ANSI C119.6-2024

American National Standard for Electric Connectors— Non-Sealed, Multiport Connector Systems Rated 600 Volts or Less for Aluminum and Copper Conductors

Secretariat:

National Electrical Manufacturers Association

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American National Standards Institute, Inc.

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Foreword (This foreword is not part of American National Standard C119.6-2024.)

This standard describes the current cycle and mechanical tests used to establish performance characteristics of non-sealed, multiport distribution connectors used to join aluminum-to-aluminum, aluminum-to-copper, or copper-to-copper conductors.

The only significant change on this 2024 revision of the standard is the change of the Current Cycle Tests temperature of 100°C to 105°C above ambient. See Section 4.3.1 to read as follows:

Tests shall be conducted in accordance with ANSI C119.0 Section 5.1, Current Cycle Tests, using a control conductor temperature of 105°C (221°F) above ambient. The test shall be run for either 500 cycles per the current cycle test (CCT) or 100 cycles per the current cycle submersion test (CCST). The conductors shall be bare. The connectors may be with or without insulation; that utilized shall be identified in the test report.

The remainder of the standard update is mostly a reaffirmation.

The Subcommittee on Non-Sealed, Multiport Connector Systems Rated 600 Volts or Less for Aluminum and Copper Conductors, C119, in its constant review of the publication, continues to seek out the views of responsible users that will contribute to the development of better standards.

Suggestions for improvement of this standard will be welcome. They should be sent to the National Electrical Manufacturers Association, 1812 North Moore Street, Suite 2200, Arlington, Virginia 22209.

This standard was processed and approved for submittal to ANSI by the Accredited Standards Committee on Connectors for Electrical Utility Applications, C119. Committee approval of this standard does not necessarily imply that all committee members voted for its approval.

At the time it approved this standard, the ANSI ASC C119 Committee had the following members:

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Carl Tamm	Classic Connectors Inc.
Giovanni Velazquez	CFE LAPEM
Matthew Welborn	AFL
Robert Westbrook	Polaris Electrical Connectors
Christopher Wong	CTC Global
Andrew Zwit	ILSCO LLC

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1 Scope and Purpose

1.1 Scope

This standard covers non-sealed, multiport distribution connectors rated 600 volts or less used for making electrical connections between aluminum-to-aluminum, aluminum-to-copper, or copper-to-copper conductors for above grade, electric utility applications.

This standard establishes the electrical and mechanical test requirements for connectors used at normal operating temperatures not to exceed 90°C (194°F) and is not intended to recommend any other operating conditions.

1.2 Purpose

The purpose of this standard is to give reasonable assurance to the user that connectors meeting the requirements of this standard will perform in a satisfactory manner, provided they have been properly selected for the intended application and are installed in accordance with the manufacturer's recommendations. The service operating conditions and the selection of the connector are the responsibility of the user.

2 Referenced Standards

This standard is intended to be used in conjunction with the following standards. When a referenced standard is superseded by a revision approved by the American National Standards Institute, Inc., the referenced revision shall apply.

ANSI C119.0 *American National Standard for Electrical Connectors—Testing Methods and Equipment Common to the ANSI C119 Family of Standards*

IEEE 837-2014 *Standard for Qualifying Permanent Connections Used in Substation Grounding*

3 Definitions

bolted-type connector: A connector in which the contact between the conductor and the connector is made by pressure exerted by one or more clamping bolts.

CCT: Current Cycle Test where current cycle heating and cooling are done in air.

CCST: Current Cycle Submersion Test where current cycle heating is done in air and cooling is done using water submersion.

conductor: Conducting material used as a carrier of electric current.

connector: A device joining two or more conductors to provide a continuous electrical path.

connector assembly: The connector installed on the conductor(s).

input conductor: Conductor on the supply side of the connector.

multiport connector: A connector that joins two or more conductors with a third or plurality of connector points.

output conductor: Conductor on the load side of the connector.

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