ONYX

ELECTROSTATIC DISCHARGE SIMULATOR

Laplace Instruments

ESD

Designed by HAEFELY TECHNOLOGY

precision. swiss made.

HUBBELL HIGHVOLTAG TEST SOLUTIONS

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 if 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 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
- 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

TECHNICAL SPECIFICATIONS – SCOPE OF SUPPLY

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

ONYX 30 Part no. 2499982
ONYX 16 Part no. 2499980

OPTIONS & ACCESSORIES

R/C Modules

Pulse shape forming modules:

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

30 kV AD Tip
4700526

Air 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 reliablility testing

ONYX Balancer
4700813

Balancing tool with mounting system up to 2.3 kg

The ONYX balancer is an economical choice for a balancing tool weighing up to 2.3 kg. The molded ABS housing has a smooth exterior with rounded edges designed for maximum appeal. The ONYX balancer is the most modern, easiest to adjust and reliable balacing tool for an ESD simulator currently on the market.

AC Mains Adapter
2490214

Power supply replaces the rechargeable battery pack for continuous testing

PET 4000
4700480

ESD Verification Set according to IEC/EN 61000-4-2 Ed. 2

Attenuator 20 dB
2ohm Target/ 4 GHz
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 470 kΩ 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 470 kΩ 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

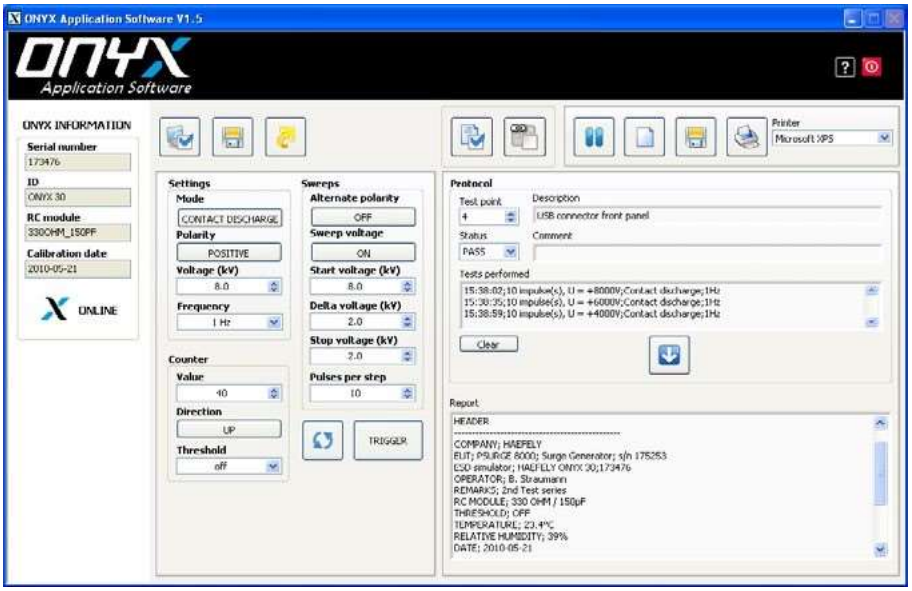
Accredited Calibration

499981

Accredited calibration according to ISO/IEC 17025 requirements

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 7 and Windows 8 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