



Plan Review, Inspection, and Permit Fees

Application Number	:	18-50044037	
\$200.00		Explosive Material (90 Days)	\$ -
\$100.00		Explosive Materials (72 Hours)	\$ -
\$100.00		Fireworks Public Display	\$ -
\$50.00		Final Inspection	\$ -
\$35.00 + \$2.00 per device	~	Fire Alarm Testing	\$ 35.00
\$35.00 + \$2.00 per nozzle		Fixed Fire Suppression	\$ -
\$75.00		Insecticide Fog/Fumigation	\$ -
\$100.00		Pipe Test/UST/AGST	\$ -
\$50.00		Plans up to 5000 sq ft	\$ -
\$100.00		Plans 5001 sq ft to 10,000 sq ft	\$ -
\$150.00		Plans 10,001 sq ft to 25,000 sq ft	\$ -
\$250.00		Plans 25,001 sq ft and over	\$ -
\$35.00 + 2.00 per head		Sprinkler Certification Test	\$ -
\$50.00		Standpipe Testing	\$ -
\$50.00		Special Assembly	
730.00		(ie. amusement buildings, carnivals, fairs)	\$ -
\$75.00		Tents/Canopies/Air Supported Structure	\$ -
\$100.00		Tank Installation (charge for each tank)	\$ -
\$100.00		Tank Removal (charge for each tank)	\$ -
	34	Total Devices/Heads	\$ 68.00
		Total Cost	\$ 103.00
Code Enforcement Officia	l	D. Banks Wallace	7/30/2018





July 30, 2018

Mr. Brett Strickland

Re: Student Life Renovation

Campbell University Lillington, NC 27546

Application Number 18-50044037

Mr. Strickland,

Thank you for submitting the plans for the building alterations. The plans have been carefully reviewed by a qualified code enforcement official to examine for compliance with the North Carolina Fire Prevention Code and all other fire protection regulatory documents. There are some items that were found during the plan review process that need to be addressed before a final inspection of the facility can be given. These items are outlined and described below.

• Fire Alarm System Upgrade Notes

All items in notes are to be completed at the time of final.

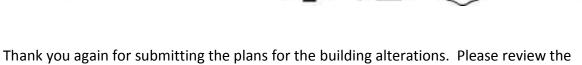
- o Provide a record of completion.
- The Fire marshal's office will complete an acceptance test at completion of project.
- Provide a copy of account history after the acceptance test is completed and approve.
- Provide an accurate zone map at the FACP and remote annunciator panel.
- All work/installation shall be compliant with the NCSFC and NFPA
 72.
- o Call Fire Marshal's office to schedule the fire alarm acceptance test. (910-984-4003)

Notes

- All additions to existing systems shall properly communicate to existing fire panel.
- A fire alarm construction permit is required.
- Please schedule all inspections through the Fire Marshal's Office.
 910-984-4003.







Again, thank you and we look forward to working with you during the construction period!

drawings. If you have any questions, please do not hesitate to call this office.

plans and adhere to any notes and alterations that were made in addition to the original

Sincerely,

D. Banks Wallace

Chief Deputy Fire Marshal

D. Bands Walleve







HARNETT COUNTY EMERGENCY SERVICE
REVIEWED FOR CODE COMPLIANCE

Application for Plan Review

Аррі	ication # 10 - 000-1900 /
Date Received: 5/1(0)	Received By:
Name of Project:	CU Student Life Renovation
Physical Address of Project:	44 Harmon Rd
	Lillington, NC 27546
Plans Submitted By:	Southeastern Construction of Buies Creek, LLC
Project Phone:	(919)-805-0664
Contact Person/Address:	Brett Strickland
	228 Airport Rd.
	Erwin, NC 28339
Contact Email:	bretts @ si-nc. com
Contact Phone:	(919)-805-0664 ()
Contractor's Name/Info:	Southeastern Construction of Buiss Creek, LLC
	228 Amport Rd.
	Fruis , NC 28339
Contractor's Phone:	(919)-805-0664

- Plans that are submitted will be reviewed as quickly as possible with an <u>average time of review between 7-10 working days</u>.
- Status checks may be conducted on plan reviews by visiting the website http://hteweb.harnett.org/Click2GovBP/Index.jsp or by calling the Harnett County Central Permitting Office (910-893-7525, Option #2), or the Harnett County Fire Marshal's Office (910-893-7580).
- Approved plans must be picked up from the Central Permitting Office and all fees paid before any required inspections can be conducted.

GENERAL NOTES:

. ALL CEILINGS ARE ASSUMED TO BE 10' A.F.F., SMOOTH CONSTRUCTION UNLESS NOTED OTHERWISE. . 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.

BRAND MODEL

EXISTING

EXISTING

EXISTING

SIMPLEX

SIMPLEX

SIMPLEX

SIMPLEX

1E SINGLE GANG BOX 2 1/2" DEEF

1G SINGLE GANG BOX 2 3/4" DEEP

1H SINGLE GANG BOX 3 1/2" DEEP

2A DOUBLE GANG BOX 2" DEEP

2B TWO GANG BOX 2 1/2" DEEP **2C** TWO GANG BOX 2 3/4" DEEP

6A 6 SINGLE GANG BOXES 3 1/2" DEEP

5A 5 GANG BOX 2 1/2" DEEP

6C 6 GANG BOX 2 1/2" DEEP

DT DESK TOP MOUNT

6D 6 GANG BOX 3 1/2" DEEP

MDW MOUNTS TO DUCTWORK
MBD MOUNTS IN BOX BEHIND DETECTOR

DS REFER TO PRODUCT DATASHEE

TRM | 3.5" WIDE SNAP TRACK W/MOUNTING SCREWS

6B 6 GANG BOX

1F SINGLE GANG BOX 2 1/2" DEEP W/COVER

EXISTING

EXISTING

4098-9792 BASE

4906-9102

4906-9128

SIMPLEX 4090-9733 FIE. 15 4098-9792 BASE

4098-9714 HEAD 4K I

4098-9733 HEAD 4K N

FIRE ALARM SYMBOL LEGEND

ADDRESSABLE PHOTOELECTRIC SMOKE SENSOR WITH

STROBE, CEILING MOUNT, RED, FIRE, CLEAR LENS

MULTI-CANDELA HORN/STROBE, WALL MOUNT, RED, FIRE, CLEAR LENS

MULTI-CANDELA HORN/STROBE, CEILING MOUNT, RED,

4N 4 11/16" SQ. BOX 1 1/2" DEEP W/ 1 1/2" EXT. RING **FBO** FURNISHED BY OTHERS **4P** 4 11/16" SQ. BOX 2 1/8" DEEP W/ 1 1/2" EXT. RING **MFG** SUPPLIED BY MANUFACTURER

FOR ADDITIONAL BACK BOX OPTIONS, REFER TO THE XX-700 SERIES DRAWINGS OR PRODUCT DATA SHEETS AND

SYMBOL DESCRIPTION

PANELS & ANNUNCIATORS

INITIATING DEVICES

BACKBOX CODES

CODE BOX SPECIFICATIONS

4A 4" SQ. BOX 1 1/2" DEEF

4D 4" SQ. BOX 2 1/8" DEEP

4J 4" SQ. BOX 2 1/2" DEEP

4K 4" OCT. BOX 1 1/2" DEEP

4M 4 11/16" SQ. BOX 2 1/8" DEEP

1A SINGLE GANG BOX 1 1/2" DEEP

1C SINGLE GANG BOX 2 1/8" DEEP

1B SINGLE GANG BOX 2" DEEP

INSTALLATION INSTRUCTIONS.

4B 4" SQ. BOX 1 1/2" DEEP W/ COVER

4E 4" SQ. BOX 2 1/8" DEEP W/ COVER

4C 4" SQ. BOX 1 1/2" DEEP W/ 1 1/2" EXT. RING

4F 4" SQ. BOX 2 1/8" DEEP W/ 1 1/2" EXT. RING

4G 4" SQ. BOX 2 1/8" DEEP W/ SINGLE GANG COVER

4H 4" SQ. BOX 2 1/8" DEEP W/ TWO GANG COVER

4L 4" OCT. BOX 1 1/2" DEEP W/ 1 1/2" EXT. RING

4Q 4" SQ. BOX 1 1/2" DEEP W/4098-9832 ADAPTER

4R 4" SQ. BOX 1 1/2" DEEP W/RACO 787 OR EQUIV.

4S 4" SQ. BOX 1 1/2" DEEP W/4098-9863 ADAPTER

FACP EXISTING FIRE ALARM CONTROL PANEL

MANUAL PULL STATION

TANDARD BASE

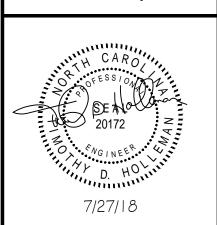
FIRE, CLEAR LENS

NOTIFICATION APPLIANCES

EXISTING NAC EXTENDER PANEL

HEAT SENSOR WITH STANDARD BASE





CENTER 벌 STUDENT I

DRAWN BY: C. BETHELL HECKED BY: J. SIMMONS SSUE DATE: 7/26/18 250:439710 ROJECT #: 250:18-607360101 JOHNSON CONTROLS © 2018

FIRE ALARM SYSTEM

DEVICE PLACEMENT PLAN

FA-101 holleman corp project # hc18150



AHJ = AUTHORITY HAVING JURISDICTION ALM = ALARMANN = ANNUNCIATORBMS = BUILDING MANAGEMENT SYSTEM C = CEILING MOUNTED CD = CANDELA RATING DET = DETECTOR DGP = DATA GATHERING PANEL E = EXISTING TO REMAINEOL = END OF LINE EPO = EMERGENCY POWER OFF 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 HUMIDITYHT = HEIGHTHVAC = HEATING VENTILATION & AIR CONDITIONING IMS = INFORMATION MANAGEMENT SYSTEM MAX = MAXIMUMMIN = MINIMUM

TS = TAMPER SWITCH TYP = TYPICALVT = VALVE TAMPER

VCC = VOICE COMMAND CENTER

**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

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 TRBL = TROUBLE UON = UNLESS OTHERWISE NOTED

NING	W/ = WIIH	
	W/O = WITHOUT	
	WF = WATERFLOW	
	WG = WIRE GUARD	
	WP = WEATHERPROOF	
	XP = EXPLOSION PROOF	

FIRE	ALARM	I WIRE	LIST

N/A = NOT APPLICABLE

NDU = NETWORK DISPLAY UNIT

NAC = NOTIFICATION APPLIANCE CIRCUIT

-					-							ıxı	i i
C	IRCUIT DE	ESCRIPTION	CONS	TRUCTION	GAUGE		F PROPERTIES	FPLR	FPLP	NHHL	NJJL	оптро	C.I.
Α	ADDRESSABI	LE NOTIFICATION	UT	P SOLID	16 AWG	1 '	RECOMMENDED	Х	Х				
М	IDNET		UT	P SOLID	18 AWG			Х	Х				
СО	NDUIT SIZE	MAX CONDUCT	OR AREA	CONDUIT SIZE	MAX COND	UCTOR AREA	NOTES						
	1/2"	0.12 SQ INC	CH *	1-1/4"	0.60 S	Q INCH *	*40% FILL PER N.E.C.						
	3/4"	0.21 SQ INC	CH *	1-1/2"	0.82 S	Q INCH *	SUBSCRIPT "u": UNSH	IELDE	D CA	BLES	MIXE	D WI	TH
	1"	0.34 SQ INC	CH *	2"	1.34 S	Q INCH *	SHIELDED CABLES OF	SAMI	E CIR	CUIT	DESIG	GNAT	ION.

Reviewed For Code Compliance By:

Chief Deputy Fire Marshal

07/30/2018 2:10:43 PM

2 GANG BOX, 1-1/2" (38mm) DEEP

IMPLEX 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

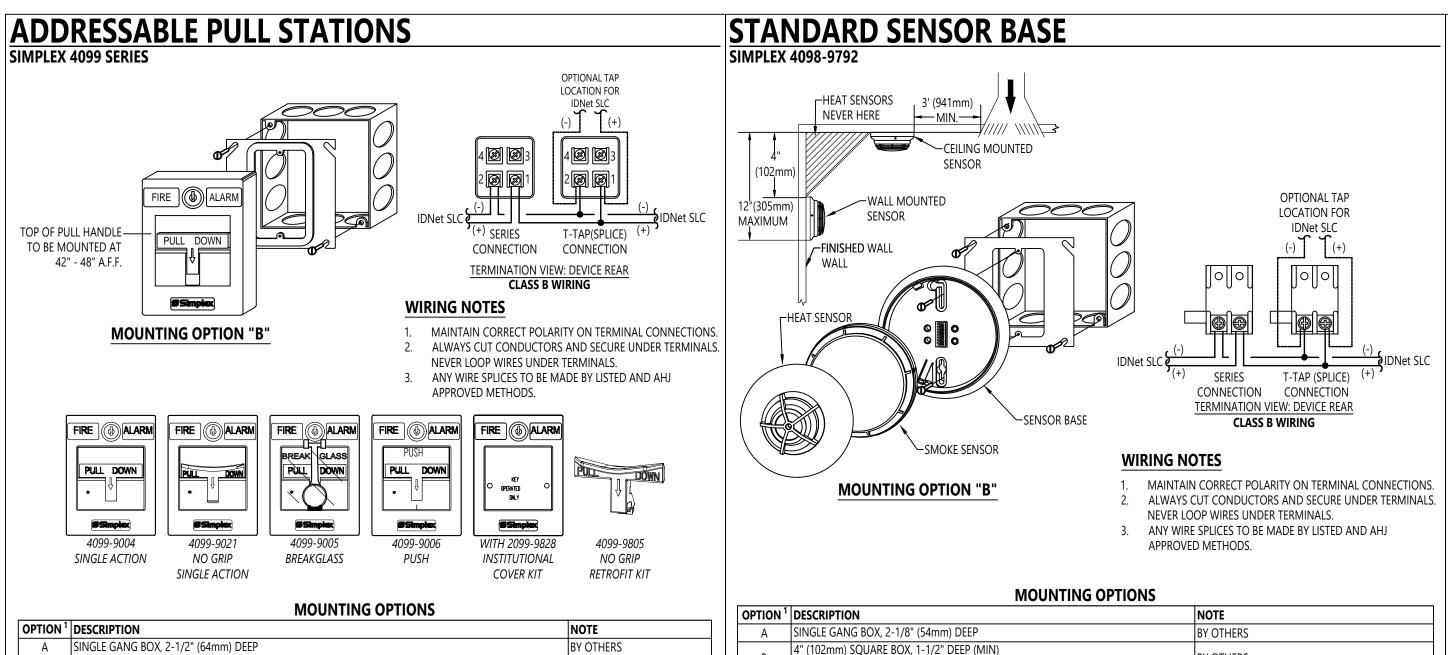
D. Banks Wallace

PARTIAL FLOOR DEVICE PLACEMENT PLAN SCALE: N.T.S.

PARTIAL FLOOR DEVICE PLACEMENT PLAN

EXISTING STOR 104

15 A1:1-4(1)



W/ SINGLE GANG COVER PLATE 3/4" (19mm) EXTENSION

D 4" (102mm) SQUARE BOX, 1-1/2" DEEP (MIN) W/ SIMPLEX 4098-9832 ADAPTER KIT BOX BY OTHER, 4098-9832 ORDERED SEPARATELY

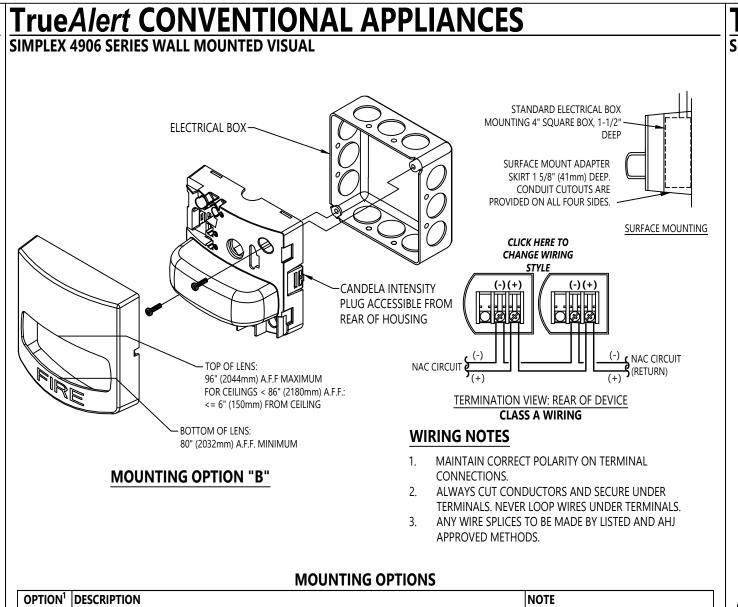
1. FOR ADDITIONAL MOUNTING OPTIONS, DOWNLOAD DATA SHEET 4098-0019 FROM HTTP://WWW.SIMPLEX-FIRE.COM

A1:1-21(2)

101 NEW ADMIN AREA

15 A1:1-13(1)

NEW OFFICE



1. FOR ADDITIONAL MOUNTING OPTIONS, DOWNLOAD DATA SHEET 4906-0002 FROM HTTP://WWW.SIMPLEX-FIRE.COM

BY OTHERS. WHEN SURFACE

4906-9940 (WHITE) SKIRT

ORDERED SEPARATELY

OVERALL KEYPLAN

1. RISER IS A DIAGRAMMATICAL REPRESENTATION OF THE SYSTEM ARCHITECTURE IN BUILDING CROSS SECTION. IT IS NOT INTENDED

CIRCUIT ROUTING AND CONFIGURATION INFORMATION.

A SINGLE GANG BOX, 1-1/2" (64mm) DEEP

2 GANG BOX, 1-1/2" (38mm) DEEP

B 4" (102mm) SQUARE BOX, 1-1/2" (38mm) DEEP, MINIMUM

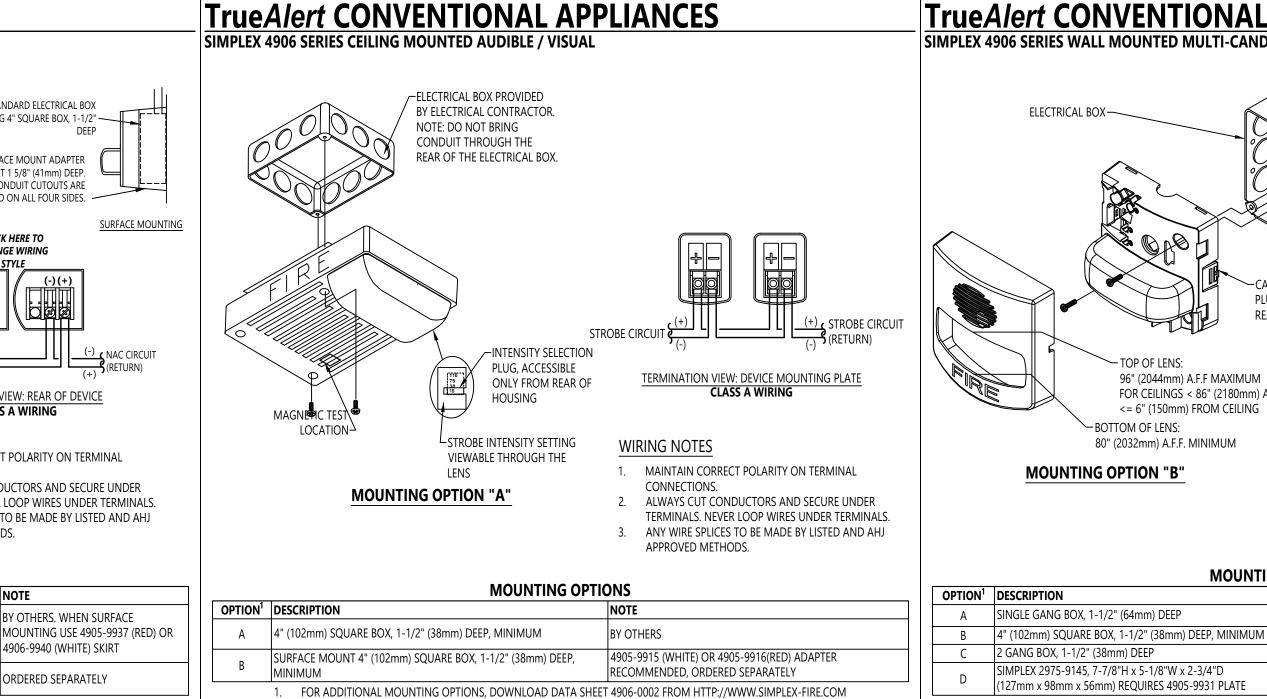
SIMPLEX 2975-9145, 7-7/8"H x 5-1/8"W x 2-3/4"D

(127mm x 98mm x 56mm) REQUIRES 4905-9931 PLATE

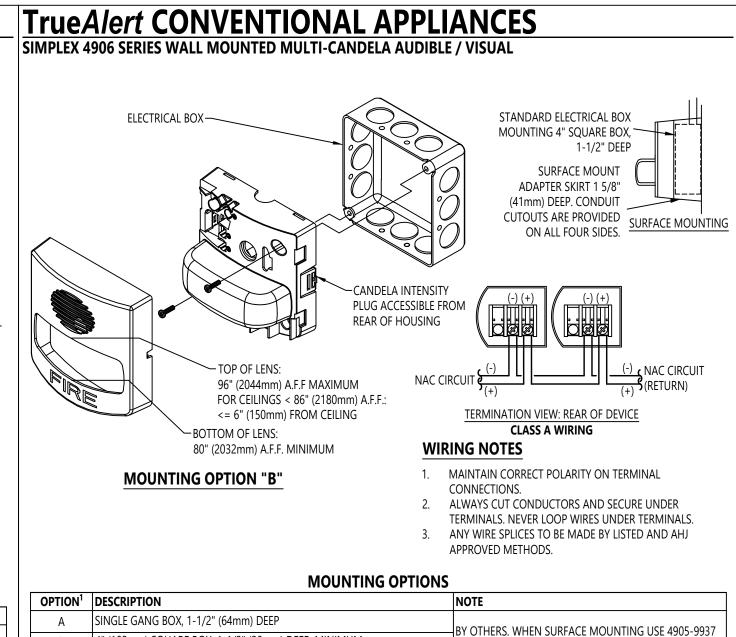
ALL WIRING SHALL COMPLY WITH APPLICABLE ELECTRICAL CODES.

3. DEVICES ARE TYPICAL. SEE FLOOR PLAN FOR QUANTITY & LOCATIONS.

TO REPRESENT ACTUAL WIRE RUNS, PANEL CONFIGURATIONS OR PENETRATIONS. REFER TO FLOOR PLANS AND PANEL DETAILS FOR



2. 4905-9928 ADAPTER PLATE REQUIRED WITH OPTIONAL 4905-9927 RED WIRE GUARD



1. FOR ADDITIONAL MOUNTING OPTIONS, DOWNLOAD DATA SHEET 4906-0002 FROM HTTP://WWW.SIMPLEX-FIRE.COM

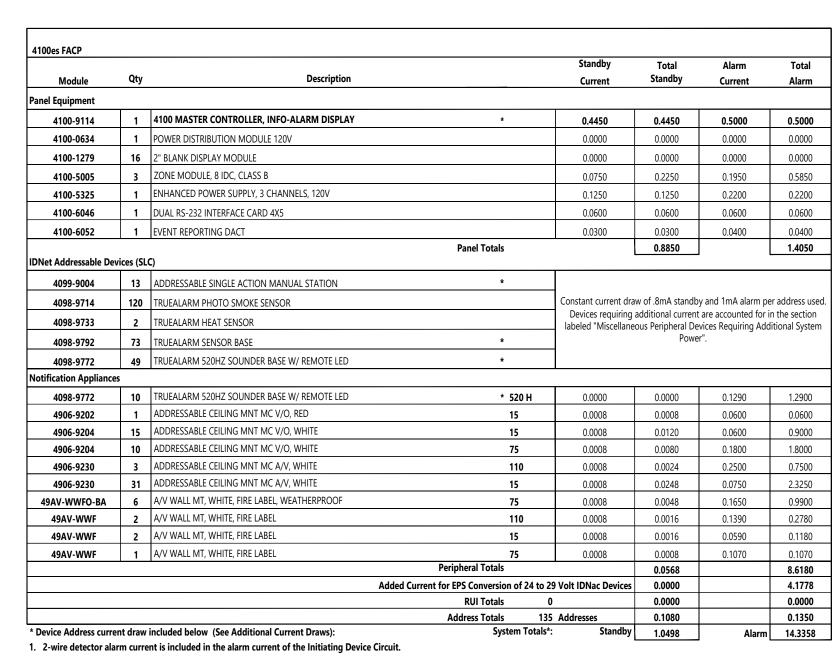
ENGINEERING SERVICES PROVIDED BY HOLLEMAN CORPORATION 6772 KELSEY COURT, GIBSONVILLE, NC 27249 (336) 337-6334 firm license # C-1381 email: hollemancorp@earthlink.net

│(RED) OR 4906-9940 (WHITE) SKIRT

B 4" (102mm) SQUARE BOX, 2-1/8" DEEP (MIN) W/ SINGLE GANG COVER PLATE 3/4" (19mm) EXTENSION

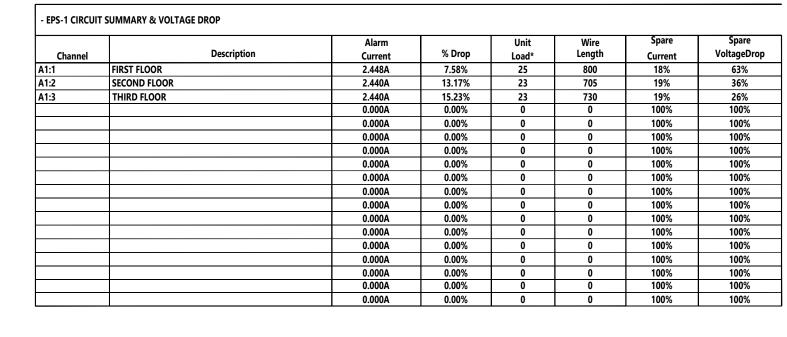
1. FOR ADDITIONAL MOUNTING OPTIONS, DOWNLOAD DATA SHEET 4099-0005 FROM HTTP://WWW.SIMPLEX-FIRE.COM

| SIMPLEX 2975-9178 - 5-3/4"H x 3-7/8"W x 2-3/16"D (132mm x 102mm x 56mm)



			Standby	Standby	Alarm	Alarr
Battery Set #1 (Cabinet/Charger #1)			Current	Total	Current	Tota
Select ALL Power Supplies on this battery set:						
SPS-1				0.7600		2.47
EPS-1				0.1818		7.54
			Sub Total	0.9418		10.02
Additional Current Draws:						
IDNac Current Boost for 29vdc Regulated Output **				0.0000		4.17
MAPNET/IDNet Device Address Communicatio	n Current	135	x 0.000800	= 0.1080	x 0.001000	= 0.13
			Sub Total	1.0498		14.33
Spare addressable point capacity	0%	0	x 0.0008	= 0.0000	x 0.001	= 0.00
			Total	1.0498		14.33
Standby Time =	24	Hrs	x 1.0498	= 25.1952	Standby Ah	
Alarm Time =	5	_ Min	0.08333 x 14.3358		Alarm Ah	
·				26.3899	-	
Additional Spare Battery Capacity =	20%		+	5.2780		
				31.6678	-	
Battery Discharge Factor =	20%		+_	6.3336	_	
Minimum Battery Required	2081-929	96 50AH (2x)	_	38.0014	-	
Battery Supplied	2081-929	96 50AH (2x)				

OWER SUPPLY SU	MMARY		Powered By	_	_	SPS-1	SUMMARY		EPS-1	SUMMARY	
Module	Qty	Description	Ext. Source Qty.	Standby Current	Alarm	Qty	Total Standby	Total Alarm	Qty	Total Standby	Tota Alarr
Module	4.9	Description .	4.9.	Current	Current 24vdc Aux Totals	 	0.0000	0.0000	4.9	0.0000	0.000
ANEL COMPONEN	ITS DOWER	RED BY POWER SUPPLY			24VUC AUX TOTAIS		0.0000	0.0000		0.0000	0.000
4100-9114	1	4100 MASTER CONTROLLER, INFO-ALARM DISPLAY		0.4450	0.5000	1	0.4450	0.5000	0	0.0000	0.00
4100-0634	1	POWER DISTRIBUTION MODULE 120V		0.0000	0.0000	1	0.0000	0.0000	0	0.0000	0.00
4100-1279	16	2" BLANK DISPLAY MODULE		0.0000	0.0000	16	0.0000	0.0000	0	0.0000	0.00
4100-5005	3	ZONE MODULE, 8 IDC, CLASS B		0.0750	0.1950	3	0.2250	0.5850	0	0.0000	0.00
4100-5325	1	ENHANCED POWER SUPPLY, 3 CHANNELS, 120V		0.1250	0.2200	0	0.0000	0.0000	1	0.1250	0.22
4100-6046	1	DUAL RS-232 INTERFACE CARD 4X5		0.0600	0.0600	1	0.0600	0.0600	0	0.0000	0.00
4100-6052	1	EVENT REPORTING DACT		0.0300	0.0400	1	0.0300	0.0400	0	0.0000	0.00
					Components		0.7600	1.1850		0.1250	0.22
				NAC Currents	from Voltage Drops		0.0000	1.2900		0.0568	7.32
			MA	PNET/IDNet De	vice Addresses used	0	0.0000	0.0000	135	0.1080	0.13
						Tota	l 0.7600	2.4750	Total	0.1818	7.548
							C			C	
						SPS-1	Configuration		EPS-1	Configuration	
							Capacity:	9.000A		Capacity:	
							Ckt. Capacity:	3.000A		Ckt. Capacity:	3.000
							Aux. Capacity:	2.000A		Aux. Capacity:	2.000



	SUPPLY - CHANNEL 1					Ь-	<u></u>	VIIC	ח אב	TTING	
DNac Number	Device Type	PID	Candela	Custom Label (Max 40 Characters)		1					
A1:1-1	AV	49AV-WWF	110cd	1FL LOUNGE	1-1-1	Х	┵		Ш		
A1:1-2	STRB	4906-9204	15cd	1FL WOMEN'S RESTROOM 102	1-1-2		Х		Щ	Ш	
A1:1-3	AV	49AV-WWFO-BA	75cd	1FL AT STAIRS NEAR SUITE 101	1-1-3	X	X		山		
A1:1-4	STRB	4906-9204	15cd	1FL MEN'S RESTROOM	1-1-4	Ш	Х		L		
A1:1-5	STRB	4906-9204	15cd	1FL LAUNDRY ROOM	1-1-5	Х	Х		山		
A1:1-6	STRB	4906-9204	15cd	1FL SUITE 101 RESTROOM	1-1-6		X X		Ш		
A1:1-7	A/V	4906-9230	15cd	1FL SUITE 101 CORR A/B	1-1-7	Х	Х		\perp		
A1:1-8	A/V	4906-9230	15cd	1FL SUITE 101 CORR ENTRANCE	1-1-8	Ш		X			
A1:1-9	STRB	4906-9204	75cd	1FL SUITE 101 LOUNGE	1-1-9	Х	$oldsymbol{\mathbb{I}}$	Х	J		_
A1:1-10	A/V	4906-9230	15cd	1FL SUITE 101 CORR E/G	1-1-10		Х	X			
A1:1-11	A/V	4906-9230	110cd	1FL SUITE 101 E	1-1-11	X	Х	X	П		
A1:1-12	AV	49AV-WWF	110cd	1FL THE GROC	1-1-12	П	Х	X	\Box		
A1:1-13	STRB	4906-9204	15cd	1FL THE GROC RESTROOM	1-1-13	Х	Х	X	Т		
A1:1-14	AV	49AV-WWFO-BA	75cd	1FL AT STAIRS NEAR SUITE 103	1-1-14		ХХ	X	Т		
A1:1-15	STRB	4906-9204	15cd	1FL SUITE 103 RESTROOM	1-1-15	X	ΧХ	X	Т		
A1:1-16	A/V	4906-9230	15cd	1FL SUITE 103 CORR A/B	1-1-16				Х		•
A1:1-17	STRB	4906-9204	75cd	1FL SUITE 103 LOUNGE	1-1-17	Х			Х		
A1:1-18	A/V	4906-9230	15cd	1FL SUITE 103 CORR ENTRANCE	1-1-18		Х		Х		
A1:1-19	A/V	4906-9230	15cd	1FL SUITE 103 CORR E/G	1-1-19	Х	Х		Х		
A1:1-20	STRB	4906-9202	15cd	1FL RESIDENT DIRECTOR BATH	1-1-20		Х		Х		
A1:1-21	AV	49AV-WWF	75cd	1FL CONF ROOM 108	1-1-21	Х	Х		Х		•
A1:1-22	AV	49AV-WWF	15cd	1FL RECEPTION 116 ENTRY	1-1-22		ХХ		Х		
A1:1-23	A/V	4906-9230	15cd	1FL RECEPTION 116	1-1-23	Х	ХХ		Х		
A1:1-24	STRB	4906-9204	15cd	1FL WOMEN'S RESTROOM 113	1-1-24	П		Х	X		
A1:1-25	AV	49AV-WWF	15cd	1FL CORR 112	1-1-25	Х		Х	Х		
A1:1-26						\Box	Х	Х	Х	\prod	
A1:1-27						X	Х	Х	Х	\Box	
A1:1-28						П	Х	X	X		
A1:1-29						Х	Х	X	Х		
A1:1-30							ΧХ	X	Х		•

	A1:1				Notification SLC	Distributed Load	Voltage Drop			
	Starting Voltage:	29vdc	٦							
	Min. Device Voltage:		7	Primary Wire Gauge:	16ga	1	Wire Res. Per Ft.	0.0049	@ 75° Celsius	
	Allowable % Drop:	20.7%	- ⊦	Home Run Wire Gauge:	16ga	1	Wire Res. Per Ft.	0.0049	@ 75° Celsius	
			_	- ر		J			J -	
							Class B Calculation	ns		1
			Distance			Device	Current	Voltage	Voltage	% Vdrop
Branch	Device #	From	(Feet)	PID	Candela	Draw	at Device	Drop	at Device	Wire Length
1	A1:1-1	PANEL	30	49AV-WWF	110cd	0.1390	1.199	0.352	28.648	Branch 1: 7.58
1	A1:1-2	A1:1-1	30	4906-9204	15cd	0.0600	1.060	0.311	28.337	Length: 325
1	A1:1-3	A1:1-2	20	49AV-WWFO-BA	75cd	0.1650	1.000	0.196	28.142	
1	A1:1-4	A1:1-3	20	4906-9204	15cd	0.0600	0.835	0.163	27.978	
1	A1:1-5	A1:1-4	20	4906-9204	15cd	0.0600	0.775	0.152	27.827	
1	A1:1-6	A1:1-5	30	4906-9204	15cd	0.0600	0.715	0.210	27.617	
1	A1:1-7	A1:1-6	20	4906-9230	15cd	0.0750	0.655	0.128	27.489	
1	A1:1-8	A1:1-7	50	4906-9230	15cd	0.0750	0.580	0.284	27.205	
1	A1:1-9	A1:1-8	50	4906-9204	75cd	0.1800	0.505	0.247	26.958	
1	A1:1-10	A1:1-9	30	4906-9230	15cd	0.0750	0.325	0.095	26.863	
1	A1:1-11	A1:1-10	25	4906-9230	110cd	0.2500	0.250	0.061	26.802	
2	A1:1-20	PANEL	45	4906-9202	15cd	0.0600	1.249	0.550	28.450	Branch 2: 6.59
2	A1:1-21	A1:1-20	50	49AV-WWF	75cd	0.1070	0.107	0.052	28.398	Length: 475
2	A1:1-12	A1:1-20	50	49AV-WWF	110cd	0.1390	1.082	0.529	27.921	
2	A1:1-13	A1:1-12	50	4906-9204	15cd	0.0600	0.943	0.461	27.460	
2	A1:1-14	A1:1-13	20	49AV-WWFO-BA	75cd	0.1650	0.165	0.032	27.428	
2	A1:1-15	A1:1-13	20	4906-9204	15cd	0.0600	0.465	0.091	27.369	
2	A1:1-16	A1:1-15	30	4906-9230	15cd	0.0750	0.405	0.119	27.250	
2	A1:1-17	A1:1-16	30	4906-9204	75cd	0.1800	0.330	0.097	27.153	
2	A1:1-18	A1:1-17	30	4906-9230	15cd	0.0750	0.150	0.044	27.109	
2	A1:1-19	A1:1-18	30	4906-9230	15cd	0.0750	0.075	0.022	27.087	
2	A1:1-22	A1:1-13	30	49AV-WWF	15cd	0.0590	0.253	0.074	27.386	
2	A1:1-23	A1:1-22	30	4906-9230	15cd	0.0750	0.194	0.057	27.329	
2	A1:1-24	A1:1-23	30	4906-9204	15cd	0.0600	0.060	0.018	27.311	
2	A1:1-25	A1:1-23	30	49AV-WWF	15cd	0.0590	0.059	0.017	27.312	
						0.0000	0.000	0.000	0.000	

ET CHANNEL	M1					SW	ITC	:H S	SETT	ΓIN	S	_
Address	Device Type	Point Type	Location Description		1	2	3	4	5	6	7	8
M1-1	РНОТО	SMOKE	1FL LOUNGE	1-1	X							
M1-2	ADRPUL	PULL	1FL LOUNGE	1-2		X						
M1-3	HEAT	HEAT	1FL LAUNDRY	1-3	X	X						
M1-4	SPHOTO	SMOKE	1FL SUITE 101 B	1-4			X					
M1-5	РНОТО	SMOKE	1FL SUITE CORR A/B	1-5	-		X					
M1-6	SPHOTO	SMOKE	1FL SUITE 101 A	1-6		X						
M1-7	РНОТО	SMOKE	1FL SUITE 101 CORR ENTRANCE	1-7	X	Х	X					
M1-8	РНОТО	SMOKE	1FL SUITE 101 LOUNGE CORR	1-8				X				
M1-9	РНОТО	SMOKE	1FL SUITE 101 E/G	1-9	X			X				
M1-10	SPHOTO	SMOKE	1FL SUITE 101 E	1-10		Х		X				_
M1-11	РНОТО	SMOKE	1FL SUITE 101 STORAGE	1-11	Х	Х		X				
M1-12	SPHOTO	SMOKE	1FL SUITE 101 G	1-12			X	X				
M1-13	ADRPUL	PULL	1FL SUITE 101 ENTRANCE	1-13	X		X	X				
M1-14	РНОТО	SMOKE	1FL CIRCULATION SPACE 119	1-14		Х	Х	Х				
M1-15	SPHOTO	SMOKE	1FL CONF ROOM 108	1-15	Х	Х	Х	Х				
M1-16	РНОТО	SMOKE	1FL STORAGE	1-16				П	Х			
M1-17	ADRPUL	PULL	1FL THE GROC	1-17	Х			П	Х			
M1-18	РНОТО	SMOKE	1FL UTILITY ROOM	1-18		х		П	Х			
M1-19	SPHOTO	SMOKE	1FL SUITE 103 B	1-19	Х	Х		П	Х			
M1-20	РНОТО	SMOKE	1FL SUITE 103 CORR A/B	1-20			Х	П	Х			-
M1-21	SPHOTO	SMOKE	1FL SUITE 103 A	1-21	Х		χ	П	Х			
M1-22	РНОТО	SMOKE	1FL SUITE 103 LOUNGE CORR	1-22		Х	Х		Х			_
M1-23	SPHOTO	SMOKE	1FL SUITE 103 G	1-23	Х	Х	Х	П	Х			
M1-24	РНОТО	SMOKE	1FL SUITE 103 CORR E/G	1-24				Х	Х			
M1-25	ADRPUL	PULL	1FL SUITE 103 ENTRANCE	1-25	Х			Х	Х			
M1-26	SPHOTO	SMOKE	1FL SUITE 103 E	1-26		х		Х	Х			_
M1-27	SPHOTO	SMOKE	1FL SUITE 103 F	1-27	Х	Х		Х	Х			_
M1-28	РНОТО	SMOKE	1FL SUITE 103 CORR ENTRANCE	1-28			Х	Х	Х			
M1-29	РНОТО	SMOKE	1FL SUITE 101 LOUNGE	1-29	X		Х	Х	Х			
M1-30	РНОТО	SMOKE	1FL DIRECTOR'S OFFICE 118	1-30		Х	Х	Х	Х			
M1-31	РНОТО	SMOKE	1FL LAUNDRY/IT ROOM	1-31	X	Х	Х	Х	Х			
M1-32	РНОТО	SMOKE	1FL LOUNGE 107	1-32				П		Х		
M1-33	HEAT	HEAT	1FL BREAK ROOM 120	1-33	Х			П		Х		
M1-34	ADRPUL	PULL	1FLCONF ROOM 108	1-34		Х		П		Х		
M1-35	РНОТО	SMOKE	1FL AT FACP	1-35	Х	Х		П		Х		
M1-36	РНОТО	SMOKE	1FL RECEPTION 116 ENTRY	1-36			Х	П		Х		
M1-37	РНОТО	SMOKE	1FL OFFICE 110	1-37	Х		Х	П		х		
M1-38	РНОТО	SMOKE	1FL CORR 112	1-38		х	х	П		х		-
M1-39	РНОТО	SMOKE	1FL SUITE 103 LOUNGE	1-39	-	_		П		х	1	-
M1-40					П			х		Х		-
M1-41	ADRPUL	PULL	2FL SUITE 201 ENTRANCE	1-41	х			х		х		
M1 42	CDUOTO	CMOVE	DEL CUITE 201 A	4.40	Н	V	H	· ·	Н		\dashv	-

SMOKE 2FL SUITE 201 A

SMOKE 2FL SUITE 201 E/G

PHOTO SMOKE 2FL SUITE 201 CORR A/B

SPHOTO SMOKE 2FL SUITE 201 F SPHOTO SMOKE 2FL SUITE 201 E
SPHOTO SMOKE 2FL SUITE 201 B

 M1-49
 SPHOTO
 SMOKE
 2FL SUITE 201 B

 M1-50
 SPHOTO
 SMOKE
 2FL SUITE 202 B

 M1-51
 SPHOTO
 SMOKE
 2FL SUITE 202 A

 M1-52
 SPHOTO
 SMOKE
 2FL SUITE 202 G

 M1-53
 SPHOTO
 SMOKE
 2FL SUITE 202 F

 M1-54
 SPHOTO
 SMOKE
 2FL SUITE 203 E

 M1-55
 SPHOTO
 SMOKE
 2FL SUITE 203 F

 M1-56
 SPHOTO
 SMOKE
 2FL SUITE 203 G

 M1-57
 SPHOTO
 SMOKE
 2FL SUITE 203 A

 M1-58
 SPHOTO
 SMOKE
 2FL SUITE 203 A

 M1-59
 SPHOTO
 SMOKE
 2FL SUITE 203 B

 M1-60
 SPHOTO
 SMOKE
 2FL SUITE 204 B

 M1-61
 PHOTO
 SMOKE
 2FL SUITE 204 CORR A/B

 M1-62
 SPHOTO
 SMOKE
 2FL SUITE 204 CORR

 M1-63
 ADRPUL
 PULL
 2FL SUITE 204 LOUNGE CORR

 M1-64
 PHOTO
 SMOKE
 2FL SUITE 204 E

 M1-65
 SPHOTO
 SMOKE</

ADRPUL PULL 2FL SUITE 202 ENTRANCE
PHOTO SMOKE 2FL SUITE 202 CORR A/B
PHOTO SMOKE 2FL SUITE 202 CORR ENTRANCE
PHOTO SMOKE 2FL SUITE 202 LOUNGE
PHOTO SMOKE 2FL SUITE 202 CORR E/G
PHOTO SMOKE 2FL SUITE 203 CORR E/G
PHOTO SMOKE 2FL SUITE 203 CORR E/G
PHOTO SMOKE 2FL SUITE 203 CORR ENTRANCE
PHOTO SMOKE 2FL SUITE 203 CORR A/B
PHOTO SMOKE 2FL SUITE 203 CORR A/B
PHOTO SMOKE 2FL SUITE 204 CORR E/G
SPHOTO SMOKE 2FL SUITE 201 G
PHOTO SMOKE 2FL SUITE 201 CORR ENTRANCE
PHOTO SMOKE 2FL SUITE 201 LOUNGE
PHOTO SMOKE 2FL SUITE 201 LOUNGE
PHOTO SMOKE 2FL SUITE 201 LOUNGE
PHOTO SMOKE 2FL SUITE 202 LOUNGE
PHOTO SMOKE 2FL SUITE 203 LOUNGE
PHOTO SMOKE 2FL SUITE 204 LOUNGE
PHOTO SMOKE 2FL SUITE 204 LOUNGE
PHOTO SMOKE 1FL RT 103
PHOTO SMOKE 1FL RT 103

ADRPUL PULL 3FL SUITE 301 ENTRANCE
PHOTO SMOKE 3FL SUITE 301 CORR ENTRANCE
SPHOTO SMOKE 3FL SUITE 301 CORR ENTRANCE
SPHOTO SMOKE 3FL SUITE 301 CORR E/G
SPHOTO SMOKE 3FL SUITE 301 F
SPHOTO SMOKE 3FL SUITE 301 E
PHOTO SMOKE 3FL SUITE 301 E
PHOTO SMOKE 3FL SUITE 301 LOUNGE CORR
SPHOTO SMOKE 3FL SUITE 301 A
PHOTO SMOKE 3FL SUITE 301 CORR A/B
SPHOTO SMOKE 3FL SUITE 301 B
SPHOTO SMOKE 3FL SUITE 302 B
PHOTO SMOKE 3FL SUITE 302 CORR A/B
SPHOTO SMOKE 3FL SUITE 302 CORR A/G
PHOTO SMOKE 3FL SUITE 302 CORR A/G
PHOTO SMOKE 3FL SUITE 302 CORR A/G
PHOTO SMOKE 3FL SUITE 302 CORR A/G
SPHOTO SMOKE 3FL SUITE 302 CORR E/G
SPHOTO SMOKE 3FL SUITE 303 E
SPHOTO SMOKE 3FL SUITE 303 E
SPHOTO SMOKE 3FL SUITE 303 E
SPHOTO SMOKE 3FL SUITE 303 G
PHOTO SMOKE 3FL SUITE 303 G
PHOTO SMOKE 3FL SUITE 303 A/G
ADRPUL PULL 3FL SUITE 303 A/G
ADRPUL PULL 3FL SUITE 303 CORR A/B
SPHOTO SMOKE 3FL SUITE 303 CORR A/B
SPHOTO SMOKE 3FL SUITE 303 A/G
ADRPUL PULL 3FL SUITE 303 CORR A/B
SPHOTO SMOKE 3FL SUITE 304 CORR ENTRANCE
SPHOTO SMOKE 3FL SUITE 304 CORR ENTRANCE

 M1-123
 ADRPUL
 PULL
 3FL SUITE 304 ENTRANCE

 M1-124
 PHOTO
 SMOKE
 3FL SUITE 304 CORR ENTRANCE

 M1-125
 PHOTO
 SMOKE
 3FL SUITE 304 LOUNGE CORR

NOTE: THE LABELS SHOWN ABOVE WILL BE USED FOR PROGRAMMING PURPOSES. THE LABELS ARE BASED UPON INFORMATION SHOWN ON THE ARCHITECTURAL DRAWINGS.

POINTS SHOWN IN ITALIC TEXT REFER TO EXISTING DEVICES.

ANY CHANGES TO THESE LABELS MUST BE NOTED ON THE SUBMITTAL REVIEW, PRIOR TO PROGRAMMING.

M1-83 M1-84 M1-85 M1-86 M1-87 M1-88

M1-89

M1-90 M1-91

1-123 X X X X X X X X ON

1-124 X X X X X X X ON

1-125 X X X X X X X ON

SMOKE 2FL SUITE 201 CORR ENTRANCE

						$\overline{}$	-							
7		IDNET CHANNEL M	1			_	_	_	_		ING			_
4	9	Address				Ь.					6 7		_	9
1		M1-126	SPHOTO	SMOKE	3FL SUITE 304 G 1-126	-		-	-	-	X >			ON
1		M1-127	РНОТО	SMOKE	3FL SUITE 304 E/G 1-127	X	X	X	Х	X	X	_	ON	
		M1-128	SPHOTO	SMOKE	3FL SUITE 304 F 1-128	Ш	Ш	Ш				X		ON
	ON	M1-129	SPHOTO	SMOKE	3FL SUITE 304 E 1-129	X	Ш							ON
		M1-130	РНОТО	SMOKE	3FL SUITE 301 LOUNGE 1-130	-	X						ON	
	ON	M1-131	РНОТО	SMOKE	3FL SUITE 302 LOUNGE 1-131	X	X						ON	
		M1-132	РНОТО	SMOKE	3FL SUITE 303 LOUNGE 1-132			X					ON	
		M1-133	РНОТО	SMOKE	3FL SUITE 304 LOUNGE 1-133	X		X				Х	ON	
		M1-134					X	X					ON	
	ON	M1-135				X	X	X					ON	
		M1-136							X			Х	ON	
I	ON	M1-137				Х	П		X			Х	ON	
I		M1-138				П	Х		Х			Х	ON	
1		M1-139				Х	Х		Х			Х	ON	
1	ON	M1-140	РНОТО	SMOKE	1FL RECEPTION 116 1-140	П		Х	Х			Х	ON	
Ī		M1-141	РНОТО	SMOKE	1FL OFFICE 117 1-141	X	П	Х	X			Х	ON	
1		M1-142	РНОТО	SMOKE	1FL OFFICE 111 1-142	П	X	Х	X			Х	ON	
Ī		M1-143	РНОТО	SMOKE	1FL CORR 112 1-143	Х	Х	Χ	Х			Х	ON	
Ī	ON	M1-144	РНОТО	SMOKE	1FL RECEPTION 116 1-144	П	П			X		Х	ON	
Ī		M1-145	РНОТО	SMOKE	1FL OFFICE 115 1-145	X	П	П		X		Х	ON	
Ī	ON	M1-146	РНОТО	SMOKE	1FL JANITOR 114 1-146		Х	П		X		Х	ON	
1		M1-147				Х	Х		П	Х		Х	ON	
Ī	ON	M1-148				П	П	Х	\Box	X		Х	ON	
		M1-149				Х	П	Х	П	Х		Х	ON	
1		M1-150				П	Х	Х	T	Х		Х	ON	
1	ON	NOTE: THE LABELS	SHOWN ABOVE V	WILL BE USED FO	R PROGRAMMING PURPOSES.									
1	ON	THE LABELS ARE BA	SED UPON INFO	RMATION SHOW	/N ON THE ARCHITECTURAL DRAWINGS.									
1		ANY CHANGES TO T	THESE LABELS MI	UST BE NOTED O	N THE SUBMITTAL REVIEW, PRIOR TO PROGRAMMING.									
-	-													

M1-143 M1-144 M1-145	РНОТО РНОТО	SMOKE	1FL CORR 112	1-143	Х	X	хI	<i>-</i>			l v	ON	
M1-145	РНОТО				_		·: L						
		SMOKE	1FL RECEPTION 116	1-144					X			ON	
M1 146	РНОТО	SMOKE	1FL OFFICE 115	1-145	Х		$_{ m I}$	_]	X			ON	
M1-146	РНОТО	SMOKE	1FL JANITOR 114	1-146		X		1	Х		Х	ON	
M1-147					Х			1	х		х	ON	T
M1-148							х		х			ON	
M1-149					Х		Х		X	+		ON	
M1-150					Ė	Х			X	+		ON	
	CHOWN ABOVE V	MILL DE LICED EU	R PROGRAMMING PURPOSES.							- 1			_
NTS SHOWN IN	ITALIC TEXT REF	ER TO EXISTING	DEVICES.										

CENTER

STUDENT LIFE (SAULS HALL

DRAWN BY:	C. BETHELL
CHECKED BY:	J. SIMMONS
ISSUE DATE:	7/26/18
JOB #:	250:439710
PROJECT #:	250:18-607360101
JOHNSON (CONTROLS © 2018
C)/CTEL 4	•

FIRE ALARM SYSTEM

CALCULATIONS AND SCHEDULES

FA-601

ENGINEERING SERVICES PROVIDED BY HOLLEMAN CORPORATION 6772 KELSEY COURT, GIBSONVILLE, NC 27249 (336) 337-6334 firm license # C-1381 email: hollemancorp@earthlink.net

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holleman corp project # hc18150

PROJECT: CAMPBELL SAULS HALL STUDENT LIFE CENTER

PROJECT NUMBER: 18:607360101/250:439710

LOCATION: BUIES CREEK, NC

FIRE ALARM SYSTEM

DATE: 07-26-18

Submitted By:



540 Civic Boulevard, Suite 105 Raleigh, NC 27610

> 919-279-6400 FAX 919-279-6439

Sales Rep: Gordon Gibb Prepared by: Joe Simmons



50 Technology Drive Westminster, Ma 01441-0001 (978) 731-2500 FAX: (978) 731-7856

TO: Southeastern Interiors PO Box 4200 BUIES CREEK, NC 27506-0000

Project: CU Saul Hall Upfit Customer Reference:

Johnson Controls Reference: L37352-000304

Date: 07/26/2018 Page 1 of 1

QUANTITY	MODEL NUMBER	DESCRIPTION
	System	
	Equipment	
8	4098-9714	PHOTO SENSOR
8	4098-9792	SENSOR BASE
3	4906-9230	MC TRUEALERT A/V CEILNG MT WHT

5 Simplex

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

True Alarm Analog Sensing

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

Features

TrueAlarm analog sensing provides:

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

For use with the following Simplex[®] products:

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

Fire alarm control panel provides:

- Peak value logging allowing accurate analysis of each sensor for individual sensitivity selection
- Sensitivity monitoring satisfying 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 per foot
- Ability to display and print detailed sensor information in plain English language

Photoelectric smoke sensors provide:

 Seven levels of sensitivity from 0.2% to 3.7% (refer to additional information on page 3)

Heat sensors provide:

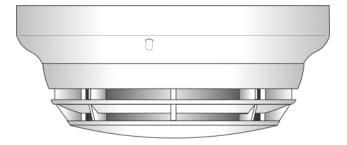
- Fixed temperature sensing
- Rate-of-rise temperature sensing
- Utility temperature sensing
- Listed to UL 521 and ULC-S530

General features:

- Operation is for ceiling or wall mounting
- Listed to UL 268 and ULC-S529
- 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 test feature is provided
- Different bases are available to support a supervised or unsupervised output relay, and/or a remote LED alarm indicator

Additional base reference:

- For isolator bases, refer to data sheet \$4098-0025
- 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)
- 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. 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.



4098-9714 TrueAlarm Photoelectric Sensor Mounted in Base

Description

Digital Communication of Analog Sensing.

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

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

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

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

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

True Alarm 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

Sensor Bases

4098-9792, Standard Sensor Base 4098-9789, Sensor Base with wired connections for:

 2098-9808 Remote LED alarm indicator or 4098-9822 relay (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 panel
- 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 @ 28 VDC; non-power limited rating of 3 A @ 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 @ 30 VDC, resistive; non-power limited rating of 0.5 A @ 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 @ 28 VDC; non-power limited rating of 1/2 A @ 120 VAC, (requires external 24 VDC coil power)

4098-9832, Adapter plate:

 Required for surface or semi-flush mounting to 4" square electrical box and for surface mounting to 4" octagonal box

 Can be used for cosmetic retrofitting to existing 6-3/8" diameter base product

2098-9808, Remote red LED Alarm Indicator:

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



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 panel every four seconds.

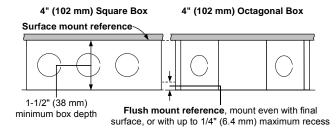
Since TrueAlarm sensors use the same base, different sensor types can be easily interchanged to meet specific location requirements. This feature also allows intentional sensor substitution during building construction. When conditions are temporarily dusty, instead of covering the smoke sensors (causing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

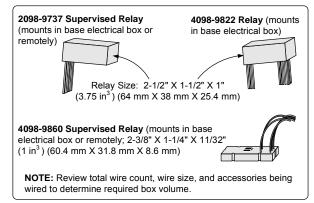
Mounting Reference

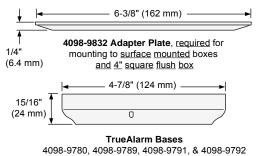
Electrical Box Requirements: (boxes are by others)

Without relay 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







True Alarm 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 & ULC Spacing	FM Spacing, Either Fixed Temperature Setting	
135° F (57.2° 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	

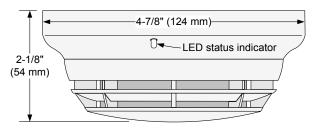
Smoke Sensors:

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

4098-9714 Photoelectric Sensor

TrueAlarm photoelectric sensors use a stable, pulsed infrared LED light source and a silicon photodiode receiver to provide consistent and accurate low power smoke sensing. Seven levels of sensitivity are available for each individual sensor, ranging from 0.2% to 3.7% per foot of smoke obscuration. Sensitivities of 0.2%, 0.5%, and 1% are for special applications in clean areas. Standard sensitivities are 1.5%, 2.0%, 2.5%, 3.0%, and 3.7%. Application type and sensitivity are selected and then monitored at the fire alarm control panel.*

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.



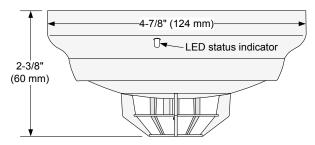
4098-9714 Photoelectric Sensor with Base

4098-9733 Heat Sensor

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

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

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



4098-9733 Heat Sensor with Base

<u>WARNING</u>: 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, smoke sensor spacing of 30 ft (9.1 m) may be used as a guide.*

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

TrueAlarm Analog Sensing Product Selection Chart

TrueAlarm Sensor Bases (for use with Sensors 4098-9714 and 4098-9733)

Heat Sensor

4098-9792	White			Mounting Requirements	
4098-9776	Black	Standard Sensor Base	No options	4" octagonal or 4" square box, 1-1/2" min. depth; or single gang box, 2" min. depth	
4098-9789	White	Sensor Base with connections			
4098-9789 IND	White	for Remote LED Alarm Indicator	2098-9808 Remote Alarm Indicator or 4098-9822 Unsupervised Relay	4" octagonal or 4" square box Note: Box depth requirements depend on total wire count and	
4098-9775	Black	or Unsupervised Relay	,		
4098-9791**	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	wire size, refer to accessories list below for reference. ** NOTE: 4098-9791 and 4098- 9780 are NOT compatible	
4098-9780**	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	with the 2120 CDT	
TrueAlarm Sens	sors				
Model*	Model*	Description	Compatibility	Mounting Requirements	
4098-9714 IND	White	Photoelectric Smoke Sensor	Bases 4098-9775, 4098-9776, 4098-		
4098-9774	Black		9792, 4098-9789, 4098-9791, and	Refer to base requirements	

TrueAlarm Sensor/Base Accessories							
Model	Description	Compatibility	Mounting Requirements				
2098-9737	Supervised Relay, mounts remote or in base electrical box	For use with 4098- <u>9791</u> base	Remote Mounting requires 4" octagonal or 4" square box, 1-1/2" minimum depth				
4098-9860	Supervised Relay, mounts remote or in base electrical box	For use with 4098- <u>9780</u> base	Base Mounting requires 4" octagonal box, 2-1/8" deep with 1-1/2" extension ring				
2098-9808	Remote Red LED Alarm Indicator on single gang stainless steel plate	Bases 4098-9789, 4098-9791, and 4098-9780	Single gang box, 1-1/2" 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" octagonal box, 2-1/8" deep with 1-1/2" extension ring				

4098-9780

Bases 4098-9792, 4098-9789,

4098-9791, and 4098-9780

Adapter Plate

White

Black

Specifications

4098-9832

4098-9733

4098-9778

General Operating Specificat	tions			
Communications and Sensor Supervisory Power		IDNet or MAPNET II communications, auto-selected, 1 address per base		
Communications Connection	ns	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	r and Relay Connections	Color coded wire leads, 18 AWG (0.82 mm ²)		
UL Listed Operating Temper	ature Range	32° to 100° F (0° to 38° C)		
Operating Temperature	with 4098-9733 Heat Sensor	32° to 122° F (0° to 50° C)		
Range	with 4098-9714 Smoke Sensor	15° to 122° F (-9° to 50° C)		
Storage Temperature Range	2	0° F to 140° F (-18° C to 60° C)		
Humidity Range		10 to 95% RH		
4098-9714 Smoke Sensor A	ir Velocity Rating	0-4000 ft/min (0-1220 m/min)		
Housing Color		Frost White or Black		
4098-9791 Base With Superv	ised Remote Relay 2098-9737 (see	page 2 for contact ratings)		
Externally Supplied Relay Coil Voltage		18-32 VDC (nominal 24 VDC)		
Supervisory Current		270 μA, from 24 VDC supply		
Alarm Current with 2098-973	37 Relay	28 mA, from 24 VDC supply		
4098-9780 Base With Superv	ised Remote Relay 4098-9860 (see	page 2 for contact ratings)		
Power		Supplied from communications		
4098-9822 Unsupervised Rel	ay, Requirements for Bases 4098-9	9789. 4098-9791, and 4098-9780 (see page 2 for contact ratings)		
Externally Supplied Relay Co	oil Voltage	18-32 VDC (nominal 24 VDC)		
Supervisory Current		Supplied from communications		
Alarm Current		13 mA from separate 24 VDC supply		

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Required for surface or semi-flush mounted

4" square box and for surface mounted

4" octagonal box

^{*} Note: Model numbers ending in IND are assembled in India.

Simplex

True Alert Addressable Notification Appliances

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



Multi-Candela Audible/Visible (A/V) Appliances; Ceiling Mount

Features

Individually addressed and controlled multi-candela 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, or 110 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 strobe allowing "T-tapped" connections for Class B circuits to simplify wiring (Class A circuits require in/out wiring)
- *TrueAlert Device Reports* at the control panel detailing appliance point ID, custom label, type, and candela setting (see sample on page 2)
- *Magnet test diagnostics* to assist checkout and testing of appliances and wiring
- Compatibility with ADA requirements
- Compatibility with legacy TrueAlert addressable systems for upgrade and replacement (see page 4)
- Strobe operation listed to UL Standard 1971 and ULC Standard S526
- Horn operation listed to UL Standard 464 and ULC Standard S525

LED indicator and magnet test feature:

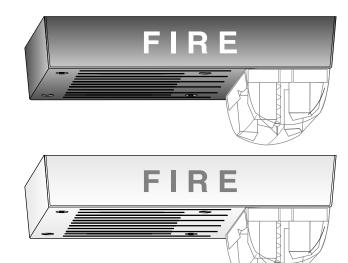
- Appliance LED can be selected to display each polling cycle to indicate appliance supervision
- In diagnostic mode, the magnet test pulses the LED to indicate appliance address *AND pulses to indicate the intensity selection*; a brief output of the strobe and the horn is also selectable to confirm operation

Mechanical design features:

- Rugged, high impact, flame retardant thermoplastic housings are available in red or white
- Rear of housing does not extend into box and easily mounts to standard electrical boxes
- Mounting options include red wire guards and adapters for surface mount electrical boxes

Audible notification appliance (horn):

- Low current electronic horn with harmonically rich output sound for either coded or steady operation
- Horns sound as Temporal or March Time pattern (60 or 120 BPM), or on continuously, controlled separately from visible appliances on the same two-wire circuit
- Output is "high" or "low" (~5 dBA difference); IDNAC SLC control selects output per device



Ceiling Mount Addressable A/Vs

Description

Multi-Candela TrueAlert addressable AVs provide convenient installation to standard electrical boxes. Operation is individually addressed and individually controlled with power, supervision, and control supplied from a Simplex fire alarm control panel providing IDNAC Signaling Line Circuits (SLCs). (See compatibility list on page 3.)

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).

IDNAC SLC Operation Advantage

TrueAlert A/V Addressable Appliances on IDNAC SLCs provide audible and visible 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.

^{*} See page 2 for wire guard listings. This product has been approved by the California State Fire Marshal (CSFM) pursuant to Section 13144.1 of the California Health and Safety Code. See CSFM Listing 7125-0026;239 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 Safety Products Westminster.

IDNAC SLC Operation Advantage (Cont'd)

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

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.

system testing will operate during worst case alarm

TrueAlert Addressable Wiring Isolator

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

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

Operational Appliance Testing. 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 (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.

Product Selection

conditions.

Multi-Candela Ceiling Mount Addressable A/Vs

Model	Housing Color	"FIRE" Lettering	Description	Dimensions
4906-9228	Red	White	Addressable Horn with Multi-Candela Strobe;	4 ¾ L" x 6 ¾" W x 2 ¾" D
4906-9230	White	Red	intensity selectable as: 15, 30, 75, or 110 candela	(121 mm x 175 mm x 67 mm)

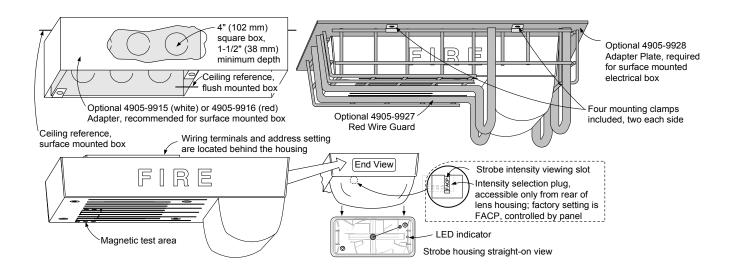
Wire Guards and Ceiling Mount A/V Adapter

Model		Description	Dimensions
4905-9927*	Red Wi	re Guard for mounting to flush mounted electrical box	8 ½" x 6 ½" x 3" (216 mm x 156 mm x 76 mm)
4905-9928*	Red Ad	apter Plate, required for surface mount guard	9" x 7" (229 mm x 178 mm)
4905-9915	White	Surface Mount Adapter Box Extension, use to cover 1-1/2"	4 ¾" x 6 ½" x 1 ½" deep,
4905-9916	Red	deep surface mounted boxes	(121 mm x 175 mm x 38 mm)

^{*} UL listed by Space Age Electronics Inc.

TrueAlert Device Reports Reference

Service Por		Page 1			
REPORT 5 :	REPORT 5 : TrueAlert Device Report				27-Jan-15
		DEVICE			
POINT ID	CUSTOM LABEL	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	30		



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			23 VDC
4009 IDNAC Repeater	S4009-0004	IDNAC SLC	29 VDC	
4007ES with IDNAC Notification	S4007-0002	IDINAC SEC	(regulated)	(with 6 VDC drop)
4010ES with ESS Enhanced System Supply	S4010-0011			

Specifications

General Specificatio	ns (see page 2 for dimens	ions)								
Environmental		32° to 122° F (0° to 50° C); 10% to 93%, non-condensing at 100° F (38° 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								
Reference		Installation Instructions 579-808								
Electrical Specificati	ions									
Typical Operating Voltage Range		23 VDC to 31 VDC, Special Application (see page 4 for 17 VDC rating)								
Supervisory Requirements		1 unit load (= 0.8 mA control panel current)								
Flash Rate and Synchronized SLC Loading		1 Hz; with up to 46 synchronized strobes maximum per NAC								
	Candela Setting	15 cd		30 cd		75 cd		110 cd		
	Horn Output Selection	High	Low	High	Low	High	Low	High	Low	
23 VDC RMS Current Ratings, for connection to IDNAC Addressable SLCs, horn steady on		75 mA	70 m A	110 mA	105 mA	198 mA	193 mA	250 mA	245 mA	
Horn Output Characteristics		2400 to 3700 Hz sweep, modulated at 120 Hz rate								
Horn Output Ratings - @ 10 ft (3 m)	Sound Type (see Note)	Steady			Coded					
	Setting	High		Low		High		Low		
	Reverberant Chamber, UL 464 Test	84.6 dBA		79.1 dBA		80.6 dBA		75.5 dBA		
	Anechoic Chamber	90 dBA		84 dBA		86 dBA		80 dBA		

Note: Coded horn values are typical of the output measured with a Temporal or March Time pattern and with a sound level meter reading on a "fast" setting. Under the same test conditions, coded horn output "peak" sound level readings are typically 4 dBA higher.

3

TrueAlert Strobe 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	Tours Alleret	45 00 75 and	17 VDC	
4009 TPS, Remote TrueAlert Power Supply	S4100-0037	TrueAlert Addressable SLC	15, 30, 75, and 110 cd		
TrueAlert Addressable Controller (4009T)	S4009-0003	Addicasable of	110 ca		

Electrical Ratings Difference for Retrofit Applications

	Voltage Range	e 17 VDC to 31 VDC, Special Application							
	Candela Setting	15 cd		30 cd		75 cd		110 cd	
	Horn Output Selection	High	Low	High	Low	High	Low	High	Low
17 VDC RMS Current Ratings, use when connected to TrueAlert Addressable SLCs per above		82 mA	77 mA	135 A	130 mA	249 mA	244 mA	335 mA	330 mA

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