

# 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 Based Monitoring
- ESD Safe Conductive Case
- Ultra-Low Voltage Signal
- Audible and Visual Alarm Indicators



**Ranger One with  
Wrist Band Jack**

### CAPABILITIES:

- Ranger One: One Operator Monitoring
- Ranger Two: One Operator & Worksurface Monitoring
- Wrist Strap Alarm: High: 35 Megohm; Low: 1.8 Megohm
- Worksurface Alarm: High: 100 Megohm

### 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 effective ways to ground people is with a wriststrap and coil cord. Ensuring that wrist straps are functional and are connected to both 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 reducing ESD damage to materials from broken wrist straps.

### Resistance Monitoring: The Superior System

Resistance based monitoring is the most complete wrist strap monitoring system available. Workstations using resistance monitors are rarely at risk for a failed ground connection. This type of monitor is used with a dual 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 a dual wire wrist strap is that if one wire is severed, the operator still has a reliable path-to-ground with the other wire.



**WB5000**

Single wire constant monitoring systems use impedance technology which can be easily fooled if a wrist strap is worn incorrectly. The monitor may still register a "pass" condition and 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: 419-841-9552

# Ohm Metrics Resistance Monitor

## Product Specifications

Dimensions: 2" W x 3" D x 1" H  
Weight: 6.8oz

### Unit monitoring capabilities

**CM1601** 1 Person/Wrist Strap  
**CM1602** 1 Person/Wrist Strap  
& 1 Worksurface Mat

### 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

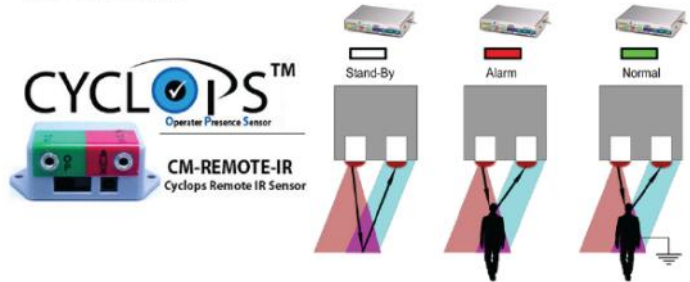
FM1515 Work Surface Ground Cable (1 included)  
FM1515CM Monitor Ground Cable (1 included)  
FM1515NR Monitor To Work Surface Cable (1 included)  
CM2015 Periodic Verification Unit  
CMREMOTE-IR Cyclops™ Operator Presence Check  
CP3000 Wrist Strap Parking Station for Mono Plug Coil Cords

### 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



WB5000



WB7000



WB2850

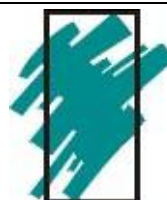


WB2595P

### 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