

Explanatory notes on CE marking

Low Voltage Directive (NSR), EMC Legislation

The Manufacturers must have to identify those products by the CE marking which fall within the applicability of certain EC (European Community) directives.

This applies to products which are covered by these directives in accordance with the new concept to include particular requirements on the technical characteristics of products.

The realization of these requirements is the condition for marketing the products in Europe. Then these CE directives constitute binding legislation for the European Union.

The inclusion of the CE marking confirms the compliance by the products with the basic requirements of all specifications applicable to that product. This means that CE marking is thus the compelling requirement in order of placing the products on the market within the EU. This also applies in the country of manufacture.

These directives are only then binding when these have been implemented in the national legislation of individual EU member states. An implementation in the national legislation of individual members states does not always occurs at the same time and is not always accomplished within the foreseen period.

Furthermore, certain transition rules may apply. If the obligation for implementation of these directives is not met, then these directives can still be directly applicable in certain circumstances.

The validity for these directives are not always clearly formulated and are sometimes abstract and not differentiated such that it cannot always be unambiguously established whether a product is covered by one or more directives and thus requires the CE marking.

The CE marking serves as evidence to the supervisory authorities of compliance with these directives. It is however often misinterpreted as being a "symbol for safety or quality" which is why it is often requested from customers without any legal justification.

EC Low Voltage Directive (NSR)

The EC Low Voltage Directive (NSR) is one of these CE Designation Directives (Article 13 of the CE Marking Directive). This means that electrical equipment used in low voltage range applications must also be identified by the CE marking. The CE marking is affixed on these products since 01.01.1997.

The CE Marking Directive will apply to a large number of electrical products, alone on account of the extensive range of applicability of the Low Voltage (NSR) and Electromagnetic Compatibility (EMC) Directives.

The following directives are of particular significance for the electrical industry:

73/23/EEC and 93/68/EEC

Electrical equipment for use within specified voltage limits (Low Voltage Directive)

89/106/EEC

Construction products

89/336/EEC

Electromagnetic compatibility (EMC Directive)

89/392/EEC

Safety of machinery

91/263/EEC

Telecommunications terminal equipment

For HELUKABEL as manufacturer and supplier of cables and wires, only the Low Voltage Directive is of significance. The EMC directive is of indirect applicability – for customer enquiries – in that queries could arise regarding the immunity of cables to interference, capacitance unbalance values and similar characteristics.

The EMC Directive

The EMC Directive, which applies for the electromagnetic compatibility of electrical and electronic equipment in their environments, can only be applied in complete systems.

For example, systems which are made up of several units, whereby each individual unit alone meet EMC requirements, are tested as a system for EMC together with the interconnecting cables.

EMC testing of a single cable or a single wire cannot be specified.

Title:

73/23/EEC and 93/68/EEC: Directive of the Council dated February 19, 1973, for harmonisation of the legislation in member states regarding electrical equipment for use within specified voltage ranges – with amendments dated July 22, 1993.

Continuation ►

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Important information regarding the Low Voltage Directive (NSR):

1. General Conditions:

- The major characteristics required for knowledge and observance, for use in accordance with the intended application, are given on the electrical equipment, or, if this is not possible, in the accompanying instructions.
- The manufacturer's symbol or trade mark shall be clearly visible on the electrical equipment, or, where this is not possible, shall be affixed on the packaging.
- The electrical devices as well as the components for these, shall be procured such that these can be connected safely and properly.
- The electrical equipment shall be designed and constructed such that protection from the hazards listed in item 2 and 3, is assured during use and proper maintenance in accordance with the intended application.

2. Protection against hazards which may arise from electrical equipment – technical measures shall be foreseen in accordance with item 1, such that:

- Humans and working animals are protected from injury or other harm which can be caused by either direct or indirect contact.
- No high temperatures, arcs or radiation are generated from which hazards could arise.
- Humans, working animals and property are adequately protected against non-electrical hazards which, from experience, can arise from electrical equipment.
- The insulation complies to the property requirements.

3. Protection against hazards which can arise from external influences on electrical equipment – technical measures are foreseen in accordance with item 1, such that the electrical equipment:

- can withstand the mechanical loads such that humans, working animals or property are not endangered.
- can withstand the non-mechanical effects under foreseen environmental conditions such that humans, working animals or property are not endangered.

- cannot endanger humans, working animals or property in any way by the foreseen overloads.

Equipment and areas which do **not** fall within the Directive.

- Electrical equipment for use in explosive atmospheres
- Electrical-radiological and electrical medical equipment
- Electrical components of passenger and goods lifts
- Electricity meters, household plug-in fixtures, radio interference suppression devices
- Installation for supplying power to electrified pasture fencing
- Specified electrical equipment intended for use on ships, in aircraft or railways and which comply with the safety regulations of member states for international installations.

Electrical equipment within the context of the Low Voltage Directive is electrical equipment for applications with a rated voltage between 50 and 1000 V alternating current and between 75 and 1500 V direct current.

For a more **exact** interpretation of the Directive, cables and wires are covered by the regulation, **not** however cables with a rated voltage exceeding 1000 V alternating current or 1500 V direct current.

HELUKABEL as manufacturer and supplier must act in accordance with the Low Voltage Directive, that is to say:

Cables and wires up to 1000 V nominal voltage **must** be identified by the CE marking, refer to page T 95.

The identification can be attached either to the product or on the label.