
Part 1 General

1.1 RELATED SECTIONS

- .1 Division 01 – General Requirements.
- .2 Section 26 05 00 – Common Work Results – Electrical.
- .3 Section 26 05 32 – Outlet Boxes, Conduit Boxes and Fittings.
- .4 Section 26 05 34 – Conduits, Conduit Fastenings and Conduit Fittings.

1.2 REFERENCES

- .1 Underwriter's Laboratories of Canada (ULC):
 - .1 CAN/ULC-S524-2006, Installation of Fire Alarm Systems.
 - .2 CAN/ULC-S525-2007, Audible Signal Appliances for Fire Alarm.
 - .3 CAN/ULC-S526-2007, Visual Signal Appliances, Fire Alarm.
 - .4 CAN/ULC-S527-2011, Control Units.
 - .5 CAN/ULC-S528-2005, Manual Pull Stations.
 - .6 CAN/ULC-S529-2009, Smoke Detectors.
 - .7 CAN/ULC-S530-M91, Heat Actuated Fire Detectors.
 - .8 CAN/ULC-S531-2002, Smoke Alarms.
 - .9 CAN/ULC-S536-2004, Inspection and Testing of Fire Alarm Systems.
 - .10 CAN/ULC-S537-2004, Verification of Fire Alarm Systems.

1.3 SUBMITTALS

- .1 Submit Shop Drawings in accordance with Section 26 05 00 – Common Work Results – Electrical.
- .2 Shop Drawings shall include:
 - .1 Detailed assembly and internal wiring diagrams for control units.
 - .2 Overall system riser wiring diagram.
 - .3 Details for devices.
 - .4 Details and performance specifications for control, annunciation and peripherals.
- .3 Fire Alarm System Verification Report and Certificate of Verification.

1.4 OPERATION AND MAINTENANCE DATA

- .1 Provide operation and maintenance data for fire alarm system for incorporation into Operation and Maintenance Manual specified in Division 01- General Requirements.
- .2 Include:
 - .1 Technical data - illustrated parts lists with parts catalogue numbers.
 - .2 Copy of approved Shop Drawings.
 - .3 List of recommended spare parts for system.

Part 2 Products

2.1 INITIATING/ INPUT CIRCUITS

- .1 Receiving circuits for alarm initiating devices such as manual pull stations, smoke detectors, heat detectors and water flow switches, wired to central control unit.
- .2 Alarm receiving circuits (active and spare): compatible with smoke detectors and open contact devices.

2.2 ALARM OUTPUT CIRCUITS

- .1 Alarm output circuits: connected to signal devices, wired to central control unit.

2.3 WIRING

- .1 Twisted copper conductors: rated 120V.
- .2 To initiating circuits: 18 AWG minimum, and in accordance with manufacturer's requirements.
- .3 To signal circuits: 14 AWG minimum, and in accordance with manufacturer's requirements.
- .4 To control circuits: 14 AWG minimum, and in accordance with manufacturer's requirements.
- .5 All wiring shall be installed in EMT conduit.

2.4 AUTOMATIC ALARM INITIATING DEVICES

- .1 Smoke detectors:
 - .1 Match existing.

2.5 AUDIBLE SIGNAL DEVICES

- .1 Notification speakers to match existing.

2.6 VISUAL SIGNAL DEVICES

- .1 Strobes to match existing.

2.7 REMOTE BATTERY POWER SUPPLY (RBPS)

- .1 The RBPS panel shall be a stand-alone panel capable of powering a minimum of 4 notification appliance circuits. Notification appliance circuits shall be Class B rated at 2 amps each. Panel shall provide capability to be expanded to 8 notification appliance circuits.
- .2 The internal power supply and battery charger shall be capable of charging up 12.7 Ah batteries internally mounted or 18Ah batteries mounted in an external cabinet.
- .3 The Addressable RBPS panel when connected to an addressable panel shall connect to the host panel via an SLC communications channel.

- .4 For SLC connected NAC extender panels up to five panels can be connected on a single SLC channel.
- .5 Alarms from the host fire alarm control unit shall signal the NAC power extender panel to activate. The panel shall monitor itself and each of its NACs for trouble conditions and shall report trouble conditions to the host panel.

2.8 END-OF-LINE DEVICES

- .1 End-of-line devices to control supervisory current in alarm circuits and signalling circuits, sized to ensure correct supervisory current for each circuit. Open, short or ground fault in any circuit will alter supervisory current in that circuit, producing audible and visible alarm at main control panel and remotely as indicated.

Part 3 Execution

3.1 MANUFACTURER'S INSTRUCTIONS

- .1 Compliance: comply with manufacturer's written recommendations or specifications, including product technical bulletins, handling, storage and installation instructions, and datasheets.

3.2 INSTALLATION

- .1 Install systems in accordance with CAN/ULC-S524.
- .2 Locate and install detectors and connect to alarm circuit wiring. Do not mount detectors within 1 m of air outlets. Maintain at least 600 mm radius clear space on ceiling, below and around detectors.
- .3 Install speakers and strobes and connect to signalling circuits.
- .4 Install end-of-line devices at end of alarm and signalling circuits.
- .5 Splices are not permitted.
- .6 Ensure that wiring is free of opens, shorts or grounds, before system testing and handing over.
- .7 Identify circuits and other related wiring at central control unit and annunciators.
- .8 All fire alarm system wiring shall be run in conduit as per Section 26 05 34.
- .9 All fire alarm devices shall be installed in outlet boxes as per Section 26 05 32.
- .10 Update main fire alarm passive graphic to reflect updates.

3.3 FIELD QUALITY CONTROL

- .1 Perform tests in accordance with Section 26 05 00 - Common Work Results - Electrical and CAN/ULC-S537.

- .2 Fire alarm system:
 - .1 Test each new and relocated device and alarm circuit to ensure manual pull stations, smoke detectors and sprinkler system devices transmit alarm to control panel and actuate general alarm and ancillary devices.
 - .2 Check annunciator panels to ensure zones are shown correctly.
 - .3 Simulate grounds and breaks on alarm and signalling circuits to ensure proper operation of systems.

3.4 DEMONSTRATION AND TRAINING

- .1 Provide on-site lectures and demonstration by fire alarm equipment manufacturer to train operational personnel in use and maintenance of fire alarm system.

END OF SECTION