



ONIX



ESD

ELECTROSTATIC DISCHARGE SIMULATOR



HAEFELY

Current and voltage – our passion



FEATURES

- User defined 'smart key' function
- Touch-screen interface
- Predefined tests according to standards
- Multilingual
- Define, store and load tests
- Ergonomic all-in-one design (no base unit) and ONYX balancer (optional)
- Automatic polarity switching
- User changeable RC networks
- Remote control software
- Battery or mains operation, long battery life

ADVANTAGES

- Flexibility enables users to meet many different test specifications with maximum cost effectiveness.
- Quick and simple one touch operation and simple on screen menu structure.
- The most ergonomic 30kV ESD gun on the market without an external base control unit. The balancer (optional) reduces operator fatigue and repetitive motion injuries
- Tests according to the different standards, or specific requirements, can be done with one single ONYX.
- Computer can be connected and used to control the ONYX, generate reports and collect measurements in seconds.
- Tests are possible even if no mains is available, no need to wait for the battery charging to continue.

SUMMARY

The ONYX is a state-of-the-art electrostatic discharge simulator available in 16 kV or 30 kV versions. It is the most ergonomic ESD simulator without any additional base control unit that can be battery or mains operated.

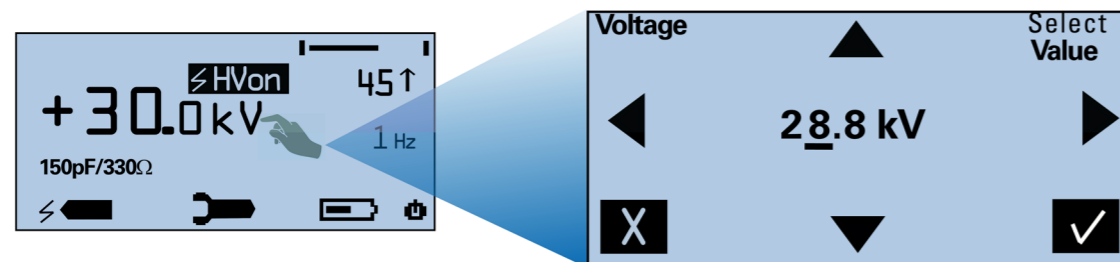
The easy to use touch-screen, ergonomic design, modular RC units, multilingual interface, remote control software, built-in LED light and temperature & humidity display allows for trouble-free use of the ONYX in all types of test sites.

The ONYX also includes a bleeder resistor which is connected in parallel with the output of the high-voltage power supply circuit. This ensures that the high

voltage power supply is completely discharged after each injected pulse to an EUT, or the ESD simulator itself will be turned-off by the user (bleed-off).

The smart key button, integrated into the trigger button, has various functions that can be defined by the user, including polarity switching, LED light, counter reset, voltage stepping up/down and others.

The ONYX also features a unique self-test which verifies that all main components of the unit are working correctly. This ensures that accurate and reliable tests are performed every time the gun is used.



APPLICATIONS

Full-compliance and pre-compliance testing according to a wide variety of standards:

- IEC/EN 61000-4-2 Edition 3 (2025)
- IEC/EN 61326
- IEC/EN 61000-6-1 & -6-2
- IEC 61340-3-1
- IEC/EN 60601-1
- ISO 10605
- GMW 3097
- Ford AB/AC
- ANSI C63.16
- PSA B21 7110
- ISO 14304
- ITU-T K.20
- MIL-STD-331 / -464 / -883 / -1512 / -1514 / -1541 / -1542
- RTCA/DO-160
- JEDEC 22-A114
- GR-78-CORE
- GR-1089-CORE
- and others

ON4X



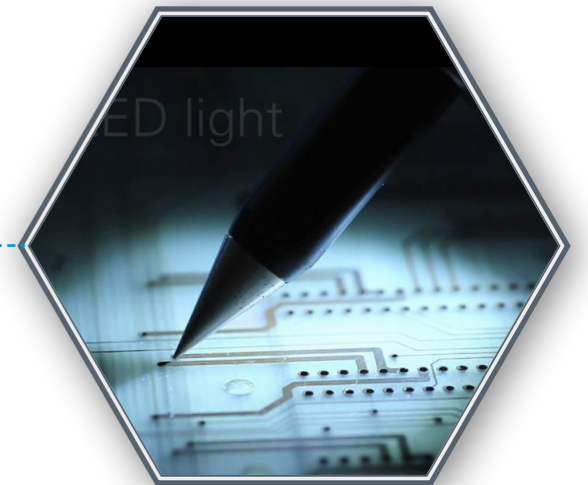
✓ **Modular**
Exchangeable RCs for different standards



✓ **Interchangeable Tips**
For better impulse



✓ **Touch Panel**
Self-explanatory operation



✓ **LED Light**
Perform the test in the exact point



✓ **Ergonomic**
Light and easy to handle, no base unit or cables



✓ **Smart Key**
To be configured for actions





STANDARD PACKAGE

ONYX SPECIFICATIONS

ONYX		
ONYX 16	ESD Simulator 16 kV	No. 2499980
ONYX 30	ESD Simulator 30 kV	No. 2499982

	ONYX 16	ONYX 30
Air discharge voltage	1 .. 16 kV	1 .. 30 kV
Cont. discharge voltage	1 .. 16 kV	1 .. 30 kV
Discharge repetition	Single/0.1/0.2/0.5/1/2/5/10/20 Hz	
Discharge counter	1 .. 9999	
Default R/C – network	150 pF / 330 Ω	
Dimensions W x H x D	290 x 270 x 110 mm	
Voltage resolution	100 V steps	
Discharge polarity	Positive & Negative	
Operating modes	Single & Continuous	
Battery life	> 16 hrs	
Power consumption	17 VA	
Weight	1.7 kg	

INCLUDED ACCESSORIES

- Carrying case
- Test tip contact discharge
- Test tip air contact discharge
- 2 rechargeable battery packs
- Ground cable
- Battery charger unit incl. country-specific mains plugs
- R/C module 150 pF/330 Ω according to IEC 61000-4-2
- Quick start guide, manual on CD, calibration certificate



OPTIONS AND ACCESORIES

RC MODULES FOR PULSE SHAPE FORMING

150 pF / 2'000 Ω (ISO 10605)	No. 4700531
330 pF / 2'000 Ω (ISO 10605)	No. 4700532
330 pF / 330 Ω (ISO 10605)	No. 4700618
100 pF / 1'500 Ω	No. 4700622
150 pF / 150 Ω	No. 4700620
500 pF / 500 Ω	No. 4700619
500 pF / 5'000 Ω	No. 4700621
50 pF .. 1 nF / 50 Ω .. 5'000 Ω (custom)	No. 4700633



TIPS

30kV AD Tip	Discharge tip 30 mm diameter for improved air discharge testing up to 30 kV	No. 4700526
Fast Rise Time Tip	Fast Rise Tip reduces the rise time of the ESD-pulse to 0.3 ns for reliability	No. 4700527

SOFTWARE

Package of fibre optical RS 232 interface and control & report software	No. 2490214
---	-------------

OTHERS

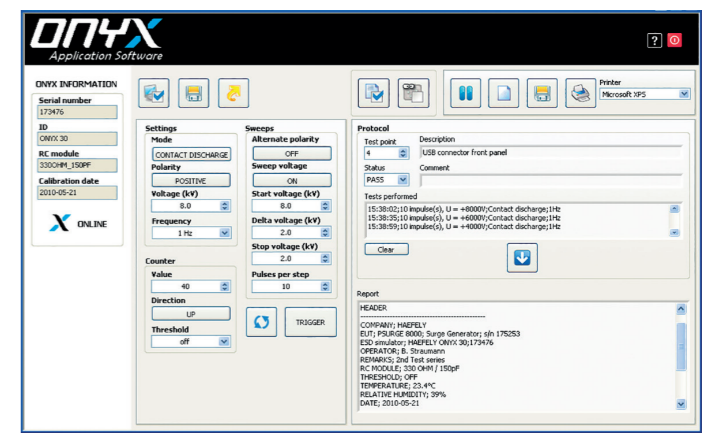
ONYX Balancer	Balancing tool with mounting system up to 2.3 kg	No. 4781300
ESD Verification Set HCP	For wave shape verification according to IEC/EN 61000-4-2	No. 4700480
VCP	Horizontal coupling plane 1.6 x 0.8 m for indirect application of the ESD. Includes cable with 2 integrated 470 kΩ HV-resistors	No. 4700480
Test Table	Vertical coupling plane 0.5 x 0.5 m, for indirect application of the ESD. Includes cable with 2 integrated 470 kΩ HV-Resistors	No. 4700480
Remote Control AC	Table 160 x 80 cm, made of wood without any metallic parts, as required by IEC 61000-4-2	No. 2495581
AC Mains Adapter	Package of fibre optical RS 232 interface and control & report software	No. 2496871
Acc. Calibration	Power supply replaces the rechargeable battery pack for continuous testing	No. 2490214
	Accredited calibration according to ISO/IEC 17025 Calibration requirements	No. 2499981

SOFTWARE

Windows based software (optional) to help make tests more reliable and reproducible.

Benefits:

- Windows XP, Windows Vista and Windows 7 compatibility
- USB and optical USB interfaces supported
- Easy-to-use and intuitive creator for test plans and test procedures
- Enhanced and highly flexible reporting capabilities
- Up-to-date design and navigation



Global Presence

EUROPE

HAEFELY AG
Birsstrasse 300
4052 Basel
Switzerland

☎ +41 61 373 4111
✉ sales@haefely.com
💻 www.haefely.com

CHINA

HAEFELY AG Representative Office
8-1-602, Fortune Street, No. 67,
Chaoyang Road, Beijing 100025
China

☎ +86 10 8578 8099
✉ sales@haefely.com.cn
💻 www.haefely.com

INDIA

HAEFELY Services Private Ltd.
1st Floor, 1, 2, 3 & 4,
Vedas Spaces Commercial,
Nashik – 422 009, India

☎ +1 800 266 4052 (toll free)
✉ sales@haefely.com
💻 www.haefely.com

This document has been drawn up with the utmost care. We cannot, however, guarantee that it is entirely complete, correct or up-to-date. Subject to change without notice.

V2505



HAEFELY

Current and voltage – our passion

HV

HIGH VOLTAGE

IN

INSTRUMENT

EM

EMC


reliable.
precision.