

TECHNICAL REPORT

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Industrial automation systems and integration — Operating conditions for discrete part manufacturing — Equipment in industrial environments

*Systèmes d'automatisation industrielle et intégration — Conditions
d'environnement pour les industries manufacturières — Systèmes
d'automatisation et équipements*



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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The main task of technical committees is to prepare International Standards, but in exceptional circumstances a technical committee may propose the publication of a Technical Report of one of the following types:

- type 1, when the required support cannot be obtained for the publication of an International Standard, despite repeated efforts;
- type 2, when the subject is still under technical development or where for any other reason there is the future but not immediate possibility of an agreement on an International Standard;
- type 3, when a technical committee has collected data of a different kind from that which is normally published as an International Standard ("state of the art", for example).

Technical Reports of types 1 and 2 are subject to review within three years of publication, to decide whether they can be transformed into International Standards. Technical Reports of type 3 do not necessarily have to be reviewed until the data they provide are considered to be no longer valid or useful.

ISO/TR 10450, which is a Technical Report of type 2, was prepared by Technical Committee ISO/TC 184, *Industrial automation systems and integration*.

This Technical Report deals with the applicability in the field of industrial automation of all the documents issued by IEC concerning operating conditions of equipment for process control.

As several parts of these standards are in the course of revision, their state and the planned dates of edition are noted. The present Technical Report will be revised in accordance with the revisions of IEC standards.

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To ensure the consistency of standardization in the fields of "process" and "manufacturing" the present Technical Report is based on the standards concerning industrial process measurement and control equipment.

The standards on "the classification of environmental parameters and their severities" (studied by IEC/TC 75) are mentioned only for clarification purposes and are applicable only as far as they are mentioned for application in the IEC/TC 65 documents.

For application in the field of discrete part manufacturing, this Technical Report recalls the relative standards for each operating condition and provides additional recommendations.

This document is being issued in the type 2 Technical Report series of publications (according to subclause G.6.2.2 of part 1 of the IEC/ISO Directives) as a "prospective standard for provisional application" in the field of industrial automation systems and integration, because there is an urgent need for guidance on how standards in this field should be used to meet an identified need.

This document is not to be regarded as an "International Standard". It is proposed for provisional application so that information and experience of its use in practice may be gathered. Comments on the content of this document should be sent to the ISO Central Secretariat.

A review of this type 2 Technical Report will be carried out not later than two years after its publication with the options of: extension for another two years; conversion into an International Standard; or withdrawal.

Introduction

This Technical Report applies to equipment used in subsystems or systems for industrial automation applying to all enterprise activities. This equipment concerns the implementation of various technologies: data processing systems and all types of computer communications (networks), controllers of machines, robots and handling equipment, etc.