CAN/ULC 561:2024

Standard for Installation and Services for Fire Signal Receiving Centres and Systems

ULC Standards
Normes ULC

SCC CCN

Underwriters Laboratories of Canada (ULC) was established in 1920 by letters patent issued by the Canadian Government. It maintains and operates laboratories and certification services for the examination, testing and certification of appliances, equipment, materials, constructions and systems to determine their relation to life, fire and property hazards as well as providing inspection services.

ULC Standards develops and publishes standards and other related publications for building construction, security and burglar protection, environmental safety, electrical equipment, fire protection equipment, gas and oil equipment, thermal insulation products, materials and systems, energy use in the built environment and electrical utility safety.

ULC Standards is a not-for-profit organization and is accredited by the Standards Council of Canada as a Standards Development Organization.

National Standards of Canada developed by ULC Standards conform to the criteria and procedures established by the Standards Council of Canada. Such standards are prepared using the consensus principle by individuals who provide a balanced representation of interests relevant to the subject area on a national basis.

National Standard of Canada

A National Standard of Canada is a standard developed by a Standards Council of Canada (SCC) accredited Standards Development Organization, in compliance with requirements and guidance set out by SCC. More information on National Standards of Canada can be found at www.scc.ca.

SCC is a Crown corporation within the portfolio of Innovation, Science and Economic Development (ISED) Canada. With the goal of enhancing Canada's economic competitiveness and social well-being, SCC leads and facilitates the development and use of national and international standards. SCC also coordinates Canadian participation in standards development, and identifies strategies to advance Canadian standardization efforts.

Accreditation services are provided by SCC to various customers, including product certifiers, testing laboratories, and standards development organizations. A list of SCC programs and accredited bodies is publicly available at www.scc.ca.

For further information on ULC standards, please contact:

ULC STANDARDS
Telephone: (613) 755-2729
E-mail: ClientService@shopULStandards.com

To purchase ULC Standards, visit: www.ulc.ca/ulcstandards

The intended primary application of this standard is stated in its scope. It is important to note that it remains the responsibility of the user of the standard to judge its suitability for the particular application.

Copies of this National Standard of Canada may be ordered from ULC Standards.

CETTE NORME NATIONALE DU CANADA EST DISPONIBLE EN VERSIONS FRANÇAISE ET ANGLAISE

Standard for Installation and Services for Fire Signal Receiving Centres and Systems, CAN/ULC 561

Third Edition, Dated June 1, 2020

Summary of Topics

This revision of CAN/ULC 561 dated July 22, 2024 includes the following changes in requirements:

> ***– Align ULC 561 and ULC-S301 Standards; 1.4, 4.2 (title), 4.2.9, 4.2.9A, 4.2.12, 5.2.1, 6.1.5, Table 6.1, 6.1.10, 6.6.1.1, 6.6.1.4 – 6.6.1.6, 6.8.1 – 6.8.3, Section 7 (title), 7.1.3, 7.1.3A, Section 7.3, Section 7.3A, 8.1.1, 8.3.5, 8.3.16, 8.4.8, 10.1.1, 11.3.1, 11.4.3.4.1, 14.1.1 – 14.1.3, 14.2.4 and 16.12.1.***
>
> ***– Reduce Nuisance Follow-up Calls to the Subscriber/Owner; Section 11.4.3***
>
> ***– Redundant Fire Signal Receiving Centre; 3.37A, 3.39, Section 15 (title), 15.1.2 – 15.1.5, 15.2.2, 16.1.1A, 17.1.2 – 17.1.4, Sections 17.3 – 17.6***

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 new and revised requirements are substantially in accordance with Proposal(s) on this subject dated July 21, 2023 and March 15, 2024.

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

ULSE INC. COPYRIGHTED MATERIAL – NOT AUTHORIZED FOR FURTHER REPRODUCTION OR DISTRIBUTION WITHOUT PERMISSION FROM ULSE INC.

CAN/ULC 561:2024

Standard for Installation and Services for Fire Signal Receiving Centres and Systems

ICS 13.220.20; 13.310

First Edition . . . . . September 2003
Second Edition . . . . . March 2013
THIRD EDITION . . . . . JUNE 1, 2020
Revision . . . . . October 27, 2020
Revision . . . . . June 9, 2022
REVISION . . . . . JULY 22, 2024

© 2024

ULC Standards

All rights reserved. No part of this publication may be reproduced in any form, in an electronic retrieval system or otherwise, without prior permission.

ULSE INC. COPYRIGHTED MATERIAL – NOT AUTHORIZED FOR FURTHER REPRODUCTION OR DISTRIBUTION WITHOUT PERMISSION FROM ULSE INC.

CONTENTS

ULC Standards Committee on Fire Alarm and Life Safety Equipment and Systems 9

PREFACE 11

1 Scope 13
2 Reference Publications 14
3 Glossary 15
4 Building Requirements 19
4.1 General 19
4.2 Centre Operations Area Security 19
5 Fire Signal Receiving Equipment 20
5.1 General 20
5.2 Packet Type Data Communications 21
5.3 Radio Equipment 21
6 Fire Signal Receiving Centre Automation System (SRCAS) 22
6.1 General 22
6.2 Monitoring SRCAS Performance 24
6.3 SRCAS Supervision and Trouble Indication 25
6.4 Hot Redundant SRCAS 25
6.5 Redundant SRCAS 26
6.6 Remote Access to the SRCAS 26
6.7 SRCAS Back-Up Storage 27
6.8 Site Specific Data Sheets 28
7 Fire Signal Receiving Centre Equipment 28
7.1 Fire Protection 28
7.2 Alarm Signal Notification 29
7.3 Clocks 29
7.3A Time Recording 29
7.4 Gas Detection 29
7.5 Fire Signal Receiving Centre Contingency Plan 29
8 Fire Signal Receiving Centre Power Supply 30
8.1 General 30
8.2 Normal Electrical Power Supply 30
8.3 Emergency Electrical Power Supply 30
8.4 External – Batteries 32
9 Signal Communications, Antennas, Cables and Wiring 33
9.1 General 33
9.2 Underground and Overhead Communication Wiring and Cables 34
10 Fire Signal Receiving Centre Operations 34
10.1 Operating Personnel 34
10.2 Fire Signal Receiving Centre Operator Training 34
10.3 Subscriber Training 35
10.4 Reports for Conformity Assessment 35
10.5 Records 37
10.6 Maintenance 37
11 Protected Premises 37
11.1 General 37
11.2 Signal Transmitting Unit 38
11.3 Electrical Supervision 38
11.4 Signalling Services 39
11.5 Installation of Equipment and Devices 43
11.6 Verification Procedure 47
12 Periodic Inspection and Tests 47

ULSE INC. COPYRIGHTED MATERIAL – NOT AUTHORIZED FOR FURTHER REPRODUCTION OR DISTRIBUTION WITHOUT PERMISSION FROM ULSE INC.

12.1 General....47
12.2 Periodic Inspection and Tests – Two Month Interval....48
12.3 Periodic Inspection and Tests – Six Month Interval....48
12.4 Periodic Inspection and Tests – Yearly....48
12.5 Field Devices....50
13 Communication Systems....52
13.1 General....52
13.2 Active Communication Systems....52
13.3 Passive Communication Systems....52
14 Proprietary Fire Signal Receiving Centre....53
14.1 General....53
14.2 Centre Operations Area....53
15 Hosted Fire Signal Receiving Centre (HSRC)....54
15.1 General....54
15.2 Hosted Fire Signal Receving Centre Configurations....55
16 Satellite Centres, Bridging Centres and Clearing Houses....55
16.1 General....55
16.2 Building Requirements....56
16.3 Protection Against Unauthorized Entry....56
16.4 Satellite Signal Receiving Equipment....57
16.5 Satellite Centre and Bridging Centre Equipment....57
16.6 Normal Electrical Power Supply....58
16.7 Emergency Electrical Power Requirements....58
16.8 External Batteries....59
16.9 Testing Emergency Power Supplies....60
16.10 Field Wiring, Underground and Overhead Wiring and Cables....60
16.11 Communication Systems....60
16.12 Supervision....60
16.13 Records....61
17 Redundant Fire Signal Receiving Centre Site....61
17.1 General....61
17.2 Ownership....61
17.3 FRSC, Satellite Centre, Bridging Centre or Owned Clearing House Failure Defined....62
17.4 Operational Transfer and Activation Time Requirements....62
17.5 Data Requirements....62
17.6 Activation (Signal Re-routing), Operation Plans and Procedures....62
18 Temporary Operating Centres....62
18.1 Temporary Centre Operation Areas....62
18.2 Minimum Physical Security Requirements....63
19 Operation during a Regional/National Disruption....63
19.1 General....63
19.2 Operation within the Fire Signal Receiving Centre....64
19.3 Operators Working Remotely (from Home)....64

ANNEX A (INFORMATIVE) – EXPLANATORY NOTES

ANNEX B (INFORMATIVE) – SITE DATA SHEETS

ANNEX C (INFORMATIVE) – TEST AND INSPECTION REPORTS

C1 Alarm Signal Transmitter Annual Test And Inspection Report....71
C2 Transmitting Unit Test Record....72
C3 Device Testing – Legend and Notes....73

ULSE INC. COPYRIGHTED MATERIAL – NOT AUTHORIZED FOR FURTHER REPRODUCTION OR DISTRIBUTION WITHOUT PERMISSION FROM ULSE INC.

C4 Individual Equipment or Device Record 73

ANNEX D (INFORMATIVE) – COMMUNICATIONS DATA INTEGRITY STANDARDS

ULSE INC. COPYRIGHTED MATERIAL – NOT AUTHORIZED FOR FURTHER REPRODUCTION OR DISTRIBUTION WITHOUT PERMISSION FROM ULSE INC.

ULC Standards Committee on Fire Alarm and Life Safety Equipment and Systems

Name	Affiliation	Category	Region
Suzanne Alfano	CFAA	General Interest	Canada
Kevin Allison	Fire Monitoring Of Canada Inc.	Producer	Canada
Michael Arruda	Electrical Contractors Association of Ontario	Commercial / Industrial Users	Canada
Ali Asraei	Jensen Hughes Consulting Canada Ltd.	General Interest	Canada
Sean Bartlett	RJ Bartlett Engineering Ltd.	General Interest	Canada
Daniel Blais	Mircom Technologies LTD	Producer	Canada
Don Casey	Mississauga Fire Emergency Services	Authorities Having Jurisdiction	Ontario
Paul Clarke	Department Of National Defence	Government	Canada
Ray Collins	Toronto Community Housing	Government	Ontario
David Currie	DAMAR SECURITY SYSTEMS, DIV OF LAMBTON COMMUNICATION LTD	General Interest	Canada
Daniel Dixon	Morrison Hershfield	Commercial / Industrial Users	Canada
Brent Early	Province of Manitoba	Government	Manitoba
Tess Espejo	UL Solutions	Testing and Standards Organization	Canada
Chris Estereicher	Photon Electric	Commercial / Industrial Users	Canada
Grayson Flake	UL Standards & Engagement	TC Project Manager – Non-voting	USA
Alwin Friess	M+B electrical consulting engineers	General Interest	Canada
Haiyan Gao	City Of Markham	Authorities Having Jurisdiction	Ontario
Diane Haithcock	UL Standards & Engagement	TC Chair – Non-voting	USA
Michael Hugh	Johnson Controls	Producer	Canada
Ronald Jagmohan	Ajax Systems Canada Corp	Producer	Canada
Kevan Jess	Self Employed	General Interest	Canada
Frank Kurz	Fire Technicians Network	Commercial / Industrial Users	Canada
Gerry Landmesser	Retired, Director Canadian Fire Alarm Association	General Interest	Canada
Cindy Leber	Building Reports Canada	Supply Chain	Canada
Fred Leber	AML Encore Corp	General Interest	Canada
Aaron Lee	Westinghouse Electric Canada Inc.	Commercial / Industrial Users	Canada
Brian McBain	Russell Township Fire Services	Authorities Having Jurisdiction	Ontario
Adam Murray	Troy Life And Fire Safety Ltd.	Producer	Canada
Russell Murray	Dialog	Supply Chain	Canada
Brian Neufeld	ADT Security Services Canada Inc. / TELUS	Supply Chain	Canada
Tina Parker	Government Of Alberta	Government	Alberta
Chris Ramenda	ONYX-ELECTRICAL SERVICES	General Interest	Canada
Joseph Rebstock	Umbra Engineering Ltd.	Commercial / Industrial Users	Canada
Daniel Rosales	Telular, a business unit of AMETEK, Inc.	Producer	USA
Leo Solonovich	City of Fort McMurray	Authorities Having Jurisdiction	Alberta
Peter Teolis	Firetronics 2000 INC	Commercial / Industrial Users	Canada
Jeffry Tondang	Siemens Canada Limited	Producer	Canada

ULSE INC. COPYRIGHTED MATERIAL – NOT AUTHORIZED FOR FURTHER REPRODUCTION OR DISTRIBUTION WITHOUT PERMISSION FROM ULSE INC.

Name	Affiliation	Category	Region
Thomas Tsapoitis	City of Burlington	Authorities Having Jurisdiction	Ontario
Calin Vaida	Plan Group	Commercial / Industrial Users	Canada
Jeffery VanKeuren	Edwards	Producer	Canada
Dennis Weber	VIPOND INC	Producer	Canada
Samuel Williams	City of Mississauga – Mississauga Fire & Emergency Services	Authorities Having Jurisdiction	Ontario
Mark Wilson	Streamline Fire Protection	Commercial / Industrial Users	Canada
Iman Yavari	LRI Engineering.	Commercial / Industrial Users	Canada
Pery Zerbinos	Chubb	Producer	Canada
Michael Zukov	ARENCON Inc.	General Interest	Canada

This list represents the membership at the time the Committee balloted on the final text of this edition. Since that time, changes in the membership may have occurred.

ULSE INC. COPYRIGHTED MATERIAL – NOT AUTHORIZED FOR FURTHER REPRODUCTION OR DISTRIBUTION WITHOUT PERMISSION FROM ULSE INC.

PREFACE

This is the Third Edition of CAN/ULC 561, Standard for Installation and Services for Fire Signal Receiving Centres and Systems.

This Edition of the Standard was developed by the ULC Standards Working Group on Installation and Services for Fire Signal Receiving Centres and Systems, reviewed by the ULC Standards Subcommittee on Installation, Inspection and Verification of Fire Alarm Systems, and was formally approved by the ULC Committee on Fire Alarm and Life Safety Equipment and Systems.

This Standard recognizes that a fire signal receiving centre system and service may have additional features or functions differing from those detailed in these requirements which may be accepted, together with the requirements of this Standard, provided that they enhance the life safety of the occupants of the protected premises as well as the fire signal receiving centre.

This Standard has been developed in compliance with the requirements of the Standards Council of Canada for accreditation of Standards Development Organizations.

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.

Annexes A, B, C and D, identified as informative, are for informational purposes only.

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 Third Edition National Standard of Canada is based on, and now supersedes, the Second Edition CAN/ULC-S561-13.

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 561 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.

ULSE INC. COPYRIGHTED MATERIAL – NOT AUTHORIZED FOR FURTHER REPRODUCTION OR DISTRIBUTION WITHOUT PERMISSION FROM ULSE INC.

1 Scope

1.1 This Standard covers the:

a) Construction, operation, installation, inspection and tests applicable to *fire signal receiving centres* for fire protective signalling services utilizing *fire signal receiving centre* facilities, *satellite centre*s and *bridging centres*, *hosted fire signal receiving centres*, managed *fire signal receiving centres*, redundant *fire signal receiving centres*, and temporary *fire signal receiving centres*;

b) Construction and operation of a *proprietary fire signal receiving centre*; and

c) Installation, inspection and tests applicable to a fire *signal transmitting unit* and its *field device* inputs· at the protected premises.

1.2 The requirements of this Standard do not apply to the test, inspection, maintenance, installation and service of the building *fire alarm system* at the protected premises, as required in CAN/ULC-S524, Standard for the Installation of Fire Alarm Systems; CAN/ULC 536, Standard for the Inspection and Testing of Fire Alarm Systems; and CAN/ULC-S537, Standard for the Verification of Fire Alarm Systems.

1.3 Equipment used in *fire signal receiving centre systems* is intended to be installed in accordance with the applicable sections of the following:

a) CAN/ULC-S524, Standard for Installation of Fire Alarm Systems;

b) CSA C22.1, Canadian Electrical Code, Part I, Safety Standard for Electrical Installations or where applicable, a Provincial Electrical Code;

c) NFPA-13, Standard for the Installation of Sprinkler Systems; and

d) NFPA-20, Standard for the Installation of Stationary Pumps for Fire Protection.

1.4 Premise installations in service prior to the publication of this edition of ULC 561 shall be deemed compliant with this Standard provided that all of the following are met:

a) They were in compliance with a previous edition of ULC 561 in effect at the time of installation; and

b) The alarm signal transmitting unit and/or method of communication have not been changed or upgraded.

Note: Any upgrade of the alarm signal transmitting or communication method will require that the full installation comply with the requirements of this standard. A “like for like” replacement to a failed module of the signal transmitting system installation is not considered an upgrade.

1.5 Where a *fire signal receiving centres* relocates, it shall be permitted to move and re-install receiving equipment required to service customers utilizing protected premises equipment in accordance with the applicable sections of CAN/ULC 527-M87, Standard for Control Units for Fire Alarm Systems.

ULSE INC. COPYRIGHTED MATERIAL – NOT AUTHORIZED FOR FURTHER REPRODUCTION OR DISTRIBUTION WITHOUT PERMISSION FROM ULSE INC.

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.

Documents published by the CSA Group
5060 Spectrum Way, Mississauga, Ontario, L4W 5N6 Canada
Telephone: (416) 747-4000 or 1-800-463-6727
Telephone: +41 22 749 01 11; Fax +41 22 733 34 30
www.csa.ca

- CSA C22.1-18, Canadian Electrical Code, Part I, Safety Standard for Electrical Installations
- CAN/CSA-C282-15 (Errata 2017), Emergency Electrical Power Supply for Buildings

---

Document published by the National Fire Protection Association
1 Batterymarch Park, Quincy, MA 02269-9101, U.S.A.
Telephone: 1-800-344-3555

- NFPA 13-2019, Standard for the Installation of Sprinkler Systems
- NFPA 20-2019, Standard for the Installation of Stationary Pumps for Fire Protection
- NFPA 72-2019, National Fire Alarm and Signaling Code

Documents Published by the National Research Council Canada (NRC)
1200 Montreal Road, Bldg. M-58, Ottawa, ON K1A 0R6 Canada
Telephone: (613) 993-9101 or 1-877-672-2672
www.nrc-cnrc.gc.ca

- National Building Code Canada 2015
- National Fire Code Canada 2015

Documents Published by ULC Standards
7 Underwriters Road, Toronto, ON M1R 3A9 Canada
Telephone: (416) 757-3611 or 1-866-937-3852
www.ulc.ca

- CAN/ULC-S301:2018, Standard for Signal Receiving Centres Configurations and Operations
- ULC-S332-93 (R2016), Standard for Burglary Resistant Glazing Material
- CAN/ULC-S524:2019, Standard for Installation of Fire Alarm Systems
- CAN/ULC 527:2019, Standard for Control Units for Fire Alarm Systems
- CAN/ULC 536:2019, Standard for Inspection and Testing of Fire Alarm Systems
- CAN/ULC-S537:2019, Standard for Verification of Fire Alarm Systems
- CAN/ULC-S548-15, Standard for Devices and Accessories for Water Type Extinguishing Systems
- CAN/ULC-S559-13 (R2018), Standard for Equipment for Fire Signal Receiving Centres and Systems
- CAN/ULC-S1981:2020, Standard for Signal Receiving Centre Automation System

---

Document Published by Underwriters Laboratories, Inc.
333 Pfingsten Road, Northbrook, IL 60062-2096 U.S.A.
Telephone: +1-847-272-8800

ULSE INC. COPYRIGHTED MATERIAL – NOT AUTHORIZED FOR FURTHER REPRODUCTION OR DISTRIBUTION WITHOUT PERMISSION FROM ULSE INC.

www.ul.com

• UL 60950-1-07 (REV 2019), Standard for Information Technology Equipment – Safety – Part 1: General Requirements

3 Glossary

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

3.1 *ACTIVE COMMUNICATIONS* – A method of communications in which the integrity of the communication channel or channels are continuously monitored so as to identify to the *Fire signal receiving centre* any fault or failure that could affect signal transmission and reception.

3.2 *AUTHORITY HAVING JURISDICTION* – The governmental body responsible for the enforcement of any part of this Standard or the official or agency designated by that body to exercise such a function.

3.2A AUTHORIZED PROVIDER – A business which has developed or is approved to provide licensed computer or software based services or sales to customers.

3.3 *BRIDGING CENTRE* – A normally unattended physical location where communication channels from multiple protected premises are connected together for transmission on a *communications channel* to a *fire signal receiving centre*, subsequent *bridging centres*, or *satellite centre*s without being processed or modified in any way.

3.4 *CENTRE OPERATIONS AREA* – The area of the signal receiving centre, *hosted fire signal receiving centre*, and a temporary fire receiving centre which is used for the receipt of and acting upon signals received from protected premises.

3.5 *CLEARING HOUSE* – A third party communications service provider facility where signals from protected premises are received and processed prior to being forwarded to a signal receiving centre.

3.6 *COMMUNICATIONS CHANNEL* – A circuit or path, over which signals are carried, connecting *subscriber*'s *control unit*(s) directly to a signal receiving centre or by way of a *satellite centre* and/or *bridging centre*.

3.7 *COMMUNICATION SYSTEM* – A combination of equipment at the Protected Premises and the *Fire signal receiving centre* connected by one or more communication channels specifically for the transmission of alarm, trouble and *supervisory signals*.

3.8 *CONTROL UNIT* – Device(s), which provides the control, logic processing, and the termination points for the protective wiring circuits of an intrusion alarm system and/or video monitoring system. These devices include, but are not limited to zone expanders, power supplies, communication devices, and keypads.

3.9 *DATE-TIME STAMP* – A means whereby an event is permanently recorded either by a mechanical *date-time stamp* (e.g. on paper) or in an electronic media.

3.10 *DEMILITARIZED ZONE (DMZ)* – A physical or logical sub-network that separates the Corporate LAN from untrusted networks and grants access to the internet. A DMZ adds an additional layer of security between the corporate network and the public internet and *firewalls* the rest of an organization's network. It can also be used to separate one particular machine from the rest of a network, moving it outside of the *protection* of a *firewall*.

ULSE INC. COPYRIGHTED MATERIAL – NOT AUTHORIZED FOR FURTHER REPRODUCTION OR DISTRIBUTION WITHOUT PERMISSION FROM ULSE INC.