

# Strain Bridge Monitor

STRAIN GAUGE READOUT

## FEATURES

- 12 channel selector
- Bridge selector
- Zero offset display
- Internal rechargeable Ni-Cd battery pack & charger

## APPLICATIONS

Environmental Systems & Services' strain bridge monitor has been designed as a versatile and portable read out unit for the measurement of resistance strain gauges and strain gauge based instruments. It is particularly adapted for use with the CSIRO Hollow Inclusion Stress Cell.

Commonly used in mining, civil and laboratory applications. Many strain gauge based transducer are available for measuring force, pressure, acceleration, soil stress, water potential and other parameters.

These can be connected to the SBM using the full bridge configuration provided the internal gain of the monitor is suitable.

LOGGERS / READOUTS



## TECHNICAL SPECIFICATIONS

<b>Range:</b>	± 199999μ
<b>Accuracy:</b>	± 1 count or ± 0.1%
<b>Gauge Factor:</b>	G.F. 2.0
<b>Amplifier:</b>	Gain 100 ± 0.1%
<b>Calibration:</b>	Shunt calibration of internal 120 ohm half bridge simulated 1000μ offset
<b>Resolution:</b>	1μ
<b>Excitation:</b>	2.0 Volts DC
<b>Temperature Range:</b>	0-50°C overall drift better than 1μ/°C
<b>Input Circuits:</b>	Up to 12 selectable inputs, 120 ohm half or full bridge, internal dummy for 120 ohm quarter bridge
<b>Power Supply:</b>	Internal Ni-Cd battery pack. 12 hours continuous life from full recharge, cannot be recharged in hazardous zone

### OPERATING PRINCIPLE

The strain bridge monitor provides bridge excitation amplification, digital display output and manual switching for up to 12 strain gauge inputs including quarter, half and full bridge configuration. The strain bridge monitor has tested to Australian standard AS 2380. The unit will read inputs from up to twelve sets of gauges with selection to the digital display from the front panel. It is possible to measure strain in a single gauge (quarter bridge), two gauges strained in opposite sense (active half bridge) or four gauges with adjacent gauges strained in opposite sense (active full bridge). The unit is supplied in a rugged carry case and supplied with internal rechargeable batteries and a 220/240V AC mains recharger.