City of Aurora
Building Codes Division
15151 E Alameda Pkwy
Aurora, CO 80012
(303) 739-7420

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Building Permit Application

Permit Center - 15151 E Alameda Pkwy ✣ Ste 2400 ✣ Aurora, CO 80012 ✣ (303)739-7420
Email buildingplans@auroragov.org

Project Address: 1501 South Potomic St. Unit # Zip code: 80012

Project Name: MCOA

Contractor Company Name: Simplex Grinnell Phone: 303.355.0500 x4 Fax: 303.355.0603

Contact Person: Peter Herring Phone: 303.961.9339 cell

Email: Pherring@SimplexGrinnell Fax:

Architect and/or Engineer Contact information for correction items:

Architect or Engineer Name: Simplex Grinnell / Todd Stewart Email: ~~Pherring@SimplexGrinnell.com~~

Phone #: 303.355.0500 x3 Fax #: TAstewart@SimplexGrinnell.com (Todd Stewart 303.961.2749 cell.)

Owner: (Required for Certificate of Occupancy) only: MCOA

Owner address: Same as Proj Address

Email: TOstewart@SimplexGrinnell.com

Valuation / FDA$** ~~$~~3,700.00 **Materials cost $ 780.00

FDA = Fee Determination Assessment. (Also known as the value of project. The Fee Determination Assessment, FDA has no relationship to the construction costs for the building which can vary greatly Rather, the Assessment is used only to determine the appropriate level of fees to fund our code compliance activities.

Describe the work you will be doing: Adding (3) three smoke detectors and relocating (4) four smoke detectors at existing fire shutter doors (1) Elev. Lobby 1st Flr. Reprogramming Sequence of Operation to allow the specific smks outside existing fire shutter doors to close only when the specific smoke detectors activate instead on general Alarm.

I declare under penalty that this application has been examined by me; and that the statements made herein are made in good faith pursuant to City of Aurora tax and licensing regulations; and to the best of my knowledge and belief are true, correct and complete.

Print Name: Peter Herring **Signature:** [signature] **Date:** 01/12/12

BOARD OF APPEALS - Contractor's Appeals and Standards Board. Applicants have the right to have the board hear appeals of orders, decisions or determinations made by the building official relative to the application and interpretation of the building code. Any application for appeal to the board shall be based on a claim that the true intent of the code or the rules legally adopted there under have been incorrectly interpreted, the provisions of the building code do not fully apply or an equally good or better form of construction is proposed.

Sprinkler & Alarm permits are separate submittals, and the value is NOT included on main permit.

◆◆◆◆ THIS SPACE FOR OFFICE USE ONLY ◆◆◆◆

Change of occupancy/use: ☐ Yes ☐ No

FDA:

Reviews		Inspections	
☐	Structural	☐	Structural
☐	Mechanical	☐	Mechanical
☐	Plumbing	☐	Plumbing
☐	Electrical	☐	Electrical
☒	Fire Life Safety	☒	Life Safety
☐	Bldg Life Safety	☐	Gate/Haz.

Intake Date: 1/12/12 PE Initial JP

Balance Due: $

Initials

Pre-approval(s): Zoning: ☐ Water: ☐

Exterior changes? ☐ Yes ☐ No

Homeowner Verified ☐ Yes

Permit Type Limited

Mid roof /Avg. bldg height

Parent Permit RSN

Plans Examiner JP

Sub Type 4X Fire Alarm

RSN: 638043

12 577690

Plans Picked up by
Company Nam
Phone #

See reverse side for Fence/sign/Public Improvements application

12-577690

MEDICAL CENTER OF AURORA
FIRE ALARM SYSTEM SHOP DRAWINGS

BUILDING CLASSIFICATIONS AND CODES

OCCUPANCY GROUP: I-2 USE: INSTITUTIONAL GROUP
STORIES: 6 STORIES TOTAL, PARTIAL 4 STORIES IN SCOPE
SQUARE FOOTAGE: 67,321 SQ. FT. TOTAL, 200 SQ. FT. IN SCOPE
SPRINKLERED: FULLY

APPLICABLE CODES

2007 ~~2003~~ NFPA 72 2009 ~~2006~~ I.F.C.
2011 ~~2008~~ N.E.C. 2009 ~~2005~~ I.M.C.
2009 ~~2006~~ I.B.C.

SYSTEM WIRING TYPES

INITIATING DEVICE CKT: CLASS B (HARDWIRED FROM MONITOR MODULES)
NOTIFICATION APPLIANCE CKT: CLASS B, STYLE Y (HARDWIRED)
SIGNALLING LINE CKT: CLASS B, STYLE 4
NETWORK: CLASS A, STYLE 7

SYSTEM TYPE

SUPERVISING STATION TYPE: CENTRAL STATION
AUDIBLE NOTIFICATION: TEMPORAL
VISUAL NOTIFICATION: PUBLIC

SCOPE OF WORK

THIS PROJECT INVOLVES THE INSTALLATION OR RELOCATION OF ADDRESSABLE SMOKE DETECTORS FOR DOOR RELEASE SERVICE PER NFPA 72. THE SEQUENCE OF OPERATION FOR THIS BUILDING HAS BEEN REVISED TO "RELEASE THE ASSOCIATED ROLL-UP DOORS" SHOWN ON THE ATTACHED DRAWINGS. THE GRAPHIC MAPS FOR THE AFFECTED FLOORS WILL BE UPDATED TO REFLECT THE NEW DEVICES.

NICET CERTIFICATION

TECHNICAL AREA 00303: LEVEL IV
CERTIFICATE #: 109355
VALID THROUGH: 09/01/12

THE DESIGN FOR MEDICAL CENTER OF AURORA – CARRIDAC TOWER WAS PROVIDED BY SIMPLEXGRINNELL. THIS DRAWING SET WAS PREPARED UNDER THE SUPERVISION OF A NICET IV PROFESSIONAL. THE DRAWINGS WERE REVIEWED FOR THE INFORMATION CONTAINED UNDER THE SCOPE OF WORK. ALL EQUIPMENT HAS BEEN VERIFIED TO BE COMPATIBLE AND WILL OPERATE AS REQUIRED PER NFPA GUIDELINES.

JAMES COOLEY — DATE 1/6/12

NICET CERTIFIED

PROJECT:
MCOA CARDIAC TOWER DOOR CONTROL
MEDICAL CENTER OF AURORA SOUTH
1455 SOUTH POTOMAC
AURORA, COLORADO 80012

FIRE ALARM DESIGN ENGINEER:
SIMPLEXGRINNELL
6240 SMITH ROAD
DENVER, COLORADO 80216
303-355-0500

ENGINEER OF RECORD:
SIMPLEXGRINNELL
6240 SMITH ROAD
DENVER, COLORADO 80216
303-355-0500

AURORA FIRE DEPARTMENT GENERAL NOTES

- FIRE ALARM SYSTEMS CANNOT BE COMBINED WITH BURGLAR ALARM SYSTEMS.
- THE INSTALLER IS REQUIRED TO COORDINATE WITH THE MECHANICAL CONTRACTOR TO DETERMINE INSTALLATION OF SMOKE DETECTORS OR SENSORS (i.e., NOT CLOSER THAN 3 FEET FROM ANY SUPPLY/RETURN DIFFUSER AND THAT ADDITIONAL DETECTION MAY BE REQUIRED DUE TO THE RELOCATION OR SPACING ADJUSTMENT OF DETECTORS, AS A RESULT).
- FIRE ALARM DEVICES MUST BE PLACED IN PROTECTED AREAS WITH AMBIENT TEMPERATURE RANGING FROM 32 DEGREES TO 120 DEGREES F.
- DO NOT PLACE SMOKE DETECTORS WITHIN 3 FEET OF AIR SUPPLY REGISTERS AND DIFFUSERS.
- FIRE ALARM SYSTEM SHALL BE MONITORED BY A CLASS 1 CENTRAL STATION.
- FIRE ALARM CONTROL PANEL WILL BE PLACED IN THE LOCATION SPECIFIED WITHIN THE PLAN SUBMITTAL UNLESS APPROVED BY THE LIFE SAFETY FIELD INSPECTOR.
- CITY OF AURORA BUILDING CODES DIVISION DOES NOT GRANT APPROVAL FOR ANY VIOLATIONS OF ADOPTED FIRE CODE. CODE VIOLATIONS UNCOVERED DURING FIELD INSPECTIONS MUST BE CORRECTED.
- PER THE 2009 ~~2006~~ IFC AND THE 2011 ~~2008~~ NEC THE INSTALLER MUST REQUEST A ROUGH WIRING INSPECTION IN THE FIRE ALARM SYSTEM PRIOR TO REQUESTING A FIRE ALARM FINAL INSPECTION.
- THE CONTRACTOR SHALL CONDUCT A "PRE-TEST" OF THE PROJECT AREA PRIOR TO SCHEDULING AN ACCEPTANCE TEST WITH THE BUILDING CODES DIVISION.
- REMOTE ALARM INDICATORS SHALL BE PROVIDED FOR ANY AUTOMATIC FIRE ALARM DETECTOR LOCATED IN A CONCEALED LOCATION WITH A NORMALLY LOCKED DOOR.
- AT THE TIME OF FINAL FIRE ALARM INSPECTION, THE SYSTEM MUST BE SUPERVISED/MONITORED BY A CLASS 1 CENTRAL MONITORING AGENCY.
- THE INSTALLING CONTRACTOR (OR DESIGNEE) MUST PROVIDE ALL NECESSARY TESTING EQUIPMENT AND PERFORM ALL TESTING REQUIRED BY THE LIFE SAFETY FIELD INSPECTOR.
- IN-DUCT SMOKE DETECTORS INSTALLED IN CONCEALED LOCATIONS OR, WHERE THE DETECTOR'S ALARM INDICATOR IS NOT READILY VISIBLE TO RESPONDING PERSONNEL SHALL BE PROVIDED WITH A REMOTE INDICATOR(S), REMOTE TEST STATION AND PLACARDING.
- ALL NEW OR EXISTING FIRE ALARM SYSTEMS MUST BE CONNECTED ANY EXTERIOR HORN AND STROBE APPLIANCE. IF THE BUILDING IS FIRE SPRINKLED, A GENERAL ALARM ACTIVATION AT THE FIRE ALARM CONTROL PANEL WILL ACTIVATE THE EXTERIOR HORN AND STROBE. SILENCING THE PANEL MUST ALLOW THE VISUAL DEVICE TO CONTINUE UNTIL THE PANEL IS RESET.
- FIRE ALARM SYSTEMS SHALL INCLUDE BOTH AUDIBLE AND VISUAL ALARMS. VISUAL ALARMS WILL BE REQUIRED IN ALL ACCESSIBLE PUBLIC AND COMMON-USE AREAS PER THE 2006 IFC AND THE 2003 ANSI A117.1 STANDARD.
- PROVIDE A PRIMARY AND SECONDARY POWER SUPPLY FOR THE FIRE ALARM SYSTEM PER THE 2006 IFC, SECTION 907.5 AND THE 2002 NFPA 72.
- FIELD INSPECTION CONSULTATION IS AVAILABLE UPON REQUEST. CALL 303-739-7420 TO REQUEST CONSULTATION.
- THE FIRE ALARM CONTRACTOR MUST COMPLETE THE NFPA72 "RECORD OF COMPLETION" PRIOR TO SCHEDULING THE AHJ ACCEPTANCE TEST.
- AUDIBLE ALARM SIGNALING DEVICES SHALL EXCEED THE PREVAILING SOUND LEVEL IN A ROOM OR SPACE BY 15 DBA. SOUND LEVELS FOR ALARM SIGNALS SHALL BE 120 DBA MAXIMUM. IFC SECTION 907.10.2.

SHEET INDEX

FIRE ALARM DRAWING INDEX:

FA0.01	COVER SHEET
FA1.01	GENERAL INFORMATION
FA1.02	BATTERY CALCULATION & PERIPHERAL DEVICE DETAILS
FA3.01	1ST, 2ND, 4TH & 5TH PARTIAL FLOOR PLANS
FA5.01-04	GRAPHIC MAPS

REQUIRED INFORMATION LOCATED ON SHEET:

FA0.01	SCOPE OF WORK
FA0.01	APPLICABLE CODES
FA1.01	LEGEND
FA1.01	SEQUENCE OF OPERATION
FA1.01	DEVICE ADDRESSES
FA1.02	BATTERY CALCULATIONS
FA2.01	ONE-LINE RISER DIAGRAM
FA1.02	PERIPHERAL DETAIL WIRING
FA5.01-04	GRAPHIC MAPS

FIRE DEPT./BLDG DEPT. PLAN REVIEW #:

AURORA BUILDING CODES DIVISION
15151 EAST ALAMEDA PARKWAY, 2ND FLR PERMIT CENTER
AURORA, COLORADO 80012
(303) 739-7420

CENTRAL STATION MONITORING SERVICE:

SIMPLEXGRINNELL
50 TECHNOLOGY DRIVE
WESTMINSTER, MA 01441
1 (888) 746-7539

CITY OF AURORA
BUILDING DIVISION
APPROVED AS NOTED JMP
DATE 1/24/12
IFC 2009
NFPA 72 ('07)

PERMIT # 12-577690
BSN # 638043
OCCUPANCY TYPE I-2
CONST. TYPE
SQUARE FOOT 200
CODES REV'D NFPA 72 ('07)
IFC 2009

NFPA MEMBER 11-12

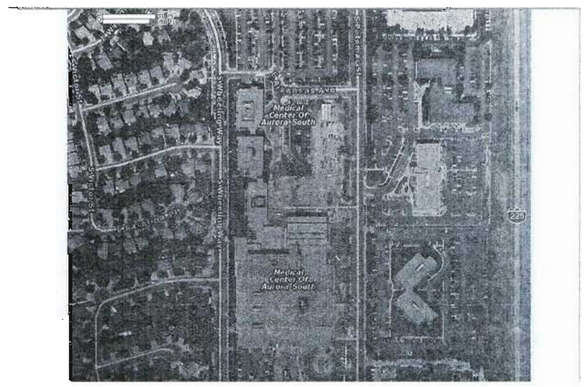
SimplexGrinnell
6240 Smith Road
Denver, Colorado 80216
(303) 355-0500 (Sales/Service)
(303) 355-0615 (Fax)
http://www.SimplexGrinnell.com

Project Manager: Pete Herring
Design Manager: James Cooley
Project Coordinator: Barb Hufford

12-577690

tyco / Fire & Security

SITE PLAN



tyco / Fire & Security
6240 SMITH ROAD
DENVER, COLORADO 80216
SALES: (303) 355-0500
SERVICE: (303) 355-0500
FAX: (303) 355-0615

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NO.	DATE	REVISION DESCRIPTION

FIRE ALARM SYSTEM FOR:
MCOA CARDIAC TOWER DOOR CONTROL
MEDICAL CENTER OF AURORA SOUTH
1501 SOUTH POTOMAC
AURORA, COLORADO 80012

DRAWN BY: CPM	DATE: 01/05/12
DESIGNED BY: TAS	DATE: 01/05/12
APPROVED BY: JWC	DATE: 01/05/12
PROJECT #: 959791404	
SCALE: N.T.S.	
SHEET TITLE: COVER SHEET	
SHEET NUMBER: FA0.01	

GENERAL NOTES

1. THE FIRE ALARM CONTRACTOR WILL PROVIDE 48 HOUR NOTICE TO THE OWNER AND TESTING AGENCY FOR ALL TESTING REQUIRED. THE AUTHORITY HAVING JURISDICTION SHALL BE NOTIFIED OF THE DATE AND TIME OF THE FINAL FIRE ALARM TESTING, AND SHALL ASSIST/WITNESS SUCH TESTING WHEN ABLE.
2. THE FIRE ALARM CONTRACTOR SHALL PROVIDE A COMPLETED AND SIGNED "RECORD OF COMPLETION" TO THE INSPECTOR OF RECORD AFTER COMPLETION OF OPERATIONAL ACCEPTANCE TESTS.
3. A STAMPED SET OF APPROVED FIRE ALARM DRAWINGS SHALL BE AT THE JOB SITE AND SHALL BE USED FOR INSTALLATION.
4. THE POWER CIRCUIT TO THE FACP AND TO THE FIRE ALARM POWER SUPPLIES SHALL BE ON A DEDICATED 120V, 20A BRANCH CIRCUIT BREAKER, AND SHALL HAVE A RED MARKING, LOCK-ON PROVISION AND SHALL BE IDENTIFIED AS "FIRE ALARM CIRCUIT CONTROL." THE LOCATION OF THE CIRCUIT DISCONNECT MEANS (CIRCUIT BREAKER) SHALL BE PERMANENTLY IDENTIFIED AT THE FIRE ALARM CONTROL UNIT.
5. UPDATE THE AS-BUILT DRAWING SET DAILY WITH JOB PROGRESS. RETURN THE AS-BUILT DRAWING SET TO SIMPLEXGRINNELL NO LATER THAN 7 DAYS AFTER FINAL TEST.
6. IF AN EXISTING FIRE ALARM SYSTEM EXISTS, IT SHALL NOT BE DISCONNECTED OR TAKEN OUT OF SERVICE WITHOUT WRITTEN PERMISSION FROM THE OWNER. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH THE OWNER THE TIMING OF THE EXISTING FA SYSTEM DEMOLITION WORK. THE LOCAL FIRE AUTHORITY AND CENTRAL MONITORING STATION SHALL BE NOTIFIED 48 HOURS IN ADVANCE OF EXISTING FA SYSTEM SHUTDOWN.
7. THE CONTRACTOR WILL MAINTAIN ALL AREAS OF THE BUILDING IN A NEAT AND WORKMAN LIKE MANNER.
8. DO NOT APPLY POWER EXCEPT IN THE PRESENCE OF A FACTORY TRAINED SIMPLEXGRINNELL TECHNICAL REPRESENTATIVE.
9. ANY SMOKE DETECTOR HEAD INSTALLED BEFORE THE BUILDING IS CLEANED AND ACCEPTED SHALL BE COVERED TO PROTECT FROM DUST. ANY FALSE ALARMS DUE TO DIRT CONTAMINATED HEADS SHALL BE THE RESPONSIBILITY OF THE FIRE ALARM INSTALLER.
10. THE FIRE ALARM INSTALLER WILL MAINTAIN THE FIRE RESISTANCE INTEGRITY OF ALL WALL, CEILING, AND ROOF ASSEMBLIES ANY TIME THAT WORK IS NOT ACTIVELY BEING PERFORMED.
11. INSTALLATION OF DEVICES SHALL BE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. POWER LIMITED AND NON-POWER LIMITED FIELD WIRING MUST BE INSTALLED WITHIN THE FACP ENCLOSURE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND NEC.
12. ALL WIRING SHALL BE INSTALLED ACCORDING TO NFPA 70 (NEC).
13. FIRE ALARM CIRCUITS SHALL BE IDENTIFIED IN ACCORDANCE WITH NEC SECTION 760-10. MARK ALL FIRE ALARM WIRES IN ACCORDANCE NEC SECTION 760-31g AND 760-42.
14. FIRE ALARM CABLE INSTALLED IN DUCTS, PLENUM, AND OTHER SPACES USED FOR ENVIRONMENTAL AIR SHALL BE TYPE FPLP.
15. FIRE ALARM CABLE INSTALLED IN THE VERTICAL RUNS AND PENETRATE MORE THAN ONE FLOOR OR CABLES INSTALLED IN VERTICAL RUNS IN SHAFTS SHALL BE TYPE FPLR.
16. FIRE ALARM CABLE INSTALLED IN UNDERGROUND CONDUIT OR OTHER WET LOCATIONS SHALL BE UL LISTED FOR WET LOCATIONS.
17. FIRE ALARM CIRCUITS EXTENDING BEYOND ONE BUILDING AND RUN OUTDOOR SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 70 ARTICLES 760-7, 770, 725 AND 800 WHERE APPLICABLE.
18. ALL WIRING, INCLUDING SHIELDS MUST BE DRY AND FREE OF SHORTS AND GROUNDS.
19. ALL SHIELDED WIRE MUST HAVE SHIELD CONTINUITY AT FULL LENGTH OF THE WIRE.
20. ONLY SYSTEM WIRING CAN BE RUN IN THE SAME CONDUIT.
21. 120VAC IS NOT PERMITTED IN THE SAME CONDUIT WITH LOW VOLTAGE WIRING.
22. MAINTAIN 40 PERCENT CONDUIT FILL RATIO AS PER NEC REQUIREMENTS.
23. FIRE ALARM SYSTEM INSTALLER SHALL COORDINATE WITH THE MECHANICAL CONTRACTOR WHEN DETERMINING INSTALLATION OF SMOKE DETECTORS OR SENSORS.
24. DO NOT MOUNT SMOKE/HEAT SENSORS CLOSER THAN 3 FEET FROM ANY SUPPLY/RETURN DIFFUSER OR FLUORESCENT BAFFLES.
25. ALL FIRE ALARM POINTS ARE TO BE ON THE NEW FIRE ALARM PANEL..THE NEW FIRE ALARM PANEL WILL BE THE MAIN FIRE ALARM PANEL.

WIRING INSTRUCTIONS

A. Install wiring according to the following:
   1. NECA 1.
   2. TIA/EIA 568-A
   3. Cables, raceways and support pathways including but not limited to j-hooks and cable tray, which are used for fire alarm circuits, and equipment control wiring associated with the fire alarm system, shall not contain any other wire or cable.

B. Wiring Method for vertical risers penetrating floor slabs: Install wiring in metal raceway according to Specification Division 26 Section "Raceways and Boxes for Electrical Systems".

C. Wiring Method for circuits concealed in Walls, Partitions, and Inaccessible Ceilings: Install wiring in metal raceway according to Specification Division 26 Section "Raceways and Boxes for Electrical Systems".

D. Wiring Method for surface mounted and other exposed circuits, including in Crawlspaces: Install wiring in metal raceway according to Specification Division 26 Section "Raceways and Boxes for Electrical Systems".

E. Wiring Method for circuits concealed in accessible ceilings, install plenum-rated fire alarm cables supported on j-hooks.
   1. For wall mounted devices: Install recessed device backboxes with conduit extended to above accessible ceiling according to Specification Division 26 Section "Raceways and Boxes for Electrical Systems.

F. Wiring Method:
   1. Cables and raceways used for fire alarm circuits, and equipment control wiring associated with the fire alarm system, may not contain any other wire or cable.
   2. Fire-Rated Cables: Use of 2-hour fire-rated fire alarm cables, NFPA70 Types MI and CI, is permitted.
   3. Signaling Line Circuits: Non-Power-limited fire alarm cables shall not be installed in the same conduit or raceway as signaling line circuits.

G. Wiring within Enclosures: Separate power-limited and non-power-limited conductors. Install conductors parallel with or at right angles to sides and back of enclosure. Bundle, lace and train conductors to terminal points with no excess. Connect conductors that are terminated, spliced or interrupted in any enclosure associated with the fire alarm system to terminal blocks. Mark each terminal according to the system's wiring diagrams. Make all connections with approved crimp-on terminal spade lugs, pressure-type terminal blocks or plug connectors.

SYMBOL KEY

SYMBOL	DESCRIPTION	MODEL#	BACKBOX
FACP SK	FIRE ALARM CONTROL PANEL W / 7AH BATTERY SET	SILENT KNIGHT 5602XL	14 1/2"W x 28 3/4"H x 5-1/8"D
APS SK	NOTIFIER POWER SUPPLY W / 18AH BATTERY SET	SILENT KNIGHT SBB2UL	14 1/2"W x 26 3/4"H x 5-1/8"D
FCPS SK/SX	FIRE ALARM CONTROL PANEL W / 20AH BATTERY SET	SIMPLEX 4100-9711 SIMPLEX 2081-9296	28"W x 66"H x 16-3/8"D
NAC-2	NAC EXTENDER PANEL # DESIGNATES THE NAC PANEL NUMBER W / 12AH BATTERY SET	SIMPLEX 4009-9201 SIMPLEX 2081-9274	16-1/4"W x 13-1/2"H x 5-3/16"D
FATC	FIRE ALARM TERMINAL CABINET	SIMPLEX 4002-9001	23-1/2"W x 32-1/2"H x 5-1/2"D
ANN-LED	ADDRESSABLE LED ANNUNCIATOR	SIMPLEX 4603-9101	4 SINGLE GANG BOXES 3 1/2" DEEP
MPS	MANUAL PULL STATION SURFACE W/ HOUSING	SIMPLEX 4099-9003 SFI-1130	SINGLE GANG BOX 2 1/2" DEEP
(2)	SMOKE PHOTO SENSOR / BASE	SIMPLEX 4098-9714 SIMPLEX 4098-9792 BASE	4" OCTAGONAL BOX 1 1/2" DEEP
(2)SK	SMOKE PHOTO SENSOR W/ BASE	SILENT KNIGHT SD355-ARS	4" OCTAGONAL BOX 1 1/2" DEEP
(2)R	SMOKE DETECTOR / BASE # = RELAY ADDR W/ENCAPSULATED RELAY PAM-1	SIMPLEX 4098-9714 SIMPLEX 4098-9791 BASE SIMPLEX 2098-9721	4" OCTAGONAL BOX 1 1/2" DEEP W/ 1 1/2" EXT RING
(2)ISO	HEAT/SMOKE SENSOR BASE W/ISOLATOR	SIMPLEX 4098-9797 BASE	4" OCTAGONAL BOX 1 1/2" DEEP
(2)I	IONIZATION SMOKE SENSOR / BASE	SIMPLEX 4098-9714 SIMPLEX 4098-9792 BASE	4" OCTAGONAL BOX 1 1/2" DEEP
(1)	HEAT SENSOR / BASE	SIMPLEX 4088-9713 SIMPLEX 4088-9792 BASE	4" OCTAGONAL BOX 1 1/2" DEEP
(2)D	DUCT SMOKE SENSOR W/PHOTOELECTRIC SENSOR HEAD REMOTE TEST STATION W/ LED AND KEY SWITCH	SIMPLEX 5098-9750 SIMPLEX 4098-9714 SIMPLEX 2098-9806	MOUNT TO DUCTWORK SINGLE GANG BOX 2 1/2" DEEP
(2)R	DUCT SMOKE SENSOR ENCAPSULATED RELAY PAM-SD, SPDT W/ LED W/SAMPLING TUBE 97" REMOTE TEST STATION W/ LED AND KEY SWITCH	SIMPLEX 5098-9768 PAM-SD SIMPLEX 2098-9708 SIMPLEX 2098-9806	MOUNT TO DUCTWORK SINGLE GANG BOX 2 1/2" DEEP
SIGNAL	SIGNAL ZAM	SIMPLEX 2190-9161	4 11/16" SQUARE BOX 2 1/8" DEEP W/ 1 1/2" EXT RING
I	INDIVIDUAL ADDRESSABLE MODULE	SIMPLEX 4090-9021	SINGLE GANG BOX 2 1/2" DEEP WITH COVER
I SK	INDIVIDUAL ADDRESSABLE MODULE	SILENT KNIGHT 495UM-ARM	SINGLE GANG BOX 2 1/2" DEEP WITH COVER
R	RELAY JAM	4090-9002	SINGLE GANG BOX 2 1/2" DEEP WITH COVER
(R)	RELAY MAKE 2 JAM W/T SENSE W/PAM-NO RELAY	SIMPLEX 4090-9118 PAM-NO	4" SQUARE BOX 2 1/2" DEEP W/ONE GANG COVER
C	PHONE IN SECURITY CABINET	SIMPLEX 2085-9003	SUPPLIED IN SIMPLEXGRINNELL
C J	PHONE JACK IN ELEVATOR CAB	SIMPLEX 2082-9001	SINGLE GANG BOX 2-1/2" DEEP
DH	DOOR HOLDER	SIMPLEX 2088-9008	SINGLE GANG BOX 2" DEEP
TS	TAMPER SWITCH	SUPPLIED BY OTHERS	BY OTHERS
WF	WATERFLOW SWITCH	SUPPLIED BY OTHERS	BY OTHERS
PS	PRESSURE SWITCH	SUPPLIED BY OTHERS	BY OTHERS
WSS #	WALL MOUNT MULTI-CANDELA S/R WHITE # = CANDELA RATING. CAP ALL SPACARE AT 1/4 WATT UNLESS OTHERWISE NOTED.	SIMPLEX 4906-9114	4" SQUARE BOX 1 1/2" DEEP W/ 1 1/2" EXTENSION RING
WSS # C	WALL MOUNT MULTI-CANDELA A/V RED # = CANDELA RATING.	SYSTEM SENSOR P2/99	4" SQUARE BOX 1 1/2" DEEP W/ 1 1/2" EXTENSION RING
WP-WSS 75	WALL MOUNT WEATHERPROOF HORN/STROBE	SYSTEM SENSOR P2WK	4" SQUARE BOX 1 1/2" DEEP W/ 1 1/2" EXTENSION RING
CWSS #	WALL MOUNT MULTI-CANDELA V/O WHITE # = CANDELA RATING	WHEELOCK RSS-24-MCW-FW	
S #	WALL MOUNT MULTI-CANDELA V/O WHITE # = CANDELA RATING	WHEELOCK RSS-24-MCW-FW	
BELL	10" VAC BELL	GENTEX 10BVC	WALL-B BOX
HSC	CHIME/STROBE	WHEELOCK CH-24-MCW-FW	
PMC	MICRO PORTAL	SIMPLEX 4190-9008	14 5/16"W x 10 1/2"H x 4 1/8"D
PTR	PRINTER	SIMPLEX 4100-8013	DESK TOP MOUNT
XXR	ENGINEERING RESERVED (XXR)	BY OTHERS	BY OTHERS
FSD	FIRE SMOKE DAMPER	BY OTHERS	BY OTHERS
GRAPHIC	GRAPHIC MAP	CUSTOM	MOUNT ON WALL
R	ENCAPSULATED PAM-SD RELAY	4090-9063	SINGLE GANG BOX 2 1/2" DEEP WITH COVER
	N = NEW RL = RELOCATE		

CITY OF AURORA
BUILDING DIVISION
APPROVED AS NOTED JMP
DATE 1/24/12

12-577690

SEQUENCE OF OPERATION

M.C.O.A.
NORTH TOWER (NODE 2)

SEQUENCE OF OPERATIONS

SYSTEM OUTPUTS

SYSTEM INPUTS	ACTIVATE COMMON ALARM SIGNAL INDICATOR	ACTIVATE AUDIBLE ALARM SIGNAL	ACTIVATE COMMON SUPERVISORY SIGNAL INDICATOR	ACTIVATE AUDIBLE SUPERVISORY SIGNAL	ACTIVATE COMMON TROUBLE SIGNAL INDICATOR	ACTIVATE AUDIBLE COMMON TROUBLE SIGNAL	ACTIVATE EVACUATION SIGNALS (SPEAKERS/STROBES)	ACTIVATE SPRINKLER RISER BELL	DISPLAY CHANGE OF STATUS AT REMOTE ANNUNCIATOR	TRANSMIT FIRE ALARM SIGNAL TO OFF-SITE REPORTING	TRANSMIT SUPERVISORY SIGNAL TO OFF-SITE REPORTING	TRANSMIT TROUBLE SIGNAL TO OFF-SITE REPORTING	FAN SHUT DOWN	DAMPER SHUT DOWN	RELEASE COMBUSTION FIRE DOORS	RELEASE ASSOCIATED FIRE DOORS	RELEASE ELEVATOR RECALL	ELEVATOR SHUT DOWN (*)	ELEVATOR RECALL - MAIN FLOOR	ELEVATOR RECALL - ALTERNATE FLOOR	ELEVATOR HAT FLASH	OUTDOOR HORN/STROBE	SILENCE AUDIBLE SIGNAL	ACTIVATE OUTSIDE HORN/STROBE	
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	
1 SMOKE DETECTOR	X	X					X		X	X			X	X	X									X	1
2 SMOKE DETECTOR @ UNIT CLERK DESK	X	X					X		X	X					X		X							X	2
3 MANUAL PULL STATION	X	X					X		X	X					X									X	3
4 HEAT DETECTOR	X	X					X		X	X					X									X	4
5 DUCT DETECTOR	X	X					X		X	X			X	X											5
6 WARM FLR. ELEV. LOBBY SMOKE DETECTOR	X	X					X		X	X			X	X	X			X		X				X	6
7 ELEV. LOBBY SMOKE DETECTORS (EXCL. MAIN FLR.)	X	X					X		X	X									X					X	7
8 ELEV. MECH. ROOM SMOKE DETECTOR	X	X					X		X	X									X					X	8
9 ELEV. SHAFT HEAT DETECTOR	X	X					X		X	X								J	X					X	9
10 ELEV. MECH. ROOM HEAT DETECTOR	X	X					X		X	X								X	X					X	10
11 WATERFLOW SWITCH	X	X					X	X	X	X														X	11
12 TAMPER SWITCH			X	X					X		X														12
13 POST INDICATOR VALVE SWITCH			X	X					X		X														13
14 FACP AC POWER FAILURE					X	X							X												14
15 FACP LOW BATTERY					X	X							X												15
16 OPEN CIRCUIT					X	X							X												16
17 GROUND FAULT					X	X							X												17
18 NOTIFICATION APPLIANCE CIRCUIT SHORT					X	X							E												18
19 ALARM SIGNAL SILENCE																								X	19
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	

NOTE: Audible Evacuation Signal shall be Temporal Pattern per NFPA 72-2007 (A6.8.6.5.1).
* Disconnect power after a time delay equal to the time it takes for the car to travel from the highest to the lowest level plus 10 seconds.

DEVICE ADDRESSING LEGEND

NODE DESIGNATOR (REQUIRED ON NETWORK PROJECTS) — ADDRESSABLE CARD (IDNET OR MAPNET) — DEVICE ADDRESS
N1:M2-1
ADDRESSABLE INITIATING DEVICES NUMBERING

4009 NAC PANEL (IF APPLICABLE) — NOTIFICATION APPLIANCE CIRCUIT — DEVICE DESIGNATOR — NODE DESIGNATOR (REQUIRED ON NETWORK PROJECTS)
N2:NAC1:V2-1
NOTIFICATION DEVICE

SPEAKER CIRCUIT — DEVICE DESIGNATOR — NODE DESIGNATOR (REQUIRED ON NETWORK PROJECTS)
N2:S2-1
SPEAKER DEVICE

ABBREVIATIONS LEGEND

(AC)	= ABOVE CEILING	HT	= HEIGHT
(C)	= CEILING MOUNTED	HVAC	= HEATING, VENTILATION, & AIR CONDITIONING
(E)	= EXISTING	MAX	= MAXIMUM
(N)	= NEW	MIN	= MINIMUM
(RC)	= EXISTING TO REMOVE AND COVER	N/A	= NOT APPLICABLE
(RD)	= EXISTING DEVICE TO BE RELOCATED	NAC	= NOTIFICATION APPLIANCE CIRCUIT
(RL)	= RELOCATED DEVICE	NDU	= NETWORK DISPLAY UNIT
(RR)	= REMOVE EXISTING AND REPLACE W/NEW	NEC	= NATIONAL ELECTRICAL CODE
(WP)	= WEATHERPROOF	NFPA	= NATIONAL FIRE PROTECTION ASSOCIATION
AFF	= ABOVE FINISHED FLOOR	NIC	= NOT IN CONTRACT
AHJ	= AUTHORITY HAVING JURISDICTION	NPU	= NETWORK PROCESSOR UNIT
ALM	= ALARM	NTS	= NOT TO SCALE
ANN	= ANNUNCIATOR	SCC	= STATUS COMMAND CENTER
BMS	= BUILDING MANAGEMENT SYSTEM	SLC	= SIGNALING LINE CIRCUIT
CD	= (EX. 15CD) CANDELA	SMK	= SMOKE
DET	= DETECTOR	SPRV	= SUPERVISORY
DGP	= DATA GATHERING PANEL	TAC	= TRUCALERT ADDRESSABLE CONTROLLER
EOL	= END OF LINE	TRBL	= TROUBLE
EP	= EXPLOSION PROOF	TYP	= TYPICAL
EPO	= EMERGENCY POWER OFF	U/N	= UNLESS OTHERWISE NOTED
FACP	= FIRE ALARM CONTROL PANEL	VCC	= VOICE COMMAND CENTER
FATC	= FIRE ALARM TERMINAL CABINET	VT	= VALVE TAMPER
FBO	= FURNISHED BY OTHERS	WF	= WATER FLOW
FCC	= FIRE COMMAND CENTER	W	= (EX. 1/2W) WATT
FSD	= FIRE SMOKE DAMPER	W/	= WITH
GCC	= GRAPHIC COMMAND CENTER		

WIRE SCHEDULE

FIRE ALARM WIRE LIST (POWER LIMITED)

A	NETWORK COMMUNICATION - 1 PAIR 18 AWC TWISTED OVERALL SHIELD - CI CABLE VENDOR: LIFELINE CKTPL-2C/18DS		
C	COMMUNICATION FOR ANNUNCIATOR AND NETWORK - 1 PAIR 18 AWC TWISTED OVERALL SHIELD NON-PLENUM RATED: FPL ANIXTER SG180259-03 AREA=0.0320 SQ. INCH		PLENUM RATED: FPLP ANIXTER SG180252I-03 AREA=0.0177 SQ. INCH
D	DOOR HOLDER CIRCUIT - 2 CONDUCTOR 14 AWG SOLID NON-PLENUM RATED: FPLR ANIXTER SG1402N10-03 AREA=0.0340 SQ. INCH	CONDUIT ONLY: THHN (2) #14 AWG (PINK/BROWN) AREA=0.0097 SQ. INCH (EACH)	PLENUM RATED: FPLP ANIXTER SG1402N21-03 AREA=0.0308 SQ. INCH
H	AUDIBLE CIRCUIT - 2 CONDUCTOR 14 AWG SOLID NON-PLENUM RATED: FPLR ANIXTER SG1402N10-03 AREA=0.0340 SQ. INCH	CONDUIT ONLY: THHN (2) #14 AWG (RED/BLACK) AREA=0.0097 SQ. INCH (EACH) ********** REFER TO SIGNAL CIRCUIT DISTANCE CHART **********	PLENUM RATED: FPLP ANIXTER SG1402N21-03 AREA=0.0308 SQ. INCH
L	REMOTE LED CIRCUIT - 2 CONDUCTOR 18 AWG SOLID NON-PLENUM RATED: FPLR ANIXTER SG1802N10-03 AREA=0.0177 SQ. INCH	CONDUIT ONLY: TFFN (2) #18 AWG (WHITE/ORANGE) AREA=0.0055 SQ. INCH (EACH)	PLENUM RATED: FPLP ANIXTER SG1802N21-03 AREA=0.0167 SQ. INCH
M	MAPNET/IDNET CIRCUIT - 1 PAIR 18 AWG TWISTED OVERALL SHIELD NON-PLENUM RATED: FPL ANIXTER SG180259-03 AREA=0.0320 SQ. INCH		PLENUM RATED: FPLP ANIXTER SG180252I-03 AREA=0.0177 SQ. INCH
N	CHIME/SIGNAL CIRCUIT - 2 CONDUCTOR 14 AWG SOLID NON-PLENUM RATED: FPLR ANIXTER SG1402N10-03 AREA=0.0340 SQ. INCH	CONDUIT ONLY: THHN (2) #14 AWG (RED/BLACK) AREA=0.0097 SQ. INCH (EACH) ********** REFER TO SIGNAL CIRCUIT DISTANCE CHART **********	PLENUM RATED: FPLP ANIXTER SG1402N21-03 AREA=0.0308 SQ. INCH
P	MAPNET/IDNET POWER CIRCUIT - 2 CONDUCTOR 14 AWG SOLID NON-PLENUM RATED: FPLR ANIXTER SG1402N10-03 AREA=0.0340 SQ. INCH	CONDUIT ONLY: THHN (2) #14 AWG (YELLOW/BLUE) AREA=0.0097 SQ. INCH (EACH)	PLENUM RATED: FPLP ANIXTER SG1402N21-03 AREA=0.0308 SQ. INCH
S	SPEAKER CIRCUIT - 1 PAIR 18 AWG TWISTED OVERALL SHIELD NON-PLENUM RATED: FPL ANIXTER SG180259-03 AREA=0.0320 SQ. INCH	********** REFER TO PANEL INSTALLATION MANUAL **********	PLENUM RATED: FPLP ANIXTER SG180252I-03 AREA=0.0177 SQ. INCH
T	TELEPHONE CIRCUITS - 1 PAIR 18 AWG TWISTED OVERALL SHIELD NON-PLENUM RATED: FPL ANIXTER SG180259-03 AREA=0.0320 SQ. INCH		PLENUM RATED: FPLP ANIXTER SG180252I-03 AREA=0.0177 SQ. INCH
V	VISUAL/SIGNAL CIRCUIT - 2 CONDUCTOR 14 AWG SOLID NON-PLENUM RATED: FPLR ANIXTER SG1402N10-03 AREA=0.0340 SQ. INCH	CONDUIT ONLY: THHN (2) #14 AWG (RED/BLACK) AREA=0.0097 SQ. INCH (EACH) ********** REFER TO SIGNAL CIRCUIT DISTANCE CHART **********	PLENUM RATED: FPLP ANIXTER SG1402N21-03 AREA=0.0308 SQ. INCH

CONDUIT SIZE	CONDUCTOR AREA	CONDUIT SIZE	CONDUCTOR AREA
1/2"	0.12 SQ INCH *	1-1/4"	0.60 SQ INCH *
3/4"	0.21 SQ INCH *	1-1/2"	0.83 SQ INCH *
1"	0.34 SQ INCH *	2"	1.34 SQ INCH *

* 40% FILL 2005 N.E.C.

CONTACT YOUR LOCAL SIMPLEXGRINNELL OFFICE FOR ANY CABLE SUBSTITUTIONS

NOTES:
1. Anixter Wire part numbers are given for reference only. All wire manufacturer types which are equal to the recommended wire are acceptable. Contact the local SimplexGrinnell engineering department for a complete list of acceptable wire manufacturers.
2. All wires should be clearly tagged for identification. If desired, different wire conductor colors can be used. When applicable match existing wire colors and sizes to maintain consistency. Contact SimplexGrinnell if existing wire is to be reused.
3. All wire sizes shown are minimum recommendations. All Fire Alarm wire must meet NEC Article 760 requirements. If different wire is desired, please contact the local SimplexGrinnell engineering department to determine compliance with U.L. listings.
4. Where contract documents and shop drawing wiring is at variance, contact engineer for clarification before proceeding.
5. Refer to NFPA 72 [2007] 6.9.10.4 and 6.10.1.16 for survivability requirements. Use 2-hour rated cable or another protection where required by these sections.
6. Indoors only - call for other applications.

NICET CERTIFICATION

TECHNICAL AREA 00303: LEVEL IV
CERTIFICATE #: 109355
VALID THROUGH: 09/01/12
JAMES COOLEY — DATE 1/6/12

NICET CERTIFIED

24" x 36"

tyco / Fire & Security / SimplexGrinnell

6240 SMITH ROAD
DENVER, COLORADO 80216
SALES: (303) 355-0500
SERVICE: (303) 355-0500
FAX: (303) 355-0515

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NO.	DATE	REVISION DESCRIPTION

FIRE ALARM SYSTEM FOR:
MCOA CARDIAC TOWER DOOR CONTROL
MEDICAL CENTER OF AURORA SOUTH
1501 SOUTH POTOMAC
AURORA, COLORADO 80012

DRAWN BY: CPM	DATE: 01/05/12
DESIGNED BY: TAS	DATE: 01/05/12
APPROVED BY: JWC	DATE: 01/05/12
PROJECT #: 959791404	
SCALE: N.T.S.	
SHEET TITLE: GENERAL INFORMATION	
SHEET NUMBER: FA1.01	

4098-9792 STANDARD SENSOR BASE

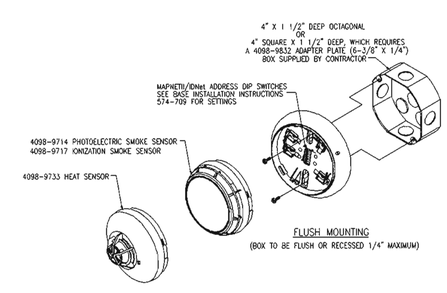
PRODUCT INFORMATION

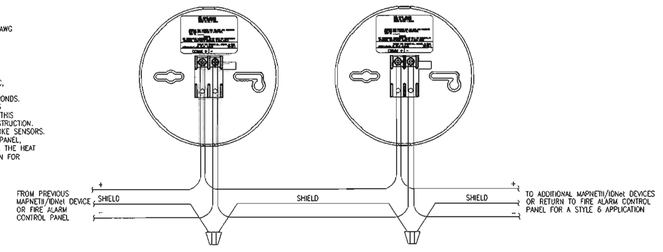
FEATURES:
- UL LISTED, FM APPROVED
- TRUEALARM ANALOG SENSING PROVIDES DIGITAL TRANSMISSION OF ANALOG SENSOR VALUES VIA MAPNET®, OR IDNet TWO WIRE COMMUNICATIONS
- FIRE ALARM CONTROL PANEL PROVIDES:
  - INDIVIDUAL SENSITIVITY SELECTION FOR EACH SENSOR
  - PEAK VALUE LOGGING ALLOWING ACCURATE ANALYSIS FOR SENSITIVITY SELECTION
  - AUTOMATIC ENVIRONMENTAL COMPENSATION
  - DISPLAY OF SENSITIVITY IN PERCENT PER FOOT
  - MULTISTAGE ALARM OPERATION
  - ABILITY TO DISPLAY AND PRINT DETAILED SENSOR INFORMATION IN PLAIN ENGLISH LANGUAGE
- PHOTOELECTRIC SMOKE SENSOR 4098-9714:
  SEVEN LEVELS OF SENSITIVITY FROM 0.2% TO 3.7%
- IONIZATION SMOKE SENSOR 4098-9717:
  FOUR LEVELS OF SENSITIVITY FROM 0.5% TO 1.7%
- HEAT SENSOR 4098-9733:
  - RATE-OF-RISE TEMPERATURE DETECTION IS SELECTABLE AT THE CONTROL PANEL, FOR EITHER 15°F OR 20°F PER MINUTE
  - FIXED TEMPERATURE SENSING IS INDEPENDENT OF RATE-OF-RISE AND PROGRAMMABLE TO OPERATE AT 135° OR 155°F
  - TRUEALARM HEAT SENSORS CAN BE PROGRAMMED AS A UTILITY DEVICE TO MONITOR FOR TEMPERATURE EXTREMES IN THE RANGE FROM 32° F TO 120° F.
- UL STANDARD SPACING:
  - 50 FT SPACING FOR 135° F
  - 40 FT SPACING FOR 155° F
- INTEGRAL RED LED FOR POWER-ON (PULSING), OR ALARM OR TROUBLE (STEADY ON)
- BASE MOUNTED ADDRESS SELECTION:
  - ACCESSIBLE FROM FRONT (DIP SWITCH UNDER SENSOR)
  - ADDRESS REMAINS WITH ITS PROGRAMMED LOCATION
- FOR USE WITH SIMPLEX 4010, 4100, 4020, AND 4120 SERIES CONTROL PANELS.
- MAXIMUM QUANTITY OF DEVICES:
  - 127 FOR 4020, 4100, 4120
  - 250 FOR 4010, 4100U
- MOUNTING: CEILING OR WALL
- COLOR: FROST WHITE
- BASE DIMENSIONS: 15/16" X 4-7/8"

SPECIFICATIONS:
- UL LISTED TEMPERATURE RANGE: 32°F TO 100°F
- OPERATING TEMPERATURE RANGE: 32°F TO 120°F
- HUMIDITY RANGE: 10% TO 95% RH
- PHOTOELECTRIC SENSOR AIR VELOCITY RANGE: 0-2000 FT/MIN
- IONIZATION SENSOR AIR VELOCITY RANGE: 0-300 FT/MIN
- WIRING CONNECTIONS: SCREW TERMINALS FOR IN/OUT WIRING, #18 TO #14 AWG
- COMMUNICATIONS MAPNET®/IDNet: 1 ADDRESS PER BASE
  VOLTAGE (MAPNET®/IDNet): 24-40VDC
  CURRENT: 400uA TYPICAL

DESCRIPTION:
TRUEALARM SENSOR BASES CONTAIN INTEGRAL ADDRESSABLE ELECTRONICS THAT CONSTANTLY MONITOR THE STATUS OF THE DETACHABLE PHOTOELECTRIC, IONIZATION, OR HEAT SENSORS. EACH SENSOR'S OUTPUT IS DIGITIZED AND TRANSMITTED TO THE SYSTEM FIRE ALARM CONTROL PANEL EVERY FOUR SECONDS. SINCE TRUEALARM SENSORS USE THE SAME BASE, DIFFERENT SENSOR TYPES CAN BE EASILY INTERCHANGED TO MEET SPECIFIC LOCATION REQUIREMENTS. THIS FEATURE ALLOWS INTENTIONAL SENSOR SUBSTITUTION DURING BUILDING CONSTRUCTION. WHEN CONDITIONS ARE TEMPORARILY DUSTY, INSTEAD OF COVERING THE SMOKE SENSORS, HEAT SENSORS MAY BE INSTALLED WITHOUT REPROGRAMMING THE CONTROL PANEL. ALTHOUGH THE CONTROL PANEL WILL INDICATE AN INCORRECT SENSOR TYPE, THE HEAT SENSOR WILL OPERATE AS A DEFAULT SENSITIVITY PROVIDING HEAT DETECTION FOR BUILDING PROTECTION AT THAT LOCATION.

WIRING:
1. ALL WIRING TO COMPLY WITH LOCAL CODE.
2. CONDUCTORS MUST TEST FREE OF ALL GROUNDS.
3. MAINTAIN CORRECT POLARITY.
4. MAPNET®/IDNet WIRING TO BE #18 AWG TWISTED SHIELDED PAIR
5. IF SHIELD IS USED, TWIST SHIELD WIRES TOGETHER AND CAP WITH WIRE NUT. SHIELD SHOULD BE INSULATED FROM ELECTRICAL BOX.
6. REFER TO INSTALLATION INSTRUCTIONS (574-707)
7. REFER TO APPLICATION MANUAL (574-709)





4090-9002 IDNet, INDIVIDUAL ADDRESSABLE MODULE RELAY WITH RELAY

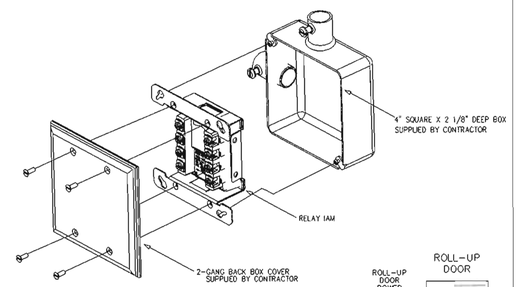
PRODUCT INFORMATION

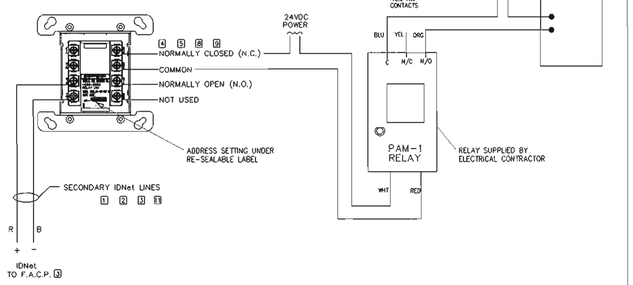
FEATURES:
- UL LISTED
- A SINGLE ADDRESSABLE POINT BOTH CONTROLS A 2A FORM "C" CONTACT AND TRACKS ITS STATUS
- LATCHING RELAY DESIGN ALLOWS DATA AND POWER TO BE BOTH SUPPLIED BY IDNet COMMUNICATIONS
- COMPACT, SEALED CONSTRUCTION:
  - SCREW TERMINALS FOR WIRING CONNECTIONS
  - REDUCES DUST INFILTRATION

SPECIFICATIONS:
- RELAY IAM POWER: SUPPLIED BY IDNet COMMUNICATIONS
- RELAY IAM CONTACTS (FORM "C", SPDT)
- POWER LIMITED RATING: 2A @ 24VDC, TRANSIENT SUPPRESSED LOADS, 1A @ 24VDC FOR INDUCTIVE LOADS
- NON POWER LIMITED RATING: 1/2A @ 24VAC, TRANSIENT SUPPRESSED LOADS, 1A @ 24 VDC FOR INDUCTIVE LOADS
- WIRE CONNECTIONS: SCREW TERMINALS FOR IN/OUT WIRING, #18 TO #14 AWG WIRE
- COMPATIBLE WITH SIMPLEX 2081-9044 OVER VOLTAGE PROTECTORS
- DIMENSIONS: 4 1/8"H x 4 1/8"W x 1 3/8"D (105mm x 105mm x 35mm)
- HOUSING MATERIAL: BLACK THERMOPLASTIC
- MOUNTING PLATE MATERIAL: SHEET METAL, GALVANIZED
- TEMPERATURE RANGE: 32° F TO 120° F (0° C TO 48° C) INTENDED FOR INDOOR OPERATION
- HUMIDITY RANGE UP TO 93% RH AT 100° F (38° C)

DESCRIPTION:
IDNet RELAY IAMS ALLOW THE SIMPLEX 4010 FIRE ALARM CONTROL PANEL TO CONTROL A REMOTELY LOCATED FORM "C" CONTACT USING IDNet ADDRESSABLE COMMUNICATIONS FOR BOTH DATA AND POWER. TYPICAL APPLICATIONS WOULD BE FOR SWITCHING LOCAL POWER FOR CONTROL FUNCTIONS SUCH AS ELEVATOR CAPTURE, OR CONTROL OF HVAC COMPONENTS, PRESSURIZATION FANS, DAMPERS, ETC. RELAY STATUS IS ALSO COMMUNICATED REQUIRING ONLY ONE DEVICE ADDRESS.

WIRING NOTES:
1. IDNet LINES ARE TO BE #18 AWG TWISTED PAIR (CONSULT SYSTEM SALES ENGINEERING FOR EXCEPTIONS) SHIELD RECOMMENDED.
2. MAXIMUM ALLOWABLE LINE RUN, FROM F.A.C.P. TO FARTHEST DEVICE, NOT TO EXCEED 2500 FEET.
3. MAXIMUM QUANTITY OF DEVICES PER CIRCUIT: 250.
4. CONTRACTOR WIRING TO RELAY CONTACTS IS UNSUPERVISED. USE #14 AWG WIRE TO LOCAL CODE.
5. RELAY CONTACTS RATED 2A, 24VDC (1A FOR INDUCTIVE LOAD) RELAY CONTACTS RATED 1A, 120VAC (NON-POWER LIMITED) FOR POWER-LIMITED OPERATION, POWER MUST BE PROVIDED FROM FACP OR POWER-LIMITED POWER SUPPLY LISTED FOR FIRE PROTECTIVE SIGNALING USE.
6. SEE INSTALLATION INSTRUCTIONS 574-184.
7. IF SHIELD IS PRESENT, IT SHOULD BE CONNECTED TO THE OUTGOING IDNet SHIELD TO PROVIDE A CONTINUOUS SHIELD OVER THE LENGTH OF THE IDNet CHANNEL.
8. WHEN CONNECTED TO A NON POWER-LIMITED SOURCE, THE WIRING MUST MAINTAIN A MINIMUM 1/4 INCH SEPARATION FROM IDNet WIRING.
9. WHEN USED WITH NON POWER-LIMITED SOURCE, THE "POWER LIMITED WIRING" INDICATION ON THE DEVICE LABEL MUST BE OBLITERATED.
10. WHEN BOTH POWER-LIMITED AND NON POWER-LIMITED SOURCES ARE PRESENT, USE TYPE FPL, FPLR OR FPLP POWER LIMITED CABLE FOR POWER-LIMITED CIRCUITS.
11. MAXIMUM TOTAL WIRE (INCLUDING ALL T-TAPS) ON CIRCUIT, FROM F.A.C.P. NOT TO EXCEED 10,000 FEET OR .5Ω. (CLASS B ONLY)
12. REFER TO FIELD WIRING DIAGRAM 642-073





1ST FLOOR AREA A FIRE COMMAND CENTER 1146B

Module	Qty	Description	Standby Current	Total Standby	Alarm Current	Total Alarm
Panel Equipment						
4100-6017	2	4100U CONFIG, DOMESTIC 120V	0.329000	0.373000	0.670000	0.470000
4100-5101	6	EXPANSION PWR SUPPLY (XPS) - 120VAC 60HZ	0.460000	0.260000	0.050000	0.200000
4100-9021	1	BASIC AUDIO WITH MICROPHONE - DIGITAL	0.075000	0.075000	0.082000	0.082000
4100-1126	6	FLEX 5/10 AMP W/3 VAUX - 12V	0.083000	0.398000	2.270000	0.080000
4100-7240	1	AUXILIARY RS232 INPUT BOARD	0.007000	0.007000	0.007000	0.007000
4100-1342	1	MESSAGE EXPANSION BOARD - 32 MINUTES	0.017000	0.017000	0.017000	0.017000
4100-1270	1	MASTER TELEPHONE PHONE CONTROL	0.085000	0.085000	0.120000	0.120000
4100-1272	3	EXPANSION PHONE CONTROL132	0.040000	0.240000	0.130000	0.390000
4100-3107	2	INPUT MODULE, UP TO 253 POINTS	0.075000	0.150000	0.115000	0.230000
4100-6014	1	NETWORK IF CARD, WIRED	0.046000	0.046000	0.046000	0.046000
4100-6056	5	NETWORK MEDIA CARD WIRED	0.055000	0.220000	0.065000	0.260000
4100-2305	1	8 RELAYS - 3 AMP	0.015000	0.015000	0.190000	0.190000
4100-1254	1	2 CHANNEL AUDIO OPERATOR INTERFACE	0.000000	0.000000	0.074000	0.074000
4100-7282	4	8 SW, WIRED/YEL LED MODULE	0.000000	0.000000	0.009000	0.036000
4100-1284	20	8 SW, W/ RED/GREEN LED MODULE	0.000000	0.000000	0.036000	0.744000
4100-1266	5	64/64 LED/SWITCH CONFIGULR	0.020000	0.100000	0.020000	0.100000
4100-1265	4	EXPANSION 64/64 LED/SW MODULE	0.020000	0.080000	0.020000	0.080000
			Total Panel Stby	1.821000	Total Panel Alarm	11.996000
Peripheral Devices						
4190-9807	34	IDNET SINGLE ACTION PULL STATION	0.010000	0.000000	0.000000	0.000000
4098-9714	421	TRUEALARM PHOTO SMOKE SENSOR	0.000000	0.000000	0.000000	0.000000
4098-9717	3	TRUEALARM ION SMOKE SENSOR	0.020000	0.000000	0.000000	0.000000
4098-9733	0	TRUEALARM HEAT SENSOR	0.020000	0.000000	0.000000	0.000000
4098-9792	248	TRUEALARM SENSOR BASE	0.000000	0.000000	0.000000	0.000000
4098-9795	16	TRUEALARM SENSOR BASE W/ RELAY DRIVER	0.000270	0.332950	0.020490	0.340000
4088-9733	57	TRUEALARM DUCT SMOKE SENSOR W/O RELAY OUTPUT	0.004200	0.000000	0.000200	0.000000
4088-9756	21	TRUEALARM DUCT SMOKE SENSOR W/ RELAY OUTPUT	0.002400	0.050400	0.015200	0.319000
4090-9002	35	IDNET RELAY IAM	0.000000	0.000000	0.000200	0.000000
4090-9001	49	IDNET SUPERVISED IAM	0.250000	0.349600	0.050200	0.709000
4090-9111	58	RELAY IDNET 2 AM W/T SENSE	0.260000	0.020000	0.050000	0.060000
4090-9004	1	IDNET RELEASE PERIPHERAL	0.000000	0.000000	0.010500	0.010000
4009-0011	6	4009 IDNET FIRE CONTROLLER, 120 VAC	0.000000	0.000000	0.100000	0.000000
4098-9843	22	ENCAPSULATED RELAY BASE	0.026000	0.000000	0.010000	0.220000
Distribution equipment (Non-4XPS Devices)						
Built-in Control Shelves Power, Remote Relays						
Miscellaneous Outside Purchased Items Requiring System Power						
			Total Periph Stby	0.0734	Total Periph Alarm	1.695
			Total Standby Amps	1.894	Total Alarm Amps	13.691

* Additional Current Draw Included With Device Addresses Used (See additional current draws)

1. 2-wire detector alarm current is included in the alarm current of the Initiating Device Circuit.

Battery Set #1 (Cabinet/Charger #1)	Qty		Standby Current		Alarm Current
Cabinet #1 Basic Power			1.481	Backup Amplifier	2.989
Current Draw For 100 Watt or 25 Watt Amplifiers	0		0.000	0	0.000
Current Draw For Over 25 and 50 Watt Amplifiers	4		0.328		9.080
Power For External Peripheral Devices			0.07685		1.38501
			1.8894	<-- Sub Totals -->	13.001
Additional Current Draws					
RUI Connected Peripheral Devices	0		0.000		0.000
MAPNET/IDNet Device Addresses Internal / Used:	1996	1860	0.745		0.558
Alarm sistemastar point, especially included for battery calc	20%	167	0.067		0.719
			2.696	<--Grand Totals -->	14.387
Additional Battery Capacity Required	20%		0.539		2.877
Standby Time =	4	Hrs	10.788	Standby Ah	
Alarm Time =	15	Min.	4.046	Alarm Ah	
Standby + Alarm =			16.178		
Battery Required 2081-9276 33AH			32.234	Total Ah Required (see note below)	

Note: The total Ah required takes into account any physical and chemical properties of battery discharge rates, high alarm current draw of a battery after a long (standby) low current draw, and reflects the manufacturers discharge rates per their recommendations and UL standards.

CITY OF AURORA
BUILDING DIVISION
APPROVED AS NOTED JMP
DATE 1/24/12

12-577690

NICET CERTIFIED

NICET CERTIFICATION
TECHNICAL AREA 00303: LEVEL IV
CERTIFICATE #: 109355
VALID THROUGH: 09/01/12
JAMES COOLEY — DATE 1/6/12

24" x 36"

tyco / Fire & Security / SimplexGrinnell

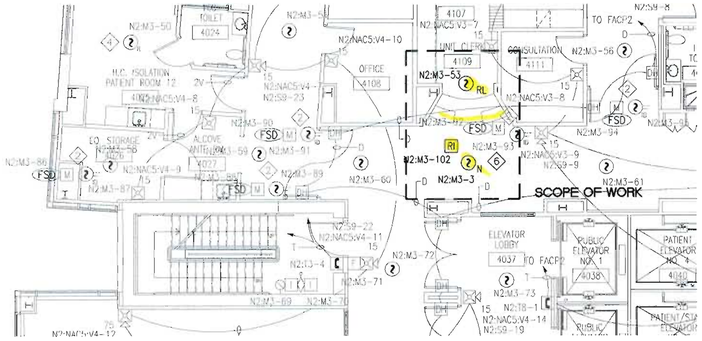
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DENVER, COLORADO 80216
SALES: (303) 355-0500
SERVICE: (303) 355-0600
FAX: (303) 355-0615

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NO.	DATE	REVISION DESCRIPTION

FIRE ALARM SYSTEM FOR:
MCOA CARDIAC TOWER DOOR CONTROL
MEDICAL CENTER OF AURORA SOUTH
1501 SOUTH POTOMAC
AURORA, COLORADO 80012

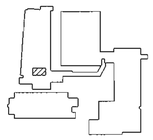
DRAWN BY: CPM	DATE: 01/05/12
DESIGNED BY: TAS	DATE: 01/05/12
APPROVED BY: JWC	DATE: 01/05/12
PROJECT #: 959791404	
SCALE: N.T.S.	
SHEET TITLE: BATTERY CALCS & PERIPHERAL DETAIL	
SHEET NUMBER: FA1.02	



PARTIAL 4TH FLR PLAN

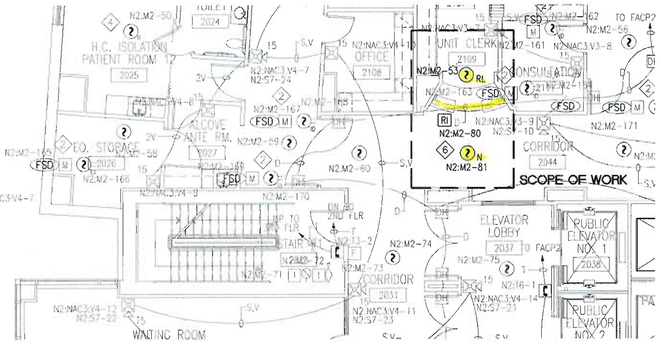
SCALE: 1/8"=1'-0"

KEY PLAN



KEYNOTES:

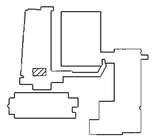
1. FIELD VERIFY LOCATION
2. FIELD VERIFY EACH DAMPER LOCATION. INSTALL REMOTE LED/TEST PLATE IN AN ACCESSIBLE, VISIBLE LOCATION.
3. FIELD VERIFY LOCATION FOR DUCT DETECTOR. INSTALL REMOTE LED/TEST PLATE IN AN ACCESSIBLE, VISIBLE LOCATION. WIRE CONTROLS FOR FAN SHUTDOWN.
4. CONNECT RELAY CONTACTS TO NURSE CALL DOME LAMP. PROVIDE 24VDC POWER FROM FACP TO POWER RELAY IN BASE. POWER FOR LAMP BY OTHERS.
5. FIRST DEVICE ON FLOOR SHALL HAVE AN ISOLATOR BASE.
6. RELAY 1AM FOR CONTROL OF ROLL-UP DOOR. SEE SEQUENCE OF OPERATION FOR ACTIVATION.

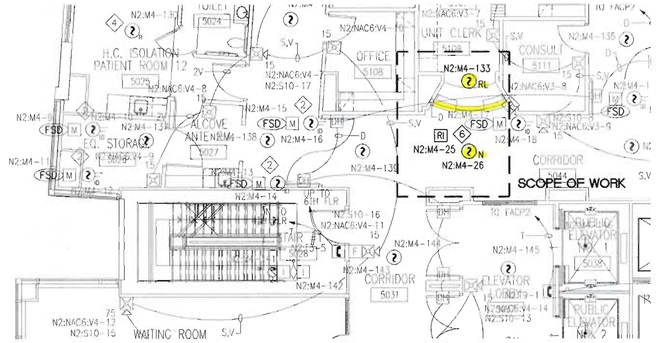


PARTIAL 2ND FLR PLAN

SCALE: 1/8"=1'-0"

KEY PLAN

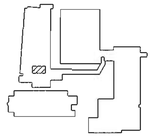


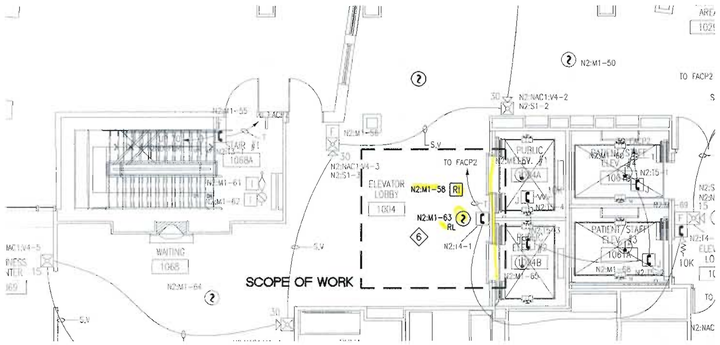


PARTIAL 5TH FLR PLAN

SCALE: 1/8"=1'-0"

KEY PLAN

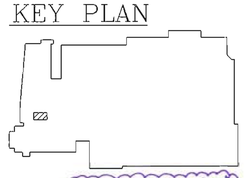




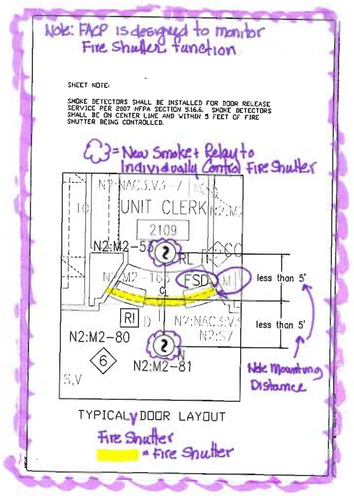
PARTIAL 1ST FLR PLAN

SCALE: 1/8"=1'-0"

KEY PLAN



Contractor to verify that proposed installation of Smoke/Relay Fire Shutter control complies w/ Fire Shutter Door approved installation requirements



CITY OF AURORA
BUILDING DIVISION
APPROVED AS NOTED - MMP
DATE 1/24/12

12-577690

NICET CERTIFICATION

TECHNICAL AREA 00303: LEVEL IV
CERTIFICATE #: 109355
VALID THROUGH: 08/01/12

JAMES COOLEY — DATE 1/6/12

NICET CERTIFIED

24" x 36"

tyco / Fire & Security / SimplexGrinnell

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DENVER, COLORADO 80216
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SERVICE: (303) 355-0500
FAX: (303) 355-0815

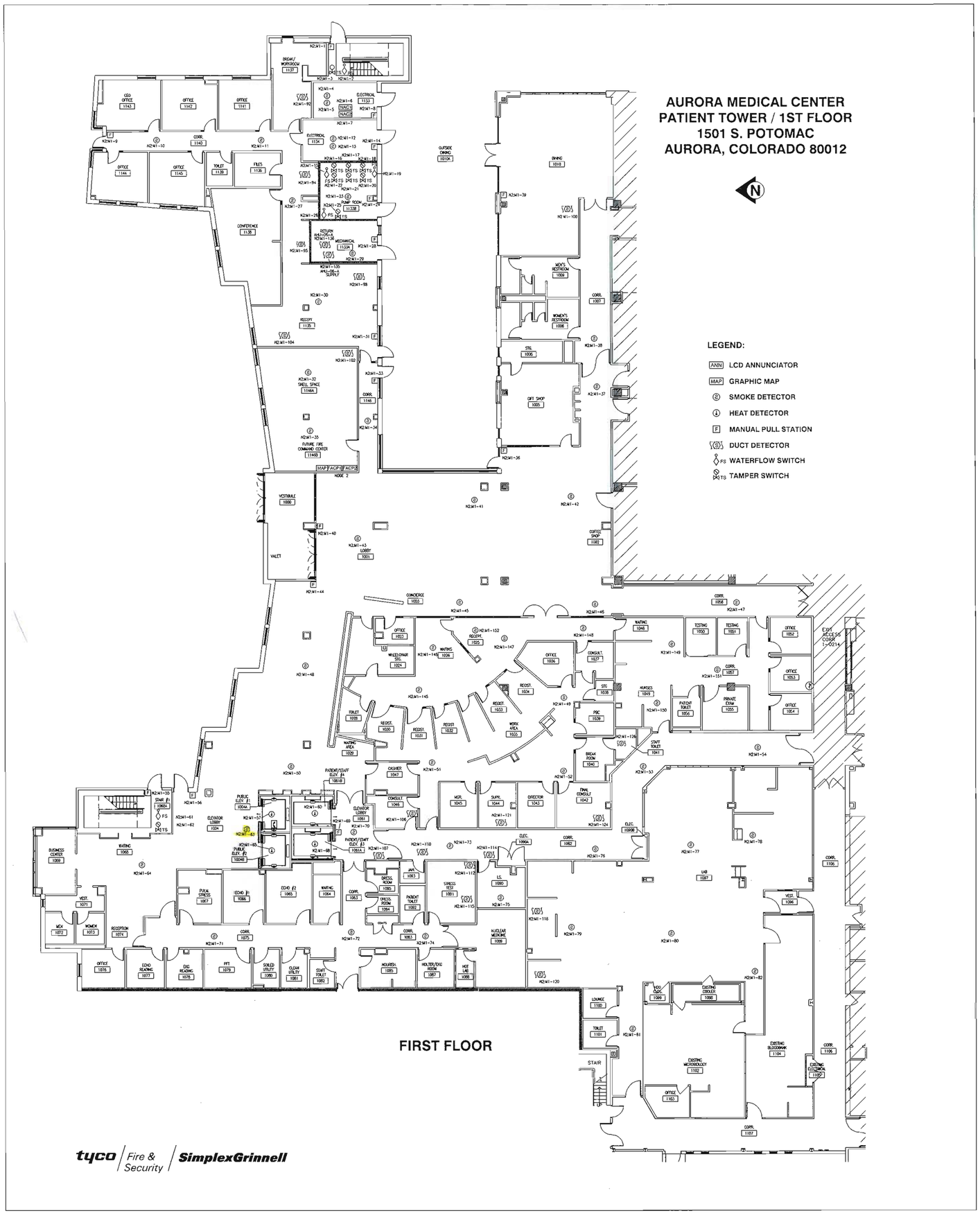
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NO	DATE	REVISION DESCRIPTION

FIRE ALARM SYSTEM FOR:
MCOA CARDIAC TOWER DOOR CONTROL
MEDICAL CENTER OF AURORA SOUTH
1501 SOUTH POTOMAC
AURORA, COLORADO 80012

DRAWN BY: CPM	DATE: 01/05/12
DESIGNED BY: TAS	DATE: 01/05/12
APPROVED BY: JWC	DATE: 01/05/12
PROJECT #: 959791404	
SCALE: AS SHOWN	
SHEET TITLE: 1ST, 2ND, 4TH, & 5TH PARTIAL FLOOR PLANS	
SHEET NUMBER: FA3.01	

24" x 36"



112-577690

PRELIMINARY GRAPHIC MAP
ACTUAL SIZE: 24" x 30"

CITY OF AURORA
BUILDING DIVISION
APPROVED AS NOTED
DATE 11/21/12

NICET CERTIFICATION
TECHNICAL AREA (0003): LEVEL IV
CERTIFICATE #: 109355
exp. August 09/01/12
JAMES COLEY
DATE 11/9/12

SHEET NUMBER: FA6.01	SHEET TITLE: GRAPHIC MAP FIRST FLOOR	SCALE: N.T.S.
PROJECT #: 93979404	APPROVED BY: JRC	DATE: 01/05/12
DESIGNED BY: TAS	DATE: 01/05/12	
DRAWN BY: GPM	DATE: 01/05/12	

FIRE ALARM SYSTEM FOR:
MCOA CARDIAC TOWER DOOR CONTROL
MEDICAL CENTER OF AURORA SOUTH
1501 SOUTH POTOMAC
AURORA, COLORADO 80012

NO.	DATE	REVISION DESCRIPTION

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24" x 36"

12-29-2011

AURORA MEDICAL CENTER
PATIENT TOWER / 2ND FLOOR
1501 S. POTOMAC
AURORA, COLORADO 80012



SECOND FLOOR

tyco / Fire & Security / SimplexGrinnell
Denver (303)-355-0500

Type: Smoke detectors in close proximity to actual installed location. Ref. Sheet FA3.01 Revise and graphic map if required.

112-577690

NICET CERTIFICATION

TECHNICIAN: AREA WASSO LEVEL IV
CERTIFICATE #: 109255
WILLIAM BOOKER 09/01/12
SIGNATURE DATE

CITY OF AURORA
BUILDING DIVISION
APPROVED AS NOTED
DATE 1/04/12 JMP

PRELIMINARY GRAPHIC MAP
ACTUAL SIZE: 24" x 30"

DRAWN BY: CPU	DATE: 01/05/12	FIRE ALARM SYSTEM FOR: MCOA CARDIAC TOWER DOOR CONTROL MEDICAL CENTER OF AURORA SOUTH 1501 SOUTH POTOMAC AURORA, COLORADO 80012	NO. / DATE / REVISION DESCRIPTION
DESIGNED BY: TAS	DATE: 01/05/12		
APPROVED BY: JWC	DATE: 01/05/12		
PROJECT #: 955797404			
SCALE: N.T.S.			
SHEET TITLE: GRAPHIC MAP SECOND FLOOR			
SHEET NUMBER: FA6.02			

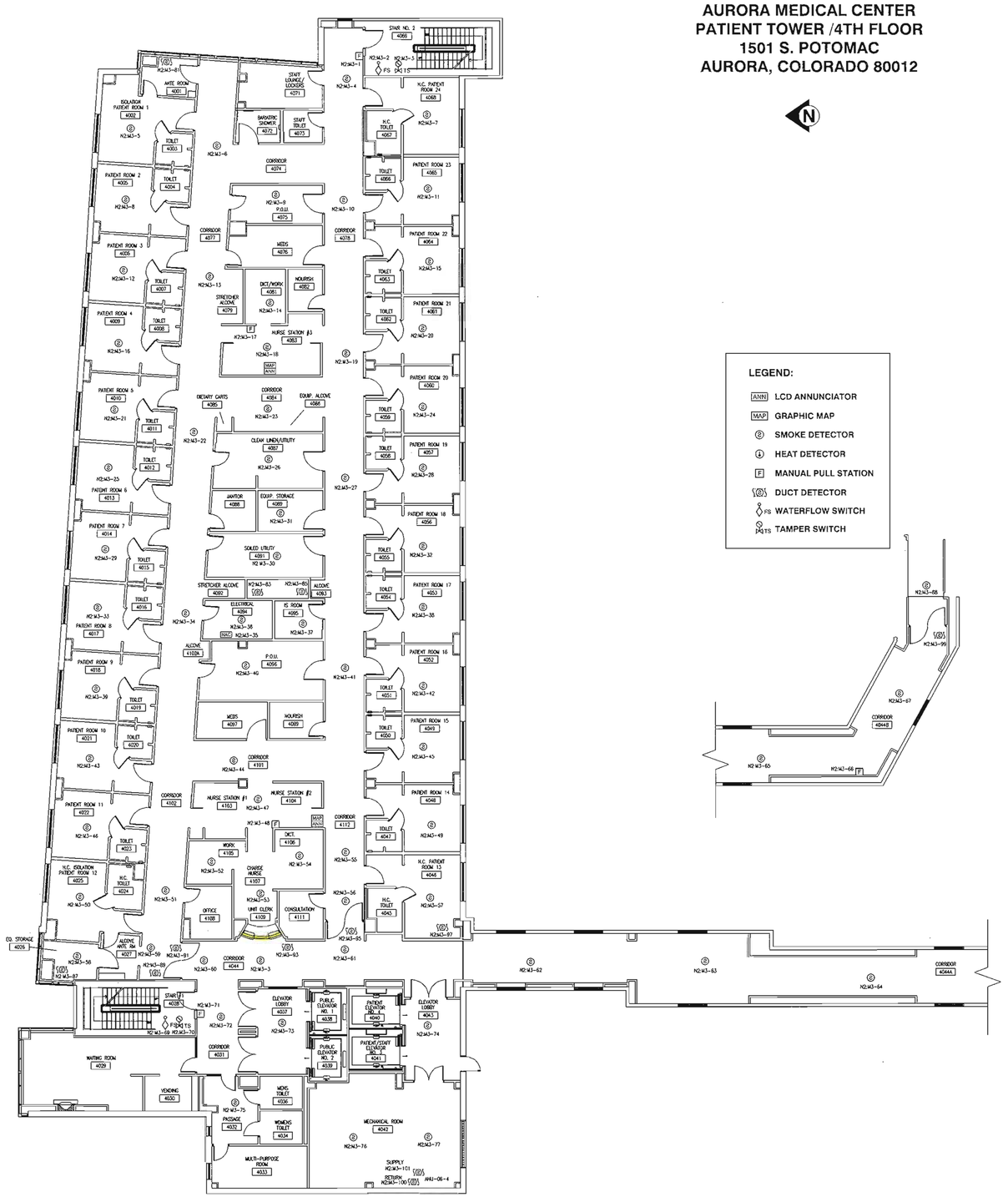
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DENVER, COLORADO 80216
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SERVICE: (303) 355-0500
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24" x 36"

12-29-2011

AURORA MEDICAL CENTER
PATIENT TOWER /4TH FLOOR
1501 S. POTOMAC
AURORA, COLORADO 80012



FOURTH FLOOR

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Denver (303)-355-0500

PRELIMINARY GRAPHIC MAP
ACTUAL SIZE: 24" x 30"

12-577690

NICET CERTIFIED

NICET CERTIFICATION
JAMES ANGLEY
TECHNICAL AREA (S)(S): LEVEL IV
CERTIFICATE #: 169355
VALID THROUGH: 09/01/12
DATE:

CITY OF AURORA
BUILDING DIVISION
APPROVED AS NOTED
DATE: 1/24/12

SHEET TITLE: GRAPHIC MAP FOURTH FLOOR	SCALE: N.T.S.	PROJECT #: 959791404	APPROVED BY: JWC DATE: 01/05/12
DESIGNED BY: TAS DATE: 01/05/12	DRAWN BY: CPM DATE: 01/05/12	FIRE ALARM SYSTEM FOR: MCOA CARDIAC TOWER DOOR CONTROL	
MEDICAL CENTER OF AURORA SOUTH	1501 SOUTH POTOMAC AURORA, COLORADO 80012		

SHEET NUMBER: FA6.03

NO.	DATE	REVISION DESCRIPTION

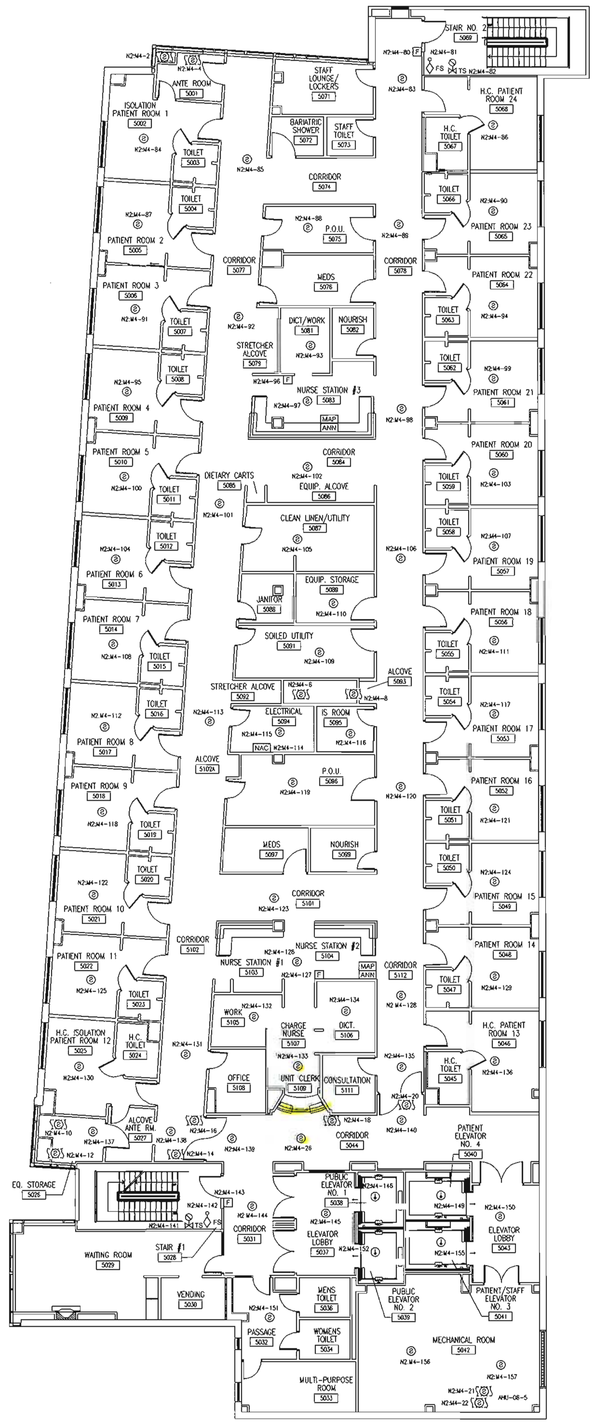
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24" x 36"

112-29-2011

AURORA MEDICAL CENTER
PATIENT TOWER /4TH FLOOR
1501 S. POTOMAC
AURORA, COLORADO 80012



FIFTH FLOOR

LEGEND:

- ANN — LCD ANNUNCIATOR
- MAP — GRAPHIC MAP
- S — SMOKE DETECTOR
- H — HEAT DETECTOR
- F — MANUAL PULL STATION
- DUCT DETECTOR
- FS — WATERFLOW SWITCH
- TS — TAMPER SWITCH

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112-577690

NICET CERTIFIED

NICET CERTIFICATION

JOINT CODES

TECHNICAL AREA (5,3,2): LEVEL IV
CERTIFICATE #: 195144
VALID THROUGH: 09/01/12
DATE: 1/6/12

CITY OF AURORA
BUILDING DIVISION
APPROVED AS NOTED
DATE: 1/9/12 JMP

PRELIMINARY GRAPHIC MAP
ACTUAL SIZE: 24" x 30"

FIRE ALARM SYSTEM FOR: MCOA CARDIAC TOWER DOOR CONTROL	NO	DATE	REVISION DESCRIPTION
MEDICAL CENTER OF AURORA SOUTH			
1501 SOUTH POTOMAC, AURORA, COLORADO 80012			

DRAWN BY: CPM 01/05/12
DESIGNED BY: TAS 01/05/12
APPROVED BY: JMC 01/05/12
PROJECT #: 999791404
SCALE: N.T.S.
SHEET TITLE: GRAPHIC MAP FIFTH FLOOR
SHEET NUMBER: FA6.04

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tyco
Fire &
Security

SimplexGrinnell

SIMPLEXGRINNELL
6240 Smith Road
Denver, Colorado 80216

www.simplexgrinnell.com

Tele: (303) 355-0500
Fax: (303) 355-0615

Fire Alarm
Product Data Submittal for:

Medical Center of Aurora
MCOA Cardiac Towers Door Control
1501 South Potomic Street
Aurora, Colorado 80012

12-577690

Prepared for:

Medical Center of Aurora
1501 South Potomic Street
Aurora, Colorado 80012

SimplexGrinnell
6240 Smith Road
Denver, Colorado 80401
Sales: (303) 355-0500
Service: (303) 355-0500
Fax: (303) 355-0615

PROJECT: *MCOA Cardiac Towers Door Control*
PREPARED FOR: *Medical Center of Aurora*

TYPE:	DESCRIPTION:
4098-9714	PHOTO SENSOR
4098-9792	SENSOR BASE
4090-9002	RELAY IAM
4098-9843	RELAY FORM C SPDT PAM-SD

12-577690

12-577690

Simplex

TrueAlarm® Analog Sensing

*UL, ULC Listed; FM, CSFM, and MEA (NYC) Approved**

TrueAlarm Analog Sensors – Photoelectric, Ionization, and Heat; Compatible Bases and Accessories

Features

TrueAlarm® analog sensing provides digital transmission of analog sensor values via MAPNET II® or IDNet™, two-wire communications**

Fire alarm control panel provides:

- Individual sensitivity selection for each sensor
- Sensitivity monitoring that satisfies NFPA 72® sensitivity testing requirements
- Peak value logging allowing accurate analysis for sensitivity selection
- Automatic, once per minute individual sensor calibration check that verifies sensor integrity
- Automatic environmental compensation
- Display of sensitivity directly in percent per foot
- Multi-stage alarm operation
- Ability to display and print detailed sensor information in plain English language

Photoelectric smoke sensors:

- Seven levels of sensitivity from 0.2% to 3.7%

Heat sensors:

- Fixed temperature sensing
- Rate-of-rise temperature sensing
- Utility temperature sensing

12-577690

Ionization smoke sensors:

- Three levels of sensitivity; 0.5%, 0.9% and 1.3%

For use with Simplex®:

- 4010, 4020, 4100, 4100U, and 4120 Series control panels
- Universal Transponders and 2120 TrueAlarm CDTs equipped for MAPNET II operation

Magnetic test feature

Functional and architecturally styled chamber enclosure:

- Louvered design enhances smoke capture by directing flow to chamber
- Entrance areas are minimally visible when ceiling mounted

Optional accessories include remote LED alarm indicator and output relays

UL listed to Standard 268

* Refer to page 4 for ULC listing status. These products have been approved by the California State Fire Marshal (CSFM) pursuant to Section 13144.1 of the California Health and Safety Code. See CSFM Listings 7272-0026:218, 7271-0026:231, 7270-0026:216, and 7300-0026:217 for allowable values and/or conditions concerning material presented in this document. It is subject to re-examination, revision, and possible cancellation. Accepted for use – City of New York Department of Buildings – MEA35-93E. Additional listings may be applicable, contact your local Simplex product supplier for the latest status. Listings and approvals under Simplex Time Recorder Co. are the property of Tyco Safety Products Westminster.



4098-9714 TrueAlarm Photoelectric Sensor Mounted in Base

Description

Digital Communication of Analog Sensing. TrueAlarm analog sensors provide an analog measurement that is digitally communicated to the host control panel using Simplex addressable communications. At the control panel, the data is analyzed and an average value is determined and stored. An alarm or other abnormal condition is determined by comparing the sensor's present value against its average value and time.

Intelligent Data Evaluation. Monitoring each sensor's average value provides a continuously shifting reference point. This software filtering process compensates for environmental factors (dust, dirt, etc.) and component aging, providing an accurate reference for evaluating new activity. With this filtering, there is a significant reduction in the probability of false or nuisance alarms caused by shifts in sensitivity, either up or down.

Control Panel Selection. Peak activity per sensor is stored to assist in evaluating specific locations. The alarm set point for each TrueAlarm sensor is determined at the host control panel, selectable as more or less sensitive as the individual application requires.

Timed/Multi-Stage Selection. Sensor alarm set points can be programmed for timed automatic sensitivity selection (such as more sensitive at night, less sensitive during day). Control panel programming can also provide multi-stage operation per sensor. For example, a 0.2% level may cause a warning to prompt investigation while a 2.5% level may initiate an alarm.

Sensor Alarm and Trouble LED Indication. Each sensor base's LED pulses to indicate communications with the panel. If the control panel determines that a sensor is in alarm, or that it is dirty or has some other type of trouble, the details are annunciated at the control panel and that sensor base's LED will be turned on steadily. During a system alarm, the control panel will control the LEDs such that an LED indicating a trouble will return to pulsing to help identify the alarmed sensors.

** TrueAlarm analog sensors are protected by one or more of the following U.S. Patents: 5,155,468; 5,173,683; 5,400,014; 5,543,777; 5,710,541; D383,407; D388,352; D392,573. MAPNET II and IDNet addressable communications designs are protected by U.S. Patent No. 4,796,025.

(3)355-0500

12-577690

TrueAlarm Sensor Bases and Accessories

Sensor Base Features

Base mounted address selection:

- Address remains with its programmed location
- Accessible from front (dipswitch under sensor)

Automatic identification provides default sensitivity when substituting sensor types

Integral red LED for power-on (pulsing), or alarm or trouble (steady on)

Locking anti-tamper design

Magnetically operated functional test

Mounts on standard outlet box

Sensor Bases

4098-9792, Standard sensor base

4098-9789, Sensor base with wired connections for:

- 2098-9808 Remote LED alarm indicator or 4098-9822 relay (unsupervised)

4098-9791, Sensor base with supervised relay driver output (not compatible with 2120 CDT):

- Relay operation is programmable and can be manually operated from control panel
- Use with remote mount 2098-9737 relay
- Also includes wired connections for remote LED alarm indicator or 4098-9822 relay

Sensor Base Options

2098-9737, Remote or local mount supervised relay:

- DPDT contacts for resistive/suppressed loads, power limited rating of 3 A @ 28 VDC; non-power limited rating of 3 A @ 120 VAC (requires external 24 VDC coil power)

4098-9822, LED Annunciation Relay:

- Activates when base LED is on steady, indicating local alarm or trouble
- DPDT contacts for resistive/suppressed loads, power limited rating of 2 A @ 28 VDC; non-power limited rating of 1/2 A @ 120 VAC, (requires external 24 VDC coil power)

4098-9832, Adapter plate:

- Required for surface or semi-flush mounting to 4" square electrical box and for surface mounting to 4" octagonal box
- Can be used for cosmetic retrofitting to existing 6-3/8" diameter base product

2098-9808, Remote red LED Alarm Indicator:

- Mounts on single gang box (shown in illustration to right)



12-577690

Description

TrueAlarm sensor bases contain integral addressable electronics that constantly monitor the status of the detachable photoelectric, ionization, or heat sensors. Each sensor's output is digitized and transmitted to the system fire alarm control panel every four seconds.

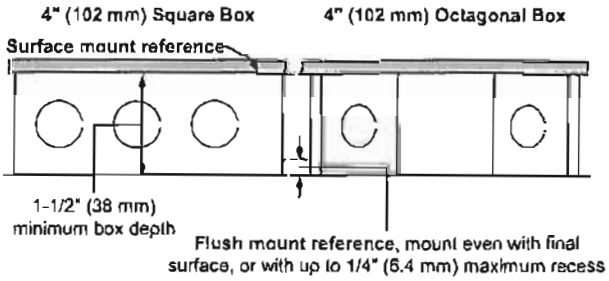
Since TrueAlarm sensors use the same base, different sensor types can be easily interchanged to meet specific location requirements. This feature also allows intentional sensor substitution during building construction. When conditions are temporarily dusty, instead of covering the smoke sensors (causing them to be disabled), heat sensors may be installed without reprogramming the control panel. Although the control panel will indicate an incorrect sensor type, the heat sensor will operate at a default sensitivity providing heat detection for building protection at that location.

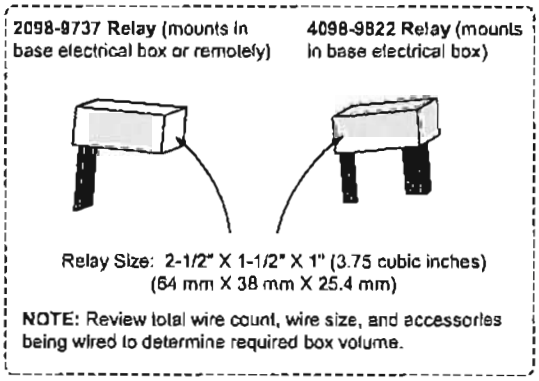
Mounting Reference

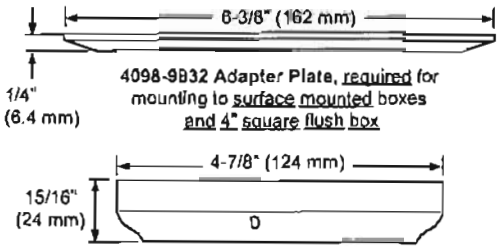
Electrical Box Requirements: (boxes are by others)

Without relay: 4" octagonal or 4" square, 1-1/2" deep; single gang, 2" deep

With relay : 4" octagonal or 4" square, 1-1/2" deep, with 1-1/2" extension ring







TrueAlarm Bases
4098-9789, -9791, & -9792

12-577690

TrueAlarm Sensors

Features

Sealed against rear air flow entry

Interchangeable mounting

EMI/RFI shielded electronics

Heat sensors:

- Selectable rate compensated, fixed temperature sensing with or without rate-of-rise operation
- Spacing distance between heat sensors:

Fixed Temp. Setting	UL Spacing	FM Spacing, Either Fixed Temperature Setting
135° F (57.2° C)	60 ft (18.3 m)	15 ft x 15 ft (4.6 m) fixed temperature only; 30 ft x 30 ft (9.2 m) fixed temperature with rate-of-rise
155° F (68° C)	40 ft (12.2 m)	

Smoke Sensors:

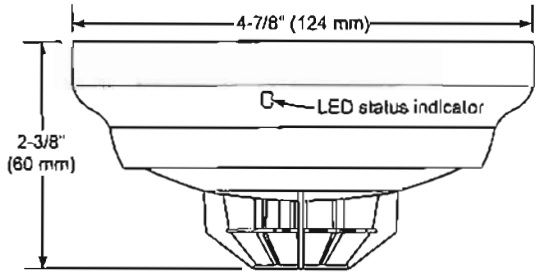
- Photoelectric or ionization technology sensing
- 360° smoke entry for optimum response

4098-9733 Heat Sensor

TrueAlarm heat sensors are self-restoring and provide rate compensated, fixed temperature sensing, selectable with or without rate-of-rise temperature sensing. Due to its small thermal mass, the sensor accurately and quickly measures the local temperature for analysis at the fire alarm control panel.

Rate-of-rise temperature detection is selectable at the control panel for either 15° F (8.3° C) or 20° F (11.1° C) per minute. Fixed temperature sensing is independent of rate-of-rise sensing and programmable to operate at 135° F (57.2° C) or 155° F (68° C). In a slow developing fire, the temperature may not increase rapidly enough to operate the rate-of-rise feature. However, an alarm will be initiated when the temperature reaches its rated fixed temperature setting.

TrueAlarm heat sensors can be programmed as a utility device to monitor for temperature extremes in the range from 32° F to 155° F (0° C to 68° C). This feature can provide freeze warnings or alert to HVAC system problems. (Refer to specific panels for availability.)



4098-9733 Heat Sensor with Base

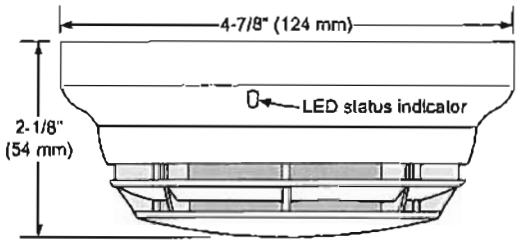
12-577690

WARNING: In most fires, hazardous levels of smoke and toxic gas can build up before a heat detection device would initiate an alarm. In cases where Life Safety is a factor, the use of smoke detection is highly recommended.

4098-9714 Photoelectric Sensor

TrueAlarm photoelectric sensors use a stable, pulsed infrared LED light source and a silicon photodiode receiver to provide consistent and accurate low power smoke sensing. Seven levels of sensitivity are available for each individual sensor, ranging from 0.2% to 3.7% per foot of smoke obscuration. Sensitivity is selected and monitored at the fire alarm control panel.

The sensor head design provides 360° smoke entry for optimum response to smoke from any direction. A built-in screen keeps insects from entering the smoke chamber. Due to its photoelectric operation, air velocity is not normally a factor, except for impact on area smoke flow.

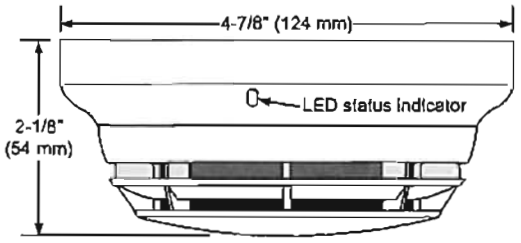


4098-9714 Photoelectric Sensor with Base

4098-9717 Ionization Sensor

TrueAlarm Ionization sensors use a single radioactive source with an outer sampling ionization chamber and an inner reference ionization chamber to provide stable operation under fluctuations in environmental conditions such as temperature and humidity. Smoke and invisible combustion gases can freely penetrate the outer chamber. With both chambers ionized by a small radioactive source [Am 241 (Americium)], a very small current flows in the circuit. The presence of particles of combustion will cause a change in the voltage ratio between chambers. This difference is measured by the electronics in the sensor base and digitally transmitted back to the control panel for processing.

Three levels of sensitivity are available for each ionization sensor: 0.5, 0.9, and 1.3% per foot of smoke obscuration.



4098-9717 Ionization Sensor with Base

Application Reference

Sensor locations should be determined only after careful consideration of the physical layout and contents of the area to be protected. Refer to NFPA 72, the *National Fire Alarm Code®*. On smooth ceilings, smoke sensor spacing of 30 ft (9.1 m) may be used as a guide. For detailed application information, refer to *4098 Detectors, Sensors, and Bases Application Manual* (574-709).

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TrueAlarm Analog Sensing Product Selection Chart

TrueAlarm Sensor Bases*

Model	Description	Compatibility	Mounting Requirements
4098-9792 (C)	Standard Sensor Base, no options	Sensors 4098-9714, -9733, & -9717	4" octagonal or 4" square box, 1-1/2" min. depth; or single gang box, 2" min. depth
4098-9789 (C)	Sensor Base with connections for Remote LED Alarm Indicator or Unsupervised Relay	Sensors 4098-9714, -9733, & -9717 2098-9808 remote LED alarm indicator or 4098-9822 relay	4" octagonal or 4" square box **Note:** Box depth requirements depend on total wire count and wire size, refer to accessories list below for reference
4098-9791 (C)	Sensor Base with connections for **Supervised** Remote Relay and connections for Remote Alarm Indicator or Unsupervised Relay	Sensors 4098-9714, -9733, & -9717 2098-9737 remote relay (supervised) 2098-9808 remote alarm indicator or 4098-9822 relay (unsupervised)	

TrueAlarm Sensors

Model	Description	Compatibility	Mounting Requirements
4098-9714 (C)	Photoelectric Smoke Sensor	Bases 4098-9792, 4098-9789, and 4098-9791	Refer to base requirements
4098-9717 (C)	Ionization Smoke Sensor		
4098-9733 (C)	Heat Sensor		

TrueAlarm Sensor/Base Accessories

Model	Description	Compatibility	Mounting Requirements
2098-9737	Supervised Relay, mounts remote or in base electrical box	For use with 4098-9791 base	**Remote Mounting** requires 4" octagonal or 4" square box, 1-1/2" minimum depth **Base Mounting** requires 4" octagonal box, 2-1/8" deep with 1-1/2" extension ring
2098-9808	Remote Red LED Alarm Indicator on single gang stainless steel plate	Bases 4098-9789 and 4098-9791	Single gang box, 1-1/2" minimum depth
4098-9822 (C)	Relay, tracks base LED status (unsupervised, mounts only in base electrical box)		4" octagonal box, 2-1/8" deep with 1-1/2" extension ring
4098-9832	Adapter Plate	Bases 4098-9792, -9789, & -9791	**Required** for surface or semi-flush mounted 4" square box and for surface mounted 4" octagonal box

* Refer to data sheet S4098-0028 for Sounder Base information. Refer to Installation Instructions 574-707 and Application Manual 574-709 for additional information. ULC listed model numbers are designated by (C) and require a "C" suffix such as 4098-9792C.

Specifications

General Operating Specifications		
Communications and Sensor Supervisory Power		MAPNET II or IDNet, auto-select, 24-40 VDC w/data, 400 µA typical, 1 address per base
Communications Connections		Screw terminals for in/out wiring, 18 to 14 AWG (0.82 mm^2 to 2.08 mm^2)
Remote LED Alarm Indicator Current		1 mA typical, no impact to alarm current
Remote LED Alarm Indicator and Relay Connections		Color coded wire leads, 18 AWG (0.82 mm^2)
UL Listed Temperature Range		32° to 100° F (0° to 38° C)
Operating Temperature Range	with 4098-9717 or 4098 -9733	32° to 122° F (0° to 50° C)
	with 4098-9714	15° to 122° F (-9° to 50° C)
Humidity Range		10 to 95% RH
Smoke Sensor Ambient Ratings	4098-9714, Photoelectric Sensor	Air velocity = 0-2000 ft/min (0-610 m/min)
	4098-9717, Ionization Sensor	Air velocity = 0-400 ft/min (0-122 m/min); Altitude is up to 8000 ft (2.4 km)
Housing Color		Frost White
4098-9791 Base With Supervised Remote Relay 2098-9737 (see page 2 for contact ratings)		
Externally Supplied Relay Coil Voltage		18-32 VDC (nominal 24 VDC)
Supervisory Current		270 µA, from 24 VDC supply
Alarm Current with 2098-9737 Relay		28 mA, from 24 VDC supply
4098-9822 Unsupervised Relay, Requirements for Bases 4098-9789 and 4098-9791 (see page 2 for contact ratings)		
Externally Supplied Relay Coil Voltage		18-32 VDC (nominal 24 VDC)
Supervisory Current		Supplied from communications
Alarm Current		13 mA from separate 24 VDC supply

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Simplex 12-577690

*UL, ULC Listed; FM, CSFM, and MEA (NYC) Approved**

Multi-Application Peripherals

IDNet™ Communicating Devices
Model 4090-9002 Relay IAM

Features

IDNet addressable interface modules for use with Simplex® models 4010 and 4100U fire alarm control panels**

4090-9002, Individual Addressable Relay Module (Relay IAM):

- A single addressable point provides control and status tracking of a Form "C" contact
- Low power latching relay design allows IDNet communications to supply both data and module power

Compact, sealed construction:

- Enclosed design minimizes dust infiltration
- Mounts in standard 4" square electrical box
- Screw terminals for wiring connections
- Visible LED flashes to indicate communications
- Optional covers are available to allow LED to be viewed after installation

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UL listed to Standard 864

Description

IDNet Relay IAMs allow fire alarm control panels to control a remotely located Form "C" contact using IDNet addressable communications for both data and module power. Typical applications would be for switching local power for control functions such as elevator capture, or control of HVAC components, pressurization fans, dampers, etc. Relay status is also communicated requiring only one device address.

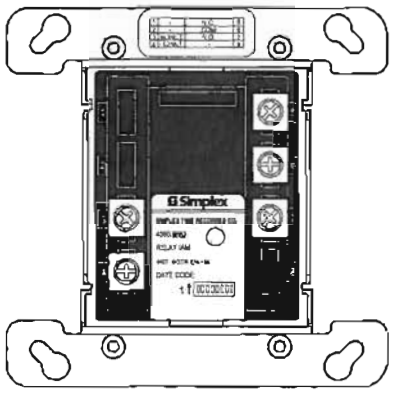
Product Selection

Model	Description
4090-9002	Relay IAM

Optional Trim Plates

Model	Description	
4090-9801	Trim plate with LED viewing window, includes mounting screws; galvanized steel	For semi-flush mounted box
4090-9802		For surface mounted box

* This product has been approved by the California State Fire Marshal (CSFM) pursuant to Section 13144.1 of the California Health and Safety Code. See CSFM Listing 7300-0026:223 for allowable values and/or conditions concerning material presented in this document. It is subject to re-examination, revision, and possible cancellation. Accepted for use – City of New York Department of Buildings – MEA35-93E. Additional listings may be applicable, contact your local Simplex product supplier for the latest status. Listings and approvals under Simplex Time Recorder Co. are the property of Tyco Safety Products Westminster.



4090 Series IDNet Relay IAM Package
(shown approximately 1/2 size)

Specifications

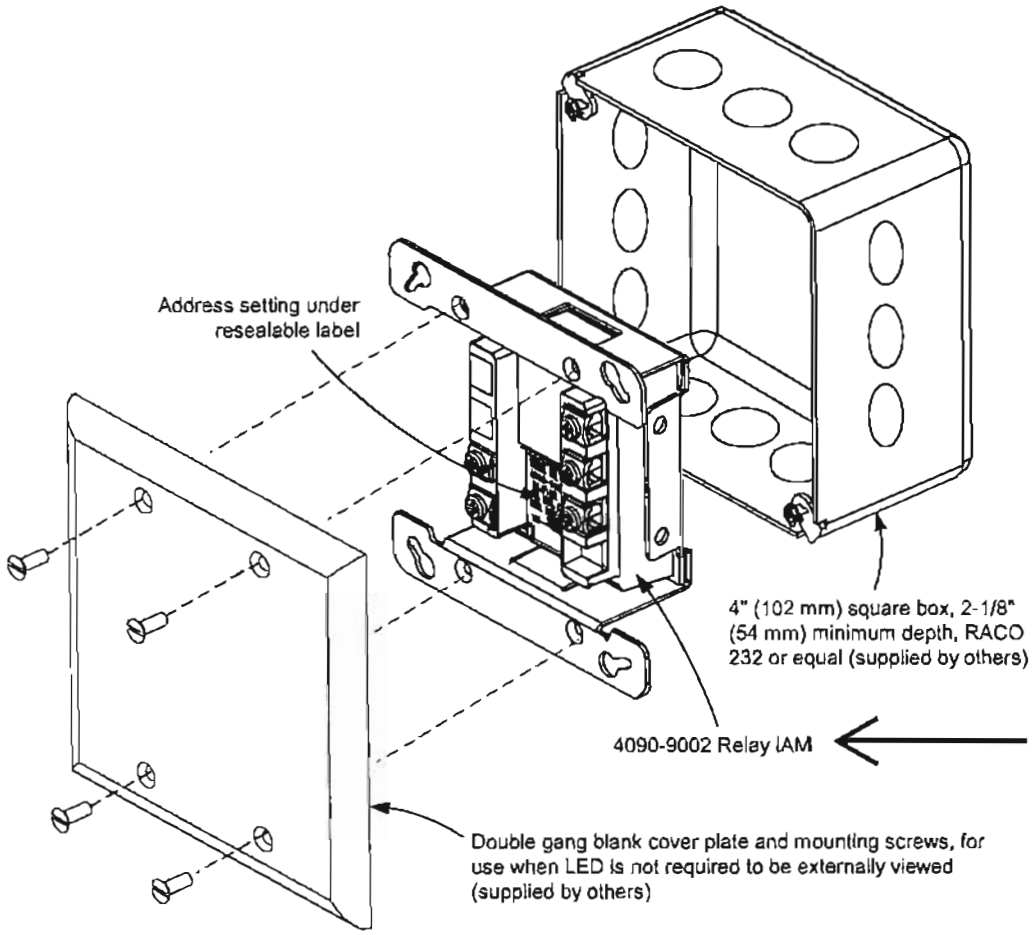
(Refer to Installation Instructions 574-184 for additional information.)

Communications		4010 or 4100U IDNet, 1 address per device
Relay IAM Power		Supplied by IDNet communications
Contact Ratings	Type	Form C, SPDT
	Power-Limited	2 A @ 24 VDC, for transient suppressed loads
		1 A @ 24 VDC for inductive loads
	Nonpower-Limited	1/2 A @ 120 VAC, for transient suppressed loads
Wire Connections		Screw terminals for in/out wiring, 18 to 14 AWG wire (0.82 to 2.08 mm²)
IDNet Wiring Reference		Up to 2500 ft (762 m) from fire alarm control panel
		Up to 10,000 ft (3048 m) total wiring distance (including T-Taps)
		Compatible with Simplex 2081-9044 Overvoltage Protectors
Dimensions		4-1/8" H x 4-1/8" W x 1-3/8" D (105 mm x 105 mm x 35 mm)
Housing Material		Black thermoplastic
Mounting Plate Material		Sheet metal, galvanized
Temperature Range		32° to 120° F (0° to 49° C), intended for indoor operation
Humidity Range		Up to 93% RH at 100° F (38° C)

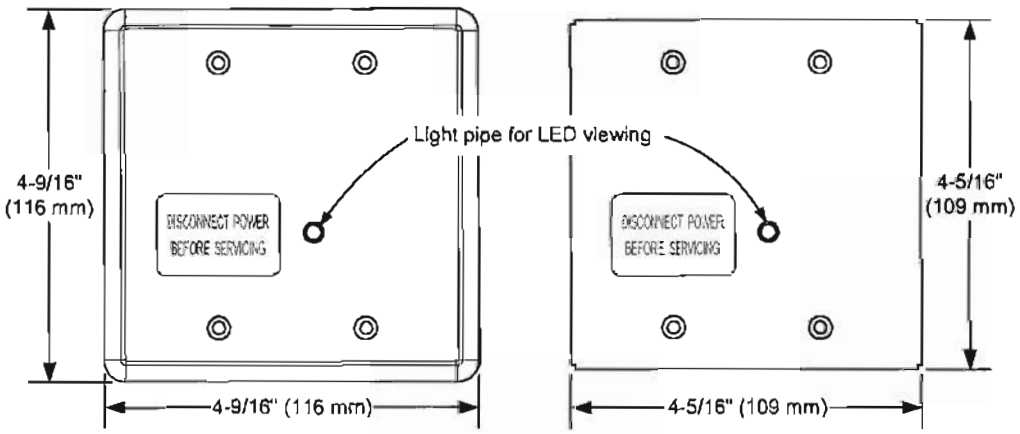
** IDNet addressable communications are protected by U.S. Patent No. 4,796,025.

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Relay IAM Mounting Information



Mounting Reference, Double Gang Blank Cover Plate



Optional Trim Plates for Visible LED

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Simplex 12-577690

System Accessories

UL, CSFM Listed;
*MEA (NYC) Acceptance**

Fire Alarm Control Relays, Track Mount and Encapsulated; Model 4098-9843 and 2088 Series

Features

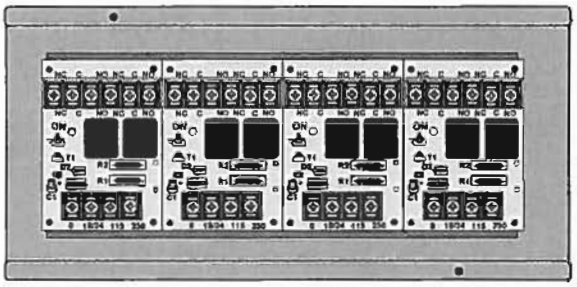
UL listed under Standard 864 as Control Unit Accessory (UOXX)

Track mount package availability:

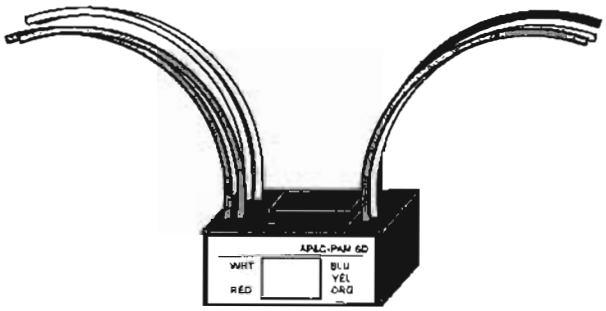
- Single relay module or four relay module, with or without cover, with SPDT or DPDT contacts
- LED indicates relay module status
- Cover provide status LED viewing ports
- Multiple coil voltage inputs, diode polarized for DC
- Modules are track mounted with snap-apart feature design allowing the four relay module to be separated

Single encapsulated SPDT relay package with color coded 18 AWG wire leads, available in two versions:

- 2088-9021 (PAM-1) Provides diode polarized multiple input voltage ability and LED indication
- 4098-9843 (PAM-SD) Provides a diode polarized 24 VDC coil with in/out wiring



2088-9020, MR204/C, Four DPDT Relay Package with Enclosure (shown with cover removed)



Encapsulated Relay Package
(typical of 2088-9021, PAM-1 and 4098-9843, PAM-SD)

Description

These multi-purpose control relays offer SPDT or DPDT, 10 A (or 7 A) contacts in a variety of mechanical packages. Models are available for coil operation by one of four input voltages allowing a single relay to be energized from a voltage source of 18-35 VDC or VAC, 120 VAC, or 230 VAC (not available with 4098-9843). Voltage selection is made by wiring to the appropriate input terminals or wire leads.

Each relay model (except model 4098-9843) contains a red LED which indicates that the relay is energized.

Mounting options are varied for application flexibility. Track mounted relays may be "snapped apart" from a standard four-module assembly and used independently if desired.

Specifications

Track Mount Relays, see page 2 for dimensions	
Coil Voltage	18-35 VAC/VDC, 120, or 230 VAC
Coil Current	SPDT models = 18 mA DPDT models = 40 mA
Terminal Blocks	Up to 14 AWG (2.08 mm^2)
Contact Ratings	10 A @ 120 VAC
	N.O. rated 1/6 HP, N.C. rated 1/8 HP
	7A @ 28 VDC and @ 230 VAC
Temperature Ratings	
UL Listed Range	32° F to 120° F (0° C to 49° C)
Operating Range	-58° F to 185° F (-50° C to 85° C)
Humidity	85% RH Non-condensing

Specifications *Continued*

Encapsulated Relays, see page 2 for dimensions		
Connections		18 AWG (0.82 mm^2) color-coded wire leads
Relay 2088-9021		
Contact Ratings		10 A @ 120 VAC, resistive
Coil Ratings	Voltage	18-35 VAC/VDC, 120, or 240 VAC
	Current	15 mA @ 24 VAC/VDC, & @ 120 or 230 VAC
Relay 4098-9843		
Coil Ratings		18-32 VDC Input, polarized, 15 mA @ 24 VDC
Contact Ratings		7 A at 0.35 p.f @ 28 VDC & 120 VAC
		250 µA @ 5 VDC
Temperature Ratings		
UL Listed Range		32° F to 120° F (0° C to 49° C)
Operating Range		-58° F to 185° F (-50° C to 85° C)
Humidity		85% RH Non-condensing

* Product listings are by Air Products & Controls Inc. (www.ap-c.com) per model numbers shown on page 2. These products are also available through Space Age Electronics Inc. (www.tsae.com) with an SSU- prefix.

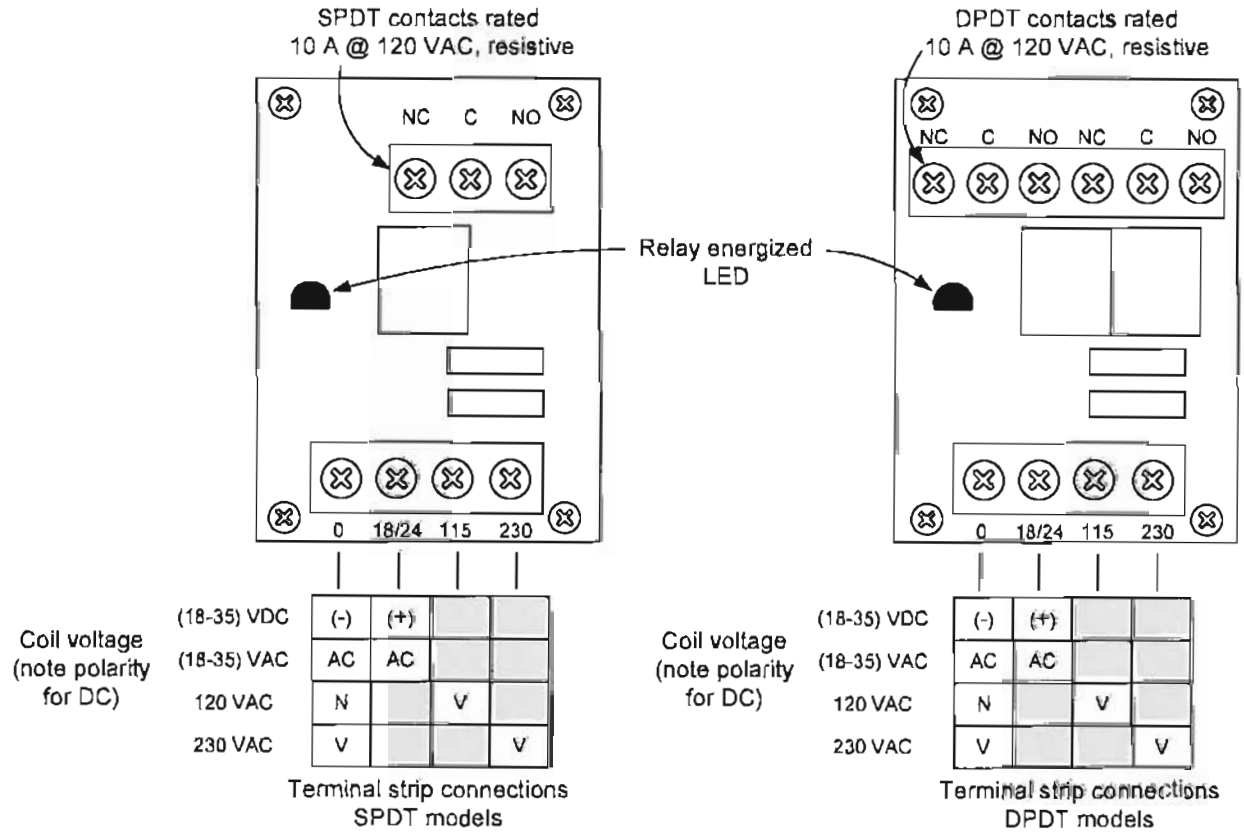
S2088-0010-8 3/2006 date

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Relay Selection Chart

Module Positions	Reference Number	Air Products Model	Relay Type	Packaging	Dimensions
One	2088-9007	MR-101/T	SPDT	Track mount, without cover	3-1/4" H x 2-1/8" W x 1-1/2" D (83 mm x 54 mm x 38 mm)
	2088-9009	MR-201/T	DPDT		
	2088-9008	MR-101/C	SPDT	Track mount with cover	5-1/8" H x 3-1/8" W x 2-1/2" D (131 mm x 79 mm x 64 mm)
	2088-9010	MR-201/C	DPDT		
Four	2088-9017	MR-104/T	SPDT	Track mount, without cover	3-1/4" H x 8-1/2" W x 1-1/2" D (83 mm x 216 mm x 38 mm)
	2088-9019	MR-204/T	DPDT		
	2088-9018	MR-104/C	SPDT	Track mount with cover	5-1/8" H x 9-1/2" W x 2-1/2" D (131 mm x 241 mm x 64 mm)
	2088-9020	MR-204/C	DPDT		
NA	2088-9021	PAM-1	SPDT	Encapsulated, multi-voltage coil, color coded 18 AWG (0.82 mm^2) wire leads, with coil status LED	1-1/2" H x 1" W x 7/8" D (38 mm x 25.4 mm x 22 mm)
→	4098-9843	PAM-SD		Encapsulated, 24 VDC coil, color coded 18 AWG (0.82 mm^2) wire leads (no LED)	1-1/2" H x 1-3/16" W x 13/16" D (38 mm x 30 mm x 21 mm)

Track Mount Relay Wiring Reference



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Fire Alarm System Acceptance Inspection

2009 IFC and 2010 NFPA 72

This checklist is for jurisdictions that permit the use of the 2010 NFPA 72 in lieu of IFC's referenced 2007 NFPA 72.

Date of Inspection: _____ Permit Number: _____

Business/Building Name: _____ Address of Project: _____

Contractor: _____ Contractor's Phone: _____

Reference numbers following checklist statements represent an NFPA code section unless otherwise specified.

Pass | Fail | NA	General
1.____ | ____ |____	Obtained a copy of the fire alarm installation certification and a Record of Completion from installer, 10.18.2.1.
2.____ | ____ |____	Approved plans are on site.
3.____ | ____ |____	Fire alarm control unit (FACU) and remote annunciator (RA) are installed consistent with approved plans, 10.16.1.
4.____ | ____ |____	A zone and legend map is provided at the RA or an approved location.
5.____ | ____ |____	Fire alarm zones are properly identified on the FACU and RA panels.
6.____ | ____ |____	The fire alarm system power supply is a dedicated 120 AC branch circuit, which is labeled, 10.5.5.2.
7.____ | ____ |____	Type and gauge of wire or cable(s) for each circuit are consistent with the plans.
8.____ | ____ |____	Device location and installation are consistent with the plans.
9.____ | ____ |____	Pull stations are installed at the proper height and location, 42 in. to 48 in. and within the 200 ft. maximum travel distance, 17.14.3 and IFC 907.5.2.
10.____ | ____ |____	A Contractor Sound Pressure Level (dBA) Pretest Room Log is provided and verified with the use of a sound meter during a sound pressure test.
Operational	
11.____ | ____ |____	Fire alarm audible notification devices sound throughout the occupancy providing a sound pressure level at least a minimum of 15 dBA above the average ambient noise level or 5 dBA above the maximum noise level. For bedrooms with closed door provide at least 75 dBA at the pillow, 18.4.3-.5, IFC 907.6.2.1.1.
12.____ | ____ |____	Fire alarm audibles are a three-pulse temporal pattern unless they were permitted to match existing audible devices, 18.4.2.1.
13.____ | ____ |____	Fire alarm visual notification device intensity (cd) ratings and settings, mounting height (80 in. to 96 in.), and location, are consistent with the plans, 18.5.4. Audible devices mounted at least 90 in. and combination audible/visual devices 80 in. to 96 in., 18.4.8.
14.____ | ____ |____	Fire alarm voice notification is tested and documentation provided to verify it is distinguishable and understandable, 24.3.1
15.____ | ____ |____	Fire alarm notification devices will activate by operation of the sprinkler flow alarm.
16. ___ | ____ |____	HVAC duct detectors are supervised by the fire alarm system, detectors are all tested to verify if they can sample the air stream, and that fans shut down and visual and audible status alarm functions, Table 14.4.2.2.
16.____ | ____ |____	24-hour monitoring service agency received various signals during system tests.
17.____ | ____ |____	Verify that the correct and distinctive signals are received (alarm, trouble, and supervisory alarms), Table 14.4.2.2.
18.____ | ____ |____	Two monitoring circuits are provided, both circuits send correct signals to monitoring company within 90 seconds, Table 14.4.2.2
19.____ | ____ |____	Verify proper operation of magnetic door-releasing hardware and/or ventilation shutdown.
20.____ | ____ |____	Sprinkler tamper switch causes trouble light and buzzer indication at the annunciator panel only (tamper and flow alarm are different type signals).
21.____ | ____ |____	Fire alarm emergency phone jacks, if provided, are operational.
22.____ | ____ |____	For air sampling and flame detectors, test the device in accordance with the manufacturer's instructions.
23.____ | ____ |____	Resettable heat and smoke detectors, and pull stations are tested (5 to 10 percent sample of the total).
24.____ | ____ |____	Trouble condition is created for each circuit and the FACU responses appropriately.
25.____ | ____ |____	Remote annunciator receives the correct information.

26. ___ | ____ |____ Battery load test: the system is switched to battery operation 24 hours before the test and in the presence of the inspector the notification devices are activated and operate for 5 to 8 minutes or 15 minutes for emergency voice alarms.
27. ___ | ____ |____ Check battery charger, measure load voltage, and open circuit voltage.
28. ___ | ____ |____ Test ground-fault monitoring circuit, if provided.
29. ___ | ____ |____ Under primary and secondary power, perform these tests:
    - ___ | ____ |____ A. power light on and in normal condition, trouble signal when on secondary power
    - ___ | ____ |____ B. supervisory signals: fire pump power loss or phase reversal, water level/temp, pressure switches, control valves, etc.
    - ___ | ____ |____ C. silence switch functions
    - ___ | ____ |____ D. a 2nd alarm initiating zone overrides silence switch
    - ___ | ____ |____ E. trouble signals and FACU panel lights operate for each circuit tested; disconnect wires from devices and primary power supply to simulate trouble conditions
    - ____ ____ ____ F. on secondary power, measure standby and alarm current demand
    - ___ | ____ |____ G. trouble and alarm reset switches operate
    - ___ | ____ |____ H. emergency voice alarms: the message is clear and distinct
    - ___ | ____ |____ I. initiating devices tested, audible sound pressure levels, and visuals operate
    - ___ | ____ |____ J. panel lamp test switch operates: if provided
    - ___ | ____ |____ K. field zones and device address signals corresponded with panel zones and addresses
    - ___ | ____ |____ L. elevator(s) recall to designated floor and alternate floor in accordance with the Elevator Code
30. ___ | ____ |____ Other systems activate fire alarm: kitchen hood suppression system, clean agent, HVAC duct detectors, etc.
31. ___ | ____ |____ As-builts are required when system installation is not consistent with the plans.
32. ___ | ____ |____ Circuit loop resistance is within specifications and a test may be required if the system wiring has changed from the plans.
33. ___ | ____ |____ Time from activating an initiating device to activation of a safety function or notification shall not exceed 10 seconds.
34. ___ | ____ |____ Heat and spot smoke detectors are not within 4 in. of the sidewall, or if on the sidewall, the detector is within 12 in. from the ceiling, 17.6.3.1.3, 17.7.3.2.1.
35. ___ | ____ |____ Visual devices in a room or adjacent space with more than 2 devices within the field of view the flash are synchronized, 18.5.2.6. Devices in a corridor with more than 2 devices within the field of view and a maximum spacing of 100 ft., are synchronized, 18.5.4.4.7.
36. ___ | ____ |____ Visual devices are wall mounted 80 in. to 96 in. above the floor level unless otherwise permitted by the approved plans and AHJ, 18.5.4.1.
37. ___ | ____ |____ Supplemental (extra) visual devices are permitted to be mounted less than 80 in. above the floor, 18.7.2.
38. ___ | ____ |____ Ceiling-mounted devices are listed for use and spaced in accordance with Table 18.5.4.3.1(b) and the approved plans.
39. ___ | ____ |____ Mass notification systems are tested in accordance with Table 14.4.2.2(27).

*Note: additional testing criteria is found in NFPA 72: Chapter 14.

Additional Comments

Inspection Date: _____ Approved or Disapproved FD Inspector: _____

Inspection Date: _____ Approved or Disapproved FD Inspector: _____