ESD-PROTECT®

Protection from electrostatics

ESD-personnel-tester

EPA-RESIST

The new generation of
ESD-personnel grounding test system

CONTENTS

EPA-RESIST

The innovation in ESD-personnel-testers

Personnel-testers of the EPA-RESIST series combine state-of-the-art measurement technology with user-friendliness, fast handling and the potential to grow with your ESD needs, based on the ESD standard DIN EN 61340-5-1.

EPA access has never been easier, smarter and more digital!

Made by ESD-PROTECT
- **Development**
- **Production**
- **Software Programming**
- **Technical Support**

The benchmark among ESD-personnel-testers

High quality and advanced product development

Designed & Produced by ESD-PROTECT in Germany

With experience in the ESD field and the consistent implementation of customer requirements, ESD-PROTECT has developed the next generation of ESD-personnel testers, which represent added value for customers in the long term.

- Own test profile for each user or user groups
- Changeable limit values for standard changes or personnel protection
- Operating System EPA-RESIST OS 2.0:
  OS updates and automatic calibration directly at the installation site
- Networking of several units with the PC-Master software
- Fast and precise measurements (32 bit processor)
- Passive body voltage test for people with active implants
- Automatic consolidation and storage of all test data with optional Data-Logger software

EPA-RESIST devices are the approved ESD-personnel-testers in the automotive industry and accepted by leading data protection authorities.

EPA-RESIST 6000, 7000 and 8000

EPA-RESIST	6000	7000	8000
Identification with **RFID transponder,** alternatively by entering the personnel number on the device display.	-	√	√
ESD-personnel-tests according to DIN EN 61340			
• **Wristband** (DIN EN 61340-4-6)	√	√	√
• **ESD-shoes**, (DIN EN 61340-4-5) Handsfree-mode, too	√	√	√
• **ESD-smock** (DIN EN 61340-4-9)	-	√	√
• **ESD-gloves** (IEC TR 61340-5-2) with hand electrode	-	√	√
• Additional **special test function** (Passive body voltage) for pregnant women and persons with active implants	√	√	√
Free limit definition Individual adaptation of the limit values in case of DIN changes or when working on live electrical lines	√	√	√
7" Touch colour display	√	√	√
Temperature and **humidity** measurement	√	√	√
Activation times for scheduled test-free access	-	√	√
ESD-personnel-tests **freely selectable** by user	√	-	-
Test profiles are **individually** assigned to the person (RFID)	-	√	√
Evaluation via persons not yet tested. Display via PC-Master software on the PC screen.	-	-	√
Control function over time-limited validities such as ESD training or temporary work	-	√	√
Selectable menu language (German/English)	√	√	√
Integrated **bootloader** for updates and extensions via USB	√	√	√
Connection for automated calibration (CU 800)	-	√	√
Electronic **storage of the test results** in the unit	-	√	√
Access control of door contacts via potential-free contacts	√	√	√
LAN-connection for **WEB-Interface**	-	√	√
Data exchange of test results and transponder data between PC and device	-	√	√
Network-compatible through supplied PC-Master software	-	-	√
• **Networking** of several EPA-RESIST 8000 and EPA-RESIST 8000S units	-	-	√
• **Central transponder management** on the PC (Read in or change personal data)	-	-	√
Optional extensions			
Data-Logger software: Central measurement data management on the PC with data protection-compliant filter functions	-	√	√
Multi-RFID card reader **PD 840**	-	√	√

OPERATING SYSTEM

The EPA-RESIST 2.0 operating system developed by ESD-PROTECT offers you special advantages that you will only find with the EPA-RESIST ESD-personnel-testers.

What means...	...for me as a customer?
• Freely adjustable limit values	Limit value changes to the DIN standard or adjustments to personnel protection (work on live electrical lines) are possible by the user at any time.
• Software updates via integrated bootloader	Future updates of the operating system (OS) can easily be carried out at the workplace.
• Connection for calibration device CU 800	An integrated calibration software in combination with the Calibration Unit CU-800 enables a fully automatic calibration of the test instrument at the workplace.
• Networking with PC-Master software	There is no need for cumbersome synchronisation of the transponder data of the individual test devices in the network. The PC-Master software takes over the central data management according to the client-server principle.
• Special mode: Test-free release times	A successfully tested person may re-enter the EPA* within the scheduled time period without further testing.
• Special test (passive body voltage test) for risk groups	People with active implants (e.g. pacemakers) or pregnant women can be tested without any health risk, as no voltage is applied to the test person's body during the measurement.
• 3 potential-free relay contacts	Each configurable as „normally closed" or „normally open". Activation time selectable from 500 milliseconds to 10 seconds.
• Multi-RFID card reader PD 840	Easy reading of all common internal RFID transponder cards, also on the PC. Convenient creation of employee profiles.

* *Electrostatic Protected Area*

Special test function for risk groups

Powerful and fast measuring device with additional special test function

Connectors for
ESD wristbands
- 4 mm DK
- Banana plug
- 10 mm DK

7" HD touch colour display

Push-Button (sensor)
Starting all test procedures
incl. body voltage test

Removable mounting desk

Foot electrode included in the scope of delivery

1	Power supply connection 24V	3	Relay output for 3 potential-free freely configurable circuits
2	Foot electrode connection	4	USB port for software updates, transponder and log data management
		5	Clip on both sides for removing the mounting desk

ESD-PROTECT added value

- **7" touch colour display**
  Clear and intuitive operation with German/English language selection

- **Display of measurement** results and measurement of temperature and relative humidity

- **Wrist strap and footwear test**

- ESD-personnel-tests **freely selectable** by the user

+ 32-bit processor for **fast and accurate measurements** for smooth passage on optional input equipment

+ **Automatic shoe-to-shoe inspection**

+ **Measuring voltages adjustable** between 33V, 50V or 100V

+ Extensive **configuration options** for the individual **test modes**

+ Access control through **3 freely configurable relays**

+ **Software updates**
  Software updates can be easily installed via USB stick thanks to an integrated boot loader.

+ **Free limit value definition**
  Individual adaptation of the limit values in the event of DIN changes or when working on live electrical lines (personnel protection takes precedence over ESD protection)

+ **Special test function for persons at risk**
  Body tests without voltage for pregnant women and people with active implants ensure access testing into the EPA.

+ *Additional functions compared to standard ESD-personnel-testers*

Menu view for limit value input

Video
EPA-RESIST 6000

Video
EPA-RESIST

With special test function + RFID identification

Powerful, fast and comprehensive measuring device with RFID identification

Connectors for ESD wristbands

Connection smock test
- 10 mm DK

- 4 mm DK
- Banana plug
- 10 mm DK

7" HD touch colour display

RFID antenna

Push-Button (sensor)
Starting all test procedures incl. body voltage test

Removable mounting desk

Foot electrode included in the scope of delivery

#		#	
1	Power supply connection 24V	5	Relay output for 3 potential-free, freely configurable circuits
2	4 mm banana plug for hand electrode	6	LAN connection
3	Foot electrode connection	7	USB port for software updates, transponder and log data management
4	Connection Calibration Unit CU 800	8	Clip on both sides for removing the mounting desk

ESD-PROTECT added value

- **7" touch colour display**
  Clear and intuitive operation with German/English language selection

- **Display of the measurement results**
  and measurement of temperature and relative humidity

- **32-bit processor for fast and precise measurements**
  for a smooth passage at optional entrance systems

- **Checking wrist strap and footwear**

- **Automatic shoe-to-shoe inspection**

- **Measuring voltages adjustable** between 33V, 50V or 100V

- **Extensive configuration options for the individual test modes,** also per employee

- **Access control through 3 freely configurable relays**

- **Software updates**
  Software updates can be easily installed via USB stick thanks to an integrated boot loader.

- **Free limit value definition**
  Individual adaptation of the limit values in the event of DIN changes or when working on live electrical lines (personnel-protection takes precedence over ESD-protection)

- **Special test function for persons at risk**
  Body tests without voltage for pregnant women and people with active implants ensure access testing into the EPA.

+ **Connection for automated calibration**
  On-site calibration without disassembly of the EPA-RESIST

+ **Additional tests**
  Glove and smock test

+ **Personnel identification with RFID**
  Test profiles and test results are assigned to the person.

+ **Activation times for scheduled test-free access**
  After a successful test, time intervals can be defined in which persons do not have to be tested again when they re-enter the EPA.

+ **Storage of the test results in the device**

+ **LAN interface for web interface**
  The PC connection enables easy data exchange of measurement and transponder data between the PC and EPA-RESIST.

Video
EPA-RESIST

+ *Additional functions compared to the EPA-RESIST 6000*

EPA-RESIST 8000

Networking of several EPA accesses

Most powerful and comprehensive measuring device on the market with in-house developed software, networking and after-sales technical support

incl. PC master software

Connection smock test
- 10 mm DK

Connectors for ESD wristbands
- 4 mm DK
- Banana plug
- 10 mm DK

7" HD touch colour display

RFID antenna

Push-Button (sensor)
Starting all test procedures incl. body voltage test

Removable mounting desk

Foot electrode included in the scope of delivery

1	Power supply connection 24V	5	Relay output for 3 potential-free, freely configurable circuits
2	4 mm banana plug for hand electrode	6	LAN connection
3	Foot electrode connection	7	USB port for software updates, transponder and log data management
4	Connection Calibration Unit CU 800	8	Clip on both sides for removing the mounting desk

Scope of services EPA-RESIST 8000

ESD-PROTECT added value

- **7" touch colour display**
  Clear and intuitive operation with German/English language selection

- **Display of the measurement results**
  and measurement of temperature and relative humidity

- **32-bit processor for fast and precise measurements**
  for a smooth passage at optional entrance systems

- **Checking wrist strap and footwear**

- **Automatic shoe-to-shoe inspection**

- **Measuring voltages** adjustable between 33V, 50V or 100V

- **Extensive configuration options for the individual test modes,** also per employee

- **Access control through 3 freely configurable relays**

- **Software updates**
  Software updates can be easily installed via USB stick thanks to an integrated boot loader.

- **Free limit value definition**
  Individual adaptation of the limit values in the event of DIN changes or when working on live lines (personnel protection takes precedence over ESD protection)

- **Special test function for persons at risk**
  Body tests without voltage for pregnant women and people with active implants ensure access testing into the EPA.

- **Connection for automated calibration**
  On-site calibration without disassembly of the EPA-RESIST

- **Additional tests**
  Glove and smock test

- **Personnel-identification with RFID**
  Test profiles and test results are assigned to the person.

- **Activation times for scheduled test-free access**
  After a successful test, time intervals can be defined in which persons do not have to be tested again when they re-enter the EPA.

+ **LAN interface for networking several devices**
  For large EPA areas with multiple inputs, several EPA-RESIST 8000 or EPA-RESIST 8000S can be networked.

+ **Central transponder management through PC-Master software**
  Personnel data can be read in or changed centrally on the PC and does not have to be entered on each individual networked device.

+ **Central storage of test results through Data-Logger software**
  Summary of all log data (test results) in a central daily file using the optional Data-Logger software.

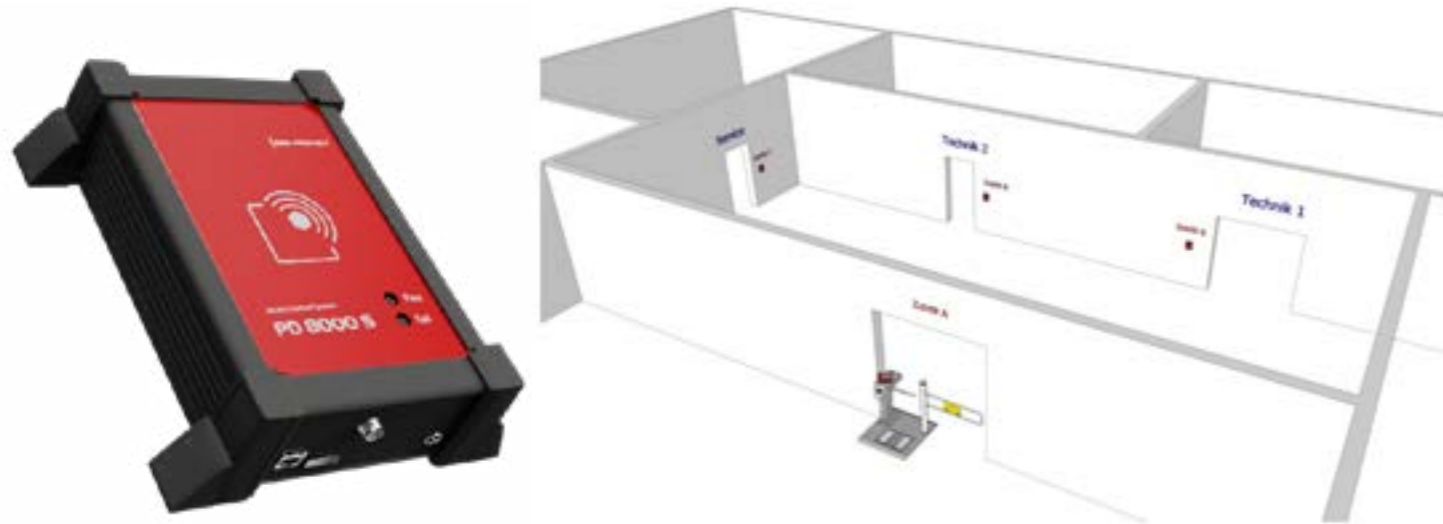+ *Additional functions compared to the EPA-RESIST 7000*

Video EPA-RESIST 8000

Video EPA-RESIST

EPA-RESIST 8000S

Extended access control

To operate the unit, the PC-Master software is required, which is included in the scope of delivery of the EPA-RESIST 8000.

The EPA-RESIST 8000S system extends ESD access control by using an **activation time*.** After identification by an RFID badge, the EPA-RESIST 8000S checks whether the badge has a valid test-free access **by communicating with the PC-Master software**.

Access authorisations can be assigned individually per employee or for groups.

This makes it possible to **quickly and inexpensively expand an ESD access control system** without having to test the person again.

The EPA-RESIST 8000S is configured via a **password-protected web interface**. The software is integrated in the EPA-RESIST 8000S and is simply started via your web browser. Therefore, **no external software** is installed for commissioning.

Larger and distributed EPA accesses can be realised flexibly and easily with the EPA-RESIST 8000S. **The system can be easily integrated into the EPA network and is ready for operation in just a few minutes.**

Advantages:
- Not every EPA access needs a complete measuring system
- Central data management of the RFID transponder data on the PC
- Control of individual access authorisations per employee/group
- Active activation times enable test-free access
- Minimisation of data traffic in the network, as there is no need to synchronise with each other

* After a successful personnel test, a time can be stored on the employee card (RFID) during which a passage is made possible without having to test the person again.

CU 800 CALIBRATION UNIT

Calibration made easy

Also for rent!

The CU 800 calibration unit was developed for the **regular calibration of the EPA-RESIST personnel-testers**. It does away with the cumbersome manual switching* of the individual resistors. Likewise, the limit values are no longer „circled" **, but displayed with real measured values.

After starting the programme, the CU 800 **automatically measures fixed reference resistors** with the three possible measuring voltages 33V, 50V and 100V.

Any deviations are detected and documented. The total calibration time is **only 21 seconds**.

The test results are **stored in a CSV file** on a USB stick. This can then easily be individually formatted, saved and printed using Excel.

The CSV file can **be read in with Excel** and individually formatted for a better overview.

Advantages:
- Calibration can be carried out on site
- EPA-RESIST does not have to be dismantled
- No need to send in the EPA-RESIST
- There is no need to keep a spare unit on hand
- Permanently reliable measurement results

Video
CU 800

* The switching of the individual resistors on a decade is done via a selector switch (rotary wheel). A personnel-test must be carried out after each setting of the selector switch.

** Conventional calibration units, or personnel-testers with LED displays, circle the lower and upper limit values of the personnel-tester. A resistance slightly lower than the actual limit value is tested and then a resistance slightly higher than the limit value is checked.

PC-MASTER SOFTWARE by ESD-PROTECT

Networking for several EPA

The PC-Master software supplied with the EPA-RESIST 8000 makes it easy to network the EPA-RESIST 8000 with other EPA-RESIST devices or the extended access control EPA-RESIST 8000S.

The transponders are managed centrally in the network by the software. This eliminates the need for data synchronisation between the individual systems.

Reading in new transponders and setting individual staff profiles is effortless.

Larger EPA zones or distributed EPA areas can thus be easily planned and reliably realised.

If subsequent release times are activated after successful personnel-tests, EPA-RESIST 8000S systems can also be used. These check the validity of the respective release time and release access if the time stamps are valid. People are identified with the same employee card via RFID.

Advantages:
- Networking and access control of large EPA areas
- Central data maintenance and administration of the RFID transponder data on the PC
- Easy reading of new transponders and individual settings
- Active activation times enable test-free access
- Minimisation of data traffic in the network, as there is no synchronisation

EPA-RESIST 8000 incl. PC-MASTER

The optimum for EPA access

- The PC-Master software provides the transponder data for EPA-RESIST 8000 or 8000S models in a network. The central administration eliminates the time-consuming synchronisation of the transponder data on the individual test systems.
- Capturing transponder data on the PC
- New transponders via **CSV import**
- **Export, delete or edit** transponder data
- **Sort and filter**
- Additional function **access control**
- **Access management:** The assignment of the areas to the corresponding systems (EPA-RESIST 8000/8000S) is configured in the „Access groups" menu under „Manage systems".
- **Check systems in the network**
  With the menu item Systems you can check the availability of all configured systems. A network ping is sent to all entered devices to determine whether they can be reached or not. Reachable systems receive the status „Online". Systems that do not answer the ping receive the status „Offline".
- **Trace window**
  In the two trace windows (grey = input, black = output), the communication from the PC-Master to all systems in the network can be observed.

DATA-LOGGER SOFTWARE by ESD-PROTECT

Evaluate the daily measurement protocols

The EPA-RESIST models 7000 and 8000 can be extended with the Data-Logger software.

It stores in real time all measurement protocols of the EPA-RESIST 7000/8000 units or passes with EPA-RESIST 8000S in the network in a central daily file on the PC.

Here, many filter functions help to comply with individual data protection guidelines and to create your own evaluations of the measurement results on this basis.

Advantages:

- All daily reports are saved in CSV format in a central directory on the PC/server.
- This eliminates the need to read out the individual units via the web interface.
- Measurement protocols can be filtered and evaluated according to data protection guidelines.

DATA-LOGGER & EPA-RESIST

Data-protection compliant filtering and storage

The Data-Logger software receives the test data from all EPA-RESIST 7000/8000 and EPA-8000S systems in the network, filters them according to user-defined specifications and stores the data records in real time.

This means that the log data no longer has to be retrieved from each individual unit and compiled.

The directory path of this log file can be freely selected. Several filters support you in complying with existing, company-internal data protection guidelines.

The saved daily file (log file) can then be archived, read into Excel or simply processed further.

RFID MULTI-CARD READER PD 840

Reading and recording RFID transponders

Simply place the transponder on the antenna surface, the UID of the tag appears directly in the opened application.

In this way, employee lists can be created quickly and easily for personnel management or transponder lists can be created for EPA-RESIST 7000/8000.

The RFID multi-card reader is equipped with a USB connection and is connected to a free USB port of the PC. Power is supplied via USB, so no additional power supply unit is required.

The multi-reader is PnP-compatible, **no device drivers need to be installed.** The read UID is transferred directly to the application via the keyboard buffer.

For all common RFID formats!

PRORENT RENTAL SERVICE

Rent instead of buy

Long-term rental for ESD-personnel-testers

The long-term rental of the new generation of ESD-personnel-testers is particularly budget-friendly. With the rental service, you can test different devices first before making a purchase decision in order to find the right device.

- Latest devices with current calibration certificate
- Including update service and maintenance contract (as per description)
- Setup included (online support)
- Minimum rental period 1 year, renewable monthly thereafter
- Monthly or annual calculation

This allows you to flexibly expand your ESD zone. No matter whether only one device is in use or you want to network several accesses intelligently.

Good reasons for PRORENT long-term rental

- Cost-efficient use of ESD personnel testing equipment
- Flexible expansion of your ESD zone
- Networking your ESD zone/s with the PC-Master software
- Rental period can be flexibly extended after one year

SCOPE OF DELIVERY + ACCESSORIES

Scope of delivery

- Personnel-tester EPA-RESIST model 6000, 7000 or 8000
- Foot electrode FE 100 or optionally FA with foot wiper
- Mounting desk for wall or table mounting
- Power supply unit 24V
- Connecting cable relay output
- Operating instructions
- Calibration certificate
- Model 8000: PC-Master software on USB stick

Accessories

- **Stand** with retaining plates
- Access control **EPA-RESIST 8000S**
- Calibration Unit **CU 800**
- RFID multi-card reader **PD 840**
- **Hand electrode**
- Stable **metal frame** with run-up edge for foot electrodes
- **Data-Logger** software
- **RFID transponder cards**, also for visitors (optionally with print)