



UL 1286

STANDARD FOR SAFETY

Office Furnishing Systems

UL Standard for Safety for Office Furnishing Systems, UL 1286

Sixth Edition, Dated June 29, 2022

SUMMARY OF TOPICS

This new edition of ANSI/UL 1286 dated June 29, 2022 is being issued to Correct Cross References, Address Mandatory Language, Reflect Standards Writing Conventions, Clarify Requirements, And Other Similar Changes.

The revised requirements are substantially in accordance with Proposal(s) on this subject dated April 15, 2022.

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1

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Standard for Office Furnishing Systems

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The most recent designation of ANSI/UL 1286 as an American National Standard (ANSI) occurred on June 24, 2022. 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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CONTENTS

INTRODUCTION

1	Scope	7
2	Glossary	7
3	Components	13
4	Units of Measurement	14
5	Referenced Publications	14

CONSTRUCTION

6	General	16
7	Accessibility of Electrical Component Parts	17
8	Accessories	17

ELECTRICAL CONSTRUCTION

9	Contacts	18
10	Power-Supply Connections	19
	10.1 General	19
	10.2 Permanently connected systems	19
	10.3 Cord-connected systems	21
11	Internal Wiring	21
12	Grounding	23
13	Electrical Connecting Assemblies	24
	13.1 Unit-to-unit, pass-through-unit, and top- and base-feed electrical connecting assemblies	24
	13.2 System jumpers	26
	13.3 Mating connectors	27
	13.4 Convenience outlets	27
14	Strain Relief	29
15	Bushings	29
16	Spacings	29
17	Office Furnishing Lighting Units	29

STRUCTURAL CONSTRUCTION

18	Mechanical Assembly	30
	18.1 General	30
	18.2 Panels	31
	18.3 Fabric Partitions	31
	18.4 Cord channels	31
	18.5 Raceway	32
	18.6 Mechanical connectors	32
	18.7 Glass panels	32
	18.8 Protection against corrosion	33
	18.9 Flammability of materials	33
	18.10 Monitor arms	33
	18.11 Video displays	34

ELECTRICAL PERFORMANCE

19	Grounding-Impedance Test	35
----	--------------------------------	----

20	Dielectric Voltage-Withstand Test	36
21	Temperature Test	36
	21.1 Accessories	36
	21.2 Lighting attachments	37
22	Strength of Enclosure Test	38
	22.1 Snap-fit cover for enclosures	38
	22.2 Impact test – furnishing-supporting enclosures	38
23	Tightening Torque Test	38
24	Electrical Connecting Assemblies Test	39
25	Strain-Relief Tests	40
	25.1 General	40
	25.2 Top- and base-feed connections	40
	25.3 Unit-to-unit and pass-through-unit electrical connections	41
26	Conductor Secureness Test	41
27	Mating Connector Separation Tests	42
28	Spill Test	42
	28.1 Procedure	42
	28.2 Spill test dielectric voltage-withstand test	45
29	Knockout Test	45

STRUCTURAL PERFORMANCE

30	General	46
31	Functional and Proof Load Tests	47
32	Panel Systems with Cross-Members Over Walkways	47
33	Video Display Mounting System Tests	48
	33.1 Cycling test for articulating video mounts	48
	33.2 Proof load securement test	49
	33.3 Monitor arm tests	50
34	Glass Panel Tests	50
	34.1 Impact	50
	34.2 Retention	50
35	Mechanical Connector Tests	50
	35.1 Conditioning	50
	35.2 Flexing	51
36	Resistance to Corrosion Test	52
37	Trial Installation Test	52

MARKINGS

38	Details	52
39	Installation and Operating Instructions	55

MANUFACTURING AND PRODUCTION LINE TESTS

40	Grounding Continuity Test	57
41	Dielectric Voltage-Withstand Test	57

ANNEX A (informative) – MODULAR PRE-WIRED OFFICE FURNISHING FLOOR RACEWAY SYSTEMS

INTRODUCTION

A1	Scope	59
A2	Glossary	59



CONSTRUCTION

A3	Accessible Routes	59
A3.1	Reduction of trip hazard	59
A3.2	Slip resistance of floor surface materials	60
A4	Mounting	60
A5	Wiring Devices.....	60
A6	Electrical Continuity	60
A7	Grounding and Bonding.....	61
A8	Accessibility of Parts	61
A9	Conductor Fill Requirements.....	62
A10	Mechanical Assembly.....	62
A11	Corrosion Protection.....	63
A11.1	General.....	63
A11.2	Zinc coatings	63
A11.3	Nonmetallic coatings.....	63
A12	Power-Supply Connections.....	64
A13	Mating Connectors	64
A14	Convenience Receptacles	64
A15	Outlet Boxes for Use with Pre-Wired Office Furnishing Raceway Wiring Systems	65
A16	Gaskets and Seals	65
A17	Cover Plates	65

PERFORMANCE

A18	Electrical Resistance Test.....	66
A18.1	Individual pieces.....	66
A18.2	Across joints	66
A19	Crush Resistance.....	66
A20	Deflection Test.....	67
A21	Resistance to Vertical Impact	67
A22	Resistance to Horizontal Impact	67
A23	Temperature Test	68
A24	Conductor Secureness Test.....	69
A25	Fault Current Test	70
A26	Receptacle Secureness Test.....	70
A27	Air-Circulating Oven Conditioning Test for Gaskets and Seals	71
A28	Water Exclusion Test.....	71
A29	Volume Measurement of Raceways.....	71

MARKING AND INSTALLATION INSTRUCTIONS

A30	Details.....	72
-----	--------------	----

ANNEX B (normative) – OFFICE FURNISHING SYSTEMS MOUNTED TO BUILDING STRUCTURES

INTRODUCTION

B1	Scope	74
B2	Glossary.....	74

CONSTRUCTION

B3	General.....	74
----	--------------	----

B4	Flammability of Materials	74
----	---------------------------------	----

PERFORMANCE

B5	Mechanical Tests	75
	B5.1 Mold stress test	75
	B5.2 Adhesive test	75
	B5.3 Mounting securement test	75
B6	Common Building Materials and Building Surface Arrangements	76

MARKINGS AND INSTALLATION INSTRUCTIONS

B7	Details	77
B8	Installation Instructions	77

INTRODUCTION

1 Scope

1.1 These requirements cover office furnishing panels, study carrels, work stations, and pedestal-style systems that form an office furnishing system in accordance with the National Electrical Code, ANSI/NFPA 70. These are able to be provided with an electrical distribution system, including switches, convenience outlets, and channels for routing communication cables within system components separate from electrical raceways. Office furnishing systems include filing cabinets, desks, work surfaces, shelves, storage units, and similar items that have a particular electrical or mechanical function unique to an office furnishing system.

1.2 These requirements also cover lighting units intended to be mechanically attached to particular components within an individual device or office furnishing system.

1.3 These requirements also cover modular pre-wired office furnishing wiring systems.

1.4 These requirements do not cover panels that are intended to penetrate the ceiling, or that are used to support the building structure.

1.5 These requirements also cover office furnishing systems intended for mounting to building structures for stability or support.

1.6 Individual commercial office furnishings are covered by UL 2999. These products may include, but are not limited to:

- a) Desks;
- b) Tables;
- c) Conference room tables;
- d) Bookcases;
- e) Storage cabinets; and
- f) Motorized carts and stands for audio/video equipment; and
- g) Benching Systems.

The above products may be provided with modesty and privacy screens.

2 Glossary

2.1 For the purposes of this Standard the following definitions apply.

2.2 **ACCESSIBLE PART** – A part located so that it is capable of being contacted by a person, either directly or as determined using the probe illustrated in [Figure 9.1](#).

2.3 **ACCESSORY** – An electrical component that is intended to be attached in the field or to be shipped separately; for example, a raceway, a top- or base-feed, a fixture, or similar component.

2.4 **BRANCH CIRCUIT** – The circuit conductors between the final overcurrent device protecting the circuit and the outlet(s).

2.5 BRANCH CIRCUIT, MULTIWIRE – A branch circuit that consists of two or more ungrounded conductors that have a voltage between them, and a grounded conductor that has equal voltage between it and each ungrounded conductor of the circuit and that is connected to the neutral or grounded conductor of the system.

2.6 CHANNEL – A passage intended for the routing and holding of communication wiring, low-voltage wiring, and wiring having functional insulation plus a layer of supplementary insulation. A channel is not required to provide mechanical protection, and is not evaluated as a raceway.

2.7 CLASS 2 CIRCUIT – A circuit having power and voltage limitations as defined in ANSI/NFPA 70, Article 725. To determine whether a circuit is within Class 2 limits, measurements shall be made in accordance with UL 5085-1 and UL 5085-3, or UL 1310.

2.8 CONNECTOR, UNIT-TO-UNIT MECHANICAL – An assembly that is used to connect two or more adjacent units for the purpose of providing mechanical support between the units.

2.9 CORD CONNECTOR (convenience outlet) – A female contact device that is wired or molded on flexible cord and intended to be installed as part of an office furnishing wiring system to supply current to utilization equipment.

2.10 CONVENIENCE OUTLET – A female connector of one of the configurations covered in the Standard for Wiring Devices – Dimensional Requirements, ANSI/NEMA WD6 that is provided for the connection of a small appliance, a work light, or similar product.

2.11 CORE – That portion of an office furnishing structural unit from one outside surface to its opposite outside surface, excluding decorative trim, electrical hardware, and mechanical supporting feet or glides.

2.12 ELECTRICAL CONNECTING ASSEMBLY TYPES:

BASE FEED – An electrical raceway assembly that contains supply conductors used to provide electrical power from a branch-circuit electrical supply located in the floor, column or wall of the building structure to the base of the office furnishing starter unit.

PASS-THROUGH UNIT – An electrical raceway assembly without any means for connection of utilization equipment. Used to pass electrical power through a unit.

TOP FEED – An electrical raceway assembly that contains the electrical supply conductors used to provide electrical power from a branch-circuit electrical supply located in the ceiling or wall of the building structure to the office furnishing starter unit.

UNIT-TO-UNIT – An electrical raceway assembly that is used to electrically interconnect two adjacent mechanically connected units.

SYSTEMS JUMPER – An electrical raceway connection assembly that is used for the interconnection of office furnishing electrical systems and manufactured wiring systems.

SYSTEM-TO-SYSTEM ADAPTER – An electrical raceway connection assembly that is used for the interconnection of one type or configuration of office furnishing electrical system to a different type or configuration of office furnishing electrical system.

2.13 ENCLOSURE – A part of the equipment that:

a) Renders inaccessible all or any parts of the equipment that may otherwise present a risk of electric shock;

b) Retards propagation of flame initiated by electrical disturbances occurring within, and

c) Provides the internal components with protection from outside physical abuses.

2.14 FABRIC PARTITIONS – A partition consisting of fabric without a rigid backing that is attached to a framing system.

2.15 FIELD-WIRING TERMINAL – A terminal to which a conductor is intended to be connected in the field.

2.16 FUNCTIONAL LOAD^a – The level of loading or force typical of hard use.

2.17 FURNISHING SYSTEM – An arrangement of interconnected or individual units, work stations, study carrels, and similar types of products. A furnishing system is defined as being of one of the following three types:

Type I – A system that provides all required parts and employs prewired modular raceways and accessories requiring only quick connect and disconnect means for electrical connections, other than the permanent connection to the branch-circuit supply. A Type I system is not prohibited from being shipped with accessories:

a) Installed in the panel; or

b) Installed in the field when the accessories are marked for use in the system.

Type II – A system that provides raceways for the routing and termination of wiring in the field. Wiring assemblies, when provided, are not always complete. This type of system requires inspection of the wiring by the local authorities.

Type III – A system that is not intended to be wired and has no provision for the routing and termination of wiring.

2.18 INSULATION, BASIC – Insulation applied to live parts to provide basic protection against electric shock.

2.19 INSULATION, SUPPLEMENTARY – A separate layer of insulation that is provided in addition to the basic insulation to reduce the risk of electric shock in the event of breakdown of the basic insulation.

2.20 LOSS OF SERVICEABILITY^a – The failure of any component to carry its intended load or to perform its normal function or adjustments.

^a With the permission of BIFMA, this definition is reproduced from ANSI/BIFMA X 5.6. BIFMA shall not be responsible for the manner in which the information is presented, used, nor for any interpretations thereof.

2.21 OFFICE FURNISHING SYSTEM – System formed from office furnishing panels, study carrels, workstations, and pedestal-style systems, and the like. See [1.1](#), [1.2](#) and [1.5](#).

2.22 OFFICE FURNISHING UNIT – A combination of panels that create one office area. An office furnishing system is made up of one or more office furnishing units.

2.23 PANEL^a – A flat or curved surface that controls and/or defines space; provides privacy and a means for hanging components.

2.24 PANEL MOUNTED COMPONENT^a – A product intended to be supported wholly by a panel system.

2.25 PANEL RUN^a – Two or more panels connected in a straight line.

2.26 PANEL-SUPPORTED^a – Individually connected panels and work surface, filing, storage, and shelving components and accessories that receive their primary support from the panels and that, when combined, form complete workstations.

2.27 PANEL SYSTEMS PRODUCTS^a – The panels, screens, and various panel-mounted components used in conjunction with panel systems.

2.28 PROOF LOAD^a – The level of loading or force in excess of hard use.

2.29 RACEWAY – A completely enclosed channel intended specifically for the holding and routing of system wiring, where the conductors of electric light and power systems are separate from the conductors of Class 2 circuit systems. A raceway provides mechanical protection to the internal system wiring.

2.30 RACEWAY TYPES:

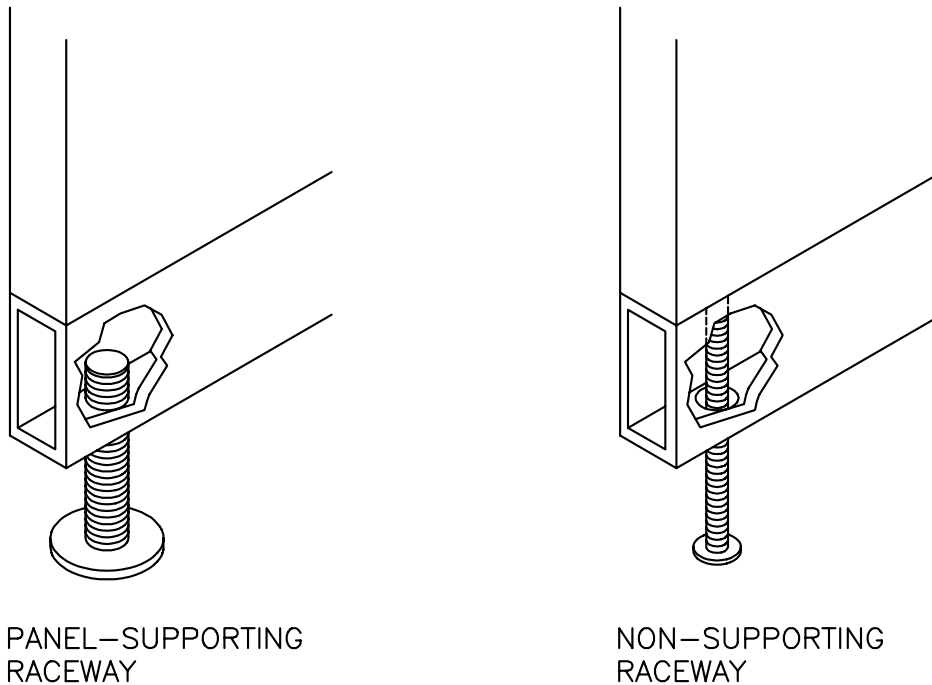
FURNISHING RACEWAY– A raceway that is physically supported by an office furnishing unit after installation or is integral to the office furnishing unit.

FURNISHING (PANEL) SUPPORTING RACEWAY – A raceway that the office furnishing unit rests directly upon or to which supporting feet or glides are mechanically connected. See [Figure 2.1](#).

PASS-THROUGH FURNISHING RACEWAY – A raceway that is physically connected between other raceways that does not have convenience outlets or any other means for connection of utilization equipment and is used to pass electrical power through a unit.

2.31 RACEWAY, FURNISHING-SUPPORTING – A raceway that the furnishing rests directly upon, or to which supporting feet or glides are mechanically connected. See [Figure 2.1](#).

Figure 2.1
Furnishing-Supporting Raceway



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2.32 RECEPTACLE, CONVENIENCE (convenience outlet) – A female contact device intended to be installed as part of an office furnishing wiring system to supply current to utilization equipment.

2.33 SCREEN^a – Non-load-carrying space divider that is less than ceiling height.

2.34 STARTER UNIT – The unit that is connected to the external supply source and that sometimes has provision for electrical connection of additional portions of an office furnishing system. The physical location of the starter unit within the system is not specified, however, a series of electrically interconnected units forming a wall has a single starter unit.

2.35 STARTER UNIT TYPES:

FIXED STARTER UNIT – A unit that is intended for permanent attachment to the building structure. A unit is permanently attached when the unit is secured and supported by mechanical fastening to the building structure. A bracket or similar arrangement that has no positive fastening means, such as a bolt or screw, to secure the unit is not permanent attachment, nor is an arrangement that serves only to stabilize the unit.

FREESTANDING STARTER UNIT – A unit that is not intended for permanent attachment to the building structure and is not provided with means for such attachment.

2.36 SURFACE CLASSIFICATIONS^a:

ADJUSTABLE KEYBOARD SURFACE – An adjustable surface that is intended for placement of the keyboard, and/or other computer input devices.

DISPLAY SHELF – A shelf with a sloping surface and retaining flange or edge.

PRIMARY SURFACE – A surface that has the apparent potential for the highest loading within a workstation or a surface on which a person may sit. In cases where more than one horizontal surface exists, there may be more than one primary surface.

SECONDARY SURFACE – A surface that is used for storage (i.e., a shelf) or occupied exclusively by the equipment placed on the surface.

TRANSACTION SURFACE – A surface that is less than 16 in (406 mm) deep and is not enclosed. It is primarily used as a temporary work surface and not as a shelf.

WRITING SHELF – A moveable, typically stowable surface that is not intended to carry loads greater than 25 lb (11 kg), whose primary function is to support ancillary office tasks, such as writing and short-term reference material handling.

2.37 TEST LOAD^a – A particular load/force placed in or on a component specified by a test procedure and not included in the dead weight of the component.

2.38 TIP OVER^a – The condition where the unrestricted unit will not return to its normal upright position.

2.39 UNIT – A panel, table, storage cabinet, file cabinet or the like, the primary purpose of which is to form an office furnishing system or a portion of a system.

2.40 UNIT INSERT – A separable portion of a panel (excluding decorative trim, electrical components, and structural elements of the unit) that is intended to be removed or replaced in the field, with or without the use of tools.

2.41 USER SERVICING – Any form of servicing that is intended to be performed by personnel other than qualified service personnel. Some examples of user servicing are:

a) The attachment of accessories by means of attachment plugs, convenience outlets, or by means of other separable connections.

b) The replacement of:

1) Fuses and lamps that are accessible without the use of tools, and

2) Lamps such as those employed for ambient lighting and that require frequent replacement, whether or not the operation requires the use of tools.

c) The disconnection or connection of a unit, excluding a permanently connected starter unit, constructed so that the user is not exposed to basic insulated or uninsulated live parts.

d) The laying in of communication-type cables or telephone cord in a cord-management trough or a designated communication channel.

2.42 USER ADJUSTABLE SURFACES^a – A surface that is intended to be adjusted by the user while under normal use.

2.43 VIDEO MOUNTING SYSTEM TYPES:

ADJUSTABLE MOUNT – A mounting system designed with components that may be adjusted once, infrequently or requires a tool be used for adjustment and is intended to support the video display in a fixed position after assembly and installation.

ARTICULATING MOUNT – A mounting system intended to allow active movement, adjustment, and repositioning, after installation.

MONITOR ARM – A device identified to support a computer video display that is in turn supported by or secured to a desk or table.

2.44 WORKING EDGE^a – The side of the surface at which the primary user sits. (Note: Some surfaces may have more than one working edge; for example, conference tables.)

2.45 WORK SURFACE^a – A horizontal surface used to perform tasks and/or for storage space.

3 Components

3.1 A component of a product covered by this Standard shall:

- a) Comply with the requirements for that component as specified in this Standard;
- b) Be used in accordance with its rating(s) established for the intended conditions of use; and
- c) Be used within its established use limitations or conditions of acceptability.

3.2 A component of a product covered by this Standard is not required to comply with a specific component requirement that:

- a) Involves a feature or characteristic not required in the application of the component in the product;
- b) Is superseded by a requirement in this Standard; or
- c) Is separately investigated when forming part of another component, provided the component is used within its established ratings and limitations.

3.3 Specific components are 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.

3.4 A component that is also intended to perform other functions such as overcurrent protection, ground-fault circuit-interruption, surge suppression, any other similar functions, or any combination thereof, shall comply additionally with the requirements of the applicable standard(s) that cover devices that provide those functions.

3.5 Electromagnetic-interference filters, relocatable power taps, and transient voltage surge suppressors that are used in office furnishing systems to operate on 50 to 60 Hz power circuits shall comply, in addition to the applicable requirements in this Standard, with the applicable requirements in UL 1283, UL 1363, and UL 1449, respectively.

3.6 Metallic raceways shall comply with UL 5 and non-metallic raceways shall comply with UL 5A, except as specified in [Table 3.1](#).

Table 3.1
Application of Specific Testing Requirements of UL 5A

UL 5A Section ^a	Test name ^a	Application
5.5	Temperature	Shall be performed as specified in Section 21, Temperature Test of this standard.
5.6	Deflection under heat and load	Not performed.
5.8	Resistance to thermal degradation	Materials shall have appropriate thermal properties based on temperatures measured.
5.11	Cold Impact	Test shall be performed at 25 °C. ^b
5.12	Low temperature handling	Not performed.
5.14	Flame test in cable trays – FT4 (optional)	Not performed.
^a If a test is not listed, it shall be performed as specified in UL 5A, if applicable. ^b For furnishing-supporting raceways, the test in 22.2, Impact test – furnishing-supporting enclosures of this Standard shall also be performed.		

3.7 Equipment that is intended to energize or de-energize electrical loads by responding to sensors and controlling the loads through the use of pre-programmed data logic or similar means shall comply with UL 916.

3.8 Metallic and non-metallic enclosures shall comply with UL 50.

3.9 Insulating materials that are in direct or indirect contact of live parts shall comply with UL 746C.

3.10 Metal channels shall comply with Tables 12.1 – 12.4, in UL 5 and non-metallic channels shall comply with the Crushing Resistance, Resistance to Impact and Mold Stress Tests in UL 746C and have a Relative Thermal Index (mechanical with impact) equal to or greater than the temperatures measured during the Temperature Test.

4 Units of Measurement

4.1 Values stated without parentheses are the requirement. Values in parentheses are explanatory or approximate information.

5 Referenced Publications

5.1 Any undated reference to a code or standard appearing in the requirements of this standard shall be interpreted as referring to the latest edition of that code or standard.

5.2 The following publications are referenced in this Standard:

ANSI Z97.1, Safety Glazing Material Used in Buildings – Safety Performance Specifications and Methods of Test

ASTM A90/A90M, Standard Test Methods for Weight [Mass] of Coating on Iron and Steel Articles with Zinc or Zinc Alloy Coatings

ASTM A653/A653M, Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process

ASTM B117, Standard Practice for Operating Salt Spray (Fog) Apparatus

ASTM C39/C39M, Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens

ASTM C90, Standard Specification for Loadbearing Concrete Masonry Units

ASTM C216, Standard Specification for Facing Brick (Solid Masonry Units Made from Clay or Shale)

ASTM D3359, Standard Test Method for Rating Adhesion by Tape Test

ASTM D3363, Standard Test Method for Film Hardness by Pencil Test

ASTM D4145, Standard Test Method for Coating Flexibility of Prepainted Sheet

ASTM E230/E230M, Standard Specification and Temperature-Electromotive Force (emf) Tables for Standardized Thermocouples

ANSI/NFPA 70, National Electrical Code

ANSI/BIFMA X5.5, Desk and Table Products

ANSI/BIFMA X5.6, Standard for Office Furnishings – Panel Systems

NFPA 701, Standard Test Methods of Fire Tests for Flame Propagation of Textiles and Films

UL 1, Flexible Metal Conduits

UL 4, Armored Cable

UL 5, Surface Metal Raceways and Fittings

UL 5A, Nonmetallic Surface Raceways and Fittings

UL 50, Enclosures for Electrical Equipment, Non-Environmental Considerations

UL 94, Tests for Flammability of Plastic Materials for Parts in Devices and Appliances

UL 153, Portable Electric Luminaires

UL 183, Manufactured Wiring Systems

UL 360, Liquid-Tight Flexible Steel Conduit

UL 410, Slip Resistance of Floor Surface Materials

UL 498, Attachment Plugs and Receptacles

UL 514A, Metallic Outlet Boxes

UL 514B, Conduit, Tubing, and Cable Fittings

UL 514C, Nonmetallic Outlet Boxes, Flush-Device Boxes, and Covers

UL 514D, Cover Plates for Flush-Mounted Wiring Devices

UL 723, Test for Surface Burning Characteristics of Building Materials

UL 746C, Polymeric Materials – Use in Electrical Equipment Evaluations

UL 817, Cord Sets and Power-Supply Cords

UL 916, Energy Management Equipment

UL 962, Household and Commercial Furnishings

UL 969, Marking and Labeling Systems

UL 1283, Electromagnetic-Interference Filters

UL 1310, Class 2 Power Units

UL 1363, Relocatable Power Taps

UL 1439, Tests for Sharpness of Edges on Equipment

UL 1441, Coated Electrical Sleeving

UL 1449, Surge Protective Devices

UL 1598, Luminaires

UL 1660, Liquid-Tight Flexible Nonmetallic Conduit

UL 2999, Individual Commercial Office Furnishings

UL 5085-1, Low Voltage Transformers – Part 1: General Requirements

UL 5085-3, Low Voltage Transformers – Part 3: Class 2 and Class 3 Transformers

CONSTRUCTION

6 General

6.1 An office furnishing system shall be formed and assembled so that it has the strength, stability, and rigidity to resist the abuses to which it is subjected without resulting in a risk of fire, electric shock, or injury to persons. See the Structural Performance requirements of Sections [30](#) – [36](#).

6.2 A frame, a guard, a handle, or similar part, or an exposed portion of an enclosure, such as an edge, projection, or corner, shall be smooth and rounded, and not be so sharp as to result in a risk of injury to persons during intended use and maintenance of the product. Compliance shall be determined in accordance with the requirements in UL 1439.

6.3 A top- or base-electrical feed for a panel assembly shall not be used to provide support to the panel system.

6.4 A modular pre-wired office furnishing floor raceway system shall comply with Annex [A](#).

7 Accessibility of Electrical Component Parts

7.1 Live parts of an office furnishing system shall be enclosed to reduce the risk of fire, electric shock, and injury to persons. See [18.5.2](#).

Exception No. 1: A part in a Class 2 circuit is not required to be enclosed. See [2.7](#).

Exception No. 2: A unit-to-unit electrical connecting assembly complying with the requirements in [13.1.4](#) – [13.1.7](#) and a contact opening of a receptacle that complies with the requirement in [9.1](#) are not required to be further enclosed.

7.2 A raceway enclosing uninsulated live parts shall be complete and shall require the use of a tool or tools to gain access to those parts. See [18.5.2](#).

7.3 A raceway enclosing basic insulated live parts shall be complete and reliably secured in place. See [18.5.2](#).

7.4 A snap-fit cover, a cover secured by 1/4-turn screws, or a similar cover, that is secured to a rigidly-supported raceway member is able to be used as the enclosure of basic insulated wiring when:

- a) The cover complies with the applicable snap-fit cover tests specified in Strength of Enclosure Tests, Section [22](#); or
- b) Where metallic, the cover is reliably connected to the ground return path by means other than simple friction between surfaces.

7.5 With reference to [7.4](#), the system shall comply with one of the following:

- a) The installation of communication or low-voltage cable or wiring does not require access to the enclosed basic insulated parts, or
- b) Basic insulated wiring that is accessible when installing communication or low-voltage wiring is reliably held in place so that it is not unintentionally displaced or requires handling during the installation of the communication or low-voltage wiring.

8 Accessories

8.1 The requirements in this Section apply to accessories other than raceways, top- or base-feeds, and other components explicitly covered by other sections of this Standard.

8.2 A system having provision for the use of electrical accessories to be attached in the field shall be constructed so that the use of such accessories does not introduce a risk of fire, electric shock, or injury to persons.

8.3 A system shall comply with the requirements in this Standard with or without the accessory installed.

8.4 Installation of an electrical accessory by the user shall be restricted to an arrangement by which the electrical connections are accomplished by means of mating connectors, attachment plugs and receptacles, or attachment plugs and cord connectors.

8.5 Installation of an accessory intended to be made by service personnel shall be by means of mating connectors, attachment plugs and receptacles, plug-in connectors, insulated wire connectors, or by connection to existing wiring terminals.

8.6 With reference to [8.5](#), any installation that requires the cutting of wiring or the soldering of connections by the installer is not in compliance with the requirement unless the office furnishing system is Type II (see [2.17](#)). An installation that requires cutting, drilling, or welding is not in compliance with the requirement in electrical enclosures and in other areas where such operations have the potential to damage existing electrical or mechanical components and wiring within the enclosures.

8.7 Strain-relief means shall be provided for the wiring in an accessory where stress is otherwise transmitted to terminal connections that are not visible during or after installation.

8.8 The mounting location of an accessory shall be indicated on the furnishing, unless:

- a) The mounting location is obvious due to the function of the accessory and arrangement of the basic products, and
- b) Instructions are provided covering the installation and location for the accessory.

8.9 An accessory shall be subjected to the Trial Installation Test, Section [37](#) to determine that the installation is applicable, that the instructions are detailed and accurate, and that the use of the accessory does not introduce a risk of fire, electric shock, or injury to persons.

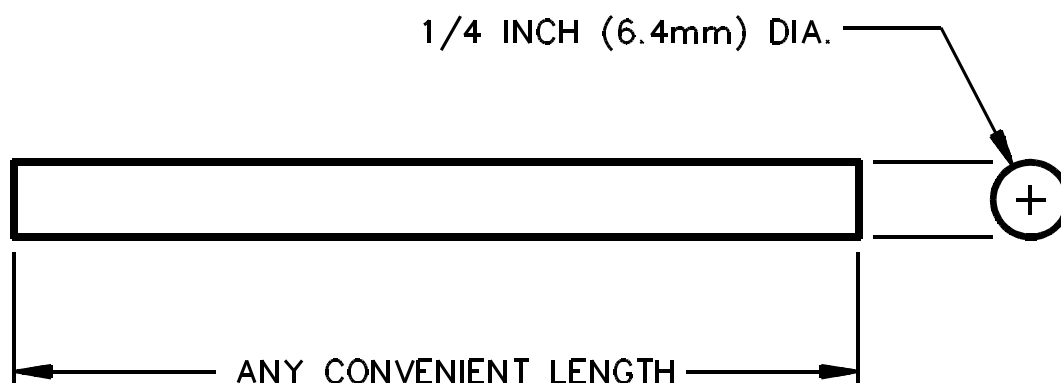
ELECTRICAL CONSTRUCTION

9 Contacts

9.1 A contact opening in a connector employed for quick assembly to connect power between two panels, between a panel and a top- or base-feed, or similar assembly, shall be such that the probe illustrated in [Figure 9.1](#) does not contact an uninsulated live part when:

- a) The probe is applied to the contact opening, without the mating plug inserted, or
- b) The mating plug is partially inserted into the connector.

Figure 9.1
Accessibility probe



PA191

10 Power-Supply Connections

10.1 General

10.1.1 A starter unit shall have provision for connection of a wiring system in accordance with ANSI/NFPA 70.

10.1.2 A starter unit shall be connected to a supply source so that no ungrounded supply (unidentified) conductor exceeds a potential of 120 V with respect to the grounded supply conductor or the grounding conductor.

10.1.3 A top- or base-feed, supply cable, fitting, cable connector, and mating raceway shall be constructed so that stresses on the top- or base-feed or supply cable that occur during the installation and intended use of the product do not result in a risk of fire or electric shock. See [13.1.13](#), [13.2.1](#), and [25.1 – 25.2](#).

10.2 Permanently connected systems

10.2.1 A fixed starter unit shall be provided with means for permanent attachment to the branch-circuit supply.

10.2.2 A Type I fixed starter unit not equipped with a top- or base-feed or supply cable shall be provided with field-wiring terminals or leads for the connection of conductors having an ampere rating:

- a) That results in compliance of the panel system with the requirements in this Standard, and
- b) That is in accordance with ANSI/NFPA 70.

10.2.3 A Type II fixed starter unit is not required to be provided with a splice compartment or a junction box to make connections.

10.2.4 A terminal or splice compartment shall be complete and shall enclose all field-wiring terminals and splices to be made in the field.

10.2.5 A terminal or splice compartment shall be of a size that provides free space for all enclosed conductors. Fill requirements and the corresponding volume required are to be determined in accordance with ANSI/NFPA 70, Article 370. The volume provided by the terminal or splice compartment is to be determined by using water as specified for the Volume Verification Test in UL 514A.

10.2.6 A terminal or splice compartment in which power-supply connections are to be made in the field shall be located so that the connections are accessible for inspection after installation of the office furnishing system.

10.2.7 The compartment specified in [10.2.4](#) shall be located so that, when making conduit connections, internal wiring and electrical components are not exposed to mechanical abuse or strain.

10.2.8 A terminal compartment intended for connection of a supply raceway shall be prevented from turning with respect to the supporting surface.

10.2.9 A terminal intended solely for connection of an equipment-grounding conductor shall secure a conductor of the size required in accordance with ANSI/NFPA 70.

10.2.10 A wiring terminal shall be prevented from turning.

10.2.11 A field wiring wire-binding screw intended for connection of an equipment-grounding conductor shall be located so that it will not require removal during normal servicing of the product and shall have one of the following constructions:

- a) A green terminal screw with a hexagonal head that is not easily removed,
- b) A green hexagonal terminal nut that is not easily removed,
- c) A green pressure wire connector, or
- d) When the terminal of the grounding conductor is not visible, the conductor entrance hole shall be marked with one of the following:
 - 1) The color green,
 - 2) The word "Green" or "Ground,"
 - 3) The letters "G" or "GR," or
 - 4) A ground symbol.

10.2.12 A wire-binding screw at a wiring terminal shall not be smaller than No. 10 (4.8 mm diameter). Where a pretapped hole is not provided, a thread-forming screw shall be used.

Exception: The use of a No. 8 (4.2 mm diameter) screw at a terminal intended only for connection of a 14 AWG (2.1 mm²) or smaller conductor complies with the requirement.

10.2.13 A terminal plate tapped for a wire-binding screw shall be of metal not less than 0.05 in (1.27 mm) thick. There shall be two or more full threads in the metal. Extruding the metal to provide the threads complies with this requirement.

Exception: The use of a terminal plate not less than 0.03 in (0.76 mm) thick complies with the requirement where the tapped threads comply with Tightening Torque Test, Section [23](#).

10.2.14 A wire-binding screw shall be provided with an upturned lug or cupped washer that retains a supply conductor of the size intended to be connected.

10.2.15 A terminal (for example, a plate and screw) intended for the connection of a grounded supply conductor shall be formed of, or plated with, metal that is substantially white in color and shall be readily distinguishable from other terminals or shall be clearly identified in some other manner, such as on an attached wiring diagram.

10.2.16 A lead intended for the connection of a grounded supply conductor shall be finished to show a white or gray color, and shall be readily distinguishable from other leads.

10.2.17 The surface of an insulated lead intended solely for connection of an equipment-grounding conductor shall be substantially green with or without one or more yellow stripes, and no other lead visible to the installer shall be so identified.

10.2.18 The free length of a lead located inside an outlet box or field-wiring compartment and intended for field connection to a branch circuit shall not be less than 6 in (150 mm). A free length of lead intended for connection to the branch circuit supply shall not be supplied on furnishing components other than a dedicated starter unit or as part of a furnishing raceway, or similar component.

10.2.19 Where flexible metal conduit, liquidtight flexible metal conduit, or liquidtight flexible nonmetallic conduit is employed in a top- or base-feed for permanent connection:

- a) A bushing or fitting shall be used so that enclosed wiring does not contact sharp edges or burrs, and
- b) The method of strain relief shall comply with Strain-Relief Tests, Section [25](#).

10.3 Cord-connected systems

10.3.1 A freestanding starter unit connected to a single-phase branch circuit by a flexible cord provided with a grounding-type attachment plug shall be constructed so that:

- a) The method of electrical interconnection of the office furnishing system is such that the length of electrically interconnected furnishings is not capable of exceeding 30 ft (9.1 m), or
- b) The system shall be provided with instructions as specified in [39.3](#).

10.3.2 A flexible cord used in accordance with [10.3.1](#) shall be rated for use at a voltage not less than the rated voltage of the product. The ampacity of the cord and plug shall:

- a) Not be less than that required for the application in accordance with ANSI/NFPA 70, and
- b) Not be less than 20 A.

Exception: A system may be provided with 14 AWG cord and a 15 A plug, if the system complies with [10.3.5](#).

10.3.3 A flexible cord shall be of a Type rated for extra-hard usage (Type S or the equivalent). The cord shall not be more than 2 ft (0.6 m) long, as measured along the cord from the back surface of the attachment plug to the back surface of the cord fitting at the office furnishing.

10.3.4 The attachment plug specified in [10.3.1](#) shall be rated 125 V, 20 A minimum, and shall be of one of the configurations covered in the Standard for Wiring Devices – Dimensional Requirements, ANSI/NEMA WD6-1988.

Exception: A system may be provided with 14 AWG cord and a 15 A plug, if the system complies with [10.3.5](#).

10.3.5 In accordance with the Exceptions in [10.3.2](#) and [10.3.4](#), a free standing starter unit may be provided with 14 AWG cord and a 15 A plug, when the unit complies with the following conditions:

- a) 15 A or less overcurrent protection is provided before the first receptacle;
- b) The system shall be limited to a total of ten, 15 A receptacles; and
- c) The product is marked in accordance with [38.20](#).

11 Internal Wiring

11.1 The wiring and connection between parts within a single office furnishing shall be enclosed. See Accessibility of Electrical Component Parts, Section [7](#).

11.2 A hole through which insulated wires pass in a sheet-metal wall within the overall enclosure of an office furnishing shall be provided with: