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Data Sheet 5.61-5/1[1)]

Software Package for Divider Calibration, Type HiRES IAS R

General

HiRES IAS R is an additional package for the main software HiRES IAS (see Data Sheet 5.61-1).

This application can be used for high voltage divider and probe calibration. Calibration can be executed by the reference method or by step response measurement:

Software and hardware requirements

- HiRES measuring system (see catalog sheet 5.50)
- HiRES IAS main software package (see data sheet 5.61-1)
- Step voltage generator (rise time ≤ 10 ns; only for step response measurement)

Parameter settings

The advantage of this application is that you can enter all necessary settings for calibration in one dialog. All other settings needed to execute a successful calibration will be set automatically.

The results are evaluated according to IEC 60060-2:2010 and IEC 61083-1:2001.

[1)] The prior version of the Data Sheet was 5.62-4/1.

Step response measurement

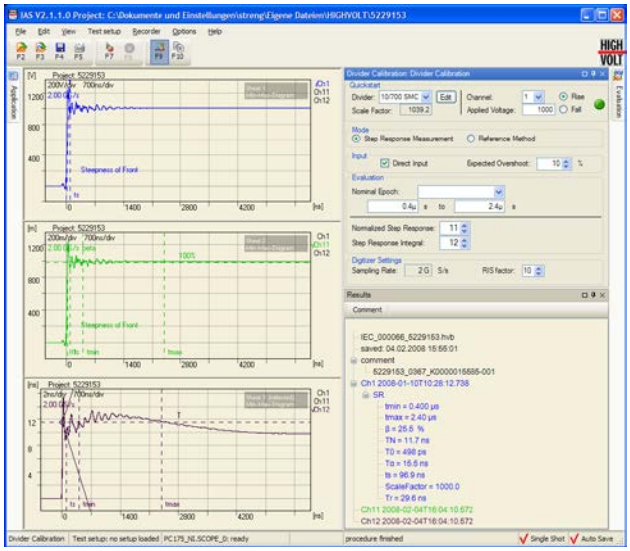

Figure 1: Screenshot of HiRES IAS R, step response

Description

The step response measurement can be used for performance check. The evaluation is performed according to IEC 60060-2:2010. The resulting parameters such as the dynamic scale factor can be compared with earlier measurements or with the manufacturer specification.

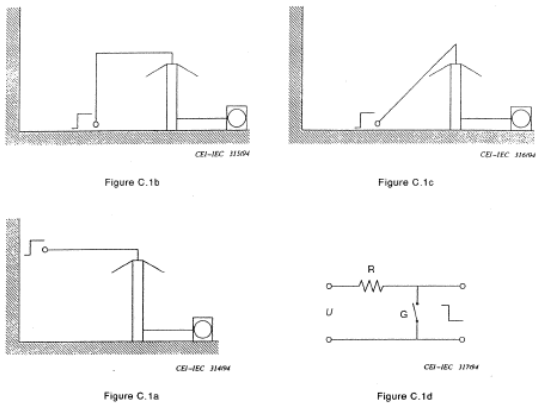

Figure 2: Configuration for step response

Operation

- Determination of response parameters of dividers and shunts
- Records will be saved
- Parameters will be evaluated automatically

Settings

- Divider settings
  - Choose your divider from a list or add it
  - Select the channel your divider is connected to
- Specify the voltage you will apply to the divider
- Set the edge of your step impulse (rise or fall)
- Check usage of direct input
- Specify expected overshoot
- Set nominal epoch (presets for lightning impulse, front chopped lightning impulse and switching impulse exist)
- Set RIS–factor (random interleave sampling)
  - Choose a factor which results in a sampling rate of about 2 GS/s.
  - The higher the RIS-factor, the more impulses are needed for one record.

Reference method

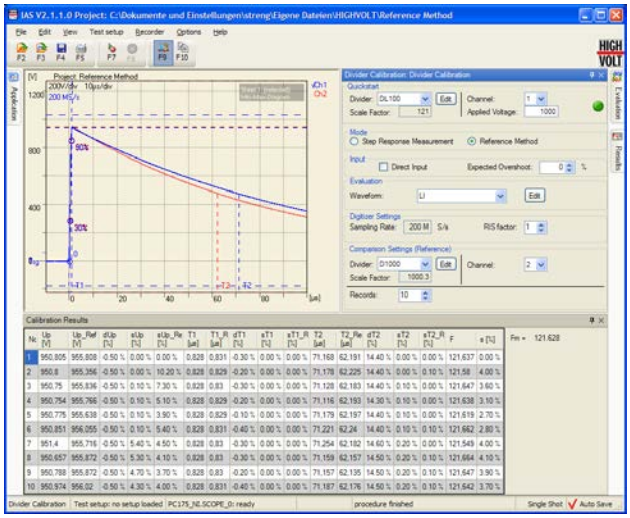

Figure 3: Screenshot of HiRES IAS R, reference method

Operation

- Calibration of dividers and shunts
- Records will be saved
- Parameters will be evaluated automatically

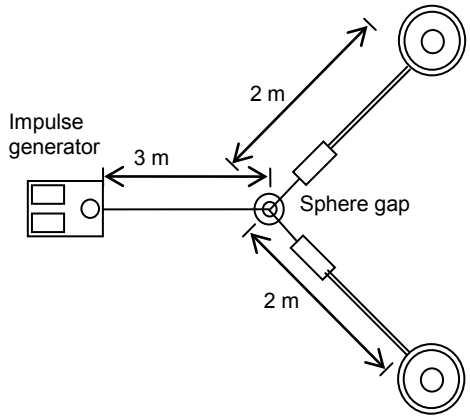

Figure 4: Configuration for reference method

Settings

- Divider settings
  - Choose your divider from a list or add it
  - Select the channel your divider is connected to
- Check usage of direct input
- Specify expected overshoot
- Choose waveform and its evaluation settings
- Set RIS–factor (random interleave sampling)
  - Enables higher sampling rates, needs more impulses for one record
- Choose reference divider
  - Choose your divider from a list or add it
  - Select the channel your divider is connected to
- Set the number of records you want to perform (≥ 10 recommended)