Fibre optic communication subsystem basic test procedures - Part 1-1: Test procedures for general communication subsystems - Transmitter output optical power measurement for single-mode optical fibre cable

EESTI STANDARDIKESKUS
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NATIONAL FOREWORD

See Eesti standard EVS-EN 61280-1-1:2013 sisaldab Euroopa standardi EN 61280-1-1:2013 ingliskeelset teksti.	This Estonian standard EVS-EN 61280-1-1:2013 consists of the English text of the European standard EN 61280-1-1:2013.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 30.08.2013.	Date of Availability of the European standard is 30.08.2013.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

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English version

Fibre optic communication subsystem basic test procedures - Part 1-1: Test procedures for general communication subsystems - Transmitter output optical power measurement for single-mode optical fibre cable

(IEC 61280-1-1:2013)

Procédures d'essai de base des sous-systèmes de télécommunication à fibres optiques -
Partie 1-1: Procédures d'essai des sous-systèmes généraux de télécommunication - Mesure de la puissance optique des émetteurs couplés à des câbles à fibres optiques unimodales
(CEI 61280-1-1:2013)

Lichtwellenleiter-Kommunikationsuntersysteme - Grundlegende Prüfverfahren -
Teil 1-1: Prüfverfahren für allgemeine Kommunikationsuntersysteme - Messung der Senderausgangsleistung für Einmoden-LWL-Kabel
(IEC 61280-1-1:2013)

CENELEC

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

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Foreword

The text of document 86C/1065/CDV, future edition 2 of IEC 61280-1-1, 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 61280-1-1:2013.

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)	2014-03-25
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2016-06-25

This document supersedes EN 61280-1-1:1998.

EN 61280-1-1:2013 includes the following significant technical changes with respect to EN 61280-1-1:1998:

- inclusion of Annex A on how to account for uncertainties;
- editorial corrections throughout the document and updates to references.

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.

Endorsement notice

The text of the International Standard IEC 61280-1-1:2013 was approved by CENELEC as a European Standard without any modification.

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 When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

Publication	Year	Title	EN/HD	Year
IEC 61300-3-35	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-35: Examinations and measurements - Fibre optic connector endface visual and automated inspection	EN 61300-3-35	-
IEC 61315	-	Calibration of fibre-optic power meters	EN 61315	-

CONTENTS

FIBRE OPTIC COMMUNICATION SUBSYSTEM BASIC TEST PROCEDURES –

Part 1-1: Test procedures for general communication subsystems – Transmitter output optical power measurement for single-mode optical fibre cable

1 Scope and object

This part of IEC 61280 applies to fibre optic general communication subsystems. The object of this part is to measure the optical power coupled from the output of a transmitter under test into single-mode optical fibre cable containing dispersion-unshifted fibre or dispersion-shifted fibre.

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 61300-3-35, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 3-35: Examinations and measurements – Fibre optic connector endface visual and automated inspection*

IEC 61315, *Calibration of fibre-optic power meters*

3 Apparatus

3.1 Optical power meter

The optical power meter shall be capable of measuring the range of power at wavelengths provided by the transmitter. The optical power meter shall have a resolution of at least 0,1 dB. The meter shall have a detecting surface of sufficient size to capture all the power coming from the fibre that is put into it.

3.2 Input signal source

The input signal source is a signal generator at the appropriate signal rate of the system interface.

3.3 Test cord

A length of single-mode optical fibre cable, which is known to remove cladding modes, shall be used. The optical fibre (cable) shall be terminated at both ends with appropriate connectors. The ends for connection to the fibre optic transmitter and to the optical power meter shall be terminated with appropriate connector plugs. These plugs and any adapters necessary to produce the connections shall be such that the performance can be specified by the manufacturer of the equipment or the connectors. Values for the insertion loss repeatability shall be known.