



The Importance of Safety Agency Listing

Most electrical or electronic products usually display one or more safety agency markings. While this mark is often taken for granted by the consumer, manufacturers must pay special attention to them. Manufacturers realize the important advantages a safety agency mark can provide.

Safety Agencies and Safety Agency Listings

So what exactly is a safety agency and why is their safety mark so important? A safety agency is an independent third party, which can establish, test to and approve product safety standards. There are many different safety agencies throughout the world. UL, TÜV, CSA, IEC, and VDE are some of the better-known agencies. Perhaps the best known safety agency in North America is Underwriters Laboratories, Inc. (UL). Most safety agencies will provide product safety consulting, testing and certification to ensure that manufactured products are safe for consumer use. It is their governing that guide safety standards.

In order for a product to carry a safety agency mark, it first must achieve safety agency listing. This is accomplished through a set of performance tests determined by the safety agency. The integrity of a product's design is tested at an engineering level during this stage. Once these initial tests have been performed the products will then go through production line tests. Although similar tests are performed, there are significant differences between the performance tests and the production line tests mainly due to the increased volumes in a production line environment. One such difference can be seen in the testing time. It is not unusual for a performance safety test to call out for the high voltage to be applied for a duration of 1-minute. This same test on a production line may be reduced to only 1-second. Also, these tests are usually performed at a 100 % level, which means that every product must be tested while performance tests are done for a representative sample of the product.

The standards to which a product is tested are not always the same and depend largely on the actual product. Once a product has passed all the tests that are specified in the standard it becomes listed by the safety agency. The safety agency's listing mark can then be displayed on the product. Only products that have gone through the required tests can actually display the safety agency mark. The mark ensures that the product has gone through testing and has been deemed safe for consumer use. Once agency listing has been achieved, there is a follow up service required by the safety agency to ensure that the production line testing is being performed correctly. It is important to note that in the United States, safety agency marking is done voluntarily. There are no laws requiring the listing. However, without agency listing it would be difficult to find any marketing channels to actually sell your product.

For most consumers the safety agency's mark on a consumer electronic product is taken for granted. Often times many consumers do not even think about or look to see if a product they are about to purchase displays a safety agency mark. It is assumed that if a product is being sold in the United States that it is safe. While most consumers recognize a safety agency mark they do not realize what it means. A safety agency listing means that the fundamental design and the manufacturing process of the product have then been approved as safe for consumer use. Therefore, the safety agency mark provides a certain amount of assurance that the consumer will not be injured while correctly using the product.

The manufacturer on the other hand, is well aware of the benefits derived from a safety agency mark. They realize that without the safety agency mark, the safety, design and manufacture of the product can come into question. They know that with the investment and commitment of achieving safety agency listing there is an accompanying level of liability protection for them.



Safety Agency Listing of an Electrical Safety Tester

The operator and manufacturer of an electrical safety tester should have a similar relationship to the consumer and the manufacturer of a product. It would stand to reason that an electrical safety tester should display a safety agency listing mark as well. This seems even more critical given that an electrical safety tester is utilized for performance and production tests on electrical/electronic products as well as generating potentially dangerous levels of high voltage.

However, most electrical safety testers are not safety agency listed. Many manufacturers' electrical safety testers can test to safety agency standards and be approved to do so by a safety agency but that does not mean that their safety testers have gone through any safety tests themselves. This is often unclear to a manufacturer. Many manufacturers and their operators who perform the electrical safety tests may not be aware of their safety testers listing status. As you can see there is a strong distinction between a safety agency listed product and a safety agency giving its approval for an electrical safety tester to be used to perform the basic safety agency tests. If a safety tester does not display a safety agency mark then it is not safety agency listed. It has not gone through the same tests that products are required to go through to ensure their safety.

Since there are no legal requirements for an electrical safety tester to obtain safety agency listing, any safety agency mark on an electrical safety tester is also done voluntarily. In order to obtain safety agency listing, an electrical safety tester must be submitted to the safety agency for testing. It needs to follow the same procedure outlined for consumer electrical and electronic products including passing all the necessary tests required by the safety agency before the agency mark can be affixed. The tests that the safety agency will perform on the safety tester itself include design

tests of the wiring circuits, components and high voltage modules. In addition, similar production line tests will be performed. These tests are the same tests the safety tester was designed to perform and may include ground continuity, ground bond (protective wire), insulation resistance as well as dielectric strength tests. Once a safety tester is listed by a safety agency it leaves no doubt that the safety tester has been voluntarily submitted and has passed the stringent testing procedures. For the manufacturer this means greater peace of mind knowing that their operators are using a safe testing instrument.

Benefits of a Listed Electrical Safety Tester

If a manufacturer is utilizing an electrical safety tester that is not safety agency listed, then there is not any assurance that their safety tester is safe for operator use. The Occupational Safety & Health Administration (OSHA) of the U.S. Department of Labor is responsible for ensuring safe work environments. Safety agencies that carry the Nationally Recognized Testing Laboratory (NRTL) designation have been recognized by the OSHA standard Subpart of S of 29CFR Part 1910 as being certified to perform safety testing and certification. UL is one such agency that has received NRTL designation. This means that a UL listed electrical safety tester is compliant to OSHA standards for safe work environments. These OSHA regulations have been increasingly enforced and non-compliance carries hefty fines. Manufacturers who must comply with OSHA safe work environments need to be sure that their safety testers carry an NRTL listing such as UL.

AR in its continuing effort to provide safe and reliable electrical safety compliance testers made the commitment to our customers to obtain both C-UL and TÜV-GS safety agency listing on all our latest products. When we began this program 7 years ago it was a significant financial and engineering commitment, but one we believed our customers would value and have come to expect from the industry leader. Today, both our Hypot® III family of Dielectric Withstand testers and our OMNIA™ series of Electrical Safety Compliance Analyzers have obtained the C-UL and TÜV-GS listings. AR's products are the only instruments in our industry to carry both safety agency



listings. We also are the only manufacturer that offers the TÜV-GS listing on our complete standard line of products. With these safety agency listings AR provides compliance to worldwide standards including U.S., Canadian, European and Asian safety standards.

Conclusion

Manufacturers who purchase electrical safety testers need to be aware of the listing status of their electrical safety tester and the many advantages a listed electrical safety tester provides. While it is possible to use an unlisted electrical safety tester, they do not provide the safest means of compliance to safety agency standards. It is also important for manufacturers to know that a UL listed safety tester is compliant to

OSHA standards for a safe work place. The use of a NRTL listed electrical safety tester not only complies with test requirements and OSHA standards, but it also provides an element of safety assurance to the manufacturer. After all it makes sense that the instrument used to perform electrical safety tests should be as safe as the products it is testing.