



# Machinery Safety

EN 60204-1 AWARENESS TRAINING

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## Introduction

This standard focuses on the electrical safety of machines and is aimed at anyone who designs, manufactures, or sets into operation industrial machinery with responsibility for its safety and compliance.

In this training course you will discover what requirements need to be considered for the electrical safety of machinery. The scope of EN 60204-1 considers electric, electronic and programmable equipment and systems for machines. Additionally, it takes into account equipment starting at the point of connection of the supply to the electrical equipment of the machine. The rated voltages this is applicable to are up to 1000 V for alternating current (AC) and up to 1500 V for direct current (DC).

## Content

- UKCA / CE marking and the directives and regulations that are applicable to machinery
- Different types of standards and why we use them
- Isolation requirements
- Protection against electric shock
- Earth bonding
- Control circuits and control functions
- Control gear location and mounting
- Wiring practices
- Equipment marking
- Technical documentation for equipment
- Testing and verification

## Recent updates

This training includes recent technical changes:

- Applications with Power Drive Systems (PDS)
- Electromagnetic compatibility (EMC)
- Short-circuit current rating of electrical equipment
- Overcurrent protection and protective bonding circuit
- Control circuits and control functions
- Icons for actuators and control devices
- Requirements for the technical documentation

## Target audience

- Design Engineers
- Engineering Managers/Projects
- Safety Personnel
- Machinery Safety Engineers

## Learning outcomes

- Familiarization with the legal requirements for electrical safety
- Understand the scope of electrical equipment to which the standard applies
- Be aware of the general and specific standard requirements to ensure the safety and protection of those using the machine, and the machine itself
- Learn the specific requirements of control functions, control devices, control gears etc. taking into account operator interface and the necessary prevention of inadvertent operation
- Know the test and technical documentation requirements to verify that the machine or assembly of machines complies with the safety standard

## Industries covered

- Manufacturing
- Food and Beverage
- Automotive
- Oil & Gas
- Metal forming
- Pharmaceutical
- Waste Recycling
- Plastics
- Chemical
- Mining
- Electronics
- Renewables
- and more

## The SGS commitment

We strive to deliver outstanding value at every step of your training in being committed to add value to your work by providing:

- Rapid turnaround time
- Value-based pricing
- Technical assistance
- Key account management
- Accurate and timely reporting
- Quality and trusted test results
- In long-term partnerships our input will increase the return on your investment



# When you need to be sure

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