

Fibre optic sensors - Part 1-1: Strain measurement -  
Strain sensors based on fibre Bragg gratings

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

See Eesti standard EVS-EN IEC 61757-1-1:2020 sisaldab Euroopa standardi EN IEC 61757-1-1:2020 ingliskeelset teksti.	This Estonian standard EVS-EN IEC 61757-1-1:2020 consists of the English text of the European standard EN IEC 61757-1-1:2020.
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English Version

**Fibre optic sensors - Part 1-1: Strain measurement - Strain  
sensors based on fibre Bragg gratings  
(IEC 61757-1-1:2020)**

Capteurs fibroniques - Partie 1-1: Mesure de déformation -  
Capteurs de déformation basés sur des réseaux de Bragg à  
fibres  
(IEC 61757-1-1:2020)

Lichtwellenleitersensoren - Teil 1-1: Dehnungsmessungen -  
Dehnungssensoren basierend auf Faser-Bragg-Gitter  
(IEC 61757-1-1:2020)

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**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

## European foreword

The text of document 86C/1642/FDIS, future edition 2 of IEC 61757-1-1, prepared by SC 86C "Fibre optic systems and active devices" of IEC/TC 86 "Fibre optics" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 61757-1-1:2020.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2021-02-01
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2023-05-01

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In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60793-1-30	NOTE	Harmonized as EN 60793-1-30
IEC 60793-1-31	NOTE	Harmonized as EN IEC 60793-1-31
IEC 60793-1-33	NOTE	Harmonized as EN 60793-1-33
ISO 527-4	NOTE	Harmonized as EN ISO 527-4
ISO 7500-1	NOTE	Harmonized as EN ISO 7500-1
ISO 14125	NOTE	Harmonized as EN ISO 14125

## Annex ZA

(normative)

### Normative references to international publications with their corresponding European publications

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.

NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: [www.cenelec.eu](http://www.cenelec.eu).

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60050	series	International Electrotechnical Vocabulary	-	-
IEC 60068-2	series	Environmental testing - Part 2: Tests	EN 60068-2	series
IEC 60793-2	-	Optical fibres - Part 2: Product specifications - General	EN IEC 60793-2	-
IEC 60793-2-50	-	Optical fibres - Part 2-50: Product specifications - Sectional specification for class B single-mode fibres	EN IEC 60793-2-50	-
IEC 61300-2	series	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2: Tests	EN 61300-2	series
IEC 61754	series	Fibre optic interconnecting devices and passive components - Fibre optic connector interfaces	EN 61754	series
IEC 61757	-	Fibre optic sensors - Generic specification	EN IEC 61757	-
IEC/TR 61931	-	Fibre optic - Terminology	-	-
IEC 62129-1	-	Calibration of wavelength/optical frequency measurement instruments - Part 1: Optical spectrum analyzers	EN 62129-1	-
IEC 62129-2	-	Calibration of wavelength/optical frequency measurement instruments - Part 2: Michelson interferometer single wavelength meters	EN 62129-2	-
IEC 62129-3	-	Calibration of wavelength/optical frequency measurement instruments - Part 3: Optical frequency meters internally referenced to a frequency comb	EN IEC 62129-3	-

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
ISO/IEC Guide 99	-	International vocabulary of metrology - - Basic and general concepts and associated terms (VIM)		-

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**FIBRE OPTIC SENSORS –****Part 1-1: Strain measurement –  
Strain sensors based on fibre Bragg gratings****FOREWORD**

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International Standard IEC 61757-1-1 has been prepared by subcommittee SC 86C: Fibre optic systems and active devices, of IEC technical committee 86: Fibre optics.

This second edition cancels and replaces the first edition published in 2016. This edition constitutes a technical revision.

This edition includes the following technical changes with respect to the previous edition:

- a) update of cited standards;
- b) clarification of definitions and test specifications.

The text of this International Standard is based on the following documents:

FDIS	Report on voting
86C/1642/FDIS	86C/1650/RVD

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts in the IEC 61757 series, published under the general title *Fibre optic sensors*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the document will be

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## INTRODUCTION

The IEC 61757 series is published with the following logic: the sub-parts are numbered as IEC 61757-*M-T*, where *M* denotes the measure and *T*, the technology.

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