

Type 123 Strain Gauge Amplifier

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Type 123 Strain Gauge/Load Cell Amplifier

DESCRIPTION

The Type 123 Strain Gauge Amplifier is compatible with a wide range of strain gauge based sensors including pressure transducers, torque transducers, load cells, and full bridge strain gauges. It provides either a 4-20mA or a 0-10Vdc output for the calibrated range of the sensor. They have been used in a range of applications including weighing systems, torque test rigs and process control systems.

FEATURES

The Type 123 is designed as a universal amplifier offering input gain ranges for sensors from 0.2mV/V up to 8.0mV/V, The ranges and the zero offset are switch selectable and final calibration is completed using the gain and zero potentiometers

This range of amplifiers is ideal where the output signal needs to be tailored to a range of different input scaling.

It is housed in a DIN rail enclosure with all input and output connections clearly marked on the enclosure along with a connection diagram. More detailed information on the product set up is provided on the product information disk with handbook data in five languages.

In addition to the Type 123 Datum Electronics Ltd manufacture a wide range of load cell indicators and instrumentation, this range includes portable indicators, digital amplifiers and bespoke OEM products



TYPE 123 AMPLIFIER

Interfaces to load sensors and most full bridge strain gauge transducers:

- 4 or 6 wire transducer connection
- 4-20mA Output
- 0-10V Output
- Coarse & Fine Span and Offset Adjustment
- 0.2 to 7.0 mV/V Calibration Range
- +/- 3 mV/V Offset Range

SPECIFICATION

Size	45mm x 70mm x 120mm Din Rail Mounting Enclosure
Weight	200g
Protection	IP20
Connection	Screw Terminals
Supply Voltage	12-24V DC
Quiescent Supply Current	25mA
Sensor excitation voltage	10V+/-5%
Sensor Resistance	120R - 1000R
Output	0-10V DC and 4-20mA
Linearity	<0.02% FSD
Drift	<0.02% FSD
Accuracy	<0.02% FSD (calibration dependent)

Coarse span ranges (Ranges set via DIP switch)

- Range 0 = 3.5 - 7.0mV/V
- Range 1 = 1.85 - 3.6 mV/V
- Range 2 = 1.0 — 2.0 mV/V
- Range 3 = 0.6 — 1.15 mV/V
- Range 4 = 0.3 — 0.65 mV/V
- Range 5 = 0.2 — 0.35 mV/V

Coarse offset ranges (Ranges set via DIP switch)

- Range 0 positive = -0.5 to +0.5 mV/V
- Range 1 positive = +0.4 to +1.4 mV/V
- Range 2 positive = +1.25 to +2.25 mV/V
- Range 3 positive = +2.15 to +3.15 mV/V
- Range 0 negative = +0.5 to -0.5 mV/V
- Range 1 negative = -0.4 to -1.4 mV/V
- Range 2 negative = -1.25 to -2.25 mV/V
- Range 3 negative = -2.15 to -3.15 mV/V