



UL 894

Underwriters Laboratories Inc. Standard for Safety

Switches For Use In
Hazardous (Classified)
Locations



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UL Standard for Safety for Switches for Use in Hazardous (Classified) Locations, UL 894

Seventh Edition, Dated June 28, 1993

Revisions: This Standard contains revisions through and including February 6, 2009.

Summary of Topics

This revision to UL 894 is to remove the ANSI approval on the title page.

UL Standards for Safety are developed and maintained in the Standard Generalized Markup Language (SGML). SGML -- an international standard (ISO 8879-1986) -- is a descriptive markup language that describes a document's structure and purpose, rather than its physical appearance on a page. Due to formatting differences resulting from the use of UL's new electronic publishing system, please note that additional pages (on which no requirements have been changed) may be included in revision pages due to relocation of existing text and reformatting of the Standard.

Text that has been changed in any manner is marked with a vertical line in the margin. Changes in requirements are marked with a vertical line in the margin and are followed by an effective date note indicating the date of publication or the date on which the changed requirement becomes effective.

The revisions dated February 6, 2009 include a reprinted title page (page1) for this Standard.

As indicated on the title page (page1), this UL Standard for Safety has been adopted by the Department of Defense.

The UL Foreword is no longer located within the UL Standard. For information concerning the use and application of the requirements contained in this Standard, the current version of the UL Foreword is located on ULStandardsInfoNet at: <http://ulstandardsinfo.net/ulforeword.html>

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The requirements in this Standard are now in effect, except for those paragraphs, sections, tables, figures, and/or other elements of the Standard having future effective dates as indicated in the note following the affected item. The prior text for requirements that have been revised and that have a future effective date are located after the Standard, and are preceded by a "SUPERSEDED REQUIREMENTS" notice.

New product submittals made prior to a specified future effective date will be judged under all of the requirements in this Standard including those requirements with a specified future effective date, unless the applicant specifically requests that the product be judged under the current requirements. However, if the applicant elects this option, it should be noted that compliance with all the requirements in this Standard will be required as a condition of continued Listing, Recognition and Follow-Up Services after the effective date, and understanding of this should be signified in writing.

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This Standard consists of pages dated as shown in the following checklist:

Page	Date
1-2A	February 6, 2009
2B-3	August 4, 1999
4	February 6, 2009
5	August 4, 1999
6-6B	July 17, 1996
7	July 31, 1995
8-9	June 28, 1993
10	July 31, 1995
11	June 28, 1993
12	February 6, 2009
13	June 28, 1993
14-15	July 31, 1995
16	June 28, 1993
17-18	April 2, 1999
18A-18B	July 31, 1995
19	July 17, 1996
20-25	June 28, 1993
26	July 31, 1995
27	June 28, 1993
28-30	July 17, 1996

No Text on This Page

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1

UL 894

Standard for Switches For Use In Hazardous (Classified) Locations

The first and second editions were titled Snap Switches For Use In Hazardous Locations. The third through fifth editions were titled Switches For Use In Hazardous Locations, Class I, Groups A, B, C, & D, Class II, Groups E, F, & G.

First Edition – April, 1954

Second Edition – October, 1969

Third Edition – April, 1972

Fourth Edition – December, 1972

Fifth Edition – December, 1977

Sixth Edition – September, 1986

Seventh Edition

June 28, 1993

The Department of Defense (DoD) has adopted UL 894 on February 18, 1989. The publication of revised pages or a new edition of this Standard will not invalidate the DoD adoption.

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 <http://csds.ul.com>.

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No Text on This Page

CONTENTS

INTRODUCTION

1 Scope	5
2 General	5
2A Class I, Zone, and Group Equivalency	6
2A.1 Class I, Zone 1, Group IIA	6
2A.2 Class I, Zone 1, Group IIB	6
2A.3 Class I, Zone 1, Group IIB plus Hydrogen	6
2A.4 Class I, Zone 1, Group IIC	6
3 Components	6
4 Enclosure Types	6

CONSTRUCTION

5 Enclosure Material	6A
6 Enclosure Thickness	7
7 Joints in Enclosure	8
7.1 General	8
7.2 Class I, Groups C and D locations	8
7.3 Class I, Group B locations	14
7.4 Class I, Group A locations	14
7.5 Class II locations	14A
8 Holes in Enclosure	15
8.1 Class I locations	15
8.2 Class II locations	15
9 Drain and Breather Plugs in Enclosure	16
10 Shaft Openings	16
10.1 General	16
10.2 Class I locations	16
10.3 Class II locations	17
11 Supply Connections	17
11.1 Class I locations	17
11.2 Class II locations	18B
12 Conduit Seal	19
13 Mounting Of Switch Mechanism	19
14 Terminals And Leads	19
15 Spacings	19
16 Insulating Barrier or Liner	19
17 Protection Against Corrosion	20
18 Materials Applied to Joint Surfaces	20

PERFORMANCE

19 Explosion Tests	21
20 Hydrostatic Pressure Test	24
21 Leakage Test on Factory-Installed Conduit Seals	24
22 Dust-Penetration Test	25
23 Secureness Test of Conduit Hubs	26

24	Diaphragm Endurance Test	26
25	Rust-Resistance Test	26

RATINGS

26	General	26
----	---------------	----

MARKING

27	Details	27
----	---------------	----

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INTRODUCTION

1 Scope

1.1 These requirements cover switches for installation and use in hazardous (classified) locations Class I, Division 1, Groups A, B, C, and D, and Class II, Division 1, Groups E, F, and G, in accordance with the National Electrical Code, NFPA 70.

1.1.1 These requirements also cover explosion-proof electrical equipment for installation and use in Class I, Zone 1, Groups IIA, IIB, IIB plus Hydrogen, and IIC hazardous (classified) locations.

1.1.1 added July 17, 1996

1.2 These requirements cover snap and similar switches rated 60 amperes or less at 250 volts or less; 30 amperes or less at 600 volts or less; and 2 horsepower or less at 600 volts or less.

1.3 These requirements do not cover knife, enclosed, clock-operated, or magnetically-operated switches, or industrial control equipment such as auxiliary devices and magnetic or manual motor controllers.

1.4 These requirements apply to switches for hazardous locations under the following atmospheric conditions:

- a) An ambient temperature between minus 25°C (minus 13°F) and plus 40°C (plus 104°F).
- b) An oxygen concentration of not greater than 21 percent by volume, and
- c) A nominal barometric pressure of one atmosphere.

1.4 revised July 31, 1995

1.5 A product that contains features, characteristics, components, materials, or systems new or different from those covered by the requirements in this standard, and that involves a risk of fire, electric shock, or injury to persons shall be evaluated using the appropriate additional component and end-product requirements as determined necessary to maintain the acceptable level of safety as originally anticipated by the intent of this standard. A product whose features, characteristics, components, materials, or systems conflict with specific requirements or provisions of this standard cannot be judged to comply with this standard. Where considered appropriate, revision of requirements shall be proposed and adopted in conformance with the methods employed for development, revision, and implementation of this standard.

1.5 added July 31, 1995

2 General

2.1 A switch for use in hazardous locations shall also comply with the applicable requirements for similar switches for use in ordinary locations.

2.2 If a value for measurement is followed by a value in other units in parentheses, the second value may be only approximate. The first stated value is the requirement.

2.3 Deleted August 4, 1999

2A Class I, Zone, and Group Equivalency

2A.1 Class I, Zone 1, Group IIA

2A.1.1 Explosion-proof electrical equipment intended to be marked in accordance with 27.1.1 shall comply with all the requirements for explosion-proof electrical equipment for use in Class I, Group D hazardous (classified) locations.

2A.1.1 added July 17, 1996

2A.2 Class I, Zone 1, Group IIB

2A.2.1 Explosion-proof electrical equipment intended to be marked in accordance with 27.1.2 shall comply with all the requirements for explosion-proof electrical equipment for use in Class I, Group C hazardous (classified) locations.

2A.2.1 added July 17, 1996

2A.3 Class I, Zone 1, Group IIB plus Hydrogen

2A.3.1 Explosion-proof electrical equipment intended to be marked in accordance with 27.1.3 shall comply with all the requirements for explosion-proof electrical equipment for use in Class I, Group B hazardous (classified) locations.

2A.3.1 added July 17, 1996

2A.4 Class I, Zone 1, Group IIC

2A.4.1 Explosion-proof electrical equipment intended to be marked in accordance with 27.1.4 shall comply with all the requirements for explosion-proof electrical equipment for use in both Class I, Group A and Class I, Group B hazardous (classified) locations.

2A.4.1 added July 17, 1996

3 Components

3.1 Except as indicated in 3.2, a component of a product covered by this standard shall comply with the requirements for that component.

3.2 A component need not comply with a specific requirement that:

- a) Involves a feature or characteristic not needed in the application of the component in the product covered by this standard, or
- b) Is superseded by a requirement in this standard.

3.3 A component shall be used in accordance with its recognized rating established for the intended conditions of use.

3.4 Specific components are recognized as being 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 for which they have been recognized.

4 Enclosure Types

4.1 An enclosure shall comply with the applicable requirements specified in Table 4.1.