

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 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 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**

Options

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

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). 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

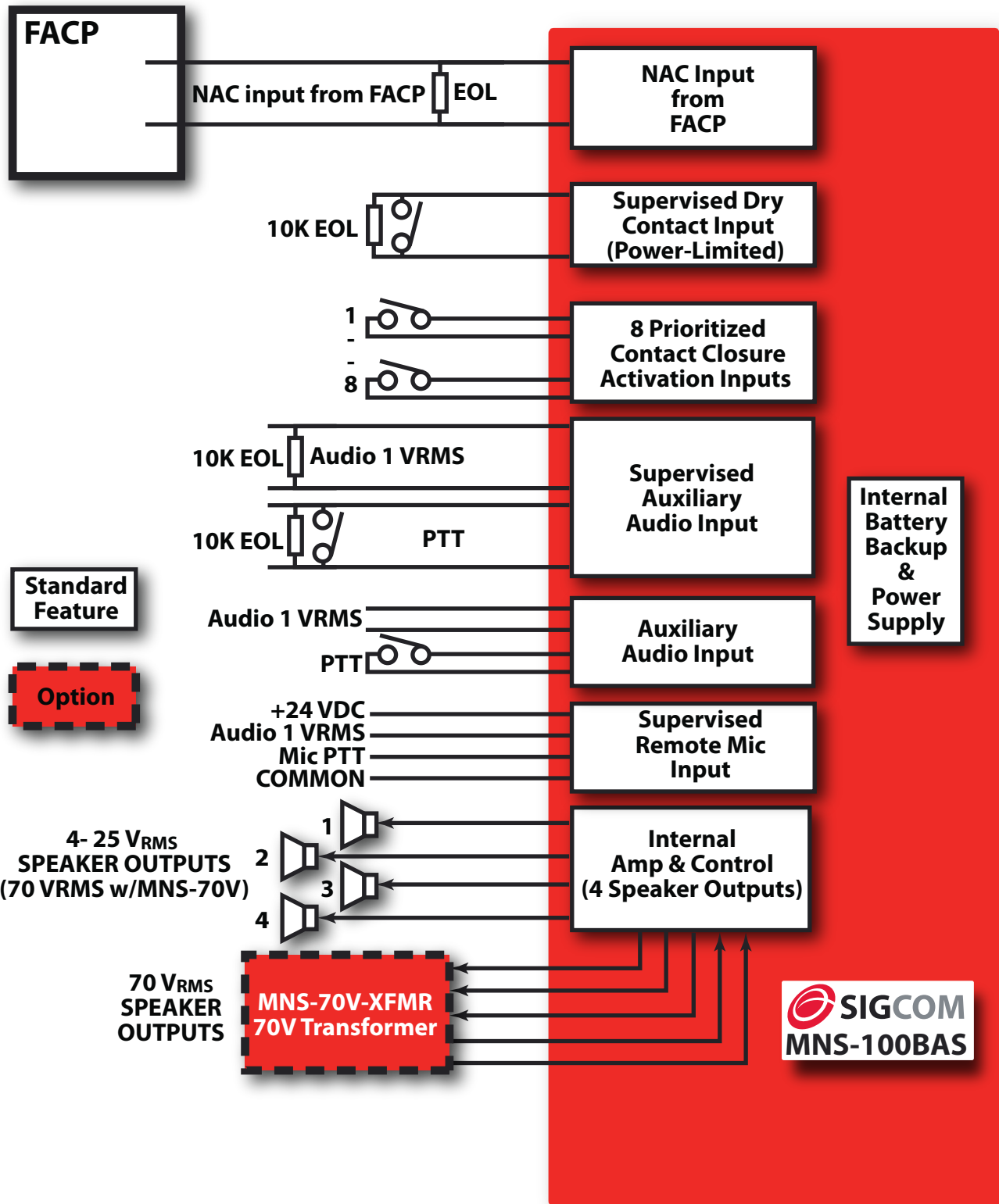
Compensate for audio power loss due to long speaker runs by installing the MNS-70V-XFMR 70 Volt Transformer. The transformer is contained in a small external cabinet that connects to the MNS-100BAS. All speaker circuits maintain active supervision and provide full output power. *(For more information,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



SIGCOM MNS-100BAS 100W Voice Evacuation Panel

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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
Secondary activation	1; supervised dry contact closure rated for 24 V _{DC} , 10 mA
Auxiliary audio	8; dry contact closure rated for 24 V _{DC} , 10 mA
	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
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)
LED bar graph	audio level; yellow 4-segment
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 9 th Edition (Control Units and Accessories for Fire Alarm Systems) and UL 1711 4 th 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
Remote Microphone	MNS-RM/B



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