TRANSFORMING TECHNOLOGIES

OUTSTANDING ALTERNATIVES IN STATIC CONTROL

Monitoring

Rev: 2021-11-16

Resistance Ranger™

RangerBOSS Constant Monitor - CM2800

Resistance-Based Constant Monitoring with Performance to your Unique Specifications.

Transforming Technologies' RangerBOSS constant monitor is the premiere work station grounding system available. A continuous pulse of an ultra-low voltage signal measures the electrical resistance of two wrist bands, two work surfaces, two grounded tools and operator voltage simultaneously and alarms is there is a problem.

Performance to your Specifications

The CM2800's alarm settings can be reconfigured quickly and easily with the PC software CM2800-SEE. Operator Resistance, Operator Voltage, Work-surface Resistance, Operator Presence Check (OPC) and Resistance of Equipment alarms can be enabled/disabled and limits selectable to user specifications.

Real Time Central Monitoring

The CM2800 is network ready and can easily be connected to other workstation monitors and a computer using the high speed network router, CM2800-H. The host computer is transformed into a command center with the software CM2800-BOSS SEE, a central monitoring program that shows real time grounding results and allows for adjustment of alarm parameters of up to 4096 workstations. An entire assembly line's ESD protection can be remotely monitored and adjusted with one computer.

Meets or exceeds requirements of ANSI ESD-S20.20 and ESDA Standard 1.1-2006

Features

- **Monitors Two Wrist Straps, Two Work Surfaces and Operator Voltage.**
- **Create Network of up to 4096 Monitors and Monitor at a Central Computer**
- **Programmable Alarm Thresholds**
- **Accurate Dual Conductor Resistance Monitoring Technology**
- **Ultra-Low Voltage Signal**
- **Audible and Visual Alarms**

RangerBOSS kit includes two wrist strap remote jacks with cables, ground cords for two mats, ground cable for monitor and power supply.

Applications:

ESD constant monitors reduce production costs by eliminating the time spent on testing wrist straps. Further savings may be realized by reduced ESD damage from broken wrist straps and work surface failures. Resistance based monitors are the most accurate technology available

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www.transforming-technologies.com

RangerBOSS CM2800

The BOSS-SEE Monitoring System

The CM2800 is network ready and can easily be connected to other workstation monitors and a computer using the high speed network router, CM2800-H. The host computer is transformed into a command center with the software BOSS SEE, a central monitoring program that shows real time grounding results and data collection of up to 4096 workstations. An entire factor's ESD protection can be remotely monitored with one computer.

The Superior Resistance Monitoring System

Workstations using resistance monitors are almost never at risk for a failed ground connection. This type of monitor is used with a two-wire (dual conductor) wrist strap. When a person is wearing a wrist strap, the monitor observes the resistance of the loop, consisting of a wire, a person, a wristband, and a second wire. If any part of the loop should open (become disconnected or have out of limit resistance), the circuit will go into the alarm state. An important feature of the dual wire wrist strap is that even if one conductor is severed, the operator has reliable path-to-ground with the other wire.

Basic systems use impedance technology and single wire wrist straps which can be easily fooled. If a wrist strap is worn incorrectly, the monitor can still register a "pass" condition or if the wire of the wrist strap is severed the workstation could be put at risk for ESD damage.

Model CM2800	**Specifications**
DC Power Supply:	7-15 VDC, 100mA.
AC Input:	100-240 VAC, 1A.
Temperature limits:	50° F (10°C) to 122° F (50°C)
Adjustments:	No serviceable components; see periodic verification tools
Dimensions:	4" W x 3" D x 1" H (10.16 x 7.62 x 2.54 cm)
Weight:	6.8oz
Monitoring Capabilities	2 wrist straps/persons + 2 mats
Alarm Limits	
Wrist Strap	
Low Resistance:	1.8 megohm.
High Resistance:	35 meg ohm.
Mat Resistance:	100 meg ohm.
Typical Operator Voltage at 10M:	max 0.1V (100mV)
Max Mat Voltage (open circuit):	0.2V (200mV)
Max Mat Voltage (alarm at 100M):	0.15V (150mV)

Unit Accessories

FM1515	Work Surface Ground Cable
FM1515CM	Monitor Ground Cable
FM1515NR	Monitor To Work Surface Cable
CM2015PV	Periodic Verification Tool
CM2800-REMOTE	Remote Jack Replacement
CM-REMOTE-IR	CYCLOPS™ Sensor
CM2800-H	Network Router
CM2800-IMS	Boss-See Network Software

CYCLOPS™ protects ESD safe workstations by sensing when an operator is within the protected work area and alarms if a wrist strap is not connected. The alarm continues until compliance is achieved, preventing isolated operators from damaging ESD sensitive devices.

About Transforming Technologies

Since 1998, Transforming Technologies has helped electronic manufacturing facilities to protect their products and processes from the many serious problems associated with static electricity.

Transforming Technologies offers a wide range of unique and outstanding products to detect, protect, eliminate and monitor electrostatic charges. Our products are integral components of an effective static control program.