HUBBELL High Voltage Test Business

HAEFELY TECHNOLOGY EMC

ECOMPACT 4

Economic & Compact Transient Immunity Test Station

The new ECOMPACT 4 combines the best of all worlds: Performance, flexibility, economy and the famous Haefely quality and reliability.

The ECOMPACT 4 is an ultra-compact immunity tester that performs all the most commonly used transient immunity tests, including Surge, EFT, Dips/Interrupts and AC/Surge Magnetic Field. The simplified user interface provides quick selection of tests and test levels, and even lets you change test parameters "on the fly" while running a test.

The actual EUT power mains voltage and current are indicated in the display. Using the Electronic-Fuse function, the user can set an upper limit for EUT power mains current. This feature is useful to protect the EUT from unnecessary damage.

By using the integrated safety-circuit and warning-lamp functions a high degree of operator safety is guaranteed.

The included "EMV-Check" software is compatible with all latest windows versions, and allows full automation of the test routine as well as data gathering and test report generation.

Whether you test to the IEC 61000 series "CE Mark" standards, the IEC 60601 Medical Device standards, or any number of telecom and product specific standards, the ECOMPACT 4 tester is your one stop test station for everything from precompliance to full compliance to product development testing. Use it as a stand-alone tester, or in conjunction with Haefely's premium arsenal of specialty EMC immunity equipment.

A wide range of cost-efficient Coupling / Decoupling Networks for symmetrical and asymmetrical data- and signal-lines is available as an option.

With a 100 year history of innovation, service centers on three continents, and a full staff of development and support engineers, Haefely is the clear choice for all your transient immunity test needs.

■ Features

- ☑ Up to **6 complete EMC immunity standards** in a **single test station**, including:
  - IEC 61000-4-4 Ed.2 Electrical Fast Transient
  - IEC 61000-4-5 Surge Combination Wave
  - IEC 61000-4-8 AC Magnetic Field
  - IEC 61000-4-9 Surge Magnetic Field
  - IEC 61000-4-11 Ed.1 & 2 AC Dips & Interrupts
  - IEC 61000-4-29 DC Dips
- ☑ According to the latest editions of: **IEC 61000-4-4 & IEC 61000-4-11**
- ☑ Integrated **1-Phase Coupling Decoupling Network**
- ☑ Optional automated **3-Phase 16A Coupling Decoupling** Network for Surge & EFT available
- ☑ Test routine **Storage and Recall**
- ☑ **Windows 98/2000/XP Software Included**

■ Benefits

Multi-purpose – All basic immunity tests combined in a single economical package for maximum flexibility.

Quick and Simple – One touch operation and simple automation of test routines streamlines the test procedure.

Flexible – Change test parameters on the fly for simple compliance testing or rigorous development work.

Test Reporting – Included Windows software automatically documents test parameters and results

Reliable and Economical – World-renowned Haefely quality, reliability, service and support in a budget-friendly package.

■ Applications

Full Compliance and Pre-Compliance testing to a wide variety of transient immunity standards:

→ IEC 61000-4-X "CE Mark" Basic Standards

→ IEC 60601 for Medical Equipment

→ Telcordia GR1089
IEC, ANSI, ITU, UL Product Standards

Because Haefely has a policy of continuous product improvement, it reserves the right to change design and specification without notice.

Technical Specifications

System Mainframe			
Control Power	100/115/230V 50/60 Hz	Dimensions (W x H x D)	48 x 18 x 44 cm
Memory Storage	20 positions	Weight	30 kg
Communication Interface	RS232, RS485		

IEC / EN 61000-4-4 Edition 2 Electrical Fast Transient			
Output Voltage	0.2 – 4.2 kV	Spike Frequency	0.5 – 100 kHz
Polarity	Positive and Negative	Burst Duration	0.75 – 130 ms
Output Impedance	50 Ohms	Burst Period	10 – 2400 ms
Rise Time	5 ns +/- 30%	Spikes per Second	Max. 2500 at U < 3 kV Max. 1250 at U = 3 kV to 4.2 kV
Impulse Duration	50 ns +/- 30% (50 Ohms) 50 ns –15 +100 ns (1 kOhm)	Integrated Single Phase Coupling Decoupling Network	33 nF coupling capacitance 1.5 mH decoupling inductance 230V AC/60V DC, 16A

IEC / EN 61000-4-5 Surge Combination Wave			
Output Voltage	0.2 – 4.2 kV	Output Current	0.1 – 2.1 kA
Voltage Rise Time	1.2 us +/- 30%	Current Rise Time	8 us +/- 20%
Voltage Duration	50 us +/- 20%	Current Duration	20 us +/- 20%
Polarity	Positive and Negative	Repetition Rate	10 s – 999 s
Output Impedance	2 Ohms	Integrated Single Phase Coupling Decoupling Network	18 uF / 0 R for differential mode 9 uF / 10 R for common mode 1.5 mH decoupling inductance 230V AC/60V DC, 16A
Synchronization	0 – 359 deg, 1 deg resolution 16.67 / 40 / 50 / 60 Hz		

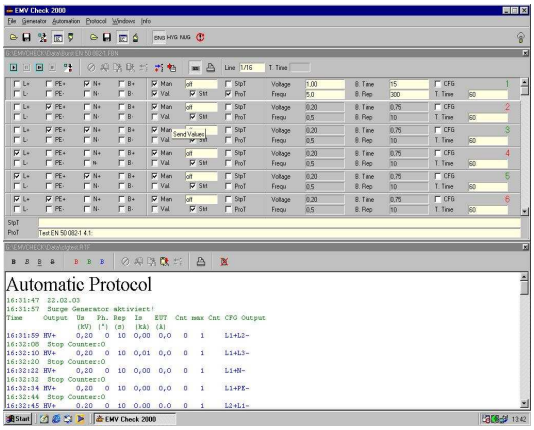
IEC / EN 61000-4-11 Edition 1 & 2 and IEC / EN 61000-4-29 Dips and Interrupts			
Max. Voltage	250V AC/DC	Interrupt Time	0.1 ms – 998 s
Max. Current	16A AC/DC	Repetition Time	0.2 ms – 999 s
Dip Levels	0%, 40%, 70%, 80%	Phase Synch.	0 – 359 degree asynchronous 16 / 40 / 50 / 60 Hz

ECOMPACT 4, Scope of Supply

Qty. 1 ECOMPACT 4 Immunity Tester
Qty. 1 Safety Circuit Connector
Qty. 1 User Manual
Qty. 1 Power, EUT Power & Control Cable
Qty. 1 EMV-Check Software Diskette

Options & Accessories

ECOUPLER 4	3 Phase CDN 440V Phase to Phase 16A rms cont. / 25A rms short-time
PCD 121	Surge Coupling Network for Symmetrical Data and Control Lines
PCD 126	Surge Coupling Network for Asymmetrical Data and Control Lines
VTM 15000	1.2/50us isolation test up to 8.4 kV
IP4A	EFT Capacitive Coupling Clamp
VTM 8000	Increases EFT voltage up to 8 kV
MFS 100	Magnetic Field Test Set up to 1000 A/m Surge & 100 A/m Power Frequency, incl. 1x1m coil & stand



"EMV-Check" Automated Test Software

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