



**BSI Standards Publication**

## **Fibre-optic communication subsystem test procedures**

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Part 4-1: Installed cabling plant — Multimode attenuation measurement

## National foreword

This British Standard is the UK implementation of EN IEC 61280-4-1:2019. It is identical to IEC 61280-4-1:2019, incorporating corrigendum April 2020. It supersedes BS EN 61280-4-1:2009, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee GEL/86/3, Fibre optic systems and active devices.

A list of organizations represented on this committee can be obtained on request to its secretary.

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31 May 2020	Implementation of IEC corrigendum April 2020: last paragraph of I.4.1 replaced

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Supersedes EN 61280-4-1:2009 and all of its  
amendments and corrigenda (if any)

English Version

**Fibre-optic communication subsystem test procedures - Part 4-1:  
Installed cabling plant - Multimode attenuation measurement  
(IEC 61280-4-1:2019)**

Procédures d'essai des sous-systèmes de  
télécommunication fibroniques - Partie 4-1: Installation  
câblée - Mesure de l'affaiblissement en multimodal  
(IEC 61280-4-1:2019)

Prüfverfahren für Lichtwellenleiter-  
Kommunikationsuntersysteme - Teil 4-1: Lichtwellenleiter-  
Kabelanlagen - Mehrmoden-Dämpfungsmessungen  
(IEC 61280-4-1:2019)

This European Standard was approved by CENELEC on 2019-06-26. 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.

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European Committee for Electrotechnical Standardization  
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Europäisches Komitee für Elektrotechnische Normung

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

**European foreword**

The text of document 86C/1575/FDIS, future edition 3 of IEC 61280-4-1, 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 61280-4-1:2019.

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) 2020-03-26
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2022-06-26

This document supersedes EN 61280-4-1:2009 and all of its amendments and corrigenda (if any)

This edition constitutes a technical revision including the following significant technical changes with respect to the previous edition:

- a) changes to Annex F on encircled flux to harmonise with IEC TR 62614-2, but keeping the encircled flux limits defined in Tables F.2 to F.5 unchanged;
- b) addition of an equipment cord method in Annex D;
- c) inclusion of testing bend insensitive multimode optical fibre;
- d) updates to measurement uncertainty;
- e) definition of additional cabling configurations;
- f) changes to Table 5 on spectral requirements.

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 61280-4-1:2019 was approved by CENELEC as a European Standard without any modification.

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

IEC 60793-1-40	NOTE	Harmonized as EN IEC 60793-1-40
IEC 60793-2	NOTE	Harmonized as EN 60793-2
IEC 60793-2-10	NOTE	Harmonized as EN 60793-2-10
IEC 60793-2-50	NOTE	Harmonized as EN IEC 60793-2-50
IEC 60794-2-21	NOTE	Harmonized as EN IEC 60794-2-21
IEC 61300-3-6	NOTE	Harmonized as EN 61300-3-6
IEC 61300-3-45	NOTE	Harmonized as EN 61300-3-45
IEC 61745	NOTE	Harmonized as EN 61745
IEC 61755-6-2	NOTE	Harmonized as EN IEC 61755-6-2
IEC 62664-1-1	NOTE	Harmonized as EN 62664-1-1
IEC 62614:2010	NOTE	Harmonized as EN 62614:2010 (not modified)

## 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 60825-2	-	Safety of laser products - Part 2: Safety of optical fibre communication systems (OFCS)	EN 60825-2	-
IEC 61280-1-3	-	Fibre optic communication subsystem test procedures - Part 1-3: General communication subsystems - Central wavelength and spectral width measurement	EN 61280-1-3	-
IEC 61280-1-4	-	Fibre optic communication subsystem test procedures - Part 1-4: General communication subsystems - Light source encircled flux measurement method	EN 61280-1-4	-
IEC 61300-3-35	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-35: Examinations and measurements - Visual inspection of fibre optic connectors and fibre-stub transceivers	EN 61300-3-35	-
IEC 61315	-	Calibration of fibre-optic power meters	EN IEC 61315	-
IEC 61746-2	-	Calibration of optical time-domain reflectometers (OTDR) - Part 2: OTDR for multimode fibres	EN 61746-2	-



## CONTENTS

FOREWORD .....	7
1 Scope .....	9
2 Normative references .....	9
3 Terms, definitions, graphical symbols and abbreviated terms.....	9
3.1 Terms and definitions.....	10
3.2 Graphical symbols .....	12
3.3 Abbreviated terms.....	14
4 Test methods.....	14
4.1 General.....	14
4.2 Cabling configurations and applicable test methods .....	15
5 Overview of uncertainties .....	17
5.1 General.....	17
5.2 Sources of significant uncertainties.....	17
5.3 Consideration of the PM.....	18
5.4 Consideration of test cord connector grade .....	18
5.5 Typical uncertainty values.....	18
6 Apparatus.....	19
6.1 General.....	19
6.2 Light source .....	19
6.2.1 Stability .....	19
6.2.2 Spectral characteristics (LSPM measurement).....	19
6.3 Launch cord .....	20
6.4 Receive or tail cord .....	20
6.5 Substitution cord .....	21
6.6 Power meter – LSPM methods only.....	21
6.7 OTDR apparatus .....	21
6.8 Connector end face cleaning and inspection equipment .....	22
6.9 Adapters .....	22
7 Procedures .....	22
7.1 General.....	22
7.2 Common procedures .....	22
7.2.1 Care of the test cords .....	22
7.2.2 Make reference measurements (LSPM methods only).....	22
7.2.3 Inspect and clean the ends of the optical fibres in the cabling.....	22
7.2.4 Make the measurements.....	23
7.2.5 Make the calculations .....	23
7.2.6 Duplex and bi-directional testing.....	23
7.3 Calibration .....	23
7.4 Safety .....	23
8 Calculations.....	23
9 Documentation .....	23
9.1 Information for each test .....	23
9.2 Information to be available .....	24
Annex A (normative) One-cord method .....	25
A.1 Applicability of test method .....	25

A.2	Apparatus .....	25
A.3	Procedure .....	25
A.4	Calculation .....	26
A.5	Components of reported attenuation .....	26
Annex B	(normative) Three-cord method .....	27
B.1	Applicability of test method .....	27
B.2	Apparatus .....	27
B.3	Procedure .....	27
B.4	Calculations .....	28
B.5	Components of reported attenuation .....	28
Annex C	(normative) Two-cord method .....	29
C.1	Applicability of test method .....	29
C.2	Apparatus .....	29
C.3	Procedure .....	29
C.4	Calculations .....	30
C.5	Components of reported attenuation .....	30
Annex D	(normative) Equipment cord method .....	32
D.1	Applicability of the test method .....	32
D.2	Apparatus .....	32
D.3	Procedure .....	32
D.4	Calculation .....	33
D.5	Components of reported attenuation .....	33
D.6	Typical uncertainty values .....	34
Annex E	(normative) Optical time domain reflectometer .....	35
E.1	Applicability of the test method .....	35
E.2	Apparatus .....	35
E.2.1	General .....	35
E.2.2	OTDR .....	35
E.2.3	Test cords .....	35
E.3	Procedure (test method) .....	36
E.4	Calculation .....	37
E.4.1	General .....	37
E.4.2	Connection location .....	37
E.4.3	Definition of power levels $F_1$ and $F_2$ .....	38
E.4.4	Alternative calculation .....	38
E.5	OTDR uncertainties .....	40
Annex F	(normative) Requirements for the source characteristics .....	42
F.1	Encircled flux .....	42
F.2	Assumptions and limitations .....	42
F.3	Encircled flux templates .....	42
F.3.1	General .....	42
F.3.2	Uncertainties expectations .....	43
F.3.3	Templates .....	43
F.4	Graphical representation of templates .....	44
Annex G	(informative) OTDR configuration information .....	46
G.1	General .....	46
G.2	Fundamental parameters that define the operational capability of an OTDR .....	47
G.2.1	Dynamic range .....	47



G.2.2	Pulse width .....	47
G.2.3	Averaging time .....	47
G.2.4	Dead zone .....	47
G.3	Other parameters .....	47
G.3.1	Index of refraction .....	47
G.3.2	Measurement range .....	48
G.3.3	Distance sampling .....	48
G.4	Other measurement configurations .....	48
G.4.1	General .....	48
G.4.2	Macrobend or splice attenuation measurement .....	48
G.4.3	Splice attenuation measurement .....	49
G.4.4	Measurement with high reflection connectors or short length cabling .....	49
G.4.5	Ghost .....	51
G.5	More on the measurement method .....	52
G.6	Bi-directional measurement .....	53
G.7	Non-recommended practices .....	54
G.7.1	Measurement without tail test cord .....	54
G.7.2	Cursor measurement .....	54
Annex H (informative)	Test cord attenuation verification .....	55
H.1	General .....	55
H.2	Apparatus .....	55
H.3	Procedure .....	55
H.3.1	General .....	55
H.3.2	Test cord verification for the one-cord and two-cord methods when using non-pinned/unpinned and non-plug/socket style connectors .....	56
H.3.3	Test cord verification for the one-cord and two-cord methods when using pinned/unpinned or plug/socket style connectors .....	57
H.3.4	Test cord verification for the three-cord method when using non-pinned/unpinned and non-plug/socket style connectors .....	59
H.3.5	Test cord verification for the three-cord method when using pinned/unpinned or plug/socket style connectors .....	61
Annex I (normative)	On the use of reference-grade test cords .....	63
I.1	General .....	63
I.2	Practical configurations and assumptions .....	63
I.2.1	Component specifications .....	63
I.2.2	Conventions .....	64
I.2.3	Reference planes .....	64
I.3	Impact of using reference grade test cords for recommended LSPM methods .....	64
I.4	Examples for LSPM measurements .....	65
I.4.1	Example 1 (configuration A, 1-C method – Annex A) .....	65
I.4.2	Example 2 (configuration D, EC method – Annex D) .....	65
I.5	Impact of using reference-grade test cords for different configurations using the OTDR test method .....	66
I.5.1	Cabling configurations A, B and C .....	66
I.5.2	Cabling configuration D .....	67
Annex J (informative)	Launch cord output near-field verification .....	69
J.1	Direct verification .....	69
J.2	Test equipment manufacturer verification .....	69
J.3	Field check with physical artefact .....	69
J.3.1	General .....	69

J.3.2	Procedure for attenuation characterization of artefacts .....	71
J.3.3	Construction details .....	71
J.3.4	Example results .....	72
Bibliography.....		76
Figure 1	– Connector symbols .....	13
Figure 2	– Symbol for cabling under test.....	13
Figure 3	– Reference plane for configuration A tested with the 1-cord method .....	16
Figure 4	– Reference plane for configuration B tested with the 3-cord method .....	16
Figure 5	– Reference plane for configuration C tested with the 2-cord method .....	17
Figure 6	– Reference plane for configuration D tested with the EC method .....	17
Figure 7	– OTDR schematic.....	21
Figure A.1	– Reference measurement.....	26
Figure A.2	– Test measurement.....	26
Figure B.1	– Reference measurement.....	27
Figure B.2	– Test measurement.....	28
Figure C.1	– Reference measurement.....	29
Figure C.2	– Test measurement.....	30
Figure C.3	– Test measurement for plug-socket style connectors.....	30
Figure D.1	– Reference measurement.....	33
Figure D.2	– Test measurement.....	33
Figure E.1	– OTDR method.....	36
Figure E.2	– Location of the ports of the cabling under test.....	37
Figure E.3	– Graphic construction of $F_1$ and $F_2$ .....	38
Figure E.4	– Graphic construction of $F_1$ , $F_{11}$ , $F_{12}$ and $F_2$ .....	40
Figure F.1	– Encircled flux example .....	45
Figure G.1	– Splice and macrobend attenuation measurement.....	49
Figure G.2	– Attenuation measurement with high reflection connectors.....	50
Figure G.3	– Attenuation measurement of a short length cabling.....	51
Figure G.4	– OTDR trace with ghost .....	52
Figure G.5	– Cursor positioning .....	53
Figure H.1	– Obtaining reference power level $P_0$ .....	57
Figure H.2	– Obtaining power level $P_1$ .....	57
Figure H.3	– Obtaining reference power level $P_0$ .....	58
Figure H.4	– Obtaining power level $P_1$ .....	58
Figure H.5	– Obtaining reference power level $P_0$ .....	59
Figure H.6	– Obtaining power level .....	59
Figure H.7	– Obtaining reference power level $P_0$ .....	60
Figure H.8	– Obtaining power level $P_1$ .....	60
Figure H.9	– Obtaining power level $P_5$ .....	61
Figure H.10	– Obtaining reference power level $P_0$ .....	62