NEMA Standards Publication

ANSI/NEMA C12.20-2015

American National Standard for Electricity Meters 0.1, 0.2 and 0.5 Accuracy Classes

National Electrical Manufacturers Association

National Electrical Manufacturers Association
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Foreword (This foreword is not part of American National Standard C12.20)

This American National Standard establishes acceptable performance criteria for electricity meters. Accuracy class designations, current class designations, voltage and frequency ratings, test current values, service connection arrangements, pertinent dimensions, form designations, and environmental tests are covered.

The existing C12.20 standard has been revised with the intent to bring it up to date in an industry that is changing dramatically because of both technology and regulatory matters.

Major changes in this edition include testing under harmonic conditions, addition of a 0.1% accuracy class, clarification that non-Blondel applications are not covered by this standard, and addition of specifications for the optical test output port.

In memoriam to Herman Millican: Herman had a passion for standards and members of SC16 felt fortunate to know and learn from him.

Suggestions for improvement to this standard are welcome. They should be sent to:

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This standard was processed and approved for submittal to ANSI by Accredited Standards Committee for Electricity Metering, C12. At the time the committee approved this standard, the C12 Main Committee had the following members:

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1 Scope

This standard establishes the physical aspects and acceptable performance criteria for 0.1, 0.2, and 0.5 accuracy class electricity meters meeting Blondel's Theorem. Where differences exist between the requirements of this standard and the most current version of ANSI C12.1 and ANSI C12.10, the requirements of this standard shall prevail.

2 Definitions

See clause 2 of ANSI C12.1.

3 References

ANSI C12.1 *American National Standard for Electric Meters—Code for Electricity Metering*
ANSI C12.10 *American National Standard for Physical Aspects of Watthour Meters—Safety Standard*
ANSI C12.18 *American National Standard for Protocol Specification for ANSI Type 2 Optical Port*

Note: Where the date of the referenced document is not shown, the latest published version of the document applies.

4 Requirements

4.1 Mounting

Mounting arrangements may include detachable socket, type "S," bottom-connected, type "A," or any other arrangement agreed upon between the manufacturer and user.

4.2 Voltage and Frequency

Typical voltage ratings are 120, 240, 277, and 480 volts with a frequency rating of 50 or 60 Hz.

4.3 Current Classes and Test Amperes

The current classes and their recommended test amperes are as listed in Table 1.

Table 1
Current Classes and Test Amperes

Current Class	Test Amperes
2	0.25
10	2.5
20	2.5
100	15
200	30
320	50

Note: Other values of test amperes may be used as recommended by the manufacturer.