



BSI Standards Publication

Connector sets and interconnect components to be used in optical fibre communication systems — Product specifications -

Part 17-1: Type FPFT (factory polished field terminated) simplex connector factory terminated with EN 60793-2-50 category B1.3 fibre and field mounted onto IEC 60793-2-50 category B1.3 or B6a_1 or B6a_2 singlemode fibre, category C

National foreword

This British Standard is the UK implementation of EN 50377-17-1:2013.

The UK participation in its preparation was entrusted to Technical Committee GEL/86/2, Fibre optic interconnecting devices and passive components.

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

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

© The British Standards Institution 2013.
Published by BSI Standards Limited 2013

ISBN 978 0 580 78809 3
ICS 33.180.20

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

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 30 November 2013.

Amendments/corrigenda issued since publication

Date	Text affected
------	---------------

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 50377-17-1

November 2013

ICS 33.180.20

English version

**Connector sets and interconnect components to be used in optical fibre communication systems -
Product specifications -
Part 17-1: Type FPFT (factory polished field terminated) simplex connector factory terminated with EN 60793-2-50 category B1.3 fibre and field mounted onto IEC 60793-2-50 category B1.3 or B6a_1 or B6a_2 singlemode fibre, category C**

Jeux de connecteurs et composants d'interconnexion à utiliser dans les systèmes de communication par fibres optiques -
Spécifications de produits -
Partie 17-1: Connecteur simplex de type FPFT (poli en usine et monté sur le terrain) raccordé en usine à une fibre de la catégorie B1.3 selon l'EN 60793 2 50 et monté sur le terrain sur une fibre unimodale de catégorie B1.3 ou B6_a1 ou B6_a2 selon la CEI 60793 2 50, Catégorie C

Steckverbindersätze und Verbindungselemente für Lichtwellenleiter-Datenübertragungssysteme -
Produktnormen -
Teil 17-1: Bauart FPFT- (vorpolyierter und feldkonfigurierbarer) Simplex-Steckverbinder mit einer Faser der Kategorie B1.3 nach IEC 60793-2-50 vorkonfektioniert und feldmontierbar an Einmodenfasern der Kategorien B1.3 oder B6a_1 oder B6a_2 nach IEC 60793-2-50 für Kategorie C

This European Standard was approved by CENELEC on 2013-08-26. 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.

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

CENELEC

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

CEN-CENELEC Management Centre: Avenue Marnix 17, B - 1000 Brussels

© 2013 CENELEC - All rights of exploitation in any form and by any means reserved worldwide for CENELEC members.

Ref. No. EN 50377-17-1:2013 E

AVA Documents
Document Sharing Hub

Contents

Page

Foreword	4
1 Scope	8
1.1 Product definition	8
1.2 Intermateability	8
1.2.1 Mechanical intermateability	8
1.2.2 Optical intermateability	8
1.3 Operating environment	8
1.4 Reliability	8
1.5 Quality assurance	8
2 Normative references	9
3 Description	10
3.1 General	10
3.2 Plug	10
3.3 Adaptor	10
3.4 Materials	10
3.5 Dimensions	10
3.6 Colour and marking	10
4 Variants	11
4.1 Terminated plug	11
4.2 Identification of variants	11
5 Dimensional requirements – Ferrule endface geometry after termination	12
6 Tests	13
6.1 Sample configuration	13
6.2 Test and measurement methods	13
6.3 Test sequence	13
6.4 Pass/fail criteria	13
7 Test report	14
8 Testing requirements	14
8.1 Dimensional and marking requirements	14
8.2 Optical performance requirements	14
8.3 Mechanical performance requirements	16
8.4 Environmental performance requirements	18
Annex A (normative) Sample size and product sourcing requirements	20
Annex B (informative) Reference connector details	21
B.1 General information	21
B.2 Reference connector details	21
Bibliography	22

Figures

Figure 1 — PC style plug — PC ferrule endface geometry — After termination	12
Figure 2 — APC style plug — APC ferrule endface geometry — After termination.....	12

Tables

Table 1 — Preferred colour scheme	11
Table 2 — Plug variants	11
Table 3 — Grade B and C plug variant FPFT plug	11
Table 4 — Optical performance requirements	14
Table 5 — Mechanical performance requirements	16
Table 6 — Environmental performance requirements	18
Table A.1 — Sample size and product sourcing requirements	20
Table B.1 — Reference connector details.....	21

Foreword

This document (EN 50377-17-1:2013) has been prepared by CLC/TC 86BXA "Fibre optic interconnect, passive and connectorised components".

The following dates are fixed:

- latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2014-08-26
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2016-08-26

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

EN 50377 is composed of the following parts:

- EN 50377-2 (all parts), *Connector sets and interconnect components to be used in optical fibre communication systems — Product specifications*;
- EN 50377-3-1, *Connector sets and interconnect components to be used in optical fibre communication systems — Product specifications — Part 3-1: Type SG terminated on IEC 60793-2-10 category A1a, A1b or equivalent multimode fibre for category C*;
- EN 50377-4 (all parts), *Connector sets and interconnect components to be used in optical fibre communication systems — Product specifications*;
- EN 50377-5-1, *Connector sets and interconnect components to be used in optical fibre communication systems - Product specifications — Part 5-1: Type EC terminated on IEC 60793-2 category B1.1 singlemode fibre*;
- EN 50377-6 (all parts), *Connector sets and interconnect components to be used in optical fibre communication systems — Product specifications*;
- EN 50377-7 (all parts), *Connector sets and interconnect components to be used in optical fibre communication systems — Product specifications*;
- EN 50377-8 (all parts), *Connector sets and interconnect components to be used in optical fibre communication systems — Product specifications*;
- EN 50377-9 (all parts), *Connector sets and interconnect components to be used in optical fibre communication systems — Product specifications*;
- EN 50377-10 (all parts), *Connector sets and interconnect components to be used in optical fibre communication systems - Product specifications*;
- EN 50377-11-1, *Connector sets and interconnect components to be used in optical fibre communication systems — Product specifications — Part 11-1: Type MF terminated on IEC 60793-2-50 category B1.1 and B1.3 singlemode fibre for category C*;

- EN 50377-13 (all parts), *Connector sets and interconnect components to be used in optical fibre communication systems — Product specifications*;
- EN 50377-14-1, *Connector sets and interconnect components to be used in optical fibre communication systems — Product specifications — Part 14-1: Cords with IEC 60793-2-50 singlemode category B1.1 and B1.3 fibre for category C*;
- EN 50377-15-1, *Connector sets and interconnect components to be used in optical fibre communication systems — Product specifications — Part 15-1: Type MPO with 12-fibre PPS ferrules terminated on IEC 60793-2 category A1a multimode fibre for 50/125 micron multimode fibre*;
- EN 50377-16-1, *Connector sets and interconnect components to be used in optical fibre communication systems - Product specifications — Part 16-1: Type LF3 APC simplex terminated on IEC 60793-2-50 category B1.1 and B1.3 singlemode fibre with titanium composite ferrule for category C*;
- EN 50377-17-1, *Connector sets and interconnect components to be used in optical fibre communication systems — Product specifications — Part 17-1: Type FPFT (factory polished field terminated) simplex connector factory terminated with EN 60793-2-50 category B1.3 fibre and field mounted onto IEC 60793-2-50 category B1.3 or B6a_1 or B6a_2 singlemode fibre, category C [the present document]*;
- prEN 50377-17-2¹⁾, *Connector sets and Interconnect components to be used in optical fibre communication systems — Product specifications — Part 17-2: Type FPFT (factory polished field terminated) simplex connector factory terminated with EN 60793-2-50 category B1.3 fibre and field mounted onto tight jacket cable containing IEC 60793-2-50 category B1.3 or B6a1 or B6a 2 single mode fibre (with restricted MFD), Category C*.

1) Currently under development.

Connector sets and interconnect components to be used in optical fibre communication systems – Product specifications			
Part 17-1: Type FPFT (factory polished field terminated) simplex connector factory terminated with EN 60793-2-50 category B1.3 fibre and field mounted onto IEC 60793-2-50 category B1.3 or B6a_1 or B6a_2 singlemode fibre, category C			
		Performance	
Configuration:	1) FPFT Plug/adaptor/plug and/or 2) FPFT Plug/adaptor/ FPFT plug	Application:	For use in IEC Category C
		Attenuation grades: (random mate)	Configuration 1 FPFT/50377 B _i B: ≤ 0,20 dB mean ≤ 0,40 dB for ≥ 97 % of measurements C _r C: ≤ 0,35 dB mean ≤ 0,70 dB for ≥ 97 % of measurements
Fibre category:	EN 60793-2-50 Types B1.3, B6a_1 or B6a_2 (with restricted MFD)		Configuration 2 FPFT/FPFT B _i B _f : ≤ 0,35 dB mean ≤ 0,55 dB for ≥ 97 % of measurements C _r C _f : ≤ 0,40 dB mean ≤ 0,75 dB for ≥ 97 % of measurements
Cable type:	Primary or secondary coated fibre 250 µm or up to 900 µm See Table 2	Return loss grade:	1: ≥ 60 dB mated and ≥ 55 dB unmated 2: ≥ 45 dB 3: ≥ 35 dB
Related documents:			
prEN 50411-3-5 ²⁾		Fibre organisers and closures to be used in optical fibre communication systems – Product specifications — Part 3-5: Wall outlet	
EN 60793-2-50		Optical fibres — Part 2-50: Product specifications — Sectional specification for class B single-mode fibres (IEC 60793-2-50)	
EN 60794-2		Optical fibre cables — Part 2: Indoor cables — Sectional specification (IEC 60794-2)	
EN 61300 (all parts)		Fibre optic interconnecting devices and passive components — Basic test and measurement procedures (IEC 61300, all parts)	
EN 61753-1		Fibre optic interconnecting devices and passive components performance standards — Part 1: General and guidance for performance standards (IEC 61753-1)	

2) At draft stage.