

## UNDERWRITERS LABORATORIES INC. CERTIFICATION REQUIREMENT DECISION

This Certification Requirement Decision is prepared by UL LLC. It is normative for the applicable UL Product Certification Program(s); however, it is currently not part of the UL Standard(s) referenced below.

**Product Category (CCN): ACOT, ACVS, ACKZ**

**Standard Number: UL 484**

**Standard Title: Standard for Room Air Conditioners**

**Edition Date: February 7, 2014**

**Edition Number:**

**Section / Paragraph Reference: 23.2.2, 23.4.1**

**Subject: Addition of reference to UL 61800-5-1 for motor protection**

### DECISION:

23.2.2 Except as indicated in paragraphs 23.2.1 (c) and (f), electronically protected motor circuits shall comply with one of the following:

- a) The Standard for Tests for Safety-Related Controls Employing Solid-State Devices, UL 991. When the protective electronic circuit is relying upon software as a protective component, it shall comply with the requirements in the Standard for Software in Programmable Components, UL 1998. If software is relied upon to perform a safety function, it shall be considered software Class 1;
- b) The Standard for Automatic Electrical Controls – Part 1: General Requirements, UL 60730-1 as well as the Standard for Automatic Electrical Controls for Household and Similar Use, Part 2: Particular Requirements for Temperature Sensing Controls, UL 60730-2-9. If software is relied upon to perform a safety function, it shall be considered software Class B; or,
- c) The Standard for Power Conversion Equipment, UL 508C, or the Standard for Adjustable Speed Electrical Power Drive Systems – Part 5-1: Safety Requirements – Electrical, Thermal, and Energy, UL 61800-5-1, for a power conversion controller protecting a motor in a split-system or packaged terminal air conditioner. The controller shall incorporate overcurrent protection with the percentage protection set as indicated in Table 23.1.

23.4.1 Hermetic refrigerant motor-compressors shall be protected in accordance with one or more of the following:

- a) The applicable requirements in UL 60335-2-34; or
- b) The Standard for Power Conversion Equipment, UL 508C, or the Standard for Adjustable Speed Electrical Power Drive Systems – Part 5-1: Safety Requirements – Electrical, Thermal, and Energy, UL 61800-5-1, for a power conversion controller protecting a compressor in a split-system or packaged terminal air conditioner. The controller shall incorporate overcurrent protection with the percentage protection set as indicated in Table 23.1.

### RATIONALE FOR DECISION:

This Certification Requirement Decision (CRD) is intended to allow power conversion equipment investigated to UL 61800-5-1 to be used as motor controllers providing electronic motor protection as alternates to UL 508C. UL 61800-5-1 is the new standard for motor drives to replace UL 508C, and requires the same or higher level of motor overload protection.

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