

EMC
PARTNER



Ergonomic high performance ESD generators up to 30 kV

ESDEX Generators Series



CONTENT

The ESDEX Series

▶ page 4

Wide range of applications

▶ page 5

Handling & Power

▶ page 6

Connectivity & Operation

▶ page 8

Technical Performance

▶ page 10

Models & Variations

▶ page 11

RC Networks

▶ page 13

Accessories

▶ page 14

Customer Services

▶ page 15

Contact

▶ page 16

ESDEX Datasheet



emc-partner.com/datasheets



Outstanding performance
Smart operation
Maximum comfort





ESDEX SERIES

Next Generation ESD Pulse Generators

The new ESDEX series represents the latest generation of modular and compact ESD Generators, designed and manufactured by EMC PARTNER AG. Featuring cutting-edge components and a modern, state-of-the-art interface and communication technology, the ESDEX series meets today's demands for maximum comfort, intuitive operation, flexibility, and high performance. Its modular architecture allows users to add a wide range of features and functions, making the ESDEX highly flexible and fully customizable to your specific needs.

The generators are available in 8, 16, and 30 kV versions and support a broad range of interchangeable RC networks to ensure full compliance with the latest international standards, including IEC 61000-4-2, ISO 10605, RTCA DO-160, MIL-STD-461.



Guaranteed compliance

Meet latest IEC, Automotive, Defence, Avionics standards.



Maximum comfort

Ergonomic design and perfect balance for maximum testing comfort.



Tailored to your needs

Available in 8, 16, and 30 kV versions, customizable and upgradeable.



Smart & intuitive

Modern control interface, smart and intuitive operation, many options and features.

Wide range of applications

The ESDEX series is a highly flexible solution capable of covering multiple standards across industrial, automotive, avionics, defence, and other application areas. It enables easy compliance with different test requirements, ensuring versatility and reliable performance. Along with the suitable ESDEX generator, a wide range of accessories are available for each application.



Industrial / IEC 61000-4-2

Meet requirements for IEC 61000-4-2 for industrial and commercial applications, ranging from medical to household, electronics, and more.



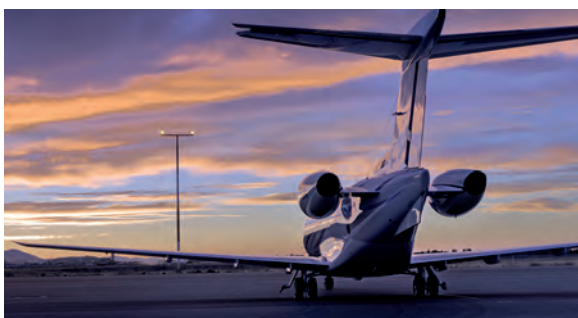
Automotive / ISO 10605

Compliance with ESD testing requirements of ISO 10605 for automotive applications, IEC-based e-mobility testing, and additional OEM applications.



Defence / MIL-STD-461 CS118

Compliance with MIL-STD-461 CS118 for defence and military applications, covering equipment and electronics.



Avionics / RTCA DO-160 Section 25

Supports RTCA DO-160 Section 25 ESD testing for airborne equipment, covering onboard electrical and electronic devices and related applications.

MAXIMUM COMFORT

Handling and Power

A comfortable and efficient ESD testing process is guaranteed by a perfectly shaped and balanced design. A precisely engineered balance point allows effortless movement in any direction or angle, for a comfortable, strain-free experience.

Handling and user comfort are further enhanced by a large 4" touchscreen, ergonomic grip, and programmable side buttons for minimising screen interactions and faster testing. ESDEX generators are powered by an integrated rechargeable battery and feature modern connectivity technology, including a USB-C port for fast charging and data transfer.



EXCHANGEABLE TIPS & RC NETWORKS

Quick and easy exchange of RC networks & test tips for each required test type and application.



TRIGGER & SIDE BUTTONS

Ergonomic low resistance round shape trigger for comfortable multi-angle triggering and programmable side buttons for assigning various functions.



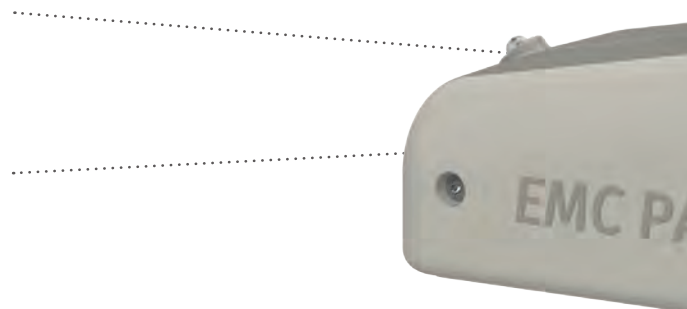
INTEGRATED TIP LED

An integrated LED light helps pinpoint the exact EUT contact point, enhancing precision and saving time.



USB-C PORT

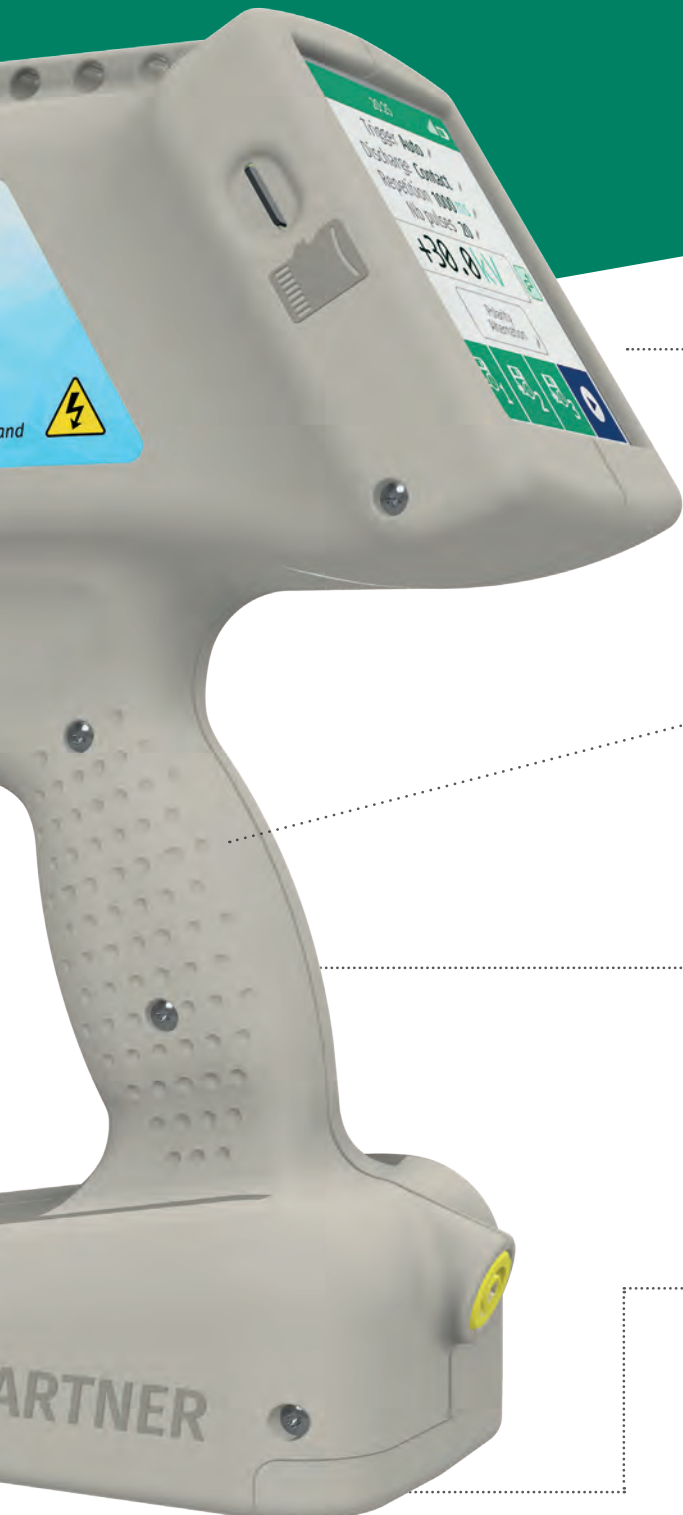
For fast charging, data transfer & reporting.



► Included in delivery

ESDEX generators are delivered in a lightweight carrying case, with all components securely placed and protected in a custom foam insert.

The delivery includes: ESDEX generator with rechargeable battery, selected RC networks, air and contact discharge tips, earth cable, SD card, plug and USB-C charging cable, and a USB stick containing the user manual.



4" TOUCHSCREEN

The large 4" capacitive touchscreen offers a wide viewing angle, ensuring clear and easy readability from any position.



ERGONOMIC GRIP

Carefully designed „one size fits all“ grip ensures the generator sits naturally in the hand without causing strain.



PERFECT BALANCE

A perfectly engineered balance point allows effortless movement in any direction or angle, ensuring a comfortable, strain-free ESD testing experience.



RECHARGEABLE BATTERY

An integrated rechargeable battery supports up to 12 hours of testing. Fast charging reaches 80% in just 80 minutes via the USB-C power port.

SMART OPERATION

Connectivity & Operation

ESDEX generators are operated via a large 4" capacitive touchscreen, providing a modern and highly responsive touch experience compared to traditional resistive screens. The state-of-the-art interface is packed with explanatory color graphics and symbols that guide the user through the test and provide clear graphical feedback, delivering a smart and modern testing experience.

An intuitive menu structure simplifies navigation and operation, while the modular architecture gives users access to a wide range of options and smart features, including user-defined settings and test setups, as well as a smart step-by-step test assistant for creating and generating customized test plans and reports.

Modern connectivity via a USB-C port enables data transfer, including user setups and tests, reporting, and installation of free lifelong firmware updates.



USB connectivity

Safe and reliable data transfer, including user setups and tests, reporting, and installation of firmware updates.



SD Card port

SD Card port for data transfer, including user setups and tests, reporting and installation of firmware updates.



Free Firmware Updates

Lifelong free firmware support to ensure your product is always up to date.



Free Software

Software for data transfer, load and save user setups and tests, reports downloads, firmware updates.



Reporting flexibility

Report directly on the generator. Export test reports in various formats, PDF, CSV, HTML.





► **4" Capacitive display**

Large 4" capacitive touchscreen for easy, modern and comfortable operation.

► **User defined settings**

Set brightness and contrast, change language, set time and location, product and firmware info, auto power off.

► **Quick save**

Save tests on the spot, instant access to saved user tests.



Modern interface

Easy-to-read keys, use of explanatory graphics, user feedback (warnings, results).



Programmable side buttons

Assign various functions, including LED On/Off, discharge mode change, polarity change, trigger mode change, level mode change, mark events (Mark, Fail) in real time during test and add to report, and more.



Flexible testing

Sequence testing, and user-defined ramp testing that lets the user set test levels precisely according to different product standard specifications.



Test Suite (test assistant)

ESDEX-TESTSUITE option offers smart step-by-step assistance in creating and generating your own customized test plans and reports according to standards IEC 61000-4-2, ISO 10605.

OUTSTANDING PERFORMANCE

Technical Performance

The ESDEX series has been designed and engineered to ensure a smooth and error-free test-ing process while delivering reliable and reproducible results.

Its compact design, carefully selected technology and components reduce magnetic fields and eliminate proximity effects in voltage measurement to guarantee accurate results and safe operation.

Features such as automatic recognition of inserted RC networks, a Self-check option, and a Bleed-off function all contribute to an error-free testing process. Whether performing full compliance testing or R&D evaluations, ESDEX generators guarantee compliance with a wide range of standards, providing confidence in results, operational safety, and outstanding performance.

▶ **AUTOMATIC RC RECOGNITION**

The unit automatically detects the type of inserted RC module.

▶ **HIGH QUALITY COMPONENTS**

Maximum safety, reliable, error free and reproducible results.

▶ **BLEED-OFF FUNCTION**

Automatically discharges residual energy after each impulse.

▶ **FIRE MODE**

Generate ESD impulses repeatedly in AD (Air Discharge) mode up to 500 Hz.

▶ **REDUCED PROXIMITY EFFECT**

Guaranteed accurate results and operation safety.

▶ **REDUCED INTERFERENCE EMISSION**

Prevent unintended radiated emission that could affect EUT.

▶ **SELF CHECK**

Check generator functionality, including charge voltage, discharge relay, and internal discharge circuit, and store and report results.

Models & Variations

The ESDEX series is designed and tailored to give users the freedom to select a generator configured to their exact needs.

There are three product types — 8 kV, 16 kV, and 30 kV — and customers can choose from a range of RC networks, options, features, and accessories to create a solution that perfectly meets their requirements. Depending on your type of business or application—whether a lab, performing specific standard tests or R&D testing—there is an ESDEX generator perfectly suited to your needs.



ESDEX 8

**8 kV ESD generator with
150 pF / 330 Ω RC network.**

Easy and simple operation, ideal for carrying out R&D tests and quality testing during development phases.



ESDEX 16

**16 kV ESD generator with
exchangeable RC networks.**

The ideal solution for various product standard testing up to 16 kV. Upgradeable to 30 kV.



ESDEX 30

**30 kV ESD generator with
exchangeable RC networks.**

Suitable for higher voltage test level requirements such as automotive testing, and larger testing laboratories that require more flexibility.



Tailored to your needs

Three versatile models offer a wide range of features and functions. Options can be added to meet your exact testing and business requirements. Various RC networks, with or without bleed-off, support multiple standards and applications. ESDEX delivers precision, adaptability, and performance tailored to you.

ESDEX 8

ESDEX 16

ESDEX 30

Voltage level (1 V steps)	2 - 8 kV	0.2 - 16 kV	0.2 - 30 kV
Upgradeability	-	From 16 to 30 kV	-
Voltage output tolerance	+/-5 %	+/-5 %	+/-5 %
Polarity	Positive, negative, alternating	Positive, negative, alternating	Positive, negative, alternating
Repetition CD	0.05 s to 900 s	0.05 s to 900 s	0.05 s to 900 s
RC networks	See table	See table	See table
Automatic RC recognition	✓	✓	✓
Fire mode	0.002 s to 30 s	0.002 s to 30 s	0.002 s to 30 s
Standard test library	-	✓	✓
User defined test setups	✓	✓	✓
Reporting (PDF, CSV, HTML)	✓	✓	✓
SD Card (reporting, firmware updates)	✓	✓	✓
Firmware updates (lifelong free of charge)	✓	✓	✓
Integrated rechargeable battery	✓	✓	✓
USB-C fast charging port	✓	✓	✓
Software (reporting, data transfer, firmware updates)	-	✓	✓
Plug and USB-C charging cable	✓	✓	✓
Programmable side buttons	-	✓	✓
LED assistance	-	✓	✓

Options

Self check	-	Optional	Optional
Test assistant	-	Optional	Optional

ESDEX Datasheet: emc-partner.com/datasheets



Available RC Networks

Depending on the ESDEX model, various RC networks are available.

RC networks are available with or without Bleed-off function, and a fast rise time function can be added to 150 pF / 330 Ohm networks if needed.

112184	NW-C150R330-B	Discharge RC-Network for IEC 61000-4-2 & ISO 10605. 150pF/330Ohm, AD & CD up to 30kV. With Bleed-off.	ESDEX8, ESDEX16 and ESDEX30
112185	NW-C150R330	Discharge RC-Network for IEC 61000-4-2 & ISO 10605. 150pF/330Ohm, AD & CD up to 30kV. No Bleed-off.	ESDEX8, ESDEX16 and ESDEX30
112186	NW-C150R2000-B	Discharge RC-Network for ISO 10605. 150pF/2000Ohm, AD & CD up to 30kV. With Bleed-off.	ESDEX16 and ESDEX30
112187	NW-C150R2000	Discharge RC-Network for ISO 10605. 150pF/2000Ohm, AD & CD up to 30kV. No Bleed-off.	ESDEX16 and ESDEX30
112188	NW-C330R2000-B	Discharge RC-Network for ISO 10605. 330pF/2000Ohm, AD & CD up to 30kV. With Bleed-off.	ESDEX16 and ESDEX30
112189	NW-C330R2000	Discharge RC-Network for ISO 10605. 330pF/2000Ohm, AD & CD up to 30kV. No Bleed-off.	ESDEX16 and ESDEX30
112190	NW-C330R330-B	Discharge RC-Network for ISO 10605. 330pF/330Ohm, AD & CD up to 30kV. With Bleed-off.	ESDEX16 and ESDEX30
112191	NW-C330R330	Discharge RC-Network for ISO 10605. 330pF/330Ohm, AD & CD up to 30kV. No Bleed-off.	ESDEX16 and ESDEX30
112204	NW-C150R330-F	Fast risetime discharge RC-Network 150pF/330Ohm. CD up to 30kV. With Bleed-off.	ESDEX16 and ESDEX30
112394	NW-C200R50	Discharge RC-Network for IEC 61000-4-2 Wearables 200pF/50Ohm, AD & CD up to 16kV. No Bleed-off.	ESDEX16 and ESDEX30
112395	NW-C200R50-B	Discharge RC-Network for IEC 61000-4-2 Wearables 200pF/50Ohm, AD & CD up to 16kV. With Bleed-off.	ESDEX16 and ESDEX30

Available accessories

A complete range of ESD testing accessories are available to complete a professional ESD test setup according to your exact needs.

112228	ESD-TARGET	2 Ohm gold plated target. acc. to IEC 61000-4-2 and ISO 10605. Including SMA cable & 2 x20dB attenuators. Max. 30kV ESD voltage
112229	ESD VERI-TARGET	Adapter for ESD-TARGET calibration. Gold plated. Lifetime protection against corrosion. N-type male connector on input side
112230	ESD-VERI-TARGET-ADAPTER	Calibration Adapter for ESD-VERI-TARGET. Gold plated. Lifetime protection against corrosion. N-type female connector on input side
112231	ESD-VERI-V	ESD Charging voltage measurement divider 20GOhm. ratio 1:20,000, Max. input voltage 32 kV. Input connector: MC. output connector: BNC
103485	ESDEX-STAND	Carbon tripod support for ESD testing as per IEC 61000-4-2, ISO 10605. Adjustable Height (15 - 139 cm). ESDEX-CABLE-PULLBACK must be ordered separately
112494	ESDEX-GND-SUPPORT	ESDEX return cable pullback stand for ESD waveform verification. in accordance with IEC 61000-4-2 Ed3. Requires ESDEX-STAND.
103485	ESD-VCP50	ESD Vertical Coupling Plate IEC 61000-4-2 with 2 x 470kOhm
112241	ESD-BLEEDER-CABLE 150	ESD cable 1.5m. 2 x 470kOhm Bleeder resistors acc. to IEC 61000-4-2. For use with HCP or deionization. Up to 30kV
112242	ESD-BLEEDER-CABLE 200	ESD cable 2m. 2 x 470kOhm Bleeder resistors acc. to IEC 61000-4-2. For use with HCP or deionization. Up to 30kV.
112243	ESDEX-H-FIELDS	Magnetic field loop for ESDEX. Generates rapidly changing magnetic field for weak-points analysis. Can be used with ESDEX8, 16 and 30
112244	ESDEX-E-FIELDS	Electric field plate for ESDEX. Simulates static induction of E-Field for weak-points analysis. Can be used with ESDEX8, 16 and 30
106381	ESD-HCP-AUTO	ESD Indirect Coupling-Plane as per ISO 10605 appendix F
110908	ESD-HCP-AUTO LARGE	ESD coupling plane as per ISO 10605 appendix F DUT area 600 x 500mm
112469	ESDEX-BATTPACK-4C	Powerful 4-Cells battery pack with 6900mAh for extended ESD testing The ideal high-performance alternative to the standard battery

CUSTOMER SERVICES

Expert Support for all EMC PARTNER products

In-depth servicing, calibration, product upgrades, and repairs are provided by our specialist centres in the USA, Europe, and Asia. Accredited calibration services are available to ensure your EMC PARTNER products meets the highest industry standards.

We provide lifelong, free-of-charge firmware updates and offer customer training on products and applications. Web-based technical consultation and support is available, along with web-site downloads such as white papers to keep you up to date with standard changes. Up-to-date wallcharts are also provided as reference guides, summarising testing requirements and setups.



▶ ACCREDITED CALIBRATION

EMC PARTNER accreditation (SCS 146) covers all our EMC instrumentation and extends beyond the scope of most EMC generators.



▶ WIDE RANGE OF SPARE PARTS

We support our customers with a comprehensive range of spare parts, ensuring fast service, longterm availability, and minimal downtime.



▶ TRAINING

We offer specific trainings for EMC PARTNER products and test applications. Trainings can take place in groups/teams or individually.



▶ WEB RESOURCES

Access and download product software and documentation, application wall charts, white papers and much more.

For further information please do not hesitate to contact your local EMC PARTNER AG representative. Visit our website for more information and contact details.

Check out our complete test solutions catalogue

www.emc-partner.com

Worldwide service center network

EMC PARTNER generators are built to lasting standards. Even after years of service, we treat every repair with the same care as new production. Our global network of certified service centers ensures a fast, high-quality turnaround for all your maintenance needs.

www.emc-partner.com/service



Swiss Headquarters

EMC PARTNER AG
Baselstrasse 160
CH - 4242 Laufen

Phone +41 61 775 20 30
Fax +41 61 775 20 59
Email sales@emc-partner.ch
Web www.emc-partner.com

Your local representative

North America Sales, Service & Support:



8526 Virginia Meadows Drive
Manassas, VA 20109

+1 (703) 365-2330
www.hvtechnologies.com
emcsales@hvtechnologies.com



Information and specifications in this document are an indication of capability only. Version 1.0 Subject to change without notice.

EMC PARTNER AG publishes only the English version of this document. Translation into other languages is not guaranteed to be a true representation of content or specification.

© by EMC PARTNER AG. No changes or reproduction without permission of EMC PARTNER AG allowed.