

NFV-25/50ZS

FireVoice-25/50 Zoned System Voice Evacuation Control Panel



Voice Control Systems

General

NOTIFIER's FireVoice-25/50 Zoned System (NFV-25/50ZS) is a state-of-the-art Emergency Voice Evacuation Panel (EVAC) capable of splitting 25 or 50 watts of audio power into up to eight speaker circuits (i.e., zones). The NFV-25/50ZS records five field-programmable messages (up to 60 seconds total message duration) with an integral commercial-grade emergency communications microphone or from an external audio source. Significant technological enhancements set the NFV-25/50ZS apart from other EVAC panels — these include full supervision in both active alarm and standby conditions, supervision of amplifier outputs, field wiring, message generator, all tone generators, and the microphone. The integral power supply is capable of charging up to 18 AH batteries, which can be housed in the NFV-25/50ZS cabinet.

The NFV-25/50ZS is suitable for use as an adjunct (slave or stand-alone) to most UL-Listed Fire Alarm Control Panels (FACPs). An optional 25 watt, 25 Vrms audio amplifier expands to 50 watts or as a secondary amplifier in jurisdictions requiring backup. A 70.7 Vrms converter is also available for independently converting amplifiers to meet retrofit needs.

The Zone Splitter Module (ACC-ZSM) divides the output of the Audio Amplifier Module(s) (ACC-AAM25) into up to eight speaker circuits (i.e., zones). The Zone Page Module with Keypad (ACC-ZPMK) provides full manual control of the speaker circuits, status indication of each of the speaker circuits, and automatic control by the FACP via the ACS serial link connection.

A host of field-programming options, including the capability of five custom messages (fire, tornado, evacuation, hazmat, non-fire, multi-language, etc.) make the NFV-25/50ZS the most versatile voice evacuation system available.

Suitable applications include schools, auditoriums, dormitories, theaters, restaurants, places of worship, lodging, office buildings, and factories.

Features

- Listed to UL Standard 864, 9th edition.
- 25 watts of audio power can be divided into eight Style Y (Class B) or four Style Z (Class A) speaker circuits (zones), utilizing the zone splitter module (ACC-ZSM).
- Full manual control of all audio zones provided by zone page module with keypad (ACC-ZPMK).
- Activation by the FACP using the ACS serial link and/or the five Command (CMD) inputs.
 - ACS serial link activation with compatible NOTIFIER FACPS: such as NFW2-100, NFS-320 and NFS2-640.
 - CMD activation compatible with any FACPS.
- FACP automatically directs the voice message to each or all audio zones.
- Paging by zone or All-Call.
- Full status indication (normal, active, fault) of each speaker circuit.
- Fault indication via ACS serial link and/or the two Form-C trouble relays (System and AC Power Loss).



- Integral 25 watt, 25 Vrms audio amplifier with single Style Z (Class A) or Style Y (Class B) speaker circuit (expandable to 50 watts using the ACC-AAM25).
- Modular design for maximum system flexibility and ease of service.
- Two command input circuits can be independently field-programmed for activation by a Notification Appliance Circuit (NAC) or contact closure.
- Three command input circuits activate on contact closure.
- **ACS link or Command Input (CMD) control of:**
 - One 60-second message.
 - Two 30-second messages.
 - Three 20-second messages.
 - Four 15-second messages.
 - Five 12-second messages.
- Microphone time-out feature.
- Nineteen different system and diagnostic LEDs.
- *Optional equipment:* second amplifier; local playback speaker; remote microphone; and paging equipment interface.
- Integral digital message generator with standard, factory-prerecorded emergency evacuation message.
- Custom messages are field recordable, without the addition of costly add-on modules, utilizing the integral microphone or the audio input jacks.
- Digital message may be field-selected for 3, 4, 6, 8, or infinite repeat.
- Built-in alert tone generators with steady, slow whoop, high/low, or chime tone capability.
- Field-selectable lead-in/trailing tone selection.

- Alert tone selection may be field-programmed to conform with ANSI S3.41 Audible Emergency Evacuation Signal (Temporal Pattern), per NFPA.
- Speaker zone control via ACS serial link, CMD inputs, or keypad
- Dual-optically-isolated, trigger input circuits are independently field-programmable for activation by polarity reversal (host FACP NAC) or dry-contact closure.
- Integral diagnostic LEDs include: Power, System Trouble, Microphone Trouble, Message Generator Trouble, Tone Generator Trouble, Amplifier Fault, and others.
- ACS serial link or independent Form-C trouble relay allows FACP to monitor voice system while in active (alarm) state.
- Integral piezo provides local audible indication for troubles.
- Fully supervised in Standby and Active states, including integral microphone, amplifier output, message generator, speaker wiring, and tone generators.
- Independent amplifier supervision: current limit, audio level, short circuit protection.
- All outputs are power-limited.
- Auxiliary power output provides local power for addressable control modules when used to activate the NFV-25/50ZS.
- Compatible with all NOTIFIER FACP's, as well as other manufacturers' panels.

Optional Modules

ACC-AAM25

- 25 watt, 25 Vrms audio amplifier module.
- Field-programmable for system expansion to 50 watts or as a backup to the primary 25 watt amplifier where required.
- Single Class A or Class B speaker circuit.
- Plug-in-style terminal blocks for ease of service and maintenance.
- Fully supervised and power-limited.
- Diagnostic LEDs include: yellow "trouble" LED (cable fault, amp fault) and green "amp functional" LED.

ACC-EPM

- Provides interface to non-fire paging equipment for non-emergency paging applications.
- Provides plug-in-style terminal blocks for ease of service and maintenance.
- Transformer-isolated, 600-ohm audio connection to paging equipment.
- Electrically-isolated, contact-closure trigger input for activation by the paging equipment.

FC-XRM70

- Converts 25 Vrms audio outputs to 70.7 Vrms for retrofit applications.
- Plugs directly on ACC-AAM25 module(s), allowing independent conversion to 70.7 Vrms.

FC-LPS

- Provides local digital message playback for user review of field-recorded custom messages.

Controls and Indicators

LED INDICATORS

1. Power On (green).
2. System Trouble (yellow).
3. Message Generator Trouble (yellow).
4. Tone Generator Trouble (yellow).
5. Microphone Trouble (yellow).
6. Record/Playback (green).
7. All-Call (green = Active).
8. Audio ON/OFF (green = Active, yellow = Manual Deactivation).
9. Status of each speaker zone (green = Active, yellow = Manual Deactivation or Fault).

Other system LEDs: Battery Trouble, Charger Trouble, Ground Fault, (ACC-AAM25) Speaker Circuit Trouble, and Amplifier Supervisory.

Product Line Information

NFV-25/50ZS: 25 watt, 25 Vrms, emergency Voice Evacuation Control Panel (VECP) with integral commercial microphone, digital message generator, zone splitter module (**ACC-ZSM**), zone page module with keypad (**ACC-ZPMK**).

ACC-AAM25: Optional 25 watt, 25 Vrms Audio Amplifier Module with single Class A or Class B speaker circuit.

ACC-EPM: Optional External Page Module.

FC-XRM70: Optional 70.7 Vrms Converter Module (one required per amplifier, consult factory for availability).

VEC-RM: Optional Remote Microphone, includes backbox (*only one VEC-RM per system*).

FC-LPS: Optional Local Playback Speaker.

BAT Series: Two batteries required. See FACP manual for specific current requirements; see data sheet DN-6933 for overview of batteries.

FC-RM: Optional Remote Microphone, includes backbox (*only one FC-RM per system*).

ACC-TR: Optional Trim Ring for semi-flush mounting.

SYSTEM SPECIFICATIONS

Specifications

PRIMARY POWER (AC)

- 120 VAC, 60 Hz, 1.5 A.
- Wire size: minimum #14 AWG with 600 V insulation. Nonpower-limited, supervised.

Secondary Power (Battery) Charging Circuit

- Lead-acid batteries only.
- Maximum Charging Circuit: Normal Float Charge - 27.6V @ 0.800 A.
- Maximum Charger Capacity: 18 Amp Hour battery. (NFV-25/50ZS Series cabinet holds max. 18 Amp Hour Battery.)

AC Loss Relay (TB7)

- Operation: normally energized fail-safe relay transfers on AC power loss for independent monitoring by DACT.
- AC Loss Relay can be programmed to be the only indication of an AC loss condition (see Table 2-3 on page 31)
- AC Loss relay contact rating: 2.0 amps @ 30 VDC (resistive), 0.6 amps @ 30 VAC (resistive)

Command input circuits (CMD1 and CMD2):

- Trigger input voltage: 10.5 – 29 VDC.

NOTE: When programmed for reverse-polarity activation.

Trouble contact rating:

- 2.0 A at 30 VDC (resistive), 0.6 A @ 125 VAC (resistive).

Auxiliary power output:

- Specific application power: 24 V, 35 mA.

Cabinet Specifications

Door: 26.174" (66.482 cm) high x 15.780" (40.081 cm) wide x 1.125" (2.858 cm) deep. **Backbox:** 26.0" (66.040 cm) high x

15.5" (39.370 cm) wide x 4.75" (12.065 cm) deep, depth includes door.

Temperature and Humidity Ranges

This system meets NFPA requirements for operation at 0 – 49°C/32 – 120°F and at a relative humidity 93% ± 2% RH (noncondensing) at 32°C ± 2°C (90°F ± 3°F). However, the useful life of the system's standby batteries and the electronic components may be adversely affected by extreme temperature ranges and humidity. Therefore, it is recommended that this system and its peripherals be installed in an environment with a normal room temperature of 15 – 27°C/60 – 80°F.

Standards and Codes

The NFV-25/50ZS complies with the following standards: NFPA 72 National Fire Alarm Code; NFPA 101 Life Safety Code; UL 864 Standard for Control Units for Fire Alarm Systems (9th edition).

Agency Listings and Approvals

The listings and approvals below apply to the basic NFV-25/50ZS control panel. In some cases, certain modules may not be listed by certain approval agencies, or listing may be in process. Consult factory for latest listing status.

- **UL:** S635
- **CSFM:** 6911-0028:229
- **MEA:** 341-03-E Vol. 2

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