
**Dynamic signs in physical
environments —**

**Part 1:
General requirements**

*Signes dynamiques dans les environnements physiques —
Partie 1: Exigences générales*



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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 procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 159, *Ergonomics*, Subcommittee SC 5, *Ergonomics of the physical environment*.

A list of all parts in the ISO 23456 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

Dynamic signs, which provide information with changing spatial and temporal images, are intended to be used for delivering cautions to improve safety in road traffic environments, public buildings, outdoor spaces and factories and for providing prompt and reliable guidance for enhanced convenience in those situations. For static displays, ISO 7010 specifies the adequate size depending on the viewing distance. Currently, most information indicating specific locations and directions within space depends on static signs. The development of dynamic signs is at a practical stage in many countries (see [Annex A](#)).

Though the significance, necessity and feasibility of dynamic signs have been recognized, there are currently no International Standards that describe the ergonomic requirements that should be understood by both device manufacturers and content creators. In order to enable this new technology to spread through the marketplace quickly and adequately, it is important that designs that do not take into account the ergonomic characteristics of the information recipient are avoided. Accordingly, this document describes the ergonomic principles for the application of dynamic signs.

This document describes a common set of general requirements for future developments of individual standards, in which numerical criteria of requirements are set depending on the individual target environment.

Dynamic signs in physical environments —

Part 1: General requirements

1 Scope

This document describes general ergonomics requirements in relation to dynamic signs, as this responsive information presentation technology changes depending on the environmental conditions in which it is used (e.g. environmental illumination, density of people).

Dynamic signs are presented adaptively to those environmental conditions.

The general requirements for dynamic signs consist of visibility (divided into conspicuity, distinctiveness, legibility and comprehensibility), visual image safety and accessibility. The requirements and recommendations for each are also described.

This document does not cover static signs.

This document does not include requirements for safety signs for the marking of escape routes.

NOTE There are some related recommendations in ISO 30061.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 3864-1, *Graphical symbols — Safety colours and safety signs — Part 1: Design principles for safety signs and safety markings*

ISO 3864-4, *Graphical symbols — Safety colours and safety signs — Part 4: Colorimetric and photometric properties of safety sign materials*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

3.1

dynamic sign

sign which changes position, size, colour, brightness and/or content for caution and guidance by flashing, motion or both depending on the environmental conditions

Note 1 to entry: The term “dynamic” has two meanings: 1) the dynamic change increases the human perceptual visibility (3.3); 2) the changing content conveys multiple information adaptively.

Note 2 to entry: Possible applications of dynamic signs are shown in [Annex A](#).