

ANSI/ICEA S-109-709-2005

**ICEA STANDARD FOR
DISTRIBUTION FRAME-WIRE
TECHNICAL REQUIREMENTS**

Published By

INSULATED CABLE ENGINEERS ASSOCIATION, INC.

Post Office Box 1568

Carrollton, GA 30112, U.S.A.

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Approved September 15, 2004 by
Insulated Cable Engineers Association, Inc.

Approved May 10, 2005 by
American National Standards Institute

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15 Inverness Way East
Englewood, CO 80113-5776 USA
Telephone: (800) 854-7179
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FOREWORD

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The user of this Standard is cautioned to observe any applicable health or safety regulations and rules relative to the manufacture and use of wire made in conformity with this Standard. This Standard hereafter assumes that manufacture, testing, installation, and maintenance of wires 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, Inc.
Post Office Box 1568
Carrollton, GA 30112, U.S.A.
United States of America

This Standard was approved by ICEA on September 15, 2004. The members of the ICEA Communications Cable Section, Working Group 709, who participated in this project were:

Greg Hessler, Chairman

D. K. Baker
R. Lovie
V. Osornio
J. Rosenbaum

C. Rim
W. T. Posey
B. Shuman
T. Zou

T Rhoades
F. Marquez
L. Hazy

The following participated in an advisory capacity to Working Group 709:

G. Hessler

RUS

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ACRONYMS, ABBREVIATIONS AND SYMBOLS

ac	Alternating Current
ANSI	American National Standards Institute
ASTM	American Society for Testing and Materials
AWG	American Wire Gauge
°C	Degrees of Temperature, Celsius scale
dc	Direct Current
EIA	Electronics Industry Alliance
EPA	Environmental Protection Agency
°F	Degrees of Temperature, Fahrenheit scale
ft	foot or feet
ICEA	Insulated Cable Engineers Association
IEC	International Electrotechnical Commission
ISO	International Organization for Standardization
in ²	square inch
kg	kilogram
km	kilometer
lb	pound
lbf	pound of force
m	meter
mm	millimeter
MPa	megapascal
μS	micro-Siemens
N	Newton
nF	nanofarad
NFPA	National Fire Protection Association
%	Percent
psi	pounds per square inch
PVC	Polyvinyl Chloride
RMS	Root-Mean-Square
TCLP	Toxicity Characteristics Leaching Procedure
UL	Underwriters Laboratories
°	degrees symbol, temperature or angle

DISTRIBUTION FRAME-WIRE TECHNICAL REQUIREMENTS

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 for cross-connecting the outside plant cable and the switching system terminations appearing on a distributing frame in the telecommunications central office. 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. This Standard is intended for use 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.

- 1.2 **SCOPE:** This Standard covers mechanical and electrical requirements for insulated, copper conductor, wires intended primarily for use as a telecommunications central office distribution frame wire. Depending upon the application, this Standard provides choices for materials.

The wires covered by this Standard are provided in singles, triples, one or two pair constructions. The wires are also provided with either a high stress or general purpose insulation.

Wires using high stress insulation should be used where user applications required use of a tougher insulating material. Wires using general purpose insulation should be used in normal user applications.

- 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 as individual paragraphs.

Paragraphs of this Standard where the user may specify a particular option are listed below:

2.1,	Conductor
3.2	Heavy Metal Free Insulation
3.3	Halogen or Nonhalogen Insulation
4.1	Wire Assembly
4.2	Color Code
7.1	Packaging

To assist the user in selection of options and to avoid possible misunderstandings between the manufacturer and user, it is suggested that a check-off sheet similar to that shown in Informative Annex A be utilized.

- 1.4 **UNITS AND TOLERANCES:** Throughout this Standard, the primary unit of measure is indicated first and these values must be used for determination of product conformance. Parenthetical conversions are approximate and are provided for information only. Unless otherwise specified, the rounding-off method of ASTM E 29 shall be used for determining measurement tolerances.