

PRESS RELEASE

PI 09-7/2017 · 16 November 2017

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EMC and Device Safety

The electromagnetic compatibility and safety of SAMSON products is verified in the CE Lab. Testing is based on the EU directives that manufacturers must comply with before they can place their products on the European Single Market.

Electromagnetic compatibility describes the ability of a device or installation to work satisfactorily in an electromagnetic environment without causing electromagnetic disturbances that are not acceptable to all other surrounding devices or installations.

Device safety is understood to mean that the risk a product produces to people and the environment is restricted to an acceptable level. This includes mechanical and electrical risks.

Testing a device's electromagnetic compatibility involves examining the electromagnetic disturbances emitted by the device itself as well as the device's immunity to such radiated emissions. All tests required to attest a product's compatibility with conducted interferences are performed in the CE Lab:

- Immunity to voltage dips and brief interruptions of the power supply like they can occur when high loads are connected or disconnected or when peak loads occur in the AC or DC supply network.
- Immunity to fast transients or burst of fast transients
- Immunity to transient overvoltages or surges: such disturbances can be caused, for example by direct or indirect lightning discharges, by lightning discharges outside buildings, by connecting or disconnecting large loads and by short circuits in the power supply networks.
- Immunity to disturbances caused by electric or magnetic fields, which act on the network, data, signal, process and control lines

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Tests for radiated interferences and emission measurements at frequencies up to 18 GHz can be performed in the CE Lab's anechoic chamber.

Another station is available in the CE Lab for electrostatic discharge (ESD) testing. This is where electrostatic energy is applied to all accessible parts of a specimen.

The tests to attest device safety cover the following:

- Degree of protection, degree of contamination, overvoltage category and measurement category
- Nameplates and documentation of the product
- Insulation and protection against contact
- Leads and cables used, grounding conductor terminal
- Environmental conditions and temperature increase

The CE Lab facilities are completely shielded. This shielding makes it possible to perform all tests without interference from the outside and the neighboring labs remain unaffected by any disturbances generated in the CE Lab.

Products can be placed on the market once they have successfully completed all the necessary inspections. Based on the tests performed in the CE Lab, SAMSON can document the required CE compliance of products.