

SLOVENSKI STANDARD
oSIST prEN ISO 9241-391:2013
01-februar-2013

Ergonomija medsebojnega vpliva človek-sistem - 391. del: Zahteve, analize in preskusne metode za ugotavljanje skladnosti za zmanjšanje epileptičnih/božjastnih napadov, sproženih s fotosenzitivnimi dražljaji (ISO/DIS 9241-391:2012)

Ergonomics of Human System Interaction - Part 391: Requirements, analysis and compliance test methods for the reduction of photosensitive seizures (ISO/DIS 9241-391:2012)

(standards.iteh.ai)

Ergonomie der Mensch-System-Interaktion - Teil 391: Anforderungen, Analysen und Prüfverfahren zur Konformität zur Verringerung epileptischer Anfälle ausgelöst durch photosensitive Reize (ISO/DIS 9241-391:2012)

/sist/0e5354d0-ddb9-49f2-a938-8334e91f5698/sist-en-iso-9241-391-2016

Ergonomie de l'interaction homme-système - Partie 391: Exigences, analyses et méthodes d'essai de conformité pour la réduction des saisies photosensibles (ISO/DIS 9241-391:2012)

Ta slovenski standard je istoveten z: prEN ISO 9241-391

ICS:

13.180

Ergonomija

Ergonomics

oSIST prEN ISO 9241-391:2013

en,fr,de

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

DRAFT
prEN ISO 9241-391

December 2012

ICS 13.180; 35.180

English Version

**Ergonomics of Human System Interaction - Part 391:
Requirements, analysis and compliance test methods for the
reduction of photosensitive seizures (ISO/DIS 9241-391:2012)**

Ergonomie de l'interaction homme-système - Partie 391:
Exigences, analyses et méthodes d'essai de conformité
pour la réduction des saisies photosensibles (ISO/DIS
9241-391:2012)

Ergonomie der Mensch-System-Interaktion - Teil 391:
Anforderungen, Analysen und Prüfverfahren zur
Konformität zur Verringerung epileptischer Anfälle
ausgelöst durch photosensitive Reize (ISO/DIS 9241-
391:2012)

This draft European Standard is submitted to CEN members for parallel enquiry. It has been drawn up by the Technical Committee CEN/TC 122.

If this draft becomes a European Standard, CEN 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.

This draft European Standard was established by CEN in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.

Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

Warning : This document is not a European Standard. It is distributed for review and comments. It is subject to change without notice and shall not be referred to as a European Standard.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents	Page
Foreword.....	3

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN ISO 9241-391:2016

<https://standards.iteh.ai/catalog/standards/sist/0e5354d0-ddb9-49f2-a938-8334e91f5698/sist-en-iso-9241-391-2016>

Foreword

This document (prEN ISO 9241-391:2012) has been prepared by Technical Committee ISO/TC 159 "Ergonomics" in collaboration with Technical Committee CEN/TC 122 "Ergonomics" the secretariat of which is held by DIN.

This document is currently submitted to the parallel Enquiry.

Endorsement notice

The text of ISO/DIS 9241-391:2012 has been approved by CEN as a prEN ISO 9241-391:2012 without any modification.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN ISO 9241-391:2016](https://standards.iteh.ai/catalog/standards/sist/0e5354d0-ddb9-49f2-a938-8334e91f5698/sist-en-iso-9241-391-2016)

<https://standards.iteh.ai/catalog/standards/sist/0e5354d0-ddb9-49f2-a938-8334e91f5698/sist-en-iso-9241-391-2016>



DRAFT INTERNATIONAL STANDARD ISO/DIS 9241-391

ISO/TC 159/SC 4

Secretariat: BSI

Voting begins on
2012-12-06Voting terminates on
2013-05-06

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

Ergonomics of Human System Interaction —

Part 391:

Requirements, analysis and compliance test methods for the reduction of photosensitive seizures

*Ergonomie de l'interaction homme-système —**Partie 391: Exigences, analyses et méthodes d'essai de conformité pour la réduction des saisies photosensibles*iTeh STANDARD PREVIEW
(standards.iteh.ai)

ICS 13.180; 40.180

SIST EN ISO 9241-391:2016

<https://standards.iteh.ai/catalog/standards/sist/0e5354d0-ddb9-49f2-a938-8334e91f5698/sist-en-iso-9241-391-2016>

ISO/CEN PARALLEL PROCESSING

This draft has been developed within the International Organization for Standardization (ISO), and processed under the **ISO-lead** mode of collaboration as defined in the Vienna Agreement.

This draft is hereby submitted to the ISO member bodies and to the CEN member bodies for a parallel five-month enquiry.

Should this draft be accepted, a final draft, established on the basis of comments received, will be submitted to a parallel two-month approval vote in ISO and formal vote in CEN.

To expedite distribution, this document is circulated as received from the committee secretariat. ISO Central Secretariat work of editing and text composition will be undertaken at publication stage.

Pour accélérer la distribution, le présent document est distribué tel qu'il est parvenu du secrétariat du comité. Le travail de rédaction et de composition de texte sera effectué au Secrétariat central de l'ISO au stade de publication.

THIS DOCUMENT IS A DRAFT CIRCULATED FOR COMMENT AND APPROVAL. IT IS THEREFORE SUBJECT TO CHANGE AND MAY NOT BE REFERRED TO AS AN INTERNATIONAL STANDARD UNTIL PUBLISHED AS SUCH.

IN ADDITION TO THEIR EVALUATION AS BEING ACCEPTABLE FOR INDUSTRIAL, TECHNOLOGICAL, COMMERCIAL AND USER PURPOSES, DRAFT INTERNATIONAL STANDARDS MAY ON OCCASION HAVE TO BE CONSIDERED IN THE LIGHT OF THEIR POTENTIAL TO BECOME STANDARDS TO WHICH REFERENCE MAY BE MADE IN NATIONAL REGULATIONS.

RECIPIENTS OF THIS DRAFT ARE INVITED TO SUBMIT, WITH THEIR COMMENTS, NOTIFICATION OF ANY RELEVANT PATENT RIGHTS OF WHICH THEY ARE AWARE AND TO PROVIDE SUPPORTING DOCUMENTATION.

iTeh STANDARD PREVIEW (standards.iteh.ai)

SIST EN ISO 9241-391:2016

<https://standards.iteh.ai/catalog/standards/sist/0e5354d0-ddb9-49f2-a938-8334e91f5698/sist-en-iso-9241-391-2016>

Copyright notice

This ISO document is a Draft International Standard and is copyright-protected by ISO. Except as permitted under the applicable laws of the user's country, neither this ISO draft nor any extract from it may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, photocopying, recording or otherwise, without prior written permission being secured.

Requests for permission to reproduce should be addressed to either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Reproduction may be subject to royalty payments or a licensing agreement.

Violators may be prosecuted.

Contents

Page

Foreword	iv
Introduction.....	vi
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Image factors of photosensitive seizures.....	2
5 Ergonomic requirements and recommendations	3
5.1 General	3
5.2 Flashes	3
5.2.1 Potentially harmful flashes.....	3
5.2.2 Rapid changes of image sequences	4
5.2.3 Potentially harmful red flashes	4
5.2.4 Cumulative risk.....	4
5.2.5 Prior warning	4
5.3 Patterns	4
5.3.1 Potentially harmful regular patterns.....	4
6 Conformance	5
6.1 General	5
6.2 Test methods	5
6.3 Conformance	6
Annex A (informative) Overview of the ISO 9241 series	7
Annex B (informative) Clinical aspects of photosensitivity	8
Annex C (informative) Potentially harmful flashes with larger maximum luminance.....	9
Annex D (informative) Saturated Red	10
Annex E (informative) Viewing environments.....	11
Annex F (informative) Sample procedure for assessing applicability and conformance	12
Bibliography.....	14

Foreword

- *Part 1: General introduction*
- *Part 2: Guidance on task requirements*
- *Part 3: Visual display requirements*
- *Part 4: Keyboard requirements*
- *Part 5: Workstation layout and postural requirements*
- *Part 6: Guidance on the work environment*
- *Part 9: Requirements for non-keyboard input devices*
- *Part 11: Guidance on usability*
- *Part 12: Presentation of information*
- *Part 13: User guidance*
- *Part 14: Menu dialogues*
- *Part 15: Command dialogues*
- *Part 16: Direct- manipulation dialogues*
- *Part 17: Form filling dialogues*

ISO 9241 also consists of the following parts, under the general title *Ergonomics of human-system interaction*:

- *Part 20: Accessibility guidelines for information/communication technology (ICT) equipment and services*
- *Part 110: Dialogue principles*
- *Part 129: Guidance on software individualization*
- *Part 143: Form-based dialogues*
- *Part 151: Software ergonomics for Guidance on World Wide Web user interfaces*
- *Part 154: Interactive voice response (IVR) applications*
- *Part 171: Guidance on software accessibility*
- *Part 210: Human-centred design for interactive systems*
- *Part 300: Introduction to electronic visual display requirements*
- *Part 302: Terminology for electronic visual displays*

- *Part 303: Requirements for electronic visual displays*
- *Part 304: User performance test methods for electronic visual displays*
- *Part 305: Optical laboratory test methods for electronic visual displays*
- *Part 306: Field assessment methods for electronic visual displays*
- *Part 307: Analysis and compliance test methods for electronic visual displays*
- *Part 308: Surface-conduction electron-emitter displays (SED) [Technical Report]*
- *Part 309: Organic light-emitting diode (OLED) displays [Technical Report]*
- *Part 310: Pixel defects — Visibility, aesthetics and ergonomics [Technical Report]*
- *Part 331: Optical characteristics of autostereoscopic displays [Technical Report]*
- *Part 400: Principles and requirements for physical input devices*
- *Part 410: Design criteria for physical input devices*
- *Part 420: Selection procedures for physical input devices*
- *Part 910: Framework for tactile and haptic interaction*
- *Part 920: Guidance on tactile and haptic interactions*

For the other parts under preparation, see Annex A.

[SIST EN ISO 9241-391:2016](https://standards.iteh.ai/catalog/standards/sist/0e5354d0-ddb9-49f2-a938-8334e91f5698/sist-en-iso-9241-391-2016)

<https://standards.iteh.ai/catalog/standards/sist/0e5354d0-ddb9-49f2-a938-8334e91f5698/sist-en-iso-9241-391-2016>