



MNS-100BAS

Mass Notification System

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 for fire alarm system extension applications, but is equally capable in weather emergencies, terrorist events, biological, chemical and nuclear emergencies, and other threats where reliable command and mass communication capabilities must be available. 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 will 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



Features

- Reverse polarity supervised FACP-NAC primary input
- Supervised dry contact closure primary activation input
- 8 prioritized contact closure activation inputs
- On-board DMR with up to 9 messages/6-1/2 minute capacity
- Local recording of messages
- Field-programmable 10 minute timeout of message announcement
- Remote microphone input
- Aux audio inputs for paging, background music, and remote system control
- 100 Watt, highly efficient Class D digital audio amplifier
- 4 selectable speaker circuits (Class A or B wiring)
- RS-232 or RS-485 communication with external systems

Options

- Remote microphone
- 70 V_{RMS} transformer
- Common alarm and trouble relays
- Audio power booster function

setting of internal SIP-switch banks. Of particular note is the capability of selecting a time-out feature, which halts message playback after a set interval of 10 minutes.

The power supply, battery back-up and charger are provided internally to the MNS-100BAS. LED indicators are provided for POWER (green), ACTIVE (red), and SYSTEM FAULT (yellow). External communications to the MNS-100BAS is provided through an RS-232/485 serial port, which will accept signals from other devices in a system such as a DTX Radio Master Box or properly configured FACP. The MNS-100BAS is housed in a 14-³/₁₆"W x 18-⁵/₈"H x 4"D surface or semi-flush mounted painted steel enclosure.

Available options for the MNS-100BAS include a remote microphone, a 70 V_{RMS} transformer, common alarm and trouble relay card, , and the audio power booster panel.

Options

70 V_{RMS} Speaker Output

Audio output power loss due to long speaker runs can be compensated for 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 Boost

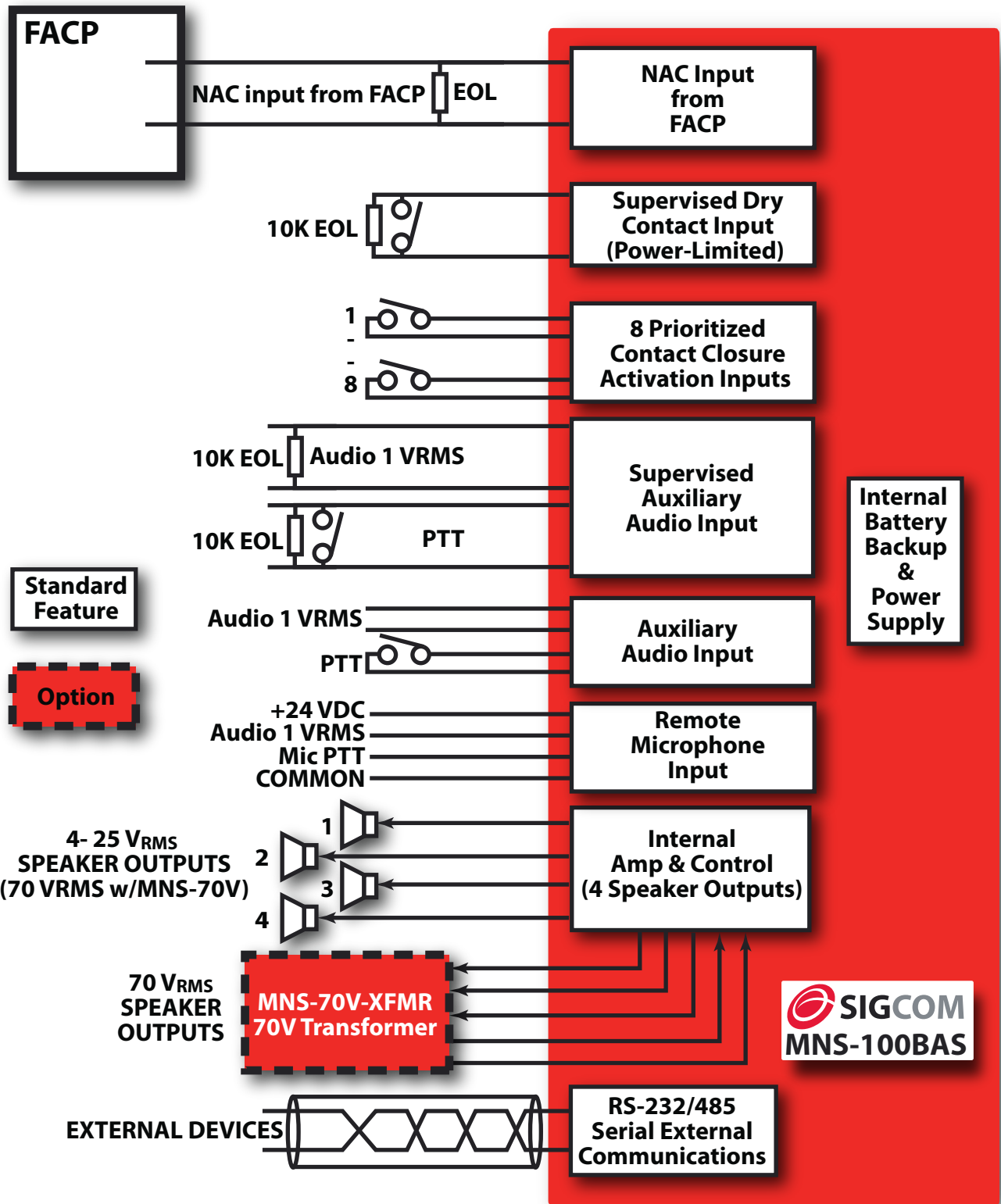
Larger facilities often require audio power greater than the 100 Watts output power the MNS-100BAS can provide. For these applications, an MNS-100APB Audio Power Booster panel can be added to act as a supervised remote 100 Watt power amplifier with its own 4 speaker outputs. As many MNS-100APB cabinets 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.)*



SIGCOM MNS-100BAS Mass Notification System

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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 V_{DC},
10 mA; steady, non-coded, or
1; supervised dry contact closure
rated for 24 V_{DC}, 10 mA

Secondary activation

8; dry contact closure rated for
24 V_{DC}, 10 mA

Auxiliary audio

600 to 3600 Hz frequency
response

1; supervised, with override
priority (control station), 1 V_{RMS}
audio input

1; unsupervised, lowest priority
(paging and background music),
1 V_{RMS} audio input

Audio Power Boost Mode —
25 V_{RMS} speaker-level;
transformer isolated input

Remote microphone

1; 1 V_{RMS} audio input; power-
limited 24 V_{DC}, 100 Ohms max line
resistance

External control/communications

RS-232/RS-485, selectable

Outputs

Audio

100 W; 25 V_{RMS} (70 V_{RMS} 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)

audio level; yellow 4-segment

LED bar graph

Power Supply

Primary Power

120 V_{AC}, 60 Hz; 5 A nominal

Internal Power Supply

24 V_{DC} regulated

External Power Supply

24 V_{DC} 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 Information

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



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