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Standard for Control, Thermocouple Extension, and Instrumentation Cables

Prepared and Sponsored by:

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Foreword

The *Standard for Control, Thermocouple Extension and Instrumentation Cables*, ICEA S-73-532, NEMA WC 57-2003, was developed by the Insulated Cable Engineers Association, Inc. (ICEA) and approved by the National Electrical Manufacturers Association (NEMA). Unless otherwise noted as Authorized Engineering Information, this standards publication has been approved by NEMA as a NEMA Standard.

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This standard does not specify any specific frequencies for sampling for test purposes, cable products, or components. One program of sampling frequencies is given in Publication ICEA T-26-465/NEMA WC 54-2013.

Requests for interpretation of this standard must be submitted in writing to the Insulated Cable Engineers Association, Inc., PO Box 1568, Carrollton, GA 30112. An official written interpretation will be provided, once approved by ICEA and NEMA. Suggestions for improvements gained in the use of this publication are welcomed by the Association.

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Scope

This standard applies to materials, construction, and testing of multiconductor control, thermocouple extension, and instrumentation cables rated up to and including 125°C. Control cables are multiconductor cables that convey electrical signals used for monitoring or controlling electrical power systems and their associated processes. Control cables convey signals between devices interfaced directly with the electrical power system, such as current transformers, potential transformers, relays, switches, and meters. Instrumentation cables and thermocouple extensions are multiconductor cables that convey low-energy electrical signals (circuits that are inherently power limited) used for monitoring or controlling electrical power systems and their associated processes. Instrumentation cables and thermocouple extensions convey signals from process monitors to process analyzers (usually electronic equipment) and from the analyzers to control equipment in the electric power system. Construction details and test requirements for cables rated above 125°C can be found in the NEMA HP-100 series of standards.