

# PEFT 8010

EFT/Burst Test System according to IEC/EN 61000-4-4 Edition 1 & 2 up to 7.3 kV

Electrical fast transients (EFT) are the most popular sources of disturbances in modern electronic circuits. EFT/bursts are caused by the operation of electro-mechanical switches, motors or power distribution switchgears.

The **PEFT 8010** instrument contains all the features expected from a top quality EFT generator. Unbeaten performance paired with a high end assembly guarantee a cost effective, long-lasting investment and valuable test results. PEFT 8010 can either be operated by the front panel keys in a stand-alone manner or be controlled by PC via RS232 or IEEE 488 as part of a complete EMC test system. Tests can be performed manually or automatically with predefined test programs. The front panel layout with its large LCD display and the intuitive software are especially designed for self-explanatory and safe operation of the instrument. Up to 36 test setups can be programmed and saved on the internal non-volatile memory.

Bursts are generated according to the related standards IEC 61000-4-4 and EN 61000-4-4. The PEFT 8010 can deliver EFT impulses in different formats including normal, continuous, random and real pulse distribution. For better handling, the PEFT 8010 is equipped with two grounding connections, one at the front panel and one at the rear panel. This is very helpful in making connections to the ground plane if the PEFT 8010 is used either horizontally or vertically. With the integrated "Transition Function" Unominal, the spike frequency, the burst duration and the burst period can be varied automatically during a test. Besides this, it is also possible to edit the parameters manually during a test. Besides conventional safety features, the PEFT 8010 contains a separate "Line ON/OFF" switch with which the main supply can be disconnected from the equipment under test.

## FEATURES

- EFT/Burst impulse generation according to newest standards and latest technology.
- Automatic test operation for shortest measuring time and minimal setup effort.
- Data exchange to printer or computer is possible without any additional hardware/software.
- Compact and reliable construction for factory, laboratory or field use.
- Remote control is provided by optional software (WinFEAT&R) designed especially for EMC testing.
- ISO 9001 : 2000 certified manufactured

## BENEFITS

### Unmatched Performance

Accurate and fast measurements make this instrument a unique tool for cost-effective and reliable testing practices.

### Wide Range of Extension Options

A wide range of options ensures a customized EMC test solution. Compatibility to other generators or detectors increases the functionality of the instrument up to an overall EMC test system.

### Simple and Safe Operation

Intuitive and clear graphical presentation of the results helps finding exact failure levels. Software menus are simple to follow and do not have too many layers in the structure.

A help function has been built into the software, so that pressing the soft key "HELP" will give you more information about the operation you are attempting.

Safety features like external emergency stop or warning lamp protect the user from hazardous and dangerous situations.

**TECHNICAL SPECIFICATIONS**

**Wave Shape into 50Ω load**

Rise time	5 ns ± 30 %
Impulse duration	50 ns ± 30 %

**Wave Shape into 1000Ω load**

Rise time	5 ns ± 30 %
Impulse duration	50 ns – 15 / + 100 ns

**Burst Characteristic**

Voltage at HV-output:	1.0 ... 7.3 kV
Voltage at CDN output:	1.0 ... 6.6 kV
Spike frequency	1 Hz ... 110 kHz
Burst duration	0.01 ... 999 ms
	0.1 Hz ... 400 Hz
Burst period	2.5 ms ... 10 s
	1 period ... 500 periods
Impulses per second	max. 250 for Unom > 4 kV max. 500 for Unom ≤ 4 kV
Impulses per burst	max. 75 for Unom > 4 kV max. 150 for Unom ≤ 4 kV
Spike distribution	normal, continuous, random, real
Polarity	positive, negative
Test time	10 s ... 8 h per path

**Single Phase Coupling/Decoupling Network**

Maximum AC voltage	264 V @ 16 ... 440 Hz
Maximum AC current	16 A @ 50 ... 60 Hz, 10 A @ 400 Hz
Maximum DC voltage	125 V
Maximum DC current	16 A (dependent on DC voltage)
Coupling Modes	L-GND, N-GND, PE-GND, LN-GND, LPE-GND, NPE-GND, LNPE-GND
Residual voltage at	≤ 10% of applied
Test Supply Input	test voltage

**Synchronization**

Frequency	16 <sup>2</sup> / <sub>3</sub> Hz, 40 Hz, 50 Hz, 60 Hz, 400 Hz, auto
Impulse trigger	automatic, manual, external

**System Configuration**

EUT fail input	BNC, logic low to trigger
P90 interface	for a 3-phase CDN extension
PESD interface	for connecting an ESD generator
Printer interface	Centronix
Computer interface	RS-232, IEEE-488 (optional)

Weight and Dimension	
Weight	14 kg
W x H x D	450mm x 130mm x 570mm

Power Supply	
Voltage	85 ... 264 VAC, 150 VA
Frequency	50 / 60 Hz

**PEFT 8010 ART. NO. 2491800**  
**SCOPE OF SUPPLY**

Qty. 1	PEFT 8010
Qty. 1	Cable set
Qty. 4	User's Manual
Qty. 1	Calibration Certificate

**OPTIONS AND ACCESSOIRES**

FP-EFT32M	Manual 3-phases CDN 690 V / 32 A
FP-EFT100M2	Manual 3-phases CDN 690 V / 100 A
IP4A	Capacitive coupling clamp for EFT (ANSI C37.90)
WinFEAT'R	Control, Measurement & Reporting Software for PEFT 8010
EFT Verification Set	Verification of EFT generator (incl. 50 Ohm / 54 dB attenuator, 1000 Ohm / 60 dB attenuator)
PAT 50A	Attenuator 54 dB, 50 Ohm
PAT 1000A	Attenuator 60 dB, 1 kOhm
Verification Adapter	Adapter for PEFT 4010, PEFT 8010, FP-EFT 32M
Verification Adapter	Adapter for FP-EFT 100M2

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