CAN/ULC-S561-03
Installation and Services for Fire Signal Receiving Centres and Systems

What an Installing Contractor needs to know?

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CAN/ULC-S561-03

- Fire/Sprinkler Alarm Monitoring
- Canada
- Ontario
Agenda

• CAN/ULC-S561 Compliant Installations – Overview

• Installation Requirements

• Communication Technologies

• Improper Installations
Mandated in Ontario
Signals to the Fire Department

• Ontario Building Code
  - 3.2.4.7 (4)

• Ontario Fire Code
  - 6.3.1.2, (2b) & (4)

• NBC 3.2.4.7 (4)

• NFC 6.3.1.3
What makes up a compliant System?

Compliant System

Protected Premise
- Transmitter
- Fire Alarm Panel
- Sprinkler Riser

Communication Path
- Active or Passive
- Multiplex, Internet
- DACT c/w Cell

Fire Signal Receiving Centre - ULC Listed
- Receiving Units
- Sufficient Staff
Why do require the installation to meet CAN/ULC-S561-03?

• The interconnection (installation) of the fire alarm transmitter, the communication channel and the connection to the fire signal receiving centre is an extension of the fire alarm system and shall be properly installed.

• CAN/ULC-S524-06 Clause 5.15.1
Typical Installation
Newer Installation- Passive
System Requirements for Installation

- ULC Listed Transmitter (S559 Compliant)
- Electrical Permit required for 120v Supply
- Grounding of Transmitter (manufacturer’s specifications)
- AC Power from a separate breaker
- Transformer properly installed - hardwired

Labeling Requirements
- Label at the breaker
- Label on the front of the transmitter – Name & Phone number of the FSRC and stating this system is being monitored and to notify the FSRC prior working on the system
System Requirements for Installation

• Install CA38A Jack – No direct wiring
• Do not twist wires or EOL’s under terminal screws
• Metallic conduit protection all connecting wires
• Standby Batteries (24hrs)- Dated
• Additional modules/relays properly mounted (Stand-offs, tie raps)
Additional requirements

• Supervised connections - (loop troubles)
  - fire alarm, fire trouble, fire supervisory
• Supervise removable terminal strips
• Monitor for AC failure
• Monitor for Communication failure
• Fire alarm signals transmitted in 60 sec.
• Dispatch on fire in 30 seconds
Communication Paths

• Active Communications-
  - Internet (IP), DVACS
  - No VoIP

Passive Communications-

  - Dual Path systems- Two technologies
  - Phone Line and Cell back –up
  - Phone line and internet
Signals to the Fire Signal Receiving Centre

• Transmit fire signal to the station 60 sec.
• Station to dispatch fire in 30 sec.
• Transmit other conditions in 90 sec.
  – Fire Trouble, Fire Supervisory, AC failure
• Transmit Communication loss
• Passive systems – 24 hr. tests
• Passive Systems - Communicate Fire on both communication channels - Cell back-up (GSM)
Fire Signal Receiving Centre

- Review Signals transmitted to the station to insure all signals are received
- Insure zone descriptions are accurate
- Fire Alarm signals shall be transmitted on both channels of a passive system
- Daily tests transmitted for passive systems
- Test for communication faults
Qualification of Personnel

• Recognized by the AHJ

• Working inside Fire Alarm Control Unit—technicians to be CFAA, ECAO registered

• Working on Transmitter – No Requirement
System Modifications
Adding Unlisted Relays
Thank You

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