STANDARD FOR THERMOPLASTIC INSULATED AND JACKETED TELECOMMUNICATIONS STATION WIRE FOR INDOOR/OUTDOOR USE

ANSI/ICEA S-100-685-2016

INSULATED CABLE ENGINEERS ASSOCIATION, Inc.

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FOREWORD

(This Foreword is not part of this Standard)

ICEA Standards are adopted in the public interest and are designed to eliminate misunderstanding between the manufacturer and user and to assist the user in selecting and obtaining proper products for his particular need. Existence of an ICEA Standard 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 only properly trained personnel using suitable equipment will perform manufacture, testing, installation and maintenance of cables defined by this Standard.

Requests for interpretation of this ICEA Standard must be submitted in writing (hard copy, email, or fax) to the Insulated Cable Engineers Association to the ICEA Secretary. The mailing address of ICEA Headquarters and a Contact link are shown on the ICEA web site:

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An official written interpretation will be provided.

The members of the ICEA Communications Division, Copper Section, Working Group 685, who participated in this project, were:

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ACRONYMS, ABBREVIATIONS AND SYMBOLS

ANSI	American National Standards Institute
ASTM	American Society for Testing and Materials
AWG	American Wire Gauge
°C	Degrees of Temperature, Celsius scale, Centigrade
CM	UL Listing designation for General Purpose Communication Cable
CMG	UL Listing designation for General Purpose Communication Cable
CMR	UL Listing designation for Riser Communication Cable
CMX	UL Listing designation for Communication Cable, Limited Use, Dwellings and Raceways
EIA	Electronic Industries Alliance
°F	Degrees of Temperature, Fahrenheit scale
ft	foot or feet
ICEA	Insulated Cable Engineers Association
in	inch
ISO	International Organization for Standardization
lb	pounds
lbf	pounds of force
NFPA	National Fire Protection Association
NIST	National Institute of Standards and Technology
psi	pounds per square inch
UL	Underwriters Laboratories
º	degrees symbol, angle

THERMOPLASTIC INSULATED AND JACKETED TELECOMMUNICATIONS STATION WIRE FOR INDOOR/OUTDOOR USE

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 thermoplastic insulated and jacketed station wire products for indoor/outdoor application.

Because this Standard does not cover all details of individual wire designs, 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 product specifications may be prepared either by the user or the manufacturer. The procurement specification is left to the discretion of the user of this Standard.

1.2 SCOPE: This Standard covers station wire intended primarily for application on the premises of communications users. The wire is intended for use in transition applications requiring a combination of fire and weather resistance, such as between the point of demarcation (the network interface device/protector) and the telephone termination device within single and multi-family dwellings. Materials, construction and performance requirements are included in the Standard, together with applicable test procedures.

1.3 OPTIONS AND INFORMATION: This Standard is arranged in Sections covering specific areas of wire requirements and may be referenced as complete Sections or individual paragraphs.

All designs covered by this Standard are suitable for indoor/outdoor use. Products covered by this Standard are intended only for operation with voltages and currents normally found in communication systems. Typically, these wires are installed both in exposed areas, e.g., surface mounted to walls or building baseboards, and in concealed areas, e.g., within walls or attics.

Station wire covered by this standard is intended for voice, data and low voltage power supply (POE and POE+) transmission and is categorized by electrical transmission characteristics based on existing system requirements and projected application needs. Four categories of wire performance are:

Category 3: Intended for voice and data transmission and whose transmission characteristics are specified for frequencies up to 16 MHz, as specified in ANSI/ICEA S-90-661-2012.

Category 5e: Intended for voice and data transmission and whose transmission characteristics are specified for frequencies up to 100 MHz, as specified in ANSI/ICEA S-90-661-2012.