

## 3M™ Ground Man Plus Ground Monitor CTC334

The Ground Man Plus Ground Monitor CTC334 can be used to monitor the ground impedance of metal ground connections of process tools in work areas including semiconductor, disk drive, flat panel, electronic equipment manufacturing and other environments. For the Ground Man Plus Ground Monitor CTC334, ground impedance monitoring can be used for up to three points for metal ground within a tool. This monitor can continuously monitor the resistance and voltage level of one operator wearing dual wire wrist strap. The monitor provides both visual and audible alarms. It also has a logic output signal.

### Metal Ground Monitor

The Ground Man Plus Ground Monitor CTC334 continuously monitors ground on three separate channels that are connected to three process tools. The alarm level is set the same for all channels and can be set from 1-20 ohms

### Resistance and Voltage Wrist Strap Monitor

The Ground Man Plus Ground Monitor CTC334 monitors the complete circuit which includes the cord, wrist band and the operator to help ensure proper electrical connection. This monitor has an additional feature that allows continuous monitoring of voltage on a person through a dual conductor wrist band assembly. The operator is grounded via the monitor on both sides of the wrist strap via the dual wire cable.

### Applications

- Electronics Assembly
- Semiconductor Device Manufacturing
- Industrial Robotics
- Back-End Semiconductor Tools
- Tool Clusters
- Medical

### Features

- Three metal ground monitoring
- Adjustable impedance alarm level
- Enable/disable for each ground
- Output to the host tool
- Operator wrist strap monitor
- Operator body voltage monitoring
- Audio and visual alarms
- Sound alarm on/off
- EMI - Ground Man Plus Ground Monitors checks EMI on each ground and indicates EMI presence.



### Product Specifications

Properties	Value
<b>Operator Monitor</b>	
Wrist Strap	Dual Wire, 3.0 mm plug
Number of Wrist Straps Monitored	1
Body Resistance Alarm Level	10 MΩ typical (plus two 1 MΩ resistors in the end of the ground cord that attaches to the wrist band)
Body Voltage Alarm Level	± 2.5V typical (Default)
<b>Ground Impedance Monitor</b>	
Number of Grounds Monitored	3
Ground Impedance Alarm Level	1-10, 12, 14, 16, 18 and 20Ω (default 10Ω)
<b>General</b>	
Output Signal Level	Logic 1 (5V typical) if below selected resistance level (any failure) Logic 0 (0V typical) if above selected resistance level (all pass or power loss)
Visual and Audio Indication	Green - OK Red - Fault Condition no LED - not monitored Note: Operator LED's red or green will not illuminate if wrist strap is not plugged into jack. Buzzer fault condition if enabled is ON
Power Supply	Universal: 100 - 240VAC, 0.5A, ~ 50/60 Hz Output: 12VDC, 1.5A
Dimension (approx.)	2.4" W x 0.85" H x 2.6" D (61 mm W x 21 mm H x 66 mm D)
Weight (approx.)	75 g

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