



LOAD CELLS WITH AMPLIFIED ANALOG OUTPUT



Load Cells with Amplified Analog Output

KEY BENEFITS

- Easy interface to standard PLCs and controller
- Load cell output fed directly into PLC
- Good immunity to noise over long cables and in heavy-industry environments
- Can be used with any Vishay load cell
- Available embedded into the sensor, or fitted externally on the side of the load cell
- Supplied with any kind of connector and cable



Load Cells with Amplified Analog Output

Why do I need amplified output?

High-level analog signals such as 0 Vdc – 10 Vdc, 4 mA – 20 mA, and 0 mA – 20 mA that serve as an interface between a sensor and a controller are common in industrial control applications. High-level outputs enable easy interface with standard PLCs and controllers with 10-bit – 14-bit A/D converters, and provide immunity to noise produced by long cables and heavy industrial environments.

Where do I need amplified output?

This solution is designed mainly for applications such as overload protection in lifting devices, cranes, draft pins, and elevators. In all of these cases, the load cell output is fed directly into the user’s PLC.

Do I need a special load cell?

Analog amplifiers can be used in any kind of Vishay Transducers load cell and can be either embedded into the load cell or fitted externally on the side of the load cell. The amplified load cell can be supplied with any kind of connector and cable.

Does the amplifier affect the accuracy of my load cell?

As general rule, the accuracy of the load cell is not affected; but because the amplifier includes a potentiometer for zero and span setting, there can be a slight affect on temperature drift performance.

What types of outputs are available?

- 4 – 20 mA
- 0 – 20 mA
- 0 – 10 Vdc
- Custom

Part Number	Description	Remarks
AM402-9020000140	Analog transmitter; 3 wires; output voltage 0 – 10 Vdc, supply 12 Vdc	Voltage amplifier
AM400-9020000145	Analog transmitter; 3 wires; output voltage 0 – 10 Vdc or 4 – 20 mA; supply 12 Vdc	Voltage and current amplifier
AMP500B-1 PCBA	Analog transmitter; 3 wires; output 4 – 20 mA; 350 Ω; zero load 9 mA; 1.5 mV/V	Loading range: -20% to +80% of F.S.
AMP500A-350-4B PCBA	Analog transmitter; 2 wires; output 4 – 20 mA; 350 Ω; zero load 4 mA; 1.2 mV/V	Loading range: 0 – 1.2 mV/V
AMP500A-350-4A PCBA	Analog transmitter; 2 wires; output 4 – 20 mA; 350 Ω; zero load 4 mA; 1.5 mV/V	Loading range: 0 – 1.5 mV/V
AMP500A-350-9 PCBA	Analog transmitter; 2 wires; output 4 – 20 mA; 350 Ω; zero load 9 mA; 1.5 mV/V	Loading range: -20% to +80% of F.S.
AMP500A-1000-9 PCBA	Analog transmitter; 2 wires; output 4 – 20 mA; 1000 Ω; zero load 9 mA; 1.5 mV/V	Loading range: -20% to +80% of F.S.
AMP500A-3000-9 PCBA	Analog transmitter; 2 wires; output 4 – 20 mA; 3000 Ω; zero load 9 mA; 1.5 mV/V	Loading range: -20% to +80% of F.S.
AMP500A-1000-4C PCBA	Analog transmitter; 2 wires; output 4 – 20 mA; 1000 Ω; zero load 4 mA; 1.0 mV/V	Loading range: 0 – 1.0 mV/V

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