit Plus Sign Depending On Application

LCD Auto Power-off

Brightness / Contrast Adjustment

CONNECTORS & WIRING DIAGRAM

SENSOR CONNECTIONS

PIN	SYMBOL	DESCRIPTION	DIAGRAM (FEMALE INSERT)
A	+E	+Excitation	
B	+S	+Signal	
C	-E	-Excitation, TEDS return	
D	-S	-Signal	
E	TEDS_IO	TEDS Data	
F	24_OUT	24V Output	
G	GND_OUT	Ground	
H	5_OUT	5V Output	
J	-V	-V from Sensor	
K	+V	+V from Sensor	
L	PLEAD	Leading Pulse from Sensor	
M	PLAG	Lagging Pulse from Sensor	

OUTPUT CONNECTIONS

PIN	SYMBOL	DESCRIPTION	DIAGRAM (FEMALE INSERT)
1	IDAC	Analog Current Output Signal	
2	REFRENCE	Analog Voltage Output Return	
3	+R1	Solid State Relay1 (Positive)	
4	VDAC	Analog Voltage Output Signal	
5	+R2	Solid State Relay2 (Positive)	
6	GND	Analog Current Output Return	
7	-R1	Solid State Relay1 (Negative)	
8	-R2	Solid State Relay2 (Negative)	

USB PORT CONNECTIONS

PIN	SYMBOL	DIAGRAM (FEMALE INSERT)
1	VBUS	
2	-D	
3	+D	
4	GND	

POWER CONNECTIONS

PIN	SYMBOL	DIAGRAM (FEMALE INSERT)
1	12V	
2	GROUND	

(Note: These pins are not polarity sensitive)

IHH500 PRO

Intelligent Digital Handheld Display, mV/V, VDC, Current Measurement, Analog Output, Alarm Relays, TEDS and USB Output, Power Supply Adapter is Included With Pro Display. Accessory kit sold separately.

IHH500 ELITE

Intelligent Digital Handheld Display, mV/V, VDC, Current and Encoder Measurement, Analog Output, Alarm Relays, TEDS and USB Output - Accessory Kit (FSH03583) With All Mating Connectors and SensIT Software Included.

VERSIONS	
ITEM #	**DESCRIPTION**
FSH03460	IHH500 - Elite Display w/ Accessory Kit
FSH03571	IHH500 - Pro Display
FSH03583	IHH500 - Accessory Kit: Pelican Case , Software (FSH03189) , USB Cable , Support Bracket , Analog/ Alarm Mating Connector , Sensor Mating Connector
FSH03569	IHH500 Power Supply Adaptor
FSH03570	IHH500 USB Cable[2]
FSH03189	SENSIT Instrument[2]
G0D03025	Bracket[2]
FSH03572	IHH500 Analog/Relay Output Cable[2]

RELATED ACCESSORIES	
ITEM #	**DESCRIPTION**
FSH03583	IHH500 - Accessory Kit: Pelican Case , Software (FSH03189) , USB Cable , Support Bracket , Analog/ Alarm Mating Connector , Sensor Mating Connector
FSH03569	IHH500 Power Supply Adaptor
FSH03570	IHH500 USB Cable[2]
FSH03189	SENSIT Instrument[2]
G0D03025	Bracket[2]
FSH03572	IHH500 Analog/Relay Output Cable[1]

[1] Only available in Elite version
[2] Included with Elite version
[3] Optional

Drawing Number: FI1329-F

FUTEK reserves the right to modify its design and specifications without notice. Please visit http://www.futek.com/salesterms for complete terms and conditions.

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ISO 9001:2008   ISO 13485:2004   ISO 17025:2005   ANSI Z540-1-1994   RoHS   U.S. Manufacturer