

BS EN 60794-2-41:2008



BSI British Standards

Optical fibre cables —

Part 2-41: Indoor cables – Product specification
for simplex and duplex buffered A4 fibres

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National foreword

This British Standard is the UK implementation of EN 60794-2-41:2008. It is identical to IEC 60794-2-41:2008.

The UK participation in its preparation was entrusted by Technical Committee GEL/86, Fibre optics, to Subcommittee GEL/86/1, Optical fibres and cables.

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

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Compliance with a British Standard cannot confer immunity from legal obligations.

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EN 60794-2-41

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English version

**Optical fibre cables -
Part 2-41: Indoor cables -
Product specification for simplex and duplex buffered A4 fibres
(IEC 60794-2-41:2008)**

Câbles à fibres optiques -
Partie 2-41: Câbles intérieurs -
Spécification de produit pour câbles
simplex et duplex munis de fibres A4
sous revêtement protecteur
(CEI 60794-2-41:2008)

Lichtwellenleiterkabel -
Teil 2-41: Innenkabel -
Produktspezifikation für ummantelte
Simplex- und Duplexfasern
der Kategorie A4
(IEC 60794-2-41:2008)

This European Standard was approved by CENELEC on 2008-08-01. 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.

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CENELEC

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

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Foreword

The text of document 86A/1215/FDIS, future edition 1 of IEC 60794-2-41, prepared by SC 86A, Fibres and cables, of IEC TC 86, Fibre optics, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60794-2-41 on 2008-08-01.

This standard is to be used in conjunction with EN 60794-1-1 and EN 60794-1-2, and EN 60794-2. A blank detail specification is provided in Annex A.

The following dates were fixed:

- latest date by which the EN has to be implemented
at national level by publication of an identical
national standard or by endorsement (dop) 2009-05-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2011-08-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 60794-2-41:2008 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 60654	NOTE	Harmonized in EN 60654 series (not modified).
IEC 60654-4	NOTE	Harmonized as EN 60654-4:1997 (not modified).
IEC 60721	NOTE	Harmonized in EN 60721 series (not modified).
IEC 60721-1	NOTE	Harmonized as EN 60721-1:1995 (not modified).
IEC 60721-3-3	NOTE	Harmonized as EN 60721-3-3:1995 (not modified).
IEC 60793-1-40	NOTE	Harmonized as EN 60793-1-40:2003 (modified).
IEC 60793-1-41	NOTE	Harmonized as EN 60793-1-41:2003 (not modified).
IEC 60794-2-40	NOTE	Harmonized as EN 60794-2-40:2008 (not modified).
IEC 61000-6-2	NOTE	Harmonized as EN 61000-6-2:2005 (not modified).
IEC 61326	NOTE	Harmonized in EN 61326 series (not modified).
IEC 61918	NOTE	Harmonized as EN 61918:2008 (modified).

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

The following referenced documents are indispensable for the application 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 When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60189-1	- ¹⁾	Low-frequency cables and wires with PVC insulation and PVC sheath - Part 1: General test and measuring methods	-	-
IEC 60793-1-20	- ¹⁾	Optical fibres - Part 1-20: Measurement methods and test procedures - Fibre geometry	EN 60793-1-20	2002 ²⁾
IEC 60793-1-21	- ¹⁾	Optical fibres - Part 1-21: Measurement methods and test procedures - Coating geometry	EN 60793-1-21	2002 ²⁾
IEC 60793-1-46	- ¹⁾	Optical fibres - Part 1-46: Measurement methods and test procedures - Monitoring of changes in optical transmittance	EN 60793-1-46	2002 ²⁾
IEC 60793-1-50	- ¹⁾	Optical fibres - Part 1-50: Measurement methods and test procedures - Damp heat (steady state)	EN 60793-1-50	2002 ²⁾
IEC 60793-1-51	- ¹⁾	Optical fibres - Part 1-51: Measurement methods and test procedures - Dry heat	EN 60793-1-51	2002 ²⁾
IEC 60793-1-52	- ¹⁾	Optical fibres - Part 1-52: Measurement methods and test procedures - Change of temperature	EN 60793-1-52	2002 ²⁾
IEC 60793-2-40	- ¹⁾	Optical fibres - Part 2-40: Product specifications - Sectional specification for category A4 multimode fibres	EN 60793-2-40	2006 ²⁾
IEC 60794-1-1	- ¹⁾	Optical fibre cables - Part 1-1: Generic specification - General	EN 60794-1-1	2002 ²⁾
IEC 60794-1-2	- ¹⁾	Optical fibre cables - Part 1-2: Generic specification - Basic optical cable test procedures	EN 60794-1-2	2003 ²⁾
IEC 60794-2	2002	Optical fibre cables - Part 2: Indoor cables - Sectional specification	EN 60794-2	2003

¹⁾ Undated reference.

²⁾ Valid edition at date of issue.

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OPTICAL FIBRE CABLES –

Part 2-41: Indoor cables – Product specification for simplex and duplex buffered A4 fibres

1 Scope

This part of IEC 60794 covers simplex and duplex buffered A4a through A4g fibres for indoor use. These may be cut into short lengths, which can be used in patchcord cable assemblies. The requirements of sectional specification IEC 60794-2 are applicable to cables covered by this standard.

2 Normative references

The following referenced documents are indispensable for the application 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 60189-1, *Low-frequency cables and wires with PVC insulation and PVC sheath – Part 1: General test and measuring methods*

IEC 60793-1-20, *Optical fibres – Part 1-20: Measurement methods and test procedures – Fibre geometry*

IEC 60793-1-21, *Optical fibres – Part 1-21: Measurement methods and test procedures – Coating geometry*

IEC 60793-1-46, *Optical fibres – Part 1-46: Measurement methods and test procedures – Monitoring of changes in optical transmittance*

IEC 60793-1-50, *Optical fibres – Part 1-50: Measurement methods and test procedures – Damp heat (steady state)*

IEC 60793-1-51, *Optical fibres – Part 1-51: Measurement methods and test procedures – Dry heat*

IEC 60793-1-52, *Optical fibres – Part 1-52: Measurement methods and test procedures – Change of temperature*

IEC 60793-2-40, *Optical fibres – Part 2-40: Product specifications – Sectional specification for category A4 multimode fibres*

IEC 60794-1-1, *Optical fibre cables – Part 1-1: Generic specification – General*

IEC 60794-1-2, *Optical fibre cables – Part 1-2: Generic specification – Basic optical cable test procedures*

IEC 60794-2:2002, *Optical fibre cables – Part 2: Indoor cables – Sectional specification*

3 Construction

3.1 General

In addition to the constructional requirements in IEC 60794-2, the following considerations apply to simplex and duplex buffered A4a through A4g fibres.

The buffered fibre shall be designed and manufactured for an expected operating lifetime of at least 15 years. In this context, the attenuation of the installed cable at the operational wavelength(s) shall not exceed values agreed between the customer and supplier. The materials in the cable shall not present a health hazard within its intended use.

There shall be no fibre splice in a delivery length unless otherwise agreed by the customer and supplier.

3.2 Optical fibres

Multimode Category A4a through A4g optical fibres shall be used that meet the requirements of IEC 60793-2-40.

3.3 Buffer

The buffer shall consist of one or more layers of inert material. For tight buffers, the buffer shall be easily removable in one operation over a length of 15 mm to 25 mm, depending on customer requirements. For semi-tight buffers, the buffer shall be easily removable over a length of 0,2 m to 2,0 m.

3.4 Strength and anti-buckling members

None.

3.5 Ripcord

None.

3.6 Sheath

None.

3.7 Marking

If required, the buffer shall be marked as agreed between the customer and supplier.

3.8 Identification

None.

3.9 Examples of constructions

Examples of buffered fibre constructions are shown in Figure 1.