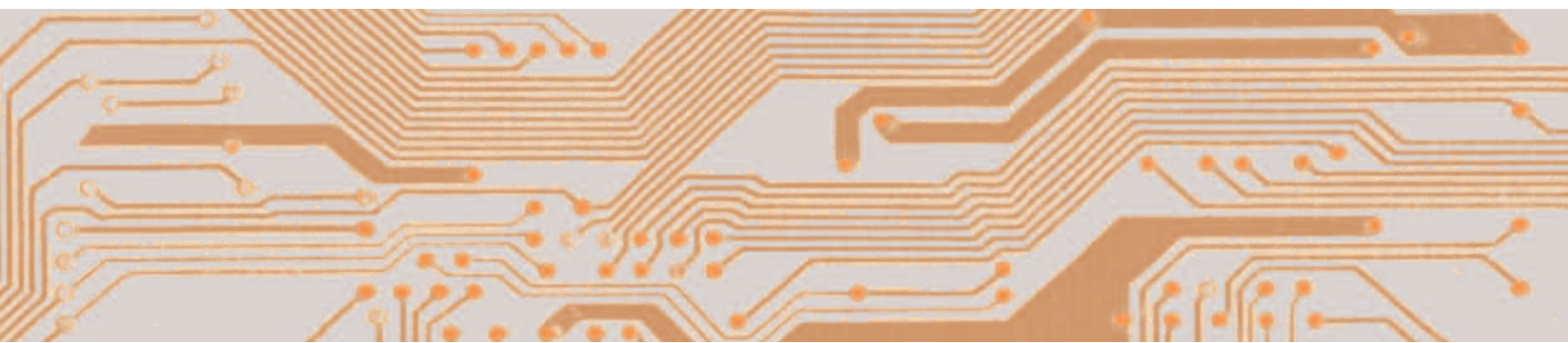


electrical equipment
CE marks
guide and checklist



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What is the CE mark?

All electrical products sold in the European Union are subject to a relevant European Directive and a CE mark is a legal requirement. The marking is intended to protect consumers, which includes intermediaries like installers, by providing an assurance that the product conforms to all applicable Directives, covering aspects such as system design, performance and quality control.

What is included in the CE standard?

The three areas of most concern to manufacturers of electronic and electrical products are covered by the Low Voltage Directive, the Electromagnetic Compatibility Directive and the Radio and Telecommunications Terminal Equipment Directive. The LVD deals with electrical safety, the EMC covers electrical interference and the R&TTE covers the health and safety of the user and others, electromagnetic compatibility and effective use of the radio spectrum.

So if installers buy and install a product that doesn't meet the required Directives, what could happen?

The overriding principle of CE marking is that the installer is ultimately responsible for the safety of the systems installed. This would normally be met by using CE marked components, but the quality of installation is also key. However if the equipment does not meet the required Directives this could lead to low performance levels and malfunctions, which can attract long-term maintenance costs for installers and disruption for customers. The worst case scenario could be that faulty equipment endangers lives by, for example, preventing the transmission of a fire alarm signal. Quite apart from the potential human tragedy, the legal and financial implications for installers could be severe.

How do manufacturers get a CE mark?

Whilst third party testing can be used, all equipment can be self-certified by manufacturers.

What does self-certification involve?

All types of alarm equipment in every installation environment, from residential to major industrial premises, are covered by EN50130-4 EMC immunity requirements. Designing a compliant product requires: EMC trained engineers, relatively expensive good quality components experienced printed circuit board (PCB) designers (who know how to minimise the PCB tracks in sensitive parts of the circuitry), as well as EMC components to bypass or block attacking interference.

What does self-certification testing involve?

EMC test equipment is expensive so not all R & D departments possess it. The only alternative in most cases is to employ the services of a test house, which is also expensive. EMC testing for control panels, for example, involves subjecting a mass of cables that normally operate at 12 volts to a long series of 500 and 1000 volt spikes in order to guard against voltages induced from external sources. This process goes on for days, at £600 - £1,000 per day. In short, it is not difficult to find plenty of reasons why an untrustworthy manufacturer might want to avoid proper CE design and testing methods.

So who is responsible for checking that manufacturers are self-certifying properly?

The EU has made the manufacturers themselves responsible for the process. This is based on the principle that products meeting the relevant requirements are not subject to multiple national testing, thereby removing the burden of testing in every country where they are sold.

Are there any ways to check the manufacturer's claims?

This is the crux of the problem because there is no easy way to check. However, for peace of mind, BSIA Security Equipment Manufacturers Section members are bound by their Code of Ethics to use a genuine CE mark (amongst other quality pledges). You may also find the checklist below helpful.

So who is responsible: manufacturer, distributor or installer?

The DTI's *Guidance Notes on Electrical Equipment (implementing the Low Voltage Directive)* clearly state that manufacturers, distributors and installers have a "statutory duty to ensure that they supply only electrical equipment which satisfies the requirements of the Regulations". There are different obligations for each group, with installers responsible for ensuring that the equipment they supply "satisfies the safety requirements" and "bears CE marking". The CE mark is enforced by different agencies including Trading Standards and the Health and Safety Executive, depending upon the Directive in question. Penalties can include fines and/or imprisonment where safety is at risk.

Checklist

- ✓ Check the price of the product against other products on the market – if the price seems too good to be true, is it? A cheap product with a CE mark indicates that you should exercise caution.
- ✓ Check if the manufacturer is a member of the BSIA, all Security Equipment Manufacturer Section members commit to a Code of Ethics, which means they must make genuine claims about product compliance, which covers the use of the CE mark. You can find a list of BSIA manufacturers on the BSIA Members page of the website www.bsia.co.uk

If the manufacturer is not a BSIA member, we recommend you ask the following questions:

- ✓ Has the product been designed to meet relevant European Directives for electrical equipment?
- ✓ Has the product been tested to these Directives?
- ✓ Can the manufacturer demonstrate this?
- ✓ Was the testing in-house or external, when did it take place and what was the outcome?
- ✓ Are design and quality systems in place to ensure that all products perform to the same high standard?