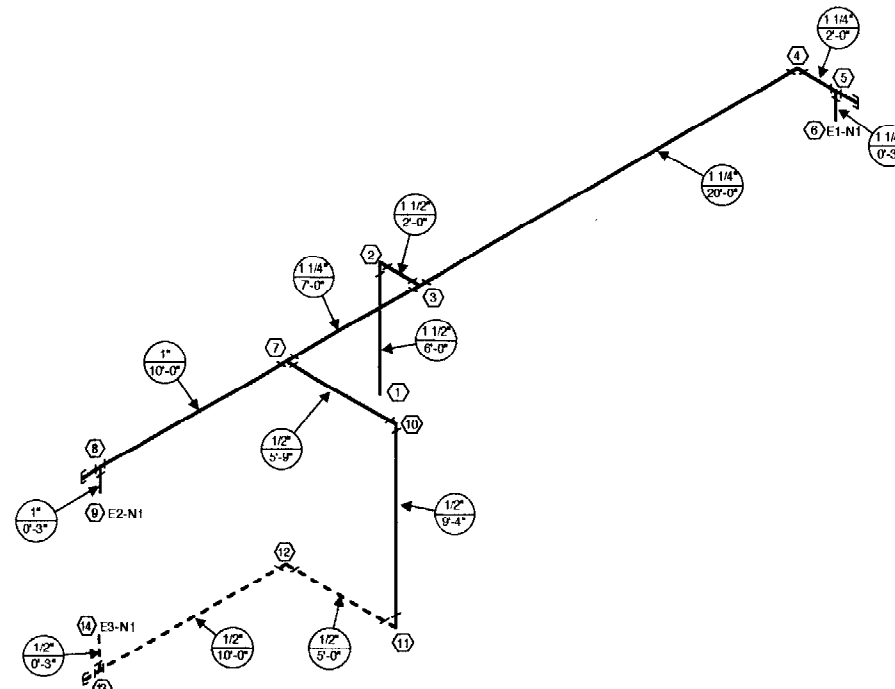


**FM-200 PIPING LAYOUT**  
SCALE: 1/4"=1'-0"  
— CEILING PIPING  
- - - SUBFLOOR PIPING  
⊗ DENOTES HYDRAULIC NODE POINT



**ISOMETRIC PIPING LAYOUT**  
NO SCALE  
— CEILING PIPING  
- - - SUBFLOOR PIPING  
⊗ DENOTES HYDRAULIC NODE POINT

EQUIPMENT LIST				
MANUFAC.	PC.	DESCRIPTION	QTY.	PART NO.
FIKE	1	215FM - 200 CYLINDER W/ LIQUID LEVEL FILLED TO 188 LBS	1	70-087
	2	MOUNTING STRAP FOR 215 LB	1	70-1310
	3	GAS CARTRIDGE ACTUATOR	1	70-1851
	4	AGENT RELEASE MODULE	1	10-1832
	5	360° NOZZLE, 1 1/4", 4512" ORIFICE AREA	1	00-050-2100
	6	360° NOZZLE, 1", 4800" ORIFICE AREA	1	00-055-2280
	7	360° NOZZLE, 1/2", 1200" ORIFICE AREA	1	00-053-1130
	8	SHIP CONTROL PANEL, 120 VAC	1	10-051-R-1
	9	7AH BATTERY PACK W/WIRING ASSY	1	10-2190-1
	10	SRM4 RELAY MODULE	1	10-2176
	11	PHOTOELECTRIC DETECTOR	3	88-1024
	12	IONIZATION DETECTOR	3	67-1033
	13	DETECTOR BASE 6"	6	67-1034
	14	EOL RESISTOR, 2.0K OHM	3	02-3700
	15	EOL RESISTOR, 2.7K OHM	1	02-1722
	16	EOL RESISTOR, 4.3K OHM	4	02-3919
	17	6" ALARM BELL, 24VDC	2	20-110
	18	HORN / STROBE, 15CD, 24VDC	2	20-088
	19	ELECTRIC RELEASE / SYSTEM ABORT	2	10-1643
	20	STROBE LIGHT, 15CD, 24VDC	1	20-081A
FIRETAC	21	NAMEPLATE - ABORT BUTTON	2	-----
	22	NAMEPLATE - ALARM BELL	2	-----
	23	NAMEPLATE - CAUTION	2	-----
	24	NAMEPLATE - CYLINDER	1	-----
	25	NAMEPLATE - ELECTRIC RELEASE	2	-----
	26	NAMEPLATE - HORN/STROBE	2	-----
	27	NAMEPLATE - STROBE LIGHT	1	-----

**FM-200 QUANTITY CALCULATIONS**

DATA ROOM: 19.33' X 13.25' X 8.33' =	2134 CU FT
8' X 6.25' X 8.33' =	417 CU FT
	2551 CU FT
7% FM-200 CONCENTRATION FACTOR @ 70 DEG. F. X .0342	88 LBS REQUIRED
	91 LBS SUPPLIED
SWITCH ROOM: 21.5' X 10' X 8.33' =	1791 CU FT
8' X 7.5' X 8.33' =	500 CU FT
	2291 CU FT
7% FM-200 CONCENTRATION FACTOR @ 70 DEG. F. X .0342	79 LBS REQUIRED
	79 LBS SUPPLIED
SWITCH ROOM SUBFLOOR: 21.5' X 10' X 2' =	430 CU FT
7% FM-200 CONCENTRATION FACTOR @ 70 DEG. F. X .0342	15 LBS REQUIRED
	161 LBS SUPPLIED
TOTAL AMOUNT OF FM-200 AGENT REQUIRED =	182 LBS
TOTAL AMOUNT OF FM-200 AGENT SUPPLIED =	180 LBS

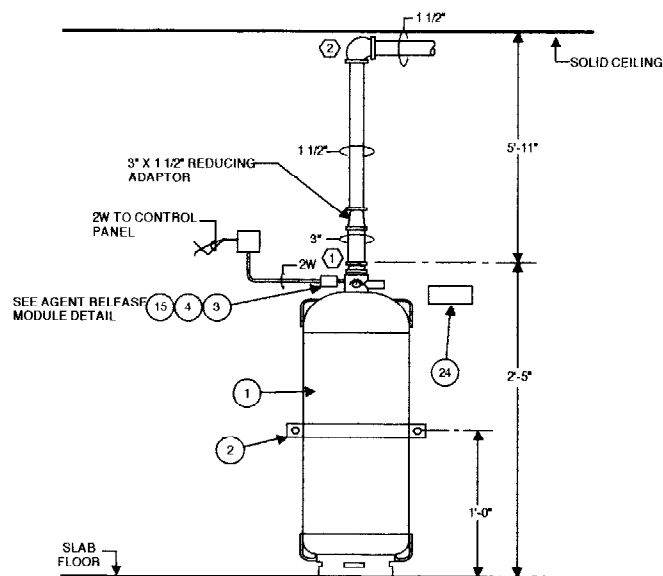
**FM-200 PIPING NOTES**

- All dimensions are to be field checked. If piping shown interferes with any object, Fire Equipment, Inc. approval for changes SHALL BE SECURED PRIOR TO INSTALLATION.
- MATERIALS:
  - PIPING:
 

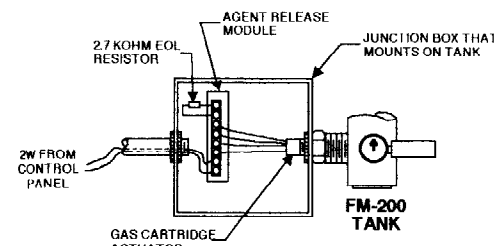
ACCEPTABLE: (SEE NFPA 2001 PARA. 2-2.1.1)  
Schedule 40 black or galvanized steel pipe conforming to ASTM A-53 seamless or ERW Grade A or B or ASTM A-106 Grade A, B, or C.  
Dual stenciled A120A53 conforming to ASTM A-53 flame weld Class F.  
Schedule 40 may be used:  
on threaded connections 1/4" - 1 1/2" NPS  
on cut groove connections 1/4" - 3" NPS  
on welded or rolled groove connections 1/4" - 6" NPS  
NON ACCEPTABLE: (SEE NFPA 2001 PARA. 2-2.1.2)  
ASTM A-120 butt welded or steel pipe and ordinary cast iron pipe shall not be used.
  - FITTINGS:
 

ACCEPTABLE: (SEE NFPA 2001 PARA. 2-2.3.1)  
Malleable iron 300 lb. class fittings shall be used up to and including 3" IPS & 1,000 lb ductile iron or forged steel fittings shall be used on 1" or larger sizes. Victrolite fittings are acceptable.  
NON ACCEPTABLE: (SEE NFPA 2001 PARA. 2-2.3.2)  
150 lb. class and ordinary cast iron fittings shall not be used.
  - HANGERS:
    - The hangers shall be UL listed and rigidly supported. No clevis hangers are allowed.
    - A hanger should be installed between fittings when the fittings are more than 2 ft. apart.
    - A hanger should be installed at a maximum of 1 ft. from nozzles.
    - The maximum spacing between hangers shall not exceed those listed in the hanger spacing table below.

PIPE SIZE IN NPT	MAXIMUM SPACING BETWEEN HANGERS
1/4"	4 FT.
1/2"	6 FT.
3/4"	8 FT.
1"	12 FT.
1 1/4"	16 FT.
1 1/2" or larger	15 FT.
- CLEANING PIPE:
  - Pipe is to be reamed, blown clear, and swabbed with appropriate solvent to remove mill varnish and cutting oil before assembly.
  - Teflon pipe tape is the only acceptable pipe sealant and must be applied to male threads only. Pipe joint compound shall NOT be used.
  - Installing contractor shall pressure test pipe in accordance with NFPA 2001, para 4-7.2.2.12 in a closed circuit for 10 minutes at 40 PSI and supply written documentation of results.



**215 LB. CYLINDER DETAIL**  
NOT TO SCALE  
⊗ DENOTES HYDRAULIC NODE POINT



**TYPICAL AGENT RELEASE MODULE DETAIL**  
NOT TO SCALE

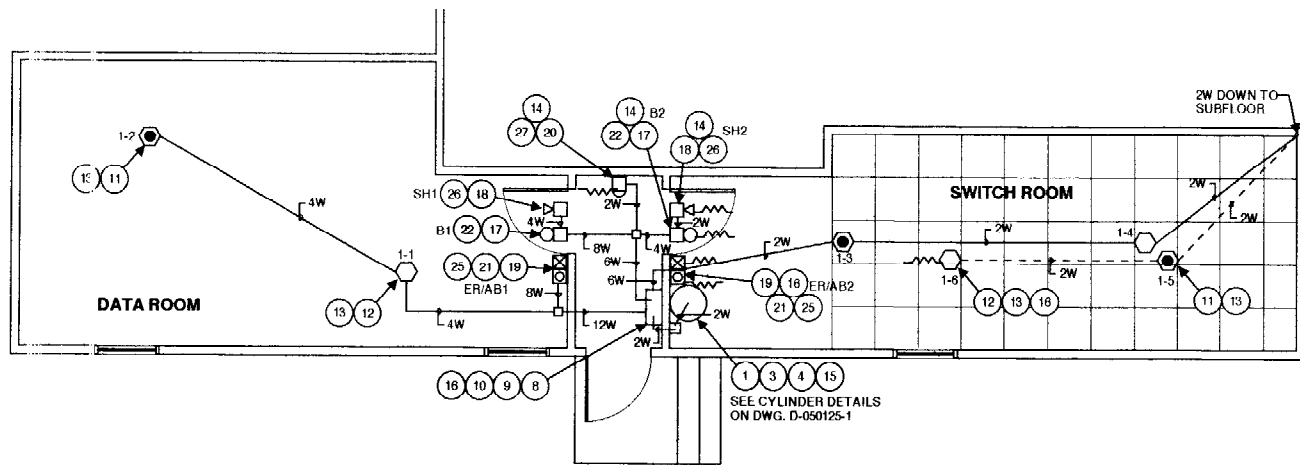
**IMPORTANT NOTE**

Fire Equipment, Inc. is not responsible for the loss of FM-200 Fire Extinguishing Agent due to leaks in the protected area. Prior to acceptance, all holes and cracks should be sealed. Any floor drains should be checked for tightness. Empty conduits must be sealed and all ducts and dampers should be tight fitting.

JOB NO. 050125

CONSULTANTS - ENGINEERING - CONTRACTORS	
APPROVED:	
NICET CERTIFIED ENGINEERING TECHNICIAN LEVEL	
CERTIFICATE NO.	
AUTOMATIC FM-200 FIRE SUPPRESSION SYSTEM	
FOR THE DATA & SWITCH ROOMS AT	
MARTINS POINT HEALTH CARE	
CARRIAGE HOUSE FACILITY PORTLAND, ME	
THIS DRAWING, DESIGN AND DATA CONTAINED HEREIN IS THE EXCLUSIVE PROPERTY OF FIRE EQUIPMENT, INC. AND IS NOT TO BE DISTRIBUTED TO OR USED BY OTHERS WITHOUT THE EXPRESS WRITTEN CONSENT OF FIRE EQUIPMENT, INC.	
SCALE: AS NOTED	DATE
DRAWN: J. BLOUNT	03-MAY-01
ENGINEERED: J. BLOUNT	03-MAY-01
CHECKED:	
SIZE	DRAWING NUMBER
D	D-050125-1
REV. NO.	0

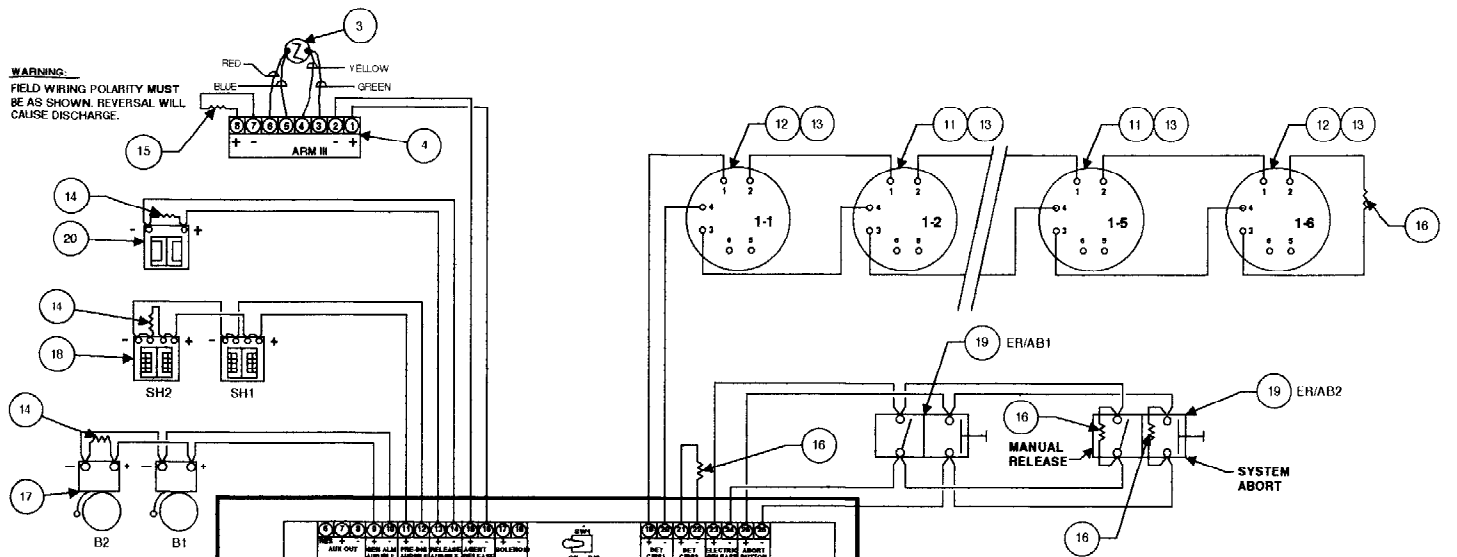
REV.	DESCRIPTION	DATE	BY
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2			
1			
0	ISSUED FOR APPROVAL	04 MAY 01	J. BLOUNT



**FM-200 WIRING LAYOUT**

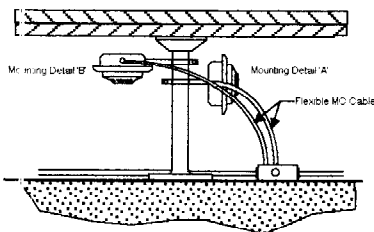
SCALE: 1/4"=1'-0"

--- CEILING WIRING  
 - - - SUBFLOOR WIRING



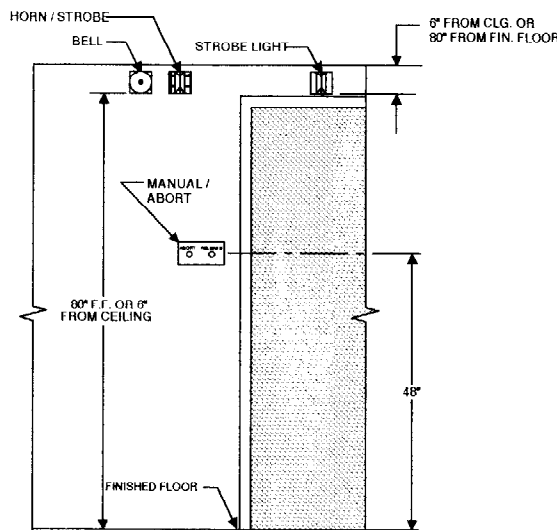
**FM-200 CONTROL PANEL WIRING DIAGRAM**

NOT TO SCALE



**SUBFLOOR SMOKE DETECTOR MOUNTING DETAIL**

The smoke detector shall be installed as shown on mounting detail A or B. In either no circumstances shall a detector be mounted upside down (socket down). The detector shall be mounted in the upper half of the subfloor area.



**DEVICE ELEVATION DETAIL**

NOT TO SCALE

**FM-200 WIRING NOTES**

- ALL WIRING SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE (NFPA 70 & 72), ARTICLE 760. ALL SUPERVISORY CIRCUITS ARE CLASSIFIED AS POWER LIMITED.
- ALL WIRING SHALL BE RUN IN THIN WALL STEEL TUBING (USING METALIC CARP) WHERE FLEXIBLE RUNS ARE REQUIRED. WHEN USING MC CABLE DO NOT USE THE GREEN WIRE FOR FIELD WIRING.
- ALL WIRING, JUNCTION BOXES, CONDUIT, ETC. IS TO BE SUPPLIED AND INSTALLED BY THE FIRE SUPPRESSION SYSTEMS ELECTRICAL CONTRACTOR.
- THE FIRE SUPPRESSION SYSTEMS ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR MOUNTING AND MAKING ALL FINAL CONNECTIONS TO ALL SUPPLIED DETECTORS, CONTROL PANELS, SIGNALING DEVICES, MANUAL STATION, ETC.
- ALL WIRING SHALL BE AS LISTED IN NEC ARTICLE 760-16B, UNLESS OTHERWISE SPECIFIED BY THE AUTHORITY HAVING JURISDICTION.
- UNLESS OTHERWISE SPECIFIED, MINIMUM WIRE SIZES SHALL BE AS FOLLOWS:  
 N#18- GAUGE FOR DETECTION CIRCUITS  
 N#16- GAUGE FOR RELEASE AND ALARM CIRCUITS  
 N#14- FOR A.C. POWER AND GROUND
- NO PARALLEL BRANCHING OF WIRING ON SUPERVISED CIRCUITS IS PERMISSIBLE AND POLARITY MUST BE OBSERVED.
- ALL FIELD WIRING MUST BE CHECKED FOR SHORTS, OR GROUNDS, BEFORE CONNECTIONS TO THE CONTROL PANEL. DO NOT MERGE THE WIRING.
- BEFORE TERMINATING WIRING TO THE CONTROL PANEL, A VOLTAGE READING SHALL BE DONE TO DETERMINE THAT THERE IS NO A.C. INDUCTIVE VOLTAGES ON THE WIRING.
- INPUT CIRCUIT WIRING AND OUTPUT CIRCUIT WIRING SHALL NOT BE RUN IN THE SAME CONDUIT UNLESS SHIELDED FROM EACH OTHER. THE ONLY EXCEPTION TO THIS SHALL BE THE MANUAL RELEASE INPUT CIRCUIT AND THE SILENCER RELEASE OUTPUT CIRCUIT WIRING MAYBE RUN IN THE SAME CONDUIT.
- A.C. POWER WIRING SHALL NOT BE RUN IN THE SAME CONDUIT AS D.C. WIRING UNLESS SHIELDED FROM EACH OTHER. THIS INCLUDES LOW VOLTAGE A.C. (HVAC CONTROLS) AND SHUNT TRIP CIRCUITS.
- THE A.C. POWER CIRCUIT FOR THE FIRE SUPPRESSION SYSTEM CONTROL PANEL SHALL BE A SEPARATE DEDICATED CIRCUIT FOR THE CONTROL PANEL ONLY. DO NOT CONNECT THIS CIRCUIT TO A SHUNT TRIP OPERATED CIRCUIT BREAKER PANEL OR USE IT TO POWER OTHER EQUIPMENT.
- NO POWER, INCLUDING EMERGENCY BATTERIES, SHALL BE APPLIED TO THE CONTROL PANEL UNTIL THE FIRE EQUIPMENT TECHNICIAN IS ON THE JOB SITE AND HAS CHECKED OUT THE WIRING TO THE PANEL. UPON ARRIVAL TO THE JOB SITE THE FIRE EQUIPMENT TECHNICIAN FIND THE CONTROL PANEL POWERED UP, FIRE EQUIPMENT, INC. WILL ASSUME NO LIABILITY FOR THE SYSTEM.
- THE SMOKE DETECTORS MOUNT ON A STANDARD 4" OCTAGON BOX.
- M-200 CYLINDER RELEASE SQUibs ARE TO BE WIRED WITH LIQUID TIGHT CABLE FROM A JUNCTION BOX ON THE WALL DIRECTLY BEHIND THE CYLINDER. DO NOT INSTALL THE SQUibs ON THE CYLINDERS, AS THESE SYSTEM DISCHARGE COULD OCCUR.
- IF THERE ARE ANY QUESTIONS REGARDING THE WIRING OR EQUIPMENT, CALL FIRE EQUIPMENT, INC. AT (618) 850-8650. ANY CHANGES IN EQUIPMENT LOCATIONS REQUIRED APPROVAL FROM FIRE EQUIPMENT, INC. PRIOR TO BEING MADE.
- THE SUBFLOOR SMOKE DETECTORS SHALL BE MOUNTED IN ACCORDANCE WITH THE MOUNTING DETAIL SHOWN. THERE SHALL BE A MINIMUM OF 3 FEET OF FLEXIBLE METALLIC CABLE ATTACHED TO THE DETECTOR AND TO THE FIXED CONDUIT ALLOWING FREEDOM OF MOVEMENT. DETECTORS SHALL NOT BE MOUNTED DIRECTLY TO THE FIXED CONDUIT. SEE DETECTOR MOUNTING DETAIL.

**SEQUENCE OF OPERATIONS**

- ACTIVATION OF A SMOKE DETECTOR WILL CAUSE THE FOLLOWING TO OCCUR:  
 1. THE ALARM LED WILL BE ANNUNCIATED ON THE CONTROL PANEL.  
 2. THE ALARMED DETECTOR'S RED STATUS LAMP WILL LIGHT.  
 3. THE ALARM BELLS WILL SOUND.  
 4. THE AIR CONDITIONING WILL SHUTDOWN.  
 5. AN ALARM SIGNAL WILL BE SENT TO THE BUILDING FIRE ALARM.  
 6. THE FM-200 SYSTEM WILL BE PRE-ALARMED.
  - ACTIVATION OF A SECOND SMOKE DETECTOR WILL CAUSE THE FOLLOWING TO OCCUR:  
 1. THE PRE-DISCHARGE LED WILL BE ANNUNCIATED ON THE CONTROL PANEL.  
 2. THE ALARMED DETECTOR'S RED STATUS LAMP WILL LIGHT.  
 3. THE STROBE/HORNS WILL OPERATE.  
 4. THE 30 SECOND PRE-DISCHARGE TIME DELAY WILL BEGIN.  
 5. UPON EXPIRATION OF THE TIME DELAY, THE FOLLOWING WILL OCCUR:  
 A. THE FM-200 SYSTEM WILL DISCHARGE INTO THE DATA & SWITCH ROOMS.  
 B. THE STROBE LIGHT OUTSIDE THE ROOMS WILL ILLUMINATE.  
 C. THE RELEASE LED WILL BE ANNUNCIATED ON THE CONTROL PANEL.  
 D. THE ROOM POWER WILL SHUTDOWN.
  - ACTIVATION OF AN ELECTRIC RELEASE STATION WILL CAUSE THE SAME AS I & II TO OCCUR, EXCEPT THE TIME DELAY WILL BE BYPASSED.
- NOTE: 1. AN ABORT BUTTON CAN BE PUSHED AND HELD TO PREVENT THE FM-200 FROM DISCHARGING UNTIL THE PANEL CAN BE RESET. THE ELECTRIC RELEASE STATION WILL OVERRIDE THE ABORT. ACTIVATION OF THE ABORT WILL CAUSE A TROUBLE CONDITION TO OCCUR ON THE CONTROL PANEL.  
 2. SHOULD A TROUBLE CONDITION OCCUR ON A CONTROL PANEL, A TROUBLE SIGNAL WILL BE SENT TO THE BUILDING FIRE ALARM.

**BATTERY CALCULATIONS**

ITEM	CURRENT DRAW	
	STANDBY	ALARM
AUX. POWER	100 mA	100 mA
SHIP PANEL	90 mA	90 mA
SRM4 MODULE	0 mA	100 mA
HORN/STROBE(2)	0 mA	206 mA
STROBE LIGHT	0 mA	65 mA
ALARM BELL(2)	0 mA	82 mA
INITIATOR ASSEMBLY	0 mA	5 mA
	190 mA	738 mA
24 HOURS STANDBY X 190 mA=	4560 MAH	
25 HOURS ALARM X 738 mA=	+ 1845 MAH	
	4745 MAH	
DE-RATING FACTOR	X 1.2	
	5694 MAH REQUIRED	
	7000 MAH SUPPLIED	

REV.	DESCRIPTION	DATE	BY
3			
2			
1			
0	ISSUED FOR APPROVAL	04-MAY-01	J. BLOUNT

CONSULTANTS - ENGINEERING - CONTRACTORS	
APPROVED:	
NICET CERTIFIED ENGINEERING TECHNICIAN LEVEL	
CERTIFICATE NO.	
AUTOMATIC FM-200 FIRE SUPPRESSION SYSTEM	
FOR THE DATA & SWITCH ROOMS AT	
MARTINS POINT HEALTH CARE	
CARRIAGE HOUSE FACILITY	PORTLAND, ME
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SCALE: AS NOTED	DATE: 05-MAY-01
DRAWN: J. BLOUNT	ENGINEERED: J. BLOUNT
CHECKED:	DATE: 05-MAY-01
SIZE: D	DRAWING NUMBER: D-050125-2
	REV. NO.: 0

88 Hicks Avenue  
 Medford, MA 02155  
 MA CR # 000075  
 Tel. (888) 296-1381  
 Fax. (888) 296-1384  
 Email: ENGINEERING@firefire.com  
 WWW.FIREFIRE.COM

JOB NO. 050125

**Specifications and Ordering Information**

All warnings are printed in bold capital letters.

**WARNING: PLEASE READ THESE SPECIFICATIONS AND INSTALLATION INSTRUCTIONS CAREFULLY BEFORE USING, SPECIFYING OR APPLYING THIS PRODUCT. FAILURE TO COMPLY WITH ANY OF THESE INSTRUCTIONS, CAUTIONS AND WARNINGS COULD RESULT IN IMPROPER APPLICATION, INSTALLATION AND/OR OPERATION OF THESE PRODUCTS IN AN EMERGENCY SITUATION, WHICH COULD RESULT IN PROPERTY DAMAGE, AND SERIOUS INJURY OR DEATH TO YOU AND/OR OTHERS. NOTE:**

Tone	Input Current AMPS @ 24 VDC		Input Current AMPS @ 12 VDC		Typical Anechoic 1 dBA at 10 Feet		Rated Reverberant dBA at 10 Feet Per UL 464			
					At Nominal Input Voltage		At Minimum Input Voltage		At Nominal Input Voltage	
	HI	STD	HI	STD	HI	STD	HI	STD	HI	STD
Horn	0.040	0.023	0.100	0.020	101	95	88	82	91	85
Bell	0.014	0.012	0.031	0.010	94	89	82	75	85	79
March Time Horn	0.040	0.023	0.100	0.020	101	95	85	79	88	82
Code-3 Horn	0.040	0.023	0.100	0.020	101	95	85	75	85	79
Code-3 Tone	0.028	0.017	0.060	0.015	97	92	79	75	82	75
Slow Whoop	0.048	0.026	0.100	0.025	101	96	88	82	88	82
Siren	0.036	0.023	0.082	0.020	100	95	85	82	88	82
Hi/Lo	0.020	0.014	0.044	0.012	95	90	82	79	85	79

Fike P/N	Wheelock P/N	Input Voltage	Rated Candela	Average* Strobe Current (AMPS)
20-096	MT-24-LS-VFR	24	15	.074
20-098	MT-24-LSM-VFR	24	15/75	.100
20-100	MT-24-IS-VFR	24	75	.200
20-102	MT-12/24-R	12/24	—	—

**NOTE:**

If the strobe and audible operate on the same circuit, add the strobe current from above to the proper current from Table 2. \*\*

\* Average current per actual Wheelock Production testing at 12 & 24VDC nominal voltage. For rated average, peak and inrush currents across the listed voltage ranges for both filtered DC and full waved rectified (FWR), see the Installation Instruction for this product series or Wheelock's current "Alarm Signals" catalog.

Tone	Input Current AMPS @ 24 VDC		Typical Anechoic 1 dBA at 10 Feet		Rated Reverberant dBA at 10 Feet Per UL 464			
			At Nominal Input Voltage		At Minimum Input Voltage		At Nominal Input Voltage	
	HI	STD	HI	STD	HI	STD	HI	STD
Horn	0.040	0.023	99	93	85	79	88	82
Bell	0.014	0.012	92	87	79	75	82	75
March Time Horn	0.040	0.023	99	93	82	75	85	79
Code-3 Horn	0.040	0.023	99	93	79	75	82	75
Code-3 Tone	0.028	0.017	95	90	75	70*	79	73*
Slow Whoop	0.048	0.026	99	94	82	75	85	79
Siren	0.036	0.023	98	93	82	75	85	79
Hi/Lo	0.020	0.014	93	88	79	75	82	75

1. Anechoic dBA is measured on axis in a non-reflective (free field) test room using fast meter response. For peak dBA (measured with peak meter response), add 5 dBA to typical anechoic values shown in Table 1 and 2.
2. Reverberant dBA is a minimum UL rating based on sound power measurements in a reverberant test room.

**\*CAUTION:** This setting is acceptable only for general signaling (non-fire alarm) use. Use the "high" dBA setting with this tone or use a different tone for public mode fire alarm service.

Tone	Alarm Tones Pattern Description
Horn	Broadband Horn (Continuous)
Bell	15660 Hz. Modulated (0.07 sec. ON/Repeat)
March Time Horn	Horn (0.25 sec. On/0.25 sec. Off/Repeat)
Code-3 Horn	Horn (ANSI S3.41 Temporal Pattern)
Code-3 Tone	500 Hz. (ANSI S3.41 Temporal Pattern)
Slow Whoop	500-1200 Hz Sweep (4.0 sec. On/0.5 sec. Off/Repeat)
Siren	600-1200 Hz Sweep (1.0 sec. On/Repeat)
Hi/Lo	1000/800 Hz (0.25 sec. On/Alternate)

**General Notes:**

- Strobes are designed to flash at 1 flash per second minimum from 20-31VDC (for 24VDC models). Note that ADA guidelines presently specify a flash rate of 1 to 2 flashes per second.
- All candela ratings represent minimum effective Multitone Strobe intensity based on UL 1971.
- MT Strobe models are UL 1971 Listed for indoor use with a temperature range of 32°F to 120°F (0°C to 49°C) and maximum humidity of 85%.

location. The Low Pressure Supervisory Switch provides constant monitoring of the container's internal pressure. It is available in two styles; normally opened and normally closed contacts. In the event of a decrease in container internal pressure from 360 psig to 272 psig (2482.1kPa to 1875.4kPa), the Supervisory Switch normally opened/closed contacts will close/open. This will cause a supervisory trouble alarm at the system control panel.

Fike Series 70 Clean Agent Containers are available for installation in the upright, inverted or horizontal positions, depending upon the user's particular needs and the type and size container specified. The mounting location of the container is quite flexible. It can be mounted at the exact point of discharge or at a remote location by adding distribution piping from the container to the nozzle system. (Refer to the Fike Design, Installation & Maintenance Manual - P/N 06-202). The operating temperature range is +32°F to +130°F (0°C to 54.4°C) in any installation.

The Fike Series 70 Clean Agent Containers can be used in a pre-engineered system, utilizing a balanced piping configuration(s); an engineered system, utilizing unbalanced piping configurations, or a combination of both designs. For assistance, consult your local Fike Distributor or Fike Protection Systems.

#### RELIABILITY

Fike Series 70 Clean Agent Containers are manufactured in strict accordance with Department of Transportation (D.O.T.) regulations. The Fike Series 70 Clean Agent Containers have successfully passed testing by Factory Mutual and Underwriters Laboratories, Inc. Before leaving the factory, each container must pass extensive leakage testing, and pressure testing to 1000 psig (6895kPa). The containers are constructed from carbon steel alloys and painted with a durable, baked enamel finish.

#### INSTALLATION

Fike Series 70 Clean Agent Containers are supplied with a mounting bracket that is designed to provide the most effective and versatile installation for that particular container. The 10, 20 and 35 pound (4.5, 9.1 and 15.9kg) container brackets employ two U-bolts for securing the container to the bracket. The 60 pound (27.2kg) container is secured using two quick connecting, over-center handle clamps. The

125i and 215i pound (56.7i and 97.5i kg) containers utilize an "L" shaped bracket for direct wall mounting or, with an optional floor mounting kit, can be mounted on a floor in the "valve down" position. The 100 pound (45.3kg) and 215 pound (97.5kg) through 1000 pound (454kg) containers are supplied with one or two U-shaped mounting brackets, depending upon container size, for mounting to a wall or other secure surface.

#### ARCHITECT SPECIFICATIONS

The Clean Agent shall be stored in Fike Series 70 Clean Agent Storage Containers. The containers shall be capable of being filled, in one pound (.5kg) increments, to their listed maximum capacity. The Clean Agent container shall be activated by a signal from the control panel which is processed by the Agent Release Module. This module shall store the power required to operate the actuator. The valve shall contain a scored, non-fragmenting, rupture disc to provide an immediate, total discharge of all the agent. The Clean Agent is stored in the container as a liquid, having a natural vapor pressure of 66.4 psig at 77°F (457.8kPa at 25°C). To aid in discharge, the container shall be super-pressurized to 360 psig at 70°F (2482.1kPa at 21.1°C) with dry nitrogen. Agent discharge shall be completed in 10 seconds, or less.

Clean Agent Storage Containers shall be actuated by either an electrical manual discharge station, an automatic detection device(s) or an increase in internal pressure due to heating the Clean Agent to approximately 160°F (71.1°C). At this temperature, internal pressure will be adequate to burst the rupture disc, discharging the contents of the container. Normal operating temperature shall be +32°F to +130°F (0°C to 54.4°C) in any installation.

Clean Agent Storage Containers shall be equipped with a pressure gauge to display internal pressure. This gauge shall be an integral part of the container and color coded for fast referencing of pressure readings. A Low Pressure Supervisory Switch shall be made available, as an option. A decrease in internal container pressure from 360 psig to 272 psig (2482.1kPa to 1875.4kPa) shall cause the normally opened/closed Supervisory Switch contacts to close/open, indicating a trouble or supervisory condition, at the control panel.

Clean Agent Storage Containers shall be fastened to a wall, or other secure surface, using a one piece mounting bracket that is designed for the most effective and versatile installation of each container.

#### Clean Agent Storage Container Data - U.S. Standard

FIKE P/N	SIZE (LB)	VALVE (IN)	EMPTY WT (LB)	AGENT FILL RANGE (LBS)	VALVE POSITION
70-108	10	1	20	8-10	Horiz. or Upright
70-098	20	1	30	12-21	Horiz. or Upright
70-089	35	1	55	22-38	Horiz. or Upright
70-022	60	1	80	37-64	Horiz. or Upright
70-088	100	1	90	58-100	Upright
70-041	125i	2 1/2	180	73-127	Inverted
70-077	215i	2 1/2	225	128-223	Inverted
70-087	215	3	285	123-215	Upright
70-086	375	3	375	215-375	Upright
70-083	650	3	455	372-650	Upright
70-083a	650	3	455	372-650	Upright
70-090	1000	3	673	573-1002	Upright

#### CLEAN AGENT STORAGE CONTAINER DATA - METRIC

FIKE P/N	SIZE (KG)	VALVE (MM)	EMPTY WT (KG)	AGENT FILL RANGE (KG)	VALVE POSITION
70-108	4.5	25	9.1	3.6-4.5	Horiz. or Upright
70-098	9.1	25	13.6	5.4-9.5	Horiz. or Upright
70-089	15.9	25	24.9	10.0-17.2	Horiz. or Upright
70-022	27.2	25	36.3	16.8-29.0	Horiz. or Upright
70-088	45.3	25	40.8	26.3-45.4	Upright
70-041	56.7i	65	81.6	33.1-57.6	Inverted
70-077	97.5i	65	81.6	58.1-101.2	Inverted
70-087	97.5	80	129.3	55.8-97.5	Upright
70-086	170	80	170.1	97.5-170.1	Upright
70-083	295	80	206.4	168.7-294.8	Upright
70-083a	295	80	206.4	168.7-294.8	Upright
70-090	454	80	305.8	259.9-454.5	Upright