

# Electrical Equipment

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# Electrical Equipment Markings

- Brand Name
- Model Number, Serial Number, Barcode.
- Power, Voltage, Frequency
- Equipment Class.

Class I 

Class II 

Class III 

- CE Marking

# CE Mark

- CE marking on electrical & electronic products can be attributed to one (or more) directives.
- Mainly these directives are the LVD, EMC, RoHS and R&TTE.

# LVD

- [2006/95/EC](#)
- For the purposes of this Directive, ‘electrical equipment’ means any equipment designed for use with a voltage rating of between 50 and 1,000 V for alternating current and between 75 and 1,500 V for direct current, other than the equipment and phenomena listed in Annex II.

# LVD Exclusions (Annex II)

- Electrical equipment for use in an explosive atmosphere
- Electrical equipment for radiology and medical purposes
- Electrical parts for goods and passenger lifts
- Electricity meters
- Plugs and socket outlets for domestic use

# EMC

- [2004/108/EC](#)
- As a rule of thumb, electrical equipment which incorporates an electronic circuit falls under the scope of the EMC directive.

# RoHS

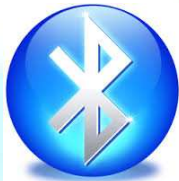

- [2011/65/EU](#) come into force from January 2013
- This Directive lays down rules on the restriction of the use of hazardous substances in electrical and electronic equipment (EEE) with a view to contributing to the protection of human health and the environment, including the environmentally sound recovery and disposal of waste EEE.

# RoHS Exemptions

- photovoltaic panels intended to be used in a system that is designed, assembled and installed by professionals for permanent use at a defined location to produce energy from solar light for public, commercial, industrial and residential applications;



# R&TTE

- 1999/5/EC
- ‘radio equipment’ means a product, or relevant component thereof, capable of communication by means of the emission and/or reception of radio waves utilising the spectrum allocated to terrestrial/space radio communication;
- Bluetooth,  Wi Fi,  RC Toys.

# R&TTE Exclusions

- Radio equipment used by radio amateurs, unless the equipment is available commercially. Kits of components to be assembled by radio amateurs and commercial equipment modified by and for the use of radio amateurs are not regarded as commercially available equipment.
- Cabling and wiring.

# Declaration of Conformity (DoC)

- CE marking has to be supported by a declaration of conformity.
- The declaration of conformity has to be issued by the manufacturer. Certificates of conformity and test results cannot substitute the DoC as these are not issued by the manufacturer but by a testing laboratory.

# The EC declaration of conformity must contain the following elements:

- name and address of the manufacturer or his authorised representative established within the Community,
- a description of the product, completed with a unique identification number such as a model number or serial number, (it may include a photograph)
- reference to the harmonised standards,
- The relevant community harmonisation legislation which the product conforms to,
- identification of the signatory who has been empowered to enter into commitments on behalf of the manufacturer, including name, function, place and date of issue.

# Example Of a DoC

- In Maltese or English

## Declaration of Conformity

Manufacturer's Name: ABC Co.  
Manufacturer's Address: ABC Street  
Detroit, MI 90061 USA

### declares that the product:

Product Name: Laser Printer  
Model Number: 5432X

### conforms to the following standards:

Safety: EN 60950,  
EN 60825  
  
EMC: EN 55022, Class B,  
EN 50082-1, using:  
EN 61000-4-2 (IEC 801-2),  
EN 61000-4-3 (IEC 801-3),  
EN 61000-4-4 (IEC 801-4)

The product is in conformity with the requirements of the Low-Voltage Directive (73/23/EEC) and the EMC Directive (89/336/EEC).

European Contact:  
John Doe, Quality Manager  
ABC Co., Bonn, Germany  
(Fax: 49-XXXX-XXXXXX)

*Signature*

(name, title, location, date)



# Thank You

For further information contact  
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