



UL 498D

STANDARD FOR SAFETY

**Attachment Plugs, Cord Connectors
and Receptacles with Arcuate (Locking
Type) Contacts**

This is a preview. Click [here](#) to purchase the full publication.

This is a preview. Click [here](#) to purchase the full publication.

UL Standard for Safety for Attachment Plugs, Cord Connectors and Receptacles with Arcuate (Locking Type) Contacts, UL 498D

First Edition, Dated July 29, 2020

SUMMARY OF TOPICS

This revision of ANSI/UL 498D dated September 21, 2021 includes a revision to the Spring Action Terminals requirements; [12.6.1](#), [12.6.4](#), [19.3.2](#), Section [22A](#), [Table 34.1](#), [Table 34.3](#), Section [48A](#), Section [61A](#), [Table 88.1](#), [Table 88.3](#).

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 new and revised requirements are substantially in accordance with Proposal(s) on this subject dated July 16, 2021.

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form by any means, electronic, mechanical photocopying, recording, or otherwise without prior permission of UL.

UL provides this Standard "as is" without warranty of any kind, either expressed or implied, including but not limited to, the implied warranties of merchantability or fitness for any purpose.

In no event will UL be liable for any special, incidental, consequential, indirect or similar damages, including loss of profits, lost savings, loss of data, or any other damages arising out of the use of or the inability to use this Standard, even if UL or an authorized UL representative has been advised of the possibility of such damage. In no event shall UL's liability for any damage ever exceed the price paid for this Standard, regardless of the form of the claim.

Users of the electronic versions of UL's Standards for Safety agree to defend, indemnify, and hold UL harmless from and against any loss, expense, liability, damage, claim, or judgment (including reasonable attorney's fees) resulting from any error or deviation introduced while purchaser is storing an electronic Standard on the purchaser's computer system.

No Text on This Page

JULY 29, 2020
(Title Page Reprinted: September 21, 2021)



ANSI/UL 498D-2021

1

UL 498D

**Standard for Attachment Plugs, Cord Connectors and Receptacles with
Arcuate (Locking Type) Contacts**

First Edition

July 29, 2020

This ANSI/UL Standard for Safety consists of the First Edition including revisions through September 21, 2021.

The most recent designation of ANSI/UL 498D as an American National Standard (ANSI) occurred on September 20, 2021. 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>.

UL's Standards for Safety are copyrighted by UL. Neither a printed nor electronic copy of a Standard should be altered in any way. All of UL's Standards and all copyrights, ownerships, and rights regarding those Standards shall remain the sole and exclusive property of UL.

COPYRIGHT © 2021 UNDERWRITERS LABORATORIES INC.

This is a preview. Click here to purchase the full publication.

No Text on This Page

CONTENTS

INTRODUCTION

1	Scope	7
2	Components	8
3	Units of Measurement	8
4	Referenced Publications	8
5	Glossary.....	9

CONSTRUCTION

6	All Devices	12
7	Configurations	12
8	Insulating Materials	12
	8.1 General	12
	8.2 Flammability.....	12
	8.3 Electrical properties	13
	8.4 Thermal properties	14
	8.5 Vulcanized fiber.....	15
	8.6 Sealing compounds	15
	8.7 Fuse enclosures	15
9	Enclosure	15
	9.1 General	15
	9.2 Male faces and wire terminations	18
10	Current-Carrying Parts.....	19
	10.1 General.....	19
	10.2 Contacts	19
11	Grounding and Dead Metal Parts	20
12	Terminals.....	21
	12.1 General.....	21
	12.2 Wire-binding screw terminals.....	21
	12.3 Soldering lugs	22
	12.4 Pressure-wire terminals.....	22
	12.5 Combination wire binding/pressure-wire terminals.....	23
	12.6 Spring action clamp terminals	23
13	Cord Entry and Strain Relief.....	23
14	Spacings	24
15	Assembly.....	24
	15.1 General.....	24
	15.2 Grounding and polarization.....	25
	15.3 Mating and interchangeability	25
	15.4 Fuseholders	26
	15.5 Switches	27

ATTACHMENT PLUGS AND INLETS

16	Insulating Materials	27
17	Enclosure	27
	17.1 General.....	27
	17.2 Configurable plug	27
18	Grounding and Dead Metal Parts.....	28
19	Terminals and Leads	29
	19.1 Terminals	29
	19.2 Leads	29

This is a preview. Click here to purchase the full publication.

19.3 Attachment plug and inlet with spring action clamp terminal	30
20 Assembly.....	30
21 Weatherproof Type.....	30

CORD CONNECTORS

22 Grounding and Dead Metal Parts.....	31
22A Cord Connector with Spring Action Clamp Terminal	31
23 Assembly.....	31

RECEPTACLES

24 Insulating Materials	31
25 Enclosure	32
26 Grounding and Dead Metal Parts.....	32
26.1 General.....	32
26.2 Flush receptacles	33
27 Terminals and Leads	33
27.1 General.....	33
27.2 Leads	33
27.3 Separable terminal assembly.....	34
27.4 Receptacle with spring action clamp terminal	34
28 Assembly.....	34
28.1 General.....	34
28.2 Flush receptacles	34
28.3 Surface-mount receptacles.....	36
29 Flush Plates.....	36
30 Self-Grounding Receptacles	36
31 Isolated-Ground Receptacles	36
32 Pendant Receptacles	36
33 Lighted Receptacle	37

PERFORMANCE

GENERAL

34 Representative Devices	37
---------------------------------	----

ALL DEVICES

35 Comparative Tracking Index Test.....	41
36 Glow Wire Test.....	42
37 High-Current Arc Resistance to Ignition Test.....	42
38 Mold Stress Relief Test	43
39 Moisture Absorption Resistance Test	44
40 Dielectric Voltage-Withstand Test	44
40.1 Devices for fixed or permanent installation.....	44
40.2 Cord-connected devices.....	45
41 Accelerated Aging Tests	45
41.1 General.....	45
41.2 Rubber, EPDM, and TEE compounds.....	45
41.3 PVC compounds and copolymers	45
42 Insulation Resistance Test	46
43 Conductor Secureness Test	46
44 Tightening Torque Test.....	47

ATTACHMENT PLUGS

45	All Devices.....	47
46	Secureness-Of-Cover Test.....	47
47	Integrity of Assembly Test – General	47
48	Terminal Temperature Test.....	47
48A	Spring Action Clamp Terminal Pull Test.....	48
49	Fuseholder Temperature Test.....	49

INLETS

50	All Devices.....	50
51	Terminal Temperature Test.....	50
52	Fuseholder Temperature Test.....	51
53	Pressure-Wire Terminals.....	52
54	Combination Wire Binding/Pressure Wire-Type Terminals	53
55	Strength of Insulating Base Test	53
56	Spring Action Clamp Terminal Pull Test.....	54

CORD CONNECTORS

57	All Devices.....	55
58	Overload Tests	55
	58.1 General.....	55
	58.2 Current overload test	56
	58.3 Horsepower overload test.....	56
59	Temperature Test	58
60	Resistance to Arcing Test.....	58
61	Fuseholder Temperature Test.....	59
61A	Spring Action Clamp Terminal Pull Test.....	60
62	Potential Drop in Grounding Connections Test.....	61
63	Integrity of Assembly Test	61
64	Self-Hinged Cord Connectors.....	61
65	Self-Hinge Flexing Test.....	62

RECEPTACLES

66	All Devices.....	62
67	Overload Test.....	62
	67.1 General.....	62
	67.2 Current overload test	63
	67.3 Horsepower overload test.....	64
68	Temperature Test	65
	68.1 Contact and terminal temperature	65
	68.2 Feed-through terminal temperature	66
69	Resistance to Arcing Test.....	66
70	Fuseholder Temperature Test.....	66
71	Pressure-Wire Terminals.....	68
72	Combination Wire Binding/Pressure Wire-Type Terminals	68
73	Strength of Insulating Base Test	69
74	Spring Action Clamp Terminal Pull Test.....	69
75	Self-Grounding Receptacles	70
76	Fault Current Test.....	70
77	Receptacles Employing a Separable Terminal Assembly	72
78	Retention of Tab Connection Test	72

79	Separable Connector Pull Test	72
80	Mold Stress Relief Test	72
81	Dielectric Voltage-Withstand Test	73
82	Grounding Contact Temperature Test.....	73
83	Resistance Test.....	74
84	Latching Mechanism Test.....	74
85	Short Circuit Test.....	74
86	Continuity Impedance Test.....	75

RATINGS

87	Details.....	75
----	--------------	----

MARKINGS AND INSTRUCTIONS

88	General	77
88.1	Details	77
88.2	Location of markings and instructions.....	87
89	Identification and Marking of Terminals.....	87
89.1	Grounded and grounding.....	87
89.2	Other terminals.....	89
89.3	Removable parts	89

ANNEX A (NORMATIVE) Wiring Device Configurations