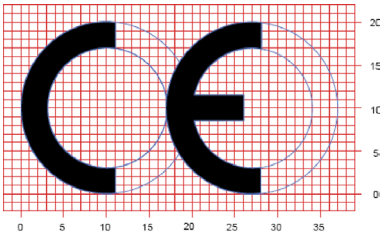
Create a more human library



RFID 701

A regulatory overview of using RFID in your library

The following article doesn't raise the right on completeness. The references on directives and standards are regarded to the date Oct.2009. Legally binding are the national legislations that are derived from directives, guidelines and council recommendations of the European commission.
The provisions can be different for a single product due to impacts on the technology (e.g.wireless,optical) application (e.g.outdoor/indoor use), user group and/or environment (e.g.explosive areas).

Scope

The article abstractly describes the CE procedure in regards to typical applicable.

- Europeans directives,
- harmonized standards
- and the labeling

on RFID products in libraries, electrical appliances with wireless data communication at the operation frequency of 13,56 MHz

Note: Other frequencies may need to consider different standards and/or national limitations.

Procedure

The CE »Communauté Européene« mark on a product indicates compliance to European legal provisions that are covering aspects like:

- Product safety (hazards on e.g. electrical, mechanical, heat, ergonomic, chemical, fire, radiation, environment)
- Electromagnetic compatibility "EMC" (operational interference and distur-bances between devices)
- Radio spectrum matters (appropriate frequency allocations to avoid interference in radio transmitted applications / wireless data communication)
- Environmental criteria (hazardous substances and/or limited raw materials) are in consultation.

To assure the free trade of goods inside the 27 EU*1) and 4 EFTA*2) member states by the CE mark the prerequisite are harmonized, traceable and comparable regulations that are adopted in the national legislations, consequently compulsory for all competitors and their products.

The manufacturer/importer or the authorized representative inside the EU who is commercially placing the product on the European market is obliged to meet the actual applicable and all relevant provisions that are in force at the time of market introduction. The actuality of the provisions needs to be regularly reviewed by the involved parties due to their periodic revisions to fit to the market and consumers need.

Legislative provisions are the European directives and their essential requirements that are going to be supported by public European harmonized standards, called EN's. The standards are prepared by the European standardization organizations like e.g. CEN, CENELEC, ETSI based on a mandate of the European commission. The publication of the standards in reference to the applicable directives is taking place in the Official Journal "OJ" of the European Union.

Beside the CE mark on the product the manufacturer/importer or the authorized representative need to provide a Declaration of Conformity "DoC" that can be requested on behalf from authorities, customs or as part of a specification in a tender. The DoC indicates the directives and standards that are in force at the time of market introduction, supplementally proven by a Technical File that includes records on test reports, certificates and constructional drawings etc..
The technical documentation may become part of an assessment on product liability and warranty.

Declaration of Conformity "DoC"

Typical contents of DoC are:

- Name/address of manufacturer/importer or the authorized representative
- Model/type and/or description on intended use
- Year on which the CE mark 1st affixed
- Applied CE marking directives
- Applied EN's that are harmonized under the specific below listed directive, including the edition date
- Where appropriate, the applied quality system e.g. ISO
- Signature / date

European Directives

Typical CE marking directives for RFID products in libraries:

(a) 2006/95/EC "Low Voltage"
safety aspects to electrical equipment designed for use within certain voltage limits

(b) 2004/108/EC "EMC"
electromagnetic compatibility

(c) 1999/5/EC "R&TTE"
radio spectrum matters on radio and telecommunications terminal equipment

(d) 2006/42/EC "Machinery"(New)
98/37/EC (Old)
safety on machinery

Note: Directive needs to be considered as far as mechanical movable parts like on sorting devices become a potential risk! 2006/42/EC supersedes 98/37/EC on Dec. 29/2009!.

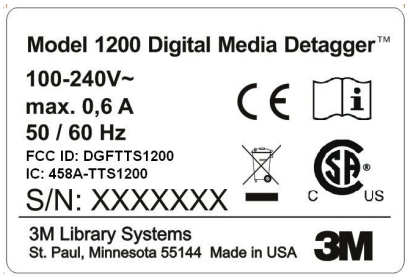
(e) 2002/95/EC "RoHS"
restriction of the use of certain hazardous substances in electrical and electronic equipment.

Note: For CE this directive is under consultation inside the EU!

Type Label

The type label of a product should have e.g. following indications that are visible, legible and indelible:

- Name/address of manufacturer/importer or the authorized representative
- Model/Type
- Serial number or similar that trace the production date
- Electrical ratings (e.g. supply voltage/ current/ frequency, power consumption, phases etc.)
- CE mark



Harmonized Standards "EN's"

Typical harmonized EN's that presume compliance to the essential requirements of the before listed directives (x):

(a) EN 60950-1:xxxx
Information technology equipment
- Safety -
Part 1: General requirements.

(a) EN 50364:xxxx
Limitation of human exposure to electromagnetic fields from devices operating in the frequency range 0 Hz to 10 GHz, used in Electronic Article Surveillance (EAS), Radio Frequency Identification (RFID) and similar applications.

(a) (d) EN 60204-1:xxxx
Safety of machinery –
Part 1: General requirements.

Note: As far as the Machinery directive is applicable!

(b) (c) EN 300 330-2:xxxx
Electromagnetic compatibility and Radio spectrum Matters (ERM)
- Short Range Devices (SRD) -
Radio equipment in the frequency range 9 kHz to 25 MHz and inductive loop systems in the frequency range 9 kHz to 30 MHz.

(b) (c) EN 301 489-1:xxxx
Electromagnetic compatibility and Radio spectrum Matters (ERM)
- ElectroMagnetic Compatibility (EMC) standard for radio equipment and services -
Part 1: Common technical requirements.

(b) EN 55022:xxxx
Information technology equipment
- Radio disturbance characteristics -
Limits and methods of measurement.

(b) EN 55024:xxxx
Information technology equipment
- Immunity characteristics -
Limits and methods of measurement.

(d) EN 12100-1:xxxx
Safety of machinery
- Basic concepts, general principles for design -
Part 1: Basic terminology, methodology.

(d) EN 12100-2:xxxx
Safety of machinery
- Basic concepts, general principles for design -
Part 2: Technical principles.

(d) EN 14121-1:xxxx
Safety of machinery
- Risk assessment -
Part 1: Principles.

Note; xxxx means the edition year or version of standard. Please consider amendments!

3M European Library Systems
3M Centre, Cain Road
Bracknell, Berkshire
RG12 8HT
www.3M.eu/librarysystems

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