
**Ergonomic requirements for the design of
displays and control actuators —**

**Part 2:
Displays**

*Spécifications ergonomiques pour la conception des dispositifs de
signalisation et des organes de service —*

Partie 2: Dispositifs de signalisation



Contents

1 Scope	1
2 Normative references	1
3 Definitions	1
4 Visual displays	2
4.1 Requirements for detection of visual displays	2
4.1.1 Positioning the display	2
4.1.2 Functional relationships between the display and the operator	4
4.1.3 Environmental factors	4
4.1.4 Other conditions to observe for facilitating signal detection	5
4.2 Requirements for identification of visual displays	5
4.2.1 Symbols used for displays	5
4.2.2 Digital displays	6
4.2.3 Analogue displays	6
4.2.4 Choice of scales for analogue displays	7
4.2.5 Choice of displays in relation to different types of tasks	10
4.2.6 Grouping displays	10
4.3 Requirements for interpretation of visual displays	12
5 Auditory displays	12
5.1 Requirements for detection of auditory displays	13
5.2 Requirements for identification of auditory displays	13
5.3 Requirements for interpretation of auditory displays	13
6 Tactile displays	14
6.1 Requirements for detection of tactile displays	14

© ISO 1999

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

International Organization for Standardization
Case postale 56 • CH-1211 Genève 20 • Switzerland
Internet iso@iso.ch

Printed in Switzerland

6.2 Requirements for identification of tactile displays 14

6.3 Requirements for interpretation of tactile displays 14

Annex A (informative) Shape of digits 16

Bibliography 17

This document is a preview generated by EVS

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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 9355-2 was prepared by the European Committee for Standardization (as European Standard EN 894-2:1997) and was adopted, under a special "fast-track procedure", by Technical Committee ISO/TC 159, *Ergonomics*, Subcommittee SC 4, *Ergonomics of human-system interaction*, in parallel with its approval by the ISO member bodies.

ISO 9355 consists of the following parts, under the general title *Ergonomic requirements for the design of displays and control actuators*:

- *Part 1: Human interactions with displays and control actuators*
- *Part 2: Displays*
- *Part 3: Control actuators*
- *Part 4: Location and arrangement of displays and control actuators*

Annex A of this part of ISO 9355 is for information only.

Ergonomic requirements for the design of displays and control actuators —

Part 2: Displays

1 Scope

This part of ISO 9355 gives guidance on the selection, design and location of displays to avoid potential ergonomic hazards associated with their use. It specifies ergonomics requirements and covers visual, audible and tactile displays.

It applies to displays used in machinery (e.g. devices and installations, control panels, operating and monitoring consoles) for occupational and private use. Specific ergonomics requirements for visual display terminals (VDTs) used for office tasks are given in the standard ISO 9241.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of ISO 9355. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of ISO 9355 are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 7731, *Danger signals for work places — Auditory danger signals*

IEC 61310-1, *Safety of machinery — Indication, marking and actuation — Part 1: Requirements for visual, auditory and tactile signals*.

IEC 61310-2, *Safety of machinery — Indication, marking and actuation — Part 2: Requirements for marking*.

3 Definitions

For the purposes of this part of ISO 9355, the following definitions apply:

3.1

operator

the person or persons given the task of installing, operating, adjusting, maintaining, cleaning, repairing or transporting machinery [EN 292-1]

3.2

work task

an activity or activities required to achieve an intended outcome of the work system [EN 614-1]

3.3

work equipment

machinery, tools, vehicles, devices, furniture, installations and other components used in the work system [EN 614-1]