Type 131 Load Cell Amplifier

DESCRIPTION

The Type 131 Load Cell Amplifier's basic function is to amplify the signal from any load cell with full bridge connection. Amplifying this signal allows the user to use the data from the load cell in a more efficient and productive way. Reading the signal can be difficult, but with an amplifier the job is made simpler and easier.

FEATURES

The Type 131 Amplifier is designed to interface with a full bridge strain gauge based load cell or similar sensor. It can be calibrated to provide a 4 mA to 20 mA output for a fixed load range from the sensor. The design is RoHS compliant to required industry standards with features including:

- Bridge resistance between 120 ohm to 2,000 ohm
- 4-wire connection to load cell
- 12 V to 24 V power supply
- -20°C to 50°C operating temperature
- Provides bridge excitation voltage of 8 V
- Linearity of 1:4,000
- Bipolar output is an optional configuration
- Bandwidth of 20 Hz at 3 dB

The amplifier is housed in an ABS enclosure allowing easy installation or mounting to a suitable surface with a single screw.

SPECIFICATIONS

The Type 131 sensor is available in four ranges to suit most applications.

Product	Full Scale Input Range
Type 131-A	0.25 mV/V - 0.85 mV/V
Type 131-B	0.65 mV/V - 1.65 mV/V
Type 131-C	1.50 mV/V - 2.50 mV/V
Type 131-D	2.25 mV/V - 3.25 mV/V

Alternative output options and custom ranges can be provided.

Output Type	Amplifier
4 mA to 20 mA	Type 131 (standard)
12 mA ± 8 mA *	Type 131M (non-standard)
0 V to 10 Vdc	Type 132 (standard)
5 V ± 5 Vdc *	Type 132M (non-standard)

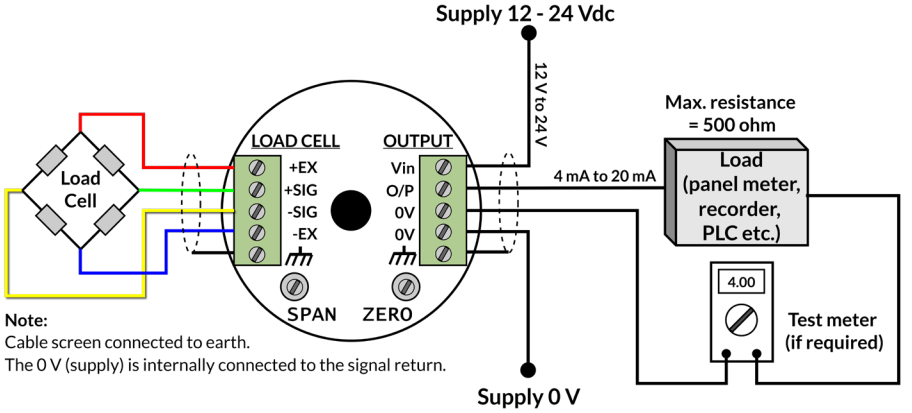
** This output allows for bipolar load ranges (custom specification)*

BRIEF SETUP SPECIFICATION TABLE

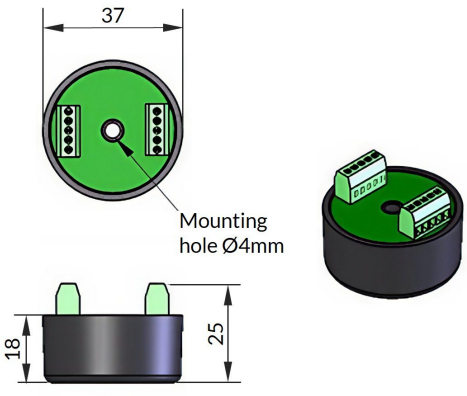
Set-up value	Minimum	Typical	Maximum	Units
Bridge resistance (**12 V** supply)	120	350	2,000	ohm
Bridge resistance (**15 V** supply)	150 *	350	2,000	ohm
Bridge resistance (**18 V** supply)	180 *	350	2,000	ohm
Bridge resistance (**24 V** supply)	350 *	-	2,000	ohm
4 mA to 20 mA load impedance	0	-	500	ohm
Supply current (Load variable)	-	35 - 50	-	mA

* To limit thermal dissipation, minimum bridge resistances are limited at higher voltages

CONNECTIONS



SENSOR DIMENSIONS



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