CN-EFT1000 in accordance with IEC 61000-4-4

Revised: 13December 2010

1 GENERAL INFORMATION DEFINITION:

Device of defined dimensions and characteristics for common mode coupling of the disturbance signal to the circuit under test without any galvanic connection to it

1.1 Technical data

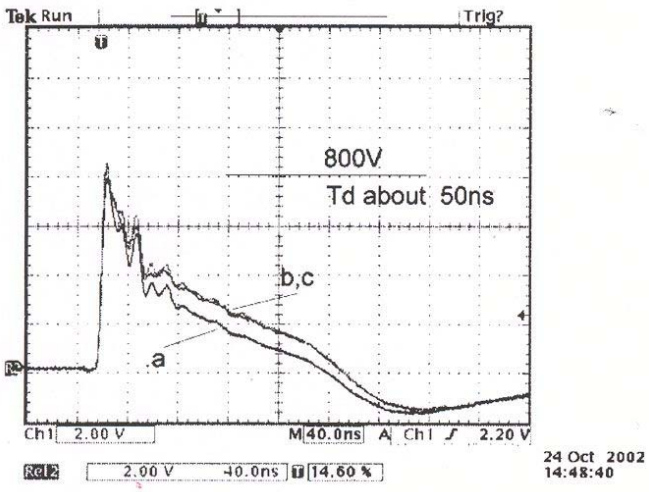
Insulation withstand capability	1.2/50 µs	5 kV
Insulation withstand capability	EFT 5/50ns	8 kV
Usable diameter range	4 mm up to 70 mm	
Typical coupling capacitance	100 pF to 1 000 pF	depending on EUT cable

2 APPLICATION CAPACITIVE COUPLING CLAMP

- The clamp provides the ability of coupling the fast transients/bursts to the circuit under test without any galvanic connection to the terminals of the EUT's ports, shielding of the cables or any other part of the EUT.
- The coupling capacitance of the clamp depends on the cable diameter, material of the cables, and cable shielding (if any).
- The device is composed of a clamp unit (made, for example, of galvanised steel, brass, copper or aluminium) for housing the cables (flat or round) of the circuits under test and shall be placed on a ground reference plane of minimum area of 1 m^2. The ground (reference) plane shall extend beyond the clamp by a least 0,1 m on all sides.
- The clamp shall be provided at both ends with a high-voltage coaxial connector for the connection of the test generator at either end. The generator shall be connected to that end of the clamp which is nearest to the EUT.
- The clamp itself shall be closed as much as possible to provide maximum coupling capacitance between the cable and the clamp.

CN-EFT1000	Usable with TRA2000xx generators
	

2.1 Comparison between EMCP clamp design and proposed IEC construction



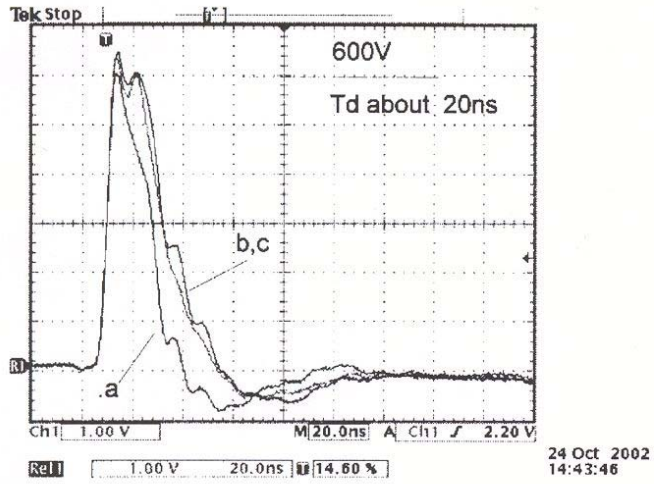
Generator : Transient-2000
Vpeak (open circuit) : 1000V

Example with high impedance load.

Clamp with test load 1.5 meter RG-58 coaxial cable.

Measured with 1 kohm divider

a) Clamp with no cover
b) Clamp with metallic cover
c) EMC-PARTNER CNEFT Clamp

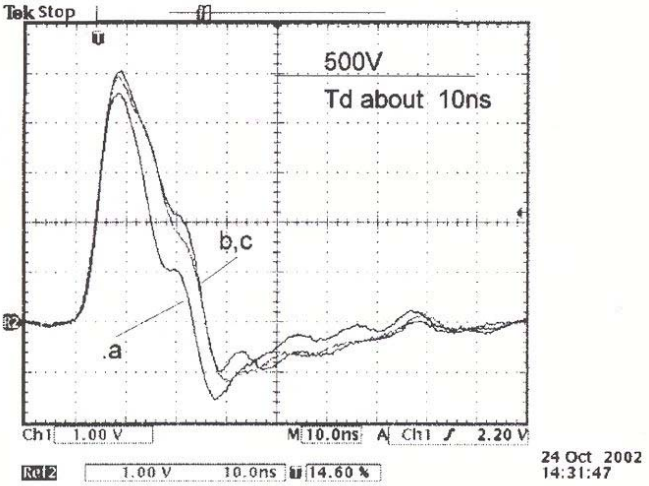


Example with low impedance load and tight capacitive coupling.

Clamp with test load 1.5 meter RG-58 coaxial cable.

Measured with 50 ohm divider

a) Clamp with no cover
b) Clamp with metallic cover
c) EMC-PARTNER CNEFT Clamp



Example with low impedance load and loose capacitive coupling.

Clamp with test load 1.5 meter 1mm2 cable with 5mm isolation.

Measured with 50 ohm divider

a) Clamp with no cover
b) Clamp with metallic cover
c) EMC-PARTNER CNEFT Clamp

Remark:
The coupling method using the clamp is required for acceptance tests on lines connected to I/O and communication ports. It may also be used on ac/dc power supply ports only if the coupling/decoupling network defined in 6.2 cannot be used

2.2 Standard accessory, dimensions

2.2.1 Included articles, dimensions

CN-EFT1000 (Article No. 103468)

Mechanical Dimensions

Unit Height:	
Length:	114 cm
Width:	15 cm
Height:	10 cm
Net Weight:	4 kg

Included Articles

According to STL-Variante 20, STL-Version 1

Qty	*PN*	*Description*
1	104801	Brochure TRANSIENT 3000
1	104802	Standard calibration report
1	103191	Standard accessories pack
1	103194	CD-UM-IN-ALL includes all User Manuals and Instruction sheets of all EMC PARTNER AG sales products.

2.2.2 Standard accessories

Accessories to CN-EFT1000 (Article No. 103468)
According to OP-Variante 1, OP-Version 1

Qty	PN	Description	Weight (kg)	Length (cm)	Width (cm)	Height (cm)
1	104366	HV-BNC connection cable, length 1m to CN-EFT1000, CN-MIG-BT, -1, -2, -3	0	100	0	0

3 RECYCLING / DISPOSAL

3.1 RoHS directive 2002/95/EG

The CN-EFT1000 complies with the directive 2002/95/EG (RoHS - Restriction of certain Hazardous Substances).

From December 2005, all EMC Partner products either hand soldered or by machine are produced using lead-free solder.

3.2 WEEE directive 2002/96/EG

The EMC Partner CN-EFT1000 is exempted from the directive 2002/96/EG (WEEE) under category 9.

The product should be recycled through a professional organisation with appropriate experience for the disposal and recycling of electronic products. EMC Partner are also available to help with questions relating to the recycling of this product.

3.3 Information for dismantling

 Remove always power cord fist.

There is no special danger involved in dismantling the CN-EFT1000.

3.4 Parts which can be recycled

The CN-EFT1000 contains parts made from steel, aluminium, PVC, two-component sealing compound. The impulse capacitors are filled with non-poisonous mineral oil. The various parts can be separated and recycled.

3.5 Parts which can not be recycled

All parts in the CN-EFT1000 can be recycled.

4 SERVICE INFORMATION

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