



# **SAFETY STANDARDS & CERTIFICATIONS FOR AUTOMATIC TRANSFER SWITCHES & PARALLELING SWITCHGEAR**

## **ENGINEERING BRIEF**

EB022 Rev 0 04/08/13



This Engineering Brief outlines the different organizations that are involved in administering, developing and validating product certification safety standards for equipment used in North America as well as the specific certification standards and listings that apply to Thomson Technology Automatic Transfer Switches and Paralleling Switchgear.

Some of the more common organizations which are involved in the development of writing safety and performance standards for the power generation industry include; Underwriters Laboratories Inc. (UL), Institute of Electrical and Electronics Engineers (IEEE), American National Standards Institute (ANSI) and the Canadian Standards Association (CSA).

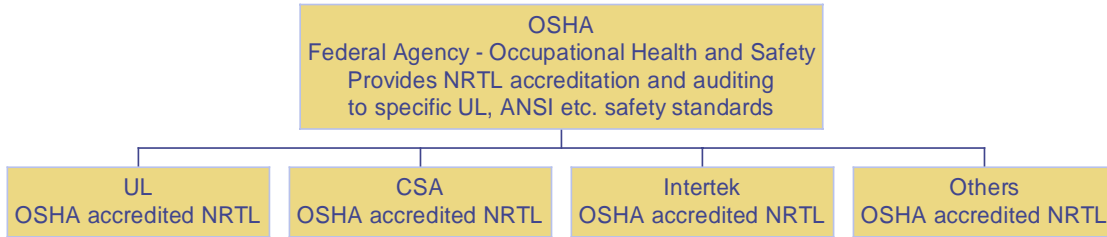
In the United States, a federal government agency called OSHA (Occupational Safety and Health Administration) administers a program that designates and certifies organizations that can test and certify products to various industry standards. The OSHA administered program is called NRTL (Nationally Recognized Testing Laboratory). See the following link for a detailed description: <http://www.osha-slc.gov/dts/otpca/nrtl/index.html>

In Canada, the federal government agency similar to OSHA is called SCC (Standards Council of Canada).

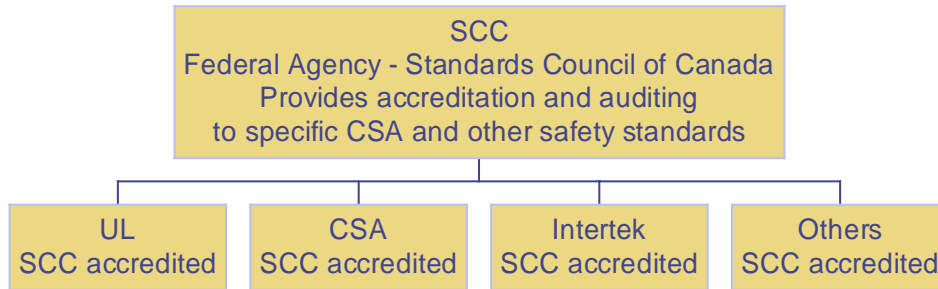
Some of the more common NRTL's, which are recognized by OSHA and the SCC for electrical equipment testing, include; Underwriters Laboratories Inc. (UL), Canadian Standards Association (CSA), and Intertek Testing Laboratories NA (ITSNA-formal known as ETL).

Refer to the following diagrams, which show the relationship of the organizations described.

USA



Canada



An important point is that certification to a UL or CSA safety standard is not only possible by UL or CSA. Other recognized NRTL organizations such as Intertek can also certify products to UL, ANSI, and CSA standards.

A listing of specific Safety Standards which can be certified by the various NRTL's are listed on OSHA website at the following links:

- ❑ Underwriters Laboratories: <http://www.osha-slc.gov/dts/otpca/nrtl/ul.html>
- ❑ Canadian Standards Association: <http://www.osha-slc.gov/dts/otpca/nrtl/csa.html>
- ❑ Intertek Testing Laboratories NA: <http://www.osha.gov/dts/otpca/nrtl/its.html>

As each of these listed NRTL organizations certifies equipment, they apply their certification mark or logo (i.e. UL, CSA, ETL etc) to the equipment and they "list" the manufacturer in their registers. For further information refer to the following link: <http://www.osha-slc.gov/dts/otpca/nrtl/nrtlmrk.html>

In today's business climate, an equipment manufacturer may select one NRTL over another based on the availability of their services, cost and the agency's proximity to the manufacturer. The correct way to specify product certification in specifications is that the equipment "must be listed or certified to ULxxxx safety standards". This ensures that the desired safety standard is met, but is open to equipment certified by any of the OSHA or SCC-recognized NRTLs. By specifying that the equipment must specifically bear either a UL or CSA stamp or label, a specifying engineer is unnecessarily limiting acceptable equipment to those certified by a specific NRTL.

The applicable standards for Automatic Transfer Switches and Paralleling Switchgear in North America are as follows:

Automatic Transfer Switches:

- ❑ UL 1008 Transfer Switch Equipment
- ❑ CSA C22.2 No. 178 Automatic Transfer Switches

Paralleling Switchgear:

- ❑ UL891 Standard for Dead-Front Switchboards
- ❑ UL1558 and ANSI/IEEE C37.20.1 Standard for Metal-Enclosed Low-Voltage Power Circuit Breaker Switchgear
- ❑ ANSI/IEEE C37.20.2 Metal-Clad and Station-Type Cubicle Switchgear
- ❑ CSA C22.2 No. 31 Switchgear Assemblies

As it relates to Thomson Technology products sold in the United States and Canada, the following links describe the various certifications that comply with applicable safety standards:

Thomson Technology Automatic Transfer Switches listed/certified to UL1008 and CSA C22.2 No. 178 refer to:  
<http://database.ul.com/cgibin/XYV/template/LISEXT/1FRAME/gfilenbr.htm>  
and search for file number “E215215”.

Thomson Technology Paralleling Switchgear listed/certified to UL891, UL1558, ANSI C37.20.2 and CSA C22.2 No. 31 refer to:  
<http://directories.csa-international.org> and search for file number “052110\_0\_000”.

Please contact our sales representative network or Thomson Technology factory staff for further information if required.