

UL vs. CE

What's the difference?

CE ≠ Product Safety: A CE mark on a product can mean many different things = which means that if you see a CE mark on a product, you have no assurance that it has anything to do with product safety.

In order to know what a specific CE mark means, you must have a copy of the CE Declaration of Conformity (DoC) for the product. The CE DoC defines to what CE Directives & Standards the product complies. For most electrical products, the CE DoC should indicate the CE “Low Voltage Directive” (2014/35/EU) with the appropriate EN product safety standards identified.

The CE-LVD specifies the safety requirements in the EU for electrical products other than Toys, Medical, and Machinery products. For this reason, this whitepaper will compare UL Certification vs. CE-LVD Compliance. For more information on the CE Mark program, see whitepaper #56.

“UL” Certification is the term commonly used for the product safety certification system in the United States. The system involves a mandatory 3rd party program where only an OSHA Accredited Nationally Recognized Test Lab (NRTL) can “certify” that a product complies with a specific “UL” product safety standard. With “UL” Certification, after a product is found to comply it is subjected to regular unannounced factory inspections to insure that the product continues to comply with the applicable UL product safety standard.

CE – Low Voltage Directive: The CE-LVD is the product safety compliance program for most products in the European Union (EU). Emphasis is placed on “compliance” as the CE-LVD is a “self-certification” system where a manufacturer self-declares compliance with the applicable EN standard under the CE-LVD. There is no independent certification involved. In addition, no factory inspections are required.

Considering that few engineers in the world have in-depth product safety knowledge (no university teaches product safety engineering), the end result is a high percentage of products that the manufacturer has “self-declared” compliant that may not fully comply with the standard – with a CE compliance system that has no means to prevent this from happening.

CE in the U.S.: A common misconception is that the CE mark is just like a UL mark and therefore it should be accepted in the United States. But the CE mark program is very different than the US-UL NRTL program and the CE mark is definitely not equivalent or suitable in the US. The CE mark is not accepted in the United States for several reasons:

UL vs. CE-LVD:	UL - US	CE - LVD
3 rd Party Certification Required?	YES	NO
Factory Inspections Required?	YES	NO
Products comply with the NEC?	YES	NO
Certification Mark assures Safety Compliance?	YES	NO
Compliance can be independently verified?	YES	NO
U.S. Inspectors Accept the Mark?	YES	NO



Conclusion: The “UL” certification mark and the CE mark are very different regulatory compliance programs that have few things in common. The CE mark is intended exclusively for Europe, with product safety standards that anticipate European electrical systems. In addition, the CE Mark is a vague mark that has no independent oversight or production control. Whereas the US-NRTL mark indicates product certification to the applicable UL standard, a standard that was written for products that will be installed in accordance with the U.S. National Electric Code (NEC), with a compliance system that involves mandatory use of an accredited 3rd party lab with ongoing unannounced factory inspections. Consequently, it is easy to see that UL ≠ CE.

CertifiGroup is a fully accredited UL & CE test lab

Compliance Assistance Services to help you get it right the 1st time

Preliminary Design Reviews, Design Guidance, Training

US, Canadian, CE, & International Certifications