



UL 228

STANDARD FOR SAFETY

Door Closers-Holders, With or Without
Integral Smoke Detectors

ULNORM.COM : Click to view the full PDF of UL 228 2022

ULNORM.COM : Click to view the full PDF of UL 228 2022

UL Standard for Safety for Door Closers-Holders, With or Without Integral Smoke Detectors, UL 228
Fifth Edition, Dated January 26, 2006

Summary of Topics

These revisions to UL 228 dated March 11, 2022 include a steel ball diameter correction in the Jarring Test; [16.2](#).

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 revised requirements are substantially in accordance with Proposal(s) on this subject dated February 4, 2022.

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

[ULNORM.COM](https://ulnorm.com) : Click to view the full PDF of UL 228 2022

JANUARY 26, 2006
(Title Page Reprinted: March 11, 2022)

1

UL 228

Standard for Door Closers-Holders, With or Without Integral Smoke

Detectors

The first edition was titled "Electromagnetic and Electromechanical Door Holder-Releasees and Combination Door Closer-Holders (With or Without Integral Smoke Detectors)".

First Edition – September, 1974

Second Edition – October, 1979

Third Edition – April, 1993

Fourth Edition – April, 1997

Fifth Edition

January 26, 2006

This UL Standard for Safety consists of the Fifth Edition including revisions through March 11, 2022.

The Department of Defense (DoD) has adopted UL 228 on October 3, 1994. The publication of revised pages or a new edition of this Standard will not invalidate the DoD adoption.

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 © 2022 UNDERWRITERS LABORATORIES INC.

No Text on This Page

[ULNORM.COM](https://ulnorm.com) : Click to view the full PDF of UL 228 2022

CONTENTS

INTRODUCTION

1	Scope	5
2	General	5
	2.1 Components	5
	2.2 Units of measurement	5
	2.3 Undated references	6

CONSTRUCTION

3	General	6
4	Frame and Enclosure	6
5	Mounting of Parts	8
6	Corrosion Protection	8
7	Insulating Material	8
8	Current-Carrying Parts	9
9	Wiring Methods	9
10	Internal Wiring	9
	10.1 General	9
	10.2 Semiconductors	10
11	Installation Wiring Methods	10
	11.1 General	10
	11.2 Strain relief	11
	11.3 Bushings	11
12	Spacings	11

PERFORMANCE

13	General	13
14	Normal Operation	13
15	Endurance Test	13
16	Jarring Test	15
17	Input Test	15
18	Temperature Test	15
19	Holding Power Test	18
20	Dielectric Voltage-Withstand Test	18
21	Abnormal Operation Test	19
22	Fire Tests of Swinging Door Closer-Holders With Integral Smoke Detectors	19
	22.1 Corridor test	19
	22.2 Paper fire – test A	19
	22.3 Wood fire – test B	20
	22.4 Gasoline fire – test C	21
	22.5 Polystyrene fire – test D	21
	22.6 Igniter assembly	22
	22.7 Limited open-area test (optional)	26
	22.8 Paper fire – test A	26
	22.9 Wood fire – test B	26
	22.10 Gasoline fire – test C	26
	22.11 Polystyrene fire – test D	27
23	Smoldering Smoke Test	29
24	Insulating Materials Test	35

MARKING

25 General35

APPENDIX A

Standards for Components36

ULNORM.COM : Click to view the full PDF of UL 228 2022