HAEFELY HIPOTRONICS

EMC TESTING

PRODUCT OVERVIEW

HAEFELY TECHNOLOGY

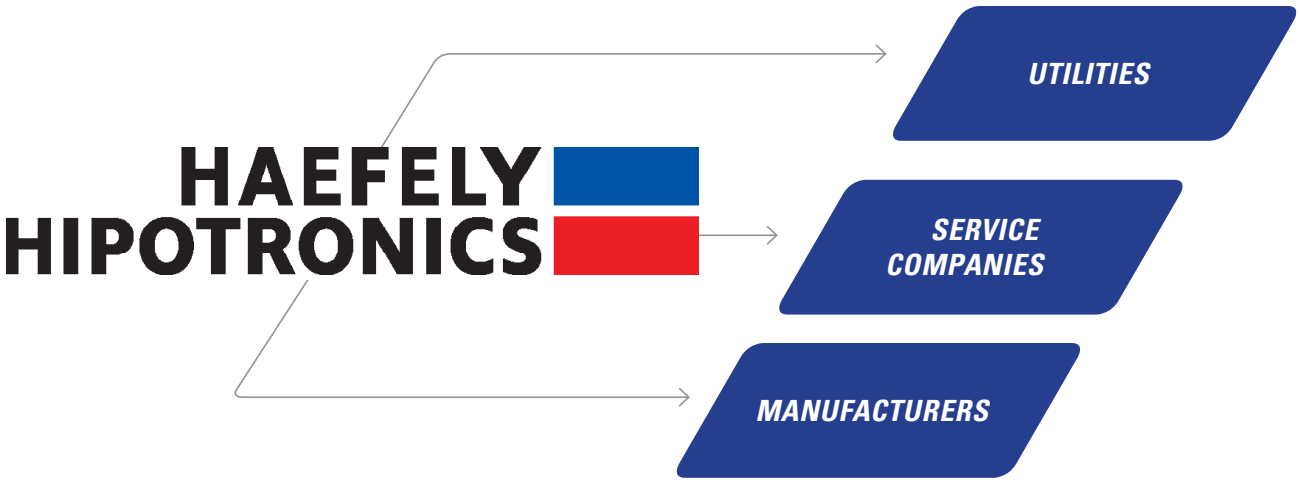
precision. swiss made.

HIGH VOLTAGE TEST SOLUTIONS

CONTENTS

MARKET SEGMENTS

CUSTOMER BASE FOR EMC TESTING



AXOS
COMPACT TESTER

The AXOS is an ultra-compact immunity tester that performs all the most commonly used transient immunity tests, including Surge, EFT, Dips/Interrupts, AC/Surge Magnetic Field, Ring Wave and Telecom Surge. Full Compliance and Pre-Compliance tests are performed to meet the requirements of a wide variety of transient immunity standards, including IEC 61000-4-x "CE Mark" Basic standards, IEC 60601 for Medical equipment, and many other IEC, ANSI, ITU, UL and specific product standards.

ACCESSORIES

	AXOS 5	AXOS 8	MSURGE-A	VTM 15000	VTM 15000/05	FP-COMB 32	FP-SURGE 100M2	FP-EFT 100M2	TW 8	PCD 121	PCD 126A	DEC 5	DEC 6	DEC 7	IP4B	PAT 50 A	PAT 1000
Surge 1.2/50 & 8/20, 5.0kV	x	x															
EFT / Burst 5.0kV	x	x															
Dips & Interrupts	x	x															
Surge magnetic field 61000-4-9	x	x	x														
Insulation testing 1.2/50, 15kV				x	x												
3-phase surge 32A						x											
3-phase surge 100A							x										
3-phase EFT/Burst 32A						x											
3-phase EFT/Burst 100A								x									
CDNs symmetrical data & control lines									x	x	x	x	x				
CDNs asymmetrical data & control lines											x			x			
Capacitive coupling clamps															x		
EFT/Burst Verification set																x	x
Surge 1.2/50 & 8/20, 7kV		x															
Telecom10/700 7kV		x							x								
Ring Wave 100 kHz 7kV		x															

SIMPLICITY

The simplified user interface can be fully operated via touchscreen and provides a quick selection of pre-loaded tests and test settings to create your own customized procedures. Additional options even allow you to change test parameters "on the fly", making this type of tester one of the most user friendly systems available.

EXPANDABILITY

A large number of additional accessories enable users to extend their testing even further, by adding capacitive coupling clamps, data and control line CDNs, three phase power line CDNs, and impulse transformers for performing insulation tests. With these options, the AXOS Series tester is your one stop test station for everything from product development, pre-compliance and full compliance testing.

ELECTROSTATIC DISCHARGE

ONYX
ESD Simulators

The ONYX simulators by HAEFELY HIPOTRONICS have been specially designed to meet all latest international standards, including IEC61000-4-2 Ed. 2 and are the most ergonomic battery and AC power operated 30kV guns on the market. 16kV and 30kV models available, along with a complete range of accessories that ensure a complete ESD test setup (verification equipment, test tables, coupling planes etc).

Smart Key Operation

The smart key button is integrated at the upper part of the discharge trigger and has various functions which are defined by the user, enabling you to run a sequence of events according to your testing requirements, and simplify test procedures.

The functions include user defined discharge voltages steps, sweep voltage, On/Off LED light, Polarity Switching, control and report function.

Compliance & Modularity

The design is based on the requirements of all latest international standards, including the latest IEC 61000-4-2 Ed. 2. R/C module values are available from 50-5000 Ohms and 50-1000pF, which enables users to fully test according to many international standards.

Contact Discharge Current Flow Detection & Self Test

The unique NO CONTACT detection circuit function continuously monitors whether ESD pulses are discharged to the EUT, ensures users the test was successful and prevents incorrect test results.

FEATURES

- 16kV and 30kV models
- Touch screen operation
- Modular
- Automatic polarity switching
- Remote control software
- Remote trigger
- Bleed-of Functionality
- Lightweight and portable design
- Battery and AC operation
- Environmental monitoring
- Onboard LED EUT light
- Smart key functions
- Contact discharge current flow detection
- Self-test function

STANDARDS

- IEC 61000-4-2 Ed. 2
- IEC613402-1/-2
- IEC 801-2
- IEC 60571
- EN 50155
- ANSI C63.16
- ISO 10605
- ISO 14304
- ITU-T K20
- MIL-STD-1512/-1514/-750D/-883
- RTCA/DO-160
- JEDEC 22-A114A
- GR-78/1089-CORE

The self test function is a built-in self test routine which checks the HV supply, the impulse capacitor, the HV discharge relays, and the insulation of the entire HV circuitry.

Bleed-off functionality

The so called bleed-off functionality of the ONYX simulator ensures via an integrated relay that the EUT is completely discharged before the next ESD pulse is initiated. This functionality ensures a maximum of test accuracy to the user without the need for a discharge brush.

ONYX 16

- 16kV Electrostatic Discharge Simulator
- 16kV Air & Contact Discharge
- 150pF/330Ω standard discharge network
- Exchangeable RC modules to meet various standard requirements (IEC, ISO, ANSI, MIL)
- Ergonomic design and operation (touch screen)
- Rechargeable battery or mains operated
- Smart key functions
- Automatic polarity switching
- Remote trigger
- Self test function
- Includes: Light rigid carrying case, contact and air discharge tips, mains supply, 2 x rechargeable battery pack with charger

ONYX 30

- 30kV Electrostatic Discharge Simulator
- 30kV Air & Contact Discharge
- 150pF/330Ω standard discharge network
- Exchangeable R/C modules to meet various standard requirements (IEC, ISO, ANSI, MIL)
- Ergonomic design and operation (touch screen)
- Rechargeable battery or mains operated
- Smart key functions
- Automatic polarity switching
- Remote trigger
- Self test function
- Includes: Light rigid carrying case, contact and air discharge tips, mains supply, 2 x rechargeable battery pack with charger

ESD VERIFICATION SET

- Built according to IEC/EN 61000-4-2
- Verification/calibration of ESD generators up to 30kV
- 2 Ω fully compliant Pellegrini target
- 30 dB attenuator
- Required cables included
- Supplied with detailed application note

Accessories:

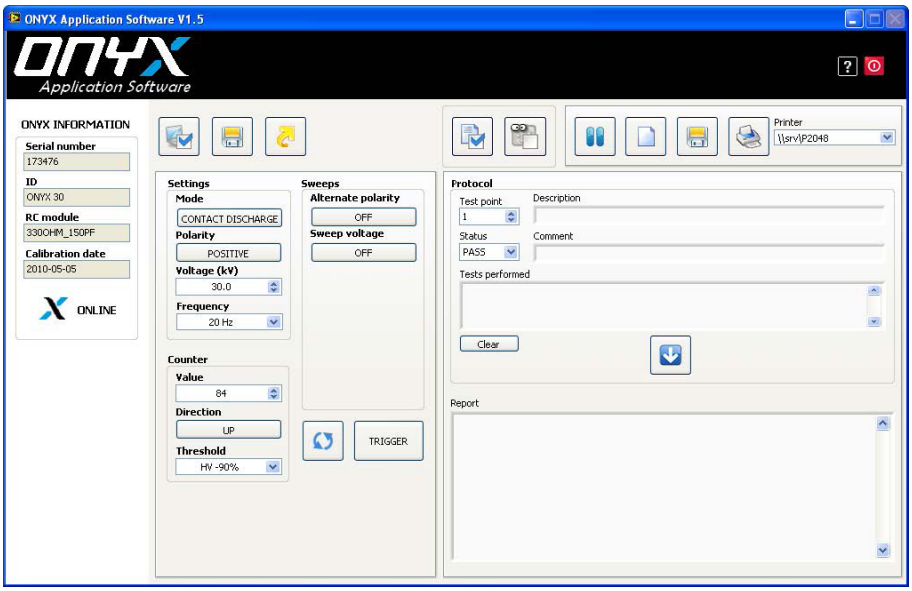
- ESD Verification set
- Vertical and Horizontal coupling planes
- 30kV air discharge tips
- Fast rise time tips
- R/C networks R:50-5000 Ohm, C:50-1000 pF
- Test tables
- Remote control package including optical fibre optic link cable and software package.

SOFTWARE

Why should you use software to perform ESD tests?
Because it makes your life easier and helps to make tests more reliable and reproducible.

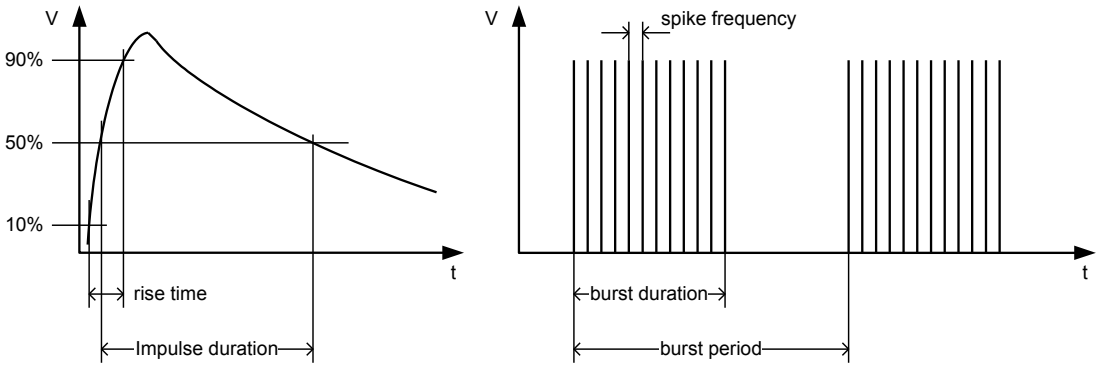
Benefits

- 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



EFT/BURST

Bursts or EFTs (Electrical Fast Transients) are caused by operation of electro-mechanical switches, motors and distribution switch-gear connected to the power distribution network. A typical burst consists of a large number of recurring impulses at high frequency for a short time period.



All our EFT/Burst generators are 100% compliant to the latest standards, including IEC/EN 61000-4-4 Ed. 3, which is mandatory from April 2012.

DISTINCTIVE FEATURES

Flexibility

Depending on the actual testing requirements, we offer our customers the choice between stand alone and compact testing equipment.

Stand alone equipment allow users to test at levels higher than what is usually required within the standards, making such testers ideal for over-testing purposes.

Compact solutions allow users to not only cover the latest eft/burst requirements, but also to carry out surge, dips & interrupts, magnetic field, and insulation tests.

STAND-ALONE

- Independent test station
- High end components
- Very high result accuracy and precision
- Higher voltage level of 7.3kV
- Spike frequency up to 110 kHz
- IEC/EN61000-4-4 Ed. 3
- Unique windows based control and reporting software
- Distinctive safety features
- Ideal for over testing

COMPACT

- Multi-test station
- Covers EFT/Burst, Surge, Dips & Interrupts, Magnetic Field, and Insulation Tests
- 5.0kV EFT/Burst
- Fully meets all latest standards including IEC/EN61000-4-4 Ed. 3
- Ideal for pre-compliance testing and CE marking

NOTE: Please refer to the COMPACT section on page 3 for details.

EFT SOLUTIONS

AXOS SERIES

- 5kV Burst Test System
- Built according to IEC/EN 61000-4-4 Ed. 2 & 3 as well as to ANSI/IEEE C62.41/45 and C37.90.1
- Impulse voltage up to 5kV
- Frequency range from 1Hz to 1MHz
- IEC, random, continuous and real burst mode
- Ramp functions
- Integrated automated single-phase CDN for AC and DC up to 16A EUT mains current
- Burst parameters editable during testing

PEFT 8010

- 7.3kV Burst Test System
- Built according to IEC/EN 61000-4-4 Ed. 2 & 3 as well as to ANSI/IEEE C62.41/45 and C37.90.1
- Impulse voltage up to 7.3kV
- Frequency range from 1Hz to 100kHz
- IEC, random, continuous and real burst mode
- Ramp functions
- Integrated automated single-phase CDN for AC and DC up to 16A EUT mains current
- Burst parameters editable during testing

FP-EFT 32M

MANUAL 32A THREE-PHASE COUPLING-DECOUPLING NETWORK FOR EFT TESTING

- Built according to IEC/EN 61000-4-4 Ed. 2 & 3 as well as to ANSI C62.41/45
- Superposition of EFT impulses onto three- phase power lines and DC power lines
- 8kV maximum impulse voltage
- EUT mains voltage up to 690V/400V AC, 110V DC
- EUT mains current up to 32A per phase
- Synchronization with power supply possible
- EUT over-current protection

FP-EFT 100M2

100A THREE-PHASE COUPLING/DECOUPLING NET-WORK FOR EFT TESTING

- Built according to IEC/EN 61000-4-4 Ed. 2 & 3 and ANSI C62.41/45
- Superposition of EFT impulses onto three- phase power lines and DC power lines
- 8kV maximum impulse voltage
- EUT voltage up to 690V/400V AC
- EUT mains current up to 100A per phase
- Manual coupling path switching
- Synchronization with power supply possible

IP4B

CAPACITIVE COUPLING CLAMP FOR SUPER-POSITION OF BURSTS ON DATA LINES

- Built according to IEC/EN 61000-4-4 Ed. 2 & 3 and ANSI C37.90.1
- 40mm maximum cable size
- Up to 8kV impulse voltage
- Handy carrying handle
- Optional transducer plate for clamp calibration/ verification

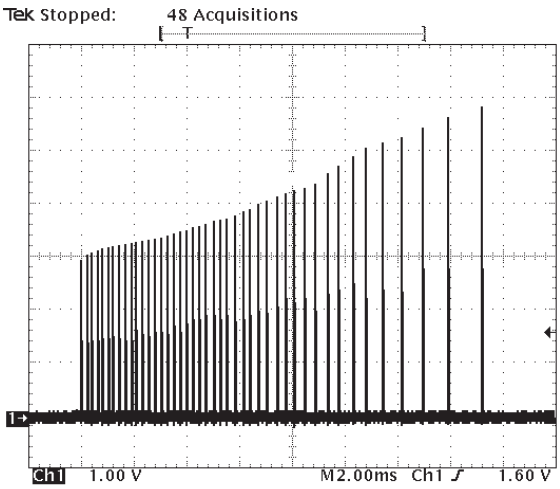
EFT VERIFICATION SET

WAVEFORM VERIFICATION SET

- Built according to IEC/EN 61000-4-4 Ed. 2 & 3
- For verification/calibration of EFT generators (PEFT 4010, PEFT 8010, AXOS Series)
- Combined 50 Ω load, 54 dB attenuator
- Combined 1 kΩ load, 60 dB attenuator
- Required cables included
- Supplied with detailed application note

OPTIONS

- IEEE 488 interface option
- Three phase verification adapters
- Warning lamps and emergency switches
- Fibre optic links (EUT fail)
- Test tables
- Dedicated software WinFEAT&R
- Upgrade kits for older models
- Real burst functional extension
- Optical decoupling fibre optic links (RS232)
- AC and DC adapters
- Near field test probes (E&H)
- Vertical operation stands VOS



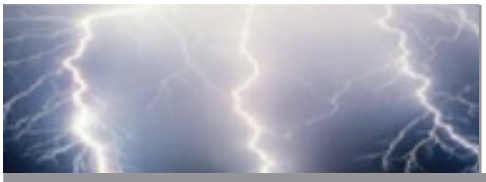
SURGE - TRANSIENT / LIGHTNING

Stand-alone, compact, and modular Surge impulse generators are available up to 30kV, which cover a range of EMC surge tests including the classical IEC defined "Combination Wave" 1.2/50 & 8/20, "Hybrid waves" defined for telecommunications testing, 10/700, ring wave, damped oscillating wave, magnetic field, and many more.

Typical standard applications include IEC, EN and ANSI for power line testing, FCC, Bellcore, ITU and ETSI for telecom testing.

Our modular Surge Platform can also be used for product safety testing to UL standards and also ITE requirements. A wide range of accessories from single and three phase CDNs up to 100A and telecoms coupling units, make these systems the most modular and flexible test equipment on the market.

PRODUCTS AND APPLICATIONS



	AXOS 5	AXOS 8	PSURGE 8000	PIM 100	PIM 110	PIM 120	PIM 150	PIM 155	VTM 15000/05	VTM 15000	PSURGE 30.2	PS 1500
Combination Wave 1.2/50 & 8/20												
5kV	x											
7kV		x										
8kV			x	x								
30kV											x	
Impulse Current 8/20												
30kA											x	
Ring Wave												
7kV 100kHz		x	x		x							
Damped Oscillatory Wave												
100kHz & 1MHz							x					
100kHz & 1MHz Magnetic Field								x				
Insulation Testing 1.2/50												
10kV	x								x	x		
14kV		x							x	x		
15kV			x	x					x	x		x
Standards												
IEC	x	x	x	x	x	x	x	x	x	x	x	x
UL			x									x
ITU	x	x	x	x	x							
ANSI	x	x	x	x	x	x	x				x	

AXOS 5

5KV COMPACT IMMUNITY TEST SYSTEM

- Built according to IEC/EN 61000-4-5 Ed. 3
- Impulse voltage up to 5.0kV, 1.2/50 µs
- Impulse current up to 2.5kA, 8/20 µs
- Positive, negative and alternating polarity
- Phase angle synchronisation
- Impulse voltage & current monitors
- Ramp functions
- 7" 24 bit touch-screen
- Integrated 16 A single-phase CDN for AC and DC

AXOS 8

7KV COMPACT IMMUNITY TEST SYSTEM

- Built according to IEC/EN 61000-4-5 Ed. 3
- Impulse voltage up to 7.0kV, 1.2/50 µs
- Impulse current up to 2.5kA, 8/20 µs
- Positive, negative and alternating polarity
- Phase angle synchronization
- Impulse voltage & current monitors
- Ramp functions
- 7" 24 bit touch-screen
- Integrated 16 A single-phase CDN for AC and DC

FP-COMB 32

32A THREE-PHASE COUPLING/DECOUPLING NETWORK FOR SURGE TESTING

- Built according to IEC/EN 61000-4-5 Ed. 2 & 3
- EUT voltage up to 480V
- EUT current up to 32A per phase
- Test level max. 7.0kV / 3.5kA
- Fully automatic test routines
- Automatic synch source switching
- Test object power line bypass mode
- Test object overcurrent protection

PS 1500

15KV VOLTAGE SURGE GENERATOR

- Built according to IEC/EN 60065,IEC/EN 60950-1 and UL 1414
- Impulse voltage up to 15kV
- Up to 24 discharges per minute
- Positive and Negative Polarity
- External trigger input
- Automatic selection of 4MΩ/100 MΩ parallel resistor
- Impulse voltage monitor
- Includes test pistol
- Flash measurement
- Insulation/safety testing
- Component testing
- Small and compact design

PSURGE 30.2

30KV SURGE TEST SYSTEM

- Built according to IEC/EN61000-4-5, IEC/EN 61010, IEC/EN 61643-1 and ANSI C62.41/45
- Impulse voltage up to 30kV (combination wave)
- Impulse current up to 30kA (8/20 µs)
- Combination wave (1.2/50 µs & 8/20 µs)
- 8/20 µs, 10/350 µs, 10/1000 µs current pulse
- Impulse voltage & current measurement
- Automatic polarity switching
- Integrated test cabinet

FP-SURGE 3010

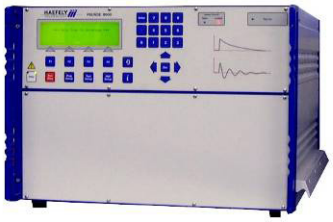
SINGLE-PHASE COUPLING/DECOUPLING NETWORK FOR SURGE TESTING UP TO 30KV / 15KA

- Single-phase EUT powering
- EUT mains voltage up to 480V
- EUT mains current up to 10A
- Manual selection of coupling path and coupling capacitor
- Test level up to 15kV/30kA
- EUT overcurrent protection
- Large integrated test cabinet

PSURGE 8000

CONTROLLER FOR SURGE PLATFORM MODULES

- Controls up to 99 PIM and PCD modules
- Supplies up to 8kV DC power to all connected PIM impulse modules
- PIM and PCD modules connected to PSURGE 8000 via daisy-chain-bus
- No additional extension-equipment required to connect additional PIM or PCD modules
- Large memory for complex and fully automatic test routines
- Contains all required interfaces to printer, PC, EUT, etc.



PIM 100

COMBINATION WAVE IMPULSE MODULE

- Built according to IEC/EN 61000-4-5 Ed. 1 & 2 and ANSI C62.41/45
- 1.2/50 µs open circuit up to 7.4kV
- 8/20 µs short circuit up to 3.7kA
- Impulse voltage and current monitors
- *1° Phase synchronization
- Reliable semiconductor HV-switch
- Positive, negative and alternating polarity
- Up to 12 pulses per minute

PIM 110

RING WAVE IMPULSE MODULE

- Built according to IEC/EN 61000-4-12 and ANSI C62.41/45
- 100 kHz frequency, 0.5 µs rise time
- Imp. voltage up to 7.8kV / 12 Ω, 30 Ω and 200 Ω
- Impulse voltage and current monitors
- *1° phase synchronization
- Positive, negative and alternating polarity
- Up to 12 pulses per minute
- Reliable semiconductor HV-switch

PIM 120/PCD 120

TELECOM TEST SYSTEM

PIM 120:

- Built according to IEC/EN 61000-4-5 Ed. 2 & 3, ITU K-series and IEC 60950
- 10/700 µs open circuit voltage
- 5/320 µs short circuit current
- Imp. voltage up to 7.4 kV / 15 Ω and 40 Ω
- Impulse voltage & current monitors
- Reliable semiconductor HV-switch
- Positive, negative and alternating polarity
- Up to 12 pulses per minute

PCD 120:

- 4 wire coupling unit for unshielded symmetrical operated lines
- Compliant to IEC 61000-4-5 (10/700µs impulse only), ITU K.20/K.21/K.44/K.45
- Fully automated operation

PIM 150

OSCILLATING WAVE SURGE MODULE

- Built according to IEC/EN 61000-4-12 Ed.1, IEC 61000-4-18 Ed.1, IEC 60255-22-1 and ANSI C37.90
- 100 kHz and 1 MHz burst frequencies
- 75 ns rise time
- Impulse voltage up to 3.3kV / 200 Ω
- Integrated, fully automatic CDN for three-phase AC and DC power lines
- EUT mains voltage up to 480V/277V 16A
- Impulse voltage monitor
- Capacitive coupling clamp available (IP4B)
- Data line CDN available (PCD 150)

FP-SURGE 100M2

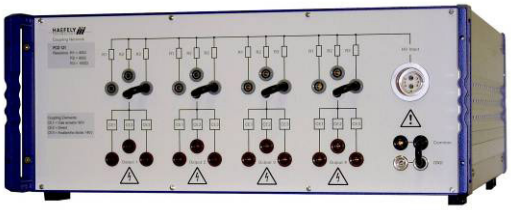
100A THREE-PHASE COUPLING/DECOUPLING NETWORK FOR SURGE TESTING

- Built according to IEC/EN 61000-4-5 Ed. 2 & 3 and ANSI C62.41/45
- Superposition of surge impulses onto three- phase AC power lines & DC power lines
- Up to 8kV impulse voltage
- EUT mains voltage up to 690V/400VAC & 110V DC
- EUT mains current up to 100A per phase
- Manual coupling path switching
- Synchronization with power supply

PCD 121

MANUAL SURGE COUPLING UNIT FOR SYMMETRICAL DATA AND CONTROL LINES

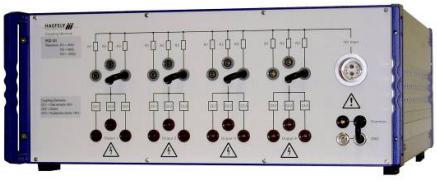
- Built according to IEC/EN 61000-4-5 Ed. 2 Fig. 14 & Ed. 3 Fig. 10
- Coupling of Combination Wave impulses
- Up to 2 pairs / 4 wires can be tested
- Serial resistors included, 4 x 40/80/160 Ohm
- Gas arrestors and Avalanche Breakdown Diodes coupling elements included
- Can be used with any surge generator
- Impulse voltage up to 6.6kV
- Signal Bandwidth up to > 10 MHz



PCD 122

MANUAL SURGE COUPLING UNIT FOR SYMMETRICAL DATA AND CONTROL LINES

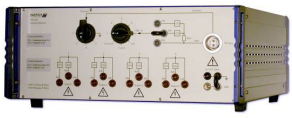
- Built according to IEC/EN 61000-4-5 Ed. 2 Fig. 14 & Ed. 3 Fig. 10
- Coupling of 10/700 µs impulses
- Up to 2 pairs / 4 wires can be tested
- Serial resistors included, 4 x 25/50/100 Ohm
- Gas arrestors and Avalanche Breakdown Diodes coupling elements included
- Can be used with any surge generator
- Impulse voltage up to 6.6kV
- Signal Bandwidth up to > 10 MHz.



PCD 126A

MANUAL SURGE COUPLING UNIT FOR ASYMMETRICAL DATA AND CONTROL LINESNETWORK FOR SURGE PLATFORM

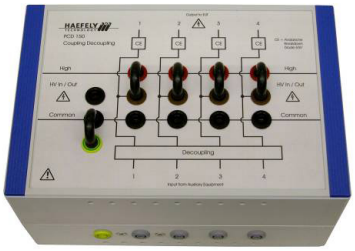
- Built according to: IEC/EN 61000-4-5 Ed. 2 Fig. 11,12 & 13 & Ed. 3 Fig. 9 for CWG
  IEC/EN 61000-4-12 2006 Ed. 2 Fig. 9, 10, 11 & 12 for Ring Wave 100kHz
- Coupling of Combination Wave impulses and Ring Wave 100kHz impulses
- Up to 4 wires can be tested simultaneous
- 40 Ohm Serial resistor included
- Capacitors and Avalanche Breakdown Diodes coupling elements included
- Impulse voltage up to 6.6kV
- Signal Bandwidth up to some 100 kHz.



PCD 150

MANUAL SURGE COUPLING/DECOUPLING UNIT FOR DATA AND CONTROL LINES

- Built according to IEC/EN 61000-4-12:2006 Fig. 9, 10, 11 & 12
- For Damped Oscillatory Wave 100 kHz & 1MHz
- For Ring Wave 100 kHz with Z = 200 Ohm
- Up to 4 wires can be tested with one unit
- Up to 8 wires can be tested with two units
- Default coupling elements are Avalanche Breakdown Diodes
- Impulse voltage up to 4.4kV
- Signal Bandwidth up to some 10 kHz



DEC 5

SURGE DECOUPLING UNIT FOR SYMMETRICAL DATA AND CONTROL LINES

- Built according to:
  IEC/EN 61000-4-5 Ed. 2 Fig. 14 & Ed. 3 Fig. 10
  ITU K.44:2003 Fig. A.5-1, A6.1-1 to A6.1-5
- Up to four wire can be tested simultaneous
- Decoupling of Combination Wave impulses
- Decoupling of Ring Wave (100kHz) impulses
- Decoupling of 10/700 µs telecom impulses
- Decoupling: Inductors 20mH compensated
- Protection elements are Gas arrestors and
  Breakdown avalanche diodes
- Can be used with any surge generator
- Impulse voltage up to 6.6kV
- Signal Bandwidth up to some 100 kHz

DEC 6

SURGE DECOUPLING UNIT FOR SYMMETRICAL DATA AND CONTROL LINES

- Build according to ITU K.44:2003 Fig. A.5-1 and A6.1-1 to A6.1-5
- Decoupling of 10/700 µs Telecom impulses
- Decoupling of Combination Wave impulses
- Decoupling of Ring Wave (100kHz) impulses
- Up to four wire can be tested simultaneous
- Decoupling: Resistors 200 Ohm
- Protection elements are Gas arrestors and Breakdown avalanche diodes
- Can be used with any surge generator
- Impulse voltage up to 6.6kV
- Signal Bandwidth up to some 10MHz

DEC 7

SURGE DECOUPLING UNIT FOR ASYMMETRICAL DATA AND CONTROL LINES

- Built according to:
  IEC/EN 61000-4-5 Ed. 2 Fig. 11, 12 & 13 & Ed. 3 Fig. 9
  IEC 61000-4-12:1995 Fig. 9, 10, 13 & 14
- Decoupling of Combination wave impulses
- Decoupling of Ring Wave (100kHz) impulses
- Up to four wire can be tested simultaneous
- Decoupling: Inductors 20mH not compensated
- Protection elements are Varistors and Breakdown avalanche diodes
- Can be used with any surge generator
- Impulse voltage up to 6.6kV
- Signal Bandwidth up to some 100 Hz

VTM 15000

IMPULSE TRANSFORMER FOR INSULATION TESTING-NETWORK FOR SURGE PLATFORM

- Built according to IEC 60060-1, IEC 60335-1, IEC 61010-1, IEC 61180-1, IEC61008-1 & 61009-1
- Voltage doubler for Combination Wave generators, up to 15.0kV 1.2/50µs open circuit voltage (current wave shape not defined)
- Selectable source impedance: 12, 40 & 500 Ohm
- Separate output for each source impedance
- Floating output

VTM 15000/05

LOW ENERGY IMPULSE TRANSFORMER FOR INSULATION TESTING NETWORK FOR SURGE PLATFORM

- Built according to IEC 60060-1, IEC 60335-1, IEC 61010-1, IEC 61180-1, IEC61008-1 & 61009-1
- Voltage doubler for Combination Wave generators, up to 15.0kV (current wave shape not defined)
- Insulation test 1.2/50µs 15kV at 0.5 J
- Source impedance: 500 Ohm
- Floating output

TW 8

TELECOM IMPULSE MODULE

- Built according to IEC/EN 61000-4-5 Ed. 3
- 10/700µs wave shape
- 2 Pairs of communication lines or 4 lines individually
- Plug and play with AXOS 8
- Test for unshielded symmetrical communication lines
- 3 different coupling impedances
  - 1 x 15 Ohm
  - 4 x 40 Ohm
  - 4 x 40 Ohm gas arresters

MAGNETIC FIELD

PIM 155

OSCILLATING WAVE SURGE MODULE

- Built according to IEC/EN 61000-4-10
- 100 kHz and 1 MHz burst frequencies
- Impulse current up to 120A
- Magnetic field strength up to 100 A/m
- Impulse voltage monitor
- Stand optionally available
- Impulse voltage up to 6.6kV
- Signal Bandwidth up to some 100 kHz

MAG 1000

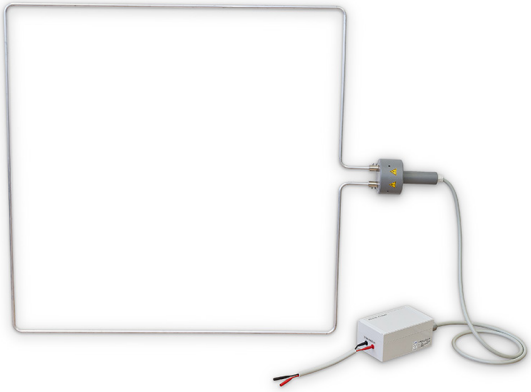
POWER FREQUENCY MAGNETIC FIELD TEST SYSTEM

- Built according to IEC/EN 61000-4-8
- 1m x 1m antenna included w/ stand
- Up to 1100A/m field strength
- Horizontal and Vertical testing
- Continuous and short duration testing
- Built in power supply at 50/60Hz
- Simple interface

MSURGE-A

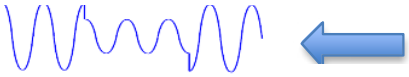
PULSE MAGNETIC FIELD TEST SYSTEM

- Built according to IEC/EN 61000-4-9
- 8/20µs magnetic field wave shape
- Up to 3000A/m field strength
- Sturdy construction
- Horizontal and vertical testing
- Control from HAEFELY surge generators
- Single turn coil with 1m x 1m square area
- Optional 2m x 2.6m magnetic coil

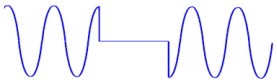


DIPS / INTERRUPTS

Such tests can be carried out with our DIP 116 which also enables users to carry out AC dips tests according to IEC 61000-4-11 (see Compact tester section).



Dip: decrease of the mains Voltage



Interruption: breakdown of the mains Voltage

AXOS SERIES VOLTAGE DIPS

FLEXIBILITY

Test parameters can be selected in wide range, exceeding the basic standard requirements by far, and enabling users to also fulfill special requirements.

TURNKEY SYSTEM

External transformers and variacs, external power sources and time consuming wiring is something you don't have to worry about, as our systems are complete turnkey systems and no additional external parts and modifications are necessary.

DIP 116

16A DIPS / INTERRUPTIONS SIMULATOR

- Built according to IEC/EN 61000-4-11
- Designed for automatic 0/40/70/80% dips of Unom
- High & Low impedance interrupts
- Inrush current capability more than 500A
- Integrated variacs for Unom and Udip
- Adjustment of Udip between 0... 99%* at any level
- 40A capability at 40% nominal voltage
- Fully integrated solution for IEC 61000-4-11, no additional equipment required

*external voltage source required

ACCESSORIES

We offer a complete range of accessories for a complete test setup.

Verification and calibration equipment are specially designed to meet exact standard recommendations, and our safety accessories such as warning lamps and emergency switches, ensure your tests are performed unter the highest safety conditions.

State of the art software and complete automation accessories are available for all our products.

More detailed information on our product accessories can be found on our website.

WinFEAT&R© SOFTWARE

The WinFEAT&R software is the latest generation of control and reporting software, based on a modern Drag and Drop concept. With such ease of use, even users with minimum technical experience will be carrying out tests in no time.

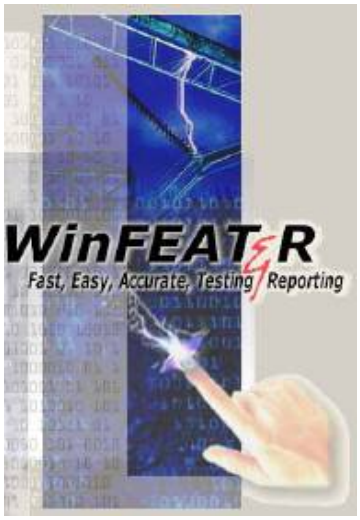
This unique software allows users to run user specified or pre-defined tests according to the latest standards, and monitors and displays real time output current and voltage values.

Communication between software and oscilloscope monitoring allows screenshots to be added to the test report.

The software runs up to Windows 7 and is compatible with all stand-alone HAEFELY HIPOTRONICS test generators.

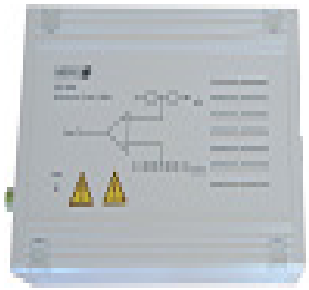
FEATURES

- Control and reporting for stand-alone EFT/Burst, Surge, Dips & Interrupts generators.
- Drag and Drop application
- User defined tests can be added and pre-defined tests are already included (according to the standards).
- Output Current/Voltage monitoring during test.
- EUT supervision (max/min V/I levels).
- User friendly, designed for use by users with minimum technical experience.
- Automatic synchronization between software and PC.
- Test setup uploaded to Oscilloscope.
- User defined test report with oscilloscope screenshot option.
- Fully compatible with Windows 7 (32-bit/64-bit)



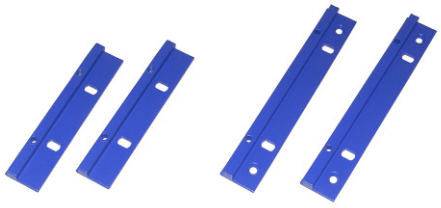
PDP 8000
DIFFERENTIAL HV PROBE

- Replaces two P6015 probes
- Calibration of surge impulse generators up to 8kV 10/700us
- Divider Ratio 1000:1
- ± 2% accuracy
- No adjustment/calibration required
- Signal Bandwidth up to some 100 kHz



RACKMOUNTING SET

- Mounts modules in racks for greater mechanical stability and mobility
- Available for all sizes

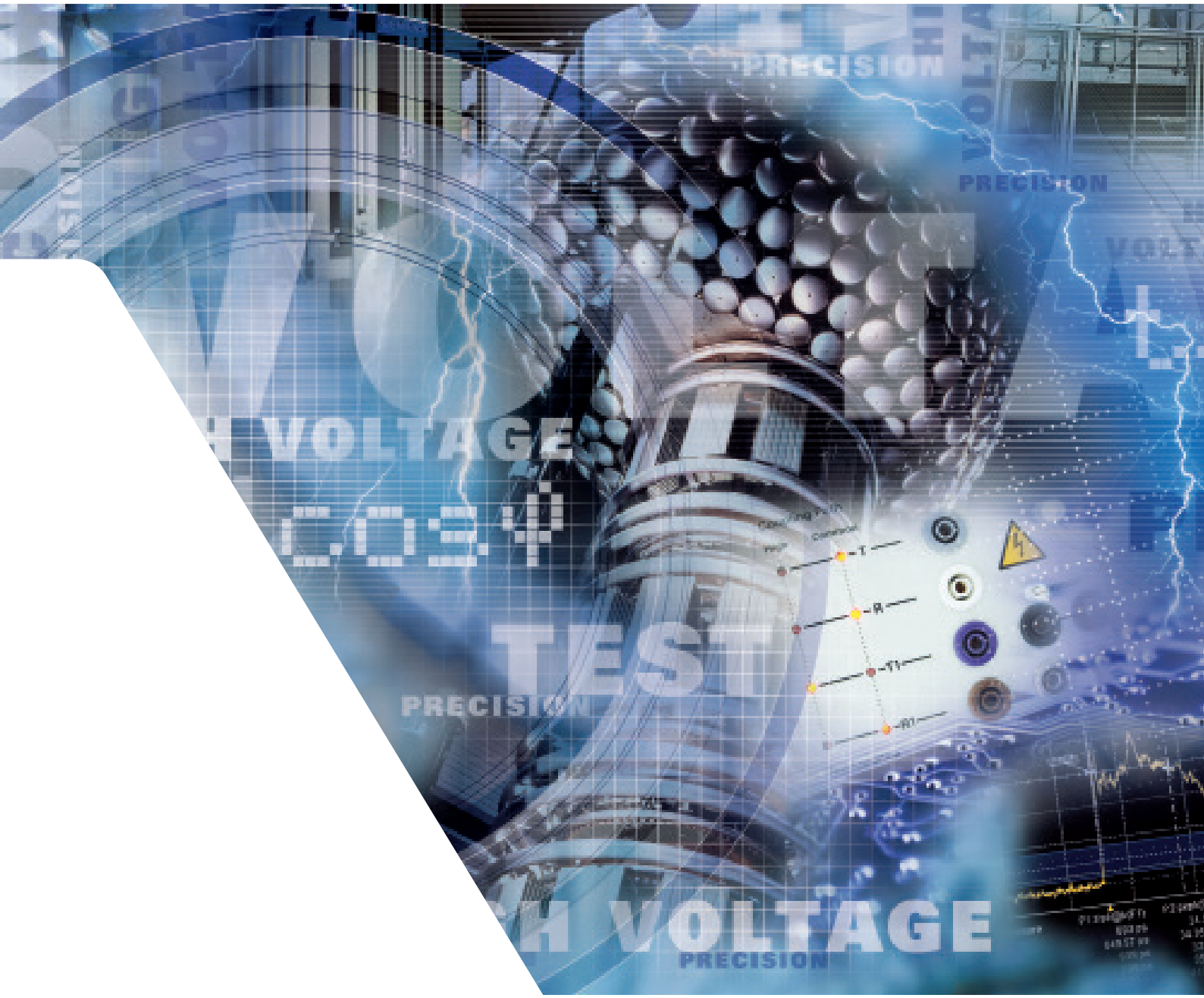


TEST TABLES

- Built according to IEC/EN 61000-4-2 and IEC/EN 61000-4-4
- Made of wood without any metallic parts
- Use for ESD & EFT testing
- Optional vertical coupling plane and ground plane available

WARNING LAMP & EMERGENCY SWITCH

- Used with SURGE, EFT and Interrupts tester
- Rugged and reliable design
- Switches cuts high voltage and mains power to EUT



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August 2013