

GREAT I AKE AMBULATORY 16100 19 MILE RD. CLINTON TWP., MI. 48038

SYSTEM INPUTS

1 Manual Fire Alarm Boxes

Flow Switches

4 Tamper Switches 5 Duct Detectors

6 Primary Lobby Smoke

Alternate Lobby Smoke

15 Fire Alarm System Low Battery

16 Open/Short Circuit

PROJECT #

SYSTEM OUTPUTS

Emergency Elevator Control Required Fire Safety Control

Control Unit Annunciation

OPERATIONAL MATRIX

26471

DRAWN BY SDM

ENGINEER NICET #

PRC 105844

PROJECT MGR

SOLD BY TC

D 48038

 $\langle \Box$

PROJECT: GREAT LAKES
16100 19 MILE ROAD
CLINTON TWP, MI, 4803

SHEET NO.

COVER, INFORMATION RISER

FAO

SUBMITTALS FA0a-b

FA1 FIRE ALARM PLAN CONTRACTOR: VETCON, INC. 412 S. SAGINAW ST.

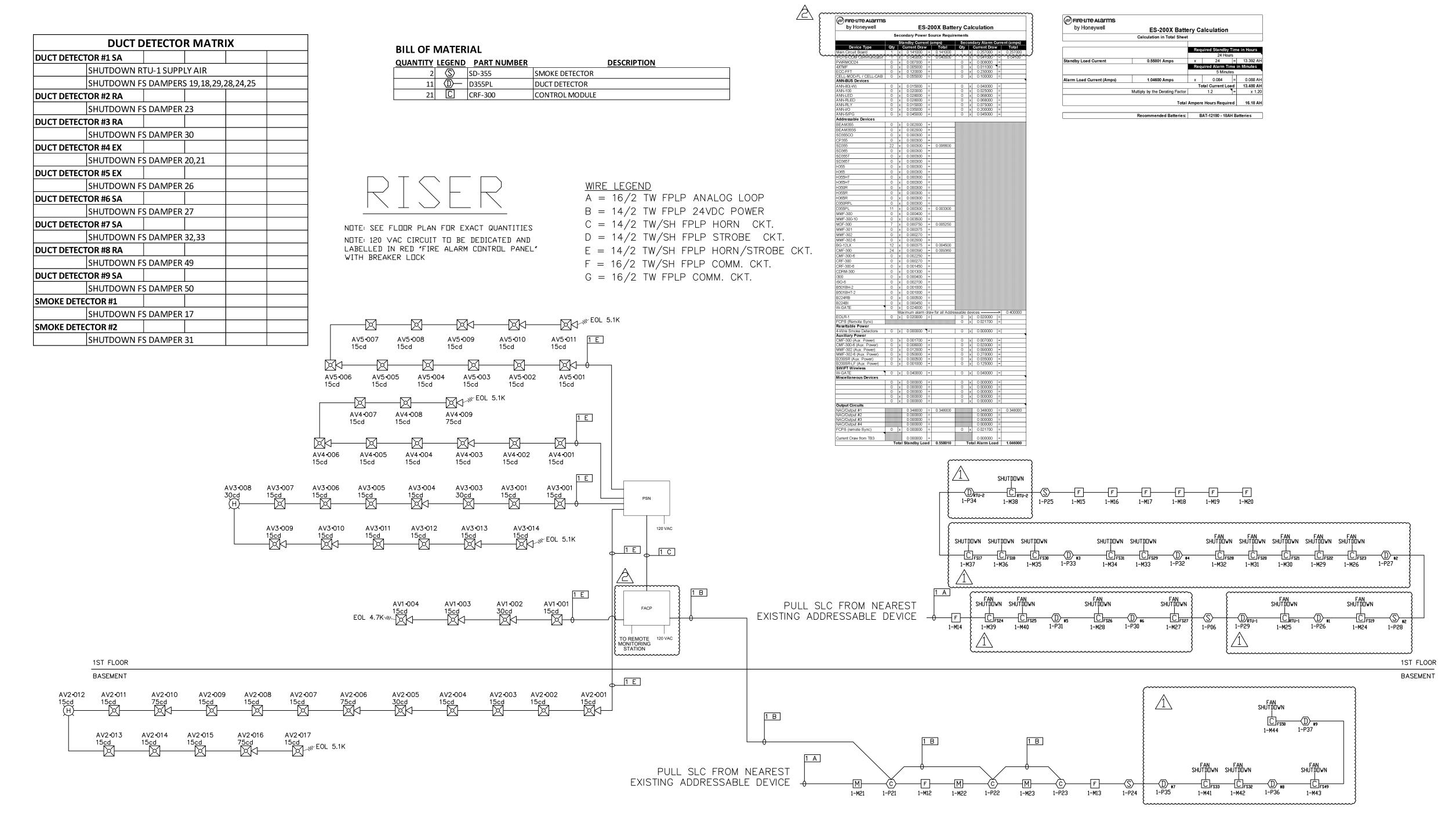
SUITE 206 FLINT, MI 48502

PHONE: 810-820-2468

DESIGN CRITERIA: BUILDING " USE GROUP B" 2015 MICHIGAN BUILDING CODE 2013 NFPA 72

SMOKE DETECTOR SMOKE DETECTOR W. ENTRANCE SMOKE DETECTOR GAS STORAGE RM O.R. #1 LECT/COMM RM ABOVE PSN SMOKE DETECTOR SMOKE DETECTOR SOILED UTILITY RM. SMOKE DETECTOR CORRIDOR BY O.R. SMOKE DETECTOR CLEAN UTILITY RM. O.R. #2 STAFF LOCKER RM. #1 SHUTDOWN DAMPER FS17 1 RESTROOM WEST SMOKE DETECTOR STERILE STORAGE SMOKE DETECTOR SMOKE DETECTOR SMOKE DETECTOR TOP OF ELEVATOR SHAFT TENANT SPACE ABOVE ELEVATOR SMOKE DETECTOR S. STAIR ABOVE ELEVATOR SMOKE DETECTOR ELEVATOR MACHINE RM. SMOKE DETECTOR ENANT SPACE ABOVE ELEVATOR FURNACE RM #02 ELECTRICAL ROOM SMOKE DETECTOR NORTH RESTROOM SCRUB AREA # 1 SUPPLY AIR SCRUB AREA #2 RETURN AIR SMOKE DETECTOR SCRUB AREA #2 SHUTDOWN DAMPER FS31 SCRUB AREA RTU-1 RETURN PRE-OP RECOVERY #6 SUPPLY AIR DUCT DETECTOR PRE-OP RECOVERY #5 EXHAUST AIR DUCT DETECTOR NORTH CORRIDOR #4 EXHAUST AIR DUCT DETECTOR EMPLOPEE LOCKER #3 RETURN AIR RTU-2 RETURN AIR DUCT DETECTOR ELECTRICAL ROOM #7SUPPLY AIR DUCT DETECTOR DUCT DETECTOR TREATMENT #8 RETURN AIR DUCT DETECTOR TREATMENT #9 SUPPLY AIR

CIRC	UIT ADDRESS	DEVICE	DESCRIPTION	FLOOF
1	M1 -	PULL STATION	BY FACP	1
1	M2	PULL STATION	W. EXIT	1
1	M3	MONITOR MODULE	RECOVERY RM. DUCT DETECTOR	1
1	M4	MONITOR MODULE	S.W. BASEMENT FLOW SWITCH	В
1	M5	MONITOR MODULE	S.W. BASEMENT TAMPER SWITCH	В
1	M6	MONITOR MODULE	S.W. BASEMENT TAMPER SWITCH	В
1	M7	CONTROL RELAY	DAMPER RELAY	1
1	M8	PULL STATION	N. EXIT	1
1	M9	CONTROL RELAY	ELEVATOR PRIMARY RECALL	В
1	M10	CONTROL RELAY	ELEVATOR ALTERNATE RECALL	В
1	M11	CONTROL RELAY	ELEVATOR FIRE HAT	В
1	M12	PULL STATION	SOUTH STAIR	В
1	M13	PULL STATION	NORTH STAIR	В
1	M14	PULL STATION	NORTH STAIR	1
1	M15	PULL STATION	NORTH LOBBY	1
1	M16	PULL STATION	LOBBY SUITE 300	1
1	M17	PULL STATION	SUITE 300 RECEPTION ENTRY	1
1	M18	PULL STATION	SOUTH STAIR	1
1	M19	PULL STATION	SUITE 200 SOUTH ENTRY	1
1	M20	PULL STATION	SUITE 200 WEST ENTRY	1
1	M21	MONITOR MODULE	CO DETECTOR FURNACE RM #03	В
\ 1	M22	MONITOR MODULE	CO DETECTOR FURNACE RM #02	В
7 1	M23	MONITOR MODULE	ELECTRICAL ROOM FURNACE # 01	В
1	M24	CONTROL RELAY	FS19 DAMPER SHUTDOWN	1
1	M25	CONTROL RELAY	RTU-1 SHUTDOWN	1
1	M26	CONTROL RELAY	FS23 DAMPER SHUTDOWN	1
} 1	M27	CONTROL RELAY	FS27 DAMPER SHUTDOWN	1
}	M28	CONTROL RELAY	FS26 DAMPER SHUTDOWN	1
{ 1	M29	CONTROL RELAY	FS22 DAMPER SHUTDOWN	1
1	M30	CONTROL RELAY	FS21 DAMPER SHUTDOWN	1
} 1	M31	CONTROL RELAY	FS20 DAMPER SHUTDOWN	1
1	M32	CONTROL RELAY	FS28 DAMPER SHUTDOWN	1
1	M33	CONTROL RELAY	FS29 DAMPER SHUTDOWN	1
1	M34	CONTROL RELAY	FS31 DAMPER SHUTDOWN	1
} 1	M35	CONTROL RELAY	FS30 DAMPER SHUTDOWN	1
{ 1	M36	CONTROL RELAY	FS18 DAMPER SHUTDOWN	1
} 1	M37	CONTROL RELAY	FS17 DAMPER SHUTDOWN	1
} 1	M38	CONTROL RELAY	RTU-2 SHUTDOWN	1
1	M39	CONTROL RELAY	FS24 DAMPER SHUTDOWN	1
{ 1	M40	CONTROL RELAY	FS25 DAMPER SHUTDOWN	1
} 1	M41	CONTROL RELAY	FS33 DAMPER SHUTDOWN	В
}	M42	CONTROL RELAY	F32 DAMPER SHUTDOWN	В
{ 1	M43	CONTROL RELAY	FS49 DAMPER SHUTDOWN	В
{ 1	M44	CONTROL RELAY	FS50 DAMPER SHUTDOWN	В
4		SPARE	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	
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GENERAL The Fire-Lite Alarms SD355 and SD355T addressable, low-profile plug-in photoelectric detectors use a state-ofthe-art photoelectric sensing chamber with communications to provide open area protection and are used exclusively with Fire•Lite's MS-9200, MS-9200UD, and MS-9600 Addressable Fire Alarm Control Panels (FACPs). The SD355T adds thermal sensors that will alarm at a fixed

temperature of 135°F (57°C). Since these detectors are addressable, they will help emergency personnel quickly locate a fire during its early stages, potentially saving precious rescue time while also reducing property damage. Two LEDs on each sensor light to provide a local, visible sensor indication. Remote LED annunciator capability is

available as an optional accessory (P/N RA400Z).

FEATURES SLC loop:

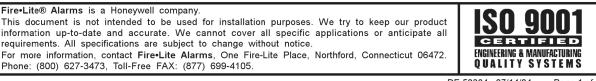
- Two-wire loop connection.
- Unit uses base for wiring, detector head plugs-in.
- Addressing: · Addressable by device
- Direct Decade 01 99 (MS-9200, MS-9200UD) and 01 159 (MS-9600) entry of address.
- **Architecture**
- Unique single-source, dual-chamber design to respond quickly and dependably to a broad range of fires.
- · Sleek, low-profile design. Integral communications and built-in type identification.
- Built-in tamper-resistant feature. Removable cover and insect-resistant screen for simple
- field cleaning. Operation:
- Withstands air velocities up to 1,500 feet-per-minute (7.6 m/sec.) without triggering a false alarm. Factory preset at 1.5% nominal sensitivity for panel alarm
- threshold level. · Visible LED "blinks" when the unit is addressed (communicating with the fire panel) and latches on in alarm. | • Remote LED output connection (P/N RA400Z).
- Mechanicals Sealed against back pressure.
- Direct surface mounting or electrical box mounting.
- Mounts to: single-gang box, 3.5" (8.89 cm) or 4.0" (10.16 cm) octagonal box, or 4.0" (10.16 cm) square electrical | tors are often better than photoelectric detectors at sens-

box (using a plaster ring — included).

This document is not intended to be used for installation purposes. We try to keep our produ information up-to-date and accurate. We cannot cover all specific applications or anticipate a

equirements. All specifications are subject to change without notice

Phone: (800) 627-3473, Toll-Free FAX: (877) 699-4105.



SD355(A)/SD355T(A)

Addressable Photoelectric Smoke

Detectors

California State Fire Marshal

7272-0075:194

(FM

APPROVED

DF-52384 • 07/14/04 — Page 1 of 2

CONSTRUCTION

These detectors are constructed of off-white LEXAN®. | **NOTE:** "A" suffix indicates ULC-Listed model. SD355(T) plug-in, low-profile smoke detectors are designed | SD355 to commercial standards and offer an attractive appear-

LEXAN® is a registered trademark of GE Plastics, a subsidiary of General Electric Company.

INSTALLATION

- to simplify installation, service and maintenance. Mount base on box which is at least 1.5 inches (3.81 cm) deep. | RA400Z(A) Remote LED. Mounts to a single-gang box. Suitable boxes include:
- 4.0" (10.16 cm) square box with plaster ring. 4.0" (10.16 cm) octagonal box
- 3.5" (8.89 cm) octagonal box.
- Single-gang box.

NOTE: Because of the inherent supervision provided by the SLC loop, end-of-line resistors are not required. Wiring "T-taps" or branches are permitted for Style 4 (Class B) wiring only.

OPERATION Each SD355(T) uses one of 99 possible addresses on the MS-9200 and MS-9200UD Signaling Line Circuit (SLC), or up to 318 (159 on each loop) on the MS-9600 SLC. It responds to regular polls from the system and reports its type | B224BI(A) Intelligent isolator base, isolator SLC from

The SD355(T) addressable photoelectric sensor's unique | B501BH(A) Plug-in System Sensor sounder detector unipolar chamber responds quickly and uniformly to a broad range of smoke conditions and can withstand wind gusts up to 1,500 feet-per-minute (7.6 m/sec.) without sending an alarm level signal. Because of its unipolar chamber, the SD355(T) is approximately two times more responsive than | **B501BHT(A)** Same as B501BBH(A), but includes tempomost photoelectric sensors. This makes it a more stable

DETECTOR SENSITIVITY TEST

detector.

Each detector can have their sensitivity tested (required per NFPA 72. Chapter 7 on Inspection. Testing and Maintenance) when installed/connected to an MS-9200, MS- | SMK400 9200UD, or MS-9600 addressable fire alarm control panel. The results of the sensitivity test can be printed off the MS-9200, MS-9200UD, or MS-9600 for record keeping.

SPECIFICATIONS Voltage range: 15 – 32 VDC (peak). Standby current: 300 µA @ 24 VDC.

LED current: 6.5 mA @ 24 VDC (latched "ON"). Air velocity: 1,500 ft./min. (7.6 m/sec.) maximum. Diameter: 6.1" (15.5 cm) installed in B350LP base. Height: 2.1" (5.33 cm) installed in B350LP base. Weight: 3.6 oz. (102 g).

Operating temperature range: for SD355: 0°C to 49°C (32°F to 120°F) SD350; for SD355T: 0°C to 38°C (32°F to **Temperature:** $0^{\circ}C - 49^{\circ}C (32^{\circ}F - 120^{\circ}F)$.

Relative humidity: 10% – 93%, non-condensing.

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Addressable photoelectric detector (B350LP

shorts on the loop.

depth of 1.5" (3.81 cm).

high ceiling applications.

(1.524 m) sections.

RA400Z(A) Remote LED annunciator. 3 – 32 VDC. Fits

ral sounder

base **only**.

base **only**.

M02-04-01 Test magnet.

Accessories

RMK400

base. Diameter: 6.0" (15.24 cm). Mounting:

4.0" (10.16 cm) square box with or without

plastic ring. Mounting box has a minimum

U.S. single-gang electrical box. For use with

Surface mounting kit provides for entry of

surface wiring conduit. For use with B501(A)

Recessed mounting kit. For use with B501(A)

Detector removal tool. Allows installation and/

Extension pole for XR-2. Comes in three 5-ft.

or removal of detector heads from bases in

B501(A) and B350LP(A) bases only.

PRODUCT LINE INFORMATION

base included). Same as SD355 with ULC Listing (B350LPA base included)

Same as SD355 but with *thermal* element (B350LP base included).

SD350(T) plug-in detectors use a detachable mounting base | SD355TA Same as SD355T with ULC Listing (B350LPA

base included B350LP(A) Plug-in detector base (included). Dimen-

sions: 6.1" (15.5 cm). Mounting: 4.0" (10.16 cm) square box with or without plastic ring, 4.0" (10.16 cm) octagonal box, 3.5" (8.89 cm) octagonal box, or single-gang box. All mountthe most extreme environments ing boxes have a minimum depth of 1.5" (3.81)

B224RB(A) Plug-in System Sensor *relay* detector base. *Diameter:* 6.2" (15.75 cm). *Mounting:* 4.0" (10.16 cm) square box with or without plastic ring, 4.0" (10.16 cm) octagonal box, or 3.5"

cates a trouble signal for a removed or improperly installed (8.89 cm) octagonal box. All mounting boxes sensor cover. The Fire•Lite InnovairFlex housing provides a 3/ have a minimum depth of 1.5" (3.81 cm). 4-inch conduit knockout and ample space to facilitate easy wiring and mounting of a relay module.

General

ized to meet local codes and specifications without additional Operating Temperature Range: -4°F to 158°F (-20°C to wiring. The new InnovairFlex product line is compatible with all 70°C). previous Innovair models, including remote test accessories.

Features

- Air velocity rating from 100 ft/min to 4,000 ft/min (0.5 m/s to Air Duct Velocity: 100 to 4,000 ft/min (0.5 to 20.32 m/s). 20.32 m/s)
- Versatile mounting options: square or rectangular configu
 Accessories
- Fire•Lite provides system flexibility with a variety of accesso-
- Broad ranges for operating temperature (-4°F to 158°F, -20°C to 70°C) and humidity (0% to 95% non-condensing). Patented sampling tube installs from front or back of the
- detector with no tools required. Cover tamper signal
- of a relay module. · Easily accessible code wheels on sensor head (sold sepa-
- Clear cover for convenient visual inspection.
- Remote testing capability.
- Requires com line power only

D355PL(A)/DNRW InnovairFlex **⊘** FIRe LITE ALARMS

by Honeywell

Size: (Square) 7.75 in (19.7 cm) Length; 9 in (22.9 cm) Width;

Storage Temperature Range: -22°F to 158°F (-30°C to

Operating Humidity Range: 0% to 95% relative humidity

ries, including two remote test stations and different means of

visible and audible system annunciation. As with our duct

smoke detectors, all duct smoke detectors accessories are UL

D355PLs and DNRWs with a date code of 0013 or higher do

Intelligent Addressable Devices

DF-60430:C2 • E-650

Intelligent Non-Relay Photoelectric

Duct Smoke Detector

The Fire*Lite InnovairFlex® D355PL(A) intelligent non-relay photoelectric duct smoke detector and DNRW watertight nonrelay photoelectric duct smoke detector feature a pivoting housing that fits both square and rectangular footprints capable of mounting to a round or rectangular duct. DNRW duct smoke detector, with its NEMA-4 rating, is listed

as a watertight, UV resistant enclosure providing protection against falling dirt, rain, and windblown dust, splashing and hose directed water, allowing operators to use the detector in

These units sense smoke in the most challenging conditions, operating in airflow speeds of 100 to 4,000 feet per minute (0.5 to 20.32 m/s), temperatures of -4°F to 158°F (-20°C to 70°C), and a humidity range of 0 to 95 percent (non-condensing.) An improved cover design isolates the sensor head, which **Specifications** allows for ease of maintenance. A cover tamper feature indi-

The Fire•Lite InnovairFlex duct smoke detector can be custom-

- Photoelectric, integrated low-flow technology.

- Increased wiring space with a newly added 3/4" conduit not require external 24VDC for remote test applications when
- knockout. used with a remote-test-capable detector. Available space within housing to accommodate mounting ACCESSORY CURRENT LOADS AT 24 VDC

- Accommodates the installation of an addressable relay module, sold separately, (CRF-300) for applications requiring a Form-C relay.

RA100Z 0mA 12 mA Max RTS151/

Agency Listings and Approvals Consult product manual for lists of compatible UL-Listed devices. In some cases, certain modules may not be listed by

certain approval agencies, or listing may be in process. Con-

UL: S1059.

RTS151KEY

ULC: S1059

sult factory for latest listing status.

Width, 2.5 in (6.6 cm) Depth.

2.5 in (6.35 cm) Dept

Weight: 1.6 lb (0.73 kg).

DF-60430:C2 • 12/18/2012 — Page 1 of 2

12mA Max

CSFM: 3242-1653:0209.

FM approved.

Product Line Information D355PL: Intelligent non-relay photoelectric low flow smoke detector housing. Includes SD355R Detector. **DNRW:** Watertight intelligent non-relay photoelectric low flow duct smoke detector housing. Does not include detector head.

SD355R(A): Remote test capable addressable low-profile photoelectric smoke detector. SD355(A): Addressable low-profile photoelectric smoke detec-

DCOIL: Remote test coil. Required for older DNR(W) duct detector housing. **DST1:** Metal sampling tube duct width up to 1 ft (0.3m). **DST1.5:** Metal sampling tube duct widths up to 1 ft to 2 ft (0.3

DST3: Metal sampling tube duct widths up to 2 ft to 4 ft (0.6 to **DST5:** Metal sampling tube duct widths up to 4 ft to 8 ft (1.2 to

DST10: Metal sampling tube duct widths up to 8 ft to 12 ft (2.4

DH400OE-1: Weatherproof enclosure ETX: Metal exhaust tube duct, width 1 ft (0.3 m).

M02-04-00: Test magnet. P48-21-00: End cap for metal sampling tubes.

RA100Z: Remote annunciator alarm LED. RTS151: Remote test station.

RTS151KEY: Remote test station with key lock.

Important Note

- DNRW duct detector housings with a date code of 0013 or higher do not require a DCOIL or auxiliary 24 VDC for remote test applications when used with a remote test capable detector.
- DNRW duct detector housings with a date code of 0012 or earlier require a DCOIL and auxiliary 24 VDC power for remote test applications.

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For more information, contact Fire•Lite Alarms. Phone: (800) 627-3473, FAX: (877) 699-4105.

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CRF-300(A) Relay Module

General The CRF-300(A) Addressable Relay Module provides the system with a dry-contact output for activating a variety of auxiliary devices, such as fans, door holders, dampers, control equipment, etc. Addressability allows the dry contact to be activated through panel programming, on a select basis.

LiteSpeed™ is a communication protocol developed by Fire•Lite Engineering that greatly enhances the speed of communication between analog intelligent devices. Intelligent devices communicate in a grouped fashion. If one of the devices within the group has new information, the panel CPU stops the group poll and concentrates on single points. The net effect is response speed greater than five times that of

other designs. **Features**

- Internal circuitry and relay powered directly by two-wire SLC loop.
- when activated. High noise immunity (EMF/RFI).
- SEMS screws with clamping plates for wiring ease.
- Direct-dial entry of address: 01–159 for MS-9600(A) series Normal operating voltage: 15 to 32 VDC. panels, 01 - 99 on MS-9200UDLS(A) and MS-9050UD(A).

The CRF-300(A) may be programmed to operate dry contacts for door holders, Air Handling Unit shutdown, etc., and to reset

Construction

address setting. • The CRF-300(A) is configured for a single Class B (Style Y)

switch together.

a relay module.

poll received. On command, it activates its internal relay. address may be set before or after mounting. The built-in TYPE CODE (not settable) will identify the module to the con-

trol panel, so as to differentiate between a control module and

df-60379:A1 • E-400

(P) FIRE-LITE ALARMS

SD355 with

B350LP base

SD355T with

B350LP base

Other system features:

Low standby current.

APPLICATIONS

ing fast, flaming fires.

94-V0 plastic flammability rating.

Fully coated circuit boards and superior RF/transient pro-

Use photoelectric detectors in life-safety applications to pro-

vide a broad range of fire-sensing capability, especially

where smoldering fires are anticipated. Ionization detec-

- Built-in type identification automatically identifies these devices to the control panel.
- Integral LED "blinks" green each time a communication is received from the control panel and turns on in steady red

Wide viewing angle of LED.

Applications

four-wire smoke detector power.

• The face plate is made of off-white heat-resistant plastic. · Controls include two rotary switches for direct-dial entry of

or Class A (Style Z) Notification Appliance Circuit. • The CRF-300(A) provides two Form-C dry contacts that

Operation Each CRF-300(A) uses one of the addresses on a SLC loop. It responds to regular polls from the control panel and reports its type and status, including the open/normal/short status of its Notification Appliance Circuit (NAC). The LED blinks with each **NOTE:** Open/short supervision is suspended with the CRF-300. Rotary switches set a unique address for each module. The

Specifications Maximum SLC current draw: 6.5 mA (LED on). Average operating current: 230 µA direct poll (CLIP mode),

Humidity range: 10% to 93% non-condensing. **Dimensions:** 4.5" (11.43 cm) high x 4" (10.16 cm) wide x 1.25" (3.175 cm) deep. Mounts to a 4" (10.16 cm) square x

Relay Contact Ratings

Load Description	Application	Maximum Voltage	Current Rating
Resistive	Non-Coded	30 VDC	3.0 A
Resistive	Coded	30 VDC	2.0 A
Resistive	Non-Coded	110 VDC	0.9 A
Resistive	Non-Coded	125 VAC	0.9 A
Inductive (L/R=5ms)	Coded	30 VDC	0.5 A
Inductive (L/R=2ms)	Coded	30 VDC	1.0 A
Inductive (PF=0.35)	Non-Coded	125 VAC	0.5 A

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Agency Listings and Approvals

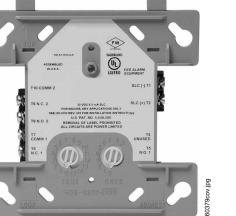
- In some cases, certain modules may not be listed by certain approval agencies, or listing may be in process. Consult fac-
- tory for latest listing status. • UL: S2424
- FM approved • CSFM: 7300-0075:185 • MEA: 72-01-E

• ULC: S2424

Product Line Information CRF-300(A): Intelligent addressable relay module.

and refer to the SLC Wiring Manual, document 51309.

: Intelligent addressable relay module, ULC listed model. SMB500: Optional surface-mount backbox. NOTE: For installation instructions, see document 156-1190-005

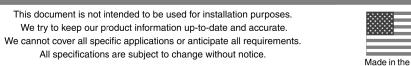


255 μA group poll (LiteSpeed mode) with LED flashing. EOL resistance: not used. Temperature range: 32°F to 120°F (0°C to 49°C).

2.125" (5.398 mm) deep box.

LiteSpeed™ is a trademark and Fire•Lite® Alarms is a registered trademark

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For more information, contact Fire•Lite Alarms. Phone: (800) 627-3473, FAX: (877) 699-4105.

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ES-200X Intelligent Addressable FACP

with Communicator

General

The **ES-200X** is the latest intelligent addressable Fire Alarm Control Panel (FACP) from Fire•Lite Alarms and is a direct replacement for the MS-9200UDLS. The ES-200X comes with a pre-installed communicator and supports up to 198 addressable devices (99 detectors and 99 modules). With an extensive list of powerful features, the ES-200X programs just like Fire Lite's other addressable products. yet fits into applications previously served only by conventional pan-

network. The IP communicator's internet monitoring capability sends alarm signals over the Internet saving the monthly cost of two dedicated business telephone lines. Although not required, the secondary telephone line may be retained providing backup communication over the public switched telephone line. Optional cellular reporting is available using the CELL-MOD or CELL-CAB-FL. Remote and local programming of the control panel is possible using the FS-Tools Upload/Download utility. Programming databases can be uploaded/downloaded via the panel's USB port (and USB cable)

The pre-installed IPOTS-COM is a dual technology (POTS and IP)

communicator. The POTS transmits system status (alarms, troubles,

AC loss, etc.) to a Central Station via the public switched telephone

The USB port also allows for the download or upload of the entire program, history file, walk-test data, current status and system voltages by means of a USB flash drive. The power supply and all electronics are contained on a circuit board supported on a new quick install chassis and housed in a • One-person audible or silent walk test with walk-test log and

or via an ethernet connection using the IPOTS-COM communicator.

metal cabinet. Available accessories include local and remote

upload/download software, remote annunciators, and reverse polarity/city box transmitter (4XTMF).

Features Listed to UL Standard 864, 10th edition Pre-installed IPOTS-COM Ethernet IP and POTS (Plain Old Tele-

phone Service) Central Station Communicator over AlarmNet

- Optional CELL-MOD or CELL-CAB-FL GSM Central Station Communicator over AlarmNet® • Automated activation of the ECC-50/100 Emergency Command SLC COMMUNICATION LOOP
- · Compatible with SWIFT® wireless devices • Auto-programming (learn mode) reduces installation time. Reports two devices set to the same address • Four built-in, independently programmable Style Z (Class A) or
- Style Y (Class B) NAC circuits Selectable strobe synchronization for System Sensor, Wheelock. and Gentex devices Notification Appliance Circuit End of Line resistor matching
- Two programmable relays and one fixed trouble relay Built-in Programmer Integral 80-character LCD display with backlighting Real-time clock/calendar with automatic daylight savings control

Four programmable function keys for ease of maintenance

- · Addressable sounder base compatibility · Multi-criteria detector (smoke, heat, CO) with programmable Control module delay timer Automatic detector sensitivity testing (NFPA 72 compliant)
- Automatic device type-code verification Point trouble identification Waterflow selection per module point

History file with 1.000 event capacity

ECC-FFT Firefighter Telephone option

(A) FIRE-LITE ALARMS by Honeywell

Addressable Fire Alarm Control Panels



Alarm verification selection per detector point Maintenance alert warns when smoke detector dust accumula-

System alarm verification selection per detector point · PAS (Positive Alarm Sequence) and Pre-signal per point (NFPA

• Up to 16 ANN-BUS annunciators- 8 per each ANN-Bus Remote Acknowledge, Alarm Silence, Reset and Drill via addressable modules or remote annunciator Upload/Download of program and data via USB with optional FS-

Compatible with Fire Lite's addressable devices (refer to the

Supports LiteSpeed[™] and CLIP protocols • SLC operates up to 10,000 ft. (3,000 m) in LiteSpeed mode with

Tools Programming Utility

- twisted, unshielded wire Single addressable SLC loop which meets NFPA Class B and Class A requirements 198 addressable device capacity (99 addressable detectors and 99 modules)
- SLC Wiring Manual) NOTIFICATION APPLIANCE CIRCUITS (NACS) • Four independently programmable output circuits. Circuits can be

configured for the following outputs:

Selectable strobe synchronization per NAC

- Style Y (Class B) – Style Z (Class A) Silence Inhibit and Autosilence timer options Continuous, March Time, Temporal, or California code for main circuit board NACs with two-stage capability
- 2.5 A special application, 250mA regulated, total power for NACs NOTE: Maximum or total 24VDC system power shared between all NAC circuits and the ANN-BUS is 2.7 A

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PROGRAMMING AND SOFTWARE Autoprogramming (learn mode) reduces installation time

- · Custom English labels (per point) may be manually entered or selected from an internal library file Two programmable Form-C relay outputs 99 software zones
- Continuous fire protection during online programming • Program Check automatically catches common errors not linked Increases alarm power output to 6 amps. to any zone or input poin • OFFLINE PROGRAMMING: Create the entire program in your upload/download system programming locally. Offline program-

ming requires an ethernet connection. FS-Tools is available on

www.firelite.com. **User interface**

- LED INDICATORS
- Fire Alarm (red) CO Alarm (red) AC Power (green)

Battery fault (yellow)

- Supervisory (yellow) Trouble (yellow) Ground fault (yellow)
- Disabled (yellow) Maintenance (yellow) Communication (yellow)

Alarm Silenced (yellow) F1-F4 Programmable Function Keys (yellow) KEYPAD

 16 key alpha-numeric pad Acknowledge Alarm Silence

Drill (Manual Evacuate)

- Four (4) programmable function keys Reset (lamp test) PRODUCT LINE INFORMATION ES-200X: Addressable Fire Alarm Control Panel with one SLC loop. Includes main circuit board with display, pre-installed communicator,
 - screws, cables, key, etc. (For ES-200XC, refer to DF-60958.) FS-Tools: Programming software for Windows®-based PC computer. Available for download at www.firelite.com. CELL-CAB-FL/CELL-MOD: Optional GSM communicators. IPOTS-COM: Dual technology (POTS and IP) communicator.
 - (replacement board) **DP-ES-R:** Optional dress panel for the ES-200X. TR-CE: Optional trim ring for semi-flush mounting. **BB-2F:** Optional cabinet for one or two modules.

chassis with transformer, backbox with door, plastic bag containing

BB-6F: Optional cabinet for up to six modules mounted on CHS-6

BB-26: Battery backbox, holds up to two 25 AH batteries and CHG-**BB-55F:** Battery box, houses two 55 AH batteries CHS-6: Chassis, mounts up to six multi-modules in a BB-6F cabinet. **CHG-75:** Battery charger for lead-acid batteries with a rating of 25 to

BAT Series: Batteries, see data sheet DF-52397

PRN Series: UL listed compatible event printer. Uses tractor-fed

4XTMF Reverse Polarity Transmitter Module: Provides a supervised output for local energy municipal box transmitter, alarm and trouble. Includes a disable switch and disable trouble LED.

OPTIONAL MODULES

shielded

PWRMOD24 Power Expander Module: Optional power module. **COMPATIBLE ANNUNCIATORS** office using FS-Tools, a Windows®-based software package, and ANN-80: Remote LCD annunciator mimics the information displayed on the FACP LCD display. Recommended wire type is un-

ANN-100: Remote LCD annunciator mimics the information dis-

played on the FACP LCD display. Recommended wire type is unshielded. For use in FM applications only. ANN-I/O: LED Driver Module provides connections to a user supplied graphic annunciator. (See DF-52430.) **ANN-LED:** Annunciator Module provides three LEDs for each zone:

Alarm, Trouble, and Supervisory. Ships with red enclosure. (See DF-ANN-RLED: Provides alarm (red) indicators for up to 30 input zones or addressable points. (See DF-60241.) **ANN-RLY:** Relay Module provides 10 programmable Form-C relays. Can be mounted inside the cabinet. (See DF-52431.)

ANN-S/PG: Serial/Parallel Printer Gateway module provides a connection for a serial or parallel printer. (See DF-52429.) ADDRESSABLE DEVICES All feature a polling LED and rotary switches for addressing. SD365: Addressable low-profile photoelectric smoke detector. Lite-Speed only.

SD365-IV: Addressable low-profile photoelectric smoke detector.

Ivory. LiteSpeed and CLIP mode.

Speed and CLIP mode.

SD365T: Addressable low-profile photoelectric smoke detector with thermal sensor. LiteSpeed only SD365T-IV: Addressable low-profile photoelectric smoke detector with thermal sensor. Ivory. LiteSpeed and CLIP mode. SD365R: Remote test capable addressable photoelectric smoke detector for use with DNR(W) duct detector housing. LiteSpeed only. SD365R-IV: Remote test capable addressable photoelectric smoke

H365: Low-profile 135°F fixed thermal sensor. LiteSpeed only. H365-IV: Low-profile 135°F fixed thermal sensor. Ivory. LiteSpeed and CLIP mode. H365R: Low-profile, intelligent, rate-of-rise thermal sensor. Lite-Speed only. H365R-IV: Low-profile, intelligent, rate-of-rise thermal sensor. Ivory. LiteSpeed and CLIP mode **H365HT**: Low-profile intelligent 190°F/88°C fixed thermal sensor.

detector for use with DNR(W) duct detector housing. Ivory. Lite-

LiteSpeed only. H365HT-IV: Low-profile intelligent 190°F/88°C fixed thermal sensor. Ivory. LiteSpeed and CLIP mode. Legacy Devices

CP355: Addressable low-profile ionization smoke detector. **SD355**: Addressable low-profile photoelectric smoke detector. **SD355T:** Addressable low-profile photoelectric smoke detector with thermal sensor.

SD355R: Remote test capable addressable photoelectric smoke detector for use with DNR(W) duct detector housing. CHG-120F: Remote battery charging system for lead-acid batteries SD355CO: Addressable, low-profile device that provides fire, heat, with a rating of 55 to 120 AH. Requires additional BB-55F for mountand carbon monoxide (CO) detection. **H355:** Fast-response, low-profile heat detector.

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SHEET NO.

H355R: Fast-response, low-profile heat detector with rate-of-rise **SWIFT Wireless Devices**

H355HT: Fast-response, low-profile heat detector that activates at W-SD355: LiteSpeed intelligent, wireless photo detector. 190°F/88°C. AD355: Low-profile, intelligent, "Adapt" multi-sensor detector detector. (B350LP base included).

B200S: Programmable, addressable sounder base. **B200SR:** Addressable sounder base.

BEAM355: Intelligent beam smoke detector.

BEAM355S: Intelligent beam smoke detector with integral sensitiv- W-CRF: LiteSpeed Intelligent wireless relay module. D355PL: InnovairFlex low-flow non-relay duct-detector housing; WAV-RL, WAV-WL, WAV-CRL, WAV-CWL: LiteSpeed Intelligent AV includes SD355R. DNR: InnovairFlex low-flow non-relay duct-detector housing. (Order W-USB: Wireless USB radio/antenna dongle that plugs into the

SD355R/SD365R separately.) **DNRW:** InnovairFlex low-flow non-relay duct-detector housing, with **SWIFT Tools:** Programming and diagnostic utility for the Wireless NEMA-4 rating. Watertight. (Order SD355R/SD365R separately.) Addressable Modules

MMF-300: Addressable Monitor Module for one zone of normally-

vides two Style B (Class B) only IDCs.

zone of conventional two-wire detectors. Requires resettable 24 CLIP protocol. Please consult factory for further information on previous VDC power. Refer to the *Device Compatibility Document* for listed 300 Series devices. compatible devices and quantity limitation. CMF-300: Addressable Control Module for one Style Y/Z (Class B/

directly to a 4.0" (10.16 cm.) electrical box. NAC option requires 47k ohm assembly supervises the MMF-300, MDF-300, MMF-301, external 24 VDC to power notification appliances.

CRF-300: Addressable relay module containing two isolated sets of CRF-300: Addressable relay module containing the location module.

Form-C contacts, which operate as a DPDT switch. Mounts directly

Power Supervision Relay: Supervises the power to 4-wire smoke BG-12LX: Addressable manual pull station with interface module

mounted inside. 1300: This module isolates the SLC loop from short circuit conditions

While shielded wire is not required, it is recommended that all SLC (required for Style 6 or 7 operation).

ISO-6: Six-fault isolator module. Mount one or two modules in a ence. Refer to the panel manual for wiring details. BB-2F cabinet (optional). Mount up to six modules on a CHS-6 chassis in a BB-6F cabinet.

SMB500: Used to mount all modules except the MMF-301 and MMF-300-10: Ten-input monitor module. Mount one or two modules

in a BB-2F cabinet (optional). Mount up to six modules on a CHS-6 chassis in a BB-6F cabinet. MMF-302-6: Six-zone interface module. Mount one or two modules in a BB-2F cabinet (optional). Mount up to six modules on a CHS-6

chassis in a BB-6F cabinet. CMF-300-6: Six-circuit supervised control module. Mount one or two modules in a BB-2F cabinet (optional). Mount up to six modules on a CHS-6 chassis in a BB-6F cabinet.

CRF-300-6: Six-relay control module (Form-C relays). Mount one or two modules in a BB-2F cabinet (optional). Mount up to six modules on a CHS-6 chassis in a BB-6F cabinet.

SYSTEM SPECIFICATIONS W-GATE: LiteSpeed Wireless Gateway

W-H355R: LiteSpeed intelligent wireless rate of rise (135°) heat

W-SD355T: Intelligent wireless photo/heat detector. W-H355: LiteSpeed intelligent wireless fixed-temperature (135°)

heat detector. **W-MMF:** LiteSpeed Intelligent wireless monitor module.

W-BG12LX: LiteSpeed Intelligent wireless pull station.

USB port of a PC running SWIFT Tools. Gateway and devices. Available for download from firelite.com. NOTE: For more information on Compatible Addressable Devices for use with the ES-200X, see the following data sheets (document numbers): SD365 Series (DF-61010), H365 Series (DF-61011), AD355 open dry-contact initiating devices. Mounts in standard 4.0" (10.16 (DF-52386), BG-12LX (DF-52013), CMF-300-6 (DF-52365), CRF-300-6 cm.) box. Includes plastic cover plate and end-of-line resistor. Mod- (DF-52374), CMF/CRF Series (DF-52130), CP355 (DF-52383), H355 ule may be configured for either a Style B (Class B) or Style D (Class Series (DF-52385), 1300 (DF-52389), 1SO-6 (DF-60485), MMF-300 Series/MDF-300 (DF-52121). MMF-300-10 (DF-52347). MMF-302-6 MDF-300: Dual Monitor Module. Same as MMF-300 except it pro- (DF-52356), SD355/SD355T (DF-52384), and SLC Wiring Manual

MMF-301: Miniature version of MMF-300. Excludes LED and Style D option. Connects with wire pigtails. May mount in device backbox.

MMF-302: Similar to MMF-300. Addressable Monitor Module for one of conventional two-wire detectors. Requires resettable 24

wiring be twisted-pair to minimize the effects of electrical interfer-

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detectors and notification appliances.

Wiring Requirements

A) zone of supervised polarized Notification Appliances. Mounts End-of-Line Resistor Assembly (R-47K and R-3.9K): The and CMF-300 module circuits. The 3.9k ohm assembly supervises (55.88 cm.) high x 19.65" (49.91 cm.) wide. the MMF-302 module circuit. These resistors are included with each

Weight: 26.9 lbs. (12.20 kg.) Dimensions: 20.00" (50.80 cm.) high x 22.5" (57.15 cm.) wide x 8.5" (21.59 cm.) deep.

System Capacity **Temperature and Humidity Ranges** .1 This system meets NFPA requirements for operation at 0 – 49°C/32 · Intelligent Signaling Line Circuits.. ...198 — 120°F and at a relative humidity 93% ± 2% RH (noncondensing) at · Addressable device capacity .. 32°C ± 2°C (90°F ± 3°F). However, the useful life of the system's · Programmable software zones... standby batteries and the electronic components may be adversely · Annunciators... affected by extreme temperature ranges and humidity. Therefore, it

Electrical Specifications an environment with a normal room temperature of 15 - 27°C/60 -AC Power: Operates in either 120 or 240 VAC, 50/60 Hz, 3.25 A, auto-sensing- no switch required. Wire size: minimum 14 AWG

NFPA Standards (2.00 mm2) with 600 V insulation. Nonpower-limited, supervised. The ES-200X complies with the following NFPA 72 Fire Alarm Sys-Battery: Two 12 V 18 AH lead-acid batteries. Battery Charger Capacity: 7-18 AH (ES-200X cabinet holds maximum of two 18 AH

Communication Loop: Supervised and power-limited.

Notification Appliance Circuits: Terminal Block provides connec-

tions for four NACs, Style Y (Class B) or Style Z (Class A). Special Application power. Power-limited, supervised circuitry. Maximum signaling current per circuit: 2.5 amps special application, 250mA regulated. End-of-Line Resistor: 4.7k ohm, ½ watt (P/N 71252 UL listed) for Style Y (Class B) NAC; system capable of 1.9 k Ω - 22 k Ω ELR range. Refer to the Fire•Lite Device Compatibility Document for listed compatible devices.

Two Programmable Relays and One Fixed Trouble Relay: Contact rating: 2.0 A @ 30 VDC (resistive), 0.5 A @ 30 VAC (resistive). Form-C relays, non-power-limited, non-supervised.

Cabinet Specifications

Door: 19.26" (48.92 cm.) high x 16.82" (42.73 cm.) wide x 0.72" (1.82 cm.) deep. **Backbox**: 19.00" (48.26 cm.) high x 16.65" (42.29 cm.) wide x 5.25" (13.34 cm.) deep. Trim Ring (TR-CE): 22.00" Agency Listings and Approvals

Shipping Specifications

latest listing status.

• CSFM: 7165-0075:500 • FDNY: COA #6261

NOTE: See DF-60958 for ULC-listed model.

is recommended that this system and its peripherals be installed in

- LOCAL (Automatic, Manual, Waterflow and Sprinkler Supervi-

- AUXILIARY (Automatic, Manual and Waterflow) (requires

- REMOTE STATION (Automatic, Manual and Waterflow)

(Where a DACT is not accepted, the alarm, trouble and supervi-

sory relays may be connected to UL 864 listed transmitters. For

reverse polarity signaling of alarm and trouble, 4XTMF is

- CENTRAL STATION (Automatic, Manual and Waterflow, and

- OT, PSDN (Other Technologies, Packet-switched Data Net-

- IBC 2012, IBC 2009, IBC 2006, IBC 2003, IBC 2000 (Seismic).

The listings and approvals below apply to the basic ES-200X control

panel. In some cases, certain modules may not be listed by certain

approval agencies, or listing may be in process. Consult factory for

- PROPRIETARY (Automatic, Manual and Waterflow).

Sprinkler Supervised).

– CBC 2007 (Seismic)

• UL: S624

FM approved

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ISO 9001

This document is not intended to be used for installation purposes. We try to keep our product information up-to-date and accurate. We cannot cover all specific applications or anticipate all requirements. All specifications are subject to change without notice.

For more information, contact Fire*Lite Alarms. Phone: (800) 627-3473, FAX: (877) 699-4105. Country of Origin: USA www.firelite.com

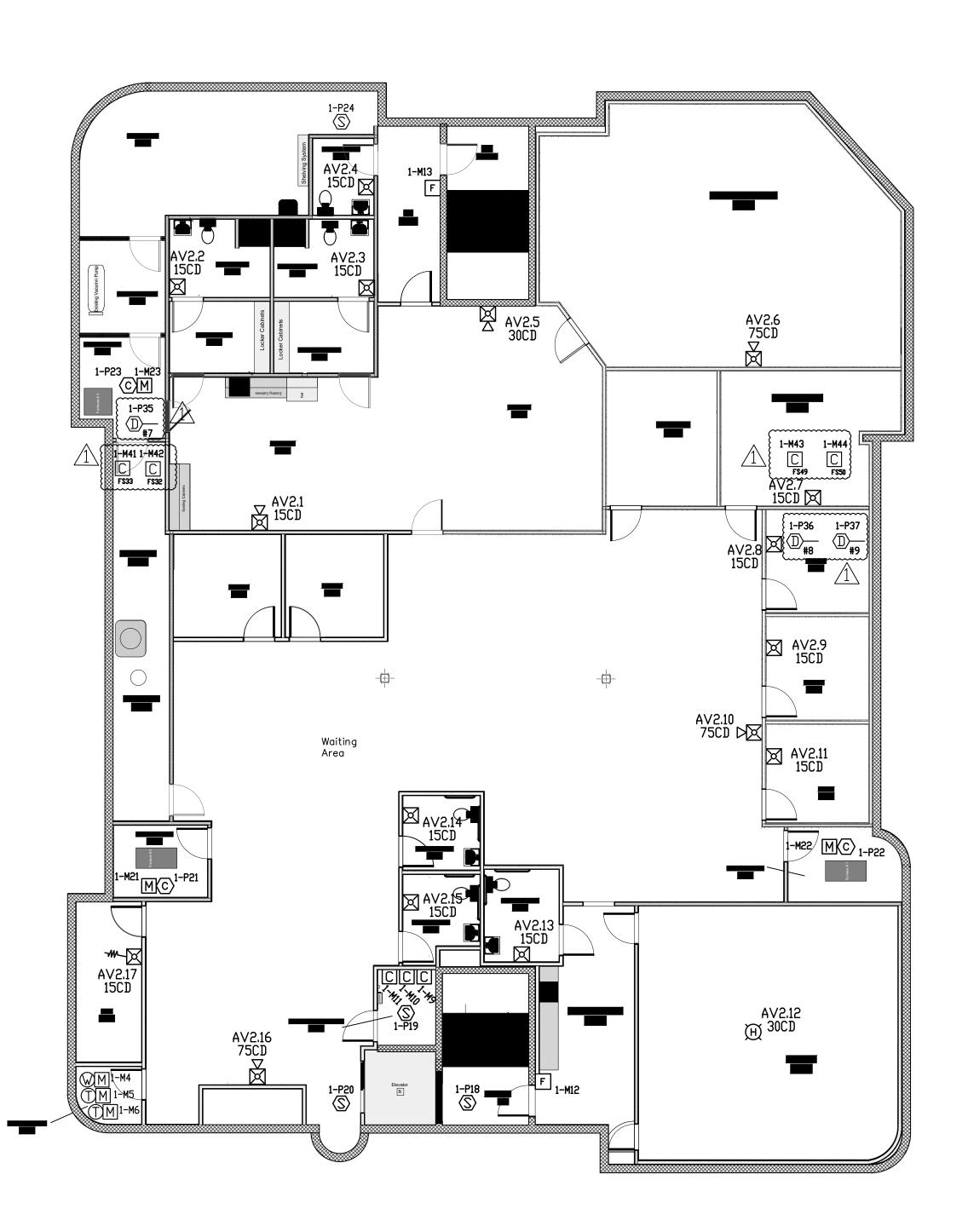
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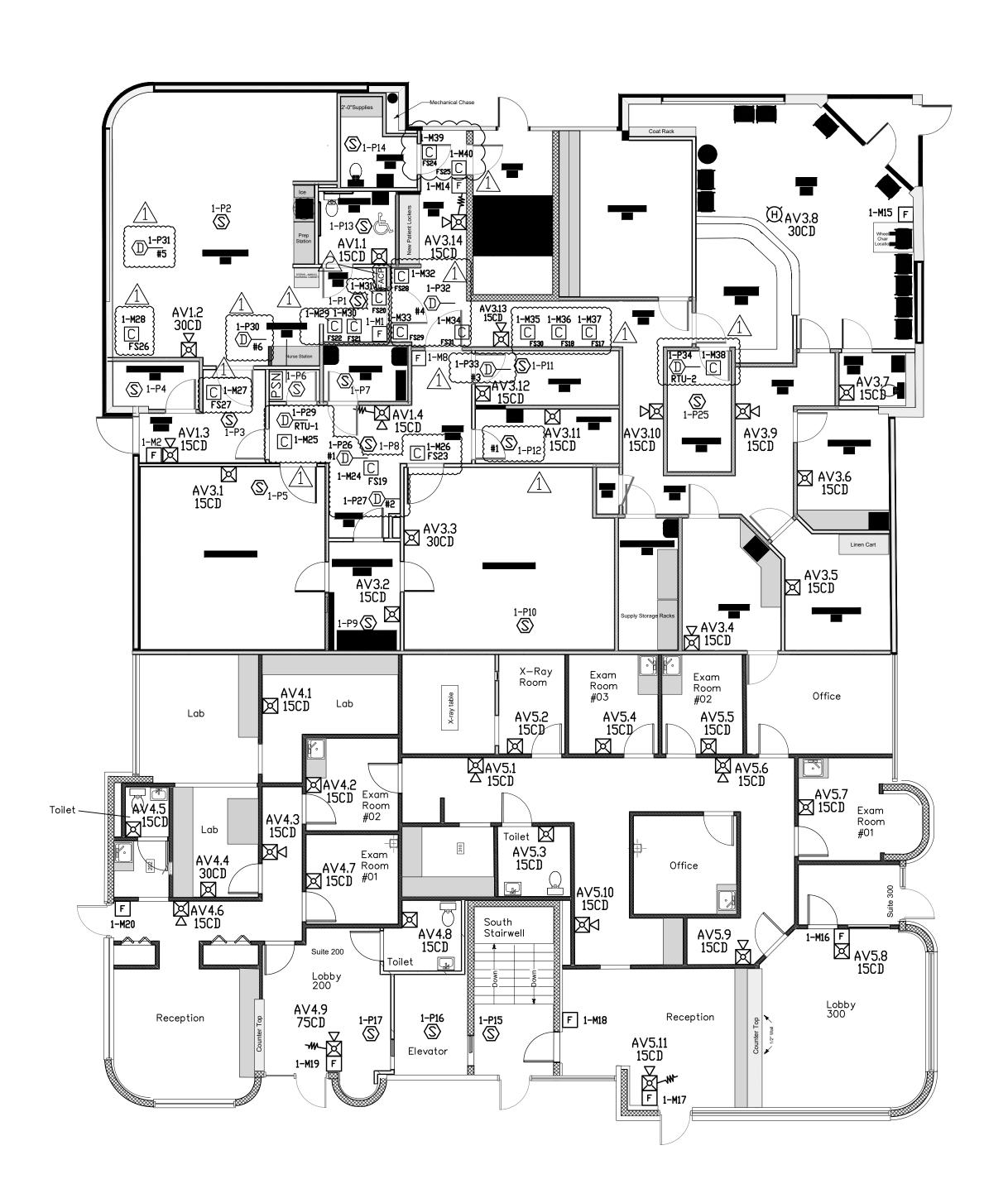
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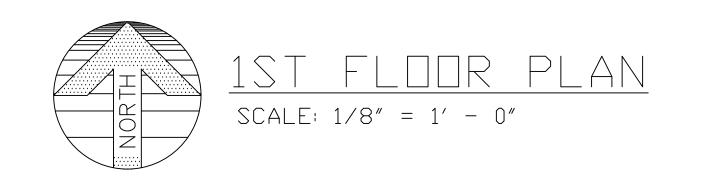
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PROJECT MGR
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