

# AutoPulse

## Electric Manual Pull Station

### Features

- UL Listed/FM Approved
- Approved for ADA
- Dual action
- Die-cast metal construction
- Terminal block
- Optional auxiliary contacts
- Flush mounts on single gang box
- Surface mount back box available
- Weatherproof back box available
- High-gloss red enamel finish
- Customized labels
- Keyed to match AUTOPULSE control units

### Applications

The Electric Manual Pull Station is a cost-effective, feature-packed, non-coded manual fire alarm pull station. It was designed to meet multiple applications with the installer and end-user in mind.

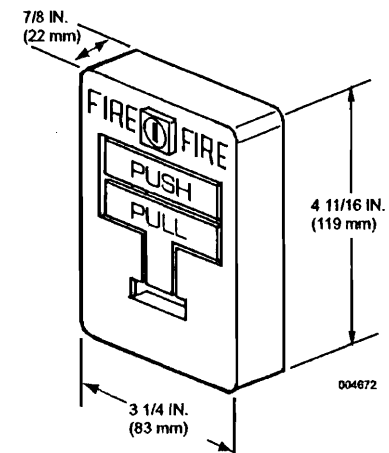
- ▶ The pull station provides the AUTOPULSE control panels with an alarm initiating input signal. Its innovative design, durable construction, and multiple mounting options make the pull station simple to install, maintain, and operate.

### Description

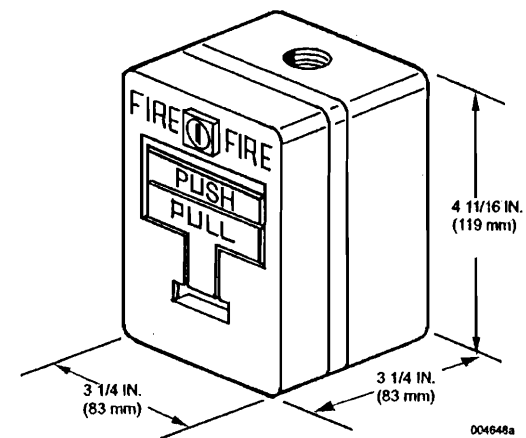
The Electric Manual Pull Station is a high quality, die-cast metal dual action fire alarm pull station available with a SPST, DPST or DPDT switch, with terminal strip connections. The contacts are rated for 1 Amp at 30 VDC. Gold plating on the contacts avoid the risk of corrosion. All models in the series have been tested by UL for compliance to the latest requirements of the American with Disabilities Act (ADA).

The Electric Manual Pull Station is operated by pushing in the top bar and pulling the handle on the front of the station as far down as it will go; at which point the handle locks into place and is easily visible from up to 50 feet. Opening the station with the key, placing the handle in the normal upright position and re-locking the station resets the pull station.

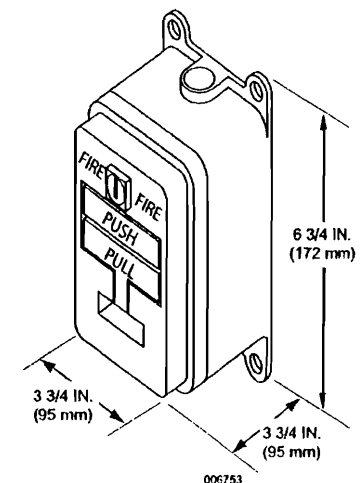
### STANDARD PULL STATION



### WEATHERPROOF PULL STATION



### PULL STATION





**Key Maintenance Switch**

**Features**

- Stackable, screw-terminal, contact blocks
- Compatible with AUTOPULSE® control units
- Surface-mount assemblies listed by Underwriters Laboratories, Inc.
- Components mounted on stainless steel switch plate

**Applications**

The Key Maintenance Switch is used to interrupt the release circuit signal to the fire suppression system. It is key-operated to allow authorized personnel to deactivate the release circuit during service or maintenance. An indicator lamp, located on the switch plate, will light when the switch is in the "lock-out" mode to serve as a reminder that the release circuit has been disconnected.

**Description**

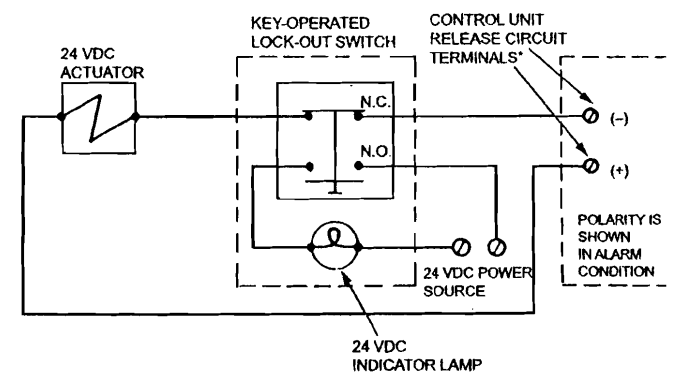
The Key Maintenance Switch assembly consists of a key-operated switch, 24 VDC indicator lamp, normally-open contact block, normally-closed contact block, and stainless steel switch plate with silk-screened label. Surface-mount assemblies include a double-gang weather-proof box and gasket.

The stackable, screw-terminal contact blocks are rated for 28 VDC @ 1.1 amp make/break or 6 amp continuous carry.

**Listings and Approvals**

The switch is UL listed when installed in the surface-mount box (with gasket) that is provided with the surface-mount assembly.

**TYPICAL WIRING DIAGRAM**

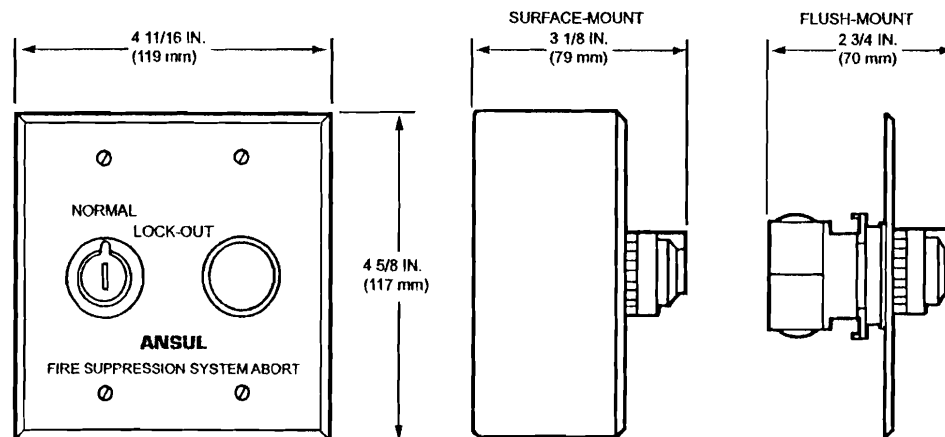


\* SEE CONTROL UNIT MANUAL FOR SPECIFIC WIRING REQUIREMENTS.

**Ordering Information**

| Part No. | Description                       | Shipping Weight |        |
|----------|-----------------------------------|-----------------|--------|
|          |                                   | lb.             | (kg)   |
| 76498    | Maintenance Switch, Surface-Mount | 2.0             | (0.9)  |
| 76499    | Maintenance Switch, Flush-Mount   | 2.0             | (0.9)  |
| 76485    | Extra Contact Block, N.C.         | 0.25            | (0.11) |
| 76486    | Extra Contact Block, N.O.         | 0.25            | (0.11) |
| 78179    | Spare Key                         | 0.25            | (0.11) |
| ▶ 470273 | Extender-Back Box                 | 0.25            | (0.11) |

**MOUNTING DIMENSIONS**



# COLORED LIGHT STROBE / HORN

Two Field Selective Tone & dBA Level with Selective Strobe.

**CSH24W**

**INDOOR ONLY**

Wall Mount Only

# COLORED LIGHT STROBE

Exclusive Field Selective Strobe Low/High.

**CSL24W**

**INDOOR ONLY**

Wall Mount Only

## INSTALLATION INSTRUCTIONS



**LISTED**

AUDIBLE / VISUAL SIGNALING APPLIANCES  
FOR FIRE ALARM SERVICE

INST. SHT. No.CSL/CSH-24W0001 : SH24W153075-H1019 S031203a

### Description

AMSECO's UL listed Colored Light Strobe series, CSH24W Select-a-Horn/strobe and CSL24W Select-A-strobe series are designed to provide audible and visual signals for Fire Alarm Protection Systems and notification signals for the Purpose of life safety and property protection. They meet or exceed NFPA/ANSI standards and UL464/UL1638.

CSH24W combines a selective 2 tone horn with a colored light Select-A-Strobe. The horn provides a continuous tone or temporal pattern (code3) tone when constant voltage from a Fire Alarm Control Panel is applied. Each tone has two dBA levels (High and Low) selected by jumper. The colored light strobe can be selected either Low or High by a selectable switch located on the front housing.

The CSH24W audible/visual signals can be connected either independently or in unison. The horn can be silenced while the strobes remain flashing, Refer to the wiring diagram Fig.1, or dBA refer to Table 1.

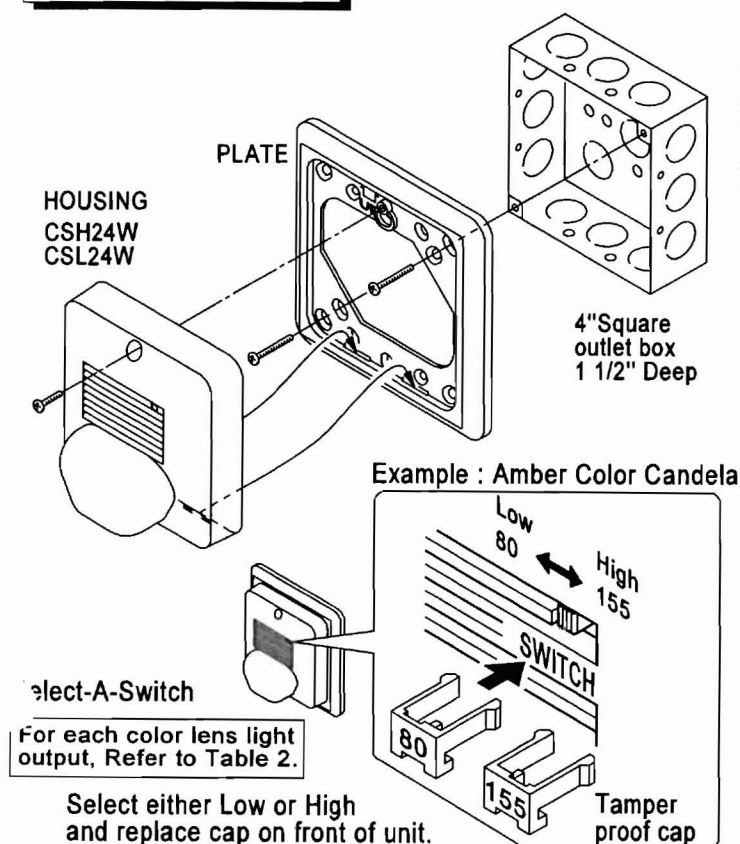
The colored light strobe CSL24W is in compliance with UL1638 visual signaling appliances that is ideal for any occupancy requiring visual notifications appliances per applicable building or fire code or wherever dependable alarms are required. The color is available in Amber, Blue, Green and Red. The light output candela ratings vary depending on the Lens color. Refer to the light output Table 2.

The CSH24W/CSL24W series are polarized and have screw terminals for IN/OUT wiring connections using #12 to #18 AWG wires.

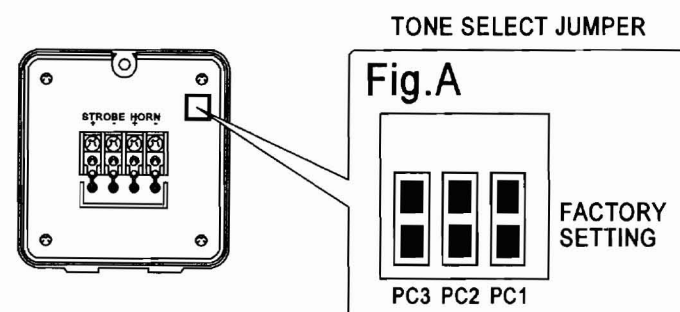
In those instances where AMSECO two or more horns and/or strobes are connected and requires a synchronized code 3 temporal pattern and/or a synchronized strobe flash, all models can be synchronized when used in conjunction with AMSECO UL listed Sync Module SMD10-3A to meet the latest code.

Note1 : Instaliation must comply in accordance with applicable standards such as NFPA 72, ANSI 117.1, UL1638, UL464, Canadian Electrical Code, part 1, and all state local codes.

### Installation



Locate the Tone Select Jumper as shown in Fig.A. For tone selection, set the jumper as shown in Fig.B. Select strobe light output Low/High by the Select-A-Switch located on the front housing. Make sure you place the tamper proof cap provided showing the candela rating. Connect all wires appropriately as shown in the wiring diagram.



| Fig.B | JUMPER | PC3 PATTERN  | PC2 TONE           | PC1 VOLUME |
|-------|--------|--------------|--------------------|------------|
|       |        | NON TEMPORAL | ELECTRO MECHANICAL | HIGH       |
|       |        | TEMPORAL     | 3000Hz             | LOW        |

**Specifications** TABLE 1

Measured by our average value indicating meter

■ Horn & Strobe  
CSH24W

|                      | PC3<br>Pattern        | PC2<br>Tone           | PC1<br>Volume         | P<br>3                | P<br>2 | P<br>1 | Average Current (mA) |      |      |      |      |      | Sound output<br>(dBA@DC) |       |      |    |    |
|----------------------|-----------------------|-----------------------|-----------------------|-----------------------|--------|--------|----------------------|------|------|------|------|------|--------------------------|-------|------|----|----|
|                      |                       |                       |                       |                       |        |        | DC                   |      |      | FWR  |      |      | 16 V                     | 24 V  | 33 V |    |    |
|                      |                       |                       |                       |                       |        |        | 16 V                 | 24 V | 33 V | 16 V | 24 V | 33 V |                          |       |      |    |    |
| Horn & Strobe<br>Low | NON-TEMP.             | ELECTRO<br>MECHANICAL | HIGH                  | 1                     | 1      | 1      | 112                  | 98   | 96   | 145  | 115  | 142  | 85                       | 87    | 88   |    |    |
|                      |                       |                       | LOW                   | 1                     | 1      | 0      | 109                  | 91   | 83   | 142  | 110  | 95   | 75                       | 78    | 81   |    |    |
|                      |                       | 3000 Hz               | HIGH                  | 1                     | 0      | 1      | 118                  | 111  | 108  | 153  | 128  | 119  | 85                       | 88    | 88   |    |    |
|                      |                       |                       | LOW                   | 1                     | 0      | 0      | 106                  | 85   | 83   | 139  | 105  | 89   | 75                       | 78    | 81   |    |    |
|                      |                       | TEMPORAL              | ELECTRO<br>MECHANICAL | HIGH                  | 0      | 1      | 1                    | 112  | 98   | 96   | 145  | 115  | 142                      | 81    | 83   | 84 |    |
|                      |                       |                       |                       | LOW                   | 0      | 1      | 0                    | 109  | 91   | 83   | 142  | 110  | 95                       | *1 71 | 75   | 77 |    |
|                      | 3000 Hz               |                       | HIGH                  | 0                     | 0      | 1      | 118                  | 111  | 108  | 153  | 128  | 119  | 80                       | 83    | 84   |    |    |
|                      |                       |                       | LOW                   | 0                     | 0      | 0      | 106                  | 85   | 83   | 139  | 105  | 89   | *2 71                    | 75    | 77   |    |    |
|                      | Horn & Strobe<br>High |                       | NON-TEMP.             | ELECTRO<br>MECHANICAL | HIGH   | 1      | 1                    | 1    | 158  | 130  | 133  | 207  | 157                      | 168   | 85   | 87 | 88 |
|                      |                       |                       |                       |                       | LOW    | 1      | 1                    | 0    | 155  | 123  | 108  | 204  | 152                      | 121   | 75   | 78 | 81 |
|                      |                       | 3000 Hz               |                       | HIGH                  | 1      | 0      | 1                    | 164  | 143  | 146  | 215  | 170  | 145                      | 85    | 88   | 88 |    |
|                      |                       |                       |                       | LOW                   | 1      | 0      | 0                    | 152  | 117  | 108  | 201  | 147  | 115                      | 75    | 78   | 81 |    |
| TEMPORAL             |                       | ELECTRO<br>MECHANICAL |                       | HIGH                  | 0      | 1      | 1                    | 158  | 130  | 133  | 207  | 157  | 168                      | 81    | 83   | 84 |    |
|                      |                       |                       |                       | LOW                   | 0      | 1      | 0                    | 155  | 123  | 108  | 204  | 152  | 121                      | *1 71 | 75   | 77 |    |
|                      |                       | 3000 Hz               | HIGH                  | 0                     | 0      | 1      | 164                  | 143  | 146  | 215  | 170  | 145  | 80                       | 83    | 84   |    |    |
|                      |                       |                       | LOW                   | 0                     | 0      | 0      | 152                  | 117  | 108  | 201  | 147  | 115  | *2 71                    | 75    | 77   |    |    |
|                      |                       | Horn only             | NON-TEMP.             | ELECTRO<br>MECHANICAL | HIGH   | 1      | 1                    | 1    | 28   | 41   | 57   | 30   | 41                       | 91    | 85   | 87 | 88 |
|                      |                       |                       |                       |                       | LOW    | 1      | 1                    | 0    | 25   | 34   | 42   | 27   | 36                       | 44    | 75   | 78 | 81 |
| 3000 Hz              |                       |                       |                       | HIGH                  | 1      | 0      | 1                    | 34   | 54   | 70   | 38   | 54   | 68                       | 85    | 88   | 88 |    |
|                      |                       |                       | LOW                   | 1                     | 0      | 0      | 22                   | 28   | 36   | 24   | 31   | 38   | 75                       | 78    | 81   |    |    |
| TEMPORAL             | ELECTRO<br>MECHANICAL |                       | HIGH                  | 0                     | 1      | 1      | 28                   | 41   | 57   | 30   | 41   | 91   | 81                       | 83    | 84   |    |    |
|                      |                       |                       | LOW                   | 0                     | 1      | 0      | 25                   | 34   | 42   | 27   | 36   | 44   | *1 71                    | 75    | 77   |    |    |
|                      | 3000 Hz               | HIGH                  | 0                     | 0                     | 1      | 34     | 54                   | 70   | 38   | 54   | 68   | 80   | 83                       | 84    |      |    |    |
|                      |                       |                       | LOW                   | 0                     | 0      | 0      | 22                   | 28   | 36   | 24   | 31   | 38   | *2 71                    | 75    | 77   |    |    |

|                             |  |
|-----------------------------|--|
| Voltage                     | 24V                                      |
| Flash Rate                  | 60 times / min.                          |
| Operating Voltage Range     | 16~33 VDC<br>16~33 VFWR                  |
| Light Output Select         | Low                                      |
|                             | High                                     |
| Sync module (SMD10-3A)      | Available                                |
| Operating Temperature Range | 32~120° F (0~49°C)                       |
| Material                    | Housing : A.B.S.<br>Lens : Polycarbonate |
| Construction                | INDOOR USE                               |

The low volume Temporal setting of \*1 & \*2 at 16V FWR/DC are not suitable to use for Fire Alarm Public Mode, (Suitable for General and Private Modes only).

|                   | Current (mA) | DC      |     |     | FWR |     |     |     |
|-------------------|--------------|---------|-----|-----|-----|-----|-----|-----|
|                   |              | 16V     | 24V | 33V | 16V | 24V | 33V |     |
| Strobe Light only | Low          | Average | 89  | 64  | 50  | 125 | 94  | 81  |
|                   |              | Peak    | 127 | 103 | 87  | 269 | 229 | 210 |
|                   |              | In-Rush | 127 | 103 | 119 | 269 | 229 | 210 |
|                   | High         | Average | 135 | 96  | 75  | 187 | 136 | 107 |
|                   |              | Peak    | 170 | 134 | 119 | 377 | 306 | 269 |
|                   |              | In-Rush | 170 | 135 | 223 | 377 | 306 | 269 |

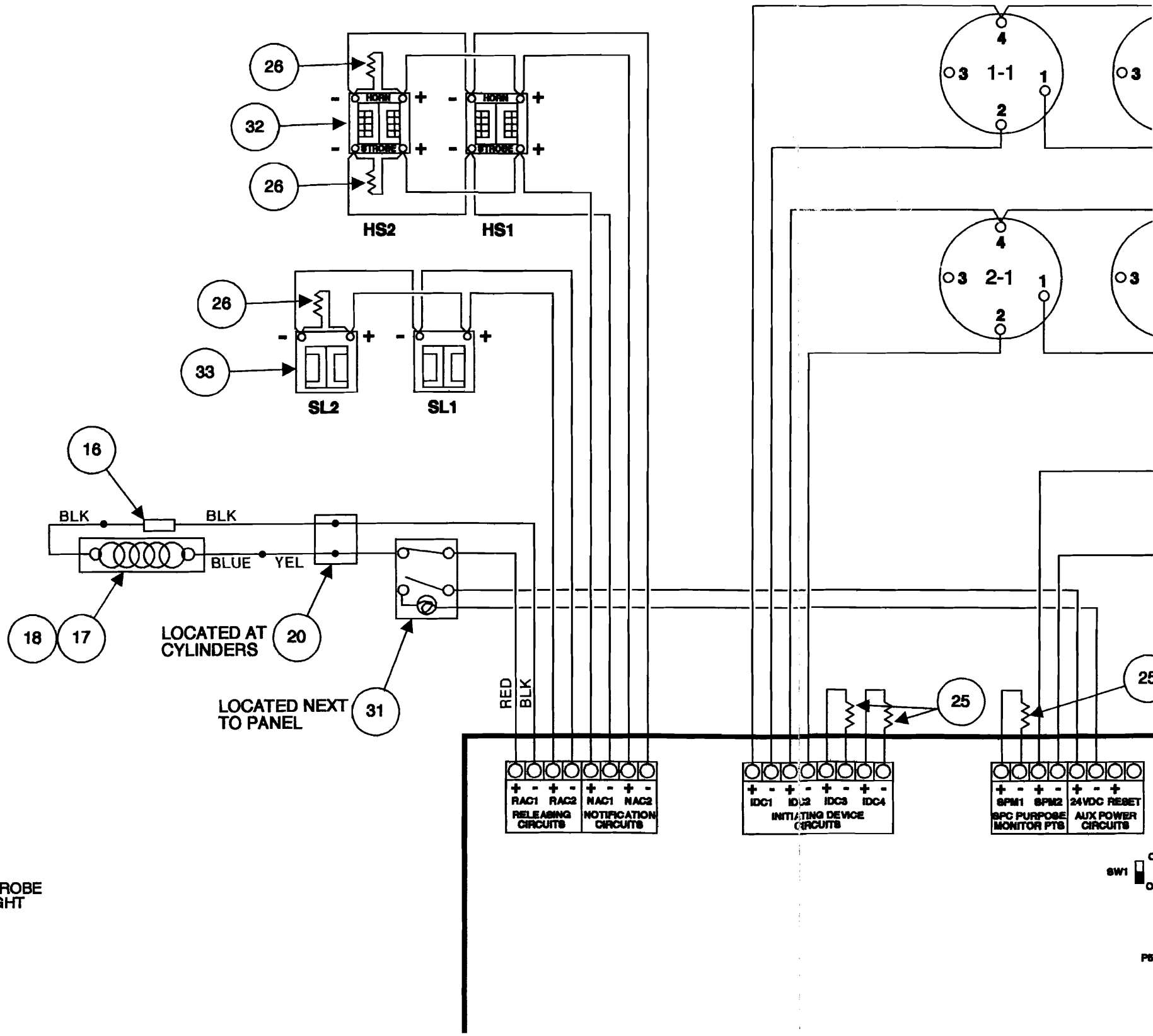
■ Strobe Light  
CSL24W

|      | Current (mA) | DC  |     |     | FWR |     |     |
|------|--------------|-----|-----|-----|-----|-----|-----|
|      |              | 16V | 24V | 33V | 16V | 24V | 33V |
| Low  | Average      | 84  | 60  | 47  | 118 | 89  | 76  |
|      | Peak         | 122 | 99  | 84  | 264 | 224 | 205 |
|      | In-Rush      | 122 | 100 | 119 | 264 | 224 | 205 |
| High | Average      | 129 | 91  | 71  | 178 | 128 | 102 |
|      | Peak         | 164 | 129 | 115 | 368 | 298 | 264 |
|      | In-Rush      | 164 | 135 | 223 | 368 | 298 | 264 |

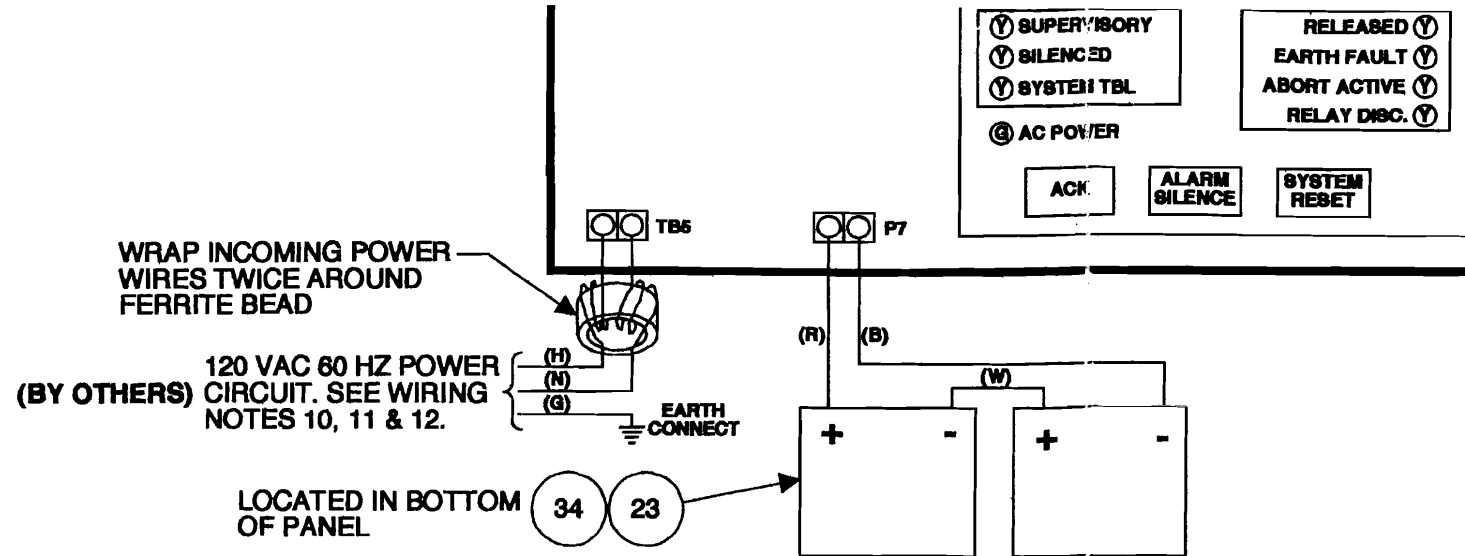
When calculating the total current : Use table to determine the highest value of "rated" current for the system.

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## DETAIL



**CE ELEVATION DETAIL**  
**1" TO SCALE**



**BATTERY CALCULATIONS**

**CURRENT DRAW**

| DEVICE           | STANDBY       | ALARM          |
|------------------|---------------|----------------|
| AUTOPULSE Z10    | 100 mA        | 264 mA         |
| AUX RELAY MOD    | 12 mA         | 70 mA          |
| HORN/STROBE(2)   | 0 mA          | 240 mA         |
| STROBE LIGHT(2)  | 0 mA          | 130 mA         |
| INERGEN SOLENOID | 0 mA          | 570 mA         |
|                  | <u>112 mA</u> | <u>1274 mA</u> |

24 HOURS STANDBY X 112 mA = 2688 mAH

.25 HOURS ALARM X 1274 mA = 319 mAH

3007 mAH

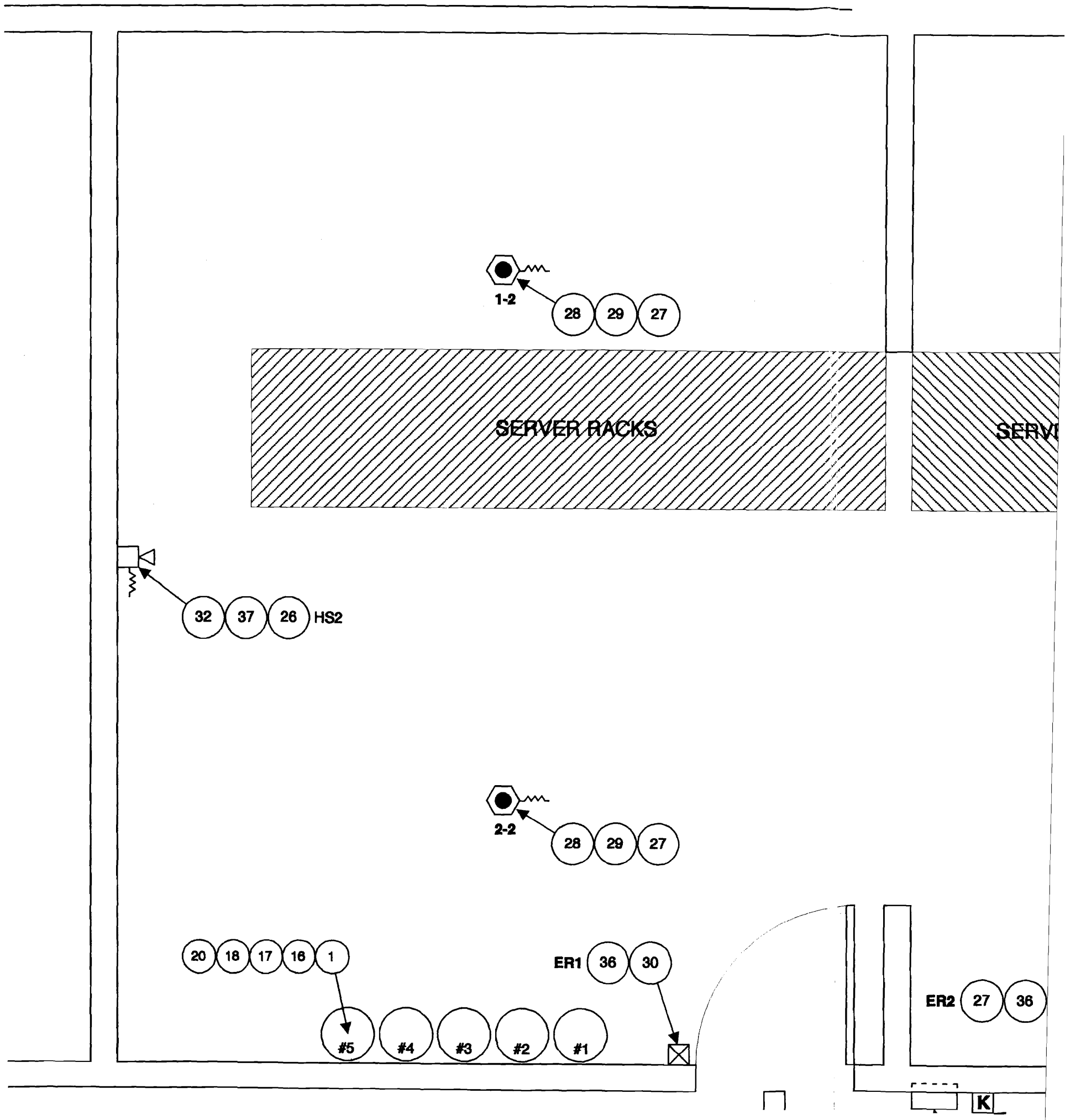
BATTERY DERATING FACTOR X 1.2

3609 mAH REQUIRED  
 7000 mAH SUPPLIED

|                              |
|------------------------------|
| <b>CONSULTANT:</b>           |
| <b>APPROVED:</b> _____       |
| <b>NICET CERTIFIED EM</b>    |
| <b>CERTIFICATE NO.</b> _____ |
| <b>AUTOMATIC</b>             |
| <b>F</b>                     |
| <b>BA</b>                    |
| <b>280 FORE STREET, S</b>    |

|      |                     |           |           |
|------|---------------------|-----------|-----------|
| 3    |                     |           |           |
| 2    |                     |           |           |
| 1    |                     |           |           |
| 0    | ISSUED FOR APPROVAL | 22-MAY-06 | J. BLOUNT |
| REV. | DESCRIPTION         | DATE      | BY        |

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# INERGEN WIRING LAYOUT

SCALE: 1/2"=1'-0"

## INERGEN WIRING NOTES

- ALL WIRING SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE (NFPA 70) ARTICLE 760. ALL SUPERVISED CIRCUITS ARE CLASSIFIED AS POWER LIMITED EXCEPT THE SOLENOID & STROBE LIGHT CIRCUITS.
- ALL WIRING SHALL BE RUN IN THIN WALL STEEL TUBING USING METALLIC CABLE 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.
- UNLESS OTHERWISE SPECIFIED, MINIMUM WIRE SIZES SHALL BE AS FOLLOWS:
  - N°18.- GAUGE FOR DETECTION CIRCUITS
  - N°18.- GAUGE FOR RELEASE AND ALARM CIRCUITS
  - N°12.- 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 MEGGER THE WIRING WITH THE DEVICES ATTACHED.
- 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.
- A.C. POWER WIRING SHALL NOT BE RUN IN THE SAME CONDUIT AS D.C. WIRING UNLESS SHIELDED FROM EACH OTHER. THIS INCLUDED 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. (PER NFPA 2001-4-7.2.4.3).
- 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. IF 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.
- INERGEN CYLINDER RELEASE SOLENOIDS ARE TO BE WIRED WITH LIQUID TIGHT CABLE FROM A JUNCTION BOX ON THE WALL DIRECTLY BEHIND THE CYLINDER. DO NOT SCREW THE SOLENOID ON THE CYLINDERS, AS FALSE SYSTEM DISCHARGE COULD OCCUR.
- IF THERE ARE ANY QUESTIONS IN REGARD TO THE WIRING OR EQUIPMENT, CALL FIRE EQUIPMENT, INC. AT 781-391-8050. ANY CHANGES IN EQUIPMENT LOCATIONS REQUIRE APPROVAL FROM FIRE EQUIPMENT, INC. PRIOR TO BEING MADE.

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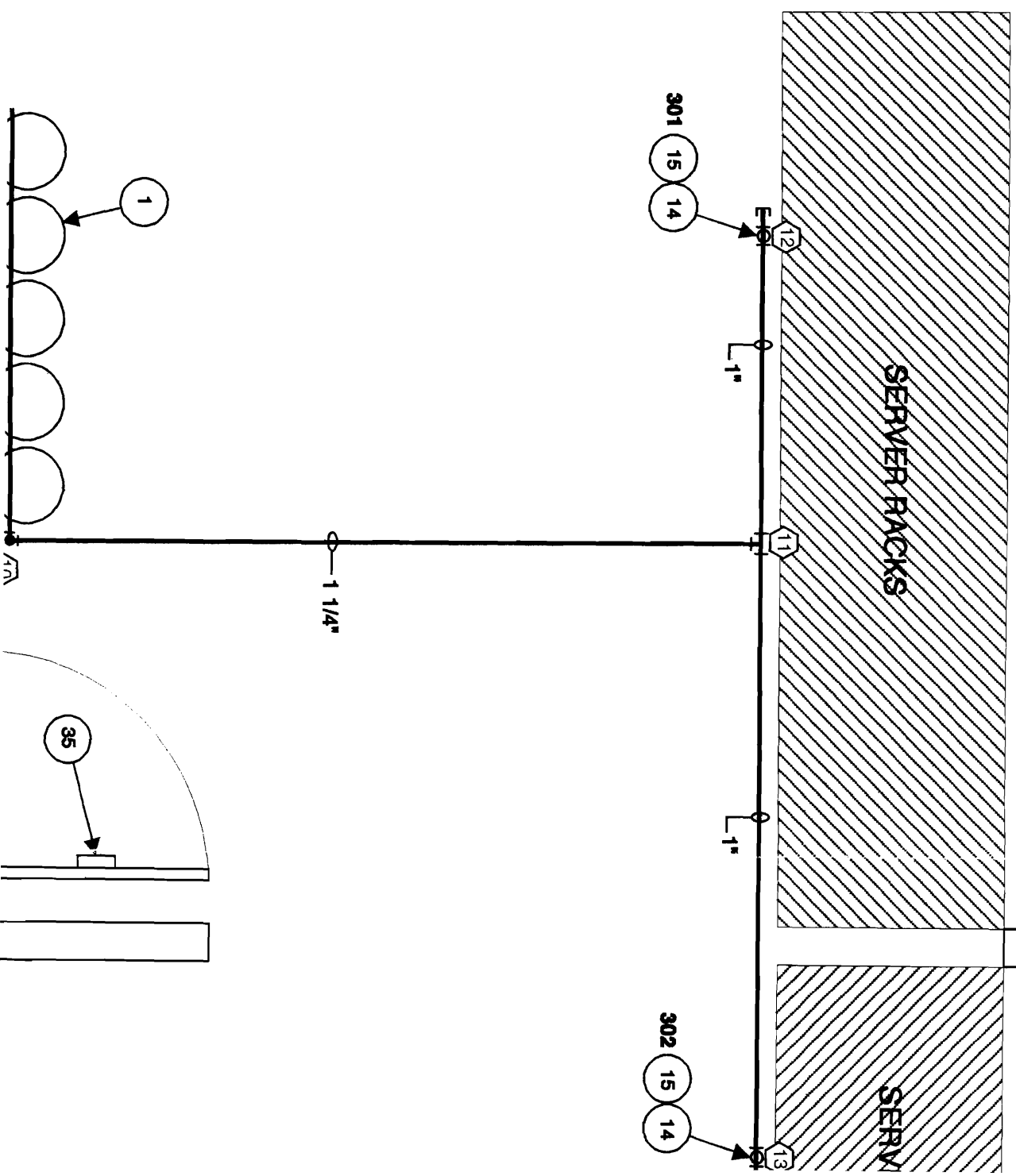
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## ARGENT™ PIPING INSTALLATION NOTES

ALL DIMENSIONS ARE TO BE FIELD CHECKED. IF PIPING SHOWN INTERFERES WITH ANY OBJECT, APPROVAL FOR CHANGES SHALL BE SECURED, PRIOR TO INSTALLATION, WITH FIRE EQUIPMENT, INC.

PIPE IS TO BE REAMED, BLOWN CLEAR AND SWABBED WITH APPROPRIATE SOLVENT TO REMOVE MILL FINISH AND CUTTING OIL BEFORE ASSEMBLY.

FLON PIPE TAPE OR PIPE JOINT COMPOUND ARE ACCEPTABLE SEALANTS AND SHALL BE APPLIED TO PIPE THREADS ONLY.

MATERIALS: IN ACCORDANCE WITH NFPA 2001, PARA.4-1.1 AND 4-2.3.

### PIPE AND FITTINGS:

THE SYSTEM MANIFOLD SHALL BE CONSTRUCTED OF SCHEDULE 80 (UP TO 2 1/2") OR SCHEDULE 160 (3" AND LARGER) PIPING AND CLASS 2000 OR 3000 LB. STEEL FITTINGS, THREADED OR WELDED. THE DISTRIBUTION PIPING DOWNSTREAM FROM THE ORIFICE UNION SHALL BE CONSTRUCTED OF SCHEDULE 40 PIPING WITH CLASS 300 MALLEABLE IRON THREADED FITTINGS OR WELDED STEEL FITTINGS. ALL FITTINGS SHALL BE BLACK OR GALVANIZED. ALL PIPING SHALL BE BLACK OR GALVANIZED STEEL OF THE FOLLOWING TYPE OR GRADE: ASTM A-68 SEAMLESS GRADE B, ASTM A-106 SEAMLESS GRADE B OR ASTM A-106 SEAMLESS GRADE C.

UNACCEPTABLE MATERIALS ARE ASTM A-120, ASTM A-53 TYPE F WELDED PIPE OR ORDINARY CAST IRON PIPE OR FITTINGS.

UNACCEPTABLE MATERIALS ARE ALL OR ANY TYPE OF VICTAULIC OR GROOVED FITTINGS AND PIPE.

### HANGERS:

THE MAXIMUM SPACING BETWEEN HANGERS SHALL NOT EXCEED THOSE LISTED IN THE HANGER SPACING TABLE BELOW.

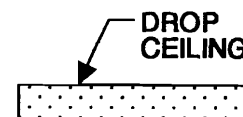
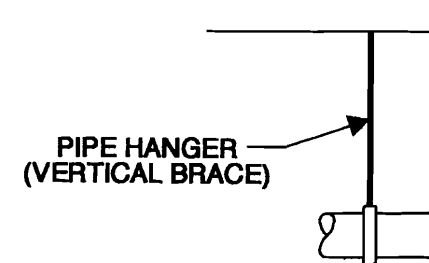
| PIPE SIZE<br>IN NPT | MAXIMUM SPACING<br>BETWEEN HANGERS | PIPE SIZE<br>IN NPT | MAXIMUM SPACING<br>BETWEEN HANGERS |
|---------------------|------------------------------------|---------------------|------------------------------------|
| 1/4"                | 4 FT.                              | 1"                  | 12 FT                              |
| 1/2"                | 6 FT                               | 1 1/4"              | 12 FT                              |
| 3/4"                | 8 FT                               | 1 1/2" OR<br>LARGER | 15 FT                              |

A HANGER SHOULD BE INSTALLED BETWEEN FITTINGS WHEN THE FITTINGS ARE MORE THAN 2 FT. APART.

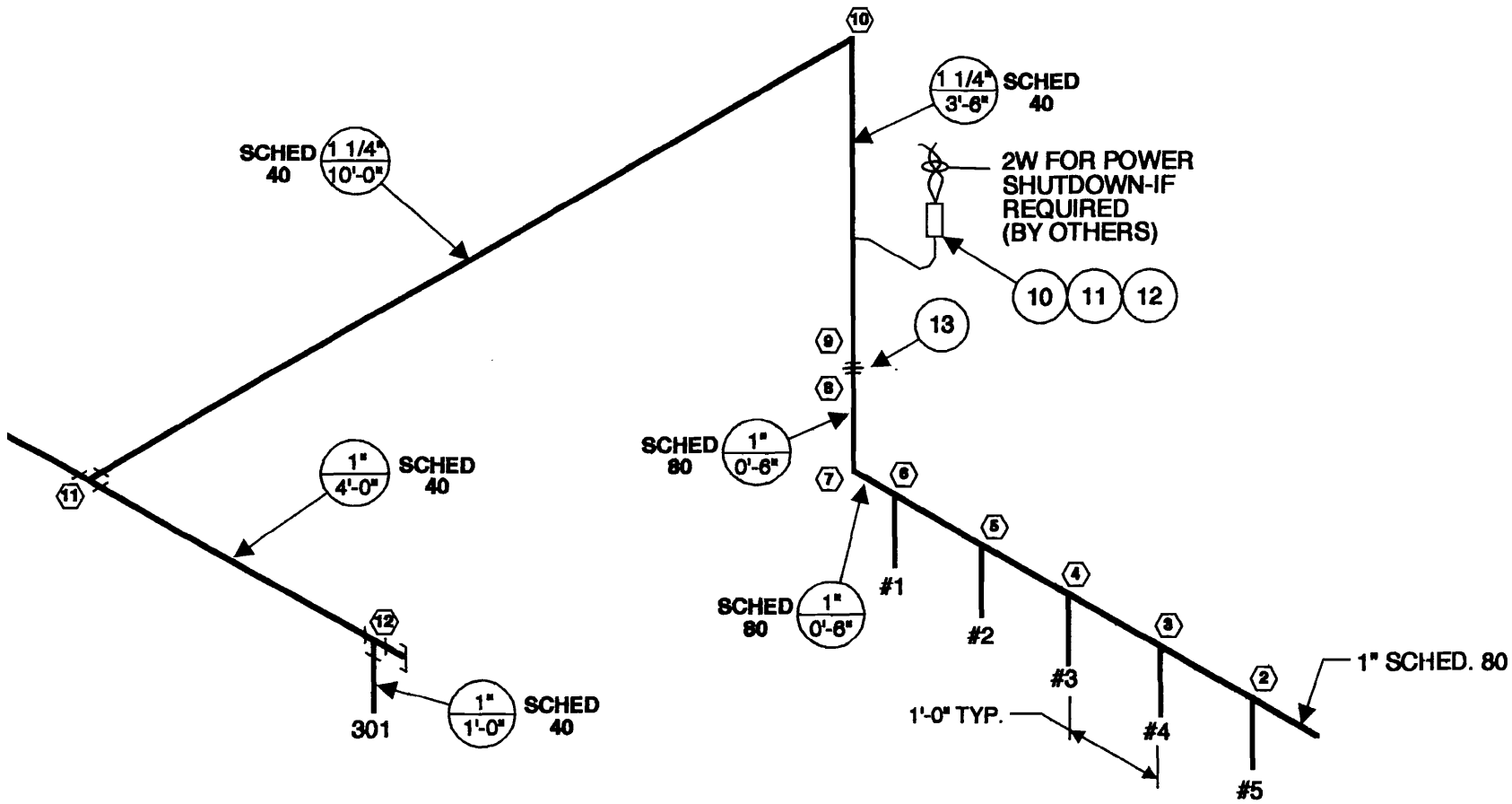
A HANGER SHOULD BE INSTALLED AT A MAXIMUM OF 1 FT. FROM NOZZLES.

THE HANGERS SHALL BE U.L. LISTED AND RIGIDLY SUPPORTED. NO CLEVIS HANGERS ARE ALLOWED.

STALLING CONTRACTOR SHALL PRESSURE TEST PIPE IN ACCORDANCE WITH NFPA 2001, PARA.6-7.2.2.12 IN A CLOSED CIRCUIT FOR 10 MINUTES AT 40 PSI AND SUPPLY WRITTEN DOCUMENTATION OF RESULTS.



**TYPICAL  
INSTALLATION**



ANSUL

**ISOMETRIC PIPING LAYOUT**

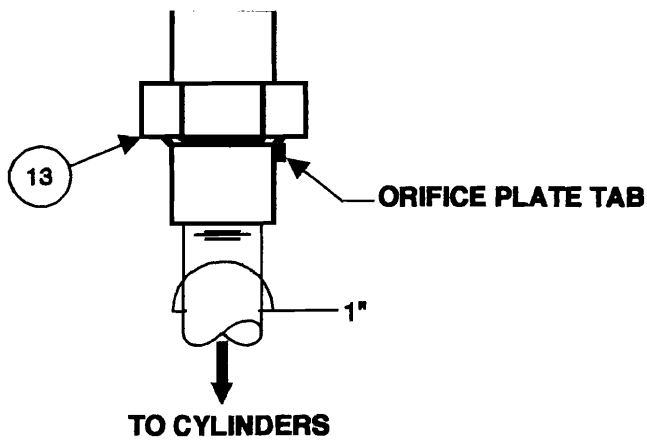
**NO SCALE**

(X) DENOTES HYDRAULIC CALCULATION NODE POINT

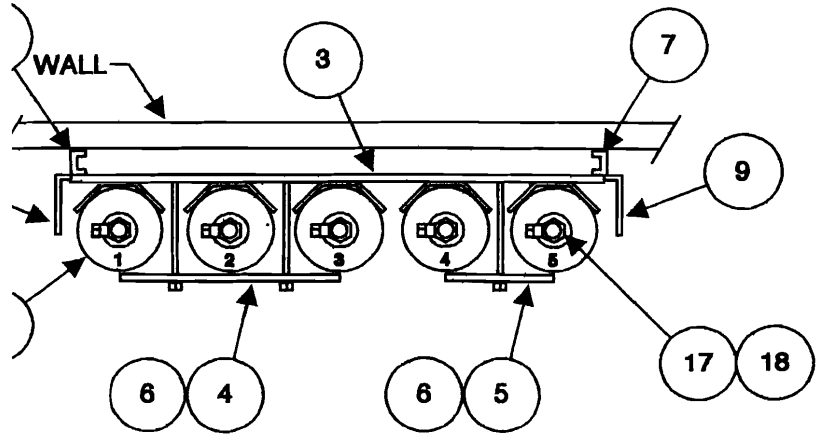
AMSECO

INTERSTATE

GEMCOM



**ORIFICE UNION DETAIL**  
NO SCALE



**TOP VIEW CYLINDER ACTUATION DETAILS**  
NO SCALE

**INERGEN**

SERVE  
34.2% INERGEN CONCEN

**PER INERGEN HYDRA  
THE REQUIRED  
THE ROO**

IM  
FIRE EQUIPMENT, INC., IS NO  
EXTINGUISHING AGENT DUE  
ACCEPTANCE, ALL HOLES A  
SHOULD BE CHECKED FOR  
ALL DUCTS AND DAMPERS  
VENTING CALCULATIONS FC  
INSTALLED IN THE ROOM.

|                                |
|--------------------------------|
| CONSULTANTS - ENGINEER         |
| APPROVED: _____                |
| NICET CERTIFIED ENGINEERING TE |
| CERTIFICATE NO. _____          |
| AUTOMATIC INERGEN FIRE S       |
| FOR THE SERVEI                 |
| <b>BANGOR SAVII</b>            |
| 280 FORE STREET, SUITE 200     |

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| 2    |                     |           |           |
| 1    |                     |           |           |
| 0    | ISSUED FOR APPROVAL | 22-MAY-06 | J. BLOUNT |
| REV. | DESCRIPTION         | DATE      | BY        |

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SCALE :  
DRAWN :  
ENGINEER  
CHECKE