UL 1690

STANDARD FOR SAFETY

Data-Processing Cable

UL Standard for Safety for Data-Processing Cable, UL 1690

Fourth Edition, Dated July 7, 2015

Summary of Topics

This revision of ANSI/UL 1690 dated August 7, 2020 is being issued to update the title page to reflect the most recent designation as a Reaffirmed American National Standard (ANS). No technical changes have been made.

Text that has been changed in any manner or impacted by UL's electronic publishing system is marked with a vertical line in the margin.

The requirements are substantially in accordance with Proposal(s) on this subject dated May 15, 2020.

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UL 1690

Standard for Data-Processing Cable

First Edition – December, 1993
Second Edition – April, 1999
Third Edition – August, 2006

Fourth Edition

July 7, 2015

This ANSI/UL Standard for Safety consists of the Fourth Edition including revisions through August 7, 2020.

The most recent designation of ANSI/UL 1690 as a Reaffirmed American National Standard (ANS) occurred on August 7, 2020. 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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INTRODUCTION

1 Scope

1.1 These requirements cover electrical cables consisting of one or more current-carrying copper, aluminum, or copper-clad aluminum conductors with or without either or both grounding conductor(s), and one or more optical-fiber members, all under an overall jacket. These electrical and composite electrical/optical-fiber cables are intended for use (optical and electrical functions associated in the case of a hybrid cable) in accordance with Article 645 and other applicable parts of the National Electrical Code (NEC) under the raised floor of a computer room.

Cables complying with these requirements are:

Type DP-1 – Voltage Rating 600 volts, Flame Test: 1.2 (b)

Type DP-1P – Same as Type DP-1 except Flame Test: 1.2 (a)

Type DP-2 – Voltage Rating: 300 volts, Flame Test: 1.2 (b)

Type DP-2P – Same as Type DP-2 except Flame Test: 1.2 (a)

Type DP-3 – Voltage Rating none – for use in signaling circuits meeting the following requirements for maximum available voltage, current and power.

30 volts ac max. 60 volts dc max. 42.4 volts peak max. 100 VA max. 8 amps max.	and/or	other circuits for use in inherently limited power sources in accordance with the requirements in the Standard for Safety of Information Technology Equipment – UL 60950

Flame Test: 1.2 (b)

Type DP-3P – Same as Type DP-3 except Flame Test: 1.2 (a)

1.2 Smoke and fire considerations are as follows for the cables covered in the requirements:

a) TYPE DP-1P, DP-2P and DP-3P CABLES – These cables are to be tested for smoke and flame characteristics in accordance with the National Fire Protection Association Standard Method of Test for Flame Travel and Smoke of Wires and Cables for Use in Air-Handling Spaces, ANSI/NFPA 262. A cable that complies exhibits a maximum flame-propagation distance that is not greater than 5 ft, 0 in, or 1.52 m, a peak optical density of smoke produced of 0.5 or less (32 percent light transmission), and an average optical density of smoke produced of 0.15 or less.

b) TYPE DP-1, DP-2, and DP-3 CABLES – Cables comply with a 70,000 Btu/h (20.5 kW) vertical-tray flame test. The cable manufacturer chooses one of the following tests:

1) THE UL TEST REFERENCED IN 30.2.1 – This paragraph applies the test method described as the UL Flame Exposure (smoke measurements are not applicable) in the Standard for Vertical-Tray Fire-Propagation and Smoke-Release Test for Electrical and Optical-Fiber Cables, UL 1685. For compliance, this test damages less than 8 feet (244 cm) of cable.