

# TECHNICAL REPORT

# IEC TR 60909-1

Second edition  
2002-07

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## Short-circuit currents in three-phase a.c. systems –

### Part 1: Factors for the calculation of short-circuit currents according to IEC 60909-0

*This **English-language** version is derived from the original **bilingual** publication by leaving out all French-language pages. Missing page numbers correspond to the French-language pages.*



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### **Part 1: Factors for the calculation of short-circuit currents according to IEC 60909-0**

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**SHORT-CIRCUIT CURRENTS IN THREE-PHASE AC SYSTEMS –****Part 1: Factors for the calculation of short-circuit currents  
according to IEC 60909-0**

## FOREWORD

- 1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, the IEC publishes International Standards. Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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Technical reports do not necessarily have to be reviewed until the data they provide are considered to be no longer valid or useful by the maintenance team.

IEC 60909-1, which is a technical report, has been prepared by IEC technical committee 73: Short-circuit currents.

This technical report shall be read in conjunction with IEC 60909-0.

The text of this technical report is based on the following documents:

Enquiry draft	Report on voting
73/120/DTR	73/125/RVC

Full information on the voting for the approval of this technical report can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 3.

This document, which is purely informative, is not to be regarded as an International Standard.

The committee has decided that the contents of this publication will remain unchanged until 2010. At this date, the publication will be

- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
- amended.

## **SHORT-CIRCUIT CURRENTS IN THREE-PHASE AC SYSTEMS –**

### **Part 1: Factors for the calculation of short-circuit currents according to IEC 60909-0**

#### **1 General**

##### **1.1 Scope and object**

This part of IEC 60909 is a technical report applicable to short-circuit currents in three-phase a.c. systems. This technical report aims at showing the origin and the application, as far as necessary, of the factors used to meet the demands of technical precision and simplicity when calculating short-circuit currents according to IEC 60909-0.

Thus this technical report is an addition to IEC 60909-0. It does not, however, change the basis for the standardized calculation procedure given in IEC 60909-0.

NOTE References are given in some cases to offer additional help, not to change the procedure laid down in the standard.

##### **1.2 Reference documents**

IEC 60038:1983, *IEC standard voltages*

IEC 60909-0:2001, *Short-circuit currents in three-phase a.c. systems – Part 0: Calculation of currents*

IEC/TR 60909-2:1992, *Electrical equipment – Data for short-circuit current calculations in accordance to IEC 60909 (1988)*

IEC/TR 60909-4:2000, *Short-circuit currents in three-phase a.c. systems – Part 4: Examples for the calculation of short-circuit currents*