



# ONYX

## ELECTROSTATIC DISCHARGE ESD SIMULATOR



ESD



[www.onyx.haefely.com](http://www.onyx.haefely.com)

a brand of **HAEFELY**

Haefely is a subsidiary of Hubbell Incorporated.



High Voltage Test Business

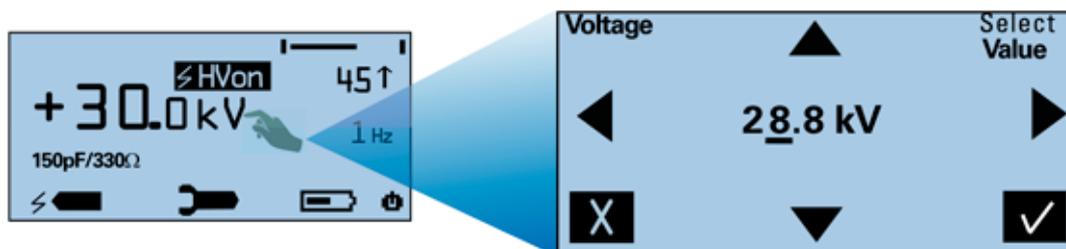
precision.  swiss made.

## 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 30 kV ESD gun without an 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 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 all of the main components of the unit are working correctly. This ensures that accurate and reliable tests are performed every time the gun is used.



## OVERVIEW

### BENEFITS

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.

Mobility – the most ergonomic 30 kV ESD gun on the market without an external base control unit.

Reliable and economical – A Swiss made product, reliability, service and support in a budget-friendly package.

### FEATURES

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

### APPLICATIONS

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

- IEC/EN 61000-4-2 Edition 2 (2009)
- IEC/EN 61326
- IEC/EN 61000-6-1 & -6-2
- IEC 61340-3-1
- 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

## TECHNICAL SPECIFICATIONS – SCOPE OF SUPPLY

TECHNICAL SPECIFICATIONS			
<b>Air discharge voltage</b>	1 .. 16 kV or 1 .. 30 kV	<b>Voltage resolution</b>	100 V steps
<b>Cont. discharge voltage</b>	1 .. 16 kV or 1 .. 30 kV	<b>Discharge polarity</b>	positive & negative
<b>Discharge repetition</b>	single/0.1/0.2/0.5/1/2/5/10/20 Hz	<b>Operating modes</b>	single & continuous
<b>Discharge counter</b>	1 .. 9999	<b>Battery life</b>	> 16 hrs
<b>Default R/C – network</b>	150 pF / 330 $\Omega$	<b>Power consumption</b>	17 VA
<b>Dimensions W x H x D</b>	290 x 270 x 110 mm	<b>Weight</b>	1.7 kg

### SCOPE OF SUPPLY

ONYX ESD simulator carrying case including:

Test tip air discharge, test tip contact discharge, 2 rechargeable battery packs, ground cable, battery charger unit incl. mains adaptor set, R/C module 150 pF/330  $\Omega$  according to IEC 61000-4-2, quick start guide, manual on CD, calibration certificate

ONYX 30    Order code 2499982  
 ONYX 16    Order code 2499980



## OPTIONS & ACCESSORIES

### R/C Modules



Pulse shape forming modules:

4700531	150 pF / 2'000 $\Omega$	(ISO 10605)
4700532	330 pF / 2'000 $\Omega$	(ISO 10605)
4700618	330 pF / 330 $\Omega$	(ISO 10605)
4700622	100 pF / 1'500 $\Omega$	
4700620	150 pF / 150 $\Omega$	
4700619	500 pF / 500 $\Omega$	
4700621	500 pF / 5'000 $\Omega$	
4700633	50 pF .. 1 nF / 50 $\Omega$ .. 5'000 $\Omega$	(custom)

### 30 kV AD Tip 4700526



Discharge tip 30 mm diameter for improved air discharge testing up to 30 kV

### Fast Rise Time Tip 4700527



Reduces the rise time of the ESD-pulse to 0.3 ns for reliability testing

### Accredited Calibration 2499981

Accredited calibration according to ISO/IEC 17025 requirements

### Mains Adaptor 2490214

Power supply replaces the rechargeable battery pack for continuous testing

**ESD Verification Set**

4700480



For wave shape verification according to IEC/EN 61000-4-2

- 2  $\Omega$  Target/ 4 GHz
- Attenuator
- Coax cable
- User manual

**HCP**

2496881

Horizontal coupling plane 1.6 m x 0.8 m for indirect application of the ESD. Includes cable with 2 integrated 470k  $\Omega$  HV-resistors

**VCP**

2495581

Vertical coupling plane 0.5 m x 0.5 m, for indirect application of the ESD. Includes cable with two integrated 470k  $\Omega$  HV-resistors

**Test Table**

2496871

Table 160 x 80 cm, made of wood without any metallic parts, as required by IEC 61000-4-2

**Remote Control**

2490216

Package of fibre optical RS 232 interface and control & report software



## SOFTWARE

Why to use software to perform EDS tests?

Because it makes your life easier and helps to make tests more reliable and reproducible.

### Benefits:

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





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