

# International Regulatory Agencies

## International Safety Standards Agencies

Most countries have their own standards writing agencies. However, the basis for the majority of International standards are adaptations from, or exact duplication of publications from the following Safety Standard Agencies. These Standards Agencies are commissioned to create and publicize International Safety Standards. They are standards setting agencies only. The enforcement of and testing to these standards is undertaken at the national level, but the final interpretation of design and approval of the product always lies with the National Test Agencies.



### IEC (International Electrotechnical Commission)

The IEC is composed of representatives from manufacturers, users, and national testing labs from many of the European industrialized nations. Their primary directive is to publicize recommendations for safety standards. Although IEC publications do not have the force of law, in most cases new standards published by the National Testing Agencies in Europe and Australia have only minor deviations from IEC publications.



### CEE (International Commission for Rules for the Approval of Electrical Equipment)

CEE was composed of representatives from European National Testing Labs. The CEE's work has been taken over by CENELEC.



### CENELEC (European Committee for Electrotechnical Standardization)

The primary responsibility of CENELEC is to develop electrotechnical standards which represent a consensus among its European member countries. While IEC publications are generally the basis for European National Standards, CENELEC will cover matters which its members feel are not completely addressed by IEC documents.

## National Testing & Approval Agencies

Although a product may have been designed to comply with individual standard agencies, or with IEC, CEE or CENELEC, each product *must* be tested, approved and marked by the National Testing Agency for each country the cords are to be sold in (such as VDE, SEMKO, DEMKO, etc.) In most cases it is illegal to sell non-approved products.



### Australia - ETSA (Electricity Trust of South Australia)

There are six electrical testing agencies in Australia. Generally, an approval with one of the agencies is accepted by the others. The Standards Association of Australia (SAA) is the recognized association for the preparation of Australian standards. SAA's policy is to use IEC standards as its guidelines. The SAA mark molded into a plug or connector indicates that a product has been tested and approved by one of the Australian testing agencies and SAA. Australian agencies require that an approval number be molded into the plug and connector. The cordage itself is the same used in Europe.

### Approval Marking



### Austria - OVE (Austrian Association for Electrical Technology)

OVE is the standards association and the National Testing Agency. IEC standards are the basis for OVE standards. The OVE mark molded into a plug or connector indicates that a product has been tested and approved for use in Austria.



### Belgium - CEBEC (Belgium Electrotechnical Committee)

The recognized association for Belgian standards is the Belgium Electrotechnical Committee (CEB). The range of CEB standards is similar to IEC. The CEBEC mark molded into a plug or connector indicates that a product has been tested and approved by CEBEC for use in Belgium. CEBEC approval in Belgium is voluntary.



### Canada - CSA (Canadian Standards Association)

CSA is one of five accredited standards writing organizations in Canada. Unlike other foreign countries, Canada does not have separate standards and national testing agencies. The CSA mark indicates that a product has been tested and approved for use in Canada.



### United States - UL (Underwriters Laboratories, Inc.)

Underwriters Laboratories, Inc., is chartered to establish, maintain, and operate laboratories for the examination and testing of devices, systems and materials to determine their relation to hazards to life and property, and to ascertain, define and publish standards, classifications and specifications for materials, devices, products, equipment, constructions, methods and systems affecting such hazards.

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## Denmark—DEMKO (Danish Electrical Testing Station)

The recognized association for Danish standards is the Danish Electrotechnical Committee (DEK). DEK adopts CENELEC and IEC standards as their basis for standards. The DEMKO mark molded into a plug or connector indicates that a product has been tested and approved by DEMKO. Goods not bearing this mark cannot be sold in Denmark.



## Finland—SETI (Electrical Inspectorate)

The recognized association for Finnish standards is the Finnish Electrotechnical Standards Association (SESKO). Most of the standards set by SESKO are in accordance with IEC and CENELEC publications. The SETI mark molded into a plug or connector indicates that a product has been tested and approved by SESKO and SETI for use in Finland. Use of this mark is mandatory only on equipment used in homes, offices, shops & other premises where the public is admitted.



## Germany—VDE (Association of German Electrical Engineers)

The recognized association for German standards is the German Electrotechnical Commission of DIN & VDE (DKE). The DKE standards are identical to IEC standards. The VDE mark indicates that a product has been tested and approved by DKE and VDE.



## Italy - IMQ (Italian Institute of the Mark of Quality)

The recognized association for the preparation of Italian standards is the Italian Electrotechnical Committee (CEI). The basis of CEI standards is the IEC and CENELEC standards. The IMQ mark on the plug or connector indicates that a product has been manufactured according to CEI standards. There is no legal authority for the mandatory application of standards in Italy.



## Netherlands - KEMA

The recognized association for standards in the Netherlands is the Netherlands Electrotechnical Committee (NEC). The NEC adopts IEC standards with few deviations. The KEMA mark on the plug or connector indicates that a product has been tested and approved by NEC and KEMA. The use of electrotechnical standards is voluntary in the Netherlands.



## Norway - NEMKO (Norwegian Board for Testing and Approval of Electrical Equipment)

The recognized association for Norwegian standards is the Norwegian Electrotechnical Committee (NEK). NEK standards are identical to IEC and CENELEC. The NEMKO mark molded into a plug or connector indicates that a product has been tested and approved by NEMKO.



## Sweden - SEMKO (Swedish Institute for Testing and Approval of Electrical Equipment)

The recognized association for Swedish standards is the Swedish Electrical Commission (SEK). There are more than 800 Swedish electrical standards. Most of them are identical to IEC standards. Most of the standards are voluntary. However, domestic electrical equipment is subject to approval and cannot be sold unless approved by SEMKO. The SEMKO mark molded into a plug or connector indicates that a product has been tested and approved by SEMKO.



## Switzerland - SEV (Swiss Electrotechnical Association)

The recognized association for Swiss standards is the Swiss Standards Association (SEV). The SEV has adopted IEC standards almost without exception. The SEV mark molded into a plug or connector indicates that a product has been tested and approved for use in Switzerland. All products to be sold in Switzerland must bear this mark.



European agencies require the agency marking to be molded into the plugs and connectors. There are two alternatives for marking cordage. The manufacturer's name and the National Test Agency symbol are printed on the blue primary conductor. In addition to the primary conductor marking, the symbol for CENELEC—"HAR"—can be printed on the outer jacket. According to CENELEC and the national approval agencies, the "HAR" symbol is not mandatory as long as a National Test Agency symbol is on the cordset. The product is fully approved for use in any Continental European country as long as it is manufactured to CENELEC and foreign agency standards and carries one of the above markings.



TUV SUD Group is a global, independent testing laboratory. The range of services TUV provides includes consulting, inspections, tests, and expert opinions, as well as certification and training on global norms.