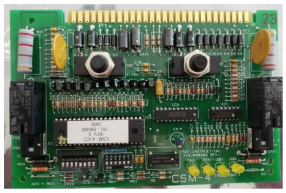
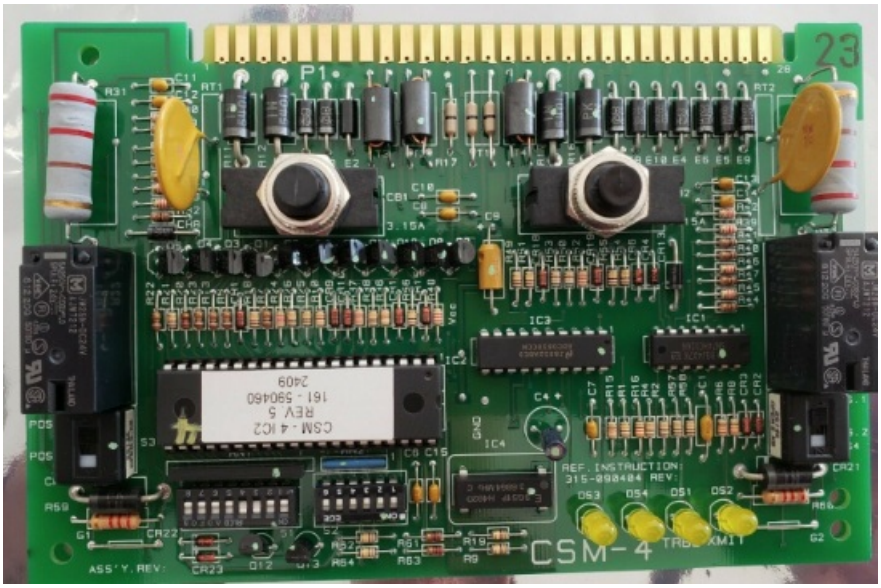


CERBERUS PYROTRONICS CSM-4 Controllable Signal-Releasing Module Owner's Manual

Contents

CERBERUS PYROTRONICS CSM-4 Controllable Signal-Releasing Module



DescriptionDescription

The Controllable Signal Module CSM-4 provides two fully supervised, programmable notification appliance circuits. The CSM-4 supplies two Class B (Style Y) or Class A (Style Z) type output circuits for the supervision and control of listed audible or visual notification appliances such as horns, bells, strobes, etc. Each circuit can provide up to 1.5 amps (24 VDC) of current to power indicating appli-ances. Any output on a CSM-4 may be configured as either a supervised connection to a local energy type Master City Box or a supervised connection to a Leased Line remote monitoring system. CSM-4 circuits may also be configured for pre-action or deluge releasing service per NFPA 13, extinguishing agent releasing (Halon, FM-200) per NFPA 12A and NFPA 2001. Each circuit or output may be controlled automatically through the MXL program logic or manually using the MXL keypad. Automatic control may also be time based.

Each circuit or output can be manually “Armed” or “Disarmed” The Controllable Signal Module CSM-4 provides two fully supervised, programmable notification appliance circuits. The CSM-4 supplies two Class B (Style Y) or Class A (Style Z) type output circuits for the supervision and control of listed audible or visual notification appliances such as horns, bells, strobes, etc. Each circuit can provide up to 1.5 amps (24 VDC) of current to power indicating appli-ances. Any output on a CSM-4 may be configured as either a supervised connection to a local energy type Master City Box or a supervised connection to a Leased Line remote monitoring system. CSM-4 circuits may also be configured for pre-action or deluge releasing service per NFPA 13, extinguishing agent releasing (Halon, FM-200) per NFPA 12A and NFPA 2001. Each circuit or output may be controlled automatically through the MXL program logic or manually using the MXL keypad. Automatic control may also be time based. Each circuit or output can be manually “Armed” or “Disarmed”

Engineer and Architect Specifications

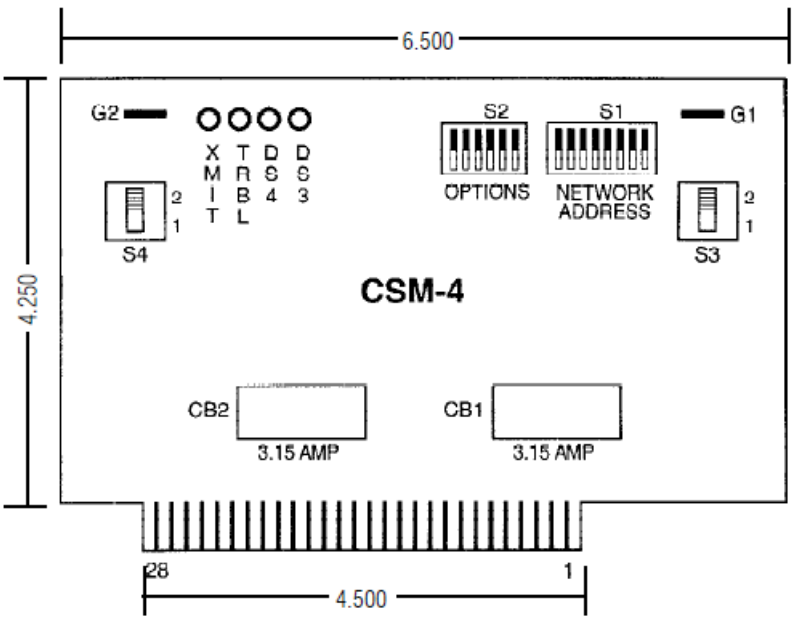
Notification Appliance Circuits shall be provided by a Cerberus Pyrotronics Model CSM-4 plug-in controllable signaling module. The unit shall provide two alarm notifica-tion application circuits which may be configured as either Class A (Style Z) or Class B (Style Y). Each circuit will be capable of activating up to 1.5 amps of listed audible or visual notification appliances. These circuits shall also be capable of being configured for activation of a local energy Master City connection or polarity reversal type Leased Line connection. Each circuit shall also be capable of being configured to activate a solenoid for pre-action or deluge releasing service per NFPA 13, as well as extinguishing agent releasing (Halon, FM-200) per NFPA 12A and NFPA 2001.

The notification appliance circuits shall be capable of a degrade mode of operation in the event of main processor failure or loss of network communication. All notification appliance circuits shall be capable of automatic activation or de-activation through control by event or time based programming contained in the control panel. They shall also be capable of manual activation or de-activation using the system keypad. Disarming any circuit or output shall result in the alphanumeric display indicating the circuit or output which has been disarmed as well as the illumination of the “System Partial Disable” LED. The CSM-4 shall be a plug-in type module using gold plated

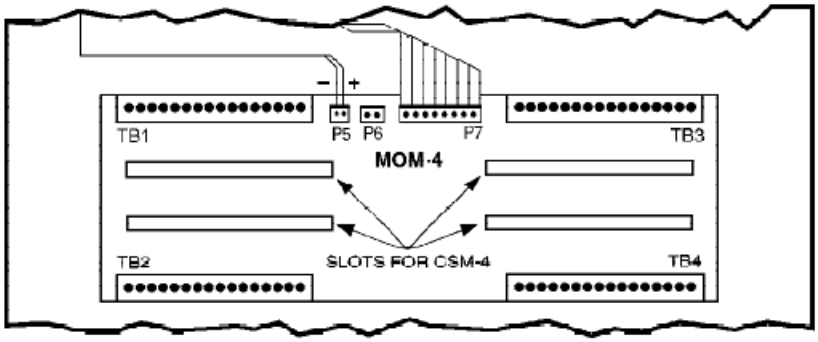
edge connectors to interface with the MOM-2 or MOM-4 expansion card cages. It shall occupy one half slot in the card cages. Notification circuit, City Tie and Leased Line power shall be provided to the CSM-4 through the main control power supply or through the supervised remote power supplies.

- Supervised Alarm Notification Appliance Circuits
- Operates Audible or Visual Devices
- 2 Class A (Style Z) or Class B (StyleY) Circuits
- 24 VDC 1.5 Amps Per Circuit
- City Tie or Lease Line Output
- Releasing Service
- Fully Programmable
- Coded Audibles
- On Board Microprocessor
- March Time/Uniform Code 3
- Selectable Degrade Operation
- Silencable/Non-Silencable Option
- Automatic/Manual Control
- Circuits Power Limited Per NEC 760
- Listed, ULC Listed
- CSFM, NYMEA, FM Approved
- NFPA 13, Pre-Action and Deluge
- NFPA 2001, FM-200 Releasing
- NFPA 12A, Halon Releasing

Dimensional Data



CSM-4 Board



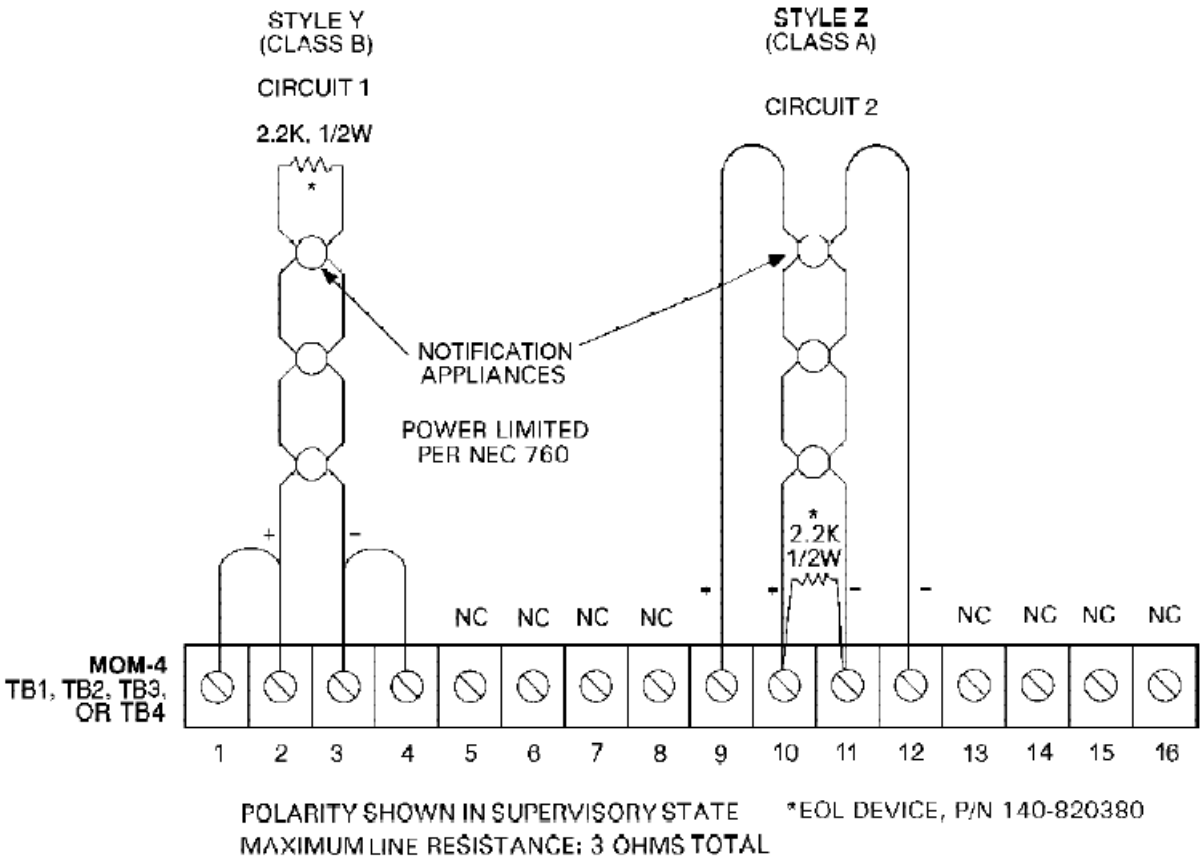
CSM-4 Installation Slots

Wiring

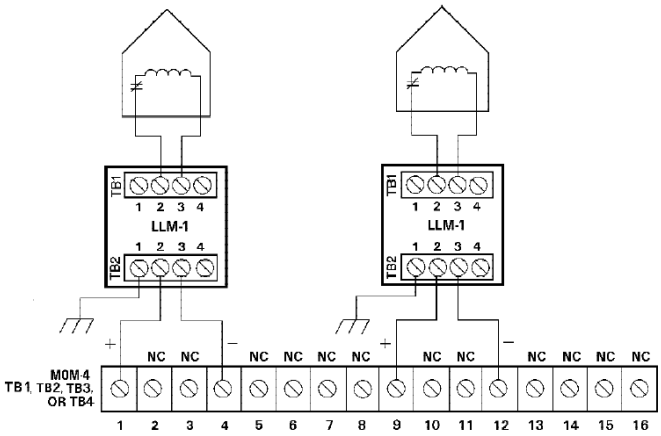
The municipal tie and leased line applications require the LLM-1 interface module. The notification appliances and leased line applications are power limited.

ELECTRICAL CONNECTIONS FOR NOTIFYING APPLIANCES (NFPA 72 Local)

1. Set switches S3 and S4 and jumpers G1 and G2 as indicated in Table 2.
2. All wiring must be in accordance with Article 760 or NEC or local building codes.
3. Both circuits are power limited to NFPA 70 per NEC 760.
4. **Electrical Ratings:**
    - **Supervisory:** 18 to 31 VDC, 12mA max
    - **Alarm:** 18 to 31 VDC, 1.5A max
5. **End of line device:** Use Cerberus Pyrotronics EOL device, 2.2K, ½ watt, P/N 140-820380
6. **Line Resistance:** 3 ohms max

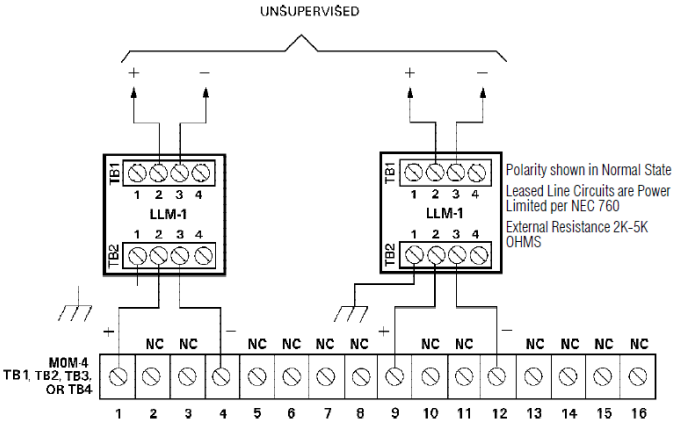


CSM-4 Loop Wiring for Supervised Notifying Appliance Circuit



NOTES:
1. Polarity shown in supervisory state.
2. The total loop resistance from the LLM-1 to the Municipal Tie, including the 14.5 OHMS in the Municipal Tie, should not exceed 22.5 OHMS.
3. Either circuit may be used.
4. Municipal Tie circuits are not power limited.

CSM-4 Loop Wiring of Supervised Municipal Tie



CSM-4 Leased Line Circuit

COMPATIBLE NOTIFICATION APPLIANCES

Chime/ Strobes	Vibrating Bells	Electro-Mech. Horn/Strobes	Electronic Horns 1-Tone with Strobe	Single Stroke Bells

EC-S15-C/F/S EC-S17-C/F/S EC-S75-F/S EC-S110-F/S	BE-F/LC BF-F/LC BS-F/LC BT-F/LC	HN-S15-C/F/S HN-S17-C/F/S HN-S75-F/S HN-S110-F/S	HNH-S15-C/F/S HNH-S17-C/F/S HNH-S75-F/S HNH-S110-F/S	EH-S15-C/F/S EH-S17-C/F/S EH-S75-F/S EH-S110-F/S	BE-SS BF-SS BS-SS BT-SS
Strobes	**Electronic S. W./Strobes**	**Horns/ Horn Strobes** **3-Tone**	**Horns/ Horn Strobes** **3-Tone**	**Sync. Strobes**	**Bell/Strobe Plate**
S15-F/FS/FT/S/ST S17-F/FS/FT/S/ST S75-F/FS/FT/S/ST S110-F/FS/FT/S/ST	EW-S15-C/F/S EW-S17-C/F/S EW-S75-F/S EW-S110-F/S	MC-C/F/S MC-S15-C/F/S MC-S17-C/F/S MC-S75-F/S MC-S110-F/S	MTL-C/F/S MTL-S15-C/F/S MTL-S17-C/F/S MTL-S75-F/S MTL-S110-F/S	S15S-F/FS/FT/S/ST S17S-F/FS/FT/S/ST S75S-F/FS/FT/S/ST	S15-6060H/6090V S17-6060H/6090V S75-6090V S110-6090V
Sync. Electro-Mech. **Horn/Strobes**		**Sync. Horns/ Horn Strobes 3-Tone**	**Sync. Horns/ Horn Strobes 8-Tone**	**Synchronizing Control Module**	**Sync. Bell/Strobe Plate**
HN-S15S-C/F/S HN-S17S-C/F/S HN-S75S-F/S	HNH-S15S-C/F/S HNH-S17S-C/F/S HNH-S75S-F/S	MC-S15S-C/F/S MC-S17S-C/F/S MC-S75S-F/S	MTL-S15S-C/F/S MTL-S17S-C/F/S MTL-S75S-F/S	SCM-F/FW	S15S-6060H/6090V S17S-6060H/6090V S75S-6090V
Electronic Horns 1-Tone	**Chimes**	**Electronic Slow Whoop**	**Electro-Mech.** **Horns**	**Tri-Tone Horns**	**Suffixes**
EH-C/F/S	EC-C/F/S CH-F/LC/SS	EW-C/F/S	HN-C/EP/F/S HNH-C/EP/F/S	SEA TTH	C = Ceiling EP = Explosion Proof F = Flush FT = Flush w/Terminals G = Gang Mount H = Horizontal LC = Low Current S = Surface
Mini-Horns			**Mini-Horns/Strobes 8-Tone**	**Sync. Mini-Horns/ Strobes 8-Tone**	

MH-1G/1GW MH-U/UW MH-S15-U/UW MH-S17-U/UW MH-S75-U/UW MH-S110-U/UW	MHT-1G/1GW MHT-U/UW MHT-S15-U/UW MHT-S17-U/UW MHT-S75-U/UW MHT-S110-U/UW	MHST-1G/1GW MHST-U/UW MHST-S15S-U/UW MHST-S17S-U/UW MHST-S75S-U/UW	MMT-1G/1GW MMT-U/UW MMT-S15-U/UW MMT-S17-U/UW MMT-S75-U/UW MMT-S110-U/UW	MMT-S15S-U/UW MMT-S17S-U/UW MMT-S75S-U/UW	SS = Single Stroke ST = Surface w/Terminals U = Universal Mount V = Vertical W = White

ELECTRICAL CONNECTIONS FOR MUNICIPAL TIE (NFPA 72)

1. Set switches S3 and S4 and jumpers G1 and G2 as indicated in Table 2.
2. All wiring must be in accordance with Article 760 of NEC or local building codes.
3. Both circuits are not power limited.
4. **Electrical Ratings:**
    1. **Trip Coil:** 14.5 ohms
    2. **Trip Current:** 220 to 320mA DC (momentary)
    3. **Supervisory Current:** 12mA DC
    4. **Voltage:** 18 to 31 VDC

       The total loop resistance from the LLM-1 to the Municipal Tie, including the 14.5 ohms in the Municipal Tie, should not exceed 22.5 ohms.
5. **Minimum emergency power:** 60 hour standby 5 minute alarm

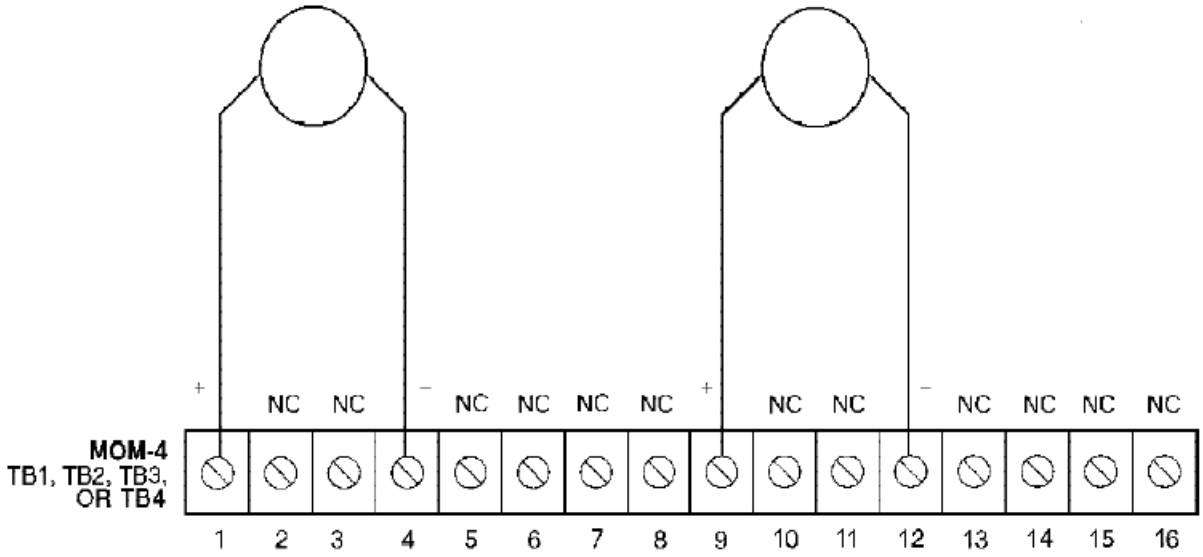
ELECTRICAL CONNECTIONS FOR LEASED LINE (NFPA 72 Remote Station)

1. Set switches S3 and S4 and jumpers G1 and G2 as indicated in Table 2.
2. When a CSM-4 circuit is used as a Leased Line trouble output, SW1 and SW2 on switch S2 must be set. These positions permit the default trouble bus to activate the trouble line. Refer to TABLE 3 to set them.
3. All wiring must be in accordance with Article 760 of NEC or local builsing codes.
4. Both Leased Line circuits are power limited to NFPA 70 per NEC Article 760.
5. **Leased Line circuit rating:** 24 VDC open circuit Load must be a compatible polarity reversal labeled remote station receiver unit.
    1. **Rated current:** 3mA to 9mA, alarm/supervisory
    2. **External circuit resistance:** 2K to 5K ohms
6. **Minimum emergency power:** 60 hour standby / 5 minute alarm

Notes:

1. Polarity shown in supervisory state.
2. Maximum line resistance 3 ohms.

3. Releasing zones are not power limited to NFPA 70 per NEC 760.
4. Releasing solenoids are supervised for opens only



ELECTRICAL CONNECTIONS FOR RELEASING SERVICE (per NFPA 12A, NFPA 13, and NFPA 2001)

1. Set switches S3 and S4 and jumpers G1 and G2 as indicated in Table 2.
2. Set all positions of switch S2 to OFF (OPEN).
3. All wiring must be in accordance with Article 760 of NEC or local building codes.
4. Both circuits are not power limited.
5. Solenoids are supervised for opens only.
6. **Electrical Ratings:**
    1. **Solenoids:** 24 VDC, 16.8 watts max, 700mA max
    2. **Supervisory Current:** 12mA max
    3. **Alarm Current:** 800mA max
    4. **Wire Resistance:** 3 ohms max
7. **Compatible Solenoids:**
    - **NFPA 13:**
        - ASCO Model T8210A107
        - ASCO Model R8210A107
        - ASCO Model 8210A107
        - SKINNER Model LV2LBX25
    - **NFPA 12A:**
        - PYRO P/N 500-982631
        - PYRO P/N 500-286652
        - PYRO P/N 500-083377
        - PYRO P/N 500-086929
    - **NFPA 2001:**
        - KIDDE FENWAL Model 486500-1
8. No End of Line Device used.

Table 2 — Setting the Mode Of Operation (Using S3, S4 and G1, G2)

For Circuit 1	**S3 Position**	**G1**
Audibles [NAC] (NFPA 72 Local) Municpal Tie (NFPA 72) Leased Line (NFPA 72 Remote Station) Releasing Service (NFPA 12A)** Releasing Service (NFPA13)** Releasing Service (NFPA 2001)** Illegal (Results in a trouble on the CSM-4)	1	Not Cut
	1	Cut
	2	Not Cut
	1	Cut
	1	Cut
	1	Cut
	2	Cut
For Circuit 2	**S4 Position**	**G2**
Audibles [NAC] (NFPA 72 Local) Municpal Tie (NFPA 72) Leased Line (NFPA 72 Remote Station) Releasing Service (NFPA 12A)** Releasing Service (NFPA13)** Releasing Service (NFPA 2001)** Illegal (Results in a trouble on the CSM-4)	1	Not Cut
	1	Cut
	2	Not Cut
	1	Cut
	1	Cut
	1	Cut
	2	Cut

Table 3 — Setting the Degrade Trouble Modes on S2

For Circuit 1	SW1
Leased Line Trouble No Trouble Activation	On (Closed) Off (Open)
For Circuit 2	**SW2**
Leased Line Trouble No Trouble Activation	On (Closed) Off (Open)

Table 4 — Setting the Degrade Alarm Modes on S2

For Circuit 1	SW1
Leased Line Trouble No Trouble Activation	On (Closed) Off (Open)
For Circuit 2	**SW2**
Leased Line Trouble No Trouble Activation	On (Closed) Off (Open)

MXL Releasing Service Wiring Diagram (per NFPA 12A, NFPA 13, and NFPA 2001)

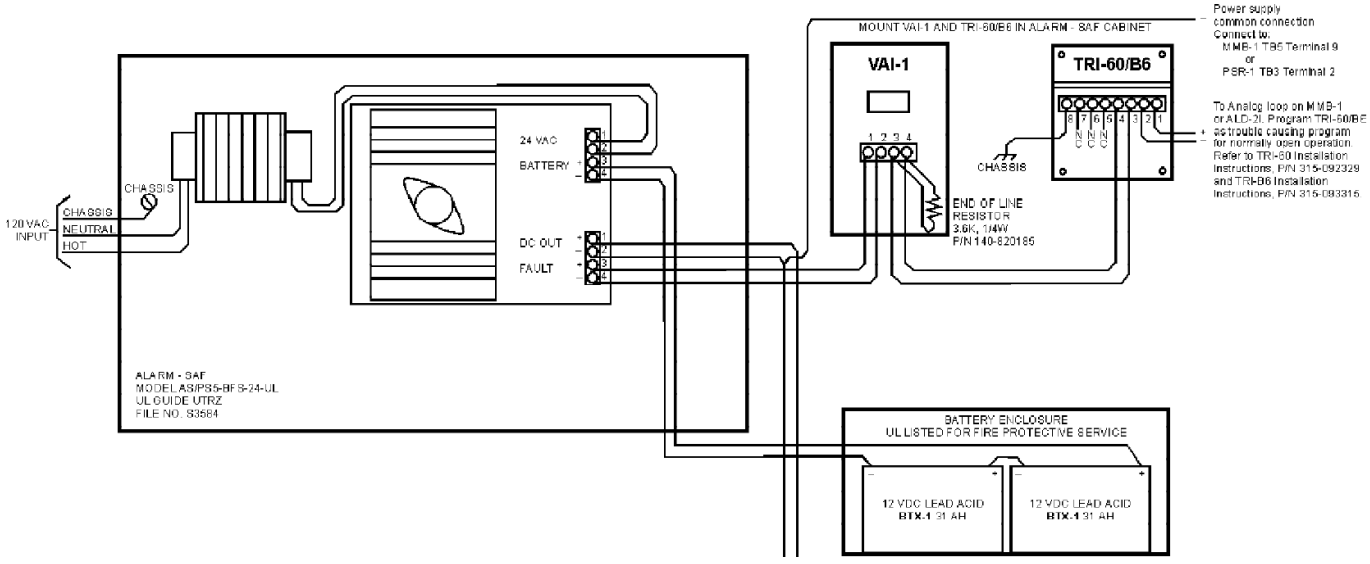
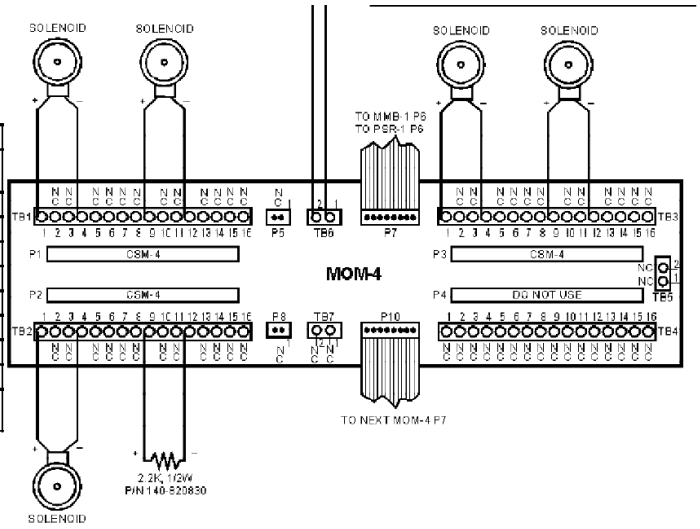


Table 1			
Application	**Make**	**Model**	**Maximum # per MOM-4**
NFPA 13 *(Preaction Deluge)*	Skinner	LV2LBX25, 24V	5
	ASCO	TB210A107, 24V	5
	ASCO	R8210A107, 24V	5
	ASCO	8210A107, 24V	5
NFPA 12A *(Halon)*	CPY	500-982631, 24V	8
	CPY	500-286652, 24V	8
	CPY	500-083377, 24V	8
	CPY	500-086929, 24V	8
NFPA 2001 *(FM-200)*	CPY	500-486500	8



Notes:

1. Use only listed solenoids from Table 1.
2. Solenoids supervised for opens only.
3. Polarity shown in supervisory condition.
4. Releasing circuits are not power limited.
5. No end of line device used.
6. Configure CSM-4 circuits as Municipal Tie.
7. Maximum of 5 Pre-Action/Deluge zones per MOM-4.
8. Each MOM-4 must be powered from a separate ALARM-SAF power supply.
9. Set all position of S2 on the CSM-4 ro OFF (OPEN).

NOTICE: The use of other than Cerberus Pyrotronics detectors and bases with Cerberus Pyrotronics control equipment will be considered a misapplication of Cerberus Pyrotronics equipment and as such void all warranties either expressed or implied with regards to loss, damage, liabilities and/or service problems.

Cerberus Pyrotronics
8 Ridgedale Avenue
Cedar Knolls, NJ 07927
Tel: (201) 267-1300
FAX: (201) 397-7008

Cerberus Pyrotronics
50 East Pearce Street
Richmond Hill, Ontario
L4B, 1B7 CN
Tel: (905) 764-8384
FAX: (905) 731-9182

Documents / Resources

	**CERBERUS PYROTRONICS CSM-4 Controllable Signal-Releasing Module** [pdf] Owner's Manual CSM-4 Controllable Signal-Releasing Module, CSM-4, Controllable Signal-Releasing Module, Signal-Releasing Module, Releasing Module, Module

References

- **Fire Alarm Resources | Download fire alarm documents**
- **cerbpyro.com**