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American National Standards Institute, Inc.
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An independent, non-profit institution whose members may be manufacturers, or individual members. ANSI identifies industrial and public requirements for national consensus standards and coordinates and manages their development, resolves national standards problems, and ensures effective participation in international standardization. Its standards are standards of interchangeability only.

Various U.S. Government Agencies often adopt ANSI Standards. For example, the Department of Defense has made mandatory the use of ANSI Standard Y32.9-1972, "Graphic Symbols for Electrical Wiring and Layout Diagrams used in Architecture and Building Construction." Such Standards are often developed by specialized technical societies for ANSI. The Standard referred to above was prepared by the Institute of Electrical and Electronics Engineers and the American Society of Mechanical Engineers.

CSA *Canadian Standards Association,*
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An independent, non-profit organization which operates a listing service for electrical and electronic materials and equipment.

The CSA performs a function for Canadian electrical manufacturers similar to that performed in the USA by Underwriters' Laboratories, Inc.

CSA develops standards of its own for electrical products which parallel UL standards in many aspects but not always identical. CSA tests products and grants paying clients „certification „ that their products meet CSA standards.

GSA *General Services Administration, Federal Supply Service,*
Crystal Mall Bldg. 4, Washington, D.C. 20406

The U.S. Government administration responsible for the approval of Federal Specifications used in the purchase of products by all Federal agencies.

The two most relevant Federal Specifications for Electrical Wiring Devices are:

W-C-596, for Electrical Power Connector, Plug,
Receptacle and Cable Outlet

W-S-896, for Toggle and Lock, Flush Mounted
Switches

NEC *National Electrical Code*
Published by the NFPA (see below)

A document which basically describes the recommend safe practice for the installation of all types of electrical equipment. The NEC is not a „legal document“ unless it is so designated by a municipality as its own statute for safe electrical installations.

The purpose of the Code is the practical safeguarding of persons and property from hazards arising from the use of electricity. This working Code is sponsored by NFPA under the auspices of ANSI. It is revised every three years. OSHA (below) has adopted the NEC as the Code to follow in order to comply with with OSHA requirements.

NEMA *National Electrical Manufacturers' Association*
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NEMA is an organization of electrical manufacturers that establishes standards for manufacture and tests for performance and reliability of electrical products. NEMA tests are often the basis or prerequisite for approval by the Federal Government and/or by Underwriters' Laboratories, Inc.

NEMA is the „voice“ of the electrical industry, and through it standards for electrical products are formulated. Generally these standards promote interchangeability between products of one manufacturer with like products made by another manufacturer.

NFPA *National Fire Protection Association*
Battery March Park, Quincy, MA 02269

National Fire Protection Association
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Quincy, MA, 02269-9101, U.S.A.

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An organization devoted to promoting the science and improving the methods of Fire Protection. Membership is open to anyone interested. Every three years the NFPA produces a new edition of the NEC (see above). The NFPA also provides many other useful publications dealing with fire prevention.

OSHA *Occupational Safety and Health Administration*
(U.S. Department of Labor), 200 Constitution Ave., N.W.,
Washington D.C. 20210 (plus regional offices)

That part of the U.S. Department of Labor responsible for assuring that employers provide safe and healthful working conditions and equipment for employees, and that employees properly avail themselves of these conditions.

In addition to specific regulations published in the Federal Register, OSHA has also adopted the National Electrical Code in part for existing installations and equipment and completely for new construction.

NOTE: OSHA does not approve products. Compliance with OSHA regulations is contingent on approval or listing of the product by an authorized testing laboratory, such as UL (see below) AND proper installation and/or use of the product in accordance with OSHA guidelines.

UL *Underwriters' Laboratories, Inc.*
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Northbrook, Illinois, 60062, U.S.A.

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An independent, non-profit organization, operating as a testing facility and developer of safety standards. UL tests products for paying „clients“ and if the product submitted passes the requirements of the UL standards for which it is submitted, a UL „listing“ is granted which allows the manufacturer to use the UL manifest or „Label“ on its product.

It is important to remember that UL is NOT an approval agency. It approves nothing, but merely lists a product as meeting its minimum standard for safety.

Underwriters „Listing“ mark on a product is generally accepted by the public and government agencies.

Listing by UL denotes initial testing and periodic retesting to assure continuing conformance to standards.

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KEMA is the competent European approval and license agency.

For further informations please also contact for Germany:

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