

Appendix K. Listed or Recognized products

During the daily research of components to be installed in the automation systems, we often find various components which differ as concerns standard approvals. Some products are classified as "Recognized" and others as "Listed"; here are the differences as follows:

K.1 Listed products

UL Listed mark is for sure the most commonly used mark for the equipment assigned to final users, but it is not the only one available on the market. There are other marks such as ETL Listed and CSA Listed, having the same value from the normative point of view. If a product has one of these marks, it means that it complies with the safety requirements based on the Safety Standards published by ANSI (American National Standard Institute), that is, the American national standard institute which acknowledges, in its turn, the rules of various institutes such as UL, ETL, CSA, NEMA or other reliable authorities. Furthermore, it means that the product has been verified through a series of tests and analysis carried out at NRTL (National Recognized Testing Laboratories) laboratories, such as UL, CSA, TUV, ETL, which are institutes recognized by OSHA (Occupational Safety and Health Administration), the American national institute dealing with safety at work.

This mark can be seen usually on finished products addressed to the users, such as electric household appliances, equipment for computers, ovens, smoke and carbon monoxide alarms, fire extinguishers, life jackets, bullet-proof glass and thousands of other products.

Typical examples of products belonging to the industrial automation sector are the industrial computers, the actuators for electrical motors, fuses and fuseholders, or the flexible metal conduits and pertinent fittings intended to protect the cables for the connection of motors or equipment. Besides, there are tray cables, which are cables made for the connection of cable trays with the equipment; they are all products whose use is specified by reference standards.

The UL Listed mark on a product can be recognized through a fundamental feature: the round UL mark and the name of the manufacturer, the trade name or a number identifying the manufacturer, which can be followed by other two elements: the "LISTED" word in capital letters and the name of the product (e.g. "portable lamp", "fuseholders", etc.).

UL Listed mark with before a "C" letter, means that the product is specific for the Canadian market. Products with this kind of mark have been evaluated and tested in compliance with the Canadian safety requirements which, in some respects, can differ from the ones applied in the United States.

UL Listed mark with before a "C" letter and the "US" abbreviation after, indicates the product compliance with both Canadian and United States requirements.

A similar marking structure is issued by the Canadian certification institute CSA.



K.2 Recognized products

The UL Recognized mark can be hardly seen by the user, as it is used in particular for components being the basic elements of greater products or systems. Being basic components, they can have restricted functional characters or incomplete structure. They differ from the Listed products for the fact that in their own standard a "condition of acceptability" is always reported: that means, that their suitability depends on how the manufacturer uses them, for instance how he measures them as regards the system they are inserted in.

This mark can be found on several products such as feeders, switches, printed circuits and some types of industrial control equipment and other numerous products. A typical example is the one of the single core cables style 1015/1284 for the internal wire harness of equipment or lamps; they are products whose destination is not specified by reference standards and their use covers a wide range of possibilities.

Also in case of a Recognized product, the UL Recognized mark can be recognized through some fundamental elements: the UR mark, the name of the manufacturer, the trade name or a number identifying the manufacturer.

The products for the Canadian markets show the UL Recognized mark with a "C" letter before. Also for the UL Recognized mark there is the possibility of a simultaneous compliance with the Canadian and the United States requirements, and in this case the mark has a "C" letter before and a "US" abbreviation after.

A similar marking structure is issued by the Canadian certification institute CSA.



K.3 Difference between Listed products and Recognized products

As an example, see a hydromassage tub: if there is a label with a UL Listed mark on it and all the other previously mentioned information, it means that the hydromassage tub, which is the end product, meets the requirements of UL 1563 standard, Electric Spas, Equipment Assemblies and Associated Equipment.

If, otherwise, the UL Listed mark cannot be found on the product, after a careful consideration, it could be possible to find out that some components of the hydromassage tub, such as the pump, the control system or the filter show the UL Recognized mark. Some manufacturers could say that, as the components are UL Recognized marked, the product they are installed in meets the necessary requirements. This is not always true, because the UL Recognized mark means that the single component meets the requirements for a specific and limited use, and just the UL Listed mark applied on the product, in this case on the hydromassage tub, indicates that the product as a whole meets the standard requirements.

To sum up, we can say that the UL Recognized mark covers the check and evaluation of components which are incomplete or have reduced functionalities. They could be suitable if used as components of a certain machine, but they are unfit if that same machine is installed in a burst hazard location or in a place where the installation must follow specific standards. These components will be used with complete finished products or UL Listed systems. In any case, the finished products can be always subject to evaluation by AHJs (Authorities Having Jurisdiction), that is, the American inspection institutions for installations. When the finished product is Listed, the inspection is limited to recognition of the mark presence and right installation; in case the product is not Listed, the inspection can include also the verification of suitability for each single component as regards functionality, use and installation of the end-item.







The distinction between a component and the end-item is the critical point between the certification of one component and the certification of the end-item, where the component is used. So, going back to the example of the hydromassage tub, the use of UL Recognized components within a end-item does not mean neither that the product is UL Listed, nor that it is in compliance with the reference standard regarding that kind of product.

K.4 Interchangeable product certification marks

In USA and Canada there are several independent organizations working on national standards that are sometimes in direct competition. The most known organizations* that are working on electrical standards, product approvals and certifications for the American and Canadian markets are UL "Underwriters Laboratories Inc." in U.S. and CSA "Canadian Standards Association" in Canada. Both companies, CSA and UL signed a Memorandum of Understanding (latest update: April 2006) which defines the mutually acceptance for tests and investigations in accordance to defined standards.

The Memorandum of Understanding agreement between the two organizations simplifies the certification process for companies who desire U.S. and/or Canadian marks. If a company requires the CSA or the UL mark, it can ask for the approval by the CSA "Canadian Standards Association" or by the UL "Underwriters Laboratories Inc."

It is important to demystify the certification marks. The certification mark provides visual evidence that the product has been tested and certified to meet the applicable standard for a specific market. All products (i.e. the luminaires, the tray cables, the fuses, etc.) certified for a specific market have been tested to the same standard, regardless of whether they carry a UL or CSA mark. Hence, as you can see in the following table, UL and CSA marks are interchangeable and are equally accepted today.

		Market of destination		
		USA	Canada	USA+Canada
Certification organization	UL	 <p>Products bearing these marks are certified by American Organization (UL) for the U.S. market according to the applicable U.S. standards.</p>	 <p>Products bearing this marks are certified by American Organization (UL) for the Canadian ("c" on the left of the logo) market according to the applicable Canadian standards.</p>	 <p>Products bearing this marks are certified by American Organization (UL) for both the U.S. ("us" on the right of the logo) and Canadian ("c" on the left of the logo) markets according to the applicable U.S. and Canadian standards.</p>
	CSA	 <p>Products bearing this mark are certified by Canadian Organization (CSA) for the U.S. market ("us" on the right of the logo) according to the applicable U.S. standards.</p>	 <p>Products bearing this mark are certified by Canadian Organization (CSA) for the Canadian market according to the applicable Canadian standards.</p>	 <p>Products bearing this mark are certified by Canadian Organization (CSA) for both the U.S. ("us" on the right of the logo) and Canadian ("c" on the left of the logo) markets according to the applicable U.S. and Canadian standards.</p>

Based on the table above two products (one certified by UL and one certified by CSA) can be interchangeable from the certification and market-destination point of view, this means that the standard requirements are guaranteed by both the products. However, remember, if you just look at the visual marks that are on the products** you cannot understand which application they are manufactured for. You always have to check the technical characteristics and the performance declared by the producer.

Some frequently asked questions.

- 1) Isn't the CSA mark only for Canadian products? No, although CSA is often perceived as only for Canadian products, this organization can test and certify products according for both Canada and USA markets.
- 2) Tray Cable marked with the c(UL) mark can be used on the Canadian market? Yes, this product has been produced according to Canadian standards (identified by the "c" on the left of UL) and certified by the American Organization (UL) to be used in the Canadian market.
- 3) I understand that your Series 1060 single core cable is marked with the c(UL)us mark but I need a cable marked CSA because my installation is in Canada! Our product has been produced according to both U.S. and Canadian standards (identified by "c" on the left and "us" on the right of UR) and certified by the American Organization (UL) to be used in the U.S. and Canadian market.
- 4) I understand that your product has been tested to a UL standard but it carries a CSA mark, how can this be possible? If the standard is UL, doesn't the mark also have to come from UL? Certification organization such as UL and CSA are involved in both standards publication and testing. It is a common misperception that because an organization's name appears on a particular standard, that organization must exclusively perform product testing against the standard. The fact is that the standards publication and testing roles must be performed independently in order to avoid a conflict of interest. The standards are available for the manufacturer's use in design and manufacturing process but are also available to all accredited certification organizations for product testing. The manufacturer can choose to certify his product by any of the certification organizations.

* Other Organizations (NRTL Nationally Recognized Testing Laboratory) recognized by OSHA (Occupational Safety and Health Administration) are QPS, CCL, FM, ETL, MET, NSF, TÜV, etc.

** Not necessarily the mark is printed or stamped on the product, it could also be on the packaging, it depends on the type of product and on the requirements of the specific standard.