

STANDARD INFORMATION

Standard: UL 924

Standard ID: Emergency Lighting and Power Equipment [UL 924:2016 Ed.10+R:05May2020]

Previous Standard ID: Emergency Lighting and Power Equipment [UL 924:2016 Ed.10+R:01May2018]

EFFECTIVE DATE OF NEW/REVISED REQUIREMENTS

Effective Date: **September 1, 2022**

IMPACT, OVERVIEW, AND ACTION REQUIRED

Impact Statement: Per our accreditation, Intertek is required to review reports against the standard revisions to confirm compliance. Once compliance is confirmed, the standard reference in the report is updated to show continued compliance to the technical requirements of the standard.

Overview of Changes:

- Electronic circuit fault assessment and functionality
- ELCDs to be evaluated only for power status conditions
- Self-Testing/Self-Diagnostic Equipment Load Loss Detection Thresholds
- Derangement signal calibration for self-test equipment with variable output levels
- Flashing Exit Signs
- Test switch accessibility
- Guidance for non-Arabic character text-based exit signs

Specific details of new/revise requirements are found in table below.

Current Listings Not Active? – Please immediately identify any current Listing Reports or products that are no longer active and should be removed from our records. We will do this at no charge as long as Intertek is notified in writing prior to the review of your reports.



STANDARD INFORMATION

CLAUSE	VERDICT	COMMENT
		<i>Additions to existing requirements are <u>underlined</u> and deletions are shown lined-out below.</i>
29	Info	Test Switch <i>New clause added;</i>
29.3		A test switch of the momentary-break type, that returns the equipment to normal status when released, shall be accessible to maintenance personnel (see 4.49, routine maintenance) without the need for tools to remove a panel or barrier.
29A	Info	<i>New section added;</i> Emergency Lighting Control Devices
29A.1		An ELCD that has control functionality (“on”, “off”, “dim”, etc.) subject to testing under 47.2(c) shall have means to monitor the input signal referred to in 47.2 (c) for the branch circuit associated with its controlled loads. This input signal monitoring feature, which can be wired or wireless, shall be continuously functional and independent of the emergency power feeding through the ELCD to the load.
29A.2		An ELCD that has functionality related to facility conditions beyond the status of normal power availability requires evaluation as part of the system it is designed to work within, for that facility and as approved by an authority having jurisdiction. Such additional functionalities, which may consider real-time conditions and hazards, and that may involve software algorithms to make real-time facility infrastructure adjustments, are beyond the scope of this Standard.
30	Info	Self-Testing/Self-Diagnostic Equipment
30.1		Equipment that contains self-testing/self-diagnostic capability shall automatically perform a minimum 30 second test at least once every 30 days to verify the following: d) Availability and functionality of connected loads. Based on preset or recalibrated levels indicating load availability, a derangement signal shall occur when the levels deviate by more than 50 percent for exit signs, <u>more than 25 percent for unit equipment and emergency battery packs</u> , and more than 10 percent for central station battery systems. The means to determine the availability of connected loads shall be appropriate for the equipment technology, such as a measurement of impedance (for incandescent loads) or drive current (for LED loads). The equipment shall be tested in accordance with 47.7 and 47.8 and be provided with user instruction manual content per 74.4.



CLAUSE	VERDICT	COMMENT
		<i>New clause added;</i>
30.1.1		Equipment with a range of output levels and subject to loads being added or removed after initial installation shall be marked, on a surface visible during service, "CAUTION: See instructions for derangement signal calibration" Examples include constant power output LED emergency battery packs which provide reduced current in proportion to higher voltage loads being connected. See 74.5.
40	Info	Exit Sign Construction – General
40.5		An exit sign is permitted to flash in response to a fire alarm activation signal. The flashing rate shall be between 12 and 120 cycles per minute <u>and the “off” time between flashes shall not exceed 250 milliseconds per cycle shall be no less than 200 milliseconds</u> as determined in accordance with 43.5.1. A Flashing exit sign shall be marked per 73.1.31.
		<i>New clause added;</i>
40.8		The requirements of Section 41 apply to text based exit signs using English alphabet letters, regardless of language. Text-based signs using other character sets would not necessarily be expected to conform to the letter height, width, and spacing requirements established for English letters; however, reductions from these dimensional values could result in reduced viewing distances. The viewing distance rating for any text-based sign of letter dimensions less than those required for English letters can instead be determined using the Observation Visibility Test.
	Info	MARKINGS
73	Info	General
73.1	Info	Details
73.1.30		An emergency luminaire intended for installation as an air-handling register for cool or return air only shall be marked "Suitable for use as an air-handling emergency luminaire. Not for use as a Heated-Air Outlet" or the equivalent. An emergency luminaire intended for installation as an air-handling register and that has been investigated for use in a 55 C environment is permitted to be marked “Suitable for use as an air-handling emergency luminaire” or the equivalent
	Info	INSTRUCTION MANUAL
74	Info	General
		<i>New clause added;</i>
74.4		Per 30.1 and specifically 30.1 (d), the user manual for self-testing/self-diagnostic equipment shall include guidance for installation, calibration, and diagnostic report analysis. The instructions should address conditions that could result in false positives (indicating failure when no failure exists) or undetected equipment failures that may be due to the effect of other equipment installed between the emergency power source and the connected load (for example, an ELCD that allows a connected emergency load to be “off”).



CLAUSE	VERDICT	COMMENT
		<i>New clause added;</i>
74.5		Per 30.1.1, equipment with self-test/self-diagnostic capability and a range of output levels shall include derangement signal calibration instructions preceded by the following, or equivalent: "CAUTION: This equipment provides reduced current levels when higher voltage loads are connected. The derangement signal requires calibration to ensure proper operation."
