UL 120101

STANDARD FOR SAFETY

Definitions and Information Pertaining to Electrical Equipment in Hazardous Locations

UL Standard for Safety for Definitions and Information Pertaining to Electrical Equipment in Hazardous Locations, UL 120101

First Edition, Dated December 3, 2019

Summary of Topics

This First edition of ANSI/UL 120101 is an Adoption of ANSI/ISA-12.01.01, Definitions and Information Pertaining to Electrical Equipment in Hazardous Locations.

The requirements are substantially in accordance with Proposal(s) on this subject dated October 26, 2018 and August 16, 2019.

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Standard for Definitions and Information Pertaining to Electrical Equipment in Hazardous Locations

First Edition

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This ANSI/UL Standard for Safety consists of the First Edition.

The most recent designation of ANSI/UL 120101 as an American National Standard (ANSI) occurred on December 3, 2019. 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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Preface (UL)

The following people served as members of STP 60079 and participated in the review of this standard:

NAME	COMPANY
*B. Zimmermann, Chair	R Stahl Inc.
*T. Adam	FM Approvals LLC
R. Allen	Honeywell Inc.
*J. Anderson	Thermon Inc.
D. Ankele	UL LLC
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*C. Coache	National Fire Protection Association
*M. Cole	Hubbell Canada LP
D. Cook	Shelby County Department of Development Services
M. Coppler	Det Norske Veritas Certification Inc.
*R. Deadman	UL LLC
M. Dona	**Consultant**
T. Dubaniewicz	NIOSH
G. Edwards	Det-Tronics
M. Egloff	Montana Tech, University of Montana
M. Ehrmann	R Stahl Inc
D. El Tawy	Siemens Energy
*A. Engler	Det Norske Veritas DNV
*W. Fiske	Intertek
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G. Gurinder	Gurinder Garcha Consulting
D. Grady	Talema Group
R. Holub	DuPont
R. Hong	Solar Turbines Inc.
P. House	Thermon Mfg. Co.
D. Jang	National Research Council Canada
*B. Johnson	Thermon Mfg. Co.
R. Johnson	Source IEC
*P. Kelly	UL LLC
S. Kiddle	ABB Inc
A. Kreider	Phoenix Contact Development & Manufacturing Inc.
S. Lambaz	Littelfuse Inc.
W. Lawrence	FM Approvals LLC
E. Leubner	Eaton's Crouse-Hinds Business
W. Lowers	WCL Corp.
*N. Ludlam	FM Approvals Ltd.
R. Martin	USCG

NAME	COMPANY
E. Massey	ABB Motors and Mechanical Inc.
E. Massey	Baldor Electric Co.
W. McBride	Northern Electric Co.
T. Michalski	Killark Electric Mfg. Co.
J. Miller	Detector Electronics Corp.
*O. Murphy	Honeywell International Inc.
D. Nedorostek	Bureau of Safety & Environmental Enforcement (BSEE)
A. Page	Bud Page Consultant
R. Parks	National Instruments Corp.
L. Ricks	ExVeritas North America LLC
P. Rigling	MTL - Eaton Electric LLC
*K. Robinson	Occupational Safety and Health Adm.
J. Ruggieri	General Machine Corp.
*J. Scheller	ABB Motor and Mechanical Inc.
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*T. Schnaare	Rosemount Inc.
*A. Schnuelle	CML Inc.
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L. Vlagea	General Monitors
D. Wechsler	American Chemistry Council
N. Weinhold	Rosemount Inc.
R. Wigg	E-x Solutions International Pty Ltd.
*K. Wolf	Intertek
T. Woods	Baker Hughes, A GE Co.
R. Zalosh	Firexplo

* Non-voting member

1 Purpose

1.1 This document provides definitions and information pertaining to protection techniques, terminology, and the installation of electrical equipment in hazardous (classified) locations and provides an introduction and basic background to the UL Standards Technical Panel (STP) 60079, Electrical Equipment for Hazardous (Classified) Locations, series of publications and committee activities.

1.2 This document provides a general review of applicable codes and standards, and it should not be used in lieu of those codes and standards for equipment design, manufacture, installation, maintenance and test criteria.

2 Scope

2.1 This document provides general guidance for safe design, installation, and maintenance of electrical equipment in hazardous (classified) locations using appropriate means to prevent ignition of flammable gases and vapors, flammable liquids, combustible dusts, or ignitable fibers or flyings.

2.2 This document covers only locations made hazardous, or potentially hazardous, due to the presence of flammable gases or vapors, flammable liquids, combustible dusts, or ignitable fibers or flyings. The document is not necessarily relevant to the hazards posed by pyrophoric materials, explosives or propellants containing their own oxidizers.

2.3 This document is concerned only with design, manufacture, installation, maintenance, and test criteria related to arcs, sparks, or hot surfaces produced by electrical and non-electrical* equipment that may cause ignition of flammable gas or vapor-in-air mixtures, clouds or blankets of combustible dust, or easily ignitable fibers or flyings. Equipment is also required to comply with the applicable ordinary location requirements (e.g.,UL 508 and UL 61010-1) either by direct reference in hazardous locations standards or by other regulations.

* Under development (Mechanical and ESD for example). Some equipment may produce static electricity or cause high temperatures or sparks due to mechanical failure. The materials of construction of parts in such equipment will be an important consideration for application in hazardous locations.

2.4 This document does not cover mechanisms of ignition from external sources, such as static electricity or lightning. Some equipment may produce static electricity. The materials of construction of parts in such equipment will be an important consideration for application in hazardous locations. The extra precautions necessary for this are beyond the scope of this document.

2.5 This document does not consider the effects of installation in corrosive atmospheres and the resulting deleterious conditions to the original design integrity of the equipment. The additional precautions necessary for these conditions are outside the scope of this document.

2.6 This document is not an instruction manual. However, it is intended to provide introductory guidance to those involved with the design, manufacture, installation, and maintenance of equipment used in hazardous (classified) locations. It is also intended to promote uniformity of practice among those skilled in the art. Nothing contained in this document is to be construed as a fixed rule without regard to sound engineering judgment.

2.7 For hazardous location equipment, atmospheric conditions are generally considered to be:

a) an ambient temperature range of -20 °C (-4 °F) to 40 °C (104 °F) for zones and to -25 °C (-13 °F) to +40 °C (104 °F) for divisions;

b) air with normal oxygen content, typically 21 percent by volume; and