



**ANSI C119.6-2018**

*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**

Approved: June 29, 2018

**American National Standards Institute, Inc.**

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Published by

**National Electrical Manufacturers Association  
1300 North 17th Street, Rosslyn, VA 22209**

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Printed in the United States of America.

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**Foreword** (This foreword is not part of American National Standard C119.6-2018.)

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.

This revision has been reorganized to follow international formatting and improve the organization of information throughout the document when compared to the previous version.

Substantive changes to the standard have been made in the C119.6-2018 version of the standard. A substantive change is one that directly and materially affects the performance of a product and which requires testing or retesting to meet the current edition of a standard. The substantive changes to the standard are:

This version of the standard requires retesting the performance of a product if there have been substantive changes made to the product.

This revision includes the addition of spreadsheet files in Annex D which can be used to collect current cycle test data, calculate connector stability, generate graphs of the data and print the data to provide test results as part of the test report. The spreadsheets are provided to give test laboratories a standardized method to collect, calculate and report test data and prepare test reports. These spreadsheets were not part of earlier editions.

This standard incorporates an alternate, accelerated current cycle test method, henceforth referred to as the current cycle submersion test (CCST). The CCST method differs from the traditional current cycle test in that test conductors are rapidly cooled by immersion in chilled water at the beginning of the current-OFF cycle and requires fewer total current-ON and current-OFF cycles. The CCST method differs from the traditional current cycle test (CCT) in that test connectors are rapidly cooled by immersion in chilled water at the beginning of the current-OFF cycle. Comparative testing has demonstrated that the CCST method will provide essentially the same performance test results as the traditional current cycle test (CCT) in fewer test cycles. The current cycle test remains the preferred test method recommended for qualification of a connector.

The Subcommittee on Multiport Connectors of the Accredited Standards Committee on Connectors for Electric Utility applications, 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, 1300 North 17th Street, Suite 900, Rosslyn, 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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## **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.