



WHY SAFETY CERTIFICATION?

It is important to choose a charging solution that is safety certified as a 'COMPLETE AND INTEGRATED PRODUCT,' versus components that are individually certified and then pieced together and not certified as a whole system.

Ergotron charging carts and wall mounts have redundant safety features, because the individual components and the entire integrated product is safety certified. It is important to require this of your charging solution supplier to ensure safety for your devices, your facilities and your students.

Certification ensures that the supplying circuit will not be overloaded and cause problems with the facility, interfere with other equipment or become a fire hazard. Mechanical hazards also are mitigated with certification.

The Importance of Safety Certification for Charging Systems

All device charging systems are not created equal. There is a tendency to assume that all charging systems are safe, but this is not always true. It is important to choose products that are safety certified as *complete and integrated systems*. It is important to require this of your supplier to ensure the safety of your devices, your facilities and your students.

Some manufacturers use individual components that are safety certified, but then combine them into a larger charging system that is not certified. Charging systems that are not evaluated and certified may exceed allowable load limits, thereby causing electrical arcing, facility problems and/or interaction and interference with other equipment. Safety certification also ensures that mechanical hazards such as user 'pinch points', tipping, sharp edges and crush/cut potential are mitigated.



What are the Risks of Using Non-Certified Products?

- **Critical materials are not fire resistant**
 - ~ This is a fire hazard if a battery or electrical fault occurs
- **Electrical hazards are not physically enclosed**
 - ~ Shock hazards exist if energized circuitry can potentially be touched either directly or if exposed metal is not safely grounded or properly isolated
 - ~ Fire hazards can exist if the enclosure can potentially let out flames or molten metal if an electrical fault occurs inside of the enclosure
- **Mechanical hazards are not mitigated**
 - ~ If not properly tested and certified, pinch points, tip, crush or cut, sharp edges, and moving parts can injure students and staff
- **Equipment ratings must meet National Electrical Code**
 - ~ Non-evaluated systems may exceed allowable load limits causing electrical arcing, facility problems and/or interaction and interference with other equipment
- **No manufacturing factory quality surveillance**
 - ~ Product quality and consistency must be managed and ensured

How Ergotron Meets and Exceeds the Regulatory Requirements

Ergotron device charging systems are UL Certified and CE marked.

EMC Testing* Electrical products are tested at an internationally approved and recognized laboratory to standards compatible with both US (FCC) and EU (EN) and other country requirements demonstrating compliance

Safety Testing Third-party testing by Nationally Recognized Testing Laboratory (NRTL) to demonstrate compliance of standards accepted by US NRTL and International notified bodies. Products are evaluated against a safety standard for a multitude of hazards (mechanical, electrical, moving parts, tip, etc.)

Ergotron's manufacturing factory is periodically audited by NRTL to assure consistently safe products are built.

* Electromagnetic compatibility (EMC) is the branch of electronic sciences which studies the unintentional generation, propagation and reception of electromagnetic energy with reference to the unwanted effects (interference) that such energy may induce.

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What are the Requirements?

Safety and EMC (Electromagnetic Compatibility) requirements for electronic products stem from the Code of Federal Regulations (CFR) in the US and the New Approach Directives in the EU (other countries have their own regulations, but most standards that demonstrate compliance are harmonized).

EMC requirements come from: US: FCC (Federal Communications Commission) (47 CFR part 15 Subpart B)
EU: EMC Directive 2004/108/EC

Safety requirements come from: US: OSHA (Occupational Safety and Health Administration) (29 CFR Part 1910 Subpart S)
EU: Low Voltage Directive 2006/95/EC

The laws can be quite complex, however, by leveraging the harmonized standards and recognized test labs, Ergotron can comply with regulations worldwide.

What it Means to be Compliant with US Federal Regulations

- Electrical equipment must be approved by a Nationally Recognized Test Laboratory (NRTL) if there is an applicable standard (e.g. UL60950, UL2442, etc.). Listings by NRTLs are public and are evidenced in labeling, manuals and online listings
- Electrical equipment must be tested to show compliance with the FCC regulations and labeled on the product stating they comply prior to marketing or selling the devices (*Virtually any powered digital device is in scope*)

What it Means to be Compliant with EU Directives

- Electrical equipment must be CE marked
- In order to be CE marked, a Declaration of Conformity must be generated that identifies the applicable directives and the rationale for evidence that the equipment complies with those directives
FOR EXAMPLE: Low Voltage Directive 2006/95/EC EMC Directive 2004/108/EC RoHS Directive 2011/65/EU

Proper Documentation

- EMC and Safety Test reports allow product labeling stating compliance with the regulatory requirements including guidance in user documentation
- CE marking for EU is authorized by generation of a Declaration of Conformity

What to Look For

Electrical products in the US must be certified to meet OSHA requirements.

Labeling must include an NRTL mark.

FOR EXAMPLE:

(There are additional approved labs with markings.)



Electrical products must be tested and labeled with the FCC specified note for an unintentional radiator (Class A or B)

FOR EXAMPLE:

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

In the EU, electrical products must be CE marked:



If a product is CE marked, a Declaration of Conformity must be available upon request

- Manufacturer must declare the basis for compliance with the applicable directives

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