



# Field Wiring Overview

## Power Input Circuits

Power to the control panel is provided by two separate battery packs designated as primary and secondary power. Both power sources are supervised for presence and voltage. Expected operating life of each battery pack operating under normal conditions is one year assuming no Fire or Trouble conditions have occurred. Battery packs must be replaced if either a Fire or Trouble condition occur. After a one-year time period, the primary pack must be replaced. The secondary battery may then be transferred to the primary position and a replacement pack added to the secondary position. Expected shelf life for the battery pack is 10 years. A date code label provided is used to indicate the installation and expiration of each battery pack. This label is installed at the time of system commissioning and during maintenance.

If the primary battery becomes depleted or if any battery fault condition occurs, operation automatically switches to the secondary battery. No operator intervention is required. A Trouble condition will exist when switching from primary to secondary battery power. The Battery Fault LED will turn ON, pulse the local audible buzzer and will transfer a trouble relay if programmed. The AdvantageLi will continue to provide fire detection and suppression while operating on the secondary battery for approximately two weeks after the primary battery fault condition is first indicated.

## Initiating (Detection) Circuits Operation

Default detection settings are programmed such that any detection input will actuate all actuation outputs. Additional detection/actuation mapping options are available via PC based configuration menu. Options for cross-zoning, individual detection to actuation and the ability to disable individual detection and actuation zones are available. See section 7.0 for offline PC programming information. A front mounted local audible buzzer provides a pulsed alarm of approx 90 dB at 2900 Hz. The audible buzzer operates during Trouble and Alarm conditions.

Two automatic detection circuits and a single dedicated manual release circuit are classified as Class B Style 4 with a 470K end-of-line device providing circuit supervisory resistance. Trouble conditions occur if the circuit resistance drops out of tolerance or increases out of tolerance. A Fire condition is indicated when the detection circuits drop in resistance to a predetermined fire detection level.

Any normally open fire detecting device (linear thermal wire, spot thermal sensors, smoke detectors, etc.) may be used when terminated with a 470K end-of-line device provided with the control panel. Refer to the individual sensor manufacturer instruction for installation, operation, and maintenance of the sensor.

## Actuation Circuit Operation

Two actuation circuits are each capable of actuating up to six Stat-X<sup>®</sup> aerosol generators or similar devices on two separate zones. Power to fire the actuators is delivered from a bank of super capacitors. Upon Fire detection, the control panel provides a signal to fire from the fully charged supercapacitor bank. Discharge is immediate with no capacitor charging delay.

## Auxiliary Supervised Circuit Operation

An auxiliary normally open pair of contacts are available for use. This input is normally closed and opens in alarm. Pressure switches, water alarms and door closures are some examples of auxiliary supervised devices. A Trouble condition occurs if the auxiliary circuit changes from closed to open. If an open condition occurs, a Trouble condition is annunciated via the yellow Service System LED. The auxiliary function is programmed to be OFF by default. Offline PC programming may be used to change the auxiliary contact setting to ON.