SBM3000

STRAIN BRIDGE MONITOR

SBM3000 FEATURES

IECEx Approved

For use with 120 Ω strain gauges

Compatible with $\frac{1}{4}$, $\frac{1}{2}$ and Full Wheatstone Strain Bridge configurations

Supports CSIRO developed Hollow Inclusion cells (HI Cells)

Up to 16 Single ended voltage inputs

Precision sensor excitation voltage and lead wire compensation

Alpha-numeric liquid crystal display

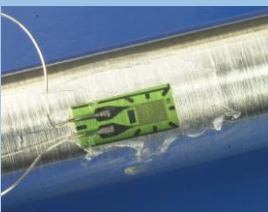Data logging of attached instruments with time and date stamp

Intuitive GUI software for configuring inputs and uploading stored data

SBM3000 Applications

The SBM3000 Strain Bridge Monitor is a combined readout / data logging unit, designed specifically for field deployment. It is an evolution of the industry standard IS2000 readout unit, which has been used for over 30 years by stata control specialists to produce accurate in situ data sets and mitigate risk in mining and tunneling projects world wide.

The SBM3000 can be used with both strain gauge and single ended voltage type transducers.

Traditionally strain gauge based transducers are used to measure force, mass, torque, pressure and strain. Single ended voltage transducers are commonly used for displacement measurements.

COMPATIBLE INSRTUMENTS

The following types of instruments are supported by the SBM3000 :-

- Load cells
- Strain gauge intstrumented rock bolts
- ANZI and Hollow Inclusion Cells for capturing insitu and virgin rock mass stresses using overcoring
- Resistance Wire Extensometer
- Shear strips used to determine borehole shear displacement
- Convergence Monitors
- Crack Monitors

WINDOWS BASED GUI FOR SYSTEM CONFIGURATION AND DATA STORAGE / RETRIEVAL

SBM3000

STRAIN BRIDGE
MONITOR

PROUDLY
AUSTRALIAN
DESIGNED AND
BUILT

SPECIFICATIONS

PHYSICAL SPECIFICATIONS:

Size:	240mm high x 198mm wide x 109mm deep
Weight:	1.6Kg
Material:	Black polypropylene case
Sealing:	Rated to IP64 with lid closed or open
Temperature:	Operating Temperature -20°C to +40°C
	Storage Temperature -25°C to +70°C

INTRINSIC SAFETY APPROVAL (for readouts Serial Nos <SBM3000I****> only)

Int'l Standards:	IEC 60079-0, Ed 6.0 (2011)
	IEC 60079-11, Ed 6.0 (2011)
	IEC 60079-11, Ed 6.0 (2011)/Cor.1 (2012)
AUS/NZ Standards:	AS/NZS 60079.0:2012
	AS/NZS 60079.11:2011
Certification:	A full copy of the IECEx Certification is available from:
	https://www.iecex-certs.com/#/deliverables/CERT/57714/view

ELECTRICAL SPECIFICATIONS

POWER

Internal Battery:	6 x AA Cells, NiMH technology, 7.2V, 2.55Ah
Charger:	240V Plug-pack Charger Module, 15v DC output
	Integrated intelligent charger
Charge Time:	Approximately 3 hours from flat
Auto-off:	3-min, 10-min, 20-min or Disabled (user selectable)

DATA LOGGING

Input Channels:	Dependant on wiring options, maximum 20 channels
Storage Capacity:	All configurations can store a maximum of 1024 scans
Data Backup:	10 years without primary power
Internal Clock:	Real-time clock, non-volatile operation
	10-year count without primary power
Scanning Intervals:	Manual trigger
	10, 15, 30 seconds (all modes, selectable while scanning)
	1, 2, 5, 10, 20 mins (all modes, selectable while scanning)
	1, 3 hours (all modes, selectable while scanning)

COMMUNICATIONS

Baud Rate:	9600 baud, 8 data, 1 start, 1 stop, no parity
Data Format:	Date, Time, Data dependant on configuration
Data Separator:	Tab separated columns, ASCII text format
Data Recovery:	Custom WINDOWS™ Interface software

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