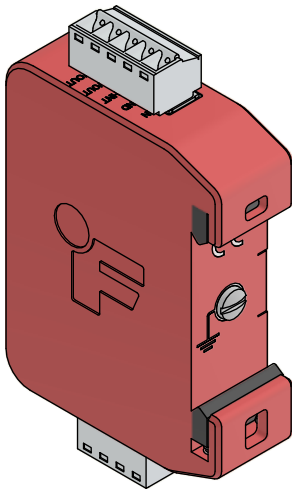
FUTEK MODEL IAA300 Fully Differential Analog Amplifier

ITEM NUMBER: FSH04875

INCH [mm] | F.S.R.= Full Scale Reading



Specifications:

Input:
- Differential Input: ±0.2 to ±500 mV/V (See Note 2)
- Bridge Resistance: 87.5 Ω to 5000 Ω
- Bridge Excitation: 5 VDC or 10 VDC

Analog Output:
- Full Scale Range: Up to ±10 VDC (Differential)
- Bandwidth Settings: 1 kHz, 10 kHz and 50 kHz (±20%)
- Noise: See Table
- Load Impedance: > 2 kΩ
- Non-linearity: 0.01 % of FSR
- Temperature Stability/Drift: 10 ppm of FSR/°C

Power:
- 12 VDC to 30 VDC
- Power Consumption: 1.5 W (Max)(Instrument Only)
- Inrush Current: 1.2 A (Max)

Power/Output Connections

Pin	Function
1	VIN
2	GND
3	SHUNT
4	+VOUT
5	-VOUT

Sensor Connections

Pin	Function
1	+E
2	+S
3	-S
4	-E

Note: For 6 Wire Sensors, Connect +Sense to +Excitation and - Sense to -Excitation

Environment:
- Operating Temperature: -13°F to 158°F (-25°C to 70°C)
- Storage Temperature: -40°F to 185°F (-40°C to 85°C)
- IP Rating: IP40

Features:
- Differential Output, Differential Input
- ±5 or ±10 VDC Outputs
- 256 Selectable Shunt Combinations: 30 kΩ, 43.7 kΩ, 60.4 kΩ, 87.6 kΩ, 100 kΩ, 150 kΩ, 300 kΩ, 432 kΩ (DIP Switch)
- Gain: 110 to 6300 (Note: Gain = 2 if All Switches are in OFF Position)
- 256 Selectable Gain Combinations (Refer to Gain and Shunt Settings Excel Sheet)
- Externally Accessible Shunt Activation Button
- Digitally Controlled Remote Shunt
- Sensor Polarity Reversal DIP Switch
- Zero Shift DIP Switch (Selectable 0 and 5 VDC)
- Calibration Zero/Span Range: ±10% of FSR
- Enclosure Material: Aluminum Body/Stainless Steel Cover
- Weight: 0.23 lb (105 g)
- Power Indicator LED (Green)
- Hot Swappable
- Reliable Spring Loaded DIN Clip Design
- Reliable Magnetic Cover for Easy Access to Instrument Settings
- External Chassis Connection (Refer to Guide)
- On-board ESD and Over Voltage/Current Protection

Bandwidth (kHz)	Noise at Default Gain (mVp-p)	Noise at Max Gain (mVp-p)
1	2	9
10	4	21
50	6	37

Compliance:
- EN IEC 61326-1:2021
- FCC 15.107:2023
- FCC 15.109:2023
- FCC 15.109(g):2023
- ICES-003:2020
- VCCI-CISPR 32:2016
- RoHS 2011/65/EU Compliant

Note 1: All Parameters Specified on This Drawing Have Been Validated for Default Settings (2 mV/V, 10V Excitation, and 1kHz Bandwidth)
Note 2: The Minimum Differential Input is Determined Based on a 10V Excitation and Maximum Gain to Attain the Maximum Output Range

CUSTOMER APPROVAL - COMPANY:

CUSTOMER APPROVAL - NAME / DATE:

REVISION HISTORY:

OUTLINE DRAWING

UNLESS OTHERWISE SPECIFIED:
- ALL DIMS ARE IN INCHES [mm]
- DIMS IN [ ] ARE FOR REFERENCE ONLY
- R.O. = RATED OUTPUT
- INTERPRET DIMS PER ASME Y14.5-2018
- THREADS TO BE MADE PER ASME B1.1-2003 AND B1.13M-2005
- TAPERED THREADS PER ASME B1.20.1-2013

TOLERANCES: .XX ± .01, .XXX ± .005, .XXXX ± .0010
ANGLES: ± 0.5°
CHAMFER: ± 5°
SURFACE: 63 OR BETTER
3rd ANGLE PROJ:

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MODEL: IAA300	DWG No: FO1648	REV: 0
DRAWN BY: P. THAKUR	CREATED: 11/17/2025	APPROVALS: SEE PLM
CHECKED BY:	CAGE: 1X8M6	SHEET: 1 OF 2

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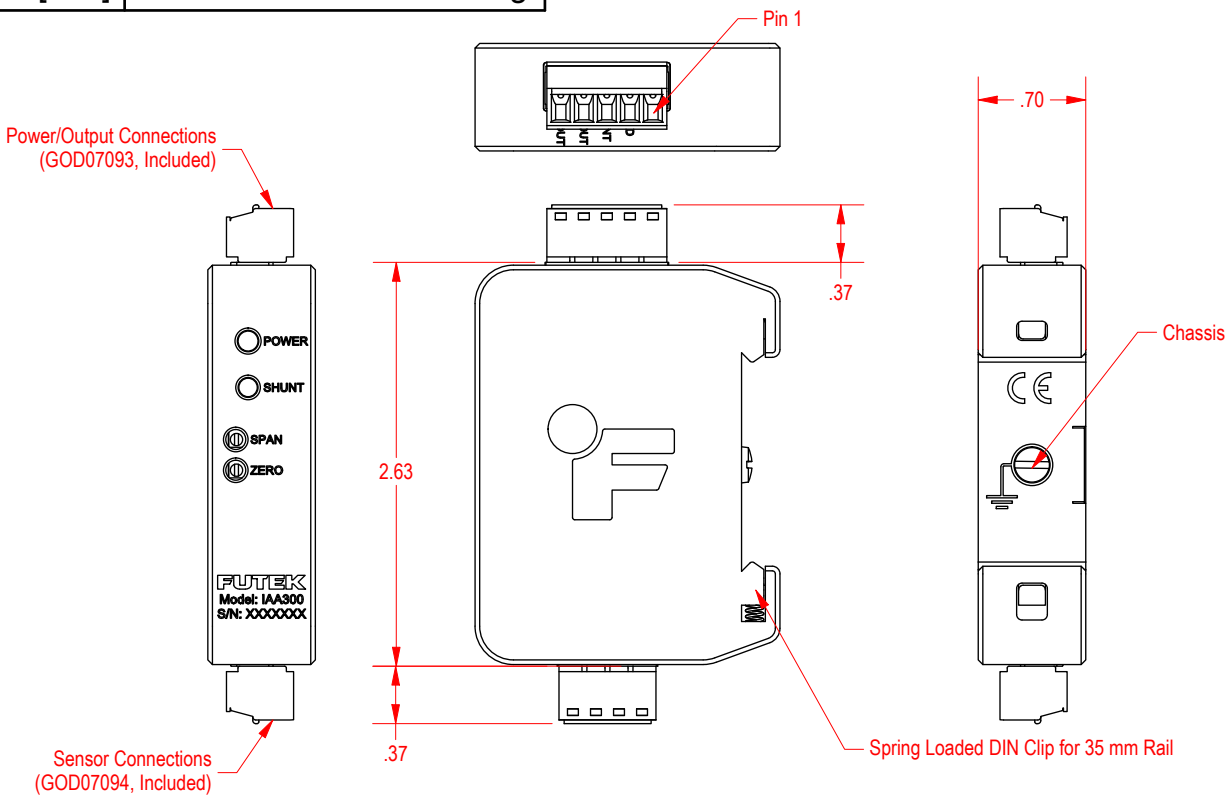

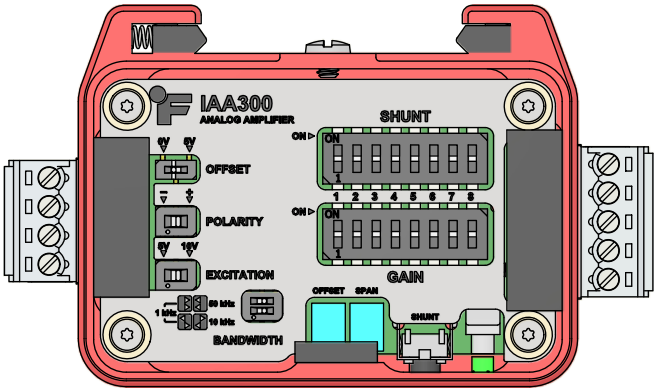

CUSTOMER APPROVAL - COMPANY:	**OUTLINE DRAWING**	www.futek.com
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DRAWN BY: P. THAKUR	CREATED: 11/17/2025	APPROVALS: SEE PLM
CHECKED BY:	CAGE: 1X8M6	SHEET: 2 OF 2