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Fibre optic sensors - Part 3-2: Acoustic sensing and vibration measurement - Distributed sensing

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

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**Fibre optic sensors - Part 3-2: Acoustic sensing and vibration
measurement - Distributed sensing
(IEC 61757-3-2:2022)**

Capteurs fibroniques - Partie 3-2: Détection acoustique et
mesure des vibrations - Détections réparties
(IEC 61757-3-2:2022)

Lichtwellenleitersensoren - Teil 3-2: Akustische Sensorik
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(IEC 61757-3-2:2022)

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EN IEC 61757-3-2:2022 (E)**European foreword**

The text of document 86C/1700/CDV, future edition 1 of IEC 61757-3-2, 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 61757-3-2:2022.

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IEC 60869-1 NOTE Harmonized as EN IEC 60869-1

Annex ZA (normative)

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<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61757	2018	Fibre optic sensors - Generic specification	EN IEC 61757	2018
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INTERNATIONAL STANDARD

NORME INTERNATIONALE



**Fibre optic sensors –
Part 3-2: Acoustic sensing and vibration measurement – Distributed sensing**

**Capteurs fibroniques –
Partie 3-2: Détection acoustique et mesure des vibrations – Détections réparties**



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Edition 1.0 2022-03

INTERNATIONAL STANDARD

NORME INTERNATIONALE



**Fibre optic sensors –
Part 3-2: Acoustic sensing and vibration measurement – Distributed sensing**

**Capteurs fibroniques –
Partie 3-2: Détection acoustique et mesure des vibrations – Détections réparties**

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FIBRE OPTIC SENSORS –

**Part 3-2: Acoustic sensing and vibration measurement –
Distributed sensing**

FOREWORD

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

Draft	Report on voting
86C/1700/CDV	86C/1719/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/standardsdev/publications.

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INTRODUCTION

This document is based on SEAFOM Measuring Sensor Performance Document – 02 (SEAFOM MSP-02) [1]¹. Within the framework of a type C liaison, SEAFOM proposed this document as a new work item, which was approved by the participating members of IEC SC 86C.

NOTE Except for Figure 1, Figure C.1, Figure C.2, and Figure C.3, all figures in this document were adopted from SEAFOM MSP-02 either in original or in modified form with permission from SEAFOM.

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¹ Numbers in square brackets refer to the Bibliography.

FIBRE OPTIC SENSORS –

Part 3-2: Acoustic sensing and vibration measurement – Distributed sensing

1 Scope

This part of IEC 61757 specifies the terminology, characteristic performance parameters, related test and calculation methods, as well as specific test equipment for interrogation units used in distributed fibre optic acoustic sensing and vibration measurement systems. This document refers to the Rayleigh backscatter and phase detection method by phase-sensitive coherent optical time-domain reflectometry (ϕ -OTDR) only. Quasi-static and low frequency operation modes are not covered by this document.

Generic specifications for fibre optic sensors are defined in IEC 61757.

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.

IEC 61757:2018, *Fibre optic sensors – Generic specification*

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