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Standards

Irish Standard
I.S. EN 62343-3-3:2014

Dynamic modules - Part 3-3: Performance specification templates - Wavelength selective switches

I.S. EN 62343-3-3:2014

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EUROPEAN STANDARD

EN 62343-3-3

NORME EUROPÉENNE

EUROPÄISCHE NORM

July 2014

ICS 33.180.20

English Version

**Dynamic modules - Part 3-3: Performance specification
templates - Wavelength selective switches
(IEC 62343-3-3:2014)**

Modules dynamiques - Partie 3-3: Modèles de spécification
de performance - Commutateurs sélectifs en longueur
d'onde
(CEI 62343-3-3:2014)

Dynamische Module - Vorlagen für Leistungsspezifikationen
- Teil 3-3: Wellenlängen-Wählschalter
(IEC 62343-3-3:2014)

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Foreword

The text of document 86C/1156/CDV, future edition 1 of IEC 62343-3-3, 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 62343-3-3:2014.

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) 2015-03-10
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2017-06-10

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The text of the International Standard IEC 62343-3-3:2014 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 60793-2-50	NOTE	Harmonized as EN 60793-2-50.
IEC 60869-1	NOTE	Harmonized as EN 60869-1.
IEC 60876-1	NOTE	Harmonized as EN 60876-1.
IEC 61300 Series	NOTE	Harmonized as EN 61300 Series (partially modified).
IEC 61300-3-4	NOTE	Harmonized as EN 61300-3-4.
IEC 61300-3-20	NOTE	Harmonized as EN 61300-3-20.
IEC 61753-1	NOTE	Harmonized as EN 61753-1.
IEC 61753-081-2	NOTE	Harmonized as EN 61753-081-2.
IEC 61754 Series	NOTE	Harmonized as EN 61754 Series (partially modified).
IEC 61978-1	NOTE	Harmonized as EN 61978-1.

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE 1 When 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

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61290-7-1	-	Optical amplifiers - Test methods - Part 7-1: Out-of-band insertion losses - Filtered optical power meter method	EN 61290-7-1	-
IEC 61300-2-14	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-14: Tests - High optical power	EN 61300-2-14	-
IEC 61300-3-2	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-2: Examinations and measurements - Polarization dependent loss in a single-mode fibre optic device	EN 61300-3-2	-
IEC 61300-3-6	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-6: Examinations and measurements - Return loss	EN 61300-3-6	-
IEC 61300-3-14	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-14: Examinations and measurements - Accuracy and repeatability of the attenuation settings of a variable attenuator	EN 61300-3-14	-
IEC 61300-3-21	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-21: Examinations and measurements - Switching time	EN 61300-3-21	-
IEC 61300-3-29	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-29: Examinations and measurements - Spectral transfer characteristics of DWDM devices	EN 61300-3-29	-

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61300-3-32	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-32: Examinations and measurements - Polarisation mode dispersion measurement for passive optical components	EN 61300-3-32	-
IEC 61300-3-38	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-38: Examinations and measurements - Group delay, chromatic dispersion and phase ripple	EN 61300-3-38	-
IEC 61753-021-2	-	Fibre optic interconnecting devices and passive components performance standard - Part 021-2: Grade C/3 single-mode fibre optic connectors for category C - Controlled environment	EN 61753-021-2	-
IEC 62074-1	-	Fibre optic interconnecting devices and passive components - Fibre optic WDM devices - Part 1: Generic specification	EN 62074-1	-
IEC 62343-4-1 ¹⁾	-	Dynamic modules - Part 4-1: Software and hardware interface standards - 1x9 wavelength selective switch	-	-
ITU-T Recommendation G.694.1	-	Spectral grids for WDM applications: DWDM-frequency grid	-	-
ITU-T Recommendation G.Sup39	-	Optical system design and engineering considerations	-	-

¹⁾ Under consideration.



IEC 62343-3-3

Edition 1.0 2014-05

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Dynamic modules –
Part 3-3: Performance specification templates – Wavelength selective switches**

**Modules dynamiques –
Partie 3-3: Modèles de spécification de performance – Commutateurs sélectifs
en longueur d'onde**





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IEC 62343-3-3

Edition 1.0 2014-05

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Dynamic modules –

Part 3-3: Performance specification templates – Wavelength selective switches

Modules dynamiques –

Partie 3-3: Modèles de spécification de performance – Commutateurs sélectifs en longueur d'onde

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

DYNAMIC MODULES –

**Part 3-3: Performance specification templates –
Wavelength selective switches**

FOREWORD

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International Standard IEC 62343-3-3 has been prepared by subcommittee 86C: Fibre optic systems and active devices, of IEC technical committee 86: Fibre optics.

The text of this standard is based on the following documents:

CDV	Report on voting
86C/1156/CDV	86C/1214/RVC

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts in the IEC 62343 series, published under the general title *Dynamic modules*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

INTRODUCTION

A wavelength selective switch (WSS) is a dynamic module (DM), which is mainly used in a reconfigurable optical add-drop multiplexer (ROADM) system to switch a particular wavelength signal to any output ports in DWDM networks. The WSS module has one input port and a plurality of output ports (i.e. $1 \times N$ WSS) and can be used in reverse, with N input ports and one output port, depending on its application. It is controlled with software, which determines any wavelength signal among a DWDM signal from one input port to switch to a particular output port in case of $1 \times N$ application.

DYNAMIC MODULES –

Part 3-3: Performance specification templates – Wavelength selective switches

1 Scope

This part of IEC 62343 provides a performance specification template for wavelength selective switches. The object is to provide a framework for the preparation of detail specifications on the performance of wavelength selective switches.

Additional specification parameters may be included for detailed product specifications or performance specifications. However, specification parameters specified in this standard shall not be removed from the detail product specifications or performance specifications.

The technical information regarding wavelength selective switches, and their applications in DWDM systems will be described in IEC TR 62343-6-4, currently under consideration.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 61290-7-1, *Optical amplifiers – Test methods – Part 7-1: Out-of-band insertion losses – Filtered optical power meter method*

IEC 61300-2-14, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 2-14: Tests – High optical power*

IEC 61300-3-2, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 3-2: Examination and measurements – Polarization dependent loss in a single-mode fibre optic device*

IEC 61300-3-6, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 3-6: Examinations and measurements – Return loss*

IEC 61300-3-14, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 3-14: Examinations and measurements – Accuracy and repeatability of the attenuation settings of a variable attenuator*

IEC 61300-3-21, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 3-21: Examinations and measurements – Switching time and bounce time*

IEC 61300-3-29, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 3-29: Examinations and measurements – Measurement techniques for characterizing the amplitude of the spectral transfer function of DWDM components*

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