Safety certifications do more than provide confidence to the end users of products. For manufacturers of products like motor drives, they are one of the keys to market entry and acceptance, supporting the brand by demonstrating an understanding of requirements, attention to detail, and a commitment to customer satisfaction and safety. As markets have become increasingly global, the power and importance of safety standards has grown. They provide an important mechanism to qualify those engaged in market competition. Beyond this commercial function, standards also help meet long-term corporate goals of sustainable design and documentation/preservation of knowledge.

Achieving certification requires a rigorous process, one that can seem daunting to those about to embark upon it without expert assistance. That’s one reason companies worldwide turn to UL—no one has more experience in safety science. Working with UL as you go through the certification process can help you achieve your certification goals faster and less expensively, get your products to market more rapidly, and gain critical market share. In a highly competitive global market such as motor drives, those are advantages that power success.

Multiple Standards, One Trusted Source

There are multiple safety standards of interest to those building or using motor drives:

**UL 508C** - UL 508C is the UL Standard for Safety for power conversion equipment. It is the basic fire/shock standard used to investigate motor drives being installed in the United States. A customer’s product found to comply with UL 508C can bear the UL certification Mark for the United States. This mark may also include a “US” identifier when combined with certifications for other regions.

**EN 61800-5-1** - EN 61800-5-1 is the European standard for adjustable speed electrical power drive systems – part 5-1: safety requirements – electrical, thermal and energy. It is the basic fire/shock standard for motor drives that is required by the European Union. A customer’s product found to comply with EN 61800-5-1 can bear the UL-EU Mark. Further, as EN 61800-5-1 is a harmonized standard, i.e., a technical specification adopted by European Standards Organizations and developed under a mandate given by the European Commission and/or the European Free Trade Association, those in compliance with it are presumed in compliance with the European Union’s Low Voltage Directive.

**CSA C22.2 No.14** - This standard is in accordance with the rules of the Canadian Electrical Code, Part 1. It applies to control and protective devices and accessory devices rated at not more than 1,500 V, for starting, stopping, regulating, controlling, or protecting electric motors, generators, heating apparatus, or other equipment used to control an industrial process that is intended to be installed and used in non-hazardous locations. Put simply, this is the basic fire/shock standard for motor drives that is accepted for installation in Canada. A customer’s product found to comply with CSA C22.2 No. 14 may bear the UL Listing Mark for Canada.

**IEC/EN 61800-5-2** - IEC 61800-5-2 is the IEC standard for adjustable speed power drive systems, part 5-2: safety requirements – functional safety. This is the globally accepted functional safety standard for motor drives. Drive systems providing safety functions can

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be investigated to 61800-5-2 and may bear the UL Functional Safety Mark. Such safety-related drive systems will fall under the Annex 4 of the Machinery Directive 2006/42/EC as “logic units to ensure safety functions.” Similar to the situation with 61800-5-1 and the Low Voltage Directive, if drive systems meet the requirement of EN 61800-5-2, this provides presumption of conformity with the essential health and safety requirements of the Machinery Directive. Note that investigation for compliance with the fire/shock requirements, i.e., UL 508C, IEC 61800-5-1 and/or CSA 22.2 No. 14, is a prerequisite for completion of a UL functional safety evaluation.

UL’s complete range of services for the drives manufacturer means one organization, greater cost efficiency, a more seamless process and getting your products to market more rapidly with the powerful and increasingly essential safety certificates.

The Power of the Combined Marks
The combined UL Marks for safety and functional safety, provide a number of significant advantages to companies seeking motor drive safety certifications. First, they can save money and speed access to global markets by earning a combined mark with a single product submittal. The need to put multiple marks on a product is eliminated, as is the need for multiple inspections. With a combined mark, a single UL inspector does the inspection for everything. This is a significant benefit for manufacturers and systems integrators because production is subject to much less disruption, i.e., products are inspected once, not three times.

Providing Ongoing Value
Due to its extensive history of certification expertise, standards development experience, and an unparalleled global network of technical safety personnel and resources, UL represents safety and integrity in markets worldwide. UL’s comprehensive motor drive services are yet another solution to help customers drive down compliance costs while speeding time-to-market by combining global testing and certification efforts.

Manufacturers need only one product submittal and work with only one team to benefit from the unique value of UL’s Marks. This delivers ongoing value.

The Credibility of UL Assessment
Product certification by a third-party, independent organization is not always compulsory, but certainly enhances a manufacturer’s reputation for those who make the investment. UL backs its certification with more than a century of experience in testing and certifying products. UL investigates thousands of products—from design to production—to determine compliance with safety requirements. Additionally, UL has developed more than 1,400 Standards for Safety.

UL’s global network of more than 7,200 employees is dedicated to public safety and helping our customers deliver safer products to their key global markets. To that end, we remain committed.

Consider Us for Assessing Strategic Markets
Companies who choose UL as their global certification resource gain access to UL’s universally respected certification processes and reputation as a safety leader. UL has the technical experience, commitment to fast service, and deep domain expertise to partner with you in carving out the smoothest path to global market recognition. The choice of UL gives you a competitive advantage: one of the world’s best—and most recognized—compliance resources when facing the challenges of accessing new global markets.

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