

PERSONAL GROUNDING MONITORS

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- The regular checking of personal grounding is a requirement of all ESD protection standards.
- All the instruments shown provide reliable periodic or continuous testing facilities to meet the requirements of BS EN 61340-5-1:2007

Combo Tester

Designed to test wrist straps and footwear at the entrance to an EPA.

Switchable between wrist strap and footwear modes, with Fail Low/Pass/Fail High indication. Battery or mains powered (with adaptor). Incorporates keyhole slots for wall or stand mounting. Supplied with a 10mm stud converter.

AC mains adaptor and power cord to be ordered separately.



Description

Description	Order Code
Combo Tester	CW-99000
Combo Tester with Stand and Footplate	CW-99004
Footplate for Combo Tester	CW-99013
AC Mains Adaptor	CW-99065
UK Power Cord	CW-93010

TECHNICAL INFORMATION:4

Pass Range: 0.75M Ω - 35M Ω
(Limits adjustable to provide custom range).
Battery: 9V PP3
Mains adaptor: 220V AC

Calibration Box

Used to carry out a functional check on the Combo Tester (CW-90000 and CW-99004) when used at factory-set limits.

This unit is a passive device, requiring no batteries.



Order Code

CW-99090

TECHNICAL INFORMATION:

Low Fail: 0.675M Ω
Low Pass: 0.825M Ω
High Pass: 35M Ω
High Fail: 40M Ω

Continuous Wrist Strap and Workstation Monitors

These instruments provide continuous monitoring of a wrist straps and bench mats during use, reducing ESD damage risk to very low levels. The units are designed for single-wire wrist straps and operate using wave distortion technology, giving instantaneous alarm of wrist strap ground failure. In addition, the units incorporate a resistive monitoring circuit for the bench mat ground.

Jewel® Workstation Continuous Mini-Monitor

A compact unit, mounted on the bench surface using two 10mm studs. 4mm and 10mm parking studs are fitted to ensure a non-alarm state when the operator leaves the workstation. Fitted with audible and visual failure indicators. Requires mains adaptor and power cord, listed separately.



Order Code

CW-99130

TECHNICAL INFORMATION:4

Uses Wave Distortion Technology to monitor the capacitive impedance of a correctly bonded person/wrist strap combination. For correct operation of the bench mat function, always use with materials incorporating a conductive layer.

Dual Operator Workstation Continuous Monitor

A dual operator unit for single wire wrist straps, for mounting below a shelf or worksurface, with two satellite socket blocks for fitting up to 2.1m from the monitor. The satellites incorporate a 4mm monitored socket, a 4mm parking stud and a 4mm unmonitored guest socket. Also provides ground monitoring for two worksurfaces. Fitted with audible and visual failure indicators. Supplied with mains adaptor and two wrist strap kits; power cord to be ordered separately.



Description

Continuous Monitor
Power Cord

Order Code

CW-50517
CW-93010

Monitor Calibration Unit

This unit is required to carry out functional tests on the Continuous Monitors CW-99130 and CW-50517 This unit is a passive device, requiring no batteries.

TECHNICAL INFORMATION:

Operator: Switchable Low fail/Pass/Hi fail.
Work Surface: Switchable 10M Ω /100M Ω /500M Ω
Note:
10M Ω is the factory default limit for the CW-50517.
500M Ω is the factory default limit for CW-99130

Order Code

CW-50512



- This equipment is designed to test and record the results of routine wrist strap and footwear checks.
- Normally sited at the entrance to an EPA, it provides a checking procedure which does not rely on operator log sheets, improving control and simplifying system audits.
- Provides various input methods to suit the client's needs.
- All tests are recorded and downloaded for future analysis.

Sentry

ID Input Options:

- Numeric keypad with lock-out option.
- Infrared bar-code reader.
- Magnetic card reader (subject to compatibility tests).

Output Options:

- To a local PC – non-network option.
- Data out via local intranet using TCP/IP protocols (network option).
- Relay operated access control.

Test Functions

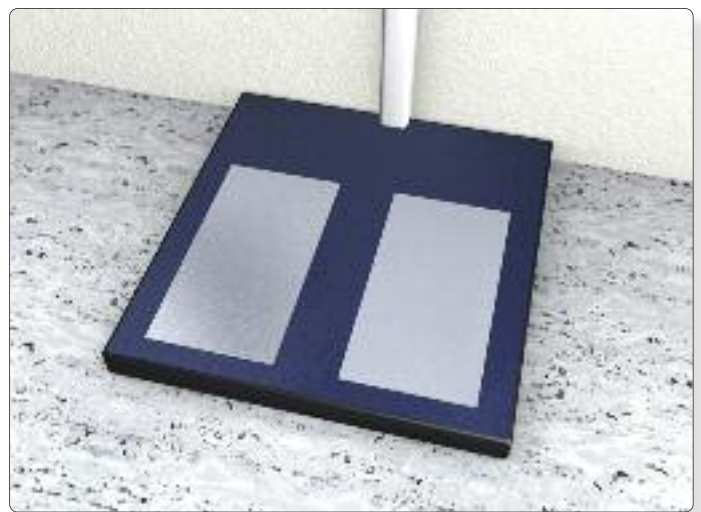
- Wrist Strap Pass/Fail.
- Left Foot Pass/Fail.
- Right Foot Pass/Fail.
- Test limits configurable.
- Individual tests selectable in staff list.

Data Download and Staff List Management

- To local PC.
- Standard network point using TCP/IP intranet.
- Multiple Sentry Installation.
- Standard network points using TCP/IP intranet.

Independent tests of wrist strap and footwear, triggered by ID input.

Incorporates battery backup for data integrity.



Twin Foot Plate

Description	Order Code
Sentry unit with keypad input only.	SEN-133
Sentry unit with keypad and optical bar code input.	SEN-133-OCR
Sentry unit with keypad input and network interface.	SEN-134
Sentry unit with keypad input, optical bar code input and network interface.	SEN-134-OCR
Dual Footplate with connecting cable.	SEN-412
Keypad Lock (factory fitted)	SEN-410
Verification Module (to carry out function tests on Sentry)	SEN-630
Verification Module with calibration certificate	SEN-630-CC
Site installation and remote support is available on this equipment. Please ask for a quotation.	

TECHNICAL INFORMATION:

Footwear Limits:	500 kΩ to 250 MΩ (Low and High Fail configurable)
Wrist Strap Limits:	1 MΩ to 35 MΩ (Low and High Fail configurable)
Accuracy:	Worst case - ± 10% between 0.5 MΩ and 100 MΩ
Storage Capacity:	Up to 3600 tests using 3 character ID
Staff List Capacity:	1000+ IDs
Test Download:	Configurable frequency.
Access Relay Capacity:	50V DC 500mA



Surface Resistance Test Kit

This kit provides the facility to carry out resistance tests on work surfaces, floors, seating and other ESD protective items.

Tests at 10V and 100V, with self-ranging. Measures ambient temperature and humidity at the time of test.

The kit is complete with two 2.27kg, 65mm diameter test electrodes and complies with the requirements of BS EN 61340-5-1:2007.

Description	Order Code
Test Kit Complete with case	CW-99105
Test Meter only	CW-99106
Surface resistivity attachment	CW-99107
Spare Electrode leads	CW-99108
Test Probes only per pair	CW-99109

TECHNICAL INFORMATION:

Test Ranges
 10 volt test 103 – 1012 Ω
 100 volt test 106 – 1012 Ω
 Battery: 2 AA alkaline cells.
 Battery life: approx. 1500 measurements



Multi-Range Megohmmeter

This instrument provides the facility to carry out resistance checks on work surfaces, floors, seating and other ESD protective items. The instrument is supplied in a carrying case, with test leads and a certificate of calibration (valid for 12 months from the date of first use).

Testing of ESD protective items is normally carried out at 10V for resistances below 1M Ω and at 100V above 1M Ω .

For work surface and floor tests, weighted test probes are required, as illustrated below.

Description	Order Code
Megohmmeter with case	MIT-415

TECHNICAL INFORMATION:

Test Voltages – megohm ranges: 10,25,50,100,250,500 V
 Maximum indication: 10V – 1G Ω ; 100V – 10G G Ω ; 500V - 50G Ω
 Test Voltages – low resistance ranges: 5 V \pm 1V
 Continuity: 0.01 Ω to 99.9 Ω
 Resistance: 0.01K Ω to 1M Ω
 Battery: 5 x AA 1.5V (NiMH rechargeable can be used)
 Battery life: 2200 tests – 5 seconds on/55 seconds off duty cycle
 Dimensions: 220 x 92 x 50mm
 Weight: 775gm with rubber protective boot



Test probes to BS EN 61340-4-1

Test probes consisting of a 2.27 kg insulated body with a conductive rubber contact pad. Use one probe for resistance to ground (Rg) measurement and two probes for point-to-point surface resistance (Rp) measurement.

Description	Order Code
Test Probes per pair	CW-99109



Extension Test Lead

This lead is essential for floor testing in larger areas where the floor grounding point is some distance from the test locations. Useful when checking ESD grounding of benches back to a remote earth point. The high quality double insulated silicon lead eliminates leakage errors. Supplied on a storage drum with handle. Lead termination - 4mm shrouded right-angle plug; drum termination - 4mm shrouded socket.

Length 50m

Description	Order Code
Extension Lead	EXL-50

Digital Field Meter

The EVS-2001 is designed to locate and measure static charge potentials on product, people, equipment and packaging. The instrument uses a non-contacting, chopper stabilized field sensor and a ranging light mechanism to ensure correct measurements of electrostatic fields in all areas. The Fieldmeter is easily zeroed with the turn of a small knob and does not require re-zeroing between measurements. Powered by a 9Volt battery, the EVS-2001 features a conductive, impact-resistant case and a convenient snap-on ground lead to facilitate grounding and increase accuracy.



Description	Order Code
Digital Field Meter	EVS-2001

TECHNICAL INFORMATION:

Display: 3 ½ digits 10mm LCD
 Range: 0V to ± 20kV at 25mm separation
 Analogue Output: ± 2 volts full scale via miniature jack socket
 Accuracy: ± 5% of displayed value

ESD Survey Kits

Basic Kit

The kit contains instruments and test electrodes required to carry out periodic tests and surveys of ESD Protected Areas.

Contains:-

- EVS-2001 Digital Field Meter (see above)
- MIT-415 Megohmmeter (see page 106)
- HT-40 Temperature/humidity meter.
- CW-99108 test probes (see page 106)
- EXL-12 12m extension test lead (see page 106)
- Foam lined carrying case.

Description	Order Code
Complete Kit	ESK-101



- Ionisers are essential for the neutralisation of charges on insulative (non-groundable) items that are essential in a production process.
- When correctly setup and maintained, Charleswater ionisers meet all the performance requirements of BS EN 61340-5-1:2007



Chargebuster Overhead Ioniser

Available as a 3 speed, 3 fan version, this overhead ioniser provides uniform neutralisation performance.

The unit is self-balancing and has an auto-test sequence at power-on.

Description	Dimensions (mm)	Order Code
Chargebuster Ioniser	940 x 165 x 89mm	CW-50681
UK Power cord		CW-93010
Replacement emitter points (pack of 8)		CW-50668
Emitter Tip Point Cleaner (pack of 20)		CW-50658

TECHNICAL INFORMATION:

Operation Mode: 5.5KV steady state DC
 Emitters: Machined tungsten
 Auto-balance with user adjustment of fine trimmer.
 Balance tolerance: ± 20 volts setup at 610mm above charged plate monitor.
 Power supply: 220V AC Internal fuse 20 x 5mm 3A time lag.



Emitter Cassette Removal

Critical Environment Ioniser

Fully featured multi-fan overhead ioniser with closed loop electronic balance control and the facility for remote monitoring via a RJ45 data-port. Incorporates removable emitter cassettes for ease of maintenance and minimum downtime, with a lock-out key to prevent unauthorised adjustments. Two units can be daisy chained to the mains supply to simplify installation. Each fan has a sealed plenum chamber to minimise contamination; suitable for clean room applications. Balance and fan speed settings are retained on power loss. Includes automatic front panel cleaning indicator.

Mini Ioniser

Ultra compact bench ioniser with two fan speeds, utilising steady state DC technology with Sense Feedback Control and visual/audible alarms. 24V power.

Size: 133h x 89w x 43d mm



Description	Dimensions (mm)	Order Code
2 fan model	610 x 150 x 50	CW-92260
4 fan model	1220 x 150 x 50	CW-92261
Replacement emitter cassette (pair)		CW-92262
Replacement filter screen		CW-92327
Replacement emitter pins (pack of 20)		CW-92234
UK Power cord		CW-93010

TECHNICAL INFORMATION:

Operation Mode: 5000V steady state DC
 Emitters: Machined tungsten
 Balance tolerance: ± 10 volts setup at 610mm above charged plate monitor
 Power supply: 220V AC Internal fuse 20 x 5mm 3A time lag.

Bench Ioniser

Compact bench ioniser with three fan speeds, utilising steady state DC technology with Sense Feedback Control and visual/audible alarms. An optional Balance Alarm Programmer allows non-default alarm sensitivities to be set. Size: 240h x 150 w x 80d mm

Description	Order Code
Mini Ioniser	CW-50640
UK Power Adaptor	CW-50676
UK Power cord	CW-93010
Replacement emitter points (pack of 8)	CW-50668
Emitter Tip Point Cleaner (pack of 20)	CW-50658

TECHNICAL INFORMATION:

Emitters: Machined tungsten
 Balance tolerance: ± 20 volts
 Discharge time: <3 sec 1000 to 100V at 300mm

Description	Order Code
Bench Ioniser	CW-92290
UK Power cord	CW-93010
Balance Alarm Programmer	CW-50667
Replacement emitter points (pack of 8)	CW-50668
Emitter Tip Point Cleaner (pack of 20)	CW-50658

TECHNICAL INFORMATION:

Emitters: Machined tungsten
 Balance tolerance: ± 5 volts
 Discharge time: <1.5 sec 1000 to 100V at 300mm

