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I.S. EN 50411-2-8:2009

# Fibre organisers and closures to be used in optical fibre communication systems - Product specifications -- Part 2-8: Microduct connectors, for air blown optical fibres, Type 1

## I.S. EN 50411-2-8:2009

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**EN 50411-2-8**

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English version

**Fibre organisers and closures to be used  
in optical fibre communication systems -  
Product specifications -  
Part 2-8: Microduct connectors, for air blown optical fibres, Type 1**

Organiseurs et boîtiers de fibres à utiliser  
dans les systèmes de communication  
par fibres optiques -  
Spécifications de produits -  
Partie 2-8: Connecteurs en microconduits  
de Type 1, destinés aux fibres optiques  
soufflées à l'air comprimé

LWL-Spleißkassetten und -Muffen  
für die Anwendung in LWL-  
Kommunikationssystemen -  
Produktnormen -  
Teil 2-8: ABF-Mikrorohrverbinder,  
Bauart 1

This European Standard was approved by CENELEC on 2008-12-01. 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.

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

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**CENELEC**

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

**Central Secretariat: Avenue Marnix 17, B - 1000 Brussels**

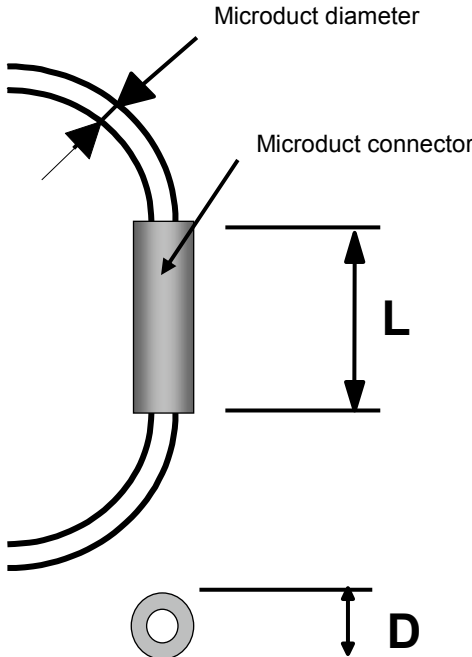
## Foreword

This European Standard was prepared by the Technical Committee CENELEC TC 86BXA, Fibre optic interconnect, passive and connectorised components.

The text of the draft was submitted to the formal vote and was approved by CENELEC as EN 50411-2-8 on 2008-12-01.

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) 2009-12-01
  - latest date by which the national standards conflicting  
with the EN have to be withdrawn (dow) 2011-12-01
-

Fibre organisers and closures to be used in optical fibre communication systems - Product specifications				
Microduct connectors, for air blown optical fibres, Type 1				
<b>Description</b>		<b>Performance</b>		
<b>Construction:</b>	Sealed microduct connector	<b>Applications:</b>	Optical fibre cable networks EN 61753-1	
<b>Tube seals:</b>	Cold applied			
<b>Connector types:</b>	Straight, Straight bulkhead, Reducer, Close down, Liquid block, Liquid block with barb end, End stop and Stem.			
<b>Related documents:</b>				
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)			
ETSI EN 300 019 series	Environmental Engineering (EE) – Environmental conditions and environmental tests for telecommunications equipment			
<b>Construction:</b>		<b>Examples ‘Straight through’</b>		
		Connector dimensions for non-bulkhead mounting		
		<b>Nominal microduct outside diameter</b>	<b>Diameter or across corners  D max. mm</b>	<b>Length  L max. mm</b>
		3 mm	9	23
		4 mm	14	32
		5 mm	15	40
		6 mm	15	38
		7 mm	18	42
		8 mm	20	46
		10 mm	24	50
		12 mm	25	54
		14 mm	29	62
		15 mm	33	70
		16 mm		

## Contents

<b>1</b>	<b>Scope</b>	<b>7</b>
1.1	Product identification	7
1.2	Operating environment	7
1.3	Reliability	7
1.4	Quality assurance	7
1.5	Safety labelling – Warning: need for an ‘over pressure device’ in sealed closures	7
<b>2</b>	<b>Normative references</b>	<b>8</b>
<b>3</b>	<b>Definitions and abbreviations</b>	<b>9</b>
3.1	Definitions	9
3.2	Abbreviations	11
<b>4</b>	<b>Description</b>	<b>11</b>
4.1	Microduct connector housing	11
4.2	Burst pressure	15
4.3	Microduct seals	15
4.4	Materials	15
4.5	Marking	15
<b>5</b>	<b>Variants</b>	<b>16</b>
<b>6</b>	<b>Dimensional requirements</b>	<b>17</b>
6.1	Dimensions diagram	17
6.2	‘Straight’ connectors – Equal microduct	17
6.3	‘Straight bulkhead’ connectors – Equal microduct	18
6.4	‘ID reducer/enlarger stem’ connectors	18
6.5	‘ID reducer/enlarger’ connectors	19
6.6	‘OD reducer/enlarger stem’ connectors	19
6.7	‘OD reducer/enlarger’ connectors	20
6.8	‘ID and OD reducer/enlarger stem’ connectors	20
6.9	‘ID and OD reducer/enlarger’ connectors	21
6.10	‘Close Down’ connectors	21
6.11	‘Liquid Block’ connector	22
6.12	‘Liquid Block with barb end’ connectors	22
6.13	‘End Stop’ connectors	22
<b>7</b>	<b>Tests</b>	<b>23</b>
7.1	Sample size	23
7.2	Test sample preparation	23
7.3	Test and measurement methods	24
7.4	Test sequence	24
7.5	Pass/fail criteria	24
<b>8</b>	<b>Test report</b>	<b>24</b>
<b>9</b>	<b>Performance requirements</b>	<b>24</b>
9.1	Bend radius	24
9.2	Dimensional and marking requirements	24
9.3	Sealing, optical and appearance performance criteria	24
9.4	Mechanical sealing performance requirements	26
9.5	Environmental sealing performance requirements	28

<b>Annex A (informative) Sample size and product sourcing requirements.....</b>	<b>30</b>
<b>Annex B (informative) Air blown fibre microduct – Mean outside diameter range.....</b>	<b>31</b>
<b>Annex C (normative) Test method – High pressure resistance – Safety.....</b>	<b>32</b>
<b>Annex D (normative) Test method – Installation .....</b>	<b>33</b>
<b>Annex E (normative) Test method – Insertion force.....</b>	<b>34</b>
<b>Bibliography .....</b>	<b>35</b>

## Figures

Figure 1 – Fibre flow impedance .....	11
Figure 2 – Fibre flow impedance – Both direction step.....	11
Figure 3 – Fibre flow impedance – One direction step .....	12
Figure 4 – Fibre flow impedance – Acute angled step.....	12
Figure 5 – ‘Typical’ connector elements – Cross sectional view.....	13
Figure 6 – ‘Straight’ – Equal microduct outside diameters .....	13
Figure 7 – ‘Straight bulkhead’ – Equal microduct outside diameters.....	13
Figure 8 – ‘ID reducer/enlarger stem’– Unequal microducts with a different ID ‘OD reducer/enlarger stem’ – Unequal microducts with a different OD ‘ID and OD reducer/enlarger stem’ – Unequal microducts with a different ID and OD .....	13
Figure 9 – ‘ID reducer/enlarger’ – Unequal microducts with a different ID ‘OD reducer/enlarger’ – Unequal microducts with a different OD ‘ID and OD reducer/enlarger’ – Unequal microducts with a different ID and OD .....	14
Figure 10 – Close down assembly access for blowing head equipment .....	14
Figure 11 – Liquid block transition point to stop liquid migration .....	14
Figure 12 – Liquid block with a barb end transition point to stop liquid migration.....	14
Figure 13 – End stop.....	14
Figure 14 – Microduct interconnection geometry.....	15
Figure 15 – Microduct connector overall dimensions .....	17
Figure 16 – Sealing performance test sample (tank to source).....	23
Figure 17 – Optical test chamber – Liquid block connectors (only) .....	24
Figure E.1 – Test apparatus for insertion force method .....	34

## Tables

Table 1 – Micro-duct connector – Variants EN 50411-2-8 – XXX/XXX <sub>1</sub> - XXX/XXX <sub>2</sub> – XXX <sub>3</sub> – X <sub>4</sub> .....	16
Table 2 – ‘Straight’ connector design – Maximum dimensions .....	17
Table 3 – ‘Straight bulkhead’ connector – Maximum dimensions .....	18
Table 4 – ‘ID reducer/enlarger stem’ connector – Maximum dimensions .....	18
Table 5 – ‘ID reducer/enlarger’ connector – Maximum dimensions .....	19
Table 6 – ‘OD reducer/enlarger stem’ connector – Maximum dimensions.....	19
Table 7 – ‘OD reducer/enlarger’ connector – Maximum dimensions .....	20
Table 8 – ‘ID and OD reducer/enlarger stem’ connector – Maximum dimensions.....	20
Table 9 – ‘ID and OD reducer/enlarger’ connector – Maximum dimensions.....	21
Table 10 – ‘Close Down’ connector – Maximum dimensions .....	21
Table 11 – ‘Liquid Block’ connectors – Maximum dimensions .....	22
Table 12 – ‘Liquid Block with barb end’ connectors - Maximum dimensions .....	22
Table 13 – ‘End Stop’ connector.....	22
Table 14 – Tightness, optical and appearance performance criteria.....	25
Table 15 – Mechanical requirements.....	26
Table 16 – Environmental sealing performance requirements .....	28
Table A.1 – Minimum sample size requirements.....	30
Table B.1 – Air blown fibre microduct – Mean outside diameter range .....	31



## 1 Scope

### 1.1 Product identification

This specification contains the initial, start of life dimensional, optical, mechanical and environmental performance requirements of a fully installed blown fibre 'microduct' connector in order for it to be categorised as an EN standard product.

This product specification covers the following 'microduct connectors' to suit a wide range of blown fibre applications, for floating or fixed:

- joining the same size microduct, or different sizes of microduct;
- joining same size protected microduct, to same or different size of microduct or protected microduct;
- disconnection of the connector to gain access, for example, to insert blowing equipment;
- a means to seal the fibre inside the connector to prevent the flow of liquids;
- close off open-ended microducts.

This product specification covers blown fibre microduct connectors for use in 'sub-ducts or protected micro-duct cable closures' as specified in EN 50411-2-5 for use in outside environments, and for both sealed and non-sealed closures. The outside environment includes both subterranean (underground) and/or aerial applications.

This document includes reducer/enlarger products. It may not be possible to blow through these devices. Manual feeding may be required because of the pressure gradient step.

This product specification does not apply to microduct connectors for use in direct sunlight.

### 1.2 Operating environment

The tests selected, combined with the severity and duration, are representative of an outside plant environment for both subterranean and aerial environments defined by

- ETSI EN 300 019 series: class 8.1: underground locations,
- EN 61753-1: all categories.

### 1.3 Reliability

Whilst the anticipated service life expectancy of the product in these environments is 20 years, compliance with this specification does not guarantee the reliability of the product. This should be predicted using a recognised reliability assessment programme.

### 1.4 Quality assurance

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

### 1.5 Safety labelling – Warning: need for an 'over pressure device' in sealed closures

All air blown fibre connectors, supplied to this standard, must have a warning on the product or packaging to read as follows:

Where the air blown fibre connector is installed inside a sealed airtight closure or housing, the closure must be able to be fitted with an over pressure safety system that is able to exhaust air to atmospheric pressure.

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