THE MEDICAL CENTER OF AURORA - SOUTH
CENTRAL TOWER MAU
MODIFICATION TO EXISTING FIRE ALARM SYSTEM

RSN: 1863018
Permit: 2024 2495050 LT
Sheet 1 of 18

Johnson Controls
DISTRICT - 419
14200 E. EXPOSITION AVE
AURORA, CO 80012
SERVICE: 303-355-0500
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NICET CERTIFICATION INFORMATION
CALE RAUCH
NICET Fire Alarm, III
Certification #151588
Valid Through: 12/01/25
11/28/2024

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City of Aurora Building Division
Project: *TMCA MAU Fire Alarm*
Address: *1501 S Potomac St*
Occupancy Group: *IBC I-2*
Construction Type: *IBC I-A SPK*
RSN: *1863018*
Permit: *2024 2495050 LT*

City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: *Rich Tenorio*
Date: *Dec 13, 2024*
2021 INTERNATIONAL CODES & 2023 NEC

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(S)
		INITIATING DEVICES			
10N	S	DUCT SMOKE DETECTOR W/ RELAY OUTPUT, ADDRESSABLE S=SUPPLY; R=RETURN	4098-9756	MOUNTS TO DUCTWORK	M,P
		SAMPLING TUBE, 97"	4098-9858		
		MODULES AND RELAYS			
10N	M	ENCAPSULATED RELAY	4098-9843	SINGLE GANG, 2-1/2" D	R
		MISCELLANEOUS DEVICES			
10N		REMOTE TEST STATION W/ LED AND KEY SWITCH	2098-9806	SINGLE GANG 2" D	K
10N	10K	END-OF-LINE RESISTOR 10kΩ, 1/2W (EOL)	4081-9008		
		FIRE/SMOKE DAMPER	BY OTHERS		

COA Adopted Codes for this project:
ICC-2021 - NEC 2023
NFPA 13-2019 - NFPA 72-2019
COA Amendments 22 & 66

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

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

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.
K	REMOTE TEST SWITCH/LED	(2) 2 COND. SOLID	14 AWG		X	X				
M	IDNET	UTP SOLID	18 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		

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.
STP = SHIELDED TWISTED PAIR
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), 2021 EDITION
INTERNATIONAL FIRE CODE (IFC), 2021 EDITION
NATIONAL ELECTRIC CODE (NFPA 70), 2023 EDITION
NATIONAL FIRE ALARM AND SIGNALING CODE (NFPA 72), 2022 EDITION
LIFE SAFETY CODE (NFPA 101), 2012 (STATE) EDITION
ICC A117.1 ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES, 2017 EDITION
ADA STANDARDS FOR ACCESSIBLE DESIGN, 2023 EDITION
COLORADO DEPARTMENT OF HEALTH AND ENVIRONMENT - HOSPITAL LICENSING RULES, 2021 EDITION

OCCUPANCY TYPE(S):
I-2 INSTITUTIONAL GROUP

SPRINKLER PROTECTION:
BUILDING IS FULLY SPRINKLERED

AREA:
TOTAL: APPROX. 450,396 SQ. FT. SQ. FT.
SCOPE: APPROX. 207 SQ. FT.

STORIES
TOTAL:6 STORIES + BASEMENT
SCOPE: PARTIAL 2ND TO ROOF FLOOR

CONSTRUCTION:
TYPE 1-A

SCOPE OF WORK

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

SCOPE OF WORK INCLUDES APPROXIMATELY 207 SQUARE FEET ENCOMPASSING THE SECOND, THIRD, FOURTH, FIFTH AND ROOF LEVELS OF THE MEDICAL CENTER OF AURORA - SOUTH, LOCATED AT 1501 SOUTH POTOMAC STREET, AURORA, COLORADO 80012. FIRE ALARM IS AFFECTED.

ADD NEW DEVICES FROM SCOPE AREA. NEW ADDRESSABLE INITIATION DEVICES TO BE INSTALLED. NEW DEVICES WILL TIE TO EXISTING NODE-1. NEW INITIATION TO TIE TO 1.M6 CIRCUIT IN THE SECOND FLOOR, 1.M9 CIRCUIT IN THE THIRD FLOOR, 1.M5 IN THE FOURTH FLOOR AND 1.M12 CIRCUIT IN FIFTH AND ROOF FLOORS. THE EXISTING FIRE ALARM CONTROL PANEL (FACP) IS LOCATED IN FIRE COMMAND CENTER 1C-1013A.THE EXISTING TRANSPONDERS 1 AND 2 ARE LOCATED IN STORAGE 2-0349.

EXISTING STATIC GRAPHIC MAP AT THE FACP IN FIRE COMMAND CENTER 1E-2902A TO BE UPDATED WITH NEW INITIATION DEVICES.

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 UUUS 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
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
N.T.S. = 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

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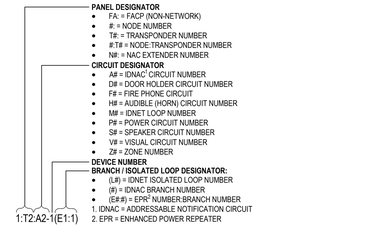
Installer
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361 INVERNESS DRIVE SOUTH, SUITE B
ENGLEWOOD, COLORADO 80112
PHONE: 303-754-0001

DESIGN STATEMENT

THIS PROJECT'S DESIGN IS BASED ON THE ENGINEERED PLANS AND SPECIFICATIONS PREPARED BY:
PATH 21 ARCHITECTURE + PLANNING

ARCHITECTURAL PLANS DATED:	SEPTEMBER 05, 2023
MECHANICAL PLANS DATED:	SEPTEMBER 05, 2023
ELECTRICAL PLANS DATED:	SEPTEMBER 05, 2023
SPECIFICATIONS DATED:	SEPTEMBER 05, 2023
ADDENDUM DATED:	

DEVICE TAG LEGEND



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

CIRCUIT DESIGNATOR
- A#: = IDNAC[1] 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[2] NUMBER:BRANCH NUMBER

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

SYSTEM SEQUENCE OF OPERATIONS

M.C.O.A. SOUTH TOWER — **SEQUENCE OF OPERATIONS**

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	NOTIFY HOSPITAL PBX	FAN SHUT DOWN	DAMPER SHUT DOWN	DOOR HOLD MAG LOCK RELEASE	RELEASE CORRIDOR FIRE DOORS	RELEASE ASSOCIATED ROLL-UP DOOR	ELEVATOR SHUT DOWN (1)	ELEVATOR RECALL - MAIN FLOOR	ELEVATOR RECALL - ALTERNATE FLOOR	ELEVATOR HAT FLASH	OVERRIDE MASC SYSTEM	SILENCE AUDIBLE SIGNAL ONLY, VISUALS TO REMAIN	ACTIVATE OUTSIDE HORN/STROBE (ON GENERAL ALARM)	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	Z	
1 SMOKE DETECTOR	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		2
3 SMOKE DETECTOR AT SMOKE PARTITION	X	X					X		X	X				X		X	X						X		X		3
4 MANUAL PULL STATION	X	X					X		X	X						X	X						X		X		4
5 HEAT DETECTOR	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																7
8 MAIN FLR. ELEV. LOBBY SMOKE DETECTOR	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		9
10 ELEV. MECH. ROOM SMOKE DETECTOR	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								11
12 ELEV. MECH. ROOM HEAT DETECTOR	X	X					X		X	X						X			X								12
13 WATERFLOW SWITCH	X	X					X	X	X	X						X							X		X		13
14 TAMPER SWITCH			X	X					X		X																14
15 POST INDICATOR VALVE SWITCH			X	X					X		X																15
16 FACP AC POWER FAILURE					X	X						X															16
17 FACP FLOW BATTERY					X	X						X															17
18 OPEN CIRCUIT					X	X						X															18
19 GROUND FAULT					X	X						X															19
20 NOTIFICATION APPLIANCE CIRCUIT SHORT					X	X						X															20
21 ALARM SIGNAL SILENCE																								X			21
22 SYSTEM RESET																										X	22
23 CATH LAB BUILDING ALARM	X	X							X				X														23
	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	Z	

NOTE: Audible Evacuation Signal shall be Temporal Pattern per NFPA 72.

- *Disconnect power after a time delay equal to the time it takes for the car to travel from the highest to the lowest level plus 10 seconds.*

New devices to follow existing Sequence of Operations; no further changes to occur.

ISSUE LOG				
MARK	DATE	CAD	CHK	DESCRIPTION
				Revisions shown with Δ symbol

FOR PERMIT

DRAWN BY:	JROJAS
CHECKED BY:	AMW
ISSUE DATE:	11/27/24
JOB #:	
PROJECT #:	419-650463614

JOHNSON CONTROLS © 2024

SYSTEM: **FIRE ALARM SYSTEM**

SHEET: **COVER SHEET**

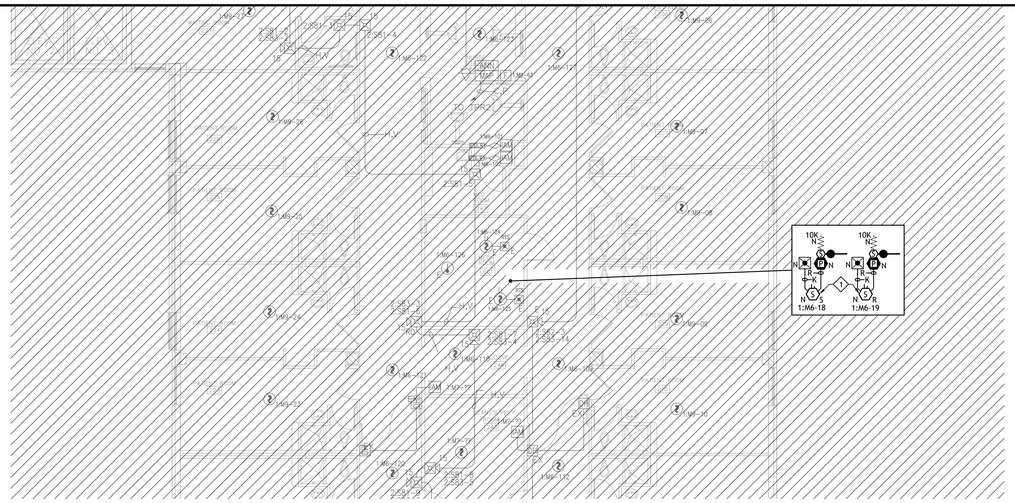
FA-001

THE MEDICAL CENTER OF AURORA - SOUTH
CENTRAL TOWER MAU
THE MEDICAL CENTER OF AURORA - SOUTH
1501 SOUTH POTOMAC STREET
AURORA, COLORADO 80012

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FILE PATH: C:\Users\jrojas87\OneDrive - Johnson Controls\1501 S Potomac - Aurora South\South Tower - Node 1\AT_CentralTower.MAU - 2024 - 650MDB614\Fire\FA-001.dwg
LAST SAVED BY: JROJAS87
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30" x 42" Arch E1 Size

RSN: 1863018
Permit: 2024 2495050 LT
Sheet 2 of 18



2ND FLOOR PARTIAL DEVICE PLACEMENT PLAN
SCALE:1/8" = 1'-0"

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



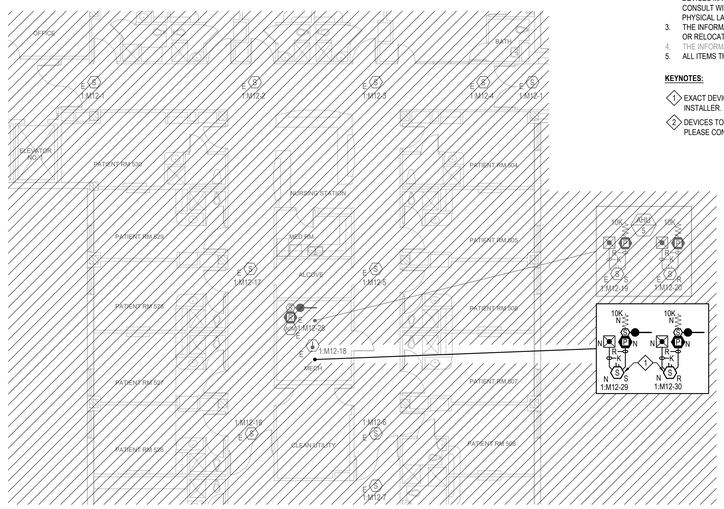
3RD FLOOR PARTIAL DEVICE PLACEMENT PLAN
SCALE:1/8" = 1'-0"

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



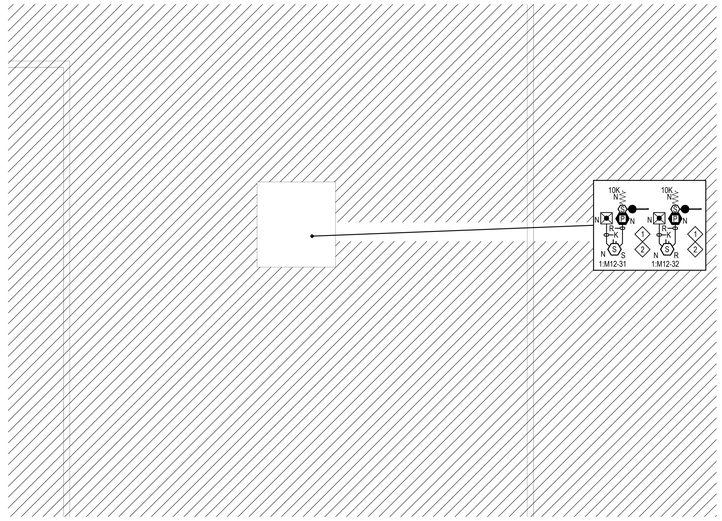
4TH FLOOR PARTIAL DEVICE PLACEMENT PLAN
SCALE:1/8" = 1'-0"

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



5TH FLOOR PARTIAL DEVICE PLACEMENT PLAN
SCALE:1/8" = 1'-0"

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



ROOF DEVICE PLACEMENT PLAN
SCALE:1/8" = 1'-0"

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

GENERAL NOTES:

1. ALL CEILINGS ARE ASSUMED TO BE OPEN TO STRUCTURE (OPS) UNLESS NOTED OTHERWISE.
2. 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.
3. THE INFORMATION OR SYMBOLS SHOWN IN BOLD LINETYPE ARE NEW, MODIFIED OR RELOCATED.
4. THE INFORMATION OR SYMBOLS SHOWN IN LIGHT LINETYPE ARE EXISTING.
5. ALL ITEMS THAT ARE HATCHED ARE NOT IN THIS SCOPE OF WORK.

KEYNOTES:

1. EXACT DEVICE PLACEMENT TO BE FIELD DETERMINED BY ASSOCIATED INSTALLER.
2. DEVICES TO BE INSTALLED INTO CONDITIONED SPACE. IF THIS IS NOT POSSIBLE, PLEASE CONTACT JOHNSON CONTROLS INC.

FIRE ALARM SYMBOL LEGEND

QTY	SYMBOL	DESCRIPTION	BRAND / MODEL	BACKBOX	WIRE TYPE(S)
		INITIATING DEVICES			
10N	S	DUCT SMOKE DETECTOR W/ RELAY OUTPUT, ADDRESSABLE S=SUPPLY; R=RETURN	4098-9756	MOUNTS TO DUCTWORK	M,P
		SAMPLING TUBE, 9'/'	4098-9858		
		MODULES AND RELAYS			
10N	R	ENCAPSULATED RELAY	4098-9843	SINGLE GANG, 2-1/2" D	R
		MISCELLANEOUS DEVICES			
10N		REMOTE TEST STATION W/ LED AND KEY SWITCH	2098-9806	SINGLE GANG 2" D	K
10N	10K	END-OF-LINE RESISTOR 10kΩ, 1/2W (EOL)	4081-9008		
		FIRE/SMOKE DAMPER	BY OTHERS		

FIRE ALARM WIRE LEGEND

CIRCUIT DESCRIPTION		CONSTRUCTION	GAUGE	CIRCUIT PROPERTIES	ACCEPTABLE CABLE TYPES				
					FPLR	FPLP	THHN	TFFN	OUTDOOR**	C.L.
K	REMOTE TEST SWITCH/LED	(2) 2 COND. SOLID	14 AWG		X	X				
M	IDNET	UTP SOLID	18 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		

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.
STP = SHIELDED TWISTED PAIR
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.

SCOPE OF WORK



KEYPLAN
SCALE:N.T.S

City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: *Rich Tenorio*
Date: *Dec 13, 2024*
2021 INTERNATIONAL CODES & 2023 NEC

Johnson Controls
DISTRICT: I-416
10065 E. EXPOSITION AVE
AURORA, CO 80017
SERVICE: 303-355-5000
PHONE: 303-326-6500
FAX: 303-326-6515

NICET CERTIFICATION INFORMATION

CALE RAUCH
NICET Fire Alarm, III
Certification #151588
Valid Through: 12/01/25

11/28/2024

THE MEDICAL CENTER OF AURORA - SOUTH CENTRAL TOWER MAU

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

Revisions shown with Δ symbol

ISSUE LOC	MARK	DATE	CAD	CHK	DESCRIPTION

FOR PERMIT

DRAWN BY:	JROJAS
CHECKED BY:	AMW
ISSUE DATE:	11/27/24
JOB #:	
PROJECT #:	419:650463614

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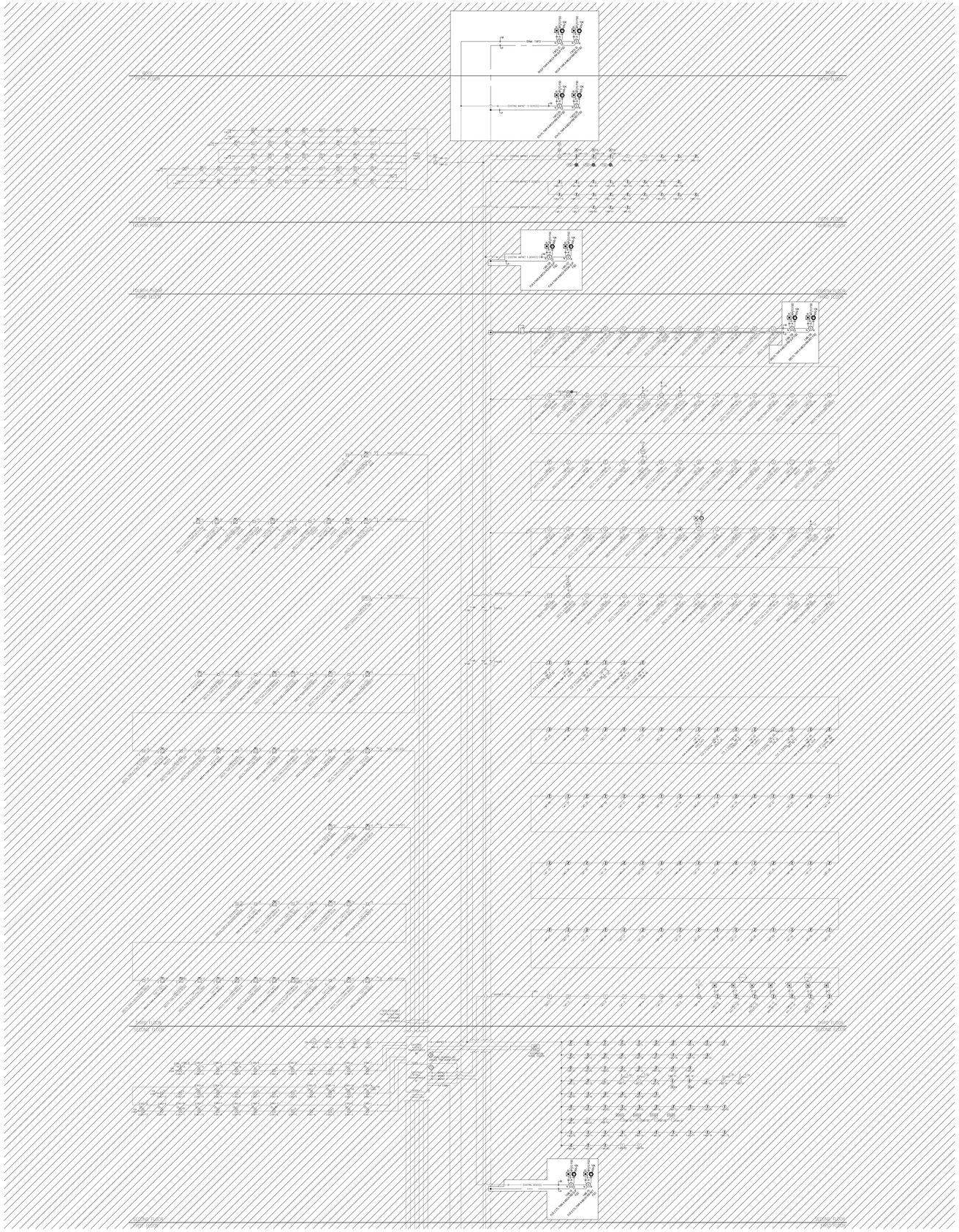
SYSTEM:
FIRE ALARM SYSTEM

SHEET:
2ND THRU ROOF PARTIAL DEVICE PLACEMENT PLANS

FA-101

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FILE PATH: C:\Users\jrojas97\OneDrive - Johnson Controls\501 S Potomac - Aurora South\South Tower - Node 1\AT-Central Tower MAU - 2024 - 650MG6614\FireFA-101.dwg
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30" x 42" - Arch E1 Size



RSN: 1863018
Permit: 2024 2495050 LT
PAGE 5 of 18

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, MODIFIED OR RELOCATED.
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KEYED NOTES:

1. 120VAC PRIMARY POWER SOURCE SHALL BE A MECHANICALLY PROTECTED BRANCH CIRCUIT. THE CIRCUIT DISCONNECTING MEANS SHALL HAVE A RED MARKING, AND BE IDENTIFIED AS "FIRE ALARM CIRCUIT"

FIRE ALARM SYMBOL LEGEND

QTY	SYMBOL	DESCRIPTION	BRAND / MODEL	BACKBOX	WIRE TYPE(S)
		INITIATING DEVICES			
10N	S	DUCT SMOKE DETECTOR W/ RELAY OUTPUT, ADDRESSABLE S=SUPPLY; R=RETURN	4098-9756	MOUNTS TO DUCTWORK	M,P
		SAMPLING TUBE, 97"	4098-9858		
		MODULES AND RELAYS			
10N	M	ENCAPSULATED RELAY	4098-9843	SINGLE GANG, 2-1/2" D	R
		MISCELLANEOUS DEVICES			
10N		REMOTE TEST STATION W/ LED AND KEY SWITCH	2098-9806	SINGLE GANG 2" D	K
10N	10K	END-OF-LINE RESISTOR 10kΩ, 1/2W (EOL)	4081-9008		
		FIRE/SMOKE DAMPER	BY OTHERS		

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	CIRCUIT DESCRIPTION	CONSTRUCTION	GAUGE	CIRCUIT PROPERTIES	ACCEPTABLE CABLE TYPES					
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K	REMOTE TEST SWITCH/LED	(2) 2 COND. SOLID	14 AWG		X	X				
M	IDNET	UTP SOLID	18 AWG	0.60uF 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		

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City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: *Rich Tenorio*
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2021 INTERNATIONAL CODES & 2023 NEC

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DISTRICT 1-418
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NICET CERTIFICATION INFORMATION

CALE RAUCH
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ISSUE LOG				
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DRAWN BY:	JROJAS
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JOB #:	
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JOHNSON CONTROLS © 2024

SYSTEM:
FIRE ALARM SYSTEM

SHEET:
PARTIAL RISER DIAGRAM

FA-201

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FILE PATH: C:\Users\rjrojas87\OneDrive - Johnson Controls\1501 S Potomac - Aurora South\South Tower - Node 1\AT-CentralTower MAU - 2024 - 650MD6614\Fire\FA-201.dwg
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30" x 42" Arch E1 Size

MEDICAL CENTER OF AURORA SOUTH NODE-1 TRANSPONDER-1 4100es XPDR

Module	Qty	Description		Standby Current	Total Standby	Alarm Current	Total Alarm
Panel Equipment							
4100-9600	*1*	*BASIC TRANSPONDER*	*	*0.0870*	*0.0870*	*0.0870*	*0.0870*
4100-3102	*3*	*MAPNET MODULE, UP TO 127 PTS*	*	*0.2550*	*0.7650*	*0.2750*	*0.8250*
4100-4321	*3*	*6 CIRCUIT CLASS B (STYLE Y)*		*0.0250*	*0.0750*	*0.0700*	*0.2100*
4100-3003	*1*	*8 PT AUX RELAY MODULE 3 AMP*		*0.0250*	*0.0250*	*0.2800*	*0.2800*
4100-6005	*1*	*MASTER CONTROLLER POWER SUPPLY*		*0.0000*	*0.0000*	*0.0000*	*0.0000*
4100-5125	*1*	*REMOTE POWER SUPPLY W/CHARGER - 120VAC*		*0.1500*	*0.1500*	*0.1850*	*0.1850*
		Panel Totals			**1.1020**		**1.5870**
Mapnet Addressable Devices (SLC)							
2190-9161	*2*	*MAPNET CLASS B SIGNAL ZAM*	*	*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".*			
2190-9163	*4*	*MAPNET UNSUPERVISED CONTROL ZAM*	*				
2190-9172	*8*	*MAPNET SUPERVISED IAM*	*				
2099-9795	*15*	*MAPNET SINGLE ACTION PULL STATION*	*				
4098-9714	*202*	*TRUEALARM PHOTO SMOKE SENSOR*					
4098-9733	*4*	*TRUEALARM HEAT SENSOR*					
4098-9756	**2**	**TRUEALARM DUCT SMOKE SENSOR W/ RELAY OUTPUT**	*				
4098-9706	*18*	*TRUEALARM DUCT SMOKE SENSOR HOUSING W/ RELAY*	*				
4098-9789	*26*	*TRUEALARM SENSOR BASE W/ LED OUTPUT*	*				
4098-9792	*180*	*TRUEALARM SENSOR BASE*	*				
4098-9795	*126*	*MULTI-SENSOR SOUNDER BASE*	*				
Miscellaneous Peripheral Devices That Require (Additional) System Power							
4098-9795	*126*	*MULTI-SENSOR SOUNDER BASE*		*0.0000*	*0.0000*	*0.0200*	*2.5200*
2098-9808	*26*	*REMOTE ALARM INDICATOR*		*0.0000*	*0.0000*	*0.0000*	*0.0000*
4098-9756	**2**	**TRUEALARM DUCT SMOKE SENSOR W/ RELAY OUTPUT**		**0.0030**	**0.0060**	**0.0150**	**0.0300**
4098-9843	**2**	**ENCAPSULATED RELAY PAM-SD**		**0.0000**	**0.0000**	**0.0150**	**0.0300**
2098-9806	**2**	**REMOTE TEST STATION W/ LED AND KEY SWITCH**		**0.0000**	**0.0000**	**0.0000**	**0.0000**
Notification Appliances			**Setting**				
4009-9001	*2*	*FOUR CIRCUIT NAC EXTENDER, 120 VAC*		*0.0000*	*0.0000*	*0.0150*	*0.0300*
4903-9292	*22*	*CH70-2415W-FR CHIME/STROBE (STROBE)*	*15*	*0.0000*	*0.0000*	*0.0600*	*1.3200*
4903-9292	*25*	*CH70-2415W-FR CHIME/STROBE (CHIME)*	*CHIME*	*0.0000*	*0.0000*	*0.0220*	*0.5500*
4904-9137	*53*	*15CD VISIBLE ONLY RED*	*15*	*0.0000*	*0.0000*	*0.0950*	*5.0350*
		Peripheral Totals			**0.0110**		**4.9970**
		Added Current for EPS Conversion of 24 to 29 Volt IDNac Devices			**0.0000**		**0.0000**
		RUI Totals	**0**		**0.0000**		**0.0000**
		Address Totals	**259 Addresses**		**0.4403**		**0.4403**
*** Device Address current draw included below (See Additional Current Draws):**		**System Totals*:**		**Standby**	**1.5533**	**Alarm**	**7.0243**

Battery Set #1 (Cabinet/Charger #1)			Standby Current	Standby Total	Alarm Current	Alarm Total
Select ALL Power Supplies on this battery set:						
RPS-1				1.1130		6.5840
			Sub Total	**1.1130**		**6.5840**
Additional Current Draws:						
MAPNET/IDNet Device Address Communication Current	259	x 0.001700		= 0.4403	x 0.001700	= 0.4403
			Sub Total	**1.5533**		**7.0243**
Spare addressable point capacity	**20%**	52 x 0.0017		= 0.0884	x 0.0017	= 0.0884
			Total	**1.6417**		**7.1127**
Standby Time =	**4** Hrs	x 1.6417		= 6.5670	Standby Ah	
Alarm Time =	**10** Min	0.16667 x 7.1127		= 1.1855	Alarm Ah	
				7.7524		
Additional Spare Battery Capacity =	**20%**		+	1.5505		
				9.3029		
Battery Discharge Factor =	**25%**		+	2.3257		
Minimum Battery Required	**2081-9288 12AH (2x)**			**11.6286**		
Battery Supplied	**2081-9276 33AH (2x)**			**(EXISTING)**		

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

MAPNET CHANNEL 1:M6

Address	Device Type	Point Type	Location Description	SWITCH SETTINGS 1	2	3	4	5	6	7	8		9
1:M6-1	*PHOTO*	*VSMOKE*	*1:M6-1 FLR 2 CENTRAL TWR A - NOURISHMENT*	X								ON	
1:M6-2	*PHOTO*	*VSMOKE*	*1:M6-2 FLR 2 CENTRAL TWR A - CLEAN UTIL*		X							ON	
1:M6-3	*ADRPUL*	*PULL*	*1:M6-3 FLR 2 CENTRAL TWR B BY L&D RM 6*	X	X							ON	
1:M6-4	*ADRPUL*	*PULL*	*1:M6-4 FLR 2 CENTRAL TWR B BY L&D 10*			X						ON	
1:M6-5	*ADRPUL*	*PULL*	*1:M6-5 FLR 2 CENTRAL B L&D NRSG STATION*	X		X						ON	
1:M6-6	*ADRPUL*	*PULL*	*1:M6-6 FLR 2 CENTRAL TWR A - BY RM 231*		X	X						ON	
1:M6-7	*PHOTO*	*VSMOKE*	*1:M6-7 FLR 2 MOM BABY WEST NURSE STA.*	X	X	X						ON	
1:M6-8			*SPARE*				X					ON	
1:M6-9	*PHOTO*	*VSMOKE*	*1:M6-9 FLR 2 CENTRAL TWR B HALL*	X			X					ON	
1:M6-10			*SPARE*		X		X					ON	
1:M6-11	*GENIAM*	*SO*	*1:M6-11 FLR 2 CTRL TWR STAIRWELL TAMPER*	X	X		X					ON	
1:M6-12	*GENIAM*	*WATER*	*1:M6-12 FLR 2 CTRL TWR STAIRWELL TAMPER*			X	X					ON	
1:M6-13			*SPARE*	X		X	X					ON	
1:M6-14			*SPARE*		X	X	X					ON	
1:M6-15	*RZAM*	*RELAY*	*1:M6-15 1ST FLOOR SMOKE DAMPER AHU 97-4*	X	X	X	X					ON	
1:M6-16	*RZAM*	*CDAMPER*	*1:M6-16 2ND FLOOR SMOKE DAMPER AHU 97-8*					X				ON	
1:M6-17	*ADRPUL*	*PULL*	*1:M6-17 FLR 2 CTL TWR A NE STAIR #1*	X				X				ON	
1:M6-18	**RPHOTO**	**LSDUCT**	**1:M6-18 FLR 2 CTL TWR A MECH RM SUP FSD**		X			X				ON	
1:M6-19	**RPHOTO**	**LSDUCT**	**1:M6-19 FLR 2 CTL TWR A MECH RM RET FSD**	X	X			X				ON	
1:M6-20	*HEAT*	*HEAT*	*1:M6-20 FLR 1 - MECH RM BY COFFEE SHOP*			X		X				ON	
1:M6-21	*PHOTO*	*VSMOKE*	*1:M6-21 FLR 1N - IN CEILING BY PBX*	X		X		X				ON	
1:M6-22	*PHOTO*	*VSMOKE*	*1:M6-22 FLR 1 CENTRAL TWR NEW CATH LAB*		X	X		X				ON	
1:M6-23	*PHOTO*	*VSMOKE*	*1:M6-23 FLR 1E - HALL BY GIFT SHOP*	X	X	X		X				ON	
1:M6-24	*PHOTO*	*VSMOKE*	*1:M6-24 FLR 1E - HALL BY PBX*				X	X				ON	
1:M6-25	*PHOTO*	*VSMOKE*	*1:M6-25 FLR 1E - S.HALL BY CLASSROOM 1*	X			X	X				ON	
1:M6-26	*PHOTO*	*VSMOKE*	*1:M6-26 FLR 1E - S.HALL BY CLASSROOM 2*		X		X	X				ON	
1:M6-27	*PHOTO*	*VSMOKE*	*1:M6-27 FLR 1E - HALL BY VENDING AREA*	X	X		X	X				ON	
1:M6-28	*PHOTO*	*VSMOKE*	*1:M6-28 FLR 1E - HALL BY VENDING AREA*			X	X	X				ON	
1:M6-29	*PHOTO*	*VSMOKE*	*1:M6-29 FLR 1E - BY DOC'S MEETING RM*	X		X	X	X				ON	
1:M6-30	*PHOTO*	*VSMOKE*	*1:M6-30 FLR 1N - CLASSROOM NO.1*		X	X	X	X				ON	
1:M6-31	*PHOTO*	*VSMOKE*	*1:M6-31 FLR 1N - CLASSROOM NO.2*	X	X	X	X	X				ON	
1:M6-32	*PHOTO*	*VSMOKE*	*1:M6-32 FLR 2 CENTRAL TWR B ON-CALL RM 1*						X			ON	
1:M6-33	*PHOTO*	*UTILITY*	*1:M6-33 FLR 2 CENTRAL TWR B L&D RM 6*	X					X			ON	
1:M6-34	*PHOTO*	*UTILITY*	*1:M6-34 FLR 2 CENTRAL TWR B L&D RM 7*		X				X			ON	
1:M6-35	*PHOTO*	*UTILITY*	*1:M6-35 FLR 2 CENTRAL TWR B L&D RM 8*	X	X				X			ON	
1:M6-36	*PHOTO*	*UTILITY*	*1:M6-36 FLR 2 CENTRAL TWR B L&D RM 9*			X			X			ON	
1:M6-37	*PHOTO*	*UTILITY*	*1:M6-37 FLR 2 CENTRAL TWR B L&D RM 10*	X		X			X			ON	
1:M6-38	*PHOTO*	*UTILITY*	*1:M6-38 FLR 2 CENTRAL TWR B L&D RM 11*		X	X			X			ON	
1:M6-39	*PHOTO*	*VSMOKE*	*1:M6-39 FLR 2 CENTRAL TWR B L&D WAITING*	X	X	X			X			ON	
1:M6-40	*PHOTO*	*UTILITY*	*1:M6-40 FLR 2 CENTRAL TWR B - L&D 12*				X		X			ON	
1:M6-41	*PHOTO*	*UTILITY*	*1:M6-41 FLR 2 CENTRAL TWR B - L&D 14*	X			X		X			ON	
1:M6-42	*PHOTO*	*UTILITY*	*1:M6-42 FLR 2 CENTRAL TWR B - TRIAGE 2*		X		X		X			ON	
1:M6-43	*PHOTO*	*UTILITY*	*1:M6-43 FLR 2 CENTRAL TWR B - TRIAGE 1*	X	X		X		X			ON	
1:M6-44	*PHOTO*	*VSMOKE*	*1:M6-44 FLR 2 CTRL TWR A MAIN ELEV LOBBY*			X	X		X			ON	
1:M6-45	*PHOTO*	*VSMOKE*	*1:M6-45 FLR 2 CENTRAL TWR B BY TRIAGE*	X		X	X		X			ON	
1:M6-46	*PHOTO*	*VSMOKE*	*1:M6-46 FLR 2 CENTRAL TWR B BY TRIAGE*		X	X	X		X			ON	
1:M6-47	*PHOTO*	*VSMOKE*	*1:M6-47 FLR 2 CENTRAL B HALL BY RM 14*	X	X	X	X		X			ON	
1:M6-48	*PHOTO*	*VSMOKE*	*1:M6-48 FLR 2 CENTRAL B HALL BY RM 11*					X	X			ON	
1:M6-49	*PHOTO*	*VSMOKE*	*1:M6-49 FLR 2 CENTRAL B HALL BY RM 10*	X				X	X			ON	
1:M6-50	*PHOTO*	*VSMOKE*	*1:M6-50 FLR 2 CENTRAL B HALL BY RM 9*		X			X	X			ON	
1:M6-51	*PHOTO*	*VSMOKE*	*1:M6-51 FLR 2 CENTRAL B HALL BY RM 8*	X	X			X	X			ON	
1:M6-52	*PHOTO*	*VSMOKE*	*1:M6-52 FLR 2 CENTRAL B HALL BY RM 7*			X		X	X			ON	
1:M6-53	*PHOTO*	*VSMOKE*	*1:M6-53 FLR 2 CENTRAL B HALL BY RM 7*	X		X		X	X			ON	
1:M6-54	*PHOTO*	*VSMOKE*	*1:M6-54 FLR 2 CENTRAL B BY ON-CALL 1*		X	X		X	X			ON	
1:M6-55	*PHOTO*	*VSMOKE*	*1:M6-55 FLR 2 CENTRAL B BY ON-CALL 2*	X	X	X		X	X			ON	
1:M6-56	*PHOTO*	*VSMOKE*	*1:M6-56 FLR 2 CENTRAL TWR B BY LDR 5*				X	X	X			ON	
1:M6-57	*PHOTO*	*VSMOKE*	*1:M6-57 FLR 2 CENTRAL B HALL BY RM 4*	X			X	X	X			ON	
1:M6-58	*PHOTO*	*VSMOKE*	*1:M6-58 FLR 2 CENTRAL TWR B - BY O.R. 2*		X		X	X	X			ON	
1:M6-59	*PHOTO*	*VSMOKE*	*1:M6-59 FLR 2 CENTRAL TWR B - BY O.R. 1*	X	X		X	X	X			ON	
1:M6-60	*PHOTO*	*VSMOKE*	*1:M6-60 FLR 2 CENTRAL B - BY O.R. RM 1*			X	X	X	X			ON	
1:M6-61	*PHOTO*	*VSMOKE*	*1:M6-61 FLR 2 CENTRAL TWR B HALL BY RM 7*	X		X	X	X	X			ON	
1:M6-62	*PHOTO*	*VSMOKE*	*1:M6-62 FLR 2 CENTRAL TWR B L&D LOUNGE*		X	X	X	X	X			ON	
1:M6-63	*PHOTO*	*VSMOKE*	*1:M6-63 FLR 2 CENTRAL TWR B ON-CALL RM 5*	X	X	X	X	X	X			ON	
1:M6-64	*PHOTO*	*VSMOKE*	*1:M6-64 FLR 2 CENTRAL TWR B BY ON-CALL 4*							X		ON	
1:M6-65	*PHOTO*	*VSMOKE*	*1:M6-65 FLR 2 CENTRAL TWR B ON-CALL 4*	X						X		ON	
1:M6-66	*PHOTO*	*VSMOKE*	*1:M6-66 FLR 2 CENTRAL TWR B BY L&D RM 1*		X					X		ON	
1:M6-67	*PHOTO*	*VSMOKE*	*1:M6-67 FLR 2 CENTRAL TWR B HALL BY RM 1*	X	X					X		ON	
1:M6-68	*PHOTO*	*VSMOKE*	*1:M6-68 FLR 2 CENTRAL B BY L&D RM 2*			X				X		ON	
1:M6-69	*PHOTO*	*UTILITY*	*1:M6-69 FLR 2 CENTRAL TWR B L&D RM 1*	X		X				X		ON	
1:M6-70	*PHOTO*	*UTILITY*	*1:M6-70 FLR 2 CENTRAL TWR B L&D RM 2*		X	X				X		ON	
1:M6-71	*PHOTO*	*UTILITY*	*1:M6-71 FLR 2 CENTRAL TWR B L&D RM 3*	X	X	X				X		ON	
1:M6-72	*PHOTO*	*UTILITY*	*1:M6-72 FLR 2 CENTRAL TWR B L&D RM 4*				X			X		ON	
1:M6-73	*PHOTO*	*UTILITY*	*1:M6-73 FLR 2 CENTRAL TWR B L&D RM 5*	X			X			X		ON	
1:M6-74	*PHOTO*	*VSMOKE*	*1:M6-74 FLR 2 CENTRAL TWR B ON-CALL RM 3*		X		X			X		ON	
1:M6-75	*PHOTO*	*VSMOKE*	*1:M6-75 FLR 2 CENTRAL TWR B ON-CALL RM 2*	X	X		X			X		ON	
1:M6-76	*PHOTO*	*UTILITY*	*1:M6-76 FLR 2 CENTRAL TWR A - RM 232*			X	X			X		ON	
1:M6-77	*PHOTO*	*VSMOKE*	*1:M6-77 FLR 2 CENTRAL TWR A - BY RM 231*	X		X	X			X		ON	
1:M6-78	*PHOTO*	*UTILITY*	*1:M6-78 FLR 2 CENTRAL TWR A - RM 231*		X	X	X			X		ON	
1:M6-79	*PHOTO*	*UTILITY*	*1:M6-79 FLR 2 CENTRAL TWR A - RM 230*	X	X	X	X			X		ON	
1:M6-80	*PHOTO*	*VSMOKE*	*1:M6-80 FLR 2 CENTRAL TWR A - BY RM 229*					X		X		ON	
1:M6-81	*PHOTO*	*UTILITY*	*1:M6-81 FLR 2 CENTRAL TWR A - RM 229*	X				X		X		ON	
1:M6-82	*PHOTO*	*VSMOKE*	*1:M6-82 FLR 2 CENTRAL TWR A - BY RM 228*		X			X		X		ON	
1:M6-83	*PHOTO*	*VSMOKE*	*1:M6-83 FLR 2 CENTRAL TWR A - BY RM 228*	X	X			X		X		ON	
1:M6-84	*PHOTO*	*VSMOKE*	*1:M6-84 FLR 2 CENTRAL TWR A - BY RM 228*			X		X		X		ON	
1:M6-85	*PHOTO*	*VSMOKE*	*1:M6-85 FLR 2 CENTRAL TWR A - BY NURSERY*	X		X		X		X		ON	
1:M6-86	*OHEAT*	*HEAT*	*1:M6-86 FLR 2 CENTRAL A - BACK MECH RM*		X	X		X		X		ON	
1:M6-87	*PHOTO*	*VSMOKE*	*1:M6-87 FLR 2 CENTRAL TWR A - BY LOUNGE*	X	X	X		X		X		ON	
1:M6-88	*PHOTO*	*VSMOKE*	*1:M6-88 FLR 2 CENTRAL TWR A - WAITING RM*				X	X		X		ON	
1:M6-89	*PHOTO*	*VSMOKE*	*1:M6-89 FLR 2 CENTRAL TWR A BY NURSERY*	X			X	X		X		ON	
1:M6-90	*PHOTO*	*VSMOKE*	*1:M6-90 FLR 2 CENTRAL TWR A - NURSERY*		X		X	X		X		ON	
1:M6-91	*RPHOTO*	*SDUCT*	*1:M6-91 FLR 2 CENTRAL TWR A - AHU 97-8*	X	X		X	X		X		ON	
1:M6-92	*RPHOTO*	*SDUCT*	*1:M6-92 FLR 2 CENTRAL TWR A - AHU 97-8*			X	X	X		X		ON	
1:M6-93	*RPHOTO*	*SDUCT*	*1:M6-93 FLR 1 - MECH RM BY COFFEE SHOP*	X		X	X	X		X		ON	
1:M6-94	*RPHOTO*	*SDUCT*	*1:M6-94 FLR 1 - MECH RM BY COFFEE SHOP*		X	X	X	X		X		ON	
1:M6-95	*PHOTO*	*VSMOKE*	*1:M6-95 FLR 2 CENTRAL TWR B NRSG STATION*	X	X	X	X	X		X		ON	
1:M6-96	*PHOTO*	*VSMOKE*	*1:M6-96 FLR 2 CENTRAL TWR B BY RM 10*						X	X		ON	
1:M6-97	*PHOTO*	*VSMOKE*	*1:M6-97 FLR 1E - CLASSROOM 3*	X					X	X		ON	
1:M6-98	*PHOTO*	*VSMOKE*	*1:M6-98 FLR 1E - DIETITIAN OFFICE*		X				X	X		ON	
1:M6-99	*RPHOTO*	*SDUCT*	*1:M6-99 FLR 2 CENTRAL TWR A - AHU 97-8*	X	X				X	X		ON	
1:M6-100	*PHOTO*	*VSMOKE*	*1:M6-100 FLR 2 CENTRAL TWR A-BACK STAIRS*			X			X	X		ON	
1:M6-101	*GENIAM*	*WATER*	*1:M6-101 FL2 CTL TWR A WEST (SOILED UTIL*	X		X			X	X		ON	
1:M6-102	*GENIAM*	*WATER*	*1:M6-102 FL2 CTL TWR A EAST (NURSE STAT)*		X	X			X	X		ON	
1:M6-103	*ADRPUL*	*PULL*	*1:M6-103 FLR 1E - DINING RM PULL STATION*	X	X	X			X	X		ON	
1:M6-104	*ADRPUL*	*PULL*	*1:M6-104 FLR 1E - DINING RM PULL STATION*				X		X	X		ON	
1:M6-105	*PHOTO*	*VSMOKE*	*1:M6-105 FLR 2 CENTRAL TWR A - BY RM 200*	X			X		X	X		ON	
1:M6-106	*PHOTO*	*VSMOKE*	*1:M6-106 FLR 2 CENTRAL TWR A - BY NURSE*		X		X		X	X		ON	
1:M6-107	*PHOTO*	*VSMOKE*	*1:M6-107 FLR 2 CENTRAL TWR A - BY RM 204*	X	X		X		X	X		ON	
1:M6-108	*PHOTO*	*VSMOKE*	*1:M6-108 FLR 2 CENTRAL TWR A - BY RM 208*			X	X		X	X		ON	
1:M6-109	*PHOTO*	*VSMOKE*	*1:M6-109 FLR 2 CENTRAL TWR A - BY RM 210*	X		X	X		X	X		ON	
1:M6-110	*PHOTO*	*VSMOKE*	*1:M6-110 FLR 2 CENTRAL TWR A CLEAN UTIL*		X	X	X		X	X		ON	
1:M6-111	*PHOTO*	*VSMOKE*	*1:M6-111 FLR 2 CENTRAL TWR A - BY RM 211*	X	X	X	X		X	X		ON	
1:M6-112	*PHOTO*	*VSMOKE*	*1:M6-112 FLR 2 CENTRAL TWR A CLEAN UTIL*					X	X	X		ON	
1:M6-113	*PHOTO*	*VSMOKE*	*1:M6-113 FLR 2 CENTRAL TWR A - BY RM 214*	X				X	X	X		ON	
1:M6-114	*PHOTO*	*VSMOKE*	*1:M6-114 FLR 2 CENTRAL TWR A - BY RM 216*		X			X	X	X		ON	
1:M6-115	*PHOTO*	*VSMOKE*	*1:M6-115 FLR 2 CENTRAL TWR A-BY SE STAIR*	X	X			X	X	X		ON	
1:M6-116	*ADRPUL*	*PULL*	*1:M6-116 FL 2 CTL TWR A SW STAIR #3*			X		X	X	X		ON	
1:M6-117	*HEAT*	*HEAT*	*1:M6-117 FLR 2 CENTRAL TWR A - ELEC ROOM*	X		X		X	X	X		ON	
1:M6-118	*PHOTO*	*VSMOKE*	*1:M6-118 FLR 2 CENTRAL TWR A - BY ELEV 3*		X	X		X	X	X		ON	
1:M6-119	*PHOTO*	*VSMOKE*	*1:M6-119 FLR 2 CENTRAL TWR A - BY RM 220*	X	X	X		X	X	X		ON	
1:M6-120	*PHOTO*	*VSMOKE*	*1:M6-120 FLR 2 CENTRAL TWR A - BY RM 220*				X	X	X	X		ON	
1:M6-121	*PHOTO*	*VSMOKE*	*1:M6-121 FLR 2 CENTRAL TWR A - BY RM 224*	X			X	X	X	X		ON	
1:M6-122	*PHOTO*	*VSMOKE*	*1:M6-122 FLR 2 CENTRAL TWR A - BY RM 226*		X		X	X	X	X		ON	
1:M6-123	*PHOTO*	*VSMOKE*	*1:M6-123 FLR 2 CENTRAL TWR A NURSE STAT*	X	X		X	X	X	X		ON	
1:M6-124	*RPHOTO*	*SDUCT*	*1:M6-124 FLR 2 CENTRAL TWR A MECH RM SUP*			X	X	X	X	X		ON	
1:M6-125	*RPHOTO*	*SDUCT*	*1:M6-125 FLR 2 CENTRAL TWR A MECH RM RET*	X		X	X	X	X	X		ON	
1:M6-126	*HEAT*	*HEAT*	*1:M6-126 FLR 2 CENTRAL TWR A MECH ROOM*		X	X	X	X	X	X		ON	
1:M6-127	*PHOTO*	*VSMOKE*	*1:M6-127 FLR 2 CENTRAL TWR A - BY RM 206*	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.

PANEL TERMINATION NOTES:

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

RSN: 1863018
Permit: 2024 2495050 LT
SHEET 1 OF 118

City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: *Rich Tenorio*
Date: *Dec 13, 2024*
2021 INTERNATIONAL CODES & 2023 NEC

Johnson Controls
DISTRICT: 1-01
DENVER METRO
10200 E. GIRARD AVE
AURORA, CO 80010
SERVICE: 303-355-6000
PHONE: 303-355-9800
FAX: 303-355-9815

NICET CERTIFICATION INFORMATION
CALE RAUCH
NICET Fire Alarm, III
Certification #151588
Valid Through: 12/01/25
11/28/2024

THE MEDICAL CENTER OF AURORA - SOUTH CENTRAL TOWER MAU

THE MEDICAL CENTER OF AURORA - SOUTH CENTRAL TOWER MAU
1501 SOUTH POTOMAC STREET
AURORA, COLORADO 80012

ISSUE LOG (Revisions shown with ⚠ symbol)

MARK	DATE	CAD	CHK	DESCRIPTION

FOR PERMIT

DRAWN BY:	JROJAS
CHECKED BY:	AMW
ISSUE DATE:	11/27/24
JOB #:	
PROJECT #:	419:650463614

JOHNSON CONTROLS © 2024

SYSTEM: **FIRE ALARM SYSTEM**

SHEET: **NODE-1 TRANSPONDER 1 4100ES CALCULATIONS AND SCHEDULES**

FA-601

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FILE PATH: C:\Users\rjojas87\OneDrive - Johnson Controls\1501 S Potomac - Aurora South\South Tower - Node 1\AT-CentralTower.MAU - 2024 - 650\MDB\14\Fire\FA-601.dwg
LAST SAVED BY: JROJAS87
LAST PRINTED: 11/26/2024 5:06:35 PM
30" x 42" Arch E1 Size

RSN: 1863018
Permit: 2024 2495050 LT
SHEET 1 OF 118

PANEL TERMINATION NOTES:

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

MEDICAL CENTER OF AURORA SOUTH NODE-1 TRANSPONDER-2 4100es XPDR

Module	Qty	Description	Standby Current	Total Standby	Alarm Current	Total Alarm
Panel Equipment						
4100-9600	*1*	*BASIC TRANSPONDER*	*0.0360*	*0.0360*	*0.0360*	*0.0360*
4100-3107	*1*	*IDNET+ MODULE, UP TO 250 POINTS* *	*0.0750*	*0.0750*	*0.1150*	*0.1150*
4100-0632	*1*	*UTILITY BLOC, 16 TERMINALS*	*0.0000*	*0.0000*	*0.0000*	*0.0000*
4100-5125	*1*	*REMOTE POWER SUPPLY W/CHARGER - 120VAC*	*0.1500*	*0.1500*	*0.1850*	*0.1850*
4100-5162	*1*	*INDICATOR ONLY, 2 BAY SOLID DOOR*	*0.0000*	*0.0000*	*0.0000*	*0.0000*
4100-5101	*1*	*EXPANSION PWR SUPPLY (XPS) - 120VAC 60HZ*	*0.0500*	*0.0500*	*0.0500*	*0.0500*
		Panel Totals		**0.3110**		**0.3860**
IDNet Addressable Devices (SLC)						
4009-9201	*1*	*4009 IDNET NAC EXTENDER, 120 VAC* *				
4090-9001	*2*	*IDNET SUPERVISED IAM* *				
4090-9002	*7*	*IDNET RELAY IAM* *				
4098-9714	*108*	*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	*2*	*TRUEALARM HEAT SENSOR*				
4098-9756	**3**	**TRUEALARM DUCT SMOKE SENSOR W/ RELAY OUTPUT** *				
4098-9771	*1*	*TRUEALARM SOUNDER BASE W/ CO MODULE* *				
4098-9792	*109*	*TRUEALARM SENSOR BASE* *				
4099-9004	*5*	*ADDRESSABLE SINGLE ACTION MANUAL STATION* *				
Miscellaneous Peripheral Devices That Require (Additional) System Power						
4098-9843	**3**	**ENCAPSULATED RELAY PAM-SD**		**0.0000**	**0.0000**	**0.0150**	**0.0450**
4098-9756	**3**	**TRUEALARM DUCT SMOKE SENSOR W/ RELAY OUTPUT**		**0.0030**	**0.0090**	**0.0150**	**0.0450**
2098-9806	**3**	**REMOTE TEST STATION W/ LED AND KEY SWITCH**		**0.0045**	**0.0135**	**0.0000**	**0.0000**
Notification Appliances		**Setting**				
4906-9101	*2*	*V/O MC NON-ADDRESS, RED, WALL*	*15*	*0.0000*	*0.0000*	*0.0600*	*0.1200*
4906-9104	*1*	*V/O MC NON-ADDRESS, WHT, CEILING*	*15*	*0.0000*	*0.0000*	*0.0750*	*0.0750*
4906-9104	*2*	*V/O MC NON-ADDRESS, WHT, CEILING*	*75*	*0.0000*	*0.0000*	*0.2330*	*0.4660*
CH70-24-R	*24*	*CHIME, 24 VDC, SQUARE, RED*	*CHIME*	*0.0000*	*0.0000*	*0.0220*	*0.5280*
CH70-24MCW-FR	*24*	*MULTI CD CHIME STROBE, WALL MNT, RED*	*15*	*0.0000*	*0.0000*	*0.0820*	*1.9680*
RSS-24MCW-FR	*11*	*MULTI CD STROBE, WALL MNT, RED*	*15*	*0.0000*	*0.0000*	*0.0600*	*0.6600*
		Peripheral Totals			**0.0225**		**3.9070**
		Address Totals	**128**	**Addresses**	**0.1024**		**0.1280**
		System Totals*:		**Standby**	**0.4359**	**Alarm**	**4.4210**

*** Device Address current draw included below (See Additional Current Draws):**
IDNet cards include 40mA alarm current for 20 device LEDs in alarm in addition to base current listed on datasheet.
1. Base FACP includes current draw for all included components. See data sheet for details.

Battery Set #1 (Cabinet/Charger #1) Select ALL Power Supplies on this battery set:				Standby Current	Standby Total	Alarm Current	Alarm Total
RPS-1					0.2835		2.5700
XPS-1					0.0500		1.7230
					Sub Total	**0.3335**		**4.2930**
Additional Current Draws:							
RUI Connected Peripheral Devices	0	x 0.0035	= 0.0000	x 0.0035	= 0.0000
MAPNET/IDNet Device Address Communication Current	128	x 0.000800	= 0.1024	x 0.001000	= 0.1280
			Sub Total	**0.4359**		**4.4210**
Spare addressable point capacity	**0%**	0	x 0.0008	= 0.0000	x 0.001	= 0.0000
			Total	**0.4359**		**4.4210**
Standby Time =	**24** Hrs	x 0.4359	= 10.4616	Standby Ah		
Alarm Time =	**5** Min	0.08333 x 4.421	= 0.3684	Alarm Ah		
			10.8300			
Additional Spare Battery Capacity =	**0%**		+ 0.0000			
			10.8300			
Battery Discharge Factor =	**25%**		+ 2.7075			
Minimum Battery Required	**2081-9275 18AH (2x)**		13.5375			
Battery Supplied	**2081-9276 33AH (2x)**					

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

IDNET CHANNEL 1:M9	ADDRESSES IN USE: 128 (51.2%) | SPARE ADDRESSES: 122 (48.8%)		SWITCH SETTINGS
Address	**Device Type**	**Point Type**	**Location Description**	**1 2 3 4 5 6 7 8**
1:M9-1	*PHOTO*	*VSMOKE*	*1:M9-1 2ND FL P-PARTUM PATIENT RM 201*	X . . . . ON
1:M9-2	*PHOTO*	*VSMOKE*	*1:M9-2 2ND FL P-PARTUM PATIENT RM 202*	. X . . . . . . ON
1:M9-3	*PHOTO*	*VSMOKE*	*1:M9-3 2ND FL P-PARTUM PATIENT RM 203*	X X . . . . . . ON
1:M9-4	*PHOTO*	*VSMOKE*	*1:M9-4 2ND FL P-PARTUM PATIENT RM 204*	. . X . . . . . ON
1:M9-5	*PHOTO*	*VSMOKE*	*1:M9-5 2ND FL P-PARTUM PATIENT RM 205*	X . X . . . . . ON
1:M9-6	*PHOTO*	*VSMOKE*	*1:M9-6 2ND FL P-PARTUM PATIENT RM 206*	. . X X . . . . ON
1:M9-7	*PHOTO*	*VSMOKE*	*1:M9-7 2ND FL P-PARTUM PATIENT RM 207*	X . X X . . . . ON
1:M9-8	*PHOTO*	*VSMOKE*	*1:M9-8 2ND FL P-PARTUM PATIENT RM 208*	. . . . X . . . ON
1:M9-9	*PHOTO*	*VSMOKE*	*1:M9-9 2ND FL P-PARTUM PATIENT RM 209*	X . . . X . . . ON
1:M9-10	*PHOTO*	*VSMOKE*	*1:M9-10 2ND FL P-PARTUM PATIENT RM 210*	. . X . X . . . ON
1:M9-11	*PHOTO*	*VSMOKE*	*1:M9-11 2ND FL P-PARTUM PATIENT RM 211*	X . X . X . . . ON
1:M9-12	*PHOTO*	*VSMOKE*	*1:M9-12 2ND FL P-PARTUM PATIENT RM 212*	. . . X X . . . ON
1:M9-13	*ADRPUL*	*PULL*	*1:M9-13 3RD FL TWR A STAIR #3*	X . . X X . . . ON
1:M9-14	*PHOTO*	*VSMOKE*	*1:M9-14 2ND FL P-PARTUM PATIENT RM 214*	. . X X X . . . ON
1:M9-15	*PHOTO*	*VSMOKE*	*1:M9-15 2ND FL P-PARTUM PATIENT RM 215*	X . X X X . . . ON
1:M9-16	*PHOTO*	*VSMOKE*	*1:M9-16 2ND FL P-PARTUM PATIENT RM 216*	. . . . X . . . ON
1:M9-17	*PHOTO*	*VSMOKE*	*1:M9-17 2ND FL P-PARTUM PATIENT RM 217*	X . . . X . . . ON
1:M9-18	*PHOTO*	*VSMOKE*	*1:M9-18 2ND FL P-PARTUM PATIENT RM 218*	. . X . X . . . ON
1:M9-19	*PHOTO*	*VSMOKE*	*1:M9-19 2ND FL P-PARTUM PATIENT RM 219*	X . X . X . . . ON
1:M9-20	*PHOTO*	*VSMOKE*	*1:M9-20 2ND FL P-PARTUM PATIENT RM 220*	. . X . X . . . ON
1:M9-21	*PHOTO*	*VSMOKE*	*1:M9-21 2ND FL P-PARTUM PATIENT RM 221*	X . X . X . . . ON
1:M9-22	*PHOTO*	*VSMOKE*	*1:M9-22 2ND FL P-PARTUM PATIENT RM 222*	. . X X X . . . ON
1:M9-23	*PHOTO*	*VSMOKE*	*1:M9-23 2ND FL P-PARTUM PATIENT RM 223*	X . X X X . . . ON
1:M9-24	*PHOTO*	*VSMOKE*	*1:M9-24 2ND FL P-PARTUM PATIENT RM 224*	. . . . X X . . ON
1:M9-25	*PHOTO*	*VSMOKE*	*1:M9-25 2ND FL P-PARTUM PATIENT RM 225*	X . . . X X . . ON
1:M9-26	*PHOTO*	*VSMOKE*	*1:M9-26 2ND FL P-PARTUM PATIENT RM 226*	. . X . X X . . ON
1:M9-27	*PHOTO*	*VSMOKE*	*1:M9-27 2ND FL P-PARTUM WAITING RM 227*	X . X . X X . . ON
1:M9-28	*IAM*	*WATER*	*1:M9-28 3RD FL PEDS WATER FLOW*	. . . X X X . . ON
1:M9-29	*PHOTO*	*VSMOKE*	*1:M9-29 3RD FL ELEC 3-0134*	X . . X X X . . ON
1:M9-30	*PHOTO*	*VSMOKE*	*1:M9-30 2ND FL P-PARTUM ON-CALL RM 200*	. . X X X X . . ON
1:M9-31	*PHOTO*	*VSMOKE*	*1:M9-31 2ND FL P-PARTUM WAITING RM 234*	X . X X X X . . ON
1:M9-32				. . . . . X . . ON
1:M9-33				X . . . . X . . ON
1:M9-34	*PHOTO*	*VSMOKE*	*1:M9-34 3RD FL PEDS CORR*	. . X . . X . . ON
1:M9-35	*PHOTO*	*VSMOKE*	*1:M9-35 3RD FL PEDS PAT RM 305*	X . X . . X . . ON
1:M9-36	*PHOTO*	*VSMOKE*	*1:M9-36 3RD FL PEDS PAT RM 306*	. . . X . X . . ON
1:M9-37				X . . X . X . . ON
1:M9-38	*PHOTO*	*VSMOKE*	*1:M9-38 3RD FL PEDS PAT RM 307*	. . X X . X . . ON
1:M9-39				X . X . . X . . ON
1:M9-40				. . . . X X . . ON
1:M9-41	*PHOTO*	*VSMOKE*	*1:M9-41 3RD FL PEDS ELEV #4 LOBBY*	X . . . X X . . ON
1:M9-42				. . X . X X . . ON
1:M9-43	*PHOTO*	*VSMOKE*	*1:M9-43 3RD FL PEDS SOILED UTIL*	X . X . X X . . ON
1:M9-44	*PHOTO*	*VSMOKE*	*1:M9-44 3RD FL PEDS CORR O/S 311*	. . . X X X . . ON
1:M9-45	*PHOTO*	*VSMOKE*	*1:M9-45 3RD FL PEDS PAT RM 311*	X . . X X X . . ON
1:M9-46	*PHOTO*	*VSMOKE*	*1:M9-46 3RD FL PEDS PAT RM 310*	. . X X X X . . ON
1:M9-47	*PHOTO*	*VSMOKE*	*1:M9-47 3RD FL PEDS PICU RM 309*	X . X X . X . . ON
1:M9-48	*PHOTO*	*VSMOKE*	*1:M9-48 3RD FL PEDS STAFF LOUNGE*	. . . . X X . . ON
1:M9-49				X . . . . X . . ON
1:M9-50	*PHOTO*	*VSMOKE*	*1:M9-50 3RD FL PEDS NURSE STATION*	. . X . . X . . ON
1:M9-51	*PHOTO*	*VSMOKE*	*1:M9-51 2ND FL P-PARTUM NORTH CORR*	X . X . . X . . ON
1:M9-52	*PHOTO*	*VSMOKE*	*1:M9-52 2ND FL P-PARTUM 2A-HALL-01*	. . . X . X . . ON
1:M9-53	*PHOTO*	*VSMOKE*	*1:M9-53 3RD FL PEDS FAMILY RM*	X . . X . X . . ON
1:M9-54	*PHOTO*	*VSMOKE*	*1:M9-54 3RD FL PEDS CORR PICU RM 308*	. . X X . X . . ON
1:M9-55	*PHOTO*	*VSMOKE*	*1:M9-55 3RD FL PEDS PICU RM 308*	X . X . . X . . ON
1:M9-56	*PHOTO*	*VSMOKE*	*1:M9-56 3RD FL PEDS CLEAN UTILITY*	. . . . X X . . ON
1:M9-57	*PHOTO*	*VSMOKE*	*1:M9-57 3RD FL PEDS STORAGE*	X . . . X X . . ON
1:M9-58	*RIAM*	*DHOLDER*	*1:M9-58 3RD FL PEDS ELEV #4 LOBBY*	. . X . X X . . ON
1:M9-59	*RIAM*	*DHOLDER*	*1:M9-59 3RD FL TELE CLOSET 3-0150.1*	X . X . X X . . ON
1:M9-60	*4009A4*	*SIGNAL*	*1:M9-60 3RD FL PEDS ELEC*	. . . X X X . . ON
1:M9-61	*PHOTO*	*VSMOKE*	*1:M9-61 3RD FL PEDS CORR O/S 307*	X . . X X X . . ON
1:M9-62	*PHOTO*	*VSMOKE*	*1:M9-62 3RD FL PEDS SOILED UTIL BACK RM*	. . X X X X . . ON
1:M9-63	*ADRPUL*	*PULL*	*1:M9-63 2ND FL P-PARTUM NURSE 248*	X . X X X X . . ON
1:M9-64	*HEAT*	*HEAT*	*1:M9-64 FL 3 TWR A EAST MECH RM 3EG02*	. . . . . . X . ON
1:M9-65				X . . . . . X . ON
1:M9-66				. . X . . . X . ON
1:M9-67	*HEAT*	*HEAT*	*1:M9-67 3RD FL TWR A MECH RM 3EG03*	X . . . . . X . ON
1:M9-68	*RPHOTO*	*SDUCT*	*1:M9-68 3RD FL TWR A MECH RM SUPPLY*	. . . X . . X . ON
1:M9-69				X . . X . . X . ON
1:M9-70	*PHOTO*	*VSMOKE*	*1:M9-70 2ND FL L&D NURSERY 254*	. . X X . . X . ON
1:M9-71	*PHOTO*	*VSMOKE*	*1:M9-71 2ND FL L&D NURSING STATION C*	X . X X . . X . ON
1:M9-72	*PHOTO*	*VSMOKE*	*1:M9-72 2ND FL L&D MEDICATION 258*	. . . . X . X . ON
1:M9-73	*PHOTO*	*VSMOKE*	*1:M9-73 2ND FL L&D BATH 258B*	X . . . X . X . ON
1:M9-74	*PHOTO*	*VSMOKE*	*1:M9-74 2ND FL L&D SUPPLY SCAN*	. . X . X . X . ON
1:M9-75	*PHOTO*	*VSMOKE*	*1:M9-75 2ND FL L&D ISOLATION ROOM 1*	X . X . X . X . ON
1:M9-76	*PHOTO*	*VSMOKE*	*1:M9-76 2ND FL L&D ISOLATION ROOM 2*	. . . X X . X . ON
1:M9-77	*PHOTO*	*VSMOKE*	*1:M9-77 2ND FL L&D SLEEP ROOM*	X . . X X . X . ON
1:M9-78	*PHOTO*	*VSMOKE*	*1:M9-78 2ND FL L&D NURSEY 257*	. . X X X . X . ON
1:M9-79	*PHOTO*	*VSMOKE*	*1:M9-79 2ND FL L&D DELIVERY WEST*	X . X X X . X . ON
1:M9-80	*PHOTO*	*VSMOKE*	*1:M9-80 2ND FL L&D SOILED UTILITY 269*	. . . . . X X . ON
1:M9-81	*PHOTO*	*VSMOKE*	*1:M9-81 2ND FL L&D GOWN & SCRUB AREA 256*	X . . . . X X . ON
1:M9-82	*PHOTO*	*VSMOKE*	*1:M9-82 2ND FL L&D NURSERY 255*	. . X . . X X . ON
1:M9-83	*ADRPUL*	*PULL*	*1:M9-83 2ND FL P-PARTUM NURSE STATION*	X . X . . X X . ON
1:M9-84	*ADRPUL*	*PULL*	*1:M9-84 2ND FL P-PARTUM MAIN ENTRY*	. . . X . X X . ON
1:M9-85	*PHOTO*	*VSMOKE*	*1:M9-85 3RD FL TWR A HALL BY ELEV*	X . . X . X X . ON
1:M9-86	*PHOTO*	*VSMOKE*	*1:M9-86 3RD FL TWR A HALL BY WAITING RM*	. . X X . X X . ON
1:M9-87	*PHOTO*	*VSMOKE*	*1:M9-87 FL 3 TWR A BY PATIENT RM 302*	X . X X . X X . ON
1:M9-88	*PHOTO*	*VSMOKE*	*1:M9-88 FL 3 TWR A BY PATIENT RM 304*	. . . . X X X . ON
1:M9-89	*PHOTO*	*VSMOKE*	*1:M9-89 FL 3 TWR A CORR 3MS54 S. @ ELEV*	X . . . X X X . ON
1:M9-90	*RIAM*	*DHOLDER*	*1:M9-90 FL 3 TWR A PAT ROOM 325*	. . X . X X X . ON
1:M9-91	*PHOTO*	*VSMOKE*	*1:M9-91 FL 3 TWR A BY PAT RM 328*	X . X . X X X . ON
1:M9-92	*PHOTO*	*VSMOKE*	*1:M9-92 FL 3 TWR A PAT RM 321*	. . . X X X X . ON
1:M9-93	*PHOTO*	*VSMOKE*	*1:M9-93 FL 3 TWR A PAT RM 320*	X . . X X X X . ON
1:M9-94	*PHOTO*	*VSMOKE*	*1:M9-94 FL 3 TWR A PAT RM 319*	. . X X X X X . ON
1:M9-95	*PHOTO*	*VSMOKE*	*1:M9-95 FL 3 TWR A PAT RM 318*	X . X X X X X . ON
1:M9-96	*PHOTO*	*VSMOKE*	*1:M9-96 FL 3 TWR A PAT RM 317*	. . . . . X X . ON
1:M9-97	*IAM*	*WATER*	*1:M9-97 3RD FL TWR A CLEAN UTILITY 3MS40*	X . . . . X X . ON
1:M9-98	*PHOTO*	*VSMOKE*	*1:M9-98 FL 3 TWR A PAT RM 316*	. . X . . X X . ON
1:M9-99	*PHOTO*	*VSMOKE*	*1:M9-99 FL 3 TWR A BY PAT RM 330*	X . X . . X X . ON
1:M9-100	*PHOTO*	*VSMOKE*	*1:M9-100 3RD FL TWR A STAFF RM 3MS38*	. . . X . X X . ON
1:M9-101	*PHOTO*	*VSMOKE*	*1:M9-101 3RD FL TWR A BY RM 315*	X . . X . X X . ON
1:M9-102	*PHOTO*	*VSMOKE*	*1:M9-102 3RD FL TWR A BY RM 317*	. . X X . X X . ON
1:M9-103	*PHOTO*	*VSMOKE*	*1:M9-103 3RD FL TWR A BY RM 318*	X . X X . X X . ON
1:M9-104	*PHOTO*	*VSMOKE*	*1:M9-104 3RD FL TWR A BY RM 321*	. . . . X X X . ON
1:M9-105	*ADRPUL*	*PULL*	*1:M9-105 3RD FL TWR A NE STAIR #1*	X . . . X X X . ON
1:M9-106	*RIAM*	*RRELAY*	*1:M9-106 3RD FL TWR A MECH RM DAMPERS*	. . X . X X X . ON
1:M9-107	*PHOTO*	*VSMOKE*	*1:M9-107 FL 3 TWR A PAT RM 303*	X . X . X X X . ON
1:M9-108	*PHOTO*	*VSMOKE*	*1:M9-108 FL 3 TWR A PAT RM 304*	. . . X X X X . ON
1:M9-109				X . . X . X X . ON
1:M9-110	*MCOPS*	*UTILITY*	*1:M9-110 FL 3 TWR A SLEEP ROOM 3MS36A*	. . X X . X X . ON
1:M9-111				X . X X . X X . ON
1:M9-112	*PHOTO*	*VSMOKE*	*1:M9-112 3RD FL TWR A CORR 3MS52*	. . . . X X X . ON
1:M9-113	*PHOTO*	*VSMOKE*	*1:M9-113 3RD FL TWR A CORR 3MS53 N*	X . . . X X X . ON
1:M9-114	*PHOTO*	*VSMOKE*	*1:M9-114 3RD FL TWR A 3MS53 N @ ELEV*	. . X . X X X . ON
1:M9-115	*RIAM*	*RELAY*	*1:M9-115 3RD FL TWR A CTL B ELEV ROLLDN*	X . X . . X X . ON
1:M9-116	*RIAM*	*RELAY*	*1:M9-116 3RD FL TWR A CTL B ELEV ROLLDN*	. . . X . X X . ON
1:M9-117	*RIAM*	*RELAY*	*1:M9-117 3RD FL TWR A CTL B ELEV ROLLDN*	X . . X . X X . ON
1:M9-118	*PHOTO*	*VSMOKE*	*1:M9-118 3RD FL TWR A PAT RM 328*	. . X X . X X . ON
1:M9-119	*PHOTO*	*VSMOKE*	*1:M9-119 3RD FL TWR A PAT RM 329*	X . X X . X X . ON
1:M9-120	*PHOTO*	*VSMOKE*	*1:M9-120 3RD FL TWR A PAT RM 330*	. . . . X X X . ON
1:M9-121	*PHOTO*	*VSMOKE*	*1:M9-121 3RD FL TWR A PAT RM 331*	X . . . X X X . ON
1:M9-122	*PHOTO*	*VSMOKE*	*1:M9-122 3RD FL TWR A PAT RM 332*	. . X . X X X . ON
1:M9-123	*PHOTO*	*VSMOKE*	*1:M9-123 3RD FL TWR A PAT RM 333*	X . X . X X X . ON
1:M9-124	*PHOTO*	*VSMOKE*	*1:M9-124 3RD FL TWR A ISO PAT RM 334*	. . . X X X X . ON
1:M9-125	*PHOTO*	*VSMOKE*	*1:M9-125 3RD FL TWR A CORR BY RM 334*	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.

IDNET CHANNEL 1:M9	ADDRESSES IN USE: 128 (51.2%) | SPARE ADDRESSES: 122 (48.8%)		SWITCH SETTINGS
Address	**Location Description**	**1 2 3 4 5 6 7 8**
1:M9-126	*1:M9-126 3RD FL TWR A PAT ROOM 301*	. X X X X X X . ON
1:M9-127	*1:M9-127 3RD FL TWR A PAT ROOM 302*	X X X X X X X . ON
1:M9-128	*1:M9-128 3RD FL TWR A WAITING RM 3AM01*	. . . . . . X . ON
1:M9-129	*1:M9-129 3RD FL TWR A IDF RM 3MS45*	X . . . . . X . ON
1:M9-130	*1:M9-130 3RD FL TWR A MEDS RM 3MS46*	. X . . . . X . ON
1:M9-131	*1:M9-131 3RD FL TWR A PAT RM 327*	X X . . . . X . ON
1:M9-132	*1:M9-132 3RD FL TWR A CORR BY RM 332*	. . X . . . X . ON
1:M9-133	*1:M9-133 3RD FL TWR A CORR 3MS62*	X . X . . . X . ON
1:M9-134	*1:M9-134 3RD FL TWR A CORR BY RM 3MS016*	. X X . . . X . ON
1:M9-135	*1:M9-135 3RD FL TWR A PAT RM 315*	X X X . . . X . ON
1:M9-136	*1:M9-136 3RD FL TWR A PAT RM 314*	. . . X . . X . ON
1:M9-137	*1:M9-137 3RD FL TWR A PAT RM 313*	X . . X . . X . ON
1:M9-138	*1:M9-138 3RD FL TWR A PAT RM 312*	. . X . X . X . ON
1:M9-139	**RPHOTO**	**LSDUCT**	**1:M9-141 3RD FL TWR A MECH RM SUP FSD**	X X . X . . X . ON
1:M9-140	**RPHOTO**	**LSDUCT**	**1:M9-142 3RD FL TWR A MECH RM RET FSD**	. . X X . . X . ON
1:M9-141			*SPARE*	X . X X . . X . ON
THRU				. . . . ON
1:M9-250			*SPARE*	. 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.

City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: *Rich Tenorio*
Date: *Dec 13, 2024*
2021 INTERNATIONAL CODES & 2023 NEC

Johnson Controls
DISTRICT: 145
10065 E. MISSISSIPPI AVE
AURORA, CO 80017
SERVICE: 303-355-6000
PHONE 303.355.9000
FAX 303.355.9015

NICET CERTIFICATION INFORMATION
CALE RAUCH
NICET Fire Alarm, III
Certification #151588
Valid Through: 12/01/25
11/28/2024

THE MEDICAL CENTER OF AURORA - SOUTH CENTRAL TOWER MAU

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

ISSUE LOG: MARK | DATE | CAD | CHK | DESCRIPTION — Revisions shown with △ symbol

FOR PERMIT

DRAWN BY:	JROJAS
CHECKED BY:	AMW
ISSUE DATE:	11/27/24
JOB #:	
PROJECT #:	419-650463614

JOHNSON CONTROLS © 2024

SYSTEM: **FIRE ALARM SYSTEM**

SHEET: **NODE-1 TRANSPONDER 2 4100ES CALCULATIONS AND SCHEDULES**

FA-602

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FILE PATH: C:\Users\jrojas87\OneDrive - Johnson Controls\1501 S Potomac - Aurora South\South Tower - Node 1\AT-CentralTower MAU - 2024 - 650MD614\Fire\FA-B01.dwg
LAST SAVED BY: JROJAS87
LAST PRINTED: 11/28/2024 5:06:36 PM
30" x 42" Arch E1 Size

MEDICAL CENTER OF AURORA SOUTH NODE-1 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*
4009-9601	*1*	*IDNAC REPEATER 120V PLATINUM UL/ULC*	*0.0700*	*0.0700*	*0.0960*	*0.0960*
4100-96xx	*3*	*REMOTE ANNUNCIATORS & MINIPLEX TRANSPONDERS *		*RUI CURRENT DRAWS INCLUDED BELOW*		
		Panel Totals		**3.2310**		**5.5690**
IDNet Addressable Devices (SLC)						
4090-9001	*7*	*IDNET SUPERVISED IAM *		*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".*		
4090-9002	*1*	*IDNET RELAY IAM *				
4098-9714	*48*	*TRUEALARM PHOTO SMOKE SENSOR*				
4098-9733	*8*	*TRUEALARM HEAT SENSOR*				
4098-9756	**7**	**TRUEALARM DUCT SMOKE SENSOR W/ RELAY OUTPUT ***				
4098-9789	*1*	*TRUEALARM SENSOR BASE W/ LED OUTPUT *				
4098-9792	*55*	*TRUEALARM SENSOR BASE *				
4090-9006	*12*	*ADDRESSABLE DOUBLE ACTION MANUAL STATION, PUSH *				
Mapnet Addressable Devices (SLC)						
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	*20*	*MAPNET SINGLE ACTION PULL STATION *				
4098-9714	*305*	*TRUEALARM PHOTO SMOKE SENSOR*				
4098-9733	*32*	*TRUEALARM HEAT SENSOR*				
4098-9756	**38**	**TRUEALARM DUCT SMOKE SENSOR W/ RELAY OUTPUT ***				
4098-9789	*293*	*TRUEALARM SENSOR BASE W/ LED OUTPUT *				
4098-9792	*44*	*TRUEALARM SENSOR BASE *				
4090-9008	*3*	*ADDRESSABLE DUAL CONTACT RELAY IAM *				
Miscellaneous Peripheral Devices That Require (Additional) System Power						
4098-9843	**45**	**ENCAPSULATED RELAY PAM-SD**	**0.0000**	**0.0000**	**0.0150**	**0.6750**
4098-9756	**45**	**TRUEALARM DUCT SMOKE SENSOR W/ RELAY OUTPUT**	**0.0030**	**0.1350**	**0.0150**	**0.6750**
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	**41**	**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	*2*	*ENCAPSULATED RELAY PAM-1*	*0.0000*	*0.0000*	*0.0150*	*0.0300*
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	*88*	*CHT0-2415W-FR,CHIME/STROBE, NON-SYNC,RED, WALL MTD*	*15*	*0.0000*	*0.0000*	*0.0700*	*6.1600*
4904-9137	*105*	*15CD VISIBLE ONLY RED*	*15*	*0.0000*	*0.0000*	*0.0900*	*9.4500*
4906-9101	*1*	*W/O MC NON-ADDRESS, RED, WALL*	*15*	*0.0000*	*0.0000*	*0.0600*	*0.0600*
4906-9101	*5*	*W/O MC NON-ADDRESS, RED, WALL*	*75*	*0.0000*	*0.0000*	*0.1860*	*0.9300*
CHT0-241575W-FR (C)	*1*	*CHIME, NON-SYNC,RED, WALL MTD*	*CHIME*	*0.0000*	*0.0000*	*0.0220*	*0.0220*
CHT0-24MCW-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**				
4009-9601	*1*	*IDNAC REPEATER 120V PLATINUM UL/ULC *		*0.0032*	*0.0032*	*0.0032*	*0.0032*
4905-9929	*2*	*TRUEALERT ISOLATOR MODULE*		*0.0032*	*0.0064*	*0.0100*	*0.0200*
49MTV-WRF	*38*	*MULTI-TONE A/V, RED, WALL MOUNT*	*15*	*0.0016*	*0.0608*	*0.1450*	*5.5100*
49MTV-WRF	*1*	*MULTI-TONE A/V, RED, WALL MOUNT*	*185*	*0.0016*	*0.0016*	*0.2990*	*0.2990*
49MTV-WRF	*5*	*MULTI-TONE A/V, RED, WALL MOUNT*	*30*	*0.0016*	*0.0080*	*0.1630*	*0.8150*
49VO-APPLC	*31*	*STROBE, APPLIANCE ONLY, CEILING MOUNT*	*15*	*0.0008*	*0.0248*	*0.0550*	*1.7050*
49VO-APPLC	*1*	*STROBE, APPLIANCE ONLY, CEILING MOUNT*	*30*	*0.0008*	*0.0008*	*0.0830*	*0.0830*
49VO-APPLC	*1*	*STROBE, APPLIANCE ONLY, CEILING MOUNT*	*75*	*0.0008*	*0.0008*	*0.1530*	*0.1530*
49VO-WRFO	*2*	*VO, WALL MT, RED, FIRE LABEL, WEATHERPROOF*	*15*	*0.0008*	*0.0016*	*0.0600*	*0.1200*
49VO-WRF	*4*	*VO, WALL MT, RED, FIRE LABEL*	*15*	*0.0008*	*0.0032*	*0.0470*	*0.1880*
49VOH-APPLCR	*2*	*STROBE, APPLIANCE ONLY, CEILING MOUNT, RED LENS*	*75*	*0.0008*	*0.0016*	*0.1280*	*0.2560*
		Total IDNac Device Current:		**0.1128**		**9.1522**
		IDNac Current Boost for 29vdc Regulated Output **				**5.2178**
		Peripheral Totals		**1.5660**		**36.9600**
		RUI Totals **16**		**0.0560**		**0.0560**
		Address Totals **598.5 Addresses**		**0.9428**		**0.9594**
		System Totals*: **Standby**		**5.9086**	**Alarm**	**43.5444**

*** 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		11.0640
PS-3				1.9310		8.9410
XPS-1				0.1560		0.5110
XPS-2				0.1000		0.1500
EPS-1				0.3380		8.0972
			Sub Total	**4.8930**		**35.7152**
Additional Current Draws:						
RUI Connected Peripheral Devices	16	x 0.0035		= 0.0560	x 0.0035	= 0.0560
MAPNET/IDNet Device Address Communication Current	599	x 0.001575		= 0.9428	x 0.001603	= 0.9594
		Sub Total		**5.8918**		**41.0385**
Spare addressable point capacity	**20%**	120	x 0.001575	= 0.1890	x 0.001603	= 0.1924
			Total	**6.0808**		**41.2309**
Standby Time = **4** Hrs		x 6.0808		= 24.3231 Standby Ah		
Alarm Time = **5** Min		0.08333 x 41.2309		= 3.4359 Alarm Ah		
				27.7590		
Additional Spare Battery Capacity = **20%**			+	5.5518		
				33.3108		
Battery Discharge Factor = **25%**			+	8.3277		
Minimum Battery Required **2081-9296 50AH (2x)**				**41.6385**		
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.**

Repeater Power Supply Battery Set:			**Standby Total**	**Alarm Total**
EPR-1			0.0168	**1.5960**
Additional Current Draw:				
IDNac Current Boost for 29vdc Regulated Output **			0.0000	0.9099
		Total	**0.0168**	**2.5059**
Standby Time = **4** Hrs		x 0.0168	= 0.0672 Standby Ah	
Alarm Time = **5** Min		0.08333 x 2.5059	= 0.2088 Alarm Ah	
			0.2760	
Additional Spare Battery Capacity = **20%**		+	0.0552	
			0.3312	
Battery Discharge Factor = **25%**		+	0.0828	
Minimum Battery Required **2081-9272 6.2AH (2x)**			**0.4140**	
Battery Supplied **2081-9274 10AH (2x)**				

IDNET CHANNEL 1:M12	**ADDRESSES IN USE: 32 (12.8%) | SPARE ADDRESSES: 218 (87.2%)**			**SWITCH SETTINGS**							
Address	**Device Type**	**Point Type**	**Location Description**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
1:M12-1	*PHOTO*	*SMOKE*	*1:M12-1 5TH FL TWR A BY RM 500*	X							ON
1:M12-2	*PHOTO*	*SMOKE*	*1:M12-2 5TH FL TWR A BY RM 502*		X						ON
1:M12-3	*PHOTO*	*SMOKE*	*1:M12-3 5TH FL TWR A BY RM 503*	X	X						ON
1:M12-4	*PHOTO*	*SMOKE*	*1:M12-4 5TH FL TWR A BY WAITING ROOM*			X					ON
1:M12-5	*PHOTO*	*SMOKE*	*1:M12-5 5TH FL TWR A BY RM 506*	X		X					ON
1:M12-6	*PHOTO*	*SMOKE*	*1:M12-6 5TH FL TWR A BY RM 508*		X	X					ON
1:M12-7	*PHOTO*	*SMOKE*	*1:M12-7 5TH FL TWR A BY RM 509*	X	X	X					ON
1:M12-8	*PHOTO*	*SMOKE*	*1:M12-8 5TH FL TWR A BY RM 511*				X				ON
1:M12-9	*PHOTO*	*SMOKE*	*1:M12-9 5TH FL TWR A BY RM 513*	X			X				ON
1:M12-10	*PHOTO*	*SMOKE*	*1:M12-10 5TH FL TWR A BY RM 516*		X		X				ON
1:M12-11	*PHOTO*	*SMOKE*	*1:M12-11 5TH FL TWR A BY RM 518*	X	X		X				ON
1:M12-12	*PHOTO*	*SMOKE*	*1:M12-12 5TH FL TWR A BY RM 520*			X	X				ON
1:M12-13	*PHOTO*	*SMOKE*	*1:M12-13 5TH FL TWR A BY RM 521*	X		X	X				ON
1:M12-14	*PHOTO*	*SMOKE*	*1:M12-14 5TH FL TWR A BY RM 523*		X	X	X				ON
1:M12-15	*PHOTO*	*SMOKE*	*1:M12-15 5TH FL TWR A BY RM 524*	X	X	X	X				ON
1:M12-16	*PHOTO*	*SMOKE*	*1:M12-16 5TH FL TWR A BY RM 526*					X			ON
1:M12-17	*PHOTO*	*SMOKE*	*1:M12-17 5TH FL TWR A BY RM 529*	X				X			ON
1:M12-18	*HEAT*	*HEAT*	*1:M12-18 5TH FL TWR A MECH RM*		X			X			ON
1:M12-19	*RPHOTO*	*SDUCT*	*1:M12-19 5TH FL TWR A MECH RM AHU-5*	X	X			X			ON
1:M12-20	*RPHOTO*	*SDUCT*	*1:M12-20 5TH FL TWR A MECH RM AHU-5*			X		X			ON
1:M12-21	*IAM*	*WATER*	*1:M12-21 5TH FL TWR A EAST (IN MED RM)*	X		X		X			ON
1:M12-22	*IAM*	*WATER*	*1:M12-22 5TH FL TWR A WEST (IN NOURISH)*		X	X		X			ON
1:M12-23	*ADRPUL*	*PULL*	*1:M12-23 5TH FL TWR A WEST STAIR 3*	X	X	X		X			ON
1:M12-24	*ADRPUL*	*PULL*	*1:M12-24 5TH FL TWR A N.E. STAIR 1*				X	X			ON
1:M12-25	*PHOTO*	*SMOKE*	*1:M12-25 5TH FL TWR A N.E. STAIR 1*	X			X	X			ON
1:M12-26	*PHOTO*	*SMOKE*	*1:M12-26 5TH FL TWR A WEST STAIR 3*		X		X	X			ON
1:M12-27	*HEAT*	*HEAT*	*1:M12-27 5TH FL TWR A ELECTRICAL*	X	X		X	X			ON
1:M12-28	*RIAM*	*CDAMPER*	*1:M12-28 5TH FL TWR A MECH RM*			X	X	X			ON
1:M12-29	**RPHOTO**	**LSDUCT**	**1:M12-29 5TH FL TWR A MECH RM SUP FSD**	X		X	X	X			ON
1:M12-30	**RPHOTO**	**LSDUCT**	**1:M12-30 5TH FL TWR A MECH RM RET FSD**		X	X	X	X			ON
1:M12-31	**RPHOTO**	**LSDUCT**	**1:M12-31 ROOF TWR A MECH RM SUP FSD**	X	X	X	X	X			ON
1:M12-32	**RPHOTO**	**LSDUCT**	**1:M12-32 ROOF TWR A MECH RM RET FSD**						X		ON
1:M12-33			*SPARE*	X					X		ON
THRU											ON
1:M12-250			*SPARE*		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.

PANEL TERMINATION NOTES:

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

RSN: 1863018
Permit: 2024 2495050 LT
ENGR: 9118

City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: *Rich Tenorio*
Date: *Dec 13, 2024*
2021 INTERNATIONAL CODES & 2023 NEC

Johnson Controls
DISTRICT 1-418
10065 E. HARVARD AVE
AURORA, CO 80017
SERVICE: 303-355-0500
PHONE: 303-350-9500
FAX: 303-355-9415

NICET CERTIFICATION INFORMATION
CALE RAUCH
NICET Fire Alarm, III
Certification #151588
Valid Through: 12/01/25
11/28/2024

THE MEDICAL CENTER OF AURORA - SOUTH CENTRAL TOWER MAU

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

Revisions shown with ⚠ symbol

ISSUE LOG MARK	DATE	CAD	CHK	DESCRIPTION

FOR PERMIT

DRAWN BY:	JROJAS
CHECKED BY:	AMW
ISSUE DATE:	11/27/24
JOB #:	
PROJECT #:	419-65046364

JOHNSON CONTROLS © 2024

SYSTEM: **FIRE ALARM SYSTEM**

SHEET: **NODE-1 4100ES FACP CALCULATIONS AND SCHEDULES**

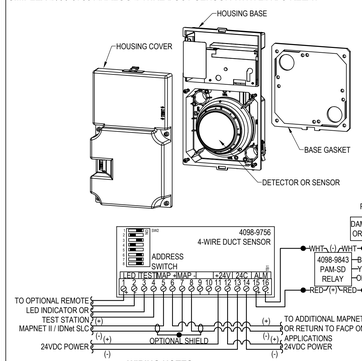
FA-603

FILE PATH: C:\Users\jrojas\OneDrive - Johnson Controls\1501 S Potomac - Aurora South\South Tower - Node 1\AT_CentralTower.MAU - 2024 - 65046364\14Fire\FA-601.dwg
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LAST PRINTED: 11/26/2024 5:06:36 PM
36" x 42" - Arch E1 Size

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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.

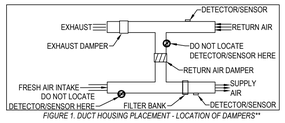


*FIGURE 1. DUCT HOUSING PLACEMENT - LOCATION OF DAMPERS***

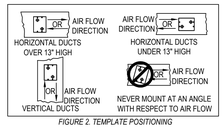


FIGURE 2. TEMPLATE POSITIONING

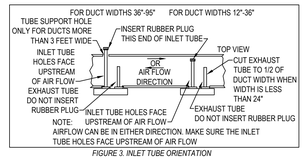


FIGURE 3. INLET TUBE ORIENTATION

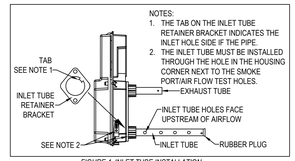


FIGURE 4. INLET TUBE INSTALLATION

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

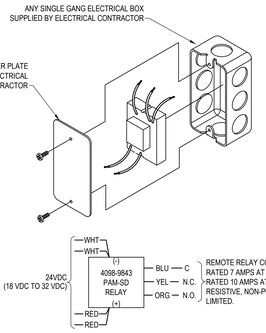
TABLE 1. INLET TUBE SELECTION

* 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.

24VDC POLARIZED RELAY

SIMPLEX 4098-9843 / APOLLO AMERICA PAM-SD



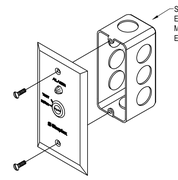
WIRING NOTES

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

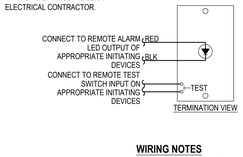
FOR ADDITIONAL DETAILS SEE DATA SHEET 2088-0010 ON HTTP://WWW.SIMPLEX-FIRE.COM

REMOTE ALARM INDICATOR / KEY SWITCH

SIMPLEX 2098-9806



FLUSH MOUNTING



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.

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.	2004, 2008, 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 MAPNETII 2 PT I/O 4-20MA ZAM (TROUBLE)
4081-9005	733-984	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 MR-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), IAM SUPERVISION	2050, 2250, 4006, 4008, 4010, 4090-5258 MX IAM
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
4081-9020	734-246	200	RED	BLK	BRN	GLD	N/A	1/2	N.O. OR N.C. CONTACT SUPERVISION	4090-5258 MX IAM

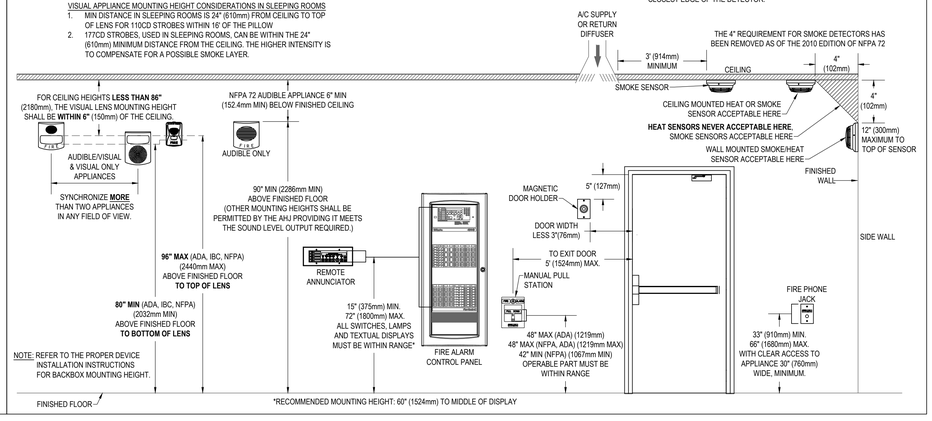
* USE WITH RETROFIT OR HIGH CURRENT MODULE

DEVICE MOUNTING HEIGHT REFERENCE

PER NFPA 72

VISUAL APPLIANCE MOUNTING HEIGHT CONSIDERATIONS IN SLEEPING ROOMS

1. MIN DISTANCE IN SLEEPING ROOMS IS 24" (610mm) FROM CEILING TO TOP OF LENS FOR 110CD STROBES WITHIN 16' OF THE PILLOW
2. 177CD STROBES, USED IN SLEEPING ROOMS, CAN BE WITHIN THE 24" (610mm) MINIMUM DISTANCE FROM THE CEILING. THE HIGHER INTENSITY IS TO COMPENSATE FOR A POSSIBLE SMOKE LAYER.



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NICET CERTIFICATION INFORMATION

CALE RAUCH
NICET Fire Alarm, III
Certification #151588
Valid Through: 12/01/25

11/28/2024

THE MEDICAL CENTER OF AURORA - SOUTH CENTRAL TOWER MAU

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

ISSUE LOG

MARK	DATE	CAD	CHK	DESCRIPTION

Revisions shown with ⚠ symbol

FOR PERMIT

DRAWN BY:	JROJAS
CHECKED BY:	AMW
ISSUE DATE:	11/27/24
JOB #:	
PROJECT #:	419-650463614

JOHNSON CONTROLS © 2024

SYSTEM: **FIRE ALARM SYSTEM**

SHEET: **TYPICAL DEVICE WIRING**

FA-701

FILE PATH: C:\Users\rojojas87\OneDrive - Johnson Controls\1501 S Potomac - Aurora South\South Tower - Node 1\AT-CentralTower-MAU - 2024 - 650MD5614\FireFA-701.dwg
LAST SAVED BY: JROJAS87
LAST PRINTED: 11/28/2024 5:06:40 PM
36" x 42" Arch E1 Size

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GRAPHIC MAP NOTES:

1. THIS 36"X48" GRAPHIC MAP IS NOT SHOWN TO SCALE.

RSN: 1863018
Permit: 2024 2495050 LT
Sheet 8 of 18

THE MEDICAL CENTER OF AURORA
1501 S. POTOMAC ST
AURORA, COLORADO 80012

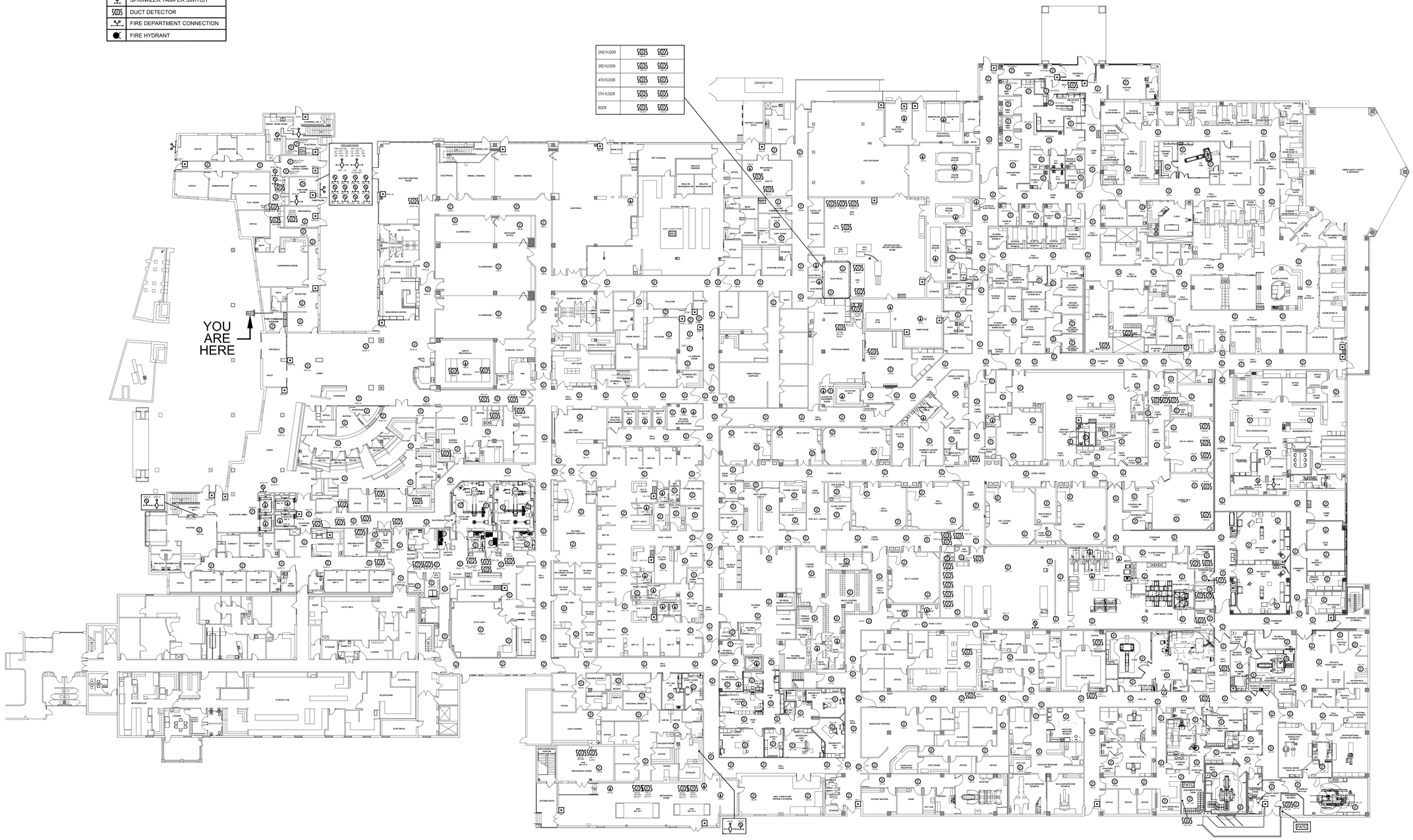
AS OF: 11/19/2024

City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: *Rich Tenorio*
Date: *Dec 13, 2024*
2021 INTERNATIONAL CODES & 2023 NEC

LEGEND:

FACP	FIRE ALARM CONTROL PANEL
FATC	FIRE ALARM TERMINAL CABINET
ANN	FIRE ALARM ANNUNCIATOR
MAP	GRAPHIC ZONE MAP
	SMOKE DETECTOR
	HEAT DETECTOR
	MANUAL PULL STATION
KH	KITCHEN HOOD SYSTEM
	SPRINKLER WATERFLOW VALVE
	SPRINKLER TAMPER SWITCH
	DUCT DETECTOR
	FIRE DEPARTMENT CONNECTION
	FIRE HYDRANT

2ND FLOOR	
3RD FLOOR	
4TH FLOOR	
5TH FLOOR	
ROOF	



Johnson Controls
AURORA (303) 355-0500

The Medical Center of Aurora
Health ONE

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NICET CERTIFICATION INFORMATION

CALE RAUCH
NICET Fire Alarm, III
Certification #151588
Valid Through: 12/01/25

11/28/2024

THE MEDICAL CENTER OF AURORA - SOUTH CENTRAL TOWER MAU

THE MEDICAL CENTER OF AURORA - SOUTH CENTRAL TOWER MAU
1501 SOUTH POTOMAC STREET
AURORA, COLORADO 80012

Revisions shown with Δ symbol

ISSUE LOC	DATE	CAD	CHK	DESCRIPTION
MARK				

FOR PERMIT

DRAWN BY:	JROJAS
CHECKED BY:	AMW
ISSUE DATE:	11/27/24
JOB #:	
PROJECT #:	419:6504636I4

JOHNSON CONTROLS © 2024

SYSTEM:
FIRE ALARM SYSTEM

SHEET:
STATIC GRAPHIC MAP AT FACP IN FIRE COMMAND CENTER 1E-2902A

FA-801

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FILE PATH: C:\Users\jrojas80\OneDrive - Johnson Controls\1501 S Potomac - Aurora South\South Tower - Node 1\AT-Central\Tower MAU - 2024 - 6504636141\Fire\FA-801.dwg
LAST SAVED BY: JROJAS87
LAST PRINTED: 11/28/2024 4:06:51 PM
30" x 42" Arch E1 Size

RSN: 1863018
Permit: 2024 2495050 LT
Sheet 9 of 18

Johnson Controls
14200 E. Exposition Avenue
Aurora, Colorado 80012

www.simplexgrinnell.com

Tele: (303) 355-0500
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Fire Alarm
Product Data Submittal for:

THE MEDICAL CENTER OF AURORA - SOUTH CENTRAL TOWER MAU
1501 SOUTH POTOMAC STREET
AURORA, COLORADO 80012

NICET CERTIFICATION INFORMATION

CALE RAUCH
NICET Fire Alarm, III
Certification #151588
Valid Through: 12/01/25

11/28/2024

Prepared for:

E LIGHT ELECTRIC SERVICES, INC.
361 INVERNESS DRIVE SOUTH, SUITE B
ENGLEWOOD, COLORADO 80112

City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: *Rich Tenorio*
Date: *Dec 13, 2024*
2021 INTERNATIONAL CODES & 2023 NEC

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14200 E. Exposition Avenue
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RSN: 1863018
Permit: 2024-2405050-LT
Sheet 10 of 18

PROJECT:	THE MEDICAL CENTER OF AURORA - SOUTH CENTRAL TOWER MAU
PREPARED FOR:	E LIGHT ELECTRIC SERVICES, INC.

TYPE:	***DESCRIPTION:***
4098-9756	TRUEALARM DUCT SMOKE SENSOR W/ RELAY OUTPUT
2098-9806	REMOTE TEST STATION W/ LED AND KEY SWITCH
4098-9858	SAMPLING TUBES 97"
4098-9843	ENCAPSULATED RELAY PAM-SD
4081-9008	EOL, 10K 1/2W

Simplex®

RSN: 1863018
Permit: 2024 2495050 LT
Sheet 11 of 18

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) ←

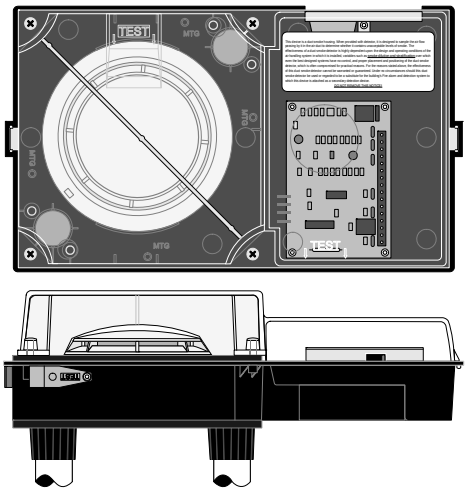
Sampling tubes (ordered separately):

- 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.

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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.

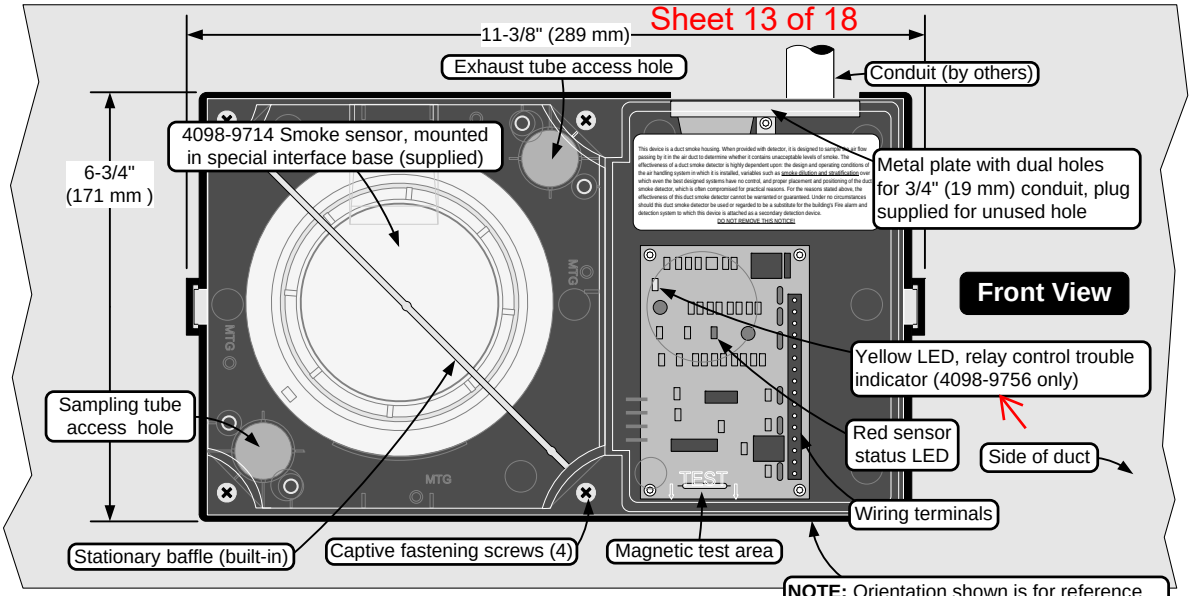
Sampling Tube Selection Chart, Ordered Separately Per Duct Width, Select One

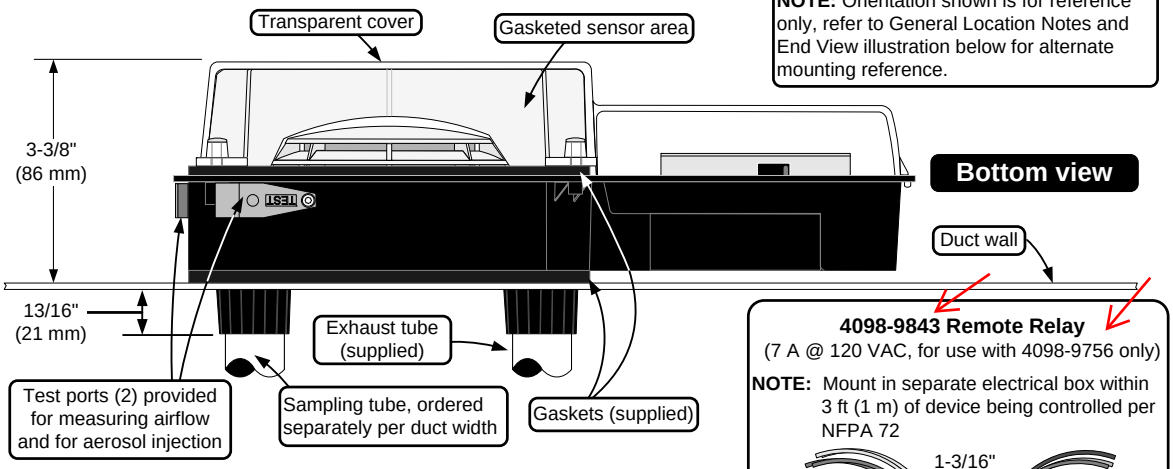
Overall Duct Width	Tube Required	Suggested Cut Length
12" (305 mm)	**4098-9854**	1/2" (12.7 mm) longer than duct width
13" to 23" (330 mm to 584 mm)	**4098-9855**	1/2" (12.7 mm) longer than duct width
24" to 46" (610 mm to 1168 mm)	**4098-9856**	3 in" (76 mm) longer than duct width
46" to 71" (1168 mm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

RSN: 1863018
Permit: 2024 2495050 LT
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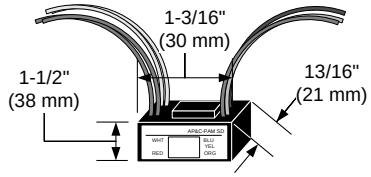
NOTE: Refer to Installation Instructions 574-776 for additional installation detail and maintenance information.

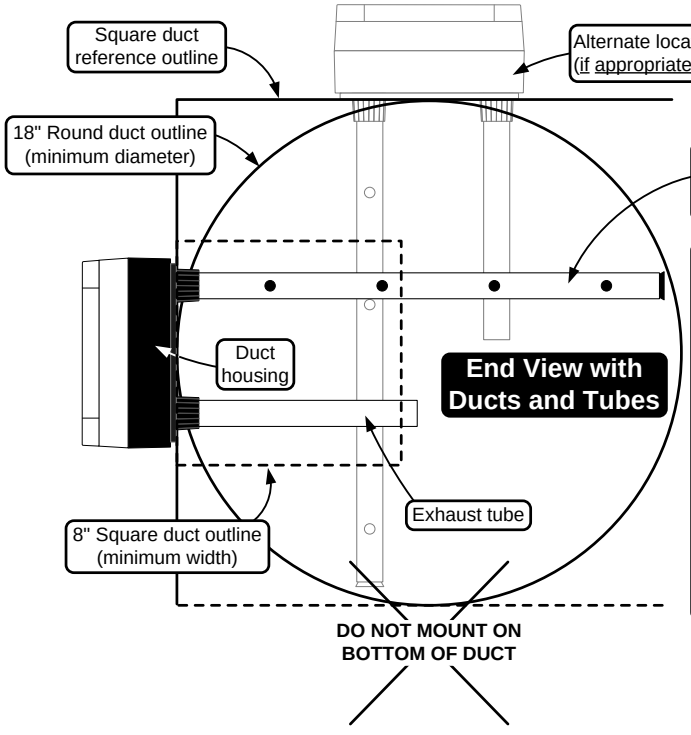




4098-9843 Remote Relay
(7 A @ 120 VAC, for use with 4098-9756 only)

NOTE: Mount in separate electrical box within 3 ft (1 m) of device being controlled per NFPA 72

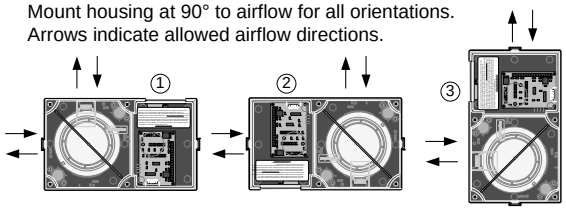




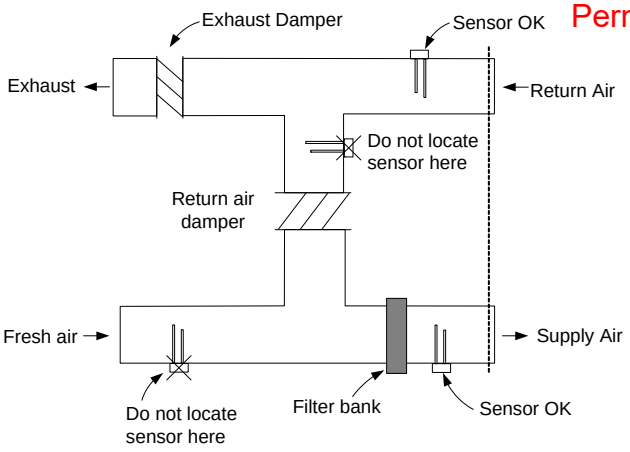
Sampling tube, keyed for proper hole alignment **with holes facing into airflow** (template is provided for proper tube installation). (Housing is shown as position 2 per note 2 below.)

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.

RSN: 1863018
Permit: 2024 2495150 ET
Sheet 14 of 18

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

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

Features

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

Track mount package availability:

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

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

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

Description

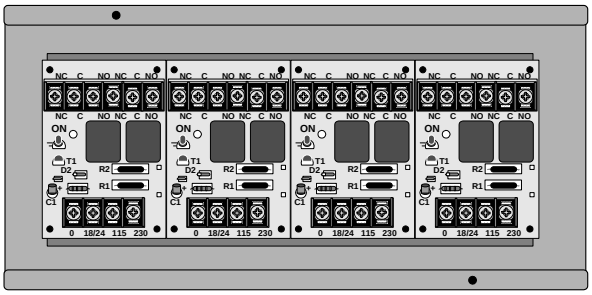
These multi-purpose control relays offer SPDT or DPDT, 10 A (or 7 A) contacts in a variety of mechanical packages. Models are available for coil operation by one of four input voltages allowing a single relay to be energized from a voltage source of 18-35 VDC or VAC, 120 VAC, or 230 VAC (not available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

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

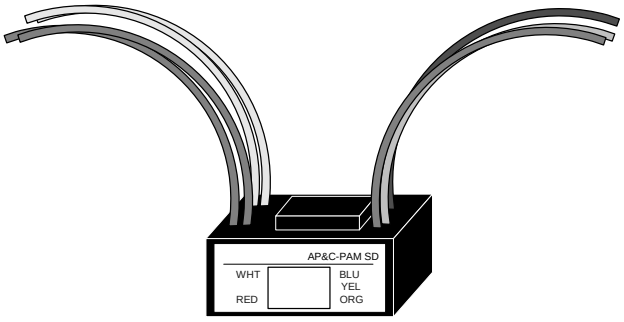
Mounting options are varied for application flexibility. Track mounted relays may be "snapped apart" from a standard four-module assembly and used independently if desired.

Specifications

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



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



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

Specifications *Continued*

Encapsulated Relays, see page 2 for dimensions		
Connections		18 AWG (0.82 mm^2) color-coded wire leads
Relay 2088-9021		
Contact Ratings		10 A @ 120 VAC, resistive
Coil Ratings	Voltage	18-35 VAC/VDC, 120, or 240 VAC
	Current	15 mA @ 24 VAC/VDC, & @ 120 or 230 VAC
Relay 4098-9843		
Coil Ratings		18-32 VDC input, polarized, 15 mA @ 24 VDC
Contact Ratings		7 A at 0.35 p.f @ 28 VDC & 120 VAC
		250 µA @ 5 VDC
Temperature Ratings		
UL Listed Range		32° F to 120° F (0° C to 49° C)
Humidity		100% RH, condensing

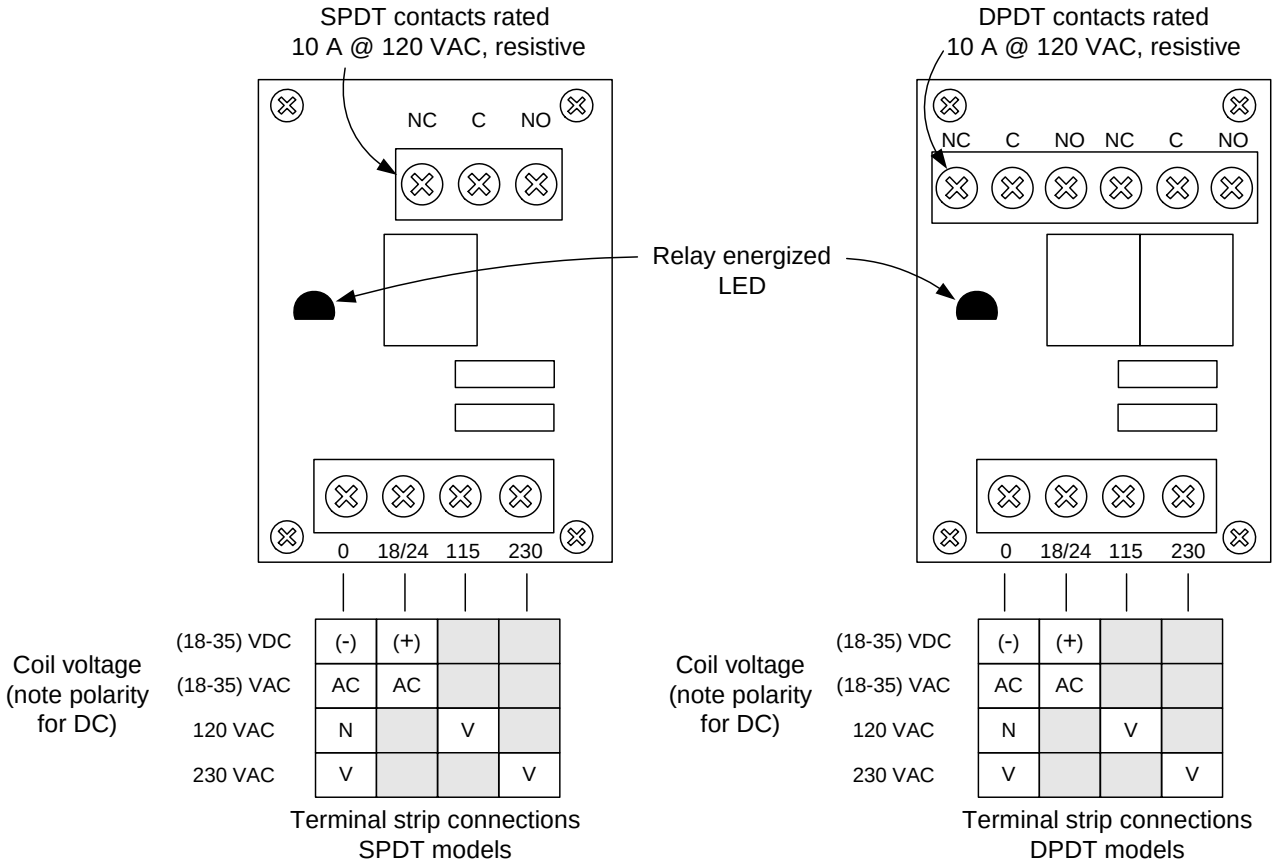
* Listings are under Apollo America Inc. per model numbers shown on page 2. See CSFM Listing 7300-1004:0101 for allowable values and/or conditions concerning material presented in this document.

Relay Selection Chart

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

Track Mount Relay Wiring Reference



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Features

For use as Class B end-of-line resistor:

- Connect these resistor harnesses where end-of-line resistors are required at remote locations to monitor wiring continuity
- Refer to specific circuit specifications for end-of-line resistor requirements

UL Listed to Standard 864

Product Selection

Table 1: Product Selection

SKU	Reference Number	Description
4081-9001	733-892	2.2 kΩ, 1/2 W, ± 5%
4081-9002	733-893	3.3 kΩ, 1 W, ± 5%
4081-9003	733-896	4.7 kΩ, 1/2 W, ± 5%
4081-9004	733-886	6.8 kΩ, 1/2 W, ± 5%
4081-9005	733-984	1.8 kΩ, 1/2 W, ± 5%
4081-9006	733-890	560 Ω, 1 W, ± 5%
4081-9007	733-891	1.2 kΩ, 1 W, ± 5%
4081-9008	733-894	10 kΩ, 1/2 W, ± 5%
4081-9009	733-912	20 Ω, 1 W, ± 5%
4081-9010	733-973	1 kΩ, 1 W, ± 5%
4081-9011	733-974	100 Ω, 1/2 W, ± 5%
4081-9012	733-985	22 kΩ, 1/2 W, ± 5%
4081-9013	734-086	4.99 kΩ, 1/2 W, ± 1%
4081-9014	734-092	2.4 kΩ, 1/2 W, ± 5%
4081-9015	734-093	1.5 kΩ, 1/2 W, ± 5%
4081-9016	734-149	150 kΩ, 1/2 W, ± 5%
4081-9017	734-171	3.9 kΩ, 1 W, ± 5%
4081-9018	734-168	10 kΩ, 1 W, ± 5%
4081-9026	A163819W6P	51.1K Ω ,1/2 W, ± 1%

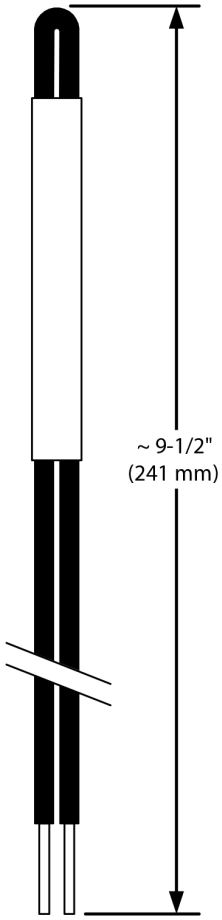


Figure 1: Typical 4081 Series Resistor Harness Assembly (full size except for lead length)

* This product was not approved by ULC, FM, MEA (NYC), or CSFM as of document revision date. Additional listings may be applicable, contact your local Simplex® supplier for the latest status.

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Specifications

Table 2: Specifications

Specification	Rating
Overall Length	Approximately 9-1/2" (241 mm)
Wire Length	7" (178 mm) ± 1" (25 mm)
Wire Size	18 AWG (0.82 mm2)
Insulation	600 V, black
Leads	Stripped 0.5" (13 mm); tinned
Resistor Attachment	Resistor leads are crimped to wires and covered with heat shrink tubing

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