International EMC/RF Calibrations

One-stop-shop · Cost Effective · ISO 17025 Accredited

International Accreditation

Kiwa is a RvA/ILAC accredited calibration laboratory (K063) in the field of electronic measurement instruments. Besides calibrations in the field of DC current, DC voltage and low frequency (test and measuring) equipment, Kiwa is specialized in calibrating high frequency measuring equipment and in particular EMC equipment in a frequency range from DC till 40 GHz. Besides equipment Kiwa can perform on site validation calibrations, whereby Kiwa can calibrate shielded rooms (Faraday rooms) and anechoic chambers under accreditation.

The RvA operates under the Multilateral Agreement (MLA) of the European Accreditation (EA), and as such, all our calibration results are internationally recognized in other countries worldwide

Calibration: the basis for quality

Quality can be defined as “the degree to which a product or service meets the requirements of the customer”. In order to determine whether a product meets the customer requirements, measurements are often performed. To ensure that these measurements are reliable.

The only way to ensure traceable results, is to use calibrated measurement instruments. It is therefore that many quality systems as the ISO 9000 series and ISO 17025 require that instruments are regularly calibrated, in other words must be included in a calibration system.

EMC/RF Instrument Calibrations

Within an EMC test laboratory a wide range of test and measurement instruments is being used to determine the emission/immunity behavior of electrical and electronic products. The results obtained using this EMC measurement equipment determines the rejection or approval of the product. It is therefore essential to determine the reproducibility and traceability of the measurement results.

Certificates

The calibration certificates are ISO 17025 compliant and contain an extensive report of the measurement results and illustrations of the measured curves, where applicable. The certificates provide the technician with a direct answer, as to whether the calibrated instrument is complies with the specifications that are part of the international standard. The total measurement uncertainty on the calibration certificate is determined according to methods described in the EA document EA-4/02.

These results depend in large to the quality of the used measurement instruments. The only way to ensure quality and traceability of these instruments is through periodical calibration, using procedures and international standards that are optimized to the specific application of the instrument in question.

Antennae

Antenna calibrations are performed according to calibration methods of CISPR 16-1-6, ANSI C63.5 or SEA-ARP958 or Quasi Free Space. These methods apply to antennae that are used in “free space”, like a fully anechoic room or “reflecting ground plane” test environment, like an OATS or Semi anechoic room. After calibration we will provide the antenna characteristics that should be used as a correction factor during daily EMC testing. As an additional service we will deliver (Excel) these antenna factors in an electronic format, to enable easy import into EMC test software.

E-field probes

Kiwa is accredited for E-field probes calibration in a frequency range from 9 kHz up to 40 GHz. Our procedure includes the frequency response in all three probe orientations (X-Y-Z), anisotropy and linearity, where our calibration method is in conformity with the IEC61000-4-3 Annex I “Calibration of E-field probes”.

Facilities

The EMC/RF Calibrations are performed in our state-of-the art calibration facilities located in Woerden (The Netherlands). Among these facilities we have a fully temperature/humidity controlled and shielded standards laboratory, a TEM-cell and two environmentally controlled fully-anechoic rooms at our disposal. We also operate a modern Open Area Test Site (OATS) and an E-Field probe calibration chamber.

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EMC Site Validation

Kiwa is accredited for performing on-site shielding effectiveness measurements (EN50147, Mil. Std. 285) of screened rooms in a frequency range from 10 kHz up to 18 GHz. Beside this we measure Normalized Site Attenuation (NSA, 30 MHz to 1 GHz) and Site VSWR (1 GHz - 18 GHz) in accordance to CISPR16-1-4 to validate the performance of your anechoic chamber and/ or Open Area Test Site (OATS). Finally we can perform Field Uniformity calibrations in accordance to IEC61000-4-3 in a frequency range from 10 kHz up to 18 GHz.

Calibration System

However, a proper functioning calibration system encompasses much more than the periodical calibration of measurement equipment. It is from this perspective that Kiwa offers a complete service package, which enables the optimal management of your valuable instruments.

Traceability

Our reference standards used in calibration are periodically calibrated by the National Standards Laboratory or other accredited laboratory, which guarantees a direct traceability to (inter)national standards.

KALIBRATIE RvA K 063

ilac-MRA

For more information? Contact us!

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creating trust *driving progress*

Our calibration services include, but are not limited to:

DC/LF

- AC Sources
- Ampère Meters (2)
- Calibrators
- Counters
- DC Power Supplies
- High Voltage Testers (4)
- Insulation Testers (4)
- Leakage Current Testers (4)
- Multimeters (2)
- Multiplexers / Recorders / Loggers
- NEN3140 Testers (4)
- Ohm Meters
- Oscilloscopes (2)
- Resistors
- Safety Testers (4)
- Thermometers (4)
- Volt Meters

RF/EMC

- (pre)Amplifiers (4)
- Analysers (1)
- Anechoic chambers (3)
- Antennae
- Attenuators / Terminators
- Cables
- Couplers
- Coupling Devices / CDN's / LISN's
- Current Clamps (4)
- EFT Generators
- ESD Generators
- Field Probes / Sensors
- Filters
- Function Generators (2)
- Injection clamps
- Loads (4)
- Measurement Receivers / Analysers (2)
- Power Meters
- Shielded rooms (3) /
- Shielding Effectiveness (MRI, Faraday Cages)
- Site VSWR (anechoic chambers)
- Signal Generators
- Spectrum Analysers (2)
- Splitters
- Surge Generators

[1] Not all measurement ranges fall completely under accreditation. See our scope K063 for a full listing.
[2] Not all the functions of measurement instrument. Ask for the exact scope of the calibration.
[3] Work is carried out on-site.
[4] Not under accreditation.

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