The importance of safe and reliable operation

Cooperating with SCHURTER as EMC specialist

As an innovation and knowledge partner, SCHURTER is closely involved in the development of input systems for machines and devices used all over the world, often under demanding or complex conditions. Operating those devices must be done safely and reliably at all times. After all, a malfunction can have far-reaching consequences.

EMC measurement at SCHURTER

In today's high-tech equipment, electromagnetic radiation is one of the main risk factors for reliable operation. It is therefore not surprising that Electromagnetic Compatibility, or EMC for short, is one of the main areas of focus at SCHURTER when developing and integrating input systems. The required EMC certification guarantees safe and reliable operation over the lifetime of the application.

With specific expertise in this field, SCHURTER engineers help develop EMC-certified applications.

Collaborative thinking in the design phase

Taking electromagnetic emission and immunity into account as early as the concept and design phase avoids having to make major design modifications afterwards. After all, discovering EMC deficiencies only in the final phase often means a costly and time-consuming trip back to the drawing board. Before the actual engineering begins, SCHURTER therefore already makes an inventory of possible failure-sensitive components or processes. Environmental factors for the intended practical use are also taken into consideration.

By choosing high-immunity materials and components in the design, electromagnetic interference can be reduced to a large extent. Insulated cables and suppression components can play a crucial role in achieving the desired EMC level. The enclosure and the way it is integrated also influence the final EMC score.

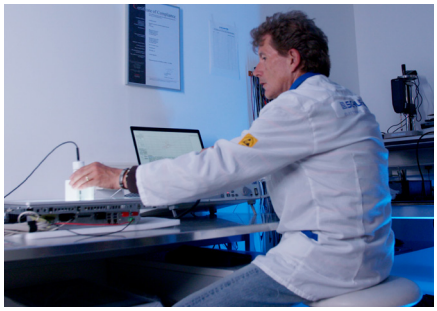
Testing during the development process

As an EMC specialist, SCHURTER is able to simulate and assess EMC conditions in-house. In a radiation-free test room, special software is used to measure how the application reacts to interference.

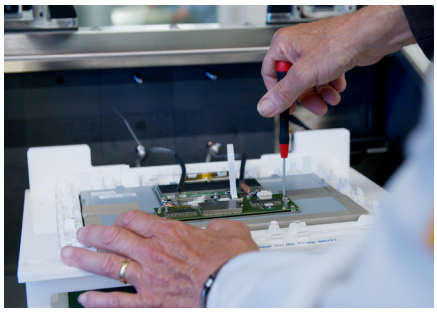
Based on the findings, the application can be specifically adapted to limit or prevent electromagnetic influences. The test room is also used to measure the radiation levels of the application itself.

All signals around predefined critical frequencies are recorded by an antenna in the test room and transmitted via a coaxial cable to a spectrum analyser outside the room. From this, an algorithm determines an average, which must lie between certain values for EMC approval.

In SCHURTER's engineering lab, pre-compliance tests can be done during the design phase and with the first prototypes. A successful pre-compliance test offers a good indication of official CE certification.



Conducted immunity test



EMC test unit

Co-engineering as success factor for efficient product development

Developing and producing machines and devices that need to comply with strict EMC requirements requires specific knowledge and expertise. By opting for co-engineering with SCHURTER, this expertise is guaranteed. SCHURTER specialists consult together in the design process and provide tailor-made advice.

SCHURTER helps select the most suitable materials, software and the various components. Development partners can thus rely on making the right choices for a reliable end product and an efficient production process. With very little extra cost, high-quality, user-friendly and EMC-certified input systems can be integrated into your application in a way that fits perfectly with the production process.

About SCHURTER

The SCHURTER Group is a globally successful Swiss technology business. With our components ensuring the clean and safe supply of power, input systems for ease of use and sophisticated overall solutions, we impress our customers with agility and excellent product and service quality.