

# OHM Metrics Constant Monitors



## RESISTANCE RANGER CONSTANT MONITORS

### DEPENDABLE, CONVIENENT, ACCURATE

Transforming Technologies' Resistance Ranger™ Series is the most reliable workstation monitoring system available. The extremely sensitive monitors accurately measure the electrical resistance of an ESD wrist band and work surface and signals if the devices fail. Audible and visible alarms are triggered if the operator's resistance exceeds 35 meg ohm or if the work surface exceeds 100 meg ohm. The Ranger Series saves time by eliminating the time consuming testing of wrist straps and coil cords. The system uses special dual wire wrist band sets that contain two independent ground paths which provide fail-safe protection.

### FEATURES:

- Resistance Monitoring Technology
- Ultra-Low Voltage Signal
- Audible and Visual Alarm Indicators
- ESD-Safe Conductive Case

### CAPABILITIES

- RangerOne: One Operator
- RangerTwo: One Operator & Worksurface
- RangerPro: Two Operators, Two Worksurfaces & Two Tools
- Wrist Strap Alarm: High 35M; Low: 1.8M
- Worksurface Alarm: 100M

### SAVE TIME AND MONEY

Since people are one of the greatest sources of static electricity and ESD, proper grounding is paramount. One of the most common ways to ground people is with a wriststrap. Ensuring that wrist straps are functional and are connected to people and ground is a continuous task. ESD Constant monitors reduce production costs by eliminating the time spent on testing wrist straps before each shift. Further savings may be realized by reduced ESD damage from broken wrist straps.



**RangerOne**

### Resistance Monitoring The Superior System

Resistance based monitoring is the most complete wrist strap monitoring system available. 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 other wire.



**WB5000**

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.



**Transforming Technologies**  
Outstanding Alternatives in Static Control

**For More Information:**  
www.transforming-technologies.com  
info@transforming-technologies.com  
P: 419-841-9952

# Ohm Metrics Resistance Monitor

## Product Specifications

### Unit monitoring capabilities

|               |  |
|---------------|--|
| <b>CM1601</b> | 1 Person/Wrist Strap                                       |
| <b>CM1602</b> | 1 Person/Wrist Strap<br>& 1 Worksurface Mat                |
| <b>CM1600</b> | 2 People/Wrist Straps<br>& 2 Worksurface Mats<br>& 2 Tools |

### Performance Specifications

|                    |                                |
|--------------------|--------------------------------|
| Wrist Strap Alarm: | Low Alarm: 1.8 megohm.         |
|                    | High Alarm: 35 meg ohm.        |
| Mat Alarm:         | 100 meg ohm.                   |
| Power:             | 9-12V, 100mA.                  |
| Temp. Limits       | :50° F (10°C) to 122° F (50°C) |

### Unit Accessories

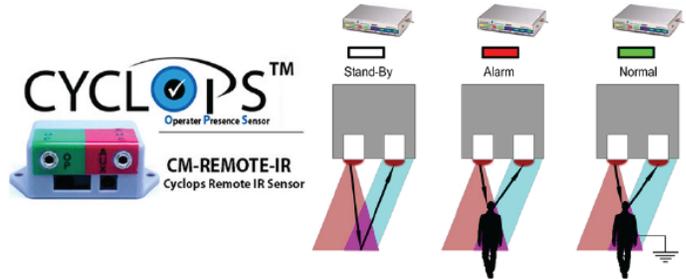
|             |  |
|-------------|--|
| FM1515      | Work Surface Ground Cable (1 included)               |
| FM1515CM    | Monitor Ground Cable (1 included)                    |
| FM1515NR    | Monitor To Work Surface Cable (1 included)           |
| CM2015      | Periodic Verification Unit                           |
| CMREMOTE-IR | Cyclops™ Operator Presence Check                     |
| CP3000      | Wrist Strap Parking Station for Mono Plug Coil Cords |

### Compatible Wrist Bands\*

|               |  |
|---------------|--|
| WB2800 Series | Two Snap, Dual Wire Wrist Bands        |
| WB2695 Series | One Snaps Dual Wire Wrist Bands        |
| WB5000 Series | Mono Plug Dual Wire Metal Wrist Bands  |
| WB7000 Series | Mono Plug Dual Wire Fabric Wrist Bands |

\*Most Standard Dual Wire Wrist Band Sets are Compatible with the CM1601 and CM1602

### IR Sensor



### CYCLOPS™ Infrared Operator Presence Sensor

CYCLOPS™ assure compliance with personnel grounding requirements and protect ESD safe workstations by sensing when an operator is within the protected work area. An operator who approaches the workstation without connecting their wrist strap causes the monitor to alarm. The alarm continues until compliance is achieved, preventing isolated operators from damaging ESD sensitive devices.



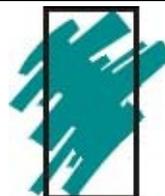
CP3000 Parking Station



### About Transforming Technologies

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.

This document is prepared for our customers as a service, and is to the best of our knowledge true and accurate. However, it is understood and agreed by the users of this document that we will accept no liability for the conclusions reached. Users of this document may therefore wish to perform additional testing before determining that products mentioned are suitable.



Transforming Technologies, LLC

3719 King Road.  
Toledo, OH 43617

Phone: 1.419.841.9552  
Fax: 1.419.841.3241  
www.transforming-technologies.com

Outstanding Alternatives in Static Control