

Load Cell / Strain Gauge Signal Amplifier MIN380

Function: Signal amplifier that will convert the input from a Load Cell or Strain Gauge (Full or Half Bridge) into a standard transmission voltage or current signal. The MIN380 supplies the transducer excitation voltage and then conditions the resulting mV signal. The MIN380 includes remote sensing input terminals to ensure that the correct voltage is applied at the transducer if it is remote from the conditioning device. The MIN380 includes as standard, zero and span potentiometers for site tuning ($\sim \pm 10\%$) and a Resistor Test Facility to simulate a known weight/force. Options on the MIN380 include: coarse zero and span offset calibration components; -10 to +10 Volt output; and, a passive output.



AlphaMINI CONVERTERS

SPECIFICATIONS

Please note that the following are typical standard ranges. We will manufacture instruments to cater for other ranges too, within certain limitations. Please contact our internal sales department for further clarification.

INPUTS:

DC Voltage

0 to 10mV DC
-10mV to +10mV DC
Others available on request
Minimum voltage span 5mV
Maximum voltage span 100mV

Input Impedance

1M ohm or greater

Excitation Voltage

5V 45mA maximum with remote sensing

OPTIONAL EXTRAS

Zero Offset

DIL Switch giving a coarse variation of the zero by $\pm 50\%$

Span Offset

DIL Switch giving a coarse variation of the span between 50 and 100%

Fine tuning is then achieved by using the internal zero and span potentiometers.

OUTPUTS:

DC Current

0 to 10mA into 10 to 2000 ohms
4 to 20mA into 10 to 1000 ohms
Other ranges as required
Minimum span 1mA
Maximum span 20mA

DC Voltage

0 to 1 Volt DC into 100 ohms min
0 to 10 Volt DC into 1K ohm min
1 to 5 Volt DC into 500 ohms min
Other ranges as required
Minimum span 1 Volt DC
Maximum span 10 Volt DC

Optional extras:

- 1) -10 to +10 Volts DC into 10K ohms minimum
- 2) Passive output

Output/Supply Isolation

600 Volts > 20M ohms

SUPPLY:

Power Supply Voltage

18 to 30 Volt DC

Power Required

3 Watts Maximum

Pilot Light

Red LED shows Power ON

GENERAL:

Linearity Error

Proportional to input $\pm 0.1\%$ of span

Response Time

1mSecs (approx) 0 to 65%

Temperature Coefficient

$\pm 0.1\%$ of span / $\Delta 10^\circ\text{C}$

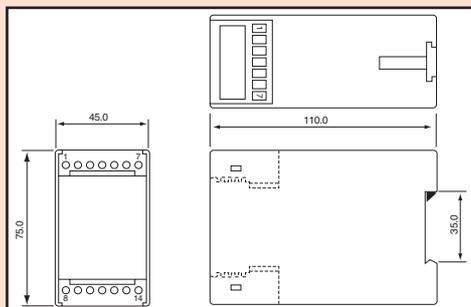
Operating / Storage

Temperature Range
0 to $+45^\circ\text{C}$ / -20 to $+60^\circ\text{C}$

Weight

108 gms

MECHANICAL DETAILS



TERMINATION DETAILS

Terminal	Terminal
1	Excitation +ve (+5 Volt DC)
2	Remote Sensing +ve
3	Signal +ve
4	Signal -ve
5	Remote Sensing -ve
6	Excitation -ve
7	Calibrated Resistor / Test Facility
8	Output -ve
9	Output +ve
10	Unused
11	Unused
12	Supply +ve (24 Volt DC)
13	Unused
14	Supply -ve (0V)

ORDERING DETAILS

- a) Give identification code, i.e. MIN380
- b) Specify Power Supply, i.e. 24 Volt DC
- c) Give details of input signal, both input type and range, i.e. 2.3mV/V and 0 to 1 Tonne
- d) Give details of output required, both type and range, i.e. 4 to 20mA



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