Rest Assured

MIDTRONICS

CELLGUARD™ TRACE

24 Volt or 48 Volt Battery String Monitor

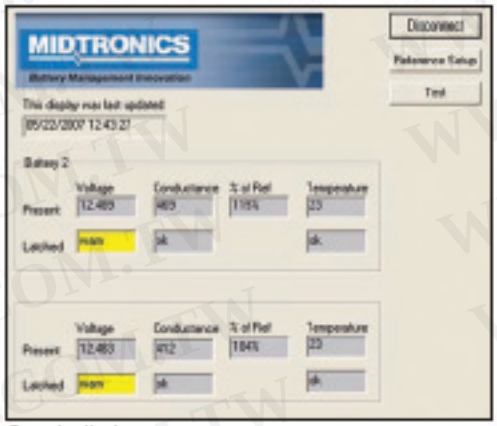
The CELLGUARD TRACE (UBM-1048) system provides effective string battery monitoring for 24 V or 48 V battery applications.

It is designed to monitor stationary batteries in a variety of applications, including:

- Telecommunications
  - Wireline (DSP)
  - Wireless
- Fire and security alarm systems
- Broadband
- Switching and control systems

Using easy-to-install kelvin connections, the CELL GUARD TRACE measures individual 12-volt jar conductance, voltage and temperature every 24 hours and warns or alarms when any measured parameter crosses a preset threshold.

This approach provides for early warning of battery degradation, enabling individual jars to be removed from the string prior to full string degradation or system failure.



Sample display

Features:

- Continuous monitoring of batteries for improved system reliability and cost effective maintenance
- Identifies infant mortality of batteries that can go undetected until the first maintenance check
- Utilizes field proven Conductance Technology for reliable battery analysis
- Simplified installation procedure and economical design allow for system-wide deployment

INNOVATION TECHNOLOGY QUALITY WORLDWIDE

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Specifications

Battery Interface

Battery Voltage—

CELLGUARD TRACE interfaces to individual batteries (part of a string) having the following nominal voltages:

- Two 12-volt batteries (24 Vdc string, + or - Ground)
- Four 12-volt batteries (48 Vdc string, + or - Ground)

Battery Terminal Connections—
CELLGUARD TRACE battery cabling connects to the battery via ring terminals. Each post will require 1 connection, for a total of 2 connections per battery.

Fused Battery Cabling—
CELLGUARD TRACE battery cabling contains in-line fuses of sufficient current rating to support normal system operation and capable of blowing upon the occurrence of an adverse situation such as due to a short or other high current draw.

Battery Temperature Monitor Connections—
CELLGUARD TRACE temperature cabling is a 2-wire interface per battery. The cable connects to the negative post of the battery via one ring terminal.

CELLGUARD TRACE Functional Specifications

System Measurements—
CELLGUARD TRACE measures the following:

- Battery conductance
- Battery DC voltage
- Battery temperature

Alarm Thresholds—

	Minor	Major
Conductance	70% of the Reference Value	60% of the Reference Value
Voltage Low	11.400 Vdc	10.500 Vdc
Voltage High	15.000 Vdc	16.000 Vdc
Temperature Low	-4°C (24.8°F)	-20°C (-4°F)
	50°C (122°F)	60°C (140°F)

Baseline conductance reference values will be determined for each battery model. CELLGUARD TRACE provides a temperature compensated percent of reference between 0-35 degrees Celsius (32-95 degrees Fahrenheit). The percentage of reference is compensated 0.7% per degree Celsius away from 25°C. Below 25°C the percent of reference increase and above 25°C the percent of reference decreases.

CELLGUARD TRACE Performance Specifications

Battery Conductance Range—
100 s < Siemens < 4,000 s for 12-volt batteries

Battery Voltage Range—
10.500 V < V < 15.000 V (12-volt battery)
Note: CELLGUARD TRACE is capable of reading above this range.

Battery Temperature Measurement Range—
-20°C (-4°F) < T < 70°C (158°F)

String Voltage—
21 V < V < 31 V for 24-volt operation
42 V < V < 62 V for 48-volt operation

Monitor System Level Requirements

Module Power Source—
CELLGUARD TRACE is powered by the batteries under test.

Module Dimensions—
9 1/2 in x 3 in x 1 1/4 in

Module Environment Requirements—
CELLGUARD TRACE operates over the environment ranges of:

- Operating Temperature: -20°C (-4°F) to 70°C (158°F)
- Operating Humidity: 0-95% non-condensing