

UL 1059

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Terminal Blocks



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UL Standard for Safety for Terminal Blocks, UL 1059

Fourth Edition, Dated December 27, 2001

Revisions: This Standard contains revisions through and including September 13, 2004.

Summary of Topics

The revisions of ANSI/UL 1059 are issued to revise Factory and Field Wiring, to add an Exception for Terminal Blocks Rated for Factory Wiring, to clarify Terminal Connectors, and other editorial and miscellaneous revisions.

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 following table lists the future effective dates with the corresponding reference.

Future Effective Date	References
September 11, 2005	Paragraph 11.2 and Table 11.1

The revised requirements are substantially in accordance with UL's Bulletin(s) on this subject dated June 15, 2004. The bulletin(s) is now obsolete and may be discarded.

The revisions dated September 13, 2004 include a reprinted title page (page1) for this Standard.

As indicated on the title page (page 1), this UL Standard for Safety is an American National Standard. Attention is directed to the note on the title page of this Standard outlining the procedures to be followed to retain the approved text of this ANSI/UL Standard.

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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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 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
1-5	September 13, 2004
6-7	December 27, 2001
8-10	September 13, 2004
11-13	December 27, 2001
14-16	September 13, 2004
17	December 27, 2001
18-20	September 13, 2004
20A-21	March 11, 2004
22	December 27, 2001
23-24B	September 13, 2004
25	December 27, 2001
26-30	September 13, 2004
31	March 11, 2004
32	September 13, 2004
33-36	December 27, 2001
37	September 13, 2004
38	December 27, 2001
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1

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December 27, 2001

The most recent designation of ANSI/UL 1059 as an American National Standard (ANSI) occurred on August 31, 2004.

This ANSI/UL Standard for Safety, which consists of the Fourth edition with revisions through September 13, 2004 is under continuous maintenance, whereby each revision is ANSI approved upon publication. Comments or proposals for revisions on any part of the Standard may be submitted to UL at any time. Written comments are to be sent to UL-RTP Standard Department, 12 Laboratory Dr., P.O. Box 13995, Research Triangle Park, NC, 27709-3995.

An effective date included as a note immediately following certain requirements is one established by Underwriters Laboratories Inc.

Revisions of this Standard will be made by issuing revised or additional pages bearing their date of issue. A UL Standard is current only if it incorporates the most recently adopted revisions, all of which are itemized on the transmittal notice that accompanies the latest set of revised requirements.

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CONTENTS

INTRODUCTION

1 Scope	9
2 Glossary	9
3 Units of Measurement	12
4 Undated References	12
5 Components	12

PART I – TERMINAL BLOCKS RATED 600 VOLTS AND LESS

CONSTRUCTION

6 Materials	12
6.1 Current-carrying parts	12
6.2 Insulation	13
7 Wiring Terminals	14
8 Spacings	16

PERFORMANCE

9 General	18
10 Selection and Preparation of Samples for Heating and Dielectric Voltage-Withstand Tests ..	18
11 Temperature Test	20
12 Dielectric Voltage-Withstand Test	20A
13 Solid-Wire Tightening Test	20B
14 Tab Pull Test	22
15 Verification of the Performance of Terminal Assemblies	22
16 Mold Stress Relief Test	23

RATING

17 Details	23
------------------	----

MARKING

18 General	24
------------------	----

PART II – TERMINAL BLOCKS RATED 601 – 1500 VOLTS

INTRODUCTION

19 Details	24
------------------	----

CONSTRUCTION

20 General	24A
21 Insulating Material	25
22 Spacings	25

PERFORMANCE

23 General	25
24 Dielectric Voltage-Withstand Test	25

RATING

25 Details	26
------------------	----

MARKING

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

PART III – SPRING FORCE CONNECTIONS**CONSTRUCTION**

27 General	26
------------------	----

PERFORMANCE

28 General	26
29 Secureness and Pullout Tests	27
30 Conditioning	28
31 Temperature Test	28
32 Dielectric Voltage-Withstand Test	28
33 Heat Cycling Test	28

RATING

34 Details	29
------------------	----

MARKING

35 General	29
------------------	----

PART IV – INSULATION PIERCING OR DISPLACEMENT CONNECTIONS**CONSTRUCTION**

36 General	29
------------------	----

PERFORMANCE

37 General	29
38 Secureness and Pullout Tests	30
39 Conditioning	31
40 Temperature Test	31
41 Dielectric Voltage-Withstand Test	31
42 Heat Cycling Test	31

RATING

43 Details	32
------------------	----

MARKING

44 General	32
------------------	----

PART V – PROTECTIVE CONDUCTOR TERMINAL BLOCKS (PCTB)**CONSTRUCTION**

45 General	32
46 Connection of Support	33
47 Spacings	33
48 Identification	33
49 Protective Conductor Mounting Rails	33

PERFORMANCE

50 Short Time Current Sequence (Commercial and Industrial Applications)	33
50.1 General	33
50.2 Voltage drop test	34
50.3 Current test	34
50.4 Voltage drop test repeated	36
51 Short Time Current Sequence (Service Applications)	37
51.1 General	37
51.2 Current test	37
51.3 Continuity test	37

RATING

52 Details	38
------------------	----

MARKING

53 General	38
------------------	----

APPENDIX A

Standards for Components.....	A1
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CRG 1059 CANADIAN REQUIREMENTS COMPARISON GUIDE

UL AND CANADIAN STANDARDS FOR TERMINAL BLOCKS CRG1

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INTRODUCTION

1 Scope

1.1 These requirements cover assemblies of wiring terminals and supporting blocks intended to provide for the connection of wiring. Compliance with these requirements does not assure that the terminal block is suitable for use as a component of an end product.

1.2 These requirements cover terminal blocks rated 1500 volts or less.

1.3 These requirements also cover protective conductor terminal blocks (PCTB) used to make the electrical and mechanical connection between conductors or between conductors and a fixing support such as a mounting rail. A PCTB is not required to be insulated.

1.4 These terminal blocks are intended to permanently support and insulate wire terminations and joints from each other, and from the surface on which the terminal block is mounted, where the absence of such support or insulation presents a risk of fire, electric shock, or injury to persons.

1.5 The acceptability of a terminal block in any particular application depends upon its suitability for continued use under the conditions that prevail in actual service. Accordingly, for a particular application a terminal block may be affected by the requirements for the equipment in which it is used, and it may be necessary to additionally evaluate that terminal block for features or performance characteristics that are not specified in this standard.

1.6 Terminal blocks employing types of connecting means not covered by this standard such as those in which conductors are secured to the terminals by means of a special tool can be evaluated under this standard but may require separate investigation.

1.7 These requirements do not cover field installed power distribution blocks intended to distribute power in a building to separate units such as apartments, separate heaters, and air conditioning units. Power distribution blocks are investigated to Subject 1953, Outline of Investigation for Power Distribution Blocks.

2 Glossary

2.1 For the purpose of this standard the following definitions apply.

2.2 FACTORY WIRING – The connection of a wire in the end application under controlled conditions, usually at a manufacturer's location.

2.2 revised September 13, 2004

2.3 FIELD WIRING – The connection of a wire, which is made in the field and that is subjected to the requirements for a terminal for field wiring as specified in this standard and the National Electrical Code, NFPA 70.

2.3 revised September 13, 2004

2.4 INSULATION PIERCING OR DISPLACEMENT CONNECTOR – A connector for the connection and possible disconnection of one conductor or the interconnection of two or more conductors, the connection being made by piercing, boring through, cutting through, removing, displacing, or making ineffective in some other manner the insulation of the conductor or conductors without previous stripping.

2.5 POST CONNECTOR – A connector utilizing a post (solderless wire wrap and similar for example) onto which one or more conductors are secured by means of a tool.

2.6 PREPARED CONDUCTOR – A conductor, the strands of which are soldered or tinned; or the end of which is fitted with a cable lug, eyelet, quick-connect, ring terminal, spade terminal, or similar component, prior to insertion into the terminal.

2.7 PROTECTIVE CONDUCTOR TERMINAL BLOCK (PCTB) – A device with one or more clamping units for connecting or joining protective conductors (Protective Earthing (PE) conductors) or connecting such conductors to the support for the clamping units. The clamping units can be secured with screw- or screwless-type fixing means. Examples of supports are mounting rails, sheet metal cut-outs, or mounting plates. A PCTB is either uninsulated, non-isolated, or isolated [See (a) and (b)]. Operating insulation is not necessary as a PCTB is intended to be at ground potential.

a) ISOLATED PROTECTIVE CONDUCTOR TERMINAL BLOCK – A protective conductor terminal block that provides insulation from live parts of other terminal blocks, adjacent poles of the same terminal block, or other devices and isolation from the support. It does not have provisions for path 2-2 of Figure 50.1. It uses path 1-1 only.

b) NON-ISOLATED PROTECTIVE CONDUCTOR TERMINAL BLOCK – A protective conductor terminal block that provides insulation from live parts of other terminal blocks, adjacent poles of the same terminal block, or other devices, but does not provide isolation from the support itself. It is mechanically and electrically attached to its support, path 2-2 in Figure 50.1. It may or may not have path 1-1.

2.8 TERMINAL CONNECTOR – A device that establishes the connection between two or more conductors or between one or more conductors and a terminal by means of mechanical pressure.

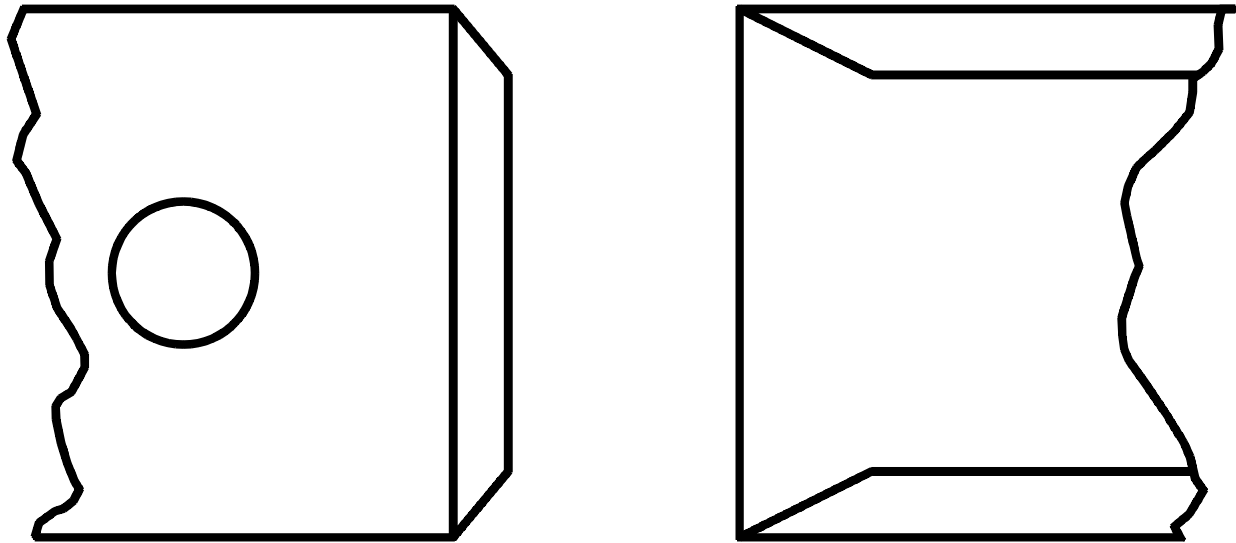
2.8 revised September 13, 2004

2.9 SEPARABLE TYPE CONNECTORS – Connectors consisting of separable, mating members that can be readily engaged or disengaged without the use of tools.

a) Quick Connect Type – Typical mating components as shown in Figure 2.1.

b) Other Types – Other than quick connect type. Acceptability to be determined by separate investigation.

Figure 2.1
Quick-connect-type connector



SB1273

2.10 SOLDER CONNECTORS – A connector in which the conductor is connected to the current-carrying member by soldering.

2.11 SPRING-FORCE CONNECTOR – A connector utilizing a spring action for retaining a conductor.

2.12 STUD AND NUT TYPE CONNECTOR – A connector in which:

- a) An unprepared conductor is looped around a stud and retained by a nut; or
- b) A prepared conductor is assembled to a stud and retained by a nut.

2.13 TERMINAL BLOCK – A terminal block is a rigidly mounted device that is composed of an insulated base with barriers having one or more electrically conductive members. Each electrically conductive member serves as a junction to electrically connect two or more conductors and also provides means to individually connect or disconnect conductors. The device can be a sectional or one-piece design.

2.14 UNPREPARED CONDUCTOR – A conductor which has been cut and the insulation of which has been removed for insertion into a terminal. The conductor end is bare. The conductor in an insulation piercing or displacement connector is considered to be unprepared.

2.15 WIRE BINDING SCREW CONNECTOR – A connector that uses a binding head screw, with or without a flat ring or lock washers, where:

- a) An unprepared conductor is looped around the shank of the screw and secured under the head of the screw; or