www.credencetech.com

WS Aware® The Safest Dual Workstation Monitor

DSP-based monitor keeps track of operators, tool and bench grounding and EMI

Assurance of continuous good grounding is the cornerstone for an ESD-safe environment. Utilizing the latest advances in digital signal processing, WS Aware® provides continuous uninterrupted monitoring of all grounding parameters on a workbench or in a tool, in full compliance with ANSI 6.1 and ANSI/ESDA S.20.20 requirements, as well as high-frequency noise (EMI) on ground.

For operators, WS Aware[®] utilizes dual wrist straps for a continuous resistivity check of human body connection and patent-pending advanced DSP technology for reliable monitoring ultilzing ultra-low control voltage. Each operator's body voltage is also continuously monitored.

For equipment, WS Aware[®] CTC061 provides continuous monitoring for two metal grounds (such as tools) and for two "soft" grounds (such as dissipative mats, surfaces and parts made of dissipative plastics), or four metal grounds (CTC062)

WS Aware[®] provides monitoring of EMI on metal grounds with programmable alarm thresholds. As electromagnetic interference (EMI) is rapidly becoming a significant factor in equipment failures, this patentpending unique feature of WS Aware[®] will help assure proper operation of your equipment.



Applications

Disk Drive Assembly GMR Head Handling Semiconductor Fabrication Reticle Handling Flat Panel Fabrication Laser Diodes/Fiberoptics Electronic Assembly Industrial Robotics Medical Military Wherever ESD is an Issue

Features

Dual wrist strap monitor Big Brother[™] operator detection Extremely low voltage on person Body voltage monitoring Metal ground monitoring EMI on metal ground Dissipative ground monitoring Programmable thresholds Industrial Network Interface Comprehensive information to FMS Miniature Individually Calibrated

Key Advantages Highly Integrated

This miniature monitor with the footprint of a credit card, packs inside a combination of features that cannot be found in any monitor several times its size.

Assurance of Operator Grounding

WS Aware[®] utilizes patent-pending Big Brother[™] terminals that detect the presence of an operator and raises an alarm if an operator is within reach of sensitive components but is not plugged in.

Ultra-Low Voltage

WS Aware[®] provides only 25 millivolts of signal to any part of the wrist strap at any time, even when it is open -- many times less than any comparable monitor. WS Aware[®] is completely safe to use in any environment utilizing the most sensitive components -- now or for years to come.

Safety

WS Aware® has built-in safety 1M resistors in ground path for each half of the wriststrap. This assures operator's safety and quick charge dissipation. Workstation Monitor Models CTC061 CTC062



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Big Brother® Terminals

Big Brother[®] operator's terminals provide assurance that the operator is always grounded by sensing operator's presence within reach of the workbench. If an operator is within reach of components but is not plugged in, WS Aware equipped with Big Brother[™] terminals will raise an alarm. This patentpending method prevents non-grounded operators from damaging sensitive parts.

As a true dual workstation monitor, WS Aware[®] uses two terminals for two operators' connection to allow their placement at different workbenches for convenience of operators. A visitor/supervisor jack is of the same type as for operators harmonizing the type of the wriststraps throughout the factory.

Wrist strap Monitor		Ground Monitor	
Wrist Strap Type Connection to Ground Number of Wrist Straps Imposed Voltage on Body Remote Terminals Remote Terminal Cables Visitor Jack on Remote Body Resistance Alarm Level" Body Voltage Alarm Level" Local Indication Indicated Parameters	Dual, 3.5mm plug 1 MOhms for each side 2 0.025V (25mV) max. 2, one for each operator Mini-DIN 6-pin Available 10MOhms default +/-2.5V default LED, Buzzer Availability Continuity Body Voltage	Parameters Monitored CTC061 Metal Ground (Tools) Dissipative Surfaces CTC062 Metal Ground (Tools) Ground Connector Connection Activation Metal Ground Alarm [*] Imposed Voltage Metal Ground Dissipative Surfaces	2 connections 2 connections 4 connections No-Screw Terminal Dip-Switch (no jumpers) 10 Ohms default 1 GOhms default < 0.075V open circuit < 0.4V open circuit
Output Parameters for Each Operator These parameters are pro locally or via facility more values are used when no provided	nitoring system. Default	EMI on Metal Ground Sensitivity Local Indication Indicated Parameters Output Parameters for Each Connection	OdBm default Good/Alarm/Off LED, Buzzer Resistance to Ground EMI on Metal Ground Availability Resistance to Ground EMI (Metal Ground)
Connectivity General			
Interface Current Loop Logic Level MODBUS Data Connector	420mA 0/20mA MODBUS Std. Compliant RJ45 jack	Power (local or network) Voltage Current Consumption Dimension (approx.) Weight (approx.)	1224V DC <150mA 3.2" x 2.25" x 1.30" 81mm x 57mm x 33mm 4.25 oz (120g)

Specification

Replaceable Jacks Protect Your Investment

WS Aware® terminals utilize special jacks custom made for high reliability allowing for a long period between service.

Should jacks ever become damaged, replacement of them in WS Aware® terminals does not require replacement of the entire terminal. Patent-pending modular construction of WS Aware® terminals allows replacement of only an inexpensive internal board with the jacks using a simple screwdriver instead of buying the entire new terminal. This greatly simplifies maintenance and significantly reduces cost of ownership.

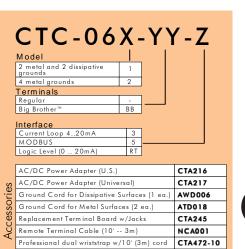


Ordering Information

The following is included when you order WS Aware:

WS Aware® CTC061/2	lea.
Remote Terminal	2ea.
10' (3m) Cable	2ea.
User's Guide	lea.
Grounding hardware	lea.

Don't forget to order proper power adapter unless FMS or data acquisition system provides power to WS Aware®





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All specifications are subject to change without notice. Made in U.S.A.