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Space engineering - Star sensor terminology and performance specification

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

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English version

Space engineering - Star sensor terminology and performance specification

Ingénierie spatiale - Specification des performances et terminologie des senseurs stellaires

Raumfahrttechnik - Terminologie und Leistungsspezifikation für Sternensensoren

This European Standard was approved by CEN on 1 March 2014.

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Foreword

This document (EN 16603-60-20:2014) has been prepared by Technical Committee CEN/CLC/TC 5 “Space”, the secretariat of which is held by DIN.

This standard (EN 16603-60-20:2014) originates from ECSS-E-ST-60-20C Rev. 1.

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of an identical text or by endorsement, at the latest by March 2015, and conflicting national standards shall be withdrawn at the latest by March 2015.

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

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

This document has been developed to cover specifically space systems and has therefore precedence over any EN covering the same scope but with a wider domain of applicability (e.g. : aerospace).

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: 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 the United Kingdom.

Introduction

In recent years there have been rapid developments in star tracker technology, in particular with a great increase in sensor autonomy and capabilities. This Standard is intended to support the variety of star sensors either available or under development.

This Standard defines the terminology and specification definitions for the performance of star trackers (in particular, autonomous star trackers). It focuses on the specific issues involved in the specification of performances of star trackers and is intended to be used as a structured set of systematic provisions.

This Standard is not intended to replace textbook material on star tracker technology, and such material is intentionally avoided. The readers and users of this Standard are assumed to possess general knowledge of star tracker technology and its application to space missions.

This document defines and normalizes terms used in star sensor performance specifications, as well as some performance assessment conditions:

- sensor components
- sensor capabilities
- sensor types
- sensor reference frames
- sensor metrics

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Scope

This Standard specifies star tracker performances as part of a space project. The Standard covers all aspects of performances, including nomenclature, definitions, and performance metrics for the performance specification of star sensors.

The Standard focuses on performance specifications. Other specification types, for example mass and power, housekeeping data, TM/TC interface and data structures, are outside the scope of this Standard.

When viewed from the perspective of a specific project context, the requirements defined in this Standard should be tailored to match the genuine requirements of a particular profile and circumstances of a project.

This standard may be tailored for the specific characteristics and constraints of a space project in conformance with ECSS-S-ST-00.

2**Normative references**

The following normative documents contain provisions which, through reference in this text, constitute provisions of this ECSS Standard. For dated references, subsequent amendments to, or revision of any of these publications, do not apply. However, parties to agreements based on this ECSS Standard are encouraged to investigate the possibility of applying the more recent editions of the normative documents indicated below. For undated references, the latest edition of the publication referred to applies.

EN reference	Reference in text	Title
EN 16601-00-01	ECSS-S-ST-00-01	ECSS system – Glossary of terms

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