

We look forward to starting a dialogue with you



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For brochures and further information about the different equipment contact your nearest representative or our headquarters and make an appointment for free demonstration.

**Offices with partnership**

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EMC PARTNER AG**

Australia, Austria, Belgium, China, Finland, France, Greece, India, Italy, Japan, Korea, Netherlands, New Zealand, Scandinavia, Spain, Taiwan.

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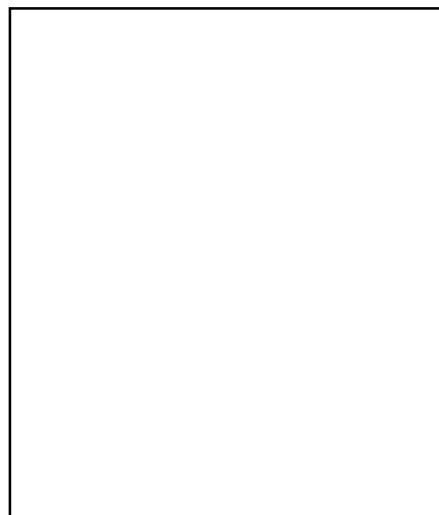
# TRANSIENT 1000

Transient Immunity Test System

## TRACS Software

- I Remote Control
- II Program Manager, Library
- III EUT Failed Behavior
- IV POT Protocol Oriented Test

Your local representative:



## Why Remote Control? Why Automatic EMC Tests?

### Why Remote Control?

The Windows based TRACS Software allows the remote control of the TRANSIENT-1000 System with a PC. The software „TRACS" should be used when the following needs occur

- Large EUT e. g. control racks or distributed system must be tested. For the EFT test the TRANSIENT-1000 must be placed either on the reference plate on the floor or elsewhere in the large system.
- A lot of different equipment must be tested. With the PM (Program Manager) the test files and the Program files can be easily organised on the PC.
- When the TRANSIENT-1000 is a part of a laboratory in a faraday cage. The generator must be controlled via an optical link.
- The measuring results Upeak and Ipeak of the SURGE test should be used for statistical investigation e.g. insulation test.
- Protocol layout must be customised formatted and must be available at test end.
- An automatic EUT failed detection is required.
- The immunity tests specified in the basic standard must be available in a library to shorten the test set-up time and reduce the setting errors.



### The outstanding features of the TRACS Software are:

- Remote control of TRANSIENT-1000 from a PC.
- POT protocol oriented test.
- All test levels specified in the basic standard are ready to use in the library.
- Offers different failure detections during the EMC test. Complex wave forms are detectable.
- Unlimited test files and program files storage.
- Collecting of test values during the EMC (logfile) for statistical investigation. Test data are reduced to measured values synchronised with the test event.
- Automatic start of user software depending on the test status „failed" or „passed".
- TRACS supports all Microsoft Windows Versions from 3.x upwards.
- For communication check (COM-port, cable, null modem, etc.) a terminal program will be installed into the TRACS group.

### TRACS-lite and TRACS-plus.

All TRANSIENTS, versions included, are delivered with a TRACS-lite. The TRACS-lite does not include:

- Library
- EUT failed behaviour
- POT protocol oriented test
- Different print masks

## EMC PARTNER Product Range

### TRANSIENT-1000 ESD, EFT, SURGE, DIPS, MAG-FIELD



One unite that performs all the required transient tests on electronic equipment and products for the CE-Mark up to full levels.

### Versions of TRANSIENT-1000 available:

EFT, SURGE, DIPS, EFT & ESD, DIPS & SURGE, EFT & SURGE & DIPS, Basic Version Package

### Large Range of Accessories:

Three different Magnetic Field Antennas, two Software, ESD Verification set EFT Coupling clamp, EFT Coupling set External Variac, DIPS Verification set Optical link, test place tools, two three phase coupling filters, SURGE coupling kits for different lines, DC, AC sources for IEC 61000-4-16

### HARMONICS-1000

Harmonics, Flicker, Voltage Fluc, Ripple



One unite that performs all the required measurements and tests on power supply of electronic equipment and products for the CE-Mark.

### The HARMONIC-1000 includes:

Amplifier for clean power source  
Line impedance network  
Measurement system Harmonics, Flicker

### Options:

Three phase Extension, Immunity Software

### MIG Modular Impulse Generator Insulation, Energy, Combination



The application range of the MIG generators is extensive. Please see technical and general data below:

### Insulation tests

Voltage range 0 to 100 kV at 1,2/50  $\mu$ s

### SURGE tests

Current range 0 to 50 kA at 8/20  $\mu$ s

### Combination tests

Voltage range 0 to 24 kV at 1,2/50  $\mu$ s

Current range 0 to 12 kA at 8/20  $\mu$ s

The MIG generators can be adapted to different wave shapes such as: 10/350, 10/700, 10/1000, etc.

### Some typical applications for the MIG are:

Varistor: clamping voltage -, surge and energy tests,

Capacitors: du/dt and surge tests,

Aircraft electronic testing: single impulse, multiple strokes, oscillatory burst,

Lightning simulation: SURGE, 10/700, Ringwave 100 kHz

Gas arresters, etc.

## POT Protocol Oriented Test

Generally an EMC test contains three different parts as following:

### 1. Writing a test plan

Content: the standard which must be applied, the selected test level, the defined performance criteria, operating condition of the test equipment, etc.

### 2. EMV test

with the TRANSIENT-1000

### 3. Printing documentation

including test results as bases of the EC declaration of conformity

The POT concept includes all three different parts in one document.

The test report is the main working document. The test report acts as a guide for the test plan, carries out the EMC tests and prints the document with the actual test results.



### Application:

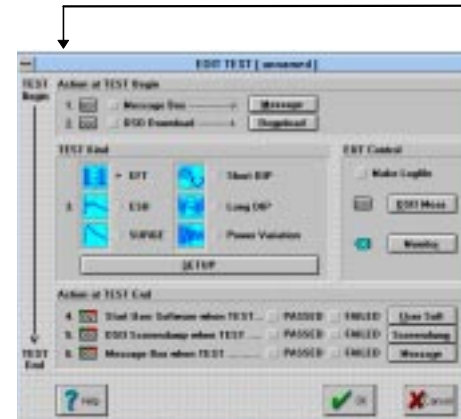
- 1 Depending on the EUT the corresponding POT pattern must be opened. Start the Windows software and open the POT document. The Winword document contains in addition to the normal text, graphics of the OLE server.
- 2 double click automatic TRACS start



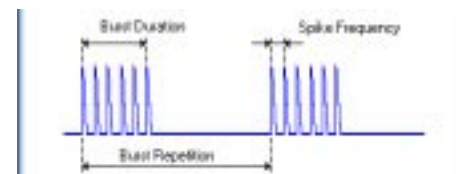
- 3 At the end of the test The test report is ready for you and your customer.

- In the EMC test operation mode the operator has full control about activated tests.
- „POT“ is an OLE-server and can be used with all applications support ing OLE e. g. Winword, Excel, etc.
- The TRACS contains „POT“ examples for Winword.

## Remote Control of the TRANSIENT-1000 System

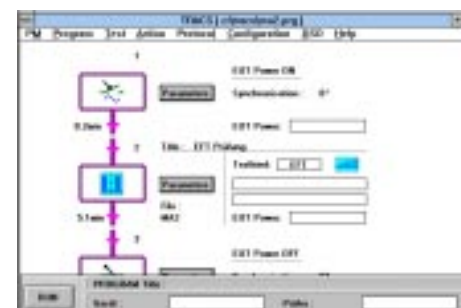


1. Message window on the tester for actions before the beginning of a "TEST" test.
2. Preparation for the error recognition at the test object during the EMC test of the Tektronix DSO oscilloscope.
3. Definition of the EMC tests, and in addition determination of the error limits for the error detection during the EMC tests (DSO or monitor).
4. After the test end, dependent on the test status "good" or "bad", further software can be started (handling of test objects, measuring program etc.)
5. Storage of the DSO oscillogram for the report.
6. Message window for instructions to the tester, dependent on the test result "good" or "bad".



For each kind of TRANSIENT-1000 test (EFT, ESD, SURGE, DIPS, VARIATION), there is an individual test setting window. The settings should be selected corresponding to the required values in the product or basic specialist standard. As an example, the setting window for the EFT (Burst) test is shown. All coupling paths can be selected automatically. For data line testing a separated high voltage output can be activated.

A lot of special drawings explain the used abbreviation. By operating the "????", you will receive further information about the definition of the values to be set.



In the main window, the tests that have been brought together to form a program are clearly displayed. The test program starts at the top of the screen with 1, and ends with 5. The EMC test operator receives "on-line" information as to which status the EMC test is currently in. The most important data and the current measurement values appear in the empty rectangular. To avoid EMC problems an optical link should be used between the PC and TRANSIENT-1000

