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TIA STANDARD

Generic Telecommunications Cabling for Customer Premises Addendum 1: Updated References, Accommodation of New Media Types

TIA-568.0-D-1
(Addendum to TIA-568.0-D)

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Generic Telecommunications Cabling for Customer Premises
Addendum 1: Updated References, Accommodation of New Media Types

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FOREWORD

(This foreword is not considered part of this Addendum.)

This Addendum was developed by TIA Subcommittee TR-42.1.

Approval of this Addendum

This Addendum was approved by TIA Subcommittee TR-42.1, TIA Engineering Committee TR-42, and the American National Standards Institute (ANSI).

ANSI/TIA reviews standards every 5 years. At that time, standards are reaffirmed, withdrawn, or revised according to the submitted updates. Updates to be included in the next revision should be sent to the committee chair or to ANSI/TIA.

Annexes

There are no annexes to this Addendum.

Introduction

Since the time of publication of ANSI/TIA-568.0-D two documents have been published by TIA TR-42 subcommittees which affect its content. In response, this Addendum revises references and accommodates new media types. Specifically:

- ANSI/TIA-568-C.2-1 specified a new balanced twisted-pair media type, category 8, specified to 2 GHz. Category 8 cabling supports 30-meter, 2 connection channels.
- ANSI/TIA-568.3-D is published. Cabling transmission performance and test requirements for optical fiber cabling, guidelines for maintaining optical fiber polarity, and guidelines for field testing of optical fiber cabling are now contained in this revision, eliminating the need to reference ANSI/TIA-568-C.0 for this information. In addition, a new media type, OM5, is specified. OM1, OM2 and OS1 cabling is no longer supported.

1 SCOPE

This Addendum updates references and accommodates new media types introduced by ANSI/TIA-568-C.2-1 and ANSI/TIA-568.3-D.

2 MODIFICATIONS TO ANSI/TIA-568.0-D

2.1 General

Deleted text is shown as ~~strikethrough~~. New text is shown as underline.

2.2 Normative references (clause 2)

The references within clause 2, "Normative references," shall be modified as follows:

- ~~ANSI/TIA-568-C.0 2009, *Generic Telecommunications Cabling for Customer Premises*~~

  ~~**NOTE –** Cabling transmission performance and test requirements for optical fiber cabling, guidelines for maintaining optical fiber polarity, and guidelines for field testing of optical fiber cabling are currently contained in ANSI/TIA-568-C.0. When ANSI/TIA-568.3-D is published these requirements and guidelines will be specified in that document.~~
- ANSI/TIA-568-C.2 2009, *Balanced Twisted-Pair Telecommunications Cabling and Components Standard*

  NOTE – The above reference includes the addendum, ANSI/TIA-568-C.2-1 2016.
- ~~ANSI/TIA-568-C.3 2008, *Optical Fiber Cabling Components Standard*~~
- ANSI/TIA-568.3-D 2016, *Optical Fiber Cabling and Components Standard*

2.3 Recognized cabling (subclause 5.8)

The text of item a) and item b) of 5.8, "Recognized cabling," shall be modified as follows:

a) 100-ohm balanced twisted-pair cabling (ANSI/TIA-568-C.2), category 5e or higher;

NOTES:

1 – To support a wide range of applications, Category 6A cabling may be required. See Annex C.

~~2 – At the time of publication category 8 cabling was under development.~~

2 – Category 8 cabling supports channels with a maximum of 2 connections to a maximum length of 30 m (98 ft).

3 – Category 8 components can be used to construct category 6A 100 m (328 ft) channels. See TIA TSB-184-A for power delivery efficiency achievable with category 8 components.

~~b) multimode optical fiber cabling (ANSI/TIA-568-C.3) 2-fiber (or higher fiber count), OM3 or higher recommended;~~

b) multimode optical fiber cabling (ANSI/TIA-568.3-D) 2-fiber (or higher fiber count);

The last paragraph in 5.8 shall be modified as follows:

Recognized cabling components shall meet applicable requirements specified in ANSI/TIA-568-C.2, ~~ANSI/TIA-568-C.3~~ANSI/TIA-568.3-D, ANSI/TIA-568-C.4, and, if applicable, the specific premises standard.

2.4 Optical fiber cabling maximum cord lengths when a MUTOA is deployed (subclause 5.9.1.4.2)

The text of 5.9.1.4.2, “Optical fiber cabling,” shall be modified as follows:

Optical fiber cords used in the context of MUTOAs and open space areas shall meet the requirements of ~~ANSI/TIA-568-C.3~~ANSI/TIA-568.3-D. The maximum horizontal cabling length is not affected by the deployment of a MUTOA.

2.5 Consolidation point (subclause 5.9.2)

The text of the first paragraph of 5.9.2, “Consolidation point,” shall be modified as follows:

The CP is an optional interconnection point within Cabling Subsystem 1 using ANSI/TIA-568-C.2 or ~~ANSI/TIA-568-C.3~~ANSI/TIA-568.3-D compliant connecting hardware. It differs from the MUTOA in that a CP creates an additional connection for each Cabling Subsystem 1 cable run. Cross-connections shall not be used at a CP. No more than one CP shall be used within the same Cabling Subsystem 1 cable run. A transition point and CP shall not be used in the same Cabling Subsystem 1 cabling link. Each Cabling Subsystem 1 cable extending to the equipment outlet space from the CP shall be terminated to an equipment outlet or MUTOA. The cables and connections used at a CP shall meet the requirements of ANSI/TIA-568-C.2 or ~~ANSI/TIA-568-C.3~~ANSI/TIA-568.3-D and be installed in accordance with the requirements of clause 5 (see figure 6).

2.6 Maximum pair un-twist for balanced twisted-pair cabling (subclause 6.2.3.1)

Table 2 of 6.2.3.1, “General,” shall be modified as follows:

Table 2 – Maximum pair un-twist for category cable termination

Category	Maximum pair un-twist mm (in)
3	75 (3)
5e	13 (0.5)
6	13 (0.5)
6A	13 (0.5)
8	13 (0.5)

NOTE – Information on category 3 cabling retained to support existing installations

2.7 Optical fiber cords (subclause 6.3.2)

The text of 6.3.2, “Cords,” shall be modified as follows:

Optical fiber cords shall have the same fiber type as the optical fiber cabling and meet the requirements of ~~ANSI/TIA-568-C.3~~ANSI/TIA-568.3-D. The minimum inside bend radius for optical fiber cord cable shall be 25 mm (1 in) unless a smaller minimum bend radius is specified by the cord manufacturer.

2.8 Optical fiber polarity (subclause 6.3.3)

The text of 6.3.3, “Polarity,” shall be modified as follows:

To support ~~bi-directional~~ communication systems that use separate optical fibers in each direction, the cabling system shall provide means to maintain correct signal polarity so that the transmitter on one end of the channel will connect to the receiver on the other end of the channel. Maintaining the correct transmit-to-receive polarity throughout the cabling system is crucial for system operation. ~~ANSI/TIA-568-C.0~~ANSI/TIA-568.3-D illustrates some methods for maintaining polarity for these systems.

2.9 Optical fiber cabling transmission performance and test requirements (subclause 7.4)

The text of 7.4, “Optical fiber cabling transmission performance and test requirements,” shall be modified as follows:

Transmission performance and test requirements for optical fiber cabling are specified in ~~ANSI/TIA-568-C.0~~ANSI/TIA-568.3-D.

2.10 Balanced twisted-pair cabling supportable distances (subclause C.2)

Table 5 of C.2, “Balanced twisted-pair cabling supportable distances,” shall be modified as follows: