



### FEATURES

- Digitally selectable bandwidth, gain, shunt, and offset/span calibration via SENSIT® LITE app
- Highly configurable analog output with countless offset and span variations ranging from -10 to 10 VDC
- Fault detection (Open/Short Circuit and/or Temperature Out of Operating Range)
- Hot swappable with on-board active ESD and over voltage/current protection
- Flexible power options (USB/external supply)
- Independent offset and span adjustment for more precise calibration
- Dedicated chassis connection
- IAA105 features **Bluetooth®** 5.0 wireless technology
- Reliable spring loaded 35 mm DIN rail clip design

### MATERIAL & MANUFACTURING

- High-Reliability PCB/Assembly (IPC CLASS III)
- High-Temperature Rated Material/BOM Items
- Strictly Controlled Inspection, Test, and Calibration Process
- Fully Controlled Handling/Packaging Process
- Extensive Test and Validation for 100% of Production Units
- Individual Calibration Report/Certification for Instruments and Systems

### APPLICATIONS

- Medical
- Aerospace
- Precision Industrial Automation
- Lab & Field Instrumentation
- Precision Manufacturing

### SPECIFICATIONS

#### GENERAL

Item Number	FSH04453
Version of <b>Bluetooth®</b> wireless technology	<b>Bluetooth®</b> 5 Low Energy
Radio frequency used by <b>Bluetooth®</b> wireless technology	2.360 GHz to 2.500 GHz
Communication range utilizing <b>Bluetooth®</b> wireless technology	33 ft. [10 m]
Material	Aluminum Body/Stainless Steel Cover
Weight	0.25 lb [115 g]
IP Rating	IP40

#### INPUT

Input Type	Strain Gauge (Differential Input up to ±10 mV/V)
Internal Shunt Value	150/100/60 kΩ
Non-Linearity	±0.004% of FSR
Bridge Excitation	Variable up to 10 VDC
Min/Max Bridge Resistance	350 Ω to 5000 Ω

#### OUTPUT

Gain Range	200/600/1500/2000
Output Range (single ended)	Up to ±10 VDC (FSR)
Load Impedance	>2000 Ω
Bandwidth (Hz)	See Chart
Noise	See Chart

#### POWER

Supply	5 VDC to 30 VDC or USB Powered
Inrush Current	400 mA (Max)
Power Consumption	1.2 W (instrument only)

#### ENVIRONMENT

Operating Temperature	-4°F to 158°F [-20°C to 70°C]
Storage Temperature	-40°F to 185°F [-40°C to 85°C]
Temperature Stability/Drift	15 ppm of FSR/°C

#### CONFORMITY

RoHS	2011/65/EU Compliant
CE	EN 61326-1:2013; FCC 15.107:2021; FCC 15.109:2021; FCC 15.109(g):2021; ICES-003 Issue 7:2020; FCC 15.247:2021; EN 300 328 V2.2.2:2019-07; EN 301 489-17 V3.2.4:2020-09

# Model IAA105

## LED INDICATORS

Color	Functionality
Solid Green LED	Normal operation mode
Blinking Red LED	Fault condition detected
Green LED indicating <b>Bluetooth®</b> wireless communication status	Blinking when advertising and solid when paired/connected

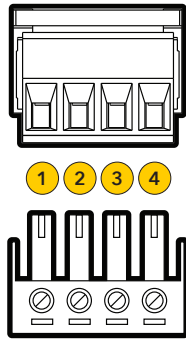
Note: The device will continue advertising upon startup and it automatically shuts off if not paired within 3 minutes. Power cycle to restart.

## NOISE

Bandwidth (-3 dB)	Noise at Default Gain	Noise at Max Gain
1 kHz	2.8 mVp-p	3.6 mVp-p
10 kHz	3.4 mVp-p	6 mVp-p

## SENSOR SIDE (item #GOD04252)

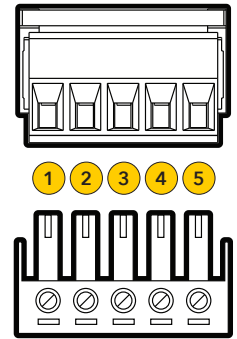
PIN	WIRING CODE	PIN FUNCTIONALITY	COLOR
1	+ E	+ Excitation	Red
2	- S	- Signal	White
3	+ S	+ Signal	Green
4	- E	- Excitation	Black



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

## 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.

### General notes:

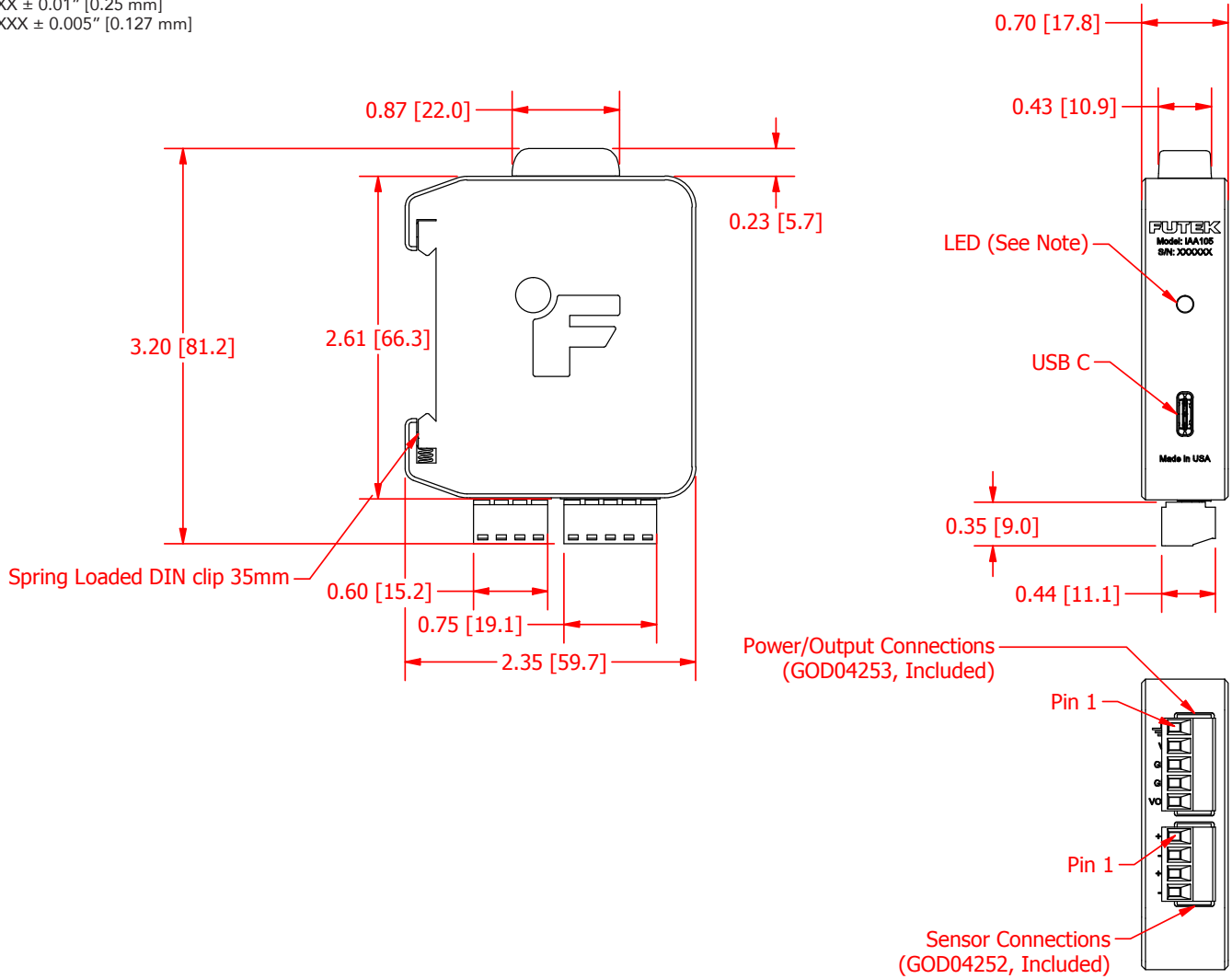
- Default Settings: Gain = 600, Bandwidth = 1kHz, Differential Input = 2 mV/V, Output = 10 VDC
- FSR = Full scale reading
- All Grounds are internally connected.
- The casing of the USB connector and the sensor receptacle are internally connected to Chassis via the body of the enclosure.



# Model IAA105

## DIMENSIONS inches [mm]

TOLERANCE:  
 .X ± 0.1" [2.5 mm]  
 .XX ± 0.01" [0.25 mm]  
 .XXX ± 0.005" [0.127 mm]



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Drawing Number: FI1569

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RoHS



U.S. Manufacturer