

Application of CE-Marking on relays and sockets

Low Voltage Directive

European product standard for elementary relays **EN 61810-1**, and standard **EN 61984** (used for the certification of sockets - as prescribed by EN 61810-1) are not listed as Harmonized standards under **2006/95/EC** Low Voltage Directive.

However, standards such as EN 60335-1, EN 60730-1, EN 50178, EN 60947-..., to which several relay characteristic relate, are Harmonized documents, as are EN 60998 and EN 60999 which are used for the assessment of socket terminals. Furthermore, for both relays and sockets - major safety characteristics are based on Insulation Coordination standard **EN 60664-1**, which is arguably the most important harmonised standard of all.

The Low Voltage Directive allows the equipment manufacturer to follow routes (other than harmonised standards) to establish conformity (note 19 from official Guide to LVD: "*Alternatively, the manufacturer may construct the product in conformity with the essential requirements (safety objectives) of the directive, without applying harmonised, international or national standards*"), and it is this prescription that Finder follows when issuing their various EU Declarations of Conformity.

(It may be noted that this approach is not permitted for equipment specifically addressed, in Annex I... Equipment and Phenomena outside the Scope of this Directive, such as *Electrical equipment for use in an explosive atmosphere, for radiology and medical purposes, Electrical parts for goods and passenger lifts, Electricity meters, Plugs and socket outlets for domestic use and so on*. But also note: relays and sockets are not part of this annex.)

So, even though it is not specifically prescribed within the Directive, **it is not forbidden to put the CE mark on relays.**

However, although the Directive itself does not expressly exclude pcb relays, the "GUIDELINES ON THE APPLICATION OF DIRECTIVE 2006/95/EC" does, see Page 7 section 9 Note 13, which in particular gives examples of components excluded: "*This includes, for example, active components such as integrated circuits, transistors, diodes, rectifiers, triacs, GTO's, IGBT's, opto-semi-conductors; passive components such as capacitors, inductance, resistors, filters; electromechanical components such as connectors, devices for mechanical protection which are part of equipment, relays with terminals for printed circuit boards, micro switches.*"

Consequently, in accordance with the aforementioned explanations, it has been decided:

1. **to apply the CE mark on relays with faston terminals and for socket mounting and on DIN rail sockets;**
2. **not to apply the CE mark on pcb relay and sockets** (even if they fulfill the same technical requirements).

Of course, for all CE marked products, there is available the corresponding EU Declaration of Conformity, which details the relevant EN standards applied when assessing this conformity, even if not listed as an Harmonized standard under the Low Voltage Directive.

ElectroMagnetic Compatibility Directive

Regarding the EMC Directive, relays and sockets are not required to conform to the **2004/108/EC** ElectroMagnetic Compability Directive (formerly 89/336/EEC Directive), according to the Directive's prescriptions and to the following clause of EN 61810-7 standard:

"4.36 Electromagnetic compatibility

Electromechanical elementary relays are components intended to be incorporated in an apparatus.

Therefore, no EMC requirements and tests apply to such relays, only to the complete apparatus.

NOTE: This is in line with the European Directive 89/336/EEC."