

# 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 /  $\Delta 10^\circ\text{C}$

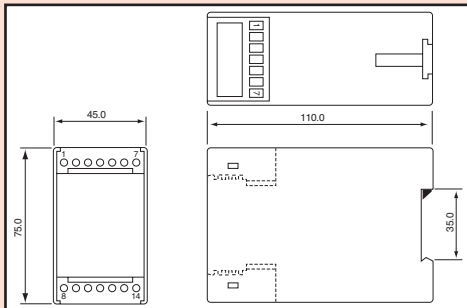
#### Operating / Storage

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

#### Weight

108 gms

## MECHANICAL DETAILS



## TERMINATION DETAILS

### Terminal

- 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

### Terminal

- 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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