



by  POTTER

Installation Manual: EVAX 100M Mass Notification System

NOTICE TO THE INSTALLER

This manual provides an overview and the installation instructions for the EVAX 100M Mass Notification System. All terminals are power limited and should be wired in accordance with the requirements of NFPA 70 (NEC), NFPA 101 (Life Safety Code) and NFPA 72 (National Fire Alarm Code). Failure to follow the wiring diagrams in the following pages will cause the system to not operate as intended. For further information, refer to the control panel installation instructions.

The module shall only be installed with listed control panels. Refer to the control panel installation manual for proper system operation.

Description

The EVAX 100M Mass Notification System is functionally identical to the EVAX 100 with the exception of an Intelligent Interface for an LOC.

The EVAX 100M may be used as an ACU and combined with accessory modules to meet the requirements of UL2572. The system provides a Physical and Communication Security Level 1, Audit Control Level 2, Stored Data and Access Control Security Level 0 per UL 2572 Mass Notification Standard. The system is designed to be used in conjunction with a UL listed Fire Alarm Control Panel (FACP) to provide a Listed Voice Evacuation Alarm System with Mass Notification capabilities. The FACP provides all Fire initiating circuitry and a signaling circuit to the EVAX 100M. The EVAX 100M provides its own internal supervision as well as supervision for its speaker lines and accessories. Any fault is reported back to the FACP. In normal standby the supervisory circuit from the panel is connected to a matching EOLR. Should the EVAX 100M suffer an internal failure or should there be any fault on the speaker line or accessory a contact would open and the FACP would report it as an open fault for that circuit.

The EVAX 100M is designed to be powered from 120 VAC at 60 Hz and will provide 100W of audio. Speakers may be 25 or 70 Vrms (jumper selected, 25V is factory set). See Installation Instruction P/N EVAX 25-50-100 R2.14 for all Electrical Specifications, Standard Terminal Designations and Wiring Diagrams.

MODELS: The EVX-100M is a complete Voice Evac/MNS Module, it is complete with built-in tones and messages for Fire and MNS. The EVX-100M may be coupled with additional EVX-100E Expander modules for systems requiring greater power. The EVAX 100M and EVAX 200M are complete Voice Evacuation Panels. Where greater Audio power is required they may be combined with Expander panels, EVAX 100E/200E/300E/400E/500E/600E. When using any EVX Expander Module, refer to the 5403672 installation instructions.

EVAX 100M contains one (1) EVX-100M and one (1) speaker circuit
EVAX 200M contains one (1) EVX-100M, one (1) EVX-100E and two (2) speaker circuits

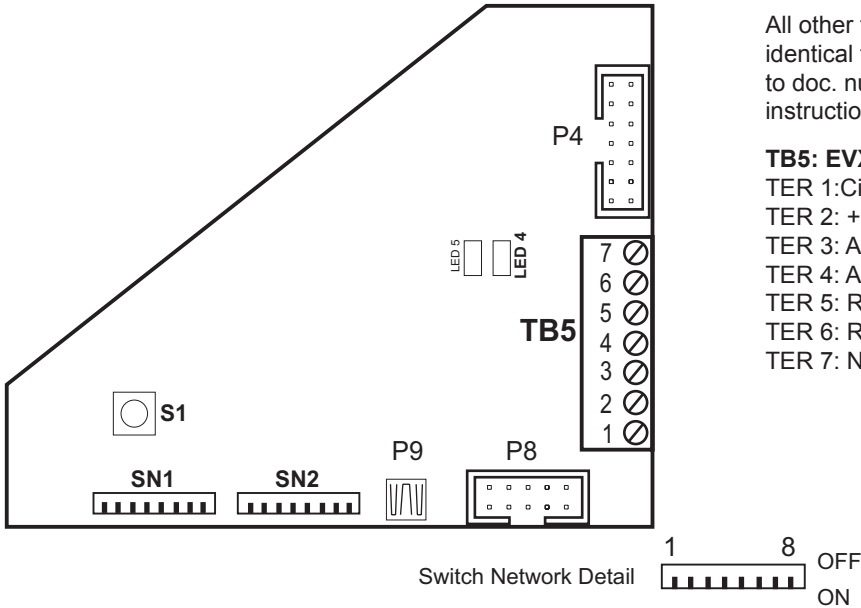
Installation and Wiring

Install equipment in a clean, dry environment, avoid installation where equipment could be subjected to vibration. Remove electronic assemblies from the enclosure prior to any drilling or punching of the enclosure. Where possible, make all cable entries from the rear or sides. Before making any modifications to the enclosure, be certain that they will not interfere with assemblies or batteries.

The EVAX 100M may be used in conjunction with a UL Listed FACP. The FACP must be capable of monitoring contacts for Fault conditions and Supervisory conditions in order to report a MNS override.

Refer to installation instructions 5403670 for wiring, terminal designation diagrams and Electrical Ratings.

Factory Default Switch Settings



All other terminals not shown on drawing are identical to the EVX-100 Module. Please refer to doc. number 5403670 for full installation instructions and ratings.

TB5: EVX RMI (NOTE 2, 4, 6)

- TER 1: Circuit Neg
- TER 2: +24VDC (0.5A)
- TER 3: Audio -
- TER 4: Audio +
- TER 5: RS 485 -
- TER 6: RS 485 +
- TER 7: No Connection

P8: I2C Port

10 Pin Connector
EVX-ZM/SL8/IL8/OL8

Zero Configuration Mode

SN1 Default = 0/0/0/0/0/1/1

SW 1 Sets the output voltage.
2 Settings: 0 25V
1 70V

SW 2 / 3 / 5 Do Not Use

SW 4 Enables Fault Code and Walk Test Message.
2 Settings: 0 Normal Op
1 Fault Code/Test Msg.

SN1-4 has a dual function. From Normal Standby, putting this switch in the ON position will automatically generate a Flash Code for the last Fault condition that the unit experienced. This can be cleared out by depressing the Reset Switch. With the Last Fault cleared, SN1-4 in the ON position will now enable the Walk Test Message to play when the unit is put into an Alarm condition.

Please Note: In Walk Test mode a steady Yellow Fault LED is active and a Fault condition is reported to the FACP.

SW 6 AC power failure report delay.
2 Settings: 0 No delay
1 3 hour delay

SW 7 Batteries.
2 Settings: 0 Batteries are not connected
1 Batteries are connected

SW 8 Microphone.
2 Settings: 0 Microphone is not connected
1 Microphone is connected

SN2 Default = 0/1/0/0/0/1/0/1

SW 1/2 Sets the number of cycles that the Temporal tone plays before and in between repeats of the message.

4 Settings: 0/0 No delay
1/0 4.5 second delay (1 Temporal cycle)
0/1 9 second delay (2 Temporal cycles)
1/1 13.5 second delay (3 Temporal cycles)

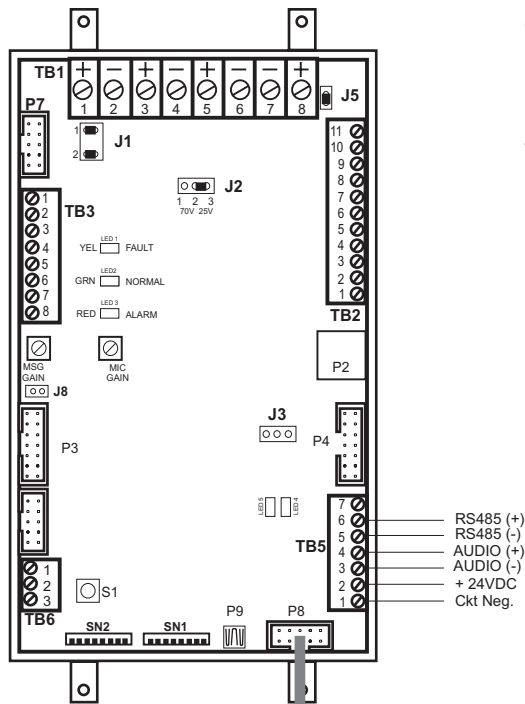
SW 3 Selects which Evac message plays.
2 Settings: 0 Standard Evac message
1 Std. Evac message w/o elevators

SW 4 Selects which Evac tone plays.
2 Settings: 0 Standard Temporal Whoop
1 Optional Temporal 520 LoFreq Signal

SW 5 Do Not Use

SW 6 Sets the message play.
2 Settings: 0 Message off
1 Message on

SW 7/8 Sets the number of times the message plays.
4 Settings: 0/0 1 play
1/0 2 plays
0/1 3 plays
1/1 Continuous plays



Typical Connection From EVX-100M to EVX-SL8 and EVX-RM8

SL8 LEDs: On the Switch/LED card which may be utilized with either the EVX-100M or the EVX-RMI, Page Switch LEDs will indicate steady Red for Paging, flashing Red for Alarm. MNS Messages will indicate Green on any associated Zone. Any Zone in Fault will indicate Amber.

Switches used for Message activation will indicate Red for Alarm or Green for MNS Messages.

Switches used for Output activation will indicate Red.

EVX-IL8 inputs may also be used for MNS Message activation.

Switch or Contact device must be Listed to UL2572/UL2017.
Device must be in the same room, within 20' and piped to EVAX 100M cabinet

Connection to EVX-RM8 (EVX-RMI/SL8 combinations)
Refer to EVX-RMI Installation Instructions for full installation and ratings.

WIRING GUIDE

Wire Type	Max Wire Resistance	Max Wire Capacitance	Max Wire Length
22 AWG Min. Twisted Pair	120 Ohms	.5uf	4000'

Wire for 24 VDC pair must be sized to ensure no more than a 20% drop in voltage at the last device

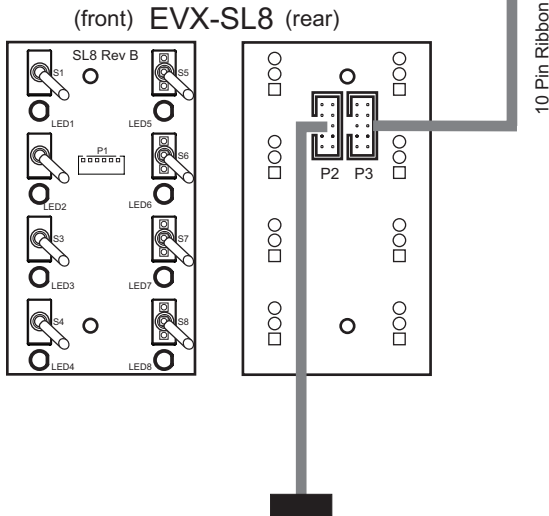
Mass Notification Operational Guidelines

The EVAX 100M is capable of operating In conjunction with a Listed FACP or stand alone for MNS applications.

When used with a Listed FACP, any condition where the MNS signal may override the FACP Alarm will require an EVX-OL8 with an output point programmed for MNS. This point will activate on any MNS signal activation as long as there is no overriding FACP Alarm condition. When the FACP is in Alarm, if it is overridden by an MNS event, the FACP must pick up this Contact closure and report the condition as a Supervisory event.

In stand alone mode, no FACP, the EVAX100M/200M must utilize an EVX-SL8 with its first position Switch/LED programmed for Power/Fault reporting. In this mode the LED will be Steady Green for Normal operating conditions. The LED will flash Amber for all Fault conditions except loss of AC Power. In that event the LED will remain steady On regardless of any other existing Fault. If Amber Strobes are used those circuits must be monitored and reported separately from the Alarm/White Strobe circuits. A EVX-IL8 input may be programmed for Fault to meet this requirement.

The Alarm and MNS control points of the EVX-OL8 may also be used to trip control points for Amber or White Strobes as requirements may demand.



to additional EVX-SL8 units or other devices

(A maximum of 16 devices on any I2C Port)

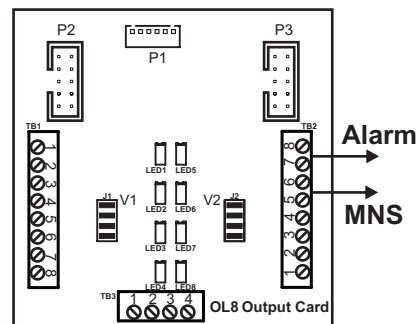
Zoning

When required, the EVAX 100M may use a EVX-ZM for separate speaker circuits. These may be activated All Call or by manual selection utilizing the EVX-SL8. Default operation is All Call on any Alarm/MNS Event.

Separate Switch or Contacts may also be employed. Any external control input must be Listed to UL2572/UL2017.

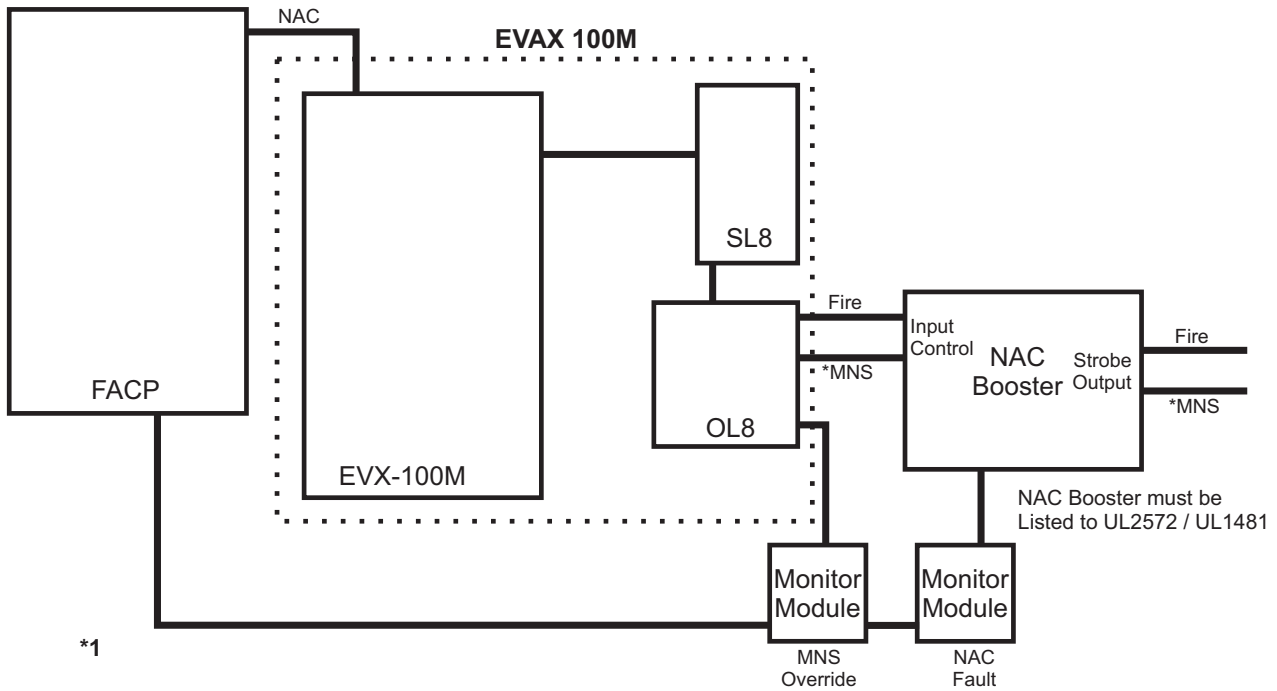
Device must be in the same room, within 20' and piped to EVAX 100M cabinet.

Refer to Installation Instructions 5403675 for full installation and ratings.



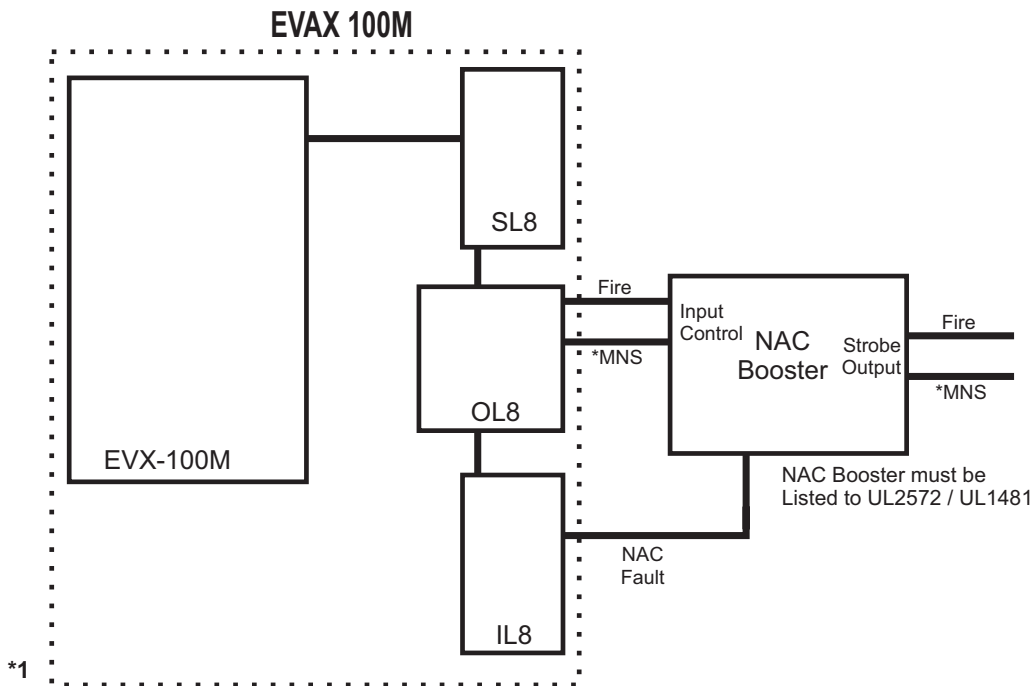
Refer to Installation Instruction EVX-SL8-IL8-OL8 (update to Potter P/N) for full installation and ratings.

EVAX 100M w/FACP



The EVAX 100M may be used in conjunction with a UL Listed FACP. The FACP must be capable of monitoring contacts for Fault conditions and Supervisory conditions in order to report a MNS override.

EVAX 100M Standalone



In applications where no automatic Fire Alarm initiation or notification is required, the EVAX 100M may be used as a Standalone system. The EVX-IL8 will provide input points to monitor the Fault status of the NAC Booster.

***1 Note: Connecting equipment must be in the same room within 20' and piped together**