

Do I need UL Listed current transformers?

Underwriters Laboratories (UL) is an organization that tests industrial and consumer products to ensure personal safety. UL is a trusted name in many industries, the electrical industry included. UL permits the application of specific markings (or logos) on products to indicate they have passed their testing and evaluation.

In the Current Transformer (CT) industry these markings have often been misused or improperly applied. As a contractor or OEM, your due-diligence in verifying the UL mark may save you from an expensive recall or legal litigation. Understanding the UL markings is critical to this effort, yet most of us simply look at the UL marking and assume everything is OK. When purchasing CTs with UL markings, you should be looking for one of two marks.

The first marking is the “Listed” mark



This is how “Listed” is described by UL:

“Products bearing the UL Listing Mark are usually either complete appliances, or equipment and materials that are intended for installation in accordance with model codes such as the National Electrical Code® (NEC®). These products have been investigated using applicable construction and performance requirements, and when installed in accordance with the manufacturer’s installation instructions, should provide a safe, code-compliant installation.

UL’s “Listing” evaluation of an end product includes an investigation of the construction and performance of all installed components.”

The second marking is the “Recognized” mark



This is how “Recognized” is described by UL:

“Comparing UL “Listing” and “Component Recognition” is like comparing a car and an engine. A car is a finished product, and an engine is a necessary component. However, not every engine is compatible with every car. The same is true for UL Recognized Components, which will not be compatible with all end-product equipment applications.”

The good news is, all UL Recognized CTs are tested and verified. Technicians commonly install or replace UL “Recognized” CTs. The “Recognized” marking, however, means that the CT is a component of a specific system. Borrowing the automobile analogy, you can put a specific make

and model 4-cylinder motor in another same-model car, but it may not be right for a 4-cylinder pickup, even though it's the same make.

Because UL "Recognized" components are only intended for installation in the products they were originally evaluated as 'part-of', they may include unique construction or they may be restricted in performance capabilities. Those are a few of the reasons UL does not claim they can be safely installed by electricians or contractors in the field.

Examples of some controlled conditions that would restrict a CT installation to a specific system are:

- Terminals are to be factory wired only, per its original publication
- Spacing between factory connectors may be specific to an end product
- Short circuit capability may need to be evaluated in the end-use application
- Spacing from exposed live metal parts to the enclosure may affect safety

If a Recognized Component is installed in the field, the only way for UL to verify compliance is to conduct a UL "Field Evaluation" on the end product. Clearly, this equates to time and money.

UL "Listed" CTs are tested to higher standards and don't allow some specific configurations. These restrictions include the use of terminals on the CT instead of wiring. Looking at the concerns listed above, the reason is pretty clear. UL "Listed" CTs allow contractors and technicians to field install these products with the confidence that they passed UL's evaluation. Going beyond common sense and safety, UL Listing is a mark of due diligence for OEM's and contractors. Investing in UL Listed products not only provides peace of mind, it can help prevent you from entering into a libelous situation.

Due diligence also includes making a reasonable effort to verify what you're told. UL has made that process relatively easy. This is how it's done:

Sentran Corporation Current Transformers

UL Listed E361441

Use your favorite search engine and type in "UL file number database"

Type this listing (E361441) into the UL file number block and hit

"search"