UL 294B

STANDARD FOR SAFETY

Power Over Ethernet (PoE) Power Sources for Access Control Systems and Equipment

UL Standard for Safety for Power Over Ethernet (PoE) Power Sources for Access Control Systems and Equipment, UL 294B

First Edition, Dated May 10, 2013

Summary of Topics

The revisions dated February 2, 2015 were issued to extend the effective date for the Standard from December 2, 2015 to December 2, 2018.

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The following table lists the future effective dates with the corresponding reference.

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Future Effective Date	Reference
December 2, 2018	Entire standard

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Standard for Power Over Ethernet (PoE) Power Sources for Access Control Systems and Equipment

First Edition

May 10, 2013

This ANSI/UL Standard for Safety consists of the First Edition including revisions through February 2, 2015.

The most recent designation of ANSI/UL 294B as an American National Standard (ANSI) occurred on May 10, 2013. ANSI approval for a standard does not include the Cover Page, Transmittal Pages, Title Page, or effective date information.

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INTRODUCTION

1 Scope

Effective date for 1 changed from December 2, 2015 to December 2, 2018

1.1 This standard provides requirements for the evaluation of Power over Ethernet (PoE) power sources for access control systems and equipment. The power sources may be provided integral with the access control equipment or as a separate device supplying power. The equipment is intended to comply with Article 725.121, Power Sources for Class 2 and Class 3 Circuits, of the National Electrical Code, NFPA 70. Equipment covered by this standard provides a nominal source voltage of 48 or 53 V DC.

1.2 This standard applies to all connected equipment and interconnections necessary to ensure normal operation of the PoE powered control system.

1.3 PoE sources covered by this standard are not intended to be located in an outdoor environment.

1.4 The PoE source shall meet the applicable requirements of the Standard for Access Control System Units, UL 294. See 2.2.4 and 2.2.5.

Exception: Outdoor Use Equipment; Sections 70 – 81 of UL 294 inclusive are not applicable.

2 General

Effective date for 2 changed from December 2, 2015 to December 2, 2018

2.1 General

2.1.1 Products intended for use in air-handling spaces in accordance with Section 300.22 (C) of the National Electrical Code, NFPA 70, are additionally investigated to the Standard for Fire Test for Heat and Visible Smoke Release for Discrete Products and Their Accessories Installed in Air-Handling Spaces, UL 2043.

2.2 Additional documentation requirements

2.2.1 Products that utilize PoE are connected through standard eight pin RJ-45 connectors. The connector configuration shall be supplied in documentation with the PoE power source.

2.2.2 The equipment shall be provided with information concerning the power sourcing equipment (PSE) connector configuration, whether Alternative A or Alternative B or both, and the maximum power class supported by the (PSE), as defined in the appropriate IEEE standard.

2.2.3 PoE based power sources that meet the requirements of this standard shall specify the UL 294 compliant PoE powered access control system and equipment with which it is compatible with.

2.2.4 PoE power sources specified in 2.2.3 shall be tested and in compliance with the Standard for Access Control System Units, UL 294 or shall comply with the requirements of 2.2.5.

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2.2.5 PoE power sources specified in 2.2.3 shall comply with the Standard for Information Technology Equipment – Safety – Part 1: General Requirements, UL 60950-1 and meet the requirements of 8.1 and 33.1 of the Standard for Access Control System Units, UL 294.

2.3 Components

2.3.1 Except as indicated in 2.3.2, a component of a product covered by this standard shall comply with the requirements for that component. See Appendix A for a list of Standards covering components generally used in the products covered by this standard.

2.3.2 A component is not required to comply with a specific requirement that:

a) Involves a feature or characteristic not required in the application of the component in the product covered by this standard, or

b) Is superseded by a requirement in this standard.

2.3.3 A component shall be used in accordance with its manufacturers rating and/or that established for the intended conditions of use.

2.3.4 Specific components are incomplete in construction features or restricted in performance capabilities. Such components are intended for use only under limited conditions, such as certain temperatures not exceeding specified limits, and shall be used only under those specific conditions.

2.4 Units of measurement

2.4.1 Values stated without parentheses are the requirement. Values in parentheses are explanatory or approximate information.

2.4.2 Unless otherwise indicated, all voltage and current values mentioned in this standard are root-mean-square (rms).

2.5 Undated references

2.5.1 Any undated reference to a code or standard appearing in the requirements of this standard shall be interpreted as referring to the latest edition of that code or standard.

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