
International Standard



4336

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

Numerical control of machines — Specification of interface signals between the numerical control unit and the electrical equipment of an NC machine

Commande numérique des machines — Spécification des signaux à l'interface entre l'unité de commande numérique et l'équipement électrique de la machine CN

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO member bodies). The work of developing International Standards is carried out through ISO technical committees. Every member body interested in a subject for which a technical committee has been set up 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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 4336 was developed by Technical Committee ISO/TC 97, *Computers and information processing*, and was circulated to the member bodies in December 1978.

It has been approved by the member bodies of the following countries :

Australia	Iran	Spain
Belgium	Italy	Switzerland
Brazil	Japan	United Kingdom
Czechoslovakia	Netherlands	USA
Finland	New Zealand	USSR
France	Poland	Yugoslavia
Germany, F.R.	Romania	

No member body expressed disapproval of the document.

Numerical control of machines — Specification of interface signals between the numerical control unit and the electrical equipment of an NC machine

0 Introduction

This International Standard is complementary to IEC Publication 550. References to pertinent clauses and sub-clauses of this Publication are given in column 7 of the table to facilitate the use of the two documents together.

1 Scope and field of application

This International Standard specifies the properties of the signals, and describes the functions they represent, at the interface between a machine, including its electrical equipment, and the numerical control unit. It gives, in the form of a table :

- a) the names of the signals and precise descriptions of the functions they represent;
- b) the type of representation of the functions : coded or decoded signal, continuous or pulsed signal;
- c) indications of the interdependence of certain signals;
- d) the description of the general effect of the signals on the machine and/or the numerical control unit;
- e) the classification of signals into two categories : compulsory and optional.

2 References

ISO 6983, *Numerical control of machines — Word address program format*

*Part 1 : Data format for positioning line motion and contouring control systems.*¹⁾

*Part 2 : Coding of preparatory functions G and miscellaneous functions M.*²⁾

IEC Publication 550, *Interface between numerical controls and industrial machines.*

3 Definition

For the purpose of this International Standard, and in addition to the descriptions of the functions given in the table, the following definition applies :

3.1 interface : Connections between the numerical control unit and the electrical equipment of the NC machine.

4 Functional areas of interface

For convenience, the interface is divided functionally into four groups of connections (see the figure) :

Group I : drive commands;

1) At present at the stage of draft. (Revision of ISO 1057-1973, ISO 1058-1973, ISO 1059-1973 and ISO 2539-1974.)

2) In preparation. (Revision of ISO 1056-1973.)