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Geometrisk produktspecifikation (GPS) – Generella begrepp och krav för mätutrustning (ISO 14978:2018)

Geometrical product specifications (GPS) – General concepts and requirements for GPS measuring equipment (ISO 14978:2018)

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Denna standard ersätter SS-EN ISO 14978:2006, utgåva 1

The European Standard EN ISO 14978:2018 has the status of a Swedish Standard. This document contains the official version of EN ISO 14978:2018.

This standard supersedes the SS-EN ISO 14978:2006, edition 1

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EUROPEAN STANDARD

EN ISO 14978

NORME EUROPÉENNE

EUROPÄISCHE NORM

December 2018

ICS 17.040.30

Supersedes EN ISO 14978:2006, EN ISO

English Version

Geometrical product specifications (GPS) - General
concepts and requirements for GPS measuring equipment
(ISO 14978:2018)

Spécification géométrique des produits (GPS)
- Concepts et exigences généraux pour les
équipements de mesure GPS (ISO 14978:2018)

Geometrische Produktspezifikation (GPS) -
Allgemeine Begriffe und Anforderungen für
GPS-Messeinrichtungen (ISO 14978:2018)

This European Standard was approved by CEN on 1 October 2018.

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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 CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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Contents

Page

European foreword	viii
Introduction	ix
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
3.1 ISO/IEC Guide 99:2007 terms.....	2
3.2 Synonym terms to ISO/IEC Guide 99:2007 terms.....	2
3.3 ISO/IEC Guide 98-4:2012 terms	3
3.4 ISO 14253-5:2015 terms.....	3
3.5 Terms related to GPS measuring equipment.....	3
4 Abbreviations	10
5 Design characteristics	10
5.1 General	10
5.1.1 Importance of design characteristics	10
5.1.2 Standards for measuring equipment.....	11
5.1.3 Measuring equipment — Commerce.....	11
5.1.4 Measuring equipment — Internal use in a company	11
5.2 Design characteristics for indicating measuring instruments	11
5.3 Design characteristics for material measures.....	12
6 Metrological characteristics	13
6.1 General	13
6.1.1 Importance of metrological characteristics.....	13
6.1.2 Standards for measuring equipment.....	13
6.1.3 Identification, definition and choice of metrological characteristics	13
6.1.4 Calibration and verification of measuring equipment.....	14
6.1.5 Calibration and verification methods.....	15
6.1.6 Measuring equipment — Commerce.....	17
6.1.7 Measuring equipment — Internal use in a company	17
6.2 Indicating measuring instruments.....	17
6.2.1 General.....	17
6.2.2 Scale interval — Resolution.....	17
6.2.3 Digital step	18
6.2.4 Error of indication	18
6.2.5 Temperature-related metrological characteristics.....	19
6.2.6 Characteristics related to measuring force	19
6.2.7 Geometry of contact element.....	19
6.2.8 Auxiliary equipment.....	19
6.3 Material measures.....	19
6.3.1 General.....	19
6.3.2 Scale interval — Resolution of reading	20
6.3.3 Form of feature characteristics	20
6.3.4 Orientation of feature characteristics	20
6.3.5 Temperature-related metrological characteristics.....	20
6.3.6 Geometrical stability.....	20
6.3.7 Other possible metrological characteristics.....	20
7 Specification and presentation of metrological characteristics	21
7.1 General	21
7.2 Specification of metrological characteristics.....	21
7.2.1 General.....	21
7.2.2 Constant value MPE function	21
7.2.3 Proportional value MPE function	22
7.2.4 Proportional and maximum value MPE function.....	23

7.3	Presentation of characteristic curves	24
7.3.1	General.....	24
7.3.2	Presentation of characteristic curves – Reference point.....	24
8	Calibration of metrological characteristics	26
8.1	Manufacturer and supplier of measuring equipment.....	26
8.2	User of measuring equipment.....	26
8.3	Measurement uncertainty	26
9	Marking.....	27
10	GPS standards for specific measuring equipment	27
Annex A (normative) General minimum requirements and guidance for clauses in GPS standards for specific measuring equipment.....		28
Annex B (informative) Data sheet for measuring equipment requirements		31
Annex C (normative) Common design characteristics.....		33
Annex D (informative) Test uncertainty		39
Annex E (informative) Relation to the GPS matrix model.....		41
Bibliography		43

European foreword

This document (EN ISO 14978:2018) has been prepared by Technical Committee ISO/TC 213 "Dimensional and geometrical product specifications and verification" in collaboration with Technical Committee CEN/TC 290 "Dimensional and geometrical product specification and verification" the secretariat of which is held by AFNOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by June 2019, and conflicting national standards shall be withdrawn at the latest by June 2019.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

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Endorsement notice

The text of ISO 14978:2018 has been approved by CEN as EN ISO 14978:2018 without any modification.

Introduction

This document is a geometrical product specification (GPS) standard and is to be regarded as a general GPS standard (see ISO 14638). It influences chain links F and G for measuring equipment and calibration in the general GPS matrix model (see [Annex E](#)).

The ISO/GPS matrix model given in ISO 14638 gives an overview of the ISO/GPS system of which this document is a part. The fundamental rules of ISO/GPS given in ISO 8015 apply to this document and the default decision rules given in ISO 14253-1 apply to specifications made in accordance with this document, unless otherwise indicated; see ISO/TR 14253-6 for additional information on the selection of alternative decision rules.

For more detailed information of the relation of this document to other standards and the GPS matrix model, see [Annex E](#).

This document contains guidance for writing the standards for specific GPS measuring equipment.

This document is intended to give the user a basic understanding of the use of ISO standards for GPS measuring equipment. This document presents and defines general concepts to be used in connection with GPS measuring equipment to avoid multiple repetitions in the ISO standards for specific GPS measuring equipment. This document is also intended as guidance for the manufacturer/supplier to evaluate and present specifications for characteristics for GPS measuring equipment.

This document is necessary when reading and using ISO standards for specific GPS measuring equipment.

Geometrical product specifications (GPS) — General concepts and requirements for GPS measuring equipment

1 Scope

This document specifies the general requirements, calibration, terms and definitions of characteristics of GPS measuring equipment, for example micrometers, callipers, gauge blocks and rotary axis form measuring instruments. This document forms the basis for standards defining and describing the design characteristics and metrological characteristics for measuring equipment and gives guidance for the development and content of standards for GPS measuring equipment.

This document is intended to ease the communication between manufacturer/supplier and customer/user and to make the specification phase of GPS measuring equipment more accurate. This document is also intended as a tool to be used in companies in the process of defining and selecting relevant characteristics for measuring equipment.

This document includes terms which are frequently used in connection with the characterization of specific measuring equipment.

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 14253-1, *Geometrical product specifications (GPS) — Inspection by measurement of workpieces and measuring equipment — Part 1: Decision rules for verifying conformity or nonconformity with specifications*

ISO 14253-5:2015, *Geometrical product specifications (GPS) — Inspection by measurement of workpieces and measuring equipment — Part 5: Uncertainty in verification testing of indicating measuring instruments*

ISO/TR 14253-6, *Geometrical product specifications (GPS) — Inspection by measurement of workpieces and measuring equipment — Part 6: Generalized decision rules for the acceptance and rejection of instruments and workpieces*

ISO/IEC Guide 98-3, *Uncertainty of measurement — Part 3: Guide to the expression of uncertainty in measurement (GUM:1995)*

ISO/IEC Guide 98-4:2012, *Uncertainty of measurement — Part 4: Role of measurement uncertainty in conformity assessment*

ISO/IEC Guide 99:2007, *International vocabulary of metrology — Basic and general concepts and associated terms (VIM)*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO/IEC Guide 99:2007, ISO/IEC Guide 98-4:2012, ISO 14253-1, ISO 14253-5:2015, ISO/TR 14253-6 and the following 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/>