# PFC-4410G3 Conventional Releasing Panel

**Program Templates** 





Potter Electric Signal Company, LLC

St. Louis, MO

Customer Service: (866) 240-1870 • Technical Support: (866) 956-1211 • Fax: (314) 595-6999

www.pottersignal.com

### PFC-4410G3 Standard Program Information

The PFC-4410G3 has built in standard program templates which are detailed on the following pages. Selecting one of these programs will automatically program every function of the panel except custom zone and banner messages. NOTE:

The release soak time defaults to continuous for all programs.

In the Agent suppression programs, the predischarge timer for detectors defaults to 60 seconds. The predischarge timer for manual stations defaults to 30 seconds. The abort mode defaults to UL.

Default programming allows the activation of a zone programmed as, Manual Release, to override any cross zoning and abort to activate the release output it is mapped to. Abort override can be changed in the panel programming by allowing manual release zones to be aborted.

Default programming does not allow zones programmed as Manual Release to be aborted. This can be changed in the panel programming.

### PFC-4410G3 Standard Program Information

Press ENT to enter program mode.

Scroll down to see the various menu options. A blinking arrow — indicates the current option.

Users can also simply enter the option number. See the Menu Tree for a complete list and location of options Follow the on-screen instructions

NOTE: Some options have YES/NO selections. Use the up/down arrows to change selection.

To enter one of the standard programs:

- 1. Press ENT
- Enter 6 or scroll down to PROGRAMMING, indicated by a flashing → and press ENT.
- 3. Enter the password. Factory default password is, 1111.
- 4. Press 1 OR ENT to select PRORGAM NUMBER.
- 5. Enter the desired program number
- 6. Press ENT
- 7. Press 1 to accept the new program
- 8. Press ENT to accept the change and update the panel

All zones and outputs are now programmed and all mapping of zones to correlating outputs is complete.

For abort functionality (available in Agent Release Mode only), pre-discharge or soak timers are required, repeat steps 1-3. Then select the desired option and follow the on-screen instructions.

Modifications to standard programs can only be accomplished using the Potter programming tool.

The following is an explanation of how the various programs operate and information about the types of devices that are to be connected to the input (Initiating) zones and output (NAC) circuits.

If none of the standard programs are acceptable for the operation required, selecting program 0 allows the user to create a custom program. Standard programs can also me modified to create custom programs. Simply select the standard program that is closest to the operation needed. Then selecting program 0 allows the user to make changes to the previously selected program as necessary.

If zone characteristics need to be modified, including latching, output paterns, manual/auto silence behiavior. Repeat steps 1-6 above and select program 0. After the panel restarts to edit zone characteristics repeat steps 1-3 and select 6 ZONES.

The water based extinguishing programs are numbered 1-15 and 30-34. The agent extinguishing programs are numbered 20-24.

To enable Class A on zones 3 or 4:

- 1. Install IDC-6 with address 16 as described on pg. 3-23
- 2. Press ENT
- 3. Enter 8 or scroll down to PANEL SETUP, indicated by a flashing → and press ENT
- 4. Enter the password. Factory default is 1111.
- 5. Enter 2 or scroll down to LEARN MENU, indicated by a flashing → and press ENT
- 6. Press 1 OR ENT to select LEARN ALL

### PFC-4410G3 PROGRAM TEMPLATES • 5403798 • REV C • 11/24

The panel will search for connected devices

7. Press 1 or ENT to select P-LINK FOUND to review devices

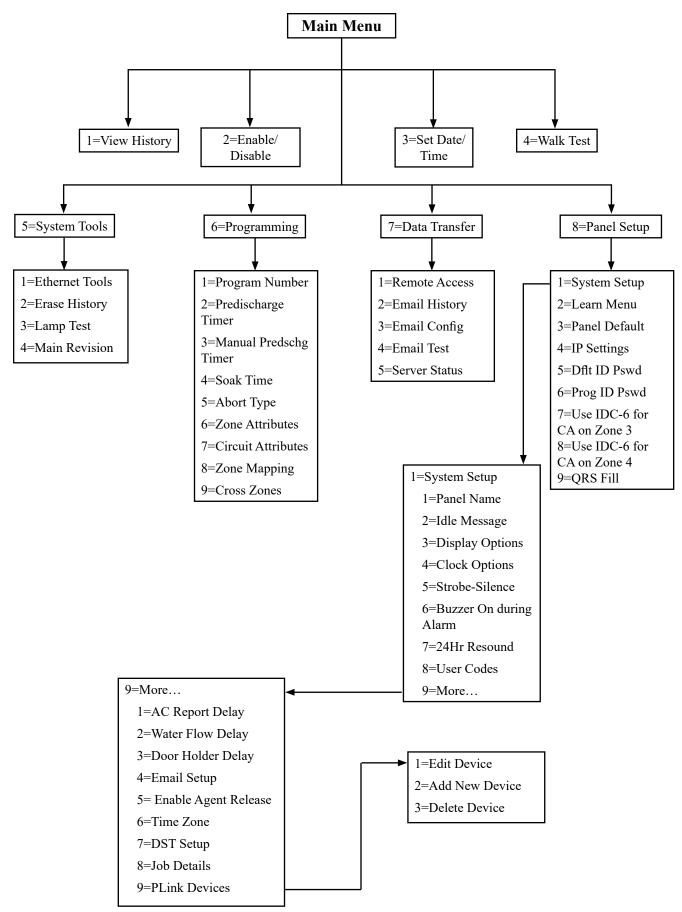
### Addr 16 (IDC-6)

- 8. Press ESC to exit learn all menu
- 9. Press 1 to Accept the new devices
- 10. Press ENT to accept the change and update the panel
- 11. Press ENT
- 12. Enter 8 or scroll down to PANEL SETUP, indicated by a flashing  $\rightarrow$  and press ENT
- 13. Enter the password. Factory default is 1111.
- 14. Enter 7 or scroll down to IDC6 F/CA ZONE 3, indicated by a flashing → and press ENT
- 15. Press any key to accept
- 16. Press ESC to exit PANEL SETUP menu
- 17. Press 1 to Accept
- 18. Press ENT to accept the change and update the panel

Repeat steps 11 – 18 using 8 or scroll down to IDC6 F/CA ZONE 4 to enable class A for zone 4. Zone 3 class A wiring to INPUT 3 / INPUT 4 on IDC-6 address 16 as shown on page 3-24. Zone 4 class A wiring to INPUT 5 / INPUT 6 on IDC-6 address 16. When using standard program templets IDC-6 address 16 INPUTS 1 and INPUT 2 are unused.

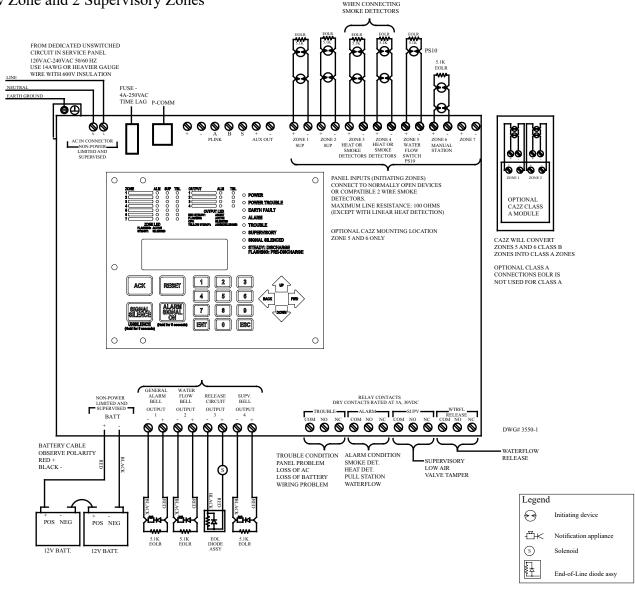
# THIS PAGE INTENTIONALLY LEFT BLANK

### Menu Tree



OBSERVE POLARITY

Wiring Diagram Program #1 Single Hazard, 3 Alarm Zones with 1 Waterflow Zone and 2 Supervisory Zones



### NOTES:

- 1. Connect only UL Listed 24VDC devices to indicating
- 2. Connect EOL Diode assembly IN SERIES with solenoid on release circuit
- 3. Install EOLR (provided) on all unused circuits.
- 4 Polarity is shown on indicating circuits in an activated (off-normal) condition.
- 5. Polarity reverses when output is activated.
- 6. Maximum current per output is 3 Amp. Maximum voltage is 33 VDC.
- 7. Outputs identified as Release are Special Application. All other outputs are Regulated 24 VDC, Rated 3 Amp each, 3 Amp total for all 4 circuits.
- All initiating and NAC/Release circuits are supervised and power limited. See Main Board Wiring Specifications for wire routing instructions. All frequencies are continuous.
- 9. Refer to Appendix A for test and maintenance information.

10. Maximum resistance on outputs is 10 ohms. Maximum resistance on outputs programmed as releasing, is 1 divided by current requirements of solenoid.

See Appendix C for smoke detector compatibility data.

### Program #1 Mode

- 1. Apply power to panel.
- 2. Press ENT to enter PROGRAM mode
- 3. Press 6 or scroll down to #6 and press ENT, (The selection is indicated by a flashing arrow next to the number.
- 4. Enter the password. (Factory default is 1111)
- 5. Press 1 or press ENT. (1 should be the highlighted selection)
- 6. The display shows the current program number. Press 1 to change to program 1. Press ENT.
- 7. Press 1 to accept the change.
- 8. Press ENT to accept the change.

Non-Interlock or Single Interlock		PROGRAM #1								
Single Hazard, 3 Alarm		CONVENTIONAL INPUT ZONES								
Zones with 1 Waterflow Zone and 2 Supervisory Zones	#1	#1 #2 #3 #4 #5 #6 #7								
OUTPUTS	Supervisory	Supervisory	Detection	Detection	Waterflow	Manual Release	Unused			
#1 ALARM INDICATING			X	X		X				
#2 ALARM INDICATING					X					
#3 RELEASE		X X X								
#4 SUPERVISORY	X	X								

Description: Single hazard - 3 zone

Inputs: 2 detection zones, 1 waterflow zone, 1 manual release zone, 2 supervisory zones
Outputs: 1 general alarm bell, 1 waterflow bell, 1 solenoid release circuit, 1 supervisory bell

Operation: Activation of either detection zone or the manual release zone will operate the release circuit and general alarm output.

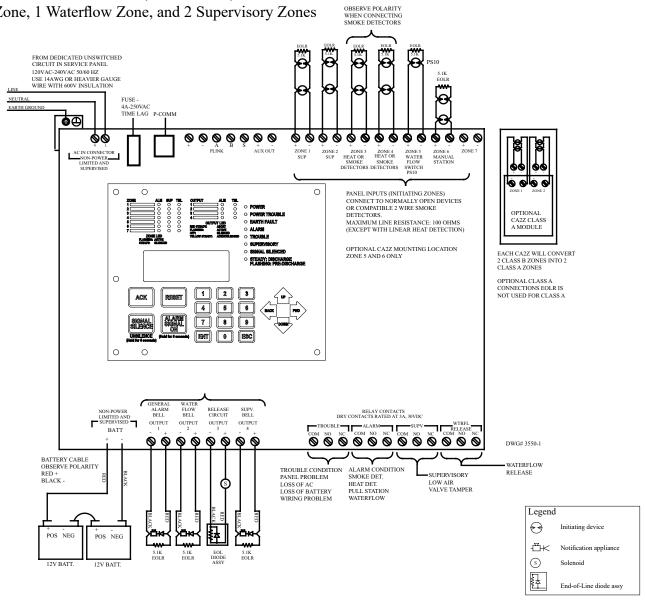
Activation of the waterflow zone will operate the waterflow bell output. Activation of the supervisory zone will operate the supervisory bell output.

When either zone 3, 4, or 6 is in alarm - output #1 (general alarm) and output #3 (solenoid release) will operate.

When zone 5 is in alarm - output #2 will operate (waterflow bell).

When the supervisory zone is activated - output #4 will operate (supervisory bell).

Wiring Diagram Program #2 Single Hazard, 2 Alarm Zones (Cross-Zoned), 1 Manual Station Zone, 1 Waterflow Zone, and 2 Supervisory Zones



### NOTES:

- Connect only UL Listed 24VDC devices to indicating circuits.
- Connect EOL Diode assembly IN SERIES with solenoid on release circuit
- 3. Install EOLR (provided) on all unused circuits.
- 4 Polarity is shown on indicating circuits in an activated (off-normal) condition.
- 5. Polarity reverses when output is activated.
- Maximum current per output is 3 Amp. Maximum voltage is 33VDC.
- 7. Outputs identified as Release are Special Application. All other outputs are Regulated 24 VDC, Rated 3 Amp each, 3 Amp total for all 4 circuits.
- All initiating and NAC/Release circuits are supervised and power limited. See Main Board Wiring Specifications for wire routing instructions. All frequencies are continuous.
- 9. Refer to Appendix A for test and maintenance information

10. Maximum resistance on outputs is 10 ohms. Maximum resistance on outputs programmed as releasing, is 1 divided by current requirements of solenoid.

See Appendix C for smoke detector compatibility data.

### Program #2 Mode

- 1. Apply power to panel.
- 2. Press ENT to enter PROGRAM mode
- 3. Press 6 or scroll down to #6 and press ENT, (The selection is indicated by a flashing arrow next to the number.
- 4. Enter the password. (Factory default is 1111)
- 5. Press 1 or press ENT. (1 should be the highlighted selection)
- 6. The display shows the current program number. Press 2 to change to program 2. Press ENT.
- 7. Press 1 to accept the change.
- 8. Press ENT to accept the change.

Single Hazard, 2 Alarm				PROGRAM	Л #2				
Zones (Cross-Zoned), 1 Manual Station Zone, 1		Conventional Input Zones							
Waterflow Zone and 2 Supervisory Zones	#1	#2	#3	#4	#5	#6	#7	#8	
OUTPUTS	Supervisory	Supervisory Supervisory Detection Detection Waterflow Manual Unused Release							
#1 ALARM INDICATING			X	X		X		X	
#2 ALARM INDICATING					X				
#3 RELEASE		XX XX X							
#4 SUPERVISORY	X	X							

<sup>\*</sup> Release Outputs which are Cross-Zoned need a Software Zone in order to work properly. The Software Zone Number will be displayed upon a release.

XX = Cross-Zoned

Description: Single hazard, cross zone with manual station override.

Inputs: 2 detection zones (cross zoned), 1 waterflow zone, 1 manual release zone, 2 supervisory zones

Outputs: 1 general alarm bell, 1 waterflow bell, 1 solenoid release circuit, 1 supervisory bell

Operation: Activation of both detection zones at the same time, or activation of the manual release zone will operate the release

output and the general alarm output.

Activation of one detection zone will operate the general alarm output.

Activation of the waterflow zone will operate the waterflow bell output.

Activation of the supervisory zone will operate the supervisory bell output.

When zone 3, 4 or 6 is in alarm - output #1 will operate (general alarm bell).

When zone 5 is in alarm - output #2 will operate (waterflow bell).

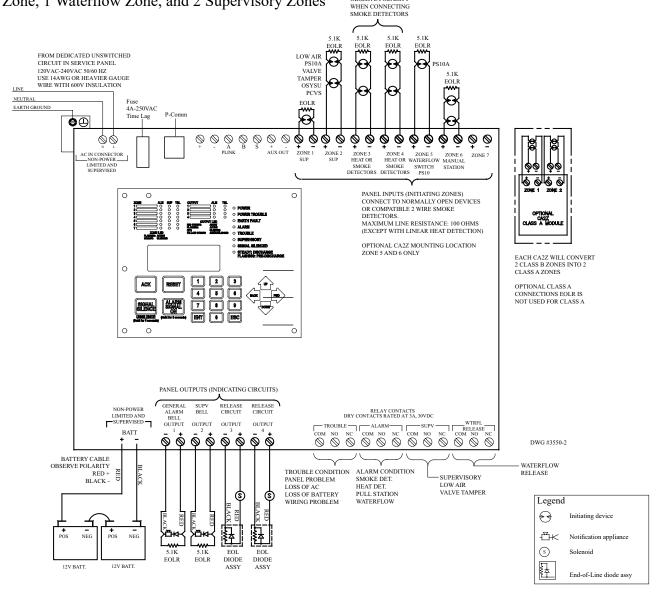
When both zones 3 and 4 are in alarm at the same time - output #3 will operate (solenoid release).

When zone 6 is in alarm - outputs #3 (solenoid release) and #1 (general alarm) will operate.

OBSERVE POLARITY

# Wiring Diagram Program #3

Dual Hazard, Combined Release - 2 Alarm Zones, 1 Manual Station Zone, 1 Waterflow Zone, and 2 Supervisory Zones



### NOTES:

- Connect only UL Listed 24VDC devices to indicating circuits.
- 2. Connect EOL Diode assembly IN SERIES with solenoid on release circuit
- 3. Install EOLR (provided) on all unused circuits.
- 4 Polarity is shown on indicating circuits in an activated (off-normal) condition.
- 5. Polarity reverses when output is activated.
- Maximum current per output is 3 Amp. Maximum voltage is 33VDC
- Outputs identified as Release are Special Application. All other outputs are Regulated 24 VDC, Rated 3 Amp each, 3 Amp total for all 4 circuits.
- All initiating and NAC/Release circuits are supervised and power limited. See Main Board Wiring Specifications for wire routing instructions. All frequencies are continuous.
- 9. Refer to Appendix A for test and maintenance information

10. Maximum resistance on outputs is 10 ohms. Maximum resistance on outputs programmed as releasing, is 1 divided by current requirements of solenoid.

See Appendix C for smoke detector compatibility data.

### Program #3 Mode

- 1. Apply power to panel.
- 2. Press ENT to enter PROGRAM mode
- 3. Press 6 or scroll down to #6 and press ENT, (The selection is indicated by a flashing arrow next to the number.
- 4. Enter the password. (Factory default is 1111)
- 5. Press 1 or press ENT. (1 should be the highlighted selection)
- 6. The display shows the current program number. Press 3 to change to program 3. Press ENT.
- 7. Press 1 to accept the change.
- 8. Press ENT to accept the change.

Dual Hazard, Combined											
Release - 2 Alarm Zones		CONVENTIONAL INPUT ZONES									
with 1 Manual Release Station, 1 Waterflow Zone and 2 Supervisory Zones	#1	#2	#3	#4	#5	#6	#7				
OUTPUTS	Supervisory	Supervisory Supervisory Detection Detection Waterflow Manual Unit Release									
#1 ALARM INDICATING			X	X	X	X					
#2 SUPERVISORY	X	X									
#3 RELEASE		X X X									
#4 RELEASE			X	X		X					

Description: Dual hazard, combined release.

Inputs: 2 detection zones, 1 waterflow zone, 1 manual release zone, 2 supervisory zones

Outputs: 1 general alarm bell, 1 supervisory bell, 2 solenoid release circuits

Operation: Activation of either detection zone or the manual release zone will activate both solenoid release outputs and the

general alarm bell.

Activation of the waterflow zone will operate the general alarm bell.

Activation of the supervisory zone will operate the supervisory bell output.

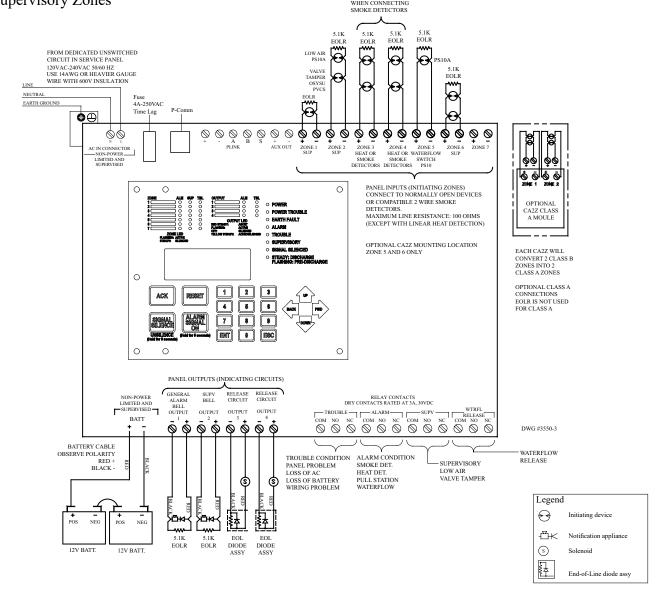
When either zone 3, 4 or 6 is in alarm - outputs #1 (general alarm), #3 and #4 (solenoid release) will operate.

When zone 5 is in alarm - output #1 (general alarm) will operate.

When zones 1 or 2 are activated - output #2 (supervisory bell) will operate.

Wiring Diagram Program #4

Dual Hazard, Split-Release - 2 Alarm Zones, 1 Waterflow Zone, and 3 Supervisory Zones



### NOTES:

- Connect only UL Listed 24VDC devices to indicating circuits.
- Connect EOL Diode assembly IN SERIES with solenoid on release circuit
- 3. Install EOLR (provided) on all unused circuits.
- 4 Polarity is shown on indicating circuits in an activated (off-normal) condition.
- 5. Polarity reverses when output is activated.
- Maximum current per output is 3 Amp. Maximum voltage is 33VDC.
- Outputs identified as Release are Special Application. All
  other outputs are Regulated 24 VDC, Rated 3 Amp each, 3
  Amp total for all 4 circuits.
- All initiating and NAC/Release circuits are supervised and power limited. See Main Board Wiring Specifications for wire routing instructions. All frequencies are continuous.
- 9. Refer to Appendix A for test and maintenance information

10. Maximum resistance on outputs is 10 ohms. Maximum resistance on outputs programmed as releasing, is 1 divided by current requirements of solenoid.

See Appendix C for smoke detector compatibility data.

### Program #4 Mode

- 1. Apply power to panel.
- 2. Press ENT to enter PROGRAM mode
- 3. Press 6 or scroll down to #6 and press ENT, (The selection is indicated by a flashing arrow next to the number.
- 4. Enter the password. (Factory default is 1111)
- 5. Press 1 or press ENT. (1 should be the highlighted selection)
- 6. The display shows the current program number. Press 4 to change to program 4. Press ENT.
- 7. Press 1 to accept the change.
- 8. Press ENT to accept the change.

Dual Hazard, Split-			F	ROGRAM #4							
Release -2 Alarm Zones,		CONVENTIONAL INPUT ZONES									
1 Waterflow Zone and 3 Supervisory Zones	#1	#2	#3	#4	#5	#6	#7				
OUTPUTS	Supervisory	Supervisory Supervisory Detection Detection Waterflow Supervisory Unused									
#1 ALARM INDICATING			X	X	X						
#2 SUPERVISORY	X	X				X					
#3 RELEASE		X									
#4 RELEASE				X							

Description: Dual hazard, split release.

Inputs: 2 detection zones, 1 waterflow zone, 3 supervisory zones

Outputs: 1 general alarm bell, 1 supervisory bell, 2 solenoid release circuits

Operation: Activation of detection zone #3 will operate solenoid release circuit #1 (output #3) and the general alarm bell.

Activation of detection zone #4 will operate solenoid release circuit #2 (output #4) and the general alarm bell.

Activation of zone #5 (Waterflow) will operate output #1 (General Alarm). Activation of either supervisory zone will operate the supervisory bell.

When zone 3 is in alarm - output #1 (general alarm) and output #3 (solenoid release #1) will operate.

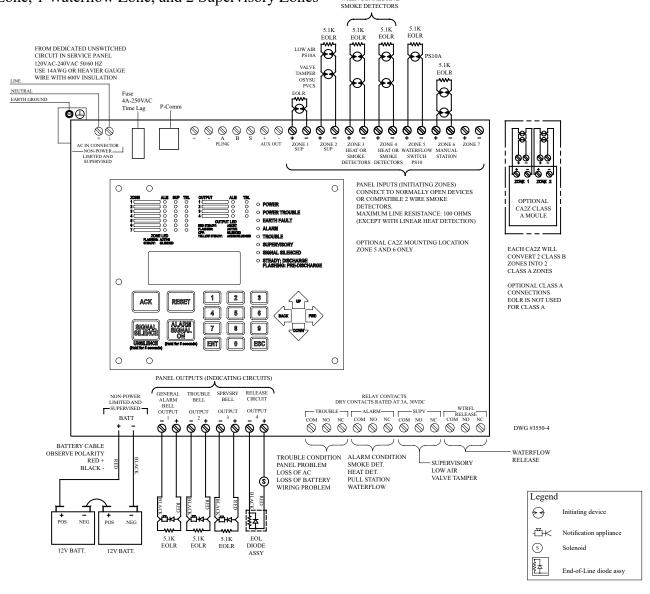
When zone 4 is in alarm - output #1 (general alarm) and output #4 (solenoid release #2) will operate.

When zones 1, 2, or 6 are activated - output #2 (supervisory bell) will operate.

OBSERVE POLARITY

# Wiring Diagram Program #5

Single Hazard with Trouble Bell - 2 Alarm Zones, 1 Manual Station Zone, 1 Waterflow Zone, and 2 Supervisory Zones



### NOTES:

- Connect only UL Listed 24VDC devices to indicating circuits.
- Connect EOL Diode assembly IN SERIES with solenoid on release circuit
- 3. Install EOLR (provided) on all unused circuits.
- 4 Polarity is shown on indicating circuits in an activated (off-normal) condition.
- 5. Polarity reverses when output is activated.
- 6. Maximum current per output is 3 Amp. Maximum voltage is 33VDC.
- Outputs identified as Release are Special Application. All other outputs are Regulated 24 VDC, Rated 3 Amp each, 3 Amp total for all 4 circuits.
- All initiating and NAC/Release circuits are supervised and power limited. See Main Board Wiring Specifications for wire routing instructions. All frequencies are continuous.
- 9. Refer to Appendix A for test and maintenance information

10. Maximum resistance on outputs is 10 ohms. Maximum resistance on outputs programmed as releasing, is 1 divided by current requirements of solenoid.

See Appendix C for smoke detector compatibility data.

### Program #5 Mode

- 1. Apply power to panel.
- 2. Press ENT to enter PROGRAM mode
- 3. Press 6 or scroll down to #6 and press ENT, (The selection is indicated by a flashing arrow next to the number.
- 4. Enter the password. (Factory default is 1111)
- 5. Press 1 or press ENT. (1 should be the highlighted selection)
- 6. The display shows the current program number. Press 5 to change to program 5. Press ENT.
- 7. Press 1 to accept the change.
- 8. Press ENT to accept the change.

Single Hazard with				PROGRAM	M #5					
Trouble Bell - 2 Alarm Zones (Cross-Zoned), 1		Conventional Input Zones								
Manual Station Zone, 1 Waterflow Zone and 2 Supervisory Zones	#1	#2	#3	#4	#5	#6	#7	#8		
OUTPUTS	Supervisory	Supervisory	Detection	Detection	Waterflow	Manual Release	Unused	Trouble Zone Type		
#1 ALARM INDICATING			X	X	X	X				
#2 TROUBLE								X*		
#3 SUPERVISORY	X	X X								
#4 RELEASE			X	X		X				

<sup>\*</sup> Trouble Output need a Software Trouble Zone Type in order to work properly.

Description: Single hazard, 3 zone with trouble bell.

Inputs: 2 detection zones, 1 waterflow zone, 1 manual release zone, 2 supervisory zones
Outputs: 1 general alarm bell, 1 trouble bell, 1 supervisory bell, 1 solenoid release circuit

Operation: Activation of either detection zone or the manual release zone will operate the solenoid release circuit and the

general alarm bell.

Activation of the waterflow zone will operate the general alarm bell. Activation of the supervisory zone will operate the supervisory bell.

A trouble condition (low battery, wire problem, etc.) will operate the trouble bell.

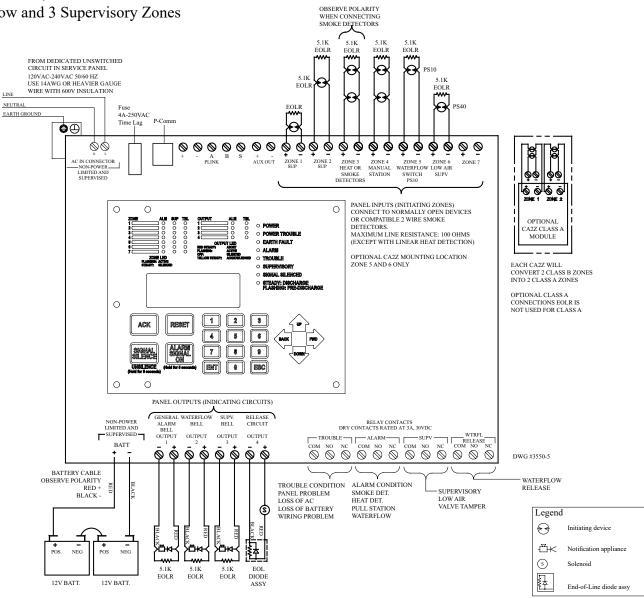
When either zone 3, 4 or 6 is in alarm - outputs #1 (general alarm) and #4 (solenoid release) will operate.

When zone 5 is in alarm - output #1 (general alarm) will operate.

When the supervisory zone is activated - output #3 (supervisory bell) will operate.

When the panel is in a trouble condition - output #2 (trouble bell) will operate.

Wiring Diagram Program #6 Single Hazard, 2 Alarm Zones with 1 Waterflow and 3 Supervisory Zones



### NOTES:

- Connect only UL Listed 24VDC devices to indicating circuits.
- Connect EOL Diode assembly IN SERIES with solenoid on release circuit
- 3. Install EOLR (provided) on all unused circuits.
- 4 Polarity is shown on indicating circuits in an activated (off-normal) condition.
- 5. Polarity reverses when output is activated.
- Maximum current per output is 3 Amp. Maximum voltage is 33VDC.
- Outputs identified as Release are Special Application. All other outputs are Regulated 24 VDC, Rated 3 Amp each, 3 Amp total for all 4 circuits.
- 8. All initiating and NAC/Release circuits are supervised and power limited. See Main Board Wiring Specifications for wire routing instructions. All frequencies are continuous.
- 9. Refer to Appendix A for test and maintenance information

10. Maximum resistance on outputs is 10 ohms. Maximum resistance on outputs programmed as releasing, is 1 divided by current requirements of solenoid.

See Appendix C for smoke detector compatibility data.

### Program #6 Mode

- 1. Apply power to panel.
- 2. Press ENT to enter PROGRAM mode
- 3. Press 6 or scroll down to #6 and press ENT, (The selection is indicated by a flashing arrow next to the number.
- 4. Enter the password. (Factory default is 1111)
- 5. Press 1 or press ENT. (1 should be the highlighted selection)
- 6. The display shows the current program number. Press 6 to change to program 6. Press ENT.
- 7. Press 1 to accept the change.
- 8. Press ENT to accept the change.

Single Hazard, 2 Alarm		PROGRAM #6								
Zones with 1 Waterflow		CONVENTIONAL INPUT ZONES								
Zone and 3 Supervisory Zones	#1	#2	#3	#4	#5	#6	#7			
OUTPUTS	Supervisory	Supervisory	Detection	Manual Release	Waterflow	Low Air Supervisory	Unused			
#1 ALARM INDICATING			X	X						
#2 ALARM INDICATING					X					
#3 SUPERVISORY	X	X				X				
#4 RELEASE			X	X						

Description: Single hazard, 2 zones and 2 supervisory zones.

Inputs: 1 detection zone, 1 manual release zone, 1 waterflow zone, 1 low air zone, 2 supervisory zones

Outputs: 1 general alarm bell, 1 waterflow bell, 1 supervisory bell, 1 solenoid release circuit

Operation: Activation of either the detection zone or the manual release zone will operate the solenoid release circuit and the

general alarm bell.

Activation of the waterflow zone will operate the waterflow bell.

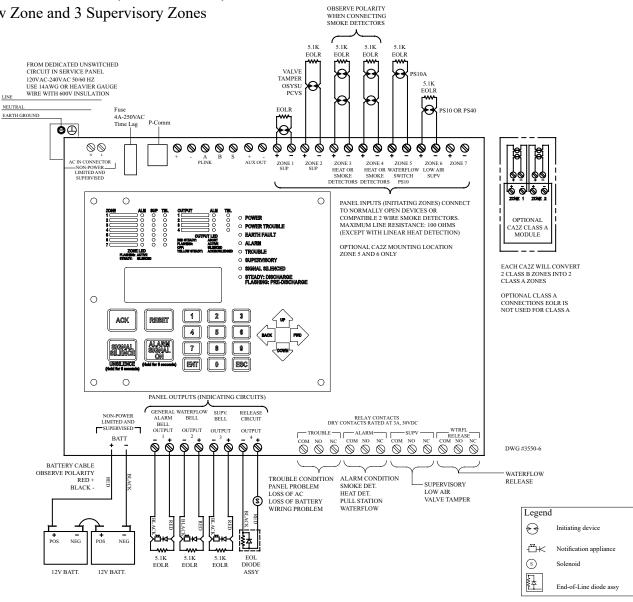
Activation of either the low air zone or the supervisory zone will operate the supervisory bell.

When either zone 3 or 4 is in alarm - output #1 (general alarm) and output #4 (solenoid release) will operate.

When zone 5 is in alarm - output #2 (waterflow bell) will operate.

When either zone 1, 2, or 6 is activated - output #3 (supervisory bell) will operate.

Wiring Diagram Program #7 Single Hazard Cross-Zoned, 2 Alarm Zones, 1 Waterflow Zone and 3 Supervisory Zones



### NOTES:

- Connect only UL Listed 24VDC devices to indicating circuits.
- 2. Connect EOL Diode assembly IN SERIES with solenoid on release circuit
- 3. Install EOLR (provided) on all unused circuits.
- 4 Polarity is shown on indicating circuits in an activated (off-normal) condition.
- 5. Polarity reverses when output is activated.
- Maximum current per output is 3 Amp. Maximum voltage is 33VDC.
- Outputs identified as Release are Special Application. All
  other outputs are Regulated 24 VDC, Rated 3 Amp each, 3
  Amp total for all 4 circuits.
- All initiating and NAC/Release circuits are supervised and power limited. See Main Board Wiring Specifications for wire routing instructions. All frequencies are continuous.
- 9. Refer to Appendix A for test and maintenance information

10. Maximum resistance on outputs is 10 ohms. Maximum resistance on outputs programmed as releasing, is 1 divided by current requirements of solenoid.

See Appendix C for smoke detector compatibility data.

### Program #7 Mode

- 1. Apply power to panel.
- 2. Press ENT to enter PROGRAM mode
- 3. Press 6 or scroll down to #6 and press ENT, (The selection is indicated by a flashing arrow next to the number.
- 4. Enter the password. (Factory default is 1111)
- 5. Press 1 or press ENT. (1 should be the highlighted selection)
- 6. The display shows the current program number. Press 7 to change to program 7. Press ENT.
- 7. Press 1 to accept the change.
- 8. Press ENT to accept the change.

Single Hazard Cross-				PROGR	AM #7					
Zoned, 2 Alarm Zones, 1 Waterflow Zone and 3		CONVENTIONAL INPUT ZONES								
Supervisory Zones	#1	#2	#3	#4	#5	#6	#7	#8		
OUTPUTS	Supervisory	upervisory Supervisory Detection Detection Waterflow Low Air Supervisory								
#1 ALARM INDICATING			X	X				X		
#2 ALARM INDICATING					X					
#3 SUPERVISORY	X	X X X								
#4 RELEASE			XX	XX				XX*		

<sup>\*</sup> Release Outputs which are Cross-Zoned need a Software Zone in order to work properly. The Software Zone Number will be displayed upon a release.

XX = Cross-Zoned

Description: Single hazard, 2 zones and cross zoned with 2 supervisory zones.

Inputs: 2 detection zones (cross zoned), 1 waterflow zone, 1 low air zone, 2 supervisory zones

Outputs: 1 general alarm bell, 1 waterflow bell, 1 supervisory bell, 1 solenoid release circuit

Operation: Activation of both detection zones at the same time will operate the solenoid release circuit and the general alarm bell.

Activation of either detection zone will operate the general alarm bell.

Activation of the waterflow zone will operate the waterflow bell.

Activation of either the low air zone or the supervisory zone will operate the supervisory bell.

When either zone 3 or 4 is in alarm - output #1 (general alarm) will operate.

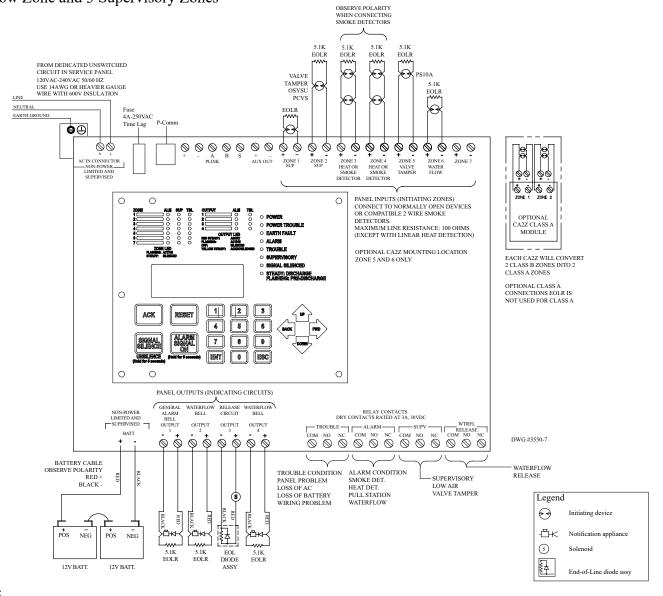
When zones 3 and 4 are in alarm at the same time - output #4 (solenoid release) and output #1 (general alarm)

will operate.

When zone 5 is in alarm - output #2 (waterflow bell) will operate.

When zone 1, 2, or 6 is activated - output #3 (supervisory bell) will operate.

Wiring Diagram Program #8
Single Hazard Two Detection Zones with 1
Waterflow Zone and 3 Supervisory Zones



### NOTES:

- 1. Connect only UL Listed 24VDC devices to indicating circuits
- Connect EOL Diode assembly IN SERIES with solenoid on release circuit
- 3. Install EOLR (provided) on all unused circuits.
- 4 Polarity is shown on indicating circuits in an activated (off-normal) condition.
- 5. Polarity reverses when output is activated.
- 6. Maximum current per output is 3 Amp. Maximum voltage is 33VDC.
- Outputs identified as Release are Special Application. All other outputs are Regulated 24 VDC, Rated 3 Amp each, 3 Amp total for all 4 circuits.
- 8. All initiating and NAC/Release circuits are supervised and power limited. See Main Board Wiring Specifications for wire routing instructions. All frequencies are continuous.
- 9. Refer to Appendix A for test and maintenance information

10. Maximum resistance on outputs is 10 ohms. Maximum resistance on outputs programmed as releasing, is 1 divided by current requirements of solenoid.

See Appendix C for smoke detector compatibility data.

### Program #8 Mode

- 1. Apply power to panel.
- 2. Press ENT to enter PROGRAM mode
- 3. Press 6 or scroll down to #6 and press ENT, (The selection is indicated by a flashing arrow next to the number.
- 4. Enter the password. (Factory default is 1111)
- 5. Press 1 or press ENT. (1 should be the highlighted selection)
- 6. The display shows the current program number. Press 8 to change to program 8. Press ENT.
- 7. Press 1 to accept the change.
- 8. Press ENT to accept the change.

Single Hazard, 2 Alarm		PROGRAM #8										
Zones with 1 Waterflow		CONVENTIONAL INPUT ZONES										
Zone and 3 Supervisory Zones	#1	#1 #2 #3 #4 #5 #6 #7										
OUTPUTS	Supervisory	Low Air Supervisory	Detection	Detection	Value Tamper	Waterflow	Unused					
#1 ALARM INDICATING			X	X		X						
#2 ALARM INDICATING						X						
#3 RELEASE			X	X								
#4 ALARM INDICATING						X						

Description: Single hazard, dual zone.

Inputs: 1 supervisory zone, 1 low air supervisory zone, 2 detection zones, 1 tamper switch zone, 1 waterflow zone

Outputs: 1 general alarm output, 2 waterflow outputs, 1 solenoid release circuit

Operation: Activation of either detection zone will operate the general alarm bell and the solenoid release circuit.

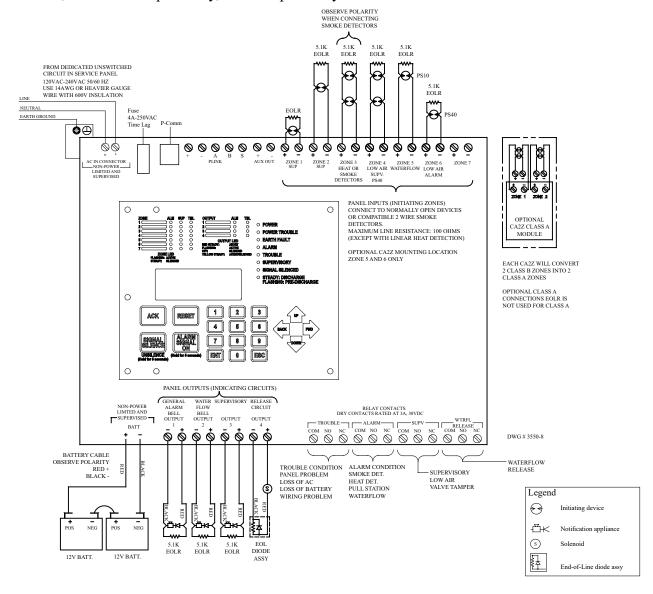
Activation of the waterflow zone will operate the general alarm bell and both of the waterflow bell outputs.

When zone 3 or 4 is in alarm - output #1 (general alarm) and output #3 (solenoid release) will operate.

When either zone 1, 2, or 5 is activated - the panel will be in a supervisory condition, no outputs will be activated.

When zone 6 is in alarm - output #1 (general alarm) and outputs #2 and #4 (both waterflow bells) will operate.

# Wiring Diagram Program #9 Single Hazard Cross-Zoned, 1 Detection Zone with Low Air Alarm Zone, 1 Waterflow, 1 Low Air Supervisory, and 2 Supervisory Zones



### NOTES:

- 1. Connect only UL Listed 24VDC devices to indicating circuits.
- Connect EOL Diode assembly IN SERIES with solenoid on release circuit
- 3. Install EOLR (provided) on all unused circuits.
- 4 Polarity is shown on indicating circuits in an activated (off-normal) condition.
- 5. Polarity reverses when output is activated.
- Maximum current per output is 3 Amp. Maximum voltage is 33VDC.
- 7. Outputs identified as Release are Special Application. All other outputs are Regulated 24 VDC, Rated 3 Amp each, 3 Amp total for all 4 circuits.
- All initiating and NAC/Release circuits are supervised and power limited. See Main Board Wiring Specifications for wire routing instructions. All frequencies are continuous.
- 9. Refer to Appendix A for test and maintenance information

10. Maximum resistance on outputs is 10 ohms. Maximum resistance on outputs programmed as releasing, is 1 divided by current requirements of solenoid.

See Appendix C for smoke detector compatibility data.

### Program #9 Mode

- 1. Apply power to panel.
- 2. Press ENT to enter PROGRAM mode
- 3. Press 6 or scroll down to #6 and press ENT, (The selection is indicated by a flashing arrow next to the number.
- 4. Enter the password. (Factory default is 1111)
- 5. Press 1 or press ENT. (1 should be the highlighted selection)
- 6. The display shows the current program number. Press 9 to change to program 9. Press ENT.
- 7. Press 1 to accept the change.
- 8. Press ENT to accept the change.

Single Hazard Cross-				PROGRA	M #9				
Zoned, 1 Detection Zone with Low Air Alarm Zone,		CONVENTIONAL INPUT ZONES							
1 Waterflow, 1 Low Air Supervisory and 2 Supervisory Zones	#1	#1 #2 #3 #4 #5 #6 #7							
OUTPUTS	Supervisory	Supervisory Supervisory Detection Low Air Waterflow Low Air Unused Supervisory Alarm							
#1 ALARM INDICATING			X					X	
#2 ALARM INDICATING	X								
#3 SUPERVISORY	X	X X X X							
#4 RELEASE			XX			XX		XX*	

<sup>\*</sup> Release Outputs which are Cross-Zoned need a Software Zone in order to work properly. The Software Zone Number will be displayed upon a release.

XX = Cross-Zoned

Description:

Single Hazard, detection and low air alarm zones cross-zoned\*\*.

Inputs: 2 supervisory zones, 1 detection zone, 1 low air supervisory zone, 1 waterflow zone, 1 low air alarm zone.

Outputs: 1 general alarm, 1 supervisory, 1 waterflow, 1 solenoid release circuit

Operation: Activation of the detection zone and the low air alarm zone at the same time will operate the solenoid

release circuit and the general alarm bell.

Activation of the detection zone only will operate the general alarm output

Activation of the low air supervisory zone will operate the supervisory bell output.

Activation of the waterflow zone will operate the waterflow bell output

Activation of the low air alarm zone will operate the supervisory bell output. It will not operate the alarm relay

When zone 3 is in alarm, output 1 will operate

When zone 4 is activated, output 3 will operate

When zone 5 is in alarm, output 2 will operate

When zone 6 is activated, output 3 will operate. This will create a supervisory condition not an alarm condition.

The alarm relay will not operate, the supervisory relay will.

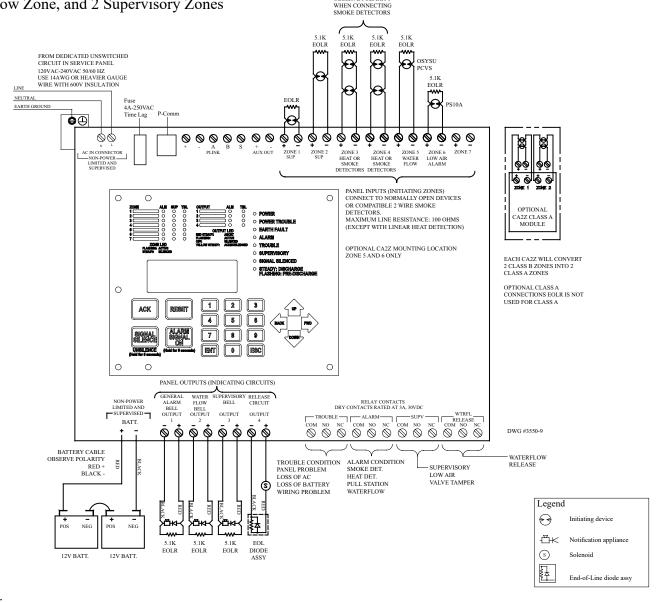
When both zones 3 & 6 are activated at the same time, the solenoid release circuit will operate.

<sup>\*\*</sup>Cross Zoning acceptable for NFPA 13, 15, and 16 type extinguishing systems.

# Wiring Diagram Program #10

Single Hazard Cross-Zoned, 2 Detection Zones with 1 Low Air Alarm Zone 1 OBSERVE POLARITY

Waterflow Zone, and 2 Supervisory Zones



### NOTES:

- Connect only UL Listed 24VDC devices to indicating circuits.
- Connect EOL Diode assembly IN SERIES with solenoid on release circuit
- 3. Install EOLR (provided) on all unused circuits.
- Polarity is shown on indicating circuits in an activated (off-normal) condition.
- Polarity reverses when output is activated.
- Maximum current per output is 3 Amp. Maximum voltage
- Outputs identified as Release are Special Application. All other outputs are Regulated 24 VDC, Rated 3 Amp each, 3 Amp total for all 4 circuits.
- All initiating and NAC/Release circuits are supervised and power limited. See Main Board Wiring Specifications for wire routing instructions. All frequencies are continuous.
- Refer to Appendix A for test and maintenance information.

10. Maximum resistance on outputs is 10 ohms. Maximum resistance on outputs programmed as releasing, is 1 divided by current requirements of solenoid.

See Appendix C for smoke detector compatibility data.

### Program #10 Mode

- 1. Apply power to panel.
- 2. Press ENT to enter PROGRAM mode
- 3. Press 6 or scroll down to #6 and press ENT, (The selection is indicated by a flashing arrow next to the number.
- 4. Enter the password. (Factory default is 1111)
- 5. Press 1 or press ENT. (1 should be the highlighted selection)
- 6. The display shows the current program number. Press 10 to change to program 10. Press ENT.
- 7. Press 1 to accept the change.
- 8. Press ENT to accept the change.

Single Hazard Cross-		PROGRAM #10							
Zoned, 2 Detection Zone with 1 Low Air Alarm		CONVENTIONAL INPUT ZONES							
Zone, 1 Waterflow Zone and 2 Supervisory Zones	#1	#1 #2 #3 #4 #5 #6 #7							
OUTPUTS	Supervisory	Supervisory	Detection	Detection	Waterflow	Low Air Alarm	Unused	Release Zone Type	
#1 ALARM INDICATING			X	X				X	
#2 ALARM INDICATING					X				
#3 SUPERVISORY	X	X				X			
#4 RELEASE			XX	XX		XX		XX*	

<sup>\*</sup> Release Outputs which are Cross-Zoned need a Software Zone in order to work properly. The Software Zone Number will be displayed upon a release.

### XX = Cross-Zoned

Description: Single Hazard, 2 detection and low air alarm zones cross-zoned\*\*.

Inputs: 2 supervisory zones, 2 detection zone, 1 waterflow zone, 1 low air alarm zone.

Outputs: 1 general alarm, 1 supervisory, 1 waterflow, 1 solenoid release circuit

Operation: Activation of both detection zones and the low air alarm zone at the same time will operate the solenoid release

circuit and the general alarm bell.

Activation of either detection zone only will operate the general alarm output

Activation of the waterflow zone will operate the waterflow bell output

Activation of the low air alarm zone will operate the supervisory bell output. It will not operate the alarm relay

When either zone 3 or 4 is in alarm, output 1 will operate

When zone 5 is in alarm, output 2 will operate

When zone 6 is activated, output 3 will operate. This will create a supervisory condition not an alarm condition.

The alarm relay will not operate, the supervisory relay will.

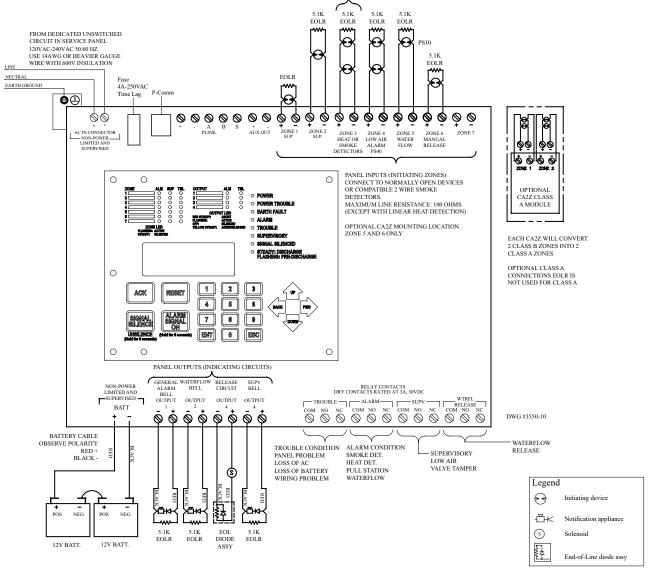
When zones 3, 4 & 6 are activated at the same time, the solenoid release circuit will operate.

<sup>\*\*</sup>Cross Zoning acceptable for NFPA 13, 15, and 16 type extinguishing systems.

# Wiring Diagram Program #11

Single Hazard Cross-Zoned, 1 Detection Zone with Low Air Alarm Zone 1

Waterflow, 1 Manual Release and 2 Supervisory Zones



### NOTES:

- Connect only UL Listed 24VDC devices to indicating circuits.
- Connect EOL Diode assembly IN SERIES with solenoid 2. on release circuit
- 3. Install EOLR (provided) on all unused circuits.
- 4 Polarity is shown on indicating circuits in an activated (off-normal) condition.
- Polarity reverses when output is activated.
- Maximum current per output is 3 Amp. Maximum voltage
- Outputs identified as Release are Special Application. All other outputs are Regulated 24 VDC, Rated 3 Amp each, 3 Amp total for all 4 circuits.
- All initiating and NAC/Release circuits are supervised and power limited. See Main Board Wiring Specifications for wire routing instructions. All frequencies are continuous.
- Refer to Appendix A for test and maintenance information

10. Maximum resistance on outputs is 10 ohms. Maximum resistance on outputs programmed as releasing, is 1 divided by current requirements of solenoid.

See Appendix C for smoke detector compatibility data.

### Program #11 Mode

- 1. Apply power to panel.
- 2. Press ENT to enter PROGRAM mode
- 3. Press 6 or scroll down to #6 and press ENT, (The selection is indicated by a flashing arrow next to the number.
- 4. Enter the password. (Factory default is 1111)
- 5. Press 1 or press ENT. (1 should be the highlighted selection)
- 6. The display shows the current program number. Press 11 to change to program 11. Press ENT.
- 7. Press 1 to accept the change.
- 8. Press ENT to accept the change.

Single Hazard Crossed-		PROGRAM #11							
Zoned with 1 Low Air Alarm Zone, 1		CONVENTIONAL INPUT ZONES							
Manual Release and 2 Supervisory Zones	#1	#1 #2 #3 #4 #5 #6 #7							
OUTPUTS	Supervisory	upervisory Supervisory Detection Low Air Waterflow Manual Unused Release							
#1 ALARM INDICATING			X			X		X	
#2 ALARM INDICATING					X				
#3 RELEASE		XX XX X							
#4 SUPERVISORY	X	X		X					

<sup>\*</sup> Release Outputs which are Cross-Zoned need a Software Zone in order to work properly. The Software Zone Number will be displayed upon a release.

### XX = Cross-Zoned

Description: Single Hazard, detection and low air alarm zones cross-zoned\*\*. Also 1 waterflow and 1 manual release

zone. Manual release overrides cross zoning.

Inputs: 2 supervisory zones, 1 detection zone, 1 low air alarm zone, 1 waterflow zone, 1 manual release zone.

Outputs: 1 general alarm, 1 supervisory, 1 waterflow, 1 solenoid release circuit

Operation: Activation of the detection zone and the low air alarm zone at the same time will operate the solenoid release

circuit and the general alarm bell.

Activation of the waterflow zone will operate the waterflow bell output

Activation of the low air alarm zone will operate the supervisory bell output. It will not operate the alarm relay.

When zone 3 is in alarm, output 1 will operate

When zone 4 is activated, output 4 will operate. This will create a supervisory condition not an alarm condition. The alarm relay will not operate, the supervisory relay will.

When zone 5 is in alarm, output 2 will operate

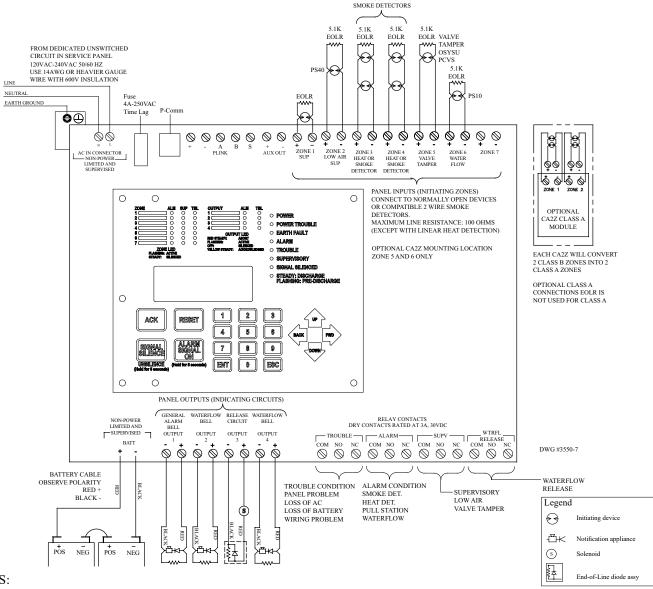
When zone 6 is in alarm, outputs 1 & 3 will operate

When both zones 3 & 4 are activated at the same time, the solenoid release circuit, output 3, will operate.

<sup>\*\*</sup>Cross Zoning acceptable for NFPA 13, 15, and 16 type extinguishing systems.

OBSERVE POLARITY WHEN CONNECTING

Wiring Diagram Program #12 Single Hazard, 2 Detection Zones, 3 Supervisory Zones 1 Waterflow Zone



### NOTES:

- 1. Connect only UL Listed 24VDC devices to indicating circuits.
- 2. Connect EOL Diode assembly IN SERIES with solenoid on release circuit
- 3. Install EOLR (provided) on all unused circuits.
- 4 Polarity is shown on indicating circuits in an activated (off-normal) condition.
- 5. Polarity reverses when output is activated.
- Maximum current per output is 3 Amp. Maximum voltage is 33VDC.
- Outputs identified as Release are Special Application. All
  other outputs are Regulated 24 VDC, Rated 3 Amp each, 3
  Amp total for all 4 circuits.
- 8. All initiating and NAC/Release circuits are supervised and power limited. See Main Board Wiring Specifications for wire routing instructions. All frequencies are continuous.
- 9. Refer to Appendix A for test and maintenance information

 Maximum resistance on outputs is 10 ohms. Maximum resistance on outputs programmed as releasing, is 1 divided by current requirements of solenoid.

See Appendix C for smoke detector compatibility data.

### Program #12 Mode

- 1. Apply power to panel.
- 2. Press ENT to enter PROGRAM mode
- 3. Press 6 or scroll down to #6 and press ENT, (The selection is indicated by a flashing arrow next to the number.
- 4. Enter the password. (Factory default is 1111)
- 5. Press 1 or press ENT. (1 should be the highlighted selection)
- 6. The display shows the current program number. Press 12 to change to program 12. Press ENT.
- 7. Press 1 to accept the change.
- 8. Press ENT to accept the change.

Single Hazard, 2 Detection		PROGRAM #12										
Zones, 3 Supervisory		CONVENTIONAL INPUT ZONES										
Zones and 1 Waterflow Zone	#1	#1 #2 #3 #4 #5 #6 #7										
OUTPUTS	Supervisory	Low Air Supervisory	Detection	Detection	Value Tamper	Waterflow	Unused					
#1 ALARM INDICATING			X	X		X						
#2 ALARM INDICATING						X						
#3 RELEASE			X	X								
#4 ALARM INDICATING						X						

Description: Single Hazard, 2 detection zones, 1 waterflow, and 3 supervisory zones.

Inputs: 1 supervisory zone, 1 low air supervisory zone, 2 detection zone, 1 waterflow zone, 1 tamper switch zone.

Outputs: 2 general alarm, 1 waterflow, 1 solenoid release circuit

Operation: Activation of either detection zone will operate the release and the general alarm bell outputs.

Activation of the waterflow zone will operate the waterflow and both general alarm bell outputs. Activation of

either the tamper or supervisory zones will operate the supervisory relay only.

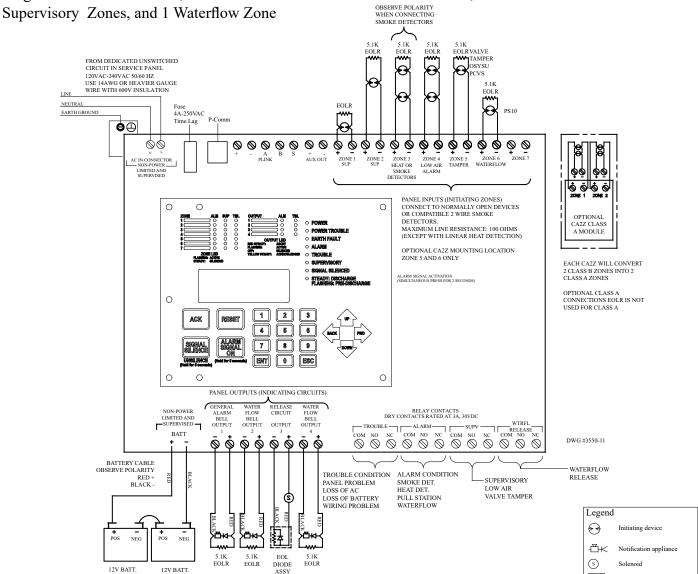
When either zone 3 or 4 is in alarm, outputs 1 & 3 will operate

When zone 5 or the supervisory zone is activated, only the supervisory relay operates

When zone 6 is in alarm, outputs 1, 2 & 4 will operate

# Wiring Diagram Program #13

Single Hazard Cross-Zoned, 1 Detection Zone with Low Air Alarm Zone, 3



### NOTES:

- 1. Connect only UL Listed 24VDC devices to indicating circuits.
- 2. Connect EOL Diode assembly IN SERIES with solenoid on release circuit
- 3. Install EOLR (provided) on all unused circuits.
- 4 Polarity is shown on indicating circuits in an activated (off-normal) condition.
- 5. Polarity reverses when output is activated.
- Maximum current per output is 3 Amp. Maximum voltage is 33VDC.
- Outputs identified as Release are Special Application. All
  other outputs are Regulated 24 VDC, Rated 3 Amp each, 3
  Amp total for all 4 circuits.
- 8. All initiating and NAC/Release circuits are supervised and power limited. See Main Board Wiring Specifications for wire routing instructions. All frequencies are continuous.
- 9. Refer to Appendix A for test and maintenance information

10. Maximum resistance on outputs is 10 ohms. Maximum resistance on outputs programmed as releasing, is 1 divided by current requirements of solenoid.

End-of-Line diode assy

See Appendix C for smoke detector compatibility data.

### Program #13 Mode

- 1. Apply power to panel.
- 2. Press ENT to enter PROGRAM mode
- 3. Press 6 or scroll down to #6 and press ENT, (The selection is indicated by a flashing arrow next to the number.
- 4. Enter the password. (Factory default is 1111)
- 5. Press 1 or press ENT. (1 should be the highlighted selection)
- 6. The display shows the current program number. Press 13 to change to program 13. Press ENT.
- 7. Press 1 to accept the change.
- 8. Press ENT to accept the change.

Single Hazard Cross-	PROGRAM #13								
Zoned, 1 Detection Zone with Low Air Alarm	CONVENTIONAL INPUT ZONES								
Zone, 3 Supervisory Zones and 1 Waterflow Zone	#1	#2	#3	#4	#5	#6	#7	#8	
OUTPUTS	Supervisory	Supervisory	Detection	Low Air Alarm	Valve Tamper	Waterflow	Unused	Release Zone Type	
#1 ALARM INDICATING			X			X		X	
#2 ALARM INDICATING						X			
#3 RELEASE			XX	XX				XX*	
#4 ALARM INDICATING						X			

<sup>\*</sup> Release Outputs which are Cross-Zoned need a Software Zone in order to work properly. The Software Zone Number will be displayed upon a release.

XX = Cross-Zoned

Description: Single Hazard, detection and low air alarm zones cross-zoned\*\*. Also 1 waterflow, 1 tamper and 1 supervisory

zone

Inputs: 2 supervisory zones, 1 detection zone, 1 low air alarm zone, 1 tamper switch zone, 1 waterflow zone,

Outputs: 1 general alarm, 2 waterflow, 1 solenoid release circuit

Operation: Activation of the detection zone and the low air alarm zone at the same time will operate the solenoid release

circuit and the general alarm bell.

Activation of the waterflow zone will operate both waterflow bell outputs

Activation of the low air alarm zone will not operate the alarm relay, only the supervisory relay.

When zone 3 is in alarm, output 1 will operate

When zone 4 is activated, it will create a supervisory condition not an alarm condition. The alarm relay will not operate, the supervisory relay will.

When zone 5 is activated, only the supervisory relay will operate.

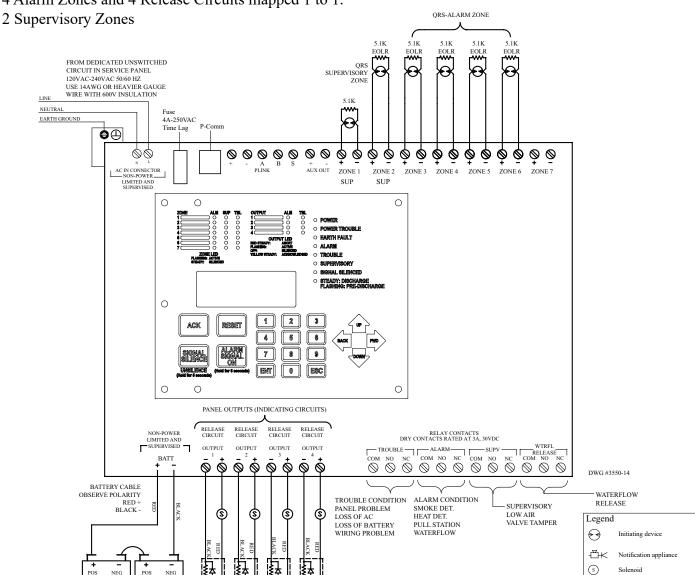
When zone 6 is in alarm, outputs 1, 2 & 4 will operate.

When both zones 3 & 4 are activated at the same time, the solenoid release circuit, output 3, will operate.

<sup>\*\*</sup>Cross Zoning acceptable for NFPA 13, 15, and 16 type extinguishing systems.

### Wiring Diagram Program #14

4 Alarm Zones and 4 Release Circuits mapped 1 to 1.



### NOTES:

- Connect only UL Listed 24VDC devices to indicating circuits.
- Connect EOL Diode assembly IN SERIES with solenoid on release circuit

NEG

EOL

DIODE

EOL

DIODE

EOL

EOL

DIODE

- 3. Install EOLR (provided) on all unused circuits.
- 4 Polarity is shown on indicating circuits in an activated (off-normal) condition.
- Polarity reverses when output is activated.
- Maximum current per output is 3 Amp. Maximum voltage is 33VDC.
- Outputs identified as Release are Special Application. All other outputs are Regulated 24 VDC, Rated 3 Amp each, 3 Amp total for all 4 circuits.
- All initiating and NAC/Release circuits are supervised and power limited. See Main Board Wiring Specifications for wire routing instructions. All frequencies are continuous.
- Refer to Appendix A for test and maintenance information

10. Maximum resistance on outputs is 10 ohms. Maximum resistance on outputs programmed as releasing, is 1 divided by current requirements of solenoid.

End-of-Line diode assy

See Appendix C for smoke detector compatibility data.

### Program #14 Mode

- 1. Apply power to panel.
- 2. Press ENT to enter PROGRAM mode
- 3. Press 6 or scroll down to #6 and press ENT, (The selection is indicated by a flashing arrow next to the number.
- 4. Enter the password. (Factory default is 1111)
- 5. Press 1 or press ENT. (1 should be the highlighted selection)
- 6. The display shows the current program number. Press 14 to change to program 14. Press ENT.
- 7. Press 1 to accept the change.
- 8. Press ENT to accept the change.

4 Alarm Zone and 4 Release Circuits mapped 1 to 1, 2 Supervisory Zones	PROGRAM #14								
	CONVENTIONAL INPUT ZONES								
	#1	#2	#3	#4	#5	#6	#7		
OUTPUTS	Supervisory	Supervisory	Detection	Detection	Detection	Detection	Unused		
#1 RELEASE			X						
#2 RELEASE				X					
#3 RELEASE					X				
#4 RELEASE						X			

Description: QRS System 4 Manual Station zones and 4 Release Outputs mapped 1 to 1

Inputs: 4 Manual Station zones, 2 Supervisory zones

Outputs: 4 release circuits

Operation: Activation of detection zone 3 will activate release output #1

Activation of detection zone 4 will activate release output #2 Activation of detection zone 5 will activate release output #3 Activation of detection zone 6 will activate release output #4

### **NOTE: TO CHARGE SYSTEM**

After initially setting the PFC-4410G3 to program 14 and the panel resets

- 1. Press ENT to enter PROGRAM mode
- 2. Press 8 or scroll down to #8 Panel Setup and press ENT (The selection is indicated by a flashing arrow next to the number)
- 3. Enter the password (Factory is 1111)
- 4. Press 9 or scroll down to #9 QRS Fill and press ENT (The selection is indicated by a flashing arrow next to the number) NOTE: The display will read: When Fill Completed Press ESC 2X to Exit and the remaining time till timeout
- 5. Charge the system to normal operating pressure.
- 6. Press ESC twice to exit QRS Fill

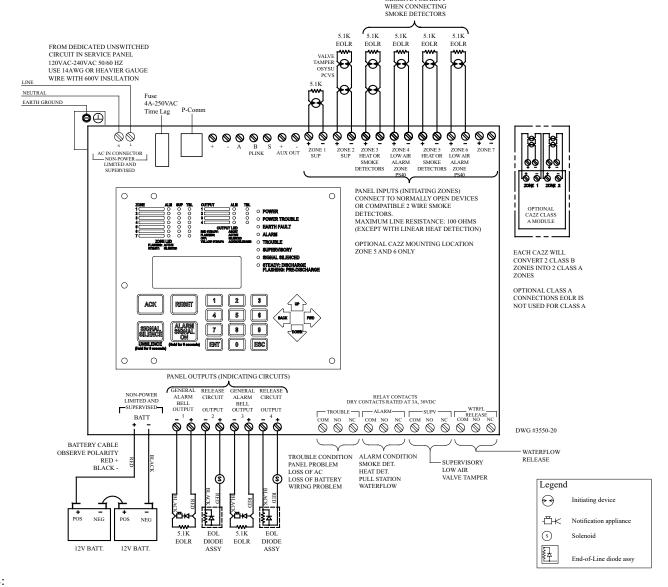
NOTE: Wait 60 seconds after the system reaches normal operating pressure before testing the QRS

# **A** CAUTION

When in QRS Fill, the panel is inoperative. None of the outputs or inputs will operate. No QRS will operate. The sprinkler system will operate as a regular dry pipe system.

### Wiring Diagram Program #15

Dual Hazard, 1 Detection Zone and 1 Low Air Alarm Zone Cross-Zoned to 1 Release Circuit, 1 Other Detection and 1 other Low Air Alarm Zone Cross-Zoned to a Separate Release Circuit, and Supervisory Zones.



### NOTES:

- Connect only UL Listed 24VDC devices to indicating circuits
- 2. Connect EOL Diode assembly IN SERIES with solenoid on release circuit
- 3. Install EOLR (provided) on all unused circuits.
- 4 Polarity is shown on indicating circuits in an activated (off-normal) condition.
- 5. Polarity reverses when output is activated.
- 6. Maximum current per output is 3 Amp. Maximum voltage is 33VDC.
- 7. Outputs identified as Release are Special Application. All other outputs are Regulated 24 VDC, Rated 3 Amp each, 3 Amp total for all 4 circuits.
- All initiating and NAC/Release circuits are supervised and power limited. See Main Board Wiring Specifications for wire routing instructions. All frequencies are continuous.
- 9. Refer to Appendix A for test and maintenance information

10. Maximum resistance on outputs is 10 ohms. Maximum resistance on outputs programmed as releasing, is 1 divided by current requirements of solenoid.

See Appendix C for smoke detector compatibility data.

### Program #15 Mode

- 1. Apply power to panel.
- 2. Press ENT to enter PROGRAM mode
- 3. Press 6 or scroll down to #6 and press ENT, (The selection is indicated by a flashing arrow next to the number.
- 4. Enter the password. (Factory default is 1111)
- 5. Press 1 or press ENT. (1 should be the highlighted selection)
- 6. The display shows the current program number. Press 15 to change to program 15. Press ENT.
- 7. Press 1 to accept the change.
- 8. Press ENT to accept the change.

Dual Hazard, 1 Detection	PROGRAM #15								
Zone and 1 Low Air Alarm Zone Cross-Zoned to 1	CONVENTIONAL INPUT ZONES							SOFTWARE ZONES	
Release Circuit, 1 other Detection and 1 other Low Air Alarm Zone Cross-	#1	#2	#3	#4	#5	#6	#7	#8	#9
Zoned to a Separate Release Circuit and Supervisory									
Zone.									
OUTPUTS	Supervisory	Supervisory	Detection	Low	Detection	Low	Unused	Release	Release
				Air		Air		Zone	Zone
				Alarm		Alarm		Type	Type
#1 ALARM INDICATING			X	X				X	
#2 RELEASE			XX	XX				XX*	
#3 ALARM INDICATING					X	X			X
#4 RELEASE					XX	XX			XX*

<sup>\*</sup> Release Outputs which are Cross-Zoned need a Software Zone in order to work properly. The Software Zone Number will be displayed upon a release.

### XX = Cross-Zoned

Description: Dual Hazard, 2 detection zones cross-zoned\*\* to 1 release circuit and 2 other detection zones cross zoned to

another release circuit

Inputs: 2 supervisory zones, 4 detection zones Outputs: 2 general alarm, 2 release circuit

Operation: Activation of either detection zones 3 and 4 will activate the alarm output #1

Activation of both detection circuits 3 and 4 at the same time will release circuit output #2 as well as activate

the alarm output #1

Activation of either detection zones 5 or 6 will activate the alarm output #3

Activation of both detection circuits 5 and 6 at the same time will release circuit output #4 as well as activate

the alarm output #3

When either zone 3 or 4 is in alarm, output 1 will operate

When both zones 3 and 4 are in alarm at the same time, output #2 will operate

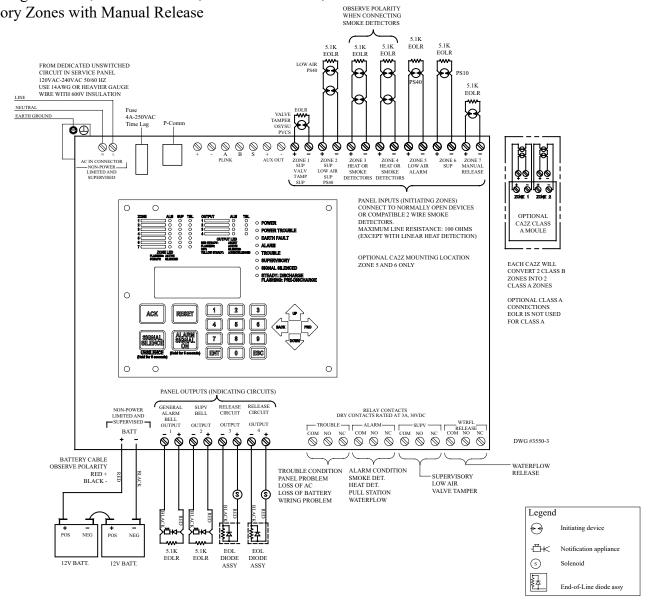
When either zone 5 or 6 is in alarm, output 3 will operate

When both zones 5 and 6 are in alarm at the same time, output #4 will operate

<sup>\*\*</sup>Cross Zoning acceptable for NFPA 13, 15, and 16 type extinguishing systems.

# Wiring Diagram Program #16

Failsafe Single Hazard, -2 Alarm Zones, 1 Waterflow Zone, 2 Supervisory Zones with Manual Release



### NOTES:

- Connect only UL Listed 24VDC devices to indicating circuits.
- 2. Connect EOL Diode assembly IN SERIES with solenoid on release circuit
- 3. Install EOLR (provided) on all unused circuits.
- 4 Polarity is shown on indicating circuits in an activated (off-normal) condition.
- 5. Polarity reverses when output is activated.
- 6. Maximum current per output is 3 Amp. Maximum voltage is 33VDC.
- Outputs identified as Release are Special Application. All
  other outputs are Regulated 24 VDC, Rated 3 Amp each, 3
  Amp total for all 4 circuits.
- 8. All initiating and NAC/Release circuits are supervised and power limited. See Main Board Wiring Specifications for wire routing instructions. All frequencies are continuous.
- 9. Refer to Appendix A for test and maintenance information

10. Maximum resistance on outputs is 10 ohms. Maximum resistance on outputs programmed as releasing, is 1 divided by current requirements of solenoid.

See Appendix C for smoke detector compatibility data.

#### Program #16 Mode

- 1. Apply power to panel.
- 2. Press ENT to enter PROGRAM mode
- 3. Press 6 or scroll down to #6 and press ENT, (The selection is indicated by a flashing arrow next to the number.
- 4. Enter the password. (Factory default is 1111)
- 5. Press 1 or press ENT. (1 should be the highlighted selection)
- 6. The display shows the current program number. Press 16 to change to program 16. Press ENT.
- 7. Press 1 to accept the change.
- 8. Press ENT to accept the change.

Failsafe Single Zoned			PF	ROGRAM #16							
activation with Normally Open and Normally	CONVENTIONAL INPUT ZONES										
Closed Solenoid	#1	#2	#3	#4	#5	#6	#7				
OUTPUTS	Valve Tamper Supervisory	Low Air Supervisory	Conventional Detection	Conventional Detection	Low Air Alarm	Waterflow	Manual Release				
#1 GENERAL ALARM			X	X		X	X				
#2 SUPERVSIORY BELL	X	X			X						
#3 RELEASE SOLENOID			X	X			X				
#4 N/O SOLENOID					X						

Description: Failsafe Single Zoned activation with Normally Open and Normally Closed Solenoid

Inputs: 2 Supervisory zones, 2 conventional detection zones, 1 Low Air Alarm zone, 1 Waterflow zone, 1 Manual release

zone.

Outputs: 1 General alarm Indicating, 1 Supervisory Bell output, 1 Release Circuit Normally Closed when not Energized, 1

Release Circuit: Normally Open when Not Energized

Operation: Activation of Supervisory zones 1 or 2 will create a supervisory condition on the panel and activate output 2.

Activation of Conventional Detection zone 3 or 4 will activate General alarm output 1 and Release output 3.

Activation of Low Air Alarm zone 5, will create supervisory condition on the panel and activate output 2 and the

Normally Open solenoid output 4.

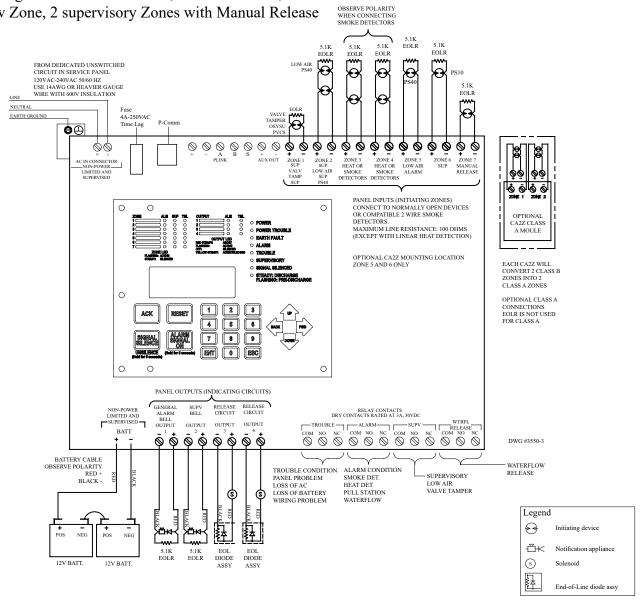
Activation of waterflow zone 6 will activate general alarm output 1.

Activation of Manual Release zone 7 will activate General alarm output 1 and Release output 3.

A trouble condition will prevent output 4 from operating.

Failsafe Single Hazard Cross Zoned, -2 Alarm Zones, 1

Waterflow Zone, 2 supervisory Zones with Manual Release



#### NOTES:

- 1. Connect only UL Listed 24VDC devices to indicating circuits.
- Connect EOL Diode assembly IN SERIES with solenoid on release circuit
- 3. Install EOLR (provided) on all unused circuits.
- Polarity is shown on indicating circuits in an activated (off-normal) condition.
- Polarity reverses when output is activated. 5.
- Maximum current per output is 3 Amp. Maximum voltage is 33VDC.
- Outputs identified as Release are Special Application. All other outputs are Regulated 24 VDC, Rated 3 Amp each, 3 Amp total for all 4 circuits.
- All initiating and NAC/Release circuits are supervised and power limited. See Main Board Wiring Specifications for wire routing instructions. All frequencies are continuous.
- Refer to Appendix A for test and maintenance information

10. Maximum resistance on outputs is 10 ohms. Maximum resistance on outputs programmed as releasing, is 1 divided by current requirements of solenoid.

See Appendix C for smoke detector compatibility data.

#### Program #17 Mode

- 1. Apply power to panel.
- 2. Press ENT to enter PROGRAM mode
- 3. Press 6 or scroll down to #6 and press ENT, (The selection is indicated by a flashing arrow next to the number.
- 4. Enter the password. (Factory default is 1111)
- 5. Press 1 or press ENT. (1 should be the highlighted selection)
- 6. The display shows the current program number. Press 17 to change to program 17. Press ENT.
- 7. Press 1 to accept the change.
- 8. Press ENT to accept the change.

Failsafe Cross				PROGRAM #1	7						
Zoned Activation With		CONVENTIONAL INPUT ZONES									
Normally Open and Normally Closed Solenoid	#1	#2	#3	#4	#5	#6	#7	#8			
OUTPUTS	VALVE TAMPER SUPERVISORY	LOW AIR SUPERVISORY	CONVENTIONAL DETECTION	CONVENTIONAL DETECTION	LOW AIR ALARM	WATER FLOW	MANUAL RELEASE	RELEASE ZONE TYPE			
#1 GENERAL ALARM			X	X		X	X	X			
#2 SUPERVISORY BELL	X	X			X						
#3 RELEASE SOLENOID			XX	XX	XX* Either zones 3 & 5 or 4 & 5		X	XX*			
#4 N/O SOLENOID					X						

<sup>\*</sup> Release Outputs which are Cross-Zoned need a Software Zone in order to work properly. The Software Zone Number will be displayed upon a release.

Inputs: 2 Supervisory zones, 2 conventional detection zones, 1 Low Air Alarm zone, 1 Waterflow zone, 1 Manual release

zone

Outputs: 1 General alarm Indicating, 1 Supervisory Bell output, 1 Release Circuit Normally Closed when not Energized, 1

Release Circuit: Normally Open when Not Energized

Operation: Activation of Supervisory zones 1 or 2 will create a supervisory condition on the panel and activate Supervisory Bell

output 2.

Activation of Conventional Detection zone 3 or 4 will activate General alarm output 1

Activation of Conventional Detection zone 3 OR 4 AND activation of Low Air Alarm zone 5 will activate General

alarm output 1 and Release output 3.

Activation of Low Air Alarm zone 5, will create supervisory condition on the panel and activate Supervisory Bell

output 2 and the Normally Open solenoid output 4

Activation of Waterflow zone 6 will activate General alarm output 1

Activation of Manual Release zone 7 will activate General alarm output 1 and Release output 3.

# **NOTICE**

The following programs are for agent or gas extinguishing systems. Selecting the Agent Releasing mode allows the use of a predischarge timer and an abort circuit. The timer defaults to 60 seconds for all alarm zones programmed as other than MANUAL RELEASE. The MANUAL RELEASE default timer is 30 seconds. The system offers the programmer the ability to change the default timers to shorter times.

Systems intended for the release of Halon 1301 as described in NFPA 12A, water mist systems as described in NFPA 750 clean agents as described in NFPA 2001, or fixed aerosol as described in NFPA 2010, or shall have provision for a pre-discharge notification circuit. If this signal is required to be separate and/or distinct from the evacuation signal, this can be accomplished by using the legacy method of using first and second alarms on separate zones. One shall be programmed as FIRST ALARM. It will provide a steady output upon activation of any initiating zone programmed as an alarm zone. This is the evacuation signal. If a temporal signal is required, the output pattern can be changed using the zone menu. The other notification circuit shall be programmed as SECOND ALARM. It will provide a steady output upon activation of a second initiating zone programmed as an alarm zone (cross zoned). This is when the pre-discharge timer would start and would be the predischarge signal. If a temporal signal is required, the output pattern can be changed using the zone menu (output pattern and pre release pattern need to be changed). If a separate signal for discharge were required, the second alarm pre discharge pattern can be changed in the zone menu. Zones programmed as MANUAL RELEASE will activate outputs programmed as SECOND ALARM, even if the MANUAL RELEASE zone is the first alarm zone activated. SECOND ALARM is intended to be used as a pre-discharge signal for cross zone applications.

The PFC-4410G3 allow for 3 patterns using 1 notification circuit. The evacuation signal pattern can be set in the zone menu for the detection zones mapped to the alarm indicating output. To set the pre discharge pattern and discharge pattern select the pattern in the zone menu for the software zone for the cross zoned output.

# **A** CAUTION

The default programming does not allow the abort circuit to abort the release or stop the pre-discharge timer activated by zones programmed as MANUAL RELEASE. This can be changed in the programming to allow MANUAL RELEASE zones to be aborted.

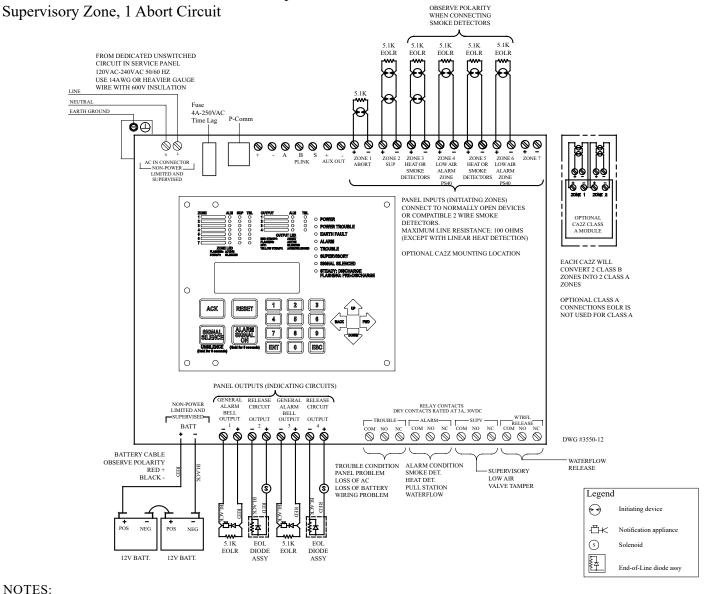
NFPA 12 prohibits the use of abort circuits on suppression systems deploying carbon dioxide.

Systems designed and installed in accordance with NFPA 2001, NFPA-750, NFPA-2010, NFPA 12 A shall be provided with a mechanical manual release system.

# THIS PAGE INTENTIONALLY LEFT BLANK

Dual Hazard, 2 Detection Zones Cross-Zoned to 1 Release Circuit, 2

Other Detection Zones Cross-Zoned to A Separate Release Circuit, 1



#### NOTES:

- Connect only UL Listed 24VDC devices to indicating circuits.
- Connect EOL Diode assembly IN SERIES with solenoid on release circuit
- Install EOLR (provided) on all unused circuits. 3.
- Polarity is shown on indicating circuits in an activated (off-normal) condition.
- Polarity reverses when output is activated.
- Maximum current per output is 3 Amp. Maximum voltage
- Outputs identified as Release are Special Application. All other outputs are Regulated 24 VDC, Rated 3 Amp each, 3 Amp total for all 4 circuits.
- All initiating and NAC/Release circuits are supervised and power limited. See Main Board Wiring Specifications for wire routing instructions. All frequencies are continuous.
- Refer to Appendix A for test and maintenance information

10. Maximum resistance on outputs is 10 ohms. Maximum resistance on outputs programmed as releasing, is 1 divided by current requirements of solenoid.

See Appendix C for smoke detector compatibility data.

#### Program #20 Mode

- 1. Apply power to panel.
- 2. Press ENT to enter PROGRAM mode
- 3. Press 6 or scroll down to #6 and press ENT, (The selection is indicated by a flashing arrow next to the number.
- 4. Enter the password. (Factory default is 1111)
- 5. Press 1 or press ENT. (1 should be the highlighted selection)
- 6. The display shows the current program number. Press 20 to change to program 20. Press ENT.
- 7. Press 1 to accept the change.
- 8. Press ENT to accept the change.

Dual Hazard, 2 Detection				PRO	OGRAM #20	0			
Zones Cross-Zoned to 1 Release Circuit, 2 Other			SOFTWAI	RE ZONES					
Detection Zones Cross-	#1	#2	#8	#9					
Zoned to a Separate Release									
Circuit, 1 Supervisory									
Circuit, 1 abort circuit									
OUTPUTS	Abort	Supervisory	Detection	Detection	Detection	Detection	Unused	Release Zone Type	Release Zone Type
#1 ALARM INDICATING			Х	X				X	
#2 RELEASE			xx	xx				XX*	
#3 ALARM INDICATING					х	Х			X
#4 RELEASE					XX	XX			XX*

<sup>\*</sup> Release Outputs which are Cross-Zoned need a Software Zone in order to work properly. The Software Zone Number will be displayed upon a release.

XX = Cross-Zoned

Description: Dual Hazard, 2 detection zones cross-zoned to 1 release circuit and 2 other detection zones cross zoned to

another release circuit

Inputs: 1 supervisory zone, 4 detection zones, 1 abort circuit

Outputs: 2 general alarm, 2 release circuit

Operation: Activation of either detection zones 3 or 4 will activate the alarm output #1

Activation of both detection circuits 3 and 4 at the same time will start the pre-discharge timer for release circuit

output #2 as well as activate the alarm output #1

Activation of either detection zones 5 or 6 will activate the alarm output #3

Activation of both detection circuits 5 and 6 at the same time will start the pre-discharge timer for release circuit

output #4 as well as activate the alarm output #3

When either zone 3 or 4 is in alarm, output 1 will operate

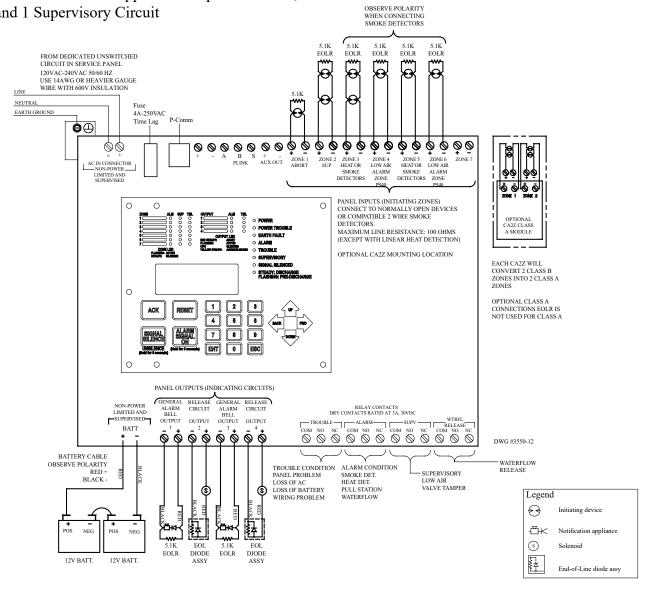
When both zones 3 and 4 are in alarm at the same time, the pre-discharge timer for output #2 will operate

When either zone 5 or 6 is in alarm, output 3 will operate

When both zones 5 and 6 are in alarm at the same time, the pre-discharge timer for output #4 will operate

Dual Hazard, 2 Detection Zones Mapped to 1 Release Circuit and 2 Other Detection Zones Mapped to A Separate Circuit, 1 Abort

Circuit, and 1 Supervisory Circuit



#### NOTES:

- Connect only UL Listed 24VDC devices to indicating circuits.
- Connect EOL Diode assembly IN SERIES with solenoid on release circuit
- 3. Install EOLR (provided) on all unused circuits.
- 4 Polarity is shown on indicating circuits in an activated (off-normal) condition.
- Polarity reverses when output is activated.
- Maximum current per output is 3 Amp. Maximum voltage is 33VDC.
- Outputs identified as Release are Special Application. All other outputs are Regulated 24 VDC, Rated 3 Amp each, 3 Amp total for all 4 circuits.
- All initiating and NAC/Release circuits are supervised and power limited. See Main Board Wiring Specifications for wire routing instructions. All frequencies are continuous.
- Refer to Appendix A for test and maintenance information

10. Maximum resistance on outputs is 10 ohms. Maximum resistance on outputs programmed as releasing, is 1 divided by current requirements of solenoid.

See Appendix C for smoke detector compatibility data.

#### Program #21 Mode

- 1. Apply power to panel.
- 2. Press ENT to enter PROGRAM mode
- 3. Press 6 or scroll down to #6 and press ENT, (The selection is indicated by a flashing arrow next to the number.
- 4. Enter the password. (Factory default is 1111)
- 5. Press 1 or press ENT. (1 should be the highlighted selection)
- 6. The display shows the current program number. Press 21 to change to program 21. Press ENT.
- 7. Press 1 to accept the change.
- 8. Press ENT to accept the change.

Dual Hazard, 2 Detection			PR	OGRAM #21						
Zones Mapped to 1	CONVENTIONAL INPUT ZONES									
Release Circuit and 2 Other Detection Zones	#1	#2	#3	#4	#5	#6	#7			
Mapped to a Separate										
Release Circuit, 1 Supervisory Circuit, 1 Abort Circuit										
OUTPUTS	Abort	Supervisory	Detection	Detection	Detection	Detection	Unused			
#1 ALARM INDICATING			X	X						
#2 RELEASE			X	X						
#3 ALARM INDICATING					X	X				
#4 RELEASE					X	X				

Description: Dual Hazard, 2 detection zones mapped to 1 release circuit and 2 other detection zones mapped to another release

circuit

Inputs: 1 supervisory zone, 4 detection zones, 1 abort circuit

Outputs: 2 general alarm, 2 release circuit

Operation: Activation of either detection zone 3 or 4 will activate the alarm output #1 and start the pre-discharge timer for

the release circuit output #2

Activation of either detection zone 5 or 6 will activate the alarm output #3 and start the pre-discharge timer for

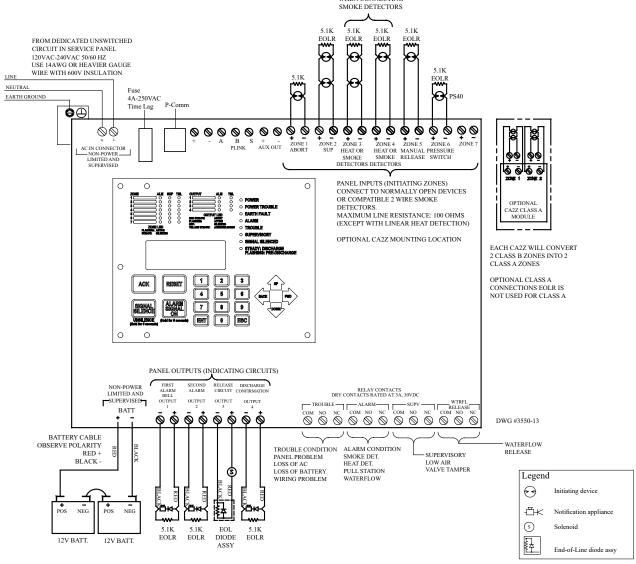
the release circuit output #2

When either zone 3 or 4 is in alarm, outputs 1 & 2 will operate When either zone 5 or 6 is in alarm, outputs 3 & 4 will operate

OBSERVE POLARITY

WHEN CONNECTING

Wiring Diagram Program #22 Single Hazard, 2 Detection Zones Cross-zoned to 1Release Circuit, 1 Manual Station and A Discharge Confirmation Zone



#### NOTES:

- Connect only UL Listed 24VDC devices to indicating circuits
- Connect EOL Diode assembly IN SERIES with solenoid on release circuit
- 3. Install EOLR (provided) on all unused circuits.
- 4 Polarity is shown on indicating circuits in an activated (off-normal) condition.
- 5. Polarity reverses when output is activated.
- 6. Maximum current per output is 3 Amp. Maximum voltage is 33VDC.
- Outputs identified as Release are Special Application. All other outputs are Regulated 24 VDC, Rated 3 Amp each, 3 Amp total for all 4 circuits.
- 8. All initiating and NAC/Release circuits are supervised and power limited. See Main Board Wiring Specifications for wire routing instructions. All frequencies are continuous.
- 9. Refer to Appendix A for test and maintenance information

10. Maximum resistance on outputs is 10 ohms. Maximum resistance on outputs programmed as releasing, is 1 divided by current requirements of solenoid.

See Appendix C for smoke detector compatibility data.

#### Program #22 Mode

- 1. Apply power to panel.
- 2. Press ENT to enter PROGRAM mode
- 3. Press 6 or scroll down to #6 and press ENT, (The selection is indicated by a flashing arrow next to the number.
- 4. Enter the password. (Factory default is 1111)
- 5. Press 1 or press ENT. (1 should be the highlighted selection)
- 6. The display shows the current program number. Press 22 to change to program 22. Press ENT.
- 7. Press 1 to accept the change.
- 8. Press ENT to accept the change.

Single Hazard, 2 Detection				PRO	OGRAM #22	2			
Zones Cross-Zoned to 1 Release Circuit, 1 Manual				Software Zones					
Station and a Discharge Confirmation Zone	#1	#2	#3	#4	#5	#6	#7	#8	#9
OUTPUTS	Abort	Supervisory	Detection	Detection	Manual Release	Detection	Unused	Alarm	Release Zone Type
#1 1st ALARM			X	X					
#2 2nd ALARM			XX	XX	Х			XX*	X
#3 RELEASE		XX XX X							XX*
#4 ALARM INDICATING						X			

<sup>\*</sup> Release Outputs which are Cross-Zoned and 2nd alarm need a Software Zone in order to work properly. The Software Zone Number will be displayed upon a release.

XX = Cross-Zoned

Description: Single Hazard, 2 detection zones cross-zoned to 1 release circuit. A manual station zone and a discharge

confirmation zone. Also first and second alarm notification circuits.

Inputs: 1 supervisory zone, 3 detection zones, 1 manual station zone, 1 abort circuit

Outputs: 3 general alarm, 1 release circuit

Operation: Activation of either detection zones 3 or 4 will activate the alarm output #1

Activation of both detection circuits 3 and 4 at the same time will activate the alarm outputs #1, #2 and start the

pre-discharge timer for the release circuit output #3

Activation of the manual release zone #5 will activate the alarm output #2 and start the manual release pre-

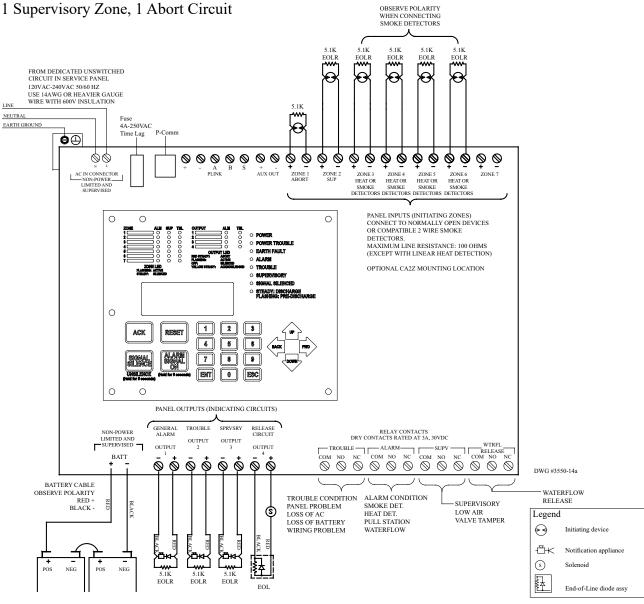
discharge timer for release circuit output #3 Activation of zone 6 will operate output #4

When either zone 3 or 4 is in alarm, output 1 will operate

When both zones 3 and 4 are in alarm at the same time, outputs #1,2 will operate and the pre-discharge timer for output #3 will start

When zone 5 is in alarm, output 2 will operate and the manual release pre-discharge timer for output #3 will start When zone 6 is in alarm, output #4 will operate

Wiring Diagram Program #23 Single Hazard, 4 Detection Zones Mapped to 1 Release Circuit, 1 Supervisory Zone, 1 Abort Circuit



#### NOTES:

- Connect only UL Listed 24VDC devices to indicating circuits
- Connect EOL Diode assembly IN SERIES with solenoid on release circuit
- 3. Install EOLR (provided) on all unused circuits.
- 4 Polarity is shown on indicating circuits in an activated (off-normal) condition.
- 5. Polarity reverses when output is activated.
- Maximum current per output is 3 Amp. Maximum voltage is 33VDC.
- Outputs identified as Release are Special Application. All
  other outputs are Regulated 24 VDC, Rated 3 Amp each, 3
  Amp total for all 4 circuits.
- All initiating and NAC/Release circuits are supervised and power limited. See Main Board Wiring Specifications for wire routing instructions. All frequencies are continuous.
- 9. Refer to Appendix A for test and maintenance information

10. Maximum resistance on outputs is 10 ohms. Maximum resistance on outputs programmed as releasing, is 1 divided by current requirements of solenoid.

See Appendix C for smoke detector compatibility data.

#### Program #23 Mode

- 1. Apply power to panel.
- 2. Press ENT to enter PROGRAM mode
- 3. Press 6 or scroll down to #6 and press ENT, (The selection is indicated by a flashing arrow next to the number.
- 4. Enter the password. (Factory default is 1111)
- 5. Press 1 or press ENT. (1 should be the highlighted selection)
- 6. The display shows the current program number. Press 23 to change to program 23. Press ENT.
- 7. Press 1 to accept the change.
- 8. Press ENT to accept the change.

Single Hazard, 4			PR	OGRAM #23						
Dectection Zones Mapped	CONVENTIONAL INPUT ZONES									
to 1 Release Circuit 1 Supervisory Circuit, 1 Abort Circuit	#1	#2	#3	#4	#5	#6	#7			
OUTPUTS	Abort	Supervisory	Detection	Detection	Detection	Detection	Unused			
#1 ALARM INDICATING			X	X	X	X				
#2 TROUBLE										
#3 SUPERVISORY		X								
#4 RELEASE			X	X	X	X				

Description: Single Hazard, 4 detection zones mapped to 1 release
Inputs: 1 supervisory zone, 4 detection zones, 1 abort circuit
Outputs: 1 general alarm, 1 trouble, 1 supervisory, 1 release circuit

Operation: Activation of any detection zone will activate the alarm output #1 and start the pre-discharge timer for the

release circuit output #4.

Activation of the supervisory zone will operate the supervisory bell.

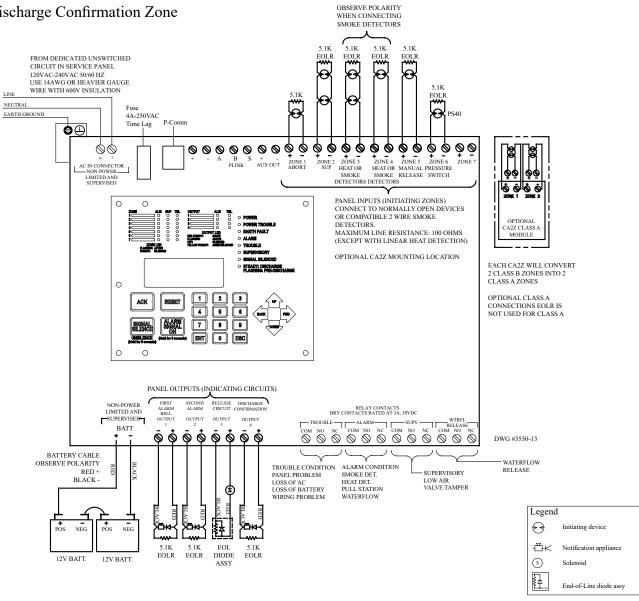
A trouble condition (low battery, wire problem, etc.) will operate the trouble bell.

When either zone 3, 4, 5, or 6 is in alarm, outputs 1 & 4 will operate

When the zone 2 supervisory zone is activated - output #3 (supervisory bell) will operate.

When the panel is in a trouble condition - output #2 (trouble bell) will operate.

Wiring Diagram Program #24 Single Hazard, 2 Detection Zones 1 Manual Station Zone and A Discharge Confirmation Zone



#### NOTES:

- Connect only UL Listed 24VDC devices to indicating circuits.
- Connect EOL Diode assembly IN SERIES with solenoid on release circuit
- 3. Install EOLR (provided) on all unused circuits.
- 4 Polarity is shown on indicating circuits in an activated (off-normal) condition.
- 5. Polarity reverses when output is activated.
- Maximum current per output is 3 Amp. Maximum voltage is 33VDC.
- 7. Outputs identified as Release are Special Application. All other outputs are Regulated 24 VDC, Rated 3 Amp each, 3 Amp total for all 4 circuits.
- All initiating and NAC/Release circuits are supervised and power limited. See Main Board Wiring Specifications for wire routing instructions. All frequencies are continuous.
- 9. Refer to Appendix A for test and maintenance information

10. Maximum resistance on outputs is 10 ohms. Maximum resistance on outputs programmed as releasing, is 1 divided by current requirements of solenoid.

See Appendix C for smoke detector compatibility data.

#### Program #24 Mode

- 1. Apply power to panel.
- 2. Press ENT to enter PROGRAM mode
- 3. Press 6 or scroll down to #6 and press ENT, (The selection is indicated by a flashing arrow next to the number.
- 4. Enter the password. (Factory default is 1111)
- 5. Press 1 or press ENT. (1 should be the highlighted selection)
- 6. The display shows the current program number. Press 1 to change to program 1. Press ENT.
- 7. Press 1 to accept the change.
- 8. Press ENT to accept the change.

Single Hazard, 2			PR	OGRAM #24							
Dectection Zones, 1		CONVENTIONAL INPUT ZONES									
Manual Release Zone and A Discharge Confirmation	#1	#2	#3	#4	#5	#6	#7				
Zone											
OUTPUTS	Abort	Supervisory	Detection	Detection	Manual Release	Low Air Supervisory	Unused				
#1 ALARM INDICATING			X	X							
#2 ALARM INDICATING					X						
#3 RELEASE			X	X	X						
#4 SUPERVISORY		X				X					

Description: Single Hazard, 2 detection zones, a manual station zone and a discharge confirmation zone. Inputs: 1 supervisory zone, 1 low air zone, 2 detection zones, 1 manual station zone, 1 abort circuit

Outputs: 2 general alarm, 1 release circuit, 1 supervisory

Operation: Activation of either detection zones 3 or 4 will activate the alarm output #1 and start the pre-discharge timer for

the release circuit output #3

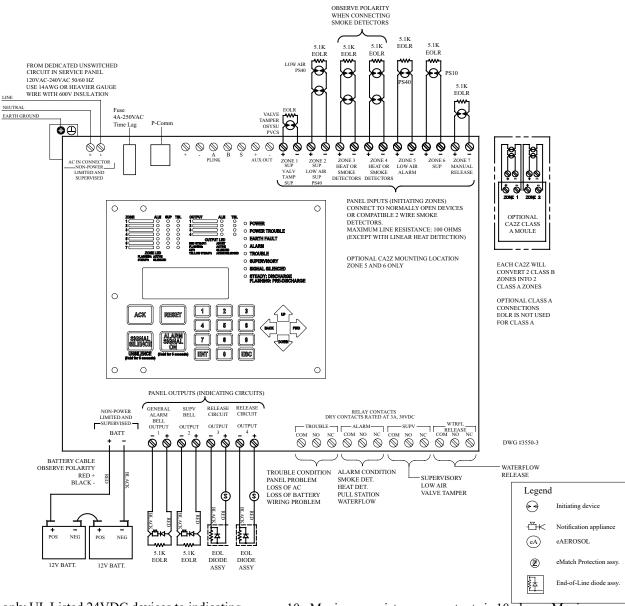
Activation of the manual release zone #5 will activate the alarm output #2 and start the manual release pre-

discharge timer for release circuit output #3 Activation of zone 6 will operate output #4

When either zone 3 or 4 is in alarm, output 1 will operate and the pre-discharge timer for output #3 will start When zone 5 is in alarm, output 2 will operate and the manual release pre-discharge timer for output #3 will start.

When zone 6 is activated, output #4 will operate

# Wiring Diagram Program #30 Failsafe Single Hazard Cross Zoned, -2 Alarm Zones, 1 Waterflow Zone, 2 supervisory Zones with Manual Release



#### NOTES:

- Connect only UL Listed 24VDC devices to indicating
  aircrafts
- Connect EOL Diode assembly IN SERIES with solenoid on release circuit
- 3. Install EOLR (provided) on all unused circuits.
- 4 Polarity is shown on indicating circuits in an activated (off-normal) condition.
- 5. Polarity reverses when output is activated.
- Maximum current per output is 3 Amp. Maximum voltage is 33VDC.
- Outputs identified as Release are Special Application. All
  other outputs are Regulated 24 VDC, Rated 3 Amp each, 3
  Amp total for all 4 circuits.
- All initiating and NAC/Release circuits are supervised and power limited. See Main Board Wiring Specifications for wire routing instructions. All frequencies are continuous.
- 9. Refer to Appendix A for test and maintenance information

10. Maximum resistance on outputs is 10 ohms. Maximum resistance on outputs programmed as releasing, is 1 divided by current requirements of solenoid.

See Appendix C for smoke detector compatibility data.

#### Program #30 Mode

- 1. Apply power to panel.
- 2. Press ENT to enter PROGRAM mode
- 3. Press 6 or scroll down to #6 and press ENT, (The selection is indicated by a flashing arrow next to the number.
- 4. Enter the password. (Factory default is 1111)
- 5. Press 1 or press ENT. (1 should be the highlighted selection)
- 6. The display shows the current program number. Press 30 to change to program 30. Press ENT.
- 7. Press 1 to accept the change.
- 8. Press ENT to accept the change.

Failsafe Cross				PROGRAM #3	30						
Zoned Activation With		CONVENTIONAL INPUT ZONES									
Normally Open and Normally Closed Solenoid	#1	#2	#3	#4	#5	#6	#7	#8			
OUTPUTS	VALVE TAMPER SUPERVISORY	LOW AIR SUPERVISORY	CONVENTIONAL DETECTION	CONVENTIONAL DETECTION	LOW AIR ALARM	WATER FLOW	MANUAL RELEASE	RELEASE ZONE TYPE			
#1 ALARM INDICATING (General Alarm)			X	X		X	X	X			
#2 RELEASE NORMALLY ENERGIZED (Failsafe Solenoid, Drops Out on Any System Trouble)			X	X			X				
#3 RELEASE			XX	XX	XX Either Zone 3 & 5 or 4 & 5		X	XX*			
#4 ALARM (waterflow alarm)						X					

<sup>\*</sup> Release Outputs which are Cross-Zoned need a Software Zone in order to work properly. The Software Zone Number will be displayed upon a release.

SUP 1 defaults to abort XX = Cross-Zoned

Inputs 2 Supervisory zones, 2 conventional detection zones, 1 Low Air Alarm zone, 1 Waterflow zone, 1 Manual release

zone.

Outputs: 1 General alarm Indicating, 1 Failsafe Release Circuit: Normally Energized. de-energizes on any system

trouble, 1 Release Circuit: Normally Not Energized, 1 Waterflow alarm output.

Operation: Output 2 is constantly energized. Any trouble condition on the panel will de-energize output 2.

Activation of supervisory zone 1 or 2 or activation of Low Air Alarm zone 5, will only create supervisory

condition on the panel.

Activation of Conventional Detection zone #3 and/or zone 4 will activate General alarm output 1 and De-

energize output 2.

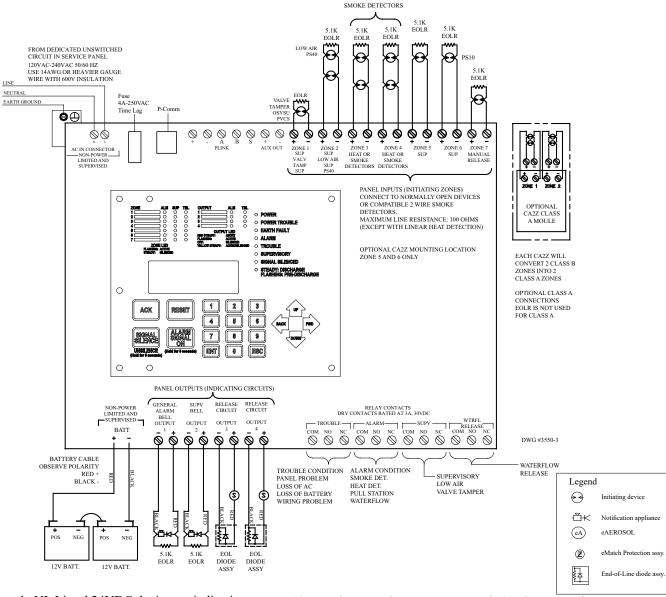
Activation of either Conventional Detection zone #3 OR zone 4, AND activation of Low Air Alarm zone 5, will

energize/activate release output #3.

Activation of Manual Release zone #7 will activate General alarm output 1, de-energize failsafe release output 2

and energize/activate release output #3.

Failsafe Single Hazard, -2 Alarm Zones, 1 Waterflow Zone, 3 supervisory Zones with Manual Release



OBSERVE POLARITY

#### NOTES:

- Connect only UL Listed 24VDC devices to indicating circuits.
- Connect EOL Diode assembly IN SERIES with solenoid on release circuit
- 3. Install EOLR (provided) on all unused circuits.
- 4 Polarity is shown on indicating circuits in an activated (off-normal) condition.
- 5. Polarity reverses when output is activated.
- Maximum current per output is 3 Amp. Maximum voltage is 33VDC.
- 7. Outputs identified as Release are Special Application. All other outputs are Regulated 24 VDC, Rated 3 Amp each, 3 Amp total for all 4 circuits.
- All initiating and NAC/Release circuits are supervised and power limited. See Main Board Wiring Specifications for wire routing instructions. All frequencies are continuous.
- 9. Refer to Appendix A for test and maintenance information

10. Maximum resistance on outputs is 10 ohms. Maximum resistance on outputs programmed as releasing, is 1 divided by current requirements of solenoid.

See Appendix C for smoke detector compatibility data.

#### Program #31 Mode

- 1. Apply power to panel.
- 2. Press ENT to enter PROGRAM mode
- 3. Press 6 or scroll down to #6 and press ENT, (The selection is indicated by a flashing arrow next to the number.
- 4. Enter the password. (Factory default is 1111)
- 5. Press 1 or press ENT. (1 should be the highlighted selection)
- 6. The display shows the current program number. Press 31 to change to program 31. Press ENT.
- 7. Press 1 to accept the change.
- 8. Press ENT to accept the change.

Failsafe Operation			PRO	OGRAM #31							
Single zone activation		CONVENTIONAL INPUT ZONES									
Two solenoids, one is Normally Energized	#1	#2	#3	#4	#5	#6	#7				
OUTPUTS	VALVE TAMPER SUPERVISORY	LOW AIR SUPERVISORY	CONVENTIONAL DETECTION	CONVENTIONAL DETECTION	SUPERVISORY	WATER LOW	MANUAL RELEASE				
#1 ALARM INDICATING (General Alarm)			X	X		X	X				
#2 RELEASE NORMALLY ENERGIZED (Failsafe Solenoid, Drops Out on Any System Trouble)			X	X			X				
#3 RELEASE (Solenoid)			X	X			X				
#4 ALARM (waterflow alarm)						X					

Inputs: 3 Supervisory zones, 2 conventional detection zones, 1 Waterflow zone, 1 Manual release zone

Outputs: 1 General alarm Indicating, 1 Release Circuit: Normally Energized. Failsafe, De-energizes on any system

trouble, 1 Release Circuit: Normally Not Energized, 1 Waterflow alarm output.

Operation: Output 2 is constantly energized. Any trouble condition on the panel will de-energize output 2. Activation of

Supervisory zone 1, zone 2 or Low Diaphragm water Pressure zone 5, will create a supervisory condition on the

panel.

Activation of Conventional Detection zone 3 or zone 4, or Manual Release zone 7 will activate General alarm

output 1, De-energize output 2 and energize/activate release output 3.

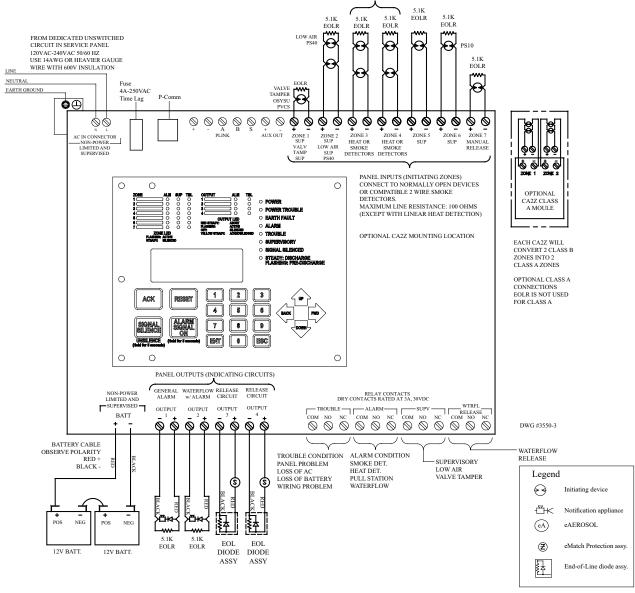
Activation of Waterflow zone 6 will activate General alarm output 1 and Waterflow alarm output 4.

Activation of Manual Release zone #7 will activate General alarm output 1, de-energize failsafe release output 2

and energize/activate release output #3.

Double Interlock with Redundant Solenoids Crossed Zone - 3 Supervisory zones, 2 OBSERVE POLARITY WHEN CONNECTING SMOKE DETECTORS

Detection zones, 1 Waterflow zone, 1 Manual Release zone



#### NOTES:

- Connect only UL Listed 24VDC devices to indicating
- Connect EOL Diode assembly IN SERIES with solenoid on release circuit
- Install EOLR (provided) on all unused circuits. 3.
- Polarity is shown on indicating circuits in an activated (off-normal) condition.
- Polarity reverses when output is activated.
- Maximum current per output is 3 Amp. Maximum voltage is 33VDC.
- Outputs identified as Release are Special Application. All other outputs are Regulated 24 VDC, Rated 3 Amp each, 3 Amp total for all 4 circuits.
- All initiating and NAC/Release circuits are supervised and power limited. See Main Board Wiring Specifications for wire routing instructions. All frequencies are continuous.
- Refer to Appendix A for test and maintenance information

10. Maximum resistance on outputs is 10 ohms. Maximum resistance on outputs programmed as releasing, is 1 divided by current requirements of solenoid.

See Appendix C for smoke detector compatibility data.

#### Program #32 Mode

- 1. Apply power to panel.
- 2. Press ENT to enter PROGRAM mode
- 3. Press 6 or scroll down to #6 and press ENT, (The selection is indicated by a flashing arrow next to the number.
- 4. Enter the password. (Factory default is 1111)
- 5. Press 1 or press ENT. (1 should be the highlighted selection)
- 6. The display shows the current program number. Press 32 to change to program 32. Press ENT.
- 7. Press 1 to accept the change.
- 8. Press ENT to accept the change.

Double Interlock with				PRO	OGRAM #32				
Redundant Solenoids Cross Zoned Activation		CONVENTIONAL INPUT ZONES							
Zoned Activation	#1	#2	#3	#4	#5	#6	#7	#8	#9
OUTPUTS	Low Air Supervisory	Valve Tamper	Conventional Detection	Conventional Detection	Low Air Alarm	Waterflow	Manual Release	Release Zone Type	Release Zone Type
#1 GENERAL ALARM			X	X		X	X	X	X
#2 WATERFLOW ALARM						X			
#3 RELEASE SOLENOID			XX	XX	XX Either Zones 3 &5 or 4&5		X	XX*	XX*
#4 RELEASE SOLENOID			XX	XX	XX Either Zones 3 &5 or 4&5		X	XX*	XX*

<sup>\*</sup> Release Outputs which are Cross-Zoned need a Software Zone in order to work properly. The Software Zone Number will be displayed upon a release.

SUP 1 defaults to abort

XX = Cross-Zoned

Inputs: 3 Supervisory zones, 2 Detection zones, 1 Waterflow zone, 1 Manual Release zone

Outputs: 1 General Alarm, 1 Waterflow, 2 Release Solenoids

Operation: Activation of any supervisory zone or Low Air Alarm zone will create a supervisory condition on the panel, no

outputs will activate

Activation of Conventional Detection zone 3 and/or 4 will activate General Alarm output 1

Activation of either Conventional Detection zone 3 OR 4 AND Low Air Alarm zone 5 will activate General

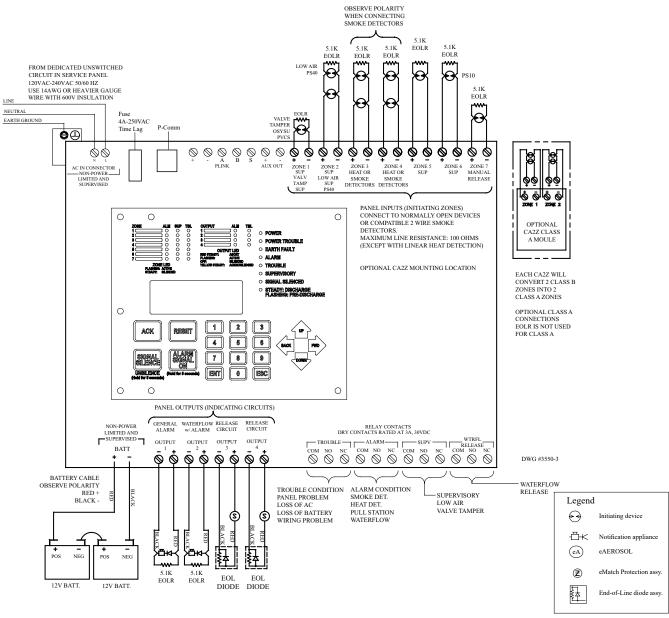
Alarm output 1 and Release Solenoid outputs 3 and 4.

Activation of Waterflow zone 6 will activate General alarm output 1 and Waterflow output 2.

Activation of Manual Release zone #7 will activate General Alarm output 1 and Release Solenoid outputs 3 and

4.

# Redundant Solenoids Single Interlock with Single Zone Activation



#### NOTES:

- Connect only UL Listed 24VDC devices to indicating circuits.
- Connect EOL Diode assembly IN SERIES with solenoid on release circuit
- 3. Install EOLR (provided) on all unused circuits.
- 4 Polarity is shown on indicating circuits in an activated (off-normal) condition.
- 5. Polarity reverses when output is activated.
- Maximum current per output is 3 Amp. Maximum voltage is 33VDC.
- 7. Outputs identified as Release are Special Application. All other outputs are Regulated 24 VDC, Rated 3 Amp each, 3 Amp total for all 4 circuits.
- All initiating and NAC/Release circuits are supervised and power limited. See Main Board Wiring Specifications for wire routing instructions. All frequencies are continuous.
- 9. Refer to Appendix A for test and maintenance information

10. Maximum resistance on outputs is 10 ohms. Maximum resistance on outputs programmed as releasing, is 1 divided by current requirements of solenoid.

See Appendix C for smoke detector compatibility data.

#### Program #33 Mode

- 1. Apply power to panel.
- 2. Press ENT to enter PROGRAM mode
- 3. Press 6 or scroll down to #6 and press ENT, (The selection is indicated by a flashing arrow next to the number.
- 4. Enter the password. (Factory default is 1111)
- 5. Press 1 or press ENT. (1 should be the highlighted selection)
- 6. The display shows the current program number. Press 33 to change to program 33. Press ENT.
- 7. Press 1 to accept the change.
- 8. Press ENT to accept the change.

Redundant Solenoids			PI	ROGRAM #33			
Single Interlock with Single				ZONES		,	
Zone Activation	#1	#2	#3	#4	#5	#6	#7
OUTPUTS	Low Air Supervisory	Valve Tamper	Conventional Detection	Conventional Detection	Low Air Alarm	Waterflow	Manual Release
#1 GENERAL ALARM			X	X		X	X
#2 WATERFLOW ALARM						X	
#3 RELEASE SOLENOID			X	X			X
#4 RELEASE SOLENOID			X	X			X

Inputs: 3 Supervisory zones, 2 Detection zones, 1 Waterflow zone, 1 Manual Release zone

Outputs: 1 General Alarm, 1 Waterflow, 2 Release Solenoids

Operation: Activation of any supervisory zone or Low Air Alarm zone will create a supervisory condition on the panel, no

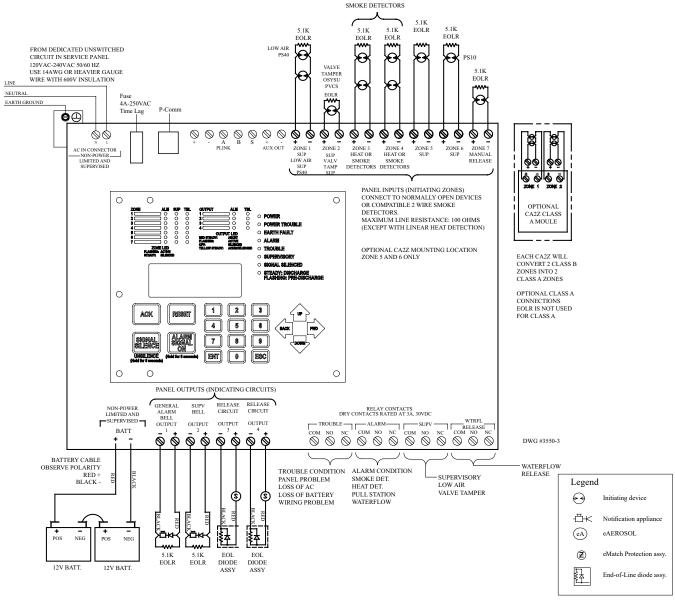
outputs will activate

Activation of Conventional Detection zone 3 and/or 4 and/or Manual Release zone 7 will activate General

Alarm output 1 and Release Solenoid outputs 3 and 4

Activation of Waterflow zone 6 will activate General alarm output 1 and Waterflow output 2

# Wiring Diagram Program #34 Single Hazard Latching Solenoid with Remote reset



OBSERVE POLARITY

#### NOTES:

- Connect only UL Listed 24VDC devices to indicating circuits.
- Connect EOL Diode assembly IN SERIES with solenoid on release circuit
- 3. Install EOLR (provided) on all unused circuits.
- 4 Polarity is shown on indicating circuits in an activated (off-normal) condition.
- 5. Polarity reverses when output is activated.
- Maximum current per output is 3 Amp. Maximum voltage is 33VDC.
- 7. Outputs identified as Release are Special Application. All other outputs are Regulated 24 VDC, Rated 3 Amp each, 3 Amp total for all 4 circuits.
- All initiating and NAC/Release circuits are supervised and power limited. See Main Board Wiring Specifications for wire routing instructions. All frequencies are continuous.
- 9. Refer to Appendix A for test and maintenance information

 Maximum resistance on outputs is 10 ohms. Maximum resistance on outputs programmed as releasing, is 1 divided by current requirements of solenoid.

See Appendix C for smoke detector compatibility data.

#### Program #34 Mode

- 1. Apply power to panel.
- 2. Press ENT to enter PROGRAM mode
- 3. Press 6 or scroll down to #6 and press ENT, (The selection is indicated by a flashing arrow next to the number.
- 4. Enter the password. (Factory default is 1111)
- 5. Press 1 or press ENT. (1 should be the highlighted selection)
- 6. The display shows the current program number. Press 1 to change to program 1. Press ENT.
- 7. Press 1 to accept the change.
- 8. Press ENT to accept the change.

Single Zone Activation:			PF	ROGRAM #34			
Latching Solenoid				ZONES			
Remote Solenoid Reset	#1	#2	#3	#4	#5	#6	#7
OUTPUTS	Low Air	Valve	Conventional	Conventional	Valve Reset	Waterflow	Manual
	Supervisory	Tamper	Detection	Detection	Supervisory		Release
#1 GENERAL ALARM			X	X			X
#2 RELEASE SOLENOID (2 second pulse)			X	X			X
#3 SOLENOID RESET (2 second pulse)					X		
#4 WATERFLOW BELL						X	

Inputs: 2 Supervisory zones, 2 conventional detection zones, 1 Waterflow zone, 1 Manual release zone, 1 Valve Reset

zone

Outputs: 1 General alarm Indicating, 1 Release circuit, 1 Valve Reset circuit, 1 Waterflow Bell Operation: Activation of Supervisory zone 1 or 2 will create a supervisory condition on the panel

Activation of Conventional Detection zone 3 or 4 will activate General alarm output 1 and temporarily activate

release output 2 for two seconds

Activation of Valve Reset zone 5 will temporarily activate release output 3 to reset the solenoid on the preaction

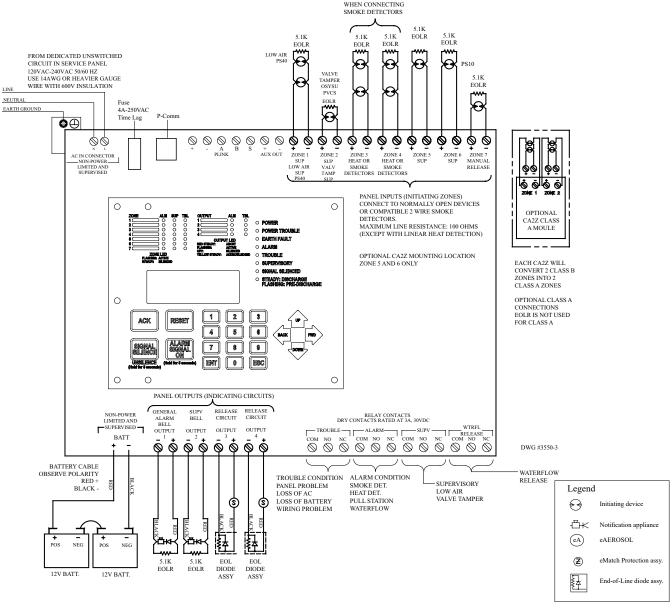
valve and create a supervisory condition

Activation of Waterflow zone 6 will activate the waterflow bell output 4

Activation of Manual Release zone #7 will activate General alarm output 1 and temporarily energize release

output #2

# Single Hazard Latching Solenoid Cross Zoned with Remote reset



OBSERVE POLARITY

#### NOTES:

- 1. Connect only UL Listed 24VDC devices to indicating
- 2. Connect EOL Diode assembly IN SERIES with solenoid on release circuit
- 3. Install EOLR (provided) on all unused circuits.
- 4 Polarity is shown on indicating circuits in an activated (off-normal) condition.
- 5. Polarity reverses when output is activated.
- 6. Maximum current per output is 3 Amp. Maximum voltage is 33VDC.
- Outputs identified as Release are Special Application. All other outputs are Regulated 24 VDC, Rated 3 Amp each, 3 Amp total for all 4 circuits.
- 8. All initiating and NAC/Release circuits are supervised and power limited. See Main Board Wiring Specifications for wire routing instructions. All frequencies are continuous.
- 9. Refer to Appendix A for test and maintenance information

10. Maximum resistance on outputs is 10 ohms. Maximum resistance on outputs programmed as releasing, is 1 divided by current requirements of solenoid.

See Appendix C for smoke detector compatibility data.

#### Program #35 Mode

- 1. Apply power to panel.
- 2. Press ENT to enter PROGRAM mode
- 3. Press 6 or scroll down to #6 and press ENT, (The selection is indicated by a flashing arrow next to the number.
- 4. Enter the password. (Factory default is 1111)
- 5. Press 1 or press ENT. (1 should be the highlighted selection)
- 6. The display shows the current program number. Press 1 to change to program 1. Press ENT.
- 7. Press 1 to accept the change.
- 8. Press ENT to accept the change.

Latching Solenoid		PROGRAM #35									
Cross Zoned		CONVENTIONAL INPUT ZONES									
	#1	#2	#3	#4	#5	#6	#7	#8			
OUTPUTS	VALVE TAMPER SUPERVISORY	LOW AIR SUPERVISORY	CONVENTIONAL DETECTION	LOW AIR ALARM	VALVE RESET SUPERVISORY	WATER FLOW	MANUAL RELEASE	RELEASE ZONE TYPE			
#1 GENERAL ALARM			X				X	X			
#2 RELEASE SOLENOID (2 second pulse)			XX	XX			X	XX*			
#3 SOLENOID RESET (2 second pulse)					X						
#4 WATERFLOW BELL						X					

<sup>\*</sup> Release Outputs which are Cross-Zoned need a Pseudo Zone in order to work properly. The Pseudo Zone Number will be displayed upon a release.

SUP 1 defaults to abort XX = Cross-Zoned

Inputs: 2 Supervisory zones, 1 conventional detection zone, 1 Low Air Alarm zone, 1 Waterflow zone, 1 Manual release

zone, 1 Valve reset zone

Outputs: 1 General alarm Indicating, 1 Release circuit, 1 Valve Reset circuit, 1 Waterflow Bell

Operation: Activation of Conventional Detection zone #3 and Low Air Alarm zone #4 at the same time or activation of

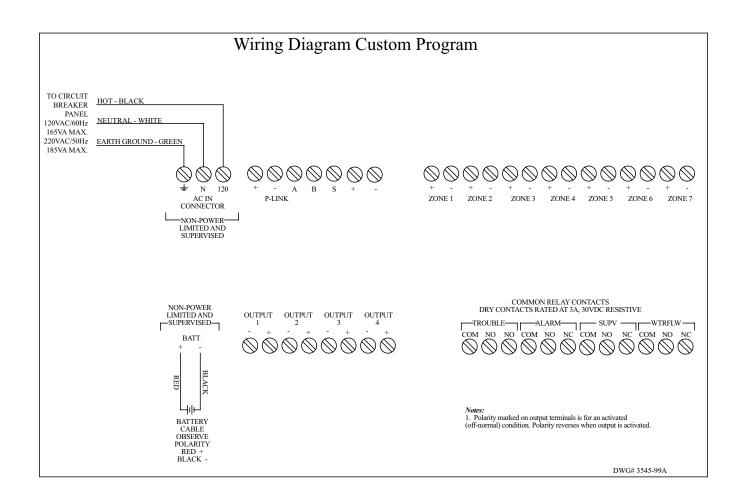
Manual Release zone #7 will activate and energize release output #2

Activation of Low Air Alarm zone 4 will create a supervisory condition on the panel

Activation of Valve Reset zone 5 will reset the solenoid on the preaction valve for two seconds

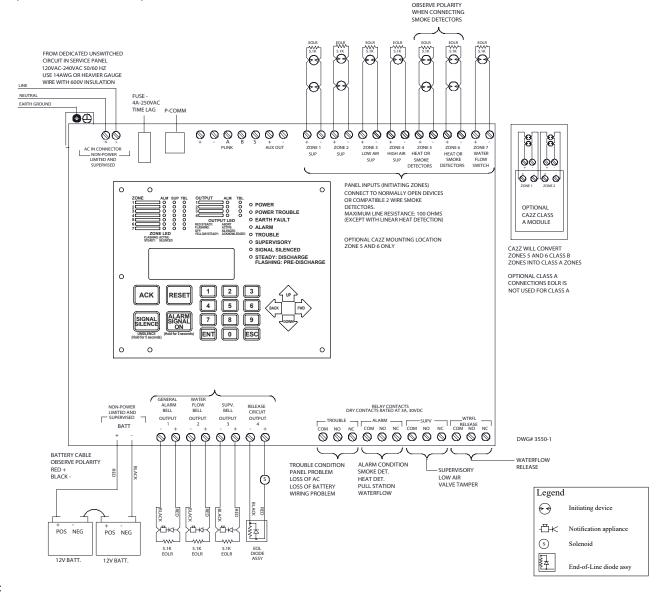
Activation of Waterflow zone 6 will activate the waterflow bell output 4

CUSTOM PROGRAM												
		CONVENTIONAL ZONES										
	#1	#1 #2 #3 #4 #5 #6 #7										
OUTPUTS												
#1												
#2												
#3												
#4												



# THIS PAGE INTENTIONALLY LEFT BLANK

Wiring Diagram Program #50 Single Interlock, Non-Interlock Preacton, or Double Interlock (Electric/Pneumatic): One or Two Zones



#### NOTES:

- Connect only UL Listed 24VDC devices to indicating circuits
- Connect EOL Diode assembly IN SERIES with solenoid on release circuit
- 3. Install EOLR (provided) on all unused circuits.
- 4 Polarity is shown on indicating circuits in an activated (off-normal) condition.
- 5. Polarity reverses when output is activated.
- 6. Maximum current per output is 3 Amp. Maximum voltage is 33VDC.
- Outputs identified as Release are Special Application. All other outputs are Regulated 24 VDC, Rated 3 Amp each, 3 Amp total for all 4 circuits.
- All initiating and NAC/Release circuits are supervised and power limited. See Main Board Wiring Specifications for wire routing instructions. All frequencies are continuous.
- 9. Refer to Appendix A for test and maintenance information

10. Maximum resistance on outputs is 10 ohms. Maximum resistance on outputs programmed as releasing, is 1 divided by current requirements of solenoid.

See 5403751 for smoke detector compatibility data and Battery Calculation Worksheet for battery information.

#### Program #50 Mode

- 1. Apply power to panel.
- 2. Press ENT to enter PROGRAM mode
- 3. Press 6 or scroll down to #6 and press ENT, (The selection is indicated by a flashing arrow next to the number.
- 4. Enter the password. (Factory default is 1111)
- 5. Press 1 or press ENT. (1 should be the highlighted selection)
- 6. The display shows the current program number. Press 50 to change to program 50. Press ENT.
- 7. Press 1 to accept the change.
- 8. Press ENT to accept the change.

Single Interlock, Non-Interlock Preacton, or Double Interlock	PROGRAM #50								
(Electric/Pneumatic): One or Two Zones	#1	#2	#3	PUT ZONES #4	#5	#6	#7		
OUTPUTS	Supervisory (Valves)	Supervisory (Solenoid)	Low Air	High Air	Detection	Detection	Waterflow		
#1 ALARM					X	X (OPT)			
#2 WATERFLOW							X		
#3 SUPERVISORY	X	X	X	X					
#4 RELEASE					X	X (OPT)			

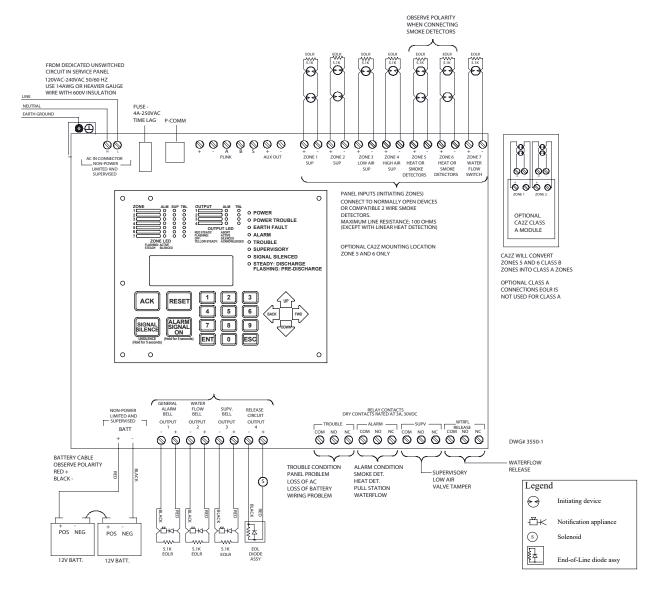
Operation: Activation of Supervisory Input #1 or #2 will operate Supervisory Output #3.

Activation of Low Air Input #3 or High Air Input #4 will operate Supervisory Output #3.

Independent activation of EITHER Detection Input #5 or #6 (if used) will operate Alarm Output #1 and Release Output #4.

Activation of Waterflow Input #7 will operate Water Flow Output #2.

Wiring Diagram Program #51 Single Interlock, Non-Interlock Preaction, or Double Interlock (Electric/Pneumatic): Cross Zoned



#### NOTES:

- Connect only UL Listed 24VDC devices to indicating circuits.
- 2. Connect EOL Diode assembly IN SERIES with solenoid on release circuit
- 3. Install EOLR (provided) on all unused circuits.
- 4 Polarity is shown on indicating circuits in an activated (off-normal) condition.
- 5. Polarity reverses when output is activated.
- Maximum current per output is 3 Amp. Maximum voltage is 33VDC.
- 7. Outputs identified as Release are Special Application. All other outputs are Regulated 24 VDC, Rated 3 Amp each, 3 Amp total for all 4 circuits.
- All initiating and NAC/Release circuits are supervised and power limited. See Main Board Wiring Specifications for wire routing instructions. All frequencies are continuous.
- 9. Refer to Appendix A for test and maintenance information

10. Maximum resistance on outputs is 10 ohms. Maximum resistance on outputs programmed as releasing, is 1 divided by current requirements of solenoid.

See 5403751 for smoke detector compatibility data and Battery Calculation Worksheet for battery information.

#### Program #51 Mode

- 1. Apply power to panel.
- 2. Press ENT to enter PROGRAM mode
- 3. Press 6 or scroll down to #6 and press ENT, (The selection is indicated by a flashing arrow next to the number.
- 4. Enter the password. (Factory default is 1111)
- 5. Press 1 or press ENT. (1 should be the highlighted selection)
- 6. The display shows the current program number. Press 51 to change to program 51. Press ENT.
- 7. Press 1 to accept the change.
- 8. Press ENT to accept the change.

Single Interlock, Non-	PROGRAM #51									
Interlock Preaction, or Double Interlock (Electric/	CONVENTIONAL INPUT ZONES									
Pneumatic): Cross Zoned	#1	#2	#3	#4	#5	#6	#7	#8		
OUTPUTS	Supervisory (Valves)	Supervisory (Solenoid)	Low Air	High Air	Detection	Detection	Waterflow	Release Zone		
#1 ALARM					X	X		X		
#2 WATERFLOW							X			
#3 SUPERVISORY	X	X	X	X						
#4 RELEASE					XX	XX		XX*		

<sup>\*</sup> Release Outputs which are Cross-Zoned need a Software Zone in order to work properly. The Software Zone Number will be displayed upon a release.

XX = Cross-Zoned

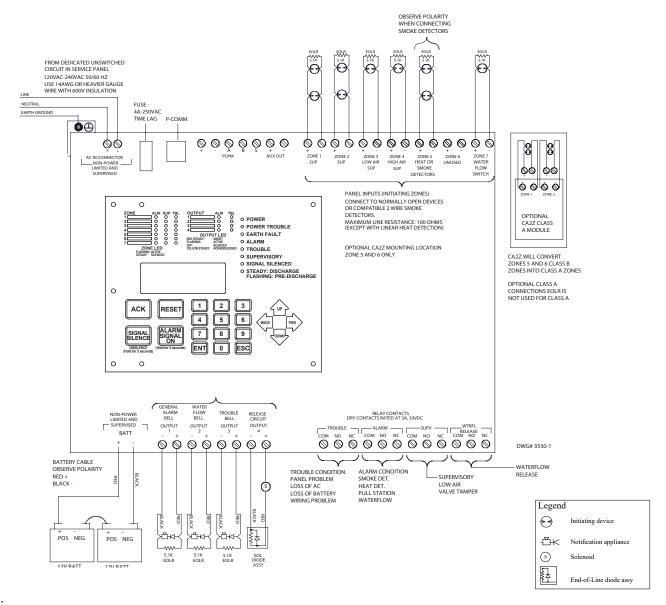
Operation:

Activation of Supervisory Input #1 or #2 will operate Supervisory Output #3.

Activation of the Low Air Input #3 or High Air Input #4 will operate Supervisory Output #3. Independent activation of EITHER Detection Zone #5 or #6 will operate Alarm Output Zone #1. Simultaneous activation of BOTH Detection Input #5 AND #6 will operate Release Output #4.

Activation of Waterflow Input #7 will operate Water Flow Output #2.

### Single Interlock: New York City Custom



#### NOTES:

- Connect only UL Listed 24VDC devices to indicating circuits.
- Connect EOL Diode assembly IN SERIES with solenoid on release circuit
- 3. Install EOLR (provided) on all unused circuits.
- 4 Polarity is shown on indicating circuits in an activated (off-normal) condition.
- 5. Polarity reverses when output is activated.
- Maximum current per output is 3 Amp. Maximum voltage is 33VDC.
- Outputs identified as Release are Special Application. All other outputs are Regulated 24 VDC, Rated 3 Amp each, 3 Amp total for all 4 circuits.
- All initiating and NAC/Release circuits are supervised and power limited. See Main Board Wiring Specifications for wire routing instructions. All frequencies are continuous.
- 9. Refer to Appendix A for test and maintenance information.

10. Maximum resistance on outputs is 10 ohms. Maximum resistance on outputs programmed as releasing, is 1 divided by current requirements of solenoid.

See 5403751 for smoke detector compatibility data and Battery Calculation Worksheet for battery information.

#### Program #52 Mode

- 1. Apply power to panel.
- 2. Press ENT to enter PROGRAM mode
- 3. Press 6 or scroll down to #6 and press ENT, (The selection is indicated by a flashing arrow next to the number.
- 4. Enter the password. (Factory default is 1111)
- 5. Press 1 or press ENT. (1 should be the highlighted selection)
- 6. The display shows the current program number. Press 52 to change to program 52. Press ENT.
- 7. Press 1 to accept the change.
- 8. Press ENT to accept the change.

Single Interlock:	PROGRAM #52									
New York City Custom		INPUT ZONES								
	#1	#1 #2 #3 #4 #5 #6 #7								
OUTPUTS	Supervisory (Valves)	Supervisory (Solenoid)	Low Air	High Air	Detection	Detection	Waterflow	Trouble Zone		
#1 ALARM					X	Not Used	X			
#2 TROUBLE	F	Panel Trouble Conditions Mapped to Output #2 for New York City								
#3 SUPERVISORY	X	X	X	X		N-4 I I J				
#4 RELEASE					X	Not Used				

<sup>\*</sup>Trouble Output needs a Software Trouble Zone Type in order to work properly. The Software Zone Number will be displayed upon a release.

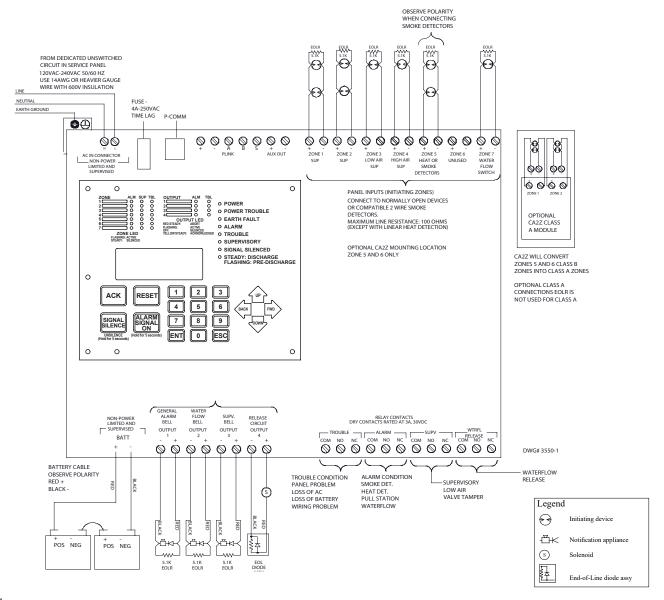
Operation: Activation of Supervisory Input #1 or #2 will operate Supervisory Output #3...

Activation of Low Air Input #3 or High Air Input #4 will operate Supervisory Output #3. Activation of Detection Input #5 will operate Alarm Output #1 and Release Output #4.

Activation of Waterflow Input #7 will operate Alarm output 1.

Activation of tany trouble condition with the panel will operate Trouble Output #2

(Electric/Electric) Double Interlock: One Zone



# NOTES:

- 1. Connect only UL Listed 24VDC devices to indicating circuits.
- Connect EOL Diode assembly IN SERIES with solenoid on release circuit
- 3. Install EOLR (provided) on all unused circuits.
- 4 Polarity is shown on indicating circuits in an activated (off-normal) condition.
- 5. Polarity reverses when output is activated.
- Maximum current per output is 3 Amp. Maximum voltage is 33VDC.
- Outputs identified as Release are Special Application. All
  other outputs are Regulated 24 VDC, Rated 3 Amp each, 3
  Amp total for all 4 circuits.
- All initiating and NAC/Release circuits are supervised and power limited. See Main Board Wiring Specifications for wire routing instructions. All frequencies are continuous.
- 9. Refer to Appendix A for test and maintenance information

10. Maximum resistance on outputs is 10 ohms. Maximum resistance on outputs programmed as releasing, is 1 divided by current requirements of solenoid.

See 5403751 for smoke detector compatibility data and Battery Calculation Worksheet for battery information.

#### Program #53 Mode

- 1. Apply power to panel.
- 2. Press ENT to enter PROGRAM mode
- 3. Press 6 or scroll down to #6 and press ENT, (The selection is indicated by a flashing arrow next to the number.
- 4. Enter the password. (Factory default is 1111)
- 5. Press 1 or press ENT. (1 should be the highlighted selection)
- 6. The display shows the current program number. Press 53 to change to program 53. Press ENT.
- 7. Press 1 to accept the change.
- 8. Press ENT to accept the change.

(Electric/Electric)	PROGRAM #53									
Double Interlock: One Zone		INPUT ZONES								
	#1	#1 #2 #3 #4 #5 #6 #7								
OUTPUTS	Supervisory (Valves)	Supervisory (Solenoid)	Low Air	High Air	Detection	Detection	Waterflow	Release Zone		
#1 ALARM					X			X		
#2 WATERFLOW						Not	X			
#3 SUPERVISORY	X	X	X	X		Used				
#4 RELEASE			XX		XX			XX*		

<sup>\*</sup> Release Outputs which are Cross-Zoned need a Software Zone in order to work properly. The Software Zone Number will be displayed upon a release.

#### XX = Cross-Zoned

Operation:

Activation of tSupervisory Input #1 or #2 will operate Supervisory Output #3.

Independent activation of Low Air Input #3 or activation of High Air Input #4 will operate

Supervisory Output #3.

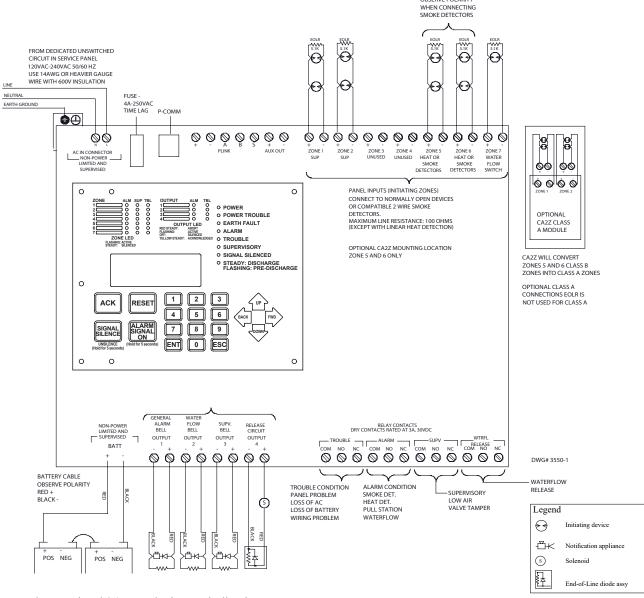
Activation of Detetion Input #5 will operate Alarm Output #1.

Simultaneous activation of BOTH Detection Input #5 AND Low Air Input #3 will operate Release

Output #4.

Activation of Waterflow Input #7 will operate Water Flow Output #2.

Electric Release Deluge: One or Two Zones



#### NOTES:

- Connect only UL Listed 24VDC devices to indicating circuits.
- 2. Connect EOL Diode assembly IN SERIES with solenoid on release circuit
- 3. Install EOLR (provided) on all unused circuits.
- 4 Polarity is shown on indicating circuits in an activated (off-normal) condition.
- 5. Polarity reverses when output is activated.
- Maximum current per output is 3 Amp. Maximum voltage is 33VDC.
- Outputs identified as Release are Special Application. All
  other outputs are Regulated 24 VDC, Rated 3 Amp each, 3
  Amp total for all 4 circuits.
- 8. All initiating and NAC/Release circuits are supervised and power limited. See Main Board Wiring Specifications for wire routing instructions. All frequencies are continuous.
- 9. Refer to Appendix A for test and maintenance information

10. Maximum resistance on outputs is 10 ohms. Maximum resistance on outputs programmed as releasing, is 1 divided by current requirements of solenoid.

OBSERVE POLARITY

See 5403751 for smoke detector compatibility data and Battery Calculation Worksheet for battery information.

#### Program #54 Mode

- 1. Apply power to panel.
- 2. Press ENT to enter PROGRAM mode
- 3. Press 6 or scroll down to #6 and press ENT, (The selection is indicated by a flashing arrow next to the number.
- 4. Enter the password. (Factory default is 1111)
- 5. Press 1 or press ENT. (1 should be the highlighted selection)
- 6. The display shows the current program number. Press 54 to change to program 54. Press ENT.
- 7. Press 1 to accept the change.
- 8. Press ENT to accept the change.

Electric Release	PROGRAM #54											
Deluge: One or Two		INPUT ZONES										
Zones	#1	#2	#3	#4	#5	#6	#7					
OUTPUTS	Supervisory (Valves)	Supervisory (Solenoid)	Low Air	High Air	Detection	Detection	Waterflow					
#1 ALARM					X	X (OPT)						
#2 WATERFLOW			Not Used	Not Hand			X					
#3 SUPERVISORY	X	X	Not Used	Not Used								
#4 RELEASE					X	X (OPT)						

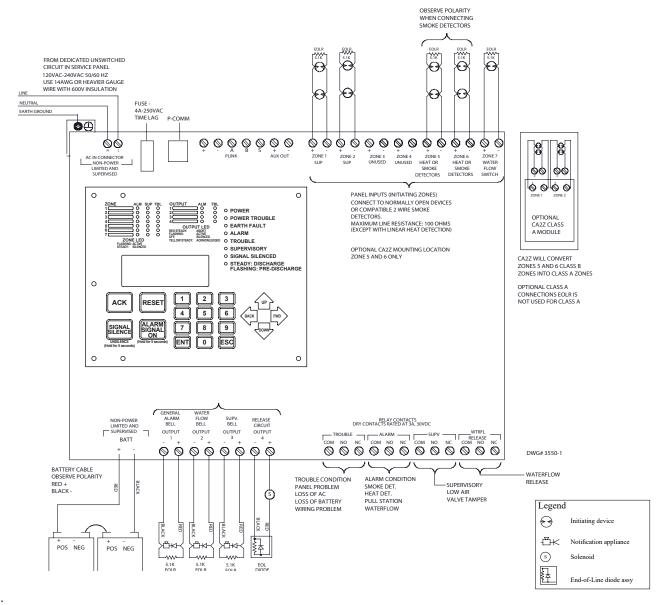
Activation of Supervisory Input #1 or #2 will operate Supervisory Output #3. Operation:

Independent activation of EITHER Detection Input #5 or #6 (if used) will operate Alarm Output

When either zone 3 or 4 is in alarm, outputs 1 & 3 will operate #1 and Release Output #4.

Activation of Waterflow Input #7 will operate Water Flow Output #2.

# Wiring Diagram Program #55 Electric Release Deluge: Cross Zoned



#### NOTES:

- Connect only UL Listed 24VDC devices to indicating circuits.
- 2. Connect EOL Diode assembly IN SERIES with solenoid on release circuit
- 3. Install EOLR (provided) on all unused circuits.
- 4 Polarity is shown on indicating circuits in an activated (off-normal) condition.
- 5. Polarity reverses when output is activated.
- Maximum current per output is 3 Amp. Maximum voltage is 33VDC.
- Outputs identified as Release are Special Application. All
  other outputs are Regulated 24 VDC, Rated 3 Amp each, 3
  Amp total for all 4 circuits.
- 8. All initiating and NAC/Release circuits are supervised and power limited. See Main Board Wiring Specifications for wire routing instructions. All frequencies are continuous.
- 9. Refer to Appendix A for test and maintenance information

10. Maximum resistance on outputs is 10 ohms. Maximum resistance on outputs programmed as releasing, is 1 divided by current requirements of solenoid.

See 5403751 for smoke detector compatibility data and Battery Calculation Worksheet for battery information.

#### Program #55 Mode

- 1. Apply power to panel.
- 2. Press ENT to enter PROGRAM mode
- 3. Press 6 or scroll down to #6 and press ENT, (The selection is indicated by a flashing arrow next to the number.
- 4. Enter the password. (Factory default is 1111)
- 5. Press 1 or press ENT. (1 should be the highlighted selection)
- 6. The display shows the current program number. Press 55 to change to program 55. Press ENT.
- 7. Press 1 to accept the change.
- 8. Press ENT to accept the change.

Electric Release	PROGRAM #55									
Deluge: Cross Zoned		CONVENTIONAL INPUT ZONES								
	#1	#1 #2 #3 #4 #5 #6 #7						#8		
OUTPUTS	Supervisory (Valves)	Supervisory (Solenoid)	Low Air	High Air	Detection	Detection	Waterflow	Release Zone		
#1 ALARM					X	X		X		
#2 WATERFLOW			NI ATT I	N. a II 1			X			
#3 SUPERVISORY	X	X	Not Used	Not Used						
#4 RELEASE					XX	XX		XX*		

<sup>\*</sup> Release Outputs which are Cross-Zoned need a Software Zone in order to work properly. The Software Zone Number will be displayed upon a release.

XX = Cross-Zoned

Operation: Activation of Supervisory Input #1 or #2 will operate Supervisory Output #3.

Independent activation of EITHER Detection Input #5 or #6 will operate Alarm Output #1

Simultaneous activation of BOTH Detection Input #5 AND #6 will operate and Release Output #4.

Activation of Waterflow Input #7 will operate Water Flow Output #2.