ARD154 SERIES

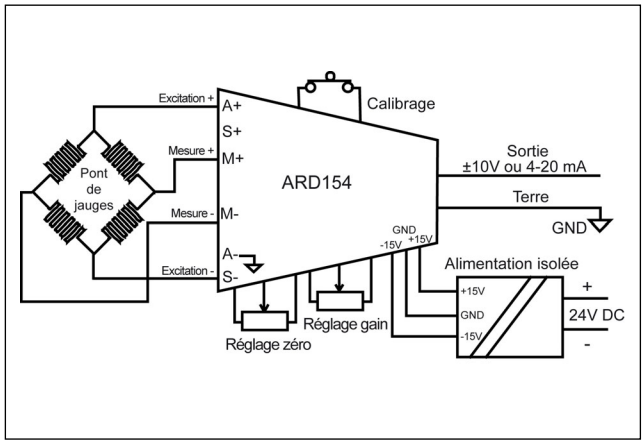
DIN Rail Amplifier

- **Suited for 1 to 4 Strain Gage Sensors**
- **120 to 10000 Ω Bridge Impedance**
- **10 V or 5 V Bridge Excitation – 4 or 6 wires**
- **Adjustable Sensitivity Range 0.1 to 30 mV/V**
- **Calibration Pushbutton from 0.1 to 10 mV/V**
- **Zero and Gain Fine Tuning by Trimmers**
- **±10 V Analogue or 0/4-20 mA Current Output**
- **0.01% F.S. Accuracy**
- **2 kHz or 20 kHz max. Bandwidth**
- **24 Vdc ±10% Isolated Power Supply**

FGP Sensors offers comprehensive measurement solutions including electronic signal conditioning and display units.

The **ARD154** is a DIN rail mountable amplifier, which adapts to most strain gage-based load cells, pressure transducers and accelerometers. The bridge supply voltage can be set to 5 V or 10 V for ±10 V analogue output signals or 0/4-20 mA current outputs. The module covers a sensitivity range from 0.1 mV/V to 30 mV/V. It also allows connecting four 350 Ω sensors in line with 5V excitation.

Through its modular design, the ARD154 adapts to many different applications. Basic settings, including bridge supply voltage, bandwidth, signal output and fixed zero offset are easily performed with onboard jumpers. Zero and Gain adjusting is facilitated by trimmers on the front panel.



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Technical Specifications

Sensor Input

Sensor Type :	Full bridge, strain gage-based, 4 or 6 wires Optional ½ and ¼ bridge 350 Ω (120 Ω on request)
Bridge Impedance :	120 Ω < Z < 10000 Ω (for 120 Ω, bridge excitation 5 V max.)
Bridge Supply Voltage :	10 V or 5 V (for 120 Ω select 5 V) i maxi 60 mA
Sensor Cable Rejection :	2.10-5 / Ω
Input Sensitivity :	5 ranges from 0.1 mV/V to 30 mV/V
Fixed Zero Offset :	4 ranges from ±50% to ±100% F.S.
Adjustable Zero Offset :	± 50% F.S.
Calibration Levels :	0.1 to 10 mV/V
Calibration Level Accuracy :	0.01% for range 1 to 3mV/V 0.1% other ranges

Analogue Output

Voltage Output :	±10 V max.
Output Current :	5 mA max.
Output Impedance :	0.2 Ω max.
Current Output :	4-20 mA or 0-20 mA
Dynamic of the Current Output :	0-10 V (Load Resistance 500 Ω at 20 mA)
Accuracy :	0.01% F.S.
Maximum Drift at the Input :	< 1 µV / °C
Maximum Noise at the Input :	< 3 µV RMS/2 kHz, 10µV RMS/20 kHz (typical)
Common Mode Rejection :	100 dB
Rejection of Power Supply Variations:	120 dB
Bandwidth :	2 KHz or 20 kHz at -3 dB (15 kHz max. for range 0.1mV/V)

Electrical Characteristics

Power Supply :	24 Vcc ±10% Consumption 100 mA max.
Power Supply Isolation :	1000 V dc max. 1 min between 0 V and GND output 400 V peak 0V input/ ground or GND output/ground

General Characteristics

Dimensions (H x L x D) : 99 x 17.5 x 112 mm
DIN rail mountable module
Operating Temperature : -10 °C to 60 °C
Storage Temperature : -40 °C to 70 °C
Screw Connector Blocs : 4 x 3 terminals
Weight : 110 grams approx.

Product References

Amplifier Model
ARD154

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Standard Sensors and Custom Specials!
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