

ELECTROMAGNETIC COMPATIBILITY / PRODUCT SAFETY

EMC overvoltage protection

Telecommunications equipment in strong electromagnetic environments



Field strength measurement at a transformer substation in Freiburg

Your equipment will certainly have CE marking and conform with all applicable EMC standards. But will it also work correctly in areas of strong electromagnetic radiation?

New network operators, such as power supply companies or transport service companies, are particularly likely to use the existing infrastructure of transformer substations and railway systems as sites for their telecommunications equipment.

The question to be answered here is whether the IT systems can work reliably in such environments.

We can give you a dependable answer after EMC analysis of each individual case.

We provide answers to questions such as the following:

- Can the planned IT system be operated at all in the designated environment?
- Are special structural measures required – for example, EMC room shielding?
- Must particular factors be considered in the planning and installation of the IT system?

Our experts can carry out essential tasks for you. These include:

- Identification of sources of interference
- EMC site measurements (if necessary)
- Analysis and evaluation of findings
- Dimensioning of any necessary EMC measures

Take advantage of our interdisciplinary know-how in the areas of overvoltage and immunity technology to obtain fast results.

Overvoltage protection – Which is better: simulation or testing?

We now offer both simulation and testing.

Metallic conductors on information and communications technology equipment carry overvoltage that can cause interference or even destruction of the equipment.

With faster transfer rates for increasingly sensitive input circuits, appropriate protective measures have become essential. This is particularly true in cases where operators, for example, in the USA or Australia, or European telecoms have to satisfy strict overvoltage requirements.

We can offer all test equipment necessary for verification of compliance with overvoltage requirements typical to the telecommunications sector.

Thanks to our years of partnership with third-level educational institutes, we can now also perform computer-supported simulation with P-Spice of the following:

- overvoltage incidents (generators)
- overvoltage protection components
- overvoltage suppressors

Simulations are valuable in helping to correctly dimension protective equipment from the very outset, resulting in shortened development cycle times.

SGS Germany GmbH
Center for Quality Engineering
Hofmannstrasse 50
81379 Munich
Phone: +49 89 / 787475-100
Fax: +49 89 / 1250406-4100
e-mail: cqe@sgs.com
internet: www.sgs-cqe.de

Contact: Armin Hudetz
Phone: +49 89 / 787475-133

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**Overvoltage protection –
Which is better: simulation or testing?**

Simulation helps to correctly dimension protective equipment from the very beginning of developments. Development cycle times are reduced as a consequence.

For example:

Common-mode surge added to the input circuit of a communications module with an ITU pulse of 10/700 μ s. An open-circuit voltage of 2 kV is set at the generator. Gas discharge arresters are provided on the main distributing frame as the primary source of protection.

