MODEL IAA200

Analog Amplifier with Current Output



FEATURES

- Uni-directional/bi-directional output, differential input
- 256 selectable shunt and gain combinations (DIP Switch)
- Digitally controlled remote shunt with externally accessible activation button
- Internal span and offset potentiometers
- Sensor polarity reversal DIP switch
- Zero shift DIP switch (selectable 0 and midpoint)
- Reliable spring loaded DIN clip design
- Removable magnetic cover for instrument setting access and protection
- External chassis connection (Refer to Guide)
- Hot swappable with on-board ESD and over voltage/ current protection

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

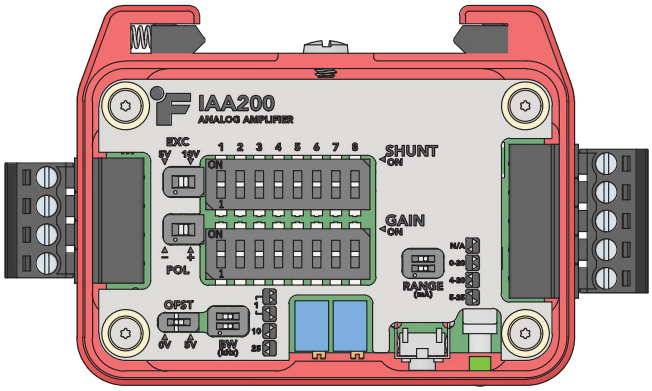
- Medical
- Aerospace
- Precision Industrial Automation
- Lab & Field Instrumentation
- Precision Manufacturing

SPECIFICATIONS

GENERAL	
Item Number	FSH04804
Material	Aluminum Body/Stainless Steel Cover
Weight	0.23 lb [105 g]
IP Rating	IP40
INPUT	
Input Type	Strain Gauge (Differential Input from ±0.2 to ±500 mV/V)[4]
Internal Shunt Value	30, 43.7, 60.4, 87.6, 100, 150, 300[3], 432[3] kΩ (± 0.1%)
Nonlinearity	±0.005% of FSR[1]
Bridge Excitation	5 or 10 VDC (DIP Switch)
Min/Max Bridge Resistance	87.5 to 5000 Ω
OUTPUT	
Gain Range	110 to 6300[2]
Output Range	4 - 20, 0 - 20[5], 5 - 25, & 12 ±8 mA
Load Impedance	< 700 Ω
Bandwidth	See Chart[6]
Noise	See Chart[6]
Calibration Span/Offset range	±10% of FSR[1]
POWER	
Supply	12 to 30 VDC
Inrush Current	1 A (Max)
Power Consumption	1 W (Max)(Instrument Only)
Power Indicator	Green LED
ENVIRONMENT	
Operating Temperature	-13° to 158°F (-25° to 70°C)
Storage Temperature	-40° to 185°F (-40° to 85°C)
Temperature Stability/Drift	±10 ppm of FSR[1]/°C
CONFORMITY	
RoHS	2011/65/EU Compliant
CE	FCC 15.107:2022, FCC 15.109:2022, FCC 15.109(g):2022, ICES-003 Issue 7:2020, VCCI-CISPR 32:2016, EN IEC 61326-1:2021

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DIP SWITCHES CONFIGURATION

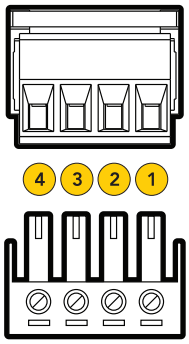


NOISE

Bandwidth kHz	Default Gain µAp-p	Max Gain µAp-p
1	4	15
10	10	40
25	12	60

SENSOR SIDE (item #GOD04254)

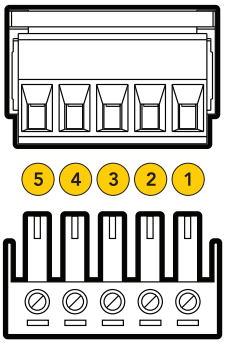
PIN	WIRING CODE	PIN FUNCTIONALITY	COLOR
1	**+ E**	+ Excitation	Red
2	**+ S**	+ Signal	Green
3	**– S**	– Signal	White
4	**– E/GND**	– Excitation	Black



For 6 wire sensors, connect +SENSE to +EXCITATION and –SENSE to –EXCITATION.

POWER/OUTPUT (item #GOD04255)

PIN	WIRING CODE	PIN FUNCTIONALITY	COLOR
1	**+VIN**	Power Supply	Red
2	**GND**	Power Ground	Black
3	**SHUNT**	Remote Connection	Orange
4	**GND**	Output Ground	Blue
5	**IOUT**	Output Signal	Green



General Notes:

[1] FSR = Full Scale Range

[2] Gain = 2 If all switches are in OFF position

[3] ±1% Tolerance

[4] The minimum differential input is determined based on a 10 V excitation and maximum gain to attain the maximum output range

[5] A minimum offset of 0.05 mA is expected when the device is configured for a 0-20 mA output range

[6] See "Noise" chart located in page 2 for detailed information

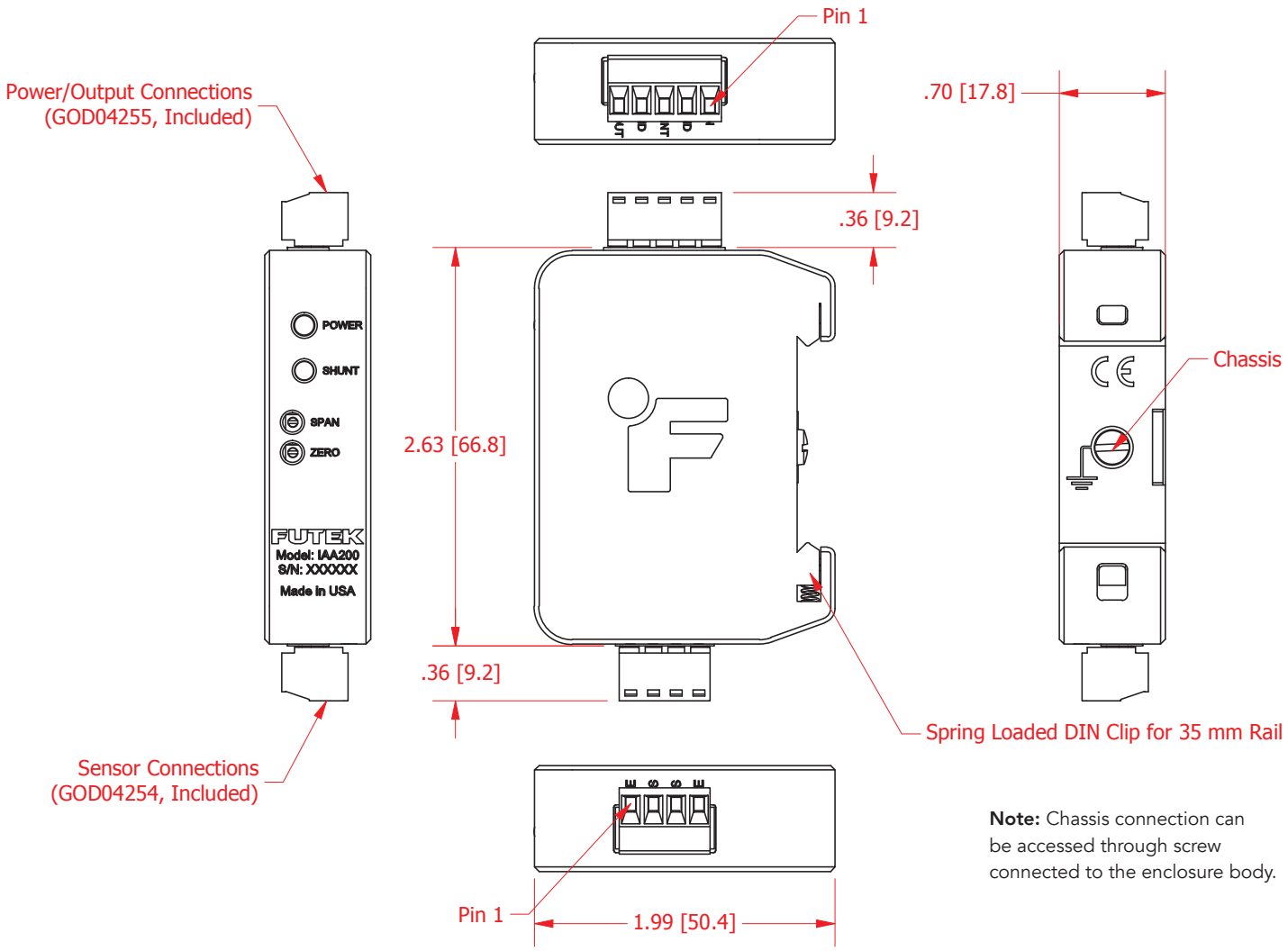
All Grounds are internally connected

Use Chassis for systems with cable Shield

All parameters specified on this drawing have been validated for default settings (2 mV/V and 1kHz bandwidth)

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DIMENSIONS inches [mm]



Note: Chassis connection can be accessed through screw connected to the enclosure body.

Drawing Number: FI1574

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