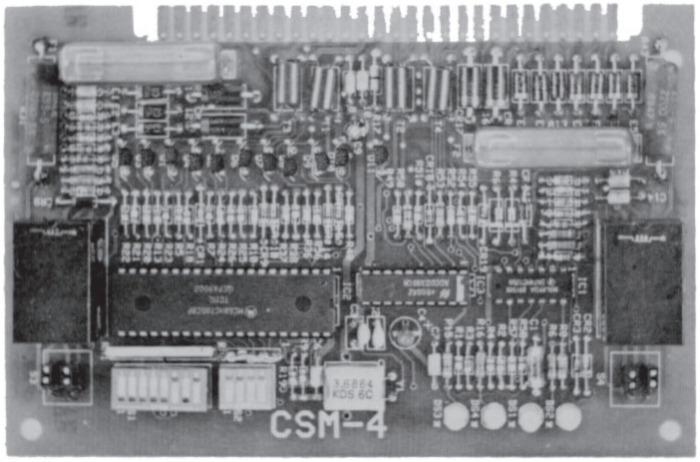
CSM-4

Controllable Signal/Releasing Module

Fire Alarm Panel Accessory

ENGINEER AND ARCHITECT SPECIFICATIONS

- 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
- (UL) Listed, ULC Listed
- CSFM, NYMEA, FM Approved
- NFPA 13, Pre-Action and Deluge
- NFPA 2001, FM-200 Releasing
- NFPA 12A, Halon Releasing



Description

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 notification appliances.

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.

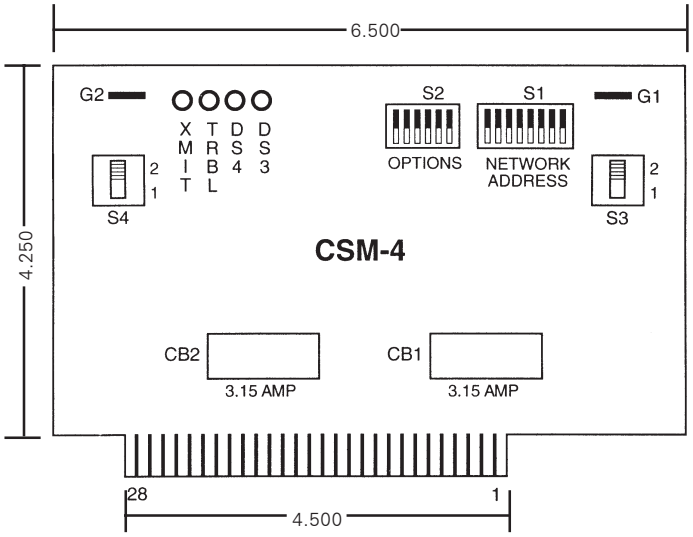
Each circuit or output may be controlled automatically through the MXL program logic or manually using the MXL keypad. Automatic control may also be time based. Each circuit or output can be manually "Armed" or "Disarmed" through the MXL keypad. When any circuit or output has been "Disarmed," the MXL LCD annunciator will indicate the affected circuit or output and the "Partial System Disable" LED will illuminate, until the circuit or output has been returned to the "Armed" condition.

The CSM-4 contains an on-board microprocessor which allows notification circuit outputs to function in a degrade mode even if the main MXL processor or the local network communication link has failed. Each circuit's degrade mode of operation can be separately configured to respond to an alarm in the following manner: OFF, ON, CONTIN-UOSLY or 1 SECOND ON - 1 SECOND OFF. In a degrade mode a CSM-4 will respond to an alarm from any Intelligent/Analog (ALD) initiating device or Conventional Zone (CZM) connected in the same local enclosure.

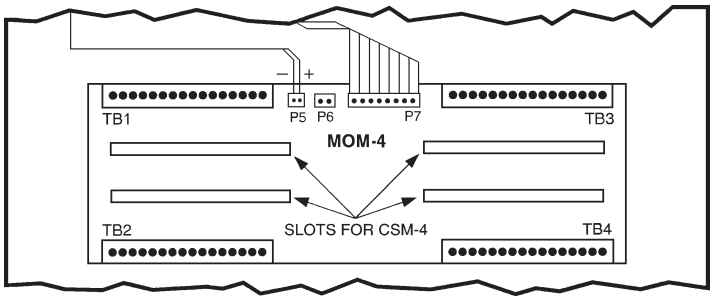
CSM-4 notification appliance circuit outputs may be configured to provide a coded, march time, or uniform code 3 output.

This equipment is approved for operation over the temperature range of 0°C to 49°C.

Dimensional Data



CSM-4 Board



CSM-4 Installation Slots

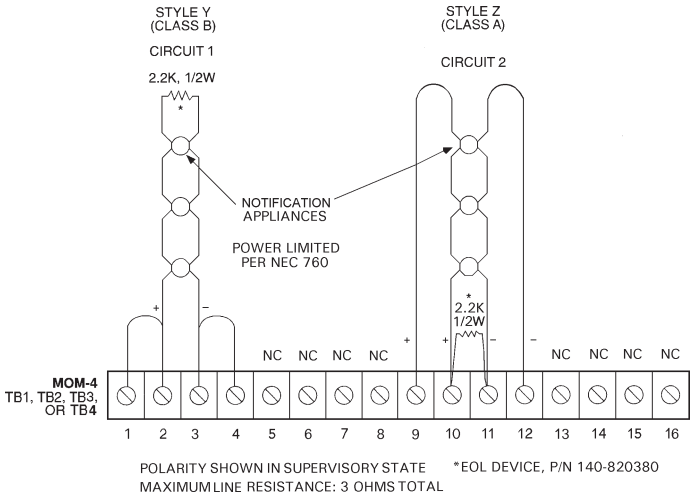
Wiring

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 by the Installation Instructions (Table 2) P/N 315-090854.
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 Siemens Building Technologies, Fire Safety Division EOL device, 2.2K, ½ watt, P/N 140-820380
6. Line Resistance:
   3 ohms max



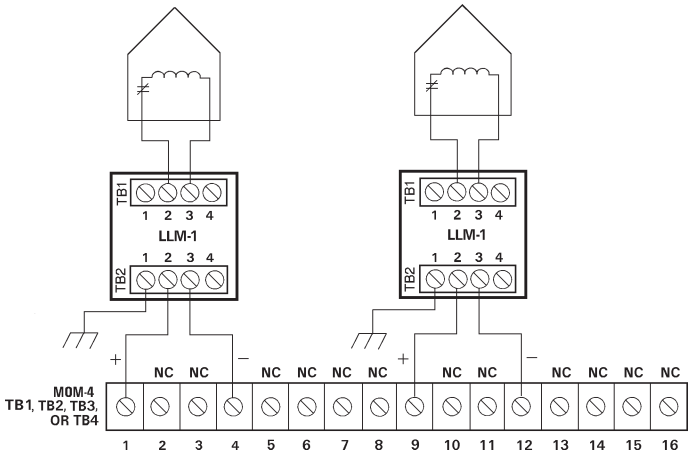
CSM-4 Loop Wiring for Supervised Notifying Appliance Circuit

ELECTRICAL RATINGS FOR MUNICIPAL TIE (NFPA 72)

Electrical Ratings:
Trip Coil: 14.5 ohms
Trip Current: 220 to 320mA DC (momentary)
Supervisory Current: 12mA DC
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.

Minimum emergency power:
60 hour standby / 5 minute alarm



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

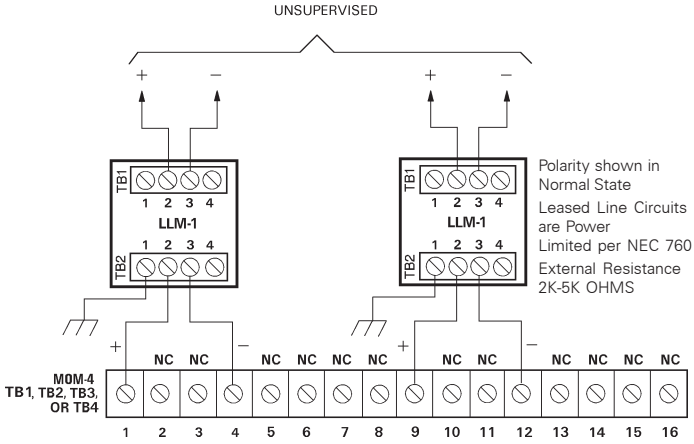
ELECTRICAL RATINGS FOR LEASED LINE (NFPA 72 Remote Station)

24 VDC open circuit Load must be a compatible polarity reversal labeled *remote station receiver unit*.

Rated current: 3mA to 9mA, alarm/supervisory

External circuit resistance: 2K to 5K ohms

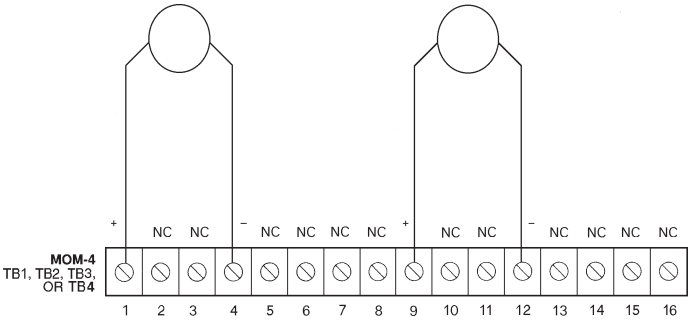
Minimum emergency power:
60 hour standby / 5 minute alarm



CSM-4 Leased Line Circuit

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

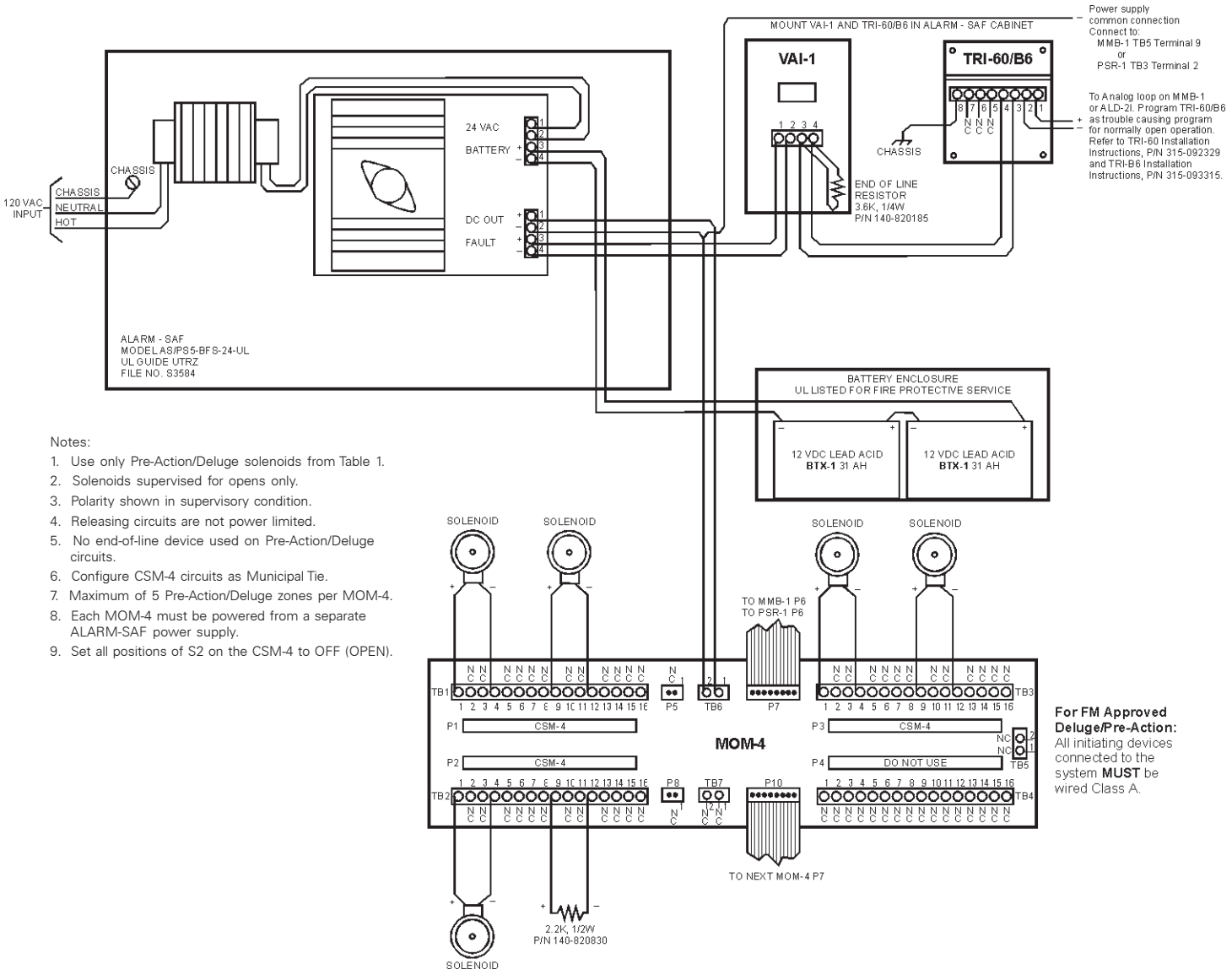
Solenoids: 24 VDC, 16.8 watts max, 700mA max
Supervisory Current: 12mA max
Alarm Current: 800mA max
Wire Resistance: 3 ohms max



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.

CSM-4 Loop Wiring for use as Releasing Service (per NFPA 12A, NFPA 13, and NFPA 2001)

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



Notes:

1. Use only Pre-Action/Deluge 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 on Pre-Action/Deluge circuits.
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 positions of S2 on the CSM-4 to OFF (OPEN).

For FM Approved Deluge/Pre-Action: All initiating devices connected to the system **MUST** be wired Class A.

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

Siemens Building Technologies
Fire Safety

Fire Safety
8 Fernwood Road
Florham Park, NJ 07932
Tel: (973) 593-2600
FAX: (973) 593-6670
Website: www.sbt.siemens.com/fis

Fire Safety
2 Kenview Boulevard
Brampton, Ontario
Canada L6T 5E4
Tel: (905) 799-9937
FAX: (905) 799-9858

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