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# UL 1996

## STANDARD FOR SAFETY

### Electric Duct Heaters



UL Standard for Safety for Electric Duct Heaters, UL 1996

Fourth Edition, Dated August 31, 2009

### **SUMMARY OF TOPICS**

***This revision of ANSI/UL 1996 dated September 29, 2021 includes the addition of Class CF Fuses and Fuseholders: [20.3](#), [24.7](#) and [24.7.1](#)***

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The revised requirements are substantially in accordance with Proposal(s) on this subject dated August 13, 2021.

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**ANSI/UL 1996-2021**

1

## **UL 1996**

### **Standard for Electric Duct Heaters**

The First edition was titled the Standard for Duct Heaters.

First Edition – December, 1992  
Second Edition – December, 1996  
Third Edition – November, 2004

### **Fourth Edition**

**August 31, 2009**

This ANSI/UL Standard for Safety consists of the Fourth Edition including revisions through September 29, 2021.

The most recent designation of ANSI/UL 1996 as an American National Standard (ANSI) occurred on September 29, 2021. ANSI approval for a standard does not include the Cover Page, Transmittal Pages, and Title Page.

Comments or proposals for revisions on any part of the Standard may be submitted to UL at any time. Proposals should be submitted via a Proposal Request in UL's On-Line Collaborative Standards Development System (CSDS) at <https://csds.ul.com>.

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No Text on This Page

## CONTENTS

### INTRODUCTION

1	Scope .....	7
2	General .....	7
2.1	General .....	7
2.2	Terminology .....	8
2.3	Units of measurement .....	8
2.4	Undated references .....	8
2A	Glossary .....	8
3	Components .....	8
3.1	General .....	9
3.2	Attachment plugs, receptacles, connectors, and terminals .....	10
3.3	Electrical enclosures and raceways .....	11
3.4	Cords, cables, and internal wiring .....	11
3.5	Lampholders .....	11
3.6	Power supplies .....	11
3.7	Printed wiring boards .....	12
3.8	Controls .....	12

### CONSTRUCTION

4	Enclosures .....	14
5	Thickness of Sheet Metal Enclosures for Uninsulated Live Parts .....	15
6	Openings in Enclosures .....	18
7	Enclosures, Doors, and Covers .....	20
8	Accessibility of Parts .....	20
9	Assembly .....	21
10	Outdoor Use Equipment .....	21
10.1	General .....	21
10.2	Enclosures .....	23
10.3	Field wiring connections .....	23
11	Mechanical Assembly .....	24
12	Auxiliary Devices .....	24
13	Connection to Power Supply .....	25
14	Thermal Insulation and Air Filters .....	27
15	Terminal Parts and Leads for Field Wiring Connections .....	28
15.1	General .....	28
15.2	High-voltage circuits .....	29
15.3	Low-voltage circuits .....	31
16	Internal Wiring .....	32
17	Separation of Circuits .....	35
18	Electrical Insulation .....	36
19	Grounding and Bonding .....	36
20	Mounting of Components .....	37
21	Switches and Fan Controllers .....	38
22	Transformers .....	39
23	Electric Heaters .....	41
23.1	General .....	41
23.2	Overcurrent protection .....	42
23.3	Heater controls .....	42
23.4	Duct heaters employed in ductwork or plenums that may contain A2L flammable refrigerants employed in the air conditioning system .....	45
24	Control Circuits .....	45

24A	Controls .....	48
24A.1	End product test parameters .....	48
24A.2	Auxiliary controls .....	48
24A.3	Operating controls (regulating controls) .....	48
24A.4	Protective controls (limiting controls) .....	49
24A.5	Controls using a temperature sensing device .....	51
24B	UL 60335-1 BASED REQUIREMENTS FOR THE EVALUATION OF ELECTRONIC CIRCUITS .....	51
24B.1	Introduction .....	51
24B.2	Construction .....	53
24B.3	Performance .....	55
24B.4	Manufacturing and production line testing .....	61
24B.5	Appendix .....	61
25	Moisture .....	62
26	Spacings .....	62
26.1	Hazardous voltage circuits .....	62
26.2	Low-voltage circuits .....	64
26A	Clearance and Creepage Distances .....	64

## PERFORMANCE

27	General .....	64
27.1	General .....	64
27.2	Supply connections .....	64
27.3	Airflow .....	65
27.4	Inlet air .....	65
27.5	Outlet air .....	65
27.6	Test enclosure .....	66
28	Temperature Tests .....	68
29	Power Input .....	71
30	Limit Control Cutout Test .....	71
31	Normal Tests .....	71
31.1	Continuous operation .....	71
31.2	Nuisance tripping .....	72
31.3	Fan-delay control .....	72
32	Abnormal Tests .....	72
32.1	General .....	72
32.2	Restricted inlet .....	73
32.3	Fan failure .....	73
32.4	Blocked outlet .....	73
33	Backup Protection Tests .....	73
33.1	General .....	73
33.2	Restricted inlet .....	73
33.3	Fan failure .....	74
33.4	Blocked outlet .....	74
34	Solid-State Components Test .....	74
35	Dielectric Voltage-Withstand Test .....	74
36	Insulation Resistance .....	75
37	Short-Circuit Tests .....	75
38	Overload Test – High-Voltage Transformers .....	76
39	Burnout Test – High-Voltage Transformers .....	77
40	Rain Test .....	77
41	Gaskets – Accelerated Aging Tests .....	81



**MANUFACTURING AND PRODUCTION TESTS**

42	Knockout Security Test .....	82
43	Production Line Dielectric Voltage-Withstand Tests .....	82

**MARKING**

44	General .....	83
45	Equipment Markings .....	83
	45.1 General .....	83
	45.2 Determination of rating .....	84
46	Other Markings .....	85

**INSTRUCTIONS**

47	General .....	86
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**APPENDIX A (informative)**

A	Example of Controls Performing as Operating or Protective Controls .....	87
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## INTRODUCTION

### 1 Scope

1.1 These requirements cover fixed electric duct heaters, and remote control assemblies for such equipment, rated at 600 volts or less to be employed in ordinary locations in accordance with the National Electrical Code, ANSI/NFPA 70.

1.2 These requirements do not cover fan-coil units, central heating furnaces, panel or cable type radiant heating equipment, electric boilers, baseboard heaters, air heaters, nor any other electric heating equipment or appliances which are covered in or as a part of separate, individual requirements.

1.3 Duct heaters intended for use in a hazardous location are judged on the basis of its compliance with the requirements in this standard, together with the requirements for hazardous location equipment included in other applicable standards.

1.4 Duct heaters designed to be connected to air-duct systems are intended for installation in accordance with the Standard for the Installation of Air Conditioning and Ventilating Systems, NFPA 90A, and the Standard for the Installation of Warm Air Heating and Air Conditioning Systems, NFPA 90B.

1.5 These requirements apply to relays and other auxiliary control devices that may be provided as part of a duct heater to make it usable with other heating or cooling equipment, and are intended to take into account the effects of operating the duct heater in conjunction with or in proximity to such equipment.

1.6 A duct heater is a self-contained heater designed to be installed in the field in the air stream of a ducted system, external to the air-moving unit. It is designed to be installed in a duct where an adequate flow of air from a separate, interlocked fan or blower system is provided. Such a heater may be located in the main supply duct of an air heating system, or in one of the branch ducts. Two or more duct heaters may be installed in a group (in proximity to one another in the duct) if tests indicate acceptable results when the heaters are installed in accordance with the manufacturer's instructions.

1.7 A duct heater intended to be employed in conjunction with another source of heat is judged on the basis of its compliance with the requirements in this standard, and further examination and tests to determine whether or not the combination is acceptable.

### 2 General

#### 2.1 General

2.1.1 A low voltage circuit is one that has an ac potential of not more than 30 volts alternating current (42.4 peak), and power of 100 VA or less; or 30 V dc supplied by a primary battery; or supplied by a Class 2 transformer; or supplied by a combination of a transformer and fixed impedance that, as a unit, complies with all the performance requirements for a Class 2 transformer. A circuit that is derived from a circuit that exceeds 30 V by connecting resistance or impedance, or both, in series with the supply circuit to limit the voltage and current is not considered to be a low voltage circuit.

2.1.2 A high-voltage circuit is one having characteristics in excess of those of an low-voltage circuit.

2.1.3 Duct heaters intended for installation within 1.22 m (4 ft) of heating or cooling equipment shall be evaluated for the combination use in accordance with the requirements in the standard. See [45.1.8](#).