

Specification for

Coding of indicating devices and actuators by colours and supplementary means

The European Standard EN 60073 : 1993 has the status of a
British Standard

Codage des dispositifs indicateurs et des
organes de commande par couleurs et moyens
supplémentaires

Codierung von Anzeigegeräten und
Bedienteilen durch Farben und ergänzende
Mittel

UDC 621.3.777.6 : 621.316.542.3 : 654.915

Cooperating organizations

The European Committee for Electrotechnical Standardization (CENELEC), under whose supervision this European Standard was prepared, comprises the national committees of the following countries:

Austria	Italy
Belgium	Luxembourg
Denmark	Netherlands
Finland	Norway
France	Portugal
Germany	Spain
Greece	Sweden
Iceland	Switzerland
Ireland	United Kingdom

This British Standard, having been prepared under the direction of the General Electrotechnical Standards Policy Committee, was published under the authority of the Standards Board and comes into effect on 15 May 1993

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National foreword

This British Standard has been prepared under the direction of the General Electrotechnical Standards Policy Committee and is the English language version of EN 60073 : 1993 *Coding of indicating devices and actuators by colours and supplementary means*, including its corrigendum of March 1993, published by the European Committee for Electrotechnical Standardization (CENELEC). It is identical with IEC 73 : 1991 published by the International Electrotechnical Commission (IEC).

This British Standard supersedes BS 4099 : Part 1 : 1986 and BS 4099 : Part 2 : 1977 which are withdrawn.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Descriptors: Indicator light, push-button, mechanical indicator, colour

English version

Coding of indicating devices and actuators by colours and supplementary means

(IEC 73 : 1991)

Codage des dispositifs indicateurs et des
organes de commande par couleurs et moyens
supplémentaires
(CEI 73 : 1991)

Codierung von Anzeigegeräten und
Bedienteilen durch Farben und ergänzende
Mittel
(IEC 73 : 1991)

This European Standard was approved by CENELEC on 1992-12-09. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Central Secretariat: rue de Stassart 35, B-1050 Brussels

Foreword

The CENELEC questionnaire procedure, performed for finding out whether or not the International Standard IEC 73 : 1991 could be accepted without textual changes, has shown that no common modifications were necessary for the acceptance as European Standard.

The reference document was submitted to the CENELEC members for formal vote and was approved by CENELEC as EN 60073 on 9 December 1992.

This European Standard supersedes HD 354 S2 : 1987.

The following dates were fixed:

- latest date of publication
of an identical national
standard (dop) 1993-09-01
- latest date of withdrawal
of conflicting national
standards (dow) 1993-09-01

For products which have complied with HD 354 S2 : 1987 before 1993-09-01, as shown by the manufacturer or by a certification body, this previous standard may continue to apply for production until 1998-09-01.

Annexes designated 'normative' are part of the body of the standard. Annexes designated 'informative' are given only for information. In this standard, annexes A and B are informative and annex ZA is normative.

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INTRODUCTION

Supervision and intervention are the principal tasks of personnel engaged in the monitoring and operation of electrical equipment.

Indicating devices for the representation of conditions, and actuators to enable intervention under normal and fault conditions, are essential to this purpose.

The information presented shall meet the needs of the users for the monitoring and operating tasks which they are required to perform, for example, of extensive industrial processes.

Safety and ergonomic aspects also have to be taken into account. The use of colours alone is often insufficient to ensure unambiguous representation of information. Where necessary, colours shall be supplemented by other means.

Apart from an unambiguous marking of the indicating devices and actuators there is a requirement for a clear and consistent system of coding by colours and supplementary means.

The choice of a code will depend on the information which it is intended to impart. This may relate to the state of equipment (or part of it), to the condition of a process, and/or to the effects which this condition has on persons, property and the environment.

The user is required to decide on which of these criteria the coding for his application is to be based.

CODING OF INDICATING DEVICES AND ACTUATORS BY COLOURS AND SUPPLEMENTARY MEANS

1 Scope

This International Standard establishes general rules for assigning particular meanings to certain colours and supplementary means for indicating devices and actuators in order to:

- increase the safety of persons, property and/or the environment through the safe monitoring and operation of the equipment,
- facilitate the proper monitoring, operation and maintenance of the equipment,
- facilitate the rapid recognition of operating conditions and actuator positions.

This standard is for general application:

- from simple cases such as single indicator lights, push-buttons, mechanical indicators, light emitting diodes (LEDs) or video display screens up to extensive control stations which may include a wide variety of devices for controlling a machine or process;
- where the safety of persons, property and/or the environment is involved, and also where colours and supplementary means are used to facilitate the proper monitoring and operating of equipment;
- where a particular kind of coding is to be assigned by a Technical Committee to a specific function.

Where no safety of persons, property and/or environment is involved, the relevant Technical Committee may specify special requirements within the framework of this basic safety publication.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

IEC Guide 104: 1984, *Guide to the drafting of safety standards, and the role of Committees with safety pilot functions and safety group functions.*

IEC 50(441): 1984, *International Electrotechnical Vocabulary (IEV), Chapter 441: Switchgear, controlgear and fuses.*

IEC 50(845): 1987, *International Electrotechnical Vocabulary (IEV), Chapter 845: Lighting.*

IEC 204: *Electrical equipment of industrial machines.*

IEC 417: 1973, *Graphical symbols for use on equipment. Index, survey and compilation of the single sheets.*

IEC 447: 1974, *Standard directions of movement for actuators which control the operation of electrical apparatus.*

IEC 617: *Graphical symbols for diagrams.*

ISO 3864: 1984, *Safety colours and safety signs.*

ISO 7000: 1989, *Graphical symbols for use on equipment - Index and synopsis.*

Publication CIE No. 2-2 (TC 1.6): 1975, *Colors of light signals.*

3 Definitions

For the purpose of this standard, the following definitions shall apply:

3.1 Indicating device: A mechanical, optical, electrical or electronic device providing visible or audible information.

3.2 actuator¹: The part of the actuating system (of a control switch) to which an external force action is applied. [IEV 441-15-22 modified]

NOTE - The actuator may take the form of a handle, knob, push-button, roller, plunger, etc.

3.3 mechanical indicator: Indicating device which forms an integral part of a mechanical or electro-mechanical switching device (e.g. circuit-breaker) and which indicates whether it is in the OPEN or CLOSED position or an intermediate position (e.g. star position of a star-delta starter) but which is not intended as a manual actuator.

3.4 signal light: Object or apparatus designed to emit a light signal. [IEV 845-11-05]

3.5 light emitting diode (LED): Solid state device embodying a p-n junction, emitting optical radiation when excited by an electric current. [IEV 845-04-40]

3.6 illuminated actuator: Actuator with an integral light source giving visual indication by illumination. The operation of the light source may be related to or independent of the actuator action.

¹⁾ For the purpose of this standard the actuator in the case of an interactive screen display is considered to be that part of the screen display which represents the actuator function.