ICS 33.180.20 SLOVENSKÁ TECHNICKÁ NORMA August 2019

STN	**Súbory konektorov a spájacie prvky pre optovláknové komunikačné systémy Špecifikácie výrobku Časť 18-1: Vysielač-prijímač typu 4+4x10.3125 Gb/s MPO (QFSP) s konektorom MPO, vybavený PPS ferulami pre 12 vlákien, ukončený mnohovidovými vláknami 50/125 µm kategórie A1a.3a alebo A1a.3b podľa EN 60793-2-10**	**STN EN 50377-18-1** 35 9242

Connector sets and interconnect components to be used in optical fibre communication systems - Product specifications - Part 18-1: type 4+4x10.3125 Gb/s MPO (QFSP) transceiver mated with an MPO connector equipped with 12 fibre PPS ferrules terminated on EN 60793-2-10 category A1a.3a or A1a.3b 50/125 micron multimode fibre

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

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 07/19

Obsahuje: EN 50377-18-1:2019

129193

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 50377-18-1

April 2019

ICS 33.180.20

English Version

Connector sets and interconnect components to be used in optical fibre communication systems - Product specifications - Part 18-1: type 4+4x10.3125 Gb/s MPO (QFSP) transceiver mated with an MPO connector equipped with 12 fibre PPS ferrules terminated on EN 60793-2-10 category A1a.3a or A1a.3b 50/125 micron multimode fibre

Jeux de connecteurs et composants d'interconnexion à utiliser dans les systèmes de communication par fibres optiques - Spécifications de produits - Partie 18-1: émetteur-récepteur de type 4+4x10.3125 Gb/s MPO (QFSP) accouplé à un connecteur MPO équipé de férules PPS 12 fibres

Steckverbindersätze und Verbindungsbauelemente für Lichtwellenleiter-Datenübertragungssysteme - Produktnormen - Teil 18-1: Sende-Empfangsgerät der Bauart 4+4x10.3125 Gb/s MPO (QFSP) mit MPO-Steckverbinder, ausgestattet mit PPS-Ferrulen für 12 Fasern, abgeschlossen mit 50/125-Mikrometer-Mehrmodenfasern der Kategorie A1a.3a oder A1a.3b nach EN 60793-2-10

This European Standard was approved by CENELEC on 2017-12-29. 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, 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

Ref. No. EN 50377-18-1:2019 E

EN 50377-18-1:2019 (E)

Contents

Page

Figures

Tables

EN 50377-18-1:2019 (E)

European foreword

This document (EN 50377-18-1:2019) 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)	2019-10-19
• latest date by which the national standards conflicting with this document have to be withdrawn	(dow)	2022-04-19

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.

CONNECTOR SETS AND INTERCONNECT COMPONENTS TO BE USED IN OPTICAL FIBRE COMMUNICATION SYSTEMS – PRODUCT SPECIFICATIONS

Part 18-1: Type 4+4x10,3125 Gb/s MPO (QSFP) transceiver mated with an MPO connector equipped with 12 fibre PPS ferrules terminated on EN 60793-2-10 category A1a.3a or A1a.3b, 50/125 micron multimode fibre

Description		Performance	
Coupling mechanism:	push-pull	Application:	Indoor applications (test severities derived from EN 61753-1 category C)
Configuration:	Transceiver /plug	Transmission speed:	4x 10,312 5 Gb/s
		Medium:	150 m cable
Fibre category:	EN 60793-2-10,type A1a.3a, A1a.3b, A1a.4a, A1a.4b		

Related documents:

EN 50377-15-1, *Connector sets and interconnect components to be used in optical fibre communication systems, product specifications – MPO connector with 12 fibre PPS ferrules terminated on EN 60793-2 category A1a 50/125 micron multimode fibre*

ISO/IEC 11801, *Information technology – Generic cabling for customer premises*

EN 60793-2, *Optical fibres – Part 2: Product specifications – General (IEC 60793-2)*

EN 60794-2, *Optical fibre cables – Part 2: Indoor cables – Sectional specification (IEC 60794-2)*

EN 60794-2-30, *Optical fibre cables – Part 2-30: Indoor cables – Family specification for optical fibre ribbon cables (IEC 60794-2-30)*

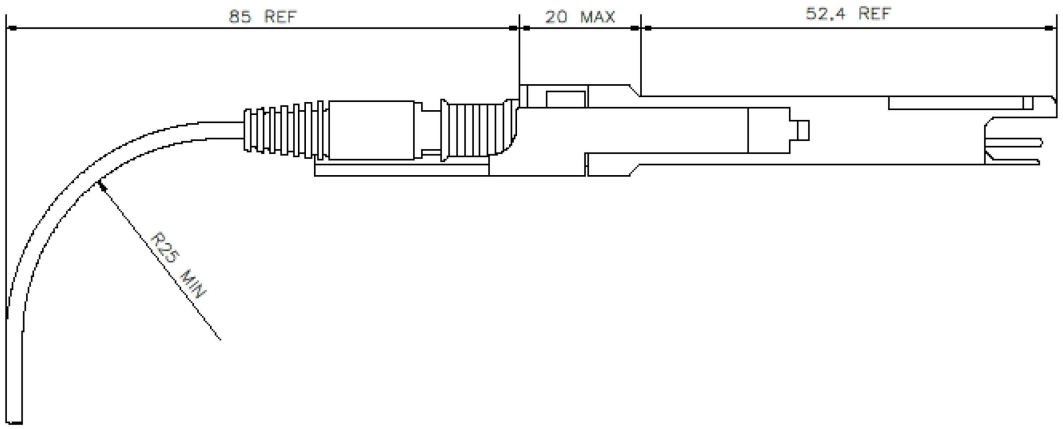
EN 61300 series, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures (IEC 61300 series)*

EN 61753-1, *Fibre optic interconnecting devices and passive components performance standard – Part 1: General and guidance for performance standards (IEC 61753-1)*

EN 61754-7-1, *Fibre optic interconnecting devices and passive components – Fibre optic connector interfaces – Part 7: Type MPO connector family (IEC 61754-7-1)*

EIA-964, *Specification for QSFP+ 10 GB/s Pluggable transceiver*

Maximum outline dimensions:



EN 50377-18-1:2019 (E)

1 Scope

1.1 Product definition

This European Standard contains the initial, start of life dimensional, optical, mechanical and environmental performance requirements (excluding electrical requirements) to be met by a 12 fibre multimode PPS MPO plug terminated on EN 60793-2-10 category A1a.3a or A1a.3b fibre and a 4+4x10,3125 Gb/s MPO (QSFP) transceiver to meet in order to be categorized as an EN standard product.

Since different variants are permitted, product marking details are given in 4.6.

1.2 Intermateability

All products conforming to the requirements of this standard are meant to intermate and give the specified performance level. The intention is that this will be true irrespective of the manufacturing source(s) of the product.

1.3 Operating environment

The tests selected, combined with the severity and duration, are representative of a backplane/back panel indoor application typically in a data centre environment derived from a customer premises protected environment as defined in the EN 50173 series and the ISO/IEC 11801 series and specified as category C in EN 61753-1.

1.4 Reliability

Whilst the anticipated service life expectancy of the product in this environment is 10 years, compliance with this standard does not guarantee the reliability of the product. This should be predicted using a recognized reliability assessment programme.

1.5 Quality assurance

Compliance with this standard does not guarantee the manufacturing consistency of the product. This should be maintained using a recognized quality assurance programme.

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.

EN 61300-2-1, *Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-1: Tests - Vibration (sinusoidal) (IEC 61300-2-1)*

EN 61300-2-2, *Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-2: Tests - Mating durability (IEC 61300-2-2)*

EN 61300-2-9, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 2-9: Tests – Shock (IEC 61300-2-9)*

EN 61300-2-22, *Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-22: Tests - Change of temperature (IEC 61300-2-22)*

EN 61300-2-42, *Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-42: Tests - Static side load for strain relief (IEC 61300-2-42)*

EN 61300-2-44, *Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-44: Tests - Flexing of the strain relief of fibre optic devices (IEC 61300-2-44)*

EN 61300-3-28, *Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-28: Examinations and measurements - Transient loss (IEC 61300-3-28)*

EN 61754-7-1, *Fibre optic interconnecting devices and passive components - Fibre optic connector interfaces - Part 7-1: Type MPO connector family - One fibre row (IEC 61754-7-1)*

EN 61754-10:2005, *Fibre optic connector interfaces - Part 10: Type Mini-MPO connector family (IEC 61754-10:2005)*

EN 61754-18, *Fibre optic connector interfaces - Part 18: Type MT-RJ connector family (IEC 61754-18)*

IEEE 802.3:2012, *40GBase-SR4*