

IAA105

Digitally Configurable Analog Amplifier
With SENSIT[®] Lite App

Sensor Solutions Source

Load · Torque · Pressure · Multi-Axis · Calibration · Instruments · Software

www.futek.com

Getting Help

TECHNICAL SUPPORT

For more IAA105 support, please visit:

<http://www.futek.com/iaa/support.aspx>

SM1004

FUTEK reserves the right to modify its design and specifications without notice.

Please visit <http://www.futek.com/salesterms> for complete terms and conditions.

10 Thomas, Irvine, CA 92618 USA

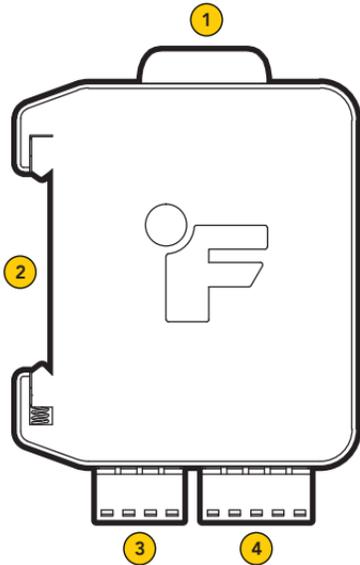
futek@futek.com

www.futek.com

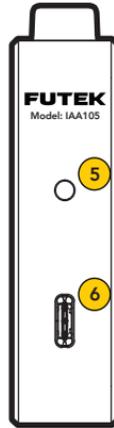
Table of Contents

Layout	4	SENSIT® Lite App	8
Sensor Wiring	5	SENSIT® Lite App—Profile Setup	10
Power/Output Wiring	6	SENSIT® Lite App—Automatic Profile Setup	11
LED Indication	7	SENSIT® Lite App—Manual Profile Setup	12

Layout



Front View



Side View

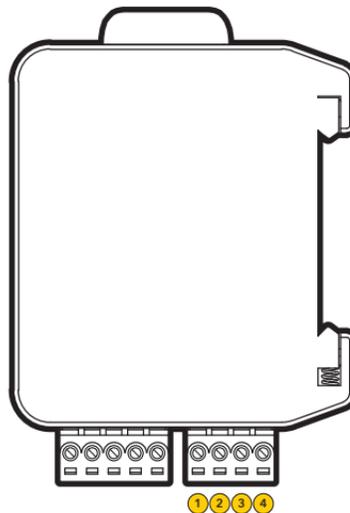
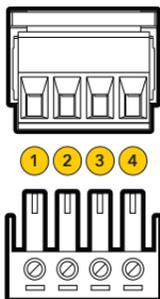
- 1 Module with integrated **Bluetooth®** wireless technology
- 2 DIN Clip
- 3 Sensor Side
- 4 Power/Output Side
- 5 LED Indicator
- 6 USB-C Power/Communication

Sensor Wiring

SENSOR SIDE (item #GOD04252)

PIN	WIRING CODE	PIN FUNCTIONALITY
1	+ E	+ Excitation
2	- S	- Signal
3	+ S	+ Signal
4	- E	- Excitation

Note: For 6 wire sensors, connect +Sense to +Excitation and -Sense to -Excitation.



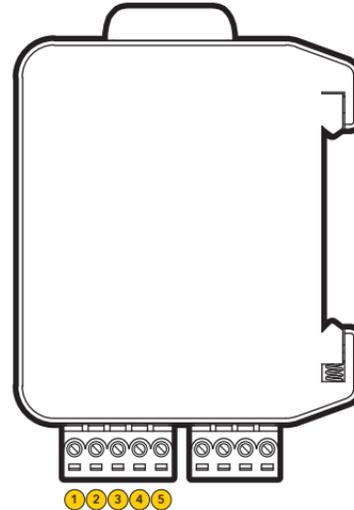
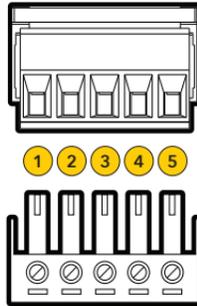
Sensor cable shield connections should be grounded on one end, either the sensor side or the IAA sensor input side, to avoid potential ground loops.

Power/Output Wiring

POWER/OUTPUT (item #GOD04253)

PIN	WIRING CODE	PIN FUNCTIONALITY	COLOR
1	CHASSIS	Shield	Orange
2	VIN	Power Supply	Red
3	GND	Power Ground	Black
4	GND	Output Ground	Blue
5	VOUT	Output Signal	Green

Note: For Sensors with Shield, use Pin 1 (Chassis) of 'Power/Output Connections' for Shield Connection.

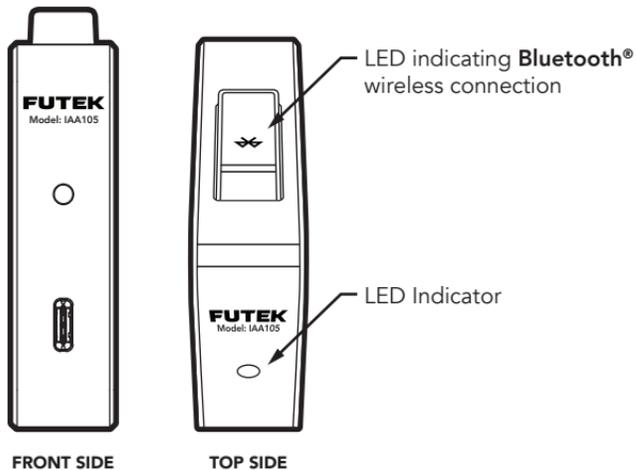


For information on effective chassis techniques, please visit: www.futek.com/support

Power:

- 5 VDC to 30 VDC or USB Powered
- Power Consumption: 1.2 W (max) (Instrument Only)
- Inrush Current: 400 mA (max)

LED Indication



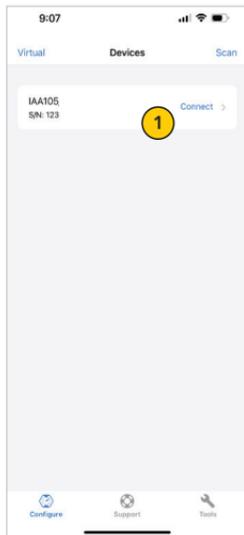
LED INDICATORS

Color	Functionality
Solid Green LED	Normal operation mode
Blinking Red LED	Fault condition detected
Green LED indicating Bluetooth®	Blinking when advertising and solid when paired/connected

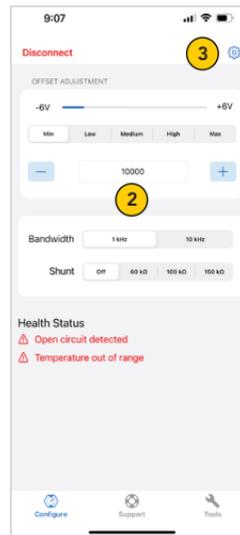
Note: The device will continue advertising upon startup and it automatically shuts off if not paired within 3 minutes. Power cycle to restart.

- A fault condition (Open/Short Circuit and/or Temperature Out of Operating Range) is indicated by a blinking red LED.

SENSIT[®] Lite App



- 1 Instruments found
- 2 Offset adjustment
- 3 Settings

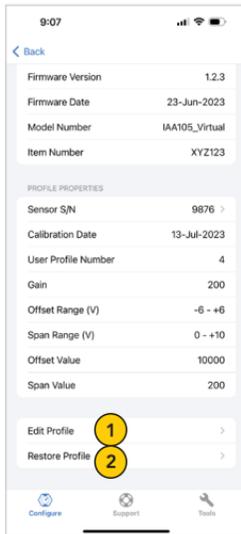


Health Status Notes:

- **Open circuit detected / Short circuit detected** - Possible open between \pm excitation wires.
- **Temperature out of range** - The amplifier is monitoring temperatures that are at or above the specified operating temperature as listed on the amplifier spec sheet.

- A zero offset adjustment can be made to account for any fixtures and will not affect the calibrated span.
- The output of the IAA105 must be monitored while adjusting.

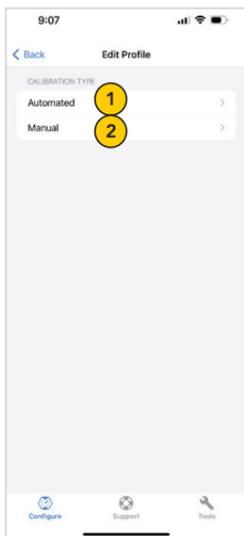
SENSIT[®] Lite App



- 1 Edit Profile:**
Allows adjustments to an existing profile or creates a new profile.
- 2 Restore Backup:**
Enables restoration from a Factory (mV/V) or system-calibrated profile.

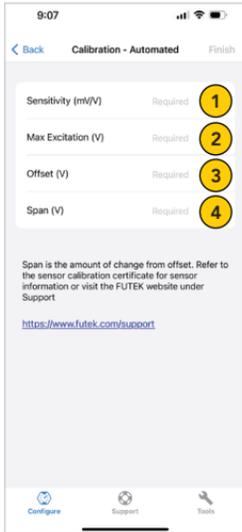
- Should the sensor and amplifier be calibrated as a system at FUTEK, adjustments to the calibration profile is not required.
- A system calibration can be started on the FUTEK website at: <https://www.futek.com/recalibrationterms>

SENSIT® Lite App—Profile Setup



- 1 Automatic:**
Allows a profile to be setup by typing in basic sensor and desired output information.
- 2 Manual:**
Allows further custom adjustments of calibration settings.

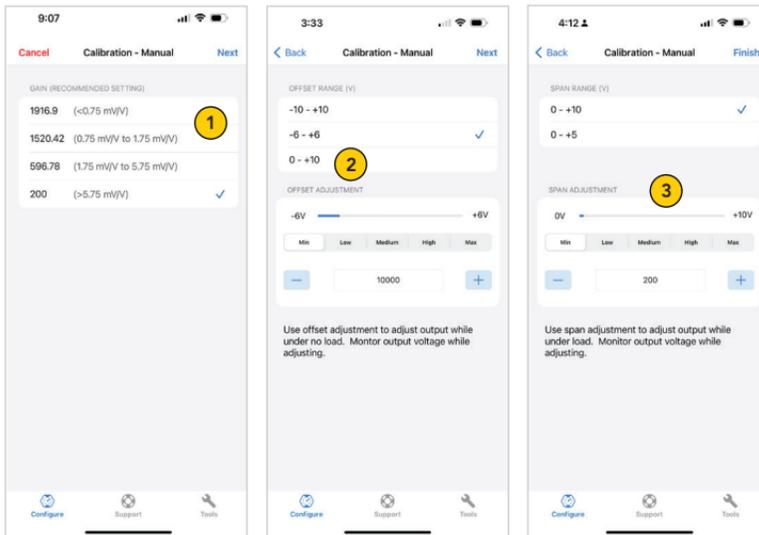
SENSIT[®] Lite App—Automatic Profile Setup



- 1 Sensitivity (mV/V):**
Enter the sensor's mV/V rated output for when the sensor is fully loaded.
- 2 Max Excitation (V):**
Enter max excitation to be supplied to the sensor.
- 3 Offset (V):**
Enter the desired zero output level. Typically, 0 V.
- 4 Span (V):**
Enter the desired amount of voltage change from Offset (V).

- The calibration certificate lists the rated output of the sensor.
- The sensor spec sheet will list the max voltage recommended for a sensor.

SENSIT® Lite App—Manual Profile Setup



- 1 Gain:**
Gain is listed by recommended sensor mV/V rated output range.
- 2 Offset Range:**
Offset range determines the range the offset adjustment will be made over.
- 3 Span:**
Span range determines the range the span adjustment will be made over.

- The calibration certificate lists the rated output of the sensor.
- The sensor spec sheet will list the max voltage recommended for a sensor.
- The output of the IAA105 must be monitored while adjusting.

10 Thomas, Irvine, CA 92618 USA
futek@futek.com

www.futek.com

RoHS



U.S. Manufacturer