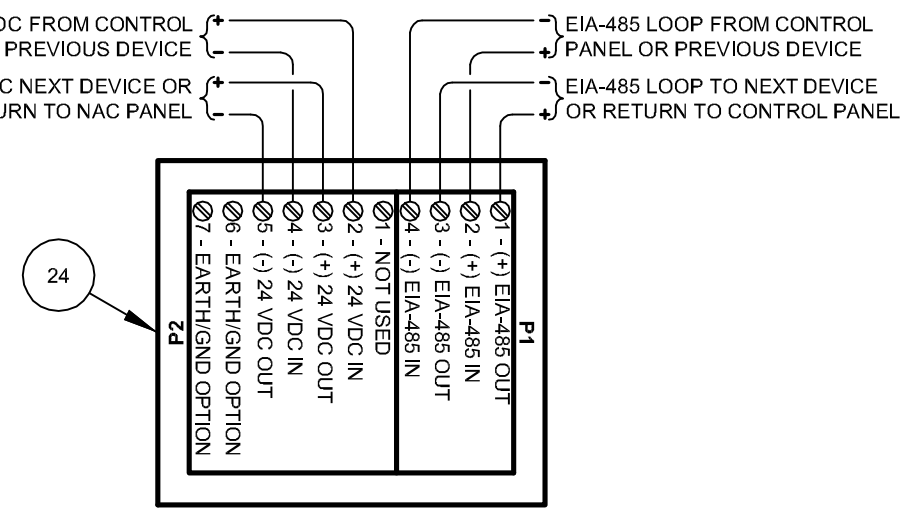


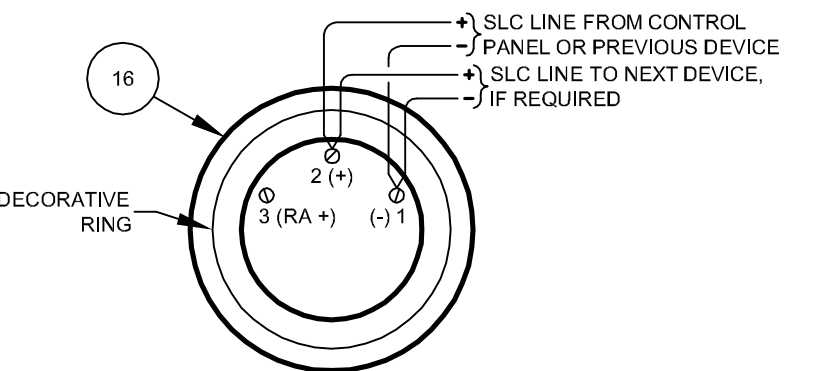
**TYPICAL RELEASE MODULE WIRING DETAIL**  
SCALE: NONE

**FDU-80 DIP SWITCH SETTINGS**

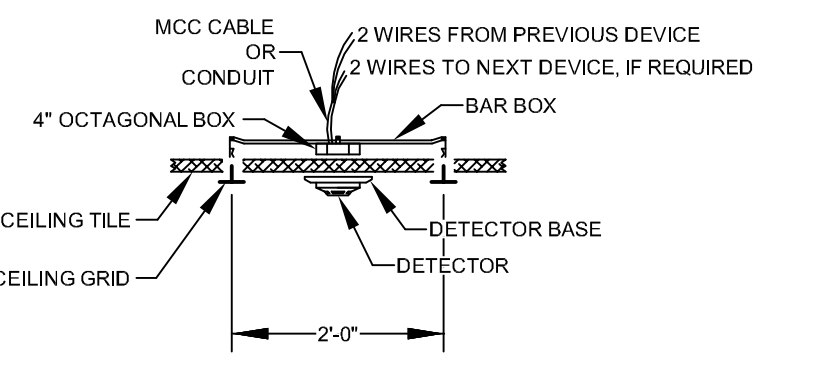
SWITCH #	POSITION	FUNCTION
1	ON	KEY SWITCH DISABLED
2	ON	PIEZO SOUNDER ENABLED
3	ON	SUPERVISORY RECEIVE / TRANSMIT
4	OFF	
5	OFF	CONFIGURATION FOR USE WITH FIRE ALARM CONTROL PANELS: • NFS-320 • NFS-440 (ALL RELEASES) • AFP-300/300/400 (WITH FACP SOFTWARE VERSION 3.52 OR HIGHER) • FIREWARDEN-100 / FIREWARDEN-100 (ALL RELEASES)
6	OFF	



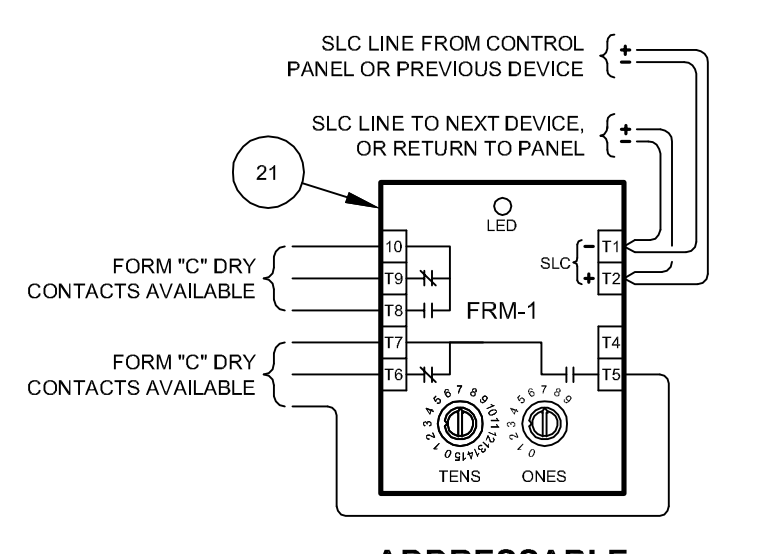
**FDU-80 REMOTE ANNUNCIATOR WIRING DETAIL**  
SCALE: NONE



**ADDRESSABLE DETECTOR BASE WIRING DETAIL**  
SCALE: NONE



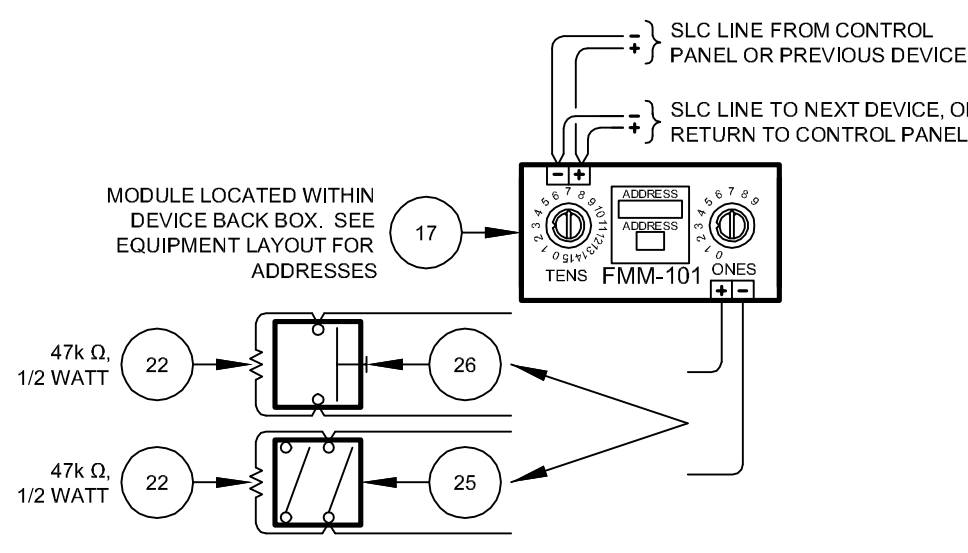
**SUSPENDED CEILING SMOKE DETECTOR MOUNTING DETAIL**  
SCALE: NONE



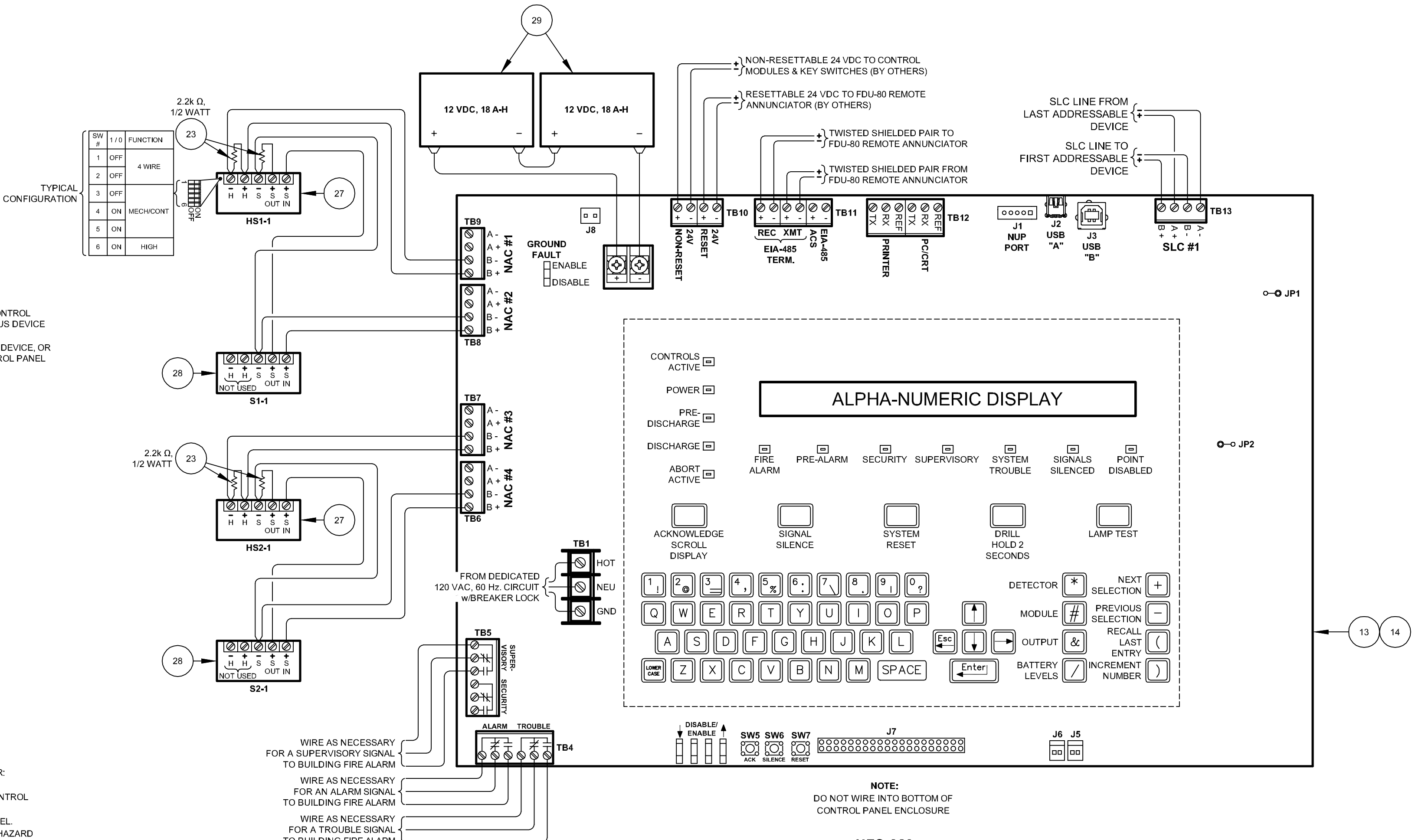
**ADDRESSABLE RELAY MODULE WIRING DETAIL**  
SCALE: NONE

**RELAY #1:**  
L01-M005 LAN ROOM HVAC 1A SHUTDOWN  
L01-M006 TELEPHONE SWITCH ROOM HVAC 2 SHUTDOWN

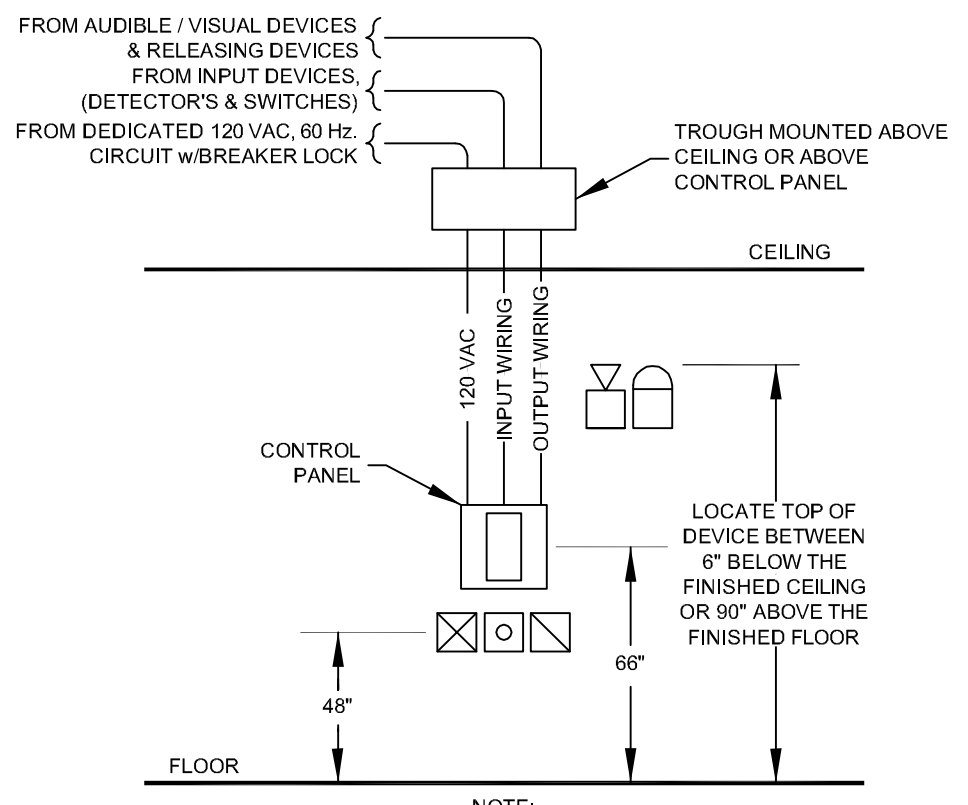
**RELAY #2:**  
L01-M005 LAN ROOM HVAC 1B SHUTDOWN  
L01-M006 SPARE



**TYPICAL WIRING DETAIL FOR ABORT STATIONS & ELECTRIC RELEASE STATIONS**  
SCALE: NONE



**NFS-320 CONTROL PANEL WIRING DETAIL**  
SCALE: NONE



**CONTROL EQUIPMENT ELEVATION DETAIL**  
SCALE: NONE

**WIRING NOTES:**

- ALL WIRING SHALL BE IN ACCORDANCE WITH ARTICLE 760-168 OF THE NATIONAL ELECTRIC CODE (NFPA 70), UNLESS OTHERWISE SPECIFIED BY THE AUTHORITY HAVING JURISDICTION. ALL SUPERVISED CIRCUITS ARE CLASSIFIED AS POWER LIMITED.
- ALL EXPOSED WIRING SHALL BE RUN IN THIN WALL STEEL TUBING USING METALLIC CABLE ON FLEXIBLE RUNS.
- ALL WIRING, JUNCTION BOXES, CONDUIT, ETC. SHALL BE PROVIDED AND INSTALLED BY THE ELECTRICAL CONTRACTOR.
- THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR MOUNTING AND MAKING FINAL CONNECTIONS TO ALL SUPPLIED DETECTORS, CONTROL PANELS, SIGNALING DEVICES, MANUAL STATIONS, ETC.
- UNLESS OTHERWISE SPECIFIED, MINIMUM WIRE SIZES SHALL BE AS FOLLOWS:  
NO. 14 GAUGE: RELEASE AND ALARM CIRCUITS  
NO. 12 GAUGE: AC POWER AND GROUND
- FOR DETECTION CIRCUITS GREATER THAN 1000 FT. IN LENGTH, USE A TWISTED-UNSHIELDED PAIR WITH A 500 OHM MAXIMUM RESISTANCE PER LENGTH BRANCH. MAXIMUM LENGTHS AS FOLLOWS:  
NO. 12 GAUGE: 12,500 FT. MAXIMUM LENGTH  
NO. 14 GAUGE: 9,500 FT. MAXIMUM LENGTH  
NO. 16 GAUGE: 6,000 FT. MAXIMUM LENGTH  
NO. 18 GAUGE: 3,700 FT. MAXIMUM LENGTH
- FOR DETECTION CIRCUITS LESS THAN 1000 FT. IN LENGTH, USE 12-18 GAUGE, UNTWISTED-UNSHIELDED WIRE (IN OR OUT OF CONDUIT) OR A TWISTED-SHIELDED PAIR.
- NO PARALLEL BRANCHING OF WIRING ON AN ANY SUPERVISED CIRCUIT IS PERMISSIBLE, UNLESS WHERE SHOWN AND POLARITY MUST BE OBSERVED.
- ALL FIELD WIRING MUST BE CHECKED FOR SHORTS AND GROUNDS BEFORE CONNECTIONS ARE MADE TO THE CONTROL PANEL. DO NOT MEASURE THE WIRING.
- SMOKE AND HEAT DETECTOR MINIMUM DISTANCE FROM A WALL IS 4" AND 3 FT. FROM ANY AIR REGISTER.
- BEFORE TERMINATING WIRING TO THE CONTROL PANEL, A VOLTAGE READING SHALL BE TAKEN WITH A HIGH-IMPEDANCE METER TO DETERMINE THAT NO AC INDUCTIVE VOLTAGE EXISTS ON THE FIELD WIRING.
- INPUT AND OUTPUT CIRCUIT WIRING SHALL NOT BE RUN IN THE SAME CONDUIT UNLESS SHIELDED FROM EACH OTHER. THE ONLY EXCEPTION IS THE MANUAL RELEASE INPUT CIRCUIT AND THE RELEASING DEVICE OUTPUT CIRCUIT WIRING CAN BE RUN TOGETHER IN THE SAME CONDUIT.
- AC POWER WIRING SHALL NOT BE RUN IN THE SAME CONDUIT AS DC WIRING, UNLESS SHIELDED FROM EACH OTHER. THIS INCLUDES LOW VOLTAGE AC, I.e. HVAC CONTROLS AND SHUNT TRIP CIRCUITS.
- THE AC POWER CIRCUIT FOR THE FIRE SUPPRESSION SYSTEM CONTROL PANEL SHALL BE A SEPARATE, DEDICATED CIRCUIT WITH A BREAKER LOCK. DO NOT CONNECT THIS CIRCUIT TO A SHUNT TRIP OPERATED CIRCUIT BREAKER PANEL OR USE IT TO POWER OTHER EQUIPMENT.
- NO POWER, INCLUDING BATTERIES, SHALL BE APPLIED TO THE CONTROL PANEL UNTIL A HILLER NEW ENGLAND FIRE PROTECTION, INC. TECHNICIAN IS ON THE JOB SITE AND HAS CHECKED OUT THE WIRING TO THE CONTROL PANEL. IF UPON ARRIVAL TO THE JOB SITE, THE HILLER NEW ENGLAND FIRE PROTECTION, INC. TECHNICIAN FINDS THAT POWER IS, OR HAS BEEN APPLIED, HILLER NEW ENGLAND FIRE PROTECTION, INC. WILL ASSUME NO LIABILITY FOR THE MALFUNCTION OF OR DAMAGE TO THE SYSTEM.
- RELEASING DEVICES ARE TO BE WIRED WITH LIQUID TIGHT CABLE FROM A JUNCTION BOX MOUNTED ON THE WALL DIRECTLY BEHIND THE RELEASING DEVICE. DO NOT ATTACH THE RELEASING DEVICE TO THE SYSTEM AS A FALSE SYSTEM DISCHARGE COULD OCCUR.
- THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND INSTALLING LABELS OF ADDRESSES FOR ALL DEVICES. LABELS FOR DETECTOR ADDRESSES SHOULD BE AFFIXED TO THE DETECTOR BASE ONLY, AND THE LABEL SHALL BE IN A VISIBLE LOCATION ON THE BASE.
- IF ANY CHANGES ARE TO BE MADE THAT DEVIATE FROM THE PLANS, PLEASE CONTACT HILLER NEW ENGLAND FIRE PROTECTION, INC. PRIOR TO MAKING THOSE CHANGES.

**NOVEC 1230 SEQUENCE OF OPERATIONS:**

- ACTIVATION OF A SMOKE DETECTOR WILL CAUSE THE FOLLOWING TO OCCUR:
    - THE ALARMED DETECTORS RED STATUS LIGHT WILL FLASH.
    - THE DETECTORS CUSTOM ADDRESS WILL BE DISPLAYED ON THE CONTROL PANELS ALPHA-NUMERIC LIQUID CRYSTAL DISPLAY (L.C.D.).
    - AN ALARM CONDITION WILL BE ANNUNCIATED ON THE CONTROL PANEL.
    - THE HORNSTROBE'S AUDIBLE SIGNAL ONLY WITHIN THE AFFECTED HAZARD WILL SOUND A SLOW PULSING TONE.
    - THE NOVEC 1230 SYSTEM WILL BE IN A PRE-ALARM CONDITION.
    - AN ALARM SIGNAL WILL BE SENT TO THE BUILDING FIRE ALARM SYSTEM.
  - ACTIVATION OF A SECOND SMOKE DETECTOR, NOT ON THE SAME DETECTION ZONE AS THE INITIAL ALARMED DETECTOR, WILL CAUSE THE FOLLOWING TO OCCUR:
    - THE ALARMED DETECTORS RED STATUS LIGHT WILL FLASH.
    - THE DETECTORS CUSTOM ADDRESS WILL BE DISPLAYED ON THE CONTROL PANELS ALPHA-NUMERIC L.C.D.
    - A PRE-DISCHARGE CONDITION WILL BE ANNUNCIATED ON THE CONTROL PANEL.
    - THE HORNSTROBE'S AUDIBLE SIGNAL ONLY WITHIN THE AFFECTED HAZARD WILL SOUND A FAST PULSING TONE.
    - THE HVAC SYSTEM FOR THE AFFECTED HAZARD WILL BE SHUTDOWN.
    - THE 20 SECOND PROGRAMMED PRE-DISCHARGE TIME DELAY WILL BEGIN.
  - UPON EXPIRATION OF THE PRE-DISCHARGE TIME DELAY, THE FOLLOWING WILL OCCUR:
    - THE HORNSTROBE'S AUDIBLE SIGNAL ONLY WITHIN THE AFFECTED HAZARD WILL SOUND STEADY.
    - THE STROBE LIGHTS ABOVE THE ENTRANCE DOOR AND AT THE HORNSTROBES OF THE AFFECTED HAZARD WILL OPERATE.
    - A DISCHARGE CONDITION WILL BE ANNUNCIATED ON THE CONTROL PANEL.
    - THE NOVEC 1230 SUPPRESSION SYSTEM WILL DISCHARGE INTO THE AFFECTED AREA.
  - ACTIVATION OF THE ELECTRIC AGENT RELEASE STATION WILL CAUSE THE SAME AS THE ABOVE TO OCCUR, EXCEPT THAT THE PRE-DISCHARGE TIME DELAY WILL BE 10 SECONDS.
- NOTES:
- THE ABORT STATION CAN BE PUSHED AND HELD TO PREVENT THE NOVEC 1230 SUPPRESSION SYSTEM FROM DISCHARGING UNTIL THE CONTROL PANEL CAN BE RESET. IF THE ABORT STATION IS RELEASED PRIOR TO THE RESETTING OF THE CONTROL PANEL, THE NOVEC 1230 SUPPRESSION SYSTEM WILL DISCHARGE AFTER A 10 SECOND TIME DELAY.
  - THE ELECTRIC AGENT RELEASE STATION WILL OVERRIDE THE ABORT STATION.
  - SHOULD A TROUBLE CONDITION OCCUR ON THE CONTROL PANEL, THE TROUBLE CONDITION WILL BE ANNUNCIATED ON THE CONTROL PANEL AND A TROUBLE SIGNAL WILL BE SENT TO THE BUILDING FIRE ALARM SYSTEM.
  - SHOULD A SUPERVISORY CONDITION OCCUR ON THE CONTROL PANEL, THE SUPERVISORY CONDITION WILL BE ANNUNCIATED ON THE CONTROL PANEL AND A SUPERVISORY SIGNAL WILL BE SENT TO THE BUILDING FIRE ALARM SYSTEM.
  - ACTIVATION OF A KEY SWITCH WILL DISABLE THE NOVEC 1230 SUPPRESSION SYSTEM ASSOCIATED WITH THE KEY SWITCH, CAUSING A TROUBLE CONDITION AND A SUPERVISORY CONDITION ON THE CONTROL PANEL, WHILE MAINTAINING FULL DETECTION & REPORTING CAPABILITIES.
  - THE DISABLING OF ANY CONTROL MODULE WILL CAUSE A SUPERVISORY CONDITION ON THE CONTROL PANEL.

**IMPORTANT NOTE:**

HILLER NEW ENGLAND FIRE PROTECTION 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 CHECKED FOR TIGHTNESS. EMPTY CONDUITS MUST BE SEALED AND ALL DUCTS AND DAMPERS SHOULD BE TIGHT FITTING.

JEFFERY S. KIDD NICET IV - #099721		DRAWING TITLE: NOVEC 1230 FIRE SUPPRESSION SYSTEM CONTROL EQUIPMENT DETAILS		REV. 0	
APPROVED BY		DATE		SURVEYED BY	
				EPC 11/8/2012	
				CHECKED BY JSK	
				AT DEAN & ALLYN, INC	
				SCALE: AS NOTED	
				SHEET NO. 2 OF 2	
REVISIONS		DATE		CONTRACT WITH: CONSIGLI CONSTRUCTION CO. PO NUMBER: XXXXXXXXXX	
				CONTRACT NO. C121116	

PROVIDED FOR:  
**DEAN & ALLYN, INC.**  
FIRE PROTECTION - SPECIAL HAZARD  
PO BOX 709, GRAY, MAINE 04039  
(207)657-5646 FAX:(207)657-5647

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PH: (207) 657-5646 FAX: (207) 657-5647