CAN/ULC 548:2015 (R2025)

Standard for Devices and Accessories for Water Type Extinguishing Systems

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Standard for Devices and Accessories for Water Type Extinguishing Systems, CAN/ULC 548

Fourth Edition, Dated September 1, 2015

Summary of Topics

This reaffirmation of CAN/ULC 548 dated July 31, 2025 is being issued to update the title page to reflect the reaffirmation of this Fourth Edition National Standard of Canada. No changes in requirements are involved.

Text that has been changed in any manner or impacted by ULSE'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 5, 2025.

PLEASE NOTE THAT CERTAIN CODES MAY REFER TO A SUPERSEDED VERSION OF THIS STANDARD. IN THOSE INSTANCES, THE RELEVANT VERSIONS ARE AVAILABLE FOR PURCHASE.

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CAN/ULC 548:2015 (R2025)

Standard for Devices and Accessories for Water Type Extinguishing Systems

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CONTENTS

ULC STANDARDS COMMITTEE ON LIFE SAFETY ACCESSORY DEVICES 7

PREFACE 9

1 SCOPE 11
2 REFERENCE PUBLICATIONS 11
3 GLOSSARY.....14
4 GENERAL.....15
4.1 COMPONENTS 15
4.2 UNITS OF MEASUREMENT 16
4.3 REQUIREMENTS FOR WATER TYPE EXTINGUISHING SYSTEMS.....16
5 INSTRUCTIONS AND INSTALLATION WIRING DIAGRAM 16
5.1 GENERAL – ALL PRODUCTS 16
5.2 VANE AND PADDLE TYPE DEVICES.....17
5.3 VALVE POSITION SWITCHES.....17
6 CONSTRUCTION.....18
6.1 GENERAL – ALL PRODUCTS 18
6.2 ENCLOSURE — ALL PRODUCTS 19
6.3 OPERATING MECHANISMS 21
6.4 CORROSION PROTECTION – ALL PRODUCTS 21
6.5 FIELD WIRING CONNECTIONS 21
6.6 BONDING FOR GROUNDING 23
6.7 INTERNAL WIRING.....24
6.8 COMPONENTS 25
6.9 ELECTRIC SHOCK – ALL PRODUCTS 29
6.10 SPACINGS 29
6.11 SERVICING AND MAINTENANCE PROTECTION – ALL PRODUCTS.....30
6.12 ALARM INITIATING DEVICES 30
7 MARKING 31
7.1 GENERAL – ALL PRODUCTS 31
7.2 ALARM INITIATING DEVICES 32
7.3 ACCESSORIES FOR WATER-SUPPLY CONTROL VALVES.....32
8 PERFORMANCE TESTS 32
8.1 GENERAL – ALL PRODUCTS 32
8.2 NORMAL OPERATION.....33
8.3 CALIBRATION TEST – RETARD FEATURE – VANE & PADDLE TYPE 35
8.4 ENDURANCE TEST.....36
8.5 OVERLOAD.....37
8.6 TEMPERATURE 37
8.7 INTERFERENCE FROM RADIO FREQUENCY AND ELECTROMAGNETIC RADIATIONS 38
8.8 DIELECTRIC VOLTAGE-WITHSTAND.....40
8.9 POLARITY REVERSAL 41
8.10 ELECTRIC SHOCK CURRENT 41
8.11 CORROSION – INDOOR USE ONLY 42
8.12 FLEXING TEST (VANE ASSEMBLY) – ALARM INITIATING DEVICES 43
8.13 ABNORMAL OPERATION 43
8.14 VARIABLE AMBIENT TEMPERATURE (INDOOR).....43
8.15 HUMIDITY (INDOOR).....43
8.16 TESTS OF PLASTIC MATERIALS 44
8.17 JARRING.....46
8.18 VIBRATION.....46
8.19 TESTS OF ELASTOMERIC MATERIALS 46

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8.20 IMMERSION TEST (INDICATOR ASSEMBLY) – VANE AND PADDLE OR FLOAT TYPE....47
8.21 SENSITIVITY TEST - VANE AND PADDLE TYPE....47
8.22 HYDRAULIC FRICTION LOSS TEST – VANE AND PADDLE OR FLOAT DEVICE....48
8.23 SURGE TEST – VANE AND PADDLE TYPE....49
8.24 HYDROSTATIC STRENGTH TEST – VANE, PADDLE OR FLOAT TYPE....49
8.25 MARKING PERMANENCY TESTS....50
8.26 MECHANICAL STRENGTH TESTS FOR ENCLOSURES....51
9 OUTDOOR-USE PRODUCTS....52
9.1 GENERAL....52
9.2 CONSTRUCTION....52
9.3 PERFORMANCE TESTS....53
9.4 DUST EXPOSURE....56
9.5 MARKING....56
10 MANUFACTURING AND PRODUCTION TESTS....56
10.1 GENERAL....56
10.2 SENSITIVITY AND RETARD CALIBRATION TEST....56
10.3 HYDROSTATIC STRENGTH TEST....56
10.4 PRODUCTION-LINE DIELECTRIC VOLTAGE-WITHSTAND TEST....57
TABLES....58
FIGURES....66

APPENDIX A (NORMATIVE) – STANDARDS FOR COMPONENTS

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PREFACE

This is the Fourth Edition of CAN/ULC 548, Standard for Devices and Accessories for Water Type Extinguishing Systems.

This Edition of the Standard has been formally approved by the ULC Standards Technical Committee on life safety accessory devices.

This Standard has been developed in compliance with the requirements of SCC for accreditation of a Standards Development Organization.

Only metric SI units of measurement are used in this Standard. If a value for measurement is followed by a value in other units in parentheses, the second value may be approximate. The first stated value is the requirement.

Appendix A, identified as Normative, forms a mandatory part of this Standard.

In Canada, there are two official languages, English and French. All safety warnings must be in French and English. Attention is drawn to the possibility that some Canadian authorities may require additional markings and/or installation instructions to be in both official languages.

This Fourth Edition National Standard of Canada is based on, and now supersedes, the Third Edition CAN/ULC-S548-08.

Attention is drawn to the possibility that some of the elements of this Canadian standard may be the subject of patent rights. ULC Standards shall not be held responsible for identifying any or all such patent rights.

Requests for interpretation of this Standard should be sent to ULC Standards. The requests should be worded in such a manner as to permit a “yes” or “no” answer based on the literal text of the requirement concerned.

This CAN/ULC 548 Standard is under continuous maintenance, whereby each revision is approved in compliance with the requirements of SCC for accreditation of a Standards Development Organization. In the event that no revisions are issued for a period of four years from the date of publication, action to revise, reaffirm, or withdraw the standard shall be initiated.

Comments or proposals for revisions on any part of the Standard may be submitted at any time. Proposals should be submitted via a Proposal Request in the Collaborative Standards Development System (CSDS) at https://csds.ul.com.

This Standard is intended to be used for conformity assessment.

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1 SCOPE

1.1 This Standard contains requirements for *alarm initiating devices*, supervisory detecting devices and accessories for automatic water supply control valves for attachment to water type extinguishing systems (such as, but not limited to wet, dry, pre-action and deluge type sprinklers, residential sprinklers, water mist suppression systems, water spray fixed extinguishing systems, water motors, gongs and standpipe systems), as follows:

A *Alarm initiating devices*, including but not limited to:

(i) Vane and paddle type waterflow switches; and

(ii) Pressure actuated waterflow switches;

B *Supervisory indicating devices*, including but not limited to:

(i) Pressure supervisory switches;

(ii) Shut-off valve position supervisory switches;

(iii) Water level supervisory switches; and

(iv) Temperature supervisory switches.

C Accessories for automatic water supply control valves, including but not limited to:

(i) Water motors and gongs; and

(ii) Other electrical and non-electrical components or units commonly used.

1.2 Valve position supervisory devices may be of a design suitable for the supervision of gate, butterfly, ball or post-indicator type valves.

1.3 The requirements of this Standard cover devices suitable for installation in ordinary (non-hazardous) indoor and outdoor locations.

1.4 The products covered by this Standard are intended for installation in accordance with the following:

A CAN/ULC 524, Standard for Installation of Fire Alarm Systems;

B CSA C22.1, Canadian Electrical Code, Part I, Safety Standard for Electrical Installations;

C NFPA 13, Standard for the Installation of Sprinkler Systems;

D NFPA 14, Standard for the Installation of Standpipe and Hose Systems;

E NFPA 15, Standard for Water-Spray Fixed Systems for Fire Protection; and

F NFPA 750, Standard on Water-Mist Fire Protection Systems.

2 REFERENCE PUBLICATIONS

2.1 The documents shown below are referenced in the text of this Standard. Unless otherwise stated elsewhere in this Standard such reference shall be considered to indicate the edition and/or revisions of the document available at the date on which the Committee approved this ULC Standard. All undated references shall be interpreted as referring to the latest edition of that document.

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35 Pinelawn Road, Suite 114E, Melville, NY 11747 U.S.A.
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• ANSI/ASA S1.40-2014, American National Standard Electroacoustics 0 Sound Level Meters – Part 1: Specifications

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3 Park Avenue, New York NY 10016-5990 U.S.A.
Telephone: 800-843-2763
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• ANSI/ASME B1.20.1- 2013, Standard For Pipe Threads – General Purpose (Inch)

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• ASTM B117-11, Standard Practice for Operating Salt Spray (Fog) Apparatus

• ASTM D572-04 (R2010), Standard Test Method for Rubber-Deterioration by Heat and Oxygen

• ASTM D638-10, Standard Test Method for Tensile Properties of Plastics

• ASTM D1693-13, Standard Test Method for Environmental Stress-Cracking of Ethylene Plastics

• ASTM D1708-13, Standard Test Method for Tensile Properties of Plastics by Use of Microtensile Specimens

• ASTM D2240-05 (R2010), Standard Test Method for Rubber Property – Durometer Hardness

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• CSA C22.1-15, Canadian Electrical Code, Part I, Safety Standard for Electrical Installations

• CAN/CSA C22.2 No.0.4-04 (R2013), Bonding of Electrical Equipment

• CAN/CSA C22.2 No.0.17-00 (R2009), Evaluation of Properties of Polymeric Materials

• CSA C22.2 No. 38-14, Thermoset-Insulated Wires and Cables

• CSA C22.2 No. 49-14, Flexible Cords and Cables

• CAN/CSA C22.2 No. 65-03 (R2008), Wire Connectors

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• CSA C22.2 No. 66.1-06,Low Voltage Transformers – Part 1: General Requirements

• CSA C22.2 No. 66.2-06,Low Voltage Transformers – Part 2: General Purpose Transformers

• CSA C22.2 No. 66.3-06,Low Voltage Transformers – Part 3: Class 2 and Class 3 Transformers

• CSA C22.2 No. 75-14, Thermoplastic-Insulated Wires and Cables

• CAN/CSA C22.2 No. 94.1-07, Enclosures for Electrical Equipment, Non-Environmental Conditions

• CSA C22.2 No. 94.2-07 (R2008), Enclosures for Electrical Equipment, Environmental Conditions

• CSA C22.2 No. 96-09 (R2011), Portable Power Cables

• CSA C22.2 No. 100-04 (R2009), Motors and Generators

• CSA C22.2 No. 111-10 (R2012), General-Use Snap Switches

• CSA C22.2 No. 127-09 (R2012), General-Use Snap Switches

• CSA C22.2 No. 142-M1987 (R2009), Process Control Equipment Industrial Products

• CSA C22.2 No. 153-09, Electric Quick Connect Terminals

• CSA C22.2 No. 156-M1987 (R2004), Solid State Controls

• CSA C22.2 No. 158-10, Terminal Blocks

• CSA C22.2 No. 190-M1985 (R2009),Capacitors for Power Factor Correction

• CSA C22.2 No. 197-M1983 (R2008), Polyvinyl Chloride, Polyethylene and Rubber Insulating Tape

• CSA C22.2 No. 198.1-06 (R2010), Extruded Insulating Tubing

• CSA C22.2 No. 4248.1-07, Fuseholders – Part 1: General Requirements

• CSA C22.2 No. 4248.4-07, Fuseholders – Part 4: Class CC

• CSA C22.2 No. 4248.5-07, Fuseholders – Part 5: Class G

• CSA C22.2 No. 4248.6-07, Fuseholders – Part 6: Class H

• CSA C22.2 No. 4248.8-07, Fuseholders – Part 8: Class J

• CSA C22.2 No. 4248.9-07, Fuseholders – Part 9: Class – K

• CSA C22.2 No. 4248.11-07, Fuseholders – Part 11: Type C (Edison Base) and Type S Plug Fuse

• CSA C22.2 No. 4248.12-07, Fuseholders – Part 12: Class R

• CSA C22.2 No. 4248.15-07, Fuseholders – Part 15: Class T

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• CAN/CSA C22.2 No. 60065-03 (R2012), Audio, Video, and Similar Electronic Apparatus

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1 Batterymarch Park, Quincy, MA 02169-7471 U.S.A.
Telephone: (617) 770-3000
www.nfpa.org

• NFPA 13-2013, Standard for the Installation of Sprinkler Systems

• NFPA 14-2013, Standard for the Installation of Standpipe and Hose Systems

• NFPA 15-2012, Standard for Water-Spray Fixed Systems for Fire Protection

• NFPA 750-2015, Standard for the Installation of Sprinkler Systems

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• CAN/ULC 511-07, Standard for Lined Fire Hose for Interior Standpipes and Municipal and Industrial Fire Protection Services

• CAN/ULC 513-11, Standard for Threaded Couplings for 38 mm and 65 mm Fire Hose

• CAN/ULC 524, Standard for the Installation of Fire Alarm Systems Including Accessories

• CAN/ULC 527, Standard for Control Units for Fire Alarm Systems

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• ANSI/UL 746A-12, Polymeric Materials – Short Term Property Evaluations

• ANSI/UL 746B-13, Polymeric Materials – Long Term Property Evaluations

• ANSI/UL 746C-04 (R2012), Polymeric Materials – Use in Electrical Equipment Evaluations

• ANSI/UL 746D-12, Polymeric Materials – Fabricated Parts

• ANSI/UL 796-10 (R2013), Printed-Wiring Boards

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3 GLOSSARY

NOTE: Terms used in this Standard that are in italic print are defined as follows:

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ALARM INITIATING DEVICE – A product that provides an electrical signal to indicate the flow of water through a water-type extinguishing system:

A Pressure Actuated Type – A device operated by an air or water pressure change; and

B Vane or Paddle Type – A device operated by mechanical movement of a vane or paddle caused by the flow of water past the mechanism.

CONTROL UNIT – A component which provides the control and logic processing for a fire alarm system.

EXTRA-LOW VOLTAGE – Any voltage up to and including 30 V rms.

LOW VOLTAGE – Any voltage exceeding 30 V rms but not exceeding 750 V rms.

RETARD TIME – The elapsed time in seconds between the initial movement of the vane resulting from the flow of a discreet amount of water and the actual transmission of an alarm signal by the device.

SET POINT – The predetermined value to which a control or interlock is adjusted, and at which it performs its intended function.

SUPERVISORY INDICATING DEVICE – A product that provides an electrical signal to indicate an abnormal condition in the water type extinguishing system:

A Pressure Type – A device operated by an air or water pressure change;

B Temperature Type – A device operated by an air or water temperature change;

C Valve Position Type – A device operated by mechanical linkage to the movable parts of a valve; and

D Water Level Type – A device operated by movement of the water storage level.

4 GENERAL

4.1 COMPONENTS

4.1.1 Except as indicated in Clause 4.1.2, a component of a product covered by this Standard shall comply with the requirements for that component. See Appendix A (Normative) for a list of Standards that apply to components generally used in the products covered by this standard.

4.1.2 A component need not comply with a specific requirement that for such devices and also with respect to their suitability for the particular application:

A Involves a feature or characteristic not needed in the application of the component in the product covered by this Standard; or

B Is superseded by a requirement in this Standard.

4.1.3 A component shall be used in accordance with its recognized rating established for the intended conditions of use.

4.1.4 Specific components are recognized as being incomplete in construction features or restricted in performance capabilities. Such components are intended for use only under limited conditions, such as

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