

## STANDARD INFORMATION

**Standard:** UL 1996

**Standard ID:** Electric Duct Heaters [UL 1996:2009 Ed.4+R:07Aug2020]

**Previous Standard ID:** Standard For Safety For Electric Duct Heaters [UL 1996:2009 Ed.4+R:15Jul2016]

## EFFECTIVE DATE OF NEW/REVISED REQUIREMENTS

**Effective Date:** **August 7, 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:

- Revisions to the control requirements
- Revisions covering duct heaters employed in ductwork that contain flammable refrigerants

Specific details of new/revisted 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 – Please immediately identify any current Listing Reports or products that are no longer active and should be removed from our records.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 <del>lined-out</del> below.</i>
3	Info	<b>Components</b>
3.8	Info	<b>Controls</b>
3.8.2	Info	<b>Electromechanical and electronic controls</b>
		A control, other than as specified in 3.8.3 – 3.8.4, shall comply with:
3.8.2.1		a) <del>Standard for Temperature-Indicating and –Regulating Equipment, UL 873; or</del> b) The Standard for Automatic Electrical Controls; Part 1: General Requirements, UL 60730-1; or c) <u>A circuit meeting the parameters of Section 24A and the alternate circuit requirements of Section 24B.</u>
3.8.3	Info	<b>Temperature controls</b>
		A temperature control shall comply with the:
3.8.3.1		a) <del>Standard for Temperature-Indicating and –Regulating Equipment, UL 873; or</del> b) Standard for Industrial Control Equipment, UL 508; or c) Standard for Automatic Electrical Controls; Part 1: General Requirements, UL 60730-1; and the Standard for Automatic Electrical Controls; Part 2: Particular Requirements for Temperature Sensing Controls, UL 60730-2-9; or d) <u>Parameters of Section 24A and the alternate circuit requirements of Section 24B.</u>
21	Info	<b>Switches and Fan Controllers</b>
		A contactor, time-delay relay, or similar device, such as a silicon controlled rectifier, that controls a fan or blower motor shall comply with the requirements for a fan control as given in the Standard for <del>Limit Controls, UL 353</del> <u>Automatic Electrical Controls, Part 1: General Requirements, UL 60730-1 and the Standard for Automatic Electrical Controls, Part 2: Particular Requirements for Temperature Sensing Controls, UL 60730-2-9.</u>
21.1		
22	Info	<b>Transformers</b>
		A thermal cutoff shall comply with the Standard for Thermal-Links – Requirements and Application Guide, UL 60691. <del>A manual or automatic resetting thermal protector shall have an endurance rating of not less than 6000 cycles, and shall comply with the requirements in the Standard for Temperature Indicating and Regulating Equipment, UL 873, pertaining to the calibration of temperature-limiting controls.</del> <u>A type-2 action thermal cut-out, as specified in the Standard for Automatic Electrical Controls, Part 1: General Requirements, UL 60730-1 and the Standard for Automatic Electrical Controls; Part 2: Particular Requirements for Temperature Sensing Controls, UL 60730-2-9.</u>
22.5		



CLAUSE	VERDICT	COMMENT
23	Info	<b>Electric Heaters</b>
23.3	Info	<b>Heater controls</b>
		<del>The temperature limiting controls shall comply with the applicable requirements of the Standard for Limit Controls, UL 353.</del>
23.3.2		<del>Exception: A type-2 action thermal cut-out, as specified in the Standard for Automatic Electrical Controls for Household and Similar Use, Part 1: General Requirements, UL 60730-1A and the Standard for Automatic Electrical Controls for Household and Similar Use; Part 2: Particular Requirements for Temperature Sensing Controls, UL 60730-2-9, is considered to comply with the requirements of UL 353.</del>
		<u>The temperature-limiting controls shall comply with the applicable requirements of a type-2 action thermal cut-out, as specified in the Standard for Automatic Electrical Controls, Part 1: General Requirements, UL 60730-1 and the Standard for Automatic Electrical Controls, Part 2: Particular Requirements for Temperature Sensing Controls, UL 60730-2-9.</u>
		<b><i>New section added;</i></b>
23.4		<b>Duct heaters employed in ductwork or plenums that may contain A2L flammable refrigerants employed in the air conditioning system</b>
		Duct heaters which may be exposed to leakage of A2L refrigerants shall be permitted to exceed the 700° C element surface temperature, during the tests of Section 29, Power Input, when one of the following requirements are met:
23.4.1		a) The indoor fan is provided with a fan failure switch capable of detecting that the fan is not operating as intended. b) The heat source cannot be energized if the fan failure switch detects that the fan is not operating as intended; and c) Airflow through the heating source greater than 1.02 m/s (200 fpm).
23.4.2		If a refrigerant detection system input is provided which de-energizes the heat source when a leak is detected a fan failure switch is not required.
46	Info	<b>Other Markings</b>
		<b><i>New clause added;</i></b>
46.12		If a refrigerant detection system input is provided which de-energizes the heat source when a leak is detected a fan failure switch is not required.