Telepower Australia is licencing IMS technology for product manufacture, as well as integration into OEM equipment.

IMS is a flexible generic software-based monitoring platform based on a universal voltage-input model. The following brochure indicates one form that IMS can take as a stand-alone product under licence.

www.telepower.com.au

TELEPOWER
AUSTRALIA

GNB

IMS

INTELLIGENT MONITORING SYSTEM

The Intelligent Monitoring System (IMS) from GNB is a stand-alone device that continuously assesses a battery's ability to provide standby power. IMS proactively notifies the user when the battery requires service or replacement. IMS will also predict the remaining standby time of a battery during a discharge. This allows the user to intelligently dispatch field generators and shed unnecessary battery loads to critical sites before power is lost.

GNB TECHNOLOGIES

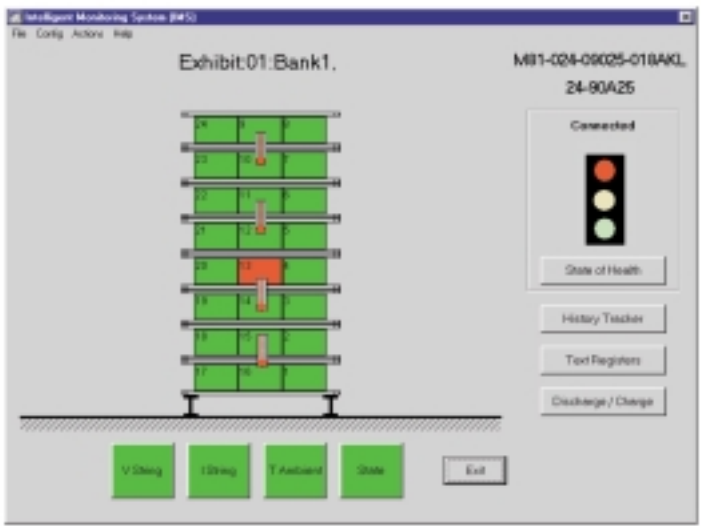
GNB®

IMS

INTELLIGENT MONITORING SYSTEM

BENEFITS

- Continuous State of Health prediction and notification
- Time to Empty prediction and notification during a battery discharge
- On-site electronic record keeping for troubleshooting and maintenance activity



FEATURES

- Expert based GNB multi-parameter algorithms for assessing State of Health
- Single cell voltage and impedance readings for the finest resolution and accuracy
- Easy ordering and installation for most GNB VRLA batteries
- Universal adaptation capabilities for any battery system
- Compact size — 1 RU height (1.75 inches/44.4mm)
- LCD display and pushbuttons allow user to scroll through menus to retrieve data
- Windows based software for Graphical data access — Local or remote operation
- Ability to cascade multiple IMS units for high voltage systems
- Standard RS232 protocol for universal system integration

GNB

IMS

INTELLIGENT MONITORING SYSTEM

SPECIFICATIONS

Measurement inputs

- 64 external analog voltage input connections.
- Maximum differential input voltage between any two inputs ±160VDC.
- Internal voltage reference input with accuracy better that 1% max.
- Internal temperature sensor input with accuracy better than 1˚C max.

DC-coupled voltage measurement

- Full-scale bipolar ranges of 40mV, 156mV, 312mV, 625mV, 1.25V, 5V, 10V, 20V, 80V, and 160V.
- Input resistance 1MΩ
- Voltage accuracy better than 0.2% typical of full scale.
- Voltage accuracy temperature stability <10ppm/˚C.
- Linearity better than 0.03% typical.
- Resolution better than 0.5mV (5V range), 2mV (20V range).
- Common-mode rejection better than 85dB typical.

AC-coupled voltage measurement for impedance

- 4 wire impedance measurement.
- Full-scale ranges of 780uΩ, 3.1mΩ, 6.25mΩ, 12.5mΩ, 25mΩ, 100mΩ, and 200mΩ.
- Frequency range from 10Hz to 1kHz.
- 10 AC current injection output.
- Impedance magnitude accuracy better than 0.5% typical of full scale.
- Impedance accuracy temperature stability <100ppm/˚C.
- Resolution better than 1uΩ (6.25mΩ range).

Data Storage

- 10 year battery backed internal RAM.

Real Time Clock

- Time accuracy better than 2 seconds per day at 25˚C.
- Time resolution 10 millisecond.
- Y2K compliant.

Power Supply

- Supply voltage range ±9 to ±100V DC.
- Power draw 1.5W normal mode, 4W during impedance measurement.
- 200V isolation between supply input and other circuitry.

Display and Keypad

- LCD type, 2 line x 20 character, alphanumeric, reflective display.
- Displays parameters and data.
- 4 key keypad can interrogate and manipulate stored data and user-defined parameters.
- Piezo beeper to provide local warning of alarms.

I/O Port Communications (serial)

- RS232, full duplex.
- 1,200-19,200 baud, software selectable.
- 2kV isolation to other circuitry and monitored inputs.

Optional Form C Dry Contacts (2)

- Battery minor and major.
- 60VA rated contacts.

Mechanical

- Aluminum housing.
- Height 44.4mm (1.75 inches), width 152mm (6.0 inches), depth 133mm (5.25 inches).
- Weight 680g (1.5 pound).

Connections

- Voltage input: 68pin female SCSI III socket.
- Impedance injection: 15pin female DB15 socket.
- I/O Port: 9pin female DB9 socket.
- Alarm relay module: 9pin female DB9 socket.

Operating Environment

- Operating temperature range 0˚C to 70˚C.
- Operating humidity to 95%, non condensing.