



Have a Safe Day!

All of us want to feel safe. When you plug in a new toaster, do you want to be concerned about getting shocked or starting a fire? Of course not! What guarantees these hazards will not turn into disasters? Safety organizations do. Safety organizations set standards and

follow up on manufacturers to ensure they're building products in accordance with these standards.

Type in terms for safety standards certification (on a safety approved computer), and your favorite web search engine will quickly lead you to over 250 certifying organizations. Most of these organizations are particular to a country or region, such as the Hungarian Standards Institution (HSI). You may not run into HSI standards worldwide, but you are certain to if you do business in Hungary.

Many of the safety organizations do have a worldwide following. Here are brief descriptions of those that govern most of the building automation industry's products.

Underwriters Laboratories **UL**

UL is the leading third-party certification organization in North America. It is a not-for-profit, product safety testing and certification organization. UL listings include complete products, recognized components, and assembled industrial control panels. There is also a CUL listing that applies to products sold in Canada.

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Canadian Standards Association **CSA**

CSA is an independent not-for-profit organization supported by 8000 members. CSA develops standards and monitors the application of the standards through product certification. CSA certification is primarily Canadian but is recognized in specifications around the world.

Conformite Europeenne **CE**

Conformite Europeenne is French for European Conformity. With the creation of the European Union, the CE mark indicates that a product is in compliance with all relevant European Union directives for health, safety, and the environment. CE covers a wide range of products including electric machinery, pressure vessels, telecommunications, and medical devices. Once the CE mark is approved, these products can then be sold throughout the 15 country European Union without modification. If products are manufactured or sold in Europe (and some other parts of the world), CE certification is a common requirement.

International Electrotechnical Commission **IEC**

IEC was founded in London in 1906. It was created as an organization of technical committees to create standards for nomenclature and ratings of electrical apparatus. In 1930 it established many of the electrical units we use today such as Hertz, Gauss, and VAR. In 1938 it unified all of the electrotechnical terminology into a document of 2000 terms, the International Electrotechnical Vocabulary, which is printed in many languages. Today, they have over 80 committees that create standards for such technologies as lasers, fuel cells, and human exposure to electromagnetic fields.

Electrical Testing Laboratories **ETL**

ETL is now a part of a worldwide testing company named Intertek Testing Services. ETL provides testing and certification to manufacturers, importers, and distributors. Often, approval by ETL will be acceptable in lieu of UL approval.

National Institute of Standards and Technology **NIST**

NIST is a non-regulatory U.S. agency that develops measurements, standards, and technology. It is the repository for most physical standards such as temperature, humidity, mass, voltage, etc. Many products used



in industries that are monitored by the FDA are required to be calibrated by instruments with accuracy traceable to NIST.

National Electrical Manufacturers Association **NEMA**

Founded in 1926, NEMA is the largest trade association in the U.S. NEMA is composed of members of over 600 companies that manufacture electrical products from power generation to end use. In the BAS industry, we encounter NEMA ratings most often with electrical enclosures.

Deutsches Institut für Normung **DIN**

Did you ever wonder where DIN rail got its name? It is a standard written by the German Institute for Standardization. DIN standards define the size and shape of many electrical components we use every day.

International Organization for Standardization **ISO**

ISO is a worldwide federation of national standards bodies from 140 countries that has written over 13,000 standards. The size of your credit card, the speed of your film, the symbols on your auto dashboard, and the size of the paper you use were all done as ISO standards so these items would be consistent internationally. Many companies implement ISO9000, which provides a framework for quality management in all parts of a business.

Factory Mutual Research **FM**

FM is a 165-year-old, not-for-profit scientific research and testing organization managed by FM Global. FM has three divisions: Standards, Research, and Product Certification. FM certifies products for use in hazardous locations, including intrinsically safe, nonincendive, explosionproof, and specially protected.

Australian Communications Authority **C-Tick**

Australian Communications Authority administers telecommunications, electromagnetic compatibility, and electrical safety compliance in Australia. The C-Tick mark is imperative for success in the Australian market.

British Approvals Service for Electrical Equipment in Flammable Atmospheres **Baseefa**

Historically, Baseefa has performed testing and certification for products to be applied in hazardous locations. Baseefa is scheduled to close in the fall of this year, so products with this label will be going to other safety organizations for approval.

While these are the most common safety certifying organizations on a global basis, there are many more. Give your favorite Kele Representative a call for assistance when standards questions arise.



by Jim Vick,
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