AHRI Standard 110

2016 Standard for

Air-conditioning, Heating and Refrigerating Equipment Nameplate Voltages

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IMPORTANT

SAFETY RECOMMENDATIONS

It is strongly recommended that the product be designed, constructed, assembled and installed in accordance with nationally recognized safety requirements appropriate for products covered by this standard.

AHRI, as a manufacturers' trade association, uses its best efforts to develop standards employing state-of-the-art and accepted industry practices. However, AHRI does not certify or guarantee safety of any products, components or systems designed, tested, rated, installed or operated in accordance with these standards or that any tests conducted under its standards will be non-hazardous or free from risk.

Note:

This standard supersedes ANSI/AHRI Standard 110-2012.

Price $10.00 (M) $20.00 (NM)
Printed in U.S.A.

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AIR-CONDITIONING, HEATING AND REFRIGERATING EQUIPMENT NAMEPLATE VOLTAGES

Section 1. Purpose

1.1 *Purpose.* The purpose of this standard is to establish, for air-conditioning, heating and refrigerating equipment: definitions; voltage rating requirements; equipment performance requirements; and conformance conditions.

1.1.1 *Intent.* This standard is intended for the guidance of the industry, including manufacturers, engineers, installers, contractors, and users.

1.1.2 *Review and Amendment.* This standard is subject to review and amendment as technology advances.

1.2 The provisions herein are recommendations intended for implementation only through reference by other authoritative documents.

Section 2. Scope

2.1 *Scope.* This standard applies to 50 Hz and 60 Hz electrical voltage ratings and operating limits as applied to air-conditioning, heating and refrigerating equipment, heat pumps, and electric furnaces as well as components.

2.1.1 *Exclusions.* Voltages less than 100V AC are not included in this standard.

Section 3. Definitions

All terms in this document will follow the standard industry definitions in the *ASHRAE Terminology* website (https://www.ashrae.org/resources--publications/free-resources/ashrae-terminology) unless otherwise defined in this section.

3.1 *Delta*. A three-phase transformer coil configuration that is commonly abbreviated by the Greek letter Δ.

3.2 *"Shall" or "Should."* "Shall" or "should" shall be interpreted as follows:

3.3.1 *Shall*. Where "shall" or "shall not" is used for a provision specified, that provision is mandatory if compliance with the standard is claimed.

3.3.2 *Should*. "Should" is used to indicate provisions which are not mandatory but which are desirable as good practice.

3.3 *Voltages.*

3.3.1 *Equipment Nameplate Voltage Rating*. The nominal Utilization Voltage marked on the equipment nameplate by the manufacturer (Tables 1 and 2).

3.3.2 *Low Voltage*. The Nominal System Voltage with the range between 100V and 1kV AC according to ANSI C84.1.

3.3.3 *Medium Voltage*. The Nominal System Voltage with the range between 1kV and 35kV AC according to IEEE 1585.

Note: For the purposes of this standard, 1kV is included under Medium Voltage.

3.3.4 *Nominal System Voltage*. A nominal value assigned to the electric power supply system for the purpose of conveniently designating its voltage class.

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