FIRE ALARM
REVISED DOCUMENT SET

SHEET INDEX

SHEET	REV.	DESCRIPTION
FA001		GENERAL SHEET, LEGEND & NOTES
FA101		DEVICE LOCATION VIEWS - FIRST LEVEL, ABOVE CEILING
FA501		SCHEDULES, POWER CALCULATIONS, RISER DIAGRAMS
FA601		PRODUCT TYPICALS
FA901		PRODUCT SHEETS

SHEET NAMING CONVENTION

SHEET	DESCRIPTION
FA0XX	GENERAL SHEET, LEGEND & NOTES
FA1XX	DEVICE LOCATION VIEWS - FIRST FLOOR
FA5XX	SCHEDULES & RISER DIAGRAMS, POWER CALCULATIONS
FA6XX	PRODUCT TYPICALS
FA9XX	PRODUCT DATA SHEETS

IDENTIFIERS

TYPE	DESCRIPTION
X	DEVICE IDENTIFIER - EXISTING, ADD, REPLACE, MOVE, DEMO
X.XX.XXX / XX	POINT OF PROTECTION IDENTIFIER / TYPE REFERENCE
XX	REVISION IDENTIFIER
(XX)	CABLE ID - SEE CABLE LEGEND
XX / XXXX	SHEET ID - SHEET DETAIL "A", "B", "C" / SHEET #XXXX

CABLE LEGEND

ID	AWG	COND	SHEILD	CLASS	ID	AWG	SHEILD	CLASS
A	16	2	N	FPLR	AA			
B	16	4	N	FPLR	BB			
C	16	2	N	FPLP	CC			
D	16	4	N	FPLP	DD			
E	14	2	N	FPLR	EE			
F	14	4	N	FPLR	FF			
G	14	2	N	FPLP	GG			
H	14	4	N	FPLP	HH			
I	12	2	N	FPLR	II			
J	12	4	N	FPLR	JJ			
K	12	2	N	FPLP	KK			
L	12	4	N	FPLP	LL			
M	16	2	N	TFFN	MM			
N	16	4	N	TFFN	NN			
O	16	2	N	THWN	OO			
P	16	4	N	THWN	PP			
Q					QQ			
U					UU			
R					RR			
S					SS			
T					TT			
U					UU			
V					VV			
X					XX			
Y					YY			
Z					ZZ			

SHEET INDEX

SHEET INDEX

THE SCOPE OF THIS PROJECT IS TO INSTALL A NEW FIRE ALARM CONTROL PANEL, NOTIFICATION, AND INITIATING DEVICES FOR THE PURPOSE OF NEW CONSTRUCTION.

SYSTEM CODES

INTERNATIONAL BUILDING CODE (IBC 2018 EDITION)
INTERNATIONAL FIRE CODE (IFC 2018 EDITION)
NATIONAL FIRE PROTECTION ASSOCATION (NFPA 70 2016 EDITION)
NATIONAL FIRE PROTECTION ASSOCIATION (NFPA 72 2016 EDITION)
NATIONAL FIRE PROTECTION (NFPA 101 2011 EDITION)
ADA INTERNATIONAL CODE ANSIE 117.1
UNDERWRITERS LABORATORIES, INCORPORATED
PUYALLUP MUNICIPAL CODES

USE & OCCUPANCY CLASSIFICATION

☐ ASSEMBLY (A)	☐ A-1	☐ A-2	☐ A-3	☐ A-4	☐ A-5
■ BUSINESS (B)					
☐ EDUCATIONAL (E)					
☐ FACTORY & INDUSTRIAL (F)	☐ F-1	☐ F-2			
☐ HIGH HAZZARD (H)	☐ H-1	☐ H-2	☐ H-3	☐ H-4	☐ H-5
☐ INSTITUTIONAL (I)	☐ I-1	☐ I-2	☐ I-3	☐ I-4	
☐ MERCANTILE (M)					
☐ RESIDENTIAL (R)	☐ R-1	☐ R-2	☐ R-3	☐ R-4	
☐ STORAGE (S)	☐ S-1	☐ S-2	☐ S-3	☐ S-4	
☐ UTILITY & MISCELLANEOUS (U)					

BUILDING CONSTRUCTION TYPES

☐ TYPE I	☐ TYPE I-A	☐ TYPE I-B
☐ TYPE II	☐ TYPE II-A	☐ TYPE II-B
☐ TYPE III	☐ TYPE III-A	☐ TYPE III-B
☐ TYPE IV		
☐ TYPE V	☐ TYPE V-A	☐ TYPE V-B

AUTOMATIC SPRINKLER PROTECTION

☐ NO ☐ PARTIAL ■ FULL

GENERAL NOTES

1. INSTALLATION SHALL BE ACCOMPLISHED IN STRICT COMPLIANCE WITH NFPA, LOCAL, AND STATE AHJ'S, NEC, AND CONTRACT DRAWINGS.
2. AS-BUILT DRAWINGS ARE REQUIRED AT THE TIME OF AHJ ACCEPTANCE. SMITH FIRE SYSTEMS REQUIRES ELECTRICAL RED LINES WITH IN TWO WEEKS PRIOR TO PRIOR TO AHJ TEST'S.
3. AGREEMENT AND CONFIRMATION OF ALL MILESTONE EVENTS WILL BE MADE WITH SMITH FIRE SYSTEMS PROJECT MANAGER. ALL SMITH FIRE SYSTEMS FIELD SERVICES MUST BE SCHEDULED WITH SMITH FIRE SYSTEMS PROJECT MANAGER WITH A MINIMUM OF TEN BUSINESS DAY'S ADVANCE NOTICE.
4. A SET OF INSTALLATION AS-BUILT DRAWINGS SHOWING ACTUAL CONDUIT AND CONDUCTOR ROUTES SHALL BE KEPT BY PROJECT FOREMAN FOR USE BY SMITH FIRE SYSTEMS ALARM TECHNICIAN.
5. FIRE ALARM CONTROL PANEL SHALL NOT BE ENERGIZED WITHOUT THE PRESENCE OF A SMITH FIRE SYSTEMS ALARM TECHNICIAN.
6. THE FIRE ALARM SYSTEM SHALL BE MONITORED BY A UNDERWRITERS LISTED MONITORING STATION BEFORE AHJ'S TEST.
7. WIRE ROUTING IS DIAGRAMMATIC IN NATURE ONLY AND NOT INTENDED FOR ACTUAL CONDUIT ROUTING.
8. ALL CONDUIT SIZING AND ROUTING BY ELECTRICAL CONTRACTOR PER NEC AND AHJ.
9. NO LINE VOLTAGE IN SAME CONDUIT AS POWER LIMITED FIRE ALARM CABLE.
10. VERIFY ALL LOCATIONS OF DEVICES WITH ELECTRICAL AND ARCHITECTURAL PLANS. SCALE AND PLACE ALL DEVICES PER ELECTRICAL AND ARCHITECTURAL PLANS.
11. FIELD VERIFY WATERFLOW SWITCHES, TAMPER SWITCHES, PRESSURE SWITCHES, SMOKE DAMPERS, AND DUCT DETECTOR LOCATIONS.
12. FIELD VERIFY ALL WIRING LOCATIONS AND REQUIREMENTS FOR HVAC AND FAN CONTROL.
13. SMOKE DETECTORS SHALL NOT BE LOCATED WITH IN 36" OF ANY AIR DIFFUSER.
14. WALL MOUNTED AUDIBLE/VISUAL APPLIANCES SHALL BE MOUNTED IN SUCH THAT THE ENTIRE LENS IS NOT LESS THAN 80" AND NOT GREATER THE 96" ABOVE FINISHED FLOOR.
15. THE OPERABLE PART OF EACH MANUAL FIRE ALARM BOX SHALL BE NOT LESS THAN 3'-6" AND NOT MORE THAN 4'-6" ABOVE THE FINISHED FLOOR.
16. NO DETECTOR SHALL BE INSTALLED UNTIL AFTER FINAL CONSTRUCTION CLEAN-UP. DETECTORS THAT HAVE BEEN INSTALLED PRIOR TO CLEAN-UP MUST BE CLEANED OR REPLACED AND WILL BE INVOICED ON A TIME AND MATERIAL BASES.
17. A DEDICATED BRANCH CIRCUIT OF ONE OF THE FOLLOWING SHALL SUPPLY PRIMARY POWER.
A) COMMERCIAL LIGHT AND POWER
B) AN ENGINE-DRIVEN GENERATOR OR EQUIVALENT WHERE A PERSON SPECIFICALLY TRAINED IN ITS OPERATIONS IS ON DUTY AT ALL TIMES.
C) AN ENGINE-DRIVEN GENERATOR OR EQUIVALENT ARRANGED FOR COGENERATION WITH COMMERCIAL LIGHT AND POWER WHERE A PERSON SPECIFICALLY TRAINED IN ITS OPERATION IS ON DUTY AT ALL TIMES.
18. ALL CIRCUITS WILL BE PROPERLY TAGGED AND TESTED FOR OPENS, SHORTS, GROUNDS, AND PROPER "END-TO-LINE" RESISTANCE. EACH CIRCUITS METER READING MUST BE DOCUMENTED AND PRESENTED TO SMITH FIRE SYSTEMS ALARM TECHNICIAN UPON ARRIVAL ONSITE FOR STARTUP AND CHECKOUT.
19. NO TAPPING OF SIGNALING OR INITIATING ZONE CIRCUITS ARE ALLOWED. T-TAPPING OF STYLE 4 ADDRESSABLE CIRCUITS IS ALLOWED PROVIDING A SPLICE IS PROFESSIONALLY INSTALLED, POLARITY IS OBSERVED, AND SHIELDS ARE CONTINUOUS AND FREE OF GROUNDS. SHIELDS MUST BE TERMINATED AT THE FIRE ALARM CONTROL PANEL ONLY. CABLE SHIELDS SHALL BE SPLICED TOGETHER AT EVERY JUNCTION BETWEEN THE FIRE ALARM CONTROL PANEL AND THE LAST DEVICE ON EACH CABLE RUN. SHIELDS AND OTHER FIRE ALARM CONDUCTORS (EXCEPT POWER GROUNDS) SHALL BE INSULATED AND COMPLETELY FREE FROM CONDUIT OR EARTH GROUNDS. SHIELDS WILL BE TIED TO GROUND ONLY AT THE FIR ALARM CONTROL PANEL.

DRAWING ACCEPTANCE

THIS DRAWING IS TO BE USED FOR THE PURPOSE OF PLACING AND LOCATING SMITH FIRE SYSTEMS FIRE ALARM DEVICES AND IS NOT BE USED FOR ANY OTHER PURPOSES.

RECORD DRAWINGS

ALL WORK PERFORMED IN THE FIELD SHALL BE ACCURATELY RECORDED ON THESE DRAWINGS AND RETURNED TO SMITH FIRE SYSTEMS CORPORATE OFFICE.

MONITORING COMPANY

TO BE DETERMINED

INSTALLATION COMPANY

SMITH FIRE SYSTEMS
1106 54TH AVE E, TACOMA, WA 98424

FIRE ALARM - PANELS

QTY	SYMBOL	DEVICE DESCRIPTION
1	FACP	FIRE ALARM CONTROL PANEL
	FM200	FM-200 CLEAN AGENT PANEL
	PAP	PRE-ACTION CONTROL PANEL
	EVAC	VOICE EVACUATION CONTROL PANEL
	FSE	FIRE SIGNAL EXPANDER
	ANN	REMOTE ANNUNCIATOR
	STU	SUBSCRIBER TERMINAL UNIT
1	RADIO	AES RADIO

FIRE ALARM - NOTIFICATION DEVICES

QTY	SYMBOL	DEVICE DESCRIPTION
3		WALL STROBE
		WALL STROBE WEATHERPROOF
12		CEILING STROBE
	WP	CEILING STROBE WEATHERPROOF
		WALL HORN-STROBE
1		WALL HORN-STROBE WEATHERPROOF
5	H	CEILING HORN-STROBE
	H WP	CEILING HORN-STROBE WEATHERPROOF
		WALL HORN
	H	CEILING HORN
		WALL MINI-SPEAKER
	S	WALL SPEAKER
	S	CEILING SPEAKER
		WALL SPEAKER/STROBE
	SS	CEILING SPEAKER/STROBE
	C	WALL CHIME
	C	CEILING CHIME
	B	WALL BUZZER
	B	CEILING BUZZER
		BELL

FIRE ALARM - DETECTORS

QTY	SYMBOL	DEVICE DESCRIPTION
30	P	SMOKE DETECTOR
17	AS	SMOKE DETECTOR ABOVE CEILING
	BL	SMOKE DETECTOR BELOW CEILING
		DUCT SMOKE DETECTOR
	RTS	DUCT SMOKE DETECTOR REMOTE TEST SWITCH
	BT	SMOKE BEAM TRANSMITTER
	BR	SMOKE BEAM RECEIVER
	135°	135° FIXED TEMP HEAT DETECTOR
	R	135° RATE OF RISE HEAT DETECTOR
	194°	194° FIXED TEMP HEAT DETECTOR
	194° R	194° RATE OF RISE HEAT DETECTOR
	190°	190° FIXED TEMP HEAT DETECTOR
	194° LT	194° LINE TYPE HEAT DETECTOR

FIRE ALARM - MODULE / RELAY

QTY	SYMBOL	DEVICE DESCRIPTION
1	M	MANUAL PULL STATION
	MM	MINI MONITOR MODULE
	M	MONITOR MODULE
	M2	TWO POINT POINT MONITOR MODULE
1	M4	FOUR POINT POINT MONITOR MODULE
	R	RELAY MODULE
	CP	CONTROL RELAY MODULE
	IN	INPUT MODULE
	IO	FOUR POINT INPUT/OUTPUT RELAY MODULE
	IM	ISOLATION MODULE
	NM	NOTIFICATION MODULE
	SM	SYNC MODULE
	DH	DOOR HOLDER

FIRE ALARM - SPRINKLER

QTY	SYMBOL	DEVICE DESCRIPTION
		SPRINKLER RISER
		WATER GONG BELL
E	FS	WATERFLOW SWITCH
	PS	PRESSURE SWITCH
E	TS	TAMPER SWITCH

FIRE ALARM - FIREMAN'S PHONE

QTY	SYMBOL	DEVICE DESCRIPTION
	ESR	ELEVATOR STATUS RECALL
	FFP	FIRE FIGHTERS PHONE
	FFJ	FIRE FIGHTERS PHONE JACK
	FFH	FIRE FIGHTERS HANDSET

FIRE ALARM - MISCELLANEOUS

QTY	SYMBOL	DEVICE DESCRIPTION
	KH	KITCHEN HOOD
		JUNCTION BOX
3		BATTERY

ACCESS / SECURITY / CAMERA - DEVICES

QTY	SYMBOL	DEVICE DESCRIPTION
	NC	NURSE CALL
	CCTV	CCTV CAMERA
	CCTV WP	CCTV CAMERA WEATHERPROOF
	B	DOOR BELL
	B	DOOR BUZZER
	B	DOOR CHIME
	SR	SECURITY ELECTRONIC DOOR OPENER
	ES	SECURITY ELECTRONIC DOOR STRIKE
	IC	INTERCOM UNIT
	MI	MASTER INTERCOM & DIRECTORY
	MD	MOTION DETECTOR
	ML	SECURITY DOOR ALARM MAG LOCK
	CR	SECURITY CARD READER
	CR WP	SECURITY CARD READER WEATHERPROOF
	SCU	SECURITY CONTROL UNIT
	SCP	SECURITY DOOR PANEL
	SC	SECURITY DOOR CONTACTS
	●	SECURITY EXIT PUSH BUTTON
	K	SECURITY KEY PAD

City of Puyallup
Development & Permitting Services
ISSUED PERMIT
Building | Planning
Engineering | Public Works
Fire | Traffic

Approval of submitted plans is not an approval of omissions or oversight by this office or noncompliance with any applicable regulations of local government. The contractor is responsible for making sure that the building complies with all applicable building codes and regulations of the local government.

THE APPROVED CONSTRUCTION PLANS AND ALL ENGINEERING MUST BE POSTED ON THE JOB AT ALL INSPECTIONS IN A VISIBLE AND READILY ACCESSIBLE LOCATION.

City of Puyallup Fire
REVIEWED FOR COMPLIANCE
DDrake
03/14/2022
7:55:25 AM

SMITH FIRE SYSTEMS INC.
1106 54TH AVE E
TACOMA, WA 98424
(253) 926-1880
SMITHFS961RS

FORD LINCOLN VITRINE

150 RIVER RD
PUYALLUP, WA 98371
PARCEL# 0420281162

ISSUE LOG:	DESCRIPTION	INT
DATE		
11/16/21	REPLACED HEATS WITH SMOKES IN DATA AND RESTROOMS	JM
2/22/22	ADDED SMOKES ABOVE CEILING	JM

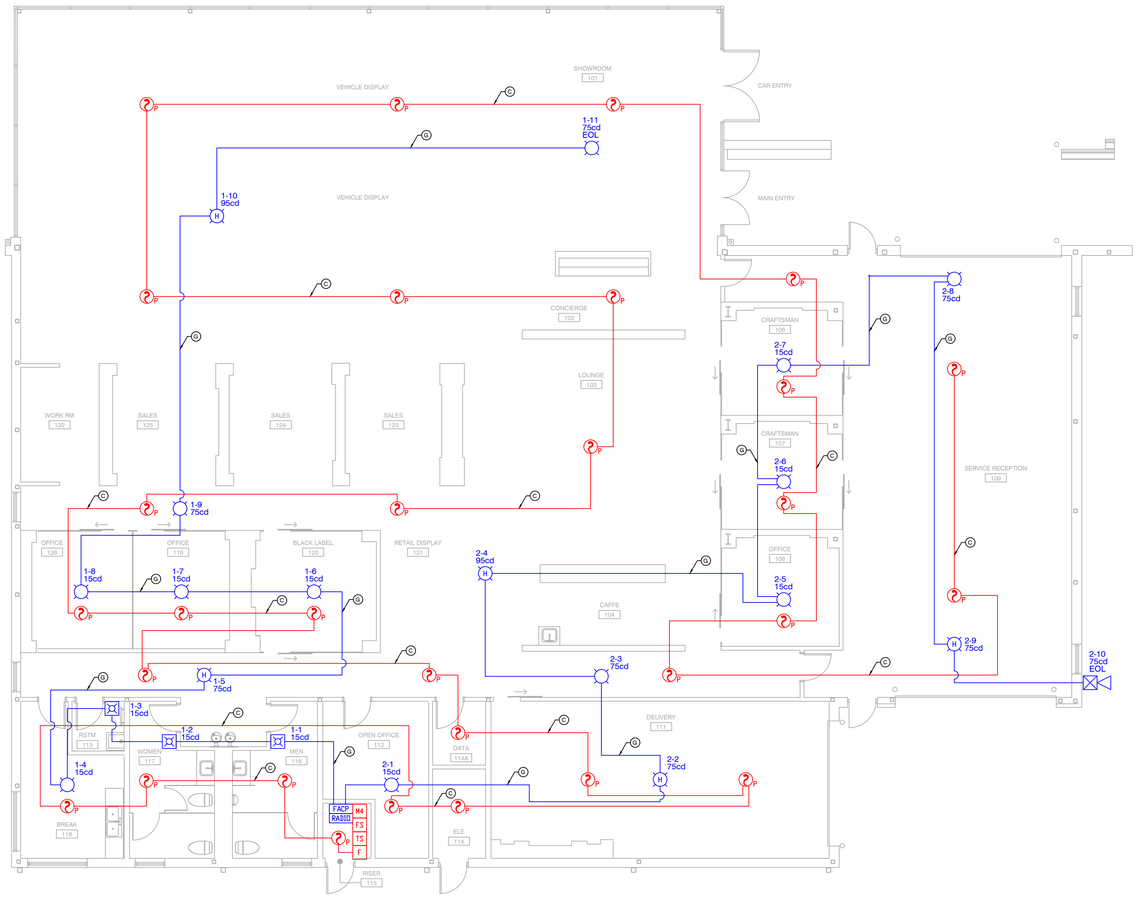
REVISED SET

DESIGNER:	JEF MARQUEZ
ISSUE DATE:	11/15/21
PROJECT #:	FA21120

SYSTEM:
FIRE ALARM

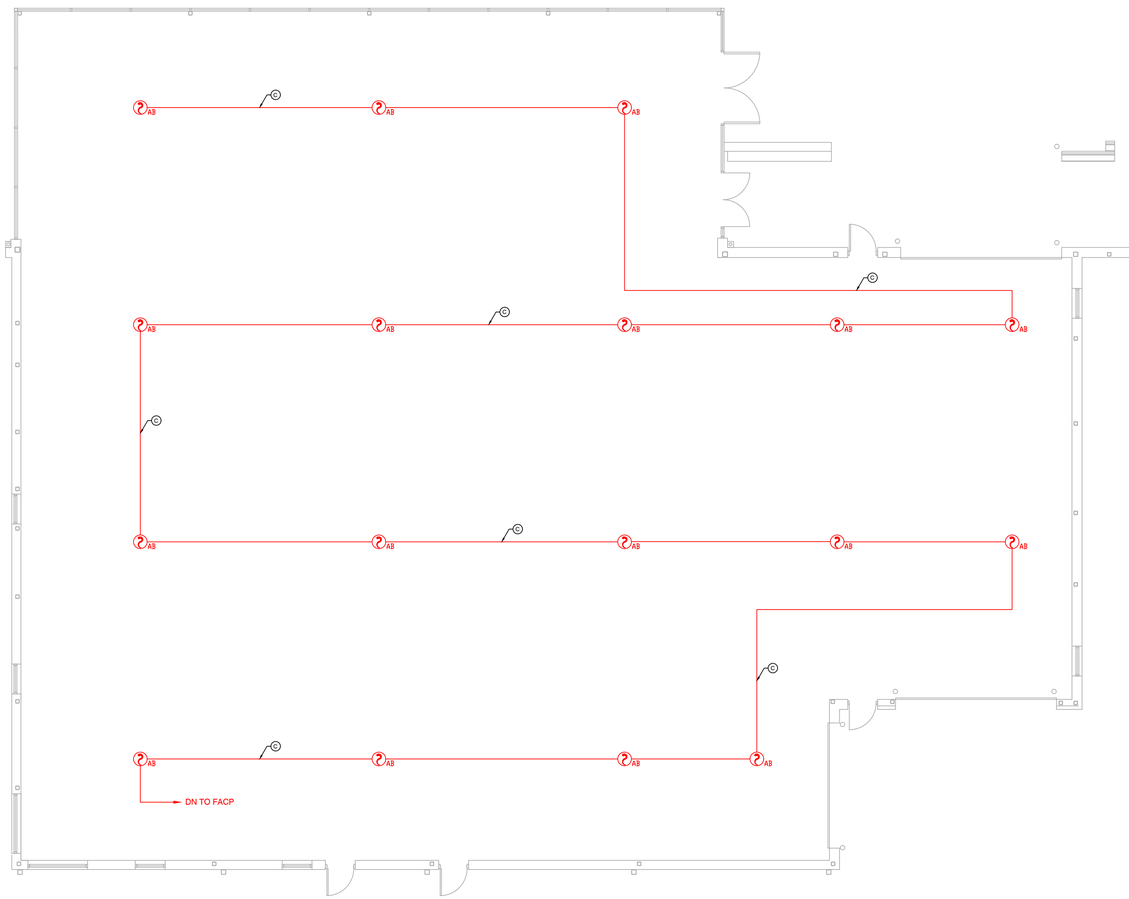
SHEET:
GENERAL SHEET
LEGEND & NOTES

FA001



A DEVICE LOCATIONS - 1ST LEVEL

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



B DEVICE LOCATIONS - ABOVE CEILING

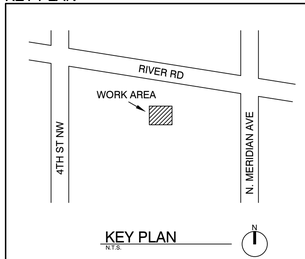
SCALE: 1/8" = 1'-0"

JEF MARQUEZ
NICET LEVEL IV
FIRE ALARM SYSTEMS
CERT #119820
EXP 7/1/22

City of Puyallup
Development & Permitting Services
ISSUED PERMIT

Building	Planning
Engineering	Public Works
Fire	Traffic

KEY PLAN



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(253) 926-1880
SMITHFS861RS

FORD LINCOLN VITRINE

150 RIVER RD
PUYALLUP, WA 98371
PARCEL# 0420281162

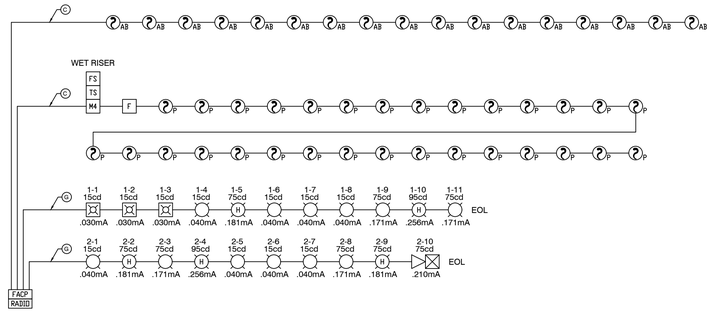
ISSUE LOG:

DATE	INT	DESCRIPTION
11/16/21	JM	REPLACED HEATS WITH SMOKES IN DATA AND RESTROOMS
2/22/22	JM	ADDED SMOKES ABOVE CEILING

REVISED SET

DESIGNER:	JEF MARQUEZ
ISSUE DATE:	11/15/21
PROJECT #:	FA21120
SYSTEM:	FIRE ALARM
SHEET:	DEVICE LOCATION VIEWS & RISER DIAGRAM

FA101



A SCHEDULES & RISER DIAGRAMS

	MANUAL PULL STATION	SMOKE DETECTOR	DUCT SMOKE DETECTOR	ELEVATOR MACHINE RM SMOKE	LOWER LEVEL ELEVATOR LOBBY SMOKE	UPPER LEVEL ELEVATOR LOBBY SMOKE	WET WATERFLOW	DRY WATERFLOW	HIGH/LOW AIR	TAMPER SWITCH	POST INDICATOR	SYSTEM TROUBLE
DISPLAY OF AN ALARM EVENT AT THE FACP	●	●					●					
DISPLAY OF A SUPERVISORY EVENT AT THE FACP									●	●		
DISPLAY OF A TROUBLE EVENT AT THE FACP												●
DISPLAY OF AN ALARM EVENT REMOTE ANNUNCIATOR												
DISPLAY OF A SUPERVISORY EVENT REMOTE ANNUNCIATOR												
DISPLAY OF A TROUBLE EVENT REMOTE ANNUNCIATOR												
TRANSMIT AN ALARM SIGNAL TO THE CENTRAL STATION	●	●					●					
TRANSMIT A SUPERVISORY SIGNAL TO THE CENTRAL STATION									●	●		
TRANSMIT A TROUBLE SIGNAL TO THE CENTRAL STATION												●
ACTIVATE ALL AUDIBLE & VISIBLE DEVICES	●	●					●					
INITIATE ELEVATOR RECALL TO UPPER LEVEL												
INITIATE ELEVATOR RECALL TO LOWER LEVEL												
ILLUMINATE FIREMANS HAT												

B SCHEDULES - SEQUENCE OP OPERATIONS MATRIX

FA21120 FORD LINCOLN VITRINE						
SIEMENS FC922 FACP						
Current Load:		Standby:		Alarm:		
Device Type	Quantity	Amps	Total	Amps	Total	
Main System Board	1	0.12000	0.1200	0.70000	0.7000	
NAC 1	1	0.00000	0.0000	1.02900	1.0290	
NAC 2	1	0.00000	0.0000	1.33000	1.3300	
NAC 3	1	0.00000	0.0000	0.00000	0.0000	
NAC 4	1	0.00000	0.0000	0.00000	0.0000	
FDCIO422	1	0.00100	0.0010	0.00100	0.0010	
OP921	47	0.00250	0.1175	0.00041	0.0193	
Total Panel Loads:			0.239	Amps	3.079	Amps
Standby Current Load:	0.239	Amps	For 24 Hours =	5.724	Amp-hours	
Alarm Current Load:	3.079	Amps	For 5 Minutes=	0.259	Amp-hours	
			20% Derating=	7.179	Amp-hours	
Total System Current Load:				7.179	Amp-hours	
Battery Pair to be Used:	12VDC		Amp-hours	10		

Voltage Drop Chart						
FA21120 FORD LINCOLN VITRINE						
Panel	Circuit	Area	Total Wire Length	Amps	Voltage Drop	EOL Voltage
FACP	1	NEW DEVICES	954	1.029	2.474	21.526
FACP	2	NEW DEVICES	854	1.330	2.862	21.138

C POWER CALCULATIONS

City of Puyallup
Development & Permitting Services
ISSUED PERMIT

Building	Planning
Engineering	Public Works
Fire	Traffic

SMITH FIRE SYSTEMS INC.
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FORD LINCOLN VITRINE

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ISSUE LOG:

DATE	INT	DESCRIPTION
11/16/21	JM	REPLACED HEATS WITH SMOKES IN DATA AND RESTROOMS
2/22/22	JM	ADDED SMOKES ABOVE CEILING

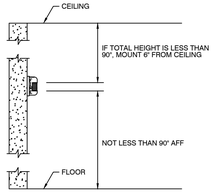
REVISED SET

DESIGNER:	JEF MARQUEZ
ISSUE DATE:	11/15/21
PROJECT #:	FA21120

SYSTEM:
FIRE ALARM

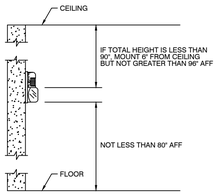
SHEET:
SCHEDULES & CALCULATIONS

FA501



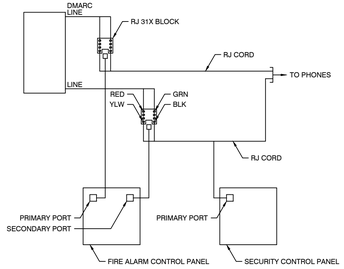
NFPA 72 2013, 18.4.8.1
WALL MOUNTED APPLIANCES SHALL HAVE THEIR TOPS ABOVE THE FINISHED FLOORS AT HEIGHTS OF NOT LESS THAN 90" AND BELOW THE FINISHED CEILINGS AT DISTANCES OF NOT LESS THAN 6".

A FIRE ALARM - HORN MOUNTING

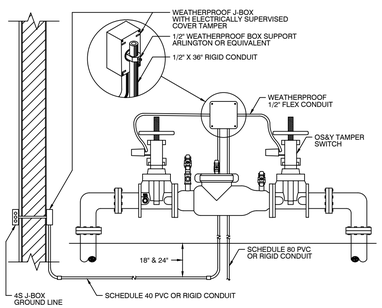


NFPA 72 2013, 18.5.5.1
WALL MOUNTED APPLIANCES SHALL BE MOUNTED SUCH THAT THE ENTIRE LENS IS NOT LESS THAN 80" AND NOT GREATER THAN 96" ABOVE THE FINISHED FLOOR.

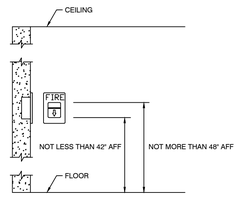
B FIRE ALARM - STROBE MOUNTING



E FIRE ALARM - PHONE CONNECTION

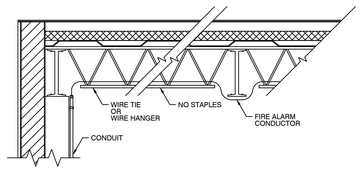


H FIRE ALARM - DCVA TAMPER SWITCHES

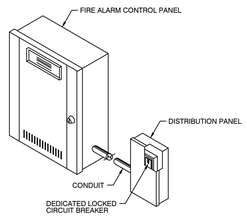


NFPA 72 2013, 17.14.5
THE OPERABLE PART OF A MANUALLY ACTUATED ALARM INITIATING DEVICE SHALL BE NOT LESS THE 42" AND NOT MORE THAN 48" FROM THE FINISHED FLOOR.

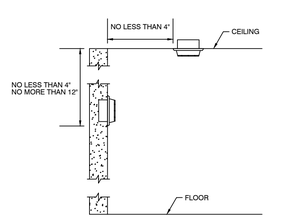
C FIRE ALARM - PULL STATION MOUNTING



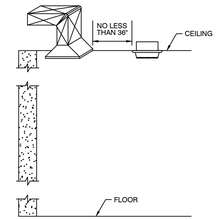
F FIRE ALARM - CEILING TO WALL TRANSITION AND OPEN WIRING



I FIRE ALARM - POWER DISCONNECT

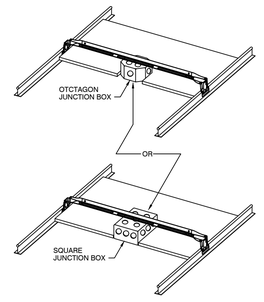


NFPA 72 2013, 17.6.3.1.3.1
DETECTORS SHALL BE LOCATED ON THE CEILING NOT LESS THAN 4" FROM THE SIDEWALL OR ON THE SIDEWALLS BETWEEN 4" AND 12" FROM THE CEILING.

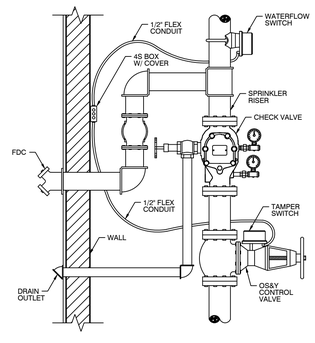


NFPA 72 2013, A.17.7.4.1
DETECTORS SHALL NOT BE LOCATED IN DIRECT AIRFLOW OR CLOSER THAN 36" FROM AN AIR SUPPLY DIFFUSER OR RETURN AIR OPENING.

D FIRE ALARM - SMOKE & HEAT MOUNTING



G FIRE ALARM - DROP CEILING & J BOX



J FIRE ALARM - OS&Y TAMPER GATE VALVE

City of Puyallup
Development & Permitting Services
ISSUED PERMIT
Building | Planning
Engineering | Public Works
Fire | Traffic

SMITH FIRE SYSTEMS INC.
1106 54TH AVE E
TACOMA, WA 98424
(253) 926-1880
SMITHFS861RS

FORD LINCOLN VITRINE

150 RIVER RD
PUYALLUP, WA 98371
PARCEL# 0420281162

ISSUE LOG:

DATE	INT	DESCRIPTION
11/16/21	JM	REPLACED HEATS WITH SMOKES IN DATA AND RESTROOMS
2/22/22	JM	ADDED SMOKES ABOVE CEILING

REVISED SET

DESIGNER:	JEF MARQUEZ
ISSUE DATE:	11/15/21
PROJECT #:	FA21120
SYSTEM:	FIRE ALARM
SHEET:	PRODUCT TYPICALS

FA601

Data Sheet

Cerberus PRO

252-Point and 504-Point Addressable (FIRE-Only) Control Panel Models FC922 and FC924

ARCHITECT AND ENGINEER SPECIFICATIONS

Addressable fire alarm control panel (FACP) intended for mid-size building applications

Comprised of the following system components:

- Operating units
- Periphery boards
- Power supplies
- System enclosures

System features:

- Supports 252 to 504 addressable devices:
  - (1) to eight (8) Class A or two (2) Class A* for Model FC922
  - (1) to eight (8) Class B* one (1) to four (4) Class A* for Model FC924
- Includes one (1) Class A* or two (2) Class B notification appliance circuits (NAC)
- Resettable and non-resettable 24VDC, (nominal) auxiliary power
- Connectivity to a leased line / city tie module
- Control relay contacts for operating fire damper valves in pre-action / deluge systems / agent release
- Off-normal warning message prior to reset
- Fast and easy set-up with auto-configuration feature
- Cerberus* DMS Dangler Management Station can monitor and control up to 32 Models FC922 and FC924 FACPs
- Digital alarm communication transmitter (DACT)

4UL 864 9th Edition Listed, cULC Listed:
FM, CSFM & NYC Fire Department Approved

Cerberus PRO Two-Height-Unit (2HU) Enclosure with two (2) cutouts

Product Overview

The Cerberus PRO 252-point (Model FC922) / 504-point (Model FC924) addressable FACP is designed to meet the fire-protection needs of mid-size buildings.

This advanced FACP offers features typically required in mid-size buildings in a package that is easy to install and competitively priced. Additionally, Models FC922 and FC924 are networkable, allowing the systems to fulfill the growing fire-protection needs of the building. The programming software for the 252 / 504-point fire systems is held in flash electrically erasable programmable read-only memory (EEPROM).

The following Cerberus PRO system components are used in the 252-point / 504-point FACP:

- Operating units
- Periphery boards
- Power supplies
- System enclosures

Other options are available to meet specific needs. Models FC922 and FC924 are FM ("3010): CSFM ("7165-0067:0259) and FDNY ("6104) Approved.

Cerberus® PRO
Fire Safety Products

9815
FACP for mid-size buildings

SIEMENS

Specifications
Operating Interface Unit

The Operating Interface Unit (Model FCM2018-UI) or Model FCM3018-UI) functions as the operating interface and central microprocessor for Models FC922 and FC924.

Either operating interface unit provides multi-use capability for each end-user to efficiently 'Acknowledge' events; to quickly control the NACs of the FACP, and to permit a manual reset of the respective system. Detailed data about the nature and location of the events can also be displayed via a backlit, 2*-ac- 4-3/4* (5.1 cm. -a- 12.1 cm.) LCD screen and the four-way navigation push button at the top of the FACP.

Periphery Boards

The periphery boards (Models FCD216-UI and FCD217-UI) serve as the main operating components for the 252 / 504-point FACP. Each module operates and monitors input-device identity; as well as controls the signaling-line circuits that communicate with smoke detectors and other field devices (i.e. – C-NET).

Specifications — (continued)
Power Supplies

All functions are supported by the power supplies (Model FCP011-UI or Model FCP012-UI), which therefore eliminate the need for external power supplies.

Further, the 170-Watt power supply (Model FP2011-UI) and 300-Watt power supply (Model FP2012-UI) provide primary, 24VDC nominal power for normal operation to Models FC922 and FC924. Both power supplies are filtered and regulated. Model FP2011-UI is rated at 6.5 Amps, and the rating for Model FP2012-UI is 11.5A.

The 170-Watt power supply incorporates a 4.0A, non-resettable slow-blow fuse on the primary input, and includes a built-in AC-line filter for surge and noise suppression. Model FP2011-UI mounts in the FACP enclosure, and there are no serviceable Cerberus PRO parts to be maintained.

The 300-Watt power supply incorporates two (2) 6.3A replaceable, non-resettable slow-blow fuses on its primary input and includes a built-in AC line filter for surge and noise suppression. Model FP2012-UI mounts in the FACP's enclosure, and there are no serviceable Cerberus PRO parts to be maintained.

System Enclosures

The Cerberus PRO fire alarm enclosures and their accessories provide a complete set of hardware for mounting all Cerberus PRO main-system and remote terminal cards and modules.

The hardware allows this Cerberus PRO system to be configured for a variety of applications, as well as for future system upgrades. Included in the enclosure series are back box and door sets; removable mounting plates and clear lenses, as well as blank plates for use with the enclosure doors.

All enclosures come with ground straps for the inner and outer doors, shield termination lugs, grounding lugs, and tie wrap lances for securing wire. All Cerberus PRO heightunit enclosures can also mount system back-up batteries up to 33AH in capacity.

Models FC922 and FC924 utilize a two-height-unit enclosure. The following components comprise a complete two-height-unit enclosure.

- One (1) back box, (Model FHB2002-UT / I1)
- One (1) or two (2) door doors, (Models FHD2004-UT or FHD2005-UT)
- One (1) outer door, (Model FHD2002-03 / I3 or FHD2003-03 / I3)
- One (1) or two (2) clear windows, (Model FHD2005-UT)

Note: One (1) window is installed for Model FHD2002-03 / I3 or FHD2003-03 / I3. Two (2) windows are required for Model FHD2005-03 / I3.

The approximate size for each two-height-unit enclosure is: 27.5* (70cm.) High-21.5* (54.4cm.) wide, +wt. 75* (14.6cm.) deep. The weight, without any attached components, is approximately 6.3 Lbs. (2858 g).

Additionally, the two-height-unit enclosure supports the following optional components:

- Enclosure trim kit (for flush-mounting)
- Battery bracket (to comply with seismic certification)
- DIN rail kit (provides connection between external system wiring and field wiring)

Optional Accessories

Digital Alarm Communication Transmitter (DACT)

The DACT is used to provide communication between Models FC922 and FC924 and with either a central or remote monitoring station.

The Model FCM2015-UT module mounts directly on the back enclosure and connects to the periphery boards. The DACT module emulates transmission of alarms and events via a public telephone line.

Releasing Module

The releasing module (Model XCI2001-UT) supports activation of releasing valves in pre-action / deluge systems (including double-interlock pre-action systems with Engineered Fire Suppression systems). Activation can be event-controlled or performed by addressable manual pull stations. The releasing module is installed on the periphery board, and supports Class B releasing circuits.

When installed on Models FC922 / FC924, the releasing module contains an integral manual-disconnect switch for releasing circuits. This essential feature protects the releasing circuits from accidental discharge during maintenance.

Battery Disconnect Module

The Battery Disconnect Module (Model FCA2032-UT) is specifically designed to disconnect the backup battery on the Cerberus PRO 252 / 504-point addressable FACP when its voltage drops below 19VDC. Model FCA2032-UT's cut-off capability prevents the battery from operating beyond its normal power level for basic system operation.

Hardware Migration Kit

Model FHA2056-series kits are specifically designed for the seamless transition of an existing Siemens FS-250 (FireSeeker) control panel into a fully operational 252 or 504-point addressable Cerberus PRO fire-alarm FACP, (FC922 or FC924, respectively). Each shipment of the Model FHA2056-series kits contains the following:

- One (1) outer door
- One (1) inner door
- One (1) hinge-assembly bracket
- One (1) back plate
- One (1) inner-door bracket

Note: The five (5) items that comprise one (1) Model FHA2056-series hardware-migration kit cannot be ordered individually.

Specifications — (continued)
Network Module

The C-WEB network module (Model FN2001-UT) is used to network up to 16 FACPs, or one (1) fire terminal, via the C-NET system bus. Model FN2001-UT is plugged into the Operating Unit or an Operating Unit with built-in LEDs.

Model FN2001-UT, which connects to a system input / output bus, has ground-fault monitoring, as well as an integrated degrade-mode feature. Redundant networking is done with one (1) network module per FACP [Slim-Loop Trouble]. There is electrical isolation between the system bus and FACP.

Remote Display Terminals

The Remote Display Terminals (Models FT2014-UI / I3 and FT2015-UI / I3) are remote annunciators that show the existing status of Models FC922 / FC924.

Light-emitting diodes (LEDs) will illuminate for any given *Alarm*, *Supervisory* and *Trouble* Cerberus PRO-system event. A LCD screen will give details of the event in alphanumeric form. The display screen can be scrolled, via the four-way navigation button, to reveal additional events.

Model FT2014-UI / I3 is a display-only remote annunciator that has one (1) button used to silence the local sounder. Model FT2015-UI / I3 has three (3) control buttons for acknowledging* events, 'silencing' audible circuits and 'resetting' the system. Additionally, there are three (3) user-programmable buttons available. Model FT2015-UI / I3 has an integral key switch that enables the control buttons to operate.

When installed on Models FC922 / FC924, the releasing module contains an integral manual-disconnect switch for releasing circuits. This essential feature protects the releasing circuits from accidental discharge during maintenance.

The remote display terminals are remotely connected to Models FC922 and FC924, via the RS-485 interface. Models FC922 and FC924 require the Model FCA2010-UI RS-485 module to provide communication to the remote display terminals. Model FCA2016-UI supports Style 4 or Style 6 wiring. Up to eight (8) modules can be supported on a RS-485 bus.

The remote display terminals require a 24VDC [nominal] power, and the necessary power can be provided from this Cerberus PRO FACP or from another 4UL Listed, 24VDC power source.

3 Series License Keys

The S1 license key (Model FCA2033-A1) allows for virtual monitoring and control between a 252 / 504-point addressable fire-only panel and a personal computer.

The S2 license key (Model FCA2034-A1) is a MiniNet output, and is used for monitoring-only purposes by a 3rd-party system for life-safety objects.

The S3 license key (Model FCA2035-A1) is a combination license key that allows for virtual monitoring and control, as well as for distribution of BACnet (monitoring-only) communications. A four-digit personal identification number (PIN) must be used in order to prevent unauthorized access.

Tabular Annunciators

Tabular annunciators allow system events sent from Cerberus PRO addressable panels to be displayed remotely in real-time. The Model FT2008 series of tabular annunciators has 16 zones, and the Model FT2009 series uses 96 LEDs for 32 zones. Up to two (2) light-emitting diodes (LEDs) can be used per zone.

Tabular annunciators provide outputs for system and zone status, and are orderable in either **black** or red.

LED Annunciator Driver

The Model FT2007-UT LED Annunciator Driver provides custom-graphic annunciators on addressable Cerberus PRO FACPs. This optional system module provides 96 highly programmable outputs for LED annunciators.

There are 16 inputs to accommodate user-system commands: *Silence*, *Unsilence*, *Reset*, *Acknowledge* and *Lamp Test*. Model FT2007-UT is supervised via a RS-485 interface. A maximum eight (8) modules are allowed on each RS–485 communication bus.

NAC Expansion Module

The NAC expansion module (Model FCD211-UT) provides either of the following additional NACs to a Cerberus PRO 252 / 504-point FACP:

- one (1) Class A*, or
- two (2) Class B* NACs

Each NAC is rated at 3 Amps. Each NAC expansion module is monitored for open-line and short-circuit conditions.

Details for Ordering

Model	Part Number	Description
FCD216-UI	554400-A6A-A1	Periphery Board, 252-pt. FACPs
FCD217-UI	554400-A36-A1	Periphery Board, 504-pt. FACPs
FCM2018-UI	554400-A40-A1	Operating Interface Unit
FCM2018-UI	554400-C41-A2	Operating Interface Unit with LEDs
FHB2002-UT	554400-B47-A1	1HU Back Box, **Black**
FHB2001-UT	554400-B47-A2	1HU Back Box, red
FHB2002-UT	554400-B48-A1	2HU Back Box, **Black**
FHB2002-UT	554400-B48-A2	2HU Back Box, red
FHD2001-UT	554400-B49-A1	1HU Door Door, **Black**
FHD2001-UT	554400-B49-A1	1HU Door Door, red
FHD2002-UT	554400-B52-A1	2HU Door Door w/ 2 Windows, **Black**
FHD2002-UT	554400-C53-A1	2HU Outer Door w/ 1 Window, Red
FHD2003-UT	554400-C42-A1	2HU Outer Door w/ 2 Windows, **Black**
FHD2003-UT	554400-B48-A1	2HU outer door w/ 2 windows, red
FHD2004-UT	554400-B52-A1	Inner Door, **Black**
FHD2005-UT	554400-B53-A1	Inner Door, **Black** (full plate)
FHD2006-UT	554400-C46-A1	Clear-Lens Window
FP2011-UT	500-430222-1	170-Watt Power Supply
FP2012-UT	554400-260-A1	300-Watt Power Supply

Electronics Packages

Model	Part Number	Description
FC922-UE	554400-C14-A1	252-Point Fire System with 170 Watt Power Supply and standard operator interfaces (with 29-zone LEDs) Includes: FCD211-UT (1 Qty.), FCD216-UI (1 Qty.), FCM2018-UI (1 Qty.)
FC924-UE	554400-C15-A1	504-Point Fire System with 170 Watt Power Supply and standard operator interfaces (with 29-zone LEDs) Includes: FCD211-UT (1 Qty.), FCD217-UI (1 Qty.), FCM2018-UI (1 Qty.)
FC922-UE	554400-C16-A1	252-Point Fire System with 170 Watt Power Supply and standard operator interfaces (with 29-zone LEDs) Includes: FCD211-UT (1 Qty.), FCM2018-UI (1 Qty.)
FC924-UE	554400-C17-A1	504-Point Fire System with 170 Watt Power Supply and standard operator interfaces (with 29-zone LEDs) Includes: FCD211-UT (1 Qty.), FCD217-UI (1 Qty.), FCM2018-UI (1 Qty.)
FT924-US	554400-C18-A1	Network Terminal w/ standard operator interface Includes: FT2007-UT (1 Qty.), FT2015-UI (1 Qty.)
FT924-UE	554400-C19-A1	Network Terminal w/ standard operator interface (with 29-zone LEDs) Includes: FT2007-UT (1 Qty.), FT2015-UI (1 Qty.)
FC922-UT	554400-C20-A1	252-Point Fire System with 300 Watt Power Supply and standard operator interfaces Includes: FCD211-UT (1 Qty.), FCM2018-UI (1 Qty.)
FC924-UT	554400-C21-A1	504-Point Fire System with 300 Watt Power Supply and standard operator interfaces Includes: FCD211-UT (1 Qty.), FCM2018-UI (1 Qty.)
FC922-UF	554400-C22-A1	252-Point Fire System with 300 Watt Power Supply and standard operator interfaces (with 29-zone LEDs) Includes: FCD211-UT (1 Qty.), FCD216-UI (1 Qty.), FCM2018-UI (1 Qty.)
FC924-UF	554400-C23-A1	504-Point Fire System with 300 Watt Power Supply and standard operator interfaces (with 29-zone LEDs) Includes: FCD211-UT (1 Qty.), FCD217-UI (1 Qty.), FCM2018-UI (1 Qty.)

Related Documentation

Product	Data Sheet Number
Cerberus PRO operating units	9801
Cerberus PRO periphery boards	9802
Cerberus PRO fire terminals	9803
Cerberus PRO DACT	9804
Cerberus PRO C-Network Module	9805
Cerberus PRO power supplies	9806
Cerberus PRO enclosures	9807
NAC expansion module	9808
Cerberus PRO releasing module	9809
Leased-Line / city-tie module	9810
Remote periphery module	9811
Remote display terminals	9812
Single / multi-mode fiber modules	9814
I/O / Blank option modules	9816
Battery disconnect module	9819
Marine-specific FACPs	9821
Marine-specific equipment	9822
LED annunciator driver	9824
16 & 32-zone tabular annunciators	9825
Hardware Migration Kits	9826

Temperature and Humidity Range

Models FC922 and FC924 are 4UL 864 9th Edition Listed for indoor dry locations within a temperature range of 120 -= 3°F (49 -= 2°C) to 32-= 3°F (0 -= 2°C) and a relative humidity of 93 -= 2% at a temperature of 90 -= 3°F (32 -= 2°C).

SIEMENS Cerberus® PRO

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Information contained in these documents should be consulted before specifying or using the product. For further data or assistance, please contact the Manufacturer.

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AES CORPORATION 40 YEARS OF QUALITY INNOVATION

7707 Fire Subscribers

IntelliNet 2.0

A Newer, Smarter Alarm Communications Platform

Feature Highlights

- Leverages state of the art technology
- Applies advanced security protection
- Offers flexible power and configuration options
- Engineered for backward compatibility with legacy systems
- Enables future ready capabilities
- Provides instant subscriber status through front panel with Power and Trouble LEDs, a backlit LCD display, and Menu/Silence button
- Includes robust Multiple Communication Technologies (MCT) feature
- Emulates virtual keypad
- Improves functionality with an adaptive Graphic User Interface (GUI) for programming via smartphones, tablets and PCs
- Plus many more...

Key Benefits

- Built upon the solid foundation of AES-*IntelliNet* patented mesh radio technology for use in private licensed wireless networks
- Protects subscriber units against unauthorized access and rogue activity with a password-protected Dealer Code
- Makes programming and streamlined troubleshooting easy with user friendly interface
- Adds integrated supervision of AES-*IntelliPro* full data module
- Provides versatile power options:
  (1) Direct from the Fire Alarm Control Panel (FACP) without requiring an electrician onsite and without Subscriber backup battery;
  (2) Directly from the FACP with Subscriber backup battery; or
  (3) Traditional installation with plug in Class 2 low power transformer
- Allows for enhancement upgrades and an expanded number of new features to be added easily with highly flexible and scalable alarm communications infrastructure
- Rigorously tested to the highest industry standards and future ready to meet emerging NFPA code and UL standards

How to Order — 7707 Fire

IntelliNet 2.0 Fire Subscribers	
2.0 PREMIUM (UL & ULC Listed)	
7707F-88-M	*IntelliNet* 2.0 Fire Subscriber, 8 Zone with Multiple Communication Technologies (MCT), Red Enclosure
7707F-88-ULP-M	*IntelliNet* 2.0 Fire Subscriber, 8 Zone with 7794A AES-*IntelliPro*, and integrated onboard Local Annunciator plus MCT, Red Enclosure
7707F-44-M	*IntelliNet* 2.0 Fire Subscriber, 4x4 Zone (4 Reversing Polarity, 4 Supervised) with Multiple Communication Technologies (MCT), Red Enclosure
7707F-44-ULP-M	*IntelliNet* 2.0 Fire Subscriber, 4x4 Zone (4 Reversing Polarity, 4 Supervised) with 7794A AES-*IntelliPro*, and integrated onboard Local Annunciator plus MCT, Red Enclosure
2.0 ACCESSORIES	
7794A	Standalone AES-*IntelliPro* Fire full data module add-on accessory board with firmware for new *IntelliNet* 2.0 units only, cannot be used in legacy units
77-WiFi	AES certified WiFi adapter
77-FACPA	FACP Power Supply Adapter for internal mount
77-FACPA-KIT	External installation hardware for 2-way junction Box
***Legacy* Fire Subscribers**	
7706-ULF	Integrated Fire Monitoring System, Red Enclosure
7788F-ULP-P	Legacy Fire Subscriber, 8 Zone with 7795 AES-*IntelliPro* (7794 full data module, 7762 hardware supervisory module, and 7740 Local Annunciator), Red Enclosure
7788F-ULP	Legacy Fire Subscriber, 8 Zone, 8 Supervised Zones with 7794 AES-*IntelliPro*, Red Enclosure
7788F	Legacy Fire Subscriber, 8 Zone, 8 Supervised Zones, Red Enclosure
7744F-ULP-P	Legacy Fire Subscriber, 4 Zone with 7795 AES-*IntelliPro* (7794 full data module, 7762 hardware supervisory module, and 7740 Local Annunciator), Red Enclosure
7744F-ULP	Legacy Fire Subscriber, 4x4 Zone, 4 Supervised Zones with 7794 AES-*IntelliPro*, Red Enclosure
7744F	Legacy Fire Subscriber, 4x4 Zone, 4 Reversing Polarity, 4 Supervised Zones, Red Enclosure
LEGACY ACCESSORIES	
7794	Standalone AES-*IntelliPro* Fire full data module add-on accessory board for legacy units only, please see 7794A above for *IntelliNet* 2.0 version

Technical Specifications — 7707 Fire

DIMENSIONS
13*H x 8.5*W x 4.5*D
(33cmH x 21.5cmW x 11.4cmD)

WEIGHT
5.8 lbs (2.6 kilograms)
excluding battery
13 lbs (5.9 kilograms) with
10 Ah battery

RADIO FREQUENCY
Standard Frequency Range:
450-470 MHz
Contact AES for other UHF
and VHF frequencies

ANTENNA
2.5 dB tamper resistant antenna
included, mounts on enclosure
Optional remote mounting
antenna available

POWER INPUT
AC SOURCES
Transformer: Class 2
16.5V AC nominal output
1.9 A max current (40 VA MIN)
ELK ELK-TRG1640,
MG ELECTRONIC SALES MGT1640,
or AES 1640 (not included)
DC SOURCES (includes FACP)
24V DC Regulated Power Supply
with Subscriber
Rechargeable Battery
1.9 A max current

BACKUP BATTERY
10-12 Ah, UL recognized lead acid
gel cell, size based on subscriber
configuration

ALARM SIGNAL INPUTS/ZONES
8 individually programmable
E.O.L. type zone inputs
4+4; 4 reverse polarity input and
4 individually programmable
E.O.L. type zone inputs
Optional 7794A AES-*IntelliPro* for
full data via Contact ID, Pulse,
Modem IIe and Modem IIIa2

UL LISTINGS
UL 864 10th Edition
Standard for Control Units and
Accessories for Fire Alarm Systems
ULC S559-04 1st Edition
Equipment for Fire Signal
Receiving Centres and Systems

TROUBLE OUTPUT—ACK
DELAY/ANTENNA CUT
Form C relay, fail secure, rated 24V
DC 1A resistive, unsupervised

RESET BUTTON
Located on main circuit board

OPERATING TEMPERATURE
32 to 120°F (0 to 49°C)

STORAGE TEMPERATURE
14 to 140°F (-10 to 60°C)

RELATIVE HUMIDITY
0 to 93%, non-condensing

RECHARGE CAPABILITY
Will charge 12V battery size
from 10-12 Ah

PORTS
Ethernet for configuration
and message communication
USB access for software upgrade

REMOTE ANNUNCIATOR
AES Model 734D
Remote Annunciator, supervised

COMPATIBLE RECEIVERS
7705i AES-MultiNet Receiver

CONFIGURATION INTERFACE
Web browser capable device
accessible via smartphone, tablet,
laptop, or PC

CURRENT CONSUMPTION
Standby w/ charged backup battery:
200 mA (1.2 A Transmitting)
Standby + charging backup battery:
900 mA (1.9 A Transmitting - MAX)

POWER OUTPUT
2 or 5 Watts
Factory set

ENCLOSURE MATERIAL
Steel with paint finish

FINISH COLOR
Red

VISUAL INDICATORS
Front panel LCD
(2 x 20 alphanumeric character
backlit display)
Power and Trouble LEDs
(ALM, Trouble, Tx, Rx, WA)

Contact Us

For pricing and availability or to learn more about *IntelliNet* 2.0, please call your local AES Sales Representative at (800) 237-6387 or email sales@aes-corp.com.

www.aes-corp.com
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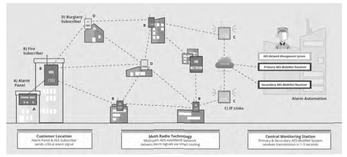
7707_KB32018_F

Enhanced Wireless Fire Alarm Monitoring

Powered by AES enhanced mesh radio technology, *IntelliNet* 2.0 7707 Fire Subscribers are next generation universal wireless communicators that provide advanced security protection for any new or existing alarm monitoring network. The AES Model 7707 is ideal for commercial fire applications. With the AES-*IntelliPro* full data module option, they are the ideal drop-in replacement for Plain Old Telephone Service (POTS) lines.

The red metal enclosure comes with a key lock and front panel LCD backlit display with intuitive view that provides an instant visual of the subscriber status. The user friendly GUI makes it easy to program AES subscriber units via a smartphone, laptop, tablet, or integrated Universal Serial Bus (USB)—without the need for special cables or having to use a handheld programmer. Additional knockouts make it easier to mount for faster installation.

IntelliNet 2.0 Private Wireless Mesh Radio Network



The *IntelliNet* 2.0 Fire Subscriber has an 8 Zone modular design for expansion with normal and reverse polarity, POTS and DACT interfaces with an option for the 7794A AES-*IntelliPro* full data module add-on accessory board. AES subscribers' intelligent software automatically detects new hardware and devices to reduce installation time.

An AES certified WiFi accessory allows seamless wireless connectivity for configuration and programming. A laptop, Ethernet cable, or a Wi-Fi USB dongle is required for *IntelliNet* 2.0 programming, handheld programmers will not work with 2.0 units. A FACP Power Supply Adapter is required for certain configurations when using flexible power options. The forward compatible design allows for feature add-ons, engineered to adapt seamlessly with future software upgrades as technology advances. *IntelliNet* 2.0 allows configuration toning for faster installation time.

The AES 7707 was designed with quick configuration and installation in mind to make it easier for field technicians to get in, out, and on to the next install.

Visit our Fire Marshal Resources web page for official NFPA and UL Listings:
aes-corp.com/products/fire/fire-marshal-resources

DURACELL® SLA Batteries
ULTRA

General Purpose
Backup and Standby Applications

Duracell® Ultra SLA technology offers high-density power that outperforms traditional lead acid batteries. The Absorbed Glass Mat (AGM) construction is designed for efficient gas recombination and allows for maintenance-free operation. Duracell® Ultra SLA batteries maintain their high capacity with a design that is resistant to damage caused by deep discharge. Every Duracell® Ultra SLA battery is inspected to ensure the highest standards in materials and fabrication.

50-150 Cycles at 100% Discharge

SPILL PROOF GUARANTEE

Features:

- Duracell® Ultra SLA GEL batteries contain a proprietary grid alloy formula combined with advanced plate curing techniques to provide maximum performance.
- Duracell® Ultra batteries contain a unique electrolyte formula with a special sub-colloid additive for higher reliability and longer life.
- Will achieve more life cycles than standard AGM and Deep Cycle batteries.
- The unique construction and sealing techniques of these batteries are guaranteed to give you leak-proof operation.
- Heavy-duty lead calcium tin alloy grids provide an extra margin of performance and service life in cyclic applications, even after repeated over-discharges.
- Quality Assurance Engineers monitor and control the entire production process.
- Recycling of used SLA batteries available.
- Delivery available.

CASE Quantities AVAILABLE

Sealed Lead Acid

Maintenance Free | Spill Proof Design | 1 YEAR 1 Year Warranty | Stringent Quality Control

batteriesplus.com 1-800-677-8278

DURACELL® SLA Batteries
ULTRA

General Purpose

PROJECT NAME:
CATALOG #
FIXTURE TYPE
NOTES

Battery	Volts	Capacity Hr (20Hr)	Dimensions (LxWxH inches)			Terminal Type	Group Size	Weight (Lbs.)
DURA12-0.8WL	12V	0.8	3.78	0.98	2.4	WL	-	0.77
DURA12-1.3F	12V	1.3	3.82	1.69	2.28	FI, T1	-	1.37
DURA12-2.9F	12V	2.3	6.97	1.38	2.64	FI, T1	-	2.64
DURA12-2.9F	12V	2.9	3.11	2.2	3.9	FI, T1	-	2.36
DURA12-3.3F	12V	3.3	5.28	2.64	2.83	FI, T1	-	3.18
DURA12-3.3F2	12V	3.3	-	-	-	-	-	-
RAM12-4F	12V	4	3.54	2.76	4.21	FI, T1	-	-
DURA12-5F	12V	5	3.54	2.76	4.21	FI, T1	-	-
DURA12-5F2	12V	5	5.96	2.77	3.94	F2, T2	-	-
DURA12-5.1A	12V	5.1	5.51	1.89	4.21	FI, T1	-	4.6
DURA12-5.5F	12V	5.5	3.54	2.76	3.98	-	-	-
RAM12-7F	12V	7	5.95	2.56	3.94	FI, T1	-	-
DURA12-7F	12V	7	5.94	2.56	3.94	FI, T1	-	-
DURA12-7F2	12V	7	5.94	2.56	3.7	F2, T2	-	-
DURA12-8F	12V	8	5.94	2.56	3.94	FI, T1	-	-
DURA12-8F2	12V	8	5.94	2.56	3.94	F2, T2	-	-
DURA12-9NB	12V	9	5.95	2.56	3.9	NB, J	-	-
DURA12-9F2	12V	9	5.95	2.56	3.94	F2, T2	-	-
DURA12-10F2	12V	10	5.95	2.54	4.38	F2, T2	-	7.5
DURA12-11NB	12V	11	5.28	3.15	6.5	-	-	10.1
DURA12-12F2	12V	12	5.94	3.9	3.98	F2, T2	-	-
DURA12-12F	12V	12	5.94	3.86	3.86	FI, T1	-	-
DURA12-14F2	12V	14	5.94	3.86	3.98	F2, T2	-	8.91
DURA12-18F2	12V	18	7.13	3.03	6.57	F2, T2	-	-
DURA12-18NB	12V	18	7.13	3.03	6.57	NB, J	-	12.43
DURA12-26NB	12V	26	6.5	6.93	4.92	NB, J	-	20.7
DURA12-35C	12V	35	7.72	5.16	6.5	C	-	27.3
DURA12-44CFR	12V	46	7.8	6.54	6.85	C	-	38
DURA12-55CFR	12V	55	9.02	5.43	8.35	-	-	42.1
DURA12-80CFR	12V	80	10.24	6.65	8.46	C	-	-
DURA12-100CFR	12V	100	12.09	6.65	8.46	C	-	74.6
DURA12-140CFR	12V	140	13.43	6.81	11.3	C	-	108
DURA4-4.5F2	4V	4.5	1.85	1.85	3.98	F2, T2	-	1.4
DURA6-1.3F	6V	1.3	3.82	0.94	2.28	FI, T1	-	0.715
DURA6-2S1	6V	2	1.69	1.45	2.99	1F	-	0.75
DURA6-2.9F	6V	2.9	2.6	1.46	3.82	FI, T1	-	1.26
DURA6-3.3F	6V	3.3	5.28	1.34	2.64	FI, T1	-	1.65
RAM6-4F	6V	4	2.76	1.85	4.13	FI, T1	-	-
DURA6-5SP	6V	5	2.6	2.6	4.53	SP	-	2.09
DURA6-5F	6V	5	2.76	1.85	4.21	FI, T1	-	-
DURA6-7.2F	6V	7.2	5.94	1.34	3.68	FI, T1	-	2.43
DURA6-8.2F	6V	8.2	3.9	2.24	4.53	FI, T1	-	3.8
DURA6-10F	6V	10	5.94	1.97	3.98	FI, T1	-	4.851
DURA6-12F	6V	12	5.94	1.97	3.98	FI, T1	-	-
DURA6-12F2	6V	12	5.94	1.97	3.98	F2, T2	-	4.602
RAM6-14T2	6V	14	4.25	2.8	5.51	H	-	6.24
DURA6-14A	6V	14	4.25	2.8	5.51	F1 (.172 Cu), T1 (.172 Cu), FP	-	6.16
DURA6-42F2	6V	42	6.25	3.37	6.37	F2, T2	-	16.64
DURA6-42NB	6V	42	6.34	3.43	6.42	NB, J	-	16.62
DURA6-200C	6V	200	12.05	6.65	8.63	C	-	-
DURA8-3.2F	8V	3.2	5.28	1.44	2.48	FI, T1	-	1.65

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Batteries+Bulbs

SMITH FIRE SYSTEMS INC.
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(253) 926-1800
SMITHFS861RS

FORD LINCOLN VITRINE
150 RIVER RD
PUYALLUP, WA 98371
PARCEL# 0420281162

ISSUE LOG:		
DATE	INT	DESCRIPTION
11/16/21	JM	REPLACED HEATS WITH SMOKES IN DATA AND RESTROOMS
2/22/22	JM	ADDED SMOKES ABOVE CEILING

REVISED SET

DESIGNER:	JEF MARQUEZ
ISSUE DATE:	11/15/21
PROJECT #:	FA21120
SYSTEM:	FIRE ALARM

SHEET:
PRODUCT DATA SHEETS

FA901

City of Puyallup
Development & Permitting Services
ISSUED PERMIT

Building	Planning
Engineering	Public Works
Fire	Traffic

A PRODUCT DATA SHEETS

SIEMENS
Ingenuity for life

Notification Appliances
'SL' Series – Horns | Strobes
Horn-Strobes

Applications : Indoor, Wall-Only

Architect & Engineer Specifications

- Sophisticated series of notification appliances that meets fire-industry codes and regulations for commercial-building applications
- Compatible with the Siemens 50-point, 252-point and 504-point addressable fire alarm control panels (FACPs), and with:
  - Siemens Modular FACPs
  - Siemens FAD-series of NAC extenders
  - FireFinder® XLS / XLSV FACPs
  - Siemens dual-sync control (DSC) modules
- Innovative LED strobe technology provides an energy-efficient means for a significantly reduced current draw
  - Capability to have existing Xenon and new LED strobes in the same field-of-view
  - Fewer power supplies required, smaller wire gage, reduced wire runs
- Straightforward installation coupled with compact, modern design
  - No visible mounting screws
  - Manual (Index Finger) slide-setting adjuster
  - Four (4) field-selectable settings in one (1) device: 15cd | 30cd | 75cd | 110cd
- Faceplates ship in four (4) distinctive types:
  - FIRE | " ALERT " | " AGENT " | (blank)
- Two (2) audible settings in each notification appliance
  - Temporal or steady horn output
  - High or Low setting
- UL (2034 | 1971 | 464) and ULC Listed (ULC-S525 | -S536)
  - ADA | NFPA | FCC| ANSI | OSHA compliant

Product Overview

Formed as the 'SL'-series, Siemens is now offering horns, strobes, and horn-strobes to its notification-appliances portfolio. With the 'SL'-series, Siemens now offers an additional range of products with low and high candela settings that makes these sophisticated notification appliances ideal for new installs and retrofit applications.

Innovative light-emitting diode (LED) strobe technology provides an energy-efficient means for a significantly reduced current draw.

The strobe portion of these appliances meets the 20 millisecond light pulse-duration requirements of the 2016 edition of NFPA 72. This feature allows existing Xenon and the new LED devices to be used in the same field-of-view.

In a single device, the 'SL'-series can provide alarm-signaling tones for dual applications. All strobe models in the series feature multi-Candela settings (15 | 30 | 75 | 110cd) on a single appliance.

Additionally, there are two (2) modes of operation for the audible portion of these notification appliances:

- T3 (coded)
- Continuous

The 'SL'-series of horns, strobes and horn-strobes devices are produced in a sleek, modern design. Its structure and design provide high-quality energy efficiency in an aesthetically pleasing, low-profile design that is consistent to the look of the interior composition of the building application.

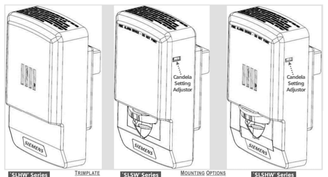
This 'SL'-series is exclusive to indoor ceiling-mount applications. The Model 'SLHC'-series horn appliances work in either 12V or 24VDC, whereas the Series 'SLSC' and 'SLHSC' strobe and horn-strobe devices are specifically for 24V operation.

Models SLHR-N | SLSCW-AL-A | SLSHCW-F

Horn | Strobe | Horn-Strobe

Siemens
Building Technologies Division

Data Sheet 2593
usa.siemens.com/fire



SLHW Series — Horn

SLSW Series — Strobe

SLSHW Series — Horn-Strobe

TRIPLATE DIMENSIONS
5.25 inches (13.34 cm.) (W)
4.58 inches (11.6 cm.) (W)
0.32 inches (0.81 cm.) (D)

MOUNTING OPTIONS INCLUDE
- Model SLSB8 to any 4" square backbox
- 4" (10.2 cm.) square backboxes with the Model SLSGP adapter kit

Specifications

In terms of composition and functionality, Models 'SLHW'-series, 'SLSW'-series, and 'SLHSW'-series provide added value to the installer for the types of applications for operation:

- Compact | sleek | low-profile design
- Comprehensive feature list
- Convenient mounting options
- Easy-to-adjust selection-slider switch for Candela settings
  - No tools required for setting changes
  - Multi-level settings: 15cd | 30cd | 75cd | 110cd
- High and Low audible outputs
- Reduced current draw, via cutting-edge LED technology

The LED portions of the Siemens 'SL'-series of strobes and horn-strobes meet the 20 millisecond light-pulse-duration requirements of the 2016 edition of NFPA 72. By meeting this latest requirement, existing Xenon as well as the new LED-technology devices can now be in the same field-of-view.

The horn, strobe and horn-strobes in this Siemens 'SL'-series of notification appliances have received UL / ULC Listed status by attaining compatible testing standards with all of the Siemens fire-alarm control panels (FACPs) and accessories that have been determined to be aligned with existing Siemens strobe-based appliances.

This would include the following existing model-types: ' CH' | 'HS' | 'MTH' | 'S-HQ' | 'AS' | 'SE' | 'SEF' | 'SET' | 'ST' | 'STH' | 'ZR' and 'ZH' Series notification appliances. The regulatory listing also includes the capability for installing the Siemens 'SL'-series LED-based strobes in the same notification zone and field-of-view with any existing Siemens Notification Appliance Xenon-based strobes.

All types of these horns, strobes and horn-strobes are UL Listed
(for indoor use under Standard 1971 and 464), as well as ULC-S525 | ULC-S526 Listed.
The Siemens 'SL'-series sounder-strobes also have ADA | ROHS and ICES approval.

Electrical Ratings

Wall-Mount | Horn-Strobes | Output Current Draw

Current Ratings (Horn dB) in Amps)
18.0 – 33.0 VDC

MODEL 'SLHSW' SERIES:	Setting	15cd	30cd	75cd	110cd
	Code 3	0.159	0.246	0.158	0.216
	Continuous	0.242	0.332	0.153	0.217

Wall-Mount | Horn-Strobes | Output Current Draw

Current Ratings (LOW dB) in Amps)
18.0 – 33.0 VDC

MODEL 'SLHSW' SERIES:	Setting	15cd	30cd	75cd	110cd
	Code 3	0.059	0.242	0.153	0.213
	Continuous	0.236	0.244	0.156	0.216

Wall-Mount | Horn-Only | Output Current Draw

Current Ratings (Code 3) in Amps)
RMS Current @ 24VDC

MODEL 'SLHW' SERIES:	Regulated Voltage Range:	High	Low
	8.0 – 17.5 VDC	0.024	0.018
	18.0 – 33.0 VDC	0.030	0.022

Wall-Mount | Strobe-Only | Output Current Draw

Current Ratings (Code 3) in Amps)
RMS Current @ 24VDC

MODEL 'SLSW' SERIES:	Regulated Voltage Range:	15cd	30cd	75cd	110cd
	18.0 – 33.0 VDC	0.038	0.046	0.152	0.201

UL | Wall-Mount | Horn-Only | Output Current Draw

UL Sound Output Ratings (dBA)
Reverberant per UL464 @ 10 feet

MODEL 'SLHW' and 'SLHSW' SERIES:	Volume	SLHC @ 15VDC	SLHC -and- SLHSC @ 24VDC		
		8.9V	12.0V	17.5V	19.9V	24.0V	33.0V
	Code 3	75	80	83	76	79	81
	High dBA						
	Code 3	73	77	80	75	77	77
	Low dBA						
	Continuous	80	84	87	80	83	86
	High dBA						
	Continuous	78	79	84	78	81	81
	Low dBA						

ULC | Wall-Mount | Horn-Only | Output Current Draw

ULC Sound Output Ratings (dBA)
Anechoic per ULS525-10 @ 3.05 meters

MODEL 'SLHW' and 'SLHSW' SERIES:	Volume	SLHC @ 15VDC	SLHC -and- SLHSC @ 24VDC		
		8.9V	12.0V	17.5V	19.9V	24.0V	33.0V
	Code 3	85	89	92	91	95	96
	High dBA						
	Code 3	79	84	87	88	90	91
	Low dBA						
	Continuous	85	89	92	91	94	97
	High dBA						
	Continuous	79	84	87	86	90	92
	Low dBA						

RMS current ratings are per UL maximum RMS method UL max current rating is the maximum RMS current within the listed voltage range (18 – 33V for 24V units)
For audible appliances, the max current is usually at the maximum listed voltage (18 - 33V for 24V units)
For unfiltered FWR ratings, see installation instructions

Technical Data

General Properties

MODEL 'SL'-series	
OPERATING TEMPERATURE	• 32° F (0°C) to 122°F (50°C) • for indoor applications use only
RELATIVE HUMIDITY:	93%, maximum
OPERATING VOLTAGE RANGES:	• 8.0 VDC	VFWR	➔ 8 – 17.5 VDC	VFWR; • 24 VDC	VFWR	➔ 18 – 33 VDC/VFWR (12 VDC for Model SLWP only)
STROBE OUTPUT RATING:	• UL 1971, ULC-S526 • Field-selectable 15cd	30cd	75cd	110cd Candela outputs
STROBE FLASH RATE:	Strobes are designed to flash at one-flash-per-second
STROBE SYNCHRONIZATION	• all Siemens addressable panels • Siemens FAD-4™ NAC Extenders • Siemens dual-sync (DSC) modules, which provide the unique Siemens proprietary synchronization protocol
TEMPORAL PATTERN:	• Continuous • Code 3 (½ second on, ½ second off, then ½ second on, ½ second off, followed by ½ second on, 1½ second off and repeat) NOTES: The Code 3 pattern is specified by ANSI and NFPA 72 for Standard Emergency Evacuation Signaling.

Physical Properties

MODEL 'SL'-series	
MATERIAL:	• White-in-(—) textured, ultraviolet (UV) stabilized, colored impregnated engineered plastic • Exceeds 94V-0 UL flammability ratings
WEIGHT	0.35 Lbs. (0.16 Kg.)
LENS TYPE:	LED strobe situated in a rugged Lexan lens
DIMENSIONS	Actual -but- Approx — Shorty-Gang Trim Plate 4.50" (11.5 cm.) (H) — 3.25" (13.3 cm.) (H) 2.76" (7.0 cm.) (W) — 4.58" (11.6 cm.) (W) 1.27" (3.23 cm.) (D) — 0.32" (0.81 cm.) (D)

Mounting and Wiring Properties

MODEL 'SL'-series	
INDOOR MOUNTING:	• Wall-mount applications • Single-gang (Model SLSB8) backboxes or to 4" (10.2 cm.) square with Model SLSGP adapter kit
WIRING TYPE	#12 – #18, American Wire Gauge (AWG)

Details for Ordering

MODEL	PART NUMBER	APPLIANCE TYPE	UL	ULC	MOUNTING TYPE	STROBE TYPE	FACEPLATE COLOR	FACEPLATE LETTERING
SLHWR-N	554329-F22-A1	Horn	✓	✓	WALL	– None –	WHITE	– None –
SLHWR-N	554329-F22-A2		✓	✓	WALL	– None –	WHITE	– None –
SLHSWR-F	554329-F22-A1	Horn-Strobe	✓	—	WALL	Clear	WHITE	FIRE
SLHSWR-F	554329-F22-A2		✓	—	WALL	Clear	RED	FIRE
SLHSWR-FB	554329-F22-A1	Horn-Strobe	—	✓	WALL	Clear	WHITE	– Pictogram –
SLHSWR-FB	554329-F22-A2		—	✓	WALL	Clear	RED	– Pictogram –
SLHSWR-A	554329-F31-A2	Horn-Strobe	✓	✓	WALL	Clear	RED	AGENT
SLHSWR-A	554329-F34-A2		✓	✓	WALL	Clear	WHITE	AGENT
SLHSWR-N	554329-F34-A1	Horn-Strobe	✓	—	WALL	Clear	RED	– None –
SLHSWR-N	554329-F37-A1		✓	—	WALL	Clear	WHITE	– None –
SLHSWR-AL	554329-F35-A1	Horn-Strobe	✓	✓	WALL	Clear	WHITE	ALERT
SLHSWR-AL	554329-F35-A2		✓	✓	WALL	Clear	RED	ALERT
SLSWR-F	554329-F25-A1	Strobe	✓	—	WALL	Clear	RED	FIRE
SLSWR-F	554329-F25-A2		✓	—	WALL	Clear	WHITE	FIRE
SLSWR-FB	554329-F26-A1	Strobe	—	✓	WALL	Clear	WHITE	– Pictogram –
SLSWR-FB	554329-F26-A2		—	✓	WALL	Clear	RED	– Pictogram –
SLSWR-A	554329-F27-A1	Strobe	✓	—	WALL	Clear	RED	AGENT
SLSWR-AL	554329-F27-A2	Strobe	✓	✓	WALL	Clear	WHITE	ALERT
SLSWR-AL	554329-F28-A2		✓	✓	WALL	Clear	RED	ALERT
SLSWR-ALA	554329-F28-A1	Strobe	✓	✓	WALL	Amber	WHITE	ALERT
SLSWR-ALA	554329-F28-A2		✓	✓	WALL	Amber	RED	ALERT
SLSWR-NA	554329-F29-A2	Strobe	✓	✓	WALL	Amber	RED	– None –
SLSWR-NA	554329-F30-A1		✓	✓	WALL	Amber	WHITE	– None –
SLSWR-N	554329-F30-A2	Strobe	✓	—	WALL	Clear	WHITE	– None –
SLSWR-N	554329-F31-A1		✓	—	WALL	Clear	WHITE	– None –
SLSBBR	554329-F27-A1	Backbox	✓	✓	WALL	– None –	RED	– None –
SLSBBR	554329-F27-A2		✓	✓	WALL	– None –	WHITE	– None –
SLSGP-R	554329-F64-A1	Optional Single-Gang Trim Plate	✓	✓	WALL	– None –	RED	– None –
SLSGP-W	554329-F64-A2		✓	✓	WALL	– None –	WHITE	– None –

NOTICE – The information contained in this data-sheet document is intended only as a summary, and is subject to change without notice. The product(s) described here has/have a specific instruction sheet(s) that cover various technical, limitation and liability information.

Copies of install-type, instruction sheets – as well as the *General Product Warning and Limitations* document, which also contains important data, are provided with the product. Id are available from the Manufacturer.

Data contained in the aforesaid type of documentation should be consulted with a fire-safety professional before specifying or using the product.

Any further questions or assistance concerning particular problems that might arise, relative to the proper functioning of the equipment, please contact the Manufacturer.

SIEMENS

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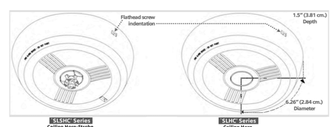
Building Technologies Division
8 Fernwood Road • Florham Park, NJ 07932
Tel: (973) 593-2600

October 2018 – Supersedes sheet dated 4/2018
(Rev. 2)



SLSHC Series — Ceiling Horn-Strobe

SLHC Series — Ceiling Horn

Specifications

In terms of composition and functionality, Models 'SLHC '-series, 'SLSC '-series, and 'SLHSC '-series provide added value to the installer for the types of applications for operation:

- Compact | sleek | low-profile design
- Comprehensive feature list
- Convenient mounting options
- Easy-to-adjust selection-slider switch for candela settings
  - No tools required for setting changes
  - Multi-level settings: 15cd | 30cd | 75cd | 95cd
- High and Low audible outputs
- Reduced current draw, via cutting-edge LED technology.

The LED portions of the Siemens 'SL'-series of strobes and horn-strobes meet the 20 millisecond light-pulse-duration requirements of the 2016 edition of NFPA 72. By meeting this latest requirement, existing Xenon as well as the new LED-technology devices can now be in the same field-of-view.

The horn, strobe and horn-strobes in this Siemens 'SL'-series of notification appliances have received UL / ULC Listed status by attaining compatible testing standards with all of the Siemens fire-alarm control panels (FACPs) and accessories that have been determined to be aligned with existing Siemens strobe-based appliances.

This would include the following existing model-types: ' CH' | 'HS' | 'MTH' | 'S-HQ' | 'AS' | 'SE' | 'SEF' | 'SET' | 'ST' | 'STH' | 'ZR' and 'ZH' Series notification appliances. The regulatory listing also includes the capability for installing the Siemens 'SL'-series sounder-strobes in the same notification zone and field-of-view with any existing Siemens Notification Appliance Xenon-based strobes.

All these horns, strobes and horn-strobes models are UL Listed
(for indoor use under Standard 1971 and 464), as well as ULC-S525 | ULC-S526 Listed.
The Siemens 'SL'-series sounder-strobes also have ADA | ROHS and ICES approval.

Electrical Ratings

Ceiling-Mount | Horn-Strobes Output Current Draw

UL Current Ratings (Horn dB) in Amps)
18.0 – 33.0 VDC

MODEL 'SLHSC' SERIES:	Setting	15cd	30cd	75cd	95cd
	Code 3	0.044	0.186	0.143	0.269
	Continuous	0.049	0.067	0.187	0.274

UL Current Ratings (LOW dB) in Amps)
18.0 – 33.0 VDC

MODEL 'SLHSC' SERIES:	Setting	15cd	30cd	75cd	95cd
	Code 3	0.042	0.054	0.141	0.249
	Continuous	0.045	0.066	0.183	0.271

Ceiling-Mount | Horn-Only | Output Current Draw

Current Ratings (Code 3) in Amps)
RMS Current @ 24 Volts DC

MODEL 'SLHC' SERIES:	Regulated Voltage Range, VDC	High	Low
	8.0 – 17.5 VDC	0.034	0.018
	18.0 – 33.0 VDC	0.036	0.022

Ceiling-Mount | Strobe-Only Output Current Draw

Current Ratings (in Amps)
RMS Current @ 24 Volts DC

MODEL 'SLSC' SERIES:	Regulated Voltage Range	15cd	30cd	75cd	95cd
	18.0 – 33.0 Volts DC	0.040	0.058	0.171	0.256

GENERAL NOTES

1. Strobes are designed to flash at 1-flash-per-second minimum over their ' Regulated Voltage Range.'
2. NFPA-72 specifies a flash rate of 1-to-2 flashes-per-second, and guidelines for the Americans with Disabilities Act (ADA) specify a flash rate of 1- to-3 flashes-per-second.
3. All candela ratings represent minimum effective Strobe intensity based on UL 1971.

Technical Data

General Properties

MODEL 'SL'-series	
OPERATING TEMPERATURE	• 32° F (0°C) to 122°F (50°C) • for indoor applications use only
RELATIVE HUMIDITY:	93%, maximum
OPERATING VOLTAGE RANGES:	• 8.0 VDC	VFWR	➔ 8 – 17.5 VDC	VFWR; • 24 VDC	VFWR	➔ 18 – 33 VDC/VFWR
STROBE OUTPUT RATING:	• UL 1971, ULC-S526 • Field-selectable 15cd	30cd	75cd	95cd candela outputs
STROBE FLASH RATE:	Strobes are designed to flash at one-flash-per-second
STROBE SYNCHRONIZATION	• all Siemens addressable panels • Siemens FAD-4™ NAC Extenders • Siemens dual-sync (DSC) modules, which provide the unique Siemens proprietary synchronization protocol
TEMPORAL PATTERN:	• Continuous • Code 3 (½ second on, ½ second off, then ½ second on, ½ second off, followed by ½ second on, 1½ second off and repeat) NOTES: The Code 3 pattern is specified by ANSI and NFPA 72 for Standard Emergency Evacuation Signaling.

Physical Properties

MODEL 'SL'-series	
MATERIAL:	• White-in-(—) textured, ultraviolet (UV) stabilized, colored impregnated engineered plastic • Exceeds 94V-0 UL flammability ratings
WEIGHT	0.35 Lbs. (0.16 Kg.)
LENS TYPE:	LED strobe situated in a rugged Lexan lens
DIMENSIONS	3 ½" (7.95 cm.) (H) 3 ½" (7.95 cm.) (W) 1.6" (3.81 cm.) (D)

Mounting and Wiring Properties

MODEL 'SL'-series	
INDOOR MOUNTING:	• Ceiling-mount applications • Model SLSB8C backboxes or to 4" (10.2 cm.) square • 1.9" (cm.) or 2 1/2" (cm.) octagonal • 1.9" (cm.) or 2 1/2" (cm.) deep
WIRING TYPE	#12 – #18, American Wire Gauge (AWG)

Details for Ordering

MODEL	PART NUMBER	APPLIANCE TYPE	UL	ULC	MOUNTING TYPE	STROBE TYPE	FACEPLATE COLOR	FACEPLATE LETTERING
SLHCR-N	554329-F12-A1	Horn	✓	✓	Ceiling	– None –	WHITE	– None –
SLHCR-N	554329-F12-A2		✓	✓	Ceiling	– None –	WHITE	– None –
SLHSCR-F	554329-F13-A1	Horn-Strobe	✓	—	Ceiling	Clear	WHITE	FIRE
SLHSCR-F	554329-F13-A2		✓	—	Ceiling	Clear	RED	FIRE
SLHSCR-FB	554329-F14-A1	Horn-Strobe	—	✓	Ceiling	Clear	WHITE	– Pictogram –
SLHSCR-FB	554329-F14-A2		—	✓	Ceiling	Clear	RED	– Pictogram –
SLSCRF	554329-F15-A1	Strobe	✓	—	Ceiling	Clear	WHITE	FIRE
SLSCR-F	554329-F15-A2		✓	—	Ceiling	Clear	RED	FIRE
SLSCRF-FB	554329-F16-A1	Strobe	—	✓	Ceiling	Clear	WHITE	– Pictogram –
SLSCR-FB	554329-F16-A2		—	✓	Ceiling	Clear	RED	– Pictogram –
SLSCRF-AL	554329-F17-A1	Strobe	✓	✓	Ceiling	Clear	WHITE	ALERT
SLSCR-AL	554329-F17-A2		✓	✓	Ceiling	Clear	RED	ALERT
SLSCRF-ALA	554329-F18-A1	Strobe	✓	✓	Ceiling	Amber	WHITE	ALERT
SLSCR-ALA	554329-F18-A2		✓	✓	Ceiling	Amber	RED	ALERT
SLSCRF-NA	554329-F19-A1	Strobe	✓	✓	Ceiling	Amber	WHITE	– None –
SLSCR-NA	554329-F19-A2		✓	✓	Ceiling	Amber	RED	– None –
SLSCRF-N	554329-F20-A1	Strobe	✓	—	Ceiling	Clear	WHITE	– None –
SLSCR-N	554329-F20-A2		✓	—	Ceiling	Clear	RED	– None –
SLHSCR-A	554329-F32-A2	Horn-Strobe	✓	✓	Ceiling	Clear	RED	AGENT
SLHSCRF-AW	554329-F33-A1	Horn-Strobe	✓	✓	Ceiling	Clear	WHITE	AGENT
SLHSCR-AL	554329-F33-A1	Horn-Strobe	✓	✓	Ceiling	Clear	WHITE	ALERT
SLHSCR-AL	554329-F33-A2		✓	✓	Ceiling	Clear	RED	ALERT
SLHSCRF-N	554329-F36-A1	Horn-Strobe	✓	—	Ceiling	Clear	WHITE	– None –
SLHSCR-N	554329-F36-A2		✓	—	Ceiling	Clear	RED	– None –
SLSCR-A	554329-F65-A1	Strobe	✓	✓	Ceiling	Clear	WHITE	AGENT
SLSCR-A	554329-F37-A2		✓	✓	Ceiling	Clear	RED	AGENT
SLSBBCR	554329-F55-A1	Backbox	✓	✓	Ceiling	– None –	WHITE	– None –
SLSBBCR	554329-F55-A2		✓	✓	Ceiling	– None –	RED	– None –

NOTICE – The information contained in this data-sheet document is intended only as a summary, and is subject to change without notice. The product(s) described here has/have a specific instruction sheet(s) that cover various technical, limitation and liability information.

Copies of install-type, instruction sheets – as well as the *General Product Warning and Limitations* document, which also contains important data, are provided with the product. Id are available from the Manufacturer.

Data contained in the aforesaid type of documentation should be consulted with a fire-safety professional before specifying or using the product.

Any further questions or assistance concerning particular problems that might arise, relative to the proper functioning of the equipment, please contact the Manufacturer.

SIEMENS

Siemens Industry, Inc.
Building Technologies Division
8 Fernwood Road • Florham Park, NJ 07932
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October 2018 – Supersedes sheet dated 4/2018
(Rev. 2)

SIEMENS
Ingenuity for life

Notification Appliances
'SL' Series – Horns | Strobes
Horn-Strobes

Applications : Indoor, Ceiling-Only

Architect & Engineer Specifications

- Sophisticated series of notification appliances that meets fire-industry codes and regulations for commercial-building applications
- Compatible with the Siemens 50-point, 252-point and 504-point addressable fire alarm control panels (FACPs), and with:
  - Siemens Modular FACPs
  - Siemens FAD-series of NAC extenders
  - FireFinder® XLS / XLSV FACPs
  - Siemens dual-sync control (DSC) modules
- Innovative LED strobe technology provides an energy-efficient means for a significantly reduced current draw
  - Capability to have existing Xenon and new LED strobes in the same field-of-view
  - Fewer power supplies required, smaller wire gage, reduced wire runs
- Straightforward installation coupled with compact, modern design
  - No visible mounting screws
  - Manual (Index Finger) slide-setting adjuster
  - Four (4) field-selectable settings in one (1) device: 15cd | 30cd | 75cd | 95cd
- Faceplates ship in four (4) distinctive types:
  - FIRE | " ALERT " | " AGENT " | (blank)
- Two (2) audible settings in each notification appliance
  - Temporal or steady horn output
  - High or Low setting
- UL (2034 | 1971 | 464) and ULC Listed (ULC-S525 | -S536)
  - ADA | NFPA | FCC| ANSI | OSHA compliant

Product Overview

Formed as the 'SL'-series, Siemens is now offering horns, strobes, and horn-strobes to its notification-appliances portfolio. With the 'SL'-series, Siemens now offers an additional range of products with low and high candela settings that makes these sophisticated notification appliances ideal for new installs and retrofit applications.

Innovative light-emitting diode (LED) strobe technology provides an energy-efficient means for a significantly reduced current draw.

The strobe portion of these appliances meets the 20 millisecond light pulse-duration requirements of the 2016 edition of NFPA 72. This feature allows existing Xenon and the new LED devices to be used in the same field-of-view.

In a single device, the 'SL'-series can provide alarm-signaling tones for dual applications. All strobe models in the series feature multi-candela settings (15 | 30 | 75 | 95cd) on a single appliance.

Additionally, there are two (2) modes of operation for the audible portion of these notification appliances:

- T3 (coded)
- Continuous

The 'SL'-series of horns, strobes and horn-strobes devices are produced in a sleek, modern design. Its structure and design provide high-quality energy efficiency in an aesthetically pleasing, low-profile design that is consistent to the look of the interior composition of the building application.

This 'SL'-series is exclusive to indoor ceiling-mount applications. The Model 'SLHC'-series horn appliances work in either 12V or 24VDC, whereas the Series 'SLSC' and 'SLHSC' strobe and horn-strobe devices are specifically for 24V operation.

Models SLHSCR-F | SLSCW-AL | SLHCR-N

Horn-Strobe | Strobe | Horn

Siemens
Building Technologies Division

Data Sheet 2594
usa.siemens.com/fire

Specifications

In terms of composition and functionality, Models 'SLHC '-series, 'SLSC '-series, and 'SLHSC '-series provide added value to the installer for the types of applications for operation:

- Compact | sleek | low-profile design
- Comprehensive feature list
- Convenient mounting options
- Easy-to-adjust selection-slider switch for candela settings
  - No tools required for setting changes
  - Multi-level settings: 15cd | 30cd | 75cd | 95cd
- High and Low audible outputs
- Reduced current draw, via cutting-edge LED technology.

The LED portions of the Siemens 'SL'-series of strobes and horn-strobes meet the 20 millisecond light-pulse-duration requirements of the 2016 edition of NFPA 72. By meeting this latest requirement, existing Xenon as well as the new LED-technology devices can now be in the same field-of-view.

The horn, strobe and horn-strobes in this Siemens 'SL'-series of notification appliances have received UL / ULC Listed status by attaining compatible testing standards with all of the Siemens fire-alarm control panels (FACPs) and accessories that have been determined to be aligned with existing Siemens strobe-based appliances.

This would include the following existing model-types: ' CH' | 'HS' | 'MTH' | 'S-HQ' | 'AS' | 'SE' | 'SEF' | 'SET' | 'ST' | 'STH' | 'ZR' and 'ZH' Series notification appliances. The regulatory listing also includes the capability for installing the Siemens 'SL'-series sounder-strobes in the same notification zone and field-of-view with any existing Siemens Notification Appliance Xenon-based strobes.

All these horns, strobes and horn-strobes models are UL Listed
(for indoor use under Standard 1971 and 464), as well as ULC-S525 | ULC-S526 Listed.
The Siemens 'SL'-series sounder-strobes also have ADA | ROHS and ICES approval.

Electrical Ratings

Ceiling-Mount | Horn-Strobes Output Current Draw

UL Current Ratings (Horn dB) in Amps)
18.0 – 33.0 VDC

MODEL 'SLHSC' SERIES:	Setting	15cd	30cd	75cd	95cd
	Code 3	0.044	0.186	0.143	0.269
	Continuous	0.049	0.067	0.187	0.274

UL Current Ratings (LOW dB) in Amps)
18.0 – 33.0 VDC

MODEL 'SLHSC' SERIES:	Setting	15cd	30cd	75cd	95cd
	Code 3	0.042	0.054	0.141	0.249
	Continuous	0.045	0.066	0.183	0.271

Ceiling-Mount | Horn-Only | Output Current Draw

Current Ratings (Code 3) in Amps)
RMS Current @ 24 Volts DC

MODEL 'SLHC' SERIES:	Regulated Voltage Range, VDC	High	Low
	8.0 – 17.5 VDC	0.034	0.018
	18.0 – 33.0 VDC	0.036	0.022

Ceiling-Mount | Strobe-Only Output Current Draw

Current Ratings (in Amps)
RMS Current @ 24 Volts DC

MODEL 'SLSC' SERIES:	Regulated Voltage Range	15cd	30cd	75cd	95cd
	18.0 – 33.0 Volts DC	0.040	0.058	0.171	0.256

GENERAL NOTES

1. Strobes are designed to flash at 1-flash-per-second minimum over their ' Regulated Voltage Range.'
2. NFPA-72 specifies a flash rate of 1-to-2 flashes-per-second, and guidelines for the Americans with Disabilities Act (ADA) specify a flash rate of 1- to-3 flashes-per-second.
3. All candela ratings represent minimum effective Strobe intensity based on UL 1971.

Technical Data

General Properties

MODEL 'SL'-series	
OPERATING TEMPERATURE	• 32° F (0°C) to 122°F (50°C) • for indoor applications use only
RELATIVE HUMIDITY:	93%, maximum
OPERATING VOLTAGE RANGES:	• 8.0 VDC	VFWR	➔ 8 – 17.5 VDC	VFWR; • 24 VDC	VFWR	➔ 18 – 33 VDC/VFWR
STROBE OUTPUT RATING:	• UL 1971, ULC-S526 • Field-selectable 15cd	30cd	75cd	95cd candela outputs
STROBE FLASH RATE:	Strobes are designed to flash at one-flash-per-second
STROBE SYNCHRONIZATION	• all Siemens addressable panels • Siemens FAD-4™ NAC Extenders • Siemens dual-sync (DSC) modules, which provide the unique Siemens proprietary synchronization protocol
TEMPORAL PATTERN:	• Continuous • Code 3 (½ second on, ½ second off, then ½ second on, ½ second off, followed by ½ second on, 1½ second off and repeat) NOTES: The Code 3 pattern is specified by ANSI and NFPA 72 for Standard Emergency Evacuation Signaling.

Physical Properties

MODEL 'SL'-series	
MATERIAL:	• White-in-(—) textured, ultraviolet (UV) stabilized, colored impregnated engineered plastic • Exceeds 94V-0 UL flammability ratings
WEIGHT	0.35 Lbs. (0.16 Kg.)
LENS TYPE:	LED strobe situated in a rugged Lexan lens
DIMENSIONS	3 ½" (7.95 cm.) (H) 3 ½" (7.95 cm.) (W) 1.6" (3.81 cm.) (D)

Mounting and Wiring Properties

MODEL 'SL'-series	
INDOOR MOUNTING:	• Ceiling-mount applications • Model SLSB8C backboxes or to 4" (10.2 cm.) square • 1.9" (cm.) or 2 1/2" (cm.) octagonal • 1.9" (cm.) or 2 1/2" (cm.) deep
WIRING TYPE	#12 – #18, American Wire Gauge (AWG)

Details for Ordering

MODEL	PART NUMBER	APPLIANCE TYPE	UL	ULC	MOUNTING TYPE	STROBE TYPE	FACEPLATE COLOR	FACEPLATE LETTERING
SLHCR-N	554329-F12-A1	Horn	✓	✓	Ceiling	– None –	WHITE	– None –
SLHCR-N	554329-F12-A2		✓	✓	Ceiling	– None –	WHITE	– None –
SLHSCR-F	554329-F13-A1	Horn-Strobe	✓	—	Ceiling	Clear	WHITE	FIRE
SLHSCR-F	554329-F13-A2		✓	—	Ceiling	Clear	RED	FIRE
SLHSCR-FB	554329-F14-A1	Horn-Strobe	—	✓	Ceiling	Clear	WHITE	– Pictogram –
SLHSCR-FB	554329-F14-A2		—	✓	Ceiling

Data Sheet

Intelligent Peripheral Devices

4-Input / 4-Output Interface Module
Model FDCIO422

ARCHITECT AND ENGINEER SPECIFICATIONS

- **Four (4) inputs / four (4) outputs via one (1) address**
- **Light-emitting diode (LED) screen of all input / output functions**
- **Input lines can be supervised for open, short and ground-fault conditions**
- **Supports 'Class A' and 'Class B' input-circuit wiring**
- **Polarity insensitive utilizing *SureWire*™ technology**
- **Microprocessor-controlled signal evaluation**
- **Two-wire installation, per addressable loop**
- **Power supply via C-NET module**
- **Communication via C-NET**
  - Individual addressing
- **Four (4) AC-rated / DC-rated outputs**
- **Mounts in one (1) electrical back box**
  - Optional 12-cm. and 12.7-cm. square back boxes
- **Restriction of Hazardous Substances (RoHS compliant)**
- **Electronic address programming is easy and dependable**
- **Easy front-end access to programming port and wiring terminals**
- **Model 8720 / DPU programs and verifies device's address, as well as performs test functionality**
- **®ULC Listed;**
  FM (*3230), CSFM (*7165-0067:0264) and NYC Department Approved

Model FDCIO422
[white front plate included]

Product Overview

The four (4) input / (4) output interface module (Model FDCIO422) from Siemens — Fire Safety is designed to provide the means of interfacing direct shorting devices to the Device Loop Card (Model DLC); FireFinder® XLS, as well as the Cerberus PRO fire-alarm control panels (FACPs).

Model FDCIO422, which contains microcomputer-chip (*SureWire*) technology and is polarity insensitive, achieves the state of an 'intelligent device' through its highly advanced method of address programming and supervision — combined with its sophisticated, bi-directional FACP communication.

The relays and contact device inputs for Model FDCIO422 are controlled at the same address. From the FACP, the relays and input contacts can be controlled as a separate function. The relay is typically used where control or shunting of external equipment is required. Four (4) independent in/out circuits are permissible on one (1) Model FDCIO422 module.

Model FDCIO422 is designed to monitor Normally Open (N.O) or Normally Closed (N.C) dry contacts. Each interface module reports the status of the (N.O) or (N.C) to the FACP.

Cerberus® PRO
Fire Safety Products

9905C
Four (4) In/Out Interface Module

Answers for infrastructure

SIEMENS

Specifications — (continued)

Separators are delivered in the following sizes:
- 12 cm. [4-$^{15}/_{16}$ –inch] back box
- 12 cm. [4-$^{15}/_{16}$ –inch] extension ring

Note: Optional 12.7 cm. back boxes are available exclusively via Rand Industries, Inc.

Model FDCIO422 has a multi-color LED that flashes GREEN when operating in 'normal' (standby) condition; AMBER if unit is in a Trouble event, and RED to indicate a change of event status.

Model FDCIO422, which is fitted with screw terminals for connection to an addressable circuit, is fully compatible on the same circuits all Siemens Model M-series detectors; Model MMS series addressable manual stations, or any other addressable intelligent modules, such as Model HZM or Model HCP.

Field-Device Programmer / Test Unit

Model FDCIO422 is compatible with the Siemens field-device programmer / test unit (Model DPU / 8720), which is a compact, portable and menu-driven accessory for electronically programming and testing Model FDCIO422 easily and reliably.

Model DPU / 8720 eliminates the need for cumbersome, unreliable mechanical programming methods — such as dials or rotary switches — and reduces installation and service costs by electronically programming and testing the detector prior to installation (via the interface's microcomputer-chip, non-volatile memory).

For proper operation of Model DPU / 8720, the technician selects the accessory's program mode, and enters the desired address. In turn, Model DPU / 8720 automatically sets and verifies the address, as well as tests Model FDCIO422. When in the 'test' mode, Model DPU / 8720 will perform a series of diagnostic tests without altering the address or other stored data, allowing technicians to determine if the detector is operating properly.

Model DPU / 8720 operates on AC power or rechargeable batteries, providing flexibility and convenience in programming and testing equipment from practically any location. Further, vibration, corrosion and other conditions that deteriorate mechanical-addressing mechanisms are no longer a cause for concern.

Specifications
Model FDCIO422 is used for the connection of up to two (2) independent (2- $\Rightarrow$ 2) 'Class A' or four (4) independent 'Class B,' dry and N.O-configurable contacts. Input lines can be supervised for open, short and ground-fault conditions (depending on end-of-line [EOL] termination resistor and class configuration).

Inputs can be independently configured, via the FACP, for Alarm, Trouble, Supervisory or Status zones.

Model FDCIO422 has four (4) programmable outputs with four (4) potential free-latching type 'Form A' (dry) relay contacts for fire-control installations.

The FACP's C-NET module provides supervised, power-limited power supply for Model FDCIO422. The four (4) input / (4) output interface module provides status indication per LED for each input / output, plus one (1) LED for general device status. Also included with Model FDCIO422 are four (4) EOL devices of 470 ohms (Ω), as well as three (3) separators to split power-limited wiring from non-power-limited wiring.

Electrical Ratings

Voltage Rating:	12VDC – 32VDC
Maximum Voltage: (C-net modules)	32VDC
Operating current: (quiescent)	1mA
Peak Current:	1.92mA, max.

Supervised switch ratings

Monitoring Voltage:	3VDC
Cable-length input:	61 meters (200 feet), max.
Input-shielding cable-length range:	9.14m — 61m (30 ft – 200 ft)
C line-to-line:	0.02 μF, max.
C line-to-shield:	0.04 μF, max.
Line Sizes: American Wire Gauge (AWG)	14 AWG, max; 18 AWG, min.

Technical Data

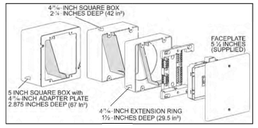
Communication Protocol:	C-net (supervised signaling-line circuit, power limited)
Storage Temperature Range:	30° – 60 °C (-22° – 140 °F)
Operating Temperature Range:	0° – 49 °C (-32° – 120 °F)
Relative Humidity:	5 – 85 % (non-freezing and condensing at low temperature)
Color:	Carrier: RAL 9017
Cage Cover:	Transparent
Cage:	RAL 9017
Faceplate:	White
Dimensions: (H = H ⇕)	12 cm. ⇔ 12 cm. ⇔ 3.1 cm. (4" ⇔ 4.7"⇔ 1.2")
Weight:	454 g. (1 Lb.)
Volume: (Cage and Carrier)	29.7 cm^3

Notes:
- AC output ratings are only applicable to Model FDCIO422 interface modules that have Engineering State (ES) version 'ES' or higher.
- The part number (SS4322-F4-A1) for Model FDCIO422 is found on the back of the module, and the ES version is placed just the right of the part number (See **Page 3** for an illustration).
- Refer to Installation Operation Manual, IOM: A6V10324662, for further details.

NOTICE

AC ratings must not be used with modules with ES less than 10. The ES number can be found on the label:

Mounting Diagram
— Model FDCIO422 Control-Module (Supplied) Barrier —



FACP Compatibility Table

Model	Data Sheet Number	Description
FC922	9815C	252-point system (networkable)
FC924	9815C	504-point system (networkable)

Details for Ordering

Model	Part Number	Description
FDCIO422	S54322-F4-A1	Four (4) Input / Four (4) Output Interface Module
FDCIO422-EOL	S54312-F7-A1	End-of-Line (EOL) Resistor (1/2-Ω ±1% 1/4 W)
TB-EOL	S54322-F4-A2	TB – EOL Terminal

Model FDCIO422-EOL
[End-of-line resistor]

Optional Accessories
(available via Randl Industries, Inc.)

Part Number	Description
M-411000	12 cm. [4-$^{15}/_{16}$-inch] adapter plate
TS5017	12 cm. [4-$^{15}/_{16}$-inch] back box
TS5018	12.7 cm. [5-inch] back box
TS5019	12.7 cm. [5-inch] back box

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SIEMENS Cerberus® PRO

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NOTICE — The information contained in this data-sheet document is intended only as a summary, and is subject to change without notice. The devices described here have specific instruction sheets that are packaged with the devices and should be consulted.

Copies of these instruction sheets and the *General Product Warning and Limitations* document, which also contains important information, are provided with the product and, are available from the Manufacturer.

Information contained in these documents should be consulted before specifying or using the product. For further information or assistance concerning particular problems contact the Manufacturer.

Building Technologies Division
SI – Fire Safety
[Printed in U.S.A.]

November 2015 — Supersedes sheet dated (-2015 (Rev. A)

Data Sheet

Intelligent Detection Devices

Photoelectric Smoke Detector
Model OP921

—ARCHITECT AND ENGINEER SPECIFICATIONS—

- **Compatible with Siemens Model 'H'-series devices on the same loop (with Cerberus PRO fire-alarm control panels [FACPs] or FireFinder® XLS FACPs)**
- **Compatible with Model 8720 / DPU (device programmer / loop tester)**
- **Utilizes advanced microprocessor-based signal processing**
- **Extended temperature and humidity operating range**
- **Each detector is self-testing:**
  - Self monitored for sensitivity within ®UL Listed limits
  - Complete diagnostics performed every 10 seconds
- **Polarity insensitive utilizing *SureWire*™ technology**
- **Compatible with Model DB-11– series mounting bases**
- **Tri-color detector-status LED with 360° viewing**
- **Field-selectable application sensitivity profiles**
- **Remote sensitivity measurement capability**
- **Utilizes advanced signal processing**
- **Superior EMI / RFI immunity**
- **RoHS compliant**
- **Automatic environment compensation**
- **®UL268A Listed [for direct air-duct use], ®ULC Listed; FM and CSFM Approved**

Product Overview

The Photoelectric Smoke Detector (Model OP921) uses state-of-the-art microcontroller circuitry and surface-mount technology for maximum reliability. Model OP921 incorporates an optical sensor using a light-scattering detection principle. The device utilizes advanced software algorithms to analyze the signals, and provides highly stable and accurate smoke detection.

Further, Model OP921 uses state-of-the-art microprocessor circuitry with error check, detector self-diagnostics, and supervision programs.

Field-Device Programmer / Test Unit

Model OP921 is compatible with the Siemens field-device programmer / test unit (Model 8720 / DPU), which is a compact, portable, menu-driven accessory for electronically programming and testing detectors easily and reliably.

Model 8720 / DPU eliminates the need for cumbersome, unreliable mechanical-programming methods, such as dials or switches, and reduces installation and service costs by electronically programming and testing the detector prior to installation.

For proper operation of the field-device programmer / test unit, the technician selects the accessory's program mode, and enters the desired address. In turn, Model 8720 / DPU automatically sets and verifies the address, as well as tests the detector. When in the 'test' mode, Model 8720 / DPU will perform a series of diagnostic tests without altering the address or other stored data, allowing technicians to determine if the detector is operating properly.

Model 8720 / DPU operates on AC power or rechargeable batteries, providing flexibility and convenience in programming and testing equipment from practically any location.

Cerberus™ PRO
Fire Safety & Security Products

9902
Photoelectric Smoke Detector

Answers for infrastructure

SIEMENS

Product Overview — (continued)

Model 8720 / DPU operates on AC power or rechargeable batteries, providing flexibility and convenience in programming and testing equipment from practically any location.

Model OP921 is a plug-in, two-wire and addressable photoelectric smoke detector. Model OP921 is ®Underwriters' Laboratories Listed (®ULC268A Listed for direct in-air duct usage).

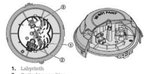
Each detector consists of a dust-resistant photoelectric chamber and microprocessor-based electronics with a low-profile plastic housing. Every Model OP921 fire detector is shipped with a protective dust cover:

1. Dust-cover
2. Smoke-detector

Operation

Model OP921 is a wide-spectrum, photoelectric smoke detector incorporating an infrared light-emitting diode (IRLED), and infrared light-sensing photodiode. Under normal conditions, light transmitted by the LED is directed away from the photodiode and scattered through the smoke chamber in a controlled pattern.

The smoke chamber is designed to manage light dissipation and extraneous reflections from dust particles or other non-smoke, airborne contaminants in such a way as to maintain stable, consistent detector operation. When smoke enters the detector chamber, light emitted from the IRLED is scattered by the smoke particles, and is received by the photodiode:



1. Labyrinths
2. Optical transmitter
3. Optical receiver

Sensitivity Settings

Application Parameter Sets

Model OP921 provides four (4) pre-programmed sensitivity parameter sets that can be selected by the FACP to match the expected application or environmental conditions:
- Sensitive
- Standard
- Robust
- Air-duct

Sensitive: This application parameter set is practically suitable for areas where few misleading sources of false alarm are present, and is appropriate where priority is given to detecting open fires as soon as possible (e.g. – typically a clean application with controlled environmental conditions.)

Standard: This application parameter set is practically apt for normal office, hotel-lobby-type applications, and is the default setting.

Robust: This application parameter set offers improved resistance to false alarms in areas where misleading sources, such as cigarette smoke or exhaust fumes, may cause a nuisance alarm.

Air-Duct: This application parameter set is used when the detector is used a ®UL268A (DI) compliant direct in-air duct application without a duct housing.

Model OP921 does not require a field sensitivity test. Model OP921 is ®UL Listed as a self-testing device and complies with NFPA 72 as a self – monitoring detector and control panel arrangement. This parameter set is also used when Model OP921 is used in air-duct housings (Models FDB2492 and FDB2493-HR).

The visible LED flashes green every 10 seconds to indicate communication with the FACP, and to notify Model OP921 has passed its self-test. Should Model OP921 sense a fault or failure within its system, the LED will flash amber, and the detector will transmit the data to the FACP.

A quick visual inspection is sufficient to indicate the condition of Model OP921 at any time. If more detailed information is required, a printed report can be provided from the compatible FACP, indicating the status and settings assigned to each individual detector. When Model OP921 moves to Alarm mode, the detector will flash red and continue flashing until the system is reset at the FACP. At that same time, any user-defined, system-alarm functions programmed into the system are activated.

Model OP921 contains a tri-color LED indicator, capable of flashing any one (1) of three (3) distinct colors: green, amber, or red. During each flash interval, the microprocessor-based detector monitors the following:

Operation — (continued)

- Smoke sensitivity is within the range indicated on the nameplate label
- Smoke in its sensing chamber
- Internal sensors and electronics are functional

Based on the monitoring results, the LED indicator flashes the following colors based on the following conditions:

Flash Color	Condition	Flash Interval (in seconds)
Green*	Normal supervisory operation; Smoke sensitivity is within rated limits.	10
Yellow	Detector is in trouble and needs replacement.	4
Red	Alarm condition.	1
No Flash	Detector is not powered.	– –

* LED can be turned OFF.
Please follow the corresponding description of the panel used.

A quick, visual inspection is sufficient to indicate the condition of the detector at any time. If more detailed information is required, a printed report can be provided from the respective Cerberus PRO FACP that indicates the status and settings assigned to each individual detector.

Installation

All Model OP921 detectors use a surface-mounting base, Model DB-11 or Model DB-11E, which mounts on a 4-inch octagonal, square or single-gang electrical box. The base utilizes screw-clamp contacts for electrical connections and self-wiping contacts for increased reliability.

The Model DB-11 base can be used with the optional Model LK11 detector locking kit, which contains 50 detector locks and an installation tool to prevent unauthorized removal of the detector head. Model DB-11 has decorative plugs to cover the outer-mounting screw holes.

Model OP921 may be installed on the same initiating circuit with the Siemens Model 'H'-series detectors [when used with the Cerberus PRO FACPs] –
- Model HFP-11
- Model 'HMS'-series manual stations
- Model 'HTRI' series interfaces
- Model HCP output-control devices
- Model 'HZM' series of addressable, conventional zone modules

Application Data

Installation of Model OP921 detectors requires a two-wire circuit. In many retrofit cases, existing wiring may be used. 'T-tapping' is permitted only for Style 4 (Class B) wiring. Model OP921 is polarity insensitive, which can greatly reduce installation and debugging time.

Model OP921 can be applied within the maximum 30-feet center spacing (900 sq. ft. areas), as indicated in NFPA 72. This application guideline is based on ideal conditions — specifically, smooth ceiling surfaces, minimal air movement, and no physical obstructions between potential fire sources and the actual detector. Do not mount detectors in close proximity to ventilation or heating and air-conditioning outlets. Exposed joints or beamed ceilings may also affect safe spacing limitations for detectors.

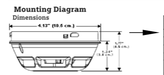
Should questions arise regarding detector placement, observe NFPA 72 guidelines, – Good fire-protection system engineering and common sense dictate how and when fire detectors are installed and used. Contact your local Siemens — Fire Safety distributor or sales office whenever you need assistance applying Model OP921 in unusual applications. Be sure to follow NFPA guidelines and ®ULC Listed / ®ULC Listed installation instructions — included with every Siemens — Fire Safety detector — and local codes as for all fire-protection equipment.

Note: For Model OP921 compatibility to FireFinder® XLS, the XLS FACP requires Model FNS-2 (no firmware upgrade is required), or Model FNS (Firmware Rev. 9 or higher is required). The detector's compatibility also requires both of following:
- Rev. 8 (or higher) 2010 custom-configuration software
- Rev. 6 (or higher) Device Loop Card (DLC) firmware

Technical Data

Operating Temperature Range:	+32°F (0°C) to 120°F (49°C)
Relative Humidity:	0 – 95%; non-condensing
Air Pressure:	No effect
Air Velocity:	0 – 4,000 ft. / min (0-20m / sec)
Input Voltage Range:	16VDC – 30VDC
Alarm Current (max.):	410μA
Standby Current (max.):	250μA, max. (average)
Maximum Spacing:	30-foot centers (900 sq. ft.), per NFPA 72
Detector Weight:	0.317 lbs. (0.144 kg.)
Mechanical Protection Guard:	®UL Listed / ®ULC Listed [with STI Guard Model STI-9604]

Mounting Diagram
Dimensions



Detector Compatibility Table

Model Number	Data Sheet Number	Description
6500	FireFinder® XLS (system overview)	
DLC	6312	Device Loop Card
FC901	9813	50-point panel
FC922	9815	252-point system (networkable)
FC924	9815	504-point system (networkable)

Details for Ordering

Model Number	Part Number	Description
OP921	S54320-F4-A1	Photoelectric Smoke Detector
DB-11	500-094751	Detector Mounting Base
DB-11E	500-094151	Detector Base (small)
DB2-HR	S54320-F12-A1	Relay Base
RL-HC	500-033230	Remote Alarm Indicator: 4"-octagon-box mount, incl. Remote Alarm Indicator: single-gang box mount, incl.
RL-HW	500-033310	
FDB2492	S54319-B22-A1	Addressable Air-Duct Housing
FDB2492-HR	S54319-B23-A1	Addressable Air-Duct Detector with Relay
LK-11	500-495150	Base Locking Kit

In Canada, order:

Model Number	Part Number	Description
DB-11C	500-095467	Detector Mounting Base for ®ULC (Listed)

March 2013 — Supersedes sheet dated (-2013 (Rev. D)

SIEMENS

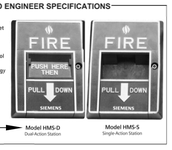
Data Sheet
Fire Safety & Security Products

Intelligent Initiating Devices

HMS-Series
Models HMS-D, HMS-S

—ARCHITECT AND ENGINEER SPECIFICATIONS—

- **Durable design**
- **Shock-and-vibration resistant**
- **Pull-down lever is down, until manually reset**
  - Reset with Allen-key
  - No break rods necessary
- **Custom microcomputer-chip technology**
- **Dynamic supervision to the fire-alarm control panel (FACP)**
- **Polarity insensitive via *SureWire*™ technology**
- **Two-wire operation**
- **Surface or semi-flush installation**
- **Model DPU programs and verifies address and tests functionality of each device**
  - Electronic-address programming is easier, more efficient and more dependable
- **Comes in single-action (Model HMS-S) and double-action (Model HMS-D) stations**
- **®UL Listed;**
  FM-, CSFM & NYC Fire Dept. Approved



Model HMS-D
Dual-Action Station

Model HMS-S
Single-Action Station

Product Overview

Models HMS-S and HMS-D intelligent manual fire-alarm boxes provide the most advanced method of address programming and supervision. Each Model HMS-series manual fire-alarm box achieves the state of an 'intelligent-initiating device' by incorporating custom microcomputer-chip technology with sophisticated, bi-directional communication capabilities with the FACP.

Specifications

Models HMS-S and HMS-D are constructed of durable, molded polycarbonate material that is matte finished in red with raised white lettering. The housing accommodates a 'pull-down' lever, which — when operated — locks into position; indicating the manual fire-alarm box has been activated.

The pull-down lever remains down / in the 'locked' position, until the fire-alarm box is manually reset. The manual fire alarm box can only be reset by opening the hinged housing cover with an Allen key; followed by closing and locking the cover.

Models HMS-S and HMS-D operate with Siemens — Fire Safety FACPs. The microcomputer chip to the manual fire-alarm box has the capacity of storing — in memory — identification information as well as important operating-status data.

Innovative technology from Siemens — Fire Safety also allows all Model HMS-series intelligent manual fire-alarm boxes to be programmed via the Device Programmer / Test Unit (Model DPU). Model DPU is a compact, portable and menu-driven accessory that makes programming and testing of a manual fire-alarm box device faster, easier and more dependable than previous methods.

The programmer / tester eliminates the need for mechanical-addressing mechanisms of a device because Model DPU electronically sets the address of the manual fire-alarm box into its microcomputer chip, non-volatile memory. Hence, vibration, corrosion and other conditions that can compromise or even deteriorate mechanical-addressing mechanisms are no longer a cause for concern.

HMS Series Intelligent Initiating Devices **6306**

Specifications — (continued)

Models HMS-S and HMS-D are fitted with screw terminals for connection to an addressable circuit, and can be either surface or semi-flush mounted.

The Model HMS-series manual fire-alarm boxes derive their power, communicate information and receive commands over a single pair of wires.

The Model HMS-series is compatible on the same circuit with all 'H'-series detectors, interfaces or addressable, conventional zone modules.

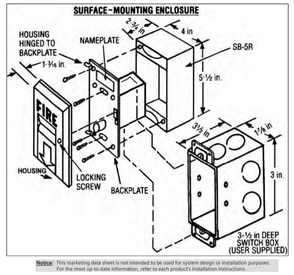
Details for Ordering

Model Number	Part Number	Description	Shipping Lbs.	Weight kg.
HMS-S	500-033550	Addressable Manual Fire Alarm Box Single Action	2.0	.90
HMS-D	500-033400	Addressable Manual Fire Alarm Box Dual Action	2.5	1.13
SB-SR	516-01868	Surface-Mounting Box	1.5	0.68
STP	500-62948	Reset/Test Package (Contains 2 tools)	0.5	0.23

Electrical Ratings

Current Draw (Active or Standby) = 1.5mA

Mounting Diagram



Notice: This marketing data sheet is not intended to be used for system design or installation purposes. For the most up-to-date information, refer to each product's installation instructions.

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February 2013
Supersedes sheet dated 10/13 (Rev. A)

City of Puyallup
Development & Permitting Services
ISSUED PERMIT

Building	Planning
Engineering	Public Works
Fire	Traffic

ISSUE LOG:

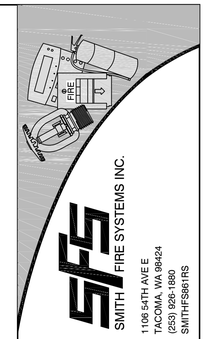
DATE	INT	DESCRIPTION
11/16/21	JM	REPLACED HEATS WITH SMOKES IN DATA AND RESTROOMS
2/22/22	JM	ADDED SMOKES ABOVE CEILING

REVISED SET

DESIGNER: JEF MARQUEZ
ISSUE DATE: 11/15/21
PROJECT #: FA21120
SYSTEM: FIRE ALARM
SHEET: PRODUCT DATA SHEETS

FA903

FORD LINCOLN VITRINE
150 RIVER RD
PUYALLUP, WA 98371
PARCEL# 0420281162



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C PRODUCT DATA SHEETS