ANSI/ICEA S-106-703-2018

Standard for Broadband Aerial Service Wire, Aircore, Polyolefin Insulated, Copper Conductor

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Insulated Cable Engineers Association, INC.
www.icea.net

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CONTENTS

APPENDICES

TABLES

FIGURES

Foreword

ICEA Standards are published in the public interest and are intended to promote product uniformity and quality throughout the industry. Existence of an ICEA publication does not in any respect preclude the manufacture or use of products not conforming to the Standard.

The user of this Standard is cautioned to observe any applicable health or safety regulations and rules relative to the manufacture and use of cable made in conformity with this Standard. This Standard hereafter assumes that manufacture, testing, installation, and maintenance of cables defined by this Standard will be performed only by properly trained personnel using suitable equipment and employing appropriate safety precautions.

Questions of interpretation of ICEA Standards can only be accepted in writing and the reply shall be provided in writing. Suggestions for improvements in this Standard are welcome. Questions and suggestions shall be sent to:

Secretary
Insulated Cable Engineers Association
www.icea.net

This Standard was developed by the ICEA Communications Division WG-703. It was approved by ICEA on Sept. 4th, 2018. This issue replaces the previous issue of ANSI/ICEA S-106-703-2012 *Standard for Broadband Aerial Service Wire, Aircore, Polyolefin Insulated, Copper Conductor*

The members of the ICEA Communications Cable Division, Working Group 703, who participated in this project, were:

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This standard was processed and approved for submittal to ANSI by the Copper Communication Cables Subcommittee of the Accredited Standards Committee C08 on Insulated Wires & Cables, Excl Magnet Wire. Committee approval of the standard does not necessarily imply that all committee members voted for its approval. At the time it approved this standard, the C08-CC Subcommittee had the following members:

Khaled Masri, Secretary

First Name	Last Name	Organization	Voting Status
Norberto	Esteves	U. S. Department of Agriculture	Voting
Anthony	Tassone	Underwriters Laboratories Inc.	Voting
Gerald	Dorna	Belden	Voting
Frédéric	Jean	Berk-Tek a Nexans Company	Voting
Kenneth	Bow	Kable Consult LLC	Voting
Todd	Taylor	Enfinity Engineering	Voting
Scott	Brown	General Cable	Alt. Voting

Section 1
GENERAL

1.1 PURPOSE

The purpose of this Standard is to establish generic technical requirements that may be referenced by individual telecommunications wire specifications covering products intended to connect the broadband outside plant to the individual customer premises. The parameters covered provide material, construction, and performance requirements.

Because this Standard does not cover all details of individual wire design, it cannot be used as a single document for procurement of product. It is intended to be used in conjunction with an individual product specification that provides complete design details for the specific wire type and designates the applicable performance requirements. Such individual wire specifications may be prepared either by the user or the manufacturer. The specification designated for procurement is at the option of the user.

The manufacturer and user of these wires should consider the selection and availability of appropriate hardware in the installation of these products

1.2 SCOPE

This Standard covers material, mechanical and electrical requirements for Broadband Aerial Service Wire (BB-ASW) of ≤ 12 pair, intended for use principally in extending a circuit from a broadband distribution cable terminal to a subscriber's network interface device (NID).

1.3 OPTIONS AND INFORMATION

This Standard provides alternative choices for type of insulation, type of sheath design (shielding materials, single or double jackets, and jacket type and thickness), strength members and armoring.

The objective of this Standard is to also ensure compatibility with the Category 5e system requirements as specified in the TIA Standard 568-C.2 for commercial building telecommunications cabling, so that the standardized service wires can be used in a “Customer Owned Outside Plant” or as “Campus Cables”, provided they have an appropriate pair count. However, due to specific requirements of service wires, not all requirements outlined in TIA Standard 568-C.2 can be met. It will be indicated in this standard, where such deviations occur.

Broadband aerial service wires are intended to be self-supporting and shall contain strength members to accommodate the appropriate requirements of this standard. The self-supporting properties may be accomplished by utilizing a galvanized coated steel strength member or an integral, or multiple layer of approved compounds containing synthetic reinforcing members. Table 1-1 lists the different wire designations and constructions used throughout this document

TABLE 1-1
WIRE DESIGNATIONS AND CONSTRUCTIONS

Wire Designations	Strength Members	Wire Construction
NMR Non Metallic Reinforced	Non-Metallic Members	Parallel Twisted Pairs
MR Metallic Reinforced	Metallic Support Messenger	Parallel Twisted Pairs