

STANDARD INFORMATION

Standard: UL 514B / CSA C22.2 No. 18.3

Standard ID:

Conduit, Tubing, and Cable Fittings [UL 514B:2012 Ed.6+R:21Nov2014]

Conduit, Tubing, and Cable Fittings [CSA C22.2#18.3:2012 Ed.2+U1]

Previous Standard ID:

Conduit, Tubing, and Cable Fittings [UL 514B:2012 Ed.6]

Conduit, Tubing, and Cable Fittings [CSA C22.2#18.3:2012 Ed.2]

EFFECTIVE DATE OF NEW/REVISED REQUIREMENTS

Effective Date: **July 1, 2024**

IMPACT, OVERVIEW, AND ACTION REQUIRED

Impact Statement: Per our accreditation, Intertek is required to review reports against the standard revisions to confirm compliance. Once compliance is confirmed, the standard reference in the report is updated to show continued compliance to the technical requirements of the standard. Reports not updated to this version by the effective date above will be withdrawn.

Overview of Changes:

- Revision and Addition of Requirements Specific to Conduit Bodies
- Revision and Addition of Construction and Marking Requirements
- Addition and Revision of Construction and Test Requirements
- Addition of Requirements to Specify Tools Required for the Assembly of Fitting Samples to be Tested

Specific details of new/revised requirements are found in table below

Current Listings Not Active? – Please immediately identify any current Listing Reports or products that are no longer active and should be removed from our records. We will do this at no charge as long as Intertek is notified in writing prior to the review of your reports.



STANDARD INFORMATION

CLAUSE	VERDICT	COMMENT
		<i>Additions to existing requirements are <u>underlined</u> and deletions are shown lined-out below.</i>
5	Info	Construction
5.7	Info	CONDUIT BODIES(Mexico and US only)
5.7.1	Info	General
		<i>New clause added;</i>
		A CONDUIT BODY having smaller dimensions than as specified in Clause 5.7.1.5 shall:
5.7.1.6		a) comply with the wire pull test in Clause 8.4 for installation of a combination of conductors, including 4 AWG (21.2 mm ²) or larger, that is less than the specified maximum fill for the largest conduit size that the CONDUIT BODY is intended to accommodate. See Clause 7.10.4, or b) have a radius to the curve of its centerline not less than the radius to the center of the tube as indicated for an elbow in UL 6, C22.2 No. 45.1 or NMX-J-534-ANCE. See Clause 7.10.4A.
		<i>New clause added;</i>
5.7.1.7		A CONDUIT BODY having a raceway entry in the wall opposite the removable cover specified in Clause 5.7.1.3 (a) shall have a distance from the cover to the opposite wall not less than that specified in Table 41.
5.7.3	Info	Conduit bodies for use with rigid polyvinyl chloride (PVC) conduit
		<i>New clause added;</i>
5.7.3.8		The throat diameter of a CONDUIT BODY for use with rigid PVC conduit shall not be less than as specified in Table 10, as determined either by application of the limit gauges illustrated in Figure 1 or by measurement as described in Clauses 5.7.3.10 and 5.7.3.11. The dimensions of the gauges are specified in Table 11.
		<i>New clause added;</i>
5.7.3.9		The curved surfaces of the limit gauges illustrated in Figure 1 shall be ground and lapped to the diameters and within the tolerances specified in Table 11. The handles for these gauges are not specified nor is the means by which the handles are joined to the gauges. Each gauge for an internally threaded adapter shall have the letters FEM or equivalent on the same face on which the size appears.



CLAUSE	VERDICT	COMMENT
		<i>New clause added;</i>
5.7.3.10		The measurements from which the throat diameter of a finished CONDUIT BODY is determined for comparison with the minimum specified in Table 10, shall be made by means of a machinist's inside micrometer caliper that is equipped with a ratchet. The calibration of the scale shall facilitate estimation of each measurement to 0.003 mm (0.0001 in).
		<i>New clause added;</i>
5.7.3.11		The throat diameter at any point in a CONDUIT BODY for use with rigid PVC conduit shall be equal to or greater than the applicable value specified in Table 10. Four measurements of the throat diameter of each CONDUIT BODY shall be made to determine the smallest diameter. Each measurement shall be estimated to the nearest 0.003 mm (0.0001 in) and recorded. The smallest of all of the recorded diameters shall be rounded to the nearest 0.03 mm (0.001 in). When rounding, an even number in the third decimal place shall not change when the number in the fourth decimal place is five and there is no number or zero in the fifth place.
5.19	Info	CONDUIT LOCKNUTS
5.19.4		Sealing type conduit locknuts for use in a wet location shall comply with the sealing ring test requirements in Clause 8.39.2. When applying the requirements in Clause 8.39.2, no sealing ring is to be used and one sealing type conduit locknut shall be assembled to the outside of the enclosure replacing the standard conduit locknut.
5.21		<i>New clause added;</i> SEALING RINGS and sealing locknuts
5.21.1		A SEALING RING intended for use with a liquid-tight fitting or a fitting or conduit locknut in a wet location shall be provided with a rigid means for retaining its shape when placed between a fitting or conduit locknut and a knockout in an applicable enclosure. This requirement does not apply to a sealing o-ring intended for use with a fitting in a threaded opening.
5.21.2		A SEALING RING shall be installed as intended or in accordance with the manufacturer's instructions.
6	Info	General conditions for tests
6.1	Info	Method of assembly
6.1.1A		<i>New clause added;</i> A FITTING sample shall be able to be assembled using commonly available tools.
6.1.1B		<i>New clause added;</i> A FITTING is permitted to be assembled using a specific tool when: a) the specific tool is provided with the product in the smallest unit carton, and b) the installation instruction provided in or on the smallest unit carton specifies use of the tool (See 7.1.6).



CLAUSE	VERDICT	COMMENT
8	Info	Performance
		<i>New section added;</i>
8.34		Reducing washers tests
8.34.1		General
8.34.1.1		Reducing washers shall be installed as intended or in accordance with the to manufacturer's instructions.
8.34.2		Resistance test
8.34.2.1		Six pairs of reducing washers shall be assembled to threaded conduit and unpainted steel plates as illustrated in Figure 16, and then subjected to the resistance test described in Clause 8.9. As a result of the test, the voltage drop shall not be greater than 10 millivolts. The samples shall then comply with the current test described in Clause 8.10.
8.34.3		Wet locations and oil spray tests
8.34.3.1		Reducing washers for use with liquid-tight fittings, conduit fittings or conduit locknuts in a wet location shall comply with the test requirements in Clause 8.39.
		<i>New section added;</i>
8.39		SEALING RING tests
8.39.1		A sealing ring intended for use with a specific wet location or liquid-tight fitting shall be tested with that fitting according to the applicable wet location or oil spray test. See Clause 7.1.5 and Clause 7.1.6.
8.39.2		A minimum of six sealing rings described in Clause 8.39.1 in each trade size shall be separately tested. When a line of a minimum of four trade sizes of a particular construction is investigated, three samples of each trade size shall be tested.
8.29.3		A sealing ring intended for use with conduit locknuts in a wet location shall be tested using an appropriately sized threaded rigid steel conduit and a conduit locknut on each side of the wet location enclosure.
8.39.4		The assembly shall then be subjected to the wet locations test in Clause 8.7.
8.39.5		A conduit locknut shall be reverse threaded onto a minimum 152-mm (6-inch) length of threaded rigid steel conduit. The sealing ring shall then be placed between the conduit locknut and the knockout of a wet locations enclosure. The threaded end of the conduit shall then be inserted into the knockout and the assembly secured to the knockout using another conduit locknut on the inside of the enclosure. Both locknuts are permitted to be hand-tightened to the enclosure and then the locknut on the inside of the enclosure shall be further tightened 1/4 turn with a hammer and a flat-bladed screwdriver or by an equivalent method.