



**NSAI**  
Standards

Irish Standard  
I.S. EN IEC 61300-2-56:2020

Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-56: Tests - Wind resistance of mounted housing

**I.S. EN IEC 61300-2-56:2020**

*Incorporating amendments/corrigenda/National Annexes issued since publication:*

The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

I.S. xxx: Irish Standard — national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation — recommendation based on the consensus of an expert panel and subject to public consultation.

SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

*This document replaces/revises/consolidates the NSAI adoption of the document(s) indicated on the CEN/CENELEC cover/Foreword and the following National document(s):*

*NOTE: The date of any NSAI previous adoption may not match the date of its original CEN/CENELEC document.*

*This document is based on:*

EN IEC 61300-2-56:2020

*Published:*

2020-10-09

*This document was published under the authority of the NSAI and comes into effect on:*

2020-10-26

ICS number:

NOTE: If blank see CEN/CENELEC cover page

NSAI  
1 Swift Square,  
Northwood, Santry  
Dublin 9

T +353 1 807 3800  
F +353 1 807 3838  
E standards@nsai.ie  
W NSAI.ie

Sales:  
T +353 1 857 6730  
F +353 1 857 6729  
W standards.ie

Údarás um Chaighdeáin Náisiúnta na hÉireann

## National Foreword

I.S. EN IEC 61300-2-56:2020 is the adopted Irish version of the European Document EN IEC 61300-2-56:2020, Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-56: Tests - Wind resistance of mounted housing

This document does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

For relationships with other publications refer to the NSAI web store.

**Compliance with this document does not of itself confer immunity from legal obligations.**

*In line with international standards practice the decimal point is shown as a comma (,) throughout this document.*

This page is intentionally left blank

EUROPEAN STANDARD

**EN IEC 61300-2-56**

NORME EUROPÉENNE

EUROPÄISCHE NORM

October 2020

---

ICS 33.180.20

English Version

**Fibre optic interconnecting devices and passive components -  
Basic test and measurement procedures - Part 2-56: Tests -  
Wind resistance of mounted housing  
(IEC 61300-2-56:2020)**

Dispositifs d'interconnexion et composants passifs  
fibroniques - Procédures fondamentales d'essais et de  
mesures - Partie 2-56: Essais - Résistance au vent des  
boîtiers installés  
(IEC 61300-2-56:2020)

Lichtwellenleiter - Verbindungselemente und passive  
Bauteile - Grundlegende Prüf- und Messverfahren - Teil 2-  
56: Prüfungen - Windfestigkeit von angebauten Gehäusen  
(IEC 61300-2-56:2020)

This European Standard was approved by CENELEC on 2020-09-22. CENELEC 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.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CENELEC member.

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

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



European Committee for Electrotechnical Standardization  
Comité Européen de Normalisation Electrotechnique  
Europäisches Komitee für Elektrotechnische Normung

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

---

## **EN IEC 61300-2-56:2020 (E)**

### **European foreword**

The text of document 86B/4300/FDIS, future edition 1 of IEC 61300-2-56, prepared by SC 86B "Fibre optic interconnecting devices and passive components" of IEC/TC 86 "Fibre optics" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 61300-2-56:2020.

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) 2021-06-22
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2023-09-22

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

### **Endorsement notice**

The text of the International Standard IEC 61300-2-56:2020 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following note has to be added for the standard indicated:

IEC 61753-1    NOTE    Harmonized as EN IEC 61753-1

## 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 61300-1	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 1: General and guidance	EN 61300-1	-
IEC 61300-3-1	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-1: Examinations and measurements - Visual examination	EN 61300-3-1	-

This page is intentionally left blank





**IEC 61300-2-56**

Edition 1.0 2020-08

# **INTERNATIONAL STANDARD**

# **NORME INTERNATIONALE**

---

**Fibre optic interconnecting devices and passive components – Basic test and measurement procedures –  
Part 2-56: Tests – Wind resistance of mounted housing**

**Dispositifs d'interconnexion et composants passifs fibroniques – Procédures fondamentales d'essais et de mesures –  
Partie 2-56: Essais – Résistance au vent des boîtiers installés**





## THIS PUBLICATION IS COPYRIGHT PROTECTED

Copyright © 2020 IEC, Geneva, Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either IEC or IEC's member National Committee in the country of the requester. If you have any questions about IEC copyright or have an enquiry about obtaining additional rights to this publication, please contact the address below or your local IEC member National Committee for further information.

Droits de reproduction réservés. Sauf indication contraire, aucune partie de cette publication ne peut être reproduite ni utilisée sous quelque forme que ce soit et par aucun procédé, électronique ou mécanique, y compris la photocopie et les microfilms, sans l'accord écrit de l'IEC ou du Comité national de l'IEC du pays du demandeur. Si vous avez des questions sur le copyright de l'IEC ou si vous désirez obtenir des droits supplémentaires sur cette publication, utilisez les coordonnées ci-après ou contactez le Comité national de l'IEC de votre pays de résidence.

IEC Central Office  
3, rue de Varembe  
CH-1211 Geneva 20  
Switzerland

Tel.: +41 22 919 02 11  
[info@iec.ch](mailto:info@iec.ch)  
[www.iec.ch](http://www.iec.ch)

### About the IEC

The International Electrotechnical Commission (IEC) is the leading global organization that prepares and publishes International Standards for all electrical, electronic and related technologies.

### About IEC publications

The technical content of IEC publications is kept under constant review by the IEC. Please make sure that you have the latest edition, a corrigendum or an amendment might have been published.

#### IEC publications search - [webstore.iec.ch/advsearchform](http://webstore.iec.ch/advsearchform)

The advanced search enables to find IEC publications by a variety of criteria (reference number, text, technical committee,...). It also gives information on projects, replaced and withdrawn publications.

#### IEC Just Published - [webstore.iec.ch/justpublished](http://webstore.iec.ch/justpublished)

Stay up to date on all new IEC publications. Just Published details all new publications released. Available online and once a month by email.

#### IEC Customer Service Centre - [webstore.iec.ch/csc](http://webstore.iec.ch/csc)

If you wish to give us your feedback on this publication or need further assistance, please contact the Customer Service Centre: [sales@iec.ch](mailto:sales@iec.ch).

#### Electropedia - [www.electropedia.org](http://www.electropedia.org)

The world's leading online dictionary on electrotechnology, containing more than 22 000 terminological entries in English and French, with equivalent terms in 16 additional languages. Also known as the International Electrotechnical Vocabulary (IEV) online.

#### IEC Glossary - [std.iec.ch/glossary](http://std.iec.ch/glossary)

67 000 electrotechnical terminology entries in English and French extracted from the Terms and Definitions clause of IEC publications issued since 2002. Some entries have been collected from earlier publications of IEC TC 37, 77, 86 and CISPR.

### A propos de l'IEC

La Commission Electrotechnique Internationale (IEC) est la première organisation mondiale qui élabore et publie des Normes internationales pour tout ce qui a trait à l'électricité, à l'électronique et aux technologies apparentées.

### A propos des publications IEC

Le contenu technique des publications IEC est constamment revu. Veuillez vous assurer que vous possédez l'édition la plus récente, un corrigendum ou amendement peut avoir été publié.

#### Recherche de publications IEC -

##### [webstore.iec.ch/advsearchform](http://webstore.iec.ch/advsearchform)

La recherche avancée permet de trouver des publications IEC en utilisant différents critères (numéro de référence, texte, comité d'études,...). Elle donne aussi des informations sur les projets et les publications remplacées ou retirées.

#### IEC Just Published - [webstore.iec.ch/justpublished](http://webstore.iec.ch/justpublished)

Restez informé sur les nouvelles publications IEC. Just Published détaille les nouvelles publications parues. Disponible en ligne et une fois par mois par email.

#### Service Clients - [webstore.iec.ch/csc](http://webstore.iec.ch/csc)

Si vous désirez nous donner des commentaires sur cette publication ou si vous avez des questions contactez-nous: [sales@iec.ch](mailto:sales@iec.ch).

#### Electropedia - [www.electropedia.org](http://www.electropedia.org)

Le premier dictionnaire d'électrotechnologie en ligne au monde, avec plus de 22 000 articles terminologiques en anglais et en français, ainsi que les termes équivalents dans 16 langues additionnelles. Egalement appelé Vocabulaire Electrotechnique International (IEV) en ligne.

#### Glossaire IEC - [std.iec.ch/glossary](http://std.iec.ch/glossary)

67 000 entrées terminologiques électrotechniques, en anglais et en français, extraites des articles Termes et Définitions des publications IEC parues depuis 2002. Plus certaines entrées antérieures extraites des publications des CE 37, 77, 86 et CISPR de l'IEC.



**IEC 61300-2-56**

Edition 1.0 2020-08

# **INTERNATIONAL STANDARD**

# **NORME INTERNATIONALE**

---

**Fibre optic interconnecting devices and passive components – Basic test and measurement procedures –  
Part 2-56: Tests – Wind resistance of mounted housing**

**Dispositifs d'interconnexion et composants passifs fibroniques – Procédures fondamentales d'essais et de mesures –  
Partie 2-56: Essais – Résistance au vent des boîtiers installés**

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

COMMISSION  
ELECTROTECHNIQUE  
INTERNATIONALE

---

ICS 33.180.20

ISBN 978-2-8322-8731-6

**Warning! Make sure that you obtained this publication from an authorized distributor.  
Attention! Veuillez vous assurer que vous avez obtenu cette publication via un distributeur agréé.**

## CONTENTS

FOREWORD.....	4
INTRODUCTION.....	6
1 Scope.....	7
2 Normative references .....	7
3 Terms and definitions .....	7
4 General description .....	7
5 Apparatus.....	8
5.1 Loading method .....	8
5.1.1 General .....	8
5.1.2 Method for pole-mounted housing.....	8
5.1.3 Method for ground-mounted housing.....	11
5.2 Force generator .....	11
5.3 Force gauge .....	12
5.4 Holding fixture .....	12
5.5 Force applying device.....	12
5.6 Timer .....	12
6 Procedure.....	12
6.1 General.....	12
6.2 Pre-conditioning.....	12
6.3 Initial examination.....	12
6.4 Mounting DUT.....	12
6.5 Conditioning.....	13
6.6 Recovery .....	13
6.7 Final examination.....	13
7 Severity.....	13
8 Details to be specified .....	14
Annex A (normative) Testing pole-mounted protective housings with vertical load application .....	15
A.1 General.....	15
A.2 Method for pole-mounted housing with vertical load application .....	15
A.3 Severities.....	16
Annex B (informative) Calculation of force resulting from wind load .....	17
B.1 Formula of force resulting from wind load.....	17
B.2 Example of force calculation .....	17
B.3 Calculation of factor for frontal load application of pole-mounted housing .....	18
B.4 Calculation of factor for lateral load application of pole-mounted housing .....	19
B.5 Calculation of factor for vertical load application of pole-mounted housing .....	20
B.6 Calculation of factor for frontal load application of ground-mounted housing .....	20
B.7 Calculation of factor for lateral load application of ground-mounted housing .....	20
Bibliography.....	21
Figure 1 – Dimensions of pole-mounted and ground-mounted housing.....	8
Figure 2 – Side view of frontal load application .....	9
Figure 3 – Front view of frontal load application .....	9
Figure 4 – Side view of lateral load application .....	10

Figure 5 – Front view of lateral load application .....	10
Figure 6 – Isometric view of frontal load application .....	11
Figure 7 – Isometric view of lateral load application .....	11
Figure A.1 – Side view of vertical load application .....	15
Figure A.2 – Front view of vertical load application .....	16
Figure B.1 – Worst-case situation for frontal load application .....	18
Figure B.2 – Model with wind load on one side only .....	18
Figure B.3 – Model for calculation of $F_T$ from $F_R$ .....	19
Table 1 – Recommended severity values for pole-mounted housing.....	13
Table 2 – Recommended severity values for ground-mounted housing .....	14
Table A.1 – Recommended severity value for pole-mounted housing and vertical load application .....	16
Table B.1 – Examples of drag coefficients .....	17

## INTERNATIONAL ELECTROTECHNICAL COMMISSION

---

**FIBRE OPTIC INTERCONNECTING  
DEVICES AND PASSIVE COMPONENTS –  
BASIC TEST AND MEASUREMENT PROCEDURES –**
**Part 2-56: Tests – Wind resistance of mounted housing**

## FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 61300-2-56 has been prepared by subcommittee 86B: Fibre optic interconnecting devices and passive components, of IEC technical committee 86: Fibre optics.

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

FDIS	Report on voting
86B/4300/FDIS	86B/4325/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 61300 series, published under the general title *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures*, 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

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

## INTRODUCTION

Outdoor protective housings are exposed to wind load. The housing fixings should be able to withstand the force of the wind without damage to or movement of the housing or its fixings. The method defined in this document provides reproducible conditions for testing the wind resistance of protective housings and their mounting hardware, either pole-mounted or ground-mounted, in two different horizontal directions (frontal and lateral). Additionally, the conditions for optional testing the wind resistance of pole-mounted protective housings in vertical direction are given.

Depending on the installation and the location, the wind speed can be very different. Even in the same geographic location, the wind speed can vary considerably with height above the ground (e.g. at the top of a mast). Recommended severities are included in this document and considered as a minimum.

Annex A provides reproducible conditions for testing the wind resistance of pole-mounted protective housings in vertical direction.

Annex B provides information for the calculation of the resulting force on the protective housing from wind load.



## **FIBRE OPTIC INTERCONNECTING DEVICES AND PASSIVE COMPONENTS – BASIC TEST AND MEASUREMENT PROCEDURES –**

### **Part 2-56: Tests – Wind resistance of mounted housing**

#### **1 Scope**

This part of IEC 61300 describes the test procedure to test the wind resistance of a protective housing and its mounting hardware using the fastening parts recommended by the manufacturer. The protective housing is considered to have a cuboid shape.

The applied force in this test procedure simulates a steady wind load from each direction to a protective housing and its mounting hardware fixed to a support.

#### **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 61300-1, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 1: General and guidance*

IEC 61300-3-1, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 3-1: Examinations and measurements – Visual examination*

#### **3 Terms and definitions**

For the purpose of this document, the terms and definitions given in IEC 61300-1 apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

#### **4 General description**

The device under test (DUT) is a protective housing and its mounting hardware fixed to a support using the fastening parts recommended by the manufacturer. A force is applied to the DUT at the specified rate until the required load has been reached. The load shall be applied during the specified period.

Two different installation types are considered: pole and ground mounting.

The acceptance criteria for the test shall be stated in the relevant specification. Typical failure modes include cracks, permanent deformation or other damage of the housing and fastening parts as well as movement of the housing in relation to its initial position on the pole or on the ground.

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

- 
- [Looking for additional Standards? Visit Intertek Inform Infostore](#)
  - [Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation](#)
-