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EUROSTAT PIONEER IN THE ELECTROSTATIC

Eurostat is a pioneer in protection against electrostatic discharges (ESD). We offer solutions for protection of components sensitive to electrostatic damage and contamination during production, storing and shipping.

PROTECTION OF DISCHARGES

WHAT ARE ELECTROSTATIC DISCHARGES?

All materials are composed of atoms. Each atom is composed of a positive charge, around which gravitate many negative electrons. At rest, positive nucleus charges are equal to the sum of negative charges of the electrons that gravitate around them. The charge therefore remains neutral. Static electricity is a phenomenon which happens when two surfaces contact each other and are then separated. It's at this moment that an exchange in electrons between both surfaces can occur. At this moment occurs a movement of electrons that creates charges at the surface of both materials.

This exchange of electrons between conductive materials (and man made materials) can occur suddenly, creating an electrostatic discharge with irreversible damage, especially to electrical components. In order to avoid those damages, it is necessary to implement the protective measures aiming elimination of all static electricity sources and consequently, prevention of the electrostatic discharges. Nevertheless, if the static discharges appear, Eurostat has developed a whole range of materials and products, providing protection for electrostatic sensitive devices such as PCBs.

Conductive

Allows a rapid discharge to ground that can have the same effect as an ESD discharge. These materials insure a bond with ground but do not mitigate the energy exchanged during a discharge.

Dissipative

Allows a slower discharge from the charge carrier to the ground, reducing the risk of potential damage.

Insulative

Offers no grounding of electrostatic charges.

Grounding resistance less than Rs/Rv < 1x10⁴ Ω

Grounding resistance is between 10⁴ < Rs/Rv < 1x10¹¹Ω

Offer no grounding of electrostatic charges Rs/Rv > 1x10¹¹ Ω



INSTRUMENTATION AND IONISATION

Eurostat offers a range of test equipment that allows you to control, measure and record critical values inside and outside the EPA in line with the IEC and ANSI norms: access control, ionisation, resistance measurement (tera-Ohm meters), field meters, discharge time measurement, walking test, etc.

Moreover, Eurostat offers a wide variety of products for storing components in a dry environment, vacuum sealing, and flexible packaging sealing.



GLOSSARY

ABS: Acrylonitrile-Butadiene-Styrene

APET: Amorphous Polyethylene Terephthalate

Carbon Nanotubes: Two dimensional layers of carbon atoms, providing conductivity or dissapation to PS matrix, depending on concentration in the material

CPM: Charge Plate Monitor measures voltages applied to it's sensing plate.

Directive RoHS: European Directive: Limiting the use of certain dangerous substances in association with electrical and electronic components

EMI: Electromagnetic interference

EPA: Electrostatic Protected Area (An area of complete ESD protection)

ESD: Electro-static Discharge

European Standard IEC 61340-5-1: Protection of electro static sensitive devices

LDPE, HDPE: Low density PolyEthylene, High density PolyEthylene

PC: Polycarbonate

PCB: Printed Circuit Board

PE: PolyEthylene

PP: PolyPropylene

PS: PolyStyrene

PU: Polyurethane

RV (volume resistance): Resistance test between the surfaces of a material

RS (surface resistance): Measurement taken from the surface area of a material

Shielding: Material offering a Faraday cage

SMD: Surface Mount Devices

Standards EIA-583 / EIA-541 /EIA-625: Standards related to the packaging of humidity sensitive parts

TPU: Thermoplastic Polyurethanes

VCI: Vapor Corrosion Inhibitor

MVTR: Moisture Vapor Transmission Rate

Eurostat has its own maintenance and service centre, offering repair and calibration for our customers in the European market.



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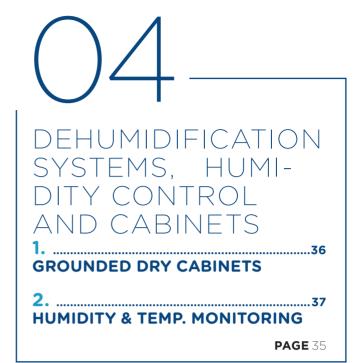
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CONTROL ACCESS SYSTEMS & GROUNDING ACCESSORIES

For companies who need to ensure that the operators cannot enter the EPA unless their wrist straps and footwear are compliant every day.

1. TURNSTILES: CONNECTED & NON CONNECTED FOR ACCESS CONTROL TO ESD PROTECTED AREAS

Connected universal access control tester that locally saves the data and make them available on the company network. The turnstiles respect the ANSI/ESD S20/20 norm as well as the ISO requirements in control recording.

The testers are configurable in function of who is wearing the badge; shoes, bracelet, shoes + bracelet.





- Both ESD safe shoes are tested separately by measuring electrodes installed in the contact mat
- This system tests operators quickly (≤2 sec.) and automatically generates reports for the ESD coordinator

Technical Data: Connected version

- Test Range : Bracelet 750K Ω to 50M Ω Shoes 100K Ω to 100M Ω

Turnstile for access control to EPA protected areas.

- RFID reader compatible with most of HID Cards*
 *Wiegand 26 bit by default others may be charged)
- Ethernet connexion to LAN
- Fully functional without LAN connexion thanks to local Operators database

Part Nr. (Left Access + RFID) : 61-500-0002 Part Nr. (Right Access + RFID) : 61-500-0003

Technical Data: Non connected version

- Test Range : Bracelet 750K Ω to 50M Ω Shoes 100K Ω to 100M Ω

Part Nr. (Left Access) : 61-500-0000 Part Nr. (Right Access) : 61-500-0001

Software utility

- Equipment and test range configuration by software
- Software calibration

Possible parameters

- Shoe tester
- Bracelet tester (Single or Dual wire)
- Shoe and /or bracelet tester
- Right & Left acces configuration

2. CONFORMITY TESTERS FOR PERSONAL EQUIPMENT

2.1. ESD tester with card reader



Tests dual cord wrist straps and both right and left foot heel grounders individually Personal equipment tester. Tester dimensions: 143 x 155 x 35. 4 colours of LEDs for test results indication.

IEC 61340 Compliant

Technical Data

- RFID identification
- Possibility to program testing parameters for each employee
- Allows communication with the company's network or the dedicated server (SQL database)

Part Nr.

- Delivered with a shoe test mat
- Calibration system available p.13 61-200-0075

Part Nr. : 61-200-3109

Product description

ESD TESTER GZ-600-MIF WITH SOFTWARE 61-200-0143 ESD TESTER GZ-600-HID WITH SOFTWARE 61-200-0144 ESD TESTER GZ-350-HID WITH SOFTWARE 61-200-0145 ESD TESTER GZ-350-MIF WITH SOFTWARE 61-200-0145

2.2. Wall mounted shoes and wrist strap tester



Separately tests left shoe, right shoe and bracelet

Tester designed for checking the conformity of operator's wrist strap and/or shoes to the ESD protection standard. It is also designed to be permanentaly wall mounted in a production facility for daily testing of employee's wrist straps and footwear.

IEC 61340 Compliant

Technical Data

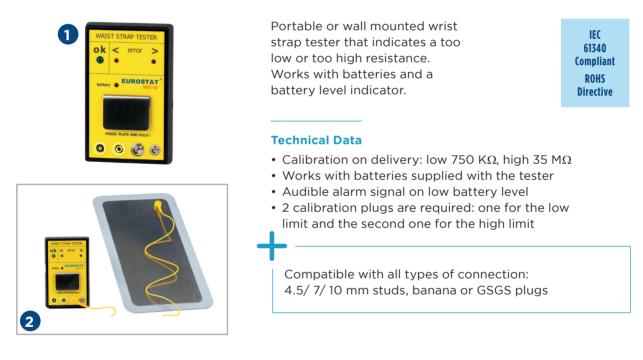
- Easy to operate, red and green LEDs give clear "pass" or "fail" Indication
- Output for interface with PC or automatic door opening system.
- Battery that can be added with an AC net Adaptor
- Tester and calibration plug are delivered with a calibration certificate

Complete kit Part Nr. : 61-200-0100RoHS

2.3. Accessories

Product description	Part Nr.
Power supply (EU plug)	61-200-0103
Power supply (UK plug)	61-300-0103
Wall mounted operational panel (French version)	61-200-0104
Wall mounted operational panel (English version)	61-200-0105
Interface PC	61-200-0107
Calibration plug: Low limit OM Ω - 2M $\Omega/$ High limit 5M Ω - 200M Ω	61-200-01xx

2.4. Portable wrist strap tester



Pro	duct description	Part Nr.
1	WST 50 Tester (7/10mm stud/banana/GSGS)	61-200-0050RoHS
1	WST 50 Tester (4,5/10mm stud/banana/GSGS)	61-200-0051RoHS
-	Calibration plug - from 10 K Ω to 200 M Ω	61-200-0xxx
2	Complete Kit	61-200-0000RoHS

3. CALIBRATION SYSTEM



Tool for controlling the calibration of the EPA control access systems.

Technical Data

- Resistance decade box
- Incorporates 6 thumb wheels 1K, 10K , 100K, 1meg, 10meg and 100meg, each having 10 positions.
- Measurements of resistance are taken using 0.1% metal film resistors, will offer accurate calibration from 1K to 999,999 ohms

Part Nr.: 61-200-0075

4. PERMANENT MONITOR GZ 1600

4.1. Permanent monitor

Compact meter that can monitor the grounding of 2 operators and/or 2 ESD mats simultaneously. 3 colour LEDs indicate the status of the operator wrist-strap: high, low, safe.



- Bracelet detection limit: 35 $\text{M}\Omega$
- Mat detection limit: 100 $\text{M}\Omega$

Part Nr.: 61-200-0012

If one of the connections fails, the device emits an alarm and a visual signal

5. GROUNDING CONNECTIONS

5.1. Connection from workbench to ground



Adaptor

Features	Part Nr.
Banana plug/10mm studs Should be connected to a wire	30-552-6012

UK grounding plug

Features	Part Nr.
3 x BP 10 mm	30-552-0610

EU grounding plug

Features	Part Nr.
3 x BP 10 mm	30-552-0615

5.2. Universal grounding box and earthing plugs

a. Universal box

ESD Earth Bonding Point

ESD Earth Bonding Point

1MO

c. Grounding Plug

IMC



Part Nr.: 30-560-0039

Technical Data

- Snaps (4, 4.5, 7 and 10mm)
- Complete with 3 meter cord with eyelet
- Material: Yellow ABS
- Dimensions: 78 x 28 x 35 mm
- No resistance
 - Universal grounding solution compatible with all existing wrist strap connections: banana plug, GSGS, snaps

b. L-Shape earth bonding bracket

-lin

1MO 1MO

Technical Data

- 3m of black cord, right output
- Material: Yellow ABS
- Dimensions: 110 x 16,5 x 33 mm
- Security resistance: $1 M\Omega$

Characteristics	Part Nr.
Grounding system with 3 x 10mm male studs	30-551-3020
Grounding system with 3 x 7mm male studs	30-551-3030
Grounding system with 3 x banana connections	30-551-3040

Other configuration on request, with a minimum order quantity



30-552-0605

30-552-0625

Technical Data

- Earthing plug providing a reliable path to electrical main earth
- Material: ABS
- Resistor: $1 M\Omega$

Wide choice of connections

Earthing plug

Connections	EU plug	UK plug
3 x 7 mm studs	30-552-0605	-
2 x M5 eyelet	30-552-0625	30-552-0620
2 x M5 eyelet connections 7 & 10mm + banana	30-552-0635	-
3 x bananas	30-552-6007	-

O1. CONTROL ACCESS SYSTEMS

d. Grounding accessories for mats

To ground mats directly, to an earthing terminal or mat to mat . Resistance: $1\,M\Omega$

Link to Earthing Terminal

Mat connection	Ground connection	Length m	Part Nr.
2 x 10mm female Stud	/	1,80	30-560-0210
2 x 10mm male Stud	/	1,80	30-560-0211
2 x 10mm female Stud	/	0,15	30-560-0214
2 x 10mm female Stud	/	0,60	30-560-0215





Serie 30-560-021X

Serie 30-560-151X

Mat grounding

Mat connection	Ground connection	Length m	Part Nr.
10mm molded female Stud	Eyelet	4,50	30-560-1510
10mm molded male Stud	Eyelet	4,50	30-560-1511
10mm male Stud + 2 holes for bananas	Eyelet	3,00	30-560-0048
10mm female Stud + 2 holes for bananas	Banana	3,00	30-560-0049
10mm female Stud + 2 fiches GSGS	Eyelet	3,00	30-560-0148

5.3 Stud assembly tool

To equip table or floor mats for grounding.

Description		Part Nr.
Snap fastener, 10mm male to be used for rigid table/floor mats up to 3mm		30-560-0033 – Bags of 10 pcs 30-552-0045 – Bags of 50 pcs
Snap fastener, 10mm female to be used for rigid table/floor mats up to 3mm	\bigcirc	30-560-0034 - Bags of 10 pcs 30-552-0030 - Bags of 50 pcs
Snap fastener, 10mm male to be used for soft table/floor mats		30-560-0050 - Bags of 10 pcs
Snap fastener, 10mm female to be used for soft table/floor mats		30-560-0051 – Bags of 10 pcs
Metal tool kit for studs		30-552-6035

CONTROL ACCESS SYSTEMS.01

5.4. Cords

WRIST STRAP COIL CORDS

- Resistance: $1 M\Omega$
- Female stud connections
- Colour: Black

- Other connections and lengths on request
- Types of connections to fit most
 - grounding systems worldwide







Coil cords

Connections	Length m	Part Nr.
4 mm / banana	1,80	30-560-0604
4 mm / banana	3,00	30-560-1004
7 mm / banana	1,80	30-560-0607
7 mm / banana	3,00	30-560-1007
10 mm / banana	1,80	30-560-0610
10 mm / banana	3,00	30-560-1010
4 mm / 10 mm stud	1,80	30-560-0641
7 mm / 7 mm stud	1,80	30-560-0677
10 mm / 10 mm stud	1,80	30-560-0611
7 mm / 10 mm stud	1,80	30-560-0671
4 mm / GSGS	1,80	30-560-0614
4 mm / GSGS	3,00	30-560-1014
4 mm / eyelet	3,60	30-560-1214



Dual Conductor Coiled Cords

- Designed to operate with workstation monitors
- Resistance: $1 M\Omega$

Length	Part Nr.
-	

1.80 m	30-560-0600
3.60 m	30-560-0605

6. GROUNDING BRACELETS

. .

a. Fabric wrist straps



 Adjustable to any wrist size 	
 Both sides are conductive 	

Connection	Part Nr.
4 mm stud	30-560-0004
7 mm stud	30-560-0007
10 mm stud	30-560-0010

Crimson red colour, allows operators to avoid electrostatic discharge to components.

Technical Data

- Material Non allergenic
- Rv < 1 x 10⁵Ω
- Male stud connection
- Washable
- Colour: Crimson red

b. Metal wrist bands



 Insulated external
side and conductive
internal side
 Adjustable to
any wrist size

Connection Part Nr.

4 mm stud	30-560-4004
7 mm stud	30-560-4007
10 mm stud	30-560-4010

Superior reliability for grounding operators

Technical Data

- Conductive bracelets
- Rv < 1 x 10⁵ Ω
- Superior reliability
- Nickel free
- Male stud connection

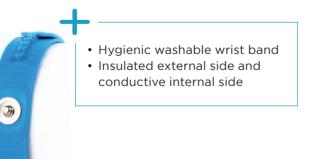
IEC 61340 Compliant

IEC

61340

Compliant

c. Plastic wrist bands



Clean room compatible.

Technical Data

- Thermoplastic material
- Rv < 1 x 10⁵Ω
- Male stud connection
- Colour: Blue

Connection Part Nr.

4 mm stud	30-560-0111
7 mm stud	30-560-0112
10 mm stud	30-560-0113

IEC

IEC 61340 Compliant

d. Dual cord wrist straps

Designed to operate with the workstation monitors.





MEASURING INSTRUMENTS

000000

Foot 97.

DUAL-WIRE

HIGH

PASS

LOW

Button To Star

HIGH PASS LOW

WRIST STRAP STATUS

HUMANE DIGITAL FILIT

SINGLE-WIRE

HIGH

PASS

FOOT PLATE

LOW

X

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TES

232

HIST

Eurostat has always historically offered premium quality ESD products, including test and measurement equipment for users and auditors alike. Eurostat has its own maintenance and service centre, offering repair and calibration for our customers in the European market.

1. RESISTANCE MEASUREMENT

1.1. Tera-Ohm meter

a. Tera-Ohmmeter SET PRS-801





Characteristics

Part Nr. tera-ohmmeter for auditors providing repeatable measurements

PRS-801 Tera-Ohm meter electrodes Unit: 61-100-0504 Accurate Wide Range Resistance Measurer 0.1 Ω to 2.0x10¹⁴ Ω . Measures constant voltage, wide range ohmmeter with data logging, calculating and computer communication capabilities.

Can test bracelets, floors, furniture, chairs and clothes by using electrodes (kits available separately). IEC 61340 Compliant

PROSTAT

Technical Data

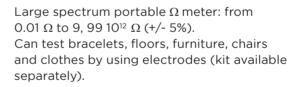
- Accurate wide range resistance measurements : 0.1Ω to 2 x $10^{14}\Omega$
- Variable Voltage 0.1 mv to 9.99 V for low resistance measurements
- Constant Test voltages 10V and 100V for specification measurements to meet international and domestic ESD measurement standards
- All results can be exported to Microsoft Excel

Part Nr.: 61-100-0503



b. PAS 853B model





IEC 61340 Compliant

Characteristic

Large spectrum portable ohm meter: from 0.01 Ω to 9, 99 $10^{12}\,\Omega$ (+/- 5%)

Technical Data

- Power voltage : DC 9V
- Shows the measured value on screen
- Battery life: 50h
- Weight: 375 g

Part Nr.: 61-100-0012

Reference tera-Ohm meter for auditors and metrology services



02. MEASURING INSTRUMENTS

c. Tera-Ohm meter TOM 600



Including

- Tera-Ohm meter
- 4 rechargeable A4 batteries
- Conductive suitcase with foam inserts
- Power supply
- 1m and 5m cord
- Serial PC cable
- CD-ROM with PC interface
- Operating instructions and calibration certificate
- 2.5 kg pair of electrodes, can be bought separately Part Nr. 61-200-0602

-EUR@STAT-

Tera-Ohm meter that can measure from $10^4\Omega$ to $10^{12}~\Omega.$ Measures resistance, temperature and humidity at the same time.

Can test bracelets, floors, furniture, chairs and clothes by using electrodes (kits available separately).

Characteristic

Automatic voltage mode to measure resistance from 10^4 Ω to 10^{12} Ω

IEC 61340 Compliant RoHS Directive

Technical Data

- Suitable for mobile use with compact housing and rechargeable batteries
- Operator friendly: only 2 buttons required to use it
- Measures resistance, temperature and humidity at the same time
- PC software interface included
- All results can be exported to Microsoft Excel
- Tester compliant with:
- EOS-ESD 4.1/6.1 & Conform IEC 61340 • Electrodes compliant with:
- EOS-ESD 4.1/7.1 & Conform IEC 61340

1.2. Resistivity indicator PAS ESI 870 model



IEC 61340 Compliant





Portable tester that measures surface resistivity and resistance to ground of surfaces in accordance with ASTM D-257 norm by using parallel electrodes.

2 measurement units displayed: resistance and resistivity.

Characteristic

Measures surface resistance

Portable surface resistance up to 1 x $10^{12}\Omega$

Technical Data

- Power voltage: DC 9V
- Measurement range: 1 x 103 1 x 1012 Ω / 40 60°C / 0 100% RH
- The surface resistivity is conveniently indicated by a row of LEDs covering a total of 10 decades from 1×10^3 to $1 \times 10^{12} \Omega$ per square.
- Battery life: 40h
- Weight: 170 g

Part Nr. 61-100-0404

Part Nr. : EU plug: 61-200-0600 RoHS UK plug: 61-300-0600 RoHS

1.3. Electrodes

PROSTAT[®]

a. PRS 801 W Contact electrodes





Electrodes designed to measure point to point resistance as per IEC 61340-4-1 and IEC 61340-2-3.

Characteristics

- Weight: 2.27kg
- To be used with PAS 853B and PRS 801

Part Nr.: 61-100-0504

IEC 61340 Compliant

b. Micro electrode concentric ring PRF-911





Allows to measure surface resistance and volume resistance of flat materials in accordance to IEC 61340-2-3.

Characteristic

Use with PAS 853B or PRS 801 Requires PRS 801 W Contact electrodes IEC 61340 Compliant

Part Nr.: 61-100-0501

c. Miniature concentric ring fixture PRF-912B





Characteristic

Measures surface resistance of small areas

IEC 61340 Compliant

Technical Data

- Accurately measures surface resistance of small areas
- Capable of obtaining measurements up to $1 \times 10^{12} \Omega$
- Designed to work with a precise wide range resistance instrument, such as PRS-801 Resistance System

Part Nr.: 60-600-0026

02. MEASURING INSTRUMENTS

d. Miniature two-point probe PRF-922B





Accurately measures point-to-point surface resistance of small areas and assemblies.

Characteristic

Measures surface resistance of small areas

IEC 61340 Compliant

Technical Data

- Capable of obtaining measurements up to $1x10^{12} \Omega$
- Designed to work with a precision wide range resistance instrument, such as PRS-801 Resistance System

Part Nr.: 60-200-0606

2. ELECTROSTATIC FIELDMETERS

2.1. Fieldmeter PFM-711A



Voltage measuring: 0 to +/- 20,000 volt range, with increments of 1V and 10V

Characteristics

• Measuring distance determined with light point indicator

Part Nr. : 61-200-0711A

2.2. Fieldmeter kit PFK-105

Allowing measurements of electrostatic field - discharge time. Ideal for calibrating and qualifying ionisers:

Includes

- Multi measure fieldmeter PFM-711A
- CPM charge analyser
- Charge generator 31300 V PCS-730
- Discharge time measurement PDT-6740B
- Ideal to control ionizers

Part Nr. 61-400-0003



Easy-to-use testing discharge times following the IEC 61340 norm

> IEC 61340 Compliant

PROSTAT

IEC 61340 Compliant

2.3. Fieldmeter EFM-022





Part Nr. 61-200-0220RoHS

Part Nr. 61-200-0222RoHS

Takes precise measurements of static charges with automatic distance conversion (choice of 5 pre-set distances) With optional CPS022, can be used as a charge plate monitor for audit purposes and checking ionisation appliances.

RoHS Directive

Fieldmeter suitcases EFM-022

Description	Characteristics	Part Nr.	
Fieldmeter	Including: • Conductive suitcase with foam • Electrostatic field meter • Grounding cable • 9V rechargeable battery and power adaptor • Certificate of calibration and user manual	61-200-0220 RoHS (EU plug) 61-300-0220 RoHS (UK plug)	
Charge analyzer (can not work without 61-200-0220)	 Conductive suitcase with foam Adaptable charge plate with HV generator 3 1200V User Manual 	61-200-0221 RoHS	
Fieldmeter + charge analyzer Complete Kit EU	EU plug 61-200-0220RoHS 61-200-0221RoHS	61-200-0222 RoHS	
Fieldmeter + charge analyzer Complete Kit UK	UK plug 61-300-0220RoHS 61-200-0221RoHS	61-300-0222 RoHS	

2.4. PGA-710B autoanalysis system set - walking test

PROSTAT

- Allows the walkers test following the IEC 61340-4-5 norm
- Other equipment applications include voltage generation of chairs, carts and process equipment

Records, plots, analyses and automatically constructs reports of body voltage generation, electrostatic decay, voltage retention, ionizer performance and other static measuring functions.

IEC 61340 Compliant

MPROSTAT

IEC

61340

Compliant

Technical Data

Creates detailed reports to help determine the risk of equaling or exceeding damaging or hazardous HBM discharge voltages in static sensitive facilities.

Analyse Footwear & Flooring Combinations: Records personnel walking voltages in accordance with ANSI/ESD STM.

97.2 Body Voltage measurements as required by ANSI/ESD S 20.20 ESD Program Standard.

Electrostatic data analysis

Characteristic

Part Nr.: 61-100-0005

2.5. Auto-analysis system kit PGA-710 - profesional equipment for auditors



Kit includes all the measuring tools to test an EPA: field measuring, recording, analyzing and presentation of electrostatic voltage and discharge performance.

Technical Data

- PGA-710 Auto-analysis Set
- Auto-analysis Application Software Disk
- PFM-711A Field Meter
- CPM-720A Charge Plate Assembly
- PCS-730 +/- 1KV Charging Source
- PHT-771 Digital Psychrometer
- GAP-005 Ground Adapter Plug
- PFA-861-H Handle
- PWS-610M Fabric Band Wrist Strap
- Carrying Case with Handle
- Accessory Box
- Operator's and How to Measure Manuals

3. CONTACT VOLTMETER



Characteristic

Part Nr. : EU plug : 61-100-0002

UK plug: 61-300-0002

Voltmeter

IEC 61340 Compliant PROSTAT

The New CVM-780 Contact Voltmeter combines the ease of use of a digital voltmeter with the high input impedance and low input capacitance of a true electrostatic voltmeter in a small, portable, battery operated package. Being a true electrostatic voltmeter, not a field meter means that it reads real voltage, without confusing it with electrostatic field strength, which can be distinctly different. Ceramic Probe Tips allow Accurate Measurement.

Technical Data

• High impedance contact voltmeter with active probe

- Measures voltage up to 500 VDC
- Dimensions: 191 x 108 x 60 mm
- Weight: 680 g

4. FIELD SERVICE KIT



• Provides efficient static protection in a compact package that fits easily into most tool cases.

• Two pockets sewn into the work surface for cords storage.

Dedicated to a technician operating on site. Kit includes:

- High quality static dissipative work surface 54 x 61 cm
- 16.6cm x 23.6 when folded in pouch
- Adjustable fabric 10mm stud wrist strap
- Grounding cord connection for wrist strap/mat
- Pouch

Thickness mm 0.8

Technical data:

- Dimensions: 540 x 610 mm
- Surface resistance Rs: < 1 x 10 $^9\,\Omega$
- Volume resistance $Rv: < 1 \times 10^9 \Omega$
- Colour: Red

Part Nr.: 31-560-0509 (with pouch)

IONISATION

Eurostat has many options and solutions to neutralise charges built up in sensitive environments, thanks to many years of experience and expertise with our partners and industry leaders.

Eurostat has its own maintenance and service centre, offering repair and calibration for our customers in the European market.

1. WORKBENCH IONISERS

1.1. Ioniser 6422^e



	Her too	 Characteristics 24V DC/AC input power 24 VAC 230V 50 Hz transformer FMS interface with report alarm for remote monitoring Discharge from 1000V to 100V < 4 sec at 300 mm Offset balance +/15V Alarm with front panel red led Dimensions: 111 x 83 x 63 mm Weight: 357 g 	IEC 61340 Compliant RoHS Directive
P Nr. EU 60-200-6422 eRoHS	P Nr. UK 60-100-6422 eRoHS	 Compact size for point-of-use and in-li Optimal for confined areas Clean room compatible class 100 / ISC Up to 4 units can be daisy-chained tog with telephone cable and connections) 5 gether
2. Ioniser	6432°	Characteristics 4V DC/AC input power 	A ITW Company
2. Ioniser	6432°		

SIMCO

P Nr. EU

60-200-0007

1.3. Ioniser Aerostat PC **Characteristics** • Variable speed fan for airflow control IEC • Status lamp indicates high voltage 61340 is present at the emitter points Compliant • Integrated heater for warm air flow RoHS • Ionisation surface 300 x1200 mm Directive • Integrated manual electrode cleaning • Offset +/15V • **Dimensions:** 140 x 220 x 80 mm • Weight: 2,4 kg • Compact and silent P Nr. EU P Nr. UK • Universal ioniser non compatible with clean rooms 60-200-0003 60-100-0013 1.4. Ioniser Endstat 2020 **Characteristics** • Two speed fan control IEC • Ionisation surface 300 x1200 mm 61340 Integrated manual electrode cleaning Compliant • Offset +/15V RoHS

- **Dimensions:** 145 x 210 x 95mm
- Weight: 3,2 kg
- ANSI/ESD STM3.1
 - Compact and portable design
 - Easy to set up, operate and maintain

Directive

1.5. Ioniser Compact MinION2

P Nr. UK

60-100-0017

шсо та		 Characteristics 230 VAC 24 VDC input power Supplied by wall ac adapter or by local tool power Dimensions: 98 x 136 x 60 mm Weight: 0,5 kg Compact, designed for portable 	IEC 61340 Compliant RoHS Directive
		or permanent operation	d
P Nr. EU	P Nr. UK	 Articulating arm offers flexibility for directe ionisation into hard to reach target areas 	d

1.6. Aerostat XC table Ioniser **Characteristics** IEC 61340 • Quick electrostatic charge Compliant neutralisation on the workbench RoHS • No calibration necessary Directive Built-in emitter point cleaner for simplified maintenance • Integrated heater for warm air flow 3 speed fan • Dimensions: 391 x 114 x 206 mm • Weight: 7,9 kg P Nr. EU P Nr. UK 60-200-0002 60-100-0012 Ioniser for workbenches covering 915 x 1830 mm

2. OVERHEAD IONISERS

2.1. Guardian CR2000



Clean room compatible, this overhead ioniser helps maintain desired ionisation in the work area. Monitors are inherently balanced at 0 +/- 5. Ideal for covering a work surface.

2 Fan Units Model

Dimensions: 81 x 10 x 17 cm Weight: 550 g

P Nr. EU	P Nr. UK
60-200-0005	60-100-0015

Characteristics

- Offset balance +/-5V
- Clean room compatible class 10 / ISO 4
- Silicone-free surfaces
- Patented emitter point cleaner
- Overhead attachments

3 Fan Units Model

Dimensions: 109 x 10 x 17 cm Weight: 680 g

P Nr. EU	P Nr. UK	
60-200-0006	60-100-0016	

IEC 61340 Compliant RoHS Directive

03. IONISATION

2.2. Guardian overhead ionising



Model

Dimensions: 108,6 x 10,2 x 17,1 cm **Weight:** 730 g

P Nr. EU	P Nr. UK
60-200-0081	60-100-0011

2.3. 5810i ionising ramp



Model

Dimensions: 96 x 155 x 1016 **Weight:** 4,18 kg

P Nr. EU	P Nr. UK
60-300-5810i	60-350-5810i

Clean room compatible, this overhead ioniser helps maintain desired ionisation in the work area. Monitors are inherently balanced at 0 +/- 5V. Ideal for covering a work surface.

Characteristics

- Offset balance +/-5V
- Clean room compatible class 10 / ISO 4
- Silicone-free surfaces
- Patented emitter point cleaner
- Overhead attachments
- Heating an lighting system



IEC

61340

Compliant

RoHS Directive

Designed to provide industry-leading balanced ionisation performance in cleanroom environments Silicone-free air bearing fans.

Other ionising ramps available on request.

Characteristics

• Cleanliness: ISO 4



IEC 61340 Compliant RoHS Directive

3. IONISING GUNS

Compressed air makes it possible to blow off contaminant particles. However, the electrostatic charges can make the particles adhere on a surface, stopping them from being blown off. The only way to evacuate the particles is to use a ionizer to neutralize the charges. The ionising guns can be plugged into any source of compressed air or nitrogen and are equipped with IsoStat technology.

3.1. Ionising Top Gun



SIMCO



P Nr. EU	P Nr. UK	
60-200-0008	60-100-0018	

Lightweight gun with ergonomic design for user comfort. For components sensible to electrostatic particles.

- Filters at the exit of the gun ensures that the air is clean
- Electrical activation of ionisation and airflow extend effectiveness of emitter with no maintenance
- Ionisation indicator light

3.2. Airforce Blow-off Gun



3.3. Accessories

Replacement in-line air filter x3 Part Nr. : 60-600-0105

IEC
61340
Compliant
RoHS
Directive

4. IONISING CARTRIDGES



IEC 61340

Compliant

RoHS Directive



General use in-line or gun ioniser.

Characteristics

- Small, self-contained unit with various nozzles available
- No calibration of system required
- Can daisy-chain up to 10 units

6110 Air ionising cartridge

Continuous operation

P Nr. EU	P Nr. UK	
60-200-6110	60-100-6110	

6110a Air Ionising cartridge

Air activated

P Nr. EU	P Nr. UK	
60-200-6210	60-100-6210	

DEHUMIDIFICA-TION SYSTEMS, HUMIDITY CONTROL AND CABINETS

-

Various humidity sensitive components are also ESD sensitive. Eurostat offers a range of temperature and humidity control systems for use in an EPA, to protect against electrostatic discharges.

1. GROUNDED DRY CABINETS



Ideal for storing components sensitive to humidity. All shelves are grounded.

Technical Data

- Can store components that are up to 500x510x570mm
- Humidity control range 1-50% (+/-1%)
- Door alarm integrated
- Power consumption: 200W +/- 22W
- · Color: white. Other colors availvable on request

- Doors are equipped with alarms.
- Screens indicate the humidity level
- Color: White and grey (other
- colors available on demand)

External Dimensions (mm)	Volume (L)	Number of compartments	Part Nr. White
600 x 640 x 737	238	1	70-400-0668
600 x 640 x 1342	454	2	70-400-0669
600 x 640 x 1947	670	3	70-400-0670
1205 x 640 x 1342	900	4	70-400-0671

Equipment available on request:

- Swivel supports (to replace casters)
- Light Tower
- Additional adjustable shelves
- LED internal lighting
- Additional automatic nitrogen unit
- Shelves separation elements
- SMD Reels adjustable rack

2. HUMIDITY MONITORING



Permanent temperature and humidity indicator to be used in production zones. Indicates in real time the humidity and temperature conditions. Includes an alarm signaling the high and low saved limits overflow.



Dimensions (mm)	LED display	Weight (kg)	Humidity	Temperature	Part Nr.
326 x 266 x 60	2,3 ''	2,7	1 - 95 % RH	-9.9 - 60 °C	61-100-0006

SEALERS

To complement our range of flexible packaging, Eurostat offers sealing machines with or without vacuum. This allows better storage for components sensitive to corrosion humidity and ESD.

a.

Carlos

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CURCED C

03

1. SEALERS

1.1. Vacuum Sealers

Nozzle type vacuum sealers are clean-room compatible and work well with all common vacuum bag materials. The unit uses a low noise, non-particle generating compressed air driven ejector vacuum pump which is efficient and maintenance free.



• 4 types of vacuum

- 3 types of flushing
- 1 type of sealing and cooling
- LCD screen
- Automatic malfunction check



With Mounting Stand option

Technical Data

- Multifunction nozzle for an optimal performance
- Appropriate for cleanroom applications thanks to
- the absence of pump and moving mechanical parts. • Stainless steel
- Weight : 30kg (without mounting stands)

Other available options

- Sealing width up to 1100mm
- Double sealing bars for thick bags
- Mounting Stands

Heating bar width mm	N ^{ber} of heating bars	Stand	Part Nr.
450	1	No	70-100-6104
450	1	Yes	70-100-6107
600	1	No	70-100-6106
600	1	Yes	70-100-6105

Dimensions available

1.2. Manual Sealers



Sealing machine for film with cut device on request. No vacuum function.



Dimensions available

Welding length mm	Welding width	Max. seal tickness	Power w	Weight ^{kg}	Part Nr.
200	2	2 x 0,1	260 W	4,5	70-100-6202
300	2	2 x 0,15	380 W	5,4	70-100-6201

TRAINING AUDIT & SERVICE

Eurostat, ESD Experts and voting member of the IEC/TC101 "electrostatics", offers on site audits and product characterization.

1. TRAINING YOUR EMPLOYEES



As ESD sensitivity of products increases the production operators and production coordinators need to adapt to a very demanding technical environment. In order to make sure that the operators follow proper procedures, it is advised and required to provide professional ESD training.

Eurostat is a certified training institute (agreement number: 43390015239) and provides training with experts supervised by the French President of TC 101.

The training is offered in English or in French, 3 training levels are available.

Level 1

Attendees	Goals	Sessions	
 Operators Manufacturing support Management 	 To understand why and how ESD damages and defects occur To have a clear view of the wide spectrum of risks, damages and defects in case of no-adherence or drift from the rules and means of prevention 	Approx. 3h3C (recommended period)	
Level 2			
Attendees	Goals	Sessions	
• Engineers	• To take care that all prevention rules are implemented and	Approx. 4h30	

Engineers	To take care that an prevention rates are implemented and	Approx. moo
 Technicians 	respected by all personnel working within or entering an	(recommended
 management 	EPA	period)
with engineering	 To be aware of the basic methods and tools currently used 	
background	to make measurements in an EPA	

Level 3

Attendees	Goals	Sessions
 ESD coordinators Supervisors Instructors To establish a complete Prevention and Control Plan preventing static electricity To propose progress axis and fitted preventive or corrective actions To prepare in-house audits thanks to punctual help of third- part ESD experts 		Approx. 3h0((recommended period)
CERTIFICAT D'HABILITATION Pentiré et activités en « ZONE SERSIBLE ESD » - E Réformed pas Musicas Dus à L'Électricitisza	improved and updated, can be adapted to URGSTAT: companies individual needs and tailored to suit	it

your company and the ESD experience of your employees.

After each training session, a personalised certificate is presented to each attendee.

2. AUDIT

REPORTS

ESD Experts and voting member of the IEC/TC101 "electrostatics", Eurostat offers on site audits and product characerisation.

2.1. Site Audit

GOALS To highlight existing in-situ gaps with what is recommended through IEC 61340-5-1/2 international standard

The site visit - Approx. 1 day

The site visit is a fact-finding visit in which our consultant surveys key parts of the site and the customer's processes and procedures.

It is also an opportunity for you to highlight and discuss any particular areas of concern you may have.

To analyse and understand

any electrostatic issues in discussion with your technical representative

For these reasons it is essential to make your on-site technical representative available to act as a guide and to be a technical support.

Electrostatic related measurements such as electrostatic field potential and resistance measurements are made where it is appropriate to check the status of equipment, processes, floors and other relevant items.

2.2. Characterization

GOALS Define the Electrostatic features of your products with measurements performed in our laboratory to IEC.



Progress - delays on request

After estimating the time nessessary to achieve your study (depends on the quantities and objectives of your demands), we will do some testing in our caracterisation laboratory.

2.3. Report

The report gives some relevant electrostatic information and explanation of key aspects where possible. It typically records: details of our consultant's findings including the results of any measurements, conclusions and specific recommendations and a list of literature and relevant standards that might be required for reference and further reading material if applicable.



3. TECHNICAL SERVICE AND INSTALLATIONS



Our Technical service centre ensures installation, maintenance and calibration of equipment, together with repairs during the guarantee period.

Range verification and calibration of electronic equipment can also be carried out.

INSTALLATION

MAINTENANCE

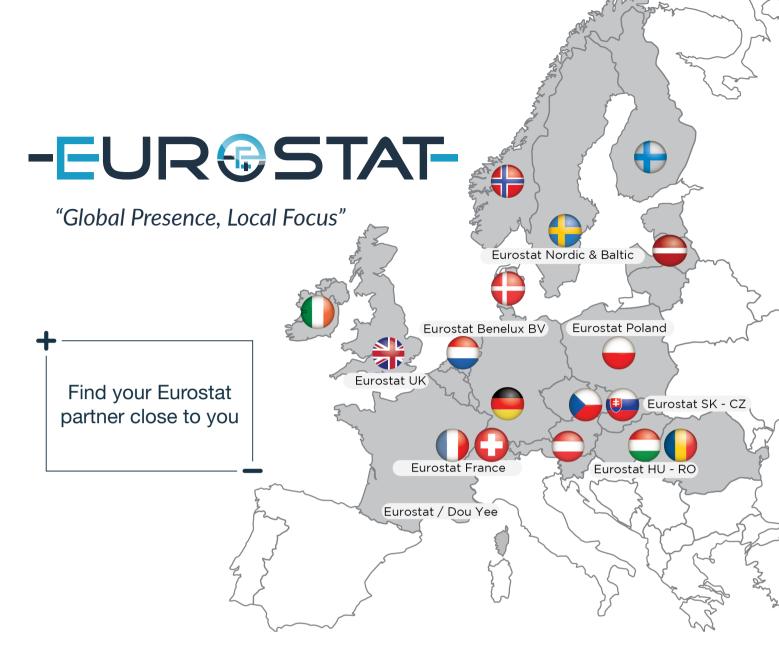
REPAIR

CALIBRATION

VERIFICATION

NOTES

NOTES	



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The Eurostat offer



RIGID PACKAGING



FLEXIBLE PACKAGING



INSTRUMENTATION & IONISATION



EPA ORGANIZATION



PERSONAL EQUIPMENT



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