SLOVENSKI STANDARD
SIST EN 62343-4-1:2016

01-julij-2016

Dinamični moduli - Programska in strojna oprema za vmesnike - 4-1. del: 1x9-valovnodolžinska selektivna stikala (IEC 62343-4-1:2016)

Dynamic modules - Software and hardware interface standards - Part 4-1: 1x9 Wavelength selective switch (IEC 62343-4-1:2016)

Ta slovenski standard je istoveten z: EN 62343-4-1:2016

ICS:

33.180.20	Povezovalne naprave za optična vlakna	Fibre optic interconnecting devices
35.200	Vmesniška in povezovalna oprema	Interface and interconnection equipment

SIST EN 62343-4-1:2016 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 62343-4-1

May 2016

ICS 33.180.20

English Version

Dynamic modules - Part 4-1: Software and hardware interface - 1 x 9 wavelength selective switch (IEC 62343-4-1:2016)

Modules dynamiques - Partie 4-1 : Interface logicielle et matérielle - Commutateur sélectif en longueur d'onde 1 x 9 (IEC 62343-4-1:2016)

Dynamische Module - Teil 4-1: Software und Hardware Schnittstelle - 1 x 9 Wellenlängenselektiver Schalter (IEC 62343-4-1:2016)

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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

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European foreword

The text of document 86C/1304/CDV, future edition 1 of IEC 62343-4-1, 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 62343-4-1:2016.

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)	2017-01-08
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2019-04-08

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The text of the International Standard IEC 62343-4-1:2016 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following note has to be added for the standard indicated :

IEC 62343-3-3	NOTE	Harmonized as EN 62343-3-3.

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

Publication	Year	Title	EN/HD	Year
IEC 60050-731	-	International Electrotechnical Vocabulary - Chapter 731: Optical fibre communication	-	-
IEC 62343	-	Dynamic modules - General and guidance	EN 62343	-

IEC 62343-4-1

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INTERNATIONAL STANDARD

Dynamic modules – Part 4-1: Software and hardware interface – 1 x 9 wavelength selective switch

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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CONTENTS

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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DYNAMIC MODULES –

Part 4-1: Software and hardware interface – 1 x 9 wavelength selective switch

FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 62343-4-1 has been prepared by subcommittee SC86C: 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/1304/CDV	86C/1346/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 website 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.

A bilingual version of this publication may be issued at a later date.

INTRODUCTION

A wavelength selective switch (WSS) is a dynamic module, which is mainly used in a reconfigurable optical add drop multiplexer (ROADM) system to switch all wavelength signals to their respective required output port in dense wavelength division multiplexing (DWDM) networks. The WSS module has one input port and a plurality of output ports (i.e. 1 x N WSS) and can be used reversely, such as N input ports and one output port, depending on its application. It is electrically controlled with software, which directs each wavelength signal among an input DWDM signal from one input port to the required output port for each wavelength signal.

DYNAMIC MODULES –

Part 4-1: Software and hardware interface – 1 x 9 wavelength selective switch

1 Scope

This part of IEC 62343 describes and provides specifications for a software and hardware interface for the 1 x 9 wavelength selective switch.

These switches can be controlled by resident firmware with this interface. This standard addresses the configuration and function to control a WSS. This interface is intended to enable a user or host to retrieve the switch status and/or adjust relevant switch and attenuation settings.

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 60050-731, *International Electrotechnical Vocabulary – Chapter 731: Optical fibre communication* (available at http://www.electropedia.org)

3 Terms, definitions and abbreviations

3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 60050-731 and IEC 62343, as well as the following apply.

3.1.1
wavelength selective switch
WSS
dynamic module with one or more input ports and one or more output ports, which is mainly used in a reconfigurable optical add drop multiplexer (ROADM) system to switch each wavelength signal on each input port independently to its required output port in DWDM networks

Note 1 to entry: It is electrically controlled with software.

Note 2 to entry: It can be used inverted, exchanging input and output ports.

Note 3 to entry: Each wavelength signal can be independently attenuated.

3.2 Abbreviations

For the purposes of this document, the following abbreviations apply.

DWDM dense wavelength division multiplexing
WSS wavelength selective switch