RSN: 1666171
Permit # 2022-2230353 -LT
Sheet 1 of 85

Johnson Controls

THE MEDICAL CENTER OF AURORA - SOUTH
OR EXPANSION
MODIFICATION TO EXISTING FIRE ALARM SYSTEM

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

City of Aurora Building Division
Project: *TMCA OR EXPANSION | FIRE ALARM*
Address: *1501 S Potomac St*
Occupancy Group: *IBC IA-SPK*
Construction Type: *IBC I-2*
RSN: *1666171*
Permit: *2022-2230353-LT*
City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: W. Polk
Date: Oct 13, 2022
2021 INTERNATIONAL CODES & 2020 NEC

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 of a code violation.

Johnson Controls
DISTRICT - 419
14200 E. EXPOSITION AVE
AURORA, CO 80012
SERVICE: 303-355-0500
PHONE: 303-355-0500
FAX: 303-369-4615

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Field Inspection consultation is available upon request; call (303) 739-7420 to schedule a consultation.

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.

KEYNOTES:

1. (2) RELOCATED DEVICES SHOWN IN INTERIM. (5) RELOCATED SHOWN IN BUILDOUT.

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 OUT 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
		PANELS				
1RL	XPDR#	EXISTING 4100ES TRANSPONDER FIRE ALARM TRANSPONDER PANEL, 120 VAC	SIMPLEX	4100-9600	SIMPLEX CABINET	N/A
1RL	NAC#	EXISTING 4009 IDNET NAC EXTENDER PANEL, 120 VAC, BEIGE	SIMPLEX	4009-9201	SIMPLEX CABINET	N/A
		INITIATING DEVICES				
5N 20RL	S OR Z	ADDRESSABLE PHOTOELECTRIC SMOKE SENSOR W/ STANDARD BASE	SIMPLEX	4098-9714 HEAD 4098-9792 BASE	4" OCT, 1-1/2" D	Mm Mi
14N		ADDRESSABLE STANDARD HEAT SENSOR W/ EXISTING STANDARD BASE	SIMPLEX	4098-9733 HEAD 4098-9792 BASE	4" OCT, 1-1/2" D	Mm Mi
1N	F	ADDRESSABLE DOUBLE ACTION MANUAL PUSH/PULL STATION	SIMPLEX	4099-9006	4" SQ, 2-1/8" D W/ 3/4" SINGLE GANG COVER EXTENSION	Mi
	F E	EXISTING MAPNET SINGLE ACTION PULL STATION	SIMPLEX	2099-9795		Mm
	Z	EXISTING ADDRESSABLE DUCT SMOKE SETECTOR W/ RELAY OUTPUT	SIMPLEX	4098-9756	MOUNTS TO DUCTWORK	Mi P
		MODULES AND RELAYS				
9N 8RL		RELAY IAM	SIMPLEX	4090-9002	4" SQ, 2-1/8" D W/ DBL. GANG COVER	Mi R
		TRIM PLATE FOR SURFACE MOUNTING	SIMPLEX	4090-9802		
9N 8RL		ENCAPSULATED RELAY PAM-1, SPDT W/ LED, APOLLO AMERICA INC PAM-1	SIMPLEX	2088-9021	SINGLE GANG 2-1/8" D W/ COVER	R
		EXISTING ENCAPSULATED RELAY	SIMPLEX	4098-9843	SINGLE GANG 2-1/8" D W/ COVER	R
		NOTIFICATION APPLIANCES				
1 4N 7RL	OR	ADDRESSABLE MULTI-TONE HORN/STROBE, WALL MOUNT, RED, FIRE	SIMPLEX	49MTV-WRF	SINGLE GANG 1-1/2" D	A
2N	R #	ADDRESSABLE MULTI-CANDELA STROBE, WALL MOUNT, APPLIANCE ONLY, CLEAR LENS	SIMPLEX	49VO-APPLW	SINGLE GANG 1-1/2" D	A
		LENS, RED	SIMPLEX	49LENS-RED		
		MOUNTING PLATE, RED	SIMPLEX	49MP-AVVOWR		
		APPLIANCE COVER, FIRE LETTERING	SIMPLEX	49VOC-WRFIRE		
	#	EXISTING ADDRESSABLE STROBE, WALL MOUNT, RED, CLEAR LENS, FIRE	SIMPLEX	49VO-WRF	SINGLE GANG 1-1/2" D	A
5N	#	ADDRESSABLE MULTI-CANDELA STROBE, CEILING MOUNT, APPLIANCE ONLY, CLEAR LENS	SIMPLEX	49VO-APPLC	4" SQ. 1-1/2" D	A
		CEILING MOUNT ADAPTER PLATE	SIMPLEX	49VO-APCS		
		APPLIANCE COVER, RED, FIRE LETTERING	SIMPLEX	49VOC-CRF		
		EXISTING CONVENTIONAL CHIME/STROBE - RED - WALL MOUNT	SIMPLEX	4903-9292		H V
		EXISTING CONVENTIONAL STROBE - RED - WALL MOUNT	SIMPLEX	4904-9137		V
		MISCELLANEOUS DEVICES				
2N	DH	DOOR HOLDER W/ 4" EXTENDER ROD	RSG/AAMES	DH24120SPC DHE4APC		D
		EXISTING DOOR HOLDER	SIMPLEX	2088-9688		D
	S OR F	FIRE/SMOKE DAMPER	BY OTHERS	BY OTHERS		
1N	JB	JUNCTION BOX	BY OTHERS	BY OTHERS		
		EXISTING REMOTE TEST STATION	SIMPLEX	2098-9806	SINGLE GANG 2'D	K

FIRE ALARM WIRE LEGEND

	CIRCUIT DESCRIPTION	CONSTRUCTION	GAUGE	CIRCUIT PROPERTIES	ACCEPTABLE CABLE TYPES: FPLR	FPLP	THHN	TFFN	OUTDOOR **	C.L.
A	ADDRESSABLE NOTIFICATION	UTP SOLID	14 AWG	60pf/ft. MAX CAPACITANCE; 3 twists/ft. MINIMUM	X	X				
D	DOOR HOLDER	2 COND. SOLID	14 AWG		X	X	X	X		
H	AUDIBLE CIRCUIT	2 COND. SOLID	14 AWG		X	X				
Mm	MAPNET	STP SOLID	16AWG	0.60µF MAX TOTAL LINE CAPACITANCE	X	X				
Mi	IDNET	UTP SOLID	18 AWG	0.60µF MAX TOTAL LINE CAPACITANCE	X	X				
R	RELAY	2 COND. SOLID	14 AWG		X	X	X	X		
V	VISUAL	2 COND. SOLID	14 AWG		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
** OUTDOOR AERIAL CABLE REQUIRES MESSENGER

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 NFPA72 "RECORD OF COMPLETION" PRIOR TO SCHEDULING THE AHJ ACCEPTANCE TEST.
- AUDIBLE ALARM SIGNALING DEVICES SHALL EXCEED THE PREVAILING SOUND LEVEL IN A ROOM OR SPACE BY 15 DBA. SOUND LEVELS FOR ALARM SIGNALS SHALL BE 120 DBA MAXIMUM. IFC SECTION 907.

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), 2020 Edition

National Fire Alarm and Signaling Code (NFPA 72), 2019 Edition

Life Safety Code (NFPA 101), 2021 Edition

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

ADA Standards for Accessible Design, 2010 Edition

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

OCCUPANCY TYPE(S):
I-2 INSTITUTIONAL GROUP

SPRINKLER PROTECTION:
BUILDING IS FULLY SPRINKLERED

AREA:
TOTAL: APPROX. 450,396 SQ. FT.
SCOPE: APPROX. 6,967 SQ. FT

STORIES:
TOTAL: 6 STORIES + BASEMENT
SCOPE: PARTIAL 1ST FLOOR

CONSTRUCTION:
TYPE 1A

SCOPE OF WORK

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

AREA TO RECEIVE WORK INCLUDES APPROXIMATELY 6,967 SQUARE FEET ENCOMPASSING EXISTING EQUIPMENT STORAGE AREAS ON THE FIRST LEVEL OF THE MEDICAL CENTER OF AURORA - SOUTH AT 1501 SOUTH POTOMAC STREET, AURORA, COLORADO 80012.

FOR INTERIM - EXISTING AREAS TO RECEIVE PARTIAL DEMOLITION TO ALLOW FOR UPDATES TO THE AREA. DURING DEMOLITION, RELOCATE EXISTING TRANSPONDER-3 AND NAC1 PANEL LOCATED IN ELEC. 1-SS006 AND ELEC. 1-SS010 RESPECTIVELY TO EQ. STG. 1-SS001. THIS ROOM WILL BE ELEC 1001 IN BUILDOUT. RETAIN ALL EXISTING CIRCUITS TO PANELS. INTERIM HEAT-DETECTORS TO BE INSTALLED IN SCOPE AREAS FOR CONSTRUCTION. RE-USE EXISTING STANDARD INITIATION-BASES WHERE SHOWN. RETAIN ALL OTHER REMOVED BASES AND HEADS. SELECT EXISTING NOTIFICATION TO BE KEPT IN AREA AS INTERIM FOR CONSTRUCTION.

FOR BUILDOUT - REMOVE INTERIM DEVICES, RETAIN BASES, REUSE EXISTING SMOKE SENSOR HEADS AND BASES FOR BUILDOUT. SOME AREAS WILL FEATURE NEW SMOKE SENSORS AND BASES DUE TO THE AGE OF SPECIFIC PARTS OF THE SYSTEM. NEW DEVICES WILL TIE TO EITHER THE EXISTING NODE-1 FIRE ALARM CONTROL PANEL LOCATED IN 1E-2902A FIRE COMMAND CENTER, EXISTING NODE-1 TRANSPONDER-3 LOCATED IN ELEC. 1001, OR EXISTING NODE-1 TRANSPONDER-4 LOCATED IN ELEC. 1-CS16. EXISTING STATIC GRAPHIC MAP AT FIRE COMMAND CENTER 1C-1013A ON THE FIRST LEVEL TO RECEIVE ARCHITECTURAL AND INITIATION UPDATES.

PLEASE NOTE THE SCOPE OF WORK WORKS WITHIN THREE SEPARATE SMOKE COMPARTMENTS - 1C, 1D, AND 1EF. THESE ARE SPECIFICALLY NOTED ON PAGE FA-102.

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.

DESIGN STATEMENT

THIS PROJECT'S DESIGN IS BASED ON THE ENGINEERED PLANS AND SPECIFICATIONS PREPARED BY:
DEVENNY GROUP LTD., ARCHITECTS

ARCHITECTURAL PLANS DATED:	FEBRUARY 02, 2022
MECHANICAL PLANS DATED:	FEBRUARY 01, 2022
ELECTRICAL PLANS DATED:	FEBRUARY 02, 2022
SPECIFICATIONS DATED:	FEBRUARY 01, 2022
ADDENDUM DATED:	FEBRUARY 01, 2022

ABBREVIATIONS LEGEND

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

JOHNSON CONTROLS CONTACTS

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PROJECT DIRECTORY

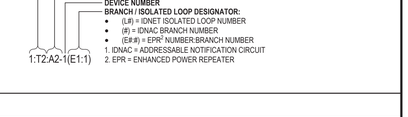
Site
THE MEDICAL CENTER OF AURORA
1501 SOUTH POTOMAC STREET
AURORA, COLORADO 80012
PHONE: 303-695-2600

Owner
HEALTH ONE
4900 SOUTH MONACO STREET
DENVER, COLORADO 80237
PHONE: 303-946-5511

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

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

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 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#:#) = EPR² NUMBER:BRANCH NUMBER

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

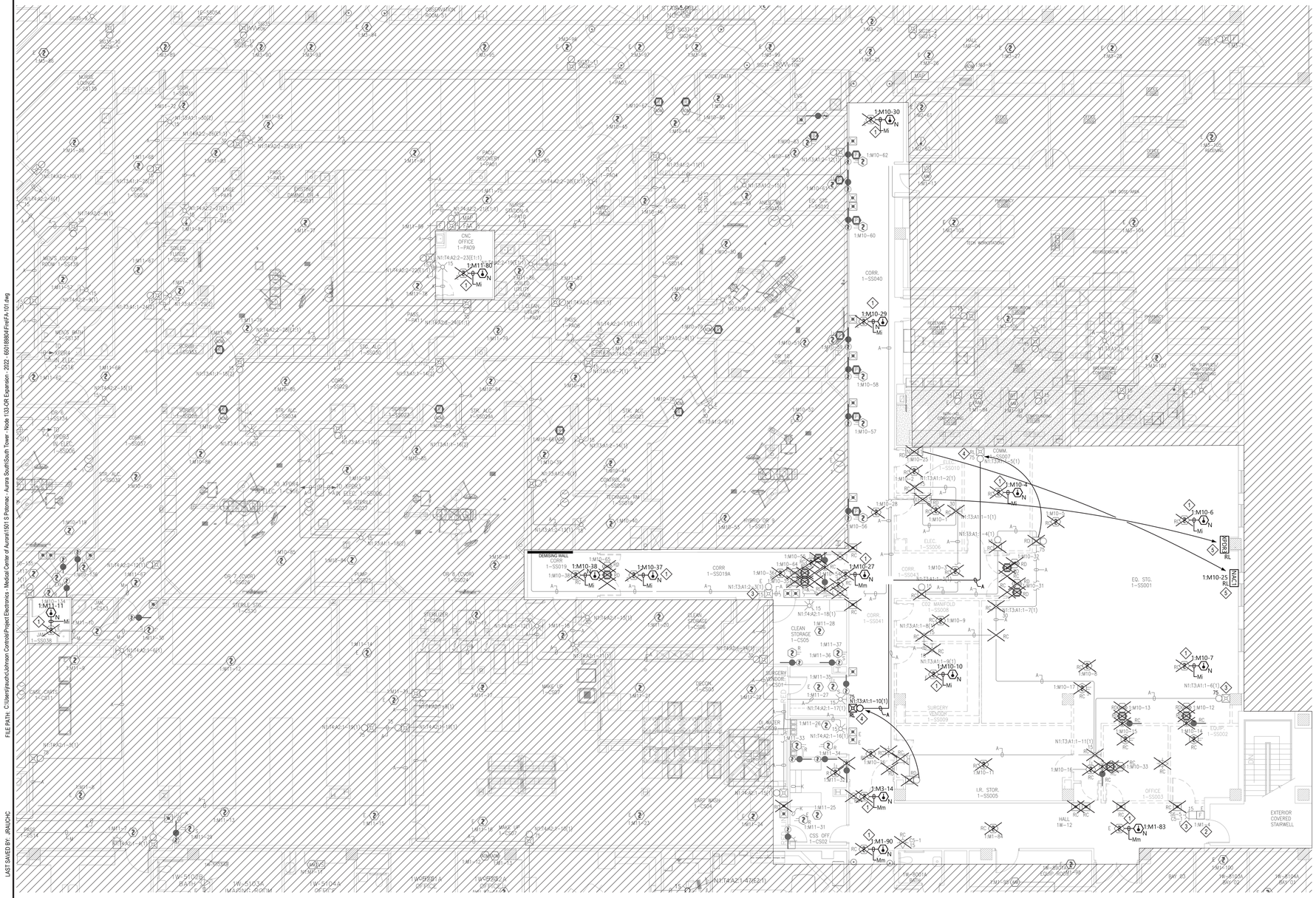
SYSTEM SEQUENCE OF OPERATIONS

M.C.O.A. SOUTH TOWER

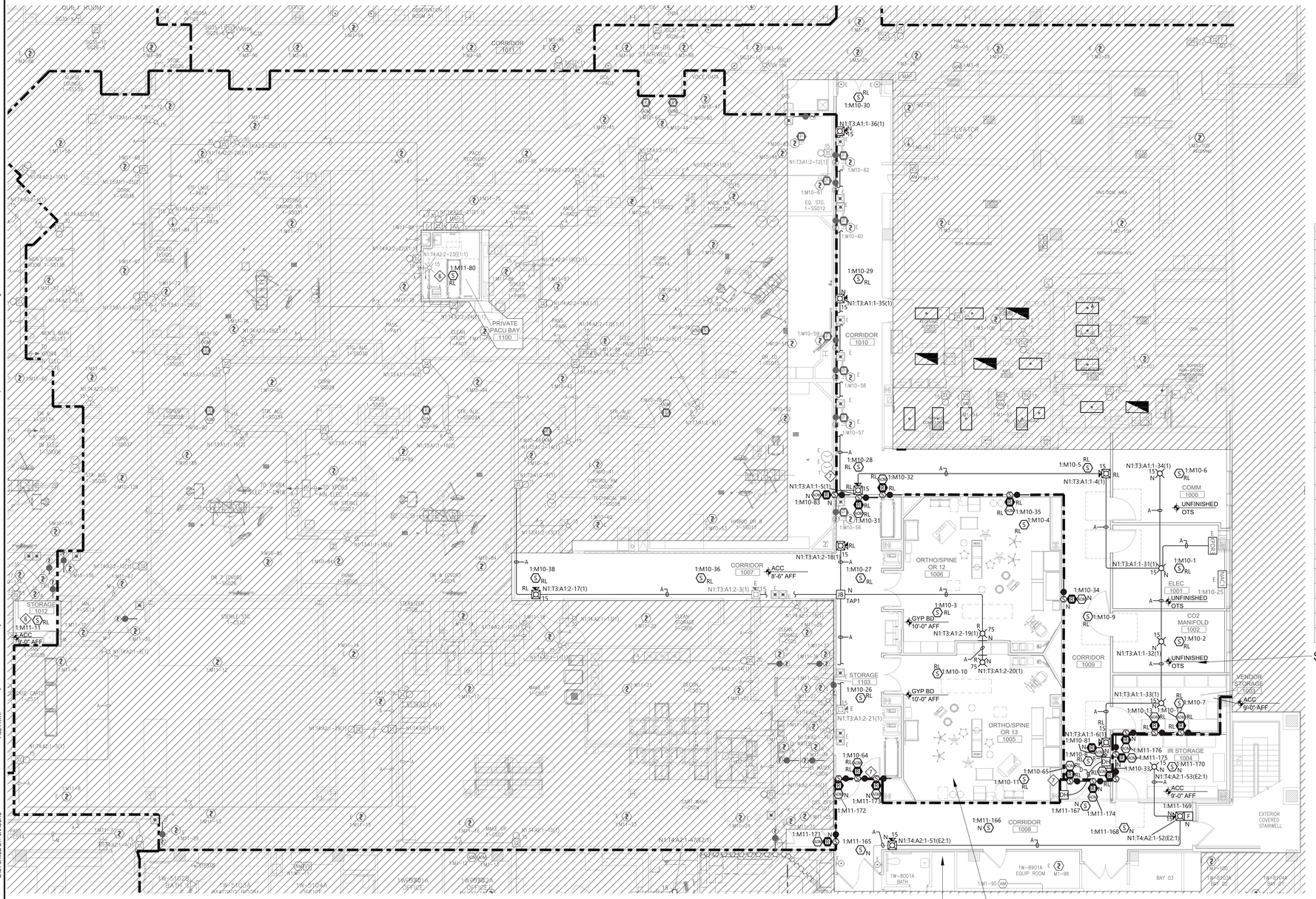
SYSTEM OUTPUTS

SEQUENCE OF OPERATIONS	FACP Annunciation: ACTIVATE COMMON ALARM SIGNAL INDICATOR	ACTIVATE AUDIBLE ALARM SIGNAL	ACTIVATE COMMON SUPERVISORY SIGNAL INDICATOR	ACTIVATE AUDIBLE SUPERVISORY SIGNAL	ACTIVATE COMMON TROUBLE SIGNAL INDICATOR	ACTIVATE AUDIBLE COMMON TROUBLE SIGNAL	Notification: ACTIVATE EVACUATION SIGNALS (SPEAKERS/STROBES)	ACTIVATE 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	Required Controls: FAN SHUT DOWN	DAMPER SHUT DOWN	RELEASE CORRIDOR FIRE DOORS	RELEASE ASSOCIATED ROLL-UP DOOR	ELEVATOR SHUT DOWN (1)	ELEVATOR RECALL - MAIN FLOOR	ELEVATOR RECALL - ALTERNATE FLOOR	ELEVATOR HAT FLASH	Supplementary: OVERRIDE MUSIC SYSTEM	SILENCE AUDIBLE SIGNAL (EXCLUDING EXTERIOR HNS)	ACTIVATE OUTSIDE HORN/STROBE	RESET PANEL TO "NORMAL" CONDITION	
SYSTEM INPUTS	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	
1 SMOKE DETECTOR	X	X					X		X	X						X	X					X	X			1
2 SMOKE DETECTOR AT 2ND, 4TH & 5TH FLR CLERK DESK.	X	X					X		X	X						X	X					X	X			2
3 SMOKE DETECTOR AT SMOKE PARTITION	X	X					X		X	X						X						X	X			3
4 MANUAL PULL STATION	X	X					X		X	X						X						X	X			4
5 HEAT DETECTOR	X	X					X		X	X						X						X	X			5
6 DUCT DETECTOR			X	X			X		X		X			X	X											6
7 DUCT DETECTOR AT F/S DAMPER			X	X			X		X		X			X	X											7
8 MAIN FLR. ELEV. LOBBY SMOKE DETECTOR	X	X					X		X	X				X	X	X	X		X			X	X			8
9 ELEV. LOBBY SMOKE DETECTORS (EXCL. MAIN FLR.)	X	X					X		X	X								X				X	X			9
10 ELEV. MECH. ROOM SMOKE DETECTOR	X	X					X		X	X										X	X	X	X			10
11 ELEV. SHAFT HEAT DETECTOR	X	X					X		X	X							X	X		X	X	X	X			11
12 ELEV. MECH. ROOM HEAT DETECTOR	X	X					X		X	X							X	X		X	X	X	X			12
13 WATERFLOW SWITCH	X	X					X		X	X						X						X	X			13
14 TAMPER SWIT

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1ST FLOOR PARTIAL DEVICE PLACEMENT PLAN - BUILDOUT

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

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

GENERAL NOTES:

1. ALL CEILINGS ARE ASSUMED TO BE 8'-10" A.F.F., ACOUSTICAL CEILING (ACC) GRID SYSTEM - SMOOTH CONSTRUCTION UNLESS NOTED OTHERWISE.
2. DO NOT CHANGE DEFAULT APPLIANCE CONFIGURATION SWITCH SETTINGS ON ADDRESSABLE A/V DEVICES (CFIG1). REFER TO DEVICE DETAILS AND INSTALLATION INSTRUCTIONS FOR MORE INFORMATION.
3. THE DEVICE ADDRESSES INDICATED ON THESE DRAWINGS ARE AN ALPHANUMERIC DESCRIPTION OF WHICH CIRCUIT THE DEVICE IS LOCATED ON. DEVICES MAY BE ASSIGNED A DIFFERENT NUMBER WITHIN THE PANEL PROGRAM. CONSULT WITH A JOHNSON CONTROLS TECHNICIAN BEFORE APPLYING A PHYSICAL LABEL TO ANY DEVICES.
4. THE INFORMATION OR SYMBOLS SHOWN IN BOLD LINETYPE ARE NEW OR RELOCATED.
5. THE INFORMATION OR SYMBOLS SHOWN IN LIGHT LINETYPE ARE EXISTING TO REMAIN.
6. ALL ITEMS THAT ARE HATCHED ARE NOT IN THIS SCOPE OF WORK.
7. DEVICES WITH "RL" WILL BE REUSED FROM INTERIM; CHANGES TO BE MADE TO WIRING, LOCATION, AND DESCRIPTOR. RETAIN ADDRESS.

KEYNOTES:

1. NEW HEAT SENSOR TO REPLACE EXISTING SMOKE SENSOR HEAD ONLY AS INTERIM FOR CONSTRUCTION. REUSE EXISTING BASE. EXISTING ADDRESS, AND EXISTING WIRING. RETAIN EXISTING HEAD TO USE DURING BUILDOUT.
2. EXISTING PULL STATION TO REMAIN AS INTERIM FOR CONSTRUCTION. TO BE REMOVED DURING BUILDOUT.
3. EXISTING CHIME/STROBE TO REMAIN AS INTERIM NOTIFICATION FOR CONSTRUCTION. TO BE REMOVED DURING BUILDOUT.
4. EXISTING CHIME/STROBE RELOCATED AS COVERAGE FOR INTERIM DURING CONSTRUCTION.
5. EXTEND ALL EXISTING WIRING TO NEW PANEL LOCATION.
6. EXISTING SMOKE SENSOR TO BE PLACED BACK INTO EXISTING BASE FOR BUILDOUT. RETURN HEAT SENSOR HEAD TO CUSTOMER STOCK.
7. MAINTAIN CIRCUIT INTEGRITY/CONTINUITY FOR DEVICES ON THE CIRCUIT BETWEEN SMOKE COMPARTMENTS.

FIRE ALARM SYMBOL LEGEND

QTY	SYMBOL	DESCRIPTION	BRAND	MODEL	BACKBOX	WIRE TYPE
		PANELS				
1RL	XPDR#	EXISTING 4100ES TRANSPONDER FIRE ALARM TRANSPONDER PANEL, 120 VAC	SIMPLEX	4100-9600	SIMPLEX CABINET	N/A
1RL	NAC#	EXISTING 4009 IDNET NAC EXTENDER PANEL, 120 VAC, BEIGE	SIMPLEX	4009-9201	SIMPLEX CABINET	N/A
		INITIATING DEVICES				
9N 20RL	S OR 2	ADDRESSABLE PHOTOELECTRIC SMOKE SENSOR W/ STANDARD BASE	SIMPLEX	4098-9714 HEAD 4098-9792 BASE	4" OCT, 1-1/2" D	Mm Mi
14N	4	ADDRESSABLE STANDARD HEAT SENSOR W/ EXISTING STANDARD BASE	SIMPLEX	4098-9733 HEAD 4098-9792 BASE	4" OCT, 1-1/2" D	Mm Mi
1N	F	ADDRESSABLE DOUBLE ACTION MANUAL PUSH/PULL STATION	SIMPLEX	4099-9006	4" SQ, 2-1/8" D W/ 3/4" SINGLE GANG COVER EXTENSION	Mi
	F	EXISTING MAPNET SINGLE ACTION PULL STATION	SIMPLEX	2099-9795		Mm
	2	EXISTING ADDRESSABLE DUCT SMOKE SETECTOR W/ RELAY OUTPUT	SIMPLEX	4098-9756	MOUNTS TO DUCTWORK	Mi P
		MODULES AND RELAYS				
9N 8RL	M	RELAY IAM	SIMPLEX	4090-9002	4" SQ. 2-1/8" D W/ DBL. GANG COVER	Mi R
		TRIM PLATE FOR SURFACE MOUNTING	SIMPLEX	4090-9802		
9N 8RL	M	ENCAPSULATED RELAY PAM-1, SPDT W/ LED, APOLLO AMERICA INC PAM-1	SIMPLEX	2088-9021	SINGLE GANG 2-1/8" D W/ COVER	R
	M	EXISTING ENCAPSULATED RELAY	SIMPLEX	4098-9843	SINGLE GANG 2-1/8" D W/ COVER	R
		NOTIFICATION APPLIANCES				
4N 7RL	V OR C	ADDRESSABLE MULTI-TONE HORN/STROBE, WALL MOUNT, RED, FIRE	SIMPLEX	49MTV-WRF	SINGLE GANG 1-1/2" D	A
2N	R	ADDRESSABLE MULTI-CANDELA STROBE, WALL MOUNT, APPLIANCE ONLY, CLEAR LENS	SIMPLEX	49VO-APPLW	SINGLE GANG 1-1/2" D	A
		LENS, RED	SIMPLEX	49LENS-RED		
		MOUNTING PLATE, RED	SIMPLEX	49MP-AVVOWR		
		APPLIANCE COVER, FIRE LETTERING	SIMPLEX	49VOC-WRFIRE		
		EXISTING ADDRESSABLE STROBE, WALL MOUNT, RED, CLEAR LENS, FIRE	SIMPLEX	49VO-WRF	SINGLE GANG 1-1/2" D	A
5N	#	ADDRESSABLE MULTI-CANDELA STROBE, CEILING MOUNT, APPLIANCE ONLY, CLEAR LENS	SIMPLEX	49VO-APPLC	4" SQ. 1-1/2" D	A
		CEILING MOUNT ADAPTER PLATE	SIMPLEX	49VO-APCS		
		APPLIANCE COVER, RED, FIRE LETTERING	SIMPLEX	49VOC-CRF		
		EXISTING CONVENTIONAL CHIME/STROBE - RED - WALL MOUNT	SIMPLEX	4903-9292		H V
		EXISTING CONVENTIONAL STROBE - RED - WALL MOUNT	SIMPLEX	4904-9137		V
		MISCELLANEOUS DEVICES				
2N	DH	DOOR HOLDER W/ 4" EXTENDER ROD	RSG/AAMES	DH241209PC DHE4APC		D
		EXISTING DOOR HOLDER	SIMPLEX	2088-9588		D
	OR 2	FIRE/SMOKE DAMPER	BY OTHERS	BY OTHERS		
1N	JB	JUNCTION BOX	BY OTHERS	BY OTHERS		
		EXISTING REMOTE TEST STATION	SIMPLEX	2098-9806	SINGLE GANG 2"D	K

FIRE ALARM WIRE LEGEND

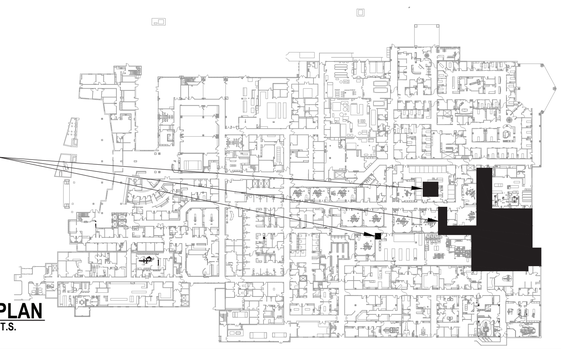
	CIRCUIT DESCRIPTION	CONSTRUCTION	GAUGE	CIRCUIT PROPERTIES	ACCEPTABLE CABLE TYPES: FPLR	FPLP	THHN	TFFN	OUTDOOR ** CI.
A	ADDRESSABLE NOTIFICATION	UTP SOLID	14 AWG	60pf/ft. MAX CAPACITANCE; 3 twists/ft. MINIMUM	X	X			
D	DOOR HOLDER	2 COND. SOLID	14 AWG		X	X	X	X	
H	AUDIBLE CIRCUIT	2 COND. SOLID	14 AWG		X	X			
Mm	MAPNET	STP SOLID	16AWG	0.60µF MAX TOTAL LINE CAPACITANCE	X	X			
Mi	IDNET	UTP SOLID	18 AWG	0.60µF MAX TOTAL LINE CAPACITANCE	X	X			
R	RELAY	2 COND. SOLID	14 AWG		X	X	X	X	
V	VISUAL	2 COND. SOLID	14 AWG		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
** OUTDOOR AERIAL CABLE REQUIRES MESSENGER

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.

BUILDOUT SCOPE OF WORK



KEYPLAN SCALE:N.T.S.

City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: W. Polk
Date: Oct 13, 2022
2021 INTERNATIONAL CODES & 2020 NEC

Johnson Controls
DISTRICT 1-418
10065 E HARVARD AVE
AURORA, CO 80017
SERVICE 303-355-5000
PHONE 303-392-9500
FAX 303-355-5815

NICET CERTIFICATION INFORMATION
NANCY S. WILTSIE
NICET Fire Alarm, III
Certification #93727
Valid Through: 03/01/24
September 21, 2022

THE MEDICAL CENTER OF AURORA - SOUTH OR EXPANSION

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

Revisions shown with ∆ symbol

ISSUE LOG MARK	DATE	CAD	CHK	DESCRIPTION

FOR PERMIT

DRAWN BY:	CCD
CHECKED BY:	CBR
ISSUE DATE:	7/26/22
JOB #:	
PROJECT #:	419:650189804

JOHNSON CONTROLS © 2022

SYSTEM: FIRE ALARM SYSTEM

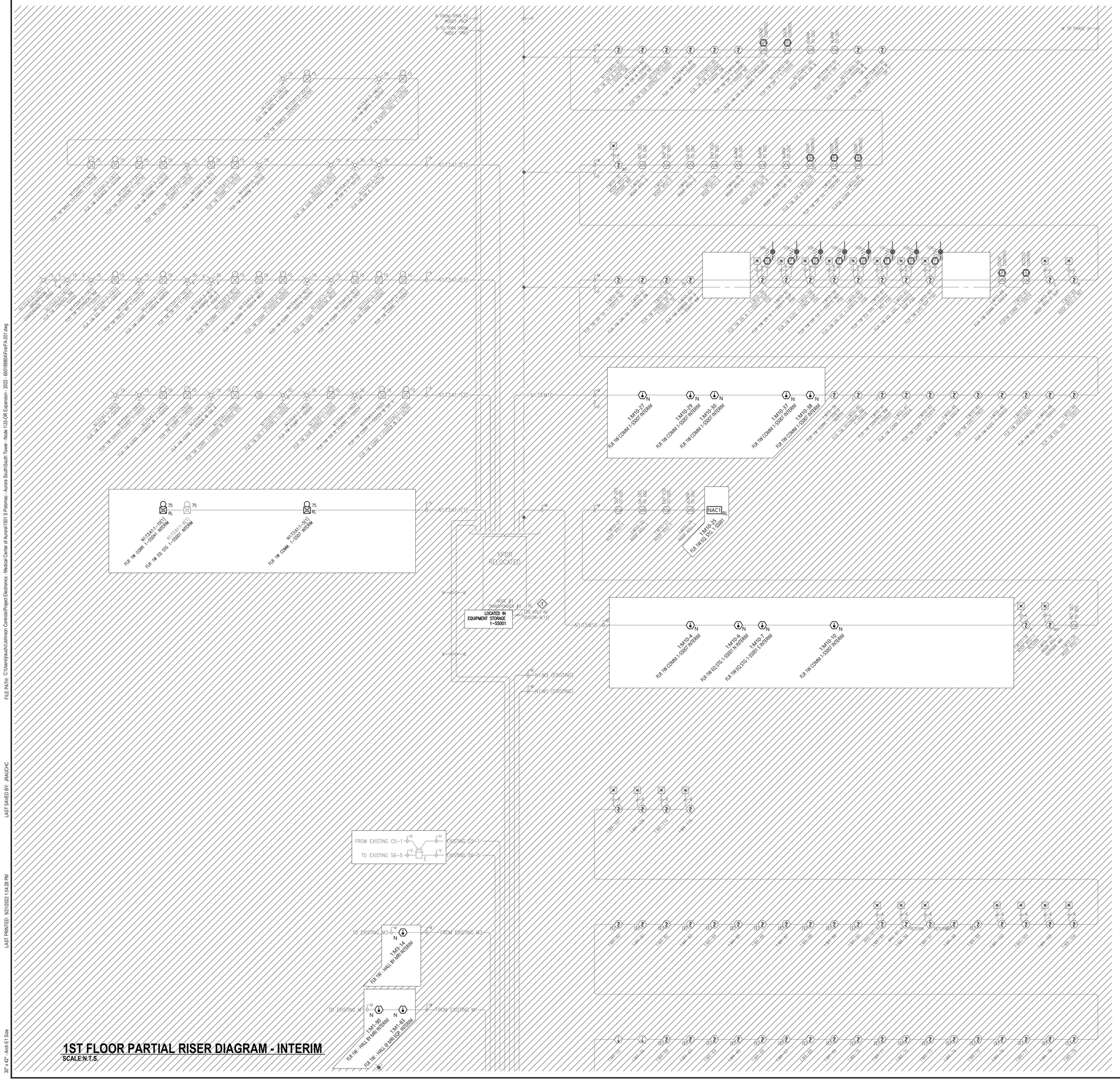
SHEET: 1ST FLOOR PARTIAL DEVICE PLACEMENT PLAN - BUILDOUT

FA-102

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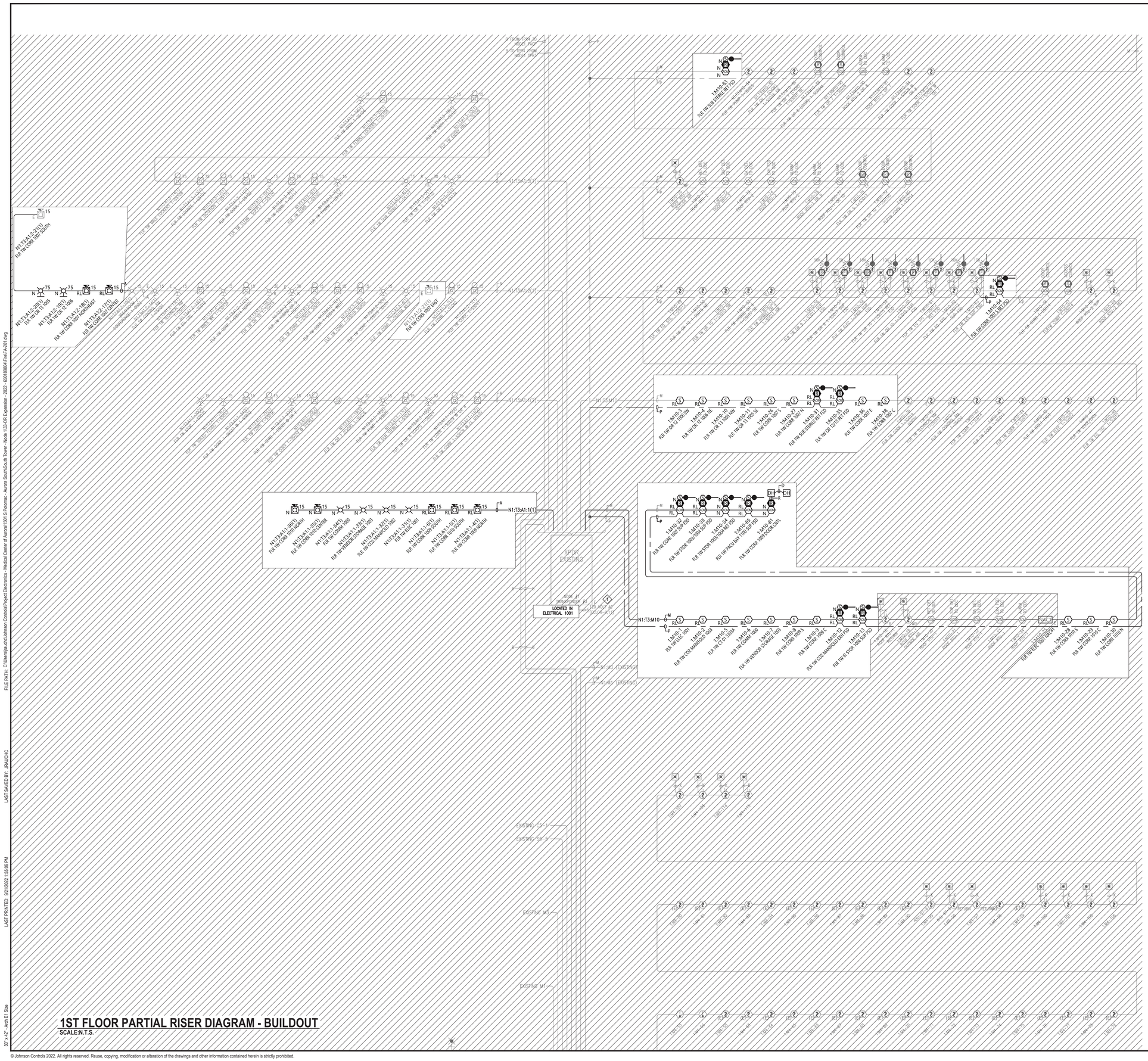
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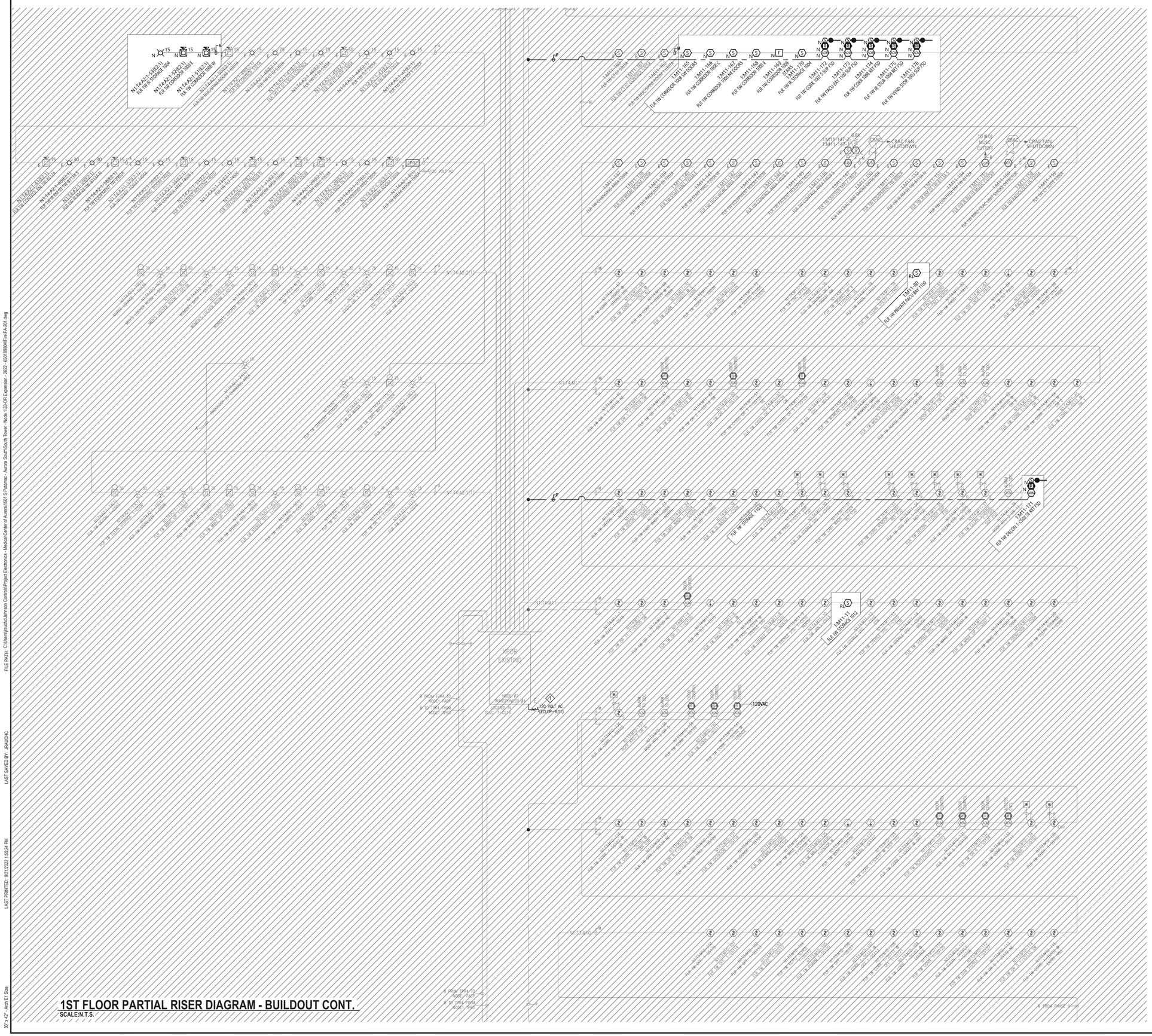

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MDSCT 3P03
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N1134A1-1

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1ST FLOOR PARTIAL RISER DIAGRAM - INTERIM CONT.
SCALE:N.T.S.
N1-T4-A2-1-4HE2-1
FCE-1W CONTROL ROOM-T150FE
N1-T4-A2-1-4HE2-2
FCE-1W RECEPTION DESK-T150FE
N1-T4-A2-1-4HE2-3
FCE-1W SECURITY DESK-T150FE
N1-T4-A2-1-4HE2-4
FCE-1W CLOSET-T150FE
N1-T4-A2-1-4HE2-5
FCE-1W BREAK ROOM-T150FE
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N1-T4-A2-1-4HE2-381
FCE-1W CONFERENCE ROOM-T150FE
N1-T4-A2-1-4HE2-382
FCE-1W CONFERENCE ROOM-T150FE
N1-T4-A2-1-4HE2-383
FCE-1W CONFERENCE ROOM-T150FE
N1-T4-A2-1-4HE2-384
FCE-1W CONFERENCE ROOM-T150FE
N1-T4-A2-1-4HE2-385
FCE-1W CONFERENCE ROOM-T150FE
N1-T4-A2-1-4HE2-386
FCE-1W CONFERENCE ROOM-T150FE
N1-T4-A2-1-4HE2-387
FCE-

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N1:T3A12-21(1)
FLR 1W CORR 1001 SOUTH
N1:T3A12-28(1)
FLR 1W CR 13 1005
N1:T3A12-19(1)
FLR 1W CR 12 1006
N1:T3A12-9(1)
FLR 1W CORR 1007 NORTHEAST
N1:T3A12-17(1)
FLR 1W CORR 1007 CENTER
N1:T3A12-21(1)
FLR 1W CORR 1007 EAST
1:M10-45
FLR 1W SUB SYSTEMS RST FSD
1:M10-64
FLR 1W CORR 1007 RST FSD
1:M10-3
FLR 1W CR 12 1008 SW
1:M10-4
FLR 1W CR 12 1008 NE
1:M10-10
FLR 1W CR 11 1005 NW
1:M10-11
FLR 1W CR 11 1005 SE
1:M10-26
FLR 1W CORR 1007 S
1:M10-27
FLR 1W CORR 1007 N
1:M10-31
FLR 1W SUB STERILES RST FSD
1:M10-33
FLR 1W CR 12/13 RST FSD
1:M10-36
FLR 1W CORR 1007 E
1:M10-38
FLR 1W CORR 1007 C
N1:T3A11-39(1)
FLR 1W CORR 1010 NORTH
N1:T3A11-35(1)
FLR 1W CORR 1010 CENTER
N1:T3A11-34(1)
FLR 1W CORR 1010
N1:T3A11-33(1)
FLR 1W VENDOR STORAGE 1003
N1:T3A11-32(1)
FLR 1W CO3 MANIFOLD 1002
N1:T3A11-31(1)
FLR 1W CR/E 1001
N1:T3A11-6(1)
FLR 1W CORR 1010 SOUTH
N1:T3A11-5(1)
FLR 1W CORR 1010 SOUTH
N1:T3A11-4(1)
FLR 1W CORR 1009 NORTH
N1:T3:A1:1(1)
1:M10-2
FLR 1W ELEC 1001
1:M10-1
FLR 1W CO3 MANIFOLD 1003
1:M10-5
FLR 1W CT/ OT 1 SSRA
1:M10-7a
FLR 1W CORR 1009
1:M10-7
FLR 1W VENDOR STORAGE 1003
1:M10-8
FLR 1W CORR 1009.5
1:M10-9
FLR 1W CORR 1009 C
1:M10-12
FLR 1W CO3 MANIFOLD 1001 FSD
1:M10-13
FLR 1W SUB STOR 1004 RST FSD
1:M10-28
FLR 1W ELEC 1001 EAST
1:M10-29
FLR 1W CORR 1010.5
1:M10-30
FLR 1W CORR 1010 C
1:M10-30.1
FLR 1W CORR 1010 N
1:M10-3
FLR 1W CORR 1007 SW FSD
1:M10-4
FLR 1W STOR 1003 1004 S SW FSD
1:M10-5
FLR 1W STOR 1003 1004 S SE FSD
1:M10-6
FLR 1W PACU BAY 1100 SW FSD
1:M10-67
FLR 1W CORR 1004 DOCK CNTL
N1:T3:M10
N1:T3:M3 (EXISTING)
N1:T3:M1 (EXISTING)
EXISTING CS-1
EXISTING SE-1
EXISTING M3
EXISTING M1
VERIFY EXISTING
LOCATED IN ELECTRICAL 1001
DOCK #1 TRANSFORMER #3 (DOCK #1)
DOCK #2 TRANSFORMER #4 (DOCK #2)
1:M10-67
FLR 1W CORR 1004 DOCK CNTL
1:M10-68
FLR 1W CORR 1004 DOCK CNTL
1:M10-69
FLR 1W CORR 1004 DOCK CNTL
1:M10-70
FLR 1W CORR 1004 DOCK CNTL
1:M10-71
FLR 1W CORR 1004 DOCK CNTL
1:M10-72
FLR 1W CORR 1004 DOCK CNTL
1:M10-73
FLR 1W CORR 1004 DOCK CNTL
1:M10-74
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1:M10-75
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1:M10-376
FLR 1W CORR 1004 DOCK CNTL
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FLR 1W CORR 1004 DOCK CNTL
1:M10-565
FLR 1W CORR 1004 DOCK CNTL
1:M10-566
FLR 1W CORR


1ST FLOOR PARTIAL RISER DIAGRAM - BUILDOUT CONT.
SCALE:N.T.S.
XDDR EXISTING
120VAC
120 VOLT AC (VOLTAGE DROP CALCULATIONS ARE LOCATED ON DRAWING FA-001)
NOTE: 1) TRANSPONDER #4 LOCATED IN DEDICATED FACP
FLR 1W STORAGE 1052
FLR 1W PRIVATE PAY/LOUNGE 1109
FLR 1W SHCON / CSR 1ST FSD
FLR 1W VEND STOR 1003 SUP FSD
FLR 1W PACU BAY 1100 SUP FSD
FLR 1W CORR 1008 RET FSD
FLR 1W IP STOR 1004A RET FSD
FLR 1W CORR 1007 SUP FSD
FLR 1W CORRIDOR 1008 E
FLR 1W CORRIDOR 1008 W
FLR 1W CORRIDOR 1008 NW DOORS
FLR 1W CORRIDOR 1008 NE DOORS
FLR 1W CORRIDOR 1008 C
FLR 1W CORRIDOR 1008 NW DOORS
FLR 1W IP STORAGE 1004
FLR 1W CHEMO PREP 1005A
FLR 1W CHEMO INFUSION 1006
FLR 1W CHEMO INFUSION 1006A
FLR 1W CHEMO INFUSION 1006B
FLR 1W CHEMO INFUSION 1006C
FLR 1W CHEMO INFUSION 1006D
FLR 1W CHEMO INFUSION 1006E
FLR 1W CHEMO INFUSION 1006F
FLR 1W CHEMO INFUSION 1006G
FLR 1W CHEMO INFUSION 1006H
FLR 1W CHEMO INFUSION 1006J
FLR 1W CHEMO INFUSION 1006K
FLR 1W CHEMO INFUSION 1006L
FLR 1W CHEMO INFUSION 1006M
FLR 1W CHEMO INFUSION 1006N
FLR 1W CHEMO INFUSION 1006P
FLR 1W CHEMO INFUSION 1006Q
FLR 1W CHEMO INFUSION 1006R
FLR 1W CHEMO INFUSION 1006S
FLR 1W CHEMO INFUSION 1006T
FLR 1W CHEMO INFUSION 1006U
FLR 1W CHEMO INFUSION 1006V
FLR 1W CHEMO INFUSION 1006W
FLR 1W CHEMO INFUSION 1006X
FLR 1W CHEMO INFUSION 1006Y
FLR 1W CHEMO INFUSION 1006Z
FLR 1W CHEMO INFUSION 1006AA
FLR 1W CHEMO INFUSION 1006AB
FLR 1W CHEMO INFUSION 1006AC
FLR 1W CHEMO INFUSION 1006AD
FLR 1W CHEMO INFUSION 1006AE
FLR 1W CHEMO INFUSION 1006AF
FLR 1W CHEMO INFUSION 1006AG
FLR 1W CHEMO INFUSION 1006AH
FLR 1W CHEMO INFUSION 1006AJ
FLR 1W CHEMO INFUSION 1006AK
FLR 1W CHEMO INFUSION 1006AL
FLR 1W CHEMO INFUSION 1006AM
FLR 1W CHEMO INFUSION 1006AN
FLR 1W CHEMO INFUSION 1006AP
FLR 1W CHEMO INFUSION 1006AQ
FLR 1W CHEMO INFUSION 1006AR
FLR 1W CHEMO INFUSION 1006AS
FLR 1W CHEMO INFUSION 1006AT
FLR 1W CHEMO INFUSION 1006AU
FLR 1W CHEMO INFUSION 1006AV
FLR 1W CHEMO INFUSION 1006AW
FLR 1W CHEMO INFUSION 1006AX
FLR 1W CHEMO INFUSION 1006AY
FLR 1W CHEMO INFUSION 1006AZ
FLR 1W CHEMO INFUSION 1006BA
FLR 1W CHEMO INFUSION 1006BB
FLR 1W CHEMO INFUSION 1006BC
FLR 1W CHEMO INFUSION 1006BD
FLR 1W CHEMO INFUSION 1006BE
FLR 1W CHEMO INFUSION 1006BF
FLR 1W CHEMO INFUSION 1006BG
FLR 1W CHEMO INFUSION 1006BH
FLR 1W CHEMO INFUSION 1006BJ
FLR 1W CHEMO INFUSION 1006BK
FLR 1W CHEMO INFUSION 1006BL
FLR 1W CHEMO INFUSION 1006BM
FLR 1W CHEMO INFUSION 1006BN
FLR 1W CHEMO INFUSION 1006BP
FLR 1W CHEMO INFUSION 1006BQ
FLR 1W CHEMO INFUSION 1006BR
FLR 1W CHEMO INFUSION 1006BS
FLR 1W CHEMO INFUSION 1006BT
FLR 1W CHEMO INFUSION 1006BU
FLR 1W CHEMO INFUSION 1006BV
FLR 1W CHEMO INFUSION 1006BW
FLR 1W CHEMO INFUSION 1006BX
FLR 1W CHEMO INFUSION 1006BY
FLR 1W CHEMO INFUSION 1006BZ
FLR 1W CHEMO INFUSION 1006CA
FLR 1W CHEMO INFUSION 1006CB
FLR 1W CHEMO INFUSION 1006CC
FLR 1W CHEMO INFUSION 1006CD
FLR 1W CHEMO INFUSION 1006CE
FLR 1W CHEMO INFUSION 1006CF
FLR 1W CHEMO INFUSION 1006CG
FLR 1W CHEMO INFUSION 1006CH
FLR 1W CHEMO INFUSION 1006CJ
FLR 1W CHEMO INFUSION 1006CK
FLR 1W CHEMO INFUSION 1006CL
FLR 1W CHEMO INFUSION 1006CM
FLR 1W CHEMO INFUSION 1006CN
FLR 1W CHEMO INFUSION 1006CP
FLR 1W CHEMO INFUSION 1006CQ
FLR 1W CHEMO INFUSION 1006CR
FLR 1W CHEMO INFUSION 1006CS
FLR 1W CHEMO INFUSION 1006CT
FLR 1W CHEMO INFUSION 1006CU
FLR 1W CHEMO INFUSION 1006CV
FLR 1W CHEMO INFUSION 1006CW
FLR 1W CHEMO INFUSION 1006CX
FLR 1W CHEMO INFUSION 1006CY
FLR 1W CHEMO INFUSION 1006CZ
FLR 1W CHEMO INFUSION 1006DA
FLR 1W CHEMO INFUSION 1006DB
FLR 1W CHEMO INFUSION 1006DC
FLR 1W CHEMO INFUSION 1006DD
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FLR 1W CHEMO INFUSION 1006DK
FLR 1W CHEMO INFUSION 1006DL
FLR 1W CHEMO INFUSION 1006DM
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FLR 1W CHEMO INFUSION 1006DX
FLR 1W CHEMO INFUSION 1006DY
FLR 1W CHEMO INFUSION 1006DZ
FLR 1W CHEMO INFUSION 1006EA
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FLR 1W CHEMO INFUSION 1006FD
FLR 1W CHEMO INFUSION 1006FE
FLR 1W CHEMO INFUSION 1006FF
FLR 1W CHEMO INFUSION 1006FG
FLR 1W CHEMO INFUSION 1006FH
FLR 1W CHEMO INFUSION 1006FJ
FLR 1W CHEMO INFUSION 1006FK
FLR 1W CHEMO INFUSION 1006FL
FLR 1W CHEMO INFUSION 1006FM
FLR 1W CHEMO INFUSION 1006FN
FLR 1W CHEMO INFUSION 1006FP
FLR 1W CHEMO INFUSION 1006FQ
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FLR 1W CHEMO INFUSION 1006FV
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FLR 1W CHEMO INFUSION 1006GB
FLR 1W CHEMO INFUSION 1006GC
FLR 1W CHEMO INFUSION 1006GD
FLR 1W CHEMO INFUSION 1006GE
FLR 1W CHEMO INFUSION 1006GF
FLR 1W CHEMO INFUSION 1006GG
FLR 1W CHEMO INFUSION 1006GH
FLR 1W CHEMO INFUSION 1006GJ
FLR 1W CHEMO INFUSION 1006GK
FLR 1W CHEMO INFUSION 1006GL
FLR 1W CHEMO INFUSION 1006GM
FLR 1W CHEMO INFUSION 1006GN
FLR 1W CHEMO INFUSION 1006GP
FLR 1W CHEMO INFUSION 1006GQ
FLR 1W CHEMO INFUSION 1006GR
FLR 1W CHEMO INFUSION 1006GS
FLR 1W CHEMO INFUSION 1006GT
FLR 1W CHEMO INFUSION 1006GU
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FLR 1W CHEMO INFUSION 1006GW
FLR 1W CHEMO INFUSION 1006GX
FLR 1W CHEMO INFUSION 1006GY
FLR 1W CHEMO INFUSION 1006GZ
FLR 1W CHEMO INFUSION 1006HA
FLR 1W CHEMO INFUSION 1006HB
FLR 1W CHEMO INFUSION 1006HC
FLR 1W CHEMO INFUSION 1006HD
FLR 1W CHEMO INFUSION 1006HE
FLR 1W CHEMO INFUSION 1006HF
FLR 1W CHEMO INFUSION 1006HG
FLR 1W CHEMO INFUSION 1006HH
FLR 1W CHEMO INFUSION 1006HJ
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FLR 1W CHEMO INFUSION 1006HQ
FLR 1W CHEMO INFUSION 1006HR
FLR 1W CHEMO INFUSION 1006HS
FLR 1W CHEMO INFUSION 1006HT
FLR 1W CHEMO INFUSION 1006HU
FLR 1W CHEMO INFUSION 1006HV
FLR 1W CHEMO INFUSION 1006HW
FLR 1W CHEMO INFUSION 1006HX
FLR 1W CHEMO INFUSION 1006HY
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FLR 1W CHEMO INFUSION 1006JA
FLR 1W CHEMO INFUSION 1006JB
FLR 1W CHEMO INFUSION 1006JC
FLR 1W CHEMO INFUSION 1006JD
FLR 1W CHEMO INFUSION 1006JE
FLR 1W CHEMO INFUSION 1006JF
FLR 1W CHEMO INFUSION 1006JG
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FLR 1W CHEMO INFUSION 1006JL
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MEDICAL CENTER OF AURORA SOUTH TOWER NODE 1 FACP 4100es FACP

Module	Qty	Description		Standby Current	Total Standby	Alarm Current	Total Alarm
Panel Equipment							
4100-7150	*1*	*MASTER CONTROLLER UPGRADE W/ 2X40 DISPLAY (4100 BA*		*0.1630*	*0.1630*	*0.2100*	*0.2100*
4100-0304	*1*	*STYLE 7 REMOTE UNIT INTERFACE*		*0.0850*	*0.0850*	*0.0850*	*0.0850*
4100-5005	*8*	*ZONE MODULE, 8 IDC, CLASS B*		*0.0750*	*0.6000*	*0.1950*	*1.5600*
4100-3003	*2*	*8 PT AUX RELAY MODULE 3 AMP*		*0.0250*	*0.0500*	*0.2800*	*0.5600*
4100-0110	*5*	*MAPNET II ADDRESSABLE MODULE*	*	*0.2700*	*1.3500*	*0.2900*	*1.4500*
4100-4321	*10*	*6 CIRCUIT CLASS B (STYLE Y)*		*0.0250*	*0.2500*	*0.0700*	*0.7000*
4100-6078	*1*	*NETWORK IF CARD, MODULAR*		*0.0460*	*0.0460*	*0.0460*	*0.0460*
4100-6056	*2*	*NETWORK MEDIA CARD WIRED*		*0.0550*	*0.1100*	*0.0550*	*0.1100*
4100-5101	*2*	*EXPANSION PWR SUPPLY (XPS) - 120VAC 60HZ*		*0.0500*	*0.1000*	*0.0500*	*0.1000*
4100-6038	*2*	*DUAL RS-232 IF CARD*		*0.1320*	*0.2640*	*0.1320*	*0.2640*
4100-6005	*1*	*MASTER CONTROLLER POWER SUPPLY*		*0.0000*	*0.0000*	*0.0000*	*0.0000*
4100-3110	*3*	*IDNet/2+2 MODULE - UP TO 250 DEVICES 4 ISOLATED LOOPS*	*	*0.0500*	*0.1500*	*0.1000*	*0.3000*
4100-0108	*2*	*EXPANSION 120V 8AMP POWER SUPPLY*		*0.0000*	*0.0000*	*0.0000*	*0.0000*
		Panel Totals			**3.1680**		**5.3850**
IDNet Addressable Devices (SLC)							
4090-9001	*7*	*IDNET SUPERVISED IAM*	*	*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	*22*	*TRUEALARM PHOTO SMOKE SENSOR*					
4098-9733	*8*	*TRUEALARM HEAT SENSOR*	*				
4098-9756	*2*	*TRUEALARM DUCT SMOKE SENSOR W/ RELAY OUTPUT*	*				
4098-9789	*1*	*TRUEALARM SENSOR BASE W/ LED OUTPUT*	*				
4098-9792	*29*	*TRUEALARM SENSOR BASE*	*				
4099-9006	*10*	*ADDRESSABLE DOUBLE ACTION MANUAL STATION, PUSH*	*				
Mapnet Addressable Devices (SLC)							
2190-9155	*1*	*MAPNET CLASS B MONITOR ZAM*	*				
2190-9161	*6*	*MAPNET CLASS B SIGNAL ZAM*	*				
2190-9163	*45*	*MAPNET UNSUPERVISED CONTROL ZAM*	*				
2190-9172	*41*	*MAPNET SUPERVISED IAM*	*				
2190-9173	*3*	*MAPNET 2 POINT INPUT/OUTPUT ZAM*	*				
2099-9795	*22*	*MAPNET SINGLE ACTION PULL STATION*	*				
1	**4098-9714**	**330**	**TRUEALARM PHOTO SMOKE SENSOR**				
2	**4098-9733**	**35**	**TRUEALARM HEAT SENSOR**	*			
	4098-9756	*36*	*TRUEALARM DUCT SMOKE SENSOR W/ RELAY OUTPUT*	*			
1	**4098-9789**	**327**	**TRUEALARM SENSOR BASE W/ LED OUTPUT**	*			
	4098-9792	*38*	*TRUEALARM SENSOR BASE*	*			
Miscellaneous Peripheral Devices That Require (Additional) System Power							
4098-9843	*38*	*ENCAPSULATED RELAY PAM-SD*		*0.0000*	*0.0000*	*0.0150*	*0.5700*
4098-9756	*38*	*TRUEALARM DUCT SMOKE SENSOR W/ RELAY OUTPUT*		*0.0030*	*0.1140*	*0.0150*	*0.5700*
4603-9101	*11*	*SERIAL LCD ANNUNCIATOR*		*0.0650*	*0.7150*	*0.1400*	*1.5400*
2098-9808	*1*	*REMOTE ALARM INDICATOR*		*0.0010*	*0.0010*	*0.0000*	*0.0000*
Notification Appliances			**Setting**				
4009-9001	*2*	*FOUR CIRCUIT NAC EXTENDER, 120 VAC*		*0.0000*	*0.0000*	*0.0150*	*0.0300*
4903-9219	*10*	*HORN/STROBE, NON-SYNC, RED, WALL MTD*	*15*	*0.0000*	*0.0000*	*0.1330*	*1.3300*
4903-9292	*94*	*CH70-24MCW-FR, CHIME/STROBE, NON-SYNC, RED, WALL MTD*	*15*	*0.0000*	*0.0000*	*0.0700*	*6.5800*
1	**4904-9137**	**115**	**15CD VISIBLE ONLY RED**	**15**	**0.0000**	**0.0000**	**0.0900**	**10.3500**
	4906-9101	*1*	*V/O MC NON-ADDRESS, RED, WALL*	*15*	*0.0000*	*0.0000*	*0.0600*	*0.0600*
	4906-9101	*5*	*V/O MC NON-ADDRESS, RED, WALL*	*75*	*0.0000*	*0.0000*	*0.1860*	*0.9300*
	CH70-24MCW-FR	*4*	*MULTI CD CHIME STROBE, WALL MNT, RED*	*15*	*0.0000*	*0.0000*	*0.0820*	*0.3280*
	RSS-24MCW-FR	*1*	*MULTI CD STROBE, WALL MNT, RED*	*15*	*0.0000*	*0.0000*	*0.0600*	*0.0600*
			Peripheral Totals			**0.8300**		**22.3480**
			RUI Totals	**11**		**0.0385**		**0.0385**
			Address Totals	**592.5 Addresses**		**0.9623**		**0.9723**
			System Totals*:		**Standby**	**4.9988**	**Alarm**	**28.7438**

*** Device Address current draw included below (See Additional Current Draws):**

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

Battery Set #1 (Cabinet/Charger #1)	Standby Current	Standby Total	Alarm Current	Alarm Total
Select ALL Power Supplies on this battery set:				
PS-1		1.0930		8.9520
PS-2		1.2470		8.0900
PS-3		0.7010		8.4000
XPS-1		0.1570		0.4960
XPS-2		0.8000		1.7950
	Sub Total	**3.9980**		**27.7330**
Additional Current Draws:				
RUI Connected Peripheral Devices 11	x 0.0035	= 0.0385	x 0.0035	= 0.0385
MAPNET/IDNet Device Address Communication Current 593	x 0.001624	= 0.9623	x 0.001641	= 0.9723
	Sub Total	**4.9988**		**28.7438**
Spare addressable point capacity **20%** 119	x 0.001624	= 0.1933	x 0.001641	= 0.1953
	Total	**5.1920**		**28.9391**
Standby Time = **4** Hrs	x 5.1920	= 20.7680	Standby Ah	
Alarm Time = **5** Min	0.08333 x 28.9391	= 2.4116	Alarm Ah	
		23.1796		
Additional Spare Battery Capacity = **20%**	+	4.6359		
		27.8156		
Battery Discharge Factor = **20%**	+	5.5631		
Minimum Battery Required **2081-9296 50AH (2x)**		**33.3787**		
Battery Supplied **2081-9296 50AH (2x)**				

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

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

												PID	*4903-9219*	*4903-9292*	**4904-9137**	*CH70-24MCW-FR*	*RSS-24MCW-FR*	*4906-9101*	*4906-9101*	*4009-9001*							
												Setting	*15cd*	*15cd*	**15cd**	*15cd*	*15cd*	*15cd*	*75cd*								
												Device Type	*A/V*	*C/V*	**V/O**	*MC A/V*	*MC V/O*	*MC V/O*	*MC V/O*								
												Supv. Current	*0.0000*	*0.0000*	**0.0000**	*0.0000*	*0.0000*	*0.0000*	*0.0000*	*0.0000*							
												Alarm Current	*0.1330*	*0.0700*	**0.0900**	*0.0820*	*0.0600*	*0.0600*	*0.1860*	*0.0150*							
NOTIFICATION CIRCUIT DESCRIPTION	**Power Supply**	**Panel Circuit**	**Plan Ckt.**	**Dist. (D) Feet**	**Wire Gauge**	**Wire Res. / Ft. (R)**	**Total Alarm (A)**	**V. Drop (A*2D*R)**	**Volt @ End**	**% Volt Drop**	**Min Device Voltage**	**Max Distance**										**Circuit Capacity (Amps)**	**Minimum Voltage @ NAC Output Terminals**	**Spare Circuit / Branch Capacity**	**Device Quantity Per Circuit/ Branch**
1ST FLOOR EAST CHIMES/STROBES N1:SIG3	*PS-1*	*SIG3*	*1:SIG3*	*500*	*14ga*	*0.0028*	**0.450**	*1.270*	*18.230*	*6.51%*	*16vdc*	*1378 Ft.*			*5*							*3.A*	*19.5*	*63.7%*	*5*
RADIOLOGY/SURGERY HALLS N1:SIG4	*PS-1*	*SIG4*	*1:SIG4*	*500*	*14ga*	*0.0028*	**0.450**	*1.270*	*18.230*	*6.51%*	*16vdc*	*1378 Ft.*			*5*							*3.A*	*19.5*	*63.7%*	*5*
2ND FLOOR CHIMES/STROBES N1:SIG5	*PS-1*	*SIG5*	*1:SIG5*	*600*	*14ga*	*0.0028*	**0.450**	*1.524*	*17.976*	*7.82%*	*16vdc*	*1378 Ft.*			*5*							*3.A*	*19.5*	*56.5%*	*5*
3RD FLOOR CHIMES/STROBES N1:SIG6	*PS-1*	*SIG6*	*1:SIG6*	*700*	*14ga*	*0.0028*	**0.450**	*1.778*	*17.722*	*9.12%*	*16vdc*	*1378 Ft.*			*5*							*3.A*	*19.5*	*49.2%*	*5*
4TH FLOOR CHIMES/STROBES N1:SIG7	*PS-1*	*SIG7*	*1:SIG7*	*800*	*14ga*	*0.0028*	**0.450**	*2.032*	*17.468*	*10.42%*	*16vdc*	*1378 Ft.*			*5*							*3.A*	*19.5*	*41.9%*	*5*
5TH FLOOR CHIMES/STROBES N1:SIG8	*PS-1*	*SIG8*	*1:SIG8*	*900*	*14ga*	*0.0028*	**0.450**	*2.286*	*17.214*	*11.72%*	*16vdc*	*1378 Ft.*			*5*							*3.A*	*19.5*	*34.7%*	*5*
SURGERY CHIMES/STROBES N1:SIG9	*PS-1*	*SIG9*	*1:SIG9*	*500*	*14ga*	*0.0028*	**0.450**	*1.270*	*18.230*	*6.51%*	*16vdc*	*1378 Ft.*			*5*							*3.A*	*19.5*	*63.7%*	*5*
LAB HALL CHIMES/STROBES N1:SIG10	*PS-1*	*SIG10*	*1:SIG10*	*500*	*14ga*	*0.0028*	**0.450**	*1.270*	*18.230*	*6.51%*	*16vdc*	*1378 Ft.*			*5*							*3.A*	*19.5*	*63.7%*	*5*
CENT SPLY/MATERIALS MGMT N1:SIG11	*PS-1*	*SIG11*	*1:SIG11*	*500*	*14ga*	*0.0028*	**0.450**	*1.270*	*18.230*	*6.51%*	*16vdc*	*1378 Ft.*			*5*							*3.A*	*19.5*	*63.7%*	*5*
EMERGENCY ROOM STROBES N1:SIG12	*PS-1*	*SIG12*	*1:SIG12*	*500*	*14ga*	*0.0028*	**0.450**	*1.270*	*18.230*	*6.51%*	*16vdc*	*1378 Ft.*			*5*							*3.A*	*19.5*	*63.7%*	*5*
EMERGENCY RM HALL STROBES N1:SIG13	*PS-1*	*SIG13*	*1:SIG13*	*500*	*14ga*	*0.0028*	**0.450**	*1.270*	*18.230*	*6.51%*	*16vdc*	*1378 Ft.*			*5*							*3.A*	*19.5*	*63.7%*	*5*
1ST FLOOR CENTRAL STROBES N1:SIG14	*PS-1*	*SIG14*	*1:SIG14*	*500*	*14ga*	*0.0028*	**0.450**	*1.270*	*18.230*	*6.51%*	*16vdc*	*1378 Ft.*			*5*							*3.A*	*19.5*	*63.7%*	*5*
N1:SIG15 CENT SPLY/MATERIAL CHIME	*PS-1*	*SIG15*	*1:SIG15*	*500*	*14ga*	*0.0028*	**0.350**	*0.988*	*18.512*	*5.07%*	*16vdc*	*1772 Ft.*		*5*								*3.A*	*19.5*	*71.8%*	*5*
N1:SIG16 EMERGENCY ROOM CHIMES	*PS-1*	*SIG16*	*1:SIG16*	*500*	*14ga*	*0.0028*	**0.350**	*0.988*	*18.512*	*5.07%*	*16vdc*	*1772 Ft.*		*5*								*3.A*	*19.5*	*71.8%*	*5*
N1:SIG17 EMERGENCY RM HALL CHIMES	*PS-1*	*SIG17*	*1:SIG17*	*500*	*14ga*	*0.0028*	**0.350**	*0.988*	*18.512*	*5.07%*	*16vdc*	*1772 Ft.*		*5*								*3.A*	*19.5*	*71.8%*	*5*
N1:SIG18 1ST FLOOR CENTRAL CHIMES	*PS-2*	*SIG18*	*1:SIG18*	*500*	*14ga*	*0.0028*	**0.350**	*0.988*	*18.512*	*5.07%*	*16vdc*	*1772 Ft.*		*5*								*3.A*	*19.5*	*71.8%*	*5*
N1:SIG19 CHIMES CS-1	*PS-2*	*SIG19*	*1:SIG19*	*100*	*14ga*	*0.0028*	**0.350**	*1.975*	*17.525*	*10.13%*	*16vdc*	*1772 Ft.*		*5*								*3.A*	*19.5*	*43.6%*	*5*
N1:SIG20 CHIMES CS-1, S5-5, S6-6	**PS-2**	**SIG20**	**1:SIG20**	**827**	**14ga**	**0.0028**	**0.410**	**1.914**	**17.586**	**9.81%**	**16vdc**	**1512 Ft.**		*2*	**3**							**3.A**	**19.5**	**45.3%**	**5**
N1:SIG21 STROBES S6-1	*PS-2*	*SIG21*	*1:SIG21*	*1000*	*14ga*	*0.0028*	**0.450**	*2.540*	*16.960*	*13.03%*	*16vdc*	*1378 Ft.*			*5*							*3.A*	*19.5*	*27.4%*	*5*
N1:SIG22 STROBES S6-2	*PS-2*	*SIG22*	*1:SIG22*	*100*	*14ga*	*0.0028*	**0.450**	*0.254*	*19.246*	*1.30%*	*16vdc*	*1378 Ft.*			*5*							*3.A*	*19.5*	*85.0%*	*5*
N1:SIG23 CHIMES C3,4-1	*PS-2*	*SIG23*	*1:SIG23*	*700*	*14ga*	*0.0028*	**0.372**	*1.470*	*18.030*	*7.54%*	*16vdc*	*1667 Ft.*							*2*			*3.A*	*19.5*	*58.0%*	*2*
N1:SIG24 STROBES S3-1	*PS-2*	*SIG24*	*1:SIG24*	*700*	*14ga*	*0.0028*	**0.360**	*1.422*	*18.078*	*7.29%*	*16vdc*	*1723 Ft.*			*4*							*3.A*	*19.5*	*59.4%*	*4*
N1:SIG25 STROBES S3-2	*PS-2*	*SIG25*	*1:SIG25*	*700*	*14ga*	*0.0028*	**0.760**	*3.003*	*16.497*	*15.40%*	*16vdc*	*816 Ft.*		*7*	*3*							*3.A*	*19.5*	*14.2%*	*10*
N1:SIG26 CHIME C2-1	*PS-2*	*SIG26*	*1:SIG26*	*600*	*14ga*	*0.0028*	**0.700**	*2.371*	*17.129*	*12.16%*	*16vdc*	*886 Ft.*		*10*								*3.A*	*19.5*	*32.3%*	*10*
N1:SIG27 SPARE	*PS-2*	*SIG27*	*1:SIG27*		*14ga*	*0.0028*	*0.000*	*0.000*	*19.500*	*0.00%*	*16vdc*	*0 Ft.*										*3.A*	*19.5*	*100.0%*	*0*
N1:SIG28 STROBES SP6-2	*PS-2*	*SIG28*	*1:SIG28*	*600*	*14ga*	*0.0028*	**0.450**	*1.524*	*17.976*	*7.82%*	*16vdc*	*1378 Ft.*			*5*							*3.A*	*19.5*	*56.5%*	*5*
N1:SIG29 4009 SP6-2,S2-4,1ST CENT ELEV#6	*PS-2*	*SIG29*	*1:SIG29*	*350*	*14ga*	*0.0028*	**0.015**	*0.030*	*19.470*	*0.15%*	*16vdc*	*41340 Ft.*									*1*	*3.A*	*19.5*	*99.2%*	*1*
N1:SIG30 STROBES 4009A SOUTH PHARMACY	*PS-2*	*SIG30*	*1:SIG30*	*350*	*14ga*	*0.0028*	**0.015**	*0.030*	*19.470*	*0.15%*	*16vdc*	*41340 Ft.*									*1*	*3.A*	*19.5*	*99.2%*	*1*
N1:SIG31 SPARE S5-2	*PS-2*	*SIG31*	*1:SIG31*		*14ga*	*0.0028*	*0.000*	*0.000*	*19.500*	*0.00%*	*16vdc*	*0 Ft.*										*3.A*	*19.5*	*100.0%*	*0*
N1:SIG32 ELECTRICAL 1E-4902B STROBE	*PS-2*	*SIG32*	*1:SIG32*	*350*	*14ga*	*0.0028*	**0.060**	*0.119*	*19.381*	*0.61%*	*16vdc*	*10335 Ft.*						*1*				*3.A*	*19.5*	*96.6%*	*1*
N1:SIG33 STROBE S6-3	*PS-2*	*SIG33*	*1:SIG33*	*1000*	*14ga*	*0.0028*	**0.180**	*1.016*	*18.484*	*5.21%*	*16vdc*	*3445 Ft.*			*2*							*3.A*	*19.5*	*71.0%*	*2*
N1:SIG34 STROBE S6-4	*PS-2*	*SIG34*	*1:SIG34*	*1000*	*14ga*	*0.0028*	**0.090**	*0.508*	*18.992*	*2.61%*	*16vdc*	*6890 Ft.*			*1*							*3.A*	*19.5*	*85.5%*	*1*
N1:SIG35 STROBE S2-3	*PS-3*	*SIG35*	*1:SIG35*	*600*	*14ga*	*0.0028*	**0.910**	*3.082*	*16.418*	*15.80%*	*16vdc*	*681 Ft.*		*4*	*7*							*3.A*	*19.5*	*11.9%*	*11*
N1:SIG36 STROBE S2-1	*PS-3*	*SIG36*	*1:SIG36*	*600*	*14ga*	*0.0028*	**0.690**	*2.337*	*17.163*	*11.98%*	*16vdc*	*899 Ft.*		*6*	*3*							*3.A*	*19.5*	*33.2%*	*9*
N1:SIG37 STROBE S2-2	*PS-3*	*SIG37*	*1:SIG37*	*533*	*14ga*	*0.0028*	**1.070**	*3.219*	*16.281*	*16.51%*	*16vdc*	*580 Ft.*		*5*	*8*							*3.A*	*19.5*	*8.0%*	*13*
N1:SIG38 SPARE	*PS-3*	*SIG38*	*1:SIG38*		*14ga*	*0.0028*	*0.000*	*0.000*	*19.500*	*0.00%*	*16vdc*	*0 Ft.*										*3.A*	*19.5*	*100.0%*	*0*
N1:SIG39 STROBE OUTSIDE SIAMESE	*PS-3*	*SIG39*	*1:SIG39*	*1000*	*14ga*	*0.0028*	**0.060**	*0.339*	*19.161*	*1.74%*	*16vdc*	*10335 Ft.*					*1*					*3.A*	*19.5*	*90.3%*	*1*
N1:SIG40 HORN OUTSIDE SIAMESE	*PS-3*	*SIG40*	*1:SIG40*	*1000*	*14ga*	*0.0028*	**0.254**	*1.434*	*18.066*	*7.35%*	*16vdc*	*2441 Ft.*			*1*	*2*						*3.A*	*19.5*	*59.0%*	*3*
N1:SIG41 SPARE	*PS-3*	*SIG41*	*1:SIG41*		*14ga*	*0.0028*	*0.000*	*0.000*	*19.500*	*0.00%*	*16vdc*	*0 Ft.*										*3.A*	*19.5*	*100.0%*	*0*
N1:SIG42 CHIME 1ST FLOOR CENTRAL	*PS-3*	*SIG42*	*1:SIG42*	*500*	*14ga*	*0.0028*	**0.360**	*1.016*	*18.484*	*5.21%*	*16vdc*	*1723 Ft.*			*4*							*3.A*	*19.5*	*71.0%*	*4*
N1:SIG43 BASEMENT EVS DEPT STROBE CKT	*PS-3*	*SIG43*	*1:SIG43*	*600*	*14ga*	*0.0028*	**0.090**	*0.305*	*19.195*	*1.56%*	*16vdc*	*6890 Ft.*			*1*							*3.A*	*19.5*	*91.3%*	*1*
N1:SIG44 SPARE	*PS-3*	*SIG44*	*1:SIG44*		*14ga*	*0.0028*	*0.000*	*0.000*	*19.500*	*0.00%*	*16vdc*	*0 Ft.*										*3.A*	*19.5*	*100.0%*	*0*
N1:SIG45 BASEMENT	*PS-3*	*SIG45*	*1:SIG45*	*600*	*14ga*	*0.0028*	**0.712**	*2.411*	*17.089*	*12.37%*	*16vdc*	*871 Ft.*		*9*		*1*						*3.A*	*19.5*	*31.1%*	*10*
N1:SIG46 STROBES MATERIAL MANAGEMENT	*PS-3*	*SIG46*	*1:SIG46*	*600*	*14ga*	*0.0028*	**0.372**	*1.260*	*18.240*	*6.46%*	*16vdc*	*1667 Ft.*							*2*			*3.A*	*19.5*	*64.0%*	*2*
N1:SIG47 BASEMENT CORRIDOR	*PS-3*	*SIG47*	*1:SIG47*	*488*	*14ga*	*0.0028*	**0.982**	*2.705*	*16.795*	*13.87%*	*16vdc*	*631 Ft.*		*9*	*3*	*1*						*3.A*	*19.5*	*22.7%*	*13*
N1:SIG48 SPARE	*PS-3*	*SIG48*	*1:SIG48*		*14ga*	*0.0028*	*0.000*	*0.000*	*19.500*	*0.00%*	*16vdc*	*0 Ft.*										*3.A*	*19.5*	*100.0%*	*0*
N1:SIG49 S9-1 BLOOD W & SURG DOC OFFICES	*PS-3*	*SIG49*	*1:SIG49*	*900*	*14ga*	*0.0028*	**0.266**	*1.351*	*18.149*	*6.93%*	*16vdc*	*2331 Ft.*	*2*									*3.A*	*19.5*	*61.4%*	*2*
N1:SIG50 S9-2 BLOOD LAB EAST	*PS-3*	*SIG50*	*1:SIG50*	*900*	*14ga*	*0.0028*	**0.266**	*1.351*	*18.149*	*6.93%*	*16vdc*	*2331 Ft.*	*2*									*3.A*	*19.5*	*61.4%*	*2*
N1:SIG51 ADMITTING SOUTH	*PS-3*	*SIG51*	*1:SIG51*	*1000*	*14ga*	*0.0028*	**0.266**	*1.501*	*17.999*	*7.70%*	*16vdc*	*2331 Ft.*	*2*									*3.A*	*19.5*	*57.1%*	*2*
N1:SIG52 ADMITTING NORTH	*PS-3*	*SIG52*	*1:SIG52*	*1000*	*14ga*	*0.0028*	**0.133**	*0.751*	*18.749*	*3.85%*	*16vdc*	*4662 Ft.*	*1*									*3.A*	*19.5*	*78.5%*	*1*
N1:SIG53 ADMITTING CHIME	*PS-3*	*SIG53*	*1:SIG53*	*1000*	*14ga*	*0.0028*	**0.133**	*0.751*	*18.749*	*3.85%*	*16vdc*	*4662 Ft.*	*1*									*3.A*	*19.5*	*78.5%*	*1*
N1:SIG54 SPARE	*PS-3*	*SIG54*	*1:SIG54*		*14ga*	*0.0028*	*0.000*	*0.000*	*19.500*	*0.00%*	*16vdc*	*0 Ft.*										*3.A*	*19.5*	*100.0%*	*0*
N1:SIG55 C7-9-1 BLOOD LAB SURGERY PREP	*PS-3*	*SIG55*	*1:SIG55*	*1000*	*14ga*	*0.0028*	**0.133**	*0.751*	*18.749*	*3.85%*	*16vdc*	*4662 Ft.*	*1*									*3.A*	*19.5*	*78.5%*	*1*
N1:SIG56 SPARE	*PS-3*	*SIG56*	*1:SIG56*		*14ga*	*0.0028*	*0.000*	*0.000*	*19.500*	*0.00%*	*16vdc*	*0 Ft.*										*3.A*	*19.5*	*100.0%*	*0*
N1:SIG57 S1,3 KITCHEN AND SLEEP ROOMS	*PS-3*	*SIG57*	*1:SIG57*	*900*	*14ga*	*0.0028*	**0.133**	*0.676*	*18.824*	*3.46%*	*16vdc*	*4662 Ft.*	*1*									*3.A*	*19.5*	*80.7%*	*1*
N1:SIG58 S1,4 GIFT SHOP & ELEVATOR AREA	*PS-3*	*SIG58*	*1:SIG58*	*900*	*14ga*	*0.0028*	**0.350**	*1.778*	*17.722*	*9.12%*	*16vdc*	*1772 Ft.*		*5*								*3.A*	*19.5*	*49.2%*	*5*
N1:SIG59 S8,3 SURGERY PREP AND HOLDING	*PS-3*	*SIG59*	*1:SIG59*	*900*	*14ga*	*0.0028*	**0.350**	*1.778*	*17.722*	*9.12%*	*16vdc*	*1772 Ft.*		*5*								*3.A*	*19.5*	*49.2%*	*5*
N1:SIG60 S7,1 SURGERY PREP	*PS-3*	*SIG60*	*1:SIG60*	*900*	*14ga*	*0.0028*	**0.350**	*1.778*	*17.722*	*9.12%*	*16vdc*	*1772 Ft.*		*5*								*3.A*	*19.5*	*49.2%*	*5*
N1:SIG61 S7,2 SURGERY PREP	*PS-3*	*SIG61*	*1:SIG61*	*900*	*14ga*	*0.0028*	**0.140**	*0.711*	*18.789*	*3.65%*	*16vdc*	*4429 Ft.*		*2*								*3.A*	*19.5*	*79.7%*	*2*
N1:SIG62 SPARE	*PS-3*	*SIG62*	*1:SIG62*		*14ga*	*0.0028*	*0.000*	*0.000*	*19.500*	*0.00%*	*16vdc*	*0 Ft.*										*3.A*	*19.5*	*100.0%*	*0*
N1:SIG101 1ST FLR ATS AREA STROBE 67-1	*XPS-1*	*SIG63*	*1:SIG63*	*1000*	*14ga*	*0.0028*	**0.186**	*1.050*	*18.400*	*5.38%*	*16vdc*	*3334 Ft.*							*1*			*3.A*	*19.5*	*70.0%*	*1*
N1:SIG102 SPARE	*XPS-1*	*SIG64*	*1:SIG64*		*14ga*	*0.0028*	*0.000*	*0.000*	*19.500*	*0.00%*	*16vdc*	*0 Ft.*										*3.A*	*19.5*	*100.0%*	*0*
N1:SIG103 SPARE	*XPS-1*	*SIG65*	*1:SIG65*		*14ga*	*0.0028*	*0.000*	*0.000*	*19.500*	*0.00%*	*16vdc*	*0 Ft.*										*3.A*	*19.5*	*100.0%*	*0*
N1:SIG107 SPARE	*XPS-2*	*SIG66*	*1:SIG66*		*14ga*	*0.0028*	*0.000*	*0.000*	*19.500*	*0.00%*	*16vdc*	*0 Ft.*										*3.A*	*19.5*	*100.0%*	*0*
N1:SIG108 SPARE	*XPS-2*	*SIG67*	*1:SIG67*		*14ga*	*0.0028*	*0.000*	*0.000*	*19.500*	*0.00%*	*16vdc*	*0 Ft.*										*3.A*	*19.5*	*100.0%*	*0*
N1:SIG109 SPARE	*XPS-2*	*SIG68*	*1:SIG68*		*14ga*	*0.0028*	*0.000*	*0.000*	*19.500*	*0.00%*	*16vdc*	*0 Ft.*										*3.A*	*19.5*	*100.0%*	*0*

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.

KEYNOTES:

1. DEVICE REMOVED FOR CONSTRUCTION.
2. DEVICE IS INTERIM FOR CONSTRUCTION. TO BE REMOVED, REPLACED, OR RELOCATED DURING BUILDOUT. DEVICE DESCRIPTOR CHANGED.
3. DEVICE DESCRIPTOR CHANGE ONLY.
4. DEVICE WAS INTERIM FOR CONSTRUCTION AND IS NOW REMOVED. DEVICE QUANTITY CHANGED.
5. EXISTING DEVICE REINSTALLED. RE-USE EXISTING HEAD, BASE, ADDRESS, LOCATION, AND WIRING.
6. DEVICE REMOVED TO BE RE-USED ON ANOTHER CIRCUIT.

City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: W. Polk
Date: Oct 13, 2022
2021 INTERNATIONAL CODES & 2020 NEC

Johnson Controls
DISTRICT 1-418
5757 WILLOW STON AVE
AURORA, CO 80017
SERVICE: 303-355-5000
PHONE: 303-355-9500
FAX: 303-355-9515

NICET CERTIFICATION INFORMATION
NANCY S. WILTSIE
NICET Fire Alarm, III
Certification #93727
Valid Through: 03/01/24
September 21, 2022

THE MEDICAL CENTER OF AURORA - SOUTH TOWER EXPANSION

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

Revisions shown with Δ symbol

ISSUE LOG				
MARK	DATE	CAD	CHK	DESCRIPTION

FOR PERMIT

DRAWN BY:	CCD
CHECKED BY:	CBR
ISSUE DATE:	7/26/22
JOB #:	
PROJECT #:	419-650189804

JOHNSON CONTROLS © 2022

SYSTEM: **FIRE ALARM SYSTEM**

SHEET: **NODE-1 FACP INTERIM CALS AND SCHEDULES**

FA-601

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FILE PATH: C:\Users\jtaucher\Johnson Controls\Project Electronics - Medical Center of Aurora (501 S Potomac - Aurora South\South Tower - Node 1\33-CAB Expansion - 2022 - 650189804\FireFA-601.dwg
LAST SAVED BY: JRAUCHC
LAST PRINTED: 9/21/2022 1:45:31 PM
30" x 42" Arch E1 Size

MAPNET CHANNEL 1:M1				SWITCH SETTINGS									
Address	Device Type	Point Type	Location Description	1	2	3	4	5	6	7	8		9
1:M1-1	ADRPUL	PULL	1:M1-1 FLR 1 W - EXIT BY X-RAY WAITING	X								ON	
1:M1-2	ADRPUL	PULL	1:M1-2 FLR 1W - EXIT HALL BY NUCLEAR MED		X							ON	
1:M1-3	ADRPUL	PULL	1:M1-3 FLR 1W - EXIT BY INTERVENTIONAL	X	X							ON	
1:M1-4	ADRPUL	PULL	1:M1-4 FLR 1 CENTRAL TWR EXIT BY MRI			X						ON	
1:M1-5	RPHOTO	SDUCT	1:M1-5 X-RAY ROOF - AHU-97-9 DUCT D.	X		X						ON	
1:M1-6	RPHOTO	SDUCT	1:M1-6 X-RAY ROOF - AHU-97-9 DUCT D.		X	X						ON	
1:M1-7	RPHOTO	SDUCT	1:M1-7 X-RAY ROOF - AHU-97-14 DUCT D.	X	X	X						ON	
1:M1-8	RPHOTO	SDUCT	1:M1-8 X-RAY ROOF - AHU-97-14 DUCT D.				X					ON	
1:M1-9	RPHOTO	SDUCT	1:M1-9 X-RAY ROOF - AHU-97-15 DUCT D.	X			X					ON	
1:M1-10	RPHOTO	SDUCT	1:M1-10 X-RAY ROOF - AHU-15 DUCT DET.		X		X					ON	
1:M1-11	GENIAM	SO	1:M1-11 FLR 1 CENTRAL TWR X-RAY HALL	X	X		X					ON	
1:M1-12	RZAM	RELAY	1:M1-12 X-RAY ROOF - AHU-97-9 DOWN			X	X					ON	
1:M1-13	RZAM	RELAY	1:M1-13 X-RAY ROOF AHU 97-14 SHUTDOWN	X		X	X					ON	
1:M1-14	RZAM	RELAY	1:M1-14 X-RAY ROOF AHU 97-15 SHUTDOWN		X	X	X					ON	
1:M1-15	PHOTO	VSMOKE	1:M1-15 FLR 1W - HALL BY X-RAY WAITING	X	X	X	X					ON	
1:M1-16	PHOTO	VSMOKE	1:M1-16 FLR 1W - X-RAY - PET SCAN					X				ON	
1:M1-17	PHOTO	VSMOKE	1:M1-17 FLR 1W - X-RAY - PET SCAN	X				X				ON	
1:M1-18	PHOTO	VSMOKE	1:M1-18 FLR 1W - HALL BY X-RAY WAITING		X			X				ON	
1:M1-19	PHOTO	VSMOKE	1:M1-19 FLR 1W - HALL BY X-RAY WAITING	X	X			X				ON	
1:M1-20	PHOTO	VSMOKE	1:M1-20 FLR 1W - X-RAY WAITING RM			X		X				ON	
1:M1-21	PHOTO	VSMOKE	1:M1-21 FLR 1W - HALL BY X-RAY WAITING	X		X		X				ON	
1:M1-22	PHOTO	VSMOKE	1:M1-22 FLR 1W - HALL BY X-RAY WAITING		X	X		X				ON	
1:M1-23	PHOTO	VSMOKE	1:M1-23 FLR 1W - BY PATHOLOGY STAIRS	X	X	X		X				ON	
1:M1-24	PHOTO	VSMOKE	1:M1-24 FLR 1W - HALL BY PATHOLOGY				X	X				ON	
1:M1-25	PHOTO	VSMOKE	1:M1-25 FLR 1W - HALL BY PATHOLOGY	X			X	X				ON	
1:M1-26			SPARE		X		X	X				ON	
1:M1-27			SPARE	X	X		X	X				ON	
1:M1-28			SPARE			X	X	X				ON	
1:M1-29			SPARE	X		X	X	X				ON	
1:M1-30			SPARE		X	X	X	X				ON	
1:M1-31			SPARE	X	X	X	X	X				ON	
1:M1-32			SPARE						X			ON	
1:M1-33			SPARE	X					X			ON	
1:M1-34			SPARE		X				X			ON	
1:M1-35			SPARE	X	X				X			ON	
1:M1-36	PHOTO	VSMOKE	1:M1-36 FLR 1W - PATHOLOGY LAB			X			X			ON	
1:M1-37	PHOTO	VSMOKE	1:M1-37 FLR 1W - ULTRASOUND SUITE	X		X			X			ON	
1:M1-38	PHOTO	VSMOKE	1:M1-38 FLR 1W - ULTRASOUND SUITE		X	X			X			ON	
1:M1-39	PHOTO	VSMOKE	1:M1-39 FLR 1W - HALL BY X-RAY WAITING	X	X	X			X			ON	
1:M1-40	PHOTO	VSMOKE	1:M1-40 FLR 1W - HALL BY X-RAY OFFICES				X		X			ON	
1:M1-41	PHOTO	VSMOKE	1:M1-41 FLR 1W - X-RAY WAITNG RM	X			X		X			ON	
1:M1-42	PHOTO	VSMOKE	1:M1-42 FLR 1W - X-RAY OFFICE SUITE		X		X		X			ON	
1:M1-43	PHOTO	VSMOKE	1:M1-43 FLR 1W - X-RAY OFFICE SUITE	X	X		X		X			ON	
1:M1-44	PHOTO	VSMOKE	1:M1-44 FLR 1W - X-RAY OFFICE SUITE			X	X		X			ON	
1:M1-45	PHOTO	VSMOKE	1:M1-45 FLR 1W - HALL BY X-RAY OFFICES	X		X	X		X			ON	
1:M1-46	PHOTO	VSMOKE	1:M1-46 FLR 1W - HALL BY X-RAY OFFICES		X	X	X		X			ON	
1:M1-47	PHOTO	VSMOKE	1:M1-47 FLR 1W - HALL BY NUCLEAR MED	X	X	X	X		X			ON	
1:M1-48	PHOTO	VSMOKE	1:M1-48 FLR 1W - HALL BY NUCLEAR MED					X	X			ON	
1:M1-49	PHOTO	VSMOKE	1:M1-49 FLR 1W - HALL BY NUCLEAR MED	X				X	X			ON	
1:M1-50	PHOTO	VSMOKE	1:M1-50 FLR 1W - NUCLEAR MEDICINE		X			X	X			ON	
1:M1-51	PHOTO	VSMOKE	1:M1-51 FLR 1W - NUCLEAR MEDICINE	X	X			X	X			ON	
1:M1-52	PHOTO	VSMOKE	1:M1-52 FLR 1W - NUCLEAR MED HOT LAB			X		X	X			ON	
1:M1-53	PHOTO	VSMOKE	1:M1-53 FLR 1W - HALL BY NUCLEAR MED	X		X		X	X			ON	
1:M1-54	PHOTO	VSMOKE	1:M1-54 FLR 1W - EXIT HALL BY X-RAY 4		X	X		X	X			ON	
1:M1-55	PHOTO	VSMOKE	1:M1-55 FLR 1W - EXIT HALL BY X-RAY 3	X	X	X		X	X			ON	
1:M1-56	PHOTO	VSMOKE	1:M1-56 FLR 1W - INTER-HALL BY X-RAY 3				X	X	X			ON	
1:M1-57	PHOTO	VSMOKE	1:M1-57 FLR 1W - INTER-HALL BY X-RAY 3	X			X	X	X			ON	
1:M1-58	PHOTO	VSMOKE	1:M1-58 FLR 1W - INTER-HALL BY X-RAY 3		X		X	X	X			ON	
1:M1-59	PHOTO	VSMOKE	1:M1-59 FLR 1W - INTER-HALL BY X-RAY 4	X	X		X	X	X			ON	
1:M1-60	PHOTO	VSMOKE	1:M1-60 FLR 1W - HALL BY CAT SCAN			X	X	X	X			ON	
1:M1-61	PHOTO	VSMOKE	1:M1-61 FLR 1W - HALL BY CAT SCAN	X		X	X	X	X			ON	
1:M1-62	PHOTO	VSMOKE	1:M1-62 FLR 1W - HALL BY CAT SCAN		X	X	X	X	X			ON	
1:M1-63			SPARE	X	X	X	X	X	X			ON	
1:M1-64	PHOTO	VSMOKE	1:M1-64 FLR 1W - HALL BY CAT SCAN						X			ON	
1:M1-65			SPARE	X					X			ON	
1:M1-66			SPARE		X				X			ON	
1:M1-67			SPARE	X	X				X			ON	
1:M1-68			SPARE			X			X			ON	
1:M1-69	PHOTO	VSMOKE	1:M1-69 FLR 1W - HALL BY X-RAY LOUNGE	X		X			X			ON	
1:M1-70	PHOTO	VSMOKE	1:M1-70 FLR 1W - HALL BY INTERVENTIONAL		X	X			X			ON	
1:M1-71	ADRPUL	PULL	1:M1-71 FL 1 CENTRL TWR MRI NRS STATION	X	X	X			X			ON	
1:M1-72	RZAM	RELAY	1:M1-72 FLTW IDF RM M - SE HALL ACCTL ML				X		X			ON	
1:M1-73	RZAM	RELAY	1:M1-73 1ST FL ROLL UP DOOR	X			X		X			ON	
1:M1-74	PHOTO	VSMOKE	1:M1-74 FLR 1W - HALL BY INTERVENTIONAL		X		X		X			ON	
1:M1-75	PHOTO	VSMOKE	1:M1-75 FLR 1W - INTERVENTIONAL X-RAY	X	X		X		X			ON	
1:M1-76	PHOTO	VSMOKE	1:M1-76 FLR 1W - HALL BY INTERVENTIONAL			X	X		X			ON	
1:M1-77	PHOTO	VSMOKE	1:M1-77 FLR 1W - HALL BY INTERVENTIONAL	X		X	X		X			ON	
1:M1-78			SPARE		X	X	X		X			ON	
1:M1-79			SPARE	X	X	X	X		X			ON	
1:M1-80	PHOTO	VSMOKE	1:M1-80 FLR 1W - INTERVENTIONAL X-RAY					X	X			ON	
1:M1-81	PHOTO	VSMOKE	1:M1-81 FLR 1W - INTERVENTIONAL X-RAY	X				X	X			ON	
1:M1-82	PHOTO	VSMOKE	1:M1-82 FLR 1W - INTERVENTIONAL X-RAY		X			X	X			ON	
2 1:M1-83	HEAT	HEAT	1:M1-83 FLR 1W - HALL @ MRI EQP. INTERIM	X	X			X	X			ON	
1 1:M1-84			SPARE			X		X	X			ON	
1:M1-85			SPARE	X		X		X	X			ON	
1:M1-86			SPARE		X	X		X	X			ON	
1:M1-87			SPARE	X	X	X		X	X			ON	
1:M1-88			SPARE				X	X	X			ON	
1:M1-89	PHOTO	VSMOKE	1:M1-89 FLR 1W - HALL BY MRI	X			X	X	X			ON	
2 1:M1-90	HEAT	HEAT	1:M1-90 FLR 1W - HALL BY MRI INTERIM		X		X	X	X			ON	
1:M1-91	PHOTO	VSMOKE	1:M1-91 FLR 1W - X-RAY - PET SCAN	X	X		X	X	X			ON	
1:M1-92			SPARE			X	X	X	X			ON	
1:M1-93	GENIAM	SO	1:M1-93 1ST FL PHARMACY SUPPLY TAMPER	X		X	X	X	X			ON	
1:M1-94	GENIAM	WATER	1:M1-94 FLR 1W - BLOOD BANK FLOW		X	X	X	X	X			ON	
1:M1-95	MBZAM	HEAT	1:M1-95 FLR 1W - MRI SCANNER ROOM	X	X	X	X		X			ON	
1:M1-96	PHOTO	VSMOKE	1:M1-96 FLR 1W - MRI CONTROL RM					X	X			ON	
1:M1-97	PHOTO	VSMOKE	1:M1-97 FLR 1W - MRI SUITE	X				X	X			ON	
1:M1-98	PHOTO	VSMOKE	1:M1-98 FLR 1W - MRI EQUIPMENT RM		X			X	X			ON	
1:M1-99	PHOTO	VSMOKE	1:M1-99 FLR 1W - INTERVENTIONAL X-RAY	X	X			X	X			ON	
1:M1-100	PHOTO	VSMOKE	1:M1-100 FLR 1W - INTERVENTIONAL BAY 2			X		X	X			ON	
1:M1-101	PHOTO	VSMOKE	1:M1-101 FLR 1W - INTERVENTIONAL BAY 1	X		X		X	X			ON	
1:M1-102	PHOTO	VSMOKE	1:M1-102 FLR 1W - INTERVENTIONAL N.STAT.		X	X		X	X			ON	
1:M1-103			SPARE	X	X	X		X	X			ON	
1:M1-104			SPARE				X	X	X			ON	
1:M1-105			SPARE	X			X	X	X			ON	
1:M1-106	PHOTO	VSMOKE	1:M1-106 FLR 1W - ELECTRIC RM BY LAB		X		X	X	X			ON	
1:M1-107	PHOTO	VSMOKE	1:M1-107 FLR 1 W - OR STORAGE	X	X		X	X	X			ON	
1:M1-108			SPARE			X	X	X	X			ON	
1:M1-109			SPARE	X		X	X	X	X			ON	
1:M1-110			SPARE		X	X	X	X	X			ON	
1:M1-111			SPARE	X	X	X	X	X	X			ON	
1:M1-112			SPARE					X	X			ON	
1:M1-113			SPARE	X				X	X			ON	
1:M1-114			SPARE		X			X	X			ON	
1:M1-115	PHOTO	VSMOKE	1:M1-115 FLR 1 RADI .03 CHANGING AREA	X	X			X	X			ON	
1:M1-116			SPARE			X		X	X			ON	
1:M1-117			SPARE	X		X		X	X			ON	
1:M1-118			SPARE		X	X		X	X			ON	
1:M1-119			SPARE	X	X	X		X	X			ON	
1:M1-120			SPARE				X	X	X			ON	
1:M1-121			SPARE	X			X	X	X			ON	
1:M1-122			SPARE		X		X	X	X			ON	
1:M1-123			SPARE	X	X		X	X	X			ON	
1:M1-124			SPARE			X	X	X	X			ON	
1:M1-125			SPARE	X		X	X	X	X			ON	
1:M1-126			SPARE		X	X	X	X	X			ON	
1:M1-127			SPARE	X	X	X	X	X	X			ON	

MAPNET CHANNEL 1:M3				SWITCH SETTINGS									
Address	Device Type	Point Type	Location Description	1	2	3	4	5	6	7	8		9
1:M3-1	ADRPUL	PULL	1:M3-1 FLR 1E - EXIT BY PHARMACY	X								ON	
1:M3-2	ADRPUL	PULL	1:M3-2 FLR 1E - E.D. DECK ELEC. RM		X							ON	
1:M3-3			SPARE	X	X							ON	
1:M3-4			SPARE			X						ON	
1:M3-5	ADRPUL	PULL	1:M3-5 FLR 1E - E.D. WAITING RM	X		X						ON	
1:M3-6	ADRPUL	PULL	1:M3-6 FLR 1E - EXIT BY E.D. WAITING RM		X	X						ON	
1:M3-7			SPARE	X	X	X						ON	
1:M3-8	RZAM	RELAY	1:M3-8 1ST FL ELEVATOR #5 WON DOOR				X					ON	
1:M3-9	PHOTO	VSMOKE	1:M3-9 FLR 1E - E.D. SUTURE D/C	X			X					ON	
1:M3-10	RZAM	RRELAY	1:M3-10 1ST FL CONTROL FOR AUTO DOORS		X		X					ON	
1:M3-11	GENIAM	SO	1:M3-11 FLR 1E-ER GLYCOL LOOP IN CEILING	X	X		X					ON	
1:M3-12	PHOTO	VSMOKE	1:M3-12 FLR 1E - E.D. ORTHOD/C			X	X					ON	
1:M3-13	GENIAM	SO	1:M3-13 BSMT ELEV 5 SHAFT TAMPER SWITCH	X		X	X					ON	
2 1:M3-14	HEAT	HEAT	1:M3-14 FLR 1W - HALL BY MRI INTERIM		X	X	X					ON	
1:M3-15	PHOTO	VSMOKE	1:M3-15 FLR 1W - HALL BY LAB	X	X	X	X					ON	
1:M3-16			SPARE					X				ON	
1:M3-17	PHOTO	VSMOKE	1:M3-17 FLR 1E - WAITING RESULTS	X				X				ON	
1:M3-18	PHOTO	VSMOKE	1:M3-18 FLR 1W - HALL BY LAB		X			X				ON	
1:M3-19	PHOTO	VSMOKE	1:M3-19 FLR 1W - HALL BY PHARMACY	X	X			X				ON	
1:M3-20	PHOTO	VSMOKE	1:M3-20 FLR 1W - HALL BY PHARMACY			X		X				ON	
1:M3-21	PHOTO	VSMOKE	1:M3-21 FLR 1W - HALL BY PHARMACY	X		X		X				ON	
1:M3-22			SPARE		X	X		X				ON	
1:M3-23			SPARE	X	X	X		X				ON	
1:M3-24	PHOTO	VSMOKE	1:M3-19 FLR 1W - HALL BY PHARMACY				X	X				ON	
1:M3-25	PHOTO	VSMOKE	1:M3-25 FLR 1E - HALL BY PHARMACY	X			X	X				ON	
1:M3-26	PHOTO	VSMOKE	1:M3-26 FLR 1E - EXIT HALL BY PHARMACY		X		X	X				ON	
1:M3-27	PHOTO	VSMOKE	1:M3-27 FLR 1E - EXIT HALL BY PHARMACY	X	X		X	X				ON	
1:M3-28	PHOTO	VSMOKE	1:M3-28 FLR 1E - EXIT HALL BY PHARMACY			X	X	X				ON	
1:M3-29	PHOTO	VSMOKE	1:M3-29 FLR 1E - EXIT HALL BY PHARMACY	X		X	X	X				ON	
1:M3-30	PHOTO	VSMOKE	1:M3-30 FLR 1E - E.D. - WEST ENTRANCE		X	X	X	X				ON	
1:M3-31	PHOTO	VSMOKE	1:M3-31 FLR 1E - E.D. - BY EXAM RM 6	X	X	X	X	X				ON	
1:M3-32	PHOTO	VSMOKE	1:M3-32 FLR 1E - E.D. - O/S FAM CON 5310					X				ON	
1:M3-33	PHOTO	VSMOKE	1:M3-33 FLR 1E - E.D. - BY EXAM RM7	X				X				ON	
1:M3-34	PHOTO	VSMOKE	1:M3-34 FLR 1E - E.D. BY. NURSE STATION		X			X				ON	
1:M3-35	PHOTO	VSMOKE	1:M3-35 FLR 1E - E.D. BY TRAUMA 1-5324	X	X			X				ON	
1:M3-36			SPARE			X		X				ON	
1:M3-37	PHOTO	VSMOKE	1:M3-37 FLR 1E - E.D. HALL BY RM 20	X		X		X				ON	
1:M3-38	PHOTO	VSMOKE	1:M3-38 FLR 1E - E.D. HALL BY RM 15		X	X		X				ON	
1:M3-39	PHOTO	VSMOKE	1:M3-39 FLR 1E - E.D. HALL BY RM 17	X	X	X		X				ON	
1:M3-40	PHOTO	VSMOKE	1:M3-40 FLR 1E - E.D. HALL BY RM 19				X	X				ON	
1:M3-41	PHOTO	VSMOKE	1:M3-41 FLR 1E - E.D. HALL BY RM 32	X			X	X				ON	
1:M3-42	PHOTO	VSMOKE	1:M3-42 FLR 1E - E.D. HALL BY RM 28		X		X	X				ON	
1:M3-43	PHOTO	VSMOKE	1:M3-43 FLR 1E - E.D. HALL BY RM 24	X	X		X	X				ON	
1:M3-44	PHOTO	VSMOKE	1:M3-44 FLR 1E - E.D. HALL BY RM 25			X	X	X				ON	
1:M3-45	PHOTO	VSMOKE	1:M3-45 FLR 1E - E.D. HALL BY RM 25	X		X	X	X				ON	
1:M3-46	PHOTO	VSMOKE	1:M3-46 FLR 1E - E.D. ELEC RM 1E-5902A		X	X	X	X				ON	
1:M3-47	ADRPUL	PULL	1:M3-47 FLR 1E - E.D. EAST ENTRY	X	X	X	X	X				ON	
1:M3-48	PHOTO	VSMOKE	1:M3-48 FLR 1E - E.D. BY NURSE STATION					X	X			ON	
1:M3-49	PHOTO	VSMOKE	1:M3-49 FLR 1E - E.D. BY EXAM RM 10	X				X	X			ON	
1:M3-50	PHOTO	VSMOKE	1:M3-50 FLR 1E - E.D. BY ALCOVE 5329		X			X	X			ON	
1:M3-51	PHOTO	VSMOKE	1:M3-51 FLR 1E - E.D. BY TRAUMA 3-5321	X	X			X	X			ON	
1:M3-52	PHOTO	VSMOKE	1:M3-52 FLR 1E - E.D. BY EXAM RM 11			X		X	X			ON	
1:M3-53	PHOTO	VSMOKE	1:M3-53 FLR 1E - E.D. HALL BY RM 43	X		X		X	X			ON	
1:M3-54	PHOTO	VSMOKE	1:M3-54 FLR 1E - E.D. HALL BY RM 43		X	X		X	X			ON	
1:M3-55	PHOTO	VSMOKE	1:M3-55 FLR 1E - E.D. HALL BY RM 26	X	X	X		X	X			ON	
1:M3-56	PHOTO	VSMOKE	1:M3-56 FLR 1E - E.D. HALL BY RM 26				X	X	X			ON	
1:M3-57	PHOTO	VSMOKE	1:M3-57 FLR 1E - E.D. HALL BY RM 26	X			X	X	X			ON	
1:M3-58	PHOTO	VSMOKE	1:M3-58 FLR 1E - E.D. - BY TRIAGE DESK		X		X	X	X			ON	
1:M3-59	PHOTO	VSMOKE	1:M3-59 FLR 1E - E.D. - BY TRIAGE DESK	X	X		X	X	X			ON	
1:M3-60	PHOTO	VSMOKE	1:M3-60 FLR 1E - E.D. - BY TRIAGE DESK			X	X	X	X			ON	
1:M3-61	PHOTO	VSMOKE	1:M3-61 FLR 1E - E.D. WAITING RM	X		X	X	X	X			ON	
1:M3-62	PHOTO	VSMOKE	1:M3-62 FLR 1E - E.D. WAITING RM		X	X	X	X	X			ON	
1:M3-63	PHOTO	VSMOKE	1:M3-63 FLR 1E - E.D. WAITING RM	X	X	X	X	X	X			ON	
1:M3-64	PHOTO	VSMOKE	1:M3-64 FLR 1E - E.D. BY TRIAGE AREA						X			ON	
1:M3-65	PHOTO	VSMOKE	1:M3-65 FLR 1E - E.D. BY TRIAGE RM 2	X					X			ON	
1:M3-66	PHOTO	VSMOKE	1:M3-66 FLR 1E - E.D. HALL BY RM 37		X				X			ON	
1:M3-67	PHOTO	VSMOKE	1:M3-67 FLR 1E - E.D. HALL BY RM 38	X	X				X			ON	
1:M3-68	PHOTO	VSMOKE	1:M3-68 FLR 1E - E.D. HALL BY RM 40			X			X			ON	
1:M3-69	PHOTO	VSMOKE	1:M3-69 FLR 1E - E.D. HALL BY E.D. ON-CALL RM	X		X			X			ON	
1:M3-70	PHOTO	VSMOKE	1:M3-70 FLR 1E - HALL BY E.D. ON-CALL RM		X	X			X			ON	
1:M3-71	PHOTO	VSMOKE	1:M3-71 FLR 1E - E.D. HALL BY RM 48	X	X	X			X			ON	
1:M3-72	PHOTO	VSMOKE	1:M3-72 FLR 1E - E.D. HALL BY RM 44				X		X			ON	
1:M3-73	PHOTO	VSMOKE	1:M3-73 FLR 1E - E.D. HALL BY RM 54	X			X		X			ON	
1:M3-74	PHOTO	VSMOKE	1:M3-74 FLR 1E - E.D. HALL BY RM 51		X		X		X			ON	
1:M3-75	PHOTO	VSMOKE	1:M3-75 FLR 1E - E.D. ADMIN OFFICES	X	X		X		X			ON	
1:M3-76	PHOTO	VSMOKE	1:M3-76 FLR 1E - HALL BEHIND E.D.			X	X		X			ON	
1:M3-77	PHOTO	VSMOKE	1:M3-77 FLR 1E - HALL BY E.D. ON-CALL RM	X		X	X		X			ON	
1:M3-78	PHOTO	VSMOKE	1:M3-78 FLR 1E - HALL BY E.D. ON-CALL RM		X	X	X		X			ON	
1:M3-79	PHOTO	VSMOKE	1:M3-79 FLR 1E - E.D. SPECIALITY ON-CALL	X	X	X	X		X			ON	
1:M3-80	PHOTO	VSMOKE	1:M3-80 FLR 1E - HALL BY E.D. ON-CALL RM					X	X			ON	
1:M3-81	PHOTO	VSMOKE	1:M3-81 FLR 1E - HALL BY E.D. ON-CALL RM	X				X	X			ON	
1:M3-82	PHOTO	VSMOKE	1:M3-82 FLR 1E - HALL BY E.D. ON-CALL RM		X			X	X			ON	
1:M3-83	PHOTO	VSMOKE	1:M3-83 FLR 1E - IN THE E.D. ON-CALL RM	X	X			X	X			ON	
1:M3-84	PHOTO	VSMOKE	1:M3-84 FLR 1E - HALL BATH BY E.D. ADMIN			X		X	X			ON	
1:M3-85	PHOTO	VSMOKE	1:M3-85 FLR 1E - BACK HALL BY QUIET RM	X		X		X	X			ON	
1:M3-86	PHOTO	VSMOKE	1:M3-86 FLR 1E - HALL BY MEDICAL LIBRARY		X	X		X	X			ON	
1:M3-87	PHOTO	VSMOKE	1:M3-87 FLR 1E - E.D. RME 3	X	X	X		X	X			ON	
1:M3-88	PHOTO	VSMOKE	1:M3-88 FLR 1E - E.D. RME 2				X	X	X			ON	
1:M3-89	PHOTO	VSMOKE	1:M3-89 FLR 1E - HALL BY PACU	X			X	X	X			ON	
1:M3-90	PHOTO	VSMOKE	1:M3-90 FLR 1E - HALL BY PACU		X		X	X	X			ON	
1:M3-91	PHOTO	VSMOKE	1:M3-91 FLR 1E - E.D. RME 1	X	X		X	X	X			ON	
1:M3-92	PHOTO	VSMOKE	1:M3-92 FLR 1E - E.D. TRACE ROOM #2			X	X	X	X			ON	
1:M3-93	PHOTO	VSMOKE	1:M3-93 FLR 1E - HALL BY PACU	X		X	X	X	X			ON	
1:M3-94	PHOTO	VSMOKE	1:M3-94 FLR 1E - HALL BY PACU		X	X	X	X	X			ON	
1:M3-95	PHOTO	VSMOKE	1:M3-95 FLR 1E - HALL BY PACU	X	X	X	X	X	X			ON	
1:M3-96	PHOTO	VSMOKE	1:M3-96 FLR 1E - HALL BY PACU					X	X			ON	
1:M3-97	PHOTO	VSMOKE	1:M3-97 FLR 1E - HALL BY E.D. STAIRWELL	X				X	X			ON	
1:M3-98	PHOTO	VSMOKE	1:M3-98 FLR 1E - HALL BY E.D. STAIRWELL		X			X	X			ON	
1:M3-99	PHOTO	VSMOKE	1:M3-99 FLR 1E - HALL BY E.D. STAIRWELL	X	X			X	X			ON	
1:M3-100	PHOTO	VSMOKE	1:M3-100 FLR 1E - EMS LOUNGE			X		X	X			ON	
1:M3-101	PHOTO	VSMOKE	1:M3-101 FLR 1E - E.D. E. HALL BY TRIAGE	X		X		X	X			ON	
1:M3-102	PHOTO	VSMOKE	1:M3-102 FLR 1E - E.D. HALL BY RM 13		X	X		X	X			ON	
1:M3-103	PHOTO	VSMOKE	1:M3-103 FLR 1W - PHARMACY	X	X	X		X	X			ON	
1:M3-104	PHOTO	VSMOKE	1:M3-104 FLR 1W - PHARMACY				X	X	X			ON	
1:M3-105	PHOTO	VSMOKE	1:M3-105 FLR 1W - PHARMACY	X			X	X	X			ON	
1:M3-106	PHOTO	VSMOKE	1:M3-106 FLR 1W - PHARMACY ANTE ROOM		X		X	X	X			ON	
1:M3-107	PHOTO	VSMOKE	1:M3-107 FLR 1W - PHARMACY MEETING ROOM	X	X		X	X	X			ON	
1:M3-108	GENIAM	UTILITY	1:M3-108 FLR 1E - E.D. SPARE MON 2 PT IO			X	X	X	X			ON	
1:M3-109	RZAM	RRELAY	1:M3-109 FLR 1E - E.D. DOOR RELEASE	X		X	X	X	X			ON	
1:M3-110	PHOTO	VSMOKE	1:M3-110 FL CTL TWR E OUTSIDE EMS LOUNGE		X	X	X	X	X			ON	
1:M3-111	PHOTO	VSMOKE	1:M3-111 FL CTL TWR E HALL BY EMS LOUNGE	X	X	X	X	X	X			ON	
1:M3-112			SPARE					X	X			ON	
1:M3-113			SPARE	X				X	X			ON	
1:M3-114			SPARE		X			X	X			ON	
1:M3-115			SPARE	X	X			X	X			ON	
1:M3-116			SPARE			X		X	X			ON	
1:M3-117			SPARE	X		X		X	X			ON	
1:M3-118			SPARE		X	X		X	X			ON	
1:M3-119			SPARE	X	X	X		X	X			ON	
1:M3-120			SPARE				X	X	X			ON	
1:M3-121			SPARE	X			X	X	X			ON	
1:M3-122			SPARE		X		X	X	X			ON	
1:M3-123			SPARE	X	X		X	X	X			ON	
1:M3-124			SPARE			X	X	X	X			ON	
1:M3-125			SPARE	X		X	X	X	X			ON	
1:M3-126			SPARE		X	X	X	X	X			ON	
1:M3-127			SPARE	X	X	X	X	X	X			ON	

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.

KEYNOTES:

1. DEVICE REMOVED FOR CONSTRUCTION.
2. DEVICE IS INTERIM FOR CONSTRUCTION. TO BE REMOVED, REPLACED, OR RELOCATED DURING BUILDOUT. DEVICE DESCRIPTOR CHANGED.
3. DEVICE DESCRIPTOR CHANGE ONLY.
4. DEVICE WAS INTERIM FOR CONSTRUCTION AND IS NOW REMOVED. DEVICE QUANTITY CHANGED.
5. EXISTING DEVICE REINSTALLED. RE-USE EXISTING HEAD, BASE, ADDRESS, LOCATION, AND WIRING.
6. DEVICE REMOVED TO BE RE-USED ON ANOTHER CIRCUIT.

City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: W. Polk
Date: Oct 13, 2022
2021 INTERNATIONAL CODES & 2020 NEC

Johnson Controls
DISTRICT 1-415
10065 E. PYTHIAN AVE
AURORA, CO 80012
SERVICE: 303-355-6000
PHONE: 303-326-6500
FAX: 303-355-6615

NIC

MEDICAL CENTER OF AURORA SOUTH TOWER TRANSPONDER 3 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*
	4100-9634	*1*	*POWER DISTRIBUTION MODULE 120V.*		*0.0000*	*0.0000*	*0.0000*	*0.0000*
	4100-5311	*1*	*ENHANCED POWER SUPPLY, 3 CHANNELS, IDNet, 120V*		*0.2250*	*0.2250*	*0.4900*	*0.4900*
			Panel Totals			**0.3120**		**0.5770**
IDNet Addressable Devices (SLC)								
	4090-9002	*13*	*IDNET RELAY IAM*	*				
1	**4098-9714**	**51**	**TRUEALARM PHOTO SMOKE SENSOR**					
2	**4098-9733**	**11**	**TRUEALARM HEAT SENSOR**	*				
	4098-9755	*5*	*TRUEALARM DUCT SMOKE SENSOR W/O RELAY OUTPUT*	*				
	4098-9756	*11*	*TRUEALARM DUCT SMOKE SENSOR W/ RELAY OUTPUT*	*				
	4009-9201	*1*	*4009 IDNET NAC EXTENDER, 120 VAC*	*				
1	**4098-9792**	**62**	**TRUEALARM SENSOR BASE**	*				
	4090-9008	*16*	*ADDRESSABLE DUAL CONTACT RELAY IAM*	*				
Miscellaneous Peripheral Devices That Require (Additional) System Power								
	4098-9843	*11*	*ENCAPSULATED RELAY PAM-SD*		*0.0000*	*0.0000*	*0.0150*	*0.1650*
	4098-9756	*11*	*TRUEALARM DUCT SMOKE SENSOR W/ RELAY OUTPUT*		*0.0030*	*0.0330*	*0.0150*	*0.1650*
	2088-9021	*18*	*ENCAPSULATED RELAY PAM-1*		*0.0000*	*0.0000*	*0.0150*	*0.2700*
Notification Appliances			**Setting**					
1	**439MTV-WRF**	**20**	**MULTI-TONE A/V, RED, WALL MOUNT**	**15**	**0.0016**	**0.0320**	**0.1450**	**2.9000**
	439MTV-WRF	**6**	**MULTI-TONE A/V, RED, WALL MOUNT**	**75**	**0.0016**	**0.0096**	**0.1980**	**1.1880**
	49VO-APPLC	*1*	*STROBE, APPLIANCE ONLY, CEILING MOUNT*	*15*	*0.0008*	*0.0008*	*0.0550*	*0.0550*
	49VO-APPLW	*6*	*VO APPLIANCE ONLY WALL MT.*	*30*	*0.0008*	*0.0048*	*0.0570*	*0.3420*
1	**49VO-WRF**	**13**	**VO, WALL MT, RED, FIRE LABEL**	**15**	**0.0008**	**0.0104**	**0.0470**	**0.6110**
				Peripheral Totals		**0.0906**		**5.6960**
				Added Current for EPS Conversion of 24 to 29 Volt IDNac Devices		**0.0000**		**2.9053**
				RUI Totals **0**		**0.0000**		**0.0000**
				Address Totals **108** **Addresses**		**0.0864**		**0.1080**
				System Totals*:	**Standby**	**0.4890**	**Alarm**	**9.2863**

* Device Address current draw included below (See Additional Current Draws):

Battery Set #1 (Cabinet/Charger #1)				Standby Current	Standby Total	Alarm Current	Alarm Total
Select ALL Power Supplies on this battery set:							
EPS-1					0.4026		6.2730
				Sub Total	**0.4026**		**6.2730**
Additional Current Draws:							
IDNac Current Boost for 29vdc Regulated Output **					0.0000		2.9053
MAPNET/IDNet Device Address Communication Current		108	x 0.000800		= 0.0864	x 0.001000	= 0.1080
				Sub Total	**0.4890**		**9.2863**
Spare addressable point capacity	**20%**	22	x 0.0008		= 0.0176	x 0.001	= 0.0220
				Total	**0.5066**		**9.3083**
Standby Time =	4	Hrs	x 0.5066		= 2.0264	Standby Ah	
Alarm Time =	15	Min	0.25 x 9.3083		= 2.3271	Alarm Ah	
					4.3535		
Additional Spare Battery Capacity =	**20%**			+	0.8707		
					5.2242		
Battery Discharge Factor =	**20%**			+	1.0448		
Minimum Battery Required	**2081-9274 10AH (2x)**				**6.2690**		
Battery Supplied	**2081-9287 25AH (2x)**						

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

** IDNac Current Boost formula: ((29.5 * IDNac Alarm Current) / .92) / 20.4 = Adjusted Current
DC-DC Converter Output = 29.5vdc. Terminal Output is 29vdc due to 0.5vdc internal loss.
Converter Worst Case efficiency is 92%, 20.4vdc represents battery output in 85% depleted state

IDNET CHANNEL 1:M10		ADDRESSES IN USE: 108 (43.2%) | SPARE ADDRESSES: 142 (56.8%)		SWITCH SETTINGS									
	Address	Device Type	Point Type	Location Description	1	2	3	4	5	6	7	8	9
	1:M10-1			**SPARE**	X							ON	
1	**1:M10-2**			**SPARE**		X						ON	
	1:M10-3			**SPARE**	X	X						ON	
2	**1:M10-4**	**HEAT**	**HEAT**	**FLR 1W COMM 1-SS007 INTERIM 1:M10-4**			X					ON	
1	**1:M10-5**			**SPARE**	X		X					ON	
2	**1:M10-6**	**HEAT**	**HEAT**	**FLR 1W EQ STG 1-SS001 N INTERIM 1:M10-6**			X	X				ON	
2	**1:M10-7**	**HEAT**	**HEAT**	**FLR 1W EQ STG 1-SS001 S INTERIM 1:M10-7**	X	X	X					ON	
	1:M10-8			**SPARE**				X				ON	
1	**1:M10-9**			**SPARE**	X			X				ON	
2	**1:M10-10**	**HEAT**	**HEAT**	**FLR 1W SURGERY NTERIM 1-SS009 1:M10-10**		X		X				ON	
	1:M10-11			**SPARE**	X	X		X				ON	
	1:M10-12			**SPARE**			X	X				ON	
	1:M10-13			**SPARE**	X		X	X				ON	
1	**1:M10-14**			**SPARE**		X	X	X				ON	
	1:M10-15			**SPARE**	X	X	X	X				ON	
	1:M10-16			**SPARE**					X			ON	
	1:M10-17			**SPARE**	X				X			ON	
	1:M10-18	*PHOTO*	*LSDUCT*	*ROOF RTU-1 RET 1:M10-18*		X			X			ON	
	1:M10-19	*PHOTO*	*LSDUCT*	*ROOF RTU-1 OUTSIDE AIR M1-19*	X	X			X			ON	
	1:M10-20	*RIAM*	*RELAY*	*ROOF RTU-1 RET DET TO DDC 1:M10-20*			X		X			ON	
	1:M10-21	*RIAM*	*RELAY*	*ROOF RTU-1 SUP DET TO DDC 1:M10-21*	X		X		X			ON	
	1:M10-22	*RIAM*	*RELAY*	*ROOF RTU-1 OA DET TO DDC 1:M10-22*		X	X		X			ON	
	1:M10-23	*RIAM*	*RELAY*	*ROOF RTU-1 EXH FSD TO DDC 1:M10-23*	X	X	X		X			ON	
	1:M10-24	*RIAM*	*RELAY*	*ROOF RTU-1 ALARM TO DDC 1:M10-24*				X	X			ON	
3	*1:M10-25*	*NAC4PT*	*SIGNAL*	**FLR 1W EQ STG 1-SS001 NAC#1 1:M10-25**	X			X	X			ON	
1	**1:M10-26**			**SPARE**		X		X	X			ON	
3	**1:M10-27**	**HEAT**	**HEAT**	**FLR 1W CORR 1-SS041 INTERIM 1:M10-27**	X	X		X	X			ON	
1	**1:M10-28**			**SPARE**			X	X	X			ON	
2	**1:M10-29**	**HEAT**	**HEAT**	**FLR 1W CORR 1-SS040 INTERIM 1:M10-29**	X		X	X	X			ON	
2	**1:M10-30**	**HEAT**	**HEAT**	**FLR 1W CORR 1-SS040 INTERIM 1:M10-30**		X	X	X	X			ON	
	1:M10-31			**SPARE**	X	X	X	X	X			ON	
1	**1:M10-32**			**SPARE**						X		ON	
	1:M10-33			**SPARE**	X					X		ON	
	1:M10-34			*SPARE*		X				X		ON	
1	**1:M10-35**			**SPARE**	X	X				X		ON	
	1:M10-36			**SPARE**			X			X		ON	
2	**1:M10-37**	**HEAT**	**HEAT**	**FLR 1W CORR 1-SS019A W INTERIM 1:M10-37**	X		X			X		ON	
	1:M10-38	**HEAT**	**HEAT**	**FLR 1W CORR 1-SS019 S INTERIM 1:M10-38**		X	X			X		ON	
	1:M10-39	*PHOTO*	*SMOKE*	*FLR 1W CORR 1-SS019 @CORR 014 1:M10-39*	X	X	X			X		ON	
	1:M10-40	*PHOTO*	*SMOKE*	*FLR 1W TECHNICAL RM 1-SS018 1:M10-40*				X	X			ON	
	1:M10-41	*PHOTO*	*SMOKE*	*FLR 1W CONTROL RM 1-SS020 1:M10-41*	X			X	X			ON	
	1:M10-42	*PHOTO*	*SMOKE*	*FLR 1W CORR 1-SS014 @SOIL UTIL 1:M10-42*		X		X	X			ON	
	1:M10-43	*PHOTO*	*SMOKE*	*FLR 1W CORR 1-SS014 @OR 10 1:M10-43*	X	X		X	X			ON	
	1:M10-44	*PHOTO*	*SMOKE*	*FLR 1W CORR 1-SS014 @EQ STG 1:M10-44*			X	X	X			ON	
	1:M10-45	*PHOTO*	*SMOKE*	*FLR 1W ISOL1-PA03 1:M10-45*	X		X	X	X			ON	
	1:M10-46	*PHOTO*	*SMOKE*	*FLR 1W ELEC 1-SS022 1:M10-46*		X	X	X	X			ON	
	1:M10-47	*PHOTO*	*SMOKE*	*FLR 1W VOICE/DATA 1:M10-47*	X	X	X	X	X			ON	
	1:M10-48	*PHOTO*	*SMOKE*	*FLR 1W EQ STG 1-SS012 1:M10-48*					X	X		ON	
	1:M10-49	*PHOTO*	*SMOKE*	*FLR 1W ANES. WK 1-SS012A 1:M10-49*	X				X	X		ON	
	1:M10-50	*PHOTO*	*SMOKE*	*FLR 1W OR 10 1-SS015 NE 1:M10-50*		X			X	X		ON	
	1:M10-51	*PHOTO*	*SMOKE*	*FLR 1W OR 10 1-SS015 SW 1:M10-51*	X	X			X	X		ON	
	1:M10-52	*PHOTO*	*SMOKE*	*FLR 1W HYBRID OR 9 1-SS017 SE 1:M10-52*			X		X	X		ON	
	1:M10-53	*PHOTO*	*SMOKE*	*FLR 1W HYBRID OR 9 1-SS017 NW 1:M10-53*	X		X		X	X		ON	
1	**1:M10-54**			**SPARE**		X	X		X	X		ON	
	1:M10-55			**SPARE**	X	X	X		X	X		ON	
	1:M10-56	*RPHOTO*	*LSDUCT*	*FLR 1W OR 9 1-SS017 SUP FSD 1:M10-56*				X	X	X		ON	
	1:M10-57	*RPHOTO*	*LSDUCT*	*FLR 1W OR 9 1-SS017 SUP FSD 1:M10-57*	X			X	X	X		ON	
	1:M10-58	*RPHOTO*	*LSDUCT*	*FLR 1W ELEC 1-PA05 SUP FSD 1:M10-58*		X		X	X	X		ON	
	1:M10-59	*RPHOTO*	*LSDUCT*	*FLR 1W OR 10 1-SS015 RET FSD 1:M10-59*	X	X		X	X	X		ON	
	1:M10-60	*RPHOTO*	*LSDUCT*	*FLR 1W OR 10 1-SS015 SUP FSD 1:M10-60*			X	X	X	X		ON	
	1:M10-61	*RPHOTO*	*LSDUCT*	*FLR 1W EQ STG 1-SS012 RET FSD 1:M10-61*	X		X	X	X	X		ON	
	1:M10-62	*RPHOTO*	*LSDUCT*	*FLR 1W EQ STG 1-SS012 SUP FSD 1:M10-62*		X	X	X	X	X		ON	
	1:M10-63	*RPHOTO*	*LSDUCT*	*FLR 1W EVS SUP FSD 1:M10-63*	X	X	X	X	X	X		ON	
1	**1:M10-64**			**SPARE**						X		ON	
	1:M10-65			**SPARE**	X					X		ON	
	1:M10-66	*RIAM*	*DHOLDER*	*FLR 1W CORR 1-SS019 N DR CNTL 1:M10-66*		X				X		ON	
	1:M10-67	*RIAM*	*RRELAY*	*FLR 1W CORR 1-SS014 ACC CNTL 1:M10-67*	X	X				X		ON	
	1:M10-68	*PHOTO*	*LSDUCT*	*ROOF RTU-2 SUP 1:M10-68 1:M10-68*			X			X		ON	
	1:M10-69	*PHOTO*	*LSDUCT*	*ROOF RTU-2 RET 1:M10-69 1:M10-69*	X		X			X		ON	
	1:M10-70	*PHOTO*	*LSDUCT*	*ROOF RTU-2 OUTSIDE AIR 1:M10-70*		X	X			X		ON	
	1:M10-71	*RIAM*	*RELAY*	*ROOF RTU-2 RET DET TO DDC 1:M10-71*	X	X	X			X		ON	
	1:M10-72	*RIAM*	*RELAY*	*ROOF RTU-2 SUP DET TO DDC 1:M10-72*				X		X		ON	
	1:M10-73	*RIAM*	*RELAY*	*ROOF RTU-2 OA DET TO DDC 1:M10-73*	X			X		X		ON	
	1:M10-74	*RIAM*	*RELAY*	*ROOF RTU-2 EXH FSD TO DDC 1:M10-74*		X		X		X		ON	
	1:M10-75	*RIAM*	*RELAY*	*ROOF RTU-2 ALARM TO DDC 1:M10-75*	X	X		X		X		ON	
	1:M10-76	*RIAM*	*RELAY*	*ROOF RTU-1 OR 9 ALARM TO DDC 1:M10-76*			X	X		X		ON	
	1:M10-77	*RIAM*	*RELAY*	*ROOF RTU-1 OR 10 ALARM TO DDC 1:M10-77*	X		X	X		X		ON	
	1:M10-78	*RIAM*	*DHOLDER*	*FLR 1W OR 9 1-SS017 DOOR CNTL 1:M10-78*		X	X	X		X		ON	
	1:M10-79	*RIAM*	*DHOLDER*	*FLR 1W OR 10 1-SS018 DOOR CNTL 1:M10-79*	X	X	X	X		X		ON	
	1:M10-80	*RIAM*	*DHOLDER*	*FLR 1W CORR 1-SS014 DOOR CNTL 1:M10-80*					X	X		ON	
	1:M10-81			*SPARE*	X				X	X		ON	
	1:M10-82			*SPARE*		X			X	X		ON	
	1:M10-83			*SPARE*	X	X			X	X		ON	
	1:M10-84	*PHOTO*	*SMOKE*	*FLR 1W OR 8 (CVOR) 1-SS024 SW 1:M10-84*			X		X	X		ON	
	1:M10-85	*PHOTO*	*SMOKE*	*FLR 1W OR 8 (CVOR) 1-SS024 NE 1:M10-85*	X		X		X	X		ON	
	1:M10-86	*PHOTO*	*SMOKE*	*FLR 1W SUB STERILE 1-SS027 1:M10-86*		X	X		X	X		ON	
	1:M10-87	*PHOTO*	*SMOKE*	*FLR 1W PUMP 1-SS025 1:M10-87*	X	X	X		X	X		ON	
	1:M10-88	*PHOTO*	*SMOKE*	*FLR 1W OR 7 (CVOR) 1-SS026 SW 1:M10-88*				X	X	X		ON	
	1:M10-89	*PHOTO*	*SMOKE*	*FLR 1W OR 7 (CVOR) 1-SS026 NE 1:M10-89*	X			X	X	X		ON	
	1:M10-90	*RIAM*	*RELAY*	*ROOF RTU-1 OR 8 ALARM TO DDC 1:M10-90*		X		X	X	X		ON	
	1:M10-91	*RIAM*	*RELAY*	*ROOF RTU-1 OR 7 ALARM TO DDC 1:M10-91*	X	X		X	X	X		ON	
	1:M10-92	*RIAM*	*DHOLDER*	*FLR 1W OR 8 1-SS024 DOOR CNTL 1:M10-92*			X	X	X	X		ON	
	1:M10-93	*RIAM*	*DHOLDER*	*FLR 1W OR 7 1-SS0026 DOOR CNTL 1:M10-93*	X		X	X	X	X		ON	
	1:M10-94	*PHOTO*	*SMOKE*	*FLR 1W CORR 1-SS029 @OR 8 1:M10-94*		X	X	X	X	X		ON	
	1:M10-95	*PHOTO*	*SMOKE*	*FLR 1W CORR 1-SS029 @OR 7 1:M10-95*	X	X	X	X	X	X		ON	
	1:M10-96			*SPARE*						X	X	ON	
	1:M10-97			*SPARE*	X					X	X	ON	
	1:M10-98			*SPARE*		X				X	X	ON	
	1:M10-99			*SPARE*	X	X				X	X	ON	
	1:M10-100	*PHOTO*	*SMOKE*	*FLR 1W OFF 1-SS115 1:M10-100*			X			X	X	ON	
	1:M10-101	*PHOTO*	*SMOKE*	*FLR 1W OFF 1-SS114 1:M10-101*	X		X			X	X	ON	
	1:M10-102	*PHOTO*	*SMOKE*	*FLR 1W OFF 1-SS113 1:M10-102*		X	X			X	X	ON	
	1:M10-103	*PHOTO*	*SMOKE*	*FLR 1W ELEC 1-SS117 1:M10-103*	X	X	X			X	X	ON	
	1:M10-104	*PHOTO*	*SMOKE*	*FLR 1W RCPT/SCHED 1-SS112 1:M10-104*				X		X	X	ON	
	1:M10-105	*PHOTO*	*SMOKE*	*FLR 1W PHARM 1-SS120 1:M10-105*	X			X		X	X	ON	
	1:M10-106	*PHOTO*	*SMOKE*	*FLR 1W OFF 1-SS121 1:M10-106*		X		X		X	X	ON	
	1:M10-107	*PHOTO*	*SMOKE*	*FLR 1W CORR 1-SS111 @OFF 113 1:M10-107*	X	X		X		X	X	ON	
	1:M10-108	*PHOTO*	*SMOKE*	*FLR 1W CORR 1-SS111 @OFF 121 1:M10-108*			X	X		X	X	ON	
	1:M10-109	*PHOTO*	*SMOKE*	*FLR 1W CORR 1-SS102 @LOUNGE 1:M10-109*	X		X	X		X	X	ON	
	1:M10-110	*PHOTO*	*SMOKE*	*FLR 1W CORR 1-SS125 1:M10-110*		X	X	X		X	X	ON	
	1:M10-111	*PHOTO*	*SMOKE*	*FLR 1W CLEAN SUPPLY 1-SS126 1:M10-111*	X	X	X	X		X	X	ON	
	1:M10-112	*PHOTO*	*SMOKE*	*FLR 1W SUB STERILE 1-SS127 1:M10-112*					X	X	X	ON	
	1:M10-113	*PHOTO*	*SMOKE*	*FLR 1W OR 5 1-SS132 NE 1:M10-113*	X				X	X	X	ON	
	1:M10-114	*PHOTO*	*SMOKE*	*FLR 1W OR 5 1-SS132 SW 1:M10-114*		X			X	X	X	ON	
	1:M10-115	*PHOTO*	*SMOKE*	*FLR 1W CORR 1-SS102 @HALL 109 1:M10-115*	X	X			X	X	X	ON	
	1:M10-116	*PHOTO*	*SMOKE*	*FLR 1W CORR 1-SS102 @OR 11 1:M10-116*			X		X	X	X	ON	
	1:M10-117	*PHOTO*	*SMOKE*	*FLR 1W CORR 1-SS102 @JAN 038 1:M10-117*	X		X		X	X	X	ON	
	1:M10-118	*PHOTO*	*SMOKE*	*FLR 1W OR 6 1-SS134 NE 1:M10-118*		X	X		X	X	X	ON	
	1:M10-119	*PHOTO*	*SMOKE*	*FLR 1W OR 6 1-SS134 SW 1:M10-119*	X	X	X		X	X	X	ON	
	1:M10-120	*PHOTO*	*SMOKE*	*FLR 1W ENTRY HALL 1-SS109 1:M10-120*				X	X	X	X	ON	
	1:M10-121	*PHOTO*	*SMOKE*	*FLR 1W DICTATION 1-SS110 1:M10-121*	X			X	X	X	X	ON	
	1:M10-122	*PHOTO*	*SMOKE*	*FLR 1W LOUNGE 1-SS104 1:M10-122*		X		X	X	X	X	ON	
	1:M10-123	*PHOTO*	*SMOKE*	*FLR 1W FEMALE LOCKERS 1-SS105 1:M10-123*	X	X		X	X	X	X	ON	
	1:M10-124	*PHOTO*	*SMOKE*	*FLR 1W MALE LOCKERS 1-SS108 E 1:M10-124*			X	X	X	X	X	ON	
	1:M10-125	*PHOTO*	*SMOKE*	*FLR 1W MALE LOCKERS 1-SS108 W 1:M10-125*	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:M10		ADDRESSES IN USE: 108 (43.2%) | SPARE ADDRESSES: 142 (56.8%)		SWITCH SETTINGS									
	Address	Device Type	Point Type	Location Description	1	2	3	4	5	6	7	8	9
	1:M10-126		*HEAT*	*HEAT*	*FLR 1W BATH 1-SS106 1:M10-126*		X	X	X	X	X	ON	
	1:M10-127		*HEAT*	*HEAT*	*FLR 1W BATH 1-SS107 1:M10-127*	X	X	X	X	X	X	ON	
	1:M10-128		*PHOTO*	*SMOKE*	*FLR 1W CORR 1-SS037 @STER STG 1:M10-128*						X	ON	
	1:M10-129		*PHOTO*	*SMOKE*	*FLR 1W CORR 1-SS037 @ORT 1:M10-129*	X					X	ON	
	1:M10-130		*RIAM*	*DHOLDER*	*FLR 1W RCPT 1-SS112 DOOR CNTL 1:M10-130*		X				X	ON	
	1:M10-131		*RIAM*	*DHOLDER*	*FLR 1W OR 5 1-SS132 DOOR CNTL 1:M10-131*	X	X				X	ON	
	1:M10-132		*RIAM*	*DHOLDER*	*FLR 1W OR 6 1-SS134 DOOR CNTL 1:M10-132*			X			X	ON	
	1:M10-133		*RIAM*	*RRELAY*	*FLR 1W CORR 1-SS111 ACC CNTL 1:M10-133*	X		X			X	ON	
	1:M10-134		*RPHOTO*	*LSDUCT*	*FLR 1W CORR 1-SS102 RET FSD 1:M10-134*		X	X			X	ON	
	1:M10-135		*RPHOTO*	*LSDUCT*	*FLR 1W CORR 1-SS102 EXH FSD 1:M10-135*	X	X	X			X	ON	
	1:M10-136		*RPHOTO*	*LSDUCT*	*FLR 1W CORR 1-SS102 SUP FSD 1:M10-136*				X		X	ON	
	1:M10-137		*RIAM*	*RELAY*	*ROOF RTU-2 OR 6 ALARM TO DDC 1:M10-137*	X			X		X	ON	
	1:M10-138		*RIAM*	*RELAY*	*ROOF RTU-2 OR 5 ALARM TO DDC 1:M10-138*		X		X		X	ON	
	1:M10-139		*RIAM*	*DHOLDER*	*FLR 1W CORR 1-SS102 DOOR CNTL 1:M10-139*	X	X		X		X	ON	
	1:M10-140		*RIAM*	*DHOLDER*	*FLR 1W CORR 1-SS111 DOOR CNTL 1:M10-140*			X	X		X	ON	
	1:M10-141				*SPARE*	X		X	X		X	ON	
	THRU											ON	
	1:M10-250				*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.

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.

KEYNOTES:

1. DEVICE REMOVED FOR CONSTRUCTION.
2. DEVICE IS INTERIM FOR CONSTRUCTION. TO BE REMOVED, REPLACED, OR RELOCATED DURING BUILDOUT. DEVICE DESCRIPTOR CHANGED.
3. DEVICE DESCRIPTOR CHANGE ONLY.
4. DEVICE WAS INTERIM FOR CONSTRUCTION AND IS NOW REMOVED. DEVICE QUANTITY CHANGED.
5. EXISTING DEVICE REINSTALLED. RE-USE EXISTING HEAD, BASE, ADDRESS, LOCATION, AND WIRING.
6. DEVICE REMOVED TO BE RE-USED ON ANOTHER CIRCUIT.

City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: W. Polk
Date: Oct 13, 2022
2021 INTERNATIONAL CODES & 2020 NEC

Johnson Controls
DISTRICT 1-418
10685 E. HOLLISTON AVE
AURORA, CO 80017
SERVICE: 303-355-5000
PHONE: 303-355-9500
FAX: 303-355-9515

NICET CERTIFICATION INFORMATION
NANCY S. WILTSIE
NICET Fire Alarm, III
Certification #93727
Valid Through: 03/01/24
September 21, 2022

THE MEDICAL CENTER OF AURORA - SOUTH OR EXPANSION

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

Revisions shown with ⚠ symbol

ISSUE LOG				
MARK	DATE	CAD	CHK	DESCRIPTION

FOR PERMIT

DRAWN BY:	CCD
CHECKED BY:	CBR
ISSUE DATE:	7/26/22
JOB #:	
PROJECT #:	419-650189804

JOHNSON CONTROLS © 2022

SYSTEM:
FIRE ALARM SYSTEM

SHEET:
NODE-1 TRANSPONDER-3 INTERIM CALCS & SCHEDUALS

FA-603

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FILE PATH: C:\Users\jtaylor\Johnson Controls\Project Electronics - Medical Center of Aurora\1501 S Potomac - Aurora South\South Tower - Node 1\33-CR Expansion - 2022 - 650189804\FireFA-601.dwg
LAST SAVED BY: JDAUCHC
LAST PRINTED: 9/21/2022 1:55:41 PM
30" x 42" - Arch E1 Size

MEDICAL CENTER OF AURORA SOUTH TOWER TRANSPONDER 3 - EPS-1 CIRCUIT SUMMARY & VOLTAGE DROP

Channel	Description	Alarm Current	% Drop	Unit Load*	Wire Length	Spare Current	Spare VoltageDrop
N1:T3:A1:1	FLR 1W OR 7-8, EQ STO	1.574A	3.57%	21	775	48%	83%
N1:T3:A1:2	FLR 1W OR 9-10	1.180A	4.19%	16	457	61%	90%
N1:T3:A1:3	FLR 1W OR 5-6, LOCKERS	2.342A	10.38%	33	908	22%	50%

N1:T3:A1: ENHANCED POWER SUPPLY - CHANNEL 1

IDNac Address	Device Type	PID	Setting	Custom Label (Max 40 Characters)	SWITCH SETTINGS 1							
N1:T3:A1:1-1				SPARE	X							ON
N1:T3:A1:1-2				SPARE		X						ON
N1:T3:A1:1-3				SPARE	X	X						ON
N1:T3:A1:1-4				SPARE			X					ON
N1:T3:A1:1-5	AV	49MTV-WRF	75cd	FLR 1W COMM. 1-SS07 INTERIM T3:A1-1-5	X		X					ON
N1:T3:A1:1-6	AV	49MTV-WRF	75cd	FLR 1W EQ STG 1-SS001 INTERIM T3:A1-1-6		X	X					ON
N1:T3:A1:1-7				SPARE	X	X	X					ON
N1:T3:A1:1-8				SPARE				X				ON
N1:T3:A1:1-9				SPARE	X			X				ON
N1:T3:A1:1-10	AV	49MTV-WRF	75cd	FLR 1W CORR 1-SS041 INTERIM T3:A1-1-10		X		X				ON
N1:T3:A1:1-11				SPARE	X	X		X				ON
N1:T3:A1:1-12				SPARE			X	X				ON
N1:T3:A1:1-13				SPARE	X		X	X				ON
N1:T3:A1:1-14	AV	49MTV-WRF	15cd	FLR 1W CORR 1-SS029 @OR-8 T3:A1-1-14		X	X	X				ON
N1:T3:A1:1-15	AV	49MTV-WRF	15cd	FLR 1W CORR 1-SS025 @OR-7 T3:A1-1-15	X	X	X	X				ON
N1:T3:A1:1-16	VO	49VO-APPLW	30cd	FLR 1W OR-9 (CVOR) 1-SS024 T3:A1-1-16				X				ON
N1:T3:A1:1-17	AV	49MTV-WRF	15cd	FLR 1W SUB STERILE 1-SS027 T3:A1-1-17	X			X				ON
N1:T3:A1:1-18	VO	49VO-WRF	15cd	FLR 1W PUMP 1-SS025 T3:A1-1-18		X		X				ON
N1:T3:A1:1-19	VO	49VO-APPLW	30cd	FLR 1W OR-7 (CVOR) 1-SS026 T3:A1-1-19	X	X		X				ON
N1:T3:A1:1-20				SPARE			X	X				ON
N1:T3:A1:1-21				SPARE	X		X	X				ON
N1:T3:A1:1-22				SPARE		X	X	X				ON
N1:T3:A1:1-23				SPARE	X	X	X	X				ON
N1:T3:A1:1-24	AV	49MTV-WRF	15cd	FLR 1W CORR 1-SS037 @1-SS032 T3:A1-1-24				X	X			ON
N1:T3:A1:1-25	AV	49MTV-WRF	15cd	FLR 1W CORR 1-SS036 T3:A1-1-25	X			X	X			ON
N1:T3:A1:1-26				SPARE		X		X	X			ON
N1:T3:A1:1-27				SPARE	X	X		X	X			ON
N1:T3:A1:1-28				SPARE			X	X	X			ON
N1:T3:A1:1-29	VO	49VO-WRF	15cd	FLR 1W SOILED FLUIDS 1-SS032 T3:A1-1-29	X		X	X	X			ON
N1:T3:A1:1-30	VO	49VO-WRF	15cd	FLR 1W STOR1-SS035 T3:A1-1-30		X	X	X	X			ON

N1:T3:A1: ENHANCED POWER SUPPLY - CHANNEL 2

IDNac Address	Device Type	PID	Setting	Custom Label (Max 40 Characters)	SWITCH SETTINGS 1							
N1:T3:A1:2-1				SPARE	X							ON
N1:T3:A1:2-2				SPARE		X						ON
N1:T3:A1:2-3	AV	49MTV-WRF	15cd	FLR 1W CORR 1-SS019A SOUTH T3:A1-2-3	X	X						ON
N1:T3:A1:2-4				SPARE			X					ON
N1:T3:A1:2-5				SPARE	X		X					ON
N1:T3:A1:2-6	AV	49MTV-WRF	15cd	FLR 1W CORR 1-SS019 NORTH T3:A1-2-6		X	X					ON
N1:T3:A1:2-7	AV	49MTV-WRF	15cd	FLR 1W CORR 1-SS014 NORTH T3:A1-2-7	X	X	X					ON
N1:T3:A1:2-8	AV	49MTV-WRF	15cd	FLR 1W CORR 1-SS014 WEST T3:A1-2-8				X				ON
N1:T3:A1:2-9	VO	49VO-APPLW	30cd	FLR 1W OR-9 1-SS017 T3:A1-2-9	X			X				ON
N1:T3:A1:2-10	VO	49VO-APPLW	30cd	FLR 1W OR-10 1-SS015 T3:A1-2-10		X		X				ON
N1:T3:A1:2-11	AV	49MTV-WRF	15cd	FLR 1W CORR 1-SS014 EAST T3:A1-2-11	X	X		X				ON
N1:T3:A1:2-12	AV	49MTV-WRF	15cd	FLR 1W EQ STG 1-SS012 T3:A1-2-12			X	X				ON
N1:T3:A1:2-13	VO	49VO-WRF	15cd	FLR 1W PUMP 1-SS018 T3:A1-2-13	X		X	X				ON
N1:T3:A1:2-14	VO	49VO-WRF	15cd	FLR 1W SOIL UTIL 1-SS020 T3:A1-2-14		X	X	X				ON
N1:T3:A1:2-15	VO	49VO-WRF	15cd	FLR 1W ANES WK 1-SS012A T3:A1-2-15	X	X	X	X				ON
N1:T3:A1:2-16	VO	49VO-APPLC	15cd	FLR 1W PHARM BRKRM 1-0502 T3:A1-2-16					X			ON

N1:T3:A1: ENHANCED POWER SUPPLY - CHANNEL 3

IDNac Address	Device Type	PID	Setting	Custom Label (Max 40 Characters)	SWITCH SETTINGS 1							
N1:T3:A1:3-1	AV	49MTV-WRF	15cd	FLR 1W CORR 1-SS122 T3:A1-3-1	X							ON
N1:T3:A1:3-2	VO	49VO-APPLW	30cd	FLR 1W OR-6 1-SS134 T3:A1-3-2		X						ON
N1:T3:A1:3-3	VO	49VO-APPLW	30cd	FLR 1W OR-5 1-SS132 T3:A1-3-3	X	X						ON
N1:T3:A1:3-4	VO	49VO-WRF	15cd	FLR 1W SUB-STERILE 1-SS127 T3:A1-3-4			X					ON
N1:T3:A1:3-5	AV	49MTV-WRF	15cd	FLR 1W CORR 1-SS122 T3:A1-3-5	X		X					ON
N1:T3:A1:3-6	AV	49MTV-WRF	15cd	FLR 1W CORR 1-SS122 T3:A1-3-6		X	X					ON
N1:T3:A1:3-7	VO	49VO-WRF	15cd	FLR 1W PHARM 1-SS120 T3:A1-3-7	X	X						ON
N1:T3:A1:3-8	AV	49MTV-WRF	75cd	FLR 1W CORR 1-SS111 T3:A1-3-8			X					ON
N1:T3:A1:3-9	AV	49MTV-WRF	15cd	FLR 1W CORR 1-SS102 T3:A1-3-9	X		X					ON
N1:T3:A1:3-10	VO	49VO-WRF	15cd	FLR 1W CLEAN SUPPLY 1-SS126 T3:A1:3-10		X	X					ON
N1:T3:A1:3-11	AV	49MTV-WRF	15cd	FLR 1W CORR 1-SS102 T3:A1-2-11	X	X		X				ON
N1:T3:A1:3-12	AV	49MTV-WRF	15cd	FLR 1W DICTATION 1-SS110 T3:A1-3-12			X	X				ON
N1:T3:A1:3-13	AV	49MTV-WRF	75cd	FLR 1W LOUNGE 1-SS104 T3:A1-3-13	X		X	X				ON
N1:T3:A1:3-14	AV	49MTV-WRF	75cd	FLR 1W MALE LOCKERS 1-SS108 T3:A1-3-14		X	X	X				ON
N1:T3:A1:3-15	AV	49MTV-WRF	15cd	FLR 1W ENTRY HALL 1-SS109 T3:A1-3-15	X	X	X	X				ON
N1:T3:A1:3-16	VO	49VO-WRF	15cd	FLR 1W ENTRY HALL T3:A1-3-16					X			ON
N1:T3:A1:3-17	AV	49MTV-WRF	15cd	FLR 1W ENTRY HALL T3:A1-3-17	X				X			ON
N1:T3:A1:3-18	VO	49VO-WRF	15cd	FLR 1W BATH 1-SS107 T3:A1-3-18		X			X			ON
N1:T3:A1:3-19	VO	49VO-WRF	15cd	FLR 1W BATH 1-SS106 T3:A1-3-19	X	X			X			ON
N1:T3:A1:3-20	AV	49MTV-WRF	15cd	FLR 1W FEM LOCKERS 1-SS105 T3:A1-3-20			X	X				ON
N1:T3:A1:3-21	VO	49VO-WRF	15cd	FLR 1W STORAGE 1-SS125 T3:A1-3-21	X		X	X				ON

N1:T3:A1:1 — Notification SLC Distributed Load Voltage Drop

Starting Voltage: 29vdc
Min. Device Voltage: 23.vdc
Allowable % Drop: 20.7%
Primary Wire Gauge: 14ga
Home Run Wire Gauge: 14ga
Wire Res. Per Ft. 0.003070 @ 75° Celsius
Wire Res. Per Ft. 0.003070 @ 75° Celsius

Branch	Device #	From	Distance (Feet)	PID	Setting	Device Draw	Class B Calculations Current at Device	Voltage Drop	Voltage at Device	% Vdrop Wire Length
1	N1:T3:A1:1-1	PANEL	22			0.0000	0.198	0.027	28.973	Branch 1: 0.64%
1	N1:T3:A1:1-2	N1:T3:A1:1-1	22			0.0000	0.000	0.000	28.973	Length: 338
1	N1:T3:A1:1-3	N1:T3:A1:1-1	31			0.0000	0.198	0.038	28.936	
1	N1:T3:A1:1-4	N1:T3:A1:1-3	32			0.0000	0.198	0.039	28.897	
1	N1:T3:A1:1-5	N1:T3:A1:1-4	20	49MTV-WRF	75cd	0.1980	0.198	0.024	28.872	
1	N1:T3:A1:1-6	N1:T3:A1:1-11	43	49MTV-WRF	75cd	0.1980	0.198	0.052	28.820	
1	N1:T3:A1:1-7	N1:T3:A1:1-5	30			0.0000	0.000	0.000	28.872	
1	TAP1	N1:T3:A1:1-7	6	JBOX		0.0000	0.000	0.000	28.872	
1	N1:T3:A1:1-8	TAP1	23			0.0000	0.000	0.000	28.872	
1	N1:T3:A1:1-9	N1:T3:A1:1-8	14			0.0000	0.000	0.000	28.872	
1	N1:T3:A1:1-10	N1:T3:A1:1-11	47	49MTV-WRF	75cd	0.1980	0.198	0.057	28.815	
1	N1:T3:A1:1-11	TAP1	48			0.0000	0.000	0.000	28.872	
2	N1:T3:A1:1-14	PANEL	139	49MTV-WRF	15cd	0.1450	0.980	0.836	28.164	Branch 2: 3.57%
2	N1:T3:A1:1-15	N1:T3:A1:1-14	45	49MTV-WRF	15cd	0.1450	0.145	0.040	28.124	Length: 437
2	N1:T3:A1:1-16	N1:T3:A1:1-14	26	49VO-APPLW	30cd	0.0570	0.306	0.049	28.115	
2	N1:T3:A1:1-17	N1:T3:A1:1-16	32	49MTV-WRF	15cd	0.1450	0.249	0.049	28.066	
2	N1:T3:A1:1-18	N1:T3:A1:1-17	33	49VO-WRF	15cd	0.0470	0.047	0.010	28.056	
2	N1:T3:A1:1-19	N1:T3:A1:1-17	26	49VO-APPLW	30cd	0.0570	0.057	0.009	28.057	
2	TAP8	N1:T3:A1:1-14	32	JBOX		0.0000	0.384	0.075	28.088	
2	N1:T3:A1:1-24	TAP8	29	49MTV-WRF	15cd	0.1450	0.384	0.068	28.020	
2	N1:T3:A1:1-25	N1:T3:A1:1-24	43	49MTV-WRF	15cd	0.1450	0.192	0.051	27.969	
2	N1:T3:A1:1-29	N1:T3:A1:1-24	12	49VO-WRF	15cd	0.0470	0.047	0.003	28.016	
2	N1:T3:A1:1-30	N1:T3:A1:1-25	20	49VO-WRF	15cd	0.0470	0.047	0.006	27.963	

N1:T3:A1:2 — Distributed Load Voltage Drop

Starting Voltage: 29vdc
Min. Device Voltage: 23.vdc
Allowable % Drop: 20.7%
Primary Wire Gauge: 14ga
Home Run Wire Gauge: 14ga
Wire Res. Per Ft. 0.003070 @ 75° Celsius
Wire Res. Per Ft. 0.003070 @ 75° Celsius

Branch	Device #	From	Distance (Feet)	PID	Setting	Device Draw	Class B Calculations Current at Device	Voltage Drop	Voltage at Device	% Vdrop Wire Length
1	TAP2	PANEL	11	JBOX		0.0000	1.125	0.076	28.924	Branch 1: 4.19%
1	N1:T3:A1:2-3	TAP2	34	49MTV-WRF	15cd	0.1450	1.125	0.235	28.689	Length: 457
1	N1:T3:A1:2-6	N1:T3:A1:2-3	75	49MTV-WRF	15cd	0.1450	0.980	0.451	28.238	
1	N1:T3:A1:2-7	N1:T3:A1:2-6	41	49MTV-WRF	15cd	0.1450	0.788	0.198	28.040	
1	N1:T3:A1:2-8	N1:T3:A1:2-7	24	49MTV-WRF	15cd	0.1450	0.596	0.088	27.952	
1	N1:T3:A1:2-9	N1:T3:A1:2-8	29	49VO-APPLW	30cd	0.0570	0.057	0.010	27.942	
1	N1:T3:A1:2-10	N1:T3:A1:2-8	31	49VO-APPLW	30cd	0.0570	0.057	0.011	27.941	
1	N1:T3:A1:2-11	N1:T3:A1:2-8	47	49MTV-WRF	15cd	0.1450	0.337	0.097	27.854	
1	N1:T3:A1:2-15	N1:T3:A1:2-11	35	49VO-WRF	15cd	0.0470	0.192	0.041	27.813	
1	N1:T3:A1:2-12	N1:T3:A1:2-15	31	49MTV-WRF	15cd	0.1450	0.145	0.028	27.786	
1	N1:T3:A1:2-13	N1:T3:A1:2-6	26	49VO-WRF	15cd	0.0470	0.047	0.008	28.230	
1	N1:T3:A1:2-14	N1:T3:A1:2-7	24	49VO-WRF	15cd	0.0470	0.047	0.007	28.033	
1	N1:T3:A1:2-16	N1:T3:A1:2-2	49	49VO-APPLC	15cd	0.0550	0.055	0.017	28.016	

N1:T3:A1:3 — Distributed Load Voltage Drop

Starting Voltage: 29vdc
Min. Device Voltage: 23.vdc
Allowable % Drop: 20.7%
Primary Wire Gauge: 14ga
Home Run Wire Gauge: 14ga
Wire Res. Per Ft. 0.003070 @ 75° Celsius
Wire Res. Per Ft. 0.003070 @ 75° Celsius

Branch	Device #	From	Distance (Feet)	PID	Setting	Device Draw	Class B Calculations Current at Device	Voltage Drop	Voltage at Device	% Vdrop Wire Length
1	TAP3	PANEL	186	JBOX		0.0000	1.568	1.791	27.209	Branch 1: 10.38%
1	N1:T3:A1:3-1	N1:T3:A1:3-5	21	49MTV-WRF	15cd	0.1450	0.145	0.019	26.860	Length: 908
1	N1:T3:A1:3-2	TAP3	18	49VO-APPLW	30cd	0.0570	0.057	0.006	27.203	
1	TAP4	TAP3	32	JBOX		0.0000	1.511	0.297	26.912	
1	N1:T3:A1:3-3	TAP4	16	49VO-APPLW	30cd	0.0570	0.057	0.006	26.907	
1	N1:T3:A1:3-4	TAP4	33	49VO-WRF	15cd	0.0470	0.047	0.010	26.903	
1	N1:T3:A1:3-5	TAP4	19	49MTV-WRF	15cd	0.1450	0.290	0.034	26.879	
1	N1:T3:A1:3-6	N1:T3:A1:3-5	28	49MTV-WRF	15cd	0.1450	0.145	0.025	26.854	
1	TAP5	TAP4	35	JBOX		0.0000	1.117	0.240	26.672	
1	N1:T3:A1:3-7	TAP5	27	49VO-WRF	15cd	0.0470	1.117	0.185	26.487	
1	N1:T3:A1:3-9	N1:T3:A1:3-7	44	49MTV-WRF	15cd	0.1450	1.070	0.289	26.198	
1	N1:T3:A1:3-8	N1:T3:A1:3-9	39	49MTV-WRF	75cd	0.1980	0.198	0.047	26.151	
1	TAP6	N1:T3:A1:3-9	14	JBOX		0.0000	0.529	0.045	26.153	
1	N1:T3:A1:3-10	TAP6	19	49VO-WRF	15cd	0.0470	0.047	0.005	26.147	
1	N1:T3:A1:3-11	TAP6	64	49MTV-WRF	15cd	0.1450	0.145	0.057	26.096	
1	TAP7	N1:T3:A1:3-13	16	JBOX		0.0000	0.629	0.070	26.113	
1	N1:T3:A1:3-12	TAP7	22	49MTV-WRF	15cd	0.1450	0.145	0.020	26.093	
1	N1:T3:A1:3-13	N1:T3:A1:3-9	13	49MTV-WRF	75cd	0.1980	0.198	0.016	26.182	
1	N1:T3:A1:3-14	TAP7	24	49MTV-WRF	75cd	0.1980	0.245	0.036	26.077	
1	N1:T3:A1:3-15	TAP6	47	49MTV-WRF	15cd	0.1450	0.337	0.097	26.055	
1	N1:T3:A1:3-16	N1:T3:A1:3-15	35	49VO-WRF	15cd	0.0470	0.192	0.041	26.014	
1	N1:T3:A1:3-17	N1:T3:A1:3-16	26	49MTV-WRF	15cd	0.1450	0.145	0.023	25.991	
1	N1:T3:A1:3-18	N1:T3:A1:3-14	39	49VO-WRF	15cd	0.0470	0.047	0.011	26.065	
1	N1:T3:A1:3-20	TAP7	38	49MTV-WRF	15cd	0.1450	0.192	0.045	26.068	
1	N1:T3:A1:3-19	N1:T3:A1:3-20	26	49VO-WRF	15cd	0.0470	0.047	0.008	26.060	
1	N1:T3:A1:3-21	TAP7	25	49VO-WRF	15cd	0.0470	0.047	0.007	26.106	

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.

KEYNOTES:

1. DEVICE REMOVED FOR CONSTRUCTION.
2. DEVICE IS INTERIM FOR CONSTRUCTION. TO BE REMOVED, REPLACED, OR RELOCATED DURING BUILDOUT. DEVICE DESCRIPTOR CHANGED.
3. DEVICE DESCRIPTOR CHANGE ONLY.
4. DEVICE WAS INTERIM FOR CONSTRUCTION AND IS NOW REMOVED. DEVICE QUANTITY CHANGED.
5. EXISTING DEVICE REINSTALLED. RE-USE EXISTING HEAD, BASE, ADDRESS, LOCATION, AND WIRING.
6. DEVICE REMOVED TO BE RE-USED ON ANOTHER CIRCUIT.

City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: W. Polk
Date: Oct 13, 2022
2021 INTERNATIONAL CODES & 2020 NEC

Johnson Controls
DISTRICT 1-418
15000 E. 40TH STON AVE
AURORA, CO 80017
SERVICE: 303-355-6000
PHONE: 303-355-9000
FAX: 303-355-9015

NICET CERTIFICATION INFORMATION
NANCY S. WILTSIE
NICET Fire Alarm, III
Certification #93727
Valid Through: 03/01/24
September 21, 2022

THE MEDICAL CENTER OF AURORA - SOUTH TOWER EXPANSION

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

Revisions shown with ⚠ symbol

ISSUE LOG: MARK	DATE	CAD	CHK	DESCRIPTION

FOR PERMIT

DRAWN BY:	CCD
CHECKED BY:	CBR
ISSUE DATE:	7/26/22
JOB #:	
PROJECT #:	419-650189804

JOHNSON CONTROLS © 2022

SYSTEM: FIRE ALARM SYSTEM

SHEET: NODE-1 TRANSPONDER-3 INTERIM CALCS & SCHEDUALS CONT.

FA-604

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FILE PATH: C:\Users\jrauch\Johnson Controls\Project Electronics - Medical Center of Aurora\1501 S Potomac - Aurora South\South Tower - Node 1\33-CR Expansion - 2022 - 650189804\Fire\FA-601.dwg
LAST SAVED BY: JRAUCH
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36" x 42" - Arch E1 Size

MEDICAL CENTER OF AURORA SOUTH TOWER TRANSPONDER 4 4100es XPDR				Standby Current	Total Standby	Alarm Current	Total Alarm
Module	**Qty**	**Description**					
Panel Equipment							
4100-9600	*1*	*BASIC TRANSPONDER*	*	*0.0870*	*0.0870*	*0.0870*	*0.0870*
4100-0634	*1*	*POWER DISTRIBUTION MODULE 120V*		*0.0000*	*0.0000*	*0.0000*	*0.0000*
4100-0636	*1*	*BOX TO BOX HARNESS KIT*		*0.0000*	*0.0000*	*0.0000*	*0.0000*
4100-2300	*1*	*EXPANSION BAY (PHASE 10 ONLY)*		*0.0000*	*0.0000*	*0.0000*	*0.0000*
4100-5311	*1*	*ENHANCED POWER SUPPLY, 3 CHANNELS, IDNet, 120V*		*0.2250*	*0.2250*	*0.4900*	*0.4900*
4009-9601	*2*	*IDNAC REPEATER 120V PLATINUM UL/ULC*		*0.0700*	*0.1400*	*0.0960*	*0.1920*
		Panel Totals			**0.4520**		**0.7690**
IDNet Addressable Devices (SLC)							
4090-9001	*3*	*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	*34*	*IDNET RELAY IAM*	*				
1 **4098-9714**	**93**	**TRUEALARM PHOTO SMOKE SENSOR**					
2 **4098-9733**	**11**	**TRUEALARM HEAT SENSOR**	*				
4098-9755	*2*	*TRUEALARM DUCT SMOKE SENSOR W/O RELAY OUTPUT*	*				
1 **4098-9756**	**10**	**TRUEALARM DUCT SMOKE SENSOR W/ RELAY OUTPUT**	*				
4098-9792	**104**	**TRUEALARM SENSOR BASE**	*				
4099-9004	*4*	*ADDRESSABLE SINGLE ACTION MANUAL STATION*	*				
Miscellaneous Peripheral Devices That Require (Additional) System Power							
1 **4098-9843**	**10**	**ENCAPSULATED RELAY PAM-SD**		**0.0000**	**0.0000**	**0.0150**	**0.1500**
4098-9756	**10**	**TRUEALARM DUCT SMOKE SENSOR W/ RELAY OUTPUT**		**0.0030**	**0.0300**	**0.0150**	**0.1500**
4603-9101	*4*	*SERIAL LCD ANNUNCIATOR*		*0.0650*	*0.2600*	*0.1400*	*0.5600*
2088-9021	*5*	*ENCAPSULATED RELAY PAM-1*		*0.0000*	*0.0000*	*0.0150*	*0.0750*
4098-9605	*2*	*PHOTO SMOKE DETECTOR SSD*		*0.0001*	*0.0002*	*0.0000*	*0.0000*
4098-9788	*2*	*2 WIRE DETECTOR BASE*		*0.0000*	*0.0000*	*0.0000*	*0.0000*
1 **2098-9806**	**10**	**REMOTE TEST STATION W/ LED AND KEY SWITCH**		**0.0000**	**0.0000**	**0.0000**	**0.0000**
IDNac Notification Appliances			**Setting**				
4009-9501	*2*	*IDNAC REPEATER 120V PLATINUM UL/ULC*	*	*0.0032*	*0.0064*	*0.0032*	*0.0064*
4906-9202	*6*	*ADDRESSABLE CEILING MNT MC V/O, RED*	*15*	*0.0008*	*0.0048*	*0.0600*	*0.3600*
4906-9202	*1*	*ADDRESSABLE CEILING MNT MC V/O, RED*	*75*	*0.0008*	*0.0008*	*0.1800*	*0.1800*
49MT-WRF	*2*	*MULTI-TONE AUDIBLE ONLY, RED, WALL MOUNT*	*520 H*	*0.0016*	*0.0032*	*0.0990*	*0.1980*
49MTV-WRF	*16*	*MULTI-TONE A/V, RED, WALL MOUNT*	*15*	*0.0016*	*0.0256*	*0.1450*	*2.3200*
49MTV-WRF	*11*	*MULTI-TONE A/V, RED, WALL MOUNT*	*30*	*0.0016*	*0.0176*	*0.1630*	*1.7930*
49MTV-WRF	*6*	*MULTI-TONE A/V, RED, WALL MOUNT*	*75*	*0.0016*	*0.0096*	*0.1980*	*1.1880*
49VO-APPLC	*9*	*STROBE, APPLIANCE ONLY, CEILING MOUNT*	*15*	*0.0008*	*0.0072*	*0.0550*	*0.4950*
49VO-APPLC	*2*	*STROBE, APPLIANCE ONLY, CEILING MOUNT*	*30*	*0.0008*	*0.0016*	*0.0830*	*0.1660*
49VO-APPLW	*1*	*VO APPLIANCE ONLY WALL MT*	*15*	*0.0008*	*0.0008*	*0.0470*	*0.0470*
49VO-APPLW	*4*	*VO APPLIANCE ONLY WALL MT*	*30*	*0.0008*	*0.0032*	*0.0570*	*0.2280*
49VO-APPLW	*1*	*VO APPLIANCE ONLY WALL MT*	*75*	*0.0008*	*0.0008*	*0.1000*	*0.1000*
49VO-WRF	*31*	*VO, WALL MT, RED, FIRE LABEL*	*15*	*0.0008*	*0.0248*	*0.0470*	*1.4570*
49VO-WRF	*6*	*VO, WALL MT, RED, FIRE LABEL*	*30*	*0.0008*	*0.0048*	*0.0570*	*0.3420*
49VO-WRF	*1*	*VO, WALL MT, RED, FIRE LABEL*	*75*	*0.0008*	*0.0008*	*0.1000*	*0.1000*
		Total IDNac Device Current:			**0.1120**		**8.9804**
		IDNac Current Boost for 29vdc Regulated Output **					**5.1199**
		Peripheral Totals			**0.2902**		**15.0353**
		RUI Totals	**4**		**0.0140**		**0.0140**
		Address Totals	**157 Addresses**		**0.1256**		**0.1570**
		System Totals*:		**Standby**	**0.9938**	**Alarm**	**15.9753**

* Device Address current draw included below (See Additional Current Draws):

Battery Set #1 (Cabinet/Charger #1)				Standby Current	Standby Total	Alarm Current	Alarm Total
Select ALL Power Supplies on this battery set:							
EPS-1					0.6734		7.1074
			Sub Total		**0.6734**		**7.1074**
Additional Current Draws:							
IDNac Current Boost for 29vdc Regulated Output **							3.1900
RUI Connected Peripheral Devices	4	x 0.0035			= 0.0140	x 0.0035	= 0.0140
MAPNET/IDNet Device Address Communication Current	157	x 0.000800			= 0.1256	x 0.001000	= 0.1570
			Sub Total		**0.8130**		**10.4684**
Spare addressable point capacity	**20%**	32	x 0.0008		= 0.0256	x 0.001	= 0.0320
			Total		**0.8386**		**10.5004**
Standby Time =	4	Hrs	x 0.8386		= 3.3544	Standby Ah	
Alarm Time =	5	Min	0.08333 x 10.5004		= 0.8750	Alarm Ah	
					4.2294		
Additional Spare Battery Capacity =	**20%**			+	0.8459		
					5.0753		
Battery Discharge Factor =	**20%**			+	1.0151		
Minimum Battery Required	**2081-9272 6.2AH (2x)**				**6.0904**		
Battery Supplied	**2081-9287 25AH (2x)**						

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

** IDNac Current Boost formula: [(29.5 * IDNac Alarm Current) / .92) / 20.4 = Adjusted Current
DC-DC Converter Output = 29.5vdc. Terminal Output is 29vdc due to 0.5vdc internal loss.
Converter Worst Case efficiency is 92%, 20.4vdc represents battery output in 85% depleted state

Repeater Power Supply Battery Set:				Standby	Standby Standby Total	Alarm	Alarm Alarm Total
EPR-1					0.0836		**1.2240**
Additional Current Draw:							
IDNac Current Boost for 29vdc Regulated Output **					0.0000		0.6431
			Total		**0.0836**		**1.8671**
Standby Time =	4	Hrs	x 0.8386		= 0.3344	Standby Ah	
Alarm Time =	5	Min	0.08333 x 1.8671		= 0.1556	Alarm Ah	
					0.4900		
Additional Spare Battery Capacity =	**20%**			+	0.0980		
					0.5880		
Battery Discharge Factor =	**20%**			+	0.1176		
Minimum Battery Required	**2081-9272 6.2AH (2x)**				**0.7056**		
Battery Supplied	**2081-9272 6.2AH (2x)**						

Repeater Power Supply Battery Set:				Standby Total	Alarm Total
EPR-2				0.0972	**2.3530**
Additional Current Draw:					
IDNac Current Boost for 29vdc Regulated Output **				0.0000	1.2868
			Total	**0.0972**	**3.6398**
Standby Time =	4	Hrs	x 0.8386	= 0.3888	Standby Ah
Alarm Time =	5	Min	0.08333 x 3.6398	= 0.3033	Alarm Ah
				0.6921	
Additional Spare Capacity =	**20%**		+	0.1384	
				0.8305	
Additional Spare Battery Capacity =	**20%**		+	0.1661	
Minimum Battery Required	**2081-9272 6.2AH (2x)**			**0.9966**	
Battery Supplied	**2081-9272 6.2AH (2x)**				

IDNET CHANNEL N1:T4:M11		ADDRESSES IN USE: 157 (62.8%) | SPARE ADDRESSES: 93 (37.2%)		SWITCH SETTINGS								
Address	**Device Type**	**Point Type**	**Location Description**	1								
N1:T4:M11-1	*PHOTO*	*SMOKE*	*1:M11-1 FLR 1W ELEC 1-CS16*	X								ON
N1:T4:M11-2	*PHOTO*	*SMOKE*	*1:M11-2 FLR 1W OR-11 1-SS10 SW*		X							ON
N1:T4:M11-3	*PHOTO*	*SMOKE*	*1:M11-3 FLR 1W OR-11 1-SS10 NE*	X	X							ON
N1:T4:M11-4	*RIAM*	*DHOLDER*	*1:M11-4 FLR 1W OR-11 1-SS100*			X						ON
N1:T4:M11-5	*HEAT*	*HEAT*	*1:M11-5 FLR 1W TOILET CS15*	X		X						ON
N1:T4:M11-6	*PHOTO*	*VSMOKE*	*1:M11-6 FLR 1W CORR 1-CS14*		X	X						ON
N1:T4:M11-7	*PHOTO*	*VSMOKE*	*1:M11-7 FLR 1W CORR 1-CS14*	X	X	X						ON
N1:T4:M11-8	*PHOTO*	*SMOKE*	*1:M11-8 FLR 1W STER STG 1-CS10 NORTH*				X					ON
N1:T4:M11-9	*PHOTO*	*SMOKE*	*1:M11-9 FLR 1W STER STG 1-CS10*	X			X					ON
N1:T4:M11-10	*PHOTO*	*SMOKE*	*1:M11-10 FLR 1W JAN1-CS13*		X		X					ON
1 **N1:T4:M11-11**	**HEAT**	**HEAT**	**1:M11-11 FLR 1W JAN INTERIM 1-SS038**	X	X		X					ON
N1:T4:M11-12	*PHOTO*	*SMOKE*	*1:M11-12 FLR 1W STER STG 1-CS10 CTR*			X	X					ON
N1:T4:M11-13	*PHOTO*	*SMOKE*	*1:M11-13 FLR 1W CENTRAL STERILE*	X		X	X					ON
N1:T4:M11-14	*PHOTO*	*SMOKE*	*1:M11-14 FLR 1W STER STG 1-CS10 SOUTH*		X	X	X					ON
N1:T4:M11-15	*PHOTO*	*SMOKE*	*1:M11-15 FLR 1W STER STG 1-CS10 SOUTH*	X	X	X	X					ON
N1:T4:M11-16	*PHOTO*	*SMOKE*	*1:M11-16 FLR 1W MAKE UP 1-CS07 W*					X				ON
N1:T4:M11-17	*PHOTO*	*SMOKE*	*1:M11-17 FL 1W CENTRAL STERILE*	X				X				ON
N1:T4:M11-18	*PHOTO*	*SMOKE*	*1:M11-18 FL 1W MAKE UP 1-CS07 @ CORR*		X			X				ON
N1:T4:M11-19	*PHOTO*	*SMOKE*	*1:M11-19 FL 1W STERILIZER 1-CS08*	X	X			X				ON
N1:T4:M11-20	*PHOTO*	*SMOKE*	*1:M11-20 FL 1W CLEAN STORAGE 1-CS06*			X	X					ON
N1:T4:M11-21	*PHOTO*	*SMOKE*	*1:M11-21 FL 1W DECON 1-CS03 NORTH*	X		X	X					ON
N1:T4:M11-22	*PHOTO*	*SMOKE*	*1:M11-22 FL 1W DECON 1-CS03 SOUTH*		X	X		X				ON
N1:T4:M11-23	*PHOTO*	*SMOKE*	*1:M11-23 FL 1W CART WASH 1-CS04 NORTH*	X	X	X		X				ON
N1:T4:M11-24	*PHOTO*	*SMOKE*	*1:M11-24 FL 1W CART WASH 1-CS04 SOUTH*				X	X				ON
N1:T4:M11-25	*PHOTO*	*SMOKE*	*1:M11-25 FL 1W CSS OFF 1-CS02*	X			X	X				ON
N1:T4:M11-26	*PHOTO*	*SMOKE*	*1:M11-26 FL 1W DI WATER 1-CS09*		X		X	X				ON
N1:T4:M11-27	*PHOTO*	*SMOKE*	*1:M11-27 FL 1W SURGERY VENDOR 1-CS01*	X	X		X	X				ON
N1:T4:M11-28	*PHOTO*	*SMOKE*	*1:M11-28 FL 1W CLEAN STORAGE 1-CS05*			X	X	X				ON
N1:T4:M11-29			*SPARE*	X		X	X	X				ON
N1:T4:M11-30	*RPHOTO*	*LSDUCT*	*1:M11-30 FLR 1W STER STG SUP FSD 1-CS10*		X	X	X	X				ON
N1:T4:M11-31	*RPHOTO*	*LSDUCT*	*1:M11-31 FLR 1W CARTWASH 1-CS04 RET FSD*	X	X	X	X	X				ON
1 **N1:T4:M11-32**			**SPARE**						X			ON
N1:T4:M11-33	*RPHOTO*	*LSDUCT*	*1:M11-33 FLR 1W SRG VEND 1-CS01 RET FSD*	X					X			ON
N1:T4:M11-34			*SPARE*		X				X			ON
N1:T4:M11-35	*RPHOTO*	*LSDUCT*	*1:M11-35 FLR 1W DECON 1- CS03 SUP FSP*	X	X				X			ON
N1:T4:M11-36			*SPARE*			X			X			ON
N1:T4:M11-37			*SPARE*	X			X		X			ON
N1:T4:M11-38			*SPARE*		X	X			X			ON
N1:T4:M11-39	*RIAM*	*RELAY*	*1:M11-39 FLR 1W OR #11 ALARM TO DCC*	X	X	X			X			ON
N1:T4:M11-40	*RIAM*	*RELAY*	*1:M11-40 FLR 1W OR 83 ALARM TO DDC*				X		X			ON
N1:T4:M11-41	*RPHOTO*	*LSDUCT*	*1:M11-41 FLR 1W ELEC RM 1-CS16 SUP FSD*	X			X		X			ON
N1:T4:M11-42	*RPHOTO*	*LSDUCT*	*1:M11-42 FLR 1W ELEC RM 1-CS16 RET FSD*		X		X		X			ON
N1:T4:M11-43	*RPHOTO*	*LSDUCT*	*1:M11-43 FLR 1W TLT 1-CS15 SUP FSD*	X	X		X		X			ON
N1:T4:M11-44	*RPHOTO*	*LSDUCT*	*1:M11-44 FLR 1W OR-11 1-SS100 RET FSD*			X	X		X			ON
N1:T4:M11-45	*PHOTO*	*VSMOKE*	*1:M11-45 FLR 1W OR-1 1-SS118 NE*	X		X	X		X			ON
N1:T4:M11-46	*PHOTO*	*VSMOKE*	*1:M11-46 FLR 1W OR-1 1-SS118 SW*		X	X	X		X			ON
N1:T4:M11-47	*RIAM*	*DHOLDER*	*1:M11-47 FLR 1W OR-1 1-SS118 D/H*	X	X	X	X		X			ON
N1:T4:M11-48	*PHOTO*	*VSMOKE*	*1:M11-48 FLR 1W OR-2 1-SS119 NE*					X	X			ON
N1:T4:M11-49	*PHOTO*	*VSMOKE*	*1:M11-49 FLR 1W OR-2 1-SS119 SW*	X				X	X			ON
N1:T4:M11-50	*RIAM*	*DHOLDER*	*1:M11-50 FLR 1W OR-2 1-SS119 D/H*		X			X	X			ON
N1:T4:M11-51	*PHOTO*	*VSMOKE*	*1:M11-51 FLR 1W CYSTO OR-3 1-SS129 NE*	X	X			X	X			ON
N1:T4:M11-52	*PHOTO*	*VSMOKE*	*1:M11-52 FLR 1W CYSTO OR-3 1-SS129 SW*			X		X	X			ON
N1:T4:M11-53	*RIAM*	*DHOLDER*	*1:M11-53 FLR 1W CYSTO OR-3 1-SS129 D/H*	X		X		X	X			ON
N1:T4:M11-54	*PHOTO*	*VSMOKE*	*1:M11-54 FLR 1W EQUIP STG 1-SS131*		X	X		X	X			ON
N1:T4:M11-55	*PHOTO*	*VSMOKE*	*1:M11-55 FLR 1W WOMENS LOCKER 1-SS135*	X	X	X		X	X			ON
N1:T4:M11-56	*HEAT*	*HEAT*	*1:M11-56 FLR 1W WOMENS BATH 1-SS136*				X	X	X			ON
N1:T4:M11-57	*PHOTO*	*VSMOKE*	*1:M11-57 FLR 1W MENS LOCKER 1-SS138*	X			X	X	X			ON
N1:T4:M11-58	*PHOTO*	*VSMOKE*	*1:M11-58 FLR 1W NURSE LOUNGE 1-SS139*		X		X	X	X			ON
N1:T4:M11-59			*SPARE*	X	X		X	X	X			ON
N1:T4:M11-60			*SPARE*			X	X	X	X			ON
N1:T4:M11-61			*SPARE*	X		X	X	X	X			ON
N1:T4:M11-62	*RPHOTO*	*LSDUCT*	*1:M11-62 FLR 1W OR-11 1-SS100 SUP FSD*		X	X	X	X	X			ON
N1:T4:M11-63	*RPHOTO*	*LSDUCT*	*1:M11-63 FLR 1W CORR 1-SS112 SUP FSD*	X	X	X	X	X	X			ON
N1:T4:M11-64			*SPARE*							X		ON
N1:T4:M11-65	*RIAM*	*RELAY*	*1:M11-65 FLR 1W OR-1 PHOENIX VALVE*	X						X		ON
N1:T4:M11-66	*RIAM*	*RELAY*	*1:M11-66 FLR 1W OR-2 PHOENIX VALVE*		X					X		ON
N1:T4:M11-67	*PHOTO*	*VSMOKE*	*1:M11-67 FLR 1W CORR 1-SS0237 @ STER STG*	X	X					X		ON
N1:T4:M11-68	*PHOTO*	*VSMOKE*	*1:M11-68 FLR 1W CORR 1-SS037 @ STG ALC*			X				X		ON
N1:T4:M11-69	*PHOTO*	*VSMOKE*	*1:M11-69 FLR 1W CORR 1-SS029 @ N CORR*	X		X				X		ON
N1:T4:M11-70	*PHOTO*	*SMOKE*	*1:M11-70 FLR 1W CORR 1-SS036*		X	X				X		ON
N1:T4:M11-71	*PHOTO*	*SMOKE*	*1:M11-71 FLR 1W CORR 1-SS036*	X	X	X				X		ON
N1:T4:M11-72	*PHOTO*	*SMOKE*	*1:M11-72 FLR 1W STOR 1-SS035*				X			X		ON
N1:T4:M11-73	*PHOTO*	*SMOKE*	*1:M11-73 FLR 1W SOILED FLUIDS 1-SS032*	X			X			X		ON
N1:T4:M11-74	*RIAM*	*DHOLDER*	*1:M11-74 FLR 1W OR 4 CORR 1-SS036*		X		X			X		ON
N1:T4:M11-75	*RIAM*	*RELAY*	*1:M11-75 FLR 1W OR 4 PHOENIX VALVE*	X	X		X			X		ON
N1:T4:M11-76	*PHOTO*	*SMOKE*	*1:M11-76 FLR 1W DAVINCI OR 4 1-SS031 NW*			X	X			X		ON
N1:T4:M11-77	*PHOTO*	*SMOKE*	*1:M11-77 FLR 1W DAVINCI OR 4 1-SS031 SE*	X		X	X			X		ON
N1:T4:M11-78	*PHOTO*	*VSMOKE*	*1:M11-78 FLR 1W PASS 1-PA11*		X	X	X			X		ON
N1:T4:M11-79	*PHOTO*	*VSMOKE*	*1:M11-79 FLR 1W CLEAN UTILITY 1-PA07*	X	X	X	X			X		ON
2 **N1:T4:M11-80**	**HEAT**	**HEAT**	**1:M11-80 FLR 1W CNC OFF. INTERIM 1-PA09**				X		X	X		ON
N1:T4:M11-81	*PHOTO*	*VSMOKE*	*1:M11-81 FLR 1W PACU RECOVERY 1-PA01 N*	X				X	X	X		ON
N1:T4:M11-82	*PHOTO*	*VSMOKE*	*1:M11-82 FLR 1W PASS 1-PA12*		X			X	X	X		ON
N1:T4:M11-83	*PHOTO*	*VSMOKE*	*1:M11-83 FLR 1W STF LNGE 1-PA14*	X	X			X	X	X		ON
N1:T4:M11-84	*HEAT*	*HEAT*	*1:M11-84 FLR 1W TLT PA15*			X		X	X	X		ON
N1:T4:M11-85	*PHOTO*	*SMOKE*	*1:M11-85 FLR 1W PACU RECOVERY 1-PA01 S*	X		X		X	X	X		ON
N1:T4:M11-86	*PHOTO*	*SMOKE*	*1:M11-86 FLR 1W SOILED UTILITY 1-PA08*		X	X		X	X	X		ON
N1:T4:M11-87	*PHOTO*	*SMOKE*	*1:M11-87 FLR 1W PASS 1-PA06*	X	X	X		X	X	X		ON
N1:T4:M11-88	*PHOTO*	*SMOKE*	*1:M11-88 FLR 1W ELEC 1-PA05*				X	X	X	X		ON
N1:T4:M11-89	*ADRPUL*	*PULL*	*1:M11-89 FLR 1W NURSE STATION A 1-PA10*	X			X	X	X	X		ON
N1:T4:M11-90	*RIAM*	*RRELAY*	*1:M11-90 FLR 1W DAVINCI OR 4 1-SS029*		X		X	X	X	X		ON
N1:T4:M11-91			*SPARE*	X	X		X	X	X	X		ON
N1:T4:M11-92	*PHOTO*	*VSMOKE*	*1:M11-92 FLR 1W CORR 1-SS122 @STORAGE*			X	X	X	X	X		ON
N1:T4:M11-93	*PHOTO*	*VSMOKE*	*1:M11-93 FLR 1W STORAGE 1-SS125*	X			X	X	X	X		ON
N1:T4:M11-94			*SPARE*		X	X	X	X	X	X		ON
N1:T4:M11-95			*SPARE*	X	X	X	X	X	X	X		ON
N1:T4:M11-96			*SPARE*						X	X		ON
N1:T4:M11-97			*SPARE*	X					X	X		ON
N1:T4:M11-98			*SPARE*		X				X	X		ON
N1:T4:M11-99			*SPARE*	X	X				X	X		ON
N1:T4:M11-100	*PHOTO*	*VSMOKE*	*1:M11-100 FLR 1W PASS 1-SS204 S*			X			X	X		ON
N1:T4:M11-101	*PHOTO*	*VSMOKE*	*1:M11-101 FLR 1W PASS 1-SS204 CTR*	X		X			X	X		ON
N1:T4:M11-102	*PHOTO*	*VSMOKE*	*1:M11-102 FLR 1W PASS 1-SS204 N*		X	X			X	X		ON
N1:T4:M11-103	*PHOTO*	*VSMOKE*	*1:M11-103 FLR 1W STORE ROOM 1-SS201*	X	X	X			X	X		ON
N1:T4:M11-104	*PHOTO*	*VSMOKE*	*1:M11-104 FLR 1W EVS 1-SS202*				X		X	X		ON
N1:T4:M11-105	*HEAT*	*HEAT*	*1:M11-105 FLR 1W TOILET 1-SS203*	X			X		X	X		ON
N1:T4:M11-106	*ADRPUL*	*PULL*	*1:M11-106 FLR 1W NURSE STATION A 1-SS205*		X		X		X	X		ON
N1:T4:M11-107	*PHOTO*	*VSMOKE*	*1:M11-107 FLR 1W PASS E 1-SS212*	X	X		X		X	X		ON
N1:T4:M11-108	*HEAT*	*HEAT*	*1:M11-108 FLR 1W TOILET 1-SS206*			X	X		X	X		ON
N1:T4:M11-109	*PHOTO*	*VSMOKE*	*1:M11-109 FLR 1W MEDS 1-SS207*	X		X	X		X	X		ON
N1:T4:M11-110	*PHOTO*	*VSMOKE*	*1:M11-110 FLR 1W SOILED UTILITY 1-SS208*		X	X	X		X	X		ON
N1:T4:M11-111	*PHOTO*	*VSMOKE*	*1:M11-111 FLR 1W OFFICE 1-SS209*	X	X	X	X		X	X		ON
N1:T4:M11-112	*PHOTO*	*VSMOKE*	*1:M11-112 FLR 1W PASSAGE 1-SS210*					X	X	X		ON
N1:T4:M11-113	*PHOTO*	*VSMOKE*	*1:M11-113 FLR 1W WORK ROOM 1-SS215*	X				X	X	X		ON
N1:T4:M11-114	*PHOTO*	*VSMOKE*	*1:M11-114 FLR 1W CLEAN UTILITY 1-SS214*		X			X	X	X		ON
N1:T4:M11-115	*ADRPUL*	*PULL*	*1:M11-115 FLR 1W NURSE STATION 1-SS213*	X	X			X	X	X		ON
N1:T4:M11-116	*PHOTO*	*SMOKE*	*1:M11-116 FLR 1W PASSAGE W 1-SS212*			X		X	X	X		ON
N1:T4:M11-117	*HEAT*	*HEAT*	*1:M11-117 FLR 1W TOILET 1-SS221*	X		X		X	X	X		ON
N1:T4:M11-118	*PHOTO*	*VSMOKE*	*1:M11-118 FLR 1W NOURISHMENT 1-SS222*		X	X		X	X	X		ON
N1:T4:M11-119	*PHOTO*	*VSMOKE*	*1:M11-119 FLR 1W PASS E 1-SS224*	X	X	X		X	X	X		ON
N1:T4:M11-120	*PHOTO*	*VSMOKE*	*1:M11-120 FLR 1W PASS N 1-SS224*				X	X	X	X		ON
N1:T4:M11-121	*PHOTO*	*VSMOKE*	*1:M11-121 FLR 1W PASS S 1-SS224*	X			X	X	X	X		ON
N1:T4:M11-122	*ADRPUL*	*PULL*	*1:M11-122 FLR 1W NURSE STAT C 1-SS223*		X		X	X	X	X		ON
N1:T4:M11-123	*HEAT*	*HEAT*	*1:M11-123 FLR 1W TLT 1-SS219*	X	X		X	X	X	X		ON
N1:T4:M11-124	*HEAT*	*HEAT*	*1:M11-124 FLR 1W TLT 1-SS218*			X	X	X	X	X		ON
N1:T4:M11-125	*PHOTO*	*VSMOKE*	*1:M11-125 FLR 1W NURSE LOUNGE 1-SS217*	X		X	X	X	X	X		ON

IDNET CHANNEL N1:T4:M11		ADDRESSES IN USE: 157 (62.8%) | SPARE ADDRESSES: 93 (37.2%)		SWITCH SETTINGS								
Address			**Location Description**	1								
N1:T4:M11-126		*HEAT*	*1:M11-126 FLR 1W TOILET 1-SS220*		X	X	X	X	X	X		ON
N1:T4:M11-127		*PHOTO*	*VSMOKE*	*1:M11-127 FLR 1W COMM 1-SS216*	X	X	X	X	X	X		ON
N1:T4:M11-128		*PHOTO*	*LSDUCT*	*1:M11-128 ROOF RTU-3 SUP DET TO DDC*						X		ON
N1:T4:M11-129		*PHOTO*	*LSDUCT*	*1:M11-129 ROOF RTU-3 RET DET TO DDC*	X					X		ON
N1:T4:M11-130		*RIAM*	*RELAY*	*1:M11-130 ROOF RTU-3 SUPPLY TO DDC*		X				X		ON
N1:T4:M11-131		*RIAM*	*RELAY*	*1:M11-131 ROOF RTU-3 RETURN TO DDC*	X	X				X		ON
N1:T4:M11-132		*RIAM*	*RELAY*	*1:M11-132 FLR 1W ALARM TO DDC AHU-3*		X				X		ON
N1:T4:M11-133		*RIAM*	*RELAY*	*1:M11-133 FLR 1W SUPV FSD TO DDC AHU-3*	X		X			X		ON
N1:T4:M11-134		*RIAM*	*RELAY*	*1:M11-134 FLR 1W RET FSD TO DDC AHU-3*		X	X			X		ON
N1:T4:M11-135		*RIAM*	*RRELAY*	*1:M11-135 FL 1W PACU BY HALL SEC RELEASE*	X	X	X			X		ON
N1:T4:M11-136				*SPARE*				X		X		ON
N1:T4:M11-137		*PHOTO*	*VSMOKE*	*1:M11-137 FLR 1 1W CHANGING AREA 7200A*	X			X		X		ON
N1:T4:M11-138		*PHOTO*	*VSMOKE*	*1:M11-138 FLR 1W BREAK RM 7300A*		X		X		X		ON
N1:T4:M11-139		*PHOTO*	*VSMOKE*	*1:M11-139 FLR 1W O/S RADIOLOGY 05 7202A*	X	X		X		X		ON
N1:T4:M11-140		*PHOTO*	*VSMOKE*	*1:M11-140 FLR1 1W STAFF HALL 7203A E*			X	X		X		ON
N1:T4:M11-141		*PHOTO*	*VSMOKE*	*1:M11-141 FLR 1W STAFF HALL 7203A W*	X		X	X		X		ON
N1:T4:M11-142		*PHOTO*	*VSMOKE*	*1:M11-142 FLR 1W TECH WORK AREA 7204A*		X	X	X		X		ON
N1:T4:M11-143		*PHOTO*	*VSMOKE*	*1:M11-143 FLR 1W EQUIPMENT RM 7203B*	X	X	X	X		X		ON
N1:T4:M11-144		*PHOTO*	*VSMOKE*	*1:M11-144 FLR 1W CONTROL AREA 7402B*					X	X		ON
N1:T4:M11-145		*PHOTO*	*VSMOKE*	*1:M11-145 FLR 1W PATIENT HOLDING 7402D*	X				X	X		ON
N1:T4:M11-146		*PHOTO*	*VSMOKE*	*1:M11-146 FLR1 1W CONTROL AREA 7402B S*		X			X	X		ON
N1:T4:M11-147		*IAM*	*SMOKE*	*1:M11-147 FLR 1W MR1 2 7402A HW SMKDET*	X	X			X	X		ON
N1:T4:M11-148				*SPARE*		X			X	X		ON
N1:T4:M11-149				*SPARE*	X		X		X	X		ON
N1:T4:M11-150		*IAM*	*SDUCT*	*1:M11-150 FLR 1W CRAC1 INTERGRAL SMK DET*		X	X		X	X		ON
N1:T4:M11-151		*PHOTO*	*VSMOKE*	*1:M11-151 FLR 1W EQUIP RM 1W-8902A*	X	X	X		X	X		ON
N1:T4:M11-152		*PHOTO*	*VSMOKE*	*1:M11-152 FLR1 IR RM 03 1W-8113A N*				X	X	X		ON
N1:T4:M11-153		*PHOTO*	*VSMOKE*	*1:M11-153 FLR1 IR RM 03 1W-8113A S*	X			X	X	X		ON
N1:T4:M11-154		*PHOTO*	*VSMOKE*	*1:M11-154 FLR 1W CONTROL RM 1W-8112A*		X		X	X	X		ON
N1:T4:M11-155		*RIAM*	*RELAY*	*1:M11-155 FLR 1W IR RM 03

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

Module	Qty	Description		Standby Current	Total Standby	Alarm Current	Total Alarm
Panel Equipment							
4100-7150	*1*	*MASTER CONTROLLER UPGRADE W/ 2X40 DISPLAY (4100 BA*		*0.1630*	*0.1630*	*0.2100*	*0.2100*
4100-0304	*1*	*STYLE 7 REMOTE UNIT INTERFACE*		*0.0850*	*0.0850*	*0.0850*	*0.0850*
4100-5005	*6*	*ZONE MODULE, 8 IDC, CLASS B*		*0.0750*	*0.6000*	*0.1950*	*1.5600*
4100-3003	*2*	*8 PT AUX RELAY MODULE 3 AMP*		*0.0250*	*0.0500*	*0.2800*	*0.5600*
4100-0110	*5*	*MAPNET II ADDRESSABLE MODULE*	*	*0.2700*	*1.3500*	*0.2900*	*1.4500*
4100-4321	*10*	*6 CIRCUIT CLASS B (STYLE Y)*		*0.0250*	*0.2500*	*0.0700*	*0.7000*
4100-6078	*1*	*NETWORK IF CARD, MODULAR*		*0.0460*	*0.0460*	*0.0460*	*0.0460*
4100-6056	*2*	*NETWORK MEDIA CARD WIRED*		*0.0550*	*0.1100*	*0.0550*	*0.1100*
4100-5101	*2*	*EXPANSION PWR SUPPLY (XPS) - 120VAC 60HZ*		*0.0500*	*0.1000*	*0.0500*	*0.1000*
4100-6038	*2*	*DUAL RS-232 IF CARD*		*0.1320*	*0.2640*	*0.1320*	*0.2640*
4100-6005	*1*	*MASTER CONTROLLER POWER SUPPLY*		*0.0000*	*0.0000*	*0.0000*	*0.0000*
4100-3110	*3*	*IDNet/2+2 MODULE - UP TO 250 DEVICES 4 ISOLATED LOOPS*	*	*0.0500*	*0.1500*	*0.1000*	*0.3000*
4100-0108	*2*	*EXPANSION 120V 8AMP POWER SUPPLY*		*0.0000*	*0.0000*	*0.0000*	*0.0000*
		Panel Totals			**3.1680**		**5.3850**
IDNet Addressable Devices (SLC)							
4090-9001	*7*	*IDNET SUPERVISED IAM*	*	*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	*22*	*TRUEALARM PHOTO SMOKE SENSOR*					
4 **4098-9733**	**8**	**TRUEALARM HEAT SENSOR**	*				
4098-9756	*2*	*TRUEALARM DUCT SMOKE SENSOR W/ RELAY OUTPUT*	*				
4098-9789	*1*	*TRUEALARM SENSOR BASE W/ LED OUTPUT*	*				
4 **4098-9792**	**29**	**TRUEALARM SENSOR BASE**	*				
4099-9006	*10*	*ADDRESSABLE DOUBLE ACTION MANUAL STATION, PUSH*	*				
Magnet Addressable Devices (SLC)							
2190-9155	*1*	*MAPNET CLASS B MONITOR ZAM*	*				
2190-9161	*6*	*MAPNET CLASS B SIGNAL ZAM*	*				
2190-9163	*45*	*MAPNET UNSUPERVISED CONTROL ZAM*	*				
2190-9172	*41*	*MAPNET SUPERVISED IAM*	*				
2190-9173	*3*	*MAPNET 2 POINT INPUT/OUTPUT ZAM*	*				
2099-9795	*22*	*MAPNET SINGLE ACTION PULL STATION*	*				
4098-9714	*330*	*TRUEALARM PHOTO SMOKE SENSOR*					
4098-9733	*32*	*TRUEALARM HEAT SENSOR*	*				
4098-9756	*36*	*TRUEALARM DUCT SMOKE SENSOR W/ RELAY OUTPUT*	*				
4098-9789	*324*	*TRUEALARM SENSOR BASE W/ LED OUTPUT*	*				
4098-9792	*38*	*TRUEALARM SENSOR BASE*	*				
Miscellaneous Peripheral Devices That Require (Additional) System Power							
4098-9843	*38*	*ENCAPSULATED RELAY PAM-SD*		*0.0000*	*0.0000*	*0.0150*	*0.5700*
4098-9756	*38*	*TRUEALARM DUCT SMOKE SENSOR W/ RELAY OUTPUT*		*0.0030*	*0.1140*	*0.0150*	*0.5700*
4603-9101	*11*	*SERIAL LCD ANNUNCIATOR*		*0.0650*	*0.7150*	*0.1400*	*1.5400*
2098-9808	*1*	*REMOTE ALARM INDICATOR*		*0.0010*	*0.0010*	*0.0000*	*0.0000*
Notification Appliances			**Setting**				
4009-9001	*2*	*FOUR CIRCUIT NAC EXTENDER, 120 VAC*		*0.0000*	*0.0000*	*0.0150*	*0.0300*
4903-9219	*10*	*HORN/STROBE, NON-SYNC, RED, WALL MTD*	*15*	*0.0000*	*0.0000*	*0.1330*	*1.3300*
4 **4903-9292**	**93**	**CH70-24MCW-FR, CHIME/STROBE, NON-SYNC, RED, WALL MTD**	**15**	**0.0000**	**0.0000**	**0.0700**	**6.5100**
4904-9137	*115*	*15CD VISIBLE ONLY RED*	*15*	*0.0000*	*0.0000*	*0.0900*	*10.3500*
4906-9101	*1*	*V/O MC NON-ADDRESS, RED, WALL*	*15*	*0.0000*	*0.0000*	*0.0600*	*0.0600*
4906-9101	*5*	*V/O MC NON-ADDRESS, RED, WALL*	*75*	*0.0000*	*0.0000*	*0.1860*	*0.9300*
CH70-24MCW-FR	*4*	*MULTI CD CHIME STROBE, WALL MNT, RED*	*15*	*0.0000*	*0.0000*	*0.0820*	*0.3280*
RSS-24MCW-FR	*1*	*MULTI CD STROBE, WALL MNT, RED*	*15*	*0.0000*	*0.0000*	*0.0600*	*0.0600*
		Peripheral Totals			**0.8300**		**22.2780**
		RUI Totals	**11**		**0.0385**		**0.0385**
		Address Totals	**589.5 Addresses**		**0.9572**		**0.9672**
		System Totals*:		**Standby**	**4.9937**	**Alarm**	**28.6687**

*** Device Address current draw included below (See Additional Current Draws):**

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

Battery Set #1 (Cabinet/Charger #1)	Standby Current	Standby Total	Alarm Current	Alarm Total
Select ALL Power Supplies on this battery set:				
PS-1		1.0930		8.9520
PS-2		1.2470		8.0200
PS-3		0.7010		8.4000
XPS-1		0.1570		0.4960
XPS-2		0.8000		1.7950
	Sub Total	**3.9980**		**27.6630**
Additional Current Draws:				
RUI Connected Peripheral Devices 11	x 0.0035	= 0.0385	x 0.0035	= 0.0385
MAPNET/IDNet Device Address Communication Current 590	x 0.001624	= 0.9572	x 0.001641	= 0.9672
	Sub Total	**4.9937**		**28.6687**
Spare addressable point capacity **20%** 118	x 0.001624	= 0.1916	x 0.001641	= 0.1936
	Total	**5.1852**		**28.8623**
Standby Time = 4 Hrs	x 5.1852	= 20.7410	Standby Ah	
Alarm Time = 5 Min	0.08333 x 28.8623	= 2.4052	Alarm Ah	
		23.1462		
Additional Spare Battery Capacity = **20%**	+	4.6292		
		27.7754		
Battery Discharge Factor = **20%**	+	5.5551		
Minimum Battery Required **2081-9296 50AH (2x)**		**33.3305**		
Battery Supplied **2081-9296 50AH (2x)**				

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

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

												4											
											PID	*4903-9219*	**4903-9292**	*4904-9137*	*CH70-24MCW-FR*	*RSS-24MCW-FR*	*4906-9101*	*4906-9101*	*4009-9001*				
											Setting	*15cd*	**15cd**	*15cd*	*15cd*	*15cd*	*15cd*	*15cd*					
											Device Type	*A/V*	**C/V**	*V/O*	*MC A/V*	*MC V/O*	*MC V/O*	*MC V/O*					
											Supv. Current	*0.0000*	**0.0000**	*0.0000*	*0.0000*	*0.0000*	*0.0000*	*0.0000*	*0.0000*				
											Alarm Current	*0.1330*	**0.0700**	*0.0900*	*0.0820*	*0.0600*	*0.0600*	*0.1860*	*0.0150*				
NOTIFICATION CIRCUIT DESCRIPTION	**Power Supply**	**Panel Circuit**	**Plan Ckt.**	**Dist. (D) Feet**	**Wire Gauge**	**Wire Res. / Ft. (R)**	**Total Alarm (A)**	**V. Drop (A*2D*R)**	**Volt @ End**	**% Volt Drop**	**Min Device Voltage**	**Max Distance**									**Circuit Capacity (Amps)**	**Minimum Voltage @ NAC Output Terminals**	**Spare Circuit / Branch Capacity**	**Device Quantity Per Circuit/ Branch**
1ST FLOOR EAST CHIMES/STROBES N1:SIG3	*PS-1*	*SIG3*	*1:SIG3*	*500*	*14ga*	*0.0028*	**0.450**	*1.270*	*18.230*	*6.51%*	*16vdc*	*1378 Ft.*			*5*						*3.A*	*19.5*	*63.7%*	*5*
RADIOLOGY/SURGERY HALLS N1:SIG4	*PS-1*	*SIG4*	*1:SIG4*	*500*	*14ga*	*0.0028*	**0.450**	*1.270*	*18.230*	*6.51%*	*16vdc*	*1378 Ft.*			*5*						*3.A*	*19.5*	*63.7%*	*5*
2ND FLOOR CHIMES/STROBES N1:SIG5	*PS-1*	*SIG5*	*1:SIG5*	*600*	*14ga*	*0.0028*	**0.450**	*1.524*	*17.976*	*7.82%*	*16vdc*	*1378 Ft.*			*5*						*3.A*	*19.5*	*56.5%*	*5*
3RD FLOOR CHIMES/STROBES N1:SIG6	*PS-1*	*SIG6*	*1:SIG6*	*700*	*14ga*	*0.0028*	**0.450**	*1.778*	*17.722*	*9.12%*	*16vdc*	*1378 Ft.*			*5*						*3.A*	*19.5*	*49.2%*	*5*
4TH FLOOR CHIMES/STROBES N1:SIG7	*PS-1*	*SIG7*	*1:SIG7*	*800*	*14ga*	*0.0028*	**0.450**	*2.032*	*17.468*	*10.42%*	*16vdc*	*1378 Ft.*			*5*						*3.A*	*19.5*	*41.9%*	*5*
5TH FLOOR CHIMES/STROBES N1:SIG8	*PS-1*	*SIG8*	*1:SIG8*	*900*	*14ga*	*0.0028*	**0.450**	*2.286*	*17.214*	*11.72%*	*16vdc*	*1378 Ft.*			*5*						*3.A*	*19.5*	*34.7%*	*5*
SURGERY CHIMES/STROBES N1:SIG9	*PS-1*	*SIG9*	*1:SIG9*	*500*	*14ga*	*0.0028*	**0.450**	*1.270*	*18.230*	*6.51%*	*16vdc*	*1378 Ft.*			*5*						*3.A*	*19.5*	*63.7%*	*5*
LAB HALL CHIMES/STROBES N1:SIG10	*PS-1*	*SIG10*	*1:SIG10*	*500*	*14ga*	*0.0028*	**0.450**	*1.270*	*18.230*	*6.51%*	*16vdc*	*1378 Ft.*			*5*						*3.A*	*19.5*	*63.7%*	*5*
CENT SPLY/MATERIALS MGMT N1:SIG11	*PS-1*	*SIG11*	*1:SIG11*	*500*	*14ga*	*0.0028*	**0.450**	*1.270*	*18.230*	*6.51%*	*16vdc*	*1378 Ft.*			*5*						*3.A*	*19.5*	*63.7%*	*5*
EMERGENCY ROOM STROBES N1:SIG12	*PS-1*	*SIG12*	*1:SIG12*	*500*	*14ga*	*0.0028*	**0.450**	*1.270*	*18.230*	*6.51%*	*16vdc*	*1378 Ft.*			*5*						*3.A*	*19.5*	*63.7%*	*5*
EMERGENCY RM HALL STROBES N1:SIG13	*PS-1*	*SIG13*	*1:SIG13*	*500*	*14ga*	*0.0028*	**0.450**	*1.270*	*18.230*	*6.51%*	*16vdc*	*1378 Ft.*			*5*						*3.A*	*19.5*	*63.7%*	*5*
1ST FLOOR CENTRAL STROBES N1:SIG14	*PS-1*	*SIG14*	*1:SIG14*	*500*	*14ga*	*0.0028*	**0.450**	*1.270*	*18.230*	*6.51%*	*16vdc*	*1378 Ft.*			*5*						*3.A*	*19.5*	*63.7%*	*5*
N1:SIG15 CENT SPLY/MATERIAL CHIME	*PS-1*	*SIG15*	*1:SIG15*	*500*	*14ga*	*0.0028*	**0.350**	*0.988*	*18.512*	*5.07%*	*16vdc*	*1772 Ft.*		*5*							*3.A*	*19.5*	*71.8%*	*5*
N1:SIG16 EMERGENCY ROOM CHIMES	*PS-1*	*SIG16*	*1:SIG16*	*500*	*14ga*	*0.0028*	**0.350**	*0.988*	*18.512*	*5.07%*	*16vdc*	*1772 Ft.*		*5*							*3.A*	*19.5*	*71.8%*	*5*
N1:SIG17 EMERGENCY RM HALL CHIMES	*PS-1*	*SIG17*	*1:SIG17*	*500*	*14ga*	*0.0028*	**0.350**	*0.988*	*18.512*	*5.07%*	*16vdc*	*1772 Ft.*		*5*							*3.A*	*19.5*	*71.8%*	*5*
N1:SIG18 1ST FLOOR CENTRAL CHIMES	*PS-2*	*SIG18*	*1:SIG18*	*500*	*14ga*	*0.0028*	**0.350**	*0.988*	*18.512*	*5.07%*	*16vdc*	*1772 Ft.*		*5*							*3.A*	*19.5*	*71.8%*	*5*
N1:SIG19 CHIMES CS-1	*PS-2*	*SIG19*	*1:SIG19*	*1000*	*14ga*	*0.0028*	**0.350**	*1.975*	*17.525*	*10.13%*	*16vdc*	*1772 Ft.*		*5*							*3.A*	*19.5*	*43.6%*	*5*
N1:SIG20 CHIMES CS-1, S5-5, S5-6	**PS-2**	**SIG20**	**1:SIG20**	**827**	**14ga**	**0.0028**	**0.340**	**1.587**	**17.913**	**8.14%**	**16vdc**	**1824 Ft.**		**1**							**3.A**	**19.5**	**54.7%**	**4**
N1:SIG21 STROBES S6-1	*PS-2*	*SIG21*	*1:SIG21*	*1000*	*14ga*	*0.0028*	**0.450**	*2.540*	*16.960*	*13.03%*	*16vdc*	*1378 Ft.*			*5*						*3.A*	*19.5*	*27.4%*	*5*
N1:SIG22 STROBES S6-2	*PS-2*	*SIG22*	*1:SIG22*	*100*	*14ga*	*0.0028*	**0.450**	*0.254*	*19.246*	*1.30%*	*16vdc*	*1378 Ft.*			*5*						*3.A*	*19.5*	*85.0%*	*5*
N1:SIG23 CHIMES C3,4-1	*PS-2*	*SIG23*	*1:SIG23*	*700*	*14ga*	*0.0028*	**0.372**	*1.470*	*18.030*	*7.54%*	*16vdc*	*1667 Ft.*							*2*		*3.A*	*19.5*	*58.0%*	*2*
N1:SIG24 STROBES S3-1	*PS-2*	*SIG24*	*1:SIG24*	*700*	*14ga*	*0.0028*	**0.360**	*1.422*	*18.078*	*7.29%*	*16vdc*	*1723 Ft.*			*4*						*3.A*	*19.5*	*59.4%*	*4*
N1:SIG25 STROBES S3-2	*PS-2*	*SIG25*	*1:SIG25*	*700*	*14ga*	*0.0028*	**0.760**	*3.003*	*16.497*	*15.40%*	*16vdc*	*816 Ft.*		*7*	*3*						*3.A*	*19.5*	*14.2%*	*10*
N1:SIG26 CHIME C2-1	*PS-2*	*SIG26*	*1:SIG26*	*600*	*14ga*	*0.0028*	**0.700**	*2.371*	*17.129*	*12.16%*	*16vdc*	*886 Ft.*		*10*							*3.A*	*19.5*	*32.3%*	*10*
N1:SIG27 SPARE	*PS-2*	*SIG27*	*1:SIG27*		*14ga*	*0.0028*	*0.000*	*0.000*	*19.500*	*0.00%*	*16vdc*	*0 Ft.*									*3.A*	*19.5*	*100.0%*	*0*
N1:SIG28 STROBES SP6-2	*PS-2*	*SIG28*	*1:SIG28*	*600*	*14ga*	*0.0028*	**0.450**	*1.524*	*17.976*	*7.82%*	*16vdc*	*1378 Ft.*			*5*						*3.A*	*19.5*	*56.5%*	*5*
N1:SIG29 4009 SP6-2,S2-4,1ST CENT ELEV#6	*PS-2*	*SIG29*	*1:SIG29*	*350*	*14ga*	*0.0028*	**0.015**	*0.030*	*19.470*	*0.15%*	*16vdc*	*41340 Ft.*								*1*	*3.A*	*19.5*	*99.2%*	*1*
N1:SIG30 STROBES 4009A SOUTH PHARMACY	*PS-2*	*SIG30*	*1:SIG30*	*350*	*14ga*	*0.0028*	**0.015**	*0.030*	*19.470*	*0.15%*	*16vdc*	*41340 Ft.*								*1*	*3.A*	*19.5*	*99.2%*	*1*
N1:SIG31 SPARE S5-2	*PS-2*	*SIG31*	*1:SIG31*		*14ga*	*0.0028*	*0.000*	*0.000*	*19.500*	*0.00%*	*16vdc*	*0 Ft.*									*3.A*	*19.5*	*100.0%*	*0*
N1:SIG32 ELECTRICAL 1E-4902B STROBE	*PS-2*	*SIG32*	*1:SIG32*	*350*	*14ga*	*0.0028*	**0.060**	*0.119*	*19.381*	*0.61%*	*16vdc*	*10335 Ft.*						*1*			*3.A*	*19.5*	*96.6%*	*1*
N1:SIG33 STROBE S6-3	*PS-2*	*SIG33*	*1:SIG33*	*1000*	*14ga*	*0.0028*	**0.180**	*1.016*	*18.484*	*5.21%*	*16vdc*	*3445 Ft.*			*2*						*3.A*	*19.5*	*71.0%*	*2*
N1:SIG34 STROBE S6-4	*PS-2*	*SIG34*	*1:SIG34*	*1000*	*14ga*	*0.0028*	**0.090**	*0.508*	*18.992*	*2.61%*	*16vdc*	*6890 Ft.*			*1*						*3.A*	*19.5*	*85.5%*	*1*
N1:SIG35 STROBE S2-3	*PS-3*	*SIG35*	*1:SIG35*	*600*	*14ga*	*0.0028*	**0.910**	*3.082*	*16.418*	*15.80%*	*16vdc*	*681 Ft.*		*4*	*7*						*3.A*	*19.5*	*11.9%*	*11*
N1:SIG36 STROBE S2-1	*PS-3*	*SIG36*	*1:SIG36*	*600*	*14ga*	*0.0028*	**0.690**	*2.337*	*17.163*	*11.98%*	*16vdc*	*899 Ft.*		*6*	*3*						*3.A*	*19.5*	*33.2%*	*9*
N1:SIG37 STROBE S2-2	*PS-3*	*SIG37*	*1:SIG37*	*533*	*14ga*	*0.0028*	**1.070**	*3.219*	*16.281*	*16.51%*	*16vdc*	*580 Ft.*		*5*	*8*						*3.A*	*19.5*	*8.0%*	*13*
N1:SIG38 SPARE	*PS-3*	*SIG38*	*1:SIG38*		*14ga*	*0.0028*	*0.000*	*0.000*	*19.500*	*0.00%*	*16vdc*	*0 Ft.*									*3.A*	*19.5*	*100.0%*	*0*
N1:SIG39 STROBE OUTSIDE SIAMESE	*PS-3*	*SIG39*	*1:SIG39*	*1000*	*14ga*	*0.0028*	**0.060**	*0.339*	*19.161*	*1.74%*	*16vdc*	*10335 Ft.*					*1*				*3.A*	*19.5*	*90.3%*	*1*
N1:SIG40 HORN OUTSIDE SIAMESE	*PS-3*	*SIG40*	*1:SIG40*	*1000*	*14ga*	*0.0028*	**0.254**	*1.434*	*18.066*	*7.35%*	*16vdc*	*2441 Ft.*			*1*	*2*					*3.A*	*19.5*	*59.0%*	*3*
N1:SIG41 SPARE	*PS-3*	*SIG41*	*1:SIG41*		*14ga*	*0.0028*	*0.000*	*0.000*	*19.500*	*0.00%*	*16vdc*	*0 Ft.*									*3.A*	*19.5*	*100.0%*	*0*
N1:SIG42 CHIME 1ST FLOOR CENTRAL	*PS-3*	*SIG42*	*1:SIG42*	*500*	*14ga*	*0.0028*	**0.360**	*1.016*	*18.484*	*5.21%*	*16vdc*	*1723 Ft.*			*4*						*3.A*	*19.5*	*71.0%*	*4*
N1:SIG43 BASEMENT EVS DEPT STROBE CKT	*PS-3*	*SIG43*	*1:SIG43*	*600*	*14ga*	*0.0028*	**0.090**	*0.305*	*19.195*	*1.56%*	*16vdc*	*6890 Ft.*			*1*						*3.A*	*19.5*	*91.3%*	*1*
N1:SIG44 SPARE	*PS-3*	*SIG44*	*1:SIG44*		*14ga*	*0.0028*	*0.000*	*0.000*	*19.500*	*0.00%*	*16vdc*	*0 Ft.*									*3.A*	*19.5*	*100.0%*	*0*
N1:SIG45 BASEMENT	*PS-3*	*SIG45*	*1:SIG45*	*600*	*14ga*	*0.0028*	**0.712**	*2.411*	*17.089*	*12.37%*	*16vdc*	*871 Ft.*		*9*			*1*				*3.A*	*19.5*	*31.1%*	*10*
N1:SIG46 STROBES MATERIAL MANAGEMENT	*PS-3*	*SIG46*	*1:SIG46*	*600*	*14ga*	*0.0028*	**0.372**	*1.260*	*18.240*	*6.46%*	*16vdc*	*1667 Ft.*							*2*		*3.A*	*19.5*	*64.0%*	*2*
N1:SIG47 BASEMENT CORRIDOR	*PS-3*	*SIG47*	*1:SIG47*	*488*	*14ga*	*0.0028*	**0.982**	*2.705*	*16.795*	*13.87%*	*16vdc*	*631 Ft.*		*9*	*3*	*1*					*3.A*	*19.5*	*22.7%*	*13*
N1:SIG48 SPARE	*PS-3*	*SIG48*	*1:SIG48*		*14ga*	*0.0028*	*0.000*	*0.000*	*19.500*	*0.00%*	*16vdc*	*0 Ft.*									*3.A*	*19.5*	*100.0%*	*0*
N1:SIG49 S9-1 BLOOD W & SURG DOC OFFICES	*PS-3*	*SIG49*	*1:SIG49*	*900*	*14ga*	*0.0028*	**0.266**	*1.351*	*18.149*	*6.93%*	*16vdc*	*2331 Ft.*	*2*								*3.A*	*19.5*	*61.4%*	*2*
N1:SIG50 S9-2 BLOOD LAB EAST	*PS-3*	*SIG50*	*1:SIG50*	*900*	*14ga*	*0.0028*	**0.266**	*1.351*	*18.149*	*6.93%*	*16vdc*	*2331 Ft.*	*2*								*3.A*	*19.5*	*61.4%*	*2*
N1:SIG51 ADMITTING SOUTH	*PS-3*	*SIG51*	*1:SIG51*	*1000*	*14ga*	*0.0028*	**0.266**	*1.501*	*17.999*	*7.70%*	*16vdc*	*2331 Ft.*	*2*								*3.A*	*19.5*	*57.1%*	*2*
N1:SIG52 ADMITTING NORTH	*PS-3*	*SIG52*	*1:SIG52*	*1000*	*14ga*	*0.0028*	**0.133**	*0.751*	*18.749*	*3.85%*	*16vdc*	*4662 Ft.*	*1*								*3.A*	*19.5*	*78.5%*	*1*
N1:SIG53 ADMITTING CHIME	*PS-3*	*SIG53*	*1:SIG53*	*1000*	*14ga*	*0.0028*	**0.133**	*0.751*	*18.749*	*3.85%*	*16vdc*	*4662 Ft.*	*1*								*3.A*	*19.5*	*78.5%*	*1*
N1:SIG54 SPARE	*PS-3*	*SIG54*	*1:SIG54*		*14ga*	*0.0028*	*0.000*	*0.000*	*19.500*	*0.00%*	*16vdc*	*0 Ft.*									*3.A*	*19.5*	*100.0%*	*0*
N1:SIG55 C7-9-1 BLOOD LAB SURGERY PREP	*PS-3*	*SIG55*	*1:SIG55*	*1000*	*14ga*	*0.0028*	**0.133**	*0.751*	*18.749*	*3.85%*	*16vdc*	*4662 Ft.*	*1*								*3.A*	*19.5*	*78.5%*	*1*
N1:SIG56 SPARE	*PS-3*	*SIG56*	*1:SIG56*		*14ga*	*0.0028*	*0.000*	*0.000*	*19.500*	*0.00%*	*16vdc*	*0 Ft.*									*3.A*	*19.5*	*100.0%*	*0*
N1:SIG57 S1,3 KITCHEN AND SLEEP ROOMS	*PS-3*	*SIG57*	*1:SIG57*	*900*	*14ga*	*0.0028*	**0.133**	*0.676*	*18.824*	*3.46%*	*16vdc*	*4662 Ft.*	*1*								*3.A*	*19.5*	*80.7%*	*1*
N1:SIG58 S1,4 GIFT SHOP & ELEVATOR AREA	*PS-3*	*SIG58*	*1:SIG58*	*900*	*14ga*	*0.0028*	**0.350**	*1.778*	*17.722*	*9.12%*	*16vdc*	*1772 Ft.*		*5*							*3.A*	*19.5*	*49.2%*	*5*
N1:SIG59 S8,3 SURGERY PREP AND HOLDING	*PS-3*	*SIG59*	*1:SIG59*	*900*	*14ga*	*0.0028*	**0.350**	*1.778*	*17.722*	*9.12%*	*16vdc*	*1772 Ft.*		*5*							*3.A*	*19.5*	*49.2%*	*5*
N1:SIG60 S7,1 SURGERY PREP	*PS-3*	*SIG60*	*1:SIG60*	*900*	*14ga*	*0.0028*	**0.350**	*1.778*	*17.722*	*9.12%*	*16vdc*	*1772 Ft.*		*5*							*3.A*	*19.5*	*49.2%*	*5*
N1:SIG61 S7,2 SURGERY PREP	*PS-3*	*SIG61*	*1:SIG61*	*900*	*14ga*	*0.0028*	**0.140**	*0.711*	*18.789*	*3.65%*	*16vdc*	*4429 Ft.*		*2*							*3.A*	*19.5*	*79.7%*	*2*
N1:SIG62 SPARE	*PS-3*	*SIG62*	*1:SIG62*		*14ga*	*0.0028*	*0.000*	*0.000*	*19.500*	*0.00%*	*16vdc*	*0 Ft.*									*3.A*	*19.5*	*100.0%*	*0*
N1:SIG101 1ST FLR ATS AREA STROBE 67-1	*XPS-1*	*SIG63*	*1:SIG63*	*1000*	*14ga*	*0.0028*	**0.186**	*1.050*	*18.450*	*5.38%*	*16vdc*	*3334 Ft.*							*1*		*3.A*	*19.5*	*70.0%*	*1*
N1:SIG102 SPARE	*XPS-1*	*SIG64*	*1:SIG64*		*14ga*	*0.0028*	*0.000*	*0.000*	*19.500*	*0.00%*	*16vdc*	*0 Ft.*									*3.A*	*19.5*	*100.0%*	*0*
N1:SIG103 SPARE	*XPS-1*	*SIG65*	*1:SIG65*		*14ga*	*0.0028*	*0.000*	*0.000*	*19.500*	*0.00%*	*16vdc*	*0 Ft.*									*3.A*	*19.5*	*100.0%*	*0*
N1:SIG107 SPARE	*XPS-2*	*SIG66*	*1:SIG66*		*14ga*	*0.0028*	*0.000*	*0.000*	*19.500*	*0.00%*	*16vdc*	*0 Ft.*									*3.A*	*19.5*	*100.0%*	*0*
N1:SIG108 SPARE	*XPS-2*	*SIG67*	*1:SIG67*		*14ga*	*0.0028*	*0.000*	*0.000*	*19.500*	*0.00%*	*16vdc*	*0 Ft.*									*3.A*	*19.5*	*100.0%*	*0*
N1:SIG109 SPARE	*XPS-2*	*SIG68*	*1:SIG68*		*14ga*	*0.0028*	*0.000*	*0.000*	*19.500*	*0.00%*	*16vdc*	*0 Ft.*									*3.A*	*19.5*	*100.0%*	*0*

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.

KEYNOTES:

1. DEVICE REMOVED FOR CONSTRUCTION.
2. DEVICE IS INTERIM FOR CONSTRUCTION. TO BE REMOVED, REPLACED, OR RELOCATED DURING BUILDOUT. DEVICE DESCRIPTOR CHANGED.
3. DEVICE DESCRIPTOR CHANGE ONLY.
4. DEVICE WAS INTERIM FOR CONSTRUCTION AND IS NOW REMOVED. DEVICE QUANTITY CHANGED.
5. EXISTING DEVICE REINSTALLED. RE-USE EXISTING HEAD, BASE, ADDRESS, LOCATION, AND WIRING.
6. DEVICE REMOVED TO BE RE-USED ON ANOTHER CIRCUIT.

City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: W. Polk
Date: Oct 13, 2022
2021 INTERNATIONAL CODES & 2020 NEC

Johnson Controls
DISTRICT 1-418
6303 SOUTH JOSTON AVE
AURORA, CO 80017
SERVICE: 303-355-5000
PHONE: 303-355-5000
FAX:

NICET CERTIFICATION INFORMATION

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

September 21, 2022

THE MEDICAL CENTER OF AURORA - SOUTH TOWER EXPANSION

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

Revisions shown with Δ symbol

ISSUE LOG MARK	DATE	CAD	CHK	DESCRIPTION

FOR PERMIT

DRAWN BY:	CCD
CHECKED BY:	CBR
ISSUE DATE:	7/26/22
JOB #:	
PROJECT #:	419-650189804

JOHNSON CONTROLS © 2022

SYSTEM:
FIRE ALARM SYSTEM

SHEET:
NODE-1 FACP BUILDOUT CALCS AND SCHEDULES

FA-606

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FILE PATH: C:\Users\jtaucher\Johnson Controls\Project Electronics - Medical Center of Aurora (501 S Potomac - Aurora South\South Tower - Node 1\33-CR Expansion - 2022 - 650189804\FireFA-601.dwg
LAST SAVED BY: JRAUCHC
LAST PRINTED: 9/21/2022 1:56:04 PM
30" x 42" Arch E1 Size

MAPNET CHANNEL 1:M1

	Address	Device Type	Point Type	Location Description	1	2	3	4	5	6	7	8		9
	1:M1-1	ADRPUL	PULL	1:M1-1 FLR 1 W - EXIT BY X-RAY WAITING	X								ON	
	1:M1-2	ADRPUL	PULL	1:M1-2 FLR 1W - EXIT HALL BY NUCLEAR MED		X							ON	
	1:M1-3	ADRPUL	PULL	1:M1-3 FLR 1W - EXIT BY INTERVENTIONAL	X	X							ON	
	1:M1-4	ADRPUL	PULL	1:M1-4 FLR 1 CENTRAL TWR EXIT BY MRI			X						ON	
	1:M1-5	RPHOTO	SDUCT	1:M1-5 X-RAY ROOF - AHU-97-9 DUCT D.	X		X						ON	
	1:M1-6	RPHOTO	SDUCT	1:M1-6 X-RAY ROOF - AHU-97-9 DUCT D.		X	X						ON	
	1:M1-7	RPHOTO	SDUCT	1:M1-7 X-RAY ROOF - AHU-97-14 DUCT D.	X	X	X						ON	
	1:M1-8	RPHOTO	SDUCT	1:M1-8 X-RAY ROOF - AHU-97-14 DUCT D.				X					ON	
	1:M1-9	RPHOTO	SDUCT	1:M1-9 X-RAY ROOF - AHU-97-15 DUCT D.	X			X					ON	
	1:M1-10	RPHOTO	SDUCT	1:M1-10 X-RAY ROOF - AHU-15 DUCT DET.		X		X					ON	
	1:M1-11	GENIAM	SO	1:M1-11 FLR 1 CENTRAL TWR X-RAY HALL	X	X		X					ON	
	1:M1-12	RZAM	RELAY	1:M1-12 X-RAY ROOF - AHU-97-9 DOWN			X	X					ON	
	1:M1-13	RZAM	RELAY	1:M1-13 X-RAY ROOF AHU 97-14 SHUTDOWN	X		X	X					ON	
	1:M1-14	RZAM	RELAY	1:M1-14 X-RAY ROOF AHU 97-15 SHUTDOWN		X	X	X					ON	
	1:M1-15	PHOTO	VSMOKE	1:M1-15 FLR 1W - HALL BY X-RAY WAITING	X	X	X	X					ON	
	1:M1-16	PHOTO	VSMOKE	1:M1-16 FLR 1W - X-RAY - PET SCAN					X				ON	
	1:M1-17	PHOTO	VSMOKE	1:M1-17 FLR 1W - X-RAY - PET SCAN	X				X				ON	
	1:M1-18	PHOTO	VSMOKE	1:M1-18 FLR 1W - HALL BY X-RAY WAITING		X			X				ON	
	1:M1-19	PHOTO	VSMOKE	1:M1-19 FLR 1W - HALL BY X-RAY WAITING	X	X			X				ON	
	1:M1-20	PHOTO	VSMOKE	1:M1-20 FLR 1W - X-RAY WAITING RM			X		X				ON	
	1:M1-21	PHOTO	VSMOKE	1:M1-21 FLR 1W - HALL BY X-RAY WAITING	X		X		X				ON	
	1:M1-22	PHOTO	VSMOKE	1:M1-22 FLR 1W - HALL BY X-RAY WAITING		X	X		X				ON	
	1:M1-23	PHOTO	VSMOKE	1:M1-23 FLR 1W - BY PATHOLOGY STAIRS	X	X	X		X				ON	
	1:M1-24	PHOTO	VSMOKE	1:M1-24 FLR 1W - HALL BY PATHOLOGY				X	X				ON	
	1:M1-25	PHOTO	VSMOKE	1:M1-25 FLR 1W - HALL BY PATHOLOGY	X			X	X				ON	
	1:M1-26			SPARE		X		X	X				ON	
	1:M1-27			SPARE	X	X		X	X				ON	
	1:M1-28			SPARE			X	X	X				ON	
	1:M1-29			SPARE	X		X	X	X				ON	
	1:M1-30			SPARE		X	X	X	X				ON	
	1:M1-31			SPARE	X	X	X	X	X				ON	
	1:M1-32			SPARE						X			ON	
	1:M1-33			SPARE	X					X			ON	
	1:M1-34			SPARE		X				X			ON	
	1:M1-35			SPARE	X	X				X			ON	
	1:M1-36	PHOTO	VSMOKE	1:M1-36 FLR 1W - PATHOLOGY LAB			X			X			ON	
	1:M1-37	PHOTO	VSMOKE	1:M1-37 FLR 1W - ULTRASOUND SUITE	X		X			X			ON	
	1:M1-38	PHOTO	VSMOKE	1:M1-38 FLR 1W - ULTRASOUND SUITE		X	X			X			ON	
	1:M1-39	PHOTO	VSMOKE	1:M1-39 FLR 1W - HALL BY X-RAY WAITING	X	X	X			X			ON	
	1:M1-40	PHOTO	VSMOKE	1:M1-40 FLR 1W - HALL BY X-RAY OFFICES				X		X			ON	
	1:M1-41	PHOTO	VSMOKE	1:M1-41 FLR 1W - X-RAY WAITNG RM	X			X		X			ON	
	1:M1-42	PHOTO	VSMOKE	1:M1-42 FLR 1W - X-RAY OFFICE SUITE		X		X		X			ON	
	1:M1-43	PHOTO	VSMOKE	1:M1-43 FLR 1W - X-RAY OFFICE SUITE	X	X		X		X			ON	
	1:M1-44	PHOTO	VSMOKE	1:M1-44 FLR 1W - X-RAY OFFICE SUITE			X	X		X			ON	
	1:M1-45	PHOTO	VSMOKE	1:M1-45 FLR 1W - HALL BY X-RAY OFFICES	X		X	X		X			ON	
	1:M1-46	PHOTO	VSMOKE	1:M1-46 FLR 1W - HALL BY X-RAY OFFICES		X	X	X		X			ON	
	1:M1-47	PHOTO	VSMOKE	1:M1-47 FLR 1W - HALL BY NUCLEAR MED	X	X	X	X		X			ON	
	1:M1-48	PHOTO	VSMOKE	1:M1-48 FLR 1W - HALL BY NUCLEAR MED					X	X			ON	
	1:M1-49	PHOTO	VSMOKE	1:M1-49 FLR 1W - HALL BY NUCLEAR MED	X				X	X			ON	
	1:M1-50	PHOTO	VSMOKE	1:M1-50 FLR 1W - NUCLEAR MEDICINE		X			X	X			ON	
	1:M1-51	PHOTO	VSMOKE	1:M1-51 FLR 1W - NUCLEAR MEDICINE	X	X			X	X			ON	
	1:M1-52	PHOTO	VSMOKE	1:M1-52 FLR 1W - NUCLEAR MED HOT LAB			X		X	X			ON	
	1:M1-53	PHOTO	VSMOKE	1:M1-53 FLR 1W - HALL BY NUCLEAR MED	X		X		X	X			ON	
	1:M1-54	PHOTO	VSMOKE	1:M1-54 FLR 1W - EXIT HALL BY X-RAY 4		X	X		X	X			ON	
	1:M1-55	PHOTO	VSMOKE	1:M1-55 FLR 1W - EXIT HALL BY X-RAY 3	X	X	X		X	X			ON	
	1:M1-56	PHOTO	VSMOKE	1:M1-56 FLR 1W - INTER-HALL BY X-RAY 3				X	X	X			ON	
	1:M1-57	PHOTO	VSMOKE	1:M1-57 FLR 1W - INTER-HALL BY X-RAY 3	X			X	X	X			ON	
	1:M1-58	PHOTO	VSMOKE	1:M1-58 FLR 1W - INTER-HALL BY X-RAY 3		X		X	X	X			ON	
	1:M1-59	PHOTO	VSMOKE	1:M1-59 FLR 1W - INTER-HALL BY X-RAY 4	X	X		X	X	X			ON	
	1:M1-60	PHOTO	VSMOKE	1:M1-60 FLR 1W - HALL BY CAT SCAN				X	X	X			ON	
	1:M1-61	PHOTO	VSMOKE	1:M1-61 FLR 1W - HALL BY CAT SCAN	X			X	X	X			ON	
	1:M1-62	PHOTO	VSMOKE	1:M1-62 FLR 1W - HALL BY CAT SCAN			X	X	X	X			ON	
	1:M1-63			SPARE	X	X	X	X	X	X			ON	
	1:M1-64	PHOTO	VSMOKE	1:M1-64 FLR 1W - HALL BY CAT SCAN							X		ON	
	1:M1-65			SPARE	X							X	ON	
	1:M1-66			SPARE		X						X	ON	
	1:M1-67			SPARE	X	X						X	ON	
	1:M1-68			SPARE			X					X	ON	
	1:M1-69	PHOTO	VSMOKE	1:M1-69 FLR 1W - HALL BY X-RAY LOUNGE	X		X					X	ON	
	1:M1-70	PHOTO	VSMOKE	1:M1-70 FLR 1W - HALL BY INTERVENTIONAL		X	X					X	ON	
	1:M1-71	ADRPUL	PULL	1:M1-71 FL 1 CENTRL TWR MRI NRS STATION	X	X	X					X	ON	
	1:M1-72	RZAM	RELAY	1:M1-72 FLTW ISF RM M - SE HALL ACCTL ML				X				X	ON	
	1:M1-73	RZAM	RELAY	1:M1-73 1ST FL ROLL UP DOOR	X			X				X	ON	
	1:M1-74	PHOTO	VSMOKE	1:M1-74 FLR 1W - HALL BY INTERVENTIONAL		X		X				X	ON	
	1:M1-75	PHOTO	VSMOKE	1:M1-75 FLR 1W - INTERVENTIONAL X-RAY	X	X		X				X	ON	
	1:M1-76	PHOTO	VSMOKE	1:M1-76 FLR 1W - HALL BY INTERVENTIONAL			X	X				X	ON	
	1:M1-77	PHOTO	VSMOKE	1:M1-77 FLR 1W - HALL BY INTERVENTIONAL	X		X	X				X	ON	
	1:M1-78			SPARE		X	X	X				X	ON	
	1:M1-79			SPARE	X	X	X	X				X	ON	
	1:M1-80	PHOTO	VSMOKE	1:M1-80 FLR 1W - INTERVENTIONAL X-RAY					X			X	ON	
	1:M1-81	PHOTO	VSMOKE	1:M1-81 FLR 1W - INTERVENTIONAL X-RAY	X				X	X			ON	
	1:M1-82	PHOTO	VSMOKE	1:M1-82 FLR 1W - INTERVENTIONAL X-RAY		X			X	X			ON	
4	1:M1-83			SPARE	X	X			X	X			ON	
	1:M1-84			SPARE			X		X	X			ON	
	1:M1-85			SPARE	X		X		X	X			ON	
	1:M1-86			SPARE		X	X		X	X			ON	
	1:M1-87			SPARE	X	X	X		X	X			ON	
	1:M1-88			SPARE				X	X	X			ON	
	1:M1-89	PHOTO	VSMOKE	1:M1-89 FLR 1W - HALL BY MRI	X			X	X	X			ON	
4	1:M1-90			SPARE		X		X	X	X			ON	
	1:M1-91	PHOTO	VSMOKE	1:M1-91 FLR 1W - X-RAY - PET SCAN	X	X		X	X	X			ON	
	1:M1-92			SPARE			X	X	X	X			ON	
	1:M1-93	GENIAM	SO	1:M1-93 1ST FL PHARMACY SUPPLY TAMPER	X		X	X	X	X			ON	
	1:M1-94	GENIAM	WATER	1:M1-94 FLR 1W - BLOOD BANK FLOW		X	X	X	X	X			ON	
	1:M1-95	MBZAM	HEAT	1:M1-95 FLR 1W - MRI SCANNER ROOM	X	X	X	X	X	X			ON	
	1:M1-96	PHOTO	VSMOKE	1:M1-96 FLR 1W - MRI CONTROL RM						X	X		ON	
	1:M1-97	PHOTO	VSMOKE	1:M1-97 FLR 1W - MRI SUITE	X					X	X		ON	
	1:M1-98	PHOTO	VSMOKE	1:M1-98 FLR 1W - MRI EQUIPMENT RM		X				X	X		ON	
	1:M1-99	PHOTO	VSMOKE	1:M1-99 FLR 1W - INTERVENTIONAL X-RAY	X	X				X	X		ON	
	1:M1-100	PHOTO	VSMOKE	1:M1-100 FLR 1W - INTERVENTIONAL BAY 2			X			X	X		ON	
	1:M1-101	PHOTO	VSMOKE	1:M1-101 FLR 1W - INTERVENTIONAL BAY 1	X		X			X	X		ON	
	1:M1-102	PHOTO	VSMOKE	1:M1-102 FLR 1W - INTERVENTIONAL N.STAT.		X	X			X	X		ON	
	1:M1-103			SPARE	X	X	X			X	X		ON	
	1:M1-104			SPARE				X		X	X		ON	
	1:M1-105			SPARE	X			X		X	X		ON	
	1:M1-106	PHOTO	VSMOKE	1:M1-106 FLR 1W - ELECTRIC RM BY LAB		X		X		X	X		ON	
	1:M1-107	PHOTO	VSMOKE	1:M1-107 FLR 1 W - OR STORAGE	X	X		X		X	X		ON	
	1:M1-108			SPARE				X	X	X	X		ON	
	1:M1-109			SPARE	X			X	X	X	X		ON	
	1:M1-110			SPARE		X	X	X		X	X		ON	
	1:M1-111			SPARE	X	X	X	X		X	X		ON	
	1:M1-112			SPARE					X	X	X		ON	
	1:M1-113			SPARE	X				X	X	X		ON	
	1:M1-114			SPARE		X			X	X	X		ON	
	1:M1-115	PHOTO	VSMOKE	1:M1-115 FLR 1 RADI .03 CHANGING AREA	X	X			X	X	X		ON	
	1:M1-116			SPARE			X		X	X	X		ON	
	1:M1-117			SPARE	X		X		X	X	X		ON	
	1:M1-118			SPARE		X	X		X	X	X		ON	
	1:M1-119			SPARE	X	X	X		X	X	X		ON	
	1:M1-120			SPARE				X	X	X	X		ON	
	1:M1-121			SPARE	X			X	X	X	X		ON	
	1:M1-122			SPARE		X		X	X	X	X		ON	
	1:M1-123			SPARE	X	X		X	X	X	X		ON	
	1:M1-124			SPARE			X	X	X	X	X		ON	
	1:M1-125			SPARE	X		X	X	X	X	X		ON	
	1:M1-126			SPARE		X	X	X	X	X	X		ON	
	1:M1-127			SPARE	X	X	X	X	X	X	X		ON	

MAPNET CHANNEL 1:M3

	Address	Device Type	Point Type	Location Description	1	2	3	4	5	6	7	8		9
	1:M3-1	ADRPUL	PULL	1:M3-1 FLR 1E - EXIT BY PHARMACY	X								ON	
	1:M3-2	ADRPUL	PULL	1:M3-2 FLR 1E - E.D. DECK ELEC. RM		X							ON	
	1:M3-3			SPARE	X	X							ON	
	1:M3-4			SPARE			X						ON	
	1:M3-5	ADRPUL	PULL	1:M3-5 FLR 1E - E.D. WAITING RM	X		X						ON	
	1:M3-6	ADRPUL	PULL	1:M3-6 FLR 1E - EXIT BY E.D. WAITING RM		X	X						ON	
	1:M3-7			SPARE	X	X	X						ON	
	1:M3-8	RZAM	RELAY	1:M3-8 1ST FL ELEVATOR 85 WON DOOR				X					ON	
	1:M3-9	PHOTO	VSMOKE	1:M3-9 FLR 1E - E.D. SUTURE D/C	X			X					ON	
	1:M3-10	RZAM	RRELAY	1:M3-10 1ST FL CONTROL FOR AUTO DOORS		X		X					ON	
	1:M3-11	GENIAM	SO	1:M3-11 FLR 1E-ER GLYCOL LOOP IN CEILING	X	X		X					ON	
	1:M3-12	PHOTO	VSMOKE	1:M3-12 FLR 1E - E.D. ORTHOD/C			X	X					ON	
	1:M3-13	GENIAM	SO	1:M3-13 BSMT ELEV 5 SHAFT TAMPER SWITCH	X		X	X					ON	
4	1:M3-14			SPARE		X	X	X					ON	
	1:M3-15	PHOTO	VSMOKE	1:M3-15 FLR 1W - HALL BY E.D.	X	X	X	X					ON	
	1:M3-16			SPARE					X				ON	
	1:M3-17	PHOTO	VSMOKE	1:M3-17 FLR 1E - WAITING RESULTS	X				X				ON	
	1:M3-18	PHOTO	VSMOKE	1:M3-18 FLR 1W - HALL BY LAB		X			X				ON	
	1:M3-19	PHOTO	VSMOKE	1:M3-19 FLR 1W - HALL BY PHARMACY	X	X			X				ON	
	1:M3-20	PHOTO	VSMOKE	1:M3-20 FLR 1W - HALL BY PHARMACY			X		X				ON	
	1:M3-21	PHOTO	VSMOKE	1:M3-21 FLR 1W - HALL BY PHARMACY	X		X		X				ON	
	1:M3-22			SPARE		X	X		X				ON	
	1:M3-23			SPARE	X	X	X		X				ON	
	1:M3-24	PHOTO	VSMOKE	1:M3-19 FLR 1W - HALL BY PHARMACY				X	X				ON	
	1:M3-25	PHOTO	VSMOKE	1:M3-25 FLR 1E - HALL BY PHARMACY	X			X	X				ON	
	1:M3-26	PHOTO	VSMOKE	1:M3-26 FLR 1E - EXIT HALL BY PHARMACY		X		X	X				ON	
	1:M3-27	PHOTO	VSMOKE	1:M3-27 FLR 1E - EXIT HALL BY PHARMACY	X	X		X	X				ON	
	1:M3-28	PHOTO	VSMOKE	1:M3-28 FLR 1E - EXIT HALL BY PHARMACY			X	X	X				ON	
	1:M3-29	PHOTO	VSMOKE	1:M3-29 FLR 1E - EXIT HALL BY PHARMACY	X		X	X	X				ON	
	1:M3-30	PHOTO	VSMOKE	1:M3-30 FLR 1E - E.D. - WEST ENTRANCE		X	X	X	X				ON	
	1:M3-31	PHOTO	VSMOKE	1:M3-31 FLR 1E - E.D. - BY EXAM RM 6	X	X	X	X	X				ON	
	1:M3-32	PHOTO	VSMOKE	1:M3-32 FLR 1E - E.D. - O/S FAM CON 5310						X			ON	
	1:M3-33	PHOTO	VSMOKE	1:M3-33 FLR 1E - E.D. - BY EXAM RM7	X					X			ON	
	1:M3-34	PHOTO	VSMOKE	1:M3-34 FLR 1E - E.D. BY. NURSE STATION		X				X			ON	
	1:M3-35	PHOTO	VSMOKE	1:M3-35 FLR 1E - E.D. BY TRAUMA 1-5324	X	X				X			ON	
	1:M3-36			SPARE			X			X			ON	
	1:M3-37	PHOTO	VSMOKE	1:M3-37 FLR 1E - E.D. HALL BY RM 20	X		X			X			ON	
	1:M3-38	PHOTO	VSMOKE	1:M3-38 FLR 1E - E.D. HALL BY RM 15		X	X			X			ON	
	1:M3-39	PHOTO	VSMOKE	1:M3-39 FLR 1E - E.D. HALL BY RM 17	X	X	X			X			ON	
	1:M3-40	PHOTO	VSMOKE	1:M3-40 FLR 1E - E.D. HALL BY RM 19				X		X			ON	
	1:M3-41	PHOTO	VSMOKE	1:M3-41 FLR 1E - E.D. HALL BY RM 32	X			X		X			ON	
	1:M3-42	PHOTO	VSMOKE	1:M3-42 FLR 1E - E.D. HALL BY RM 28		X		X		X			ON	
	1:M3-43	PHOTO	VSMOKE	1:M3-43 FLR 1E - E.D. HALL BY RM 24	X	X		X		X			ON	
	1:M3-44	PHOTO	VSMOKE	1:M3-44 FLR 1E - E.D. HALL BY RM 25			X	X		X			ON	
	1:M3-45	PHOTO	VSMOKE	1:M3-45 FLR 1E - E.D. HALL BY RM 25	X		X	X		X			ON	
	1:M3-46	PHOTO	VSMOKE	1:M3-46 FLR 1E - E.D. ELEC RM 1E-5902A		X	X	X		X			ON	
	1:M3-47	ADRPUL	PULL	1:M3-47 FLR 1E - E.D. EAST ENTRY	X	X	X	X		X			ON	
	1:M3-48	PHOTO	VSMOKE	1:M3-48 FLR 1E - E.D. BY NURSE STATION					X	X			ON	
	1:M3-49	PHOTO	VSMOKE	1:M3-49 FLR 1E - E.D. BY EXAM RM 10	X				X	X			ON	
	1:M3-50	PHOTO	VSMOKE	1:M3-50 FLR 1E - E.D. BY ALCOVE 5329		X			X	X			ON	
	1:M3-51	PHOTO	VSMOKE	1:M3-51 FLR 1E - E.D. BY TRAUMA 3-5321	X	X			X	X			ON	
	1:M3-52	PHOTO	VSMOKE	1:M3-52 FLR 1E - E.D. BY EXAM RM 11			X		X	X			ON	
	1:M3-53	PHOTO	VSMOKE	1:M3-53 FLR 1E - E.D. HALL BY RM 43	X		X		X	X			ON	
	1:M3-54	PHOTO	VSMOKE	1:M3-54 FLR 1E - E.D. HALL BY RM 43		X	X		X	X			ON	
	1:M3-55	PHOTO	VSMOKE	1:M3-55 FLR 1E - E.D. HALL BY RM 26	X	X	X		X	X			ON	
	1:M3-56	PHOTO	VSMOKE	1:M3-56 FLR 1E - E.D. HALL BY RM 26				X	X	X			ON	
	1:M3-57	PHOTO	VSMOKE	1:M3-57 FLR 1E - E.D. HALL BY RM 26	X			X	X	X			ON	
	1:M3-58	PHOTO	VSMOKE	1:M3-58 FLR 1E - E.D. - BY TRIAGE DESK		X		X	X	X			ON	
	1:M3-59	PHOTO	VSMOKE	1:M3-59 FLR 1E - E.D. - BY TRIAGE DESK	X	X		X	X	X			ON	
	1:M3-60	PHOTO	VSMOKE	1:M3-60 FLR 1E - E.D. - BY TRIAGE DESK			X	X	X	X			ON	
	1:M3-61	PHOTO	VSMOKE	1:M3-61 FLR 1E - E.D. WAITING RM	X		X	X	X	X			ON	
	1:M3-62	PHOTO	VSMOKE	1:M3-62 FLR 1E - E.D. WAITING RM		X	X	X	X	X			ON	
	1:M3-63	PHOTO	VSMOKE	1:M3-63 FLR 1E - E.D. WAITING RM	X	X	X	X	X	X			ON	
	1:M3-64	PHOTO	VSMOKE	1:M3-64 FLR 1E - E.D. BY TRIAGE AREA							X		ON	
	1:M3-65	PHOTO	VSMOKE	1:M3-65 FLR 1E - E.D. BY TRIAGE RM 2	X							X	ON	
	1:M3-66	PHOTO	VSMOKE	1:M3-66 FLR 1E - E.D. HALL BY RM 37		X						X	ON	
	1:M3-67	PHOTO	VSMOKE	1:M3-67 FLR 1E - E.D. HALL BY RM 38	X	X						X	ON	
	1:M3-68	PHOTO	VSMOKE	1:M3-68 FLR 1E - E.D. HALL BY RM 40			X					X	ON	
	1:M3-69	PHOTO	VSMOKE	1:M3-69 FLR 1E - HALL BY E.D. ON-CALL RM	X		X					X	ON	
	1:M3-70	PHOTO	VSMOKE	1:M3-70 FLR 1E - HALL BY E.D. ON-CALL RM		X	X					X	ON	
	1:M3-71	PHOTO	VSMOKE	1:M3-71 FLR 1E - E.D. HALL BY RM 48	X	X	X					X	ON	
	1:M3-72	PHOTO	VSMOKE	1:M3-72 FLR 1E - E.D. HALL BY RM 44				X				X	ON	
	1:M3-73	PHOTO	VSMOKE	1:M3-73 FLR 1E - E.D. HALL BY RM 54	X			X				X	ON	
	1:M3-74	PHOTO	VSMOKE	1:M3-74 FLR 1E - E.D. HALL BY RM 51		X		X				X	ON	
	1:M3-75	PHOTO	VSMOKE	1:M3-75 FLR 1E - E.D. ADMIN OFFICES	X	X		X				X	ON	
	1:M3-76	PHOTO	VSMOKE	1:M3-76 FLR 1E - HALL BEHIND E.D.			X	X				X	ON	
	1:M3-77	PHOTO	VSMOKE	1:M3-77 FLR 1E - HALL BY E.D. ON-CALL RM	X		X	X				X	ON	
	1:M3-78	PHOTO	VSMOKE	1:M3-78 FLR 1E - HALL BY E.D. ON-CALL RM		X	X	X				X	ON	
	1:M3-79	PHOTO	VSMOKE	1:M3-79 FLR 1E - E.D. SPECIALITY ON-CALL	X	X	X	X				X	ON	
	1:M3-80	PHOTO	VSMOKE	1:M3-80 FLR 1E - HALL BY E.D. ON-CALL RM					X			X	ON	
	1:M3-81	PHOTO	VSMOKE	1:M3-81 FLR 1E - HALL BY E.D. ON-CALL RM	X				X			X	ON	
	1:M3-82	PHOTO	VSMOKE	1:M3-82 FLR 1E - HALL BY E.D. ON-CALL RM		X			X			X	ON	
	1:M3-83	PHOTO	VSMOKE	1:M3-83 FLR 1E - IN THE E.D. ON-CALL RM	X	X			X			X	ON	
	1:M3-84	PHOTO	VSMOKE	1:M3-84 FLR 1E - HALL BATH BY E.D. ADMIN			X		X			X	ON	
	1:M3-85	PHOTO	VSMOKE	1:M3-85 FLR 1E - BACK HALL BY QUIET RM	X		X		X			X	ON	
	1:M3-86	PHOTO	VSMOKE	1:M3-86 FLR 1E - HALL BY MEDICAL LIBRARY		X	X		X			X	ON	
	1:M3-87	PHOTO	VSMOKE	1:M3-87 FLR 1E - E.D. RME 3	X	X	X		X			X	ON	
	1:M3-88	PHOTO	VSMOKE	1:M3-88 FLR 1E - E.D. RME 2				X	X			X	ON	
	1:M3-89	PHOTO	VSMOKE	1:M3-89 FLR 1E - HALL BY PACU	X			X	X			X	ON	
	1:M3-90	PHOTO	VSMOKE	1:M3-90 FLR 1E - HALL BY PACU		X		X	X			X	ON	
	1:M3-91	PHOTO	VSMOKE	1:M3-91 FLR 1E - E.D. RME 1	X	X		X	X			X	ON	
	1:M3-92	PHOTO	VSMOKE	1:M3-92 FLR 1E - E.D. TRACE ROOM #2			X	X	X			X	ON	
	1:M3-93	PHOTO	VSMOKE	1:M3-93 FLR 1E - HALL BY PACU	X		X	X	X			X	ON	
	1:M3-94	PHOTO	VSMOKE	1:M3-94 FLR 1E - HALL BY PACU		X	X	X	X			X	ON	
	1:M3-95	PHOTO	VSMOKE	1:M3-95 FLR 1E - HALL BY PACU	X	X	X	X	X			X	ON	
	1:M3-96	PHOTO	VSMOKE	1:M3-96 FLR 1E - HALL BY PACU						X	X		ON	
	1:M3-97	PHOTO	VSMOKE	1:M3-97 FLR 1E - HALL BY E.D. STAIRWELL	X					X	X		ON	
	1:M3-98	PHOTO	VSMOKE	1:M3-98 FLR 1E - HALL BY E.D. STAIRWELL		X				X	X		ON	
	1:M3-99	PHOTO	VSMOKE	1:M3-99 FLR 1E - HALL BY E.D. STAIRWELL	X	X				X	X		ON	
	1:M3-100	PHOTO	VSMOKE	1:M3-100 FLR 1E - EMS LOUNGE			X			X	X		ON	
	1:M3-101	PHOTO	VSMOKE	1:M3-101 FLR 1E - E.D. E. HALL BY TRIAGE	X		X			X	X		ON	
	1:M3-102	PHOTO	VSMOKE	1:M3-102 FLR 1E - E.D. HALL BY RM 13		X	X			X	X		ON	
	1:M3-103	PHOTO	VSMOKE	1:M3-103 FLR 1W - PHARMACY	X	X	X			X	X		ON	
	1:M3-104	PHOTO	VSMOKE	1:M3-104 FLR 1W - PHARMACY				X		X	X		ON	
	1:M3-105	PHOTO	VSMOKE	1:M3-105 FLR 1W - PHARMACY	X			X		X	X		ON	
	1:M3-106	PHOTO	VSMOKE	1:M3-106 FLR 1W - PHARMACY ANTE ROOM		X		X		X	X		ON	
	1:M3-107	PHOTO	VSMOKE	1:M3-107 FLR 1W - PHARMACY MEETING ROOM	X	X		X		X	X		ON	
	1:M3-108	GENIAM	UTILITY	1:M3-108 FLR 1E - E.D. SPARE MON 2 PT IO			X	X		X	X		ON	
	1:M3-109	RZAM	RRELAY	1:M3-109 FLR 1E - E.D. DOOR RELEASE	X		X	X		X	X		ON	
	1:M3-110	PHOTO	VSMOKE	1:M3-110 FL CTL TWR E OUTSIDE EMS LOUNGE		X	X	X		X	X		ON	
	1:M3-111	PHOTO	VSMOKE	1:M3-111 FL CTL TWR E HALL BY EMS LOUNGE	X	X	X	X		X	X		ON	
	1:M3-112			SPARE					X	X	X		ON	
	1:M3-113			SPARE	X				X	X	X		ON	
	1:M3-114			SPARE		X			X	X	X		ON	
	1:M3-115			SPARE	X	X			X	X	X		ON	
	1:M3-116			SPARE			X		X	X	X		ON	
	1:M3-117			SPARE	X		X		X	X	X		ON	
	1:M3-118			SPARE		X	X		X	X	X		ON	
	1:M3-119			SPARE	X	X	X		X	X	X		ON	
	1:M3-120			SPARE				X	X	X	X		ON	
	1:M3-121			SPARE	X			X	X	X	X		ON	
	1:M3-122			SPARE		X		X	X	X	X		ON	
	1:M3-123			SPARE	X	X		X	X	X	X		ON	
	1:M3-124			SPARE			X	X	X	X	X		ON	
	1:M3-125			SPARE	X		X	X	X	X	X		ON	
	1:M3-126			SPARE		X	X	X	X	X	X		ON	
	1:M3-127			SPARE	X	X	X	X	X	X	X		ON	

MAPNET CHANNEL 1:M5

	Address	Device Type	Point Type	Location Description	1								9
	1:M5-1	ADRPUL	PULL	1:M5-1 FLR 1 W - WEST MECHANICAL RM	X							ON	
	1:M5-2	ADRPUL	PULL	1:M5-2 FLR 1W - WEST MECHANICAL PULL		X						ON	
	1:M5-3	PHOTO	VSMOKE	1:M5-3 FLR 1E - HALL BY MORGUE	X	X						ON	
	1:M5-4			SPARE			X					ON	
	1:M5-5			SPARE	X		X					ON	
	1:M5-6			SPARE		X	X					ON	
	1:M5-7	RZAM	CDAMPER	1:M5-7 AHU 97-5	X	X	X					ON	
	1:M5-8	RZAM	CDA

MEDICAL CENTER OF AURORA SOUTH TOWER TRANSPONDER 3 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*
4100-0634	*1*	*POWER DISTRIBUTION MODULE 120V*		*0.0000*	*0.0000*	*0.0000*	*0.0000*
4100-5311	*1*	*ENHANCED POWER SUPPLY, 3 CHANNELS, IDNet, 120V*		*0.2250*	*0.2250*	*0.4900*	*0.4900*
		Panel Totals			**0.3120**		**0.5770**
IDNet Addressable Devices (SLC)							
4090-9002	**26**	**IDNET RELAY IAM**	*				
4098-9714	**69**	**TRUEALARM PHOTO SMOKE SENSOR**					
4 **4098-9733**	**2**	**TRUEALARM HEAT SENSOR**	*				
4098-9755	*5*	*TRUEALARM DUCT SMOKE SENSOR W/O RELAY OUTPUT*	*				
4098-9756	*11*	*TRUEALARM DUCT SMOKE SENSOR W/ RELAY OUTPUT*	*				
4009-9201	*1*	*4009 IDNET NAC EXTENDER, 120 VAC*	*				
4098-9792	**71**	**TRUEALARM SENSOR BASE**	*				
4090-9008	*16*	*ADDRESSABLE DUAL CONTACT RELAY IAM*	*				
Miscellaneous Peripheral Devices That Require (Additional) System Power							
4098-9843	*11*	*ENCAPSULATED RELAY PAM-SD*		*0.0000*	*0.0000*	*0.0150*	*0.1650*
4098-9756	*11*	*TRUEALARM DUCT SMOKE SENSOR W/ RELAY OUTPUT*		*0.0030*	*0.0330*	*0.0150*	*0.1650*
2088-9021	**18**	**ENCAPSULATED RELAY PAM-1**		**0.0000**	**0.0000**	**0.0150**	**0.2700**
Notification Appliances			**Setting**				
49MTV-WRF	**28**	**MULTI-TONE A/V, RED, WALL MOUNT**	**15**	**0.0016**	**0.0448**	**0.1450**	**4.0600**
49MTV-WRF	**3**	**MULTI-TONE A/V, RED, WALL MOUNT**	**75**	**0.0016**	**0.0048**	**0.1980**	**0.5940**
49VO-APPLC	**5**	**STROBE, APPLIANCE ONLY, CEILING MOUNT**	**15**	**0.0008**	**0.0040**	**0.0550**	**0.2750**
49VO-APPLW	*6*	*VO APPLIANCE ONLY WALL MT*	*30*	*0.0008*	*0.0048*	*0.0570*	*0.3420*
49VO-APPLW	**2**	**VO APPLIANCE ONLY WALL MT, W/ COLORED LENS KIT**	**75 w/**	**0.0008**	**0.0016**	**0.1280**	**0.2560**
49VO-WRF	**13**	**VO, WALL MT, RED, FIRE LABEL**	**15**	**0.0008**	**0.0104**	**0.0470**	**0.6110**
			Peripheral Totals		**0.1034**		**6.7380**
			Added Current for EPS Conversion of 24 to 29 Volt IDNac Devices		**0.0000**		**3.4994**
			RUI Totals **0**		**0.0000**		**0.0000**
			Address Totals **130 Addresses**		**0.1040**		**0.1300**
			System Totals*:	**Standby**	**0.5194**	**Alarm**	**10.9444**

* Device Address current draw included below (See Additional Current Draws):

Battery Set #1 (Cabinet/Charger #1)				Standby Current	Standby Total	Alarm Current	Alarm Total
Select ALL Power Supplies on this battery set:							
EPS-1					0.4154		7.3150
				Sub Total	**0.4154**		**7.3150**
Additional Current Draws:							
IDNac Current Boost for 29vdc Regulated Output **					0.0000		3.4994
MAPNET/IDNet Device Address Communication Current		130	x 0.000800		= 0.1040	x 0.001000	= 0.1300
				Sub Total	**0.5194**		**10.9444**
Spare addressable point capacity	**20%**	26	x 0.0008		= 0.0208	x 0.001	= 0.0260
				Total	**0.5402**		**10.9704**
Standby Time =	**4**	Hrs	x 0.5402		= 2.1608	Standby Ah	
Alarm Time =	**15**	Min	0.25 x 10.9704		= 2.7426	Alarm Ah	
					4.9034		
Additional Spare Battery Capacity =	**20%**			+	0.9807		
					5.8841		
Battery Discharge Factor =	**20%**			+	1.1768		
Minimum Battery Required	**2081-9274 10AH (2x)**				**7.0609**		
Battery Supplied	**2081-9287 25AH (2x)**						

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

** IDNac Current Boost formula: ((29.5 * IDNac Alarm Current) / .92) / 20.4 = Adjusted Current
DC-DC Converter Output = 29.5vdc, Terminal Output is 29vdc due to 0.5vdc internal loss.
Converter Worst Case efficiency is 92%, 20.4vdc represents battery output in 85% depleted state

IDNET CHANNEL 1:M10		ADDRESSES IN USE: 130 (52%) | SPARE ADDRESSES: 120 (48%)		SWITCH SETTINGS									
Address	**Device Type**	**Point Type**	**Location Description**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**		**9**
1:M10-1	**PHOTO**	**VSMOKE**	**FLR 1W ELEC 1001 1:M10-1**	X								ON	
1:M10-2	**PHOTO**	**VSMOKE**	**FLR 1W CO2 MANIFOLD 1003 1:M10-2**		X							ON	
1:M10-3	**PHOTO**	**VSMOKE**	**FLR 1W OR 12 1006 SW 1:M10-3**	X	X							ON	
1:M10-4	**PHOTO**	**VSMOKE**	**FLR 1W OR 12 1006 NE 1:M10-4**			X						ON	
1:M10-5	**PHOTO**	**VSMOKE**	**FLR 1W CORR 1009 N 1:M10-5**	X		X						ON	
1:M10-6	**PHOTO**	**VSMOKE**	**FLR 1W COMM 1000 1:M10-6**			X	X					ON	
1:M10-7	**PHOTO**	**VSMOKE**	**FLR 1W VENDOR STGRAGE 1003 1:M10-7**	X	X	X						ON	
1:M10-8	**PHOTO**	**VSMOKE**	**FLR 1W CORR 1009 S 1:M10-8**				X					ON	
1:M10-9	**PHOTO**	**VSMOKE**	**FLR 1W CORR 1009 C 1:M10-9**	X			X					ON	
1:M10-10	**PHOTO**	**VSMOKE**	**FLR 1W OR 13 1005 NW 1:M10-10**		X		X					ON	
1:M10-11	**PHOTO**	**VSMOKE**	**FLR 1W OR 13 1005 SE 1:M10-11**	X	X		X					ON	
1:M10-12	**RIAM**	**CDAMPER**	**FLR 1W CO2 MANIFOLD EXH FSD 1:M10-12**			X	X					ON	
1:M10-13	**RIAM**	**CDAMPER**	**FLR 1W IR STOR 1004 SUP FSD 1:M10-13**	X		X	X					ON	
1:M10-14			*SPARE*		X	X						ON	
1:M10-15			*SPARE*	X	X	X						ON	
1:M10-16			*SPARE*					X				ON	
1:M10-17			*SPARE*	X				X				ON	
1:M10-18	*PHOTO*	*LSDUCT*	*ROOF RTU-1 RET 1:M10-18*		X			X				ON	
1:M10-19	*PHOTO*	*LSDUCT*	*ROOF RTU-1 OUTSIDE AIR M1-19*	X	X			X				ON	
1:M10-20	*RIAM*	*RELAY*	*ROOF RTU-1 RET DET TO DDC 1:M10-20*			X		X				ON	
1:M10-21	*RIAM*	*RELAY*	*ROOF RTU-1 SUP DET TO DDC 1:M10-21*	X		X		X				ON	
1:M10-22	*RIAM*	*RELAY*	*ROOF RTU-1 OA DET TO DDC 1:M10-22*		X	X		X				ON	
1:M10-23	*RIAM*	*RELAY*	*ROOF RTU-1 EXH FSD TO DDC 1:M10-23*	X	X	X		X				ON	
1:M10-24	*RIAM*	*RELAY*	*ROOF RTU-1 ALARM TO DDC 1:M10-24*				X	X				ON	
3 *1:M10-25*	*NAC4PT*	*SIGNAL*	**FLR 1W ELEC 1001 NAC#1 1:M10-25**	X			X	X				ON	
1:M10-26	**PHOTO**	**VSMOKE**	**FLR 1W CORR 1007 S 1:M10-26**		X		X	X				ON	
1:M10-27	**PHOTO**	**VSMOKE**	**FLR 1W CORR 1007 N 1:M10-27**	X	X		X	X				ON	
1:M10-28	**PHOTO**	**VSMOKE**	**FLR 1W CORR 1010 S 1:M10-28**			X	X	X				ON	
1:M10-29	**PHOTO**	**VSMOKE**	**FLR 1W CORR 1010 C 1:M10-29**	X		X	X	X				ON	
1:M10-30	**PHOTO**	**VSMOKE**	**FLR 1W CORR 1010 N 1:M10-30**			X	X	X				ON	
1:M10-31	**RIAM**	**CDAMPER**	**FLR 1W SUB STERILE RET FSD 1:M10-31**	X	X	X	X	X				ON	
1:M10-32	**RIAM**	**CDAMPER**	**FLR 1W CORR 1007 SUP FSD 1:M10-32**						X			ON	
1:M10-33	**RIAM**	**CDAMPER**	**FLR 1W STOR 1003/1004 SUP FSD 1:M10-33**	X					X			ON	
1:M10-34	**RIAM**	**CDAMPER**	**FLR 1W STOR 1003/1004 RET FSD 1:M10-34**		X				X			ON	
1:M10-35	**RIAM**	**CDAMPER**	**FLR 1W OR 12/13 RET FSD 1:M10-35**	X	X				X			ON	
1:M10-36	**PHOTO**	**VSMOKE**	**FLR 1W CORR 1007 E 1:M10-36**			X			X			ON	
4 **1:M10-37**			**SPARE**	X		X			X			ON	
1:M10-38	**PHOTO**	**VSMOKE**	**FLR 1W CORR 1007 C 1:M10-38**		X	X			X			ON	
2 *1:M10-39*	*PHOTO*	*SMOKE*	**FLR 1W CORR 1007 N 1:M10-39**	X	X	X			X			ON	
1:M10-40	*PHOTO*	*SMOKE*	*FLR 1W TECHNICAL RM 1-SS018 1:M10-40*				X	X				ON	
1:M10-41	*PHOTO*	*SMOKE*	*FLR 1W CONTROL RM 1-SS020 1:M10-41*	X			X	X				ON	
1:M10-42	*PHOTO*	*SMOKE*	*FLR 1W CORR 1-SS014 @SOIL UTIL 1:M10-42*		X		X	X				ON	
1:M10-43	*PHOTO*	*SMOKE*	*FLR 1W CORR 1-SS014 @OR 10 1:M10-43*	X	X		X	X				ON	
1:M10-44	*PHOTO*	*SMOKE*	*FLR 1W CORR 1-SS014 @EQ STG 1:M10-44*			X	X	X				ON	
1:M10-45	*PHOTO*	*SMOKE*	*FLR 1W ISOL1-PA03 1:M10-45*	X		X	X	X				ON	
1:M10-46	*PHOTO*	*SMOKE*	*FLR 1W ELEC 1-SS022 1:M10-46*		X	X	X	X				ON	
1:M10-47	*PHOTO*	*SMOKE*	*FLR 1W VOICE/DATA 1:M10-47*	X	X	X	X	X				ON	
1:M10-48	*PHOTO*	*SMOKE*	*FLR 1W EQ STG 1-SS012 1:M10-48*					X	X			ON	
1:M10-49	*PHOTO*	*SMOKE*	*FLR 1W ANES. WK 1-SS012A 1:M10-49*	X				X	X			ON	
1:M10-50	*PHOTO*	*SMOKE*	*FLR 1W OR 10 1-SS015 NE 1:M10-50*		X			X	X			ON	
1:M10-51	*PHOTO*	*SMOKE*	*FLR 1W OR 10 1-SS015 SW 1:M10-51*	X	X			X	X			ON	
1:M10-52	*PHOTO*	*SMOKE*	*FLR 1W HYBRID OR 9 1-SS017 SE 1:M10-52*			X		X	X			ON	
1:M10-53	*PHOTO*	*SMOKE*	*FLR 1W HYBRID OR 9 1-SS017 NW 1:M10-53*	X		X		X	X			ON	
1:M10-54			*SPARE*		X	X		X	X			ON	
1:M10-55			*SPARE*	X	X	X		X	X			ON	
1:M10-56	*RPHOTO*	*LSDUCT*	*FLR 1W OR 9 1-SS017 SUP FSD 1:M10-56*				X	X	X			ON	
1:M10-57	*RPHOTO*	*LSDUCT*	*FLR 1W OR 9 1-SS017 SUP FSD 1:M10-57*	X			X	X	X			ON	
1:M10-58	*RPHOTO*	*LSDUCT*	*FLR 1W ELEC 1-PA05 SUP FSD 1:M10-58*		X		X	X	X			ON	
1:M10-59	*RPHOTO*	*LSDUCT*	*FLR 1W OR 10 1-SS015 RET FSD 1:M10-59*	X	X		X	X	X			ON	
1:M10-60	*RPHOTO*	*LSDUCT*	*FLR 1W OR 10 1-SS015 SUP FSD 1:M10-60*			X	X	X	X			ON	
1:M10-61	*RPHOTO*	*LSDUCT*	*FLR 1W EQ STG 1-SS012 RET FSD 1:M10-61*	X		X	X	X	X			ON	
1:M10-62	*RPHOTO*	*LSDUCT*	*FLR 1W EQ STG 1-SS012 SUP FSD 1:M10-62*			X	X	X	X			ON	
1:M10-63	*RPHOTO*	*LSDUCT*	*FLR 1W EVS SUP FSD 1:M10-63*	X	X	X	X	X	X			ON	
1:M10-64	**RIAM**	**CDAMPER**	**FLR 1W CORR 1007 S RET FSD 1:M10-64**							X		ON	
1:M10-65	**RIAM**	**CDAMPER**	**FLR 1W PACU BAY 1100 SUP FSD 1:M10-8**	X						X		ON	
1:M10-66	*RIAM*	*DHOLDER*	*FLR 1W CORR 1-SS019 N DR CNTL 1:M10-66*		X					X		ON	
1:M10-67	*RIAM*	*RRELAY*	*FLR 1W CORR 1-SS014 ACC CNTL 1:M10-67*	X	X					X		ON	
1:M10-68	*PHOTO*	*LSDUCT*	*ROOF RTU-2 SUP 1:M10-68 1:M10-68*			X				X		ON	
1:M10-69	*PHOTO*	*LSDUCT*	*ROOF RTU-2 RET 1:M10-69 1:M10-69*	X		X				X		ON	
1:M10-70	*PHOTO*	*LSDUCT*	*ROOF RTU-2 OUTSIDE AIR 1:M10-70*		X	X				X		ON	
1:M10-71	*RIAM*	*RELAY*	*ROOF RTU-2 RET DET TO DDC 1:M10-71*	X	X	X				X		ON	
1:M10-72	*RIAM*	*RELAY*	*ROOF RTU-2 SUP DET TO DDC 1:M10-72*				X			X		ON	
1:M10-73	*RIAM*	*RELAY*	*ROOF RTU-2 OA DET TO DDC 1:M10-73*	X			X			X		ON	
1:M10-74	*RIAM*	*RELAY*	*ROOF RTU-2 EXH FSD TO DDC 1:M10-74*		X		X			X		ON	
1:M10-75	*RIAM*	*RELAY*	*ROOF RTU-2 ALARM TO DDC 1:M10-75*	X	X		X			X		ON	
1:M10-76	*RIAM*	*RELAY*	*ROOF RTU-1 OR 9 ALARM TO DDC 1:M10-76*			X	X			X		ON	
1:M10-77	*RIAM*	*RELAY*	*ROOF RTU-1 OR 10 ALARM TO DDC 1:M10-77*	X		X	X			X		ON	
1:M10-78	*RIAM*	*DHOLDER*	*FLR 1W OR 9 1-SS017 DOOR CNTL 1:M10-78*		X	X	X			X		ON	
1:M10-79	*RIAM*	*DHOLDER*	*FLR 1W OR 10 1-SS018 DOOR CNTL 1:M10-79*	X	X	X	X			X		ON	
1:M10-80	*RIAM*	*DHOLDER*	*FLR 1W CORR 1-SS014 DOOR CNTL 1:M10-80*					X		X		ON	
1:M10-81	**RIAM**	**DHOLDER**	**FLR 1W CORR 1009 DOOR CNTL 1:M10-81**	X				X		X		ON	
1:M10-82			*SPARE*		X			X		X		ON	
1:M10-83	**RIAM**	**CDAMPER**	**FLR 1W OR 9/10 SUP FSD 1:M10-83**	X	X			X		X		ON	
1:M10-84	*PHOTO*	*SMOKE*	*FLR 1W OR 8 (CVOR) 1-SS024 SW 1:M10-84*			X		X		X		ON	
1:M10-85	*PHOTO*	*SMOKE*	*FLR 1W OR 8 (CVOR) 1-SS024 NE 1:M10-85*	X		X		X		X		ON	
1:M10-86	*PHOTO*	*SMOKE*	*FLR 1W SUB STERILE 1-SS027 1:M10-86*		X	X		X		X		ON	
1:M10-87	*PHOTO*	*SMOKE*	*FLR 1W PUMP 1-SS025 1:M10-87*	X	X	X		X		X		ON	
1:M10-88	*PHOTO*	*SMOKE*	*FLR 1W OR 7 (CVOR) 1-SS026 SW 1:M10-88*				X	X		X		ON	
1:M10-89	*PHOTO*	*SMOKE*	*FLR 1W OR 7 (CVOR) 1-SS026 NE 1:M10-89*	X			X	X		X		ON	
1:M10-90	*RIAM*	*RELAY*	*ROOF RTU-1 OR 8 ALARM TO DDC 1:M10-90*		X		X	X		X		ON	
1:M10-91	*RIAM*	*RELAY*	*ROOF RTU-1 OR 7 ALARM TO DDC 1:M10-91*	X	X		X	X		X		ON	
1:M10-92	*RIAM*	*DHOLDER*	*FLR 1W OR 8 1-SS024 DOOR CNTL 1:M10-92*		X	X	X	X		X		ON	
1:M10-93	*RIAM*	*DHOLDER*	*FLR 1W OR 7 1-SS0026 DOOR CNTL 1:M10-93*	X		X	X	X		X		ON	
1:M10-94	*PHOTO*	*SMOKE*	*FLR 1W CORR 1-SS029 @OR 8 1:M10-94*		X	X	X	X		X		ON	
1:M10-95	*PHOTO*	*SMOKE*	*FLR 1W CORR 1-SS029 @OR 7 1:M10-95*	X	X	X	X	X		X		ON	
1:M10-96			*SPARE*						X	X		ON	
1:M10-97			*SPARE*	X					X	X		ON	
1:M10-98			*SPARE*		X				X	X		ON	
1:M10-99			*SPARE*	X	X				X	X		ON	
1:M10-100	*PHOTO*	*SMOKE*	*FLR 1W OFF 1-SS115 1:M10-100*			X			X	X		ON	
1:M10-101	*PHOTO*	*SMOKE*	*FLR 1W OFF 1-SS114 1:M10-101*	X		X			X	X		ON	
1:M10-102	*PHOTO*	*SMOKE*	*FLR 1W OFF 1-SS113 1:M10-102*		X	X			X	X		ON	
1:M10-103	*PHOTO*	*SMOKE*	*FLR 1W ELEC 1-SS117 1:M10-103*	X	X	X			X	X		ON	
1:M10-104	*PHOTO*	*SMOKE*	*FLR 1W RCPT/SCHED 1-SS112 1:M10-104*				X		X	X		ON	
1:M10-105	*PHOTO*	*SMOKE*	*FLR 1W PHARM 1-SS120 1:M10-105*	X			X		X	X		ON	
1:M10-106	*PHOTO*	*SMOKE*	*FLR 1W OFF 1-SS121 1:M10-106*		X		X		X	X		ON	
1:M10-107	*PHOTO*	*SMOKE*	*FLR 1W CORR 1-SS111 @OFF 113 1:M10-107*	X	X		X		X	X		ON	
1:M10-108	*PHOTO*	*SMOKE*	*FLR 1W CORR 1-SS111 @OFF 121 1:M10-108*				X	X	X	X		ON	
1:M10-109	*PHOTO*	*SMOKE*	*FLR 1W CORR 1-SS102 @LOUNGE 1:M10-109*	X			X	X	X	X		ON	
1:M10-110	*PHOTO*	*SMOKE*	*FLR 1W CORR 1-SS125 1:M10-110*		X	X	X		X	X		ON	
1:M10-111	*PHOTO*	*SMOKE*	*FLR 1W CLEAN SUPPLY 1-SS126 1:M10-111*	X	X	X	X		X	X		ON	
1:M10-112	*PHOTO*	*SMOKE*	*FLR 1W SUB STERILE 1-SS127 1:M10-112*					X	X	X		ON	
1:M10-113	*PHOTO*	*SMOKE*	*FLR 1W OR 5 1-SS132 NE 1:M10-113*	X				X	X	X		ON	
1:M10-114	*PHOTO*	*SMOKE*	*FLR 1W OR 5 1-SS132 SW 1:M10-114*		X			X	X	X		ON	
1:M10-115	*PHOTO*	*SMOKE*	*FLR 1W CORR 1-SS102 @HALL 109 1:M10-115*	X	X			X	X	X		ON	
1:M10-116	*PHOTO*	*SMOKE*	*FLR 1W CORR 1-SS102 @OR 11 1:M10-116*			X		X	X	X		ON	
1:M10-117	*PHOTO*	*SMOKE*	*FLR 1W CORR 1-SS102 @JAN 038 1:M10-117*	X		X		X	X	X		ON	
1:M10-118	*PHOTO*	*SMOKE*	*FLR 1W OR 6 1-SS134 NE 1:M10-118*		X	X		X	X	X		ON	
1:M10-119	*PHOTO*	*SMOKE*	*FLR 1W OR 6 1-SS134 SW 1:M10-119*	X	X	X		X	X	X		ON	
1:M10-120	*PHOTO*	*SMOKE*	*FLR 1W ENTRY HALL 1-SS109 1:M10-120*				X	X	X	X		ON	
1:M10-121	*PHOTO*	*SMOKE*	*FLR 1W DICTATION 1-SS110 1:M10-121*	X			X	X	X	X		ON	
1:M10-122	*PHOTO*	*SMOKE*	*FLR 1W LOUNGE 1-SS104 1:M10-122*		X		X	X	X	X		ON	
1:M10-123	*PHOTO*	*SMOKE*	*FLR 1W FEMALE LOCKERS 1-SS105 1:M10-123*	X	X		X	X	X	X		ON	
1:M10-124	*PHOTO*	*SMOKE*	*FLR 1W MALE LOCKERS 1-SS108 E 1:M10-124*			X	X	X	X	X		ON	
1:M10-125	*PHOTO*	*SMOKE*	*FLR 1W MALE LOCKERS 1-SS108 W 1:M10-125*	X		X	X	X	X	X		ON	

IDNET CHANNEL 1:M10		ADDRESSES IN USE: 126 (50.4%) | SPARE ADDRESSES: 124 (49.6%)		SWITCH SETTINGS									
Address			**Location Description**	**1**									**9**
1:M10-126		*HEAT*	*FLR 1W BATH 1-SS106 1:M10-126*		X	X	X	X	X	X		ON	
1:M10-127		*HEAT*	*FLR 1W BATH 1-SS107 1:M10-127*	X	X	X	X	X	X	X		ON	
1:M10-128		*PHOTO*	*SMOKE*	*FLR 1W CORR 1-SS037 @STER STG 1:M10-128*							X	ON	
1:M10-129		*PHOTO*	*SMOKE*	*FLR 1W CORR 1-SS037 @ORT 1:M10-129*	X						X	ON	
1:M10-130		*RIAM*	*DHOLDER*	*FLR 1W RCPT 1-SS112 DOOR CNTL 1:M10-130*		X					X	ON	
1:M10-131		*RIAM*	*DHOLDER*	*FLR 1W OR 5 1-SS132 DOOR CNTL 1:M10-131*	X	X					X	ON	
1:M10-132		*RIAM*	*DHOLDER*	*FLR 1W OR 6 1-SS134 DOOR CNTL 1:M10-132*			X				X	ON	
1:M10-133		*RIAM*	*RRELAY*	*FLR 1W CORR 1-SS111 ACC CNTL 1:M10-133*	X		X				X	ON	
1:M10-134		*RPHOTO*	*LSDUCT*	*FLR 1W CORR 1-SS102 RET FSD 1:M10-134*		X	X				X	ON	
1:M10-135		*RPHOTO*	*LSDUCT*	*FLR 1W CORR 1-SS102 EXH FSD 1:M10-135*	X	X	X				X	ON	
1:M10-136		*RPHOTO*	*LSDUCT*	*FLR 1W CORR 1-SS102 SUP FSD 1:M10-136*				X			X	ON	
1:M10-137		*RIAM*	*RELAY*	*ROOF RTU-2 OR 6 ALARM TO DDC 1:M10-137*	X			X			X	ON	
1:M10-138		*RIAM*	*RELAY*	*ROOF RTU-2 OR 5 ALARM TO DDC 1:M10-138*		X		X			X	ON	
1:M10-139		*RIAM*	*DHOLDER*	*FLR 1W CORR 1-SS102 DOOR CNTL 1:M10-139*	X	X		X			X	ON	
1:M10-140		*RIAM*	*DHOLDER*	*FLR 1W CORR 1-SS111 DOOR CNTL 1:M10-140*			X	X			X	ON	
1:M10-141				*SPARE*	X		X	X			X	ON	
THRU												ON	
1:M10-250				*SPARE*		X		X	X	X	X	ON	

Johnson Controls
DISTRICT 1-418
10001 E. 104TH AVENUE
AURORA, CO 80010
SERVICE: 303-355-6000
PHONE: 303-395-9500
FAX: 303-395-9515

NICET CERTIFICATION INFORMATION
NANCY S. WILTSIE
NICET Fire Alarm, III
Certification #93727
Valid Through: 03/01/24
September 21, 2022

THE MEDICAL CENTER OF AURORA - SOUTH OR EXPANSION

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

Revisions shown with Δ symbol

ISSUE LOC	MARK	DATE	CAD	CHK	DESCRIPTION

FOR PERMIT

DRAWN BY:	CCD
CHECKED BY:	CBR
ISSUE DATE:	7/26/22
JOB #:	
PROJECT #:	419:650189804

JOHNSON CONTROLS © 2022

SYSTEM:
FIRE ALARM SYSTEM

SHEET:
NODE-1 TRANSPONDER-3 BUILDOUT CALCS & SCHEDUALS

FA-608

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.

KEYNOTES:

1. DEVICE REMOVED FOR CONSTRUCTION.
2. DEVICE IS INTERIM FOR CONSTRUCTION. TO BE REMOVED, REPLACED, OR RELOCATED DURING BUILDOUT. DEVICE DESCRIPTOR CHANGED.
3. DEVICE DESCRIPTOR CHANGE ONLY.
4. DEVICE WAS INTERIM FOR CONSTRUCTION AND IS NOW REMOVED. DEVICE QUANTITY CHANGED.
5. EXISTING DEVICE REINSTALLED. RE-USE EXISTING HEAD, BASE, ADDRESS, LOCATION, AND WIRING.
6. DEVICE REMOVED TO BE RE-USED ON ANOTHER CIRCUIT.

City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: W. Polk
Date: Oct 13, 2022
2021 INTERNATIONAL CODES & 2020 NEC

FILE PATH: C:\Users\jhuynh\Johnson Controls\Project Electronics - Medical Center of Aurora\1501 S Potomac - Aurora South\South Tower - Node 1\33-CR Expansion - 2022 - 650189804\FireFA-601.dwg
LAST SAVED BY: JHUYNH
LAST PRINTED: 9/21/2022 1:56:20 PM
30" x 42" - Arch E1 Size
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MEDICAL CENTER OF AURORA SOUTH TOWER TRANSPONDER 3 - EPS-1 CIRCUIT SUMMARY & VOLTAGE DROP

Channel	Description	Alarm Current	% Drop	Unit Load*	Wire Length	Spare Current	Spare VoltageDrop
N1:T3:A1:1	FLR 1W OR 7-9, EQ STO	1.925A	3.57%	29	738	36%	83%
N1:T3:A1:2	FLR 1W OR 9-10-11-12	1.815A	4.56%	26	642	40%	78%
N1:T3:A1:3	*FLR 1W OR 5-6, LOCKERS*	*2.342A*	*10.38%*	*33*	*908*	*22%*	*50%*

N1:T3:A1: ENHANCED POWER SUPPLY - CHANNEL 1

IDNac Address	Device Type	PID	Setting	Custom Label (Max 40 Characters)	SWITCH SETTINGS 1 2 3 4 5 6 7 8	
N1:T3:A1:1-1				*SPARE*	X	ON
N1:T3:A1:1-2				*SPARE*	X	ON
⑥ **N1:T3:A1:1-3**				**SPARE**	X X	ON
N1:T3:A1:1-4	**AV**	**49MTV-WRF**	**15cd**	**FLR 1W CORR 1009 NORTH T3:A1-1-4**	X	ON
N1:T3:A1:1-5	**AV**	**49MTV-WRF**	**15cd**	**FLR 1W CORR 1010 SOUTH T3:A1-1-5**	X X	ON
N1:T3:A1:1-6	**AV**	**49MTV-WRF**	**15cd**	**FLR 1W CORR 1009 SOUTH T3:A1-1-6**	X X	ON
N1:T3:A1:1-7				*SPARE*	X X X	ON
N1:T3:A1:1-8				*SPARE*	X	ON
N1:T3:A1:1-9				*SPARE*	X X	ON
⑥ **N1:T3:A1:1-10**				**SPARE**	X X	ON
N1:T3:A1:1-11				*SPARE*	X X X	ON
N1:T3:A1:1-12				*SPARE*	X X	ON
N1:T3:A1:1-13				*SPARE*	X X X	ON
N1:T3:A1:1-14	*AV*	*49MTV-WRF*	*15cd*	*FLR 1W CORR 1-SS029 @OR-8 T3:A1-1-14*	X X X	ON
N1:T3:A1:1-15	*AV*	*49MTV-WRF*	*15cd*	*FLR 1W CORR 1-SS025 @OR-7 T3:A1-1-15*	X X X X	ON
N1:T3:A1:1-16	*VO*	*49VO-APPLW*	*30cd*	*FLR 1W OR-9 (CVOR) 1-SS024 T3:A1-1-16*	X	ON
N1:T3:A1:1-17	*AV*	*49MTV-WRF*	*15cd*	*FLR 1W SUB STERILE 1-SS027 T3:A1-1-17*	X X	ON
N1:T3:A1:1-18	*VO*	*49VO-WRF*	*15cd*	*FLR 1W PUMP 1-SS025 T3:A1-1-18*	X X	ON
N1:T3:A1:1-19	*VO*	*49VO-APPLW*	*30cd*	*FLR 1W OR-7 (CVOR) 1-SS026 T3:A1-1-19*	X X X	ON
N1:T3:A1:1-20				*SPARE*	X X	ON
N1:T3:A1:1-21				*SPARE*	X X X	ON
N1:T3:A1:1-22				*SPARE*	X X X	ON
N1:T3:A1:1-23				*SPARE*	X X X X	ON
N1:T3:A1:1-24	*AV*	*49MTV-WRF*	*15cd*	*FLR 1W CORR 1-SS037 @1-SS032 T3:A1-1-24*	X X	ON
N1:T3:A1:1-25	*AV*	*49MTV-WRF*	*15cd*	*FLR 1W CORR 1-SS036 T3:A1-1-25*	X X X	ON
N1:T3:A1:1-26				*SPARE*	X X X	ON
N1:T3:A1:1-27				*SPARE*	X X X	ON
N1:T3:A1:1-28				*SPARE*	X X X	ON
N1:T3:A1:1-29	*VO*	*49VO-WRF*	*15cd*	*FLR 1W SOILED FLUIDS 1-SS032 T3:A1-1-29*	X X X X	ON
N1:T3:A1:1-30	*VO*	*49VO-WRF*	*15cd*	*FLR 1W STOR1 SS033 T3:A1-1-30*	X X X X	ON
N1:T3:A1:1-31	**VO**	**49VO-APPLC**	**15cd**	**FLR 1W ELEC 1001 T3:A1-1-31**	X X X X X	ON
N1:T3:A1:1-32	**VO**	**49VO-APPLC**	**15cd**	**FLR 1W CO2 MANIFOLD 1002 T3:A1-1-32**	X	ON
N1:T3:A1:1-33	**VO**	**49VO-APPLC**	**15cd**	**FLR 1W VENDOR STORAGE 1003 T3:A1-1-33**	X X	ON
N1:T3:A1:1-34	**VO**	**49VO-APPLC**	**15cd**	**FLR 1W COMM 1000 T3:A1-1-34**	X X	ON
N1:T3:A1:1-35	**AV**	**49MTV-WRF**	**15cd**	**FLR 1W CORR 1010 CENTER T3:A1-1-35**	X X X	ON
N1:T3:A1:1-36	**AV**	**49MTV-WRF**	**15cd**	**FLR 1W CORR 1010 NORTH T3:A1-1-36**	X X	ON

N1:T3:A1: ENHANCED POWER SUPPLY - CHANNEL 2

IDNac Address	Device Type	PID	Setting	Custom Label (Max 40 Characters)	SWITCH SETTINGS 1 2 3 4 5 6 7 8	
N1:T3:A1:2-1				*SPARE*	X	ON
N1:T3:A1:2-2				*SPARE*	X	ON
N1:T3:A1:2-3	*AV*	*49MTV-WRF*	*15cd*	**FLR 1W CORR 1007 EAST T3:A1-2-3**	X X	ON
N1:T3:A1:2-4				*SPARE*	X	ON
N1:T3:A1:2-5				*SPARE*	X X	ON
N1:T3:A1:2-6	*AV*	*49MTV-WRF*	*15cd*	*FLR 1W CORR 1-SS019 NORTH T3:A1-2-6*	X X	ON
N1:T3:A1:2-7	*AV*	*49MTV-WRF*	*15cd*	*FLR 1W CORR 1-SS014 NORTH T3:A1-2-7*	X X X	ON
N1:T3:A1:2-8	*AV*	*49MTV-WRF*	*15cd*	*FLR 1W CORR 1-SS014 WEST T3:A1-2-8*	X	ON
N1:T3:A1:2-9	*VO*	*49VO-APPLW*	*30cd*	*FLR 1W OR-9 1-SS017 T3:A1-2-9*	X X	ON
N1:T3:A1:2-10	*VO*	*49VO-APPLW*	*30cd*	*FLR 1W OR-10 1-SS015 T3:A1-2-10*	X X	ON
N1:T3:A1:2-11	*AV*	*49MTV-WRF*	*15cd*	*FLR 1W CORR 1-SS014 EAST T3:A1-2-11*	X X X	ON
N1:T3:A1:2-12	*AV*	*49MTV-WRF*	*15cd*	*FLR 1W EQ STG 1-SS012 T3:A1-2-12*	X X	ON
N1:T3:A1:2-13	*VO*	*49VO-WRF*	*15cd*	*FLR 1W PUMP 1-SS018 T3:A1-2-13*	X X X	ON
N1:T3:A1:2-14	*VO*	*49VO-WRF*	*15cd*	*FLR 1W SOIL UTIL 1-SS020 T3:A1-2-14*	X X X	ON
N1:T3:A1:2-15	*VO*	*49VO-WRF*	*15cd*	*FLR 1W ANES WK 1-SS012A T3:A1-2-15*	X X X X	ON
N1:T3:A1:2-16	*VO*	*49VO-APPLC*	*15cd*	*FLR 1W PHARM BKRM 1-SS012 T3:A1-2-16*	X	ON
N1:T3:A1:2-17	**AV**	**49MTV-WRF**	**15cd**	**FLR 1W CORR 1007 CENTER T3:A1-2-17**	X	ON
N1:T3:A1:2-18	**AV**	**49MTV-WRF**	**15cd**	**FLR 1W CORR 1007 NORTHEAST T3:A1-2-18**	X	ON
N1:T3:A1:2-19	**VO**	**49VO-APPLW**	**75 w/Lens Kit**	**FLR 1W OR 12 1006 T3:A1-2-19**	X X	ON
N1:T3:A1:2-20	**VO**	**49VO-APPLW**	**75 w/Lens Kit**	**FLR 1W OR 13 1005 T3:A1-2-20**	X	ON
N1:T3:A1:2-21	*AV*	*49MTV-WRF*	*15cd*	**FLR 1W CORR 1007 SOUTH T3:A1-2-21**	X X	ON

N1:T3:A1: ENHANCED POWER SUPPLY - CHANNEL 3

IDNac Address	Device Type	PID	Setting	Custom Label (Max 40 Characters)	SWITCH SETTINGS 1 2 3 4 5 6 7 8	
N1:T3:A1:3-1	*AV*	*49MTV-WRF*	*15cd*	*FLR 1W CORR 1-SS122 T3:A1-3-1*	X	ON
N1:T3:A1:3-2	*VO*	*49VO-APPLW*	*30cd*	*FLR 1W OR-6 1-SS134 T3:A1-3-2*	X	ON
N1:T3:A1:3-3	*VO*	*49VO-APPLW*	*30cd*	*FLR 1W OR-5 1-SS132 T3:A1-3-3*	X X	ON
N1:T3:A1:3-4	*VO*	*49VO-WRF*	*15cd*	*FLR 1W SUB-STERILE 1-SS127 T3:A1-3-4*	X	ON
N1:T3:A1:3-5	*AV*	*49MTV-WRF*	*15cd*	*FLR 1W CORR 1-SS122 T3:A1-3-5*	X X	ON
N1:T3:A1:3-6	*AV*	*49MTV-WRF*	*15cd*	*FLR 1W CORR 1-SS122 T3:A1-3-6*	X X	ON
N1:T3:A1:3-7	*VO*	*49VO-WRF*	*15cd*	*FLR 1W PHARM 1-SS120 T3:A1-3-7*	X X X	ON
N1:T3:A1:3-8	*AV*	*49MTV-WRF*	*75cd*	*FLR 1W CORR 1-SS111 T3:A1-3-8*	X	ON
N1:T3:A1:3-9	*AV*	*49MTV-WRF*	*15cd*	*FLR 1W CORR 1-SS102 T3:A1-3-9*	X X	ON
N1:T3:A1:3-10	*VO*	*49VO-WRF*	*15cd*	*FLR 1W CLEAN SUPPLY 1-SS126 T3:A1-3-10*	X X	ON
N1:T3:A1:3-11	*AV*	*49MTV-WRF*	*15cd*	*FLR 1W CORR 1-SS102 T3:A1-2-11*	X X X	ON
N1:T3:A1:3-12	*AV*	*49MTV-WRF*	*15cd*	*FLR 1W DICTATION 1-SS110 T3:A1-3-12*	X X	ON
N1:T3:A1:3-13	*AV*	*49MTV-WRF*	*75cd*	*FLR 1W LOUNGE 1-SS104 T3:A1-3-13*	X X X	ON
N1:T3:A1:3-14	*AV*	*49MTV-WRF*	*75cd*	*FLR 1W MALE LOCKERS 1-SS108 T3:A1-3-14*	X X X	ON
N1:T3:A1:3-15	*AV*	*49MTV-WRF*	*15cd*	*FLR 1W ENTRY HALL 1-SS109 T3:A1-3-15*	X X X X	ON
N1:T3:A1:3-16	*VO*	*49VO-WRF*	*15cd*	*FLR 1W ENTRY HALL T3:A1-3-16*	X	ON
N1:T3:A1:3-17	*AV*	*49MTV-WRF*	*15cd*	*FLR 1W ENTRY HALL T3:A1-3-17*	X X	ON
N1:T3:A1:3-18	*VO*	*49VO-WRF*	*15cd*	*FLR 1W BATH 1-SS107 T3:A1-3-18*	X	ON
N1:T3:A1:3-19	*VO*	*49VO-WRF*	*15cd*	*FLR 1W BATH 1-SS106 T3:A1-3-19*	X X	ON
N1:T3:A1:3-20	*AV*	*49MTV-WRF*	*15cd*	*FLR 1W FEM LOCKERS 1-SS105 T3:A1-3-20*	X X	ON
N1:T3:A1:3-21	*VO*	*49VO-WRF*	*15cd*	*FLR 1W STORAGE 1-SS125 T3:A1-3-21*	X X X	ON

N1:T3:A1:1 — Notification SLC Distributed Load Voltage Drop

Starting Voltage: 29vdc
Min. Device Voltage: 23.vdc
Allowable % Drop: 20.7%
Primary Wire Gauge: 14ga
Home Run Wire Gauge: 14ga
Wire Res. Per Ft. 0.003070 @ 75° Celsius
Wire Res. Per Ft. 0.003070 @ 75° Celsius

Branch	Device #	From	Distance (Feet)	PID	Setting	Device Draw	Class B Calculations Current at Device	Voltage Drop	Voltage at Device	% Vdrop Wire Length
1	**N1:T3:A1:1-31**	**PANEL**	**23**	**49VO-APPLC**	**15cd**	**0.0550**	**0.655**	**0.092**	**28.908**	**Branch 1: 1.13%**
1	**N1:T3:A1:1-32**	**N1:T3:A1:1-31**	**23**	**49VO-APPLC**	**15cd**	**0.0550**	**0.255**	**0.036**	**28.871**	**Length: 301**
1	**N1:T3:A1:1-33**	**N1:T3:A1:1-32**	**21**	**49VO-APPLC**	**15cd**	**0.0550**	**0.200**	**0.026**	**28.846**	
1	**N1:T3:A1:1-34**	**N1:T3:A1:1-31**	**27**	**49VO-APPLC**	**15cd**	**0.0550**	**0.055**	**0.009**	**28.898**	
1	**N1:T3:A1:1-35**	**N1:T3:A1:1-5**	**47**	**49MTV-WRF**	**15cd**	**0.1450**	**0.290**	**0.084**	**28.709**	
1	**N1:T3:A1:1-36**	**N1:T3:A1:1-35**	**40**	**49MTV-WRF**	**15cd**	**0.1450**	**0.145**	**0.036**	**28.673**	
1	**N1:T3:A1:1-4**	**N1:T3:A1:1-31**	**36**	**49MTV-WRF**	**15cd**	**0.1450**	**0.290**	**0.064**	**28.843**	
1	**N1:T3:A1:1-5**	**N1:T3:A1:1-4**	**57**	**49MTV-WRF**	**15cd**	**0.1450**	**0.145**	**0.051**	**28.793**	
1	**N1:T3:A1:1-6**	**N1:T3:A1:1-33**	**27**	**49MTV-WRF**	**15cd**	**0.1450**	**0.145**	**0.024**	**28.822**	
2	*N1:T3:A1:1-14*	*PANEL*	*139*	*49MTV-WRF*	*15cd*	*0.1450*	*0.980*	*0.836*	*28.164*	*Branch 2: 3.57%*
2	*N1:T3:A1:1-15*	*N1:T3:A1:1-14*	*45*	*49MTV-WRF*	*15cd*	*0.1450*	*0.145*	*0.040*	*28.124*	*Length: 437*
2	*N1:T3:A1:1-16*	*N1:T3:A1:1-14*	*26*	*49VO-APPLW*	*30cd*	*0.0570*	*0.306*	*0.049*	*28.115*	
2	*N1:T3:A1:1-17*	*N1:T3:A1:1-16*	*32*	*49MTV-WRF*	*15cd*	*0.1450*	*0.249*	*0.049*	*28.066*	
2	*N1:T3:A1:1-18*	*N1:T3:A1:1-17*	*33*	*49VO-WRF*	*15cd*	*0.0470*	*0.047*	*0.010*	*28.056*	
2	*N1:T3:A1:1-19*	*N1:T3:A1:1-17*	*26*	*49VO-APPLW*	*30cd*	*0.0570*	*0.057*	*0.009*	*28.057*	
2	*TAP8*	*N1:T3:A1:1-14*	*32*	*JBOX*		*0.0000*	*0.384*	*0.075*	*28.088*	
2	*N1:T3:A1:1-24*	*TAP8*	*29*	*49MTV-WRF*	*15cd*	*0.1450*	*0.384*	*0.068*	*28.020*	
2	*N1:T3:A1:1-25*	*N1:T3:A1:1-24*	*43*	*49MTV-WRF*	*15cd*	*0.1450*	*0.192*	*0.051*	*27.969*	
2	*N1:T3:A1:1-29*	*N1:T3:A1:1-24*	*12*	*49VO-WRF*	*15cd*	*0.0470*	*0.047*	*0.003*	*28.016*	
2	*N1:T3:A1:1-30*	*N1:T3:A1:1-25*	*20*	*49VO-WRF*	*15cd*	*0.0470*	*0.047*	*0.006*	*27.963*	

N1:T3:A1:2 — Distributed Load Voltage Drop

Starting Voltage: 29vdc
Min. Device Voltage: 23.vdc
Allowable % Drop: 20.7%
Primary Wire Gauge: 14ga
Home Run Wire Gauge: 14ga
Wire Res. Per Ft. 0.003070 @ 75° Celsius
Wire Res. Per Ft. 0.003070 @ 75° Celsius

Branch	Device #	From	Distance (Feet)	PID	Setting	Device Draw	Class B Calculations Current at Device	Voltage Drop	Voltage at Device	% Vdrop Wire Length
1	*TAP2*	*PANEL*	*11*	*JBOX*		*0.0000*	*0.000*	*0.000*	*29.000*	*Branch 1: 4.56%*
1	**N1:T3:A1:2-3**	**N1:T3:A1:2-17**	**49**	**49MTV-WRF**	**15cd**	**0.1450**	**1.816**	**0.546**	**28.649**	*Length: 457*
1	*N1:T3:A1:2-6*	*N1:T3:A1:2-3*	*75*	*49MTV-WRF*	*15cd*	*0.1450*	*1.126*	*0.518*	*28.131*	
1	*N1:T3:A1:2-7*	*N1:T3:A1:2-6*	*41*	*49MTV-WRF*	*15cd*	*0.1450*	*0.788*	*0.198*	*27.933*	
1	*N1:T3:A1:2-8*	*N1:T3:A1:2-7*	*24*	*49MTV-WRF*	*15cd*	*0.1450*	*0.596*	*0.088*	*27.845*	
1	*N1:T3:A1:2-9*	*N1:T3:A1:2-8*	*29*	*49VO-APPLW*	*30cd*	*0.0570*	*0.057*	*0.010*	*27.835*	
1	*N1:T3:A1:2-10*	*N1:T3:A1:2-8*	*31*	*49VO-APPLW*	*30cd*	*0.0570*	*0.057*	*0.011*	*27.834*	
1	*N1:T3:A1:2-11*	*N1:T3:A1:2-8*	*47*	*49MTV-WRF*	*15cd*	*0.1450*	*0.337*	*0.087*	*27.748*	
1	*N1:T3:A1:2-15*	*N1:T3:A1:2-11*	*35*	*49VO-WRF*	*15cd*	*0.0470*	*0.192*	*0.041*	*27.706*	
1	*N1:T3:A1:2-12*	*N1:T3:A1:2-15*	*31*	*49MTV-WRF*	*15cd*	*0.1450*	*0.145*	*0.028*	*27.679*	
1	*N1:T3:A1:2-13*	*N1:T3:A1:2-6*	*26*	*49VO-WRF*	*15cd*	*0.0470*	*0.047*	*0.008*	*28.124*	
1	*N1:T3:A1:2-14*	*N1:T3:A1:2-7*	*24*	*49VO-WRF*	*15cd*	*0.0470*	*0.047*	*0.007*	*27.926*	
1	*N1:T3:A1:2-16*	*N1:T3:A1:2-2*	*49*	*49VO-APPLC*	*15cd*	*0.0550*	*0.055*	*0.017*	*27.909*	
1	**N1:T3:A1:2-17**	**N1:T3:A1:2-6**	**32**	**49MTV-WRF**	**15cd**	**0.1450**	**0.145**	**0.028**	**28.131**	
1	**TAP1**	**N1:T3:A1:2-3**	**15**	**JBOX**		**0.0000**	**0.546**	**0.050**	**0.000**	
1	**N1:T3:A1:2-18**	**TAP1**	**19**	**49MTV-WRF**	**15cd**	**0.1450**	**0.546**	**0.064**	**0.000**	
1	**N1:T3:A1:2-19**	**N1:T3:A1:2-18**	**50**	**49VO-APPLW**	**75 w/Lens Kit**	**0.1280**	**0.256**	**0.079**	**0.000**	
1	**N1:T3:A1:2-20**	**N1:T3:A1:2-19**	**15**	**49VO-APPLW**	**75 w/Lens Kit**	**0.1280**	**0.128**	**0.012**	**0.000**	
1	**N1:T3:A1:2-21**	**N1:T3:A1:2-18**	**39**	**49MTV-WRF**	**15cd**	**0.1450**	**0.145**	**0.035**	**0.000**	

N1:T3:A1:3 — Distributed Load Voltage Drop

Starting Voltage: 29vdc
Min. Device Voltage: 23.vdc
Allowable % Drop: 20.7%
Primary Wire Gauge: 14ga
Home Run Wire Gauge: 14ga
Wire Res. Per Ft. 0.003070 @ 75° Celsius
Wire Res. Per Ft. 0.003070 @ 75° Celsius

Branch	Device #	From	Distance (Feet)	PID	Setting	Device Draw	Class B Calculations Current at Device	Voltage Drop	Voltage at Device	% Vdrop Wire Length
1	*TAP3*	*PANEL*	*186*	*JBOX*		*0.0000*	*1.568*	*1.791*	*27.209*	*Branch 1: 10.38%*
1	*N1:T3:A1:3-1*	*N1:T3:A1:3-5*	*21*	*49MTV-WRF*	*15cd*	*0.1450*	*0.145*	*0.019*	*26.860*	*Length: 908*
1	*N1:T3:A1:3-2*	*TAP3*	*18*	*49VO-APPLW*	*30cd*	*0.0570*	*0.057*	*0.006*	*27.203*	
1	*TAP4*	*TAP3*	*32*	*JBOX*		*0.0000*	*1.511*	*0.297*	*26.912*	
1	*N1:T3:A1:3-3*	*TAP4*	*16*	*49VO-APPLW*	*30cd*	*0.0570*	*0.057*	*0.006*	*26.907*	
1	*N1:T3:A1:3-4*	*TAP4*	*33*	*49VO-WRF*	*15cd*	*0.0470*	*0.047*	*0.010*	*26.903*	
1	*N1:T3:A1:3-5*	*TAP4*	*19*	*49MTV-WRF*	*15cd*	*0.1450*	*0.290*	*0.034*	*26.879*	
1	*N1:T3:A1:3-6*	*N1:T3:A1:3-5*	*28*	*49MTV-WRF*	*15cd*	*0.1450*	*0.145*	*0.025*	*26.854*	
1	*TAP5*	*TAP4*	*35*	*JBOX*		*0.0000*	*1.117*	*0.240*	*26.672*	
1	*N1:T3:A1:3-7*	*TAP5*	*27*	*49VO-WRF*	*15cd*	*0.0470*	*1.117*	*0.185*	*26.487*	
1	*N1:T3:A1:3-9*	*N1:T3:A1:3-7*	*44*	*49MTV-WRF*	*15cd*	*0.1450*	*1.070*	*0.289*	*26.198*	
1	*N1:T3:A1:3-8*	*N1:T3:A1:3-9*	*39*	*49MTV-WRF*	*75cd*	*0.1980*	*0.198*	*0.047*	*26.151*	
1	*TAP6*	*N1:T3:A1:3-9*	*14*	*JBOX*		*0.0000*	*0.529*	*0.045*	*26.153*	
1	*N1:T3:A1:3-10*	*TAP6*	*19*	*49VO-WRF*	*15cd*	*0.0470*	*0.047*	*0.005*	*26.147*	
1	*N1:T3:A1:3-11*	*TAP6*	*64*	*49MTV-WRF*	*15cd*	*0.1450*	*0.145*	*0.057*	*26.096*	
1	*TAP7*	*N1:T3:A1:3-13*	*18*	*JBOX*		*0.0000*	*0.629*	*0.070*	*26.113*	
1	*N1:T3:A1:3-12*	*TAP7*	*22*	*49MTV-WRF*	*15cd*	*0.1450*	*0.145*	*0.020*	*26.093*	
1	*N1:T3:A1:3-13*	*N1:T3:A1:3-9*	*13*	*49MTV-WRF*	*75cd*	*0.1980*	*0.198*	*0.016*	*26.182*	
1	*N1:T3:A1:3-14*	*TAP7*	*24*	*49MTV-WRF*	*75cd*	*0.1980*	*0.245*	*0.036*	*26.077*	
1	*N1:T3:A1:3-15*	*TAP6*	*47*	*49MTV-WRF*	*15cd*	*0.1450*	*0.337*	*0.097*	*26.055*	
1	*N1:T3:A1:3-16*	*N1:T3:A1:3-15*	*35*	*49VO-WRF*	*15cd*	*0.0470*	*0.192*	*0.041*	*26.014*	
1	*N1:T3:A1:3-17*	*N1:T3:A1:3-16*	*26*	*49MTV-WRF*	*15cd*	*0.1450*	*0.145*	*0.023*	*25.991*	
1	*N1:T3:A1:3-18*	*N1:T3:A1:3-14*	*39*	*49VO-WRF*	*15cd*	*0.0470*	*0.047*	*0.011*	*26.065*	
1	*N1:T3:A1:3-20*	*TAP7*	*38*	*49MTV-WRF*	*15cd*	*0.1450*	*0.192*	*0.045*	*26.068*	
1	*N1:T3:A1:3-19*	*N1:T3:A1:3-20*	*26*	*49VO-WRF*	*15cd*	*0.0470*	*0.047*	*0.008*	*26.060*	
1	*N1:T3:A1:3-21*	*TAP7*	*25*	*49VO-WRF*	*15cd*	*0.0470*	*0.047*	*0.007*	*26.106*	

City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: W. Polk
Date: Oct 13, 2022
2021 INTERNATIONAL CODES & 2020 NEC

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.

KEYNOTES:

1. DEVICE REMOVED FOR CONSTRUCTION.
2. DEVICE IS INTERIM FOR CONSTRUCTION. TO BE REMOVED, REPLACED, OR RELOCATED DURING BUILDOUT. DEVICE DESCRIPTOR CHANGED.
3. DEVICE DESCRIPTOR CHANGE ONLY.
4. DEVICE WAS INTERIM FOR CONSTRUCTION AND IS NOW REMOVED. DEVICE QUANTITY CHANGED.
5. EXISTING DEVICE REINSTALLED. RE-USE EXISTING HEAD, BASE, ADDRESS, LOCATION, AND WIRING.
6. DEVICE REMOVED TO BE RE-USED ON ANOTHER CIRCUIT.

Johnson Controls
DISTRICT 1-418
10001 E 104TH AVE
AURORA, CO 80010
SERVICE: 303-355-6000
PHONE 303-355-6000
FAX 303-355-6015

NICET CERTIFICATION INFORMATION
NANCY S. WILTSIE
NICET Fire Alarm, III
Certification #93727
Valid Through: 03/01/24
September 21, 2022

THE MEDICAL CENTER OF AURORA - SOUTH TOWER EXPANSION

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

Revisions shown with ⚠ symbol

ISSUE LOG: MARK	DATE	CAD	CHK	DESCRIPTION

FOR PERMIT

DRAWN BY:	CCD
CHECKED BY:	CBR
ISSUE DATE:	7/26/22
JOB #:	
PROJECT #:	419-650189804

JOHNSON CONTROLS © 2022

SYSTEM: **FIRE ALARM SYSTEM**

SHEET: **NODE-1 TRANSPONDER-3 BUILDOUT CALCS & SCHEDUALS CONT.**

FA-609

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FILE PATH: C:\Users\jlyuschc\Johnson Controls\Project Electronics - Medical Center of Aurora\1501 S Potomac - Aurora South\South Tower - Node 1\33-CR Expansion - 2022 - 650189804\Fire\FA-601.dwg
LAST SAVED BY: JRMUCHC
LAST PRINTED: 9/21/2022 1:56:25 PM
30" x 42" Arch E1 Size

MEDICAL CENTER OF AURORA SOUTH TOWER TRANSPONDER 4 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*
4100-0634	*1*	*POWER DISTRIBUTION MODULE 120V*		*0.0000*	*0.0000*	*0.0000*	*0.0000*
4100-0636	*1*	*BOX TO BOX HARNESS KIT*		*0.0000*	*0.0000*	*0.0000*	*0.0000*
4100-2300	*1*	*EXPANSION BAY (PHASE 10 ONLY)*		*0.0000*	*0.0000*	*0.0000*	*0.0000*
4100-5311	*1*	*ENHANCED POWER SUPPLY, 3 CHANNELS, IDNet, 120V*		*0.2250*	*0.2250*	*0.4900*	*0.4900*
4009-9601	*2*	*IDNAC REPEATER 120V PLATINUM UL/ULC*		*0.0700*	*0.1400*	*0.0960*	*0.1920*
		Panel Totals			**0.4520**		**0.7690**
IDNet Addressable Devices (SLC)							
4090-9001	*3*	*IDNET SUPERVISED IAM*	*				
4090-9002	**40**	**IDNET RELAY IAM**	*				
4098-9714	**100**	**TRUEALARM PHOTO SMOKE SENSOR**					
4098-9733	**9**	**TRUEALARM HEAT SENSOR**	*				
4098-9755	*2*	*TRUEALARM DUCT SMOKE SENSOR W/O RELAY OUTPUT*	*				
4098-9756	*10*	*TRUEALARM DUCT SMOKE SENSOR W/ RELAY OUTPUT*	*				
4098-9792	**109**	**TRUEALARM SENSOR BASE**	*				
4099-9004	*4*	*ADDRESSABLE SINGLE ACTION MANUAL STATION*	*				
4099-9006	**1**	**ADDRESSABLE DOUBLE ACTION MANUAL STATION, PUSH**	*				
Miscellaneous Peripheral Devices That Require (Additional) System Power							
4098-9843	*10*	*ENCAPSULATED RELAY PAM-SD*		*0.0000*	*0.0000*	*0.0150*	*0.1500*
4098-9756	*10*	*TRUEALARM DUCT SMOKE SENSOR W/ RELAY OUTPUT*		*0.0030*	*0.0300*	*0.0150*	*0.1500*
4603-9101	*4*	*SERIAL LCD ANNUNCIATOR*		*0.0650*	*0.2600*	*0.1400*	*0.5600*
2088-9021	**11**	**ENCAPSULATED RELAY PAM-1**		**0.0000**	**0.0000**	**0.0150**	**0.1650**
4098-9605	*2*	*PHOTO SMOKE DETECTOR SSD*		*0.0001*	*0.0002*	*0.0000*	*0.0000*
4098-9788	*2*	*2 WIRE DETECTOR BASE*		*0.0000*	*0.0000*	*0.0000*	*0.0000*
2098-9806	*10*	*REMOTE TEST STATION W/ LED AND KEY SWITCH*		*0.0000*	*0.0000*	*0.0000*	*0.0000*
IDNac Notification Appliances			**Setting**				
4009-9601	*2*	*IDNAC REPEATER 120V PLATINUM UL/ULC*	*	*0.0032*	*0.0064*	*0.0032*	*0.0064*
4906-9202	*6*	*ADDRESSABLE CEILING MNT MC V/O, RED*	*15*	*0.0008*	*0.0048*	*0.0600*	*0.3600*
4906-9202	*1*	*ADDRESSABLE CEILING MNT MC V/O, RED*	*75*	*0.0008*	*0.0008*	*0.1800*	*0.1800*
49MT-WRF	*2*	*MULTI-TONE AUDIBLE ONLY, RED, WALL MOUNT*	*520 H*	*0.0016*	*0.0032*	*0.0990*	*0.1980*
49MTV-WRF	**18**	**MULTI-TONE A/V, RED, WALL MOUNT**	**15**	**0.0016**	**0.0288**	**0.1450**	**2.6100**
49MTV-WRF	*11*	*MULTI-TONE A/V, RED, WALL MOUNT*	*30*	*0.0016*	*0.0176*	*0.1630*	*1.7930*
49MTV-WRF	*6*	*MULTI-TONE A/V, RED, WALL MOUNT*	*75*	*0.0016*	*0.0096*	*0.1980*	*1.1880*
49VO-APPLC	**11**	**STROBE, APPLIANCE ONLY, CEILING MOUNT**	**15**	**0.0008**	**0.0088**	**0.0550**	**0.6050**
49VO-APPLC	*2*	*STROBE, APPLIANCE ONLY, CEILING MOUNT*	*30*	*0.0008*	*0.0016*	*0.0830*	*0.1660*
49VO-APPLC	*2*	*STROBE, APPLIANCE ONLY, CEILING MOUNT*	*75*	*0.0008*	*0.0016*	*0.1530*	*0.3060*
49VO-APPLW	*1*	*VO APPLIANCE ONLY WALL MT*	*15*	*0.0008*	*0.0008*	*0.0470*	*0.0470*
49VO-APPLW	*4*	*VO APPLIANCE ONLY WALL MT*	*30*	*0.0008*	*0.0032*	*0.0570*	*0.2280*
49VO-APPLW	*1*	*VO APPLIANCE ONLY WALL MT*	*75*	*0.0008*	*0.0008*	*0.1000*	*0.1000*
49VO-WRF	*30*	*VO, WALL MT, RED, FIRE LABEL*	*15*	*0.0008*	*0.0240*	*0.0470*	*1.4100*
49VO-WRF	*4*	*VO, WALL MT, RED, FIRE LABEL*	*30*	*0.0008*	*0.0032*	*0.0570*	*0.2280*
		Total IDNac Device Current:			**0.1160**		**9.5254**
		IDNac Current Boost for 29vdc Regulated Output **					**5.4306**
		Peripheral Totals			**0.2902**		**15.9810**
		RUI Totals	**4**		**0.0140**		**0.0140**
		Address Totals	**169 Addresses**		**0.1352**		**0.1690**
*** Device Address current draw included below (See Additional Current Draws):**			**System Totals*:**	**Standby**	**1.0074**	**Alarm**	**16.9330**

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".

Battery Set #1 (Cabinet/Charger #1)			Standby Current	Standby Total	Alarm Current	Alarm Total
Select ALL Power Supplies on this battery set:						
EPS-1				0.6734		7.1974
		Sub Total		**0.6734**		**7.1974**
Additional Current Draws:						
IDNac Current Boost for 29vdc Regulated Output **						3.1900
RUI Connected Peripheral Devices	4	x 0.0035		= 0.0140	x 0.0035	= 0.0140
MAPNET/IDNet Device Address Communication Current	169	x 0.000800		= 0.1352	x 0.001000	= 0.1690
		Sub Total		**0.8226**		**10.5704**
Spare addressable point capacity	**20%**	34 x 0.0008		= 0.0272	x 0.001	= 0.0340
		Total		**0.8498**		**10.6044**
Standby Time =	**4** Hrs	x 0.8498		= 3.3992	Standby Ah	
Alarm Time =	**5** Min	0.08333 x 10.6044		= 0.8837	Alarm Ah	
				4.2829		
Additional Spare Battery Capacity =	**20%**			+ 0.8566		
				5.1395		
Battery Discharge Factor =	**20%**			+ 1.0279		
Minimum Battery Required	**2081-9272 6.2AH (2x)**			**6.1674**		
Battery Supplied	**2081-9287 25AH (2x)**					

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

**** IDNac Current Boost formula: ((29.5 * IDNac Alarm Current) / .92) / 20.4 = Adjusted Current**
DC-DC Converter Output = 29.5vdc. Terminal Output is 29vdc due to 0.5vdc internal loss.
Converter Worst Case efficiency is 92%, 20.4vdc represents battery output in 85% depleted state

Repeater Power Supply Battery Set:			Standby	Standby Total	Alarm	Alarm Total
EPR-1				0.0836		**1.2240**
Additional Current Draw:						
IDNac Current Boost for 29vdc Regulated Output **				0.0000		0.6431
		Total		**0.0836**		**1.8671**
Standby Time =	**4** Hrs	x 0.8498		= 0.3344	Standby Ah	
Alarm Time =	**5** Min	0.08333 x 1.8671		= 0.1556	Alarm Ah	
				0.4900		
Additional Spare Battery Capacity =	**20%**			+ 0.0980		
				0.5880		
Battery Discharge Factor =	**20%**			+ 0.1176		
Minimum Battery Required	**2081-9272 6.2AH (2x)**			**0.7056**		
Battery Supplied	**2081-9272 6.2AH (2x)**					

Repeater Power Supply Battery Set:			Standby Total	Alarm Total
EPR-2			0.1012	**2.8980**
Additional Current Draw:				
IDNac Current Boost for 29vdc Regulated Output **			0.0000	1.5975
		Total	**0.1012**	**4.4955**
Standby Time =	**4** Hrs	x 0.8498	= 0.4048	Standby Ah
Alarm Time =	**5** Min	0.08333 x 4.4955	= 0.3746	Alarm Ah
			0.7794	
Additional Spare Capacity =	**20%**		+ 0.1559	
			0.9353	
Additional Spare Battery Capacity =	**20%**		+ 0.1871	
Minimum Battery Required	**2081-9272 6.2AH (2x)**		**1.1224**	
Battery Supplied	**2081-9272 6.2AH (2x)**			

IDNET CHANNEL N1:T4:M11		ADDRESSES IN USE: 169 (67.6%) | SPARE ADDRESSES: 81 (32.4%)		SWITCH SETTINGS								
Address	Device Type	Point Type	Location Description	1								
N1:T4:M11-1	*PHOTO*	*SMOKE*	*1:M11-1 FLR 1W ELEC 1-CS16*	X							ON	
N1:T4:M11-2	*PHOTO*	*SMOKE*	*1:M11-2 FLR 1W OR-11 1-SS10 SW*		X						ON	
N1:T4:M11-3	*PHOTO*	*SMOKE*	*1:M11-3 FLR 1W OR-11 1-SS10 NE*	X	X						ON	
N1:T4:M11-4	*RIAM*	*DHOLDER*	*1:M11-4 FLR 1W OR-11 1-SS100*			X					ON	
N1:T4:M11-5	*HEAT*	*HEAT*	*1:M11-5 FLR 1W TOILET CS15*	X		X					ON	
N1:T4:M11-6	*PHOTO*	*VSMOKE*	*1:M11-6 FLR 1W CORR 1-CS14*		X	X					ON	
N1:T4:M11-7	*PHOTO*	*VSMOKE*	*1:M11-7 FLR 1W CORR 1-CS14*	X	X	X					ON	
N1:T4:M11-8	*PHOTO*	*SMOKE*	*1:M11-8 FLR 1W STER STG 1-CS10 NORTH*				X				ON	
N1:T4:M11-9	*PHOTO*	*SMOKE*	*1:M11-9 FLR 1W STER STG 1-CS10*	X			X				ON	
N1:T4:M11-10	*PHOTO*	*SMOKE*	*1:M11-10 FLR 1W JAN1-CS13*		X		X				ON	
3 **N1:T4:M11-11**	**PHOTO**	**VSMOKE**	**1:M11-11 FLR 1W STORAGE 1012**	X	X		X				ON	
N1:T4:M11-12	*PHOTO*	*SMOKE*	*1:M11-12 FLR 1W STER STG 1-CS10 CTR*			X	X				ON	
N1:T4:M11-13	*PHOTO*	*SMOKE*	*1:M11-13 FLR 1W CENTRAL STERILE*	X		X	X				ON	
N1:T4:M11-14	*PHOTO*	*SMOKE*	*1:M11-14 FLR 1W STER STG 1-CS10 SOUTH*		X	X	X				ON	
N1:T4:M11-15	*PHOTO*	*SMOKE*	*1:M11-15 FLR 1W STER STG 1-CS10 SOUTH*	X	X	X	X				ON	
N1:T4:M11-16	*PHOTO*	*SMOKE*	*1:M11-16 FLR 1W MAKE UP 1-CS07 W*					X			ON	
N1:T4:M11-17	*PHOTO*	*SMOKE*	*1:M11-17 FL 1W CENTRAL STERILE*	X				X			ON	
N1:T4:M11-18	*PHOTO*	*SMOKE*	*1:M11-18 FL 1W MAKE UP 1-CS07 @ CORR*		X			X			ON	
N1:T4:M11-19	*PHOTO*	*SMOKE*	*1:M11-19 FL 1W STERILIZER 1-CS08*	X	X			X			ON	
N1:T4:M11-20	*PHOTO*	*SMOKE*	*1:M11-20 FL 1W CLEAN STORAGE 1-CS06*			X		X			ON	
N1:T4:M11-21	*PHOTO*	*SMOKE*	*1:M11-21 FL 1W DECON 1-CS03 NORTH*	X		X		X			ON	
N1:T4:M11-22	*PHOTO*	*SMOKE*	*1:M11-22 FL 1W DECON 1-CS03 SOUTH*		X	X		X			ON	
N1:T4:M11-23	*PHOTO*	*SMOKE*	*1:M11-23 FL 1W CART WASH 1-CS04 NORTH*	X	X	X		X			ON	
N1:T4:M11-24	*PHOTO*	*SMOKE*	*1:M11-24 FL 1W CART WASH 1-CS04 SOUTH*				X	X			ON	
N1:T4:M11-25	*PHOTO*	*SMOKE*	*1:M11-25 FL 1W CSS OFF 1-CS02*	X			X	X			ON	
N1:T4:M11-26	*PHOTO*	*SMOKE*	*1:M11-26 FL 1W DI WATER 1-CS09*		X		X	X			ON	
3 *N1:T4:M11-27*	*PHOTO*	*SMOKE*	**1:M11-27 FL 1W STORAGE 1103**	X	X		X	X			ON	
N1:T4:M11-28	*PHOTO*	*SMOKE*	*1:M11-28 FL 1W CLEAN STORAGE 1-CS05*			X	X	X			ON	
N1:T4:M11-29			*SPARE*	X		X	X	X			ON	
N1:T4:M11-30	*RPHOTO*	*LSDUCT*	*1:M11-30 FLR 1W STER STG SUP FSD 1-CS10*		X	X	X	X			ON	
N1:T4:M11-31	*RPHOTO*	*LSDUCT*	*1:M11-31 FLR 1W CARTWASH 1-CS04 RET FSD*	X	X	X	X	X			ON	
N1:T4:M11-32			*SPARE*						X		ON	
N1:T4:M11-33	*RPHOTO*	*LSDUCT*	*1:M11-33 FLR 1W SRG VEND 1-CS01 RET FSD*	X					X		ON	
N1:T4:M11-34			*SPARE*		X				X		ON	
N1:T4:M11-35	*RPHOTO*	*LSDUCT*	*1:M11-35 FLR 1W DECON 1- CS03 SUP FSP*	X	X				X		ON	
N1:T4:M11-36			*SPARE*			X			X		ON	
N1:T4:M11-37			*SPARE*	X					X		ON	
N1:T4:M11-38			*SPARE*		X	X			X		ON	
N1:T4:M11-39	*RIAM*	*RELAY*	*1:M11-39 FLR 1W OR #11 ALARM TO DCC*	X	X	X			X		ON	
N1:T4:M11-40	*RIAM*	*RELAY*	*1:M11-40 FLR 1W OR 83 ALARM TO DDC*				X		X		ON	
N1:T4:M11-41	*RPHOTO*	*LSDUCT*	*1:M11-41 FLR 1W ELEC RM 1-CS16 SUP FSD*	X			X		X		ON	
N1:T4:M11-42	*RPHOTO*	*LSDUCT*	*1:M11-42 FLR 1W ELEC RM 1-CS16 RET FSD*		X		X		X		ON	
N1:T4:M11-43	*RPHOTO*	*LSDUCT*	*1:M11-43 FLR 1W TLT 1-CS15 SUP FSD*	X	X		X		X		ON	
N1:T4:M11-44	*RPHOTO*	*LSDUCT*	*1:M11-44 FLR 1W OR-11 1-SS100 RET FSD*			X	X		X		ON	
N1:T4:M11-45	*PHOTO*	*VSMOKE*	*1:M11-45 FLR 1W OR-1 1-SS118 NE*	X		X	X		X		ON	
N1:T4:M11-46	*PHOTO*	*VSMOKE*	*1:M11-46 FLR 1W OR-1 1-SS118 SW*		X	X	X		X		ON	
N1:T4:M11-47	*RIAM*	*DHOLDER*	*1:M11-47 FLR 1W OR-1 1-SS118 D/H*	X	X	X	X		X		ON	
N1:T4:M11-48	*PHOTO*	*VSMOKE*	*1:M11-48 FLR 1W OR-2 1-SS119 NE*					X	X		ON	
N1:T4:M11-49	*PHOTO*	*VSMOKE*	*1:M11-49 FLR 1W OR-2 1-SS119 SW*	X				X	X		ON	
N1:T4:M11-50	*RIAM*	*DHOLDER*	*1:M11-50 FLR 1W OR-2 1-SS119 D/H*		X			X	X		ON	
N1:T4:M11-51	*PHOTO*	*VSMOKE*	*1:M11-51 FLR 1W CYSTO OR-3 1-SS129 NE*	X	X			X	X		ON	
N1:T4:M11-52	*PHOTO*	*VSMOKE*	*1:M11-52 FLR 1W CYSTO OR-3 1-SS129 SW*			X		X	X		ON	
N1:T4:M11-53	*RIAM*	*DHOLDER*	*1:M11-53 FLR 1W CYSTO OR-3 1-SS129 D/H*	X		X		X	X		ON	
N1:T4:M11-54	*PHOTO*	*VSMOKE*	*1:M11-54 FLR 1W EQUIP STG 1-SS131*		X	X		X	X		ON	
N1:T4:M11-55	*PHOTO*	*VSMOKE*	*1:M11-55 FLR 1W WOMENS LOCKER 1-SS135*	X	X	X		X	X		ON	
N1:T4:M11-56	*HEAT*	*HEAT*	*1:M11-56 FLR 1W WOMENS BATH 1-SS136*				X	X	X		ON	
N1:T4:M11-57	*PHOTO*	*VSMOKE*	*1:M11-57 FLR 1W MENS LOCKER 1-SS138*	X			X	X	X		ON	
N1:T4:M11-58	*PHOTO*	*VSMOKE*	*1:M11-58 FLR 1W NURSE LOUNGE 1-SS139*		X		X	X	X		ON	
N1:T4:M11-59			*SPARE*	X	X		X	X	X		ON	
N1:T4:M11-60			*SPARE*			X	X	X	X		ON	
N1:T4:M11-61			*SPARE*	X		X	X	X	X		ON	
N1:T4:M11-62	*RPHOTO*	*LSDUCT*	*1:M11-62 FLR 1W OR-11 1-SS100 SUP FSD*		X	X	X	X	X		ON	
N1:T4:M11-63	*RPHOTO*	*LSDUCT*	*1:M11-63 FLR 1W CORR 1-SS112 SUP FSD*	X	X	X	X	X	X		ON	
N1:T4:M11-64			*SPARE*							X	ON	
N1:T4:M11-65	*RIAM*	*RELAY*	*1:M11-65 FLR 1W OR-1 PHOENIX VALVE*	X						X	ON	
N1:T4:M11-66	*RIAM*	*RELAY*	*1:M11-66 FLR 1W OR-2 PHOENIX VALVE*		X					X	ON	
N1:T4:M11-67	*PHOTO*	*VSMOKE*	*1:M11-67 FLR 1W CORR 1-SS0237 @ STER STG*	X	X					X	ON	
N1:T4:M11-68	*PHOTO*	*VSMOKE*	*1:M11-68 FLR 1W CORR 1-SS037 @ STG ALC*			X				X	ON	
N1:T4:M11-69	*PHOTO*	*VSMOKE*	*1:M11-69 FLR 1W CORR 1-SS029 @ N CORR*	X		X				X	ON	
N1:T4:M11-70	*PHOTO*	*SMOKE*	*1:M11-70 FLR 1W CORR 1-SS036*		X	X				X	ON	
N1:T4:M11-71	*PHOTO*	*SMOKE*	*1:M11-71 FLR 1W CORR 1-SS036*	X	X	X				X	ON	
N1:T4:M11-72	*PHOTO*	*SMOKE*	*1:M11-72 FLR 1W STOR 1-SS035*				X			X	ON	
N1:T4:M11-73	*PHOTO*	*SMOKE*	*1:M11-73 FLR 1W SOILED FLUIDS 1-SS032*	X			X			X	ON	
N1:T4:M11-74	*RIAM*	*DHOLDER*	*1:M11-74 FLR 1W OR 4 CORR 1-SS036*		X		X			X	ON	
N1:T4:M11-75	*RIAM*	*RELAY*	*1:M11-75 FLR 1W OR 4 PHOENIX VALVE*	X	X		X			X	ON	
N1:T4:M11-76	*PHOTO*	*SMOKE*	*1:M11-76 FLR 1W DAVINCI OR 4 1-SS031 NW*			X	X			X	ON	
N1:T4:M11-77	*PHOTO*	*SMOKE*	*1:M11-77 FLR 1W DAVINCI OR 4 1-SS031 SE*	X		X	X			X	ON	
N1:T4:M11-78	*PHOTO*	*VSMOKE*	*1:M11-78 FLR 1W PASS 1-PA11*		X	X	X			X	ON	
N1:T4:M11-79	*PHOTO*	*VSMOKE*	*1:M11-79 FLR 1W CLEAN UTILITY 1-PA07*	X	X	X	X			X	ON	
5 **N1:T4:M11-80**	**PHOTO**	**VSMOKE**	**1:M11-80 FLR 1W PRIVATE PACU BAY 1100**					X		X	ON	
N1:T4:M11-81	*PHOTO*	*VSMOKE*	*1:M11-81 FLR 1W PACU RECOVERY 1-PA01 N*	X				X		X	ON	
N1:T4:M11-82	*PHOTO*	*VSMOKE*	*1:M11-82 FLR 1W PASS 1-PA12*		X			X		X	ON	
N1:T4:M11-83	*PHOTO*	*VSMOKE*	*1:M11-83 FLR 1W STF LNGE 1-PA14*	X	X			X		X	ON	
N1:T4:M11-84	*HEAT*	*HEAT*	*1:M11-84 FLR 1W TLT PA15*			X		X		X	ON	
N1:T4:M11-85	*PHOTO*	*SMOKE*	*1:M11-85 FLR 1W PACU RECOVERY 1-PA01 S*	X		X		X		X	ON	
N1:T4:M11-86	*PHOTO*	*SMOKE*	*1:M11-86 FLR 1W SOILED UTILITY 1-PA08*		X	X		X		X	ON	
N1:T4:M11-87	*PHOTO*	*SMOKE*	*1:M11-87 FLR 1W PASS 1-PA06*	X	X	X		X		X	ON	
N1:T4:M11-88	*PHOTO*	*SMOKE*	*1:M11-88 FLR 1W ELEC 1-PA05*				X	X		X	ON	
N1:T4:M11-89	*ADRPUL*	*PULL*	*1:M11-89 FLR 1W NURSE STATION A 1-PA10*	X			X	X		X	ON	
N1:T4:M11-90	*RIAM*	*RRELAY*	*1:M11-90 FLR 1W DAVINCI OR 4 1-SS029*		X		X	X		X	ON	
N1:T4:M11-91			*SPARE*	X	X		X	X		X	ON	
N1:T4:M11-92	*PHOTO*	*VSMOKE*	*1:M11-92 FLR 1W CORR 1-SS122 @STORAGE*			X	X	X		X	ON	
N1:T4:M11-93	*PHOTO*	*VSMOKE*	*1:M11-93 FLR 1W STORAGE 1-SS125*	X		X	X	X		X	ON	
N1:T4:M11-94			*SPARE*		X	X	X	X		X	ON	
N1:T4:M11-95			*SPARE*	X	X	X	X	X		X	ON	
N1:T4:M11-96			*SPARE*						X	X	ON	
N1:T4:M11-97			*SPARE*	X					X	X	ON	
N1:T4:M11-98			*SPARE*		X				X	X	ON	
N1:T4:M11-99			*SPARE*	X	X				X	X	ON	
N1:T4:M11-100	*PHOTO*	*VSMOKE*	*1:M11-100 FLR 1W PASS 1-SS204 S*			X			X	X	ON	
N1:T4:M11-101	*PHOTO*	*VSMOKE*	*1:M11-101 FLR 1W PASS 1-SS204 CTR*	X		X			X	X	ON	
N1:T4:M11-102	*PHOTO*	*VSMOKE*	*1:M11-102 FLR 1W PASS 1-SS204 N*		X	X			X	X	ON	
N1:T4:M11-103	*PHOTO*	*VSMOKE*	*1:M11-103 FLR 1W STORE ROOM 1-SS201*	X	X	X			X	X	ON	
N1:T4:M11-104	*PHOTO*	*VSMOKE*	*1:M11-104 FLR 1W EVS 1-SS202*				X		X	X	ON	
N1:T4:M11-105	*HEAT*	*HEAT*	*1:M11-105 FLR 1W TOILET 1-SS203*	X			X		X	X	ON	
N1:T4:M11-106	*ADRPUL*	*PULL*	*1:M11-106 FLR 1W NURSE STATION A 1-SS205*		X		X		X	X	ON	
N1:T4:M11-107	*PHOTO*	*VSMOKE*	*1:M11-107 FLR 1W PASS E 1-SS212*	X	X		X		X	X	ON	
N1:T4:M11-108	*HEAT*	*HEAT*	*1:M11-108 FLR 1W TOILET 1-SS206*				X		X	X	ON	
N1:T4:M11-109	*PHOTO*	*VSMOKE*	*1:M11-109 FLR 1W MEDS 1-SS207*	X			X		X	X	ON	
N1:T4:M11-110	*PHOTO*	*VSMOKE*	*1:M11-110 FLR 1W SOILED UTILITY 1-SS208*		X	X	X		X	X	ON	
N1:T4:M11-111	*PHOTO*	*VSMOKE*	*1:M11-111 FLR 1W OFFICE 1-SS209*	X	X	X	X		X	X	ON	
N1:T4:M11-112	*PHOTO*	*VSMOKE*	*1:M11-112 FLR 1W PASSAGE 1-SS210*					X	X	X	ON	
N1:T4:M11-113	*PHOTO*	*VSMOKE*	*1:M11-113 FLR 1W WORK ROOM 1-SS215*	X				X	X	X	ON	
N1:T4:M11-114	*PHOTO*	*VSMOKE*	*1:M11-114 FLR 1W CLEAN UTILITY 1-SS214*		X			X	X	X	ON	
N1:T4:M11-115	*ADRPUL*	*PULL*	*1:M11-115 FLR 1W NURSE STATION 1-SS213*	X	X			X	X	X	ON	
N1:T4:M11-116	*PHOTO*	*SMOKE*	*1:M11-116 FLR 1W PASSAGE W 1-SS212*			X		X	X	X	ON	
N1:T4:M11-117	*HEAT*	*HEAT*	*1:M11-117 FLR 1W TOILET 1-SS221*	X		X		X	X	X	ON	
N1:T4:M11-118	*PHOTO*	*VSMOKE*	*1:M11-118 FLR 1W NOURISHMENT 1-SS222*		X	X		X	X	X	ON	
N1:T4:M11-119	*PHOTO*	*VSMOKE*	*1:M11-119 FLR 1W PASS E 1-SS224*	X	X	X		X	X	X	ON	
N1:T4:M11-120	*PHOTO*	*VSMOKE*	*1:M11-120 FLR 1W PASS N 1-SS224*				X	X	X	X	ON	
N1:T4:M11-121	*PHOTO*	*VSMOKE*	*1:M11-121 FLR 1W PASS S 1-SS224*	X			X	X	X	X	ON	
N1:T4:M11-122	*ADRPUL*	*PULL*	*1:M11-122 FLR 1W NURSE STAT C 1-SS223*		X		X	X	X	X	ON	
N1:T4:M11-123	*HEAT*	*HEAT*	*1:M11-123 FLR 1W TLT 1-SS219*	X	X		X	X	X	X	ON	
N1:T4:M11-124	*HEAT*	*HEAT*	*1:M11-124 FLR 1W TLT 1-SS218*			X	X	X	X	X	ON	
N1:T4:M11-125	*PHOTO*	*VSMOKE*	*1:M11-125 FLR 1W NURSE LOUNGE 1-SS217*	X		X	X	X	X	X	ON	

IDNET CHANNEL N1:T4:M11		ADDRESSES IN USE: 169 (67.6%) | SPARE ADDRESSES: 81 (32.4%)		SWITCH SETTINGS								
Address	Device Type	Point Type	Location Description	1								
N1:T4:M11-126	*HEAT*	*HEAT*	*1:M11-126 FLR 1W TOILET 1-SS220*		X	X	X	X	X	X	ON	
N1:T4:M11-127	*PHOTO*	*VSMOKE*	*1:M11-127 FLR 1W COMM 1-SS216*	X	X	X	X	X	X	X	ON	
N1:T4:M11-128	*PHOTO*	*LSDUCT*	*1:M11-128 ROOF RTU-3 SUP DET TO DDC*							X	ON	
N1:T4:M11-129	*PHOTO*	*LSDUCT*	*1:M11-129 ROOF RTU-3 RET DET TO DDC*	X						X	ON	
N1:T4:M11-130	*RIAM*	*RELAY*	*1:M11-130 ROOF RTU-3 SUPPLY TO DDC*		X					X	ON	
N1:T4:M11-131	*RIAM*	*RELAY*	*1:M11-131 ROOF RTU-3 RETURN TO DDC*	X	X					X	ON	
N1:T4:M11-132	*RIAM*	*RELAY*	*1:M11-132 FLR 1W ALARM TO DDC AHU-3*			X				X	ON	
N1:T4:M11-133	*RIAM*	*RELAY*	*1:M11-133 FLR 1W SUPV FSD TO DDC AHU-3*	X		X				X	ON	
N1:T4:M11-134	*RIAM*	*RELAY*	*1:M11-134 FLR 1W RET FSD TO DDC AHU-3*		X	X				X	ON	
N1:T4:M11-135	*RIAM*	*RRELAY*	*1:M11-135 FL 1W PACU BY HALL SEC RELEASE*	X	X	X				X	ON	
N1:T4:M11-136			*SPARE*				X			X	ON	
N1:T4:M11-137	*PHOTO*	*VSMOKE*	*1:M11-137 FLR 1 1W CHANGING AREA 7200A*	X			X			X	ON	
N1:T4:M11-138	*PHOTO*	*VSMOKE*	*1:M11-138 FLR 1W BREAK RM 7300A*		X		X			X	ON	
N1:T4:M11-139	*PHOTO*	*VSMOKE*	*1:M11-139 FLR 1W O/S RADIOLOGY 05 7202A*	X	X		X			X	ON	
N1:T4:M11-140	*PHOTO*	*VSMOKE*	*1:M11-140 FLR1 1W STAFF HALL 7203A E*			X	X			X	ON	
N1:T4:M11-141	*PHOTO*	*VSMOKE*	*1:M11-141 FLR 1W STAFF HALL 7203A W*	X		X	X			X	ON	
N1:T4:M11-142	*PHOTO*	*VSMOKE*	*1:M11-142 FLR 1W TECH WORK AREA 7204A*		X	X	X			X	ON	
N1:T4:M11-143	*PHOTO*	*VSMOKE*	*1:M11-143 FLR 1W EQUIPMENT RM 7203B*	X	X	X	X			X	ON	
N1:T4:M11-144	*PHOTO*	*VSMOKE*	*1:M11-144 FLR 1W CONTROL AREA 7402B*					X		X	ON	
N1:T4:M11-145	*PHOTO*	*VSMOKE*	*1:M11-145 FLR 1W PATIENT HOLDING 7402D*	X				X		X	ON	
N1:T4:M11-146	*PHOTO*	*VSMOKE*	*1:M11-146 FLR1 1W CONTROL AREA 7402B S*		X			X		X	ON	
N1:T4:M11-147	*IAM*	*SMOKE*	*1:M11-147 FLR 1W MR1 2 7402A HW SMKDET*	X	X			X		X	ON	
N1:T4:M11-148			*SPARE*		X			X		X	ON	
N1:T4:M11-149			*SPARE*	X		X		X		X	ON	
N1:T4:M11-150	*IAM*	*SDUCT*	*1:M11-150 FLR 1W CRAC1 INTERGRAL SMK DET*		X	X		X		X	ON	
N1:T4:M11-151	*PHOTO*	*VSMOKE*	*1:M11-151 FLR 1W EQUIP RM 1W-8902A*	X	X	X		X		X	ON	
N1:T4:M11-152	*PHOTO*	*VSMOKE*	*1:M11-152 FLR1 IR RM 03 1W-8113A N*				X	X		X	ON	
N1:T4:M11-153	*PHOTO*	*VSMOKE*	*1:M11-153 FLR1 IR RM 03 1W-8113A S*	X			X	X		X	ON	
N1:T4:M11-154	*PHOTO*	*VSMOKE*	*1:M11-154 FLR 1W CONTROL RM 1W-8112A*		X		X	X		X	ON	
N1:T4:M11-155	*RIAM*	*RELAY*	*1:M11-155 FLR 1W IR RM 03 MUSIC SHUT-OFF*	X	X		X	X		X	ON	
*N1:T4:M11-

MEDICAL CENTER OF AURORA SOUTH TOWER TRANSPONDER 4 - EPS-1 CIRCUIT SUMMARY & VOLTAGE DROP

Channel	Description	Alarm Current	% Drop	Unit Load*	Wire Length	Spare Current	Spare VoltageDrop
N1:T4:A2:1	**FLR 1W OR 11, STERILE STG**	**2.241A**	**5.80%**	**36**	**795**	**25%**	**72%**
N1:T4:A2:2	*FLR 1W OR 1-4, PACU CORR*	*1.346A*	*3.24%*	*23*	*690*	*55%*	*84%*
N1:T4:A2:3	*FLR 1W OR RECOVERY*	*2.008A*	*4.45%*	*30*	*849*	*33%*	*78%*
EPR2	*FLR 1W MRI AREA BREAK RM 7300A*	*2.802A*	*4.97%*	*39*	*864*	*7%*	*76%*
EPR1	*PACU RECOVERY*	*1.128A*	*2.53%*	*17*	*357*	*62%*	*88%*

N1:T4:A2: ENHANCED POWER SUPPLY - CHANNEL 1

IDNac Address	Device Type	PID	Setting	Custom Label (Max 40 Characters)	SWITCH SETTINGS 1	2	3	4	5	6	7	8	
N1:T4:A2:1-1	*VO*	*49VO-WRF*	*15cd*	*FLR 1W ELEC 1-CS16 T4:A2:1-1*	X								ON
N1:T4:A2:1-2	*AV*	*49MTV-WRF*	*15cd*	*FLR 1W CORR 1-CS14 T4:A2:1-2*		X							ON
N1:T4:A2:1-3	*VO*	*49VO-WRF*	*15cd*	*FLR 1W TOILET 1-CS15 T4:A2:1-3*	X	X							ON
N1:T4:A2:1-4	*AV*	*49MTV-WRF*	*15cd*	*FLR 1W CORR 1-CS14 T4:A2:1-4*			X						ON
N1:T4:A2:1-5	*AO*	*49MT-WRF*	*520 Hz*	*FLR 1W CASE CARTS 1-CS11 T4:A2:1-5*	X		X						ON
N1:T4:A2:1-6	*STRB*	*4906-9202*	*75cd*	*FLR 1W STERILE STG 1-CS1 T4:A2:1-6*		X	X						ON
N1:T4:A2:1-7	*VO*	*49VO-APPLW*	*30cd*	*FLR 1W OR 11 1-SS100 T4:A2:1-7*	X	X	X						ON
N1:T4:A2:1-8	*REPEATER*	*4009-9601*		*FLR 1W BREAK RM 7300A T4:A2:1-8*				X					ON
N1:T4:A2:1-9	*AV*	*49MTV-WRF*	*75cd*	*FLR 1W MAKE UP 1-CS7 T4:A2:1-9*	X			X					ON
N1:T4:A2:1-10	*AV*	*49MTV-WRF*	*75cd*	*FLR 1W MAKE UP 1CS7 T4:A2:1-10*		X		X					ON
N1:T4:A2:1-11	*VO*	*49VO-WRF*	*15cd*	*FLR 1W WAKE UP 1-CS07 T4:A2:1-11*	X	X		X					ON
N1:T4:A2:1-12	*VO*	*49VO-WRF*	*30cd*	*FLR 1W STERILIZER 1-CS08 T4:A2:1-12*			X	X					ON
N1:T4:A2:1-13	*VO*	*49VO-WRF*	*30cd*	*FLR 1W CLEAN STORAGE 1-CS06 T4:A2:1-13*	X		X	X					ON
N1:T4:A2:1-14	*AV*	*49MTV-WRF*	*30cd*	*FLR 1W DECON 1-CS03 T4:A2:1-14*		X	X	X					ON
N1:T4:A2:1-15	*AV*	*49MTV-WRF*	*75cd*	*FLR 1W CART WASH 1-CS04 T4:A2:1-15*	X	X	X	X					ON
N1:T4:A2:1-16	*STRB*	*4906-9202*	*15cd*	*FLR 1W DI WATER 1-CS09 T4:A2:1-16*					X				ON
N1:T4:A2:1-17	*VO*	*49VO-WRF*	*15cd*	*FLR 1W SURGERY VEN 1-CS01 T4:A2:1-17*	X				X				ON
N1:T4:A2:1-18	*VO*	*49VO-WRF*	*15cd*	*FLR 1W CLEAN STORAGE 1-CS05 T4:A2:1-18*		X			X				ON
N1:T4:A2:1-19	*AO*	*49MT-WRF*	*520 Hz*	*FLR 1W STERILE STG 1-CSG1 T4:A2:1-19*	X	X			X				ON
N1:T4:A2:1-20	*STRB*	*4906-9202*	*15cd*	*FLR 1W STERILE STG 1-CSG1 T4:A2:1-20*			X		X				ON
N1:T4:A2:1-21	*STRB*	*4906-9202*	*15cd*	*FLR 1W STERILE STG 1-CSG1 T4:A2:1-21*	X		X		X				ON
N1:T4:A2:1-22	*STRB*	*4906-9202*	*15cd*	*FLR 1W STERILE STG 1-CSG1 T4:A2:1-22*		X	X		X				ON
N1:T4:A2:1-23	*STRB*	*4906-9202*	*15cd*	*FLR 1W STERILE STG 1-CSG1 T4:A2:1-23*	X	X	X		X				ON
N1:T4:A2:1-24	*STRB*	*4906-9202*	*15cd*	*FLR 1W STERILE STG 1-CSG1 T4:A2:1-24*				X	X				ON
N1:T4:A2:1-25	*VO*	*49VO-APPLW*	*15cd*	*FLR 1W RADI.03 CHANG AREA T4:A2:1-25*	X			X	X				ON
N1:T4:A2:1-26	*AV*	*49MTV-WRF*	*30cd*	*FLR 1W BREAK RM 7300A T4:A2:1-26*		X		X	X				ON
N1:T4:A2:1-27	*VO*	*49VO-APPLC*	*15cd*	*FLR 1W CHANGING AREA 7200A T4:A2:1-27*	X	X		X	X				ON
N1:T4:A2:1-28	*VO*	*49VO-APPLC*	*15cd*	*FLR 1W CIS RAD. 05 7202A T4:A2:1-28*			X	X	X				ON
N1:T4:A2:1-29	*AV*	*49MTV-WRF*	*15cd*	*FLR 1W STAFF HALL 7203A T4:A2:1-29*	X		X	X	X				ON
N1:T4:A2:1-30	*AV*	*49MTV-WRF*	*15cd*	*FLR 1W EQUIP RM 7203B T4:A2:1-30*			X	X	X				ON
N1:T4:A2:1-31	*VO*	*49VO-APPLC*	*15cd*	*FLR 1W TECH WORK AREA 7204A T4:A2:1-31*	X	X	X	X	X				ON
N1:T4:A2:1-32	*AV*	*49MTV-WRF*	*15cd*	*FLR 1W CONTROL AREA 7402B T4:A2:1-32*						X			ON
N1:T4:A2:1-33	*VO*	*49VO-APPLC*	*15cd*	*FLR 1W TLT 7402C T4:A2:1-33*	X					X			ON
N1:T4:A2:1-34	*VO*	*49VO-APPLC*	*15cd*	*FLR 1W PAT HOLDING 7402C T4:A2:1-34*		X				X			ON
N1:T4:A2:1-35	*AV*	*49MTV-WRF*	*15cd*	*FLR 1W CONTROL AREA 7402B S T4:A2:1-35*	X	X				X			ON
N1:T4:A2:1-36	*VO*	*49VO-APPLC*	*15cd*	*FLR 1W CHANGING RM 7402E T4:A2:1-36*			X			X			ON
N1:T4:A2:1-37	*VO*	*49VO-APPLC*	*15cd*	*FLR 1W STAFF TLT 7404A T4:A2:1-37*	X		X			X			ON
N1:T4:A2:1-38	*AV*	*49MTV-WRF*	*15cd*	*FLR 1W EQUIP RM 1W-8902A T4:A2:1-38*		X	X			X			ON
N1:T4:A2:1-39	*VO*	*49VO-APPLC*	*30cd*	*FLR 1W IR RM 03 1W-8113A N T4:A2:1-39*	X	X	X			X			ON
N1:T4:A2:1-40	*VO*	*49VO-APPLC*	*30cd*	*FLR 1W IR RM 03 1W-8113A S T4:A2:1-40*				X		X			ON
N1:T4:A2:1-41	*AV*	*49MTV-WRF*	*15cd*	*FLR 1W CONTROL RM 1W-8112A T4:A2:1-41*	X			X		X			ON
N1:T4:A2:1-42	*VO*	*49VO-APPLC*	*15cd*	*FLR 1W RAD RM 5 7202A T4:A2:1-42*		X		X		X			ON
N1:T4:A2:1-43	*VO*	*49VO-WRF*	*15cd*	*FLR 1W BATH 7201A T4:A2:1-43*	X	X		X		X			ON
N1:T4:A2:1-44	*VO*	*49VO-WRF*	*15cd*	*FLR 1W TLT 5305A 1-44*			X	X		X			ON
N1:T4:A2:1-45	*AV*	*49MTV-WRF*	*30cd*	*FLR 1W CT SUITE 5300A 1-45*	X		X	X		X			ON
N1:T4:A2:1-46	*VO*	*49VO-APPLC*	*75cd*	*FLR 1W CT 01 5303A 1-46*		X	X	X		X			ON
N1:T4:A2:1-47	*VO*	*49VO-APPLC*	*15cd*	*FLR 1W CT 01 5303A CONTROL 1-47*	X	X	X	X		X			ON
N1:T4:A2:1-48	*VO*	*49VO-APPLC*	*75cd*	*FLR 1W CT 02 5302A 1-48*					X	X			ON
N1:T4:A2:1-49	*VO*	*49VO-APPLC*	*15cd*	*FLR 1W CONTROL 5301A 1-49*	X				X	X			ON
N1:T4:A2:1-50	*AV*	*49MTV-WRF*	*15cd*	*FLR 1W NUC/SPINE ROOM 1 6307A 1-50*		X			X	X			ON
N1:T4:A2:1-51	**AV**	**49MTV-WRF**	**15cd**	**FLR 1W CORRIDOR 1008 W T4:A2:1-51**	X	X			X	X			ON
N1:T4:A2:1-52	**AV**	**49MTV-WRF**	**15cd**	**FLR 1W CORRIDOR 1008 E T4:A2:1-52**			X		X	X			ON
N1:T4:A2:1-53	**VO**	**49VO-APPLC**	**15cd**	**FLR 1W IR STORAGE 1004 T4:A2:1-53**	X		X		X	X			ON

N1:T4:A2:1 — Notification SLC Distributed Load Voltage Drop

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

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

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

Branch	Device #	From	Distance (Feet)	PID	Setting	Device Draw	Class B Calculations: Current at Device	Voltage Drop	Voltage at Device	% Vdrop Wire Length
1	*N1:T4:A2:1-1*	*PANEL*	*15*	*49VO-WRF*	*15cd*	*0.0470*	*1.059*	*0.098*	*28.902*	*Branch 1: 5.8%*
1	*N1:T4:A2:1-2*	*N1:T4:A2:1-1*	*25*	*49MTV-WRF*	*15cd*	*0.1450*	*0.955*	*0.147*	*28.756*	*Length: 795*
1	*N1:T4:A2:1-3*	*N1:T4:A2:1-2*	*22*	*49VO-WRF*	*15cd*	*0.0470*	*0.047*	*0.006*	*28.750*	
1	*N1:T4:A2:1-4*	*N1:T4:A2:1-2*	*51*	*49MTV-WRF*	*15cd*	*0.1450*	*0.145*	*0.045*	*28.710*	
1	*TAP9*	*N1:T4:A2:1-2*	*18*	*JBOX*		*0.0000*	*0.618*	*0.068*	*28.688*	
1	*N1:T4:A2:1-5*	*TAP9*	*18*	*49MT-WRF*	*520 Hz*	*0.0990*	*0.339*	*0.037*	*28.650*	
1	*N1:T4:A2:1-6*	*N1:T4:A2:1-5*	*45*	*4906-9202*	*75cd*	*0.1800*	*0.180*	*0.050*	*28.600*	
1	*N1:T4:A2:1-7*	*N1:T4:A2:1-1*	*48*	*49VO-APPLW*	*30cd*	*0.0570*	*0.057*	*0.017*	*28.886*	
1	*N1:T4:A2:1-8*	*N1:T4:A2:1-5*	*89*	*4009-9601*		*0.0032*	*1.122*	*0.613*	*27.774*	
1	*N1:T4:A2:1-9*	*N1:T4:A2:1-8*	*18*	*49MTV-WRF*	*75cd*	*0.1980*	*1.119*	*0.124*	*27.650*	
1	*N1:T4:A2:1-10*	*N1:T4:A2:1-9*	*56*	*49MTV-WRF*	*75cd*	*0.1980*	*0.245*	*0.084*	*27.566*	
1	*TAP10*	*N1:T4:A2:1-9*	*29*	*JBOX*		*0.0000*	*0.676*	*0.120*	*27.530*	
1	*N1:T4:A2:1-11*	*TAP10*	*17*	*49VO-WRF*	*15cd*	*0.0470*	*0.104*	*0.011*	*27.519*	
1	*N1:T4:A2:1-12*	*TAP10*	*15*	*49VO-WRF*	*30cd*	*0.0570*	*0.057*	*0.005*	*27.525*	
1	*N1:T4:A2:1-13*	*N1:T4:A2:1-11*	*17*	*49VO-WRF*	*30cd*	*0.0570*	*0.057*	*0.005*	*27.513*	
1	*N1:T4:A2:1-14*	*TAP10*	*51*	*49MTV-WRF*	*30cd*	*0.1630*	*0.515*	*0.161*	*27.369*	
1	*TAP11*	*N1:T4:A2:1-14*	*10*	*JBOX*		*0.0000*	*0.305*	*0.019*	*27.350*	
1	*N1:T4:A2:1-15*	*TAP11*	*27*	*49MTV-WRF*	*75cd*	*0.1980*	*0.198*	*0.033*	*27.317*	
1	*N1:T4:A2:1-16*	*TAP11*	*26*	*4906-9202*	*15cd*	*0.0600*	*0.060*	*0.010*	*27.340*	
1	*N1:T4:A2:1-17*	*TAP11*	*20*	*49VO-WRF*	*15cd*	*0.0470*	*0.047*	*0.005*	*27.344*	
1	*N1:T4:A2:1-18*	*N1:T4:A2:1-14*	*28*	*49VO-WRF*	*15cd*	*0.0470*	*0.047*	*0.008*	*27.361*	
1	*N1:T4:A2:1-19*	*TAP9*	*10*	*49MT-WRF*	*520 Hz*	*0.0990*	*0.279*	*0.017*	*28.670*	
1	*N1:T4:A2:1-20*	*N1:T4:A2:1-24*	*39*	*4906-9202*	*15cd*	*0.0600*	*0.060*	*0.014*	*28.649*	
1	*N1:T4:A2:1-21*	*N1:T4:A2:1-5*	*2*	*4906-9202*	*15cd*	*0.0600*	*0.060*	*0.001*	*28.649*	
1	*N1:T4:A2:1-22*	*N1:T4:A2:1-19*	*2*	*4906-9202*	*15cd*	*0.0600*	*0.180*	*0.002*	*28.668*	
1	*N1:T4:A2:1-23*	*N1:T4:A2:1-22*	*2*	*4906-9202*	*15cd*	*0.0600*	*0.120*	*0.001*	*28.667*	
1	*N1:T4:A2:1-24*	*N1:T4:A2:1-23*	*10*	*4906-9202*	*15cd*	*0.0600*	*0.060*	*0.004*	*28.663*	
1	*N1:T4:A2:1-25*	*N1:T4:A2:1-10*	*65*	*49VO-APPLW*	*15cd*	*0.0470*	*0.047*	*0.025*	*27.542*	
E2:1	*N1:T4:A2:1-26*	*EPR2*	*26*	*49MTV-WRF*	*30cd*	*0.1630*	*2.802*	*0.447*	*28.553*	*Branch E2:1: 4.97%*
E2:1	*N1:T4:A2:1-27*	*N1:T4:A2:1-26*	*28*	*49VO-APPLC*	*15cd*	*0.0550*	*2.639*	*0.454*	*28.099*	*Length: 415*
E2:1	*N1:T4:A2:1-28*	*N1:T4:A2:1-27*	*21*	*49VO-APPLC*	*15cd*	*0.0550*	*2.584*	*0.333*	*27.766*	
E2:1	*N1:T4:A2:1-29*	*N1:T4:A2:1-28*	*29*	*49MTV-WRF*	*15cd*	*0.1450*	*0.345*	*0.061*	*27.704*	
E2:1	*N1:T4:A2:1-30*	*N1:T4:A2:1-29*	*18*	*49MTV-WRF*	*15cd*	*0.1450*	*0.200*	*0.022*	*27.682*	
E2:1	*N1:T4:A2:1-31*	*N1:T4:A2:1-30*	*31*	*49VO-APPLC*	*15cd*	*0.0550*	*0.055*	*0.010*	*27.672*	
E2:1	*N1:T4:A2:1-32*	*N1:T4:A2:1-28*	*22*	*49MTV-WRF*	*15cd*	*0.1450*	*0.966*	*0.130*	*27.635*	
E2:1	*N1:T4:A2:1-33*	*N1:T4:A2:1-32*	*24*	*49VO-APPLC*	*15cd*	*0.0550*	*0.821*	*0.121*	*27.514*	
E2:1	*N1:T4:A2:1-34*	*N1:T4:A2:1-33*	*19*	*49VO-APPLC*	*15cd*	*0.0550*	*0.766*	*0.089*	*27.425*	
E2:1	*N1:T4:A2:1-35*	*N1:T4:A2:1-34*	*25*	*49MTV-WRF*	*15cd*	*0.1450*	*0.711*	*0.109*	*27.316*	
E2:1	*N1:T4:A2:1-36*	*N1:T4:A2:1-35*	*27*	*49VO-APPLC*	*15cd*	*0.0550*	*0.566*	*0.094*	*27.222*	
E2:1	*N1:T4:A2:1-37*	*N1:T4:A2:1-36*	*21*	*49VO-APPLC*	*15cd*	*0.0550*	*0.511*	*0.066*	*27.156*	
E2:1	*N1:T4:A2:1-38*	*N1:T4:A2:1-37*	*34*	*49MTV-WRF*	*15cd*	*0.1450*	*0.456*	*0.095*	*27.061*	
E2:1	*N1:T4:A2:1-39*	*N1:T4:A2:1-38*	*21*	*49VO-APPLC*	*30cd*	*0.0830*	*0.311*	*0.040*	*27.021*	
E2:1	*N1:T4:A2:1-40*	*N1:T4:A2:1-39*	*47*	*49VO-APPLC*	*30cd*	*0.0830*	*0.083*	*0.024*	*26.997*	
E2:1	*N1:T4:A2:1-41*	*N1:T4:A2:1-39*	*22*	*49MTV-WRF*	*15cd*	*0.1450*	*0.145*	*0.020*	*27.001*	
E2:1	*N1:T4:A2:1-42*	*N1:T4:A2:1-28*	*21*	*49VO-APPLC*	*15cd*	*0.0550*	*1.218*	*0.157*	*27.609*	
E2:1	*N1:T4:A2:1-43*	*N1:T4:A2:1-42*	*21*	*49VO-WRF*	*15cd*	*0.0470*	*1.163*	*0.150*	*27.459*	
E2:1	*N1:T4:A2:1-44*	*N1:T4:A2:1-43*	*27*	*49VO-WRF*	*15cd*	*0.0470*	*1.116*	*0.185*	*27.274*	
E2:1	*N1:T4:A2:1-45*	*N1:T4:A2:1-44*	*19*	*49MTV-WRF*	*30cd*	*0.1630*	*0.724*	*0.084*	*27.189*	
E2:1	*N1:T4:A2:1-46*	*N1:T4:A2:1-45*	*40*	*49VO-APPLC*	*75cd*	*0.1530*	*0.153*	*0.038*	*27.152*	
E2:1	*N1:T4:A2:1-47*	*N1:T4:A2:1-45*	*35*	*49VO-APPLC*	*15cd*	*0.0550*	*0.208*	*0.045*	*27.145*	
E2:1	*N1:T4:A2:1-48*	*N1:T4:A2:1-47*	*24*	*49VO-APPLC*	*75cd*	*0.1530*	*0.153*	*0.023*	*27.122*	
E2:1	*N1:T4:A2:1-49*	*N1:T4:A2:1-45*	*33*	*49VO-APPLC*	*15cd*	*0.0550*	*0.200*	*0.041*	*27.149*	
E2:1	*N1:T4:A2:1-50*	*N1:T4:A2:1-49*	*76*	*49MTV-WRF*	*15cd*	*0.1450*	*0.145*	*0.067*	*27.082*	
E2:1	**N1:T4:A2:1-51**	**N1:T4:A2:1-44**	**65**	**49MTV-WRF**	**15cd**	**0.1450**	**0.345**	**0.138**	**27.136**	
E2:1	**N1:T4:A2:1-52**	**N1:T4:A2:1-51**	**66**	**49MTV-WRF**	**15cd**	**0.1450**	**0.200**	**0.081**	**27.055**	
E2:1	**N1:T4:A2:1-53**	**N1:T4:A2:1-52**	**23**	**49VO-APPLC**	**15cd**	**0.0550**	**0.055**	**0.008**	**27.047**	

N1:T4:A2:2 — Distributed Load Voltage Drop

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

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

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

Branch	Device #	From	Distance (Feet)	PID	Setting	Device Draw	Class B Calculations: Current at Device	Voltage Drop	Voltage at Device	% Vdrop Wire Length
1	*TAP12*	*PANEL*	*105*	*JBOX*		*0.0000*	*1.196*	*0.772*	*28.228*	*Branch 1: 3.24%*
1	*N1:T4:A2:2-11*	*TAP12*	*16*	*49MTV-WRF*	*15cd*	*0.1450*	*0.145*	*0.016*	*28.212*	*Length: 458*
1	*N1:T4:A2:2-1*	*TAP12*	*33*	*49MTV-WRF*	*15cd*	*0.1450*	*0.359*	*0.073*	*28.155*	
1	*N1:T4:A2:2-2*	*N1:T4:A2:2-1*	*31*	*49VO-APPLW*	*75cd*	*0.1000*	*0.214*	*0.041*	*28.114*	
1	*N1:T4:A2:2-3*	*N1:T4:A2:2-2*	*45*	*49VO-APPLW*	*30cd*	*0.0570*	*0.114*	*0.031*	*28.083*	
1	*N1:T4:A2:2-12*	*N1:T4:A2:2-13*	*27*	*49MTV-WRF*	*15cd*	*0.1450*	*0.145*	*0.024*	*28.200*	
1	*N1:T4:A2:2-4*	*N1:T4:A2:2-3*	*37*	*49VO-APPLW*	*30cd*	*0.0570*	*0.057*	*0.013*	*28.070*	
1	*N1:T4:A2:2-14*	*N1:T4:A2:2-4*	*16*			*0.0000*	*0.000*	*0.000*	*28.070*	
1	*N1:T4:A2:2-13*	*TAP12*	*11*	*49VO-WRF*	*15cd*	*0.0470*	*0.047*	*0.003*	*28.224*	
1	*N1:T4:A2:2-5*	*TAP13*	*19*	*49MTV-WRF*	*15cd*	*0.1450*	*0.647*	*0.075*	*28.152*	
1	*TAP13*	*N1:T4:A2:2-5*	*11*	*JBOX*		*0.0000*	*0.502*	*0.034*	*28.118*	
1	*N1:T4:A2:2-6*	*TAP13*	*19*	*49VO-WRF*	*15cd*	*0.0470*	*0.292*	*0.034*	*28.084*	
1	*N1:T4:A2:2-7*	*N1:T4:A2:2-6*	*25*	*49VO-WRF*	*15cd*	*0.0470*	*0.047*	*0.007*	*28.077*	
1	*N1:T4:A2:2-8*	*TAP13*	*19*	*49MTV-WRF*	*30cd*	*0.1630*	*0.210*	*0.024*	*28.094*	
1	*N1:T4:A2:2-9*	*N1:T4:A2:2-8*	*23*	*49VO-WRF*	*15cd*	*0.0470*	*0.047*	*0.007*	*28.087*	
1	*N1:T4:A2:2-10*	*N1:T4:A2:2-6*	*19*	*49MTV-WRF*	*75cd*	*0.1980*	*0.198*	*0.023*	*28.061*	
2	*N1:T4:A2:2-16*	*PANEL*	*232*	*4009-9601*		*0.0032*	*0.003*	*0.005*	*28.995*	*Branch 2: 0.02%*
E1:1	*N1:T4:A2:2-17*	*EPR1*	*18*	*49VO-WRF*	*15cd*	*0.0470*	*1.128*	*0.125*	*28.875*	*Branch E1:1: 2.53%*
E1:1	*N1:T4:A2:2-18*	*N1:T4:A2:2-17*	*25*	*49MTV-WRF*	*15cd*	*0.1450*	*1.081*	*0.166*	*28.709*	*Length: 357*
E1:1	*N1:T4:A2:2-19*	*N1:T4:A2:2-18*	*21*	*49VO-WRF*	*15cd*	*0.0470*	*0.047*	*0.006*	*28.703*	
E1:1	*TAP14*	*N1:T4:A2:2-18*	*25*	*JBOX*		*0.0000*	*0.889*	*0.136*	*28.573*	
E1:1	*N1:T4:A2:2-20*	*TAP14*	*23*	*49VO-WRF*	*15cd*	*0.0470*	*0.047*	*0.007*	*28.566*	
E1:1	*N1:T4:A2:2-21*	*TAP14*	*29*	*49MTV-WRF*	*30cd*	*0.1630*	*0.842*	*0.150*	*28.423*	
E1:1	*TAP15*	*N1:T4:A2:2-21*	*9*	*JBOX*		*0.0000*	*0.679*	*0.038*	*28.385*	
E1:1	*N1:T4:A2:2-22*	*TAP15*	*17*	*49MTV-WRF*	*15cd*	*0.1450*	*0.412*	*0.043*	*28.342*	
E1:1	*N1:T4:A2:2-23*	*N1:T4:A2:2-22*	*14*	*49VO-WRF*	*15cd*	*0.0470*	*0.267*	*0.023*	*28.320*	
E1:1	*N1:T4:A2:2-24*	*N1:T4:A2:2-23*	*25*	*49MTV-WRF*	*30cd*	*0.1630*	*0.220*	*0.034*	*28.286*	
E1:1	*N1:T4:A2:2-28*	*N1:T4:A2:2-24*	*52*	*49VO-APPLW*	*30cd*	*0.0570*	*0.057*	*0.018*	*28.268*	
E1:1	*N1:T4:A2:2-25*	*TAP15*	*55*	*49VO-WRF*	*30cd*	*0.0570*	*0.267*	*0.090*	*28.295*	
E1:1	*N1:T4:A2:2-26*	*N1:T4:A2:2-25*	*13*	*49MTV-WRF*	*30cd*	*0.1630*	*0.210*	*0.017*	*28.279*	
E1:1	*N1:T4:A2:2-27*	*N1:T4:A2:2-26*	*31*	*49VO-WRF*	*15cd*	*0.0470*	*0.047*	*0.009*	*28.270*	

N1:T4:A2: ENHANCED POWER SUPPLY - CHANNEL 2

IDNac Address	Device Type	PID	Setting	Custom Label (Max 40 Characters)	SWITCH SETTINGS 1	2	3	4	5	6	7	8	
N1:T4:A2:2-1	*AV*	*49MTV-WRF*	*15cd*	*FLR 1W EQ. STG 1-SS131 T:A2:2-1*	X								ON
N1:T4:A2:2-2	*VO*	*49VO-APPLW*	*75cd*	*FLR 1W CYSTO DR 1-SS129 1A2:2-2*		X							ON
N1:T4:A2:2-3	*VO*	*49VO-APPLW*	*30cd*	*FLR 1W OR 2 1-SS119 1A2:2-3*	X	X							ON
N1:T4:A2:2-4	*VO*	*49VO-APPLW*	*30cd*	*FLR 1W OR 1 1-SS118 1A2:2-4*			X						ON
N1:T4:A2:2-5	*AV*	*49MTV-WRF*	*15cd*	*FLR 1W WOMENS LCKR RM 1-SS135 1A2:2-5*	X		X						ON
N1:T4:A2:2-6	*VO*	*49VO-WRF*	*15cd*	*FLR 1W WOMENS LCKR RM 1-SS135 1A2:2-6*		X	X						ON
N1:T4:A2:2-7	*VO*	*49VO-WRF*	*15cd*	*FLR 1W WOMENS BATH 1-SS136 1A2:2-7*	X	X	X						ON
N1:T4:A2:2-8	*AV*	*49MTV-WRF*	*30cd*	*FLR 1W MENS LCKR RM 1-SS138 1A2:2-8*				X					ON
N1:T4:A2:2-9	*VO*	*49VO-WRF*	*15cd*	*FLR 1W MENS LCKR RM 1-SS138 1A2:2-9*	X			X					ON
N1:T4:A2:2-10	*AV*	*49MTV-WRF*	*75cd*	*FLR 1W NURSE LOUNGE 1-SS139 1A2:2-10*		X		X					ON
N1:T4:A2:2-11	*AV*	*49MTV-WRF*	*15cd*	*SPARE*	X	X		X					ON
N1:T4:A2:2-12	*AV*	*49MTV-WRF*	*15cd*	*FLR 1W CORR 1-SS029 @OR 1 1:A2:2-12*			X	X					ON
N1:T4:A2:2-13	*VO*	*49VO-WRF*	*15cd*	*FLR 1W CORR 1-SS029 @OR 1 1:A2:2-13*	X		X	X					ON
N1:T4:A2:2-14				*SPARE*		X	X	X					ON
N1:T4:A2:2-15				*SPARE*	X	X	X	X					ON
N1:T4:A2:2-16	*REPEATER*	*4009-9601*		*FLR 1W ELEC 1-PA05 1:A2:2-16*					X				ON
N1:T4:A2:2-17	*VO*	*49VO-WRF*	*15cd*	*FLR 1W ELEC 1-PA05 1:A2:2-17*	X				X				ON
N1:T4:A2:2-18	*AV*	*49MTV-WRF*	*15cd*	*FLR 1W PASS 1-PA06 1:A2:2-18*		X			X				ON
N1:T4:A2:2-19	*VO*	*49VO-WRF*	*15cd*	*FLR 1W SOIL UTILITY 1-PA08 1:A2:2-19*	X	X			X				ON
N1:T4:A2:2-20	*VO*	*49VO-WRF*	*15cd*	*FLR 1W PACU RECOVERY 1-PA01 1:A2:2-20*			X		X				ON
N1:T4:A2:2-21	*AV*	*49MTV-WRF*	*30cd*	*FLR 1W NURSE STAT A 1-PA10 1:A2:2-21*	X		X		X				ON
N1:T4:A2:2-22	*AV*	*49MTV-WRF*	*15cd*	*FLR 1W PASS 1-PA11 1:A2:2-27*		X	X		X				ON
N1:T4:A2:2-23	*VO*	*49VO-WRF*	*15cd*	*FLR 1W CNC OFF 1-PA09 1:A2:2-28*	X	X	X		X				ON
N1:T4:A2:2-24	*AV*	*49MTV-WRF*	*30cd*	*FLR 1W CL UTILITY 1-PA07 1:A2:2-29*				X	X				ON
N1:T4:A2:2-25	*VO*	*49VO-WRF*	*30cd*	*FLR 1W PASS 1-PA12 1:A2:2-30*	X			X	X				ON
N1:T4:A2:2-26	*AV*	*49MTV-WRF*	*30cd*	*FLR 1W STAFF LOUNGE 1-PA14 1:A2:2-31*		X		X	X				ON
N1:T4:A2:2-27	*VO*	*49VO-WRF*	*15cd*	*FLR 1W TLT 1-PA15 1:A2:2-32*	X	X		X	X				ON
N1:T4:A2:2-28	*VO*	*49VO-APPLW*	*30cd*	*FLR 1W DAVINCI OR 4 1-SS031 1:A1:1-28*			X	X	X				ON

N1:T4:A2:3 — Distributed Load Voltage Drop

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

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

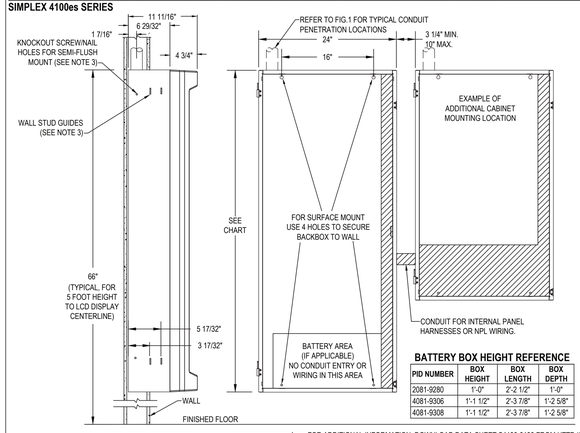
Wire Res. Per Ft. 0.003070 @ 75° Celsius
Wire Res. Per Ft. 0.003070 @ 75° Celsius

Branch	Device #	From	Distance (Feet)	PID	Setting	Device Draw	Class B Calculations: Current at Device	Voltage Drop	Voltage at Device	% Vdrop Wire Length
1	*TAP16*	*PANEL*	*104*	*JBOX*		*0.0000*	*0.649*	*0.414*	*28.586*	*Branch 1: 1.98%*
1	*N1:T4:A2:3-3*	*TAP16*	*60*	*49VO-WRF*	*15cd*	*0.0470*	*0.257*	*0.095*	*28.491*	*Length: 296*
1	*N1:T4:A2:3-4*	*N1:T4:A2:3-3*	*24*	*49MTV-WRF*	*30cd*	*0.1630*	*0.210*	*0.031*	*28.460*	
1	*N1:T4:A2:3-5*	*N1:T4:A2:3-4*	*28*	*49VO-WRF*	*15cd*	*0.0470*	*0.047*	*0.008*	*28.452*	
1	*N1:T4:A2:3-6*	*TAP16*	*33*	*49VO-WRF*	*15cd*	*0.0470*	*0.392*	*0.079*	*28.506*	
1	*N1:T4:A2:3-7*	*N1:T4:A2:3-6*	*13*	*49VO-WRF*	*15cd*	*0.0470*	*0.345*	*0.028*	*28.479*	
1	*N1:T4:A2:3-8*	*N1:T4:A2:3-7*	*21*	*49VO-WRF*	*75cd*	*0.1000*	*0.298*	*0.038*	*28.440*	
1	*N1:T4:A2:3-9*	*N1:T4:A2:3-8*	*13*	*49MTV-WRF*	*75cd*	*0.1980*	*0.198*	*0.016*	*28.424*	
2	*TAP17*	*PANEL*	*118*	*JBOX*		*0.0000*	*1.359*	*0.985*	*28.015*	*Branch 2: 4.45%*
2	*N1:T4:A2:3-12*	*TAP17*	*90*	*49VO-WRF*	*15cd*	*0.0470*	*0.408*	*0.225*	*27.790*	*Length: 553*
*

FOR REFERENCE ONLY

FIRE ALARM CONTROL PANEL BACKBOX INSTALLATION

SIMPLEX 4100es SERIES



TYPICAL CONDUIT LOCATION FOR PWR. LIMITED FIELD WIRING

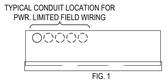


FIG. 1

INSTRUCTIONS

1. REMOVE ELECTRONIC CARD CAGE (IF PRESENT) AND STORE IT IN A SAFE DRY AREA.
2. NO KNOCKOUTS PROVIDED. CUT CONDUIT/SERVICE ENTRANCE OPENINGS. REFER TO FIG.1 FOR PROPER LOCATIONS. CONDUIT PROTRUSION INTO BOX 1/2" MAX.
3. MOUNT BOX TO WALL: BOX MUST BE LEVEL AND PLUMB. FOR SURFACE MOUNT USE TEAR DROP AND CLEARANCE HOLES ON BACK SURFACE. FOR SEMI-FLUSH MOUNT: USE WALL STUD GUIDES FOR MAXIMUM ALLOWABLE BOX DEPTH TO PROVIDE OPEN DOOR CLEARANCE. USE KNOCKOUTS ON SIDE WALL SCREW OR NAIL BOX TO WALL STUDS.
4. MINIMUM DISTANCE BETWEEN ANY TWO BOXES IS 3 1/4" (6" MAXIMUM).
5. IF PRESENT, USE WIRE MANAGEMENT BRACKETS ON BOX SIDES TO SECURE WIRE RUNS.
6. NEMA RATING: NEMA 1 - GENERAL PURPOSE.
7. DO NOT LOCATE POWER-LIMITED WIRING IN THE SHADED AREAS OF THE BACKBOX, THIS AREA IS RESERVED FOR NON-POWER LIMITED CIRCUITRY SUCH AS AC POWER, BATTERIES AND CITY CONNECTION.
8. REFER TO SIMPLEX BACKBOX INSTALLATION DOCUMENT 579-117 FOR DETAILED INSTRUCTIONS.

NOTE: ADA REQUIREMENTS LIMIT THE ALLOWABLE PROTRUSION OF OBJECTS MOUNTED IN PUBLIC ACCESSIBLE WALKS, HALLS, CORRIDORS, PASSAGEWAYS OR AISLES. THE 4 INCH (102mm) RESTRICTION APPLIES TO ANY ITEM IN WHICH THE MEASUREMENT FROM THE FLOOR TO THE BOTTOM OF THE UNIT IS MORE THAN 27 INCHES.

BACKBOX AND DOOR OPTIONS

PKG. SIZE	BOX W/ GLASS DOOR	BOX W/ SOLID DOOR	BOX ONLY	GLASS DOOR	SOLID DOOR	BOX HEIGHT
1 BAY RED	2975-9441	2975-9447	2975-9407	4100-2124	4100-2134	22"
2 BAY RED	2975-9442	2975-9448	2975-9408	4100-2125	4100-2135	40"
3 BAY RED	2975-9443	2975-9449	2975-9409	4100-2126	4100-2136	56"
1 BAY PLATINUM	2975-9444	2975-9450	2975-9438	4100-2104	4100-2114	22"
2 BAY PLATINUM	2975-9445	2975-9451	2975-9439	4100-2105	4100-2115	40"
3 BAY PLATINUM	2975-9446	2975-9452	2975-9440	4100-2106	4100-2116	56"

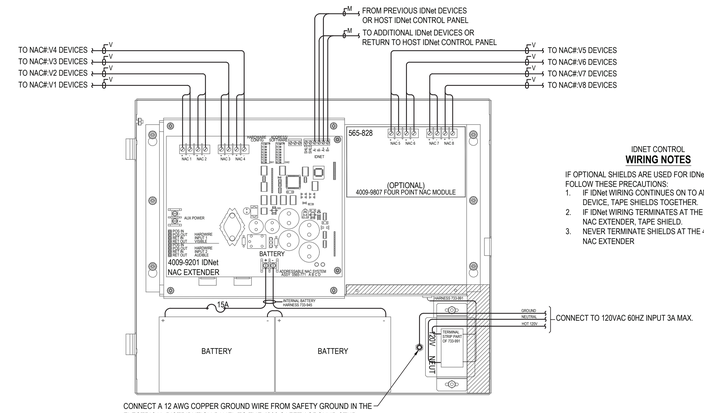
BATTERY BOX HEIGHT REFERENCE

PID NUMBER	BOX HEIGHT	BOX LENGTH	BOX DEPTH
2081-9280	1'-0"	2'-2 1/2"	1'-0"
4081-9306	1'-1 1/2"	2'-3 7/8"	1'-2 5/8"
4081-9308	1'-1 1/2"	2'-3 7/8"	1'-2 5/8"

1. FOR ADDITIONAL INFORMATION, DOWNLOAD DATA SHEET S4100-0100 FROM HTTP://WWW.SIMPLEX-FIRE.COM

NAC EXTENDER PANEL WIRING

SIMPLEX 4009 SERIES



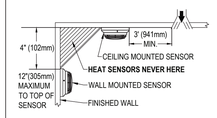
CONNECT A 12 AWG COPPER GROUND WIRE FROM SAFETY GROUND IN THE ELECTRICAL DISTRIBUTION PANEL TO THE 4009 SAFETY GROUND STUD.

IDNET CONTROL WIRING NOTES

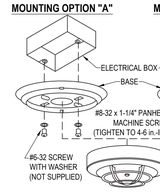
IF OPTIONAL SHIELDS ARE USED FOR IDNet WIRING, FOLLOW THESE PRECAUTIONS:
1. IF IDNet WIRING CONTINUES ON TO ANOTHER DEVICE, TAPE SHIELDS TOGETHER.
2. IF IDNet WIRING TERMINATES AT THE 4009 IDNet NAC EXTENDER, TAPE SHIELD.
3. NEVER TERMINATE SHIELDS AT THE 4009 IDNet NAC EXTENDER

STANDARD SENSOR BASE

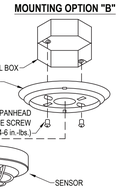
SIMPLEX 4098-9792

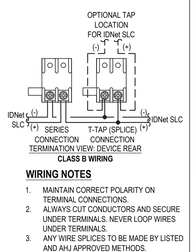


MOUNTING OPTION "A"



MOUNTING OPTION "B"





WIRING NOTES

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

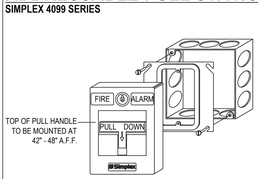
MOUNTING OPTIONS

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

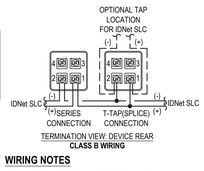
1. FOR ADDITIONAL MOUNTING OPTIONS, DOWNLOAD DATA SHEET 4098-0019 FROM HTTP://WWW.SIMPLEX-FIRE.COM

ADDRESSABLE PULL STATIONS

SIMPLEX 4099 SERIES

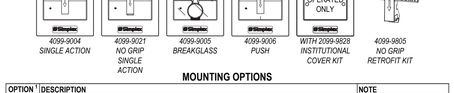


MOUNTING OPTION "B"



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.



4099-9004 SINGLE ACTION | *4099-9021 NO GRIP SINGLE ACTION* | *4099-9005 BREAKGLASS* | *4099-9006 PUSH* | *WITH 2099-9828 INSTITUTIONAL COVER KIT* | *4099-9805 NO GRIP RETROFIT KIT*

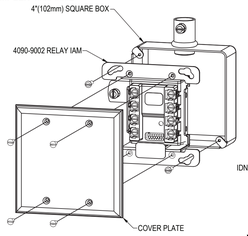
MOUNTING OPTIONS

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

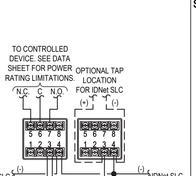
1. FOR ADDITIONAL MOUNTING OPTIONS, DOWNLOAD DATA SHEET 4099-0005 FROM HTTP://WWW.SIMPLEX-FIRE.COM

ADDRESSABLE RELAY MODULE

SIMPLEX 4090-9002



MOUNTING OPTION "A"



WIRING NOTES

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

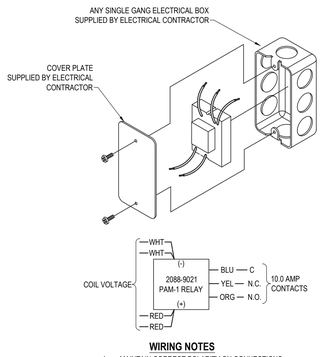
MOUNTING OPTIONS

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

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

MULTI-VOLTAGE RELAY

SIMPLEX 2088-9021 / APOLLO AMERICA PAM-1



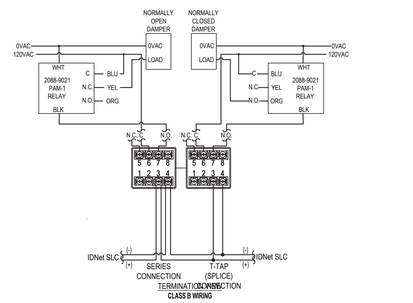
WIRING NOTES

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

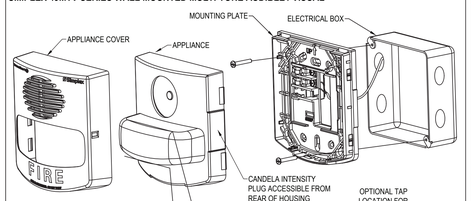
DAMPER WIRING-RELAY MODULE W/PAM-1 RELAY

SIMPLEX 4090-9002 & 2088-9021 / APOLLO AMERICA PAM-1



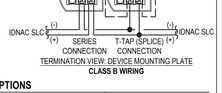
TrueAlert ES ADDRESSABLE APPLIANCES

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



MOUNTING OPTION "B"

IMPORTANT
DO NOT BRING THE CONDUIT THROUGH THE REAR OF THE ELECTRICAL BOX. STRIP THE LEAD INSULATION TO 7/16" MAX.



WIRING NOTES

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

MOUNTING OPTIONS

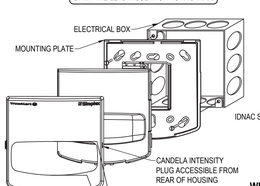
OPTION [1]	DESCRIPTION	NOTE
A	SINGLE GANG OR DOUBLE GANG BOX, 1-1/2" (38mm) MINIMUM DEPTH	BY OTHERS
B	4" (102mm) SQUARE BOX, 1-1/2" (38mm) MINIMUM DEPTH	BY OTHERS
C	SIMPLEX 2975-9145, 7-7/8"H x 5-1/8"W x 2-3/4"D (127mm x 98mm x 56mm) REQUIRES 4905-9931 PLATE	ORDERED SEPARATELY

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

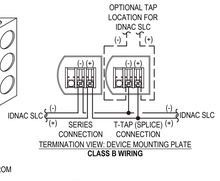
TrueAlert ES ADDRESSABLE APPLIANCES

SIMPLEX 49VO SERIES WALL MOUNTED VISUAL ONLY

IMPORTANT
DO NOT BRING THE CONDUIT THROUGH THE REAR OF THE ELECTRICAL BOX. STRIP THE LEAD INSULATION TO 7/16" MAX.



MOUNTING OPTION "B"



WIRING NOTES

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

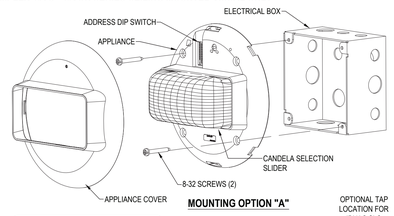
MOUNTING OPTIONS

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

1. FOR ADDITIONAL MOUNTING OPTIONS, DOWNLOAD DATA SHEET S49VO-0001 FROM HTTP://WWW.SIMPLEX-FIRE.COM

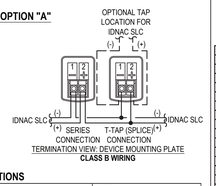
TrueAlert ES ADDRESSABLE APPLIANCES

SIMPLEX 49VO / 49VOH SERIES CEILING MOUNTED VISUAL ONLY



MOUNTING OPTION "A"

IMPORTANT
DO NOT BRING THE CONDUIT THROUGH THE REAR OF THE ELECTRICAL BOX. STRIP THE LEAD INSULATION TO 7/16" MAX.



WIRING NOTES

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

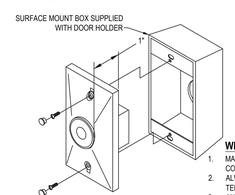
MOUNTING OPTIONS

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

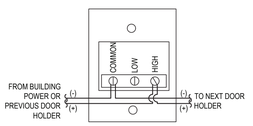
1. FOR ADDITIONAL MOUNTING OPTIONS, DOWNLOAD DATA SHEET S49VOC-0001 FROM HTTP://WWW.SIMPLEX-FIRE.COM

MAGNETIC SURFACE MOUNT DOOR HOLDERS

DH24120S SERIES



SURFACE MOUNTING



WIRING NOTES

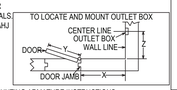
1. MAINTAIN CORRECT POLARITY ON TERMINAL CONNECTIONS.
2. ALWAYS CUT CONDUCTORS AND SECURE UNDER TERMINALS. NEVER LOOP WIRES UNDER TERMINALS.
3. ANY WIRE SPLICES TO BE MADE BY LISTED AND AHJ APPROVED METHODS.

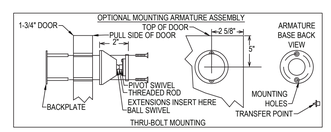
Y = DIMENSION OF DOOR												
	28	30	32	34	36	38	40	42	44	46	48	
X	Z = THE INTERSECTION OF X AND Y (THE DIMENSION BETWEEN WALL AND OUTLET BOX)											
4	26	28	29-7/8	32	34	36	38	40	42	43-7/8	45-5/8	
6	25-7/8	27-5/8	29-5/8	31-3/4	33-3/4	35-3/4	37-3/4	39-3/4	41-3/4	43-5/8	45-3/8	
8	25-1/4	27-1/4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

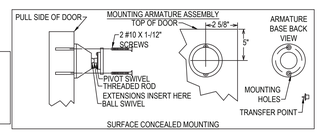
X = DIMENSION OF DOOR JAMB TO WALL

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

TO LOCATE AND MOUNT OUTLET BOX







MOUNTING ARMATURE INSTRUCTIONS

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

Johnson Controls
DISTRICT 1-418
1600 W. HOUSTON AVE
AURORA, CO 80017
PHONE: 303-326-0500
FAX: 303-326-0615
SERVICE: 303-3550000

NICET CERTIFICATION INFORMATION
NANCY S. WILTSIE
NICET Fire Alarm, III
Certification #93727
Valid Through: 03/01/24
September 21, 2022

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

Revisions shown with Δ symbol

ISSUE LOC	DATE	CAD	CHK	DESCRIPTION
MARK				

FOR PERMIT

DRAWN BY:	CCD
CHECKED BY:	CBR
ISSUE DATE:	7/26/22
JOB #:	
PROJECT #:	419:650189804

JOHNSON CONTROLS © 2022

SYSTEM: FIRE ALARM SYSTEM

SHEET: TYPICAL DEVICE WIRING

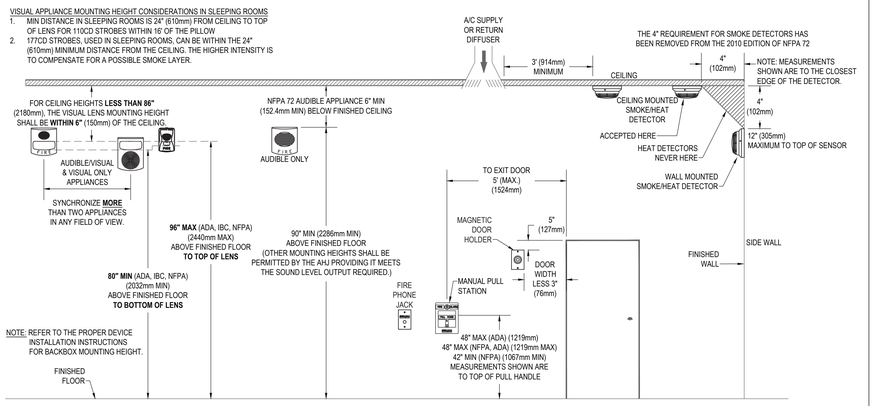
FA-701

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FILE PATH: C:\Users\jrauch\Johnson Controls\Project Electronics - Medical Center of Aurora\1501 S Potomac - Aurora South\South Tower - Node 133-OR Expansion - 2022 - 650189804\FireFA-701.dwg
LAST SAVED BY: JDIXON\C4
LAST PRINTED: 9/21/2022 1:55:51 PM
30" x 42" - Arch E1 Size

DEVICE MOUNTING HEIGHT REFERENCE

PER NFPA 72



Johnson Controls
DISTRICT 1-418
10685 E. HOUSTON AVE
AURORA, CO 80017
SERVICE: 303-355-6000
PHONE 303-355-9500
FAX 303-355-9515

NICET CERTIFICATION INFORMATION
NANCY S. WILTSIE
NICET Fire Alarm, III
Certification #93727
Valid Through: 03/01/24
September 21, 2022

THE MEDICAL CENTER OF AURORA - SOUTH OR EXPANSION

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

Revisions shown with ⚠ symbol

ISSUE LOG: MARK	DATE	CAD	CHK	DESCRIPTION

FOR PERMIT

DRAWN BY:	CCD
CHECKED BY:	CBR
ISSUE DATE:	7/26/22
JOB #:	
PROJECT #:	419:650189804

JOHNSON CONTROLS © 2022

SYSTEM:
FIRE ALARM SYSTEM

SHEET:
TYPICAL DEVICE WIRING CONT.

FA-702

LAST PRINTED: 9/1/2022 1:56:54 PM
LAST SAVED BY: JDIXON4
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30" x 42" Arch E1 Size

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RSN: 1666171
Permit # 2022-2230353 -LT
Sheet 21 of 85

GENERAL NOTES:

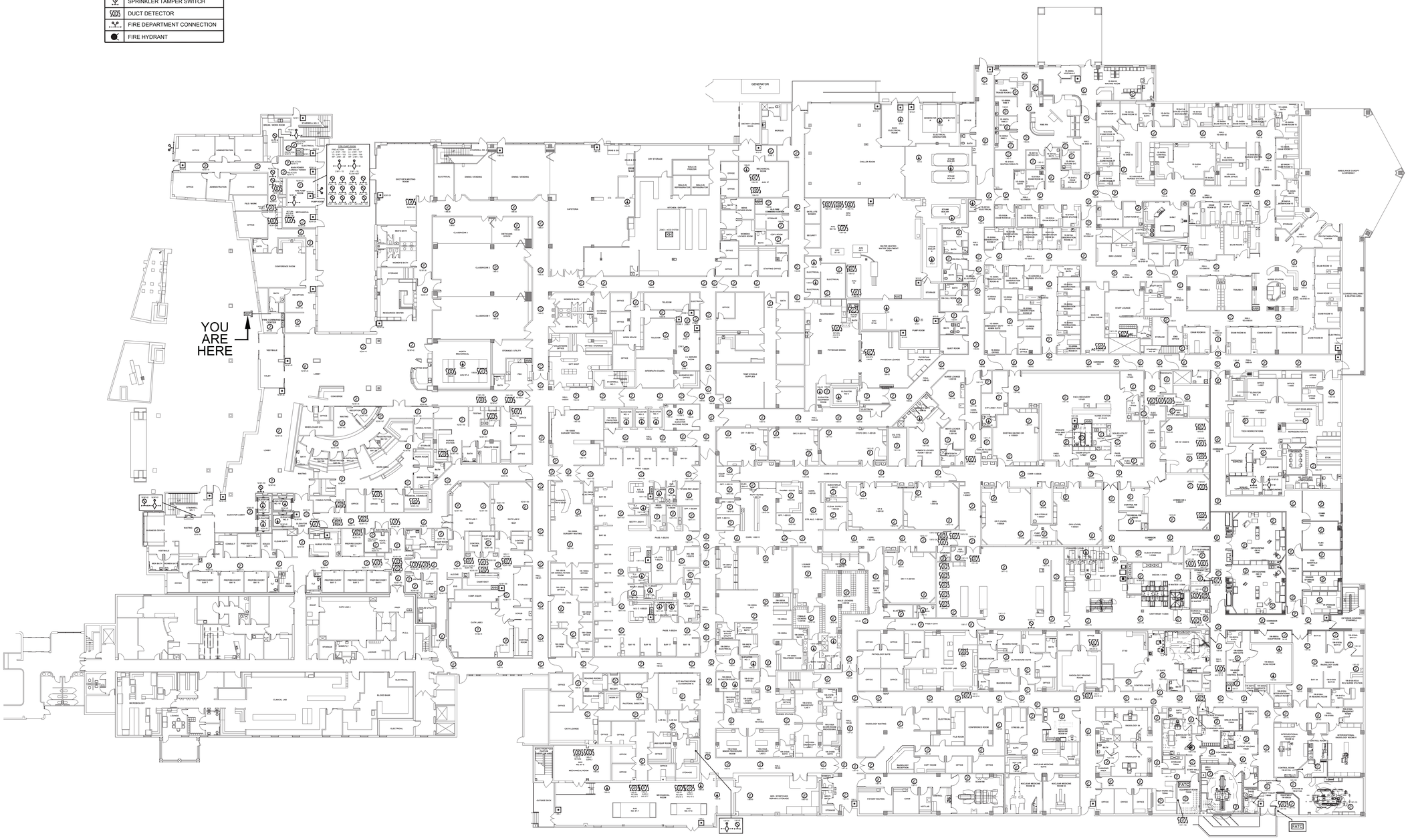
1. THIS 36"X48" STATIC GRAPHIC MAP IS NOT SHOWN TO SCALE.

AS OF: 09/13/2022

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

LEGEND:

FACP	FIRE ALARM CONTROL PANEL
FATC	FIRE ALARM TERMINAL CABINET
ANN	GRAPHIC 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


YOU ARE HERE
GENERATOR
CHILLER ROOM
CAFETERIA
KITCHEN / PANTRY
ED EXAM ROOM 01
ED EXAM ROOM 02
ED EXAM ROOM 03
ED EXAM ROOM 04
ED EXAM ROOM 05
ED EXAM ROOM 06
ED EXAM ROOM 07
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ED

Johnson Controls
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Fire Alarm
Product Data Submittal for:

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OR Expansion
1501 S Potomac Street
Aurora, Colorado 80012

Prepared for:

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Fax: (303) 355-0615

PROJECT: The Medical Center of Aurora - South OR Expansion

PREPARED FOR: E Light Electric Services, Inc.

TYPE:	***DESCRIPTION:***
4100-9600	BASIC TRANSPONDER (FOR REFERENCE ONLY)
4009-9201	4009 IDNET NAC EXTENDER, 120 VAC (FOR REFERENCE ONLY)
4098-9714	TRUEALARM PHOTO SMOKE SENSOR
4098-9733	TRUEALARM HEAT SENSOR
4098-9792	TRUEALARM SENSOR BASE
4099-9006	ADDRESSABLE DOUBLE ACTION MANUAL STATION, PUSH
4090-9002	IDNET RELAY IAM
4090-9802	COVER-ADDRESS MODULE SURFACE
2088-9021	ENCAPSULATED RELAY PAM-1
49MTV-WRF	MULTI-TONE A/V, RED, WALL MOUNT
49VO-APPLW	VO APPLIANCE ONLY WALL MT
49MP-AVVOWR	AV/VO MOUNTING PLATE, WALL MT, RED
49VOC-WRFIRE	VO COVER, WALL MT, RED, FIRE
49LENS-RED	NOTI APPL RED LENS ONLY KIT
49VO-APPLC	VO APPLIANCE ONLY CEIL MT
49VO-APCS	VO CEIL MT ADAPTER PLATE
49VOC-CRF	VO COVER, CEIL MT, RED, FIRE
DH24120SPC	DOOR HOLDER,SURFACE MNT,CHROME
DHE4APC	4 IN ADJ EXTENSION ROD,DOOR HOLDER,CHROME

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Simplex

*UL, ULC, CSFM Listed; FM Approved, OTCR/NYC Approved**

4100-9600 4100ES Fire Control Units

MINIPLEX Transponders with ES-PS Power Supplies

Features

4100ES Series MINIPLEX transponders allow remotely located initiating and notification functions:

- Transponder operation is available as standard or with local mode operation
- Communications with the host fire alarm control panel use the Remote Unit Interface (RUI and RUI+) formats

Initiating functions include:

- Conventional initiating device circuit (IDC) support
- Addressable device support including TrueAlarm analog sensor compatibility

Notification functions include:

- Addressable strobe and horn notification using enhanced power delivery **IDNAC SLCs**
- Conventional DC notification appliance circuits including TrueAlert strobe and horn appliances
- Emergency voice/alarm communications

Local mode operation provides:

- Default local initiating and notification operation in the event of a communications loss with the host control panel
- Enabling of an optional Local Mode Controller with a local alarm sounder, LED status indicators, and keyswitch enabled control switches
- Support for conventional Initiating Device Circuits (IDC's), conventional Notification Appliance Circuits (NAC's), addressable IDNet devices, addressable IDNAC notification appliances, and default output tones from local amplifiers

Optional modules include:

- Digital or Analog audio riser modules for connection to system audio signals
- Digital or analog input audio amplifiers with integral on-board NACs
- Power supplies with or without battery chargers
- City Connect modules and RS-232 ports for printers or maintenance terminals
- Alarm relays, auxiliary relays, additional IDC modules, and NAC expansion modules

NEMA 1/IP30 cabinets are equipped with solid doors (platinum or red) and in one, two, or three bay sizes

Listed to:

- UL 864, Fire Detection and Control (UOJZ), Smoke Control Service (UUKL), Releasing Device Service (SYZV), Emergency Communication and Relocation Equipment (UOQY)
- UL 1076, Proprietary Alarm Units - Burglar (APOU)
- UL 2017, Process Management Equipment (QVAX), Emergency Alarm System Control Units (FSZI)
- UL 1730, Smoke Detector Monitor (UULH)
- UL 2572, Mass Notification Systems (PGWM)
- CAN/ULC-S527 Control Units for Fire Alarm Systems (UOJZ7), Releasing Device Service (SYZV7)
- CAN/ULC-S559 Central Station Fire Alarm System Units (DAYR7)
- ULC/ORD-C1076 Proprietary Burglar Alarm Units and Systems (APOU7)
- ULC/ORD-C100 Smoke Control System Equipment (UUKL7)

Introduction

4100ES MINIPLEX transponders connect to a host 4100ES Fire Alarm Control Panel using Simplex remote unit interface (RUI) communications. At the transponder, RUI communications are received by the transponder interface module and translated into the same internal communications format that is used in the host control panel.

Remotely located modules. With RUI communications, the transponder can remotely provide the same initiating and notification functions that occur at the host control panel without requiring multiple long distance wiring runs. Connections to the host panel are low current communications and audio wiring with distances up to 2500 ft (762 m).

Please refer to document *S4100-1031* and the other documents listed in Additional 4100ES Product Reference for additional information concerning the extensive initiating and notification features of the 4100ES fire alarm control panels.

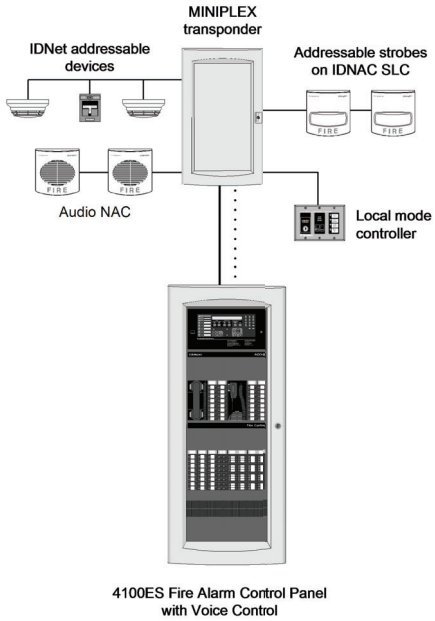


Figure 1: Typical 4100ES MINIPLEX System One-Line Drawing

Module Bay Description

Transponder model 4100-9600 includes a bay assembly, a power distribution interface module (PDI), a Basic Transponder Interface Module, and an interconnect harness. Communications with the host fire alarm control panel are via a Remote Unit Interface (RUI) connection that allows for up to 2500 ft (762 m) distance. RUI can communicate with up to a total of 31 remote devices and can be either Class B or Class X communications.

Transponder model 4100-9601 substitutes a Local Mode Transponder Module for the Basic Transponder Module.

Optional Expansion Bays each include a PDI and accept a variety of optional modules (refer to tables from MINIPLEX Transponder Product Selection onwards).

The Battery Compartment (bottom) accepts two batteries, up to 50 Ah, that can be mounted within the cabinet. Battery mounting does not interfere with available module space. A power supply with battery charger is required for each battery set.

* Additional listings may be applicable; contact your local Simplex product supplier for the latest status.

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Packaging Availability

- Modules are power-limited (except as noted, such as battery chargers, city circuits and relay modules)
- Enclosure are available for one, two, or three bay sizes or for cabinet rack mounting
- NEMA 1/IP30 boxes and solid doors are available in platinum or red (ordered separately)
- Up to eight close-nippled cabinets can be connected at one transponder location (close-nippled is mounted within 20 ft (6 m) and with interconnecting wiring enclosed in conduit)
- Refer to document *S4100-0037* for enclosure details.

Local Mode Control Operation

Default Stand-Alone Operation. In the event of a communications loss with the host fire alarm control panel, model 4100-9601 MINIPLEX Local Mode Transponders provide fire alarm response default operation for its connected devices and appliances per the following:

Input Operation. During local mode operation, conventional initiating devices and addressable IDNet initiating devices shall be capable of reporting an alarm condition to the MINIPLEX transponder. TrueAlarm sensors will cause an alarm at their least sensitive alarm threshold:

- Photoelectric sensors will alarm at 3.7%/ft smoke obscuration
- Heat sensors will alarm at a fixed temperature of 135 °F (57 °C)
- TrueAlarm device LEDs will be activated to indicate a device in alarm

Notification Operation. Fire alarm conditions reported against a fire alarm point type within a transponder in local mode will cause all notification appliance circuits in that transponder to:

- Sound a general alarm temporal pattern horn tone
- Activate visible notification appliance circuits

Local Mode Module Support. Local mode operation provides support for the following MINIPLEX transponder circuits:

- Conventional NAC and addressable IDNAC notification appliance circuits, operated at a temporal pattern,
- IDNet, IDNet 2 and IDNet 2+2 addressable device circuits
- 4100ES amplifiers will provide their on-board horn tones (500 Hz) at a temporal pattern through their on-board amplifier NACs
- Firefighter Telephone control modules in local mode

Local Mode Operation Module Exclusion. Modules and circuits not listed above but that are listed as compatible with MINIPLEX transponders per this document, do not interfere with local mode operation but **are not supported** during local mode operation.

Local Mode Controller

Operation. During local mode operation, an optional Local Mode Controller will indicate status (see Figure 2) and can be enabled using a keyswitch to perform local alarm silence or reset. If alarms occurring during local mode are reset using a Local Mode Controller, upon restoration of communications, **those alarms will not be sent to the master controller**. If alarms are still present upon restoration of communications, then the alarm condition will be reported and host fire alarm control panel programmed alarm functions will occur. When communications are re-established, the local mode transponder restores automatically.

Mounting. Local Mode Controllers are mounted on three-gang plates, are available in beige or red, and for either flush or semi-flush mounting. (See Local Mode Controller and 579-343 operating instructions for details).

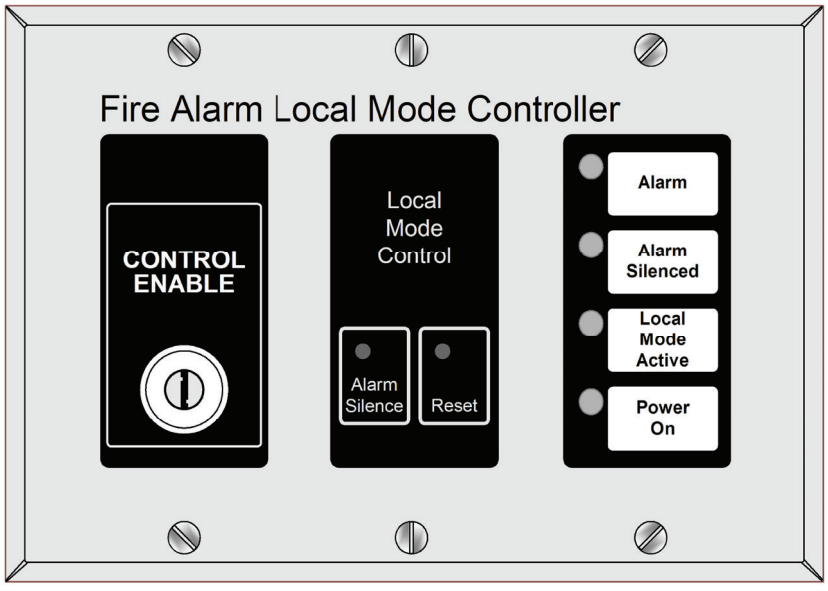
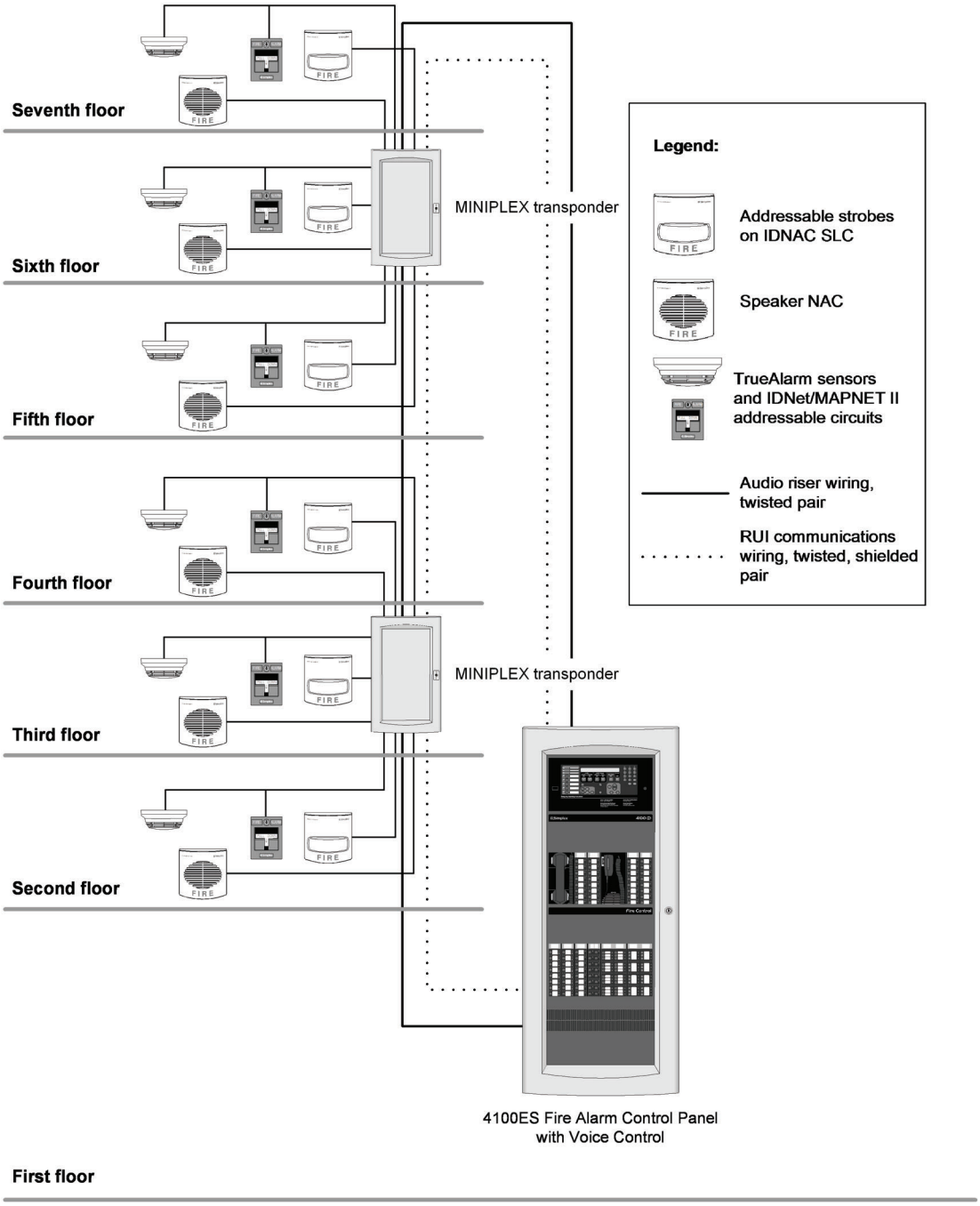


Figure 2: Local Mode Controller Module

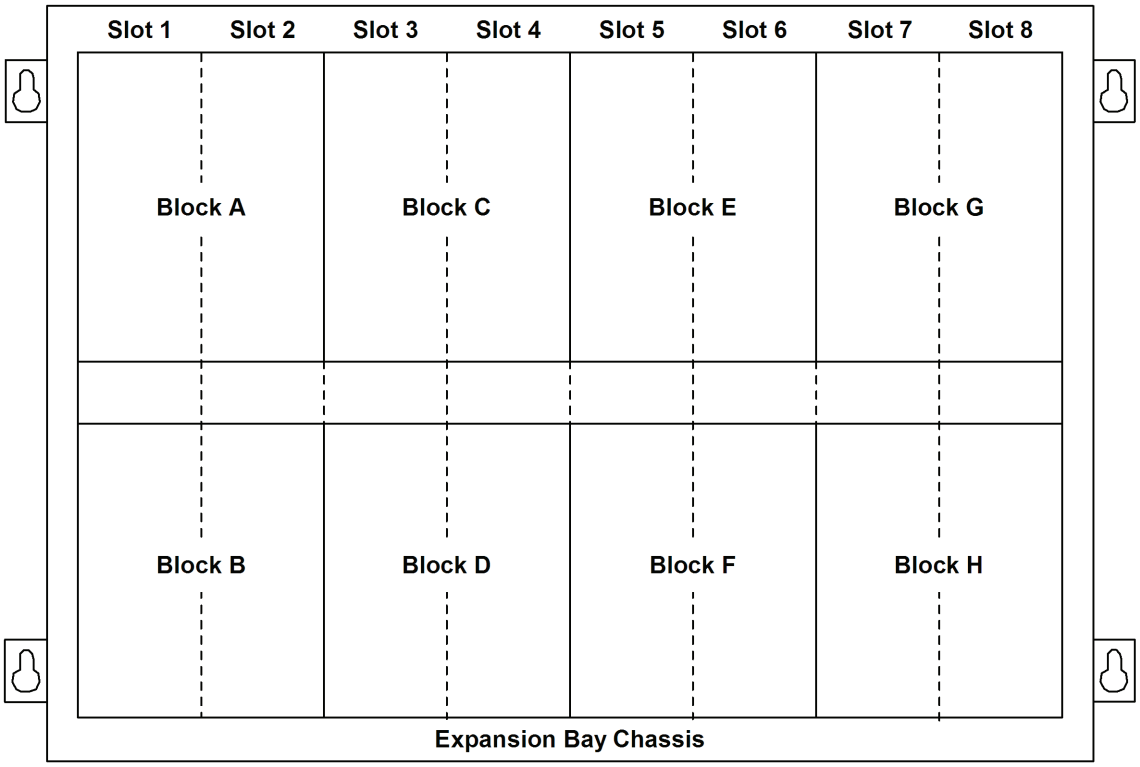
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Typical Multi-Floor MINIPLEX Audio System



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Expansion Bay Module Loading Reference



Size Definitions: Block = 4" W x 5" H (102 mm x 127 mm) card area
Slot = 2" W x 8" H (51 mm x 203 mm) motherboard with daughter card

Description		Mounting
Transponder Interface Modules		Block A
Audio Riser Modules		Block B
Terminal Block Module		1 Block
IDNet 2 and IDNet 2+2 Modules		1 Block
4, 2 A Relays	**NON Power-limited**	1 Block
4, 10 A Relays		4", 2 Slots
8, 3 A Relays		1 Block
VESDA Interface		2", 1 Slot
8 Point Zone/Relay Card		1 Block
Class B IDC		2", 1 Slot
Class A IDC		2", 1 Slot
MAPNET II Module		4", 2 Slots
MAPNET II Isolator		2", 1 Slot
Decoder Module		6", 3 Slots
Flex-35 Amplifiers, 2 max /bay*		Blocks E & F; C & D; or A & B
Flex-50 Amplifiers, 2 max/bay*		Blocks E & F or C & D
100 W Amplifiers, 1 max/bay		Blocks E, F, G & H
100 W Backup Amplifiers, 1 max. per bay with primary amplifier		Blocks A, B, C & D
Telephone Expansion Module		1 Block
Expansion Signal Module		1 Block
NAC Card		1 Block
IDNAC Card		2 Blocks (on ES Power Supply only)
ES-PS		Blocks G & H ONLY
ES-PS Configured as backup		Blocks E & F ONLY
ES-XPS		2 Blocks

Note: * When mounting dual Flex amplifiers on an expansion bay, special mounting rules apply.

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General Specifications

Table 1: ES Power Supply Specifications (ES-PS and ES-XPS)

Specifications	Rating
AC Input Power	120-240 VAC
120 VAC	3.72 A
220 - 240 VAC	1.82 A
Total DC Output Power Capacity	
Without Fan	9.5 A
With 4100-5131 Fan and 4100-5451 IDNAC Module(s)	9.7 A
With 4100-5131 Fan (without 4100-5451 IDNAC Module)	12.7 A
With Regulated 24V Appliance Loads (with or without 4100-5131 Fan)	5.0 A
Special Application Appliance Loads: supports full total DC output power capacity ratings above	Simplex horns, strobes, and combination horn/strobes and speaker/strobes (contact your Simplex product representative for compatible appliances)
Regulated 24V Appliances: reduces total DC output power capacity to 5.0 A	Power for other UL listed appliances; use associated external synchronization modules where required
Auxiliary Power Tap	2 A maximum (taken from total output power capacity)
NACs Programmed for Auxiliary Power	3 A maximum per NAC, 5 A maximum total (taken from total output power capacity)
Battery Charger (ES-PS only)	Sealed Lead-Acid Batteries
Battery Ah Capacity	UL/ULC listed for battery charging of up to 110 Ah (batteries larger than 50 Ah require a remote battery cabinet)
Charger characteristics and performance	Temperature compensated, dual rate, recharges depleted batteries within 48 hours
Environmental	
Operating Temperature	32 °F to 120 °F (0 °C to 49 °C)
Operating Humidity	Up to 93% RH, non-condensing @ 90 °F (32 °C) maximum
Option Card Mounting	2 vertical blocks are available for compatible modules (refer to 579-1288 installation instructions for additional details)

Note:

1. Battery charger is only available on the ES-PS power supply.
2. When an ES-PS is used to power Flex-35 or Flex-50 Amplifiers the ES-PS battery charger is not available.

Table 2: IDNet, MAPNET II, IDNet 2, and IDNet 2+2 SLC Wiring Common Specifications

Specification		Description
Maximum Distance from Control Panel per Device Load	1 to 125	4000 ft (1219 m); 50 ohms
	126 to 250	2500 ft (762 m); 35 ohms
Connections		Terminals for 18 to 12 AWG (0.82 mm^2 to 3.31 mm^2)

Table 3: IDNet and MAPNET II Specifications

Specification		Description
Wire Type	New Installation	Shielded twisted pair (STP)
	Retrofit Only	Unshielded twisted pair (UTP)
Total Wire Length Allowed With "T" Taps for Class B Wiring		Up to 10,000 ft (3 km); 0.58 µF

Note: For retrofit installations consult with your local Simplex product supplier, restrictions may apply.

Table 4: IDNet 2 and IDNet 2+2 Wiring Specifications

Specification		Description
Wire Type	New Installation	Unshielded twisted pair (UTP)
	Retrofit Only	Shielded or unshielded, twisted or untwisted wire
Total Wire Length Allowed With "T" Taps for Class B Wiring		Up to 12,500 ft (3.8 km); 0.60 µF
Maximum Capacitance Between IDNet 2 Channels		1 µF
IDNet 2 and IDNet 2+2 Module Compatibility: IDNet communicating devices and TrueAlarm sensors including QuickConnect and QuickConnect2 sensors		

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MINIPLEX Transponder Product Selection

Table 5: Transponder Type

SKU	Description		Supv.	Alarm
4100-9600	Basic Transponder, includes bay equipment with power distribution interface, and 4100-0620 Basic Transponder Interface Module mounted in Block A		36 mA	36 mA
4100-9601	Local Mode Transponder, includes bay equipment with power distribution interface, and 4100-0625 Local Mode Transponder Interface Module mounted in Block A	normal	38 mA	38 mA
		in local mode	23 mA	23 mA

Table 6: ES Power Supplies

Model	Voltage	Description	Includes	Provides Power to Bay	Size	Supv.	Alarm
4100-5401	120-240 V 50/60 Hz	ES-PS	24 V Aux. Relay, 24 V Aux. Power 2 A Tap/ Simple NAC, 110 Ah Battery Charger, 2 PDI Blocks for compatible option cards.	Yes	2 Blocks	68 mA	77 mA
4100-5402	120-240 V 50/60 Hz	ES-XPS	Same as ES-PS above except without battery charger	No			

Table 7: Power supply accessories

Model	Description	Size	Current
4100-5152	12 VDC Power Option, 2 A maximum	1 Block	1.5 A maximum
4100-0156	8 VDC Converter, required for multiple Physical Bridge Modules, 3 A maximum	1 Block	included w/loads
4100-5130	Voltage Regulator Module, 22.8 to 26.4 VDC (25VDC nominal); isolated and resettable output; includes earth detection circuit and trouble relay for status monitoring.	1 Block	3 A maximum with 2.5 A load, 4.9 A maximum with 4 A load
4100-5131	ES-PS Fan Module, allows more than one power supply to be installed in a single bay and may increase total DC output power capacity per power supply. See Table 1 for specifications.	N/A	0 mA Supv. 200 mA Alarm
4100-0636	Box Interconnection Harness Kit (non-audio); order one for each close-nippled cabinet		
4100-0638	4100 Slot Module Additional 24 VDC Harness; needed when 4100 Slot module requirements exceed 2 A from ES-PS		
4100-5403	Harness for ES-PS Backup Power Supply		
4100-0644	120 VAC PDM Harness	1 PDM harness is required per power supply, select as required for appropriate input voltage	
4100-0645	220 VAC PDM Harness		
4100-0646	230 VAC PDM Harness		
4100-0647	240 VAC PDM Harness		

Table 8: Conventional and Addressable Notification Appliance Modules

Model	Description	Outputs	Size	Max Load - Special Application*		Max Load - Regulated 24 V		Current Draw	
				On ES-PS / ES-XPS	In Bay	On ES-PS / ES-XPS	In Bay	Supv.	Alarm
4100-5450**	Conventional NAC Module	Three 3 A NACs	1 Block	3.0 A / NAC 9.0 A / Card	3.0 A / NAC 6.0 A / Card	2.0 A / NAC 5.0 A / Card	2.0 A / NAC 2.0 A / Card	66 mA	66 mA
4100-5451**	IDNAC Addressable Notification SLC Module	Three 3 A SLCs	2 Blocks (on ES Power Supply only)	3.0 A / NAC 9.0 A / Card	N/A	N/A		124 mA	230 mA

***Special Application specifications apply to both Special Application and Steady Aux Power loads during alarm operation. Available power during non-alarm operation is 5.0 A maximum.

****The 4100-5450 and 4100-5451 can only be powered from a 4100-5401 and 4100-5402 power supply.

Table 9: Dual Class A Isolator for IDNAC

Model	Description	Size	Supv.	Alarm
4100-6103	**Dual Class A IDNAC Isolator (DCAI)**, converts a single Class B IDNAC SLC input to two Class A SLC outputs; provides short circuit isolation between each Class A output circuit; connect up to two DCAI Modules per IDNAC SLC input up to a maximum of 6 DCAI Modules per IDNAC SLC; each isolated output SLC used requires one IDNAC address; the total current remains controlled by the Class B input source SLC at 3 A maximum; each isolated loop supports up to 30 device addresses **Note:** Up to 30 additional device addresses may be installed between each 4905-9929 TrueAlert Addressable Isolator+ Module, not to exceed the maximum address and unit loading specifications for the IDNAC channel)	1 Block	8.3 mA	18.5 mA

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Table 10: Addressable Interface Modules

Model	Description	Devices	Supv.	Alarm
4100-3109*	**IDNet 2 Module**, 250 point capacity; electrically isolated output with **two** short circuit isolating Class B or Class A output loops, 1 block; standard on EPS with IDNet 2 Module	no devices	50 mA	60 mA
		50 devices	90 mA	150 mA
		125 devices	150 mA	225 mA
		250 devices	250 mA	350 mA
4100-3110*	**IDNet 2+2 Module**, 250 point capacity; electrically isolated output with **four** short circuit isolating Class B or Class A output loops, 1 block; mounts in expansion bay or available master controller bay module locations only, not applicable for EPS mounting	no devices	50 mA	60 mA
		50 devices	90 mA	150 mA
		125 devices	150 mA	225 mA
		250 devices	250 mA	350 mA
4100-3111*	**IDNet Short Circuit Isolating Loop Output Module; for Aftermarket Field Installation Only**; mount up to two on a 4100-3109 module; for use with 4100-3109 modules only			
4100-3102	MAPNET II Module, 127 point capacity, add devices separately; Module size = 2 Slots; Loading per MAPNET II device = 1.7 mA	Module without devices	255 mA	275 mA
4100-3103	Isolator Module for MAPNET II communications; converts a single connected SLC into four isolated outputs selectable as Class A or Class B; up to two Isolator Modules can be connected to one SLC; Module size = 1 Slot; **Note:** Compatible with MAPNET II Remote Isolators only		50 mA	50 mA
*__Note__: See Table for current draw for each IDNet device				

Table 11: Current draw for each IDNet device

Condition	Current
Standby	0.8 mA
Alarm, with LED off	1.0 mA
Alarm, with LED on	3.0 mA
Note: A maximum of 20 devices with LED on is supported for each channel. Additional device LEDs do not turn on.	

Table 12: 8-Point Zone/Relay Card

Model	Description	Size	Supv.	Alarm
4100-5013	8 point zone/relay 4x5" flat module. Mounts in any open block in a master controller or expansion bay. Alarm current shown is for 8 Class B IDCs using 3.3K end-of-line-resistors with 4 in alarm and 4 in standby. Standby current shown is for all 8 IDCs in standby. Refer to 579-1236 Zone/Relay Module Installation Instructions for additional information.	1 block	83 mA	351 mA
4100-6305	25V regulator harness for 8 point zone/relay module. One required for each 8 point zone/relay module to be powered by the 4100-5130 25V regulator module. A maximum of (5) 8 point zone/relay modules may be powered from the 4100-5130 per bay.	N/A	N/A	N/A

Note: Modules in Table 12 requires 4100ES Version 3.06 or later.

Table 13: Relay Modules; Non-power-limited

Model	Description	Resistive Ratings		Inductive Ratings		Size	Supv.	Alarm
4100-3202	4 DPDT w/ feedback	10 A	250 VAC	10 A	250 VAC	2 Slots	15 mA	175 mA
4100-3204	4 DPDT w/ feedback	2 A	30 VDC/VAC	½ A	30 VDC/120 VAC	1 Block	15 mA	60 mA
4100-3206	8 SPDT	3 A	30 VDC/120 VAC	1 ½ A	30 VDC/120 VAC	1 Block	15 mA	190 mA

Current Calculation Notes:

1. For total supervisory current, add panel module currents to base system **and** add all external loads panel-powered loads.
2. For total alarm current, add panel module currents to base system alarm current **and** add all panel NAC loads **and** all external loads powered from panel power supplies.

Table 14: Communication Modules

SKU	Description			Size	Supv.	Alarm
4100-1291	Remote Unit Interface Module (RUI, unisolated), up to 3 maximum per control panel; for use with 4100-9600 only			1 Slot	85 mA	85 mA
4100-6031	**Select one per ES Power Supply (non power-limited)**	City Circuit, with disconnect switches	For use with ES-PS only (not for backup ES-PS or ES-XPS)	1 Block	20 mA	36 mA
4100-6032		City Circuit, without disconnect switches			20 mA	36 mA
4100-6033		Alarm Relay, 3 Form C relays, 2 A @ 32 VDC; for ES-PS			15 mA	37 mA
4100-6038	Dual RS-232 Interface			1 Slot	132 mA	132 mA
4100-6045	Decoder Module			3 Slots	85 mA	163 mA

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Table 14: Communication Modules

SKU	Description	Size	Supv.	Alarm
4100-6048	VESDA Aspiration System Interface	1 Slot	132 mA	132 mA
4100-9816	Master Clock Interface Module with one standard RS-232 port (see *S4100-0033*)	1 Slot	132 mA	132 mA

Table 15: Miscellaneous Options and Accessories

Model	Description	
4100-1290	24 Point I/O Module for external connections, select each point as either a switch input (momentary or maintained) or an output (for lamp/LED/relay); requires 1 Slot (refer to data sheet *S4100-0032* for additional information)	
4100-0632	Terminal Block Utility Module with 2, 16 position terminal blocks on 4" x 5" single block, for of up to 12 AWG wire (3.31 mm^2)	
4100-0633	Door Tamper Switch, connects into Transponder Interface Module, one per cabinet assembly if required	
4100-0634	120 VAC	Power Distribution Module (PDM) select per system voltage; one required per box
4100-0635	220/230/240 VAC	Power Distribution Module (PDM) select per system voltage; one required per box
4100-9837	Green LED Power-on Indicator Kit, required for ULC listing of MINIPLEX transponder; mounts on solid door knockout	
2081-9031	Series resistor for WSO, IDCs (N.O. water flow and tamper on same circuit, wires after water flow and before tamper) 470 Ω, 1 W, encapsulated, two 18 AWG leads (0.82 mm^2), 2 ½" L x 1 ⅜" W x 1" H (64 mm x 35 mm x 25 mm)	

Table 16: Audio Riser Modules

SKU	Description	Size	Supv.	Alarm
4100-0621	Dual Channel *Analog* Audio Riser Module; accepts one or two separate audio signals from host control panel; mounts in Block B, is controlled by Transponder Interface Module	1 Block	0 mA	15 mA
4100-0622	3-8 Channel *Digital* Audio Riser Module; similar to analog module, except receives and decodes a digital input signal with up to eight audio channels; with Non-Alarm Audio input	1 Block	70 mA	70 mA

Table 17: Analog Emergency Voice/Alarm Communications Equipment, Constant Supervision Compatible*

SKU	Description		Details		
4100-1361	25 VRMS output	Flex-35, 35 W Amplifier, constant supervision compatible	Includes three on-board Class B audio NACs; power is supplied from an ES-PS	NAC rating = 1.4 A	35 W, or 100 speakers
4100-1362	70.07 VRMS output			NAC rating = 0.5 A	
4100-1312	25 VRMS output	Flex-50, 50 W Amplifier, constant supervision compatible		NAC rating = 2 A	50 W, or 100 speakers
4100-1313	70.7 VRMS output			NAC rating = 0.707 A	
* Refer to document S4100-1034 for additional audio information.					

Table 18: 100 W Analog Amplifiers with Power Supply, Constant Supervision Compatible

SKU/Output Voltage		Power Supply Input/Listing		Description	Details
25 VRMS	70.7 VRMS				
4100-1314	4100-1315	120 VAC, 60 Hz	UL	Primary 100 W Amplifier	Includes six, Class B audio NACs; NAC rating = 50 W or 100 speakers maximum; 2 A @ 25 VRMS; 1.4 A @ 70.7 VRMS
4100-1316	4100-1317	120 VAC, 60 Hz	ULC	Primary 100 W Amplifier	Includes six, Class B audio NACs; NAC rating = 50 W or 100 speakers maximum; 2 A @ 25 VRMS; 1.4 A @ 70.7 VRMS ULC models have low battery dropout circuit
4100-1318	4100-1319	220/230/240 VAC, 50/60 Hz	UL	Primary 100 W Amplifier	Includes six, Class B audio NACs; NAC rating = 50 W or 100 speakers maximum; 2 A @ 25 VRMS; 1.4 A @ 70.7 VRMS
4100-1320	4100-1321	120 VAC, 60 Hz	UL	Backup 100 W Amplifier	Uses the six Class B NACs of primary amplifier
4100-1322	4100-1323	120 VAC, 60 Hz	ULC	Backup 100 W Amplifier	Uses the six Class B NACs of primary amplifier ULC models have low battery dropout circuit
4100-1324	4100-1325	220/230/240 VAC, 50/60 Hz	UL	Backup 100 W Amplifier	Uses the six Class B NACs of primary amplifier

Table 19: Digital Emergency Voice/Alarm Communications Equipment*

Model	Description		Details		
4100-1363	25 VRMS output	Flex-35, 35 W Amplifier, constant supervision compatible	Includes three on-board Class B audio NACs; power is supplied from an ES-PS	NAC rating = 1.4 A	35 W, or 100 speakers
4100-1364	70.07 VRMS output			NAC rating = 0.5 A	
4100-1326	25 VRMS output	Flex-50, 50 W Amplifier, constant supervision compatible		NAC rating = 2 A	50 W, or 100 speakers
4100-1327	70.7 VRMS output			NAC rating = 0.707 A	
* Refer to document S4100-1034 for additional audio information.					

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Table 20: 100 W Digital Amplifiers with Power Supply, Constant Supervision Compatible

SKU/Output Voltage		Power Supply Input/Listing		Description	Details
25 VRMS	70.7 VRMS				
4100-1328	4100-1329	120 VAC, 60 Hz	UL	Primary 100 W Amplifier	Includes six, Class B audio NACs; NAC rating = 50 W or 100 speakers maximum; 2 A @ 25 VRMS; 1.4 A @ 70.7 VRMS
4100-1330	4100-1331	120 VAC, 60 Hz	ULC	Primary 100 W Amplifier	Includes six, Class B audio NACs; NAC rating = 50 W or 100 speakers maximum; 2 A @ 25 VRMS; 1.4 A @ 70.7 VRMS ULC models have low battery dropout circuit
4100-1332	4100-1333	220/230/240 VAC, 50/60 Hz	UL	Primary 100 W Amplifier	Includes six, Class B audio NACs; NAC rating = 50 W or 100 speakers maximum; 2 A @ 25 VRMS; 1.4 A @ 70.7 VRMS
4100-1334	4100-1335	120 VAC, 60 Hz	UL	Backup 100 W Amplifier	Uses the six Class B NACs of primary amplifier
4100-1336	4100-1337	120 VAC, 60 Hz	ULC	Backup 100 W Amplifier	Uses the six Class B NACs of primary amplifier ULC models have low battery dropout circuit
4100-1338	4100-1339	220/230/240 VAC, 50/60 Hz	UL	Backup 100 W Amplifier	Uses the six Class B NACs of primary amplifier

Table 21: Options for use with either Analog or Digital Amplifiers

Model	Description		Details and Mounting Reference	
4100-1245	Flex-35/50 Expansion NAC Module; adds three Class B audio NACs	Choose one per amplifier	Mounts on Flex-35/50 assembly; NAC ratings = 1.5 A, 35/50 W, or 100 speakers maximum; *Supv = 8 mA, Alarm = 60 mA*	
4100-1246	Flex-35/50 Class A Adapter Module; converts three on-board NACS to Class A operation		Mounts on Flex-35/50 assembly; NAC ratings = 2 A, 50 W, or 100 speakers maximum; *Supv =10 mA, Alarm = 30 mA*	
4100-1248	100 W Amplifier Expansion NAC Module; NAC ratings = 1.5 A, 50 W, or 100 speakers max.		Provides six additional Class B audio NACs, mounts on 100 W amplifier assembly; *Supv = 17 mA, Alarm = 60 mA*	
4100-1249	100 W Class A Adapter Module; NAC ratings = 2 A, 50 W, or 100 speakers max.		Converts six on-board NACs to Class A operation, mounts on 100 W amplifier assembly; Supv = 1 mA, Alarm = 60 mA	
4100-1259	25 VRMS Output; NAC rating = 2 A, 50 W, or 100 speakers max.	Constant Supervision Adapter for three NACs; select per amplifier output; not compatible with amplifier NAC expansion modules; deactivated when on batteries	*Supv = 10 mA on batteries;* *Alarm = 35 mA*	Converts three Class B audio NACS to Class A or Class B Constant Supervision NACs; mounts on Flex-35/50 or 100 W amplifier assembly; use two for the six NACs on 100 W amplifiers
4100-1260	70.7 VRMS Output; NAC rating = 0.707 A, 50 W, or 100 speakers max.		*Supv = 38 mA on batteries;* *Alarm = 70 mA*	

Table 22: Audio Expansion Signal Module and Options

Model	Description	Details and Mounting Reference	
4100-5116	Expansion Signal Module; three, 1.5 A Class B NACs for Audio applications; up to five maximum per amplifier; NAC rating = 1.5 A, 50 W, or 100 speakers maximum	Converts one NAC input to three NAC outputs; selects between two inputs; for Flex-35/50 amplifiers only, two input NACs are required; Single Block module mounts in expansion bay; *Supv = 20 mA; Alarm = 80 mA*	
4100-1266	Expansion Signal Module NAC Expander; NAC rating = 1.5 A, 50 W, or 100 speakers max.	Expands module capacity to six, Class B NACs; *Supv = 0.84 mA; Alarm = 60 mA*	These modules mount on the 4100-5116; select one max. per 4100-5116 as required
4100-1267	Expansion Signal Module Class A Adapter; NAC rating = 1.5 A, 50 W, or 100 speakers maximum	Converts 3 Class B, NACs to Class A; *Supv = 0 mA; Alarm = 30 mA*	
4100-1268	Expansion Signal Module Constant Supervision Adapter; Converts 3 Class B NACs to Constant Supervision Class B or Class A NACs; for 25 VRMS or 70.7 VRMS audio	NAC rating = 1.4 A, 50 W, or 100 speakers max.; *Supv = 38 mA on batteries (constant supervision deactivated); Alarm = 70 mA*	

Table 23: Firefighters Telephone Options

SKU	Description	Size	Supv.	In Use
4100-1272	Expansion Telephone Control Module with three Class B telephone NACS; required when telephone circuits are mounted in transponder;	1 Block	80 mA	130 mA
4100-1273	Telephone Class A Adapter Module; mounts on 4100-1272; no additional current required			

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Table 24: General Audio Options

Model	Description
4081-9018	End-of-line resistor harness for 70.7 VRMS NACs; 10 kΩ, 1 W
4100-2320	Audio Bay-to-Bay Interconnection Harness Kit; **order one for each audio bay addition**
4100-0637	Audio Box Interconnection Harness Kit; **order one for each close-nippled audio cabinet**

Table 25: Local Mode Controller Selection

SKU	Description				Supv.	Alarm
4601-9108	Flush mount	Red with white lettering	Local Mode Controller, 3-gang plate mounted; flush mount requires a 1 ½" (38 mm) deep 3-gang box; surface mount controllers include a matching mounting box; see Local Mode Controller Detail	normal	44 mA	44 mA
4601-9109	Surface mount					
4601-9110	Flush mount	Beige with black lettering		in local mode	44 mA	58 mA
4601-9111	Surface mount					

Local Mode Controller Detail

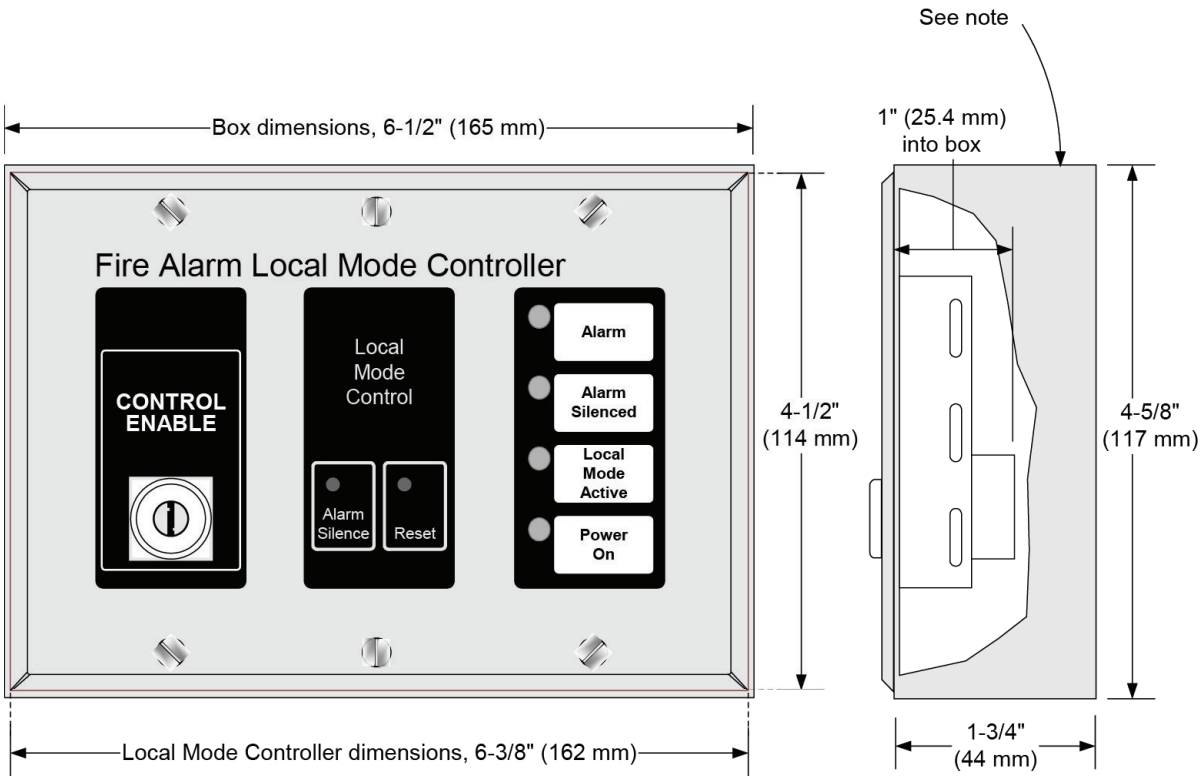


Figure 3: Local Mode Controller Detail

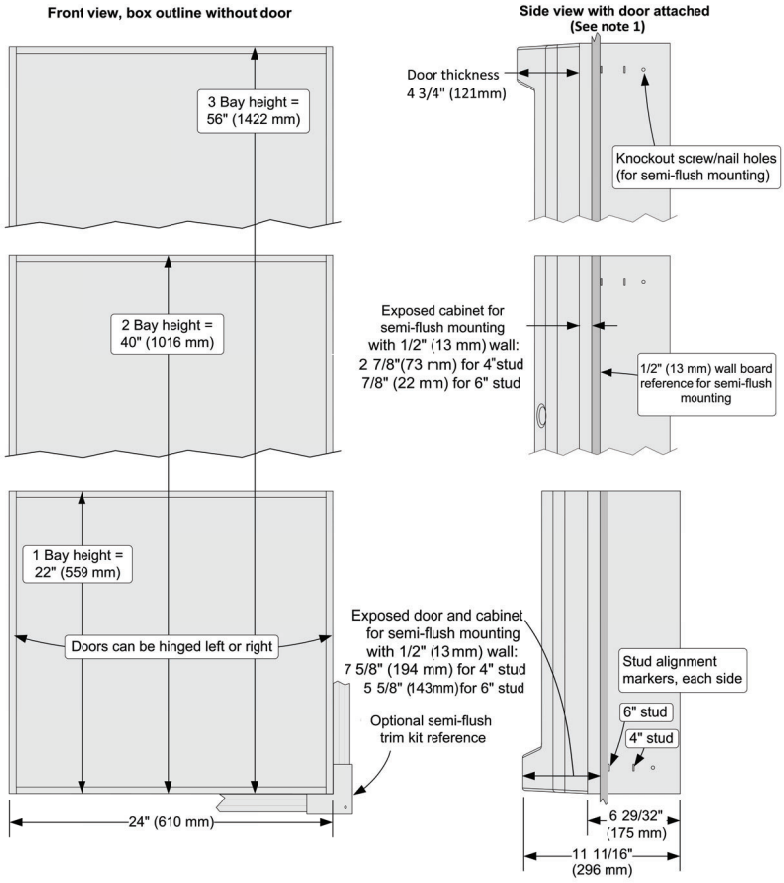
Note: Matching box is supplied with surface mount models 4601-9109 (red) and 4601-9111 (beige); for semi-flush models 4601-9108 (red) and 4601-9110 (beige), use a 1-1/2" (38 mm) minimum depth, 3-gang box.

Local Mode Controller to Transponder Wiring:

1. Wire close-nippled to transponder, maximum distance = 20 ft (6.1 m).
2. Nine wires required: 24 VDC (2), one per LED indicator (4), and one per switch (3).
3. Wire size, 18 AWG (0.82 mm²).

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Enclosure Installation Reference



Note:

1. Side View dimensions are shown with minimal cabinet and door protrusion from the exterior wall. For 6 inch stud construction with minimum protrusion shown, the door will open 90 degrees. To allow the door to open 180 degrees, the exposed cabinet dimension from the exterior wall must be a minimum of 3 inches (76 mm) for both 4 inch and 6 inch stud construction.

2. A system ground must be provided for Earth Detection and transient protection devices. This connection shall be made to an approved, dedicated Earth connection per NFPA 70, Article 250, and NFPA 780.

Additional 4100ES Product Reference

Table 26: Additional 4100ES Product Reference

Subject	Datasheet
Battery and Battery Cabinet Reference for 4100ES	S2081-0006
110 Ah Batteries and Cabinets for 4100ES	S2081-0012
Seismic Battery Brackets Reference	S2081-0019
4100ES LED/Switch Modules & Printer	S4100-0032
4100ES Enclosures	S4100-0037
4100ES Basic Panels with ES-PS Power Supplies	S4100-1031
NDU with ES-PS Power Supplies for 4120 Network	S4100-1036
NDU with ES-PS Power Supplies for ES Net	S4100-1077

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

4009 IDNet NAC Extender for Control with IDNet Communications or Conventional NACs

Features

Provides additional notification appliance circuit (NAC) capacity with flexible operation modes and power-limited design

Four, Class B NACs are standard:

- Rated 2 A each for conventional reverse polarity 24 VDC notification appliances and providing multiple operation modes.
- Can be selected to provide synchronization for Simplex visible notification strobe flashes.
- Capable of controlling TrueAlert non-addressable notification appliances operating with SmartSync two-wire control mode.

Input control options:

- IDNet addressable communications from a 4007ES, 4010, 4010ES, 4100U, or 4100ES Fire Alarm Control Panel. See note.
- Or from one or two conventional 24 VDC NACs with multiple output control options

IDNet communications control benefits:

- Provides status monitoring and individual NAC control using a single address per 4009 IDNet NAC Extender
- Supports IDNet "Device Level" earth fault location

WALKTEST operation is available with either input choice

Internal 8 A power supply/battery charger:

- Charges internal batteries up to 12.7 Ah or up to 18 Ah batteries in external cabinet
- Provides status monitoring of battery, input power, and earth faults
- Rated 8 A for "Special Application" appliances; including 4901, 4903, 4904, and 4906 Series horns, strobes, horn/strobes, and speaker/strobes
- Rated 6 A for "Regulated 24 DC" appliance power

Optional 4009 IDNet NAC Extender modules:

- IDNet Communications Repeater provides Class B or Class A output
- IDNet Communications Fiber Optic Receiver/Repeater, available as Class B or Class X
- Four additional Class B NACs, rated 1.5 A for Special Application appliances; 1 A for Regulated 24 DC appliance power
- Class A, Two Circuit Adapter Module

UL Listed to Standard 864

External Accessories

IDNet communication fiber optic transmitters:

- For applications requiring the data integrity available with fiber optic communications
- Available as Class B or Class X
- Mounts in standard six-gang electrical box

External battery cabinet for 18 Ah batteries

Introduction

ADA compliance. Complying with the notification requirements of ADA (Americans with Disabilities Act) may require more notification appliance power than is available within the fire alarm control panel. When additional power is required, a 4009 IDNet NAC Extender can provide up to 8 A of NAC power with up to eight, supervised reverse polarity NACs.

Location flexibility. The 4009 IDNet NAC Extender can be mounted close to a compatible dedicated host panel or can be located remotely for convenient power distribution. Multiple operation modes and multiple connection options further increase location flexibility.

Additional information. For additional operation detail and application information, refer to *Installation Instructions 574-181* and *field wiring diagram 842-068*.

Note: 4100U requires revision 11 software or higher for compatibility. 4010 requires revision 2 software or higher for compatibility.

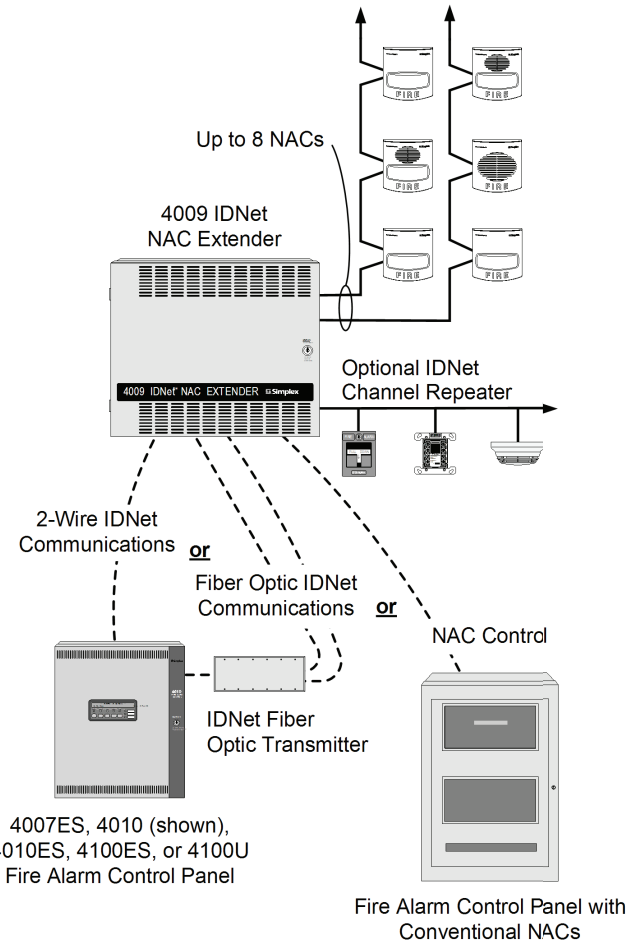


Figure 1: 4009 IDNet NAC Extender connection reference drawing

ULC listed model is 4009-9202CA. This product has been approved by the California State Fire Marshal (CSFM) pursuant to Section 13144.1 of the California Health and Safety Code. See CSFM Listing 7300-0026:214 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.

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Application and operation information

IDNet addressable communications compatible. Up to 10, 4009 IDNet NAC Extenders can be controlled for each 4007ES, 4010ES, 4100U, or 4100ES IDNet communications channel; up to 5 can be controlled on the 4010 IDNet communications channel. Each output NAC can be individually controlled for general alarm or selective area notification requiring only one point address for each Extender. Individual Extender NACs can also be manually controlled from the host panel. IDNet controlled extenders will inform the host panel of troubles using IDNet communications. 4007ES, 4010ES, 4100ES, and 4100U control panels control using multi-point rules, refer to data sheet *S4090-0011* for details.

Optional IDNet repeaters. IDNet communications can be repeated with the optional IDNet Repeater Module or with the optional Fiber Optic Receiver Module. Up to 100 of the IDNet channel points can be repeated once (refer to Typical IDNet connection example and 4009 IDNet NAC Extender specifications for details). Repeated IDNet communications also support the "device level" earth fault location utility of the host panel.

Hardwire control applications. For applications where an existing (or new) conventional NAC needs additional power, the 4009 IDNet NAC Extender can be controlled directly from the NAC. Either one or two NACs, from either the same, or from different host fire alarm control panels, can be connected to control the 4009 IDNet NAC Extender output NACs. Multiple control selections provide flexible operation. (See Hardwire Control Connection Information for more detail.) Alarms from the host panel will activate the four, 4009 IDNet NAC Extender NACs (or optionally, 8 NACs) to extend the alarm.

The 4009 IDNet Extender monitors itself and each of its output NACs for trouble conditions, including earth faults. Extenders wired to conventional NACs will indicate a trouble by opening the path to the NAC's end-of-line resistor, but retaining the ability to respond to alarms. Individual troubles are also annunciated by LEDs located on the 4009 IDNet NAC Extender main circuit board. Refer to Service diagnostic features for more diagnostic information.

Product selection

Table 1: Standard models

Model	Description	
4009-9201**	120 VAC input	4009 IDNet NAC Extender with 4, Class B NACs and 8 A power supply
4009-9301	240 VAC input	
4009-9202CA (ULC listed model)	120 VAC input	-
** 4009-9201 has been seismic tested and is certified to IBC and CBC standards as well as to ASCE 7 categories A through F, requires battery brackets as detailed on data sheet *S2081-0019*		

Table 2: Optional modules (for on-site installation)

Model	Description		Comments
4009-9807	Additional four point NAC module, rated 1.5 A Special Application appliances; 1 A for Regulated 24 DC appliance power, Class B		1 maximum
4009-9808	Dual Class A adapter (for two NAC outputs)		Select as required (4 maximum)
4009-9809	IDNet Repeater, output is Class A or Class B		Select **either** an IDNet Repeater **or** a Fiber Optic Receiver as required; one transmitter can connect to one receiver
4009-9810	Fiber Optic Receiver	Class B	
4009-9811		Class A (IDNet), Class X (fiber)	
4009-9805	Red Appliqué for door		Select if required
2975-9801	Semi-Flush Trim Kit	Beige trim	1 7/16 in. wide (78 mm), use if required for semi-flush installations
2975-9802		Red trim	

Table 3: Battery selection (select battery size using system requirements)

Model	Description	Comments
2081-9272	6.2 Ah Battery, 12 VDC	Two batteries are required, 24 VDC operation
2081-9274	10 Ah Battery, 12 VDC	
2081-9288	12.7 Ah Battery, 12 VDC	
2081-9275	18 Ah Battery, 12 VDC	Requires external battery cabinet, two batteries are required, 24 VDC operation

Table 4: External accessories (select using system requirements)

Model	Description		Comments
4090-9105	IDNet Fiber Optic Transmitter	Class B operation	Mounts in six-gang electrical box, refer to 4090-9105/9107 IDNet fiber optic transmitter mounting information for mounting details **Note:** Class B Fiber Transmitter Rev C or higher, IS NOT COMPATIBLE with Class B Fiber Receiver before Rev J.
4090-9107		Class X operation	
4009-9801	External battery cabinet for up to 18 Ah batteries, beige		16-1/4 in. W x 13-1/2 in. H x 5-3/4 in. D (413 mm x 343 mm x 146 mm)
4081 series	End-of-Line resistor harnesses; see data sheet *S4081-0003* for details		

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Typical IDNet connection example

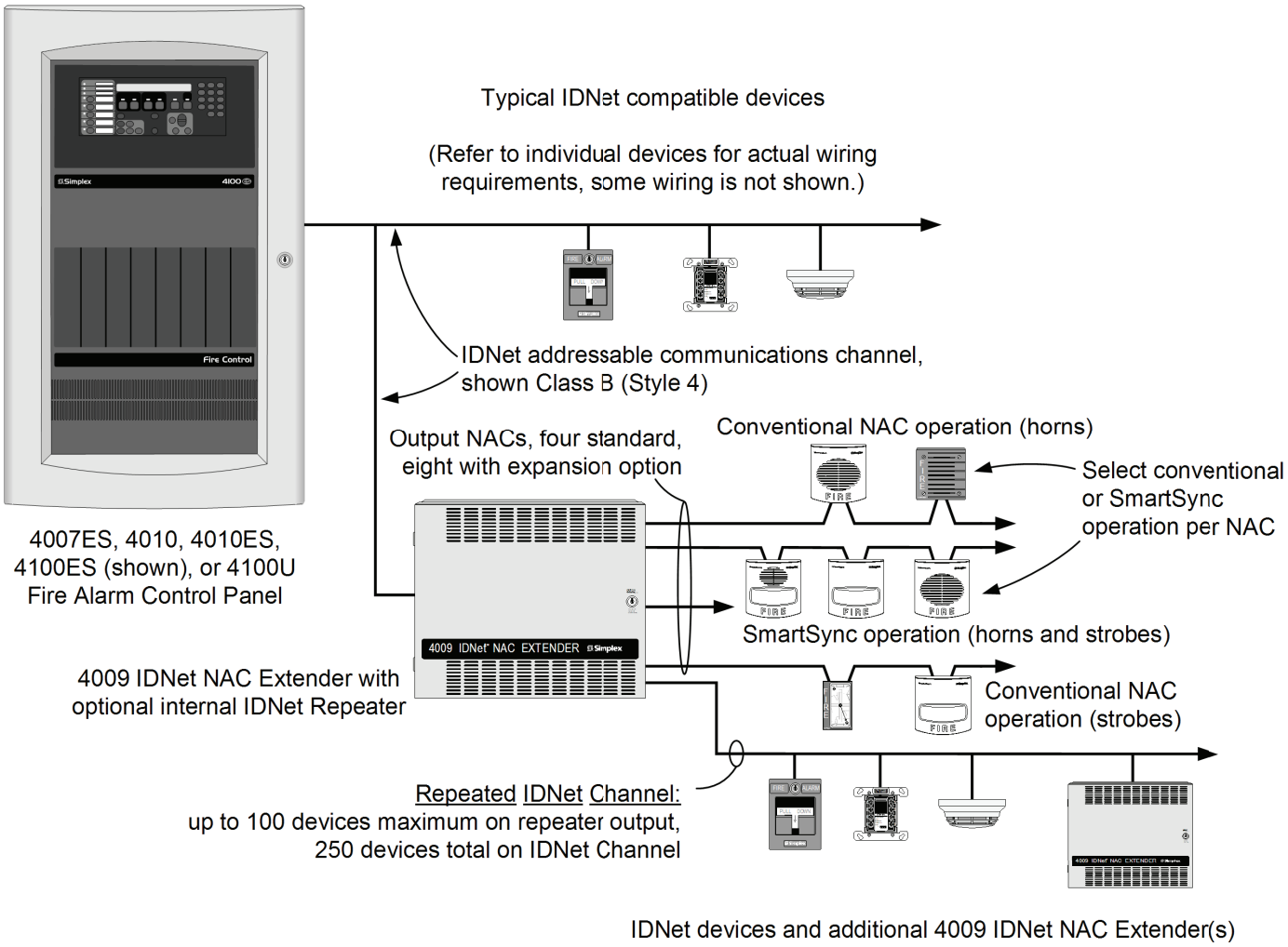


Figure 2: Typical IDNet connection example

Note: Up to 10 4009 IDNet NAC Extenders may be connected using 4007ES, 4010ES, 4100U, or 4100ES IDNet channel, up to 5 on the 4010 IDNet channel. IDNet communications can be repeated only once (can pass through only one series connected repeater or one fiber optic receiver).

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Typical fiber optic system connections

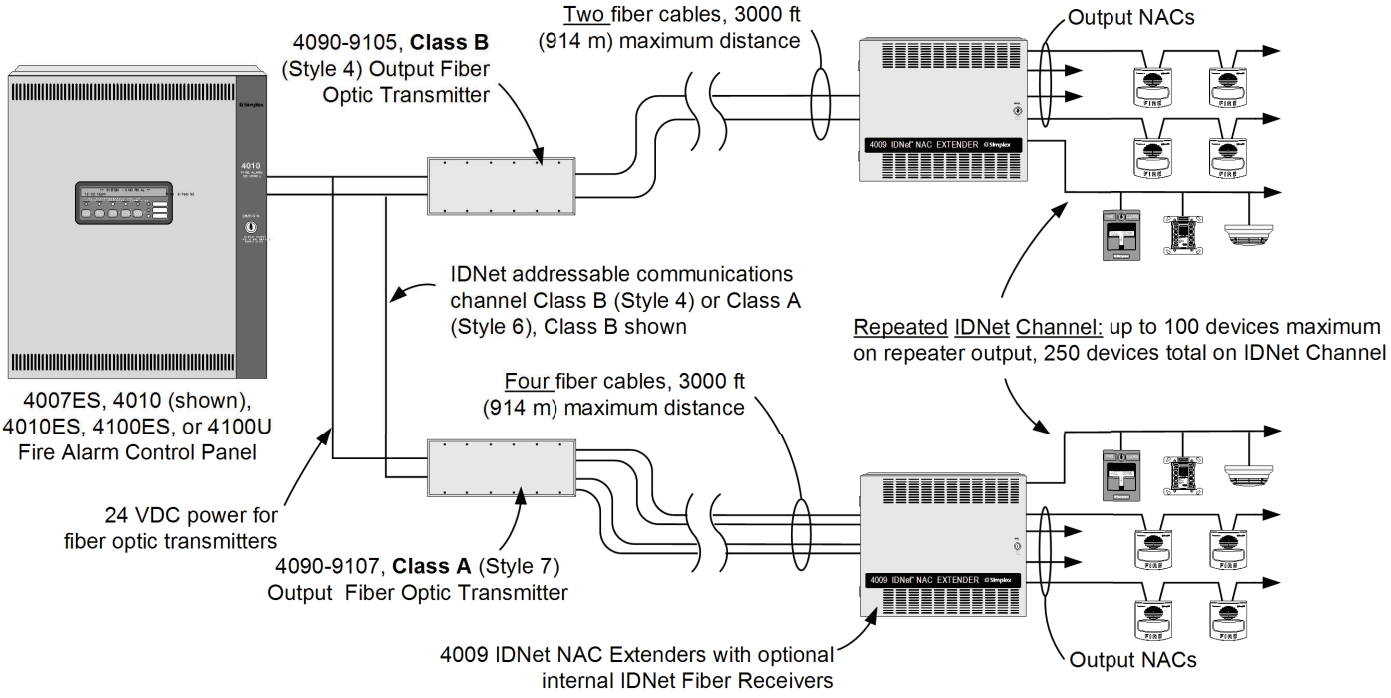


Figure 3: Typical fiber optic system connections

Note: Up to 10 4009 IDNet NAC Extenders may be connected per 4007ES, 4100ES, or 4010ES. Up to 5 4009 IDNet NAC Extenders may be connected on the 4010 IDNet channel. IDNet communications can be repeated only once (can pass through only one series connected repeater or one fiber optic receiver). Fiber optic transmitters connect to only one receiver in a 4009 IDNet NAC Extender.

Hardwire Control Connection Information

NAC Input Selections. The 4009 IDNet NAC Extender can be selected to:

- Track input NAC operation **or** to provide a locally generated code, selectable using NAC input.
- If selected for local coding, NAC outputs can be either **Temporal Coded** or **60 Beats/min March Time Coded**, one code selection per extender (input NACs must be on continuous with Alarm).
- Additionally, NAC outputs can be selected to provide the Simplex strobe synchronization signal. This signal will synchronize the flashes of synchronized strobes but will be ignored by free-run strobes and audible devices. (Strobes are for operation by noncoded NACs.)

NAC input to NAC output control can be selected for standard and optional NACs per the following table:

Table 5: Conventional NAC Output Operation Options

Input	A	B	C
NAC 1	NACs 1 and 2, 5 and 6	NACs 1 - 4	NACs 1 - 8
NAC 2	NACs 3 and 4, 7 and 8	NACs 5 - 8	-

Table 6: SmartSync NAC Output Operation

Input	NAC Control Function	
NAC 1	Strobe Control	All NAC outputs (1 - 8)
NAC 2	Horn Control	

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SmartSync Notification Appliance Control

The TrueAlert Notification Appliance product line includes addressable and non-addressable operation. Non-addressable models are available with 2-wire SmartSync operation or conventional 4-wire operation. The following details apply to use with the 4009 IDNet NAC Extender:

- TrueAlert non-addressable models with SmartSync operation allow audible notification to be separately controlled over the same wire pair that controls visible notification.
- 4009 IDNet NAC Extenders can be selected to provide SmartSync operation whether controlled by IDNet communications or conventional NACs.
- IDNet control allows output NACs to be **individually selected** for conventional **or** SmartSync operation.
- With NAC input control, **all** output NACs are selected for either conventional **or** SmartSync operation.
- Refer to data sheet *S4009-0003* for TrueAlert Addressable operation details, contact your local Simplex product supplier for further information on specific TrueAlert notification appliances.

Hardwire control NAC connection cne-line reference diagram

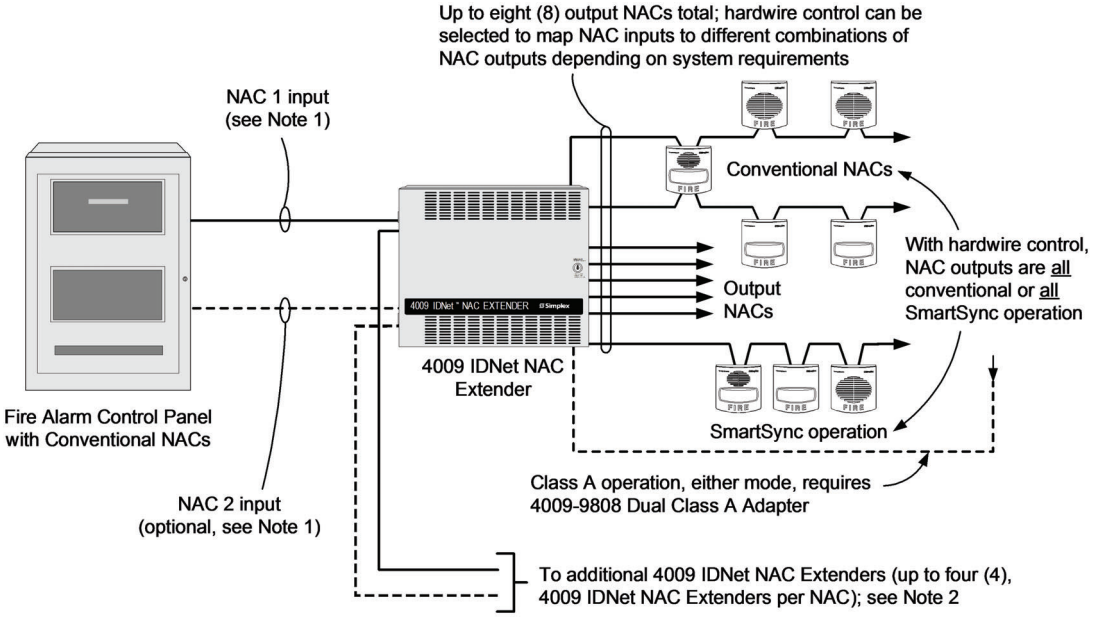


Figure 4: Hardwire control NAC connection one-line reference diagram

Note:

1. For separate audible and visible output NAC control, or SmartSync NAC output operation, 2 input NACs are required. NAC 1 is "on-until-reset" and NAC 2 is "on-until-silenced".
2. To synchronize strobe flash outputs for up to 4 4009 IDNet NAC Extenders, use the synchronized strobe output from a Synchronized Flash Module (4905-9914 for Class B operation, 4905-9922 for Class A operation) or, if available, from a NAC selected to provide synchronized strobe flash output. **NOTE: DO NOT USE a NAC selected for SmartSync operation for this function.**

Refer to Installation Instructions *574-181* for additional information and application guidance.

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4009 IDNet NAC Extender specifications

Table 7: Input ratings

Specification	Rating
120 VAC input (4009-9201)	3A @ 102 VAC -132 VAC, 60 Hz
240 VAC input (4009-9301)	1.5A @ 204 VAC -264 VAC, 50 Hz /60 Hz
Hardwire control from external NACs, input requirements	Conventional reverse polarity operation
	5 mA maximum; 16 VDC to 33 VDC

Table 8: Output ratings

Specification	Rating
Total rating	8 A, Special application appliances 6 A, regulated 24 DC appliance power
Standard NACs	2 A each, special application or regulated 24 DC appliance power
Optional NACs (requires 4009-9807)	1.5 A each, Special Application appliances 1 A each, Regulated 24 DC appliance power
Special application appliances	Simplex non-addressable horns, strobes, and combination horn/strobes and speaker/strobes (contact your Simplex product representative for compatible appliances)
Regulated 24 DC appliances	Power for other UL listed appliances; use associated external synchronization modules where required
Strobe operation	Up to 33 strobes for each NAC can be synchronized; output NACs configured for Simplex synchronized strobe operation are synchronized to each other
Auxiliary output	500 mA @ 24 VDC nominal

Table 9: Optional modules ratings

Specification		Rating
IDNet Repeater Module (4009-9809)	Input power	70 mA @ 24 VDC, system supplied
	IDNet input, one address	Maximum distance from IDNet source is 2,500 ft (762 m)
	IDNet output specifications	Repeated IDNet output for up to 100 devices (total IDNet devices not to exceed 250 for each channel)
		Maximum distance to farthest device is 2,500 ft (762 m)
		Total distance including "T-taps" is 10,000 ft (3048 m)
		Class A loop maximum distance is 2,500 ft (762 m), no "T" taps

Table 10: Fiber optic receiver modules

Specification	Rating
Input current	4009-9810 , Class B, 65 mA @ 24 VDC, system supplied
	4009-9811 , Class X, 80 mA @ 24 VDC, system supplied
IDNet output specifications	Same as those for repeater module
Fiber optic transmission distance	3000 ft (914 m) maximum

Table 11: General specifications

Specification	Rating
Operating temperature	32° F to 120° F (0° C to 49° C)
Operating humidity range	10% to 90% RH from 32° F to 104° F (0° C to 40° C)
Wiring Connections* **Note:** * Metric wire equivalents: 18 AWG = 0.82 mm^2; 12 AWG = 3.31 mm^2	Terminal blocks for 18 AWG (stranded) to 12 AWG (solid)

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Fiber optic transmitter specifications

Table 12: Fiber optic transmitter specifications

Specification	Rating
Input voltage	18.9 VDC -32 VDC from compatible listed fire alarm supply
Input current	4090-9105, Class B, 30 mA @ 24 VDC
	4090-9107 , Class X, 35 mA @ 24 VDC
Fiber optic connections and cable requirements	Multimode, graded index, 50/125µm, 62.5/125 µm, 100/40 µm, or 200 µm
	Type ST connectors
	4090-9105, Class B operation, two fiber cables required
	4090-9107 , Class X operation, four fiber cables required
Module size (with mounting bracket)	6-13/16 in. W x 3-3/4 in. H x 1-1/8 in. D (173 mm x 95 mm x 29 mm)
On-board status indicators	Green LED flashing = transmit
	Red LED flashing = receive
	Separate red LED on 4090-9107 = Class X receive
Communications	Simplex IDNet
Fiber optic transmission distance	3000 ft (914 m) maximum
Wiring connections*	Terminal blocks for 18 AWG (stranded) to 12 AWG (solid)
Operating humidity	10% to 90% RH from 32° F to 104° F (0° C to 40° C)
Operating temperature	32° F to 120° F (0° C to 49° C)
* Metric wire equivalents: 18 AWG = 0.82 mm^2; 12 AWG = 3.31 mm^2	

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4009 IDNet NAC Extender mounting and module placement information

Additional four point module shown model 4009-9807 .

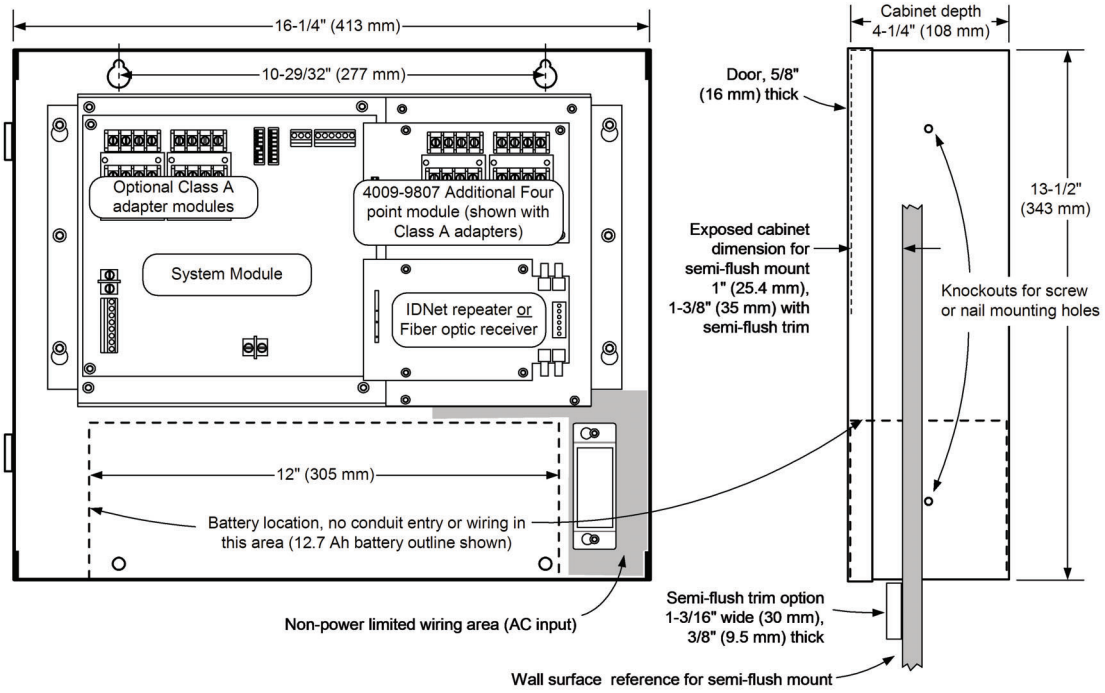


Figure 5: 4009 IDNet NAC Extender mounting and module placement information

Note: Recommended conduit entrance varies with module selection. Refer to general installation instructions *574-181*, specific module installation instructions, and to field wiring diagrams 842-068 before locating conduit entrance.

4009 IDNet NAC extender cabinet with door detail

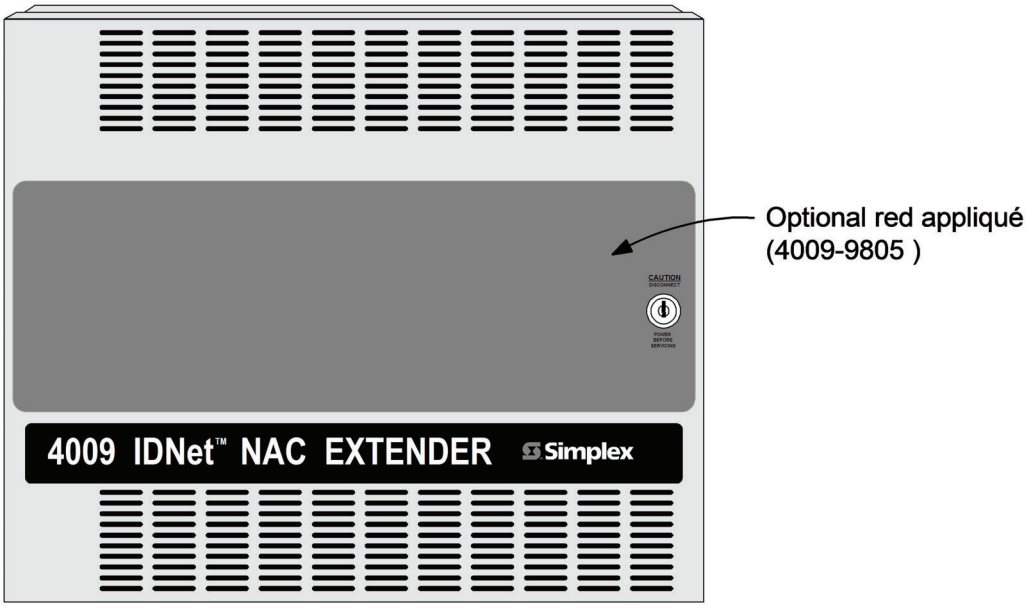
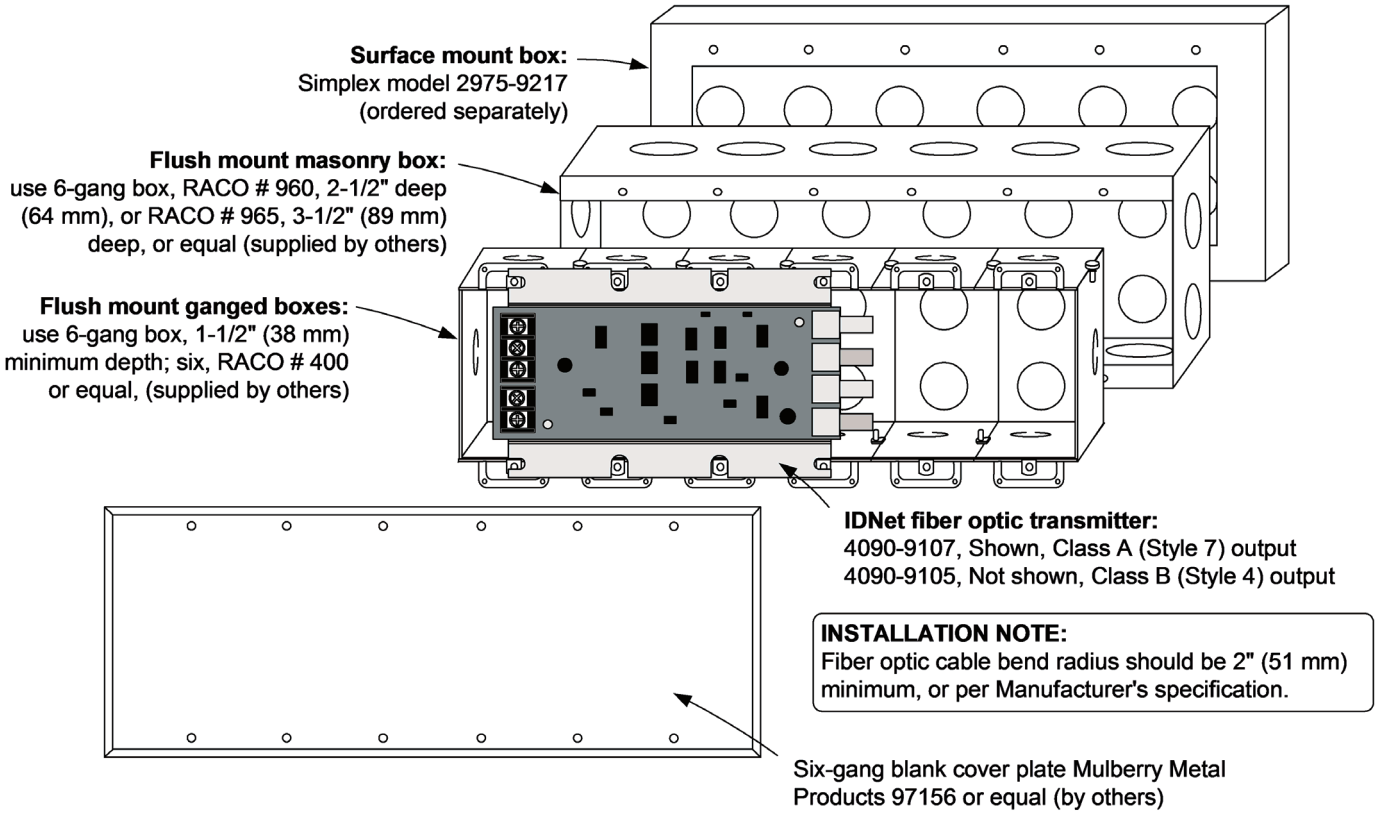


Figure 6: 4009 IDNet NAC extender cabinet with door detail

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4090-9105/9107 IDNet fiber optic transmitter mounting information



Service diagnostic features

Power-up self-diagnostics. Upon power-up, the 4009 IDNet NAC Extender tests each module and performs earth fault diagnostics. Trouble conditions are communicated to the host control panel and are also displayed on diagnostic status LEDs in the 4009 IDNet NAC Extender. When connected via IDNet communications, detailed status information is available at the host. When controlled with conventional NAC inputs, common troubles are signaled by providing a polarized open circuit that disconnects the NAC wiring from its end-of-line resistor but still allows a reversed polarity alarm to be received.

Door mounted reference label. The 4009 IDNet NAC Extender has a detailed programming and diagnostic label inside the front door that provides a quick reference for both installation and checkout.

LED Status Indicators are provided for the following:

- **Each NAC** (standard and optional) has a dedicated yellow LED that:
  - During supervision provides a slow flash to indicate a short circuit condition and a fast flash to indicate an open circuit.
  - During an alarm, the LED follows the NAC output (on steady or flashing with coded output).
- **Four, general status yellow LEDs** provide nine separate indications listed in priority of urgency. As a trouble is eliminated, any remaining trouble will then be indicated until the 4009 IDNet NAC Extender is returned to normal operation.
- **AC power status** is indicated by a green LED that is on when AC is normal. During low AC (brownout) conditions or with no AC, the LED is off. Additional power and battery status is indicated by the general status LEDs.

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4009 IDNet NAC extender current calculation chart

Step 1. Calculate the basic extender battery requirements (minus NAC loads)

Panel, NAC Options, and Auxiliary Power (underlined model numbers are optional modules).

Model	Description		Supervisory current	Actual supervisory	Alarm current	Actual alarm
4009-9201	120 VAC input	Basic Panel	85 mA	85 mA	185 mA	185 mA
4009-9301	240 VAC input					
4009-9807	Additional four point NAC		40 mA	+_____	40 mA	+_____
4009-9808	Dual class A adapter (no additional current)		–	–	–	–
Auxiliary power output			(500 mA maximum)	+_____	(500 mA maximum)	**+ [A1] _____**
Basic panel supervisory current				**= [S1] ____**		
Basic panel alarm current						**= [A2] _____**

Step 2. Calculate IDNet output module and device current (if used)

4009-9809	IDNet Repeater	Select one for each extender	70 mA	+_____	70 mA	+_____
4009-9810 *	Fiber Optic Receiver, Class B		65 mA		65 mA	
4009-9811 *	Fiber Optic Receiver, Class X		80 mA		80 mA	
IDNet devices (connected to repeater or receiver above), 0.7 mA each, maximum of 100			Total devices x 0.7 mA each	+_____	Total devices x 0.7 mA each	+_____
Note: IDNet Fiber Optic Transmitter current is supplied from the host fire alarm control panel	IDNet module supervisory current			**[S2] = ___**		
	IDNet module alarm current					**= [A3] _____**

Step 2. Calculate available NAC current	Maximum available current	**= 8 A***
	Subtract auxiliary power output	**- [A1] _____**
	Subtract IDNet module current	**- [A3] _____**
* 8 A for special application appliances; 6 A for regulated 24 DC appliances	Available NAC current	**= [A4] _____**

Step 3. Calculate actual NAC loading (Limited to available NAC current per Step 2.)

NAC type	NAC circuit #	NAC alarm current
Standard panel NACS, 2 A maximum for each NAC	Circuit 1	+_____
	Circuit 2	+_____
	Circuit 3	+_____
	Circuit 4	+_____
Optional four point NAC module, 1.5 A maximum special application rating, **1 A maximum** regulated 24 DC rating, per NAC	Circuit 5	+_____
	Circuit 6	+_____
	Circuit 7	+_____
	Circuit 8	+_____
Total actual NAC load alarm current		**= [A5] _____**

Step 4. Calculate total supervisory current

Total supervisory current = Basic panel current **[S1]** + IDNet Module current **[S2]** =	_____

Step 5. Calculate total alarm current

Total alarm current = Basic panel current [A2] + IDNet module current **[A3]** + actual NAC Current **[A5]** =	_____

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Features

TrueAlarm analog sensing provides the following features

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

For use with the following Simplex products

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

Fire alarm control unit provides the folloing features

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

Photoelectric smoke sensors provide the following features

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

Heat sensors have these features

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

General features

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

Additional base reference

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

Description

Digital communication of analog sensing

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

Intelligent data evaluation

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

Control unit selection

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

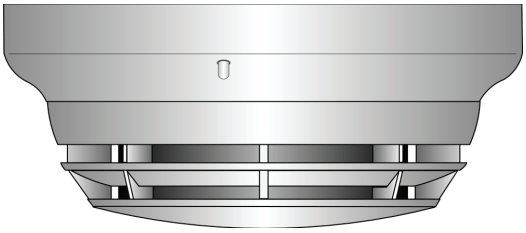


Figure 1: 4098-9714 TrueAlarm photoelectric sensor mounted in base

Timed/multi-stage selection

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

Sensor alarm and trouble LED indication

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

TrueAlarm sensor bases and accessories

Sensor base features

Base mounted address selection

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

General features

- Automatic identification provides default sensitivity when substituting sensor types
- Integral red LED for power-on, pulsing, or alarm or trouble, steady on
- Locking anti-tamper design mounts on standard outlet box
- Magnetically-operated functional test

* These products have been approved by the California State Fire Marshal (CSFM) pursuant to Section 13144.1 of the California Health and Safety Code. See CSFM Listings 7272-0026:218, 7271-0026:231, 7270-0026:216, and 7300-0026:217 for allowable values and/or conditions concerning material presented in this document. Additional listings may be applicable, contact your local Simplex product supplier for the latest status. Listings and approvals under Simplex Time Recorder Co. are the property of Tyco Fire Protection Products.

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Sensor bases

4098-9792, standard sensor base

4098-9789, sensor base with wired connections

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

Supervised relay bases not compatible with 2120 CDT:

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

Sensor base options

2098-9737, remote or local mount supervised relay

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

4098-9860, remote or local mount supervised relay

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

4098-9822, LED annunciation relay

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

4098-9832, adapter plate

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

2098-9808, remote red LED alarm indicator

- Mounts on single gang box

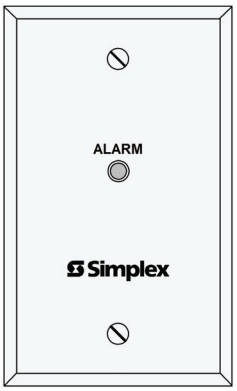


Figure 2: Remote red LED alarm indicator

Description

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

You can easily interchange different TrueAlarm sensor types to meet specific location requirements. This feature allows intentional sensor substitution during building construction. When conditions are temporarily dusty, you can install heat sensors without reprogramming the control unit, as covering smoke sensors causes them to be disabled. Although the control unit will indicate an incorrect sensor type, the heat sensor will operate at a default sensitivity providing heat detection for building protection at that location.

Mounting reference

Electrical Box Requirements: (boxes are by others)

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

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

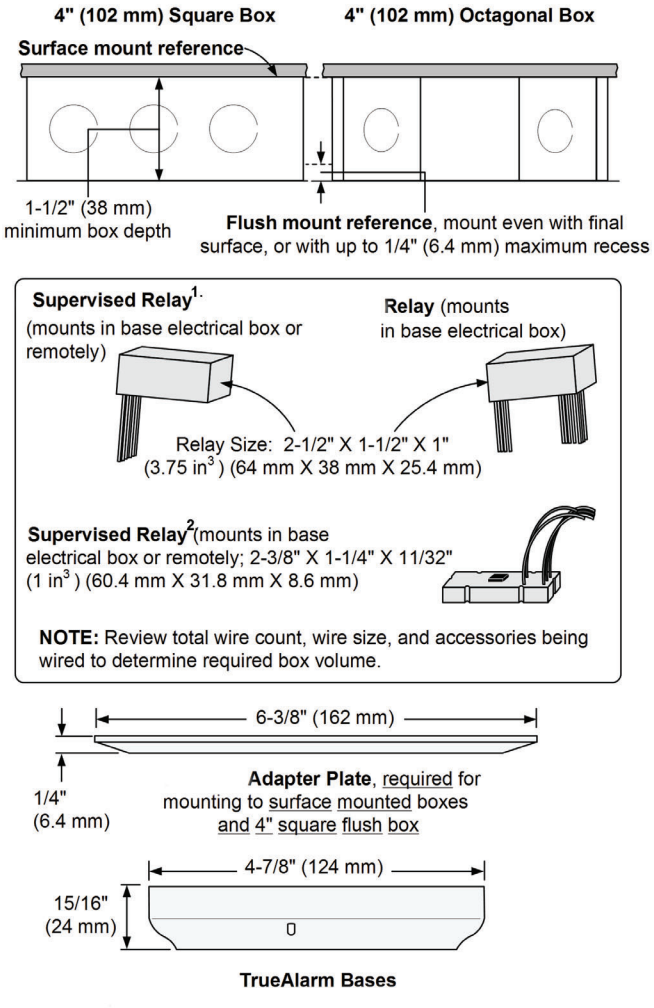


Figure 3: Mounting reference

Table 1: Product mounting - SKU reference

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

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TrueAlarm sensors

Features

- Sealed against rear air flow entry
- Interchangeable mounting
- EMI/RFI shielded electronics
- Heat sensors:
  - Selectable rate compensated, fixed temperature sensing with or without rate-of-rise operation
  - Rated spacing distance between sensors:

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

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

Smoke sensors

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

4098-9714 photoelectric sensor

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

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

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

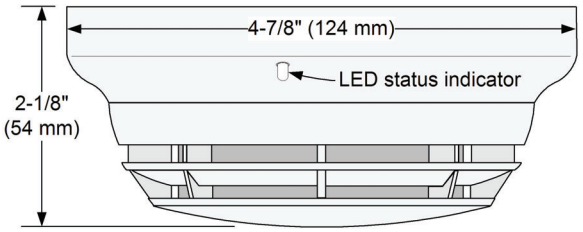


Figure 4: 4098-9714 photoelectric sensor with base

4098-9733 and 4098-9734 heat sensors

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

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

In a slowly developing fire, the temperature may not increase rapidly enough to operate the rate-of-rise feature. However, an alarm will be initiated when the temperature reaches its rated fixed temperature setting.

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

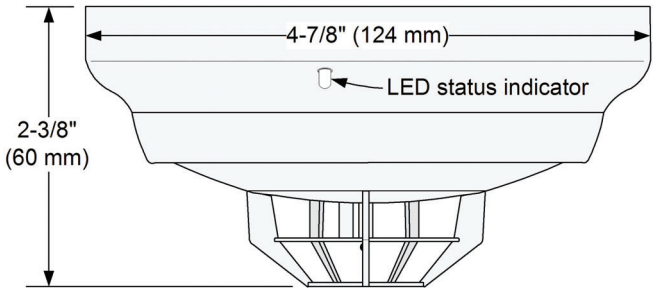


Figure 5: 4098-9733 heat sensor with base

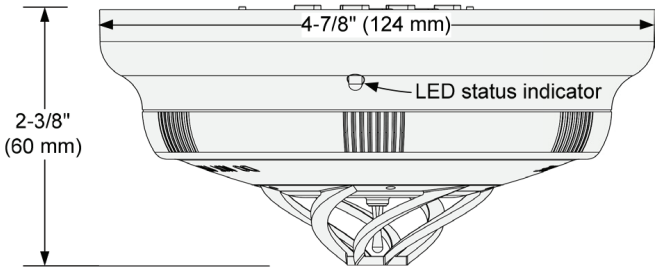


Figure 6: 4098-9734 high temperature heat sensor with base

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

Application reference

Sensor locations should be determined only after careful consideration of the physical layout and contents of the area to be protected. Refer to NFPA 72, ***the National Fire Alarm and Signaling Code***. On smooth ceilings, a smoke sensor spacing of 30 ft (9.1 m) can be used as a guide.

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

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TrueAlarm analog sensing product selection chart

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

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

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

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

Table 3: TrueAlarm sensors

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

Note:

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

Table 4: TrueAlarm sensor/base accessories

SKU	Description	Compatibility	Mounting requirements
2098-9737	Supervised relay, mounts remote or in base electrical box	For use with 4098-9791 base	Remote mounting requires 4 in. octagonal or 4 in. square box, 1 1/2 in. minimum depth Base mounting requires 4 in. octagonal box, 2 1/8 in. deep with 1 1/2 in. extension ring
4098-9860	Supervised relay, mounts remote or in base electrical box	For use with 4098-9780 base	
2098-9808	Remote red LED alarm indicator on single gang stainless steel plate	Bases 4098-9789, 4098-9791, and 4098-9780	Single gang box, 1 1/2 in. minimum depth
4098-9822	Unsupervised relay, tracks base led status. **Note:** Mounts only in base electrical box.	Bases 4098-9789, 4098-9791, and 4098-9780	4 in. octagonal box, 2 1/8 in. deep with 1 1/2 in. extension ring
4098-9832	Adapter plate	Bases 4098-9792, 4098-9789, 4098-9791, and 4098-9780	Required for surface or semi-flush mounted 4 in. square box and for surface mounted 4 in. octagonal box

Note: 2098-9808 is NEMA 1 rated.

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Specifications

Table 5: General operating specifications

Specification		Rating
Communications and sensor supervisory power		IDNet or MAPNET II communications, auto-selected, one address for each base
Communications connections		Screw terminals for in/out wiring, 18 to 14 AWG, 0.82 mm^2 to 2.08 mm^2
Remote LED alarm indicator current		1 mA typical, no impact to alarm current
Remote LED alarm indicator and relay connections		Color coded wire leads, 18 AWG, 0.82 mm^2
UL listed operating temperature range		32°F to 100°F, 0°C to 38°C
Operating temperature range	with 4098-9733 Heat Sensor	32°F to 122°F, 0°C to 50°C
	with 4098-9714 Smoke Sensor	15°F to 122°F, -9°C to 50°C
	with 4098-9734 Heat Sensor	32°F to 150°F, 0°C to 66°C
Storage temperature range		0°F to 140°F, -18°C to 60°C
Humidity range		10% to 95% RH
4098-9714 smoke sensor air velocity rating		0 to 4000 ft/min, 0 to 1220 m/min
Housing color		Frost white or black

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

Specification	Rating
Externally supplied relay coil voltage	18 VDC to 32 VDC, nominal 24 VDC
Supervisory current	270 µA, from 24 VDC supply
Alarm current with 2098-9737 relay	28 mA, from 24 VDC supply
Note: See Sensor base options for contact ratings.	

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

Specification	Rating
Power	Supplied from communications

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

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

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Features

Individually addressable manual fire alarm stations with:

- Power and data supplied by IDNet or MAPNET II addressable communications using a single wire pair
- Operation that complies with ADA requirements
- Visible LED indicator that flashes during communications and is on steady when the station has been activated
- The NO GRIP Single Action Station and Retrofit Kit are available with a more easily operated pull lever for applications where anticipated users may find the standard station lever difficult to activate
- Pull lever that protrudes when alarmed
- Break-rod supplied (use is optional)
- Models are available with single or double action (breakglass or push) operation
- UL listed to Standard 38
- NEMA 1 rated. See Addressable manual station product selection for more information.

Compatible with the following Simplex control panels:

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

Compact construction:

- Electronics module enclosure minimizes dust infiltration
- Allows mounting in standard electrical boxes
- Screw terminals for wiring connections

Tamper resistant reset key lock, keyed same as Simplex fire alarm cabinets.

Multiple mounting options:

- Surface or semi-flush with standard boxes or matching Simplex boxes
- Flush mount adapter kit
- Adapters are available for retrofitting to commonly available existing boxes

Description

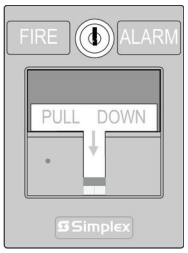
The Simplex addressable manual station combines the familiar Simplex manual station housing with a compact communication module that is easily installed to satisfy demanding applications. Its integral individual addressable module (IAM) constantly monitors status and communicates changes to the connected control panel through IDNet or MAPNET II communications wiring.

Operation

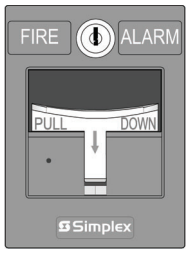
Activation of the 4099-9004 single action manual station requires a firm downward pull to activate the alarm switch. Completing the action breaks an internal plastic break-rod which is visible below the pull lever, use is optional. The use of a break-rod can be a deterrent to vandalism without interfering with the minimum pull requirements needed for easy activation. The pull lever latches into the alarm position and remains extended out of the housing to provide a visible indication.

Single Action NO GRIP Station 4099-9021. For applications such as California Building Code, Title 24, which requires "Controls and operating mechanisms shall be operable with one hand and shall not require tight grasping, pinching or twisting of the wrist" the model 4099-9021 station provides a more easily operated pull lever compared to standard stations. Retrofit of existing stations is available using the 4099-9805 Retrofit kit.

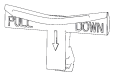
Double Action Stations (Breakglass) require the operator to strike the front mounted hammer to break the glass and expose the recessed pull lever. The pull lever then operates as a single action station.



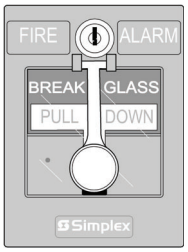
4099-9004
Single action



4099-9021 NO
GRIP Single action



4099-9805 NO
GRIP Retrofit kit



4099-9005 Breakglass



4099-9006 Push



With 2099-9828
Institutional Cover kit

Double Action Stations (Push Type) require that a spring loaded interference plate, marked PUSH, be pushed back to access the pull lever of the single action station.

Station reset requires the use of a key to reset the manual station lever and deactivate the alarm switch. If you use the break-rod, you must replace it.

Station testing is performed by physical activation of the pull lever. You can also perform electrical testing by unlocking the station housing to activate the alarm switch.

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Specifications

Refer to *4099 MAPNET II/ IDNet Addressable Manual Pull Station with LED Installation Instructions 579-1135* for additional information.

Table 1: Specifications

Specification	Rating
Power and communications	IDNet or MAPNET II communications, 1 address for each station
Address means	DIP switch, 8 position
Wire connections	Screw terminal for in/out wiring, for 18 AWG to 14 AWG wire (0.82 mm^2 to 2.08 mm^2)
UL listed temperature range	32°F to 120°F (0°C to 49°C) intended for indoor operation
Humidity range	Up to 93% RH at 100°F (38°C)
Housing color	Red with white raised lettering
Material	Housing and pull lever are Lexan polycarbonate or equal
Pull lever color	White with red raised lettering
Housing dimensions	5 in. H x 3 3/4 in. W x 1 in. D (127 mm x 95 mm x 25 mm)

Addressable manual station semi-flush mounting

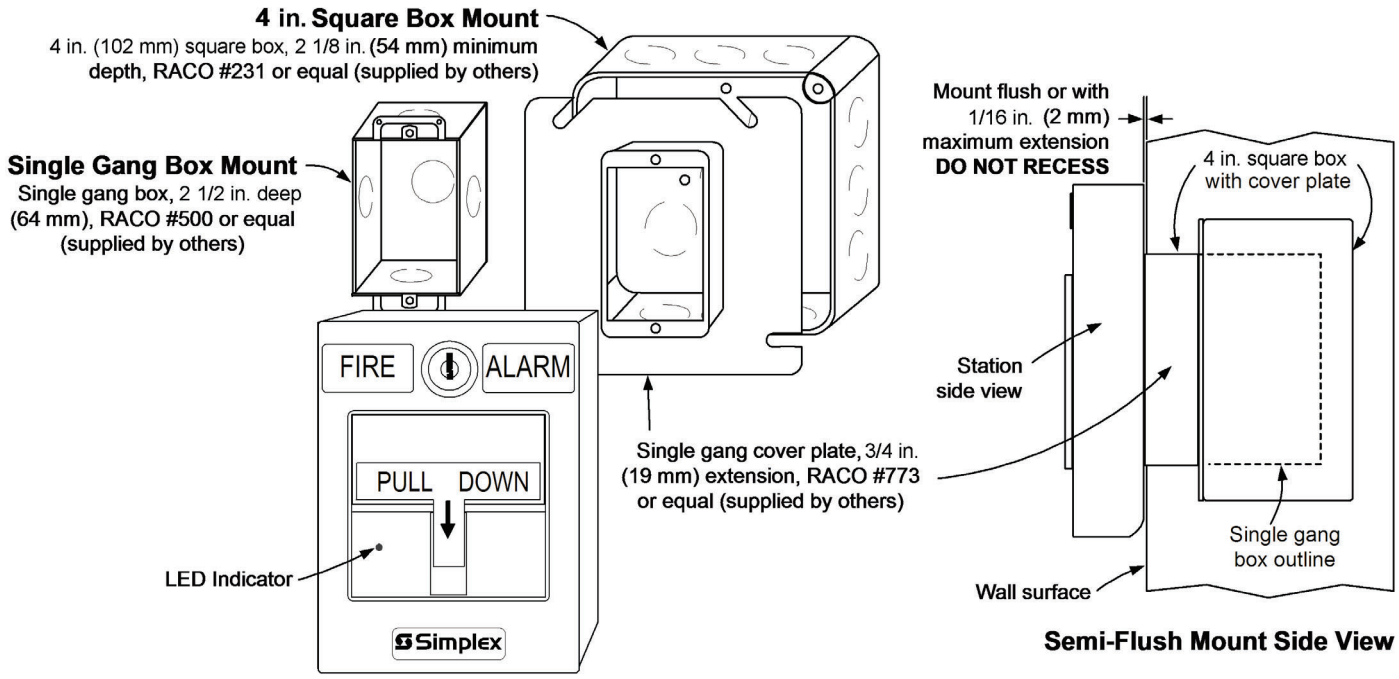


Figure 1: Addressable manual station semi-flush mounting

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Addressable manual stations surface mounting

Preferred mounting. For surface mounting of these addressable manual stations, the preferred electrical boxes are shown in Figure 2.

Additional mounting reference. See Addressable manual station, additional mounting information for Wiremold box mounting compatibility.

Figure 2 shows the 2975-9178 box and the 2975-9022 cast box.

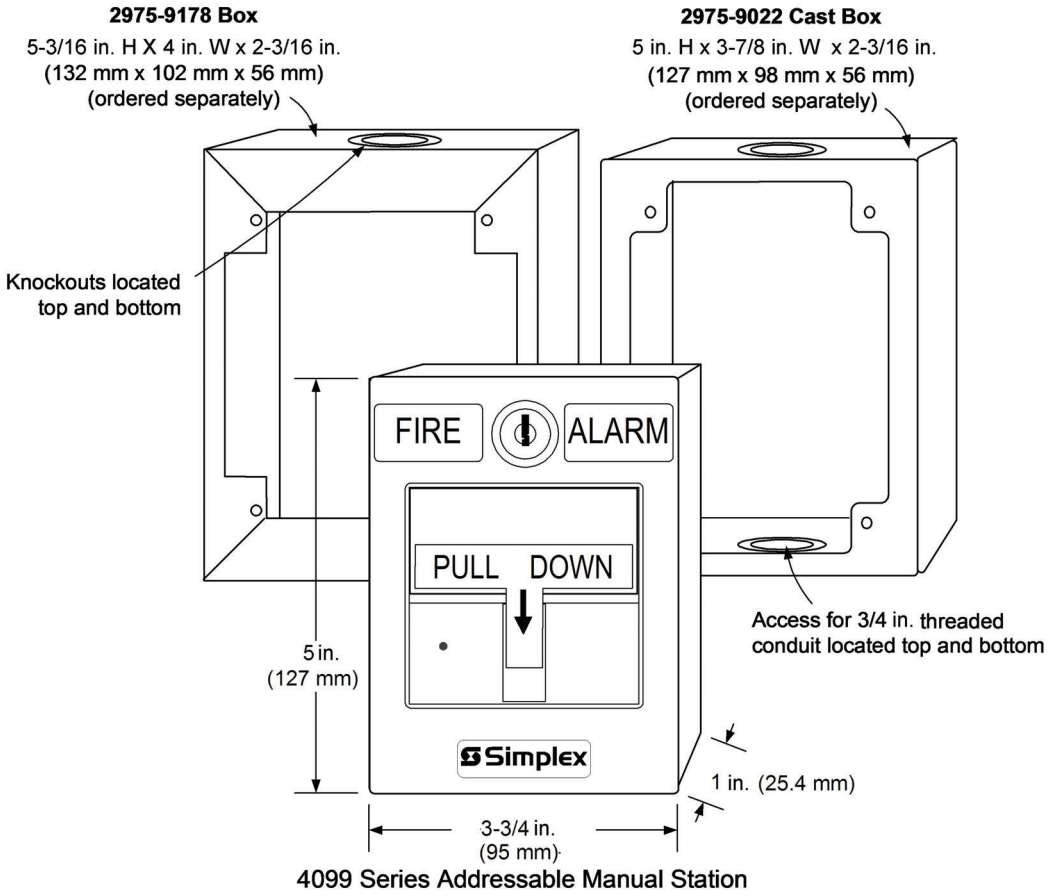


Figure 2: 4099 Series addressable manual station

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Surface mount side view with internal detail

Figure 3 shows the 2975-9178 box.

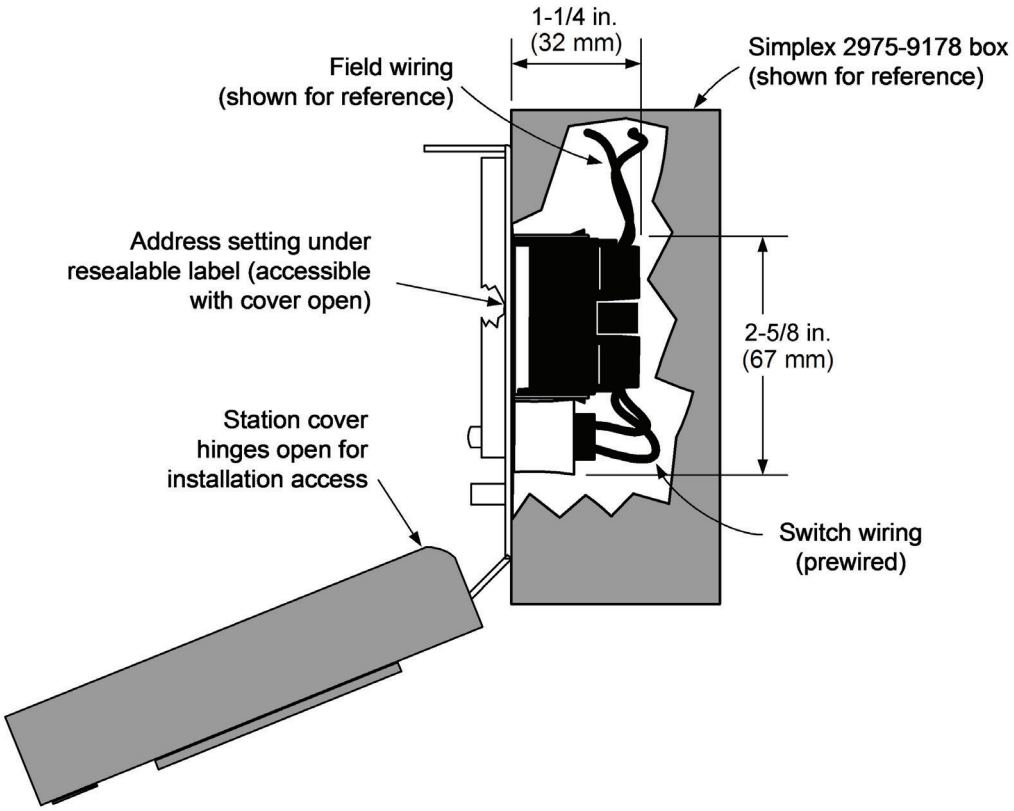


Figure 3: Surface mount side view with internal detail

Application reference

Refer to NFPA 72, the *National Fire Alarm and Signaling Code*, and all applicable local codes for complete requirements for manual stations. The following summarizes the basic requirements:

1. Stations shall be located in the normal path of exit and distributed in the protected area such that they are unobstructed and readily accessible.
2. Mounting shall be with the operable part not less than 42 in. (1.07 m) and not more than 48 in. (1.22 m) above floor level.
3. At least one station shall be provided on each floor. Additional stations shall be provided to obtain a travel distance not more than 200 ft (61 m) to the nearest station from any point in the building.
4. When manual station coverage appears limited in any way, additional stations should be installed.

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Addressable manual station, additional mounting information

For retrofit and new installations, additional compatible mounting boxes and the required adapter plates are shown in Figure 4. Figure 4 shows the 2099-9814 surface trim for Wiremold boxes and the 2099-9813 semi-flush trim for 2 gang switch boxes.

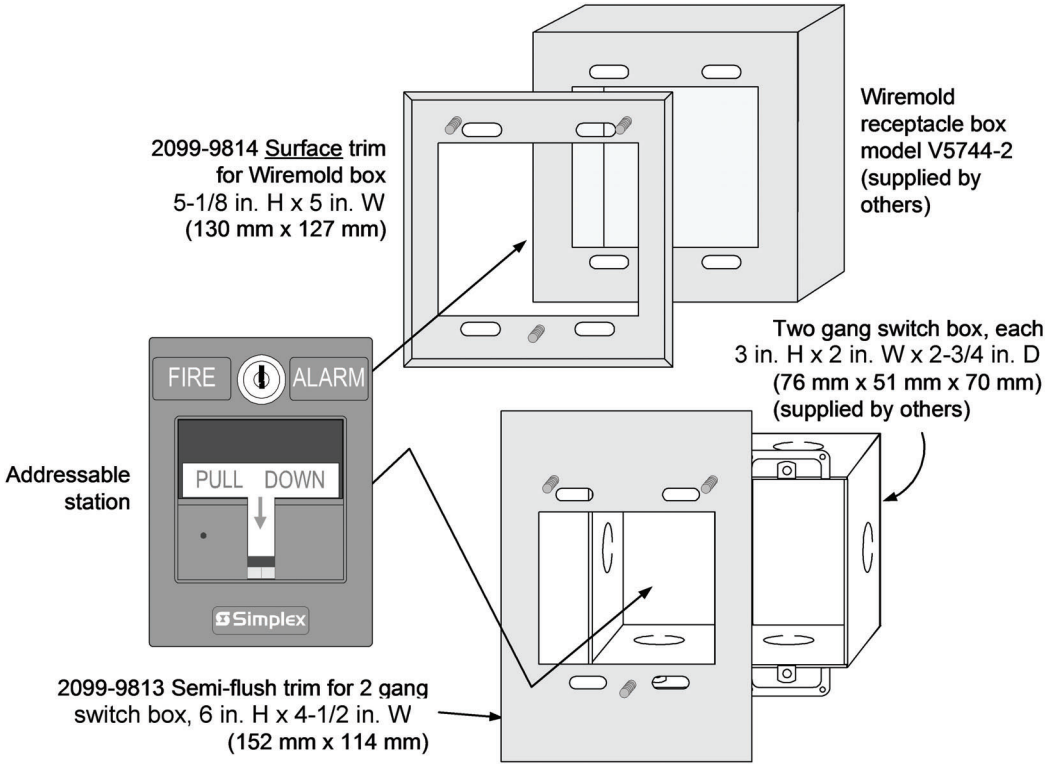


Figure 4: Addressable manual station, additional mounting information

Addressable manual station, flush mounting information

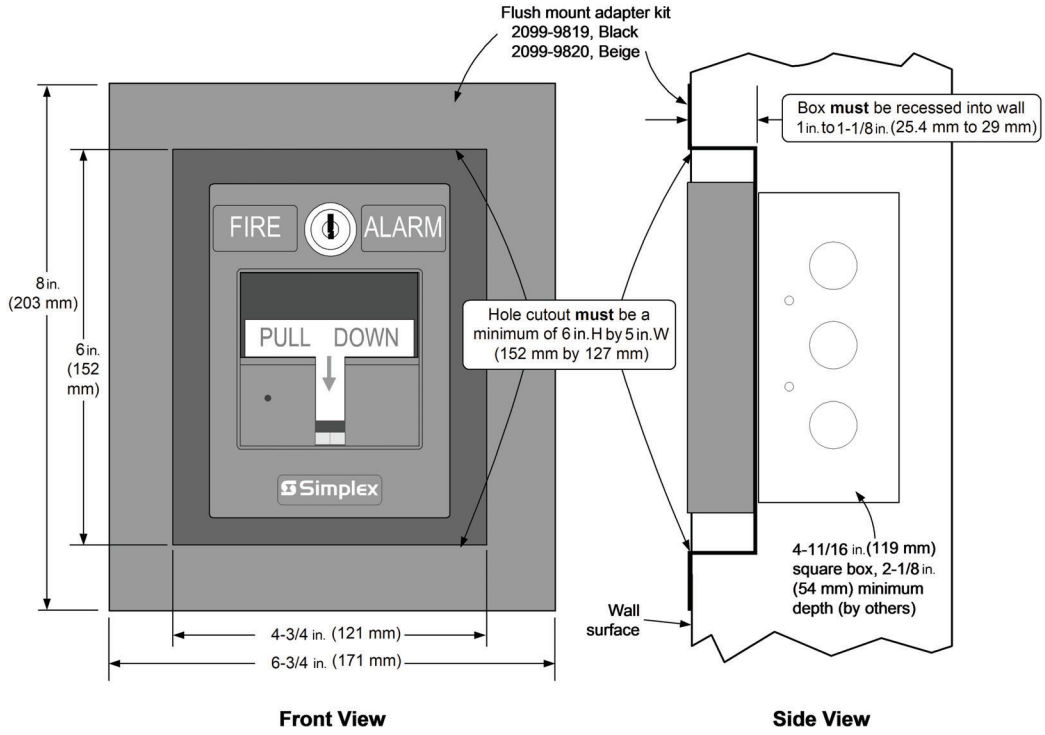


Figure 5: Addressable manual station, flush mounting information

The flush mount adapter kit is available in beige (2099-9820) or black (2099-9819).

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Addressable manual station product selection

Table 2: Addressable manual station product selection red housing with white letters and white pull lever

Model	Description	Housing	Pull lever	Listings
4099-9004, see note	Single Action, English	FIRE ALARM	PULL DOWN	UL, ULC, FM, CSFM
4099-9004CB, see note	Single Action, Bilingual English and French	FEU FIRE	TIREZ PULL	ULC
4099-9004CF, see note	Single Action, French	ALARME FEU	ABAISSEZ	
4099-9004PO, see note	Single Action, Portuguese	FOGO ALARME	PUXE	UL, FM
4099-9004SP, see note	Single Action, Spanish	ALARMA FUEGO	JALE	
4099-9005, see note	Double Action, Breakglass operation, English	FIRE ALARM	PULL DOWN	UL, ULC, FM, CSFM
4099-9005PO, see note	Double Action, Breakglass operation, Portuguese	FOGO ALARME	PUXE	UL, FM
4099-9005SP, see note	Double Action, Breakglass operation, Spanish	ALARMA FUEGO	JALE	
4099-9006, see note	Double Action, Push operation, English	FIRE ALARM	PUSH PULL DOWN	UL, ULC, FM, CSFM
4099-9006PO, see note	Double Action, Push operation, Portuguese	FOGO ALARME	EMPURRE PUXE	UL, FM
4099-9006SP, see note	Double Action, Push operation, Spanish	ALARMA FUEGO	EMPUJE JALE	
4099-9021, see note	Single Action NO GRIP operation, English	FIRE ALARM	PULL DOWN	UL, ULC, FM, CSFM

Note: NEMA 1 rated when used with 2975-9178 back box.

Table 3: Accessories

Model	Description
2975-9022	Cast aluminum surface mount box, red
2975-9178	Surface mount steel box, red
2099-9813	Semi-flush trim plate for double gang switch box, red
2099-9819	Flush mount adapter kit, black
2099-9820	Flush mount adapter kit, beige
4099-9805	Retrofit Kit for field conversion of a single action station to a NO GRIP station; refer to the ***NO GRIP Actuator (4099-9805) Installation Instructions 579-1007*** for details
2099-9803	Replacement breakglass
2099-9804	Replacement break-rod
2099-9828	Institutional cover kit for field installation on 4099-9004; **Note:** Covers LED indicator
2099-9814	Surface trim plate for Wiremold box V5744-2, red
2099-9822	Replacement retaining clip for breakglass
252-019	B key for manual station reset.

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Simplex®

Multi-Application Peripherals

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

IDNet Communicating Devices
→Model 4090-9002 Relay IAM

Features

Individual Addressable Relay Module (Relay IAM):

- IDNet addressable control for use with Simplex® fire alarm control panel models 4007ES, 4008, 4010, 4010ES, 4100ES, and 4100U
- A single addressable point provides control and status tracking of a Form "C" contact
- Low power latching relay design allows IDNet communications to supply both data and module power
- Relay is set to OFF on initial power up and upon loss of IDNet communications

Compact, sealed construction:

- Enclosed design minimizes dust infiltration
- Mounts in standard 4" (102 mm) square electrical box, optional adapter bracket is available to mount in a 4 $^{11}/_{16}$" (119 mm) square electrical box
- Screw terminals for wiring connections
- Visible LED flashes to indicate communications
- Optional covers are available to allow LED to be viewed after installation

UL listed to Standard 864

Description

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

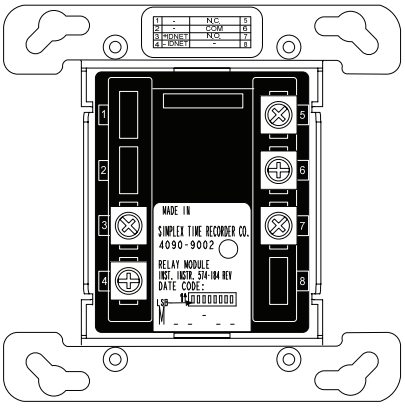
Product Selection

Model	Description
→ 4090-9002	Relay IAM

Optional Adapter and Trim Plates

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

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

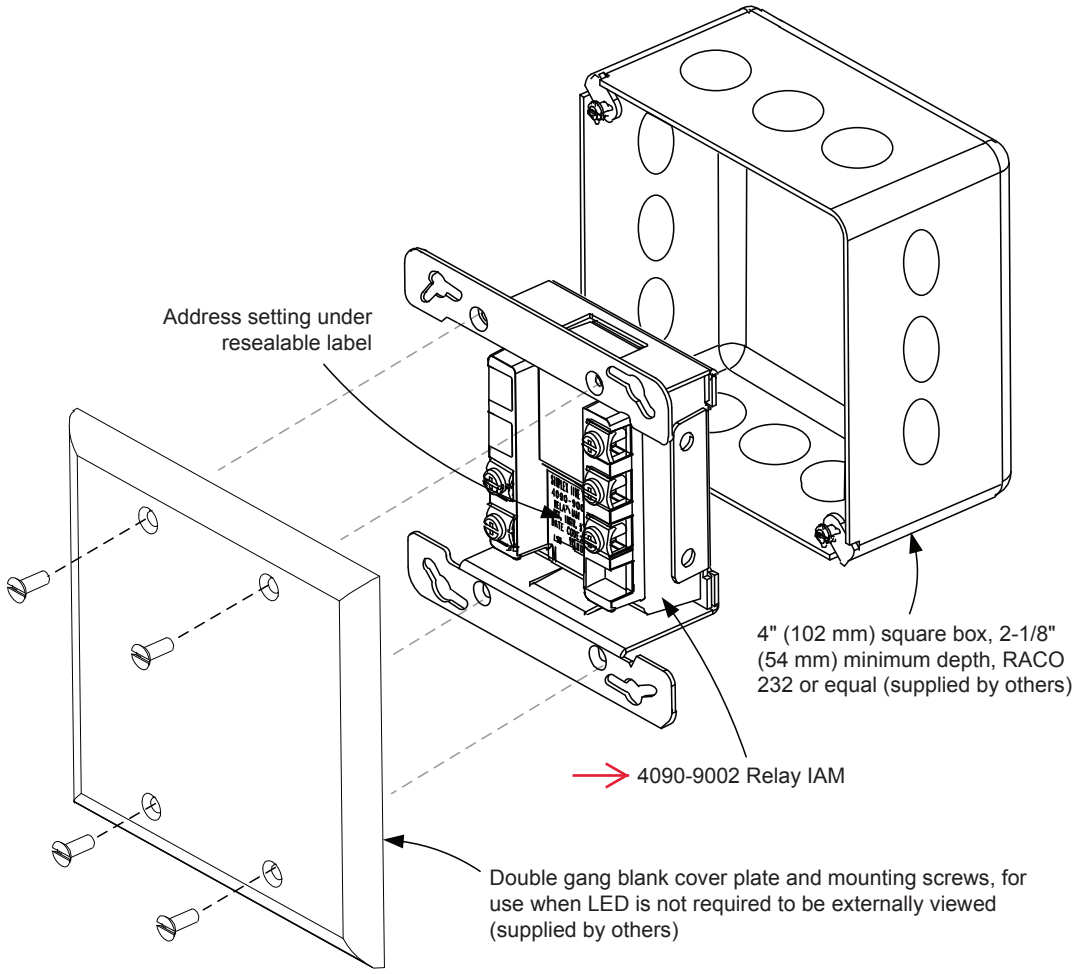


→ 4090-9002 IDNet Relay IAM Package
(shown approximately 1/2 size)

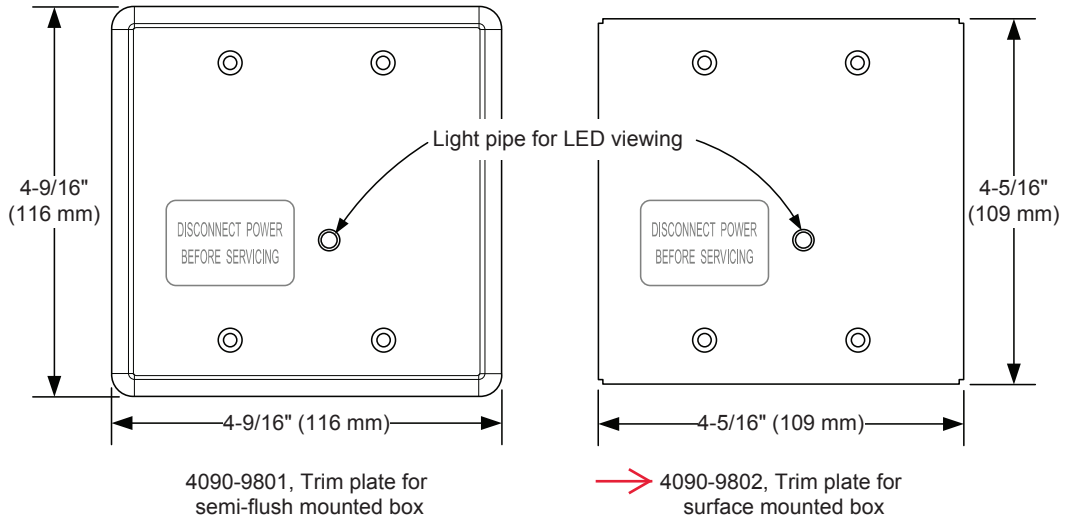
→ Specifications

Communications	IDNet communications, 1 address per device	
Relay IAM Power	Supplied by IDNet communications	
Contact Ratings* (not rated for incandescent switching)		
Type	Form C, SPDT	
Power-Limited	2 A @ 24 VDC, resistive	from listed fire alarm supply
	1 A @ 24 VDC, inductive	
Nonpower-Limited	0.5 A @ 120 VAC, resistive	
* Provide circuit fusing and transient suppression as required per application. DC inductive loads can typically be diode suppressed; 120 VAC loads may require RC networks or varistors, depending on device type. Refer to the installation instructions for additional information.		
Wire Connections	Screw terminals for in/out wiring, 18 to 14 AWG wire (0.82 to 2.08 mm^2)	
IDNet Communications Wiring Reference	Up to 2500 ft (762 m) from control panel	
	Up to 10,000 ft (3048 m) total wiring distance (including T-Taps)	
	Compatible with Simplex 2081-9044 Overvoltage Protectors	
Dimensions	4 ⅛" H x 4 ⅛" W x 1 ⅜" D (105 mm x 105 mm x 35 mm)	
Housing Material	Black thermoplastic	
Mounting Plate	Sheet metal, galvanized	
Temperature Range	32° to 120° F (0° to 49° C), intended for indoor operation	
Humidity Range	Up to 93% RH at 100° F (38° C)	
Installation Instructions	574-184	

Relay IAM Mounting Information



Mounting Reference, Double Gang Blank Cover Plate



Optional Trim Plates for Visible LED

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Simplex

System Accessories

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

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

Features

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

Track mount package availability:

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

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

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

Description

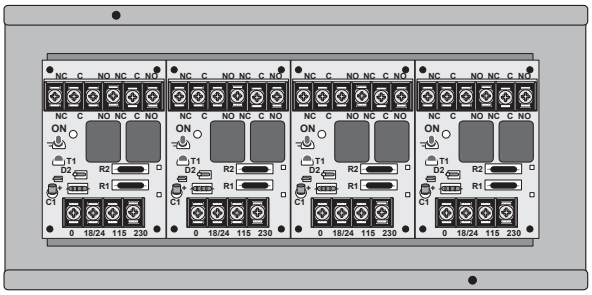
These multi-purpose control relays offer SPDT or DPDT, 10 A (or 7 A) contacts in a variety of mechanical packages. Models are available for coil operation by one of four input voltages allowing a single relay to be energized from a voltage source of 18-35 VDC or VAC, 120 VAC, or 230 VAC (not available 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.

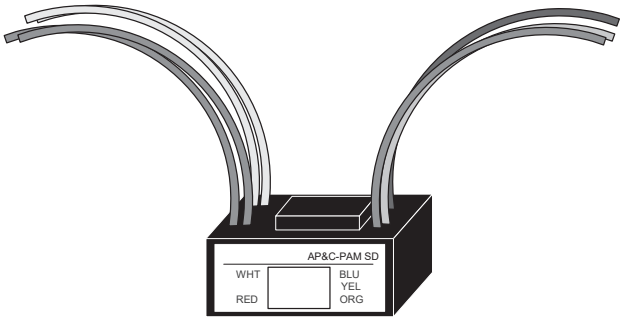
Mounting options are varied for application flexibility. Track mounted relays may be "snapped apart" from a standard four-module assembly and used independently if desired.

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*

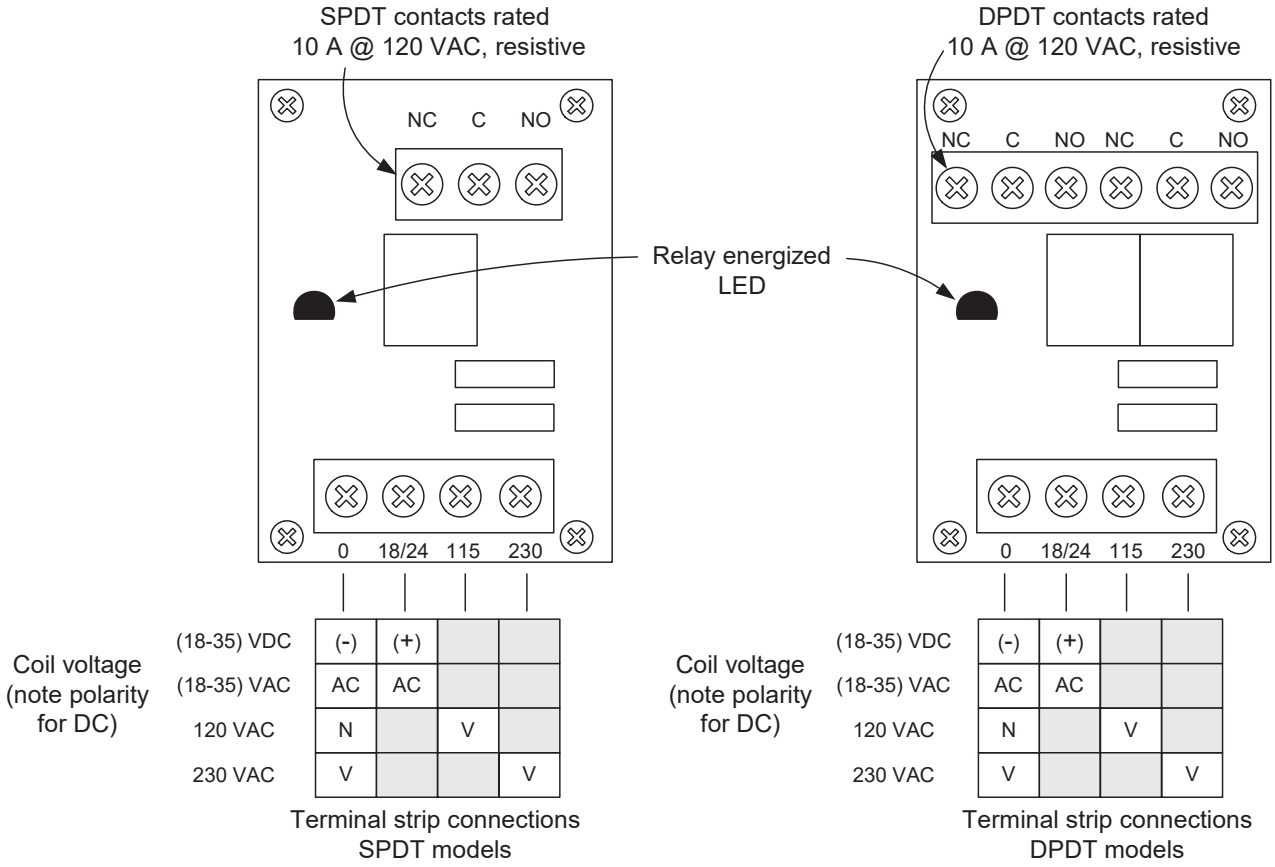
Encapsulated Relays, see page 2 for dimensions		
Connections		18 AWG (0.82 mm^2) color-coded wire leads
Relay 2088-9021		
Contact Ratings		10 A @ 120 VAC, resistive
Coil Ratings	Voltage	18-35 VAC/VDC, 120, or 240 VAC
	Current	15 mA @ 24 VAC/VDC, & @ 120 or 230 VAC
Relay 4098-9843		
Coil Ratings		18-32 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

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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Simplex

TrueAlert ES Addressable Notification Appliances

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

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

Features

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

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

LED Indicator and Magnet Test feature:

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



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

Features *(Continued)*

Mechanical design features include:

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

Description

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

Strobe Application Reference

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

* This product has been approved by the California State Fire Marshal (CSFM) pursuant to Section 13144.1 of the California Health and Safety Code. See CSFM Listing 7135-0026:0380 for allowable values and/or conditions concerning material presented in this document. Additional listings may be applicable; contact your local Simplex product supplier for the latest status. Listings and approvals under Simplex Time Recorder Co. are the property of Tyco Fire Protection Products.

TrueAlert ES Operation Advantage

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

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

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

TrueAlert ES Diagnostics

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

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

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

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

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

TrueAlert Addressable Wiring Isolator

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

Product Selection

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

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

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

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

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

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

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

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

Mounting Adapters

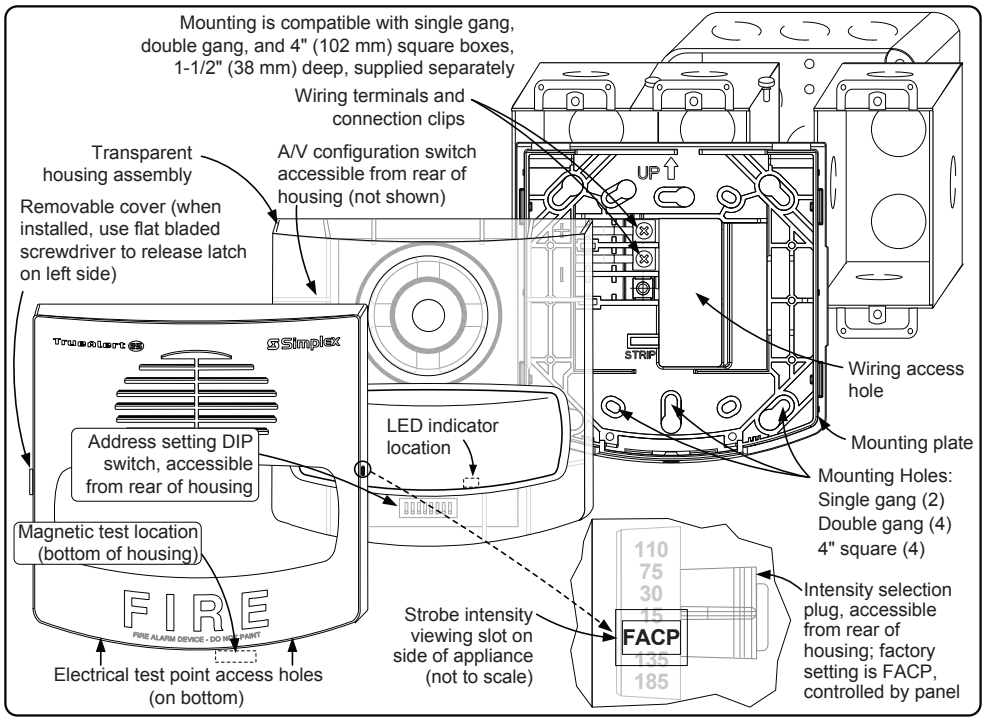
Model	Color	Description	Dimensions
4905-9937	Red	Surface Mount Adapter Skirt	5 ⅜" H x 5 ¼" W x 1 ⅝" D (136 mm x 133 mm x 41 mm) Total depth with strobe = 4 ⅜" (111 mm)
4905-9940	White		
4905-9931	Red Adapter Plate for mounting to Simplex 2975-9145 Box (typically for retrofit, mount vertical or horizontal)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

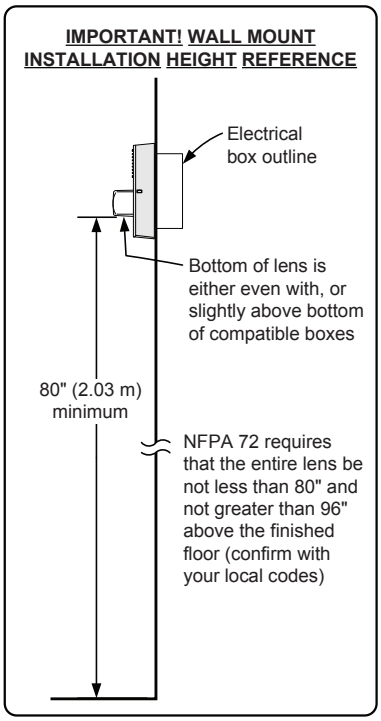
TrueAlert Device Reports Reference

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

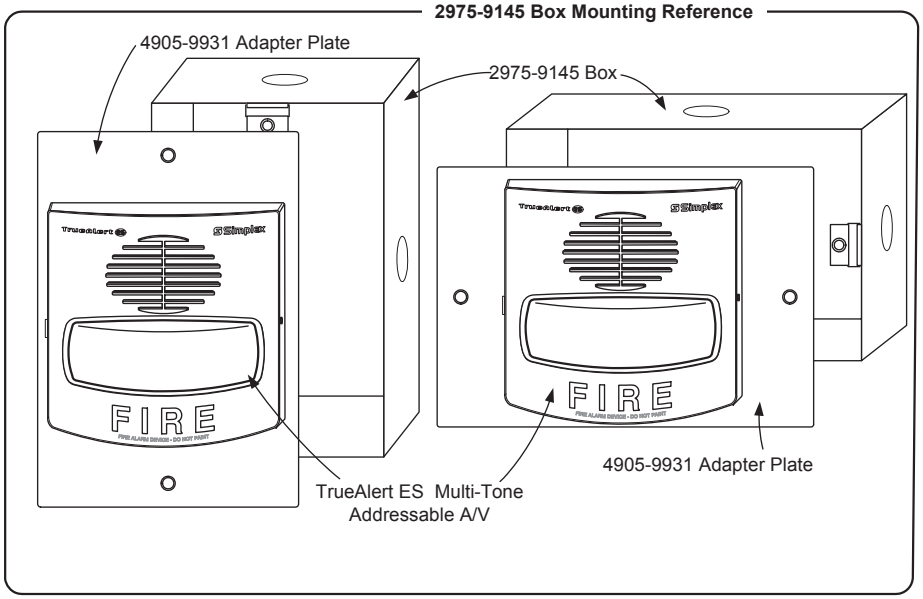
POINT ID	CUSTOM LABEL	DEVICE TYPE	CANDELA
T14-1-1	Location Label . . . up to 40 characters	MT AV	15
T14-1-2	Break Room 5	MT AV	110
T14-1-3	Boiler Room	VO	75
T14-1-4	Elec. Room 7	AV	135

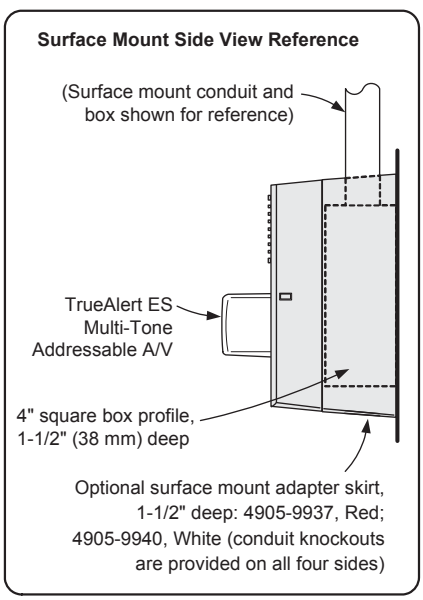
Installation Reference





Adapter Plate and Surface Mount Installation Reference





IDNAC SLC Controller Compatibility Reference

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

TrueAlert ES A/V Specifications

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

Tone Characteristics

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

TrueAlert ES Multi-Tone Horn/Strobe Current Ratings

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

TrueAlert ES Multi-Tone Horn/Strobe Horn Output

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

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

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

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

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

General Specifications

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

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Simplex

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

TrueAlert ES Addressable Notification Appliances

Visible Notification Appliances, Wall Mount Multi-Candela Strobes, Model Series 49VO

Features

Individually addressed and controlled multi-candela TrueAlert ES V/O (visible only) notification appliances provide:

- Multi-candela xenon strobe with synchronized 1 Hz flash rate and with intensity ***programmable from the control panel*** or jumper selected as 15, 30, 75, 110, 135, or 185 cd
- Advanced addressable notification controlled by **IDNAC SLCs** providing *regulated 29 VDC* allowing strobes to operate with lower current even under battery backup
- Wiring supervision to each appliance allowing "T-tapped" connections for Class B circuits to simplify wiring (Class A circuits require in/out wiring)
- *Self-Test Mode* allows an on-board sensor to detect the strobe output and then report its status to the control panel
- *TrueAlert Device Reports* at the control panel detailing appliance point ID, custom label, type, and candela setting
- *Magnet Test diagnostics* to assist checkout and testing of appliances and wiring and *Electrical test point access* without removing cover
- Compatibility with ADA requirements; (refer to Installation Reference)
- Compatibility with legacy TrueAlert addressable systems for upgrade and replacement (see TrueAlert ES Strobe LEGACY Compatibility Reference)
- Listed to UL Standard 1971 and ULC Standard S526

LED Indicator and Magnet Test feature:

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

Mechanical design features include:

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

Description

TrueAlert ES addressable strobes

TrueAlert ES addressable strobes are individually addressed visible notification appliances that receive power, supervision, and control signals from the Simplex fire alarm control panel providing **IDNAC** Signaling Line Circuits (SLCs). (See IDNAC SLC Controller Compatibility Reference.)

Strobe Application Reference

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



Figure 1: TrueAlert ES Addressable Strobes are Available in Red with White Lettering and White with Red Lettering

TrueAlert ES Operation Advantage

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

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

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

* 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 7125-0026:0373 for allowable values and/or conditions concerning material presented in this document. Additional listings may be applicable; contact your local Simplex product supplier for the latest status. Listings and approvals under Simplex Time Recorder Co. are the property of Tyco Fire Protection Products.

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TrueAlert ES Diagnostics

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

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

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

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

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

TrueAlert Addressable Wiring Isolator

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

Installation Reference

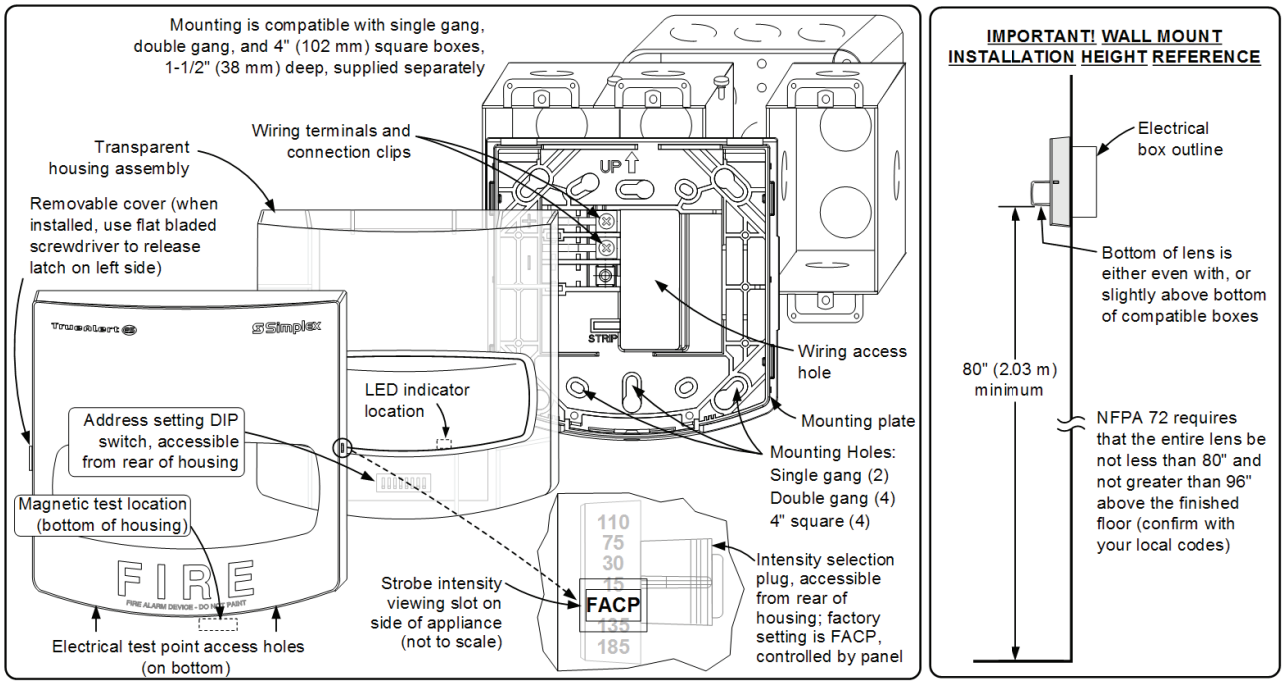


Figure 2: Installation Reference

Adapter Plate and Surface Mount Installation Reference

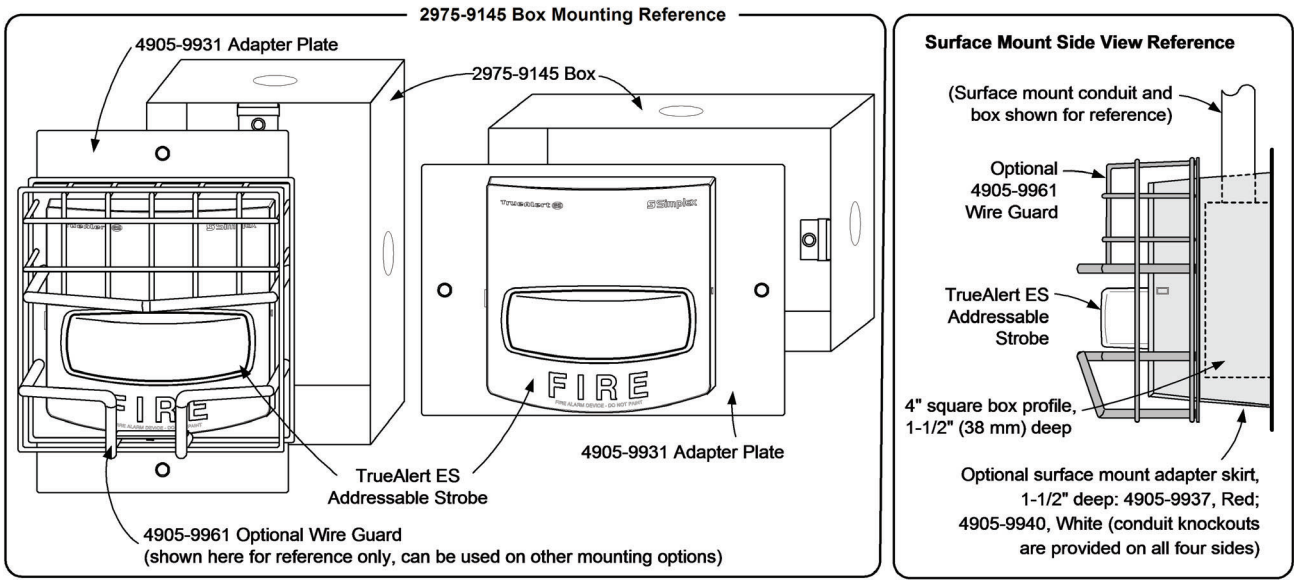


Figure 3: Adapter Plate and Surface Mount Installation Reference

The 2975-9145 box is shown mounted to the 4905-9931 Adapter Plates. Also shown is the optional surface mount adapter skirt (available in red 4905-9937 or white 4905-9940)., as well as the 4905-9961 optional wire guard.

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Product Selection

Table 1: TrueAlert ES Wall Mount Addressable Strobes

SKU*	Cover Color	Wording	Lens Color
49VO-WRF 49VO-WRF-BA	Red	FIRE	Clear
49VO-WWF 49VO-WWF-BA	White		
49VO-WRA 49VO-WRA-BA	Red	ALERT	
49VO-WWA 49VO-WWA-BA	White		
49VO-WRQ	Red	FEU	
49VO-WWQ	White		
49VO-WRS 49VO-WRS-BA	Red	Simplex logo only	
49VO-WWS 49VO-WWS-BA	White		
49VO-APPLW 49VO-APPLW-BA	Select cover and mounting plate separately		
TrueAlert ES addressable VO (strobe) appliances include cover and matching mounting plate except as noted; Dimensions with Cover = 5 ⅛" H x 5" W x 2 ⅝" D (130 mm x 127 mm x 67 mm)			

Table 2: Separate Mounting Plate

Model	Color	Note
49MP-AVVOWR	Red	Mounting Plate **is required** when ordering model 49VO-APPLW(-BA)
49MP-AVVOWW	White	

Table 3: Separate Covers (Required when ordering model 49VO-APPLW(-BA))

SKU*	Color	Wording
49VOC-WRFIRE	Red	FIRE
49VOC-WWFIRE	White	
49VOC-WRALT	Red	ALERT
49VOC-WWALT	White	
49VOC-WRFEU	Red	FEU
49VOC-WWFEU	White	
49VOC-WRBLNG	Red	FEU/FIRE
49VOC-WWBLNG	White	
49VOC-WRS	Red	Simplex logo only
49VOC-WWS	White	

Table 4: Mounting Adapters and Wire Guard

Model	Color	Description	Dimensions
4905-9937	Red	Surface Mount Adapter Skirt	5 ⅜" H x 5 ¼" W x 1 ⅝" D (136 mm x 133 mm x 41 mm) Total depth with strobe = 4 ⅜" (111 mm)
4905-9940	White		
4905-9931	Red Adapter Plate for mounting to Simplex, 2975-9145 Box (typically for retrofit, mount vertical or horizontal)		8 5/16" x 5 ¾" x 0.060" Thick (211 mm x 146 mm x 1.5 mm)
2975-9145	Red Mounting Box, requires 4905-9931 Adapter Plate		7 ⅞" x 5 ⅛" x 2 ¾" D (200 mm x 130 mm x 70 mm)
4905-9961	Red wire guard with mounting plate, compatible with semi-flush or surface mount boxes		6 1/16" H x 6 1/16" W x 3 ⅛" D (154 mm x 154 mm x 79 mm)

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IDNAC SLC Controller Compatibility Reference

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

TrueAlert ES Strobe Specifications

Table 5: Electrical Ratings

Specification	Rating
Typical Operating Voltage Range	23 VDC to 31 VDC, Special Application (see below for 17 VDC rating)
Supervisory Requirements	1 unit load (= 0.8 mA control panel current)
IDNAC SLC Loading	Maximum of 127 addresses per SLC, 139 unit loads

Table 6: Candela Setting

Candela	15 cd	30 cd	75 cd	110 cd	135 cd	185 cd
23 VDC RMS Current Ratings, for typical design of IDNAC Addressable SLCs (6 VDC drop)	47 mA	57 mA	100 mA	132 mA	160 mA	208 mA

Table 7: General Specifications

Temperature Range	32° to 122° F (0° to 50° C)
Humidity Range	10% to 93%, non-condensing @ 104° F (40° C)
IDNAC SLC Wiring Specifications (refer to control panel installation instructions for more information)	UTP, unshielded twisted pair recommended
	Maximum wire length allowed with "T-Taps" for Class B wiring per SLC = 10,000 ft (3048 m)
	Maximum wire length to any appliance = 4000 ft (1219 m)
Connections	Terminal blocks on mounting plate for 18 AWG to 12 AWG (0.82 mm2 to 3.31 mm2); two wires per terminal for in/out wiring
Installation Instructions	579-1031
Note: Refer to compatibility table above for fire alarm control panel and power supply operation type.	

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TrueAlert ES Strobe LEGACY Compatibility Reference

Table 8: Compatibility Reference

Compatible Controller	Data Sheet Reference	Controller Output	Available Strobe Intensity	Appliance Voltage Minimum
4100ES or 4100U with TrueAlert Power Supply	*S4100-0031*	TrueAlert Addressable SLC	15, 30, 75, and 110 cd	17 VDC
4009 TPS, Remote TrueAlert Power Supply	*S4100-0037*			
TrueAlert Addressable Controller (4009T)	*S4009-0003*			

Table 9: Electrical Ratings Reference for Retrofit Applications

Voltage Range	**17 VDC to 31 VDC, Special Application**			
Candela Setting	**15 cd**	**30 cd**	**75 cd**	**110 cd**
17 VDC RMS Current Ratings, use when connected to TrueAlert Addressable SLCs per above	62 mA	75 mA	133 mA	178 mA

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Simplex

TrueAlert ES Addressable Notification Appliances

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

Wall Mount Visible & Audible/Visible Notification Appliances for Emergency Communications

Features

Individually addressed and controlled multi-candela TrueAlert ES Emergency Communications appliances provide:

- Multi-candela xenon strobe with synchronized 1 Hz flash rate and with intensity ***programmable from the control panel*** or jumper selected
- Standard strobe models *with amber lens covers*, available with ALERT lettering or blank, and with red or white covers, available with 15, 30, 75, 110, or 135 cd output
- Separate lens covers are available in *amber, blue, green, and red* to configure strobes (V/O) or audible/visible (A/V) appliances (see ordering details on page 2 and candela ratings on page 4)
- Advanced addressable notification controlled by ***IDNAC SLCs*** providing ***regulated 29 VDC*** allowing strobes to operate with lower current even under battery backup
- Emergency Communications appliances are controlled separately from fire alarm appliances but both can be on the same IDNAC SLC; (only one type activates at a time, ether fire alarm or notification, not both)
- Wiring supervision to each appliance allowing "T-tapped" connections for Class B circuits to simplify wiring (Class A circuits require in/out wiring)

Provides TrueAlert ES product features:

- ***Self-Test Mode*** using on-board sensors
- ***TrueAlert Device Reports*** at the control panel
- ***Magnet Test diagnostics*** to assist checkout and test
- Compatibility with ADA requirements; (see page 3)
- Compatibility with legacy TrueAlert addressable systems for upgrade and replacement (see page 4)
- Appliance LED can be selected to display polling
- UL listed to Standard 1638 (due to non-white lens); verified by UL testing to provide light dispersion patterns of UL Standard 1971 at rated candela (no derating necessary for amber or blue lens)
- ULC listed to Standard S526

Mechanical design features include:

- Rugged, high impact, flame retardant thermoplastic housing in red with white letters or white with red letters, available with ALERT or blank lettering
- Separate covers, optional mounting adapters and red wire guards are available
- A separate mounting plate allows wiring to be completed before appliance is mounted; use with single gang, double gang, or 4-inch square box, flush or surface mount
- In/out wiring terminals for 18 AWG to 12 AWG

For clear lens TrueAlert ES appliances:

- Refer to data sheet S49VO-0001 for strobes
- Refer to data sheet S49AV-0001 for A/Vs

* 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 7125-0026:0373 (for 49AV-APPLW(-BA)) and 7300-0026:0374 (for color lens products) for allowable values and/or conditions concerning material presented in this document. Additional listings may be applicable; contact your local Simplex product supplier for the latest status. Listings and approvals under Simplex Time Recorder Co. are the property of Tyco Fire Protection Products.



TrueAlert ES Notification Appliances for Emergency Communications are available with ALERT or Blank

Description

TrueAlert ES addressable appliances are individually addressed and receive power, supervision, and control signals from a Simplex fire alarm control panel providing **IDNAC** Signaling Line Circuits (SLCs). (See compatibility list on page 4.)

Strobe Application Reference

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

TrueAlert ES Operation Advantage

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

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

TrueAlert ES Operation Advantage *(Cont'd)*

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

TrueAlert ES Diagnostics

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

***Self-Test* Details.** Selecting Self-Test Mode from the control panel allows on-board sensors, depending on the device type, to detect its own strobe and/or horn output and then report their status to the control panel.

TrueAlert ES Diagnostics *(Continued)*

***Self-Test* Details** *(Continued)*. Operation is by selected VNAC appliance groups and is either automatic (all briefly simultaneously activated) or individually activated by applying a magnet. (Refer to control panel data sheet for more Self-Test information, see list on page 4.)

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

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

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

TrueAlert Addressable Wiring Isolator

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

Product Selection

TrueAlert ES Wall Mount Addressable Strobes (V/O) with Color Lens

Model*	Cover Color	Lettering	Lens Color	Description
49VO-WRA-A(-BA)	Red	ALERT	Amber	Complete assembly with amber lens cover, housing cover with color and lettering as indicated, and matching mounting plate; Dimensions with cover = 5 ⅛" H x 5" W x 2 ⅝" D (130 mm x 127 mm x 67 mm
49VO-WWA-A(-BA)	White	ALERT	Amber	
49VO-WWS-A-BA	White	Blank	Amber	

Configured Appliance Selection (Lens covers include correct intensity selection plug)

Model*	Description	
49VO-APPLWE(-BA)	V/O Housing for color lens Emergency Communications Appliances	**Order lens cover, housing cover, and mounting plate separately**
49AV-APPLW(-BA)	A/V Housing (has setting on-board for selecting color lens applications)	

Color Lens Covers	49LENS-AMBER	49LENS-BLUE	49LENS-GREEN	→ 49LENS-RED

Separate Mounting Plate (**Required** when ordering model 49VO-APPLWE(-BA) or 49AV-APPLW(-BA))

Model*	Color	Model*	Color
→ 49MP-AVVOWR	Red	49MP-AVVOWW	White

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

Housing Covers (**Required** when ordering model 49VO-APPLWE(-BA) or 49AV-APPLW(-BA))

Color	V/O ALERT Lettering	V/O Blank Lettering	A/V ALERT Lettering	A/V Blank Lettering
Red	49VOC-WRALT	49VOC-WRS	49AVC-WRALT	49AVC-WRS
White	49VOC-WWALT	49VOC-WWS	49AVC-WWALT	49AVC-WWS

Mounting Adapters and Wire Guard

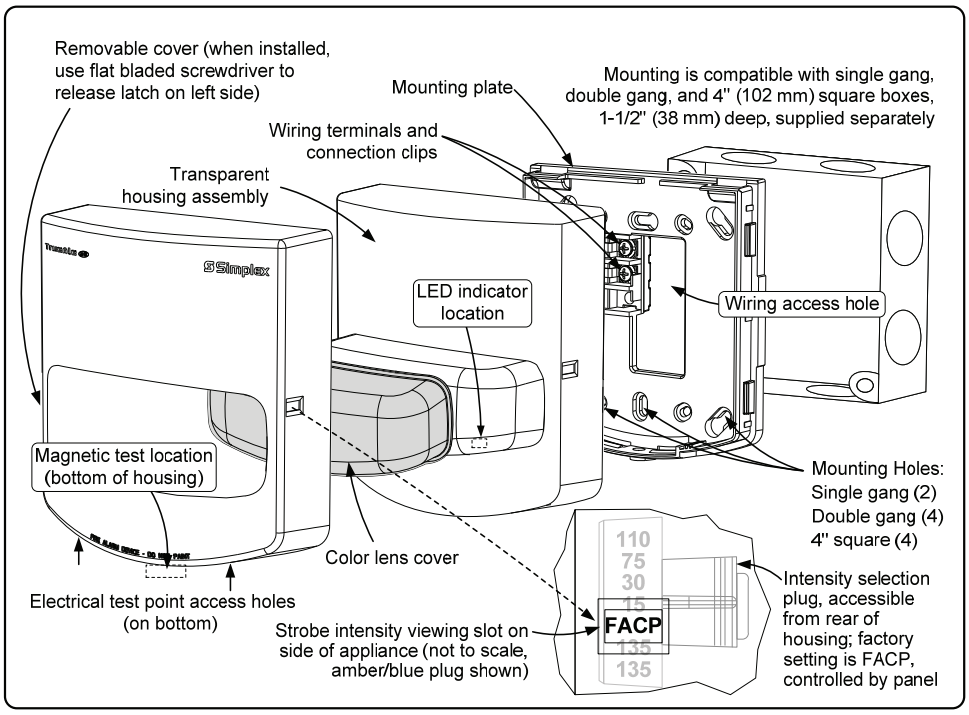
Model	Color	Description	Dimensions
4905-9937	Red	Surface Mount Adapter Skirt	5 ⅜" H x 5 ¼" W x 1 ⅝" D (136 mm x 133 mm x 41 mm) Total depth with strobe = 4 ⅜" (111 mm)
4905-9940	White	Surface Mount Adapter Skirt	5 ⅜" H x 5 ¼" W x 1 ⅝" D (136 mm x 133 mm x 41 mm) Total depth with strobe = 4 ⅜" (111 mm)
4905-9931	Red	Adapter Plate for mounting to Simplex 2975-9145 Box (typically for retrofit, mount vertical or horizontal)	8 5/16" x 5 ¾" x 0.060" Thick (211 mm x 146 mm x 1.5 mm)
2975-9145	Red	Mounting Box, requires 4905-9931 Adapter Plate	7 ⅞" x 5 ⅛" x 2 ¾" D (200 mm x 130 mm x 70 mm)
4905-9961	Red	Red wire guard with mounting plate, compatible with semi-flush or surface mount boxes	6 1/16" H x 6 1/16" W x 3 ⅛" D (154 mm x 154 mm x 79 mm)

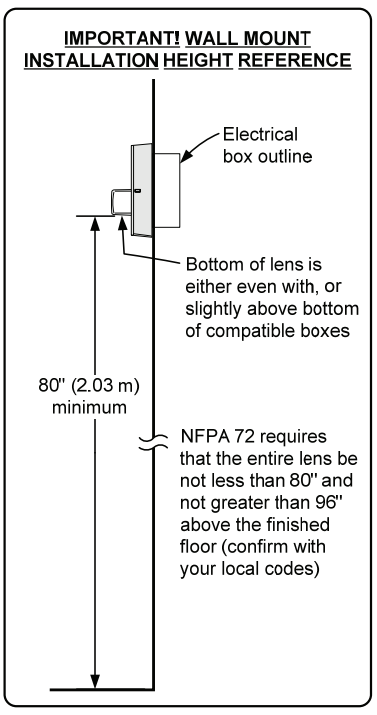
TrueAlert Device Reports Reference

Service Port — Page 1
REPORT 5 : TrueAlert Device Report — 12:34:56am TUE 27-Jan-15

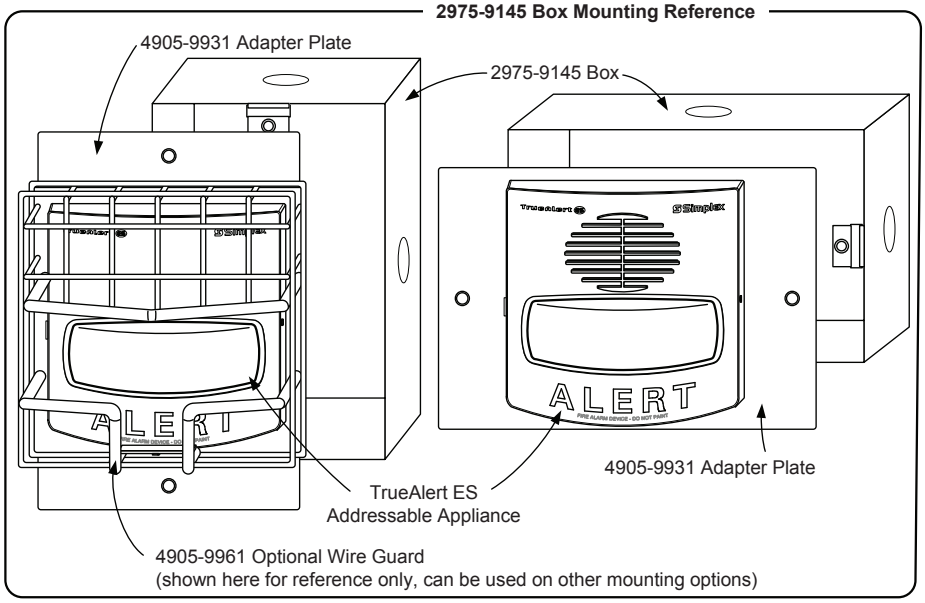
POINT ID	CUSTOM LABEL	DEVICE TYPE	CANDELA
T14-1-1	Location Label . . . up to 40 characters	V/O	15
T14-1-2	Break Room 5	A/V	110
T14-1-3	Boiler Room	A/V	75
T14-1-4	Elec. Room 7	A/V	135

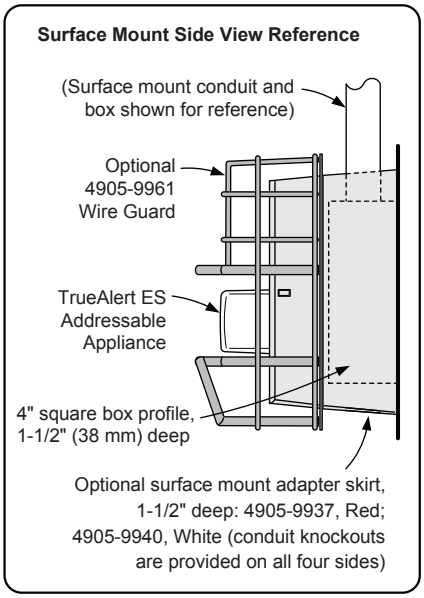
Installation Reference





Adapter Plate and Surface Mount Installation Reference





IDNAC SLC Controller Compatibility Reference

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

TrueAlert ES with Color Lens Specifications

Electrical Ratings

Typical Operating Voltage Range		23 VDC to 31 VDC, Special Application (see below for 17 VDC rating)					
Supervisory Requirements		1 unit load (= 0.8 mA control panel current)					
IDNAC SLC Loading		Maximum of 127 addresses per SLC, 139 unit loads					
Appliance PC Board Marking Reference		**15 cd**	**30 cd**	**75 cd**	**110 cd**	**135 cd**	**185 cd**
Amber and **Blue** Lens Output Rating		**15 cd**	**30 cd**	**75 cd**	**110 cd**	**135 cd**	Not Available
Green Lens Output Rating		**10 cd**	**20 cd**	**45 cd**	**75 cd**	**95 cd**	
Red Lens Output Rating		**3 cd**	**7 cd**	**15 cd**	**30 cd**	**37 cd**	
23 VDC RMS Current Ratings, for typical design of IDNAC Addressable SLCs (6 VDC drop)	V/O	54 mA	78 mA	128 mA	184 mA	211 mA	
	A/V	66 mA	88 mA	137 mA	192 mA	219 mA	

General Specifications

Temperature Range	32° to 122° F (0° to 50° C)
Humidity Range	10% to 93%, non-condensing @ 104° F (40° C)
IDNAC SLC Wiring Specifications (refer to control panel installation instructions for more information)	UTP, unshielded twisted pair recommended
	Maximum wire length allowed with “T-Taps” for Class B wiring per SLC = 10,000 ft (3048 m)
	Maximum wire length to any appliance = 4000 ft (1219 m)
Connections	Terminal blocks on mounting plate for 18 AWG to 12 AWG (0.82 mm^2 to 3.31 mm^2); two wires per terminal for in/out wiring
Installation Instructions	579-1052, *TrueAlert ES Addressable Emergency Indoor Notification Appliances* 579-1046, *TrueAlert ES A/V and V/O Colored Lens Kit Installation Instructions*

Notes: Refer to compatibility table above for fire alarm control panel and power supply operation type.

TrueAlert ES Strobe with Color Lens LEGACY Compatibility Reference

Compatible Controller	Data Sheet Reference	Controller Output	Available Strobe Intensity	Appliance Voltage Minimum
4100ES or 4100U with TrueAlert Power Supply	S4100-0031	TrueAlert Addressable SLC	15, 30, 75, and 110 cd	17 VDC
4009 TPS, Remote TrueAlert Power Supply	S4100-0037			
TrueAlert Addressable Controller (4009T)	S4009-0003			

Electrical Ratings Reference for Retrofit Applications

Voltage Range		17 VDC to 31 VDC, Special Application					
Appliance PC Board Marking Reference		**15 cd**	**30 cd**	**75 cd**	**110 cd**	**135 cd**	**185 cd**
Amber and **Blue** Lens Output Rating		**15 cd**	**30 cd**	**75 cd**	**110 cd**	Not Available	
Green Lens Output Rating		**10 cd**	**20 cd**	**45 cd**	**75 cd**		
Red Lens Output Rating		**3 cd**	**7 cd**	**15 cd**	**30 cd**		
17 VDC RMS Current Ratings, use when connected to TrueAlert Addressable SLCs per above	V/O	67 mA	103 mA	171 mA	250 mA		
	A/V	79 mA	113 mA	180 mA	258 mA		

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Description

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

Features

Individually addressed visible only (V/O) notification appliances

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

LED indicator and magnet test feature:

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

Mechanical design features

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



Figure 1: Indoor ceiling mount strobe

Strobe application reference

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

TrueAlert addressable wiring isolator

Isolator model 4905-9929

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

TrueAlert ES diagnostics

Test features

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

Silent appliance magnet test

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

Operational appliance magnet test

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

TrueStart instrument two (TSIT)

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

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

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Installation reference

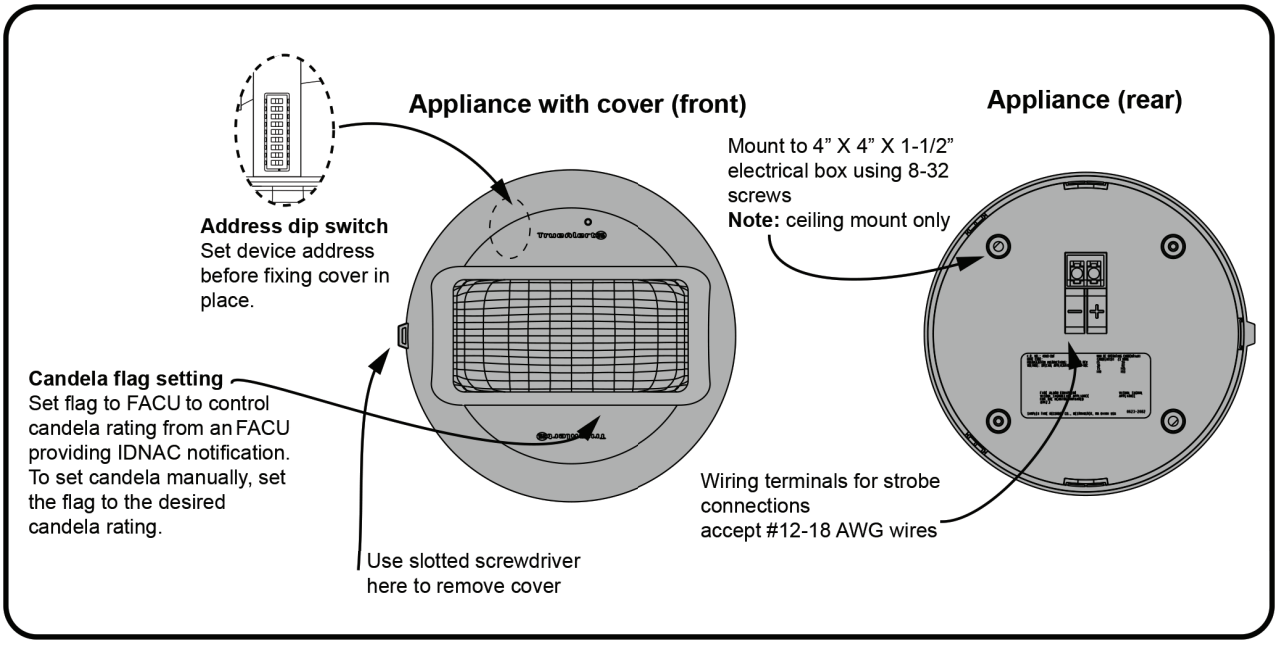


Figure 2: Indoor Ceiling Mount Strobe installation

IDNAC SLC operation advantage

TrueAlert Addressable visible appliances on IDNAC SLCs

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

Reduced current usage on IDNAC SLCs

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

Reducing Installation and Testing Time

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

Product selection

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

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

Table 2: Surface/WP back boxes

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

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

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Table 3: Adapter plates

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

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

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

Table 5: Wire guards

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

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

IDNAC SLC controller compatibility reference

Table 6: Compatibility reference

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

Ceiling mount V/O specifications

Table 7: Specifications

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

Table 8: Percentage of rated light output at room temperature

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

Table 9: Appliance specifications

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

TrueAlert ES V/O LEGACY compatibility reference

Table 10: Compatibility reference

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

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

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Simplex®

Fire Alarm System Accessories

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

RSG Electromagnetic Door Holders; Wall Mounted or Floor Mounted

Features

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

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

Multiple finish options:

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

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

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

Quick and easy installation:

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

Optional accessories:

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

UL listed to Standard 228

Description

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

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



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



Surface Wall Mount Door Holder Magnet with Supplied Box



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

* These products have been approved by the California State Fire Marshal (CSFM) pursuant to Section 13144.1 of the California Health and Safety Code. See CSFM Listing 3550-1039:0100 for allowable values and/or conditions concerning material presented in this document. It is subject to re-examination, revision, and possible cancellation. Additional listings may be applicable, contact your local Simplex® product supplier for the latest status. Listings and approvals are under RSG, Reliable Security Group.

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

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

Optional Door Holder Accessories

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

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

Door Holder Part Number Selection

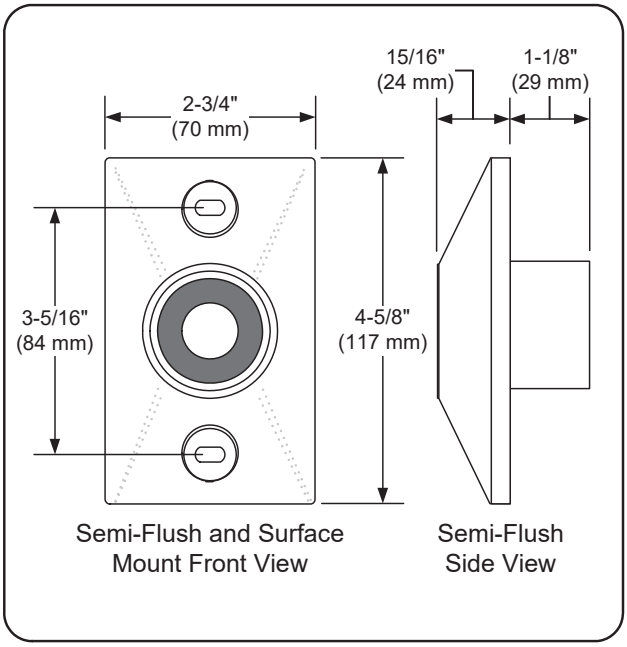
Select from each of the 6 categories to create part number (see examples below)

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

Examples:

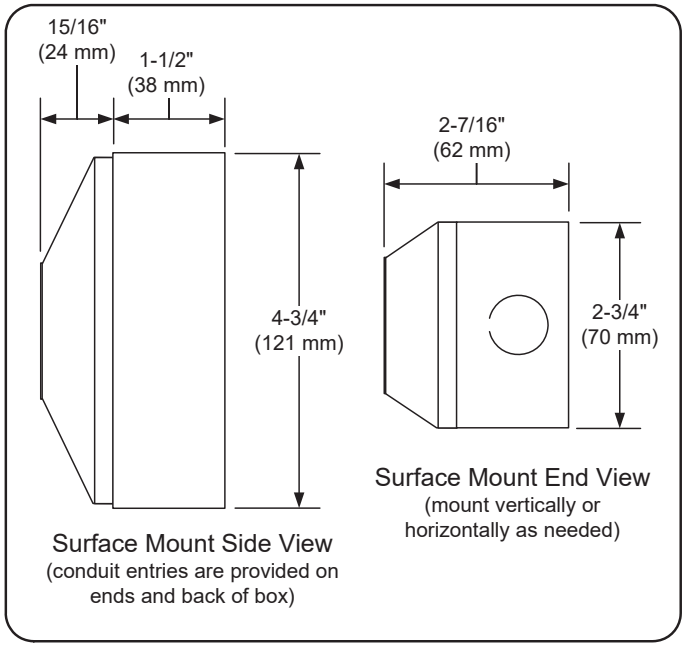
1. **DH24120RPC**: Door holder; 24 VDC/VAC, or 120 VAC operation; Recessed magnet/flush mount; Powdercoated; Chrome finish
2. **DH24120GB2:** Door holder; 24 VDC/VAC, or 120 VAC operation; Ground/floor mount; Brass finish, high luster; Double door
3. **DH1224SPC:** Door holder; 12 or 24 VDC/VAC operation;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

Semi-Flush and Surface Mount Dimensions



Semi-Flush and Surface Mount Front View

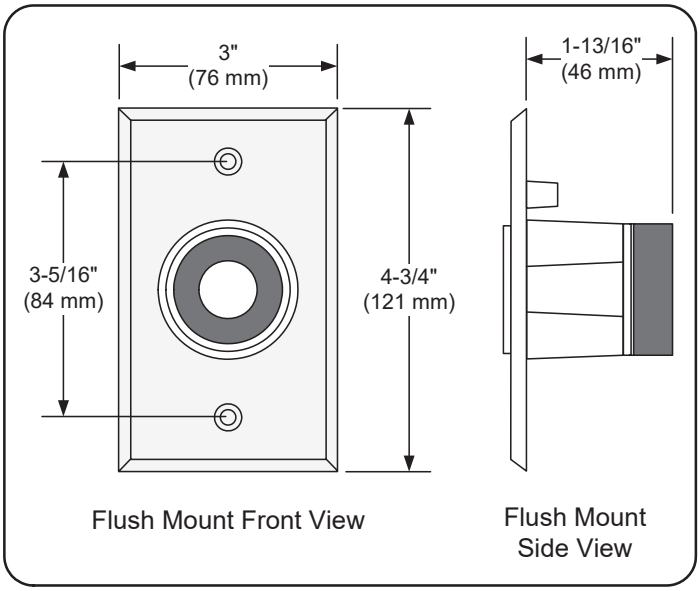
Semi-Flush Side View



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

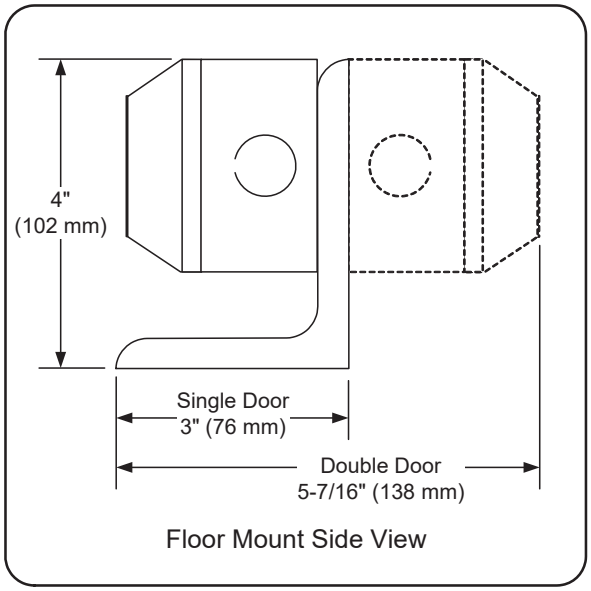
Surface Mount End View
(mount vertically or horizontally as needed)

Flush and Floor Mount Dimensions



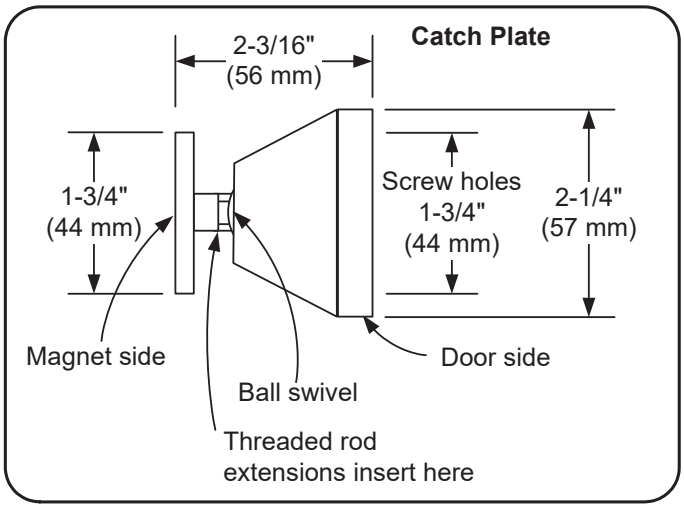
Flush Mount Front View

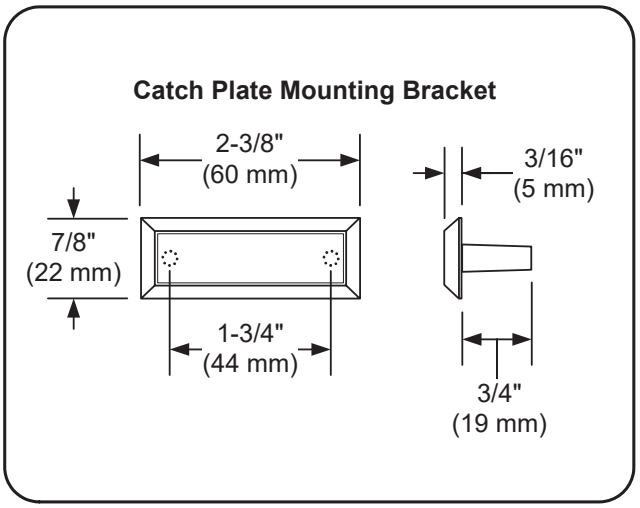
Flush Mount Side View



Floor Mount Side View

Catch Plate and Mounting Bracket Dimensions





Specifications

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

Electrical Specifications and Performance

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

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

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