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 **Bluetooth®** wireless technology	**Bluetooth®** 5 Low Energy
Radio frequency used by **Bluetooth®** wireless technology	2.360 GHz to 2.500 GHz
Communication range utilizing **Bluetooth®** 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

Sensor Solution Source
Load · Torque · Pressure · Multi-Axis · Calibration · Instruments · Software

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ANSI Z540-1   ISO 17025   ISO 9001   ISO 13485   U.S. Manufacturer

DSPM Industria®
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Model IAA105

LED INDICATORS

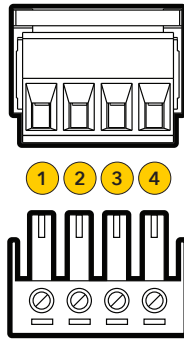| Color	Functionality
Solid Green LED	Normal operation mode
Blinking Red LED	Fault condition detected
Green LED indicating **Bluetooth®** wireless communication status	Blinking when advertising and solid when paired/connected

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

NOISE

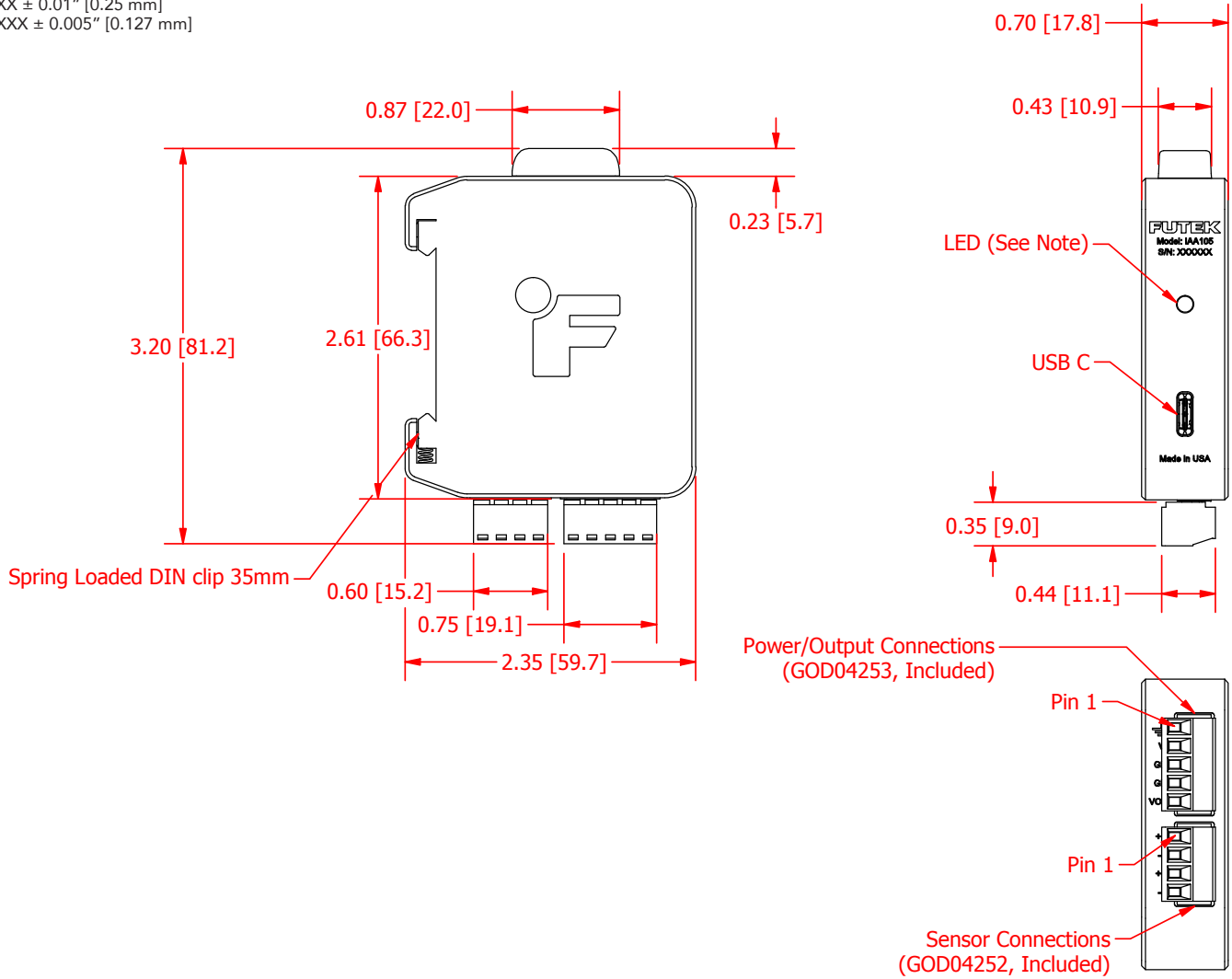| Bandwidth (-3 dB)	Noise at Default Gain	Noise at Max Gain
1 kHz	2.8 mVp-p	3.6 mVp-p
10 kHz	3.4 mVp-p	6 mVp-p

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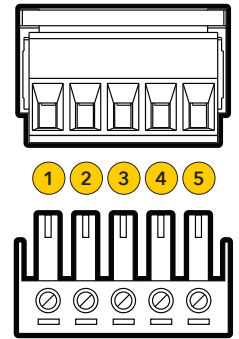
Note: For Sensors with Shield, use Pin 1 (Chassis) of 'Power/Output Connections' for Shield Connection.

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]

0.87 [22.0]

0.23 [5.7]

3.20 [81.2]

2.61 [66.3]

Spring Loaded DIN clip 35mm

0.60 [15.2]

0.75 [19.1]

2.35 [59.7]

0.70 [17.8]

0.43 [10.9]

LED (See Note)

Model: IAA105
S/N: XXXXXX

USB C

Made in USA

0.35 [9.0]

0.44 [11.1]

Power/Output Connections
(GOD04253, Included)

Pin 1

Pin 1

Sensor Connections
(GOD04252, Included)

Drawing Number: FI1569

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ANSI
Z540-1

ISO
17025

ISO
9001

ISO
13485

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