3M™ EM Eye Meter CTM048

The portable, easy-to-use EM Eye Meter CTM048 serves as a measuring instrument for most ESD signals. The EM Eye Meter CTM048 measures the magnitude of ESD events. This meter also provides filters to estimate the events magnitude for CDM, HBM and MM models.

The EM Eye Meter CTM048 has optional sensors to detect EMF and RF signals.
- ESD Events Detection – The EM Eye Meter CTM048 is capable of measuring the magnitude (rise) of a signal from both ESD and non-ESD events. This meter provides an estimate of CDM, HBM and MM models*.
- EMF Sensor – Enables the EM Eye Meter CTM048 to be transformed into an EMF Meter, Power Density Meter and EIRP Meter.
- RF Signal Sensor – The EM Eye Meter CTM048 measures the amplitude of RF signal.

Not all ESD events are captured by the EM Eye Meter CTM048. The magnitude of the event can be measured. CDM,HBM and MM Model results are estimated based on proprietary algorithms.

Features
- Sensor Modular Construction
- ESD*/EMF/RF Measurement
- Reject Most Non-ESD Events
- ESD Event Count
- Portable
- Local and Remote Antenna
- Touch Screen
- microSD™ Card for Data Storage
- Audio Output
- Rechargeable Battery

Key Advantages
- Rejection of most Non-ESD Events
- User-Friendly Interface with Graphic and Touch Display
- Multi-Sensor Capabilities
- ON/OFF Using Touch Screen

Applications
- Electronics Assembly
- Semiconductor Device Manufacturing
- Industrial Robotics
- Back-End Semiconductor Tools
- Tool Clusters
- Design and Communication
- Antenna Tuning

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Specifications

GENERAL

Audio Indicators	Speaker: Beep or analog audio with selectable volume
External Data Storage	microSD™ Card
Recording Interval	Peaks: 1 – 360 seconds Average signals: 0.1 – 360 seconds
Display	Touch LCD
Size	65 W x 32 D x 105 L mm
Headphone Jack	3.5 mm (1/8 in.)
Power Supply/Charger	Input: 100-240V ~ 50-60 Hz 0.2A Output: 5.0V 1000mA Center: Positive, ID 1.3 mm; OD 3.5 mm

ESD EVENT SENSOR

ESD Event Detection Characterization Modes	Raw input for magnitude and estimated CDM, HBM, MM using proprietary algorithm
Raw Input Resolution	1mV (1mV-15mV) ; 15 mV (15mV-1500mV) (Detection Resolution: 1mV)
Threshold (Display) Resolution	1-10 Volts, 10-990 Volts Raw input: 1mV (1-15mV) and 15mV (15-1500mV)
Distance Detection Range	1.3 cm (0.5 in.) – 38.1 cm (15.0 in.)
ESD Counter Range	0 – 32,767 counts (screen count)
Hardware Setup	Adjustable Brightness, Auto-off-time

Specifications

ELECTROMAGNETIC FIELD SENSOR

Function Modes	Electromagnetic Field	Power Density meter	EIRP meter
Peak range	Min: 0.001 V/m Max: 20.00 V/m	Min: 0.027 nW/cm^2 Max: 106.1 uW/cm^2	Min: 0.001W Max: 5333 W
Average range	Min: 0.001 V/m Max: 20.00 V/m	Min: 2.65 nW/m^2 Max: 1.06 Watts/m^2	
Units	V/m	W/cm^2	Watts

Antenna Factor range	-40.0 to 40.0 dBm
Hardware setup	Brightness, Off-time, Antenna factor (AF)
Antenna options	Local, or remote (CTC 111)
Record interval range	1 – 360 seconds
Record average range	0.1 – 360 seconds

RF SIGNAL SENSOR

Unit modes	dBuV , dBm , mV
Dynamic range	Min: -55 dBm Max: 0 dBm
ATT (Attenuation)	00 dB / 20 dB

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