

Switchgear and controlgear

Information of DKE/K 225 on the application of DIN EN 60204-1, DIN EN 61439-1 and DIN EN 61439-2 for the installation of electrical equipment of machines

Scopes of DIN EN 60204-1, DIN EN 61439-1 and DIN EN 61439-2

The basic safety standard DIN EN 60204-1 “Safety of machinery – Electrical equipment of machines – Part 1: General requirements“ has been listed in the Official Journal of the European Union under the Directive 2006/95/EC (Low-Voltage Directive) and the Directive 2006/42/EG (Machinery Directive). Further listings of the standards under other directives (e.g. EMC Directive) with regard to installation requirements were not considered.

DIN EN 60204-1 contains extensive requirements for electrical, electronic and programmable electronic equipment and systems of machines. This also includes the installation of electrical components and equipment in switchgear and thus the installation of switchgear assemblies (e.g. switchboxes, control cabinets and control panels) as integral parts of electrical equipment of machines. In addition to the requirements of DIN EN 60204-1 and depending on the machine, its intended use and electrical equipment the designer can choose parts of electrical equipment of machines complying with the relevant parts of the DIN 61439 series.

DIN EN 61439-1 “Low-voltage switchgear and controlgear assemblies – Part 1: General rules” and DIN EN 61439-2 “Low-voltage switchgear and controlgear assemblies” – Part 2: Power switchgear and controlgear assemblies” standards are exclusively listed under the Low-Voltage Directive and do not contain specific requirements for electrical equipment of machines.

Therefore, applying these standards does not give rise to the presumption of conformity that the relevant requirements of the Machinery Directive are met.

Summary

The application of DIN EN 60204-1 allows the declaration of conformity with the relevant essential requirements of the Machinery Directive or the Low Voltage Directive (presumption of conformity for the requirements of Annex I to the Machinery Directive listed in Annex ZZ).

As a result of risk assessment, manufacturers of switchgear may use technical rules, e.g. those given in DIN EN 61439-1 or DIN EN 61439-2, as an additional aid for design (e.g. consideration of heat and short-circuit).

However, the exclusive use of DIN EN 61439-1 and DIN EN 61439-2 is not sufficient for the safety of machinery.

The use of DIN EN 60204-1 is sufficient for the declaration of conformity of switchgear assemblies which are part of the electrical equipment of machines.