THE MEDICAL CENTER OF AURORA - SOUTH
3RD FLOOR - A TOWER - REFRESH
MODIFICATION TO EXISTING FIRE ALARM SYSTEM

Johnson Controls

DRAWING INDEX

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City of Aurora Building Division
Project: *TMCA LEVEL 3 REFRESH - FIRE ALARM*
Address: *1501 S POTOMAC ST*
Occupancy Group: *IBC I2*
Construction Type: *IBC IA SPK*
RSN: *1679748*
Permit: *2022-2258138-LT*
City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: *M. Apodaca*
Date: *Apr 14, 2023*
2015 INTERNATIONAL CODES & 2020 NEC

COA Adopted Codes for this project:
ICC-2021 - NEC-2020
NFPA 13-2019 - NFPA 72-2019
COA Amendments 22 & 66

Code violations that are found during inspection are required to be corrected. Permit issuance does not grant approval of a code violation.

Provide a full size set of legible approved construction documents **PRINTED IN COLOR** for review by the Field Inspector.

BUILDING/FIRE DEPT PLAN REVIEW #:

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

GENERAL NOTES

1. THESE DRAWINGS DEPICT GENERAL LOCATIONS OF LIFE SAFETY EQUIPMENT & FIELD DEVICES. EXACT ROUTING OF CONDUITS IS TO BE DETERMINED IN THE FIELD BY THE INSTALLING CONTRACTOR TO SUIT CONDITIONS. ALL CHANGES SHALL BE CLEARLY INDICATED ON THE RECORD DRAWINGS.
2. SHOULD ANY CONDITIONS EXIST THAT DIFFER FROM WHAT IS INDICATED ON THESE DRAWINGS WHICH CAUSE MAJOR DEVIATIONS IN THE WORK SHOWN, THE CONTRACTOR SHALL CONTACT JOHNSON CONTROLS IN A TIMELY MANNER SO AS NOT TO IMPAIR THE CONSTRUCTION SCHEDULE.
3. CONTRACTOR IS RESPONSIBLE FOR MAKING AND OBTAINING APPROVAL FOR ALL NECESSARY ADJUSTMENTS IN CIRCUITING AS REQUIRED TO ACCOMMODATE THE RELOCATION OF EQUIPMENT AND/OR DEVICES WHICH ARE AFFECTED BY ANY AUTHORIZED CHANGE. ALL CHANGES SHALL BE CLEARLY INDICATED ON THE RECORD DRAWINGS.
4. A STAMPED SET OF APPROVED FIRE ALARM DRAWINGS SHALL BE AT THE JOB SITE AND SHALL BE USED FOR INSTALLATION.
5. 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.
6. UPDATE THE AS-BUILT DRAWING SET DAILY WITH JOB PROGRESS. RETURN THE AS-BUILT DRAWING SET TO JOHNSON CONTROLS NO LATER THAN 7 DAYS AFTER FINAL TEST.
7. THE CONTRACTOR WILL MAINTAIN ALL AREAS OF THE BUILDING IN A NEAT AND WORKMANLIKE MANNER.
8. DO NOT APPLY POWER EXCEPT IN THE PRESENCE OF A FACTORY TRAINED JOHNSON CONTROLS 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 APPLICABLE ELECTRICAL CODES. REFER TO "APPLICABLE CODES & STANDARDS" FOR SPECIFIC CODE REFERENCES.
12. ALL WIRING SHALL BE INSTALLED ACCORDING TO APPLICABLE ELECTRICAL CODES.
13. FIRE ALARM CIRCUITS SHALL BE IDENTIFIED IN ACCORDANCE WITH APPLICABLE ELECTRICAL CODES. MARK ALL FIRE ALARM WIRES IN ACCORDANCE WITH APPLICABLE ELECTRICAL CODE SECTIONS FOR POWER LIMITED AND NON-POWER LIMITED WIRE.
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 PENETRATING 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 OUTDOORS SHALL BE INSTALLED IN ACCORDANCE APPLICABLE ELECTRICAL CODES, 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 MAXIMUM CONDUIT FILL RATIO AS PER APPLICABLE ELECTRICAL CODES REQUIREMENTS.
23. EXISTING CONDUITS MAY BE USED BY THE INSTALLATION CONTRACTOR AS DEEMED NECESSARY; HOWEVER, ANY EXISTING CONDUIT WILL BE USED ONLY IF CONDUITS MEET CURRENT STANDARDS AND CODES. JOHNSON CONTROLS MAKES NO STATEMENTS WRITTEN OR VERBAL AS TO THE CONDITION OF EXISTING CONDUITS.

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LEGENDS

FIRE ALARM SYMBOL LEGEND

QTY	SYMBOL	DESCRIPTION	BRAND	MODEL	BACKBOX	WIRE TYPE
		INITIATING DEVICES				
62N 3RL	(2) OR (S)	ADDRESSABLE PHOTOELECTRIC SMOKE SENSOR W/ STANDARD BASE	SIMPLEX	4098-9714 HEAD 4098-9792 BASE	4" OCT, 1-1/2" D	Mi Mm
17N		ADDRESSABLE STANDARD HEAT SENSOR W/ STANDARD BASE	SIMPLEX	4098-9733 HEAD 4098-9792 BASE	4" OCT, 1-1/2" D	Mi Mm
2N	(S)	ADDRESSABLE DUCT SMOKE SETECTOR W/ RELAY OUTPUT	SIMPLEX	4098-9756	MOUNTS TO DUCTWORK	Mi P
2N	F	ADDRESSABLE DOUBLE ACTION MANUAL PUSH/PULL STATION	SIMPLEX	4099-9006	4" SQ, 2-1/8" D W/ 3/4" SINGLE GANG COVER EXTENSION	Mi
	(2)	EXISTING ZONED SMOKE SENSOR	SIMPLEX	EXISTING		
		EXISTING ZONED HEAT SENSOR	SIMPLEX	EXISTING		
	P	EXISTING ZONED MANUAL PULL STATION	SIMPLEX	EXISTING		
	(2)	EXISTING ZONED DUCT DETECTOR	SIMPLEX	EXISTING		
		MODULES AND RELAYS				
2N		ENCAPSULATED RELAY	SIMPLEX	4098-9843	SINGLE GANG 2-1/8" D W/ COVER	R
2N	(AIM)	INDIVIDUAL ADDRESSABLE MODULE TRIM PLATE FOR SEMI-FLUSH MOUNTING IAM MOUNTING BRACKET	SIMPLEX SIMPLEX SIMPLEX	4090-9001 4090-9806 4090-9810	SINGLE GANG 2-1/2" D W/COVER	Mi Z
2N	(AIM) OR (AIM)	RELAY IAM TRIM PLATE FOR SURFACE MOUNTING	SIMPLEX SIMPLEX	4090-9002 4090-9802	4" SQ, 2-1/8" D W/ DBL. GANG COVER	Mi R
	(AID) OR (AID)	EXISTING RELAY IDNET 2 IAM W/T SENSE TRIM PLATE FOR SURFACE MOUNTING	SIMPLEX SIMPLEX	4090-9118 4090-9802	4" SQ, 2-1/8" D W/ DBL. GANG COVER	Mi R, Z
		NOTIFICATION APPLIANCES				
26N	#	ADDRESSABLE MULTI-TONE HORN/STROBE, WALL MOUNT, RED, FIRE	SIMPLEX	49MTV-WRF	SINGLE GANG 1-1/2" D	A
20N	#	ADDRESSABLE MULTI-CANDELA STROBE, CEILING MOUNT, APPLIANCE ONLY, CLEAR LENS CEILING MOUNT ADAPTER CASE APPLIANCE COVER, RED, FIRE LETTERING	SIMPLEX SIMPLEX SIMPLEX	49VO-APPLC 49VO-APCS 49VOC-CRF	4" SQ, 1-1/2" D	A
1N	# WP	ADDRESSABLE WEATHERPROOF STROBE, WALL MOUNT, RED, CLEAR LENS, FIRE	SIMPLEX	49VO-WRFO	49WPBB-AVVOWR	A
	#	EXISTING CHIME/STROBE, NON-SYNCED, RED, WALL	WHEELOCK	CH70-2415W-FR 4903-9292		
	#	EXISTING STROBE, 15CD, RED, WALL	SIMPLEX	4904-9137		
		MISCELLANEOUS DEVICES				
16N	DH	DOOR HOLDER	RSG/AAMES	DH24120FPC		D
2N		REMOTE TEST STATION	SIMPLEX	2098-9806	SINGLE GANG 2"D	K
2N	6.8K OR 6.8K	END-OF-LINE RESISTOR 6.8kΩ, 1/2W (EOL)	SIMPLEX	4081-9004		
2N	10K	END-OF-LINE RESISTOR 10kΩ, 1/2W (EOL)	SIMPLEX	4081-9008		
	JB	JUNCTION BOX	BY OTHERS	BY OTHERS		
		EXISTING DOOR HOLDER	BY OTHERS	BY OTHERS		D
	(2) OR (S)	EXISTING FIRE/SMOKE DAMPER	BY OTHERS	BY OTHERS		
		EXISTING REMOTE TEST STATION	SIMPLEX	EXISTING		K
	WF OR WF	EXISTING WATERFLOW SWITCH	BY OTHERS	BY OTHERS		Z
	MAP	EXISTING STATIC GRAPHIC MAP	BY OTHERS	BY OTHERS		

GENERAL NOTES:

1. THE INFORMATION OR SYMBOLS SHOWN IN BOLD LINETYPE ARE NEW OR RELOCATED.
2. THE INFORMATION OR SYMBOLS SHOWN IN LIGHT LINETYPE ARE EXISTING TO REMAIN.

FIRE ALARM WIRE LEGEND

	CIRCUIT DESCRIPTION	CONSTRUCTION	GAUGE	CIRCUIT PROPERTIES	ACCEPTABLE CABLE TYPES: FPLR	FPLP	THHN	TFFN	* OUTDOOR	C.I.
A	ADDRESSABLE NOTIFICATION	UTP SOLID	14 AWG	60pf/ft. MAX CAPACITANCE; 3 twists/ft. MINIMUM	X	X				
Ac	ADDRESSABLE NOTIFICATION - CI	UTP SOLID - CI	14 AWG	60pf/ft. MAX CAPACITANCE; 3 twists/ft. MINIMUM	X	X				X
D	DOOR HOLDER	2 COND. SOLID	14 AWG		X	X	X	X		
K	REMOTE TEST SWITCH/LED	(2) 2 COND. SOLID	14 AWG		X	X				
Mi	IDNET	UTP SOLID	18 AWG	0.60μF MAX TOTAL LINE CAPACITANCE	X	X				
Mic	IDNET - CI	UTP SOLID - CI	18 AWG	0.60μF MAX TOTAL LINE CAPACITANCE	X	X				X
Mm	MAPNET	STP SOLID	16 AWG	0.60μF MAX TOTAL LINE CAPACITANCE	X	X				
P	POWER	2 COND. SOLID	14 AWG		X	X	X	X		
R	RELAY	2 COND. SOLID	14 AWG		X	X	X	X		
V	VISUAL	2 COND. SOLID	14 AWG		X	X				
Z	ZONE CIRCUIT	2 COND. SOLID	14 AWG		X	X	X	X		

CONDUIT SIZE	MAX CONDUCTOR AREA	CONDUIT SIZE	MAX CONDUCTOR AREA
1/2"	0.122 SQ. INCH*	1-1/4"	0.598 SQ INCH*
3/4"	0.213 SQ INCH*	1-1/2"	0.814 SQ INCH*
1"	0.346 SQ INCH*	2"	1.342 SQ INCH*

* 40% CONDUIT FILL PER N.E.C.

UTP = UNSHIELDED TWISTED PAIR

ITEMS SUCH AS CAPACITANCE BETWEEN CONDUCTORS AND WIRE GAUGE CAN BE CRUCIAL TO THE CIRCUIT DESIGN OF THIS SYSTEM INSTALLATION. THE INSTALLING CONTRACTOR IS RESPONSIBLE FOR SELECTING AND INSTALLING CABLE MANUFACTURER AND MODEL THAT MEETS OR EXCEEDS THE ABOVE REQUIREMENTS. RECOMMENDED CABLE MANUFACTURERS AND MODEL NUMBERS ARE AVAILABLE UPON REQUEST.

BUILDING/FIRE DEPT 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 IFC AND THE 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 IFC AND THE ANSI A117.1 STANDARD.
- PROVIDE A PRIMARY AND SECONDARY POWER SUPPLY FOR THE FIRE ALARM SYSTEM PER THE IFC, SECTION 907 AND THE NFPA 72.
- FIELD INSPECTION CONSULTATION IS AVAILABLE UPON REQUEST. CALL 303-739-7420 TO REQUEST CONSULTATION.
- THE FIRE ALARM CONTRACTOR MUST COMPLETE THE NFPA 72 "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.

APPLICABLE CODES & STANDARDS

JURISDICTIONS WITHIN THE STATE MAY HAVE AMENDMENTS TO THE STATE ADOPTED CODE. CHECK WITH THE LOCAL JURISDICTION AUTHORITY FOR MORE DETAILS.

International Building Code (IBC), 2015 Edition

International Fire Code (IFC), 2015 Edition

National Electric Code (NFPA 70), 2020 Edition

National Fire Alarm and Signaling Code (NFPA 72), 2013 Edition

Life Safety Code (NFPA 101), 2012 Edition

ICC A117.1 Accessible and Usable Buildings and Facilities, 2009 Edition

ADA Standards for Accessible Design, 2010 Edition

Colorado Department of Health and Environment - Hospital Licensing Rules, 2012 Edition

OCCUPANCY TYPE(S):
I-2 INSTITUTIONAL GROUP

SPRINKLER PROTECTION:
BUILDING IS FULLY SPRINKLERED

AREA:
TOTAL: APPROX. 450,396 SQ. FT.
SCOPE: APPROX. 17,400 SQ. FT

STORIES:
TOTAL: 6 STORIES + BASEMENT
SCOPE: PARTIAL 3RD FLOOR

CONSTRUCTION:
EXISTING: TYPE 1A
NEW: TYPE 1A

SCOPE OF WORK

MODIFY EXISTING FIRE ALARM SYSTEM: PROVIDE NEW DEVICES AND DEMO EXISTING DEVICES AS SHOWN ON DRAWINGS.

AREA TO RECEIVE WORK INCLUDES APPROXIMATELY 17,400 SQUARE FEET ENCOMPASSING 3RD FLOOR OF CENTRAL A-TOWER AT THE MEDICAL CENTER OF AURORA - SOUTH, AT 1501 SOUTH POTOMAC STREET, AURORA, COLORADO 80012.

FOR INTERIM - EXISTING AREA TO RECEIVE PARTIAL DEMOLITION TO ALLOW FOR UPDATES TO THE AREA. DURING DEMOLITION, INTERIM HEAT-DETECTORS TO BE INSTALLED IN SCOPE AREA FOR CONSTRUCTION. RE-USE SELECT EXISTING STANDARD INITIATION-BASES WHERE SHOWN.

FOR BUILDOUT - INSTALL NEW ENHANCED POWER SUPPLY (EPS) INTO NODE-1 FIRE ALARM CONTROL PANEL (FACP) LOCATED IN OLD FIRE COMMAND CENTER 1E-2902A. REMOVE INTERIM DEVICES FROM SCOPE AREA. INSTALL NEW INITIATION AND NOTIFICATION DEVICES. NEW DEVICES WILL TIE TO EXISTING NODE-1 FACP. NEW INITIATION TO TIE TO NEW IDNET 1:M14 CIRCUIT. NEW ADDRESSABLE NOTIFICATION TO TIE TO NEW IDNAC 1:A1 CIRCUIT UTILIZING NEW EPS.

EXISTING STATIC GRAPHIC MAPS SHOWN ACROSS 3RD FLOOR ARE CUSTOMER MADE AND ARE TO BE UPDATED BY OTHERS.

NEW DEVICES TO FOLLOW EXISTING SEQUENCE OF OPERATIONS; NO FURTHER CHANGES TO OCCUR.

ALL NEW WIRING TO BE CLASS B.

THE EXISTING FIRE ALARM SYSTEM 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 ANY EXISTING FIRE ALARM SYSTEM DEMOLITION WORK.

AUTOMATIC FIRE ALARM SYSTEM SHALL TRANSMIT THE ALARM, SUPERVISORY AND TROUBLE SIGNALS TO AN APPROVED SUPERVISING STATION. THE SUPERVISING STATION SHALL BE LISTED AS EITHER UUFX OR UUJS UNDERWRITERS LABORATORY OR SHALL MEET THE REQUIREMENTS OF FACTORY MUTUAL RESEARCH APPROVAL STANDARD 3011. SUPERVISION OF SYSTEM AND LEASED TELEPHONE LINES SHALL BE ARRANGED BY THE OWNER.

ABBREVIATIONS LEGEND

AC = ABOVE CEILING
AFF = ABOVE FINISHED FLOOR
AHJ = AUTHORITY HAVING JURISDICTION
ALM = ALARM
ANN = ANNUNCIATOR
BMS = BUILDING MANAGEMENT SYSTEM
C = CEILING MOUNTED
CD = CANDELA RATING
DET = DETECTOR
DGP = DATA GATHERING PANEL
E = EXISTING TO REMAIN
EOL = END OF LINE
EPO = EMERGENCY POWER OFF
ER = ELEVATOR RECALL
FAA = FIRE ALARM ANNUNCIATOR
FACP = FIRE ALARM CONTROL PANEL
FATC = FIRE ALARM TERMINAL CABINET
FBO = FURNISHED BY OTHERS
FCC = FIRE COMMAND CENTER
FSD = FIRE SMOKE DAMPER
FTR = FIRE ALARM TRANSPONDER
H = HIGH HUMIDITY
HT = HEIGHT
HVAC = HEATING VENTILATION & AIR CONDITIONING
IMS = INFORMATION MANAGEMENT SYSTEM
MAX = MAXIMUM
MIN = MINIMUM
N = NEW DEVICE
NAC = NOTIFICATION APPLIANCE CIRCUIT
NDU = NETWORK DISPLAY UNIT
NEC = NATIONAL ELECTRIC CODE
NFPA = NATIONAL FIRE PROTECTION ASSOCIATION
NIC = NOT IN CONTRACT
NPU = NETWORK PROCESSING UNIT
NTS = NOT TO SCALE
PAP = PRE-ACTION PANEL
RC = EXISTING TO REMOVE AND COVER
RD = EXISTING DEVICE TO BE RELOCATED
RL = RELOCATED DEVICE
RR = REMOVE EXISTING & REPLACE WITH NEW
SCC = STATUS COMMAND CENTER
SLC = SIGNALING LINE CIRCUIT
SMK = SMOKE
SUPV = SUPERVISORY
TAC = TRUEALERT ADDRESSABLE CONTROLLER
TOS = TOP OF SHAFT
TRBL = TROUBLE
TS = TAMPER SWITCH
TYP = TYPICAL
UON = UNLESS OTHERWISE NOTED
VCC = VOICE COMMAND CENTER
VT = VALVE TAMPER
W = WATTAGE
W/ = WITH
W/O = WITHOUT
WF = WATERFLOW
WG = WIRE GUARD
WP = WEATHERPROOF
XP = EXPLOSION PROOF

JOHNSON CONTROLS CONTACTS

Sales Representative
RYAN SCHISSEL
RYAN.SCHISSEL@JCI.COM
PHONE:720-633-5751

Project Manager
KATHERINE LUDEMAN
KATHERINE.LUDMAN@JCI.COM
PHONE:720-775-0485

Drawings Prepared By
CHANNING DIXON
CHANNING.DIXON-EXT@JCI.COM

Drawings Checked By
CALE RAUCH
CALE.RAUCH@JCI.COM
NICET II #151588, EXP. 12/01/2025

Drawings Reviewed By
NANCY WILTSIE
NANCY.WILTSIE@JCI.COM
NICET III #93727, EXP 03/01/2024

PROJECT DIRECTORY

Site
THE MEDICAL CENTER OF AURORA
1501 SOUTH POTOMAC STREET
AURORA, COLORADO 80012
PHONE: 303-695-2600

Johnson Controls District - 419
14200 E. EXPOSITION AVE
AURORA, CO 80012
PHONE: 303-355-0500
FAX: 303-355-0615
SERVICE: 303-355-0500

Owner
HEALTH ONE
4900 SOUTH MONACO STREET
DENVER, COLORADO 80237
PHONE: 303-846-5511

Installer
E LIGHT ELECTRIC SERVICES, INC.
361 INVERNES DRIVE, SUITE B
ENGLEWOOD, COLORADO 80112
PHONE: 303-754-0001

DESIGN STATEMENT

THIS PROJECT'S DESIGN IS BASED ON THE ENGINEERED PLANS AND SPECIFICATIONS PREPARED BY:
PERKINS & WILL ARCHITECTS & INTERIOR DESIGNERS

ARCHITECTURAL PLANS DATED:	MARCH 11, 2022
MECHANICAL PLANS DATED:	MARCH 11, 2022
ELECTRICAL PLANS DATED:	MARCH 11, 2022
SPECIFICATIONS DATED:	MARCH 11, 2022
ADDENDUM DATED:	APRIL 01, 2022

DEVICE TAG LEGEND

1:T2:A2-1(E1:1)

PANEL DESIGNATOR
- FA: = FACP (NON-NETWORK)
- #: = NODE NUMBER
- T#: = TRANSPONDER NUMBER
- #:T# = NODE:TRANSPONDER NUMBER
- N#: = NAC EXTENDER NUMBER

CIRCUIT DESIGNATOR
- A#: = IDNAC CIRCUIT NUMBER
- D#: = DOOR HOLDER CIRCUIT NUMBER
- F#: = FIRE PHONE CIRCUIT
- H#: = AUDIBLE (HORN) CIRCUIT NUMBER
- M#: = IDNET LOOP NUMBER
- P#: = POWER CIRCUIT NUMBER
- S#: = SPEAKER CIRCUIT NUMBER
- V#: = VISUAL CIRCUIT NUMBER
- Z#: = ZONE NUMBER

DEVICE NUMBER

BRANCH / ISOLATED LOOP DESIGNATOR:
- (L#) = IDNET ISOLATED LOOP NUMBER
- (#) = IDNAC BRANCH NUMBER
- (E#:#) = EPR CIRCUIT:BRANCH NUMBER

1. IDNAC = ADDRESSABLE NOTIFICATION CIRCUIT
2. EPR = ENHANCED POWER REPEATER

SYSTEM SEQUENCE OF OPERATIONS

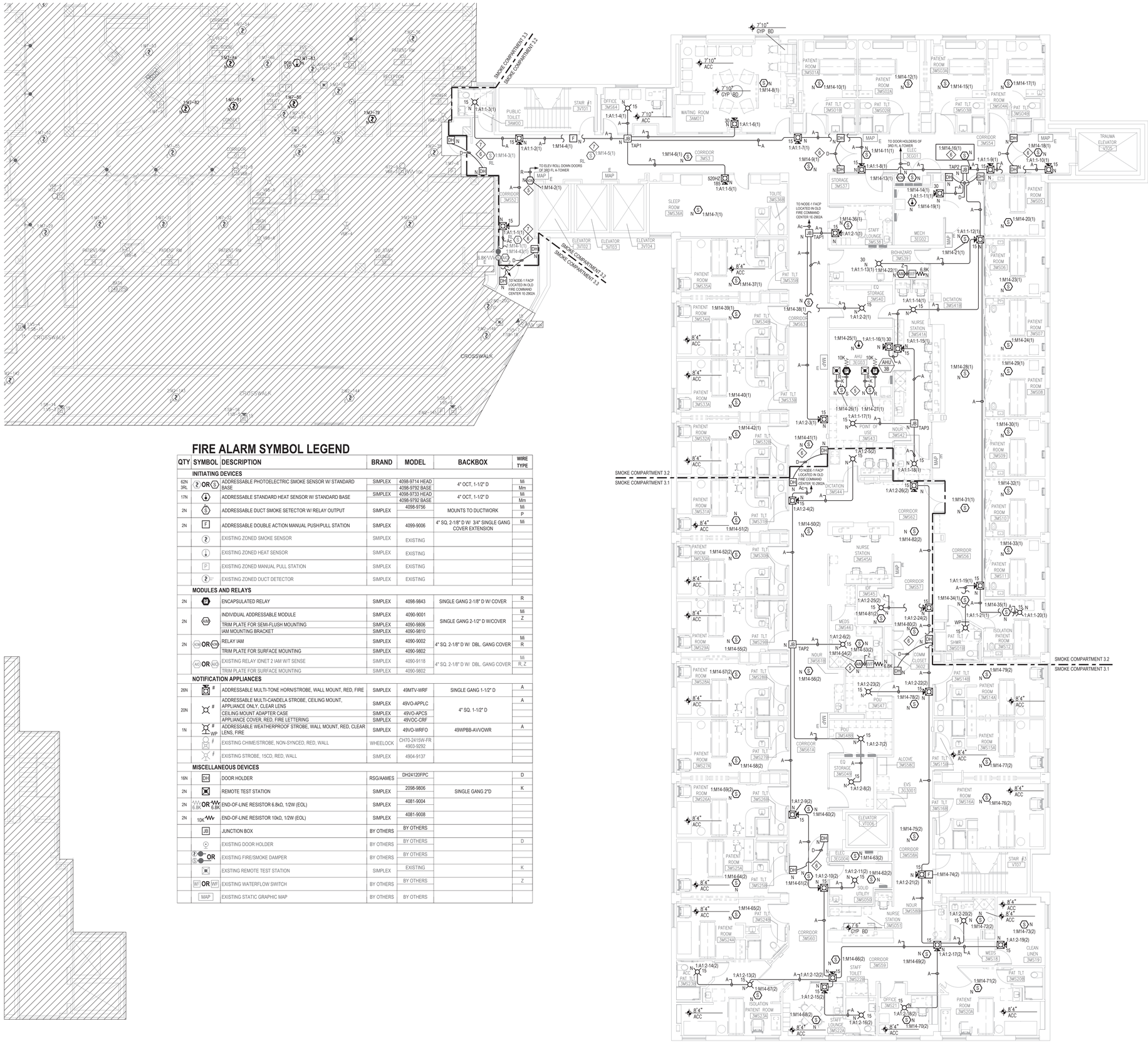
New and existing fire alarm systems shall activate exterior horn/strobe upon both general alarm and flow switch activation. When fire alarm panel is silenced, the interior and exterior strobes will continue until fire alarm panel is reset.

SEQUENCE OF OPERATIONS

M.C.O.A. SOUTH TOWER	SYSTEM OUTPUTS: FACP Annunciation						Notification						Required Controls								Supplementary				
SYSTEM INPUTS	ACTUATE COMMON ALARM SIGNAL INDICATOR	ACTUATE AUDIBLE ALARM SIGNAL	ACTUATE COMMON SUPERVISORY SIGNAL INDICATOR	ACTUATE AUDIBLE SUPERVISORY SIGNAL	ACTUATE COMMON TROUBLE SIGNAL INDICATOR	ACTUATE AUDIBLE COMMON TROUBLE SIGNAL	ACTUATE EVACUATION SIGNALS (AUDIBLE/VISUAL)	ACTUATE SPRINKLER 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	RECALL ELEVATORS TO DESIGNATED FLOOR	ASE SHUT DOWN	DAMPER SHUT DOWN	RELEASE CORRIDOR FIRE DOORS	RELEASE ASSOCIATED ROLL-UP DOOR	ELEVATOR SHUT DOWN (1)	ELEVATOR RECALL - MAIN FLOOR	ELEVATOR HW FLASH	ELEVATOR RECALL - ALTERNATE FLOOR	OVERRIDE MAGNIC SYSTEM	SILENCE AUDIBLE SIGNAL (EXCLUDING EXTERIOR HS)	ACTUATE OUTSIDE HORN/STROBE	RESET PANEL TO "NORMAL" CONDITION	
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	
1 SMOKE DETECTOR	X	X					X	X	X	X			X	X	X							X	X	X		1
2 SMOKE DETECTOR AT 2ND, 4TH & 5TH FLR CLERK DESK	X	X					X	X	X	X			X	X	X							X	X	X		2
3 SMOKE DETECTOR AT SMOKE PARTITION	X	X					X	X	X	X			X	X	X							X	X	X		3
4 MANUAL PULL STATION	X	X					X	X	X	X			X	X								X	X	X		4
5 HEAT DETECTOR	X	X					X	X	X	X			X	X								X	X	X		5
6 DUCT DETECTOR			X	X				X			X		X	X												6
7 DUCT DETECTOR AT F/S DAMPER			X	X				X			X		X	X												7
8 MAIN FLR. ELEV. LOBBY SMOKE DETECTOR	X	X					X	X	X	X			X	X	X	X	X		X	X	X	X	X	X		8
9 ELEV. LOBBY SMOKE DETECTORS (EXCL. MAIN FLR.)	X	X					X	X	X	X			X	X		X		X		X		X	X	X		9
10 ELEV. MECH. ROOM SMOKE DETECTOR	X	X					X	X	X	X			X	X		X		X		X		X	X	X		10
11 ELEV. SHAFT HEAT DETECTOR	X	X					X	X	X	X			X	X			X									11
12 ELEV. MECH. ROOM HEAT DETECTOR	X	X					X	X	X	X			X	X			X									12
13 WATERFLOW SWITCH	X	X					X	X	X	X			X	X								X	X	X		13
14 TAMPER SWITCH			X	X				X			X		X	X												14
15 POST INDICATOR VALVE SWITCH			X	X				X			X		X	X												15
16 FACP AC POWER FAILURE					X	X						X		X												16
17 FACP LOW BATTERY					X	X						X		X												17
18 OPEN CIRCUIT					X	X						X		X												18
19 GROUND FAULT					X	X						X		X												19
20 NOTIFICATION APPLIANCE CIRCUIT SHORT					X	X						X		X												20


SLEEP LAB 301
PATIENT RM 302
PATIENT RM 303
STAFF LOUNGE 304
WAITING ROOM
SLEEP RM 325
PATIENT RM 324
PATIENT RM 323
PATIENT RM 322
PATIENT RM 321
PATIENT RM 320
PATIENT RM 319
PATIENT RM 318
PATIENT RM 317
PATIENT RM 316
PATIENT RM 315
PATIENT RM 314
PATIENT RM 312
PICU PATIENT RM 311
STAFF LOUNGE
FAMILY ROOM
PICU PATIENT RM 308
PATIENT RM 305
PATIENT RM 306
PATIENT RM 307
PATIENT RM 327
PATIENT RM 328
PATIENT RM 329
PATIENT RM 330
PATIENT RM 331
PATIENT RM 332
PATIENT RM 333
ISOLATION RM 334
OFFICE
ELECTRICAL
MECHANICAL
SOILED UTILITY
CLEAN UTILITY
NURSING STATION
STORAGE 41
CHARTING RM
PANTRY
MED RM
SHOWER RM 335
ANTE RM 34
DOCTOR'S DICTATION RM 305
P.O.U. ROOM
EQUIP STOR
EVS
ELECTRICAL/TELEPHONE
STORAGE
ELEVATOR NO. 1
ELEVATOR NO. 2
ELEVATOR NO. 3
ELEVATOR NO. 4
ELEVATOR NO. 6
AHU NO. 1
AHU NO. 3
STAIRWELL NO. 3
STAIR 1
STAIR 3
CROSSWALK
CORRIDOR 102
CORRIDOR 103
CORRIDOR 104
CORRIDOR 105
MED. ROOM 101
PATIENT RM ICU 24
PATIENT RM ICU 25
PATIENT RM ICU 26
SOILED UTILITY 102
SOILED UTILITY 103
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FIRE ALARM SYMBOL LEGEND

QTY	SYMBOL	DESCRIPTION	BRAND	MODEL	BACKBOX	WIRE TYPE
		INITIATING DEVICES				
62N 3RL	(2) OR (S)	ADDRESSABLE PHOTOELECTRIC SMOKE SENSOR W/ STANDARD BASE	SIMPLEX	4098-9714 HEAD 4098-9792 BASE	4" OCT, 1-1/2" D	Mi Mm
17N		ADDRESSABLE STANDARD HEAT SENSOR W/ STANDARD BASE	SIMPLEX	4098-9733 HEAD 4098-9792 BASE	4" OCT, 1-1/2" D	Mi Mm
2N	(S)	ADDRESSABLE DUCT SMOKE SETECTOR W/ RELAY OUTPUT	SIMPLEX	4098-9756	MOUNTS TO DUCTWORK	Mi P
2N	F	ADDRESSABLE DOUBLE ACTION MANUAL PUSH/PULL STATION	SIMPLEX	4099-9006	4" SQ, 2-1/8" D W/ 3/4" SINGLE GANG COVER EXTENSION	Mi
	(2)	EXISTING ZONED SMOKE SENSOR	SMIPLEX	EXISTING		
		EXISTING ZONED HEAT SENSOR	SIMPLEX	EXISTING		
	P	EXISTING ZONED MANUAL PULL STATION	SIMPLEX	EXISTING		
	(2)	EXISTING ZONED DUCT DETECTOR	SIMPLEX	EXISTING		
		MODULES AND RELAYS				
2N	R	ENCAPSULATED RELAY	SIMPLEX	4098-9843	SINGLE GANG 2-1/8" D W/ COVER	R
2N	AIM	INDIVIDUAL ADDRESSABLE MODULE	SIMPLEX	4090-9001	SINGLE GANG 2-1/2" D W/COVER	Mi Z
		TRIM PLATE FOR SEMI-FLUSH MOUNTING	SIMPLEX	4090-9806		
		IAM MOUNTING BRACKET	SIMPLEX	4090-9810		
2N	(KM) OR (KW)	RELAY IAM	SIMPLEX	4090-9002	4" SQ. 2-1/8" D W/ DBL. GANG COVER	Mi R
		TRIM PLATE FOR SURFACE MOUNTING	SIMPLEX	4090-9802		
	(AIO) OR (AIC)	EXISTING RELAY IDNET 2 IAM W/T SENSE	SIMPLEX	4090-9118	4" SQ. 2-1/8" D W/ DBL. GANG COVER	Mi R, Z
		TRIM PLATE FOR SURFACE MOUNTING	SIMPLEX	4090-9802		
		NOTIFICATION APPLIANCES				
26N	#	ADDRESSABLE MULTI-TONE HORN/STROBE, WALL MOUNT, RED, FIRE	SIMPLEX	49MTV-WRF	SINGLE GANG 1-1/2" D	A
20N	#	ADDRESSABLE MULTI-CANDELA STROBE, CEILING MOUNT, APPLIANCE ONLY, CLEAR LENS	SIMPLEX	49VO-APPLC	4" SQ. 1-1/2" D	A
		CEILING MOUNT ADAPTER CASE	SIMPLEX	49VO-APCS		
		APPLIANCE COVER, RED, FIRE LETTERING	SIMPLEX	49VOC-CRF		
1N	# WP	ADDRESSABLE WEATHERPROOF STROBE, WALL MOUNT, RED, CLEAR LENS, FIRE	SIMPLEX	49VO-WRFQ	49WPBB-AVVOWR	A
	#	EXISTING CHIME/STROBE, NON-SYNCED, RED, WALL	WHEELOCK	CH70-2415W-FR 4903-9252		
	#	EXISTING STROBE, 15CD, RED, WALL	SIMPLEX	4904-9137		
		MISCELLANEOUS DEVICES				
16N	DH	DOOR HOLDER	RSG/AAMES	DH24120FPC	SINGLE GANG 2"D	D
2N		REMOTE TEST STATION	SIMPLEX	2098-9806		K
2N	6.8K OR 6.8K	END-OF-LINE RESISTOR 6.8kΩ, 1/2W (EOL)	SIMPLEX	4081-9004		
2N	10K	END-OF-LINE RESISTOR 10kΩ, 1/2W (EOL)	SIMPLEX	4081-9008		
	JB	JUNCTION BOX	BY OTHERS	BY OTHERS		
		EXISTING DOOR HOLDER	BY OTHERS	BY OTHERS		D
	OR	EXISTING FIRE/SMOKE DAMPER	BY OTHERS	BY OTHERS		
		EXSTING REMOTE TEST STATION	SIMPLEX	EXISTING		K
	WF OR WF	EXISTING WATERFLOW SWITCH	BY OTHERS	BY OTHERS		Z
	MAP	EXISTING STATIC GRAPHIC MAP	BY OTHERS	BY OTHERS		

3RD FLOOR PARTIAL DEVICE PLACEMENT PLAN - BUILDOUT

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

SCALE: 1/8" = 1'-0" 0 4' 8' IN FEET 16'

GENERAL NOTES:

1. ALL CEILINGS ARE ASSUMED TO BE EITHER 8'-0" A.F.F., SUSPENDED ACOUSTICAL CEILING SYSTEM (ACC) UNLESS NOTED OTHERWISE.
2. DO NOT CHANGE DEFAULT APPLIANCE CONFIGURATION SWITCH SETTINGS ON ADDRESSABLE A/V DEVICES (CFIG1). REFER TO DEVICE DETAILS AND INSTALLATION INSTRUCTIONS FOR MORE INFORMATION.
3. THE DEVICE ADDRESSES INDICATED ON THESE DRAWINGS ARE AN ALPHANUMERIC DESCRIPTION OF WHICH CIRCUIT THE DEVICE IS LOCATED ON. DEVICES MAY BE ASSIGNED A DIFFERENT NUMBER WITHIN THE PANEL PROGRAM. CONSULT WITH A JOHNSON CONTROLS TECHNICIAN BEFORE APPLYING A PHYSICAL LABEL TO ANY DEVICES.
4. THE INFORMATION OR SYMBOLS SHOWN IN BOLD LINETYPE ARE NEW OR RELOCATED.
5. THE INFORMATION OR SYMBOLS SHOWN IN LIGHT LINETYPE ARE EXISTING TO REMAIN.
6. ALL ITEMS THAT ARE HATCHED ARE NOT IN THIS SCOPE OF WORK.

KEYNOTES:

1. NEW HEAT SENSOR TO REPLACE EXISTING SMOKE SENSOR HEAD ONLY AS INTERIM FOR CONSTRUCTION. REUSE EXISTING BASE, EXISTING ADDRESS, AND EXISTING WIRING.
2. NEW HEAT SENSOR TO BE INSTALLED AS INTERIM FOR CONSTRUCTION. TO BE REMOVED AFTER CONSTRUCTION.
3. EXISTING DEVICE TO REMAIN AS INTERIM FOR CONSTRUCTION. TO BE REMOVED DURING BUILDOUT.
4. DEVICE REMOVED TO BE KEPT IN STOCK. DEVICES TO REINSTALLED DURING BUILDOUT.
5. EXACT DEVICE PLACEMENT TO BE DETERMINED BY INSTALLING CONTRACTOR.
6. MOUNT SMOKE DETECTOR WITHIN 5' OF DOOR HOLDERS.
7. EXISTING DEVICE REINSTALLED. UPDATE ADDRESS, DESCRIPTOR, AND LOCATION. REWIRE TO M14 CIRCUIT.

FIRE ALARM WIRE LEGEND

CIRCUIT DESCRIPTION	CONSTRUCTION	GAUGE	CIRCUIT PROPERTIES	ACCEPTABLE CABLE TYPES: FPL/R	FPL/P	THHN	TFFN	OUTDOOR **	C.I.
A ADDRESSABLE NOTIFICATION	UTP SOLID	14 AWG	60pf/ft. MAX CAPACITANCE; 3 twists/ft. MINIMUM	X	X				
Ac ADDRESSABLE NOTIFICATION - CI	UTP SOLID - CI	14 AWG	60pf/ft. MAX CAPACITANCE; 3 twists/ft. MINIMUM	X	X				X
D DOOR HOLDER	2 COND. SOLID	14 AWG		X	X	X	X		
K REMOTE TEST SWITCH/LED	(2) 2 COND. SOLID	14 AWG		X	X				
Mi IDNET	UTP SOLID	18 AWG	0.60µF MAX TOTAL LINE CAPACITANCE	X	X				
Mic IDNET - CI	UTP SOLID - CI	18 AWG		X	X				X
Mm MAPNET	STP SOLID	16 AWG	0.60µF MAX TOTAL LINE CAPACITANCE	X	X				
P POWER	2 COND. SOLID	14 AWG		X	X	X	X		
R RELAY	2 COND. SOLID	14 AWG		X	X	X	X		
V VISUAL	2 COND. SOLID	14 AWG		X	X				
Z ZONE CIRCUIT	2 COND. SOLID	14 AWG		X	X	X	X		

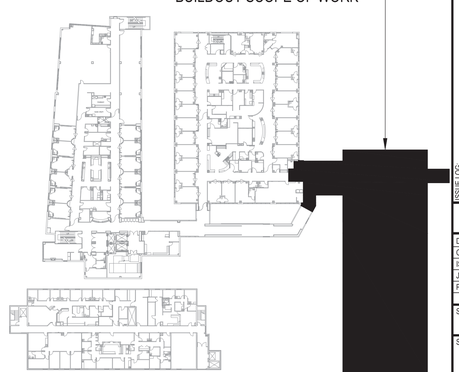
CONDUIT SIZE	MAX CONDUCTOR AREA	CONDUIT SIZE	MAX CONDUCTOR AREA
1/2"	0.122 SQ. INCH*	1-1/4"	0.598 SQ INCH*
3/4"	0.213 SQ INCH*	1-1/2"	0.814 SQ INCH*
1"	0.346 SQ INCH*	2"	1.342 SQ INCH*

* 40% CONDUIT FILL PER N.E.C.
UTP = UNSHIELDED TWISTED PAIR

ITEMS SUCH AS CAPACITANCE BETWEEN CONDUCTORS AND WIRE GAUGE CAN BE CRUCIAL TO THE CIRCUIT DESIGN OF THIS SYSTEM INSTALLATION. THE INSTALLING CONTRACTOR IS RESPONSIBLE FOR SELECTING AND INSTALLING CABLE MANUFACTURER AND MODEL THAT MEETS OR EXCEEDS THE ABOVE REQUIREMENTS. RECOMMENDED CABLE MANUFACTURERS AND MODEL NUMBERS ARE AVAILABLE UPON REQUEST.

City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: *M. Apodaca*
Date: *Apr 14, 2023*
2015 INTERNATIONAL CODES & 2020 NEC

BUILDOUT SCOPE OF WORK



KEYPLAN
SCALE:N.T.S.

Johnson Controls
DISTRICT 1-418
10344 E. COUNTY LINE RD
LONE TREE, CO 80124
PHONE: 303-395-6500
FAX: 303-395-6615

NICET CERTIFICATION INFORMATION
NANCY S. WILTSIE
NICET Fire Alarm, III
Certification #93727
Valid Through: 03/01/24
December 14, 2022

THE MEDICAL CENTER OF AURORA - SOUTH
3RD FLOOR - A TOWER - REFRESH

THE MEDICAL CENTER OF AURORA
1501 SOUTH POTOMAC STREET
AURORA, COLORADO 80012

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JOB #:	
PROJECT #:	419-650214504

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SYSTEM: FIRE ALARM SYSTEM

SHEET: 3RD FLOOR PARTIAL DEVICE PLACEMENT PLAN - BUILDOUT

FA-102

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Permit # 2022-2258138-LT
Sheet 4 of 52

RISER NOTES:

1. RISER IS A DIAGRAMMATICAL REPRESENTATION OF THE SYSTEM ARCHITECTURE IN BUILDING CROSS SECTION. IT IS NOT INTENDED TO REPRESENT ACTUAL WIRE RUNS, PANEL CONFIGURATIONS OR PENETRATIONS. REFER TO FLOOR PLANS AND PANEL DETAILS FOR CIRCUIT ROUTING AND CONFIGURATION INFORMATION.
2. ALL WIRING SHALL COMPLY WITH APPLICABLE ELECTRICAL CODES. REFER TO "APPLICABLE CODES & STANDARDS" ON SHEET FA-001 FOR SPECIFIC CODE REFERENCES.
3. THE INFORMATION OR SYMBOLS SHOWN IN BOLD LINETYPE ARE NEW OR RELOCATED.
4. THE INFORMATION OR SYMBOLS SHOWN IN LIGHT LINETYPE ARE EXISTING TO REMAIN.
5. ALL ITEMS THAT ARE HATCHED ARE NOT IN THIS SCOPE OF WORK.

City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: *M. Apodaca*
Date: *Apr 14, 2023*
2018 INTERNATIONAL CODES & 2020 NEC



3RD FLOOR PARTIAL RISER DIAGRAM - INTERIM

SCALE:N.T.S.

Johnson Controls
DISTRICT: 1-418
MAIL: 5757 JOHNSTON AVE
AURORA, CO 80017
SERVICE: 303-355-0500
PHONE: 303-350-9500
FAX: 303-355-9615

NICET CERTIFICATION INFORMATION

NANCY S. WILTSIE
NICET Fire Alarm, III
Certification #93727
Valid Through: 03/01/24

December 14, 2022

THE MEDICAL CENTER OF AURORA - SOUTH 3RD FLOOR - A TOWER - REFRESH

THE MEDICAL CENTER OF AURORA
1501 SOUTH POTOMAC STREET
AURORA, COLORADO 80012

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PROJECT #:	419:650214504

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SYSTEM:
FIRE ALARM SYSTEM

SHEET:
3RD FLOOR PARTIAL RISER DIAGRAM - INTERIM

FA-201

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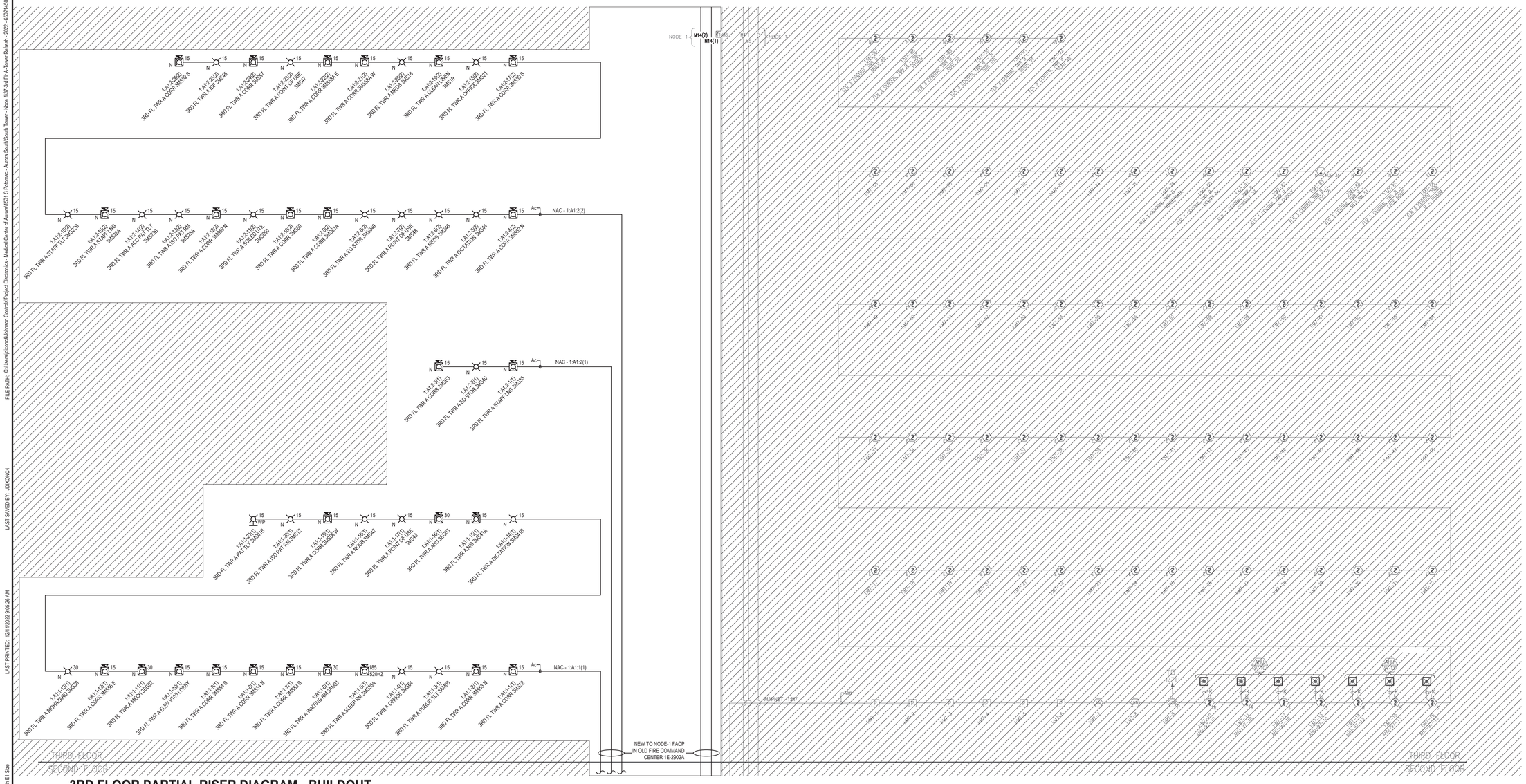
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RSN: 1679748
Permit # 2022-2258138-LT
Sheet 5 of 52

RISER NOTES:

1. RISER IS A DIAGRAMMATICAL REPRESENTATION OF THE SYSTEM ARCHITECTURE IN BUILDING CROSS SECTION. IT IS NOT INTENDED TO REPRESENT ACTUAL WIRE RUNS, PANEL CONFIGURATIONS OR PENETRATIONS. REFER TO FLOOR PLANS AND PANEL DETAILS FOR CIRCUIT ROUTING AND CONFIGURATION INFORMATION.
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City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: *M. Apodaca*
Date: *Apr 14, 2023*
2015 INTERNATIONAL CODES & 2020 NEC



3RD FLOOR PARTIAL RISER DIAGRAM - BUILDOUT
SCALE:N.T.S.

Johnson Controls
DISTRICT: 1-418
14000 E EXPOSITION AVE
AURORA, CO 80012
SERVICE: 303-3550500
PHONE: 303-350-9500
FAX: 303-350-9615

NICET CERTIFICATION INFORMATION

NANCY S. WILTSIE
NICET Fire Alarm, III
Certification #93727
Valid Through: 03/01/24

December 14, 2022

THE MEDICAL CENTER OF AURORA - SOUTH 3RD FLOOR - A TOWER - REFRESH

THE MEDICAL CENTER OF AURORA
1501 SOUTH POTOMAC STREET
AURORA, COLORADO 80012

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SYSTEM:
FIRE ALARM SYSTEM

SHEET:
3RD FLOOR PARTIAL RISER DIAGRAM - BUILDOUT

FA-202

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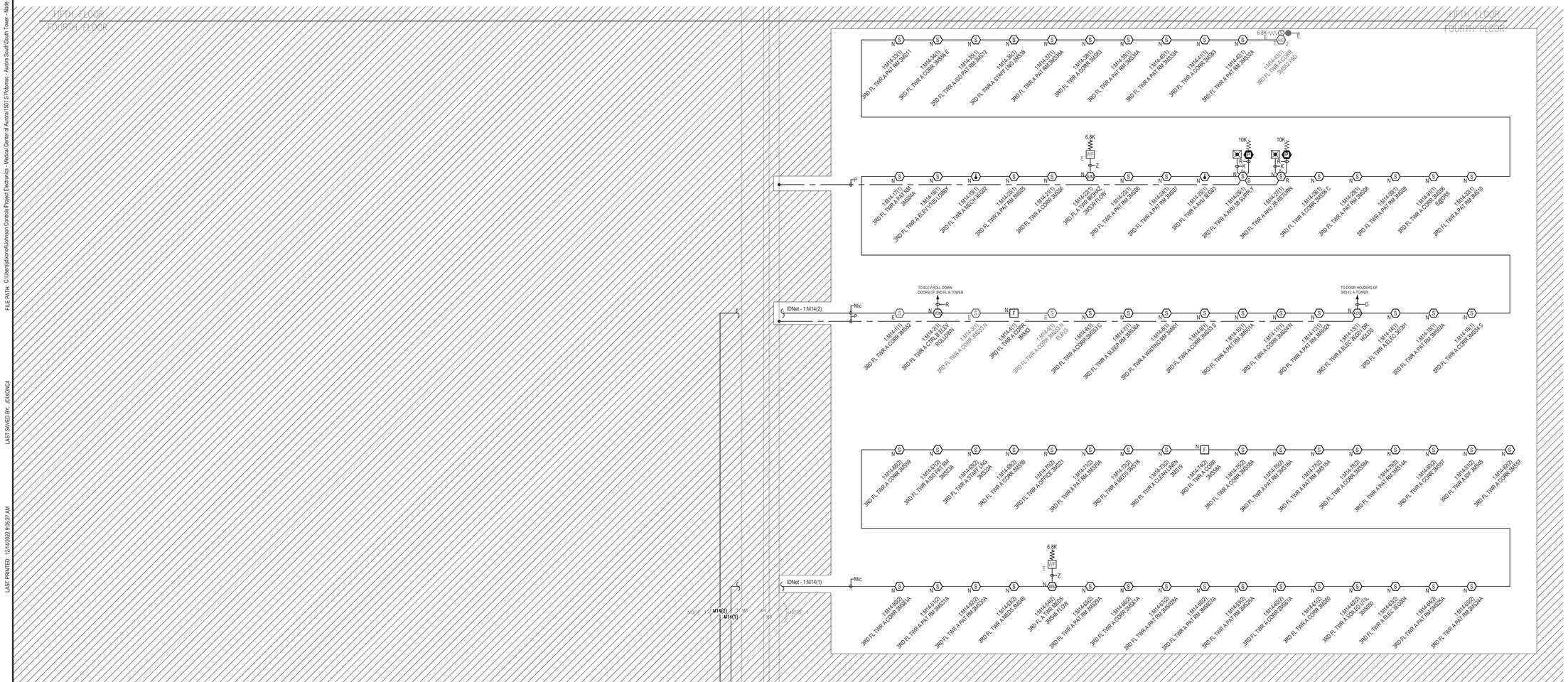
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Permit # 2022-2258138-LT
Sheet 6 of 52

RISER NOTES:

1. RISER IS A DIAGRAMMATICAL REPRESENTATION OF THE SYSTEM ARCHITECTURE IN BUILDING CROSS SECTION. IT IS NOT INTENDED TO REPRESENT ACTUAL WIRE RUNS, PANEL CONFIGURATIONS OR PENETRATIONS. REFER TO FLOOR PLANS AND PANEL DETAILS FOR CIRCUIT ROUTING AND CONFIGURATION INFORMATION.
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City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: *M. Apodaca*
Date: *Apr 14, 2023*
2015 INTERNATIONAL CODES & 2020 NEC



3RD FLOOR PARTIAL RISER DIAGRAM - BUILDOUT CONTINUED

SCALE:N.T.S.

Johnson Controls
DISTRICT: 1-418
14000 E MISSISSIPPI AVE
AURORA, CO 80017
SERVICE: 303-355-6000
PHONE: 303-350-6500
FAX: 303-355-6615

NICET CERTIFICATION INFORMATION

NANCY S. WILTSIE
NICET Fire Alarm, III
Certification #93727
Valid Through: 03/01/24

December 14, 2022

THE MEDICAL CENTER OF AURORA - SOUTH 3RD FLOOR - A TOWER - REFRESH

THE MEDICAL CENTER OF AURORA
1501 SOUTH POTOMAC STREET
AURORA, COLORADO 80012

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JOB #:	
PROJECT #:	419:650214504

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SYSTEM:
FIRE ALARM SYSTEM

SHEET:
3RD FLOOR PARTIAL RISER DIAGRAM - BUILDOUT CONTINUED

FA-203

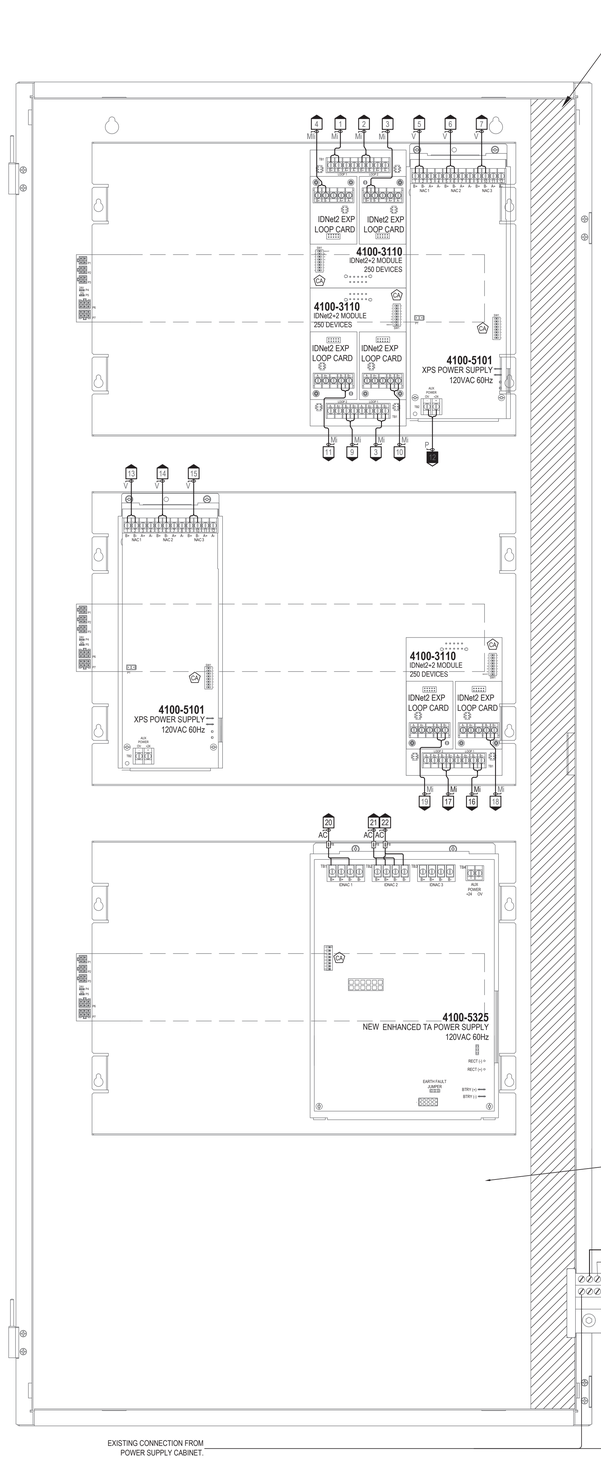
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RSN: 1679748
Permit # 2022-2258138-LT
Sheet 7 of 52

PANEL TERMINATION NOTES:

1. THE INFORMATION OR SYMBOLS SHOWN IN BOLD LINETYPE ARE NEW OR RELOCATED.
2. THE INFORMATION OR SYMBOLS SHOWN IN LIGHT LINETYPE ARE EXISTING TO REMAIN.



BAY 1 TERMINATIONS

TERMINATION NUMBER	CIRCUIT LABEL	CKT DESCRIPTION	WIRE
1	1:M13(1)	TO IDNET M13 DEVICES ON 1ST FLR	Mi
2	1:M13(2)	FUTURE M13 ISOLATED IDNET DEVICES	Mi
3	1:M13(3)	FUTURE M13 ISOLATED IDNET DEVICES	Mi
4	1:M13(4)	FUTURE M13 ISOLATED IDNET DEVICES	Mi
5	1:SIG101	1ST FLR ATS AREA STROBE	V
6	1:SIG102	FUTURE NOTIFICATION DEVICES	V
7	1:SIG103	FUTURE NOTIFICATION DEVICES	V
8	1:M12(1)	TO IDNET M12 DEVICES ON 5TH FLR TWR A	Mi
9	1:M12(2)	FUTURE M12 ISOLATED IDNET DEVICES	Mi
10	1:M12(3)	FUTURE M12 ISOLATED IDNET DEVICES	Mi
11	1:M12(4)	FUTURE M12 ISOLATED IDNET DEVICES	Mi
12	24VDC	24VDC POWER AS NEEDED	P

BAY 2 TERMINATIONS

TERMINATION NUMBER	CIRCUIT LABEL	CKT DESCRIPTION	WIRE
13	1:SIG107	FUTURE NOTIFICATION DEVICES	V
14	1:SIG108	FUTURE NOTIFICATION DEVICES	V
15	1:SIG109	FUTURE NOTIFICATION DEVICES	V
16	1:M14(1)	M14 ISOLATED IDNET DEVICES	Mic
17	1:M14(2)	M14 ISOLATED IDNET DEVICES	Mic
18	1:M14(3)	FUTURE M14 ISOLATED IDNET DEVICES	Mi
19	1:M14(4)	FUTURE M14 ISOLATED IDNET DEVICES	Mi

BAY 3 TERMINATIONS

TERMINATION NUMBER	CIRCUIT LABEL	CKT DESCRIPTION	WIRE
20	1:A1:1(1)	3RD FLR TWR A SOUTHEAST NOTIFICATION	Ac
21	1:A1:2(1)	3RD FLR TWR A NORTHWEST NOTIFICATION	Ac
22	1:A1:2(2)	3RD FLR TWR A NORTHWEST NOTIFICATION	Ac

NODE-1 FIRE ALARM CONTROL PANEL

CABINET #5 - EXISTING
LOCATED IN
OLD FIRE COMMAND
CENTER 1E-2902A

SCALE: NTS

This sheet of drawings has not been reviewed for code compliance.

Johnson Controls
DISTRICT 1-418
15400 E 14TH PLACE SUITE 300
AURORA, CO 80012
SERVICE: 303-355-6000
PHONE: 303-326-9500
FAX: 303-355-9615

NICET CERTIFICATION INFORMATION

NANCY S. WILTSIE
NICET Fire Alarm, III
Certification #93727
Valid Through: 03/01/24

December 14, 2022

THE MEDICAL CENTER OF AURORA - SOUTH
3RD FLOOR - A TOWER - REFRESH

THE MEDICAL CENTER OF AURORA
1501 SOUTH POTOMAC STREET
AURORA, COLORADO 80012

ISSUE LOG

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ISSUE DATE:	11/7/22
JOB #:	
PROJECT #:	419:650214504

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SYSTEM:
FIRE ALARM SYSTEM

SHEET:
PARTIAL NODE-1 4100 FIRE ALARM CONTROL PANEL DETAIL

FA-501

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MEDICAL CENTER OF AURORA SOUTH TOWER NODE 1 FACP 4100es FACP

Module	Qty	Description		Standby Current	Total Standby	Alarm Current	Total Alarm
Panel Equipment							
4100-7150	*1*	*MASTER CONTROLLER UPGRADE W/ 2X40 DISPLAY (4100 BA*		*0.1630*	*0.1630*	*0.2100*	*0.2100*
4100-0304	*1*	*STYLE 7 REMOTE UNIT INTERFACE*		*0.0850*	*0.0850*	*0.0850*	*0.0850*
4100-5005	*8*	*ZONE MODULE, 8 IDC, CLASS B*		*0.0750*	*0.6000*	*0.1950*	*1.5600*
4100-3003	*2*	*8 PT AUX RELAY MODULE 3 AMP*		*0.0250*	*0.0500*	*0.2800*	*0.5600*
4100-0110	*5*	*MAPNET II ADDRESSABLE MODULE*	*	*0.2700*	*1.3500*	*0.2900*	*1.4500*
4100-4321	*10*	*6 CIRCUIT CLASS B (STYLE Y)*		*0.0250*	*0.2500*	*0.0700*	*0.7000*
4100-6078	*1*	*NETWORK IF CARD, MODULAR*		*0.0460*	*0.0460*	*0.0460*	*0.0460*
4100-6056	*2*	*NETWORK MEDIA CARD WIRED*		*0.0550*	*0.1100*	*0.0550*	*0.1100*
4100-5101	*2*	*EXPANSION PWR SUPPLY (XPS) - 120VAC 60HZ*		*0.0500*	*0.1000*	*0.0500*	*0.1000*
4100-6038	*2*	*DUAL RS-232 IF CARD*		*0.1320*	*0.2640*	*0.1320*	*0.2640*
4100-6005	*1*	*MASTER CONTROLLER POWER SUPPLY*		*0.0000*	*0.0000*	*0.0000*	*0.0000*
4100-3110	*3*	*IDNet2+3 MODULE - UP TO 250 DEVICES 4 ISOLATED LOOPS*	*	*0.0500*	*0.1500*	*0.1000*	*0.3000*
4100-0108	*2*	*EXPANSION 120V 8AMP POWER SUPPLY*		*0.0000*	*0.0000*	*0.0000*	*0.0000*
		Panel Totals			**3.1680**		**5.3850**
IDNet Addressable Devices (SLC)							
4090-9001	*7*	*IDNET SUPERVISED IAM*	*				
4090-9002	*1*	*IDNET RELAY IAM*	*				
4098-9714	*22*	*TRUEALARM PHOTO SMOKE SENSOR*		*Constant current draw of .8mA standby and 1mA alarm per address used. Devices requiring additional current are accounted for in the section labeled "Miscellaneous Peripheral Devices Requiring Additional System Power".*			
4098-9733	*8*	*TRUEALARM HEAT SENSOR*	*				
4098-9756	*2*	*TRUEALARM DUCT SMOKE SENSOR W/ RELAY OUTPUT*	*				
4098-9789	*1*	*TRUEALARM SENSOR BASE W/ LED OUTPUT*	*				
4098-9792	*29*	*TRUEALARM SENSOR BASE*	*				
4099-9006	*10*	*ADDRESSABLE DOUBLE ACTION MANUAL STATION, PUSH*	*				
Mapnet Addressable Devices (SLC)							
2190-9155	*1*	*MAPNET CLASS B MONITOR ZAM*	*				
2190-9161	*6*	*MAPNET CLASS B SIGNAL ZAM*	*				
2190-9163	*45*	*MAPNET UNSUPERVISED CONTROL ZAM*	*				
2190-9172	*41*	*MAPNET SUPERVISED IAM*	*				
2190-9173	*3*	*MAPNET 2 POINT INPUT/OUTPUT ZAM*	*				
2099-8705	*23*	*MAPNET SINGLE ACTION PULL STATION*	*				
1 **4098-9714**	**322**	**TRUEALARM PHOTO SMOKE SENSOR**					
4098-9733	**47**	**TRUEALARM HEAT SENSOR**	*				
4098-9756	*36*	*TRUEALARM DUCT SMOKE SENSOR W/ RELAY OUTPUT*	*				
1 **4098-9789**	**318**	**TRUEALARM SENSOR BASE W/ LED OUTPUT**	*				
4098-9792	**51**	**TRUEALARM SENSOR BASE**	*				
Miscellaneous Peripheral Devices That Require (Additional) System Power							
4098-9843	*38*	*ENCAPSULATED RELAY PAM-SD*		*0.0000*	*0.0000*	*0.0150*	*0.5700*
4098-9756	*38*	*TRUEALARM DUCT SMOKE SENSOR W/ RELAY OUTPUT*		*0.0030*	*0.1140*	*0.0150*	*0.5700*
4603-9101	*11*	*SERIAL LCD ANNUNCIATOR*		*0.0650*	*0.7150*	*0.1400*	*1.5400*
2098-9808	*1*	*REMOTE ALARM INDICATOR*		*0.0010*	*0.0010*	*0.0000*	*0.0000*
Notification Appliances			**Setting**				
4009-9001	*2*	*FOUR CIRCUIT NAC EXTENDER, 120 VAC*		*0.0000*	*0.0000*	*0.0150*	*0.0300*
4903-9219	*10*	*HORN/STROBE. NON-SYNC, RED, WALL MTD.*	*15*	*0.0000*	*0.0000*	*0.1330*	*1.3300*
1 **4903-9292**	**93**	**CH70-2415W-FR, CHIME/STROBE, NON-SYNC, RED, WALL MTD**	**15**	**0.0000**	**0.0000**	**0.0700**	**6.5100**
4904-9137	**109**	**15CD VISIBLE ONLY RED**	**15**	**0.0000**	**0.0000**	**0.0900**	**9.8100**
4906-9101	*1*	*V/O MC NON-ADDRESS, RED, WALL*	*15*	*0.0000*	*0.0000*	*0.0600*	*0.0600*
4906-9101	*5*	*V/O MC NON-ADDRESS, RED, WALL*	*15*	*0.0000*	*0.0000*	*0.1860*	*0.9300*
CH70-24MCW-FR	*4*	*MULTI CD CHIME STROBE, WALL MNT, RED*	*15*	*0.0000*	*0.0000*	*0.0820*	*0.3280*
RSS-24MCW-FR	*1*	*MULTI CD STROBE, WALL MNT, RED*	*15*	*0.0000*	*0.0000*	*0.0600*	*0.0600*
		Peripheral Totals			**0.8300**		**21.7380**
		RUI Totals	**11**		**0.0385**		**0.0385**
		Address Totals	**596.5 Addresses**		**0.9691**		**0.9791**
		System Totals*:		**Standby**	**5.0056**	**Alarm**	**28.1406**

* Device Address current draw included below (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)			Standby Current	Standby Total	Alarm Current	Alarm Total
Select ALL Power Supplies on this battery set:						
PS-1				1.0930		8.5020
PS-2				1.2470		7.9300
PS-3				0.7010		8.4000
XPS-1				0.1570		0.4960
XPS-2				0.8000		1.7950
			Sub Total	**3.9980**		**27.1230**
Additional Current Draws:						
RUI Connected Peripheral Devices	11	x 0.0035		= 0.0385	x 0.0035	= 0.0385
MAPNET/IDNet Device Address Communication Current	597	x 0.001625		= 0.9691	x 0.001641	= 0.9791
			Sub Total	**5.0056**		**28.1406**
Spare addressable point capacity	**20%**	120	x 0.001625	= 0.1949	x 0.001641	= 0.1970
			Total	**5.2005**		**28.3376**
Standby Time =	4 Hrs	x 5.2005		= 20.8020	Standby Ah	
Alarm Time =	5 Min	0.08333 x 28.3376		= 2.3615	Alarm Ah	
				23.1635		
Additional Spare Battery Capacity =	**20%**		+	4.6327		
				27.7961		
Battery Discharge Factor =	**20%**		+	5.5592		
Minimum Battery Required	**2081-9296 50AH (2x)**			33.3554		
Battery Supplied	**2081-9296 50AH (2x)**					

* System Totals represent total system current requirements. Those currents may be distributed between multiple battery sets or power supplies as shown above.

MEDICAL CENTER OF AURORA SOUTH TOWER NODE 1 FACP 4100es FACP VOLTAGE DROPS

WIRE RESISTANCE BASED ON TABLE 8 FROM NATIONAL ELECTRICAL CODE (UNCOATED SOLID COPPER WIRE) @ 50 Celsius

												PID	*4903-9219*	**4903-9292**	**4904-9137**	*CH70-24MCW-FR*	*RSS-24MCW-FR*	*4906-9101*	*4906-9101*	*4009-9001*				
												Setting	*15cd*	**15cd**	**15cd**	*15cd*	*15cd*	*15cd*	*15cd*					
												Device Type	*A/V*	**C/V**	**V/O**	*MC A/V*	*MC V/O*	*MC V/O*	*MC V/O*					
												Supv. Current	*0.0000*	**0.0000**	**0.0000**	*0.0000*	*0.0000*	*0.0000*	*0.0000*	*0.0000*				
												Alarm Current	*0.1330*	**0.0700**	**0.0900**	*0.0820*	*0.0600*	*0.0600*	*0.1860*	*0.0150*				
NOTIFICATION CIRCUIT DESCRIPTION	**Power Supply**	**Panel Circuit**	**Plan Ckt.**	**Dist. (D) Feet**	**Wire Gauge**	**Wire Res. / Ft. (R)**	**Total Alarm (A)**	**V. Drop (A*2D*R)**	**Volt @ End**	**% Volt Drop**	**Min Device Voltage**	**Max Distance**										**Circuit Capacity (Amps)**	**Minimum Voltage @ NAC Output Terminals**	**Spare Circuit / Branch Capacity**	**Device Quantity Per Circuit/ Branch**
1ST FLOOR EAST CHIMES/STROBES N1:SIG3	*PS-1*	*SIG3*	*1:SIG3*	*500*	*14ga*	*0.0028*	**0.450**	*1.270*	*18.230*	*6.51%*	*16vdc*	*1378 Ft.*			*5*							*3.A*	*19.5*	*63.7%*	*5*
RADIOLOGY/SURGERY HALLS N1:SIG4	*PS-1*	*SIG4*	*1:SIG4*	*500*	*14ga*	*0.0028*	**0.450**	*1.270*	*18.230*	*6.51%*	*16vdc*	*1378 Ft.*			*5*							*3.A*	*19.5*	*63.7%*	*5*
2ND FLOOR CHIMES/STROBES N1:SIG5	*PS-1*	*SIG5*	*1:SIG5*	*600*	*14ga*	*0.0028*	**0.450**	*1.524*	*17.976*	*7.82%*	*16vdc*	*1378 Ft.*			*5*							*3.A*	*19.5*	*56.5%*	*5*
3RD FLOOR CHIMES/STROBES N1:SIG6	*PS-1*	*SIG6*	*1:SIG6*	*700*	*14ga*	*0.0028*	**0.450**	*1.778*	*17.722*	*9.12%*	*16vdc*	*1378 Ft.*			*5*							*3.A*	*19.5*	*49.2%*	*5*
4TH FLOOR CHIMES/STROBES N1:SIG7	*PS-1*	*SIG7*	*1:SIG7*	*800*	*14ga*	*0.0028*	**0.450**	*2.032*	*17.468*	*10.42%*	*16vdc*	*1378 Ft.*			*5*							*3.A*	*19.5*	*41.9%*	*5*
5TH FLOOR CHIMES/STROBES N1:SIG8	*PS-1*	*SIG8*	*1:SIG8*	*900*	*14ga*	*0.0028*	**0.450**	*2.286*	*17.214*	*11.72%*	*16vdc*	*1378 Ft.*			*5*							*3.A*	*19.5*	*34.7%*	*5*
SURGERY CHIMES/STROBES N1:SIG9	*PS-1*	*SIG9*	*1:SIG9*	*500*	*14ga*	*0.0028*	**0.450**	*1.270*	*18.230*	*6.51%*	*16vdc*	*1378 Ft.*			*5*							*3.A*	*19.5*	*63.7%*	*5*
LAB HALL CHIMES/STROBES N1:SIG10	*PS-1*	*SIG10*	*1:SIG10*	*500*	*14ga*	*0.0028*	**0.450**	*1.270*	*18.230*	*6.51%*	*16vdc*	*1378 Ft.*			*5*							*3.A*	*19.5*	*63.7%*	*5*
CENT SPLY/MATERIALS MGMT N1:SIG11	*PS-1*	*SIG11*	*1:SIG11*	*500*	*14ga*	*0.0028*	**0.450**	*1.270*	*18.230*	*6.51%*	*16vdc*	*1378 Ft.*			*5*							*3.A*	*19.5*	*63.7%*	*5*
EMERGENCY ROOM STROBES N1:SIG12	*PS-1*	*SIG12*	*1:SIG12*	*0*	*14ga*	*0.0028*	*0.000*	*0.000*	*19.500*	*0.00%*	*16vdc*	*0 Ft.*										*3.A*	*19.5*	*100.0%*	*0*
EMERGENCY RM HALL STROBES N1:SIG13	*PS-1*	*SIG13*	*1:SIG13*	*500*	*14ga*	*0.0028*	**0.450**	*1.270*	*18.230*	*6.51%*	*16vdc*	*1378 Ft.*			*5*							*3.A*	*19.5*	*63.7%*	*5*
1ST FLOOR CENTRAL STROBES N1:SIG14	*PS-1*	*SIG14*	*1:SIG14*	*500*	*14ga*	*0.0028*	**0.450**	*1.270*	*18.230*	*6.51%*	*16vdc*	*1378 Ft.*			*5*							*3.A*	*19.5*	*63.7%*	*5*
N1:SIG15 CENT SPLY/MATERIAL CHIME	*PS-1*	*SIG15*	*1:SIG15*	*500*	*14ga*	*0.0028*	**0.350**	*0.988*	*18.512*	*5.07%*	*16vdc*	*1772 Ft.*		*5*								*3.A*	*19.5*	*71.8%*	*5*
N1:SIG16 EMERGENCY ROOM CHIMES	*PS-1*	*SIG16*	*1:SIG16*	*500*	*14ga*	*0.0028*	**0.350**	*0.988*	*18.512*	*5.07%*	*16vdc*	*1772 Ft.*		*5*								*3.A*	*19.5*	*71.8%*	*5*
N1:SIG17 EMERGENCY RM HALL CHIMES	*PS-1*	*SIG17*	*1:SIG17*	*500*	*14ga*	*0.0028*	**0.350**	*0.988*	*18.512*	*5.07%*	*16vdc*	*1772 Ft.*		*5*								*3.A*	*19.5*	*71.8%*	*5*
N1:SIG18 1ST FLOOR CENTRAL CHIMES	*PS-2*	*SIG18*	*1:SIG18*	*500*	*14ga*	*0.0028*	**0.350**	*0.988*	*18.512*	*5.07%*	*16vdc*	*1772 Ft.*		*5*								*3.A*	*19.5*	*71.8%*	*5*
N1:SIG19 CHIMES C6-1	*PS-2*	*SIG19*	*1:SIG19*	*1000*	*14ga*	*0.0028*	**0.350**	*1.975*	*17.525*	*10.13%*	*16vdc*	*1772 Ft.*		*5*								*3.A*	*19.5*	*43.6%*	*5*
N1:SIG20 CHIMES C5-1, S5-5, S5-6	*PS-2*	*SIG20*	*1:SIG20*	*827*	*14ga*	*0.0028*	**0.340**	*1.597*	*17.913*	*8.14%*	*16vdc*	*1824 Ft.*		*1*	*3*							*3.A*	*19.5*	*54.7%*	*4*
N1:SIG21 STROBES S6-1	*PS-2*	*SIG21*	*1:SIG21*	*1000*	*14ga*	*0.0028*	**0.450**	*2.540*	*16.960*	*13.03%*	*16vdc*	*1378 Ft.*			*5*							*3.A*	*19.5*	*27.4%*	*5*
N1:SIG22 STROBES S6-2	*PS-2*	*SIG22*	*1:SIG22*	*100*	*14ga*	*0.0028*	**0.450**	*0.254*	*19.246*	*1.30%*	*16vdc*	*1378 Ft.*			*5*							*3.A*	*19.5*	*85.0%*	*5*
N1:SIG23 CHIMES C3.4-1	*PS-2*	*SIG23*	*1:SIG23*	*700*	*14ga*	*0.0028*	**0.372**	*1.470*	*18.030*	*7.54%*	*16vdc*	*1667 Ft.*							*2*			*3.A*	*19.5*	*58.0%*	*2*
N1:SIG24 STROBES S3-1	*PS-2*	*SIG24*	*1:SIG24*	*700*	*14ga*	*0.0028*	**0.360**	*1.422*	*18.078*	*7.29%*	*16vdc*	*1723 Ft.*			*4*							*3.A*	*19.5*	*59.4%*	*4*
N1:SIG25 STROBES S3-2	**PS-2**	**SIG25**	**1:SIG25**	**638**	**14ga**	**0.0028**	**0.670**	**2.413**	**17.087**	**12.37%**	**16vdc**	**926 Ft.**		**7**	**2**							**3.A**	**19.5**	**31.1%**	**9**
N1.SIG26 CHIME C2-1	*PS-2*	*SIG26*	*1:SIG26*	*600*	*14ga*	*0.0028*	**0.700**	*2.371*	*17.129*	*12.16%*	*16vdc*	*886 Ft.*		*10*								*3.A*	*19.5*	*32.3%*	*10*
N1.SIG27 SPARE	*PS-2*	*SIG27*	*1:SIG27*		*14ga*	*0.0028*	*0.000*	*0.000*	*19.500*	*0.00%*	*16vdc*	*0 Ft.*										*3.A*	*19.5*	*100.0%*	*0*
N1.SIG28 STROBES SP6-2	*PS-2*	*SIG28*	*1:SIG28*	*600*	*14ga*	*0.0028*	**0.450**	*1.524*	*17.976*	*7.82%*	*16vdc*	*1378 Ft.*			*5*							*3.A*	*19.5*	*56.5%*	*5*
N1:SIG29 4009 SP6-2,S2-4,1ST CENT ELEV#6	*PS-2*	*SIG29*	*1:SIG29*	*350*	*14ga*	*0.0028*	**0.015**	*0.030*	*19.470*	*0.15%*	*16vdc*	*4134 0 Ft.*									*1*	*3.A*	*19.5*	*99.2%*	*1*
N1:SIG30 STROBES 4009A SOUTH PHARMACY	*PS-2*	*SIG30*	*1:SIG30*	*350*	*14ga*	*0.0028*	**0.015**	*0.030*	*19.470*	*0.15%*	*16vdc*	*4134 0 Ft.*									*1*	*3.A*	*19.5*	*99.2%*	*1*
N1.SIG31 SPARE S5-2	*PS-2*	*SIG31*	*1:SIG31*		*14ga*	*0.0028*	*0.000*	*0.000*	*19.500*	*0.00%*	*16vdc*	*0 Ft.*										*3.A*	*19.5*	*100.0%*	*0*
N1.SIG32 ELECTRICAL 1E-4902B STROBE	*PS-2*	*SIG32*	*1:SIG32*	*350*	*14ga*	*0.0028*	**0.060**	*0.119*	*19.381*	*0.61%*	*16vdc*	*10335 Ft.*						*1*				*3.A*	*19.5*	*96.6%*	*1*
N1.SIG33 STROBE S6-3	*PS-2*	*SIG33*	*1:SIG33*	*1000*	*14ga*	*0.0028*	**0.180**	*1.016*	*18.484*	*5.21%*	*16vdc*	*3445 Ft.*			*2*							*3.A*	*19.5*	*71.0%*	*2*
N1.SIG34 STROBE S6-4	*PS-2*	*SIG34*	*1:SIG34*	*1000*	*14ga*	*0.0028*	**0.090**	*0.508*	*18.992*	*2.61%*	*16vdc*	*6890 Ft.*			*1*							*3.A*	*19.5*	*85.5%*	*1*
N1.SIG35 STROBE S2-3	*PS-2*	*SIG35*	*1:SIG35*	*600*	*14ga*	*0.0028*	**0.910**	*3.082*	*16.418*	*15.80%*	*16vdc*	*681 Ft.*		*4*	*7*							*3.A*	*19.5*	*11.9%*	*11*
N1.SIG36 STROBE S2-1	*PS-3*	*SIG36*	*1:SIG36*	*600*	*14ga*	*0.0028*	**0.690**	*2.337*	*17.163*	*11.98%*	*16vdc*	*869 Ft.*		*6*	*3*							*3.A*	*19.5*	*33.2%*	*9*
N1.SIG37 STROBE S2-2	*PS-3*	*SIG37*	*1:SIG37*	*533*	*14ga*	*0.0028*	**1.070**	*3.219*	*16.281*	*16.51%*	*16vdc*	*580 Ft.*		*5*	*8*							*3.A*	*19.5*	*8.0%*	*13*
N1.SIG38 SPARE	*PS-3*	*SIG38*			*14ga*	*0.0028*	*0.000*	*0.000*	*19.500*	*0.00%*	*16vdc*	*0 Ft.*										*3.A*	*19.5*	*100.0%*	*0*
N1.SIG39 STROBE OUTSIDE SIAMESE	*PS-3*	*SIG39*	*1:SIG39*	*1000*	*14ga*	*0.0028*	**0.060**	*0.339*	*19.161*	*1.74%*	*16vdc*	*10335 Ft.*					*1*					*3.A*	*19.5*	*90.3%*	*1*
N1.SIG40 HORN OUTSIDE SIAMESE	*PS-3*	*SIG40*	*1:SIG40*	*1000*	*14ga*	*0.0028*	**0.254**	*1.434*	*18.066*	*7.35%*	*16vdc*	*2441 Ft.*			*1*	*2*						*3.A*	*19.5*	*59.0%*	*3*
N1.SIG41 SPARE	*PS-3*	*SIG41*	*1:SIG41*		*14ga*	*0.0028*	*0.000*	*0.000*	*19.500*	*0.00%*	*16vdc*	*0 Ft.*										*3.A*	*19.5*	*100.0%*	*0*
N1.SIG42 CHIME 1ST FLOOR CENTRAL	*PS-3*	*SIG42*	*1:SIG42*	*500*	*14ga*	*0.0028*	**0.360**	*1.016*	*18.484*	*5.21%*	*16vdc*	*1723 Ft.*			*4*							*3.A*	*19.5*	*71.0%*	*4*
N1.SIG43 BASEMENT EVS DEPT STROBE CKT	*PS-3*	*SIG43*	*1:SIG43*	*600*	*14ga*	*0.0028*	**0.090**	*0.305*	*19.195*	*1.56%*	*16vdc*	*6890 Ft.*			*1*							*3.A*	*19.5*	*91.3%*	*1*
N1.SIG44 SPARE	*PS-3*	*SIG44*	*1:SIG44*		*14ga*	*0.0028*	*0.000*	*0.000*	*19.500*	*0.00%*	*16vdc*	*0 Ft.*										*3.A*	*19.5*	*100.0%*	*0*
N1.SIG45 BASEMENT	*PS-3*	*SIG45*	*1:SIG45*	*600*	*14ga*	*0.0028*	**0.712**	*2.411*	*17.089*	*12.37%*	*16vdc*	*871 Ft.*		*9*		*1*						*3.A*	*19.5*	*31.1%*	*10*
N1.SIG46 STROBES MATERIAL MANAGEMENT	*PS-3*	*SIG46*	*1:SIG46*	*600*	*14ga*	*0.0028*	**0.372**	*1.260*	*18.240*	*6.46%*	*16vdc*	*1667 Ft.*							*2*			*3.A*	*19.5*	*64.0%*	*2*
N1.SIG47 BASEMENT CORRIDOR	*PS-3*	*SIG47*	*1:SIG47*	*488*	*14ga*	*0.0028*	**0.982**	*2.705*	*16.795*	*13.87%*	*16vdc*	*631 Ft.*		*9*	*3*	*1*						*3.A*	*19.5*	*22.7%*	*13*
N1.SIG48 SPARE	*PS-3*	*SIG48*	*1:SIG48*		*14ga*	*0.0028*	*0.000*	*0.000*	*19.500*	*0.00%*	*16vdc*	*0 Ft.*										*3.A*	*19.5*	*100.0%*	*0*
N1.SIG49 S9-1 BLOOD W.& SURG DOC OFFICES	*PS-3*	*SIG49*	*1:SIG49*	*900*	*14ga*	*0.0028*	**0.266**	*1.351*	*18.149*	*6.93%*	*16vdc*	*2331 Ft.*	*2*									*3.A*	*19.5*	*61.4%*	*2*
N1.SIG50 S9-2 BLOOD LAB EAST	*PS-3*	*SIG50*	*1:SIG50*	*900*	*14ga*	*0.0028*	**0.266**	*1.351*	*18.149*	*6.93%*	*16vdc*	*2331 Ft.*	*2*									*3.A*	*19.5*	*61.4%*	*2*
N1.SIG51 ADMITING SOUTH	*PS-3*	*SIG51*	*1:SIG51*	*1000*	*14ga*	*0.0028*	**0.266**	*1.501*	*17.999*	*7.70%*	*16vdc*	*2331 Ft.*	*2*									*3.A*	*19.5*	*57.1%*	*2*
N1.SIG52 ADMITING NORTH	*PS-3*	*SIG52*	*1:SIG52*	*1000*	*14ga*	*0.0028*	**0.133**	*0.751*	*18.749*	*3.85%*	*16vdc*	*4662 Ft.*	*1*									*3.A*	*19.5*	*78.5%*	*1*
N1.SIG53 ADMITING CHIME	*PS-3*	*SIG53*	*1:SIG53*	*1000*	*14ga*	*0.0028*	**0.133**	*0.751*	*18.749*	*3.85%*	*16vdc*	*4662 Ft.*	*1*									*3.A*	*19.5*	*78.5%*	*1*
N1.SIG54 SPARE	*PS-3*	*SIG54*	*1:SIG54*		*14ga*	*0.0028*	*0.000*	*0.000*	*19.500*	*0.00%*	*16vdc*	*0 Ft.*										*3.A*	*19.5*	*100.0%*	*0*
N1.SIG55 C7-9-1 BLOOD LAB SURGERY PREP	*PS-3*	*SIG55*	*1:SIG55*	*1000*	*14ga*	*0.0028*	**0.133**	*0.751*	*18.749*	*3.85%*	*16vdc*	*4662 Ft.*	*1*									*3.A*	*19.5*	*78.5%*	*1*
N1.SIG56 SPARE	*PS-3*	*SIG56*	*1:SIG56*		*14ga*	*0.0028*	*0.000*	*0.000*	*19.500*	*0.00%*	*16vdc*	*0 Ft.*										*3.A*	*19.5*	*100.0%*	*0*
N1.SIG57 S1.3 KITCHEN AND SLEEP ROOMS	*PS-3*	*SIG57*	*1:SIG57*	*900*	*14ga*	*0.0028*	**0.133**	*0.676*	*18.824*	*3.46%*	*16vdc*	*4662 Ft.*	*1*									*3.A*	*19.5*	*80.7%*	*1*
N1.SIG58 S1.4 GIFT SHOP & ELEVATOR AREA	*PS-3*	*SIG58*	*1:SIG58*	*900*	*14ga*	*0.0028*	**0.350**	*1.778*	*17.722*	*9.12%*	*16vdc*	*1772 Ft.*		*5*								*3.A*	*19.5*	*49.2%*	*5*
N1.SIG59 S8.3 SURGERY PREP AND HOLDING	*PS-3*	*SIG59*	*1:SIG59*	*900*	*14ga*	*0.0028*	**0.350**	*1.778*	*17.722*	*9.12%*	*16vdc*	*1772 Ft.*		*5*								*3.A*	*19.5*	*49.2%*	*5*
N1.SIG60 S7,1 SURGERY PREP	*PS-3*	*SIG60*	*1:SIG60*	*900*	*14ga*	*0.0028*	**0.350**	*1.778*	*17.722*	*9.12%*	*16vdc*	*1772 Ft.*		*5*								*3.A*	*19.5*	*49.2%*	*5*
N1.SIG61 S7,2 SURGERY PREP	*PS-3*	*SIG61*	*1:SIG61*	*900*	*14ga*	*0.0028*	**0.140**	*0.711*	*18.789*	*3.65%*	*16vdc*	*4429 Ft.*		*2*								*3.A*	*19.5*	*79.7%*	*2*
N1.SIG62 SPARE	*PS-3*	*SIG62*	*1:SIG62*		*14ga*	*0.0028*	*0.000*	*0.000*	*19.500*	*0.00%*	*16vdc*	*0 Ft.*										*3.A*	*19.5*	*100.0%*	*0*
N1.SIG101 1ST FLR ATS AREA STROBE 67-1	*XPS-1*	*SIG63*	*1:SIG63*	*1000*	*14ga*	*0.0028*	**0.186**	*1.050*	*18.450*	*5.38%*	*16vdc*	*3334 Ft.*							*1*			*3.A*	*19.5*	*70.0%*	*1*
N1.SIG102 SPARE	*XPS-1*	*SIG64*	*1:SIG64*		*14ga*	*0.0028*	*0.000*	*0.000*	*19.500*	*0.00%*	*16vdc*	*0 Ft.*										*3.A*	*19.5*	*100.0%*	*0*
N1.SIG103 SPARE	*XPS-1*	*SIG65*	*1:SIG65*		*14ga*	*0.0028*	*0.000*	*0.000*	*19.500*	*0.00%*	*16vdc*	*0 Ft.*										*3.A*	*19.5*	*100.0%*	*0*
N1.SIG107 SPARE	*XPS-2*	*SIG66*	*1:SIG66*		*14ga*	*0.0028*	*0.000*	*0.000*	*19.500*	*0.00%*	*16vdc*	*0 Ft.*										*3.A*	*19.5*	*100.0%*	*0*
N1.SIG108 SPARE	*XPS-2*	*SIG67*	*1:SIG67*		*14ga*	*0.0028*	*0.000*	*0.000*	*19.500*	*0.00%*	*16vdc*	*0 Ft.*										*3.A*	*19.5*	*100.0%*	*0*
N1.SIG109 SPARE	*XPS-2*	*SIG68*	*1:SIG68*		*14ga*	*0.0028*	*0.000*	*0.000*	*19.500*	*0.00%*	*16vdc*	*0 Ft.*										*3.A*	*19.5*	*100.0%*	*0*

NOTE:
LUMP SUM METHOD WAS USED TO CALCULATE ALLOWABLE VOLTAGE DROP. THIS METHOD ALLOWS FOR A SMALL MARGIN OF SAFETY, TAKING INTO CONSIDERATION THAT THE ACTUAL INSTALLED CIRCUIT ROUTING MAY DIFFER FROM WHAT IS SHOWN ON THE SHOP DRAWINGS. IF THE ACTUAL CIRCUIT LENGTH IS GOING TO EXCEED THE MAXIMUM ALLOWABLE CIRCUIT LENGTH, CONTACT YOUR LOCAL JOHNSON CONTROLS DISTRICT OFFICE.

PANEL CALCULATIONS NOTES:

1. THE INFORMATION OR SYMBOLS SHOWN IN BOLD LINETYPE ARE NEW OR RELOCATED.
2. THE INFORMATION OR SYMBOLS SHOWN IN LIGHT LINETYPE ARE EXISTING TO REMAIN.

KEYNOTES:

1. DEVICE REMOVED FOR CONSTRUCTION.
2. DEVICE IS INTERIM FOR CONSTRUCTION. TO BE REMOVED DURING BUILDOUT. DEVICE DESCRIPTOR CHANGED.
3. DEVICE WAS INTERIM FOR CONSTRUCTION AND IS NOW REMOVED. DEVICE QUANTITY CHANGED.
4. EXISTING DEVICE REINSTALLED. UPDATE ADDRESS, DESCRIPTOR, AND LOCATION.

Johnson Controls
DISTRICT: 1-415
10065 E HARVARD AVE
AURORA, CO 80017
SERVICE: 303-3550500
PHONE: 303-365-9500
FAX: 303-365-9515

NICET CERTIFICATION INFORMATION

NANCY S. WILTSIE
NICET Fire Alarm, III
Certification #93727
Valid Through: 03/01/24

December 14, 2022

THE MEDICAL CENTER OF AURORA - SOUTH 3RD FLOOR - A TOWER - REFRESH

THE MEDICAL CENTER OF AURORA
1501 SOUTH POTOMAC STREET
AURORA, COLORADO 80012

Revisions shown with Δ symbol

ISSUE, CO'S MARK	DATE	CAD	CHK	DESCRIPTION

FOR PERMIT

DRAWN BY:	CCD
CHECKED BY:	CBR
ISSUE DATE:	11/7/22
JOB #:	
PROJECT #:	419-6502214504

JOHNSON CONTROLS © 2022

SYSTEM: FIRE ALARM SYSTEM

SHEET: NODE-1 FACP CALCULATIONS AND SCHEDULES - INTERIM

FA-601

City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: *M. Apodaca*
Date: *Apr 14, 2023*
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30" x 42" Arch E1 Size

RSN: 1679748
Permit # 2022-2258138-LT
Sheet 9 of 52

MAPNET CHANNEL 1:M4				SWITCH SETTINGS								
	Address	Device Type	Point Type	Location Description	1	2	3	4	5	6	7	8	9
	1:M4-1	*GENIAM*	*SO*	*1:M4-1 FLR 1 CENTRAL TWR ELEVATOR 1*	X							ON	
	1:M4-2	*GENIAM*	*SO*	*1:M4-2 FLR 1 CENTRL TWR O.R. ELEVATOR RM*		X						ON	
	1:M4-3	*GENIAM*	*SUPDET*	*1:M4-3 FLR 1 KITCHEN HOOD SUPPRESSION*	X	X						ON	
	1:M4-4	*RZAM*	*RRELAY*	*1:M4-4 1ST FLR MDF LIEBERT UNIT CONTROL*			X					ON	
	1:M4-5	*RZAM*	*RRELAY*	*1:M4-5 1ST FLR MDF LIEBERT UNIT CONTROL*	X		X					ON	
	1:M4-6	*RZAM*	*RELAY*	*1:M4-6 SURGERY ROLLUP DOOR IN PHARMACY*		X	X					ON	
	1:M4-7	*RZAM*	*RELAY*	*1:M4-7 FLR 1 CENTRAL TOWER ELEVATOR #1*	X	X	X					ON	
	1:M4-8	*RZAM*	*RELAY*	*1:M4-8 FLR 1 CENTRAL TOWER ELEVATOR #1*				X				ON	
	1:M4-9	*RZAM*	*RELAY*	*1:M4-9 FLR 2 CENTRL B ELEVATOR ROLL DOWN*	X			X				ON	
	1:M4-10	*RZAM*	*RELAY*	*1:M4-10 FLR 3 CTRL B ELEVATOR ROLL DOWN*			X	X				ON	
	1:M4-11	*RZAM*	*RELAY*	*1:M4-11 FLR 4 CTRL B ELEVATOR ROLL DOWN*		X	X	X				ON	
	1:M4-12	*RZAM*	*RELAY*	*1:M4-12 CENTRAL TOWER ELEVATOR 1*				X	X			ON	
	1:M4-13	*RZAM*	*RELAY*	*1:M4-13 CENTRAL TOWER ELEVATOR #6 RECALL*	X			X	X			ON	
	1:M4-14	*RZAM*	*RELAY*	*1:M4-14 CENTRAL TOWER ELEVATOR #6 RECALL*			X	X	X			ON	
	1:M4-15	*RZAM*	*RELAY*	*1:M4-15 CENTRAL TOWER ELEVATOR 1*	X		X	X	X			ON	
	1:M4-16	*RZAM*	*RELAY*	*1:M4-16 CENTRAL TOWER ELEV #6 SHUNT TRIP*						X		ON	
	1:M4-17	*RZAM*	*RELAY*	*1:M4-17 FLR 1 CENTRAL TOWER GIFT SHOP*	X					X		ON	
	1:M4-18	*RZAM*	*RELAY*	*1:M4-18 FLR 1 KITCHEN FIRE DOORS*		X				X		ON	
	1:M4-19	*RZAM*	*RELAY*	*1:M4-19 FLR 1 CTRL TWR ELEV 3 SHUNT TRIP*	X	X				X		ON	
	1:M4-20	*RZAM*	*CDAMPER*	*1:M4-20 FLR 1 CENTRAL PLANT AHU-97-6*			X			X		ON	
	1:M4-21	*GENIAM*	*TROUBLE*	*1:M4-21 FLR 1 CENTRL TWR HALON IN I.T. R*	X		X			X		ON	
	1:M4-22	*GENIAM*	*FIRE*	*1:M4-22 FLR 1 CENTRL TWR HALON IN I.T. R*		X	X			X		ON	
	1:M4-23	*HEAT*	*HEAT*	*1:M4-23 FLR 1E MECH RM BY CENTRAL PLANT*	X	X	X			X		ON	
	1:M4-24	*HEAT*	*HEAT*	*1:M4-24 FLR 1E ELECT RM BY SECURITY OFF.*				X		X		ON	
	1:M4-25	*HEAT*	*HEAT*	*1:M4-25 FLR 1E - DINING RM GRILLE AREA*	X			X		X		ON	
	1:M4-26	*HEAT*	*HEAT*	*1:M4-26 FLR 1W - ELEVATOR 4 IN PIT*		X		X		X		ON	
	1:M4-27	*HEAT*	*HEAT*	*1:M4-27 FLR 1W - ELEVATOR 1 & 2 IN PIT*	X	X		X		X		ON	
	1:M4-28	*HEAT*	*HEAT*	*1:M4-28 FLR 1W - ELEVATOR 1 & 2 IN PIT*			X	X		X		ON	
	1:M4-29	*HEAT*	*HEAT*	*1:M4-29 FLR 1W - ELEV. 1*	X		X	X		X		ON	
	1:M4-30	*HEAT*	*HEAT*	*1:M4-30 FLR 5 CENTRAL A-ELEV. 1&2 SHAFT*			X	X		X		ON	
	1:M4-31	*HEAT*	*HEAT*	*1:M4-31 FLR 5W - CENTRAL A-ELEV. 4 SHAFT*	X	X	X	X		X		ON	
	1:M4-32	*PHOTO*	*VSMOKE*	*1:M4-32 FLR 1W - ELEV. 1*							X	ON	
	1:M4-33	*PHOTO*	*VSMOKE*	*1:M4-33 FLR 1W - ELEV 4 BACK LOBBY*	X					X		ON	
	1:M4-34	*PHOTO*	*VSMOKE*	*1:M4-34 FLR 1W - ELEV 4 BACK LOBBY*		X				X		ON	
	1:M4-35	*PHOTO*	*VSMOKE*	*1:M4-35 FLR 1E - HALL BESIDE CHAPEL*	X	X				X		ON	
	1:M4-36	*PHOTO*	*VSMOKE*	*1:M4-36 FLR 2 CENTRAL TWR A - ELEV. LOB.*			X			X		ON	
	1:M4-37	*PHOTO*	*VSMOKE*	*1:M4-37 FLR 2 CENTRAL TWR A - ELEV. LOB.*	X		X			X		ON	
2	**1:M4-38**	**HEAT**	**HEAT**	**1:M4-38 FLR 3 TWR A - ELEV. LOB. INTERIM**			X			X		ON	
1	**1:M4-39**			**SPARE**	X	X	X			X		ON	
	1:M4-40	*PHOTO*	*VSMOKE*	*1:M4-40 FLR 4 CENTRAL TWR A - ELEV. LOB.*				X		X		ON	
	1:M4-41	*PHOTO*	*VSMOKE*	*1:M4-41 FLR 4 CENTRAL TWR A - ELEV. LOB.*	X			X		X		ON	
	1:M4-42	*PHOTO*	*VSMOKE*	*1:M4-42 FLR 5 CENTRAL A - ELEV. 1 LOBBY*			X	X		X		ON	
	1:M4-43	*PHOTO*	*VSMOKE*	*1:M4-43 FLR 5 CENTRAL A-ELEV. 4 LOBBY*	X		X	X		X		ON	
	1:M4-44	*PHOTO*	*VSMOKE*	*1:M4-44 FLR 2 CENTRL TWR A LOBBY WAITING*				X	X	X		ON	
	1:M4-45	*PHOTO*	*VSMOKE*	*1:M4-45 FLR 1W - HALL BY SURGERY WAITING*	X		X	X		X		ON	
	1:M4-46	*PHOTO*	*VSMOKE*	*1:M4-46 FLR 1E - HALL BY GIFT SHOP*			X	X		X		ON	
	1:M4-47	*PHOTO*	*VSMOKE*	*1:M4-47 FLR 1E - CEILING BY GIFT SHOP*	X	X	X	X		X		ON	
	1:M4-48	*PHOTO*	*VSMOKE*	*1:M4-48 FLR 1E - HALL BESIDE CHAPEL*					X	X		ON	
	1:M4-49	*PHOTO*	*VSMOKE*	*1:M4-49 FLR 1E - HALL BESIDE CHAPEL*	X				X	X		ON	
	1:M4-50	*PHOTO*	*VSMOKE*	*1:M4-50 FLR 1E - BY HUMAN RESOURCES*		X			X	X		ON	
	1:M4-51	*HEAT*	*HEAT*	*1:M4-51 FL 1E ELECT RM BY SECURITY OFF.*	X	X			X	X		ON	
	1:M4-52	*PHOTO*	*VSMOKE*	*1:M4-52 FLR 1E - BY HUMAN RESOURCES*			X		X	X		ON	
	1:M4-53	*PHOTO*	*VSMOKE*	*1:M4-53 FLR 1W - ELEV.1*	X		X		X	X		ON	
	1:M4-54	*PHOTO*	*VSMOKE*	*1:M4-54 FLR 1W - ELEV.6 MACHINE RM*			X	X	X	X		ON	
	1:M4-55	*HEAT*	*HEAT*	*1:M4-55 FLR 1W - ELEV.6 EQUIP. RM*	X	X	X		X	X		ON	
	1:M4-56	*HEAT*	*HEAT*	*1:M4-56 FLR 1W - ELEV.6 IN ELEVATOR PIT*				X	X	X		ON	
	1:M4-57	*HEAT*	*HEAT*	*1:M4-57 FLR 5 CENTRAL TWR A-ELEV.6 SHAFT*	X			X	X	X		ON	
	1:M4-58	*PHOTO*	*VSMOKE*	*1:M4-58 FLR 1 CTRL TWR O.R. ELEV. LOBBY*		X		X	X	X		ON	
2	*1:M4-59*	*PHOTO*	*VSMOKE*	*1:M4-59 FLR 3 CENTRAL TWR A - BY RM 305*	X	X		X	X	X		ON	
2	**1:M4-60**	**HEAT**	**HEAT**	**1:M4-60 FLR 3 TWR A - BY RM 304 INTERIM**				X	X	X		ON	
	1:M4-61	*PHOTO*	*VSMOKE*	*1:M4-61 FLR 4 CENTRAL TWR A - BY RM 406*		X		X	X	X		ON	
	1:M4-62	*PHOTO*	*VSMOKE*	*1:M4-62 FLR 5 CENTRAL TWR A-ELEV.6 LOBBY*			X	X	X	X		ON	
	1:M4-63	*PHOTO*	*VSMOKE*	*1:M4-63 FLR 1E - MEDICAL STAFF LIBRARY*		X	X	X	X	X		ON	
	1:M4-64	*PHOTO*	*VSMOKE*	*1:M4-64 FLR 1E - HALL BY ELEVATOR NO.6*							X	ON	
	1:M4-65	*PHOTO*	*VSMOKE*	*1:M4-65 FLR 1E - HALL BY ELEVATOR NO.6*		X					X	ON	
	1:M4-66	*PHOTO*	*VSMOKE*	*1:M4-66 FLR 1E - HALL BY ELEVATOR NO.6*		X					X	ON	
	1:M4-67	*PHOTO*	*VSMOKE*	*1:M4-67 FLR 1E - HALL BY ELEVATOR NO.6*		X					X	ON	
	1:M4-68	*PHOTO*	*VSMOKE*	*1:M4-68 FLR 1E-HALL WEST OF DOCS DINING*				X			X	ON	
	1:M4-69	*PHOTO*	*VSMOKE*	*1:M4-69 FLR 1E - HUMAN RESOURCES*		X		X			X	ON	
	1:M4-70	*PHOTO*	*VSMOKE*	*1:M4-70 FLR 1E - HALL BESIDE H.R.*			X	X			X	ON	
	1:M4-71	*PHOTO*	*VSMOKE*	*1:M4-71 FLR 1E - HALL BESIDE H.R.*		X	X	X			X	ON	
	1:M4-72	*PHOTO*	*VSMOKE*	*1:M4-72 FLR 1E - HALL IN FRONT OF H.R.*					X		X	ON	
	1:M4-73	*PHOTO*	*VSMOKE*	*1:M4-73 FLR 1E - HALL IN FRONT OF H.R.*		X			X		X	ON	
	1:M4-74	*PHOTO*	*VSMOKE*	*1:M4-74 FLR 1 CTRL TWR HALL BY CAFETERIA*			X		X		X	ON	
	1:M4-75	*PHOTO*	*VSMOKE*	*1:M4-75 FLR 1E - INFORMATION SYSTEMS*		X			X		X	ON	
	1:M4-76	*PHOTO*	*VSMOKE*	*1:M4-76 FLR 1E - INFORMATION SYSTEMS*				X	X		X	ON	
	1:M4-77	*PHOTO*	*VSMOKE*	*1:M4-77 FLR 1E - INFORMATION SYSTEMS*		X		X	X		X	ON	
	1:M4-78	*PHOTO*	*VSMOKE*	*1:M4-78 FLR 1E - HALL BY DISH ROOM*			X	X	X		X	ON	
	1:M4-79	*PHOTO*	*VSMOKE*	*1:M4-79 FLR 1E - HALL BY DISH ROOM*		X	X	X	X		X	ON	
	1:M4-80	*PHOTO*	*VSMOKE*	*1:M4-80 FLR 1E - HALL BY DISH ROOM*						X	X	ON	
	1:M4-81	*PHOTO*	*VSMOKE*	*1:M4-81 FLR 1 CTRL TWR HALL BY CAFETERIA*		X				X	X	ON	
	1:M4-82	*PHOTO*	*VSMOKE*	*1:M4-82 FLR 1E - HALL BY KITCHEN*			X			X	X	ON	
	1:M4-83	*PHOTO*	*VSMOKE*	*1:M4-83 FLR 1E - HALL BY KITCHEN*		X	X			X	X	ON	
	1:M4-84	*PHOTO*	*VSMOKE*	*1:M4-84 FLR 1E - ENTRY HALL TO H.R.*				X		X	X	ON	
	1:M4-85	*PHOTO*	*VSMOKE*	*1:M4-85 FLR 1E - HUMAN RESOURCES*		X		X		X	X	ON	
	1:M4-86	*PHOTO*	*VSMOKE*	*1:M4-86 FLR 1E - HALL BY NRSG. OFFICE*			X	X		X	X	ON	
	1:M4-87	*PHOTO*	*VSMOKE*	*1:M4-87 FLR 1E - HALL BY NRSG. OFFICE*		X	X	X		X	X	ON	
	1:M4-88	*PHOTO*	*VSMOKE*	*1:M4-88 FLR 1E - COPY RM BY STAFFING*					X	X	X	ON	
	1:M4-89	*PHOTO*	*VSMOKE*	*1:M4-89 FLR 1E - OFFICE NEXT TO COPY RM*		X			X	X	X	ON	
	1:M4-90	*PHOTO*	*VSMOKE*	*1:M4-90 FLR 1E - OLD FIRE COMMAND CTR*			X		X	X	X	ON	
	1:M4-91	*PHOTO*	*VSMOKE*	*1:M4-91 FLR 5 CENTRAL A - ELEV 1&2 SHAFT*		X	X		X	X	X	ON	
	1:M4-92	*PHOTO*	*VSMOKE*	*1:M4-92 FLW - CENTRAL B ELEV.4 SHAFT*				X	X	X	X	ON	
	1:M4-93	*PHOTO*	*VSMOKE*	*1:M4-93 FLR 5 CENTRAL A - ELEV.6 SHAFT*		X		X	X	X	X	ON	
	1:M4-94	*RZAM*	*CDAMPER*	*1:M4-94 FLR 1E - UTILITY PLANT-AHU 97-6*			X	X	X	X	X	ON	
	1:M4-95	*RPHOTO*	*SDUCT*	*1:M4-95 FLR 1E - UTILITY PLANT-AHU 97-6*		X	X	X	X	X	X	ON	
	1:M4-96	*RPHOTO*	*SDUCT*	*1:M4-96 FLR 1E - UTILITY PLANT-AHU 97-6*						X	X	ON	
	1:M4-97	*RPHOTO*	*SDUCT*	*1:M4-97 FLR 1E - HALL BY STAFFING OFFICE*		X				X	X	ON	
	1:M4-98	*PHOTO*	*VSMOKE*	*1:M4-98 FLR 1E - HALL BY STAFFING OFFICE*			X			X	X	ON	
	1:M4-99	*PHOTO*	*VSMOKE*	*1:M4-99 FLR 1E - MECH RM BY COPY CTR*		X	X			X	X	ON	
	1:M4-100	*RPHOTO*	*SDUCT*	*1:M4-100 FLR 1E - MECH RM BY COPY CTR*				X		X	X	ON	
	1:M4-101	*RPHOTO*	*SDUCT*	*1:M4-101 FLR 1 CTRL TWR MECH RM/COPY CTR*		X		X		X	X	ON	
	1:M4-102	*SBZAM*	*SIGNAL*	*1:M4-102 FLR 1 CTRL TWR MECH RM/COPY CTR*		X	X			X	X	ON	
	1:M4-103	*SBZAM*	*SIGNAL*	*1:M4-103 FLR 1 CTRL TWR MECH RM/COPY CTR*		X	X			X	X	ON	
	1:M4-104	*ADRPUL*	*PULL*	*1:M4-104 FLR 4 CENTRAL TWR A-BY RM 429*				X		X	X	ON	
	1:M4-105	*RPHOTO*	*SDUCT*	*1:M4-105 FLR 1E - UTILITY PLANT - AHU 1A*		X			X	X	X	ON	
	1:M4-106	*RPHOTO*	*SDUCT*	*1:M4-106 FLR 1E - UTILITY PLANT - AHU 1A*			X		X	X	X	ON	
	1:M4-107	*RPHOTO*	*SDUCT*	*1:M4-107 FLR 1E - UTILITY PLANT - AHU 1C*		X	X		X	X	X	ON	
	1:M4-108	*RPHOTO*	*SDUCT*	*1:M4-108 FLR 1E - UTILITY PLANT - AHU 1C*				X	X	X	X	ON	
	1:M4-109	*PHOTO*	*VSMOKE*	*1:M4-109 FLR 4 SOILED UTILITY HOLDING*		X		X	X	X	X	ON	
	1:M4-110	*SBZAM*	*RELAY*	*1:M4-110 AHU XC FAN SHUTDOWN CONTROL*			X	X	X	X	X	ON	
	1:M4-111	*SBZAM*	*RELAY*	*1:M4-111 AHU 1A FAN SHUTDOWN CONTROL*		X	X	X		X	X	ON	
	1:M4-112	*PHOTO*	*VSMOKE*	*1:M4-112 FLR 4 CENTRAL A - CLEAN STORAGE*					X	X	X	ON	
	1:M4-113	*SBZAM*	*RELAY*	*1:M4-113 HV-1 FAN SHUTDOWN CONTROL*		X			X	X	X	ON	
	1:M4-114	*RPHOTO*	*SDUCT*	*1:M4-114 FLR 1E - BY AHU 1A IN PLANT*			X		X	X	X	ON	
	1:M4-115	*RPHOTO*	*SDUCT*	*1:M4-115 FLR 1E - BY AHU 1A IN PLANT*		X	X		X	X	X	ON	
	1:M4-116	*SBZAM*	*RELAY*	*1:M4-116 HV-2 KITCHEN MAKE-UP SHUTDOWN*				X	X	X	X	ON	
	1:M4-117	*ADRPUL*	*PULL*	*1:M4-117 FLR 4 CENTRAL TWR A-BY RM 435*		X		X	X	X	X	ON	
	1:M4-118	*RZAM*	*RELAY*	*1:M4-118 FLR 2 ELEVATOR #2 SMK CURTAIN*			X		X	X	X	ON	
	1:M4-119	*RZAM*	*RELAY*	*1:M4-119 FLR 3 ELEVATOR #2 SMK CURTAIN*		X	X		X	X	X	ON	
	1:M4-120	*RZAM*	*RELAY*	*1:M4-120 FLR 4 ELEVATOR #2 SMK CURTAIN*				X	X	X	X	ON	
	1:M4-121	*RZAM*	*RELAY*	*1:M4-121 FLR 2 ELEVATOR #4 SMK CURTAIN*		X			X	X	X	ON	
	1:M4-122	*RZAM*	*RELAY*	*1:M4-122 FLR 3 ELEVATOR #4 SMK CURTAIN*			X		X	X	X	ON	
	1:M4-123	*RZAM*	*RELAY*	*1:M4-123 FLR 4 ELEVATOR #4 SMK CURTAIN*		X		X	X	X	X	ON	
	1:M4-124	*PHOTO*	*VSMOKE*	*1:M4-124 FLR 4 CENTRAL TWR A - ELECT. RM*			X	X	X	X	X	ON	
	1:M4-125	*RPHOTO*	*SDUCT*	*1:M4-125 FLR 4 DUCT IN CONSULT FSD*		X	X	X	X	X	X	ON	
	1:M4-126	*RPHOTO*	*SDUCT*	*1:M4-126 FLR 4 DUCT @ CONSULT FSD*			X	X	X	X	X	ON	
	1:M4-127	*RPHOTO*	*SDUCT*	*1:M4-127 FLR 4 DUCT @ FAMILY WAITING*		X	X	X	X	X	X	ON	

NOTE: THE LABELS SHOWN ABOVE WILL BE USED FOR PROGRAMMING PURPOSES.
THE LABELS ARE BASED UPON INFORMATION SHOWN ON THE ARCHITECTURAL DRAWINGS.
ANY CHANGES TO THESE LABELS MUST BE NOTED ON THE SUBMITTAL REVIEW, PRIOR TO PROGRAMMING.
POINTS SHOWN IN ITALIC TEXT REFER TO EXISTING DEVICES.

MAPNET CHANNEL 1:M5				SWITCH SETTINGS								
	Address	Device Type	Point Type	Location Description	1	2	3	4	5	6	7	8	9
	1:M5-1	*ADRPUL*	*PULL*	*1:M5-1 FLR 1 W - WEST MECHANICAL RM*	X							ON	
	1:M5-2	*ADRPUL*	*PULL*	*1:M5-2 FLR 1W - WEST MECHANICAL PULL*		X						ON	
	1:M5-3	*PHOTO*	*VSMOKE*	*1:M5-3 FLR 1E - HALL BY MORGUE*	X	X						ON	
	1:M5-4	**HEAT**	**HEAT**	**1:M5-4 FLR 3 TWR A - BY RM 325 INTERIM**			X					ON	
2	**1:M5-5**	**HEAT**	**HEAT**	**1:M5-5 FLR 3 TWR A - BY RM 303 INTERIM**	X		X					ON	
	1:M5-6	**HEAT**	**HEAT**	**1:M5-6 FLR 3 TWR A - BY RM 327 INTERIM**		X	X					ON	
	1:M5-7	*RZAM*	*CDAMPER*	*1:M5-7 AHU 97-5*	X	X	X					ON	
	1:M5-8	*RZAM*	*CDAMPER*	*1:M5-8 SMOKE DAMPER AHU 97-7*				X				ON	
	1:M5-9	*RZAM*	*CDAMPER*	*1:M5-9 SMOKE DAMPER AHU 97-3*	X			X				ON	
	1:M5-10	*RZAM*	*DHOLDER*	*1:M5-10 DAY SURGERY AUTO DOORS*		X		X				ON	
	1:M5-11	*ADRPUL*	*PULL*	*1:M5-11 FLR 1 CENTRAL TWR HALL EAST EXIT*	X	X		X				ON	
	1:M5-12	*RZAM*	*RELAY*	*1:M5-12 ELEVATOR #3 PRIMARY RECALL*			X	X				ON	
	1:M5-13	*RZAM*	*RELAY*	*1:M5-13 ELEVATOR #3 ALTERNATE RECALL*	X		X	X				ON	
	1:M5-14	*GENIAM*	*SO*	*1:M5-14 ELEVATOR #3 TAMPER IN PIT*		X	X	X				ON	
	1:M5-15	*PHOTO*	*VSMOKE*	*1:M5-15 FLR 4 CENTRAL TWR A EQU STOR*	X	X	X	X				ON	
2	**1:M5-16**	**HEAT**	**HEAT**	**1:M5-16 FLR 3 TWR A - BY RM 330 INTERIM**					X			ON	
	1:M5-17	*RPHOTO*	*SDUCT*	*1:M5-17 FLR 1W - WEST MECH AHU 97-5*	X				X			ON	
	1:M5-18	*RPHOTO*	*SDUCT*	*1:M5-18 FLR 1W - WEST MECH AHU 97-5*		X			X			ON	
	1:M5-19	*RPHOTO*	*SDUCT*	*1:M5-19 FLR 1W - WEST MECH AHU 97-7*	X	X			X			ON	
	1:M5-20	*RPHOTO*	*SDUCT*	*1:M5-20 FLR 1W - WEST MECH. AHU 97-7*			X		X			ON	
	1:M5-21	*RPHOTO*	*SDUCT*	*1:M5-21 FLR 1W - WEST MECH. AHU 97-3*	X		X		X			ON	
	1:M5-22	*RPHOTO*	*SDUCT*	*1:M5-22 FLR 1W - WEST MECH. AHU 97-3*		X	X		X			ON	
	1:M5-23	*PHOTO*	*VSMOKE*	*1:M5-23 FLR 1W - WEST MECH. BACK RM*	X	X	X		X			ON	
	1:M5-24	*HEAT*	*HEAT*	*1:M5-24 FLR 1W - WEST MECHANICAL*				X	X			ON	
	1:M5-25	*HEAT*	*HEAT*	*1:M5-25 FLR 1W - WEST MECH. BY ENTRY*	X			X	X			ON	
	1:M5-26	*HEAT*	*HEAT*	*1:M5-26 FLR 1W - WEST MECH. DETECTOR*		X		X	X			ON	
	1:M5-27	*HEAT*	*HEAT*	*1:M5-27 FLR 1W - ELEV. NO.3 EQUIP. RM*	X	X		X	X			ON	
	1:M5-28	*HEAT*	*HEAT*	*1:M5-28 FLR 1W - ELEV. NO.3 PIT DETECTOR*			X	X	X			ON	
	1:M5-29	*HEAT*	*HEAT*	*1:M5-29 CTR TWR ELEV.3 TOP OF SHAFT*	X		X	X	X			ON	
	1:M5-30	*GENIAM*	*UTILITY*	*1:M5-30 SPARE 2PT I/O MONITOR*		X	X	X	X			ON	
	1:M5-31	*RZAM*	*RRELAY*	*1:M5-31 EAST CORR EMERGENCY EXIT RELAY*	X	X	X	X	X			ON	
	1:M5-32	*PHOTO*	*VSMOKE*	*1:M5-32 FLR 2 CENTRAL TWR A - BY NURSERY*						X		ON	
2	**1:M5-33**	**HEAT**	**HEAT**	**1:M5-33 FLR 3 TWR A - BY RM 333 INTERIM**	X					X		ON	
1	**1:M5-34**			**SPARE**		X				X		ON	
2	**1:M5-35**	**HEAT**	**HEAT**	**1:M5-35 FLR 3 TWR A - BY RM 324 INTERIM**	X	X				X		ON	
	1:M5-36	*PHOTO*	*VSMOKE*	*1:M5-36 FLR 4 CENTRAL TWR A - BY RM 426*			X			X		ON	
2	**1:M5-37**	**HEAT**	**HEAT**	**1:M5-37 FLR 3 TWR A - BY RM 321 INTERIM**	X		X			X		ON	
	1:M5-38	*PHOTO*	*VSMOKE*	*1:M5-38 FLR 5 CENTRAL TWR A - BY RM 520*		X	X			X		ON	
	1:M5-39	*PHOTO*	*VSMOKE*	*1:M5-39 CTR TWR ELEV.3 TOP OF SHAFT*	X	X	X			X		ON	
	1:M5-40	*PHOTO*	*VSMOKE*	*1:M5-40 FLR 1W - ELEV. NO. 3 EQUIP. RM*				X		X		ON	
	1:M5-41	*PHOTO*	*VSMOKE*	*1:M5-41 FLR 1 CENTRAL TWR ELEVATOR LOBBY*	X			X		X		ON	
	1:M5-42	*PHOTO*	*VSMOKE*	*1:M5-42 FLR 1W - SUPPORT SERVICES*		X		X		X		ON	
	1:M5-43	*PHOTO*	*VSMOKE*	*1:M5-43 FLR 1W - SUPPORT SERVICES*	X	X		X		X		ON	
	1:M5-44	*PHOTO*	*VSMOKE*	*1:M5-44 FLR 1W - SUPPORT SERVICES*				X	X	X		ON	
	1:M5-45			*SPARE*	X			X	X	X		ON	
	1:M5-46	*PHOTO*	*VSMOKE*	*1:M5-46 FLR 1W - SUPPORT SERVICES*		X	X	X		X		ON	
	1:M5-47	*PHOTO*	*VSMOKE*	*1:M5-47 FLR 1W - SUPPORT SERVICES*	X	X	X	X		X		ON	
	1:M5-48	*PHOTO*	*VSMOKE*	*1:M5-48 FLR 1 CENTRL TWR BY SUPPORT SVCS*					X	X		ON	
	1:M5-49	*PHOTO*	*VSMOKE*	*1:M5-49 FLR 1W - SUPPORT SERVICES*	X				X	X		ON	
	1:M5-50	*PHOTO*	*VSMOKE*	*1:M5-50 FLR 1W - SUPPORT SERVICES*		X			X	X		ON	
	1:M5-51	*PHOTO*	*VSMOKE*	*1:M5-51 FLR 1W - HALL BY MED. STAFF OFF.*	X	X			X	X		ON	
	1:M5-52	*PHOTO*	*VSMOKE*	*1:M5-52 FLR 1W - HALL BY MED. STAFF OFF.*			X		X	X		ON	
	1:M5-53	*PHOTO*	*VSMOKE*	*1:M5-53 FLR 1 CTRL TWR SUPPORT SERVICES*	X		X		X	X		ON	
	1:M5-54	*PHOTO*	*VSMOKE*	*1:M5-54 FLR 1 CENTRL TWR BY SUPPORT SVCS*		X	X		X	X		ON	
	1:M5-55	*PHOTO*	*VSMOKE*	*1:M5-55 FLR 1 CTRL TWR SUPPORT SERVICES*	X	X	X		X	X		ON	
	1:M5-56	*PHOTO*	*VSMOKE*	*1:M5-56 FLR 1W - HALL BY SAME DAY SURG.*					X	X		ON	
	1:M5-57	*PHOTO*	*VSMOKE*	*1:M5-57 FLR 1W - HALL BY SAME DAY SURG.*	X				X	X		ON	
	1:M5-58	*PHOTO*	*VSMOKE*	*1:M5-58 FLR 1W - HALL BY SAME DAY SURG.*		X			X	X		ON	
	1:M5-59	*PHOTO*	*VSMOKE*	*1:M5-59 FLR 1W - HALL BY SAME DAY SURG.*	X	X			X	X		ON	
	1:M5-60	*PHOTO*	*VSMOKE*	*1:M5-60 FLR 1W - HALL BY SAME DAY SURG.*					X	X		ON	
2	**1:M5-61**	**HEAT**	**HEAT**	**1:M5-61 FLR 3 TWR A - BY RM 320 INTERIM**	X				X	X		ON	
	1:M5-62	*PHOTO*	*VSMOKE*	*1:M5-62 FLR 1W - O.R. PRE-OP OVERFLOW*		X	X	X	X	X		ON	
	1:M5-63	*PHOTO*	*VSMOKE*	*1:M5-63 FLR 1W - O.R. PRE-OP OVERFLOW*	X	X	X	X	X	X		ON	
	1:M5-64	*PHOTO*	*VSMOKE*	*1:M5-64 FLR 1W - O.R. PRE-OP OVERFLOW*							X	ON	
	1:M5-65	*PHOTO*	*VSMOKE*	*1:M5-65 FLR 1W - O.R. PRE-OP OVERFLOW*	X						X	ON	
	1:M5-66			*SPARE*		X					X	ON	
	1:M5-67			*SPARE*	X	X					X	ON	
	1:M5-68			*SPARE*			X				X	ON	
	1:M5-69	*PHOTO*	*VSMOKE*	*1:M5-69 FLR 1W - HALL BY G.I. SUITE*	X		X				X	ON	
	1:M5-70	*PHOTO*	*VSMOKE*	*1:M5-70 FLR 1W - HALL BY BED STORAGE*		X	X				X	ON	
	1:M5-71	*PHOTO*	*VSMOKE*	*1:M5-71 FLR 1W - HALL BY BED STORAGE*	X	X	X				X	ON	
	1:M5-72	*PHOTO*	*VSMOKE*	*1:M5-72 FLR 1W - HALL BY BED STORAGE*				X			X	ON	
	1:M5-73	*PHOTO*	*VSMOKE*	*1:M5-73 FLR 1W - HALL BY MICROBIOLOGY*	X			X			X	ON	
	1:M5-74	*PHOTO*	*VSMOKE*	*1:M5-74 FLR 1 CENTRAL TWR MICOBIOLOGY*		X		X			X	ON	
2	**1:M5-75**	**HEAT**	**HEAT**	**1:M5-74 FLR 3 TWR A - BY RM 316 INTERIM**	X	X		X			X	ON	
	1:M5-76	*PHOTO*	*VSMOKE*	*1:M5-76 FLR 1W - MICROBIOLOGY LAB*			X	X			X	ON	
	1:M5-77	*PHOTO*	*VSMOKE*	*1:M5-77 FLR 1 - CENTRAL TWR A BY RM 402*	X		X	X			X	ON	
	1:M5-78	*GENIAM*	*WATER*	*1:M5-78 FLR 1W - BY BED STORAGE - FLOW*		X	X	X			X	ON	
	1:M5-79	*PHOTO*	*VSMOKE*	*1:M5-79 FLR 1 CENTRAL TWR NEW CATH LAB*	X	X	X	X			X	ON	
	1:M5-80	*PHOTO*	*VSMOKE*	*1:M5-80 FLR 1 CENTRAL TWR CATH LAB*					X		X	ON	
	1:M5-81	*PHOTO*	*VSMOKE*	*1:M5-81 FLR 1 CENTRAL TWR CATH LAB*	X				X		X	ON	
	1:M5-82	*PHOTO*	*VSMOKE*	*1:M5-82 FLR 1N - HALL BY SURGERY WAITING*		X			X		X	ON	
	1:M5-83	*PHOTO*	*VSMOKE*	*1:M5-83 FLR 1N - HALL BY SURGERY WAITING*	X	X			X		X	ON	
	1:M5-84	*PHOTO*	*VSMOKE*	*1:M5-84 FLR 1W - SURGERY WAITING AREA*			X	

MEDICAL CENTER OF AURORA SOUTH TOWER NODE 1 FACP 4100u FACP

Module	Qty	Description		Standby Current	Total Standby	Alarm Current	Total Alarm
Panel Equipment							
4100-7150	*1*	*MASTER CONTROLLER UPGRADE W/ 2X40 DISPLAY (4100 BA*		*0.1630*	*0.1630*	*0.2100*	*0.2100*
4100-6078	*1*	*NETWORK IF CARD, MODULAR*		*0.0460*	*0.0460*	*0.0460*	*0.0460*
4100-6056	*2*	*NETWORK MEDIA CARD WIRED*		*0.0550*	*0.1100*	*0.0550*	*0.1100*
4100-0304	*1*	*STYLE 7 REMOTE UNIT INTERFACE*		*0.0850*	*0.0850*	*0.0850*	*0.0850*
4100-5005	*8*	*ZONE MODULE, 8 IDC, CLASS B*		*0.0750*	*0.6000*	*0.1950*	*1.5600*
4100-4321	*10*	*6 CIRCUIT CLASS B (STYLE Y)*		*0.0250*	*0.2500*	*0.0700*	*0.7000*
4100-3003	*2*	*8 PT AUX RELAY MODULE 3 AMP*		*0.0250*	*0.0500*	*0.2800*	*0.5600*
4100-0110	*5*	*MAPNET II ADDRESSABLE MODULE*	"	*0.2700*	*1.3500*	*0.2900*	*1.4500*
4100-6005	*1*	*MASTER CONTROLLER POWER SUPPLY*		*0.0000*	*0.0000*	*0.0000*	*0.0000*
4100-0108	*2*	*EXPANSION 120V 8AMP POWER SUPPLY*		*0.0000*	*0.0000*	*0.0000*	*0.0000*
4100-6038	*1*	*DUAL RS-232 IF CARD*		*0.1320*	*0.1320*	*0.1320*	*0.1320*
4100-5101	*2*	*EXPANSION PWR SUPPLY (XPS) - 120VAC 60HZ*		*0.0500*	*0.1000*	*0.0500*	*0.1000*
4100-3110	*3*	*IDNet2+2 MODULE - UP TO 250 DEVICES 4 ISOLATED LOOPS*	"	*0.0500*	*0.1500*	*0.1000*	*0.3000*
4100-5325	**1**	**ENHANCED POWER SUPPLY, 3 CHANNELS, 120V**		**0.1250**	**0.1250**	**0.2200**	**0.2200**
4100-96xx	*3*	*REMOTE ANNUNCIATORS & MINIPLEX TRANSPONDERS*	"	*RUI CURRENT DRAWS INCLUDED BELOW*			
		Panel Totals			**3.1610**		**5.4730**
IDNet Addressable Devices (SLC)							
4090-9001	**9**	**IDNET SUPERVISED IAM ***					
4090-9002	**3**	**IDNET RELAY IAM ***					
4090-9118	*1*	*RELAY IDNET 2 IAM W/T SENSE **					
4098-9714	**71**	**TRUEALARM PHOTO SMOKE SENSOR**					
4098-9733	**10**	**TRUEALARM HEAT SENSOR**					
4098-9756	**4**	**TRUEALARM DUCT SMOKE SENSOR W/ RELAY OUTPUT ***					
4098-9789	**1**	**TRUEALARM SENSOR BASE W/ LED OUTPUT ***					
4098-9792	**80**	**TRUEALARM SENSOR BASE ***					
4099-9006	**12**	**ADDRESSABLE DOUBLE ACTION MANUAL STATION, PUSH ***					
Mapnet Addressable Devices (SLC)							
2190-9155	*1*	*MAPNET CLASS B MONITOR ZAM **					
2190-9161	*6*	*MAPNET CLASS B SIGNAL ZAM **					
2190-9163	**44**	**MAPNET UNSUPERVISED CONTROL ZAM ***					
2190-9172	*41*	*MAPNET SUPERVISED IAM **					
2190-9173	*3*	*MAPNET 2 POINT INPUT/OUTPUT ZAM **					
2099-9795	*22*	*MAPNET SINGLE ACTION PULL STATION **					
4098-9714	*322*	*TRUEALARM PHOTO SMOKE SENSOR*					
4098-9733	**32**	**TRUEALARM HEAT SENSOR**					
4098-9756	*36*	*TRUEALARM DUCT SMOKE SENSOR W/ RELAY OUTPUT **					
4098-9789	*316*	*TRUEALARM SENSOR BASE W/ LED OUTPUT **					
4098-9792	**38**	**TRUEALARM SENSOR BASE ***					
Miscellaneous Peripheral Devices That Require (Additional!) System Power							
4098-9843	*40*	*ENCAPSULATED RELAY PAM-SD*		*0.0000*	*0.0000*	*0.0150*	*0.6600*
4098-9756	*40*	*TRUEALARM DUCT SMOKE SENSOR W/ RELAY OUTPUT*		*0.0030*	*0.1200*	*0.0150*	*0.6600*
4603-9101	*13*	*SERIAL LCD ANNUNCIATOR*		*0.0650*	*0.8450*	*0.1400*	*1.8200*
2098-9808	*26*	*REMOTE ALARM INDICATOR*		*0.0010*	*0.0260*	*0.0000*	*0.0000*
2098-9806	*54*	*REMOTE TEST STATION W/ LED AND KEY SWITCH*		*0.0000*	*0.0000*	*0.0000*	*0.0000*
2190-9155	*1*	*MAPNET CLASS B MONITOR ZAM*		*0.0200*	*0.0200*	*0.0900*	*0.0900*
2190-9163	*45*	*MAPNET UNSUPERVISED CONTROL ZAM*		*0.0100*	*0.4500*	*0.0400*	*1.8000*
2190-9161	*6*	*MAPNET CLASS B SIGNAL ZAM*		*0.0150*	*0.0900*	*0.0400*	*0.2400*
2088-9021	*1*	*ENCAPSULATED RELAY PAM-1*		*0.0000*	*0.0000*	*0.0150*	*0.0150*
Notification Appliances			**Setting**				
4009-9001	*2*	*FOUR CIRCUIT NAC EXTENDER, 120 VAC*		*0.0000*	*0.0000*	*0.0150*	*0.0300*
4903-9219	*10*	*HORN/STROBE, NON-SYNC, RED, WALL MTD*	*15*	*0.0000*	*0.0000*	*0.0220*	*0.2200*
4903-9292	**93**	**CH70-2415W-FR,CHIME/STROBE, NON-SYNC,RED, WALL MTD**	**15**	**0.0000**	**0.0000**	**0.0700**	**6.5100**
4904-9137	**110**	**15CD VISIBLE ONLY RED**	**15**	**0.0000**	**0.0000**	**0.0900**	**9.9000**
4906-9101	*1*	*V/O MC NON-ADDRESS, RED, WALL*	*15*	*0.0000*	*0.0000*	*0.0600*	*0.0600*
4906-9101	*5*	*V/O MC NON-ADDRESS, RED, WALL*	*75*	*0.0000*	*0.0000*	*0.1860*	*0.9300*
CH70-24MCW-FR	*4*	*MULTI CD CHIME STROBE, WALL MNT, RED*	*15*	*0.0000*	*0.0000*	*0.0820*	*0.3280*
RSS-24MCW-FR	*1*	*MULTI CD STROBE, WALL MNT, RED*	*15*	*0.0000*	*0.0000*	*0.0600*	*0.0600*
IDNac Notification Appliances			**Setting**				
49MTV-WRF	**22**	**MULTI-TONE A/V, RED, WALL MOUNT**	**15**	**0.0016**	**0.0352**	**0.1450**	**3.1900**
49MTV-WRF	**1**	**MULTI-TONE A/V, RED, WALL MOUNT**	**185**	**0.0016**	**0.0016**	**0.2990**	**0.2990**
49MTV-WRF	**3**	**MULTI-TONE A/V, RED, WALL MOUNT**	**30**	**0.0016**	**0.0048**	**0.1630**	**0.4890**
49VO-APPLC	**19**	**STROBE, APPLIANCE ONLY, CEILING MOUNT**	**15**	**0.0008**	**0.0152**	**0.0550**	**1.0450**
49VO-APPLC	**1**	**STROBE, APPLIANCE ONLY, CEILING MOUNT**	**30**	**0.0008**	**0.0008**	**0.0830**	**0.0830**
49VO-WRFO	**1**	**VO, WALL MT, RED, FIRE LABEL, WEATHERPROOF**	**15**	**0.0008**	**0.0008**	**0.0600**	**0.0600**
		Total IDNac Device Current:			**0.0584**		**5.1660**
		IDNac Current Boost for 29vdc Regulated Output **					**2.9452**
		Peripheral Totals			**1.5510**		**31.3142**
		RUI Totals	**16**		**0.0560**		**0.0560**
		Address Totals	**640.5**	**Addresses**	**0.9899**		**1.0119**
		System Totals*:		**Standby**	**5.8163**	**Alarm**	**37.8551**

Constant current draw of .8mA standby and 1mA alarm per address used. Devices requiring additional current are accounted for in the section labeled "Miscellaneous Peripheral Devices Requiring Additional System Power".

* Device Address current draw included below (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)			Standby Current	Standby Total	Alarm Current	Alarm Total
Select ALL Power Supplies on this battery set:						
PS-1				1.3150		6.9520
PS-2				1.0530		11.8420
PS-3				1.9310		8.9410
XPS-1				0.1560		0.5110
XPS-2				0.1000		0.1500
EPS-1				0.2154		5.4460
			Sub Total	**4.7704**		**33.8420**
Additional Current Draws:						
RUI Connected Peripheral Devices	16	x 0.0035		= 0.0560	x 0.0035	= 0.0560
MAPNET/IDNet Device Address Communication Current	641	x 0.001545		= 0.9899	x 0.001580	= 1.0119
		Sub Total		**5.8163**		**37.8551**
Spare addressable point capacity	**20%**	129 x 0.001545		= 0.1994	x 0.00158	= 0.2038
		Total		**6.0156**		**38.0589**
Standby Time =	**4** Hrs	x 6.0156		= 24.0624	Standby Ah	
Alarm Time =	**5** Min	0.08333 x 38.0589		= 3.1716	Alarm Ah	
				27.2340		
Additional Spare Battery Capacity =	**20%**		+	5.4468		
				32.6808		
Battery Discharge Factor =	**20%**		+	6.5362		
Minimum Battery Required	**2081-9296 50AH (2x)**			**39.2170**		
Battery Supplied	**2081-9296 50AH (2x)**					

* System Totals represent total system current requirements. Those currents may be distributed between multiple battery sets or power supplies as shown above.

MEDICAL CENTER OF AURORA SOUTH TOWER NODE 1 FACP 4100u FACP VOLTAGE DROPS

WIRE RESISTANCE BASED ON TABLE 8 FROM NATIONAL ELECTRICAL CODE (UNCOATED SOLID COPPER WIRE) @ 75 Celsius

RSN: 1679748
Permit # 2022-2258138-LT
Sheet 11 of 52

MAPNET CHANNEL 1:M4

	Address	Device Type	Point Type	Location Description	1	2	3	4	5	6	7	8	9
	1:M4-1	GENIAM	SO	1:M4-1 FLR 1 CENTRAL TWR ELEVATOR 1	X							ON	
	1:M4-2	GENIAM	SO	1:M4-2 FLR 1 CENTRL TWR O.R. ELEVATOR RM		X						ON	
	1:M4-3	GENIAM	SUPDET	1:M4-3 FLR 1 KITCHEN HOOD SUPPRESSION	X	X						ON	
	1:M4-4	RZAM	RRELAY	1:M4-4 1ST FLR MDF LIEBERT UNIT CONTROL			X					ON	
	1:M4-5	RZAM	RRELAY	1:M4-5 1ST FLR MDF LIEBERT UNIT CONTROL	X		X					ON	
	1:M4-6	RZAM	RELAY	1:M4-6 SURGERY ROLLUP DOOR IN PHARMACY		X	X					ON	
	1:M4-7	RZAM	RELAY	1:M4-7 FLR 1 CENTRAL TOWER ELEVATOR #1	X	X	X					ON	
	1:M4-8	RZAM	RELAY	1:M4-8 FLR 1 CENTRAL TOWER ELEVATOR #1				X				ON	
	1:M4-9	RZAM	RELAY	1:M4-9 FLR 2 CENTRL B ELEVATOR ROLL DOWN	X			X				ON	
3	1:M4-10			SPARE				X				ON	
	1:M4-11	RZAM	RELAY	1:M4-11 FLR 4 CTRL B ELEVATOR ROLL DOWN	X	X		X				ON	
	1:M4-12	RZAM	RELAY	1:M4-12 CENTRAL TOWER ELEVATOR 1			X	X				ON	
	1:M4-13	RZAM	RELAY	1:M4-13 CENTRAL TOWER ELEVATOR #6 RECALL	X		X	X				ON	
	1:M4-14	RZAM	RELAY	1:M4-14 CENTRAL TOWER ELEVATOR #6 RECALL		X	X	X				ON	
	1:M4-15	RZAM	RELAY	1:M4-15 CENTRAL TOWER ELEVATOR 1	X	X	X	X				ON	
	1:M4-16	RZAM	RELAY	1:M4-16 CENTRAL TOWER ELEV #6 SHUNT TRIP					X			ON	
	1:M4-17	RZAM	RELAY	1:M4-17 FLR 1 CENTRAL TOWER GIFT SHOP	X				X			ON	
	1:M4-18	RZAM	RELAY	1:M4-18 FLR 1 KITCHEN FIRE DOORS		X			X			ON	
	1:M4-19	RZAM	RELAY	1:M4-19 FLR 1 CTRL TWR ELEV 3 SHUNT TRIP	X	X			X			ON	
	1:M4-20	RZAM	CDAMPER	1:M4-20 FLR 1 CENTRAL PLANT AHU-97-6			X		X			ON	
	1:M4-21	GENIAM	TROUBLE	1:M4-21 FLR 1 CENTRL TWR HALON IN I.T. R	X		X		X			ON	
	1:M4-22	GENIAM	FIRE	1:M4-22 FLR 1 CENTRL TWR HALON IN I.T. R		X	X		X			ON	
	1:M4-23	HEAT	HEAT	1:M4-23 FLR 1E MECH RM BY CENTRAL PLANT	X	X	X		X			ON	
	1:M4-24	HEAT	HEAT	1:M4-24 FLR 1E ELECT RM BY SECURITY OFF.				X	X			ON	
	1:M4-25	HEAT	HEAT	1:M4-25 FLR 1E - DINING RM GRILLE AREA	X			X	X			ON	
	1:M4-26	HEAT	HEAT	1:M4-26 FLR 1W - ELEVATOR 4 IN PIT		X		X	X			ON	
	1:M4-27	HEAT	HEAT	1:M4-27 FLR 1W - ELEVATOR 1 & 2 IN PIT	X	X		X	X			ON	
	1:M4-28	HEAT	HEAT	1:M4-28 FLR 1W - ELEVATOR 1 & 2 IN PIT			X	X	X			ON	
	1:M4-29	HEAT	HEAT	1:M4-29 FLR 1W - ELEV. 1	X		X	X	X			ON	
	1:M4-30	HEAT	HEAT	1:M4-30 FLR 5 CENTRAL A-ELEV. 1&2 SHAFT		X	X	X	X			ON	
	1:M4-31	HEAT	HEAT	1:M4-31 FLR 5W - CENTRAL A-ELEV. 4 SHAFT	X	X	X	X	X			ON	
	1:M4-32	PHOTO	VSMOKE	1:M4-32 FLR 1W - ELEV. 1						X		ON	
	1:M4-33	PHOTO	VSMOKE	1:M4-33 FLR 1W - ELEV 4 BACK LOBBY	X					X		ON	
	1:M4-34	PHOTO	VSMOKE	1:M4-34 FLR 1W - ELEV 4 BACK LOBBY		X				X		ON	
	1:M4-35	PHOTO	VSMOKE	1:M4-35 FLR 1E - HALL BESIDE CHAPEL	X	X				X		ON	
	1:M4-36	PHOTO	VSMOKE	1:M4-36 FLR 2 CENTRAL TWR A - ELEV. LOB.			X			X		ON	
	1:M4-37	PHOTO	VSMOKE	1:M4-37 FLR 2 CENTRAL TWR A - ELEV. LOB.	X		X			X		ON	
3	1:M4-38			SPARE			X			X		ON	
	1:M4-39			SPARE	X	X	X			X		ON	
	1:M4-40	PHOTO	VSMOKE	1:M4-40 FLR 4 CENTRAL TWR A - ELEV. LOB.				X		X		ON	
	1:M4-41	PHOTO	VSMOKE	1:M4-41 FLR 4 CENTRAL TWR A - ELEV. LOB.	X			X		X		ON	
	1:M4-42	PHOTO	VSMOKE	1:M4-42 FLR 5 CENTRAL A - ELEV. 1 LOBBY		X		X		X		ON	
	1:M4-43	PHOTO	VSMOKE	1:M4-43 FLR 5 CENTRAL A-ELEV. 4 LOBBY	X	X		X		X		ON	
	1:M4-44	PHOTO	VSMOKE	1:M4-44 FLR 2 CENTRL TWR A LOBBY WAITING			X	X		X		ON	
	1:M4-45	PHOTO	VSMOKE	1:M4-45 FLR 1W - HALL BY SURGERY WAITING	X		X	X		X		ON	
	1:M4-46	PHOTO	VSMOKE	1:M4-46 FLR 1E - HALL BY GIFT SHOP		X	X	X		X		ON	
	1:M4-47	PHOTO	VSMOKE	1:M4-47 FLR 1E - CEILING BY GIFT SHOP	X	X	X	X		X		ON	
	1:M4-48	PHOTO	VSMOKE	1:M4-48 FLR 1E - HALL BESIDE CHAPEL					X	X		ON	
	1:M4-49	PHOTO	VSMOKE	1:M4-49 FLR 1E - HALL BESIDE CHAPEL	X				X	X		ON	
	1:M4-50	PHOTO	VSMOKE	1:M4-50 FLR 1E - BY HUMAN RESOURCES		X			X	X		ON	
	1:M4-51	HEAT	HEAT	1:M4-51 FL 1E ELECT RM BY SECURITY OFF.	X	X			X	X		ON	
	1:M4-52	PHOTO	VSMOKE	1:M4-52 FLR 1E - BY HUMAN RESOURCES			X		X	X		ON	
	1:M4-53	PHOTO	VSMOKE	1:M4-53 FLR 1W - ELEV.1	X		X		X	X		ON	
	1:M4-54	PHOTO	VSMOKE	1:M4-54 FLR 1W - ELEV.6 MACHINE RM		X	X		X	X		ON	
	1:M4-55	HEAT	HEAT	1:M4-55 FLR 1W - ELEV.6 EQUIP. RM	X	X	X		X	X		ON	
	1:M4-56	HEAT	HEAT	1:M4-56 FLR 1W - ELEV.6 IN ELEVATOR PIT				X	X	X		ON	
	1:M4-57	HEAT	HEAT	1:M4-57 FLR 5 CENTRAL TWR A-ELEV.6 SHAFT	X			X	X	X		ON	
	1:M4-58	PHOTO	VSMOKE	1:M4-58 FLR 1 CTRL TWR O.R. ELEV. LOBBY		X		X	X	X		ON	
	1:M4-59	PHOTO	VSMOKE	1:M4-59 FLR 2 CENTRAL TWR A - BY RM 205	X	X		X	X	X		ON	
3	1:M4-60			SPARE				X	X	X		ON	
	1:M4-61	PHOTO	VSMOKE	1:M4-61 FLR 4 CENTRAL TWR A - BY RM 406		X		X	X	X		ON	
	1:M4-62	PHOTO	VSMOKE	1:M4-62 FLR 5 CENTRAL TWR A-ELEV.6 LOBBY				X	X	X		ON	
	1:M4-63	PHOTO	VSMOKE	1:M4-63 FLR 1E - MEDICAL STAFF LIBRARY		X	X	X	X	X		ON	
	1:M4-64	PHOTO	VSMOKE	1:M4-64 FLR 1E - HALL BY ELEVATOR NO.6							X	ON	
	1:M4-65	PHOTO	VSMOKE	1:M4-65 FLR 1E - HALL BY ELEVATOR NO.6	X						X	ON	
	1:M4-66	PHOTO	VSMOKE	1:M4-66 FLR 1E - HALL BY ELEVATOR NO.6		X					X	ON	
	1:M4-67	PHOTO	VSMOKE	1:M4-67 FLR 1E - HALL BY ELEVATOR NO.6	X	X					X	ON	
	1:M4-68	PHOTO	VSMOKE	1:M4-68 FLR 1E-HALL WEST OF DOCS DINING			X				X	ON	
	1:M4-69	PHOTO	VSMOKE	1:M4-69 FLR 1E - HUMAN RESOURCES	X		X				X	ON	
	1:M4-70	PHOTO	VSMOKE	1:M4-70 FLR 1E - HALL BESIDE H.R.		X	X				X	ON	
	1:M4-71	PHOTO	VSMOKE	1:M4-71 FLR 1E - HALL BESIDE H.R.	X	X	X				X	ON	
	1:M4-72	PHOTO	VSMOKE	1:M4-72 FLR 1E - HALL IN FRONT OF H.R.				X			X	ON	
	1:M4-73	PHOTO	VSMOKE	1:M4-73 FLR 1E - HALL IN FRONT OF H.R.	X			X			X	ON	
	1:M4-74	PHOTO	VSMOKE	1:M4-74 FLR 1 CTRL TWR HALL BY CAFETERIA		X		X			X	ON	
	1:M4-75	PHOTO	VSMOKE	1:M4-75 FLR 1E - INFORMATION SYSTEMS	X	X		X			X	ON	
	1:M4-76	PHOTO	VSMOKE	1:M4-76 FLR 1E - INFORMATION SYSTEMS			X	X			X	ON	
	1:M4-77	PHOTO	VSMOKE	1:M4-77 FLR 1E - INFORMATION SYSTEMS	X		X	X			X	ON	
	1:M4-78	PHOTO	VSMOKE	1:M4-78 FLR 1E - HALL BY DISH ROOM		X	X	X			X	ON	
	1:M4-79	PHOTO	VSMOKE	1:M4-79 FLR 1E - HALL BY DISH ROOM	X	X	X	X			X	ON	
	1:M4-80	PHOTO	VSMOKE	1:M4-80 FLR 1E - HALL BY DISH ROOM					X		X	ON	
	1:M4-81	PHOTO	VSMOKE	1:M4-81 FLR 1 CTRL TWR HALL BY CAFETERIA	X				X		X	ON	
	1:M4-82	PHOTO	VSMOKE	1:M4-82 FLR 1E - HALL BY KITCHEN		X			X		X	ON	
	1:M4-83	PHOTO	VSMOKE	1:M4-83 FLR 1E - HALL BY KITCHEN	X	X			X		X	ON	
	1:M4-84	PHOTO	VSMOKE	1:M4-84 FLR 1E - ENTRY HALL TO H.R.			X		X		X	ON	
	1:M4-85	PHOTO	VSMOKE	1:M4-85 FLR 1E - HUMAN RESOURCES	X		X		X		X	ON	
	1:M4-86	PHOTO	VSMOKE	1:M4-86 FLR 1E - HALL BY NRSG. OFFICE		X	X		X		X	ON	
	1:M4-87	PHOTO	VSMOKE	1:M4-87 FLR 1E - HALL BY NRSG. OFFICE	X	X	X		X		X	ON	
	1:M4-88	PHOTO	VSMOKE	1:M4-88 FLR 1E - COPY RM BY STAFFING				X	X		X	ON	
	1:M4-89	PHOTO	VSMOKE	1:M4-89 FLR 1E - OFFICE NEXT TO COPY RM	X			X	X		X	ON	
	1:M4-90	PHOTO	VSMOKE	1:M4-90 FLR 1E - OLD FIRE COMMAND CTR		X		X	X		X	ON	
	1:M4-91	PHOTO	VSMOKE	1:M4-91 FLR 5 CENTRAL A - ELEV.1&2 SHAFT	X	X		X	X		X	ON	
	1:M4-92	PHOTO	VSMOKE	1:M4-92 FLR 5W - CENTRAL B ELEV.4 SHAFT			X	X	X		X	ON	
	1:M4-93	PHOTO	VSMOKE	1:M4-93 FLR 5 CENTRAL A - ELEV.6 SHAFT	X		X	X	X		X	ON	
	1:M4-94	RZAM	CDAMPER	1:M4-94 FLR 1E - UTILITY PLANT-AHU 97-6		X	X	X	X		X	ON	
	1:M4-95	RPHOTO	SDUCT	1:M4-95 FLR 1E - UTILITY PLANT-AHU 97-6	X	X	X	X	X		X	ON	
	1:M4-96	RPHOTO	SDUCT	1:M4-96 FLR 1E - UTILITY PLANT-AHU 97-6						X	X	ON	
	1:M4-97	RPHOTO	SDUCT	1:M4-97 FLR 1E - HALL BY STAFFING OFFICE	X					X	X	ON	
	1:M4-98	PHOTO	VSMOKE	1:M4-98 FLR 1E - HALL BY STAFFING OFFICE		X				X	X	ON	
	1:M4-99	PHOTO	VSMOKE	1:M4-99 FLR 1E - MECH RM BY COPY CTR	X	X				X	X	ON	
	1:M4-100	RPHOTO	SDUCT	1:M4-100 FLR 1E - MECH RM BY COPY CTR			X			X	X	ON	
	1:M4-101	RPHOTO	SDUCT	1:M4-101 FLR 1 CTRL TWR MECH RM/COPY CTR	X		X			X	X	ON	
	1:M4-102	SBZAM	SIGNAL	1:M4-102 FLR 1 CTRL TWR MECH RM/COPY CTR		X	X			X	X	ON	
	1:M4-103	SBZAM	SIGNAL	1:M4-103 FLR 1 CTRL TWR MECH RM/COPY CTR	X	X	X			X	X	ON	
	1:M4-104	ADRPUL	PULL	1:M4-104 FLR 4 CENTRAL TWR A-BY RM 429				X		X	X	ON	
	1:M4-105	RPHOTO	SDUCT	1:M4-105 FLR 1E - UTILITY PLANT - AHU 1A	X			X		X	X	ON	
	1:M4-106	RPHOTO	SDUCT	1:M4-106 FLR 1E - UTILITY PLANT - AHU 1A		X		X		X	X	ON	
	1:M4-107	RPHOTO	SDUCT	1:M4-107 FLR 1E - UTILITY PLANT - AHU 1C	X	X		X		X	X	ON	
	1:M4-108	RPHOTO	SDUCT	1:M4-108 FLR 1E - UTILITY PLANT - AHU 1C			X	X		X	X	ON	
	1:M4-109	PHOTO	VSMOKE	1:M4-109 FLR 4 SOILED UTILITYHOLDING	X		X	X		X	X	ON	
	1:M4-110	SBZAM	RELAY	1:M4-110 AHU 1C FAN SHUTDOWN CONTROL		X	X	X		X	X	ON	
	1:M4-111	SBZAM	RELAY	1:M4-111 AHU 1A FAN SHUTDOWN CONTROL	X	X	X	X		X	X	ON	
	1:M4-112	PHOTO	VSMOKE	1:M4-112 FLR 4 CENTRAL A - CLEAN STORAGE					X	X	X	ON	
	1:M4-113	SBZAM	RELAY	1:M4-113 HV-1 FAN SHUTDOWN CONTROL	X				X	X	X	ON	
	1:M4-114	RPHOTO	SDUCT	1:M4-114 FLR 1E - BY AHU 1A IN PLANT		X			X	X	X	ON	
	1:M4-115	RPHOTO	SDUCT	1:M4-115 FLR 1E - BY AHU 1A IN PLANT	X	X			X	X	X	ON	
	1:M4-116	SBZAM	RELAY	1:M4-116 HV-2 KITCHEN MAKE-UP SHUTDOWN			X		X	X	X	ON	
	1:M4-117	ADRPUL	PULL	1:M4-117 FLR 4 CENTRAL TWR A-BY RM 435	X		X		X	X	X	ON	
	1:M4-118	RZAM	RELAY	1:M4-118 FLR 2 ELEVATOR 92 SMK CURTAIN		X	X		X	X	X	ON	
	1:M4-119	RZAM	RELAY	1:M4-119 FLR 3 ELEVATOR 92 SMK CURTAIN	X	X	X		X	X	X	ON	
	1:M4-120	RZAM	RELAY	1:M4-120 FLR 4 ELEVATOR 92 SMK CURTAIN				X	X	X	X	ON	
	1:M4-121	RZAM	RELAY	1:M4-121 FLR 2 ELEVATOR 84 SMK CURTAIN	X			X	X	X	X	ON	
	1:M4-122	RZAM	RELAY	1:M4-122 FLR 3 ELEVATOR 84 SMK CURTAIN		X		X	X	X	X	ON	
	1:M4-123	RZAM	RELAY	1:M4-123 FLR 4 ELEVATOR 84 SMK CURTAIN	X	X		X	X	X	X	ON	
	1:M4-124	PHOTO	VSMOKE	1:M4-124 FLR 4 CENTRAL TWR A - ELECT. RM			X	X	X	X	X	ON	
	1:M4-125	RPHOTO	SDUCT	1:M4-125 FLR 4 DUCT IN CONSULT FSD	X		X	X	X	X	X	ON	
	1:M4-126	RPHOTO	SDUCT	1:M4-126 FLR 4 DUCT @ CONSULT FSD			X	X	X	X	X	ON	
	1:M4-127	RPHOTO	SDUCT	1:M4-127 FLR 4 DUCT @ FAMILY WAITING	X	X	X	X	X	X	X	ON	

NOTE: THE LABELS SHOWN ABOVE WILL BE USED FOR PROGRAMMING PURPOSES.
THE LABELS ARE BASED UPON INFORMATION SHOWN ON THE ARCHITECTURAL DRAWINGS.
ANY CHANGES TO THESE LABELS MUST BE NOTED ON THE SUBMITTAL REVIEW, PRIOR TO PROGRAMMING.
POINTS SHOWN IN ITALIC TEXT REFER TO EXISTING DEVICES.

MAPNET CHANNEL 1:M5

	Address	Device Type	Point Type	Location Description	1	2	3	4	5	6	7	8	9
	1:M5-1	ADRPUL	PULL	1:M5-1 FLR 1 W - WEST MECHANICAL RM	X							ON	
	1:M5-2	ADRPUL	PULL	1:M5-2 FLR 1W - WEST MECHANICAL PULL		X						ON	
	1:M5-3	PHOTO	VSMOKE	1:M5-3 FLR 1E - HALL BY MORGUE	X	X						ON	
	1:M5-4			SPARE			X					ON	
3	1:M5-5			SPARE	X		X					ON	
	1:M5-6			SPARE		X	X					ON	
	1:M5-7	RZAM	CDAMPER	1:M5-7 AHU 97-5	X	X	X					ON	
	1:M5-8	RZAM	CDAMPER	1:M5-8 SMOKE DAMPER AHU 97-7				X	X			ON	
	1:M5-9	RZAM	CDAMPER	1:M5-9 SMOKE DAMPER AHU 97-3	X			X				ON	
	1:M5-10	RZAM	DHOLDER	1:M5-10 DAY SURGERY AUTO DOORS		X		X				ON	
	1:M5-11	ADRPUL	PULL	1:M5-11 FLR 1 CENTRAL TWR HALL EAST EXIT	X	X		X				ON	
	1:M5-12	RZAM	RELAY	1:M5-12 ELEVATOR #3 PRIMARY RECALL			X	X				ON	
	1:M5-13	RZAM	RELAY	1:M5-13 ELEVATOR #3 ALTERNATE RECALL	X		X	X				ON	
	1:M5-14	GENIAM	SO	1:M5-14 ELEVATOR #3 TAMPER IN PIT		X	X	X				ON	
	1:M5-15	PHOTO	VSMOKE	1:M5-15 FLR 4 CENTRAL TWR A EQU STOR	X	X	X	X				ON	
3	1:M5-16			SPARE					X			ON	
	1:M5-17	RPHOTO	SDUCT	1:M5-17 FLR 1W - WEST MECH AHU 97-5	X				X			ON	
	1:M5-18	RPHOTO	SDUCT	1:M5-18 FLR 1W - WEST MECH AHU 97-5		X			X			ON	
	1:M5-19	RPHOTO	SDUCT	1:M5-19 FLR 1W - WEST MECH AHU 97-7	X	X			X			ON	
	1:M5-20	RPHOTO	SDUCT	1:M5-20 FLR 1W - WEST MECH. AHU 97-7			X		X			ON	
	1:M5-21	RPHOTO	SDUCT	1:M5-21 FLR 1W - WEST MECH. AHU 97-3	X		X		X			ON	
	1:M5-22	RPHOTO	SDUCT	1:M5-22 FLR 1W - WEST MECH. AHU 97-3		X	X		X			ON	
	1:M5-23	PHOTO	VSMOKE	1:M5-23 FLR 1W - WEST MECH. BACK RM	X	X	X		X			ON	
	1:M5-24	HEAT	HEAT	1:M5-24 FLR 1W - WEST MECHANICAL				X	X			ON	
	1:M5-25	HEAT	HEAT	1:M5-25 FLR 1W - WEST MECH. BY ENTRY	X			X	X			ON	
	1:M5-26	HEAT	HEAT	1:M5-26 FLR 1W - WEST MECH. DETECTOR		X		X	X			ON	
	1:M5-27	HEAT	HEAT	1:M5-27 FLR 1W - ELEV. NO.3 EQUIP. RM	X	X		X	X			ON	
	1:M5-28	HEAT	HEAT	1:M5-28 FLR 1W - ELEV. NO.3 PIT DETECTOR			X	X	X			ON	
	1:M5-29	HEAT	HEAT	1:M5-29 CTR TWR ELEV.3 TOP OF SHAFT	X		X	X	X			ON	
	1:M5-30	GENIAM	UTILITY	1:M5-30 SPARE 2PT I/O MONITOR		X	X	X	X			ON	
	1:M5-31	RZAM	RRELAY	1:M5-31 EAST CORR EMERGENCY EXIT RELAY	X	X	X	X	X			ON	
	1:M5-32	PHOTO	VSMOKE	1:M5-32 FLR 2 CENTRAL TWR A - BY NURSERY						X		ON	
3	1:M5-33			SPARE	X					X		ON	
	1:M5-34			SPARE		X				X		ON	
3	1:M5-35			SPARE	X	X				X		ON	
	1:M5-36	PHOTO	VSMOKE	1:M5-36 FLR 4 CENTRAL TWR A - BY RM 426			X			X		ON	
3	1:M5-37			SPARE	X		X			X		ON	
	1:M5-38	PHOTO	VSMOKE	1:M5-38 FLR 5 CENTRAL TWR A - BY RM 520		X	X			X		ON	
	1:M5-39	PHOTO	VSMOKE	1:M5-39 CTR TWR ELEV.3 TOP OF SHAFT	X	X	X			X		ON	
	1:M5-40	PHOTO	VSMOKE	1:M5-40 FLR 1W - ELEV. NO. 3 EQUIP. RM				X		X		ON	
	1:M5-41	PHOTO	VSMOKE	1:M5-41 FLR 1 CENTRAL TWR ELEVATOR LOBBY	X			X		X		ON	
	1:M5-42	PHOTO	VSMOKE	1:M5-42 FLR 1W - SUPPORT SERVICES		X		X		X		ON	
	1:M5-43	PHOTO	VSMOKE	1:M5-43 FLR 1W - SUPPORT SERVICES	X	X		X		X		ON	
	1:M5-44	PHOTO	VSMOKE	1:M5-44 FLR 1W - SUPPORT SERVICES			X	X		X		ON	
	1:M5-45			SPARE	X		X	X		X		ON	
	1:M5-46	PHOTO	VSMOKE	1:M5-46 FLR 1W - SUPPORT SERVICES		X	X	X		X		ON	
	1:M5-47	PHOTO	VSMOKE	1:M5-47 FLR 1W - SUPPORT SERVICES	X	X	X	X		X		ON	
	1:M5-48	PHOTO	VSMOKE	1:M5-48 FLR 1 CENTRL TWR BY SUPPORT SVCS					X	X		ON	
	1:M5-49	PHOTO	VSMOKE	1:M5-49 FLR 1W - SUPPORT SERVICES	X				X	X		ON	
	1:M5-50	PHOTO	VSMOKE	1:M5-50 FLR 1W - SUPPORT SERVICES		X			X	X		ON	
	1:M5-51	PHOTO	VSMOKE	1:M5-51 FLR 1W - HALL BY MED. STAFF OFF.	X	X			X	X		ON	
	1:M5-52	PHOTO	VSMOKE	1:M5-52 FLR 1W - HALL BY MED. STAFF OFF.			X		X	X		ON	
	1:M5-53	PHOTO	VSMOKE	1:M5-53 FLR 1 CTRL TWR SUPPORT SERVICES	X		X		X	X		ON	
	1:M5-54	PHOTO	VSMOKE	1:M5-54 FLR 1 CENTRL TWR BY SUPPORT SVCS		X	X		X	X		ON	
	1:M5-55	PHOTO	VSMOKE	1:M5-55 FLR 1 CTRL TWR SUPPORT SERVICES	X	X	X		X	X		ON	
	1:M5-56	PHOTO	VSMOKE	1:M5-56 FLR 1W - HALL BY SAME DAY SURG.				X	X	X		ON	
	1:M5-57	PHOTO	VSMOKE	1:M5-57 FLR 1W - HALL BY SAME DAY SURG.	X			X	X	X		ON	
	1:M5-58	PHOTO	VSMOKE	1:M5-58 FLR 1W - HALL BY SAME DAY SURG.		X		X	X	X		ON	
	1:M5-59	PHOTO	VSMOKE	1:M5-59 FLR 1W - HALL BY SAME DAY SURG.	X	X		X	X	X		ON	
	1:M5-60	PHOTO	VSMOKE	1:M5-60 FLR 1W - HALL BY SAME DAY SURG.			X	X	X	X		ON	
3	1:M5-61			SPARE	X		X	X	X	X		ON	
	1:M5-62	PHOTO	VSMOKE	1:M5-62 FLR 1W - O.R. PRE-OP OVERFLOW		X	X	X	X	X		ON	
	1:M5-63	PHOTO	VSMOKE	1:M5-63 FLR 1W - O.R. PRE-OP OVERFLOW	X	X	X	X	X	X		ON	
	1:M5-64	PHOTO	VSMOKE	1:M5-64 FLR 1W - O.R. PRE-OP OVERFLOW							X	ON	
	1:M5-65	PHOTO	VSMOKE	1:M5-65 FLR 1W - O.R. PRE-OP OVERFLOW	X						X	ON	
	1:M5-66			SPARE		X					X	ON	
	1:M5-67			SPARE	X	X					X	ON	
	1:M5-68			SPARE			X				X	ON	
	1:M5-69	PHOTO	VSMOKE	1:M5-69 FLR 1W - HALL BY G.I. SUITE	X		X				X	ON	
	1:M5-70	PHOTO	VSMOKE	1:M5-70 FLR 1W - HALL BY BED STORAGE		X	X				X	ON	
	1:M5-71	PHOTO	VSMOKE	1:M5-71 FLR 1W - HALL BY BED STORAGE	X	X	X				X	ON	
	1:M5-72	PHOTO	VSMOKE	1:M5-72 FLR 1W - HALL BY BED STORAGE				X			X	ON	
	1:M5-73	PHOTO	VSMOKE	1:M5-73 FLR 1W - HALL BY MICROBIOLOGY	X			X			X	ON	
	1:M5-74	PHOTO	VSMOKE	1:M5-74 FLR 1 CENTRAL TWR MICOBIOLOGY		X	X				X	ON	
3	1:M5-75			SPARE	X	X		X			X	ON	
	1:M5-76	PHOTO	VSMOKE	1:M5-76 FLR 1W - MICROBIOLOGY LAB			X	X			X	ON	
	1:M5-77	PHOTO	VSMOKE	1:M5-77 FLR 1 - CENTRAL TWR A BY RM 402	X		X	X			X	ON	
	1:M5-78	GENIAM	WATER	1:M5-78 FLR 1W - BY BED STORAGE - FLOW		X	X	X			X	ON	
	1:M5-79	PHOTO	VSMOKE	1:M5-79 FLR 1 CENTRAL TWR NEW CATH LAB	X	X	X	X			X	ON	
	1:M5-80	PHOTO	VSMOKE	1:M5-80 FLR 1 CENTRAL TWR CATH LAB					X		X	ON	
	1:M5-81	PHOTO	VSMOKE	1:M5-81 FLR 1 CENTRAL TWR CATH LAB	X				X		X	ON	
	1:M5-82	PHOTO	VSMOKE	1:M5-82 FLR 1N - HALL BY SURGERY WAITING		X			X		X	ON	
	1:M5-83	PHOTO	VSMOKE	1:M5-83 FLR 1N - HALL BY SURGERY WAITING	X	X			X		X	ON	
	1:M5-84	PHOTO	VSMOKE	1:M5-84 FLR 1W - SURGERY WAITING AREA			X		X		X	ON	
	1:M5-85	GENIAM	WATER	1:M5-85 FL4 CENTRAL TOWER A MED RM EAST	X		X		X		X	ON	
	1:M5-86	GENIAM	WATER	1:M5-86 FL4 CENTRAL TOWER A MED RM WEST		X	X		X		X	ON	
	1:M5-87	HEAT	HEAT	1:M5-87 FL 4 TWR A MECH ROOM	X	X	X		X		X	ON	
	1:M5-88	PHOTO	VSMOKE	1:M5-88 FLR 1W - HALL BY SAME DAY SURG.				X	X		X	ON	
	1:M5-89	RPHOTO	SDUCT	1:M5-89 FL 4 TWR A MECH ROOM RETURN	X			X	X		X	ON	
	1:M5-90	RPHOTO	SDUCT	1:M5-90 FL 4 TWR A MECH ROOM SUPPLY		X		X	X		X	ON	
	1:M5-91	ADRPUL	PULL	1:M5-91 FL 4 CENTRAL TOWER A SW STAIR #3	X	X		X	X		X	ON	
	1:M5-92	ADRPUL	PULL	1:M5-92 FL 4 CENTRAL TOWER A NE STAIR #1			X	X	X		X	ON	
	1:M5-93	PHOTO	VSMOKE	1:M5-93 FLR 1W - MEDICAL STAFF OFFICE	X		X	X	X		X	ON	
	1:M5-94	PHOTO	VSMOKE	1:M5-94 FLR 1W - MEDICAL STAFF OFFICE		X	X	X	X		X	ON	
3	1:M5-95			SPARE	X	X	X	X	X		X	ON	
3	1:M5-96			SPARE						X	X	ON	
	1:M5-97			SPARE	X					X	X	ON	
	1:M5-98	PHOTO	VSMOKE	1:M5-98 FLR 4 CENTRAL TWR A - BY RM 435		X				X	X	ON	
	1:M5-99	PHOTO	VSMOKE	1:M5-99 FLR 1W STORAGE 1013 WEST	X	X				X	X	ON	
	1:M5-100	PHOTO	VSMOKE	1:M5-100 FLR 1W STORAGE 1013 EAST			X			X	X	ON	
	1:M5-101	PHOTO	VSMOKE	1:M5-101 FLR 4 CENTRAL TWR A -BY RM 401	X		X			X	X	ON	
	1:M5-102	GENIAM	UTILITY	1:M5-102 FLR 1 SPARE 2 PT I/O		X	X			X	X	ON	
	1:M5-103	RZAM	RRELAY	1:M5-103 FLR 1 CTRL TWR N HALL FIRE DOOR	X	X	X			X	X	ON	
	1:M5-104	PHOTO	VSMOKE	1:M5-104 FLR 4 CENTRAL TWR A -BY RM 432				X		X	X	ON	
	1:M5-105	PHOTO	VSMOKE	1:M5-105 FLR 4 CENTRAL TWR A -BY RM 431	X			X		X	X	ON	
	1:M5-106	PHOTO	VSMOKE	1:M5-106 FLR 4 CENTRAL TWR A -BY RM 429		X		X		X	X	ON	
	1:M5

MEDICAL CENTER OF AURORA SOUTH TOWER NODE 1 FACP - EPS-1 CIRCUIT SUMMARY & VOLTAGE DROP							
Channel	Description	Alarm Current	% Drop	Unit Load*	Wire Length	Spare Current	Spare VoltageDrop
1:A1:1	3RD FLR A-TOWER SOUTH-EAST	2.566A	15.37%	34	800	14%	26%
1:A1:2	3RD FLR A-TOWER NORTH-WEST	2.600A	12.76%	39	1,072	13%	38%
1:A1:3	SPARE	0.000A	0.00%	0	0	100%	100%

ENHANCED POWER SUPPLY 1 - CHANNEL 1

IDNac Address	Device Type	PID	Setting	Custom Label (Max 40 Characters)		SWITCH SETTINGS 1	2	3	4	5	6	7	8	
1:A1:1-1	AV	49MTV-WRF	15cd	3RD FL TWR A CORR 3MS52	-A1:1-1	X								ON
1:A1:1-2	AV	49MTV-WRF	15cd	3RD FL TWR A CORR 3MS53 N	-A1:1-2	X								ON
1:A1:1-3	VO	49VO-APPLC	15cd	3RD FL TWR A PUBLIC TLT 3AM00	-A1:1-3	X	X							ON
1:A1:1-4	VO	49VO-APPLC	15cd	3RD FL TWR A OFFICE 3MS64	-A1:1-4			X						ON
1:A1:1-5	AV	49MTV-WRF	185cd	3RD FL TWR A SLEEP RM 3MS36A	-A1:1-5	X		X						ON
1:A1:1-6	AV	49MTV-WRF	30cd	3RD FL TWR A WAITING RM 3AM01	-A1:1-6		X	X						ON
1:A1:1-7	AV	49MTV-WRF	15cd	3RD FL TWR A CORR 3MS53 S	-A1:1-7	X	X	X						ON
1:A1:1-8	AV	49MTV-WRF	15cd	3RD FL TWR A CORR 3MS54 N	-A1:1-8				X					ON
1:A1:1-9	AV	49MTV-WRF	15cd	3RD FL TWR A CORR 3MS54 S	-A1:1-9	X			X					ON
1:A1:1-10	AV	49MTV-WRF	15cd	3RD FL TWR A ELEV VT05 LOBBY	-A1:1-10		X		X					ON
1:A1:1-11	AV	49MTV-WRF	30cd	3RD FL TWR A MECH 3EG02	-A1:1-11	X	X		X					ON
1:A1:1-12	AV	49MTV-WRF	15cd	3RD FL TWR A CORR 3MS56 E	-A1:1-12			X	X					ON
1:A1:1-13	VO	49VO-APPLC	30cd	3RD FL TWR A BIOHAZARD 3MS39	-A1:1-13	X	X	X						ON
1:A1:1-14	VO	49VO-APPLC	15cd	3RD FL TWR A DICTATION 3MS41B	-A1:1-14		X	X	X					ON
1:A1:1-15	AV	49MTV-WRF	15cd	3RD FL TWR A N/S 3MS41A	-A1:1-15	X	X	X	X					ON
1:A1:1-16	AV	49MTV-WRF	30cd	3RD FL TWR A AHU 3EG03	-A1:1-16				X					ON
1:A1:1-17	VO	49VO-APPLC	15cd	3RD FL TWR A POINT OF USE 3MS43	-A1:1-17	X			X					ON
1:A1:1-18	VO	49VO-APPLC	15cd	3RD FL TWR A NOUR 3MS42	-A1:1-18		X		X					ON
1:A1:1-19	AV	49MTV-WRF	15cd	3RD FL TWR A CORR 3MS56 W	-A1:1-19	X	X		X					ON
1:A1:1-20	VO	49VO-APPLC	15cd	3RD FL TWR A ISO PAT RM 3MS12	-A1:1-20			X	X					ON
1:A1:1-21	VO	49VO-WRFO	15cd	3RD FL TWR A PAT TLT 3MS01B	-A1:1-21	X		X						ON

ENHANCED POWER SUPPLY 1 - CHANNEL 2

IDNac Address	Device Type	PID	Setting	Custom Label (Max 40 Characters)		SWITCH SETTINGS 1	2	3	4	5	6	7	8	
1:A1:2-1	AV	49MTV-WRF	15cd	3RD FL TWR A STAFF LNG 3MS38	-A1:2-1	X								ON
1:A1:2-2	VO	49VO-APPLC	15cd	3RD FL TWR A EQ STOR 3MS40	-A1:2-2		X							ON
1:A1:2-3	AV	49MTV-WRF	15cd	3RD FL TWR A CORR 3MS63	-A1:2-3	X	X							ON
1:A1:2-4	AV	49MTV-WRF	15cd	3RD FL TWR A CORR 3MS62 N	-A1:2-4			X						ON
1:A1:2-5	VO	49VO-APPLC	15cd	3RD FL TWR A DICTATION 3MS44	-A1:2-5	X		X						ON
1:A1:2-6	VO	49VO-APPLC	15cd	3RD FL TWR A MEDS 3MS46	-A1:2-6	X	X							ON
1:A1:2-7	VO	49VO-APPLC	15cd	3RD FL TWR A POINT OF USE 3MS48	-A1:2-7	X	X	X						ON
1:A1:2-8	VO	49VO-APPLC	15cd	3RD FL TWR A EQ STOR 3MS849	-A1:2-8				X					ON
1:A1:2-9	AV	49MTV-WRF	15cd	3RD FL TWR A CORR 3MS61A	-A1:2-9	X			X					ON
1:A1:2-10	AV	49MTV-WRF	15cd	3RD FL TWR A CORR 3MS60	-A1:2-10		X		X					ON
1:A1:2-11	VO	49VO-APPLC	15cd	3RD FL TWR A SOILED UTIL 3MS050	-A1:2-11	X	X		X					ON
1:A1:2-12	AV	49MTV-WRF	15cd	3RD FL TWR A CORR 3MS59 N	-A1:2-12			X	X					ON
1:A1:2-13	VO	49VO-APPLC	15cd	3RD FL TWR A ISO PAT RM 3MS23A	-A1:2-13	X		X	X					ON
1:A1:2-14	VO	49VO-APPLC	15cd	3RD FL TWR A ACC PAT TLT 3MS23B	-A1:2-14		X	X	X					ON
1:A1:2-15	AV	49MTV-WRF	15cd	3RD FL TWR A STAFF LNG 3MS22A	-A1:2-15	X	X	X	X					ON
1:A1:2-16	VO	49VO-APPLC	15cd	3RD FL TWR A STAFF TLT 3MS22B	-A1:2-16				X					ON
1:A1:2-17	AV	49MTV-WRF	15cd	3RD FL TWR A CORR 3MS59 S	-A1:2-17	X			X					ON
1:A1:2-18	VO	49VO-APPLC	15cd	3RD FL TWR A OFFICE 3MS21	-A1:2-18		X		X					ON
1:A1:2-19	AV	49MTV-WRF	15cd	3RD FL TWR A CLEAN LINEN 3MS19	-A1:2-19	X	X		X					ON
1:A1:2-20	VO	49VO-APPLC	15cd	3RD FL TWR A MEDS 3MS18	-A1:2-20			X	X					ON
1:A1:2-21	AV	49MTV-WRF	15cd	3RD FL TWR A CORR 3MS58A W	-A1:2-21	X		X	X					ON
1:A1:2-22	AV	49MTV-WRF	15cd	3RD FL TWR A CORR 3MS58A E	-A1:2-22		X	X	X					ON
1:A1:2-23	VO	49VO-APPLC	15cd	3RD FL TWR A POINT OF USE 3MS47	-A1:2-23	X	X	X	X					ON
1:A1:2-24	AV	49MTV-WRF	15cd	3RD FL TWR A CORR 3MS57	-A1:2-24				X	X				ON
1:A1:2-25	VO	49VO-APPLC	15cd	3RD FL TWR A IDF 3MS45	-A1:2-25	X			X	X				ON
1:A1:2-26	AV	49MTV-WRF	15cd	3RD FL TWR A CORR 3MS62 S	-A1:2-26		X		X	X				ON

ENHANCED POWER SUPPLY 1 - CHANNEL 2

IDNac Address	Device Type	PID	Setting	Custom Label (Max 40 Characters)		SWITCH SETTINGS 1	2	3	4	5	6	7	8	
1:A1:3-1				SPARE	-A1:3-1	X								ON

1:A1:1 — Notification SLC Distributed Load Voltage Drop

Starting Voltage: 29vdc
Min. Device Voltage: 23.vdc
Allowable % Drop: 20.7%

Primary Wire Gauge: 14ga
Home Run Wire Gauge: 14ga

Wire Res. Per Ft. 0.003070 @ 75° Celsius
Wire Res. Per Ft. 0.003070 @ 75° Celsius

Branch	Device #	From	Distance (Feet)	PID	Setting	Device Draw	Class B Calculations Current at Device	Voltage Drop	Voltage at Device	% Vdrop Wire Length
1	1:A1:1-1	PANEL	150	49MTV-WRF	15cd	0.1450	2.566	2.363	26.637	Branch 1: 15.37%
1	1:A1:1-2	1:A1:1-1	32	49MTV-WRF	15cd	0.1450	2.421	0.476	26.161	Length: 800
1	1:A1:1-3	1:A1:1-2	27	49VO-APPLC	15cd	0.0550	0.055	0.009	26.152	
1	TAP1	1:A1:1-2	23	JBOX		0.0000	2.221	0.314	25.847	
1	1:A1:1-4	TAP1	16	49VO-APPLC	15cd	0.0550	0.055	0.005	25.842	
1	1:A1:1-5	TAP1	39	49MTV-WRF	185cd	0.2990	0.299	0.072	25.776	
1	1:A1:1-6	TAP1	35	49MTV-WRF	30cd	0.1630	0.163	0.035	25.812	
1	1:A1:1-7	TAP1	46	49MTV-WRF	15cd	0.1450	1.704	0.481	25.366	
1	1:A1:1-8	1:A1:1-7	30	49MTV-WRF	15cd	0.1450	1.559	0.287	25.079	
1	TAP2	1:A1:1-8	21	JBOX		0.0000	1.414	0.182	24.897	
1	1:A1:1-9	TAP2	15	49MTV-WRF	15cd	0.1450	0.290	0.027	24.870	
1	1:A1:1-10	1:A1:1-9	22	49MTV-WRF	15cd	0.1450	0.145	0.020	24.850	
1	1:A1:1-11	TAP2	20	49MTV-WRF	30cd	0.1630	0.163	0.020	24.877	
1	1:A1:1-12	TAP2	28	49MTV-WRF	15cd	0.1450	0.961	0.165	24.731	
1	1:A1:1-13	1:A1:1-12	36	49VO-APPLC	30cd	0.0830	0.083	0.018	24.713	
1	1:A1:1-14	1:A1:1-12	39	49VO-APPLC	15cd	0.0550	0.473	0.113	24.618	
1	1:A1:1-15	1:A1:1-14	21	49MTV-WRF	15cd	0.1450	0.418	0.054	24.564	
1	1:A1:1-16	1:A1:1-15	12	49MTV-WRF	30cd	0.1630	0.163	0.012	24.552	
1	TAP3	1:A1:1-15	19	JBOX		0.0000	0.110	0.013	24.551	
1	1:A1:1-17	TAP3	23	49VO-APPLC	15cd	0.0550	0.055	0.008	24.544	
1	1:A1:1-18	TAP3	18	49VO-APPLC	15cd	0.0550	0.055	0.006	24.545	
1	1:A1:1-19	1:A1:1-12	82	49MTV-WRF	15cd	0.1450	0.260	0.131	24.600	
1	1:A1:1-20	1:A1:1-19	24	49VO-APPLC	15cd	0.0550	0.055	0.008	24.592	
1	1:A1:1-21	1:A1:1-19	22	49VO-WRFO	15cd	0.0600	0.060	0.008	24.592	

1:A1:2 — Distributed Load Voltage Drop

Starting Voltage: 29vdc
Min. Device Voltage: 23.vdc
Allowable % Drop: 20.7%

Primary Wire Gauge: 14ga
Home Run Wire Gauge: 14ga

Wire Res. Per Ft. 0.003070 @ 75° Celsius
Wire Res. Per Ft. 0.003070 @ 75° Celsius

Branch	Device #	From	Distance (Feet)	PID	Setting	Device Draw	Class B Calculations Current at Device	Voltage Drop	Voltage at Device	% Vdrop Wire Length
1	TAP1	PANEL	194	JBOX		0.0000	0.345	0.411	28.589	Branch 1: 1.58%
1	1:A1:2-1	TAP1	15	49MTV-WRF	15cd	0.1450	0.145	0.013	28.576	Length: 298
1	1:A1:2-2	TAP1	37	49VO-APPLC	15cd	0.0550	0.055	0.012	28.577	
1	1:A1:2-3	TAP1	52	49MTV-WRF	15cd	0.1450	0.145	0.046	28.543	
2	1:A1:2-4	PANEL	110	49MTV-WRF	15cd	0.1450	2.255	1.523	27.477	Branch 2: 12.76%
2	1:A1:2-5	1:A1:2-4	31	49VO-APPLC	15cd	0.0550	0.055	0.010	27.467	Length: 774
2	TAP2	1:A1:2-4	30	JBOX		0.0000	2.055	0.379	27.098	
2	1:A1:2-6	TAP2	21	49VO-APPLC	15cd	0.0550	0.055	0.007	27.091	
2	1:A1:2-7	TAP2	44	49VO-APPLC	15cd	0.0550	0.110	0.030	27.069	
2	1:A1:2-8	1:A1:2-7	21	49VO-APPLC	15cd	0.0550	0.055	0.007	27.062	
2	1:A1:2-9	TAP2	45	49MTV-WRF	15cd	0.1450	1.890	0.522	26.576	
2	1:A1:2-10	1:A1:2-9	32	49MTV-WRF	15cd	0.1450	1.745	0.343	26.233	
2	1:A1:2-11	1:A1:2-10	18	49VO-APPLC	15cd	0.0550	0.055	0.006	26.227	
2	1:A1:2-12	1:A1:2-10	31	49MTV-WRF	15cd	0.1450	1.545	0.294	25.939	
2	1:A1:2-13	1:A1:2-12	29	49VO-APPLC	15cd	0.0550	0.110	0.020	25.920	
2	1:A1:2-14	1:A1:2-13	24	49VO-APPLC	15cd	0.0550	0.055	0.008	25.912	
2	1:A1:2-15	1:A1:2-12	14	49MTV-WRF	15cd	0.1450	0.200	0.017	25.922	
2	1:A1:2-16	1:A1:2-15	23	49VO-APPLC	15cd	0.0550	0.055	0.008	25.914	
2	1:A1:2-17	1:A1:2-12	39	49MTV-WRF	15cd	0.1450	1.090	0.261	25.678	
2	1:A1:2-18	1:A1:2-17	30	49VO-APPLC	15cd	0.0550	0.055	0.010	25.668	
2	1:A1:2-19	1:A1:2-17	23	49MTV-WRF	15cd	0.1450	0.145	0.020	25.658	
2	1:A1:2-20	1:A1:2-17	21	49VO-APPLC	15cd	0.0550	0.055	0.007	25.671	
2	1:A1:2-21	1:A1:2-17	28	49MTV-WRF	15cd	0.1450	0.690	0.119	25.560	
2	1:A1:2-22	1:A1:2-21	50	49MTV-WRF	15cd	0.1450	0.545	0.167	25.392	
2	1:A1:2-23	1:A1:2-22	23	49VO-APPLC	15cd	0.0550	0.055	0.008	25.385	
2	1:A1:2-24	1:A1:2-22	27	49MTV-WRF	15cd	0.1450	0.345	0.057	25.335	
2	1:A1:2-25	1:A1:2-24	21	49VO-APPLC	15cd	0.0550	0.055	0.007	25.328	
2	1:A1:2-26	1:A1:2-24	39	49MTV-WRF	15cd	0.1450	0.145	0.035	25.300	

1:A1:3 — Distributed Load Voltage Drop

Starting Voltage: 29vdc
Min. Device Voltage: 23.vdc
Allowable % Drop: 20.7%

Primary Wire Gauge: 14ga
Home Run Wire Gauge: 14ga

Wire Res. Per Ft. 0.003070 @ 75° Celsius
Wire Res. Per Ft. 0.003070 @ 75° Celsius

Branch	Device #	From	Distance (Feet)	PID	Setting	Device Draw	Class B Calculations Current at Device	Voltage Drop	Voltage at Device	% Vdrop Wire Length
						0.0000	0.000	0.000	0.000	

PANEL CALCULATIONS NOTES:

1. THE INFORMATION OR SYMBOLS SHOWN IN BOLD LINETYPE ARE NEW OR RELOCATED.
2. THE INFORMATION OR SYMBOLS SHOWN IN LIGHT LINETYPE ARE EXISTING TO REMAIN.

KEYNOTES:

1. DEVICE REMOVED FOR CONSTRUCTION.
2. DEVICE IS INTERIM FOR CONSTRUCTION. TO BE REMOVED DURING BUILDOUT. DEVICE DESCRIPTOR CHANGED.
3. DEVICE WAS INTERIM FOR CONSTRUCTION AND IS NOW REMOVED. DEVICE QUANTITY CHANGED.
4. EXISTING DEVICE REINSTALLED. UPDATE ADDRESS, DESCRIPTOR, AND LOCATION.

Johnson Controls
DISTRICT 1-415
10001 E. 104TH AVE
AURORA, CO 80010
SERVICE: 303-355-6000
PHONE: 303-395-9500
FAX: 303-395-9515

NICET CERTIFICATION INFORMATION

NANCY S. WILTSIE
NICET Fire Alarm, III
Certification #93727
Valid Through: 03/01/24

December 14, 2022

THE MEDICAL CENTER OF AURORA - SOUTH
3RD FLOOR - A TOWER - REFRESH

THE MEDICAL CENTER OF AURORA
1501 SOUTH POTOMAC STREET
AURORA, COLORADO 80012

Revisions shown with Δ symbol

ISSUE LOG MARK	DATE	CAD	CHK	DESCRIPTION

FOR PERMIT

DRAWN BY:	CCD
CHECKED BY:	CBR
ISSUE DATE:	11/7/22
JOB #:	
PROJECT #:	419:650214504

JOHNSON CONTROLS © 2022

SYSTEM:
FIRE ALARM SYSTEM

SHEET:
NODE-1 FACP CALCULATIONS AND SCHEDULES - BUILDOUT CONTINUED

FA-605

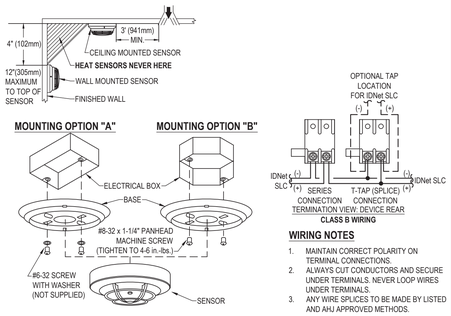
City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: *M. Apodaca*
Date: *Apr 14, 2023*
2015 INTERNATIONAL CODES & 2020 NEC

FILE PATH: C:\Users\jlsnow5\Johnson Controls\Project Electronics - Medical Center of Aurora\1501 S Potomac - Aurora South\South Tower - Node 1\37-3rd Flr A-Tower Refresh - 2022 - 650214504\Fire\FA-601.dwg
LAST SAVED BY: JSNOW5
LAST PRINTED: 12/14/2022 9:05:39 AM
30" x 42" - Arch E1 Size
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RSN: 1679748
Permit # 2022-2258138-LT
Sheet 13 of 52

STANDARD SENSOR BASE

SIMPLEX 4098-9792



MOUNTING OPTIONS

OPTION [1]	DESCRIPTION	NOTE
A	SINGLE GANG BOX, 2-1/8" (54mm) DEEP - FLUSH MOUNT	BY OTHERS
B	4" (102mm) OCTAGONAL BOX, 1-1/2" (38mm) DEEP, MINIMUM - FLUSH MOUNT	BY OTHERS
C	4" (102mm) SQUARE BOX, 1-1/2" DEEP (MIN) W/ SIMPLEX 4098-9832 ADAPTER KIT	BOX BY OTHERS, 4098-9832 ORDERED SEPARATELY
D	4" (102mm) SQUARE BOX, 1-1/2" DEEP (MIN) W/ SINGLE GANG COVER PLATE 3/4" (19mm) EXTENSION	BY OTHERS

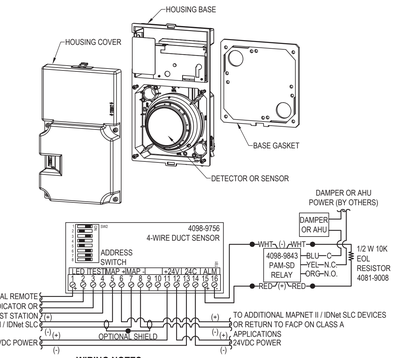
1. FOR ADDITIONAL MOUNTING OPTIONS, DOWNLOAD DATA SHEET 4098-0019 FROM HTTP://WWW.SIMPLEX-FIRE.COM

WIRING NOTES

1. MAINTAIN CORRECT POLARITY ON TERMINAL CONNECTIONS.
2. ALWAYS CUT CONDUCTORS AND SECURE UNDER TERMINALS. NEVER LOOP WIRES UNDER TERMINALS.
3. ANY WIRE SPLICES TO BE MADE BY LISTED AND AHJ APPROVED METHODS.

DUCT SMOKE DETECTOR

SIMPLEX 4098-9756 ANALOG 4-WIRE DUCT SENSOR WITH 24VDC RELAY



WIRING NOTES

1. MAINTAIN CORRECT POLARITY ON TERMINAL CONNECTIONS.
2. ALWAYS CUT CONDUCTORS AND SECURE UNDER TERMINALS. NEVER LOOP WIRES UNDER TERMINALS.
3. ANY WIRE SPLICES TO BE MADE BY LISTED AND AHJ APPROVED METHODS. CLASS B APPLICATIONS ONLY.

DUCT SMOKE DETECTOR INSTALLATION GUIDE

PRE-INSTALLATION ROUTINES

DUCT DETECTORS/SENSORS SHOULD BE INSTALLED IN A LOCATION OF RELATIVELY NON-TURBULENT AIR FLOW AND WITHIN THE INTENDED OPERATING VELOCITY RANGE OF 300-4000 FEET-PER-MINUTE (91 TO 1220 M/MIN.)

MEASUREMENTS OF AIR FLOW AND EXAMINATION OF ENGINEERING SPECIFICATIONS THAT DEFINE EXPECTED DUCT AIR VELOCITIES UNDER ALL CONDITIONS IS RECOMMENDED. THIS IS DONE TO DETERMINE IF A LOCATION IS SUITABLE FOR DUCT DETECTOR/SENSOR OPERATION. AN ALNOR INSTRUMENT CO. (CHICAGO) MODEL 6000P VELOMETER OR EQUIVALENT (NOT SUPPLIED) MAY BE USED TO CHECK THE DUCT AIR VELOCITY.

INSTALLATION GUIDELINES

1. LOCATE DUCT HOUSINGS SO THAT DAMPERS DO NOT RESTRICT AIR FLOW AT THE DETECTOR/SENSOR LOCATION. SEE FIGURE 1.
2. LOCATE AIR DUCT DETECTORS/SENSORS ON THE RETURN OR SUPPLY DUCT OF THE EQUIPMENT'S AIR HANDLING SYSTEM. HOWEVER, DETECTORS/SENSORS SHOULD NOT BE INSTALLED IN THE RETURN AIR DAMPER BRANCH. SEE FIGURE 1.
3. LOCATE AIR DUCT DETECTORS/SENSORS ON BRANCH LINES IF CLOSE IDENTIFICATION OF THE ALARM SOURCE IS REQUIRED.
4. LOCATE AIR DUCT DETECTORS/SENSORS ON THE DOWNSTREAM SIDE OF FILTERS TO SENSE FIRE IN FILTERS. HOWEVER, SHOULD THE FILTERS BLOCK, SUFFICIENT AIR FLOW MAY NOT BE AVAILABLE FOR PROPER AIR DUCT DETECTOR/SENSOR OPERATION. SEE FIGURE 1.
5. WHENEVER POSSIBLE, LOCATE AIR DUCT DETECTORS/SENSORS WHERE THEY CAN BE CONVENIENTLY OBSERVED AND READILY SERVICED.
6. LOCATE THE AIR DUCT DETECTORS/SENSORS IN RETURN AIR DUCTS AHEAD OF MIXING AREAS.
7. DO NOT LOCATE AIR DUCT DETECTORS/SENSORS NEXT TO OUTSIDE AIR INLETS UNLESS YOU WANT TO MONITOR SMOKE ENTRY TO THE HANDLING SYSTEM FROM AN ADJACENT AREA.
8. LOCATE AIR DUCT DETECTORS/SENSORS UPSTREAM OF AIR HUMIDIFIERS AND COOLING COILS.
9. DO NOT INSTALL THE DUCT DETECTOR HOUSING OR DUCT TUBES IN LOCATIONS THAT EXCEED THE LISTED TEMPERATURE RATINGS FOR THE DEVICE.
10. DO NOT MOUNT THE DUCT HOUSING ON BOTTOM OF DUCT.

DUCT DETECTOR/SENSOR INSTALLATION

1. TAPE THE TEMPLATE (SUPPLIED) ON THE DUCT SURFACE. DO NOT POSITION THE TEMPLATE WITH EDGES ANGLED WITH RESPECT TO AIR FLOW DIRECTION. SEE FIGURE 2.
2. DRILL TWO 1 1/4 INCH (31.75 MM) HOLES (MARKED "A") AS LOCATED BY THE TEMPLATE. REMOVE TEMPLATE AFTER HOLES HAVE BEEN DRILLED.
3. IF THE DUCT IS MORE THAN 3 FEET (0.9 M) WIDE, THEN PUNCH A 1-INCH (25.4 MM) HOLE IN THE DUCT WALL DIRECTLY OPPOSITE THE UPSTREAM 1-1/4 INCH (31.75 MM) HOLE. SEE FIGURE 3. THIS HOLE IS USED TO SUPPORT THE INLET TUBE.
4. INLET TUBES SHOULD BE SELECTED AND CUT TO LENGTH AS SPECIFIED IN TABLE 1. AFTER TRIMMING THE INLET TUBE OPPOSITE THE SLOT, TAP RUBBER PLUG (SUPPLIED) INTO THE TRIMMED END. SEE FIGURE 3.

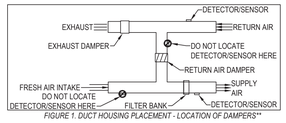


*FIGURE 1. DUCT HOUSING PLACEMENT - LOCATION OF DAMPERS***

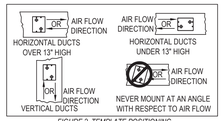


FIGURE 2. TEMPLATE POSITIONING

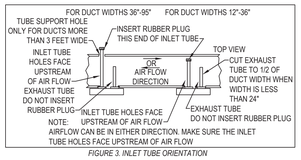


FIGURE 3. INLET TUBE ORIENTATION

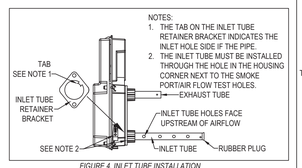


FIGURE 4. INLET TUBE INSTALLATION

INLET TUBE SELECTION

OVERALL DUCT WIDTH	TUBE REQUIRED	TUBE TYPE	SUGGESTED TOTAL LENGTH
12" (30cm)	4098-9854	13" (33.02cm)	1/2" (1.27cm) LONGER THAN DUCT WIDTH
13" (33.02cm) TO 23" (58cm)	4098-9855	24" (60.96cm)	1/2" (1.27cm) LONGER THAN DUCT WIDTH
24" (60cm) TO 46" (116cm)	4098-9856	49" (125.46cm)	2" (5.8cm) LONGER THAN DUCT WIDTH
46" (116cm) TO 71" (180cm)	4098-9857	73" (185cm)	2" (5.8cm) LONGER THAN DUCT WIDTH
71" (180cm) TO 95" (240cm)	4098-9858	97" (245cm)	2" (5.8CM) LONGER THAN DUCT WIDTH

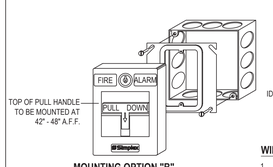
TABLE 1. INLET TUBE SELECTION

* REFER TO INSTALLATION INSTRUCTION DOCUMENT 574-776 FOR MORE DETAILED INFORMATION.

** WHEN PROVIDING CONTROL FOR A SMOKE DAMPER INSTALLED WITHIN AN AIR TRANSFER OPENING IN A WALL, THE DUCT DETECTOR SHALL BE INSTALLED WITHIN 5 FEET HORIZONTALLY OF THE DAMPER.

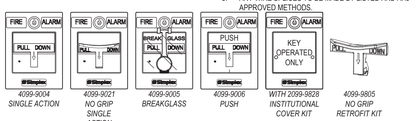
ADDRESSABLE PULL STATIONS

SIMPLEX 4099 SERIES



WIRING NOTES

1. MAINTAIN CORRECT POLARITY ON TERMINAL CONNECTIONS.
2. ALWAYS CUT CONDUCTORS AND SECURE UNDER TERMINALS. NEVER LOOP WIRES UNDER TERMINALS.
3. ANY WIRE SPLICES TO BE MADE BY LISTED AND AHJ APPROVED METHODS.



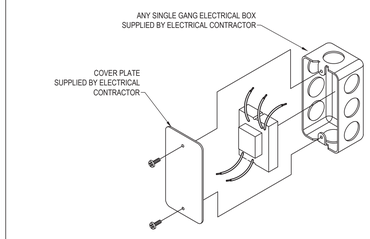
MOUNTING OPTIONS

OPTION [1]	DESCRIPTION	NOTE
A	SINGLE GANG BOX, 2-1/2" (64mm) DEEP	BY OTHERS
B	4" (102mm) SQUARE BOX, 2-1/8" DEEP (MIN) W/ SINGLE GANG COVER PLATE 3/4" (19mm) EXTENSION	BY OTHERS
C	SIMPLEX 2975-9022 - 5H x 3-7/8"W x 2-3/16"D (127mm x 98mm x 56mm)	ORDERED SEPARATELY
D	SIMPLEX 2975-9178 - 5-3/4"H x 3-7/8"W x 2-3/16"D (132mm x 102mm x 56mm)	ORDERED SEPARATELY

1. FOR ADDITIONAL MOUNTING OPTIONS, DOWNLOAD DATA SHEET 4099-0005 FROM HTTP://WWW.SIMPLEX-FIRE.COM

24VDC POLARIZED RELAY

SIMPLEX 4098-9843 / APOLLO AMERICA PAM-SD



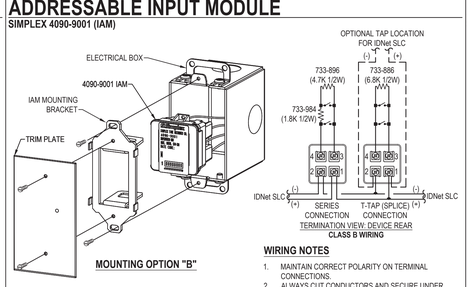
WIRING NOTES

1. MAINTAIN CORRECT POLARITY ON CONNECTIONS.
2. ANY WIRE SPLICES TO BE MADE BY LISTED AND AHJ APPROVED METHODS. CLASS B APPLICATIONS ONLY.

FOR ADDITIONAL DETAILS SEE DATA SHEET 2088-0010 ON HTTP://WWW.SIMPLEX-FIRE.COM

ADDRESSABLE INPUT MODULE

SIMPLEX 4090-9001 (IAM)

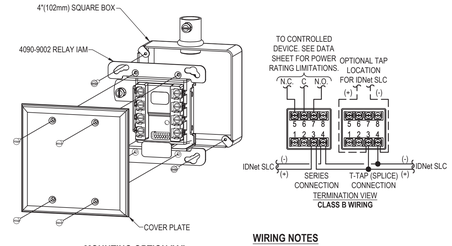


WIRING NOTES

1. MAINTAIN CORRECT POLARITY ON TERMINAL CONNECTIONS.
2. ALWAYS CUT CONDUCTORS AND SECURE UNDER TERMINALS. NEVER LOOP WIRES UNDER TERMINALS.
3. ANY WIRE SPLICES TO BE MADE BY LISTED AND AHJ APPROVED METHODS.

ADDRESSABLE RELAY MODULE

SIMPLEX 4090-9002



WIRING NOTES

1. MAINTAIN CORRECT POLARITY ON TERMINAL CONNECTIONS.
2. ALWAYS CUT CONDUCTORS AND SECURE UNDER TERMINALS. NEVER LOOP WIRES UNDER TERMINALS.
3. ANY WIRE SPLICES TO BE MADE BY LISTED AND AHJ APPROVED METHODS.

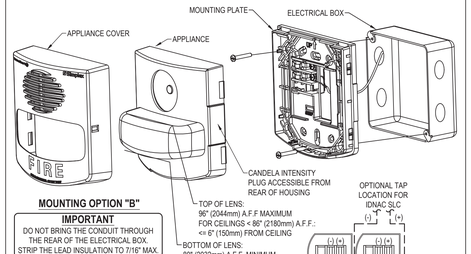
MOUNTING OPTIONS

OPTION [1]	DESCRIPTION	NOTE
A	4" (102mm) SQUARE BOX, 2-1/8" MINIMUM DEPTH WITH DOUBLE GANG COVER PLATE	BY OTHERS
B	4" (102mm) SQUARE BOX, 2-1/8" MINIMUM DEPTH WITH SIMPLEX 4090-9801 TRIM PLATE FOR SEMI-FLUSH MOUNTED BOX	BOX BY OTHERS, PLATES ORDERED SEPARATELY
C	4" (102mm) SQUARE BOX, 2-1/8" MINIMUM DEPTH WITH SIMPLEX 4090-9802 TRIM PLATE FOR SURFACE MOUNTED BOX	BOX BY OTHERS, PLATES ORDERED SEPARATELY

1. FOR ADDITIONAL MOUNTING OPTIONS, DOWNLOAD DATA SHEET 4090-0002 FROM HTTP://WWW.SIMPLEX-FIRE.COM

TrueAlert ES ADDRESSABLE APPLIANCES

SIMPLEX 49MTV SERIES WALL MOUNTED MULTI-TONE AUDIBLE / VISUAL



WIRING NOTES

1. MAINTAIN CORRECT POLARITY ON TERMINAL CONNECTIONS.
2. ALWAYS CUT CONDUCTORS AND SECURE UNDER TERMINALS. NEVER LOOP WIRES UNDER TERMINALS.
3. ANY WIRE SPLICES TO BE MADE BY LISTED AND AHJ APPROVED METHODS.

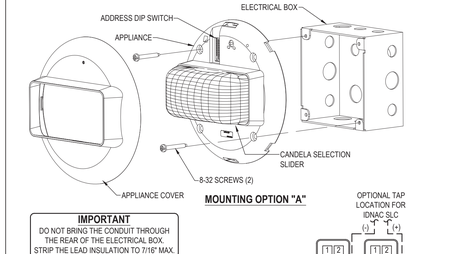
MOUNTING OPTIONS

OPTION [1]	DESCRIPTION	NOTE
A	SINGLE GANG OR DOUBLE GANG BOX, 1-1/2" (38mm) MINIMUM DEPTH	BY OTHERS
B	4" (102mm) SQUARE BOX, 1-1/2" (38mm) MINIMUM DEPTH	BY OTHERS
C	SIMPLEX 2975-9145, 7-7/8"H x 5-1/8"W x 2-3/4"D (127mm x 98mm x 56mm) REQUIRES 4905-9931 PLATE	ORDERED SEPARATELY

1. FOR ADDITIONAL MOUNTING OPTIONS, DOWNLOAD DATA SHEET S49MTV-0001 FROM HTTP://WWW.SIMPLEX-FIRE.COM

TrueAlert ES ADDRESSABLE APPLIANCES

SIMPLEX 49VO / 49VOH SERIES CEILING MOUNTED VISUAL ONLY



WIRING NOTES

1. MAINTAIN CORRECT POLARITY ON TERMINAL CONNECTIONS.
2. ALWAYS CUT CONDUCTORS AND SECURE UNDER TERMINALS. NEVER LOOP WIRES UNDER TERMINALS.
3. ANY WIRE SPLICES TO BE MADE BY LISTED AND AHJ APPROVED METHODS.

MOUNTING OPTIONS

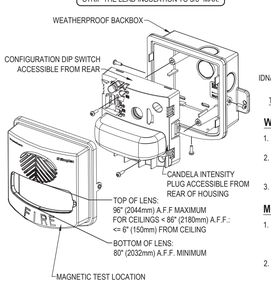
OPTION [1]	DESCRIPTION	NOTE
A	4" SQUARE ELECTRICAL BOX, 1-1/2" (39mm) MINIMUM DEPTH	BY OTHERS
B	SINGLE GANG ELECTRICAL BOX, 1-1/2" (39mm) MINIMUM DEPTH, WITH 49VO-APCS ADAPTER PLATE	BOX BY OTHERS, SIMPLEX ADAPTER PLATE

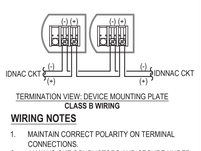
1. FOR ADDITIONAL MOUNTING OPTIONS, DOWNLOAD DATA SHEET S49VOC-0001 FROM HTTP://WWW.SIMPLEX-FIRE.COM

TrueAlert ES ADDRESSABLE APPLIANCES

SIMPLEX 49WP SERIES WEATHERPROOF WALL MOUNTED VISUAL ONLY & AUDIBLE / VISUAL

IMPORTANT
DO NOT BRING THE CONDUIT THROUGH THE REAR OF THE ELECTRICAL BOX. STRIP THE LEAD INSULATION TO 3/8" MAX.





WIRING NOTES

1. MAINTAIN CORRECT POLARITY ON TERMINAL CONNECTIONS.
2. ALWAYS CUT CONDUCTORS AND SECURE UNDER TERMINALS. NEVER LOOP WIRES UNDER TERMINALS.
3. ANY WIRE SPLICES TO BE MADE BY LISTED AND AHJ APPROVED METHODS.

MOUNTING INSTRUCTIONS

1. ASSEMBLE THE HOUSING ONTO THE WEATHERPROOF BACKBOX ASSURING EVEN CONTACT WITH THE GASKET AROUND THE PERIPHERY.
2. USING THE HOLES INDICATED, ASSEMBLE THE HOUSING TO THE BACKBOX. TIGHTEN SCREWS TO RECOMMENDED TORQUE.
3. ASSEMBLE THE COVER TO THE WEATHERPROOF BACKBOX USING SCREWS PROVIDED. TIGHTEN SCREWS TO RECOMMENDED TORQUE.

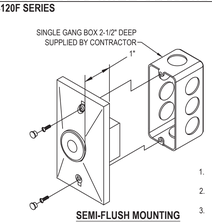
MOUNTING OPTIONS

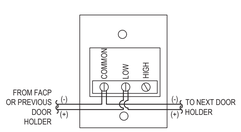
OPTION [1]	DESCRIPTION	NOTE
A	SIMPLEX 49WPBB-AVVOWR 1-1/2" DEEP WEATHERPROOF BOX - RED	ORDERED SEPARATELY
B	SIMPLEX 4905 9829 1-1/2" DEEP WEATHERPROOF BOX - WHITE	ORDERED SEPARATELY

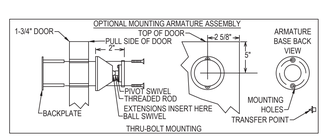
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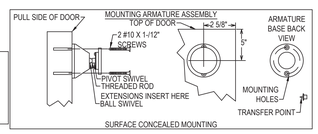
MAGNETIC SEMI-FLUSH MOUNT DOOR HOLDERS

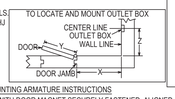
DH24120F SERIES











	Y = DIMENSION OF DOOR											
	28	30	32	34	36	38	40	42	44	46	48	
X	Z = THE INTERSECTION OF X AND Y (THE DIMENSION BETWEEN WALL AND OUTLET BOX)											
2	26	28	29-7/8	32	34	36	38	40	42	43-7/8	45-5/8	
4	26	28	29-7/8	32	34	36	38	40	42	43-7/8	45-5/8	
6	25-7/8	27-5/8	29-5/8	31-3/4	33-3/4	35-3/4	37-3/4	39-3/4	41-3/4	43-5/8	45-3/8	
8	25-1/4	27-1/4	29-1/4	31-3/8	33-1/2	35-1/2	37-3/8	39-1/2	41-1/2	43-3/8	45-1/4	
10	24-5/8	26-3/4	28-3/4	30-7/8	33	35	37	39-1/8	41-1/8	43	44-7/8	
12	23-3/4	25-7/8	28	30-1/8	32-1/4	34-3/8	36-3/8	38-1/2	40-5/8	42-1/2	44-3/8	
14	23-3/4	25	27-1/4	29-3/8	31-1/2	33-3/4	35-7/8	38	40	42	43-7/8	
16	21-3/4	24	26-1/4	28-1/2	30-3/4	33	35-1/8	37-1/4	39-3/8	41-3/8	43-3/8	
18	20	22-1/2	25	27-3/8	29-3/4	32	34-1/4	36-1/2	38-5/8	40-5/8	42-1/2	
20	18-1/4	21	23-1/2	26	28-1/2	30-7/8	33-1/8	35-1/2	37-5/8	39-5/8	41-5/8	
22		18-3/4	21-5/8	24-3/8	27	29-3/8	31-3/4	34-1/8	36-1/2	38-5/8	40-3/4	
24				22-1/2	25-1/2	28-1/8	30-5/8	33-1/8	35-5/8	37-7/8	40	
26						26-1/4	29	31-5/8	34-1/4	36-1/2	38-5/8	
28								29-3/4	32-1/2	34-7/8	37-1/8	
30								27-3/4	30-5/8	33	35-3/8	
32										31-3/8	33-7/8	

X = DIMENSION OF DOOR JAMB TO WALL

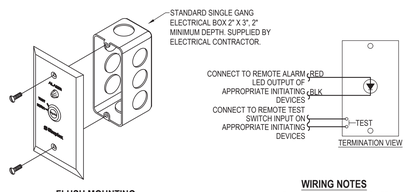
1. REFER TO DRAWING & CHART TO LOCATE OUTLET BOX.
2. INSTALL THE OUTLET BOX ON THE HORIZONTAL CENTER LINE 5" FROM TOP OF DOOR.

MOUNTING ARMATURE INSTRUCTIONS

1. WITH DOOR MAGNET SECURELY FASTENED, ALIGNED AND ENERGIZED, PROCEED WITH SWIVEL BASE ASSEMBLY.
2. ATTACH SWIVEL PORTION OF MAGNET, BEING CAREFUL TO CENTER CATCH PLATE OVER MAGNET.
3. WITH CATCH PLATE ASSEMBLY ATTACHED MAGNETICALLY TO DOOR MAGNET, PEEL ADHESIVE BACKING OFF MOUNTING TEMPLATE AND SLIDE OVER CATCH PLATE, MAKING SURE ADHESIVE SIDE FACES DOOR.
4. GENTLY CLOSE DOOR AND WITH ONE HAND ADJUST BASE OF CATCH PLATE TO LIE FLAT AGAINST DOOR.
5. WHILE KEEPING SLIGHT PRESSURE ON DOOR, SLIDE MOUNTING TEMPLATE OVER CATCH PLATE TO DOOR SURFACE AND APPLY PRESSURE TO TEMPLATE IN A FEW SPOTS.
6. OPENING DOOR WILL REVEAL MOUNTING TEMPLATE. APPLY FINAL PRESSURE TO INSURE TEMPLATE DOES NOT FALL OFF WHILE ASSEMBLY TAKES PLACE.
7. INSERT ALIGNMENT TEMPLATE INTO CENTER OF MOUNTING TEMPLATE. USE TAB TO ROTATE FOR FINE ADJUSTMENT. WHILE HOLDING ALIGNMENT TEMPLATE WITH ONE HAND, REMOVE ADHESIVE BACKING OF TAB, THEN PUSH FLAT AGAINST DOOR.
8. IF USING OPTIONAL DOOR BACK PLATE, CENTER PUNCH POINTS INDICATED ON ALIGNMENT TEMPLATE FOR EITHER HORIZONTAL OR VERTICAL MOUNTING. FOR BEST RESULTS DRILL 1/8" PILOT HOLE FIRST, THEN FOLLOW WITH 5/16" DIA. DRILL, DRILL STRAIGHT THROUGH DOOR.
9. IF MOUNTING CATCH PLATE ASSEMBLY DIRECTLY TO DOOR, DRILL 1/8" DIA PILOT HOLE APPROXIMATELY 1 TO 1 1/2" DEEP, BEING CAREFUL NOT TO GO THROUGH DOOR.
10. FOR EITHER STYLE OF MOUNTING (THRU DOOR/DIRECT) REMOVE ONLY ALIGNMENT TEMPLATE, THEN PLACE SWIVEL IN CENTER ALIGN HOLES, THEN INSERT SCREWS AND TIGHTEN ASSEMBLY FULLY. LASTLY, REMOVE MOUNTING TEMPLATE.

REMOTE ALARM INDICATOR / KEY SWITCH

SIMPLEX 2098-9806



WIRING NOTES

1. MAINTAIN CORRECT POLARITY ON TERMINAL CONNECTIONS.
2. ALWAYS CUT CONDUCTORS AND SECURE UNDER TERMINALS. NEVER LOOP WIRES UNDER TERMINALS.
3. ONE INDICATOR MAY BE INSTALLED PER DETECTOR.

This sheet of drawings has not been reviewed for code compliance.

Johnson Controls
DISTRICT 1-416
1501 W. MINNESOTA AVE
AURORA, CO 80017
SERVICE: 303-3555000
PHONE: 303-350-9500
FAX: 303-350-9515

NICET CERTIFICATION INFORMATION
NANCY S. WILTSIE
NICET Fire Alarm, III
Certification #93727
Valid Through: 03/01/24
December 14, 2022

THE MEDICAL CENTER OF AURORA - SOUTH 3RD FLOOR - A TOWER - REFRESH

THE MEDICAL CENTER OF AURORA
1501 SOUTH POTOMAC STREET
AURORA, COLORADO 80012

Revisions shown with △ symbol

ISSUE LOC.	MARK	DATE	DESCRIPTION	CHK	CAD

FOR PERMIT

DRAWN BY:	CCD
CHECKED BY:	CBR
ISSUE DATE:	11/7/22
JOB #:	
PROJECT #:	419-650214504

JOHNSON CONTROLS © 2022

SYSTEM: FIRE ALARM SYSTEM

SHEET: TYPICAL DEVICE WIRING

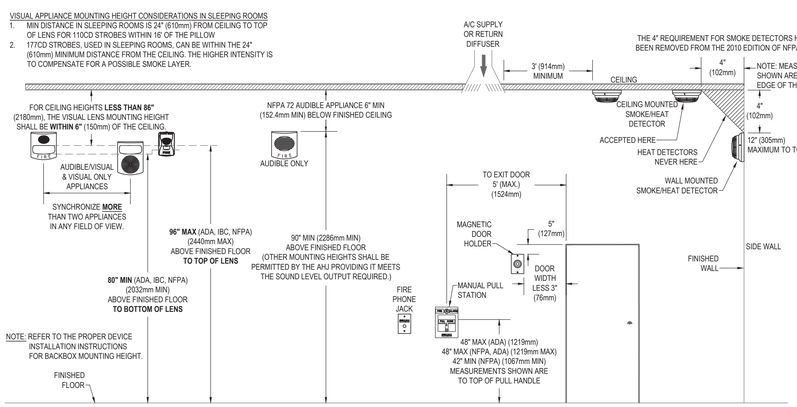
FA-701

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FILE PATH: C:\Users\jdonc4\Johnson Controls\Project Electronics - Medical Center of Aurora\1501 S Potomac - Aurora South\South Tower - Node 1\3rd Flr A-Tower Refresh - 2022 - 4502140\FireFA\FA701.dwg
LAST SAVED BY: JDONC4
LAST PRINTED: 10/14/2022 9:05:39 AM
36" x 42" Arch E1 Size

DEVICE MOUNTING HEIGHT REFERENCE

PER NFPA 72



END OF LINE RESISTOR CODES



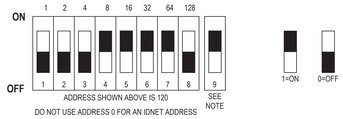
NOTE: REFER TO PANEL/MODULE AND DEVICE INSTALLATION INSTRUCTIONS FOR PROPER TERMINATIONS.

MODEL	REF. NUMBER	Ω	BAND NUMBER 3	2	3	4	5	WATTS	CIRCUIT TYPE	FIRE ALARM PANEL/MODULE
4081-9001	733-892	2.2K	RED	RED	RED	GLD	N/A	1/2	ANNUNCIATOR (4300)	4004, 4010 (TROUBLE)
4081-9002	733-893	3.3K	ORG	ORG	RED	GLD	N/A	1	N.O. INITIATING PULL, SMOKE, HEAT., WATERFLOW, TAMPER, ETC. 24 PT. I/O SWITCH SUPV.	4004*, 4004R, 4005*, 4006, 4100, 4120, 4100U, ZAMs 4605-7401, 4100 SERIES
4081-9003	733-896	4.7K	YEL	VT	RED	GLD	N/A	1/2	CURRENT LIMITED N.O. INIT., NOTIFICATION (DACT)	4090 IDNET IAM (EOLR) 2080-9024
4081-9004	733-886	6.8K	BLU	GRY	RED	GLD	N/A	1/2	N/O INITIATING PULL, SMOKE, HEAT, W.FLOW, TAMPER, ETC	4004, 4005, 4090-9001 IDNET IAM, 2190-9173 MAPNET® II 2 PT I/O 4-20MA ZAM (TROUBLE)
4081-9005	733-884	1.8K	BRN	GRY	RED	GLD	N/A	1/2	CURRENT LIMITED N.O. INITIATING (INLINE)	4090-9001 IDNET IAM
4081-9006	733-890	560	GRN	BLU	BRN	GLD	N/A	1	N.C. INITIATING (EOLR)	4005*, 4090-9001 IDNET IAM 4100, 4100U
4081-9007	733-891	1.2K	BRN	RED	RED	GLD	N/A	1	N.C. INITIATING (EOLR)	4005
4081-9008	733-894	10K	BRN	BLK	ORG	GLD	N/A	1/2	NOTIFICATION	4004, 4005, 4006, 4008, 4009, 4010, 4100, 4100U
4081-9009	733-912	20	RED	BLK	BLK	GLD	N/A	1	TO MIR-101 RELAY COIL	4005 8 POINT I/O
4081-9010	733-973	1K	BRN	BLK	RED	GLD	N/A	1	N.C. INIT. (ACROSS CONTACTS)	4005*, 4090-9001 IDNET IAM
									24 PT. I/O (ACROSS CONTACTS	4605-7401, 4100 SERIES
									CURRENT LIMITED N.O. INIT. (IN SERIES WITH CONTACT)	4090-9001 IDNET IAM
4081-9011	733-974	100	BRN	BLK	BRN	GLD	N/A	1/2	ANNUNCIATOR (N2)	4006, 4008, 4010
4081-9012	733-985	22K	RED	RED	ORG	GLD	N/A	1/2	SPEAKER CIRCUIT	4003
4081-9013	734-086	4.99K	YEL	WHT	WHT	BRN	BRN	1/2		
4081-9014	734-092	2.4K	RED	YEL	RED	GLD	N/A	1/2	N.C. INITIATING (SECURITY MONITORING EOLR)	4090-9001 IDNET IAM
4081-9015	734-093	1.5K	BRN	GRN	RED	GLD	N/A	1/2	CURRENT LIMITED N.O. INIT. (SECURITY MONITORING EOLR)	4090-9001 IDNET IAM
4081-9016	734-149	150K	BRN	GRN	YEL	GLD	N/A	1/2		
4081-9017	734-171	3.9K	ORG	WHT	RED	GLD	N/A	1		
4081-9018	734-168	10K	BRN	BLK	ORG	GLD	N/A	1	70VRMS CONSTANT SUPV. NAC	4100-1260
	378-090	8.2K	GRY	RED	RED	GLD	N/A	1/2	SECURITY MONITORING (EOLR)	4100, 4100U
	378-046	5.6K	GRN	BLU	RED	GLD	N/A	1/2	N.O. SECURITY MON. (SERIES)	4100, 4100U
	378-069	12K	BRN	RED	ORG	GLD	N/A	1/2	N.C. SECURITY MON. (SHUNT)	4100, 4100U

* USE WITH RETROFIT OR HIGH CURRENT MODULE

DIP SWITCH SETTINGS - INITIATING

SIMPLEX IDNet



DIP SWITCHES 5 THRU 8

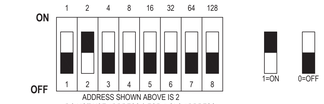
DIP SWITCHES 1 THRU 4

	M	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
1		17	33	49	65	81	97	113	129	145	161	177	193	209	225	241
2		18	34	50	66	82	98	114	130	146	162	178	194	210	226	242
3		19	35	51	67	83	99	115	131	147	163	179	195	211	227	243
4		20	36	52	68	84	100	116	132	148	164	180	196	212	228	244
5		21	37	53	69	85	101	117	133	149	165	181	197	213	229	245
6		22	38	54	70	86	102	118	134	150	166	182	198	214	230	246
7		23	39	55	71	87	103	119	135	151	167	183	199	215	231	247
8		24	40	56	72	88	104	120	136	152	168	184	200	216	232	248
9		25	41	57	73	89	105	121	137	153	169	185	201	217	233	249
10		26	42	58	74	90	106	122	138	154	170	186	202	218	234	250
11		27	43	59	75	91	107	123	139	155	171	187	203	219	235	251
12		28	44	60	76	92	108	124	140	156	172	188	204	220	236	252
13		29	45	61	77	93	109	125	141	157	173	189	205	221	237	253
14		30	46	62	78	94	110	126	142	158	174	190	206	222	238	254
15		31	47	63	79	95	111	127	143	159	175	191	207	223	239	255

NOTE:
THE 4098-9771, -9794, -9795, -9798 SOUNDER BASES HAVE A 9-POSITION DIP SWITCH. THE FIRST EIGHT DIP SWITCHES SET THE SOUNDER BASE ADDRESS. DIP SWITCH POSITION 9 IS SET TO OFF OR ON DEPENDING UPON THE SOUNDER BASE POWER SOURCE. WHEN THE SOUNDER BASE IS CONNECTED TO A 24 VDC POWER SOURCE, DIP SWITCH POSITION 9 IS SET TO "OFF" AND THE 24 VDC POWER IS SUPERVISED BY THE SOUNDER BASE. WHEN THE SOUNDER BASE IS POWERED BY THE PANEL'S NOTIFICATION APPLIANCE CIRCUIT (NAC), DIP SWITCH POSITION 9 IS SET TO "ON" AND THE POWER IS SUPERVISED BY THE NAC AND NOT THE SOUNDER BASE. THE 4098-9770 AND -9797 BASES HAVE THE SAME LAYOUT, BUT DOESN'T OFFER SOUNDER FUNCTIONALITY. THEY USE AN 8-WAY DIP SWITCH ONLY.

DIP SWITCH SETTINGS - NOTIFICATION

SIMPLEX TRUEALERT ES / IDNAC



DIP SWITCHES 5 THRU 8

DIP SWITCHES 1 THRU 4

	M	16	32	48	64	80	96	112
1		17	33	49	65	81	97	113
2		18	34	50	66	82	98	114
3		19	35	51	67	83	99	115
4		20	36	52	68	84	100	116
5		21	37	53	69	85	101	117
6		22	38	54	70	86	102	118
7		23	39	55	71	87	103	119
8		24	40	56	72	88	104	120
9		25	41	57	73	89	105	121
10		26	42	58	74	90	106	122
11		27	43	59	75	91	107	123
12		28	44	60	76	92	108	124
13		29	45	61	77	93	109	125
14		30	46	62	78	94	110	126
15		31	47	63	79	95	111	127

This sheet of drawings has not been reviewed for code compliance.

Johnson Controls
DISTRICT 1-418
15771 E HINSTON AVE
AURORA, CO 80017
SERVICE: 303-355-0000
PHONE: 303-350-9500
FAX: 303-355-9415

NICET CERTIFICATION INFORMATION
NANCY S. WILTSIE
NICET Fire Alarm, III
Certification #93727
Valid Through: 03/01/24
December 14, 2022

THE MEDICAL CENTER OF AURORA - SOUTH
3RD FLOOR - A TOWER - REFRESH

THE MEDICAL CENTER OF AURORA
1501 SOUTH POTOMAC STREET
AURORA, COLORADO 80012

Revisions shown with ⚠ symbol

ISSUE LOC.	MARK	DATE	CAD	CHK	DESCRIPTION

FOR PERMIT

DRAWN BY:	CCD
CHECKED BY:	CBR
ISSUE DATE:	11/7/22
JOB #:	
PROJECT #:	419-650214504

JOHNSON CONTROLS © 2022

SYSTEM:
FIRE ALARM SYSTEM

SHEET:
TYPICAL DEVICE WIRING - CONTINUED

FA-702

LAST PRINTED: 10/14/2022 9:06:40 AM
LAST SAVED BY: JDIXON2C4
FILE PATH: C:\Users\jdixon4\Johnson Controls\Project Electronics - Medical Center of Aurora\1501 S Potomac - Aurora South\South Tower - Node 1\3rd Flr A-Tower Refresh - 2022 - 650214504\Fire\FA-701.dwg
30" x 42" - Arch E1 Size

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Johnson Controls
14200 E. Exposition Avenue
Aurora, Colorado 80012

www.simplexgrinnell.com

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

Fire Alarm
Product Data Submittal for:

The Medical Center of Aurora - South
3rd Floor - A Tower - Refresh
1501 S Potomac Street
Aurora, Colorado 80012

Prepared for:

E Light Electric Services, Inc.
361 Invernes Drive, Suite B
Englewood, Colorado 80112

Johnson Controls
14200 E. Exposition Avenue
Aurora, Colorado 80012
Sales: (303) 355-0500
Service: (303) 355-0500
Fax: (303) 355-0615

PROJECT: The Medical Center of Aurora - South
3rd Floor - A Tower - Refresh

PREPARED FOR: E Light Electric Services, Inc.

TYPE:	***DESCRIPTION:***
4098-9714	TRUEALARM PHOTO SMOKE SENSOR
4098-9733	TRUEALARM HEAT SENSOR
4098-9792	TRUEALARM SENSOR BASE
4098-9756	TRUEALARM DUCT SMOKE SENSOR W/ RELAY OUTPUT
2098-9806	REMOTE TEST STATION W/ LED AND KEY SWITCH
4098-9843	ENCAPSULATED RELAY PAM-SD
4081-9008	EOL, 10K 1/2W
4090-9001	IDNET SUPERVISED IAM
4090-9806	COVER-ADDRESS MODULE FLUSH
4090-9810	BRACKET, IAM
4081-9004	EOL, 6.8K 1/2W
4090-9002	IDNET RELAY IAM
4090-9802	COVER-ADDRESS MODULE SURFACE
49MTV-WRF	MULTI-TONE A/V, RED, WALL MOUNT
49VO-APPLC	VO APPLIANCE ONLY CEIL MT
49VO-APCS	VO CEIL MT ADAPTER PLATE
49VOC-CRF	VO COVER, CEIL MT, RED, FIRE
49VO-WRFO	VO, WALL MT, RED, FIRE LABEL, WEATHERPROOF
49WPBB-AVVOWR	WP BACK BOX AV OR VO WALL RED
DH24120FPC	DOOR HOLDER,SEMI-FLUSH,CHROME

Simplex

*UL, ULC, CSFM Listed;FM Approved**

TrueAlarm Analog Sensors – Photoelectric and Heat; Standard Bases and Accessories

Features

TrueAlarm analog sensing provides the following features

- Digital transmission of analog sensor values using IDNet or MAPNET II two-wire communications

For use with the following Simplex products

- 4007ES, 4010, 4010ES, 4100ES, and 4100U Series control units ; and 4008 Series control units with reduced feature set (refer to data sheet *S4008-0001* for details)
- 4020, 4100, and 4120 Series control units, Universal Transponders, and 2120 TrueAlarm CDTs equipped for MAPNET II operation

Fire alarm control unit provides the folloing features

- Peak value logging with accurate analysis of each sensor for individual sensitivity selection
- Sensitivity monitoring meets NFPA 72 sensitivity testing requirements; automatic individual sensor calibration check verifies sensor integrity
- Automatic environmental compensation, multi-stage alarm operation, and display of sensitivity directly in percent for each foot
- Display and print detailed sensor information in plain English language

Photoelectric smoke sensors provide the following features

- Sensitivity levels from 0.2% to 3.1%. See TrueAlarm sensors for more information.

Heat sensors have these features

- Three fixed temperature sensing thresholds: 135°F, 155°F and 190°F
- Rate-of-rise temperature sensing
- Utility temperature sensing
- Listed to UL 521 and ULC-S530

General features

- Ceiling or wall mounting
- Listed to UL 268 7th Edition and ULC-S529
- NEMA 1 rated. See TrueAlarm analog sensing product selection chart for more information.
- Louvered smoke sensor design enhances smoke capture by directing flow to chamber; entrance areas are minimally visible when ceiling mounted
- Designed for EMI compatibility
- Magnetic testing
- Different bases support a supervised or unsupervised output relay, or a remote LED alarm indicator

Additional base reference

- For isolator bases, refer to data sheet *S4098-0025*
- For sounder bases, refer to data sheet *S4098-0028*
- For photo/heat sensors, refer to data sheet *S4098-0024* , single address and *S4098-0033* , dual address

Description

Digital communication of analog sensing

TrueAlarm analog sensors provide an analog measurement digitally communicated to the host control panel using Simplex addressable communications. The control unit analyses the data, determines an average value and stores it. Comparing the sensor's present value against its average value and time, determines an alarm or other abnormal condition.

Intelligent data evaluation

Monitoring each sensor's average value provides a continuously shifting reference point. A software filtering process compensates for environmental factors, such as dust and dirt, and component aging, to provide an accurate reference for evaluating new activity. This filtering reduces the probability of false or nuisance alarms caused by shifts in sensitivity, either up or down.

Control unit selection

The control unit stores peak activity for each sensor to assist in evaluating specific locations. The host control unit determines the alarm set point for each TrueAlarm sensor, selectable as more or less sensitive as the individual application requires.

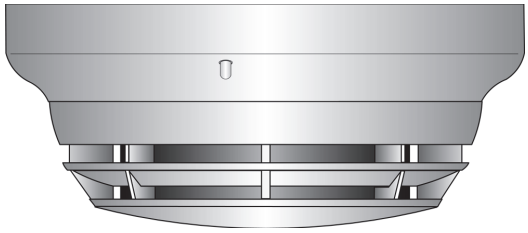


Figure 1: 4098-9714 TrueAlarm photoelectric sensor mounted in base

Timed/multi-stage selection

You can program the sensor alarm set points for timed automatic sensitivity selection, such as more sensitive at night, less sensitive during day. You can program the control unit to provide multi-stage operation for each sensor.

Sensor alarm and trouble LED indication

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

TrueAlarm sensor bases and accessories

Sensor base features

Base mounted address selection

- Address remains with its programmed location
- Accessible from front, DIP switch under sensor

General features

- 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 mounts on standard outlet box
- Magnetically-operated functional test

* 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. 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 Fire Protection Products.

RSN: 1679748
Permit # 2022-25-38-SIMPLEX
Sheet 20 of 52

Sensor bases

4098-9792, standard sensor base

4098-9789, sensor base with wired connections

- 2098-9808 remote LED alarm indicator or 4098-9822 relay (relay is unsupervised and requires separate 24 VDC)

Supervised relay bases not compatible with 2120 CDT:

- **4098-9791, 4-wire sensor base,** use with remote or locally mounted 2098-9737 relay, requires separate 24 VDC
- **4098-9780, 2-wire sensor base,** use with remote or locally mounted 4098-9860 relay, no separate power required
- Supervised relay operation is programmable and can be manually operated from control unit
- Includes wired connections for remote LED alarm indicator **or** 4098-9822 relay, relay is unsupervised and requires separate 24 VDC

Sensor base options

2098-9737, remote or local mount supervised relay

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

4098-9860, remote or local mount supervised relay

- SPDT dry contacts, power limited rating of 2 A at 30 VDC, resistive; non-power limited rating of 0.5 A at 125 VAC, resistive

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 at 28 VDC; non-power limited rating of 1/2 A at 120 VAC, (requires external 24 VDC coil power)

4098-9832, adapter plate

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

2098-9808, remote red LED alarm indicator

- Mounts on single gang box

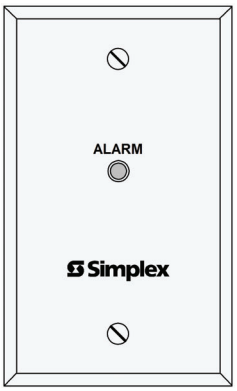


Figure 2: Remote red LED alarm indicator

Description

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

You can easily interchange different TrueAlarm sensor types to meet specific location requirements. This feature allows intentional sensor substitution during building construction. When conditions are temporarily dusty, you can install heat sensors without reprogramming the control unit, as covering smoke sensors causes them to be disabled. Although the control unit 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 in the box: 4" octagonal or 4" square, 1-1/2" deep; single gang, 2" deep

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

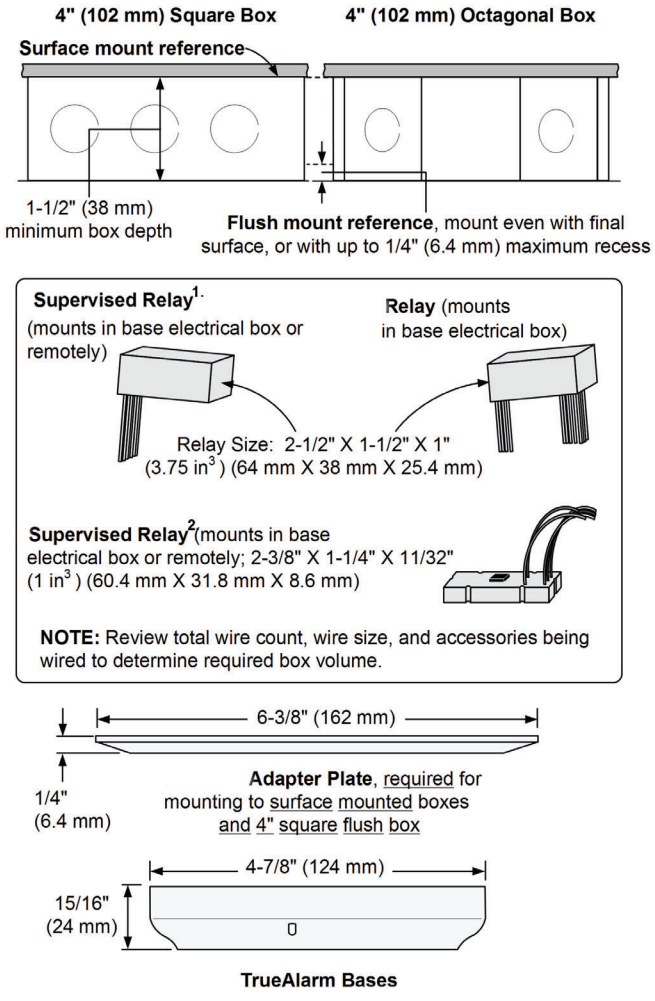


Figure 3: Mounting reference

Table 1: Product mounting - SKU reference

Product	SKU
Relay	4098-9822
Supervised relay	Example 1 2098-9739 Example 2 4098-9860
Adapter plate	4098-9832
TrueAlarm bases	4098-9780, 4098-9789, 4098-9791, 4098-9792

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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
  - Rated spacing distance between sensors:

Fixed Temp. Setting	UL and ULC Spacing	FM Spacing, Either Fixed Temperature Setting
135°F (57.2°C) 190°F (88°C)	60 ft x 60 ft (18.3 m)	20 ft x 20 ft (6.1 m) for fixed temperature only; RTI = Quick
155°F (68°C)	40 ft x 40 ft (12.2 m)	50 ft x 50 ft (15.2 m) for fixed temperature with either rate-of-rise selection; RTI = Ultra Fast

Note: 190°F (88°C) ratings apply only to the 4098-9734 sensor.

Smoke sensors

- Photoelectric technology sensing
- 360° smoke entry for optimum response
- Built-in insect screens

4098-9714 photoelectric sensor

TrueAlarm photoelectric sensors use a stable, pulsed LED light source and a silicon photodiode receiver to deliver consistent and accurate low power smoke sensing. There are three user-selectable sensitivities for special applications for each individual sensor: 0.2%, 0.5%, and 1% for each foot. Standard sensitivity is 1.25% to 3.1% for each foot. The fire alarm control unit runs an algorithm that can vary the sensitivity for normal applications between 1.25% and 3.1% for each foot.

Note: Fixed sensitivity settings higher than 1.0% for each foot are not UL268 7th Edition compliant.

The sensor head design provides 360° smoke entry for optimum response to smoke from any direction. Due to its photoelectric operation, air velocity is not normally a factor, except for impact on area smoke flow.

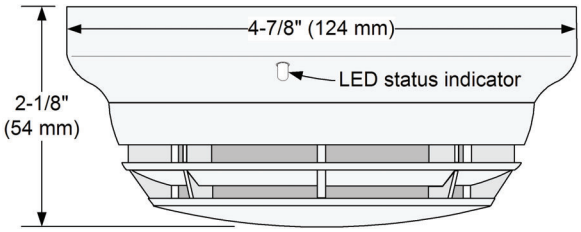


Figure 4: 4098-9714 photoelectric sensor with base

4098-9733 and 4098-9734 heat sensors

TrueAlarm heat sensors are self-restoring and provide rate-compensated, fixed temperature sensing, you can select 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 unit.

You can select rate-of-rise temperature detection at the control unit for either 15°F or 20°F, (8.3°C or 11.1°C) for each minute. Fixed temperature sensing is independent of rate-of-rise sensing and you can program it to operate at 135°F or 155°F (57.2°C or 68°C). The 4098-9734 sensor provides an additional 190°F (88°C) set point.

In a slowly 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.

You can program TrueAlarm heat sensors as a utility device to monitor for temperature extremes in the range of 32°F to 155°F (0°C to 68°C). This feature can provide freeze warnings, or alert you to HVAC system problems. Refer to panel specifications for availability.

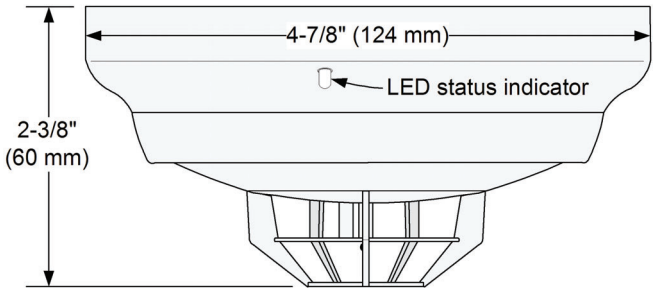


Figure 5: 4098-9733 heat sensor with base

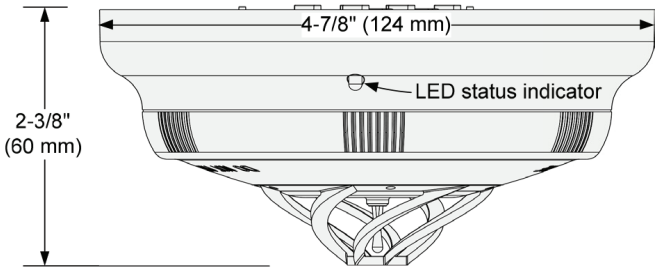


Figure 6: 4098-9734 high temperature heat sensor with base

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.

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 and Signaling Code***. On smooth ceilings, a smoke sensor spacing of 30 ft (9.1 m) can be used as a guide.

For detailed application information including sensitivity selection, refer to *Installation Instructions 574-709*.

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TrueAlarm analog sensing product selection chart

Table 2: TrueAlarm sensor bases (for use with sensors 4098-9714 and 4098-9733)

SKU	Color	Description	Compatibility	Mounting requirements
4098-9792 GSA4098-9792	White	Standard sensor base	No options	4 in. octagonal or 4 in. square box, 1 1/2 in. min. depth; or single gang box, 2 in. min. depth
4098-9776	Black			
4098-9789 4098-9789IND GSA4098-9789	White	Sensor base with connections for remote LED alarm indicator **or** unsupervised relay	2098-9808 remote alarm indicator or 4098-9822 unsupervised relay	4 in. octagonal or 4 in. square box **Note:** Box depth requirements depend on total wire count and wire size, see Table 4 for reference.
4098-9775	Black			
4098-9791 **Note:** NOT compatible with the 2120 CDT	White	4-wire sensor supervised relay base with connections for LED indicator or unsupervised relay	2098-9737 supervised remote relay 2098-9808 remote alarm indicator or 4098-9822 unsupervised relay	
4098-9780 GSA4098-9780 **Note:** NOT compatible with the 2120 CDT	White	2-wire sensor supervised relay base with connections for LED indicator or unsupervised relay	4098-9860 supervised remote relay 2098-9808 remote alarm indicator or 4098-9822 unsupervised relay	

Note: SKU numbers ending in IND are assembled in India. SKU numbers with GSA prefix are assembled in the USA.

Refer to *Application Manual 574-709* and *Installation Instructions 574-707* for additional information.

Table 3: TrueAlarm sensors

SKU	Color	Description	Compatibility	Mounting requirements
4098-9714 4098-9714-IND GSA4098-9714	White	Photoelectric smoke sensor	Bases 4098-9775, 4098-9776, 4098-9792, 4098-9789, 4098-9791, and 4098-9780	Refer to base requirements
4098-9774	Black			
4098-9733 GSA4098-9733	White	Heat sensor		
4098-9778	Black			
4098-9734 GSA4098-9734	White	High temperature heat sensor		

Note:

- All of these SKUs are NEMA 1 rated.
- The 4098-9734 Heat Sensor is compatible with IDNet on the 4100ES, 4010ES, and 4007ES only.
- SKU numbers with GSA prefix are assembled in the USA.

Table 4: TrueAlarm sensor/base accessories

SKU	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 in. octagonal or 4 in. square box, 1 1/2 in. minimum depth Base mounting requires 4 in. octagonal box, 2 1/8 in. deep with 1 1/2 in. extension ring
4098-9860	Supervised relay, mounts remote or in base electrical box	For use with 4098-9780 base	
2098-9808	Remote red LED alarm indicator on single gang stainless steel plate	Bases 4098-9789, 4098-9791, and 4098-9780	Single gang box, 1 1/2 in. minimum depth
4098-9822	Unsupervised relay, tracks base led status. **Note:** Mounts only in base electrical box.	Bases 4098-9789, 4098-9791, and 4098-9780	4 in. octagonal box, 2 1/8 in. deep with 1 1/2 in. extension ring
4098-9832	Adapter plate	Bases 4098-9792, 4098-9789, 4098-9791, and 4098-9780	Required for surface or semi-flush mounted 4 in. square box and for surface mounted 4 in. octagonal box

Note: 2098-9808 is NEMA 1 rated.

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Specifications

Table 5: General operating specifications

Specification		Rating
Communications and sensor supervisory power		IDNet or MAPNET II communications, auto-selected, one address for each 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 operating temperature range		32°F to 100°F, 0°C to 38°C
Operating temperature range	with 4098-9733 Heat Sensor	32°F to 122°F, 0°C to 50°C
	with 4098-9714 Smoke Sensor	15°F to 122°F, -9°C to 50°C
	with 4098-9734 Heat Sensor	32°F to 150°F, 0°C to 66°C
Storage temperature range		0°F to 140°F, -18°C to 60°C
Humidity range		10% to 95% RH
4098-9714 smoke sensor air velocity rating		0 to 4000 ft/min, 0 to 1220 m/min
Housing color		Frost white or black

Table 6: 4098-9791 Base with supervised remote relay 2098-9737

Specification	Rating
Externally supplied relay coil voltage	18 VDC to 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
Note: See Sensor base options for contact ratings.	

Table 7: 4098-9780 Base with supervised remote relay 4098-9860

Specification	Rating
Power	Supplied from communications

Table 8: 4098-9822 Unsupervised relay, requirements for bases 4098-9789, 4098-9791, and 4098-9780

Specification	Rating
Externally supplied relay coil voltage	18 VDC to 32 VDC, nominal 24 VDC
Supervisory current	Supplied from communications
Alarm current	13 mA from separate 24 VDC supply
Note: See Sensor base options for contact ratings.	

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Simplex®

TrueAlarm Analog Sensing

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

Addressable Duct Sensor Housings with TrueAlarm Photoelectric Sensor; Available with Multiple Relay Control

Features

Compact air duct sensor housing with clear cover to monitor for the presence of smoke**

Includes factory installed TrueAlarm photoelectric smoke sensor and features:

- Individual sensor information processed by the host control panel to determine sensor status
- Digital transmission of analog sensor values via IDNet or MAPNET II, 2-wire communications
- Programmable sensitivity, consistent accuracy, environmental compensation, status testing, and monitoring of sensor dirt accumulation

Model 4098-9755:

- Basic duct sensor housing (no relay output) powered by IDNet/MAPNET II communications

Model 4098-9756:

- Duct sensor housing with supervised output for multiple remote relays; requires separate 24 VDC; includes one relay
- Relay output is under panel control
- At the panel, relay output can be activated manually or in response to a separate alarm or other input

General features:

- UL listed to Standard 268A
- Clear cover allows visual inspection
- Test ports provide functional smoke testing access with cover in place
- Mounts to rectangular ducts or round ducts; minimum size is 8" (203 mm) square or 18" (457 mm) diameter
- Magnetic test feature for alarm initiation at housing
- Optional weatherproof enclosure is available separately (refer to data sheet S4098-0032)

Diagnostic LEDs (on interface board):

- Red Alarm/Trouble LED for sensor status and communications polling display
- Yellow LED for open or shorted trouble indication of supervised relay control (4098-9756 only)

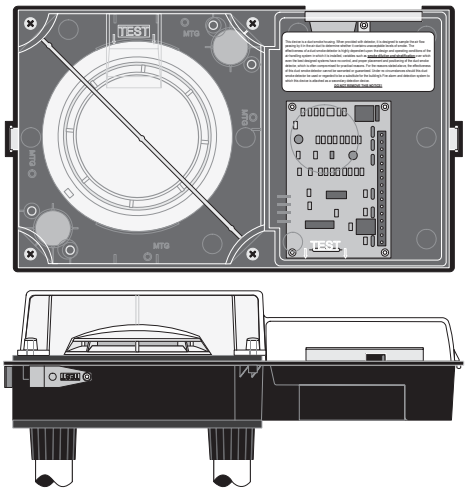
Sampling tubes (ordered separately):

- Available in multiple lengths to match duct size
- Installed and serviced with housing in place

Remote module options (ordered separately):

- Remote red status/alarm LED (2098-9808)
- Remote test station with LED (2098-9806)
- 4098-9843 remote relays (refer to page 2 for details)

* 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 Listing 3240-0026.241 for allowable values and/or conditions concerning material presented in this document. 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 Fire Protection Products.



Duct Sensor Housing, Front and Bottom View



2098-9808 2098-9806

Remote Status/Alarm Indicator and Test Station

Introduction

Operation. Simplex® compact air duct smoke sensor housings provide TrueAlarm operation for the detection of smoke in air conditioning or ventilating ducts. Sampling tubes are installed into the duct allowing air to be directed to the smoke sensor mounted in the housing.

TrueAlarm Sensor Operation

Digital Communication of Analog Sensing. Analog information from the sensor is digitally communicated to the control panel where it is analyzed. Sensor input is stored and tracked as an average value with an alarm or abnormal condition being determined by comparing the sensor's present value against its average.

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

** Please note that smoke detection in air ducts is intended to provide notification of the presence of smoke *in the duct*. It is not intended to, and will not, replace smoke detection requirements for open areas or other non-duct applications.

TrueAlarm Sensor Operation *(Continued)*

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

Sensor Status LED. Each sensor housing's red status LED (located on the electrical interface board) 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 housing's status 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 any alarmed sensors. (Remote Status/Alarm LEDs track the operation of the sensor housing LED.)

Photoelectric Sensing

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.

Photoelectric Sensing *(Continued)*

Typically duct sensor applications require less sensitive settings (such as 2.5% per foot obscuration) due to the ducts being a relative dirty environment. However, the standard seven levels of TrueAlarm sensor 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.

Fire Alarm Control Panel Features

- Individual smoke sensitivity selection
- Sensitivity monitoring that satisfies NFPA 72 sensitivity testing requirements
- Peak value logging allows accurate analysis for sensitivity selection
- Automatic, once per minute individual sensor calibration check verifies sensor integrity
- Automatic environmental compensation
- Smoke sensitivity is displayed in percent per foot
- Ability to display and print detailed sensor information in plain English language
- Relays of model 4098-9756 are under panel control for ON, OFF, or override

Duct Sensor Selection Chart

Duct Smoke Sensor Housing with Photoelectric Sensor*

Model	Description	Compatibility
4098-9755	Basic Duct Sensor Housing; operating power is supplied by either IDNet or MAPNET II communications (no relay output)	4007ES, 4008, 4010, 4010ES, 4020, 4100, 4100ES, 4100E, and 4120. Also 2120 CDT if configured for MAPNET II, TrueAlarm operation
4098-9756	Duct Sensor Housing with supervised multiple relay output, requires separate 24 VDC fire alarm power and 4081-9008 end-of-line resistor harness; includes one 4098-9843 relay	Same as above except relay operation is not compatible with 2120 CDT; Relay output is for up to 15 total 4098-9843 Relays (additional relays are ordered separately)

Remote LED Indicator and Test Station, Select One if Required

Model	Description	Compatibility	Mounting
2098-9808	Red LED status indicator on single-gang stainless steel plate	4098-9755 4098-9756	Use single gang box, 3" H x 2" W x 2" D (76 mm x 51 mm x 51 mm)
2098-9806	Test Station with keyswitch and red LED status indicator, on single-gang stainless steel plate; (turning switch to "TEST" initiates alarm for system testing)		

Epoxy Encapsulated Remote Relay and End-of-Line Resistor

Model	Description	Compatibility	Location
4098-9843	Relay; single Form C (7 A @ 120 VAC); refer to pages 3 and 4 for additional relay information; one included with 4098-9756; wiring is 18 AWG (0.82 mm^2) color coded wire leads	4098-9756 only; connect up to 15	Locate relays within 3 ft (1 m) of device being controlled per NFPA 72
4081-9008	End-of-Line Resistor Harness; 10 kΩ, 1/2 W; (ref. 733-894); required to supervise remote relay coil connection	4098-9756	At last relay location

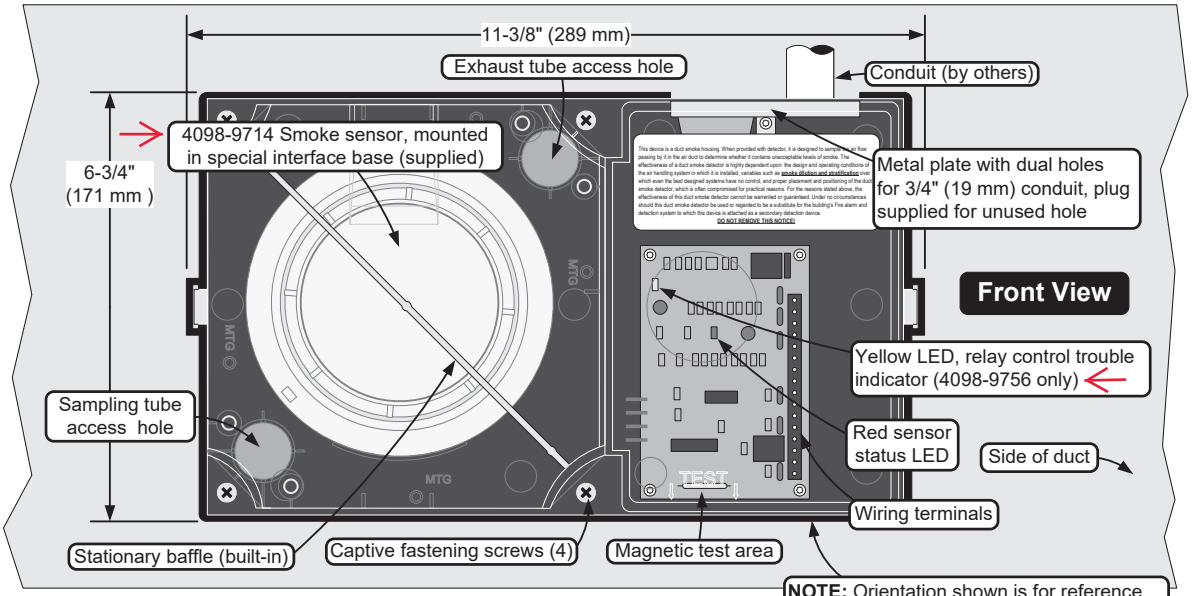
* Each duct housing includes an internally mounted model 4098-9714 TrueAlarm photoelectric sensor and an exhaust tube. A correctly sized sampling tube (ordered per application) is required, refer to chart below.

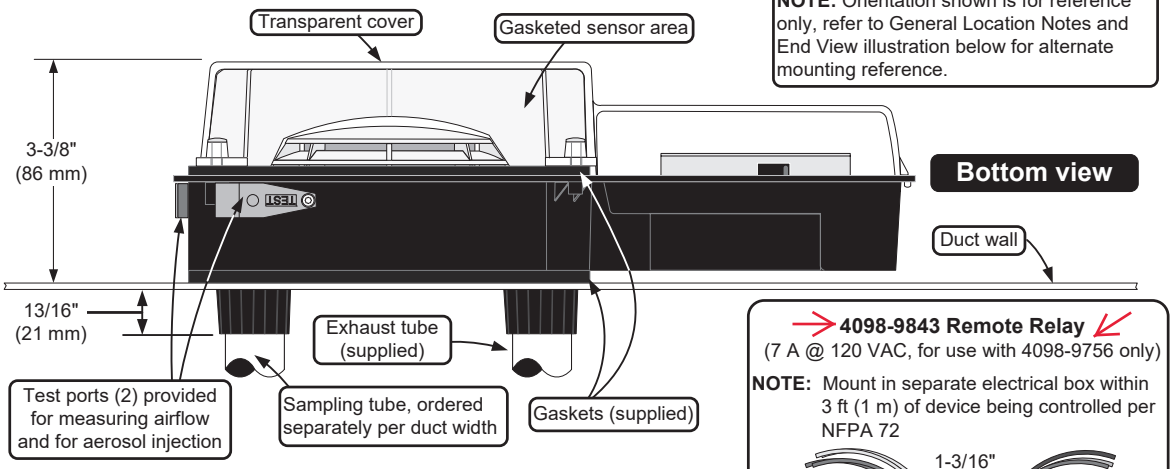
Sampling Tube Selection Chart, Ordered Separately Per Duct Width, Select One

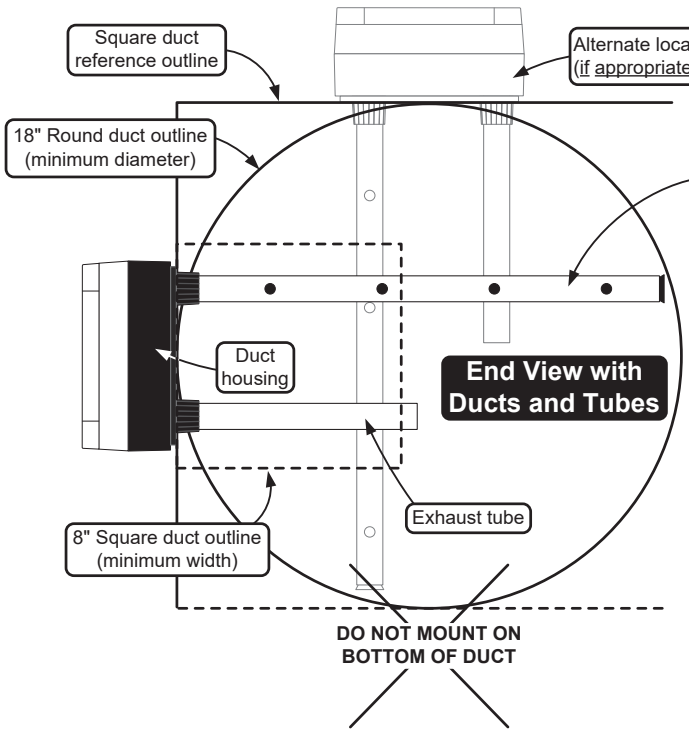
Overall Duct Width	Tube Required	Suggested Cut Length
12" (305 mm)	**4098-9854**	1/2" (12.7 mm) longer than duct width
13" to 23" (330 mm to 584 mm)	**4098-9855**	1/2" (12.7 mm) longer than duct width
24" to 46" (610 mm to 1168 mm)	**4098-9856**	3 in" (76 mm) longer than duct width
46" to 71" (1168 mm to 1803 mm)	**4098-9857**	3 in" (76 mm) longer than duct width
71" to 95" (1803 mm to 2413 mm)	**4098-9858**	3 in" (76 mm) longer than duct width

Duct Sensor Housing Detail Reference

NOTE: Refer to Installation Instructions 574-776 for additional installation detail and maintenance information.



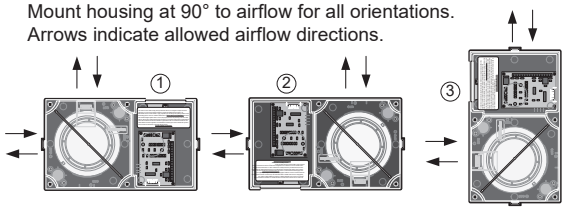




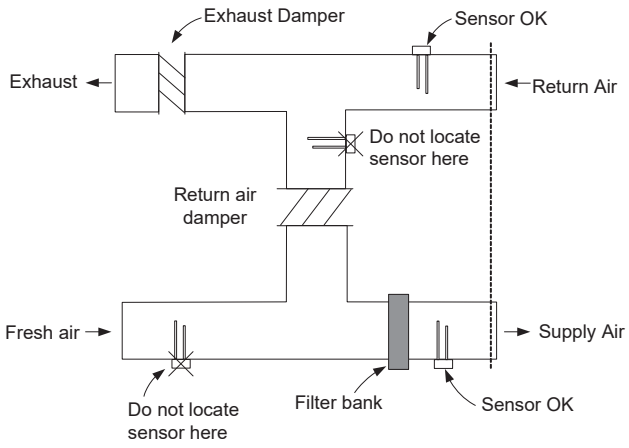
Sampling tube, keyed for proper hole alignment **with holes facing into airflow** (template is provided for proper tube installation). (Housing is shown as position 2 per note 2 below.)

General Location Notes:

1. Testing performed under the auspices of the Fire Detection Institute (FDI) recommended when sampling tubes are not located vertically, that they be positioned horizontally in the upper half of the duct to account for possible stratification.
2. Three duct side mounting options are available as shown below. Mount housing at 90° to airflow for all orientations. Arrows indicate allowed airflow directions.



Duct Sensor Location Reference



Additional Information. Refer to NFPA 90A, *Standard for the Installation of Air Conditioning and Ventilating Systems*; NFPA 72, the *National Fire Alarm and Signaling Code*; and the *NEMA Guide for Proper Use of Smoke Detectors in Duct Applications*, and Installation Instructions 574-776.

Duct Sensor Location Considerations:

1. Proper duct smoke detection location must ensure adequate airflow within the duct housing.
2. Duct air velocity rating is 300 to 4000 ft/min (91 to 1220 m/min). Pressure differential between intake and exhaust tubes is required to be between 0.015 to 1.55 inches of water (0.381 to 39.37 mm).
3. Ensure accessibility for test and service.
4. Proper Locations: downstream side of filters to detect fires in the filters; in return ducts, ahead of mixing areas; upstream of air humidifier and cooling coil.
5. Other locations and orientations may be required for proper duct smoke detection depending on duct access, system design, and duct airflow testing. Contact your local Simplex product supplier for assistance.

Locations to Avoid:

1. Where dampers closed for comfort control would interfere with airflow.
2. Next to outside air inlets (unless the intent is to monitor smoke entry from that area).
3. In return air damper branch ducts and mixing areas where airflow may be restricted.

Specifications

General Mechanical and Environmental	
Air Velocity Range (linear ft/min)	300 to 4000 ft/min (91 to 1220 m/min)
Sensor Sensitivity Range	0.2% to 3.7% per foot of obscuration, selectable at host control panel
UL Listed Temperature Range	32° F to 100° F (0° C to 38° C)
Operating Temperature Range	32° F to 122° F (0° C to 50° C)
Storage Temperature Range	0° F to 140° F (-18° C to 60° C)
Humidity Range	10% to 95% RH, non-condensing
Wiring Connections	Terminal blocks, 18 to 12 AWG (0.82 mm^2 to 3.31 mm^2)
Housing Color and Material	Black ABS base with clear polycarbonate cover
Sampling and Exhaust Tube Material	Black CPVC, custom extrusion; sampling tubes are pre-drilled
Remote Status/Alarm LED and Test Station with Remote Status/Alarm LED	
Remote Alarm LED Current	1.2 mA, no impact to 24 VDC alarm current (2098-9808 or 2098-9806)
Test Station Keyswitch Current	3.3 mA, no impact to 24 VDC alarm current (2098-9806)
Remote Alarm LED and Test Station Distance	250 ft (76 m) maximum
Addressable Operation	
Data Communications	IDNet or MAPNET II communications, auto-select, one address per housing; provides operating power to model 4098-9755
Model 4098-9756 with Supervised Multiple Relay Control, Requires Separate Fused 24 VDC from Fire Alarm Power Supply	
Input Voltage	18-32 VDC (24 VDC nominal)
Standby Current	3 mA @ 24 VDC
Alarm Current	15 mA @ 24 VDC; add 15 mA for each 4098-9843 relay
Supervised Remote Relay Control Output	For use with 4098-9843 relay only, quantity of 15 maximum; distance of 500 ft (152 m) maximum; requires 4081-9008 (ref. 733-894) 10 kΩ, 1/2 W end-of-line resistor
4098-9843 Relay Output Ratings, Single Form C, use with Model 4098-9756 Only	
Coil Current	15 mA @ 24 VDC, up to 15 maximum per relay control output
Relay Contacts	7 A at 0.35 PF @ 28 VDC & 120 VAC; 250 μA @ 5 VDC
Location Distance	500 ft (152 m) maximum to relay coils; locate relays within 3 ft (1 m) of device being controlled per NFPA 72

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Simplex

Multi-Application Peripherals

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

IDNet and MAPNET II Communicating Devices, Individual Addressable Modules (IAMs)

Features

IDNet or MAPNET II addressable communications supply both data and power over a single wire pair to provide:**

- Supervised Class B monitoring of normally open, dry contacts
- Total wiring distance from IAM to supervision resistor(s) of up to 500 ft (152 m)
- Monitored connection is compatible with Simplex® 2081-9044 Overvoltage Protectors for outdoor wiring or electrically noisy applications
- For use in indoor locations up to 158° F (70° C) such as attic spaces or similar applications

For use with following Simplex control panels:

- Model Series 4007ES, 4008, 4010, 4010ES, and 4100ES fire alarm control panels for IDNet communications
- Model Series 4100/4100U/4100ES, 4120, 4020, and 2120 Communicating Device Transponders (CDTs) equipped with MAPNET II communications

Model 4090-9001:

- Enclosed design minimizes dust infiltration
- Mounts in standard single gang 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 (requires mounting bracket, ordered separately)

Model 4090-9051:

- Encapsulated design for extended exposure to high humidity (LED is not present on this model)
- Color coded 18 AWG leads for wiring

IDNet communications provides current limited monitoring:

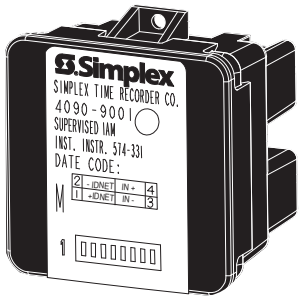
- Provides monitoring of tamper switch (supervisory) and waterflow switch (alarm) on same circuit using one point
- Available with IDNet communications only

Multiple operation modes are available and are selectable at the control panel:

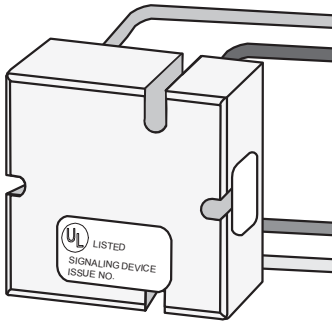
- Contact closure status can be tracked
- Momentary contact closure conditions can be selected at the panel to be latched or tracked (not available with the 2120 CDT)

UL listed to Standard 864

* 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 Listing 7300-0026:223 for allowable values and/or conditions concerning material presented in this document. 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 Fire Protection Products .



4090-9001 Supervised IAM
(shown approximately 3/4 size)



4090-9051 Supervised IAM
(shown approximately 3/4 size)

Description

Individual addressable modules (IAMs) receive both power and communications from a two-wire MAPNET II or IDNet circuit. They provide location specific addressability to a single initiating device (such as single station smoke detector alarm contacts or heat detector contacts) or multiple devices at the same location by monitoring normally open dry contacts and the wiring to an end-of-line resistor.

Model 4090-9001 is packaged in a thermoplastic housing and provides screw terminal connections and a status indicating LED.

Model 4090-9051 is an encapsulated package with wire leads. It does not provide a status indicating LED.

Operation

Contact Closure. Closure of the monitored contact(s) initiates an alarm or other response as programmed at the fire alarm control panel. An open in the monitored circuit wiring will cause a trouble to be reported.

Panel Selections. Selections can be made at the control panel to maintain the alarm condition if the initiating device contacts are momentary, such as from a rate-of-rise heat detector, or to track the device contact status (not available with the 2120 CDT).

Current Limited Operation Applications

For use with IDNet communications only, these IAMs can provide quad-state sensing of normal, open circuit, short circuit, and current limited conditions. (Program type is "T-sense.") With the proper end-of-line and current limiting resistors, dual functions such as tamper switch and waterflow switch monitoring can be determined and communicated by a single addressable point.

IAM Product Selection

Model	Description
4090-9001	Supervised IAM, mounted in thermoplastic housing with screw terminals; see applicable options below
4090-9051	Supervised IAM, encapsulated with wire leads

Optional Trim Plates and Mounting Bracket for Model 4090-9001

Model	Description	
4090-9806	For semi-flush mounted box	Trim plate with LED viewing window, requires 4090-9810 mounting bracket, includes mounting screws; galvanized steel
4090-9807	For surface mounted box	
4090-9810	Mounting bracket, mounts IAM to electrical box and provides screw holes for trim plate, **required for optional trim plates**	

End-of-Line Resistor Harnesses (ordered separately as required)

Model	Reference No.	Description	
4081-9004	733-886	6.8 kΩ, 1/2 W; Standard end-of-line resistor harness for N.O. contact supervision	
4081-9003	733-896	4.7 kΩ, 1/2 W	Use for current limited monitoring applications
4081-9005	733-984	1.8 kΩ, 1/2 W	

Specifications

Electrical

Power and Communications		MAPNET II or IDNet, auto selected, 1 address per IAM
Input Requirements		Normally open, dry contacts
Wire Connections	4090-9001	Screw terminals for in/out wiring, 18 to 14 AWG wire (0.82 mm^2 to 2.08 mm^2)
	4090-9051	Color coded wire leads, 18 AWG (0.82 mm^2), 8" long (203 mm)
Reference Documents	Installation Instructions	574-331 for 4090-9001; 579-572 for 4090-9051
	Field Wiring Diagrams	842-073 for IDNet operation; 841-804 for MAPNET II operation

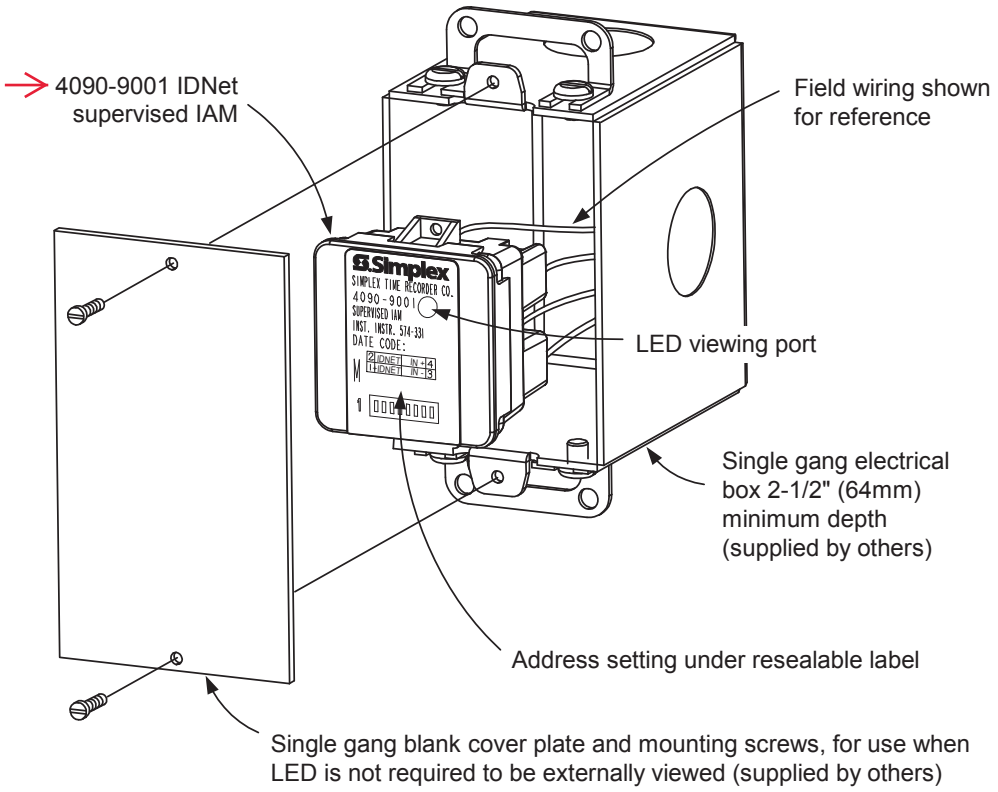
Wiring Distances

Distance from IAM to Contacts	500 ft (152 m) maximum without protectors
	400 ft (122 m) maximum with 2081-9044 Overvoltage Protectors
Wiring Distance Reference per channel, MAPNET II or IDNet Communications	2500 ft (762 m) maximum from fire alarm control panel
	10,000 ft (3048 m) maximum total wiring distance (including T-Taps)

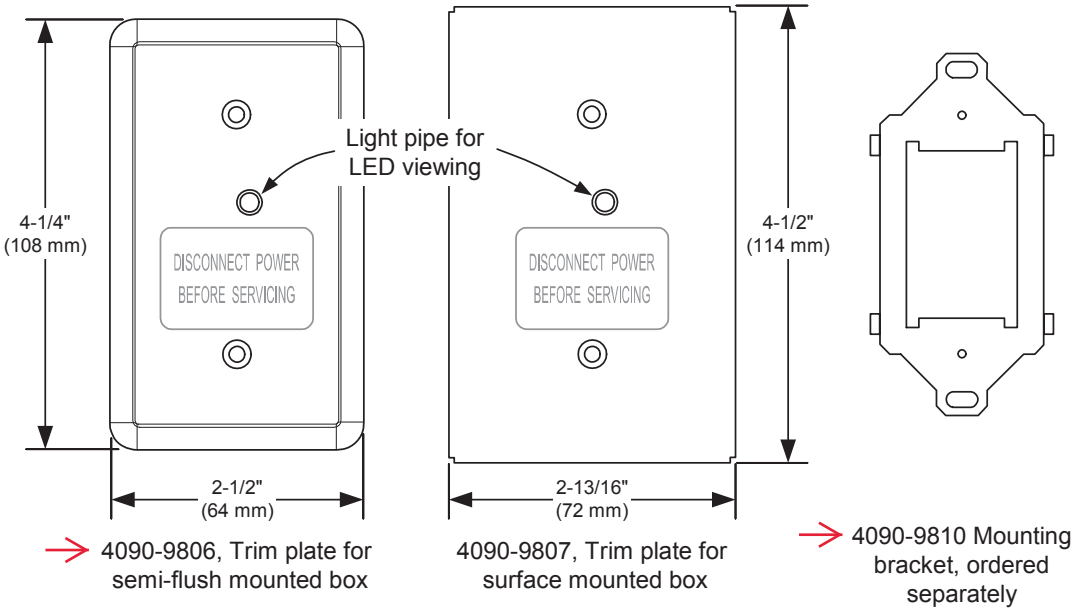
Mechanical

Dimensions	4090-9001	1-9/16" W x 1-3/4" H x 1-1/4" D (40 mm x 44 mm x 32 mm)
	4090-9051	1-9/16" W x 1-9/16" H x 9/16" D (40 mm x 40 mm x 14 mm)
Housing Material, 4090-9001		Black thermoplastic
Encapsulation Material, 4090-9051		Epoxy, beige
Temperature Range		32° to 158° F (0° to 70° C); intended for indoor operation
Humidity Range		Up to 93% RH at 100° F (38° C)

Mounting Information



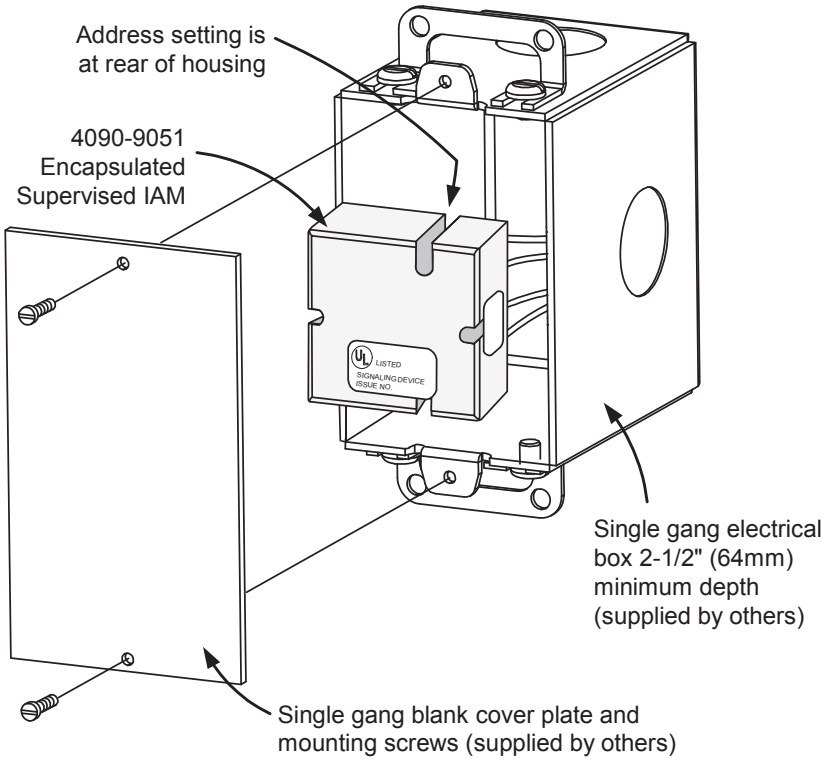
Mounting Reference, Single Gang Blank Cover Plate



NOTE: These mounting plates require mounting bracket 4090-9810.

Optional Trim Plates and Mounting Bracket for Visible LED

4090-9051 Mounting Information



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Simplex®

Multi-Application Peripherals

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

IDNet Communicating Devices
→ Model 4090-9002 Relay IAM

Features

Individual Addressable Relay Module (Relay IAM):

- IDNet addressable control for use with Simplex® fire alarm control panel models 4007ES, 4008, 4010, 4010ES, 4100ES, and 4100U
- 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
- Relay is set to OFF on initial power up and upon loss of IDNet communications

Compact, sealed construction:

- Enclosed design minimizes dust infiltration
- Mounts in standard 4" (102 mm) square electrical box, optional adapter bracket is available to mount in a 4 $^{11}/_{16}$" (119 mm) 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

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.

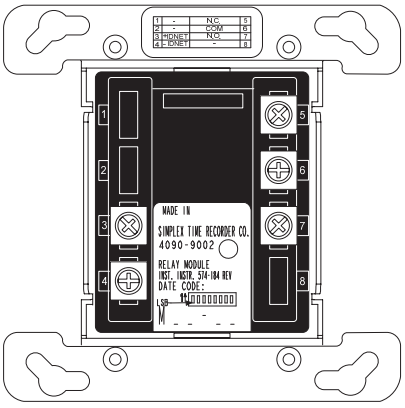
Product Selection

Model	Description
→ 4090-9002	Relay IAM

Optional Adapter and Trim Plates

Model	Description	
4090-9813	Adapter plate to fit 4 $^{11}/_{16}$" (119 mm) square electrical box	
4090-9801	For semi-flush mounted box	Trim Plate, galvanized steel, with LED viewing window; includes mounting screws
→ 4090-9802	For surface mounted box	

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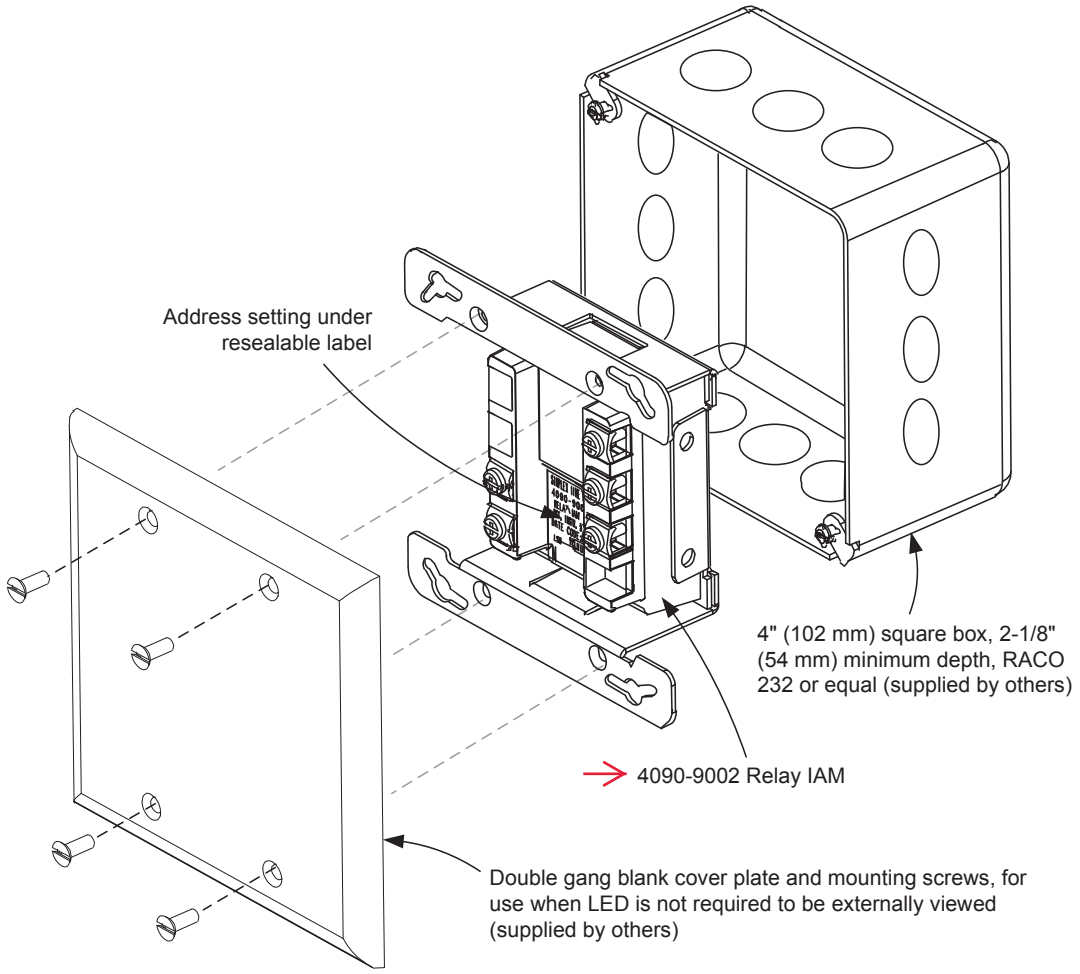


→ 4090-9002 IDNet Relay IAM Package
(shown approximately 1/2 size)

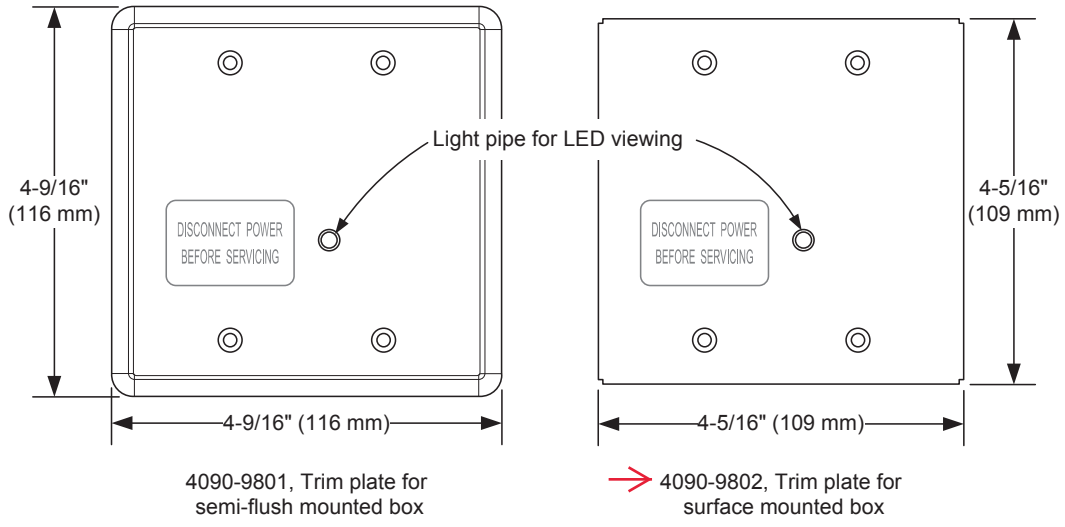
→ Specifications

Communications	IDNet communications, 1 address per device	
Relay IAM Power	Supplied by IDNet communications	
Contact Ratings* (not rated for incandescent switching)		
Type	Form C, SPDT	
Power-Limited	2 A @ 24 VDC, resistive	from listed fire alarm supply
	1 A @ 24 VDC, inductive	
Nonpower-Limited	0.5 A @ 120 VAC, resistive	
* Provide circuit fusing and transient suppression as required per application. DC inductive loads can typically be diode suppressed; 120 VAC loads may require RC networks or varistors, depending on device type. Refer to the installation instructions for additional information.		
Wire Connections	Screw terminals for in/out wiring, 18 to 14 AWG wire (0.82 to 2.08 mm^2)	
IDNet Communications Wiring Reference	Up to 2500 ft (762 m) from control panel	
	Up to 10,000 ft (3048 m) total wiring distance (including T-Taps)	
	Compatible with Simplex 2081-9044 Overvoltage Protectors	
Dimensions	4 ⅛" H x 4 ⅛" W x 1 ⅜" D (105 mm x 105 mm x 35 mm)	
Housing Material	Black thermoplastic	
Mounting Plate	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)	
Installation Instructions	574-184	

Relay IAM Mounting Information



Mounting Reference, Double Gang Blank Cover Plate



Optional Trim Plates for Visible LED

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Simplex

TrueAlert ES Addressable Notification Appliances

*UL, ULC, CSFM Listed**
*FM Approved**

Audible/Visible Notification Appliances;
Multi-Tone Horn/Strobe with 520 Hz Output

Features

Individually addressed and controlled multi-tone and multi-candela TrueAlert ES A/V (audible/visible) notification appliances provide:

- Multi-candela xenon strobe with synchronized 1 Hz flash rate and with intensity ***programmable from the control panel*** or jumper selected as 15, 30, 75, 110, 135, or 185 cd
- Advanced addressable notification controlled by ***IDNAC SLCs*** providing ***regulated 29 VDC*** allowing strobes to operate with lower current even under battery backup
- Wiring supervision to each appliance allowing "T-tapped" connections for Class B circuits to simplify wiring (Class A circuits require in/out wiring)
- ***Self-Test Mode*** allows on-board sensors to detect the strobe and horn output and then report their status to the control panel
- Per appliance tone selection of: 520 Hz Horn, Broadband Horn, Bell, Chime, High/Low, Slow Whoop, or Siren; *programmable from the control panel*, or selected using an on-board DIP Switch (refer to sound output details on page 4)
- 520 Hz tone is compliant with NFPA 72 Low Frequency Signal Requirements for Sleeping Areas
- Horn, Bell, and High/Low tones can be controlled as: Temporal Code 3, Temporal Code 4, March Time (selectable as 20, 60, or 120 bpm), or Continuous
- Slow Whoop, Siren, and Chime tone selections are controlled as synchronized continuous operation
- Output of "high" or "low" (~6 dBA difference) selectable at the appliance or from the controller with FACP mode selected at the appliance
- ***TrueAlert Device Reports*** at the control panel detailing appliance point ID, custom label, type, and candela setting (see sample on page 3)
- ***Magnet Test diagnostics*** to assist checkout and testing of appliances and wiring
- ***Electrical test point access*** without removing cover
- Compatibility with ADA requirements; (refer to important installation information on page 3)
- Strobe operation is listed to UL Standard 1971 and ULC Standard S526; Horn operation is listed to UL Standard 464 and ULC Standard S525

LED Indicator and Magnet Test feature:

- Appliance LED can be selected to display each polling cycle to indicate appliance supervision
- When the controller is in diagnostic mode, the Magnet Test pulses the LED to indicate appliance address and can be set to also briefly flash the strobe and sound the horn



TrueAlert ES Multi-Tone Addressable A/Vs are Available in Red with White Lettering and White with Red Lettering

Features *(Continued)*

Mechanical design features include:

- Rugged, high impact, flame retardant thermoplastic housing in red with white letters or white with red letters, with clear lens, available with FIRE, FEU, ALERT, FEU/FIRE, or blank lettering
- Separate covers are available to change application type on-site or for replacement; covers can be easily removed without disturbing the connected housing and avoiding trouble conditions
- A separate mounting plate allows wiring to be completed before appliance is mounted; use with single gang, double gang, or 4-inch square box, flush or surface mount
- In/out wiring terminals for 18 AWG to 12 AWG
- Optional mounting adapters are available to cover surface mounted electrical boxes and to adapt to Simplex 2975-9145 boxes

Description

TrueAlert ES addressable multi-tone A/Vs are individually addressed audible/visible notification appliances that receive power, supervision, and control signals from a Simplex fire alarm control panel providing **IDNAC** Signaling Line Circuits (SLCs). (See compatibility list on page 4.)

Strobe Application Reference

Proper selection of visible notification is dependent on occupancy, location, local codes, and proper applications of: the *National Fire Alarm Code* (NFPA 72), ANSI A117.1; the appropriate model building code: BOCA, ICBO, or SBCCI; and the application guidelines of the Americans with Disabilities Act (ADA).

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TrueAlert ES Operation Advantage

TrueAlert ES addressable appliances on IDNAC SLCs provide separate visible and audible notification using a single two-wire circuit that also *confirms connection to the individual notification appliance's electronic circuit*. This operation increases circuit supervision integrity by providing supervision that extends beyond the appliance wiring connections.

Reduced current allows efficient IDNAC SLC operation. With ***IDNAC SLCs***, a ***constant*** 29 VDC source voltage is maintained, even during battery standby, allowing strobes to operate at higher voltage with lower current and ensuring a consistent current draw and voltage drop margin under both primary power and secondary battery standby. Efficiencies include wiring distances up to 2 to 3 times farther than with conventional notification, or support for more appliances per IDNAC SLC, or use of smaller gauge wiring, or combinations of these benefits, all providing installation and maintenance savings with high assurance that appliances that operate during normal system testing will operate during worst case alarm conditions.

Reducing Installation and Testing Time. With separate controls on the same two-wire SLC, installation time and expense for both retrofit and new construction can be significantly reduced. When Class B wiring is used, *wiring can be "T" tapped*, allowing more savings in distance, wire, conduit (size and utilization), and overall installation efficiency. Use of Self-Test and Magnet Test features improve installation efficiency. TrueAlert device reports conveniently identify information about each connected appliance.

TrueAlert ES Diagnostics

Test Features. When IDNAC SLCs are in diagnostic mode, *Self-Test* and *Magnet Test* features provide individual appliance testing. With the *Self-Test* feature, *appliance operation can be confirmed without leaving the control panel.* Additionally, each appliance's LED can be selected to pulse when it receives a supervision poll during normal operation.

***Self-Test* Details.** Selecting Self-Test Mode from the control panel allows on-board sensors, depending on the device type, to detect its own strobe and/or horn output and then report their status to the control panel. Operation is by selected VNAC appliance groups and is either automatic (all briefly simultaneously activated) or individually activated by applying a magnet. (Refer to control panel data sheet for more Self-Test information, see list on page 4.)

Silent Appliance Magnet Test. In this test mode, in response to application of a magnet, the appliance LED pulses sequentially to conveniently indicate the appliance's address.

Operational Appliance Magnet Test. In this test mode, after the address is indicated by pulsing the appliance LED, the strobe will briefly flash and the horn will briefly sound to indicate proper operation.

TrueStart Instrument Two (TSIT). The 2nd generation of the Simplex TrueStart Test Instrument adds testing of IDNAC SLC wiring and TrueAlert ES appliances to its ability to test IDCs, NACs, and IDNet communications *before connection to the control panel*. Please contact your local Simplex representative for additional information.

TrueAlert Addressable Wiring Isolator

Isolator Model 4905-9929 is available for remote mounting on TrueAlert addressable circuits to isolate short circuited wiring from functioning wiring. (See data sheet S4905-0001.)

Product Selection

TrueAlert ES Wall Mount Multi-Tone Addressable Audible/Visible Appliances

TrueAlert ES multi-tone addressable A/V appliances include cover and matching mounting plate except as noted;
Dimensions with Cover = 5 ⅛" H x 5" W x 2 ⅝" D (130 mm x 127 mm x 67 mm)

Model*	Cover Color	Wording	Lens Color	Model*	Cover Color	Wording	Lens Color
49MTV-WRF(-BA)	Red	FIRE	Clear	49MTV-WRS-BA	Red	Blank	Clear
49MTV-WWF(-BA)	White			49MTV-WWS-BA	White		
49MTV-APPLW(-BA)	Select cover and mounting plate separately						

Separate Mounting Plate (Required when ordering model 49MTV-APPLW(-BA))

Model*	Color	Model	Color	Note
49MP-AVVOWR	Red	49MP-AVVOWW	White	Mounting Plate, select color to match cover

*** Note:** (-BA) indicates model is available either with or without the -BA suffix. Model numbers ending in -BA, APPLW models, and separate mounting plates are assembled in the USA.

Separate Covers (Required when ordering model 49MTV-APPLW(-BA), uses same covers as 49AV Series fixed tone A/Vs)

Model	Color	Wording	Model	Color	Wording
49AVC-WRFIRE	Red	FIRE	49AVC-WRFEU	Red	FEU
49AVC-WWFIRE	White		49AVC-WWFEU	White	
49AVC-WRALT	Red	ALERT	49AVC-WRBLNG	Red	FEU/FIRE
49AVC-WWALT	White		49AVC-WWBLNG	White	
49AVC-WRS	Red	Logos Only	49AVC-WWS	White	Logos Only

Mounting Adapters

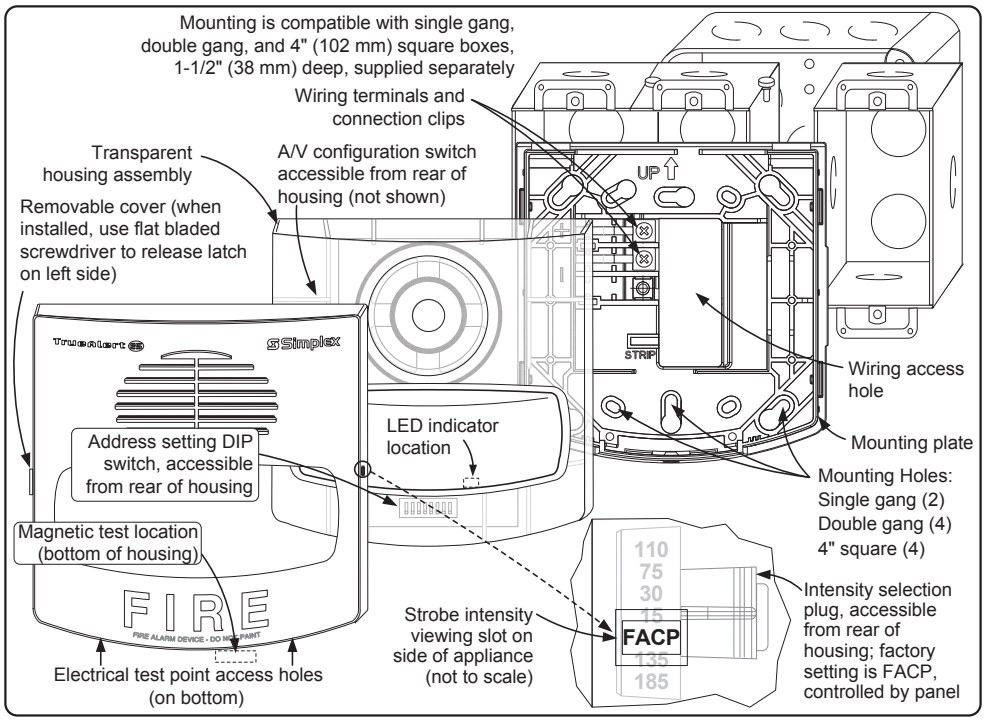
Model	Color	Description	Dimensions
4905-9937	Red	Surface Mount Adapter Skirt	5 ⅜" H x 5 ¼" W x 1 ⅝" D (136 mm x 133 mm x 41 mm) Total depth with strobe = 4 ⅜" (111 mm)
4905-9940	White		
4905-9931	Red Adapter Plate for mounting to Simplex 2975-9145 Box (typically for retrofit, mount vertical or horizontal)		8 $\frac{5}{16}$" x 5 ¾" x 0.060" Thick (211 mm x 146 mm x 1.5 mm)
2975-9145	Red Mounting Box, requires 4905-9931 Adapter Plate		7 ⅞" x 5 ⅛" x 2 ¾" D (200 mm x 130 mm x 70 mm)

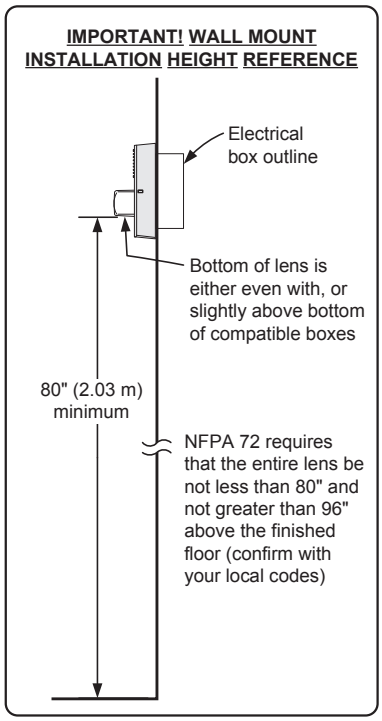
TrueAlert Device Reports Reference

Service Port — Page 1
REPORT 5 : TrueAlert Device Report — 12:34:56am TUE 10-Mar-15

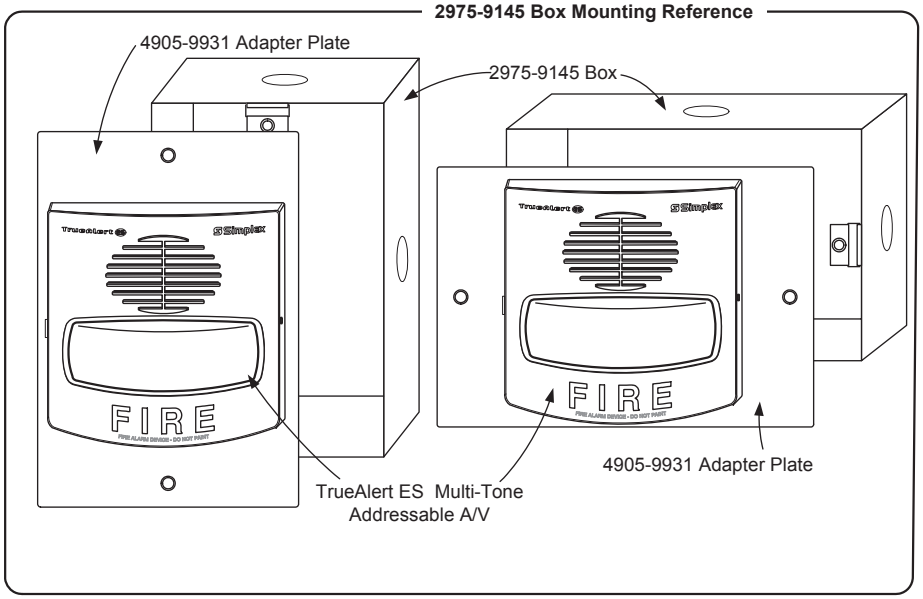
POINT ID	CUSTOM LABEL	DEVICE TYPE	CANDELA
T14-1-1	Location Label . . . up to 40 characters	MT AV	15
T14-1-2	Break Room 5	MT AV	110
T14-1-3	Boiler Room	VO	75
T14-1-4	Elec. Room 7	AV	135

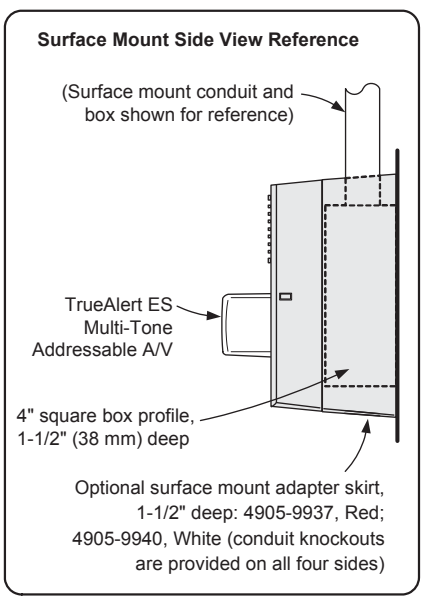
Installation Reference





Adapter Plate and Surface Mount Installation Reference





IDNAC SLC Controller Compatibility Reference

Compatible Controllers	Data Sheet Reference	Controller Output	IDNAC SLC Output Voltage	Appliance Voltage Design Reference
4100ES with EPS+ or EPS Power Supply	S4100-0100	IDNAC SLC	29 VDC (regulated)	23 VDC (with 6 VDC drop)
4009 IDNAC Repeater	S4009-0004			
4007ES with IDNAC Notification	S4007-0002			
4010ES with ESS Enhanced System Supply	S4010-0011			

TrueAlert ES A/V Specifications

Electrical Ratings	Typical Operating Voltage Range	23 VDC to 29.5 VDC, Special Application
	Supervisory Requirements	2 unit loads (1 unit load = 0.8 mA control panel current)
	49MTV Series SLC Loading	Up to 21 appliances can connect directly to the panel IDNAC SLC or to a 4009 IDNAC Repeater output, to a maximum of 127 addresses and 139 unit loads per SLC
IDNAC SLC Wiring Specifications (refer to control panel or power supply installation instructions for more information)		UTP, unshielded twisted pair recommended
		Maximum wire length allowed with "T-Taps" for Class B wiring per SLC = 10,000 ft (3048 m)
		Maximum wire length to any appliance = 4000 ft (1219 m)

Tone Characteristics

520 Hz Horn	520 Hz tone	These tones are compatible with control panel IDNAC commands for operation as Temporal Code 3, Temporal Code 4, March Time at 20, 60, or 120 bpm, or Continuous operation
Broadband Horn	Combination 600/3000 Hz signal	
Bell	Synthesized Bell tone	
High/Low	Alternating modulated tones with fundamentals of 1000 Hz and 800 Hz, 250 ms duration each	
Slow Whoop	Modulated 520 Hz to 1200 Hz sweep with 2 s duration	These tones operate as Continuous with synchronization
Siren	Modulated 600 Hz to 1200 Hz to 600 Hz sweep, with 2 s duration	
Chime	Multi-phase signal with a peak and decay time of 1 s	

TrueAlert ES Multi-Tone Horn/Strobe Current Ratings

	RMS Current Ratings @ 23 VDC, in mA											
	15 cd		30 cd		75 cd		110 cd		135 cd		185 cd	
Tone	**High**	**Low**	**High**	**Low**	**High**	**Low**	**High**	**Low**	**High**	**Low**	**High**	**Low**
520 Hz Horn and High/Low	145	108	163	125	198	158	230	195	262	214	299	257
Broadband Horn, Bell, Chime, Slow Whoop, and Siren	135	99	152	111	185	139	212	172	247	203	284	243

TrueAlert ES Multi-Tone Horn/Strobe Horn Output

		UL 464 Output Ratings @ 23 VDC and 29.5 VDC (dBA)*								ULC S525 Output Ratings @ 23 VDC and 29.5 VDC (dBA)*							
		Steady High		Steady Low		Coded High		Coded Low		Steady High		Steady Low		Coded High		Coded Low	
Tone	**Voltage**	**23**	**29.5**	**23**	**29.5**	**23**	**29.5**	**23**	**29.5**	**23**	**29.5**	**23**	**29.5**	**23**	**29.5**	**23**	**29.5**
520 Hz Horn		80	80	74**	75	76	76	70**	71**	83†		79†		83†		78†	
High/Low		81	82	77	77	75	76	70**	71**	87		82†		86†		82†	
Broadband Horn		84	84	79	79	81	81	74**	75	88		84†		87†		83†	
Bell		80	80	75	75	76	76	71**	71**	85		80†		85†		80†	
Slow Whoop		79	80	74**	75	these tones are not used for coded operation				85		80†		these tones are not used for coded operation			
Siren		79	80	74**	75					85		80†					
Chime**		67**	67**	62**	62**					82†		77†					

* Output ratings are at 10 ft (3 m); UL 464 ratings are per UL Reverberant Chamber testing; ULC S525 ratings are per ULC Anechoic Chamber testing. The tone generator circuit is DC-DC converter powered and provides essentially constant output over the rated voltage range.

** UL output ratings below 75 dBA are for NFPA 72 Private Mode applications.

† ULC output ratings below 85 dBA are for use in applications per applicable local codes.

Sound Output Dispersion per ULC S541 Anechoic Testing	Horizontal	-3 dBA @ ±37°	-6 dBA @ ±40°	-9.4 dBA @ ±90°
	Vertical	-3 dBA @ -24°, +42°	-6 dBA @ -59°, +50°	-8.6 dBA @ ±90°

General Specifications

Temperature Range	32° to 122° F (0° to 50° C)
Humidity Range	10% to 93%, non-condensing @ 104° F (40° C)
Connections	Terminal blocks on mounting plate for 18 AWG to 12 AWG (0.82 mm^2 to 3.31 mm^2); two wires per terminal for in/out wiring
Installation Instructions	579-1156 for 49MTV Series A/V appliances 579-1100 for 49MP Series mounting plates

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RSN: 1679748
Permit # 2022-2258138-LT
Sheet 39 of 52

Simplex

*UL, ULC, CSFM Listed; FM Approved**

TrueAlert ES Addressable Notification Appliances

Visual Only Notification Appliances, Indoor Ceiling Mount Strobe, Model Series 49VO

Description

Ceiling mount addressable visible (V/O) notification appliances are individually powered, addressed, and controlled from a Simplex fire alarm control unit (FACU) IDNAC Signaling Line Circuit (SLC). V/O notification appliances use a multi-candela strobe with synchronized 1 Hz flash rate and selectable candela rating. Xenon tube strobes devices are interoperable on the same IDNAC channel. Separate appliance and cover selection greatly simplifies the ordering and installation process.

Features

Individually addressed visible only (V/O) notification appliances

- Multi-candela Xenon strobe available in low: 15 cd, 30 cd, 75 cd, and 110 cd; and high: 110 cd , 135 cd, and 185 cd range candela models
- Small compact design and low current draw due to energy efficient Xenon tube strobes, with LED indicators
- Advanced addressable notification controlled by IDNAC SLCs.
- IDNAC SLCs provide regulated 29 VDC allowing horns to operate with lower current
- Electrical test point access by removing the cover
- Strobe intensity can be programmed from the FACU or the device
- Wiring supervision to each appliance allows T-tapped connections for Class B circuits to simplify wiring. Class A circuits require in/out wiring
- Self-Test Mode allows on-board sensors to detect the strobe output and then report their status to the FACU
- TrueAlert Device Reports at the FACU detail appliance point ID, custom label, type, and candela setting
- Magnet test diagnostics assist checkout and testing of appliances and wiring
- Compatibility with ADA requirements
- Strobe operation is listed to UL Standard 1971 and ULC Standard S526
- Synchronized strobe operation on its IDNAC channel

LED indicator and magnet test feature:

- Indicator LED indicates magnet test acknowledgment, 3 digit IDNAC address, and candela rating
- Indicator LED can be configured to blink every polling cycle to indicate appliance supervision
- When the controller is in diagnostic mode, the magnet test pulses the Indicator LED to indicate appliance address and can be set to also briefly flash the strobe LEDs

Mechanical design features

- Rugged, high impact, flame retardant thermoplastic housing in red and white colors
- Various covers and lettering options available – Red with white letters or white with red letters
- Covers can be easily removed without disturbing the connected housing and avoiding trouble conditions
- In/out wiring terminals for 18 AWG to 12 AWG
- Mounts on 4 in. square or single gang USA electrical boxes. Adapter plate required for mounting on single gang electrical boxes
- Optional wire guards
- Weatherproof back boxes are required for surface mounting



Figure 1: Indoor ceiling mount strobe

Strobe application reference

Proper selection of visible notification is dependent on occupancy, location, local codes, and proper applications of: the National Fire Alarm and Signaling Code (NFPA 72), ANSI A117.1; the appropriate model building code: BOCA, ICBO, or SBCCI; and the application guidelines of the Americans with Disabilities Act (ADA).

TrueAlert addressable wiring isolator

Isolator model 4905-9929

Isolator model 4905-9929 is available for remote mounting on TrueAlert addressable circuits to isolate short circuited wiring from functioning wiring. Refer to data sheet *TrueAlert Addressable Isolator+ Module, Model 4905-9929 S4905-0001* for additional information.

TrueAlert ES diagnostics

Test features

Controllers can be selected to pulse each appliance's LED when it receives a supervision poll. When the controller is selected for diagnostic mode, the appliance magnet test feature provides a response at the individual appliance being tested.

Silent appliance magnet test

The appliance LED pulses sequentially to conveniently indicate the appliance's address when a magnet is applied.

Operational appliance magnet test

In this test mode, after the address is indicated by pulsing the appliance LED, the strobe will briefly flash to indicate proper operation.

TrueStart instrument two (TSIT)

The 2nd generation of the Simplex TrueStart Test Instrument adds testing of IDNAC SLC wiring and TrueAlert ES appliances to its ability to test IDCs, NACs, and IDNet communications before connection to the FACU. Contact your local Simplex representative for additional information.

* Additional listings may be applicable; contact your local Simplex product supplier for the latest status. Listings and approvals under Simplex Time Recorder Co.

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Installation reference

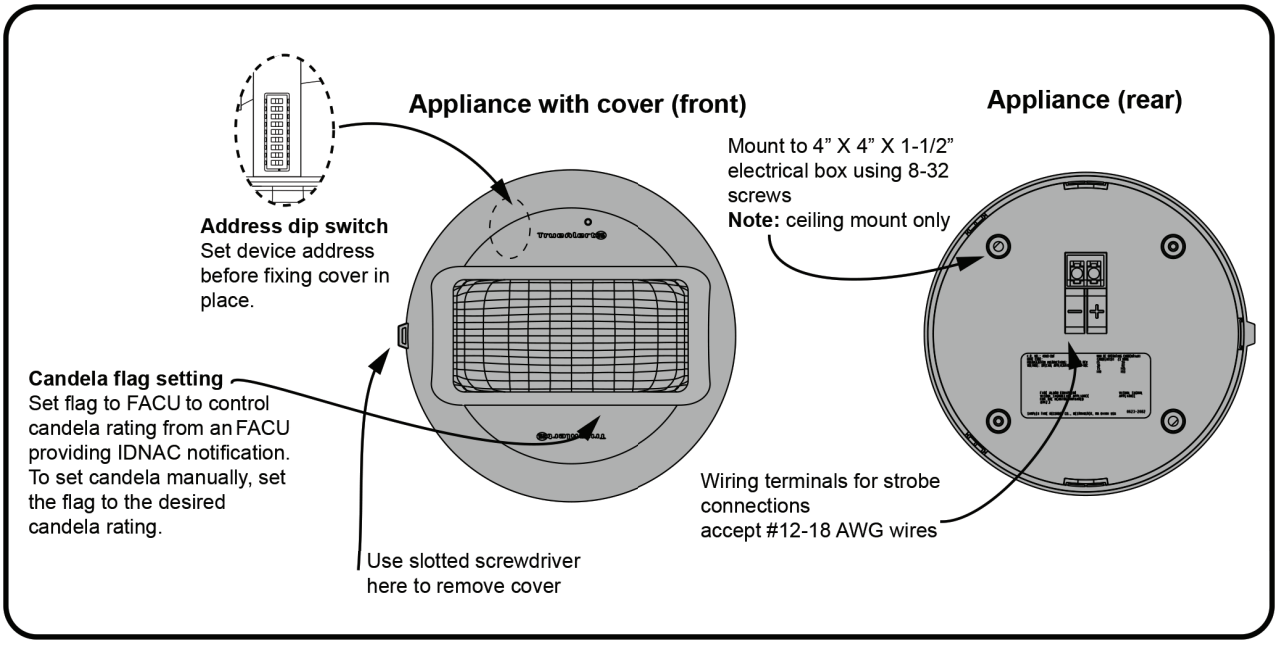


Figure 2: Indoor Ceiling Mount Strobe installation

IDNAC SLC operation advantage

TrueAlert Addressable visible appliances on IDNAC SLCs

TrueAlert Addressable visible appliances on IDNAC SLCs provide visible notification using one two-wire circuit that also confirms connection to the individual notification appliance's electronic circuit. This operation increases circuit supervision integrity by providing supervision that extends beyond the appliance wiring connections.

Reduced current usage on IDNAC SLCs

A constant 29 VDC source voltage is maintained, even during battery standby. This allows appliances to operate at higher voltage with lower current and ensuring a consistent current draw and voltage drop margin under both primary power and secondary battery standby. Efficiencies include wiring distances up to 2 to 3 times farther than with conventional notification, support for more appliances per IDNAC SLC, use of smaller gauge wiring, or combinations of these benefits.

Reducing Installation and Testing Time

With separate controls on the same two-wire SLC, installation time and expense for both retrofit and new construction can be significantly reduced. When Class B wiring is used, wiring can be T-tapped, allowing more savings in distance, wire, conduit size and utilization, and overall installation efficiency. Use of the magnet test feature improves installation efficiency. TrueAlert device reports conveniently identify information about each connected appliance.

Product selection

Table 1: Ceiling mount addressable visual only V/O appliances

Model*	Lens color	Description	Installation Instructions
49VO-APPLC 49VO-APPLC-BA	Clear	VO appliance only. Select cover separately.	579-1227
49VOH-APPLC 49VOH-APPLC-BA			
49VOH-APPLCA-BA	Amber		
49VOH-APPLCB-BA	Blue		
49VOH-APPLCG	Green		579-1280
49VOH-APPLCR	Red		

Table 2: Surface/WP back boxes

Model	Color	Description	Installation instructions
49WPBB-VOCR	Red	Surface/WP back box in red	579-1270
49WPBB-VOCW	White	Surface/WP back box in white	

Note: Use WP back boxes for surface mounting only. Using weatherproof back boxes does not make an appliance weatherproof.

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Table 3: Adapter plates

Model	Description	Installation Instructions
49VO-APCS	VO Ceiling Mount Adapter Plate. Required for mounting on a single gang electrical box.	579-1227

Table 4: V/O covers (required when ordering APPLC models)

Model*	Color	Wording
49VOC-CRALT	Red	ALERT
49VOC-CRBF		FEU/FIRE
49VOC-CRFEU		FEU
49VOC-CRFBL		FUEGO/FOGO
49VOC-CRF		FIRE
49VOC-CRS		Simplex logo only
49VOC-CRBAA		إنذار/ALERT
49VOC-CRBCF		火警/FIRE
49VOC-CRBAF		حريق/FIRE
49VOC-CK	Black	Blank
49VOC-CWALT	White	ALERT
49VOC-CWBF		FEU/FIRE
49VOC-CWFEU		FEU
49VOC-CWF		FIRE
49VOC-CWS		Simplex logo only
49VOC-CWBAA		إنذار/ALERT
49VOC-CWBCF		火警/FIRE
49VOC-CWBAF		حريق/FIRE

Table 5: Wire guards

Model	Description
49WG-VOCR	VO Ceiling Mount Red Wire Guard
49WGBB-VOCR	VO Ceiling Mount Wire Guard Back Box

Note: * (-BA) indicates model is available either with or without the -BA suffix. Model numbers ending in –BA are assembled in the USA

IDNAC SLC controller compatibility reference

Table 6: Compatibility reference

Compatible Controllers	Data Sheet Reference	Controller Output	IDNAC SLC Output Voltage	Appliance Voltage Design Reference
4100ES with EPS+ or EPS Power Supply	S4100-0100	IDNAC SLC	29 VDC (regulated)	23 VDC (with 6 VDC drop)
4009 IDNAC Repeater	S4009-0004			
4100ES Flex 35, 50, and 100 Amplifiers	S4100-0034			
4100ES Constant Supervision and Signal Cards				
Note: See TrueAlert ES V/O LEGACY compatibility reference for 17 VDC ratings				

Ceiling mount V/O specifications

Table 7: Specifications

Specification	Rating
Environmental	32°F to 120°F (0°C to 49°C); 10% to 93%, non-condensing at 104°F (40°C)
Connections	Terminal blocks for 18 AWG to 12 AWG (0.82 mm^2 to 3.31 mm^2); two wires per terminal for in/out wiring. Use Unshielded Twisted Pair (UTP) for IDNAC.
IDNAC SLC Loading	Maximum of 127 addresses per SLC, 139 unit loads. See device and compatible FACU Installation Instructions for circuit current load limits.

Table 8: Percentage of rated light output at room temperature

Angle	On-Axis	Vertical, Below Axis		Horizontal, Left/Right of Axis	
	0°	45°	90°	45°	90°
UL required output	100%	45%	25%	45%	25%
Typical output	327%	134%	83%	129%	47%

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Table 9: Appliance specifications

Specification		Rating						
Operating Voltage Range		23 VDC to 30 VDC, Special Application						
Supervisory Requirements		1 unit load (= 0.8 mA FACU current)						
Flash Rate and Synchronized SLC Loading		1 Hz; with up to 63 synchronized strobes maximum per powered circuit, max 127 S/V appliances per IDNAC channel						
Current consumption, see note	**Candela Setting**	**15 cd**	**30 cd**	**75 cd**	**90/95 cd**	**110 cd**	**135 cd**	**185 cd**
	49VO model	55 mA	83 mA	153 mA	N/A	199 mA	N/A	N/A
	49VOH model	N/A	N/A	N/A	N/A	253 mA	296 mA	377 mA
	49VOH amber lens	N/A	N/A	N/A	253 mA (90 cd)	296 mA	377 mA	N/A
	49VOH blue lens	N/A	N/A	253 mA	296 mA (95 cd)	377 mA	N/A	N/A
Note: Measured at 23 VDC on IDNAC Addressable SLC								

TrueAlert ES V/O LEGACY compatibility reference

Table 10: Compatibility reference

Compatible Controller	Data Sheet Reference	Controller Output	Available Strobe Intensity	Appliance Voltage Minimum
4100ES or 4100U with TrueAlert Power Supply	S4100-0031	TrueAlert Addressable SLC	15 cd, 30 cd, 75 cd, and 110 cd	17 VDC
4009 TPS, Remote TrueAlert 17 VDC Power Supply, see note.	S4100-0037			
TrueAlert Addressable Controller (4009T)	S4009-0003			
Electrical ratings differences for legacy applications, see IDNAC SLC controller compatibility reference for 29 VDC ratings				
Voltage Range		17 VDC to 31 VDC, Special Application		
Candela Setting	**15 cd**	**30 cd**	**75 cd**	**110 cd**
17 VDC RMS Current Ratings, with horn on continuous at high setting, use when connected to TrueAlertAddressable SLCs per above	73 mA	114 mA	210 mA	269 mA

Note: * For connection to legacy fire panel models Simplex 4009T and 4100/TPS. High candela (49VOH) appliances are not compatible with Simplex models 4009T and TPS, see the fire panel compatibility charts.

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Simplex

*UL, CSFM Listed; FM Approved**

TrueAlert Addressable Notification Appliances

Wall Mount Weatherproof Visible and Audible/Visible Notification Appliances

Features



Figure 1: Weatherproof A/V (top) and Strobe (bottom), side view of A/V on Weatherproof Mounting Boxes (right)

TrueAlert ES weatherproof addressable appliances provide visible and audible/visible notification for indoor and outdoor, extended temperature and extended humidity applications. They are individually addressed and receive power, supervision, and control signals from a Simplex fire alarm control unit providing IDNAC Signaling Line Circuits (SLCs).

Individually addressed and controlled multi-candela TrueAlert ES weatherproof notification appliances for extended temperature and humidity range provide:

- Multi-candela xenon strobe with synchronized 1 Hz flash rate and with intensity programmable from the control unit or jumper selected as 15, 75, WP 75, or WP 185 cd
- Advanced addressable notification controlled by IDNAC SLCs providing regulated 29 VDC allowing strobes to operate with lower current even under battery backup
- Wiring supervision to each appliance allowing "T-tapped" connections for Class B circuits to simplify wiring (Class A circuits require in/out wiring)
- Self-Test Mode allows on-board sensors to detect the strobe and horn output and then report their status to the control unit
- TrueAlert Device Reports at the control unit detailing appliance point ID, custom label, type, and candela setting
- Magnet Test diagnostics to assist checkout and testing of appliances and wiring
- Electrical test point access without removing cover

LED Indicator and Magnet Test:

- Appliance LED can be selected to display each polling cycle to indicate appliance supervision
- When the controller is in diagnostic mode, the Magnet Test pulses the LED to indicate appliance address and can be set to also briefly flash the strobe and sound the A/V horn

Mechanical design:

- Rugged, high impact, flame retardant thermoplastic housing in red with white letters or white with red letters, with clear lens
- Standard models are available with FIRE lettering or blank; configured models are available with additional lettering of FEU, FEU/FIRE, ALERT, and blank
- Mounting matches weatherproof boxes (required), ordered separately
- Separate covers are available to change application type on-site or for replacement
- In/out wiring terminals for 18 AWG to 12 AWG
- Enclosure is rated NEMA 3R
- Convenient wiring terminal access at front of housing

Agency listings:

- UL 1638 listed for outdoor applications with strobe rated at 75 cd (WP75) or 185 cd (WP185)
- UL 1971 listed for indoor applications with strobe intensity selectable as 15 or 75 cd; indoor applications are compatible with ADA requirements
- Horn operation is listed to UL Standard 464
- Refer to data sheet *S49WP-0002* for ULC listed models

For A/V Models with horn:

- Harmonically rich output sound for either coded or steady operation
- Horns sound as Temporal Code 3, March Time pattern, continuous; or Temporal Code 4, controlled separately from visible appliances on the same two-wire circuit
- Selectable March Time rates of 20, 60, or 120 beats per minute
- Output is "high" or "low" (~5 dBA difference) selectable at the appliance or from the controller with FACU mode selected at the appliance

Strobe Application Reference

Proper selection of visible notification is dependent on occupancy, location, local codes, and proper applications of: the National Fire Alarm Code (NFPA 72), ANSI A117.1; the appropriate model building code: BOCA, ICBO, or SBCCI; and the application guidelines of the Americans with Disabilities Act (ADA).

TrueAlert ES Operation

Separate visible and audible notification

TrueAlert ES addressable appliances on IDNAC SLCs provide separate visible and audible notification using a single two-wire circuit that also confirms connection to the individual notification appliance's electronic circuit. This operation increases circuit supervision integrity by providing supervision that extends beyond the appliance wiring connections.

Reduced current allows efficient IDNAC SLC operation

With IDNAC SLCs, a constant 29 VDC source voltage is maintained, even during battery standby, allowing strobes to operate at higher voltage with lower current and ensuring a consistent current draw and voltage drop margin under both primary power and secondary battery standby. Efficiencies include wiring distances up to 2 to 3 times farther than with conventional notification, or support for more appliances per IDNAC SLC, or use of smaller gauge wiring, or combinations of these benefits, all providing installation and maintenance savings with high assurance that appliances that operate during normal system testing will operate during worst case alarm conditions.

Reduced Installation and Testing Time.

With separate controls on the same two-wire SLC, installation time and expense for both retrofit and new construction can be significantly reduced. When Class B wiring is used, wiring can be "T" tapped, allowing more savings in distance, wire, conduit (size and utilization), and overall installation efficiency. Use of Self-Test and Magnet Test features improves installation efficiency. TrueAlert device reports conveniently identify information about each connected appliance.

* 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 7125-0026:0371 for allowable values and/or conditions concerning material presented in this document. 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 Fire Protection Products.

TrueAlert ES Diagnostics

Test Features

When IDNAC SLCs are in diagnostic mode, Self-Test and Magnet Test features provide individual appliance testing. With the Self-Test feature, appliance operation can be confirmed without leaving the control unit. Additionally, each appliance's LED can be selected to pulse when it receives a supervision poll during normal operation.

Self-Test Details

Selecting Self-Test Mode from the control unit allows on-board sensors, depending on the device type, to detect its own strobe and/or horn output and then report their status to the control unit. Operation is by selected VNAC appliance groups and is either automatic (all briefly simultaneously activated) or individually activated by applying a magnet.

Silent Appliance Magnet Test

In this test mode, in response to the application of a magnet, the appliance LED pulses sequentially to conveniently indicate the appliance's address.

Operational Appliance Magnet Test

In this test mode, after the address is indicated by pulsing the appliance LED, the strobe will briefly flash and the A/V horn will briefly sound to indicate proper operation.

TrueStart Instrument Two (TSIT)

The 2nd generation of the Simplex TrueStart Test Instrument adds testing of IDNAC SLC wiring and TrueAlert ES appliances to its ability to test IDCs, NACs, and IDNet communications before connection to the control unit. Please contact your local Simplex representative for additional information.

TrueAlert Addressable Wiring Isolator

Isolator Model 4905-9929 is available for remote mounting on TrueAlert addressable circuits to isolate short circuited wiring from functioning wiring. Refer to data sheet *S4905-0001* for additional information.

Weatherproof Appliance Installation

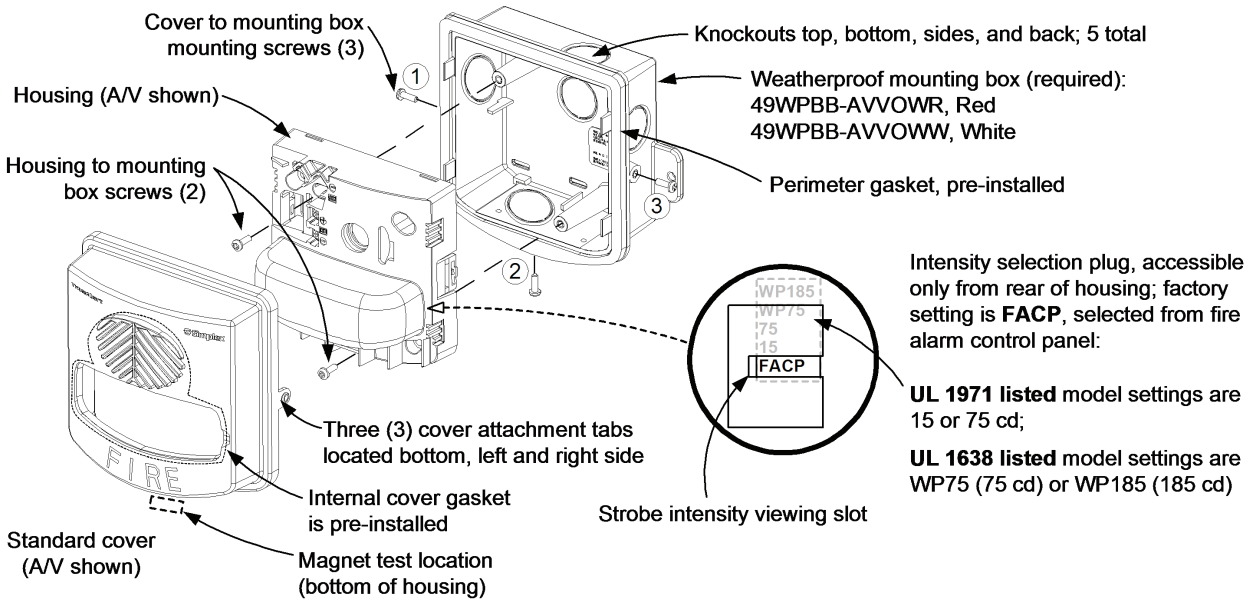


Figure 2: Weatherproof Appliance Installation

Dimension and Mounting Height Reference

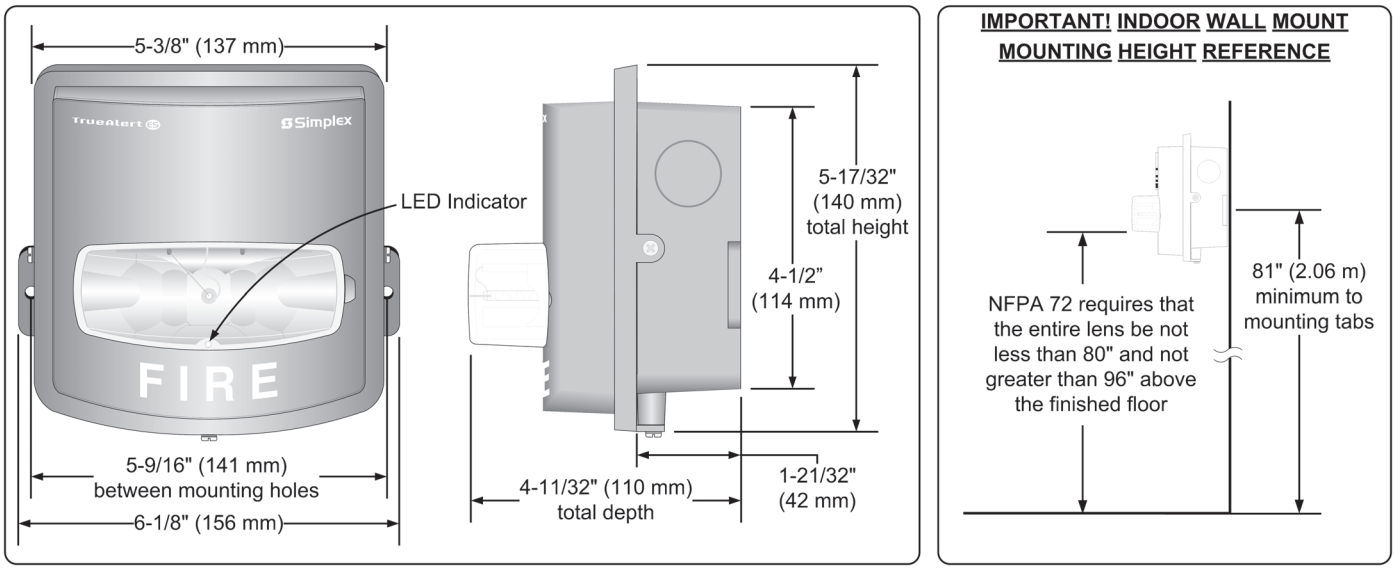


Figure 3: Dimension and Mounting Height

IDNAC SLC Controller Compatibility Reference

Table 1: IDNAC SLC Controller Compatibility Reference

Compatible Controllers	Data Sheet	Controller Output	IDNAC SLC Output Voltage	Appliance Voltage
4100ES with EPS+ or EPS Power Supply	*S4100-0100*	IDNAC SLC	29 VDC (regulated)	23 VDC (with 6 VDC drop)
4009 IDNAC Repeater	*S4009-0004*			
4007ES with IDNAC Notification	*S4007-0002*			
4010ES with ESS Enhanced System Supply	*S4010-0011*			

Product Selection

Note: Model numbers ending in -BA are assembled in the USA

Table 2: UL Listed TrueAlert ES Addressable Weatherproof Notification Appliances

Type	Model	Cover Color	"FIRE" Lettering	Description	Intensity Ratings	
					UL 1971	UL 1638
Strobe (V/O) A	49VO-WRFO 49VO-WRFO-BA	Red	White	UL listed weatherproof TrueAlert ES addressable appliance; requires weatherproof box, see below **Note:** (-BA) indicates model is available either with or without the -BA suffix; model numbers ending in -BA are assembled in the USA	15 cd or 75 cd	75 cd (setting WP75) or 185 cd (setting WP185)
	49VO-WRSO 49VO-WRSO-BA	Red	Blank			
	49VO-WWFO 49VO-WWFO-BA	White	Red			
	49VO-APPLW-O 49VO-APPLW-O-BA	order cover separately				
Horn/Strobe (A/V)	49AV-WRFO 49AV-WRFO-BA	Red	White			
	49AV-WWFO 49AV-WWFO-BA	White	Red			
	49AV-APPLW-O 49AV-APPLW-O	order cover separately				

Note: Separate covers are required when ordering 49VO-APPLW-O , 49VO-APPLW-O-BA, 49AV-APPLW-O-BA or 49AV-APPLW-O.

Table 3: Wall Mount Weatherproof Boxes (Required)

Model	Color	Description	Dimensions
49WPBB-AVVOWR	Red	Surface Mount Weatherproof Mounting Box (required)	5 ½" H x 6 ⅛" W x 1 ⅝" D (140 mm x 156 mm x 41 mm)
49WPBB-AVVOWW	White		

Table 4: Separate Covers

Wording	Red VO Cover Models	Red AV Cover Models	White VO Cover Models	White AV Cover Models
FIRE	49VOC-WRFIRE-O	49AVC-WRFIRE-O	49VOC-WWFIRE-O	49AVC-WWFIRE-O
ALERT	49VOC-WRALT-O	49AVC-WRALT-O	49VOC-WWALT-O	49AVC-WWALT-O
FEU	49VOC-WRFEU-O	49AVC-WRFEU-O	49VOC-WWFEU-O	49AVC-WWFEU-O
FEU/FIRE	49VOC-WRBLNG-O	49AVC-WRBLNG-O	49VOC-WWBLNG-O	49AVC-WWBLNG-O
Blank	49VOC-WRS-O	49AVC-WRS-O	49VOC-WWS-O	49AVC-WWS-O

Specifications

Table 5: Electrical specifications

Specifications		Rating
Typical Operating Voltage Range		23 VDC to 31 VDC, Special Application
Supervisory Requirements		1 unit load (= 0.8 mA control panel current)
IDNAC SLC Loading		Maximum of 127 addresses per SLC, 139 unit loads
Temperature Range	UL 1971 Listed Rating	32 °F to 120 °F (0 °C to 49 °C); 15 or 75 cd setting
	UL 1638 Listed Rating	-31 °F to 150 °F (-35 °C to 66 °C); WP75 or WP185 cd setting
Humidity Range	UL 1971 Listed Rating	10% to 93%, at 100 °F (38 °C)
	UL 1638 Listed Rating	up to 98%, at 104 °F (40 °C)
IDNAC SLC Wiring Specifications (refer to control panel installation instructions for more information)		UTP, unshielded twisted pair recommended
		Maximum wire length allowed with "T-Taps" for Class B wiring per SLC = 10,000 ft (3048 m)
		Maximum wire length to any appliance = 4000 ft (1219 m)
Connections		Terminal blocks for 18 AWG to 12 AWG (0.82 mm^2 to 3.31 mm^2); two wires per terminal for in/out wiring
Installation Instructions		579-1032

Table 6: A/V Horn Output Ratings @ 10 ft (3 m) @ 23 VDC

Sound Type	Steady/High	Steady/Low	Coded/High	Coded/Low
Reverberant Chamber, UL 464 Test	81.3 dB	73.8 dB	76.4 dB	69.9 dB
Anechoic Chamber, ULC 525 Test	87.4 dB	81.0 dB	87.2 dB	80.6 dB
Note: UL 464 test coded values are typical of the output measured with a Temporal or a March Time pattern and with a sound level meter reading on a "fast" setting. Under the same test conditions, coded horn output "peak" sound level readings are typically 4 dBA higher. Anechoic horn output ratings are typically more representative of actual installed sound output.				

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Table 7: 23 VDC RMS Current Ratings

Model	Rating	Temperature	Candela Setting	Current
V/O Models	UL 1971 Ratings	32 °F to 120 °F (0 °C to 49 °C)	15 cd	60 mA
			75 cd	160 mA
	UL 1638 Ratings	32 °F to 150 °F (0 °C to 66 °C)	WP75 cd	160 mA
			WP185 cd	185 mA
		-31 °F to below 32 °F (-35 °C to 0 °C)	WP75 cd	212 mA
			WP185 cd	239 mA
A/V Models, horn on continuous, high setting	UL 1971 Ratings	32 °F to 120 °F (0 °C to 49 °C)	15 cd	80 mA
			75 cd	165 mA
	UL 1638 Ratings	32 °F to 150 °F (0 °C to 66 °C)	WP75 cd	163 mA
			WP185 cd	189 mA
		-31 °F to below 32 °F (-35 °C to 0 °C)	WP75 cd	238 mA
			WP185 cd	274 mA

Table 8: UL 1638 WP75 and WP185 Light Output Reference

Angle	On-Axis	Vertical, Below Axis		Horizontal, Left/Right of Axis	
	0°	45°	90°	45°	90°
WP75 Minimum Candela Rating (over temp. range)	75 cd	69 cd	17 cd	60 cd	28 cd
WP75 Typical Candela at 77 °F (25 °C)	142 cd	86 cd	22 cd	74 cd	35 cd
WP185 Minimum Candela Rating (over temp. range)	185 cd	90 cd	21 cd	81 cd	40 cd
WP185 Typical Candela at 77 °F (25 °C)	220 cd	112 cd	27 cd	101 cd	50 cd
A/V Sound Dispersion per ULC-S525 Anechoic testing performed at 3 m (10 ft); referenced to on-axis = 0°	Level Decrease	Horizontal Angle		Vertical Angle	
	-3 dB	+50° (to right)		+55° (above axis)	
		-40° (to left)		-70° (below axis)	
	-6 dB	+85° (to right)		+60° (above axis)	
		-85° (to left)		-90° (below axis)	

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Simplex®

Fire Alarm System Accessories

UL, ULC, CSFM Listed;
*FM Approved**

RSG Electromagnetic Door Holders; Wall Mounted or Floor Mounted

Features

Electromagnetic door holders from RSG (Reliable Security Group) with four mounting types:

- Semi-flush wall mount for shallow box applications
- Surface wall mount with matching box
- Flush wall mount with recessed magnet for low profile applications
- Floor mount, for single or double doors

Multiple finish options:

- High luster plating of chrome, brass, or dark bronze
- Powdercoated in chrome or dark bronze

Low current, multi-voltage design reduces power supply and battery demands:

- Models are available for operation with 24 VDC, 24 VAC, or 120 VAC
- Internal full wave rectifier allows AC or DC operation and provides switching transient suppression
- Low residual magnetism allows easy door release for compatibility with low pressure door closers
- Rated holding force ranges from 20 lbs (9 kg) minimum; to up to 110 lbs (49.8 kg)

Quick and easy installation:

- Self-adjusting swivel catch plate adjusts to door alignment changes
- Adhesive mounting templates assure alignment
- Required mounting hardware is supplied with each door holder
- Magnet catch plates can be screwed to wooden doors or drilled through and attached to a mounting bracket
- Floor mount door holders include drills and anchors for mounting to concrete floors and hardware for mounting to wooden floors
- Front plates provide convenient grounding screw location

Optional accessories:

- Extension rods are available in multiple lengths to allow proper alignment, including a 4” (102 mm) long pivoting rod
- Drilling fixture for accurate repetitive installation

UL listed to Standard 228

Description

Door holders are normally energized to magnetically hold doors open. In the event of a fire emergency, the fire alarm control panel or other compatible control means will release the magnet allowing the door to close to prevent the spread of smoke. Doors may be manually closed or opened when the door holder is energized.

Product Reference Images
(shown without screw hole caps in place)



Semi-Flush Wall Mount Door Holder Magnet and Catch Plate Assembly



Surface Wall Mount Door Holder Magnet with Supplied Box



Floor Mount Door Holder Magnet with Supplied Bracket and Box
(Single door model shown, available for double doors)

* 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 Listing 3550-1039:0100 for allowable values and/or conditions concerning material presented in this document. It is subject to re-examination, revision, and possible cancellation. Additional listings may be applicable, contact your local Simplex® product supplier for the latest status. Listings and approvals are under RSG, Reliable Security Group.

Product Selection (see specifications on page 4 and part number selection below)

Mounting Type	Hardware Included	Electrical Box Requirement
Semi-flush Mount (partially recessed magnet)	Magnet assembly, catch plate with bracket, screw hole caps, and required mounting hardware	Single gang box, 1 ½" deep minimum (supplied separately)
Flush Mount (fully recessed magnet)	Magnet assembly, catch plate with bracket, screw hole caps, and required mounting hardware (not shown on page 1, refer to illustration on page 3)	Single gang box, 2 ¼" deep minimum (supplied separately)
Surface Mount	Magnet assembly, catch plate with bracket, screw hole caps, matching electrical box, and required mounting hardware	Box is supplied with door holder: 4 ¾" H x 2 ¾" W x 1 ½" D (117 mm x 70 mm x 54 mm)
Floor (ground) Mount for single door with single magnet	Magnet assembly with electrical box, catch plate with bracket, floor mounting bracket, screw hole caps, and required mounting hardware including drills and anchors for concrete floors	
Floor (ground) Mount for double door with double magnets	Two surface mount magnet assemblies with electrical box, each with electrical box; two catch plates with brackets, screw hole caps, and required mounting hardware including drills and anchors for concrete floors	

Optional Door Holder Accessories

Model		Description	
Powdercoat Chrome	Brass		
DHE1PC	DHE1B	Catch plate extender rod, 1" (25.4 mm) long	Each extender rod includes two DHW extension wrenches
DHE1.5PC	DHE1.5B	Catch plate extender rod, 1 ½ " (38 mm) long	
DHE2PC	DHE2B	Catch plate extender rod, 2" (51 mm) long	
DHE3PC	DHE3B	Catch plate extender rod, 3" (76 mm) long	
DHE4APC	DHE4AB	Catch plate with adjustable extender rod, 4" (102 mm) long with center pivot	

Model	Description
DHDF	Drilling Fixture, provides convenient alignment for repetitive installation
DHW	Extension Wrench for adding extender rod to catch plate (two are needed, two are shipped with each extension)

Door Holder Part Number Selection

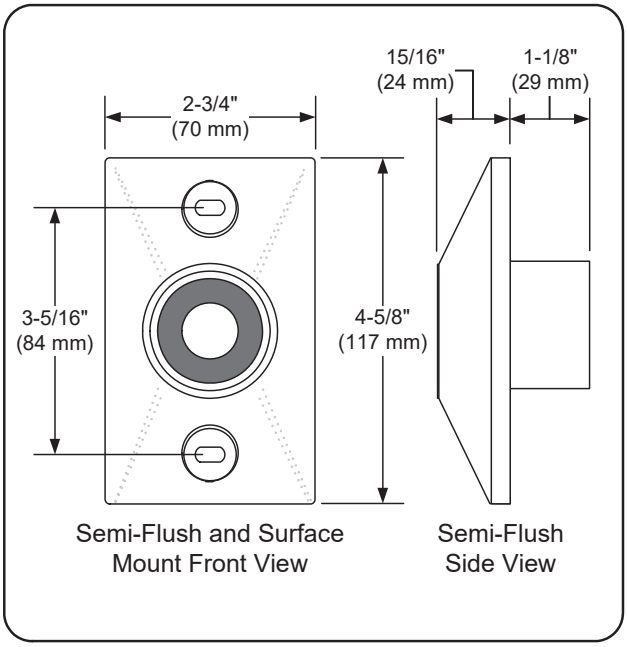
Select from each of the 6 categories to create part number (see examples below)

1	2		3		4		5		6	
Door Holder	Operating Voltages		Mounting Style		Finish Type		Finish Color		Floor Mount Coils	
Select	*Select*	For	*Select*	For	*Select*	For	*Select*	For	*Select*	For
→ DH	1224	12 VDC 12 VAC 24 VDC 24 VAC	S	Surface Mount	P	Powdercoated	C	Chrome	1	Single door
	↑		F	Semi-Flush Mount	↑		↑			
	24120	24 VDC 24 VAC 120 VAC	↑ G	Floor (Ground) Mount			B	Brass	2	Double door
	↑				blank	High luster plated				
	24220	24 VDC 24 VAC 220 VAC	R	Flush Mount (Recessed Magnet)			DBR	Dark Bronze	blank	Not floor mounted

Examples:

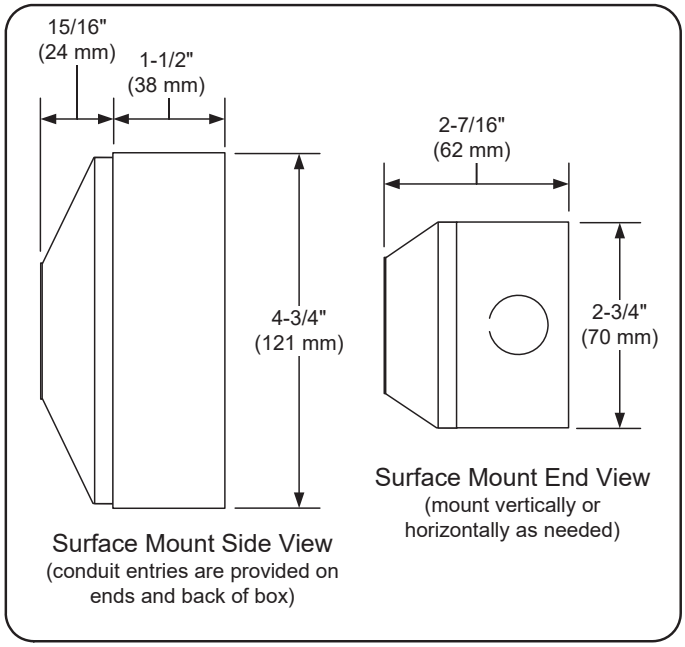
1. **DH24120RPC**: Door holder; 24 VDC/VAC, or 120 VAC operation; Recessed magnet/flush mount; Powdercoated; Chrome finish
2. **DH24120GB2:** Door holder; 24 VDC/VAC, or 120 VAC operation; Ground/floor mount; Brass finish, high luster; Double door
3. **DH1224SPC:** Door holder; 12 or 24 VDC/VAC operation; Surface mount; Powdercoated; Chrome finish

Semi-Flush and Surface Mount Dimensions



Semi-Flush and Surface Mount Front View

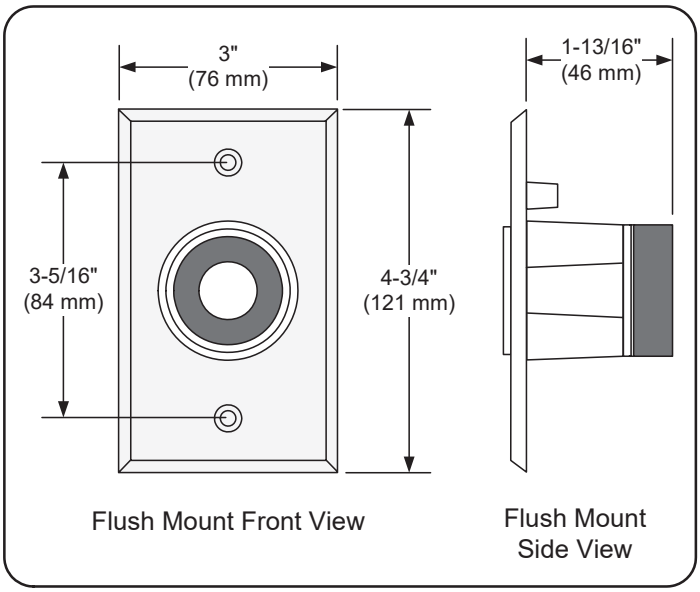
Semi-Flush Side View



Surface Mount Side View
(conduit entries are provided on ends and back of box)

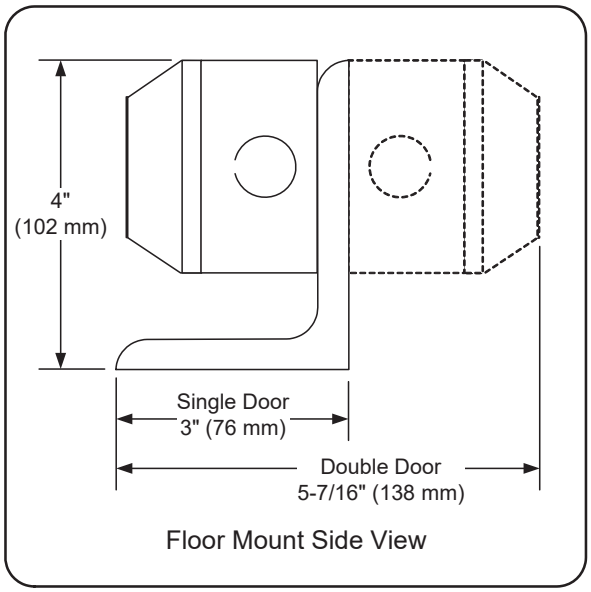
Surface Mount End View
(mount vertically or horizontally as needed)

Flush and Floor Mount Dimensions



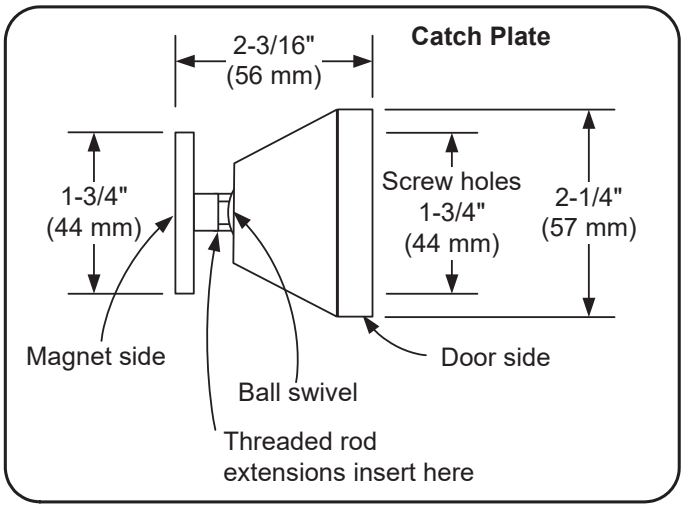
Flush Mount Front View

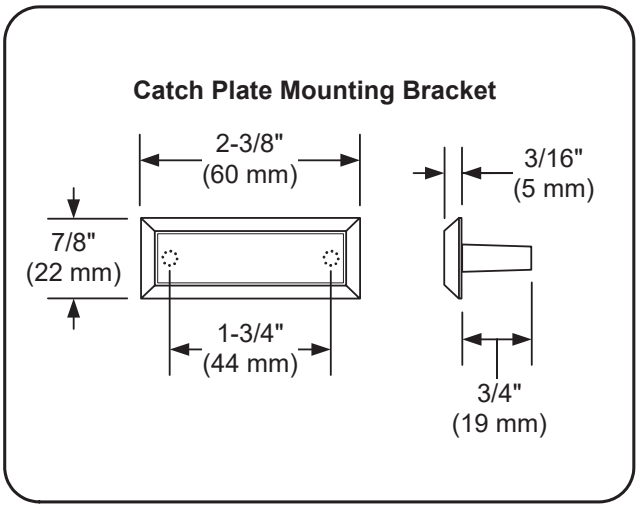
Flush Mount Side View



Floor Mount Side View

Catch Plate and Mounting Bracket Dimensions





Specifications

Mechanical Specifications	
Material	Durable die-cast metal
Wiring Connections	Three position terminal block with provisions for in/out wiring; common (C), low voltage, high voltage); 22 to 12 AWG (0.5 to 3.31 mm^2)

Electrical Specifications and Performance

Model	Voltage	Current DC	Current AC	Terminals	Holding
1224	12 V	40 mA	38 mA	C & L	30 lbs (13.6 kg)
	24 V	40 mA	36 mA	C & H	
1224 High Holding Force	24 V	85 mA	81 mA	C & L	75 lbs (34 kg)
24120	24 V	20 mA	19 mA	C & L	40 lbs (18.1 kg)
	120 VAC	–	20 mA	C & H	35 lbs (15.8 kg)
24120 High Holding Force	120 VAC	–	100 mA	C & L	110 lbs (49.8 kg)
24220	24 V	20 mA	19 mA	C & L	20 lbs (9 kg)
	220 VAC	–	15 mA	C & H	22 lbs (9.8 kg)

For additional information, visit the RSG website: http://www.rsgsecurity.com/

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