

Overview

The SIGCOM MNS-100BAS is a modular, state-of-the-art emergency communications system designed for a variety of voice alarm and mass notification applications. The system is ideally suited as a voice evacuation extension of existing fire alarm systems. It meets the stringent requirements of NFPA 72, UL864 9th edition, and UFC 4-021-01.

The MNS-100BAS accommodates virtually any host alarm system, integrating as quickly and easily as a single primary connection to a NAC output from the FACP. Many of the pre-set configurations provide a complete mass notification capability right out of the box. Additional activation is by a single supervised input from a dry contact closure, or by 8 dry contact closures.

Numerous audio inputs are provided for maximum control flexibility and system access. A supervised remote microphone input is provided for central placement for emergency personnel. A high priority supervised audio input is provided that overrides lower priority activations. The system also provides a 25 V_{RMS} speaker-level input to allow power booster operation (see below). An additional non-supervised audio input provided; this lowest-priority input can be used for paging or background music as application needs dictate.

A highly efficient, Class D, 100 Watt digital audio power amplifier drives four selectable power-limited speaker circuits in the standard configuration. All speaker circuits are continuously supervised, even while activated. Each speaker can be configured for Class A or B wiring without loss of speaker circuits. Amplifier output voltage is 25 V_{RMS} standard. An optional transformer can be configured for 70 V_{RMS} output for longer speaker runs with low signal loss. An audio power boost option is also available for additional output power in multiples of 100 Watts.

The MNS-100BAS provides simple field programming of a variety of its features. These can be as simple as its response to contact closure inputs, or to the setting of internal SIP switch banks.



Features

- 100 Watt, highly efficient Class D digital audio amplifier
- 4 speaker circuits (Class A or B wiring)
- Reverse polarity supervised FACP-NAC primary input
- Supervised dry contact primary activation input
- 2 standard messages preloaded, ready to go
- Up 9 messages possible, contact factory for detail
- Prioritized contact closure activation inputs
- Remote microphone input
- Aux audio inputs for paging, background music, and remote system control
- 120/240V 50/60 Hz Input
- Power Supply, Charger and Battery Backup included

Options

- Remote microphone
- 70 VRMS transformer
- Common alarm and trouble relays
- Audio power booster

Options

70 V_{RMS} Speaker Output

Compensate for audio power loss due to long speaker runs by installing the MNS-70V-XFMR 70 Volt Transformer. The transformer is contained in a small external cabinet that connects to the MNS-100BAS. All speaker circuits maintain active supervision and provide full output power. *(For more information, please refer to the MNS-70V-XFMR data sheet.)*

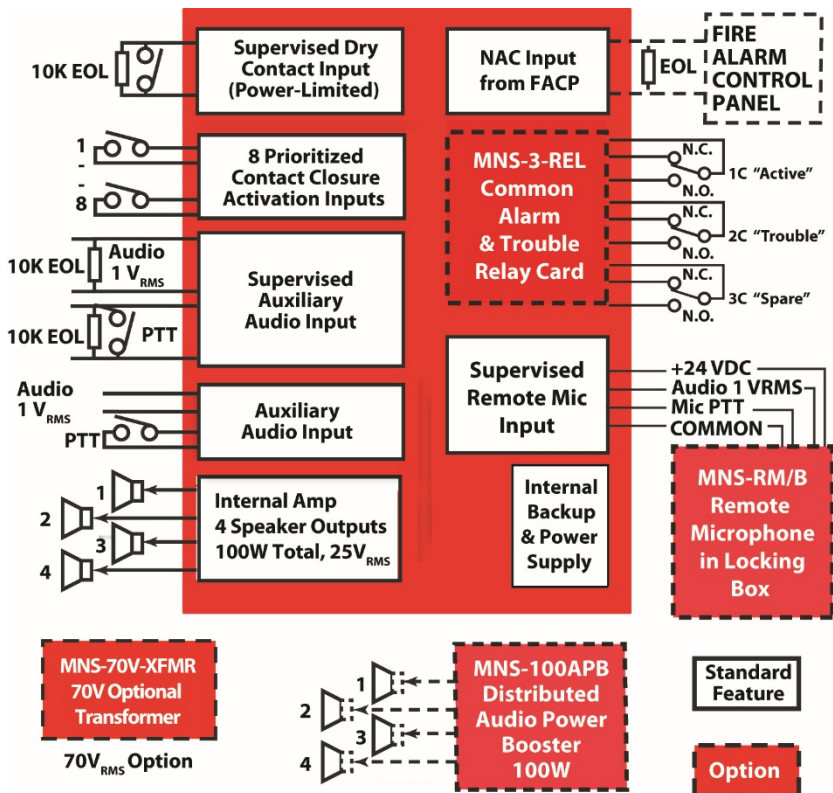
Common Alarm and Trouble Relays

The MNS-3-REL 3-Relay Card provides three Form-C relay contact outputs to signal external devices in the system. The three outputs are typically used as Active and Trouble indicators, with the third used for other applications. *(For more information, please refer to the MNS-3-REL data sheet.)*

Audio Power Booster

Need more power? The SigCom MNS-100APB Audio Power Booster panel can be added to act as a supervised remote 100 Watt power amplifier with its own 4 speaker outputs. As many MNS-100APB cabinets may be connected to the MNS-100BAS as needed to provide full facility coverage. In this configuration, the supervised audio input accepts a 25 V_{RMS} typical speaker-level input, and broadcasts it to its speaker outputs. *(For more information, please refer to the MNS-100APB data sheet.)*

Block Diagram



Specifications

Standard Configuration; no options installed. For specifications on options, please refer to their individual data sheets. Specifications are subject to change without notice due to product improvements

Interface

Inputs

Primary activation, supervised

1; reverse polarity NAC; 9-30 VDC, 10 mA;
steady, non-coded, or

1; supervised dry contact closure rated for 24
VDC, 10 mA

Secondary activation

8; dry contact closure rated for 24 VDC, 10
mA

Auxiliary audio

600 to 3600 Hz frequency response

1; supervised, with override priority (control
station), 1 VRMS audio input

1; unsupervised, lowest priority (paging and
background music), 1 VRMS audio input

Remote microphone 1; 1 VRMS audio input;
power-limited 24 VDC, 100 Ohms max line resistance

Outputs

Audio 100 W; 25 VRMS (70 VRMS Optional)
Speaker circuits
1; power-limited to 60 W
3; power-limited to 25 W each with
total power not exceeding 100 W
10 KOhm EOLR continuously
monitored

Indicators

LED power (green)
active (red)
system fault (yellow)
LED bar graph audio level; yellow 4-segment Power
Supply

Primary Power 120/240VAC, 50/60 Hz; 5 A nominal
Internal Power Supply 24 VDC regulated
External Power Supply can power this device; 24 VDC
regulated; Listed for Fire Alarm Use

Internal Battery Backup

Capacity 10 A-Hr

Standby Mode 24 hours

Alarm Mode 15 minutes

Recharge Time 48 hours

Installation surface or semi-flush mount; between 16" O.C.
studs

Enclosure, indoor; 18-5/8"h x 14-3/16"w x 4"d; painted steel
Temperature Range: 32°F to 120°F (0°C to 49°C) Humidity
90% maximum, non-condensing;

Approvals/Listings ETL Listed for UL 864 9th Edition (Control
Units and Accessories for Fire Alarm Systems) and UL 1711
4th Edition (Amplifiers for Fire Protective Systems)

Ordering

Description	Model
100 Watt Panel, 4 Speaker Circuits, Back-up Battery and Power Supply	MNS-100BAS
Common Alarm and Trouble 3-Relay Card	MNS-3-REL
70 Volt Transformer	MNS-70V-XFMR
Audio Power Booster Panel	MNS-100-APB
Remote Microphone	MNS-RM/B



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