

# E-NAC Analog NAC Module Installation Sheet

## Operation

The module is an analog addressable device used to connect a supervised output circuit to a signal riser. The output wiring is monitored for open and short circuits. A short circuit causes the module to inhibit the activation of the audible/visual signal circuit so the riser is not connected to the wiring fault. Upon command from the control panel, the module connects the output circuit to the riser input. The output circuit energizes a riser to operate polarized audible and visual signals. The module can be used for connection of a Class A or Class B (with EOL) output notification appliance circuit (NAC).

The device address is set using the two rotary switches located on the front of the module. One device address is required.

The module is configured to operate as a Genesis Audible/Visual/Silence device type from the factory. The module can also be configured for other device types through front panel programming or the configuration utility. Refer to the applicable control panel technical reference manual for a list of available device types.

**Genesis Audible/Visual/Silence:** Used with Genesis and Enhanced Integrity horns and strobes. Genesis and Enhanced Integrity appliances maintain synchronization per UL 1971. For Genesis devices, this configuration allows connected horns to be silenced while strobes on the same two-wire circuit continue to flash until the panel is reset.

**Note:** You may use nonsynchronous fire alarm signals with or instead of compatible synchronized fire alarm signals, but the operation of these devices will not comply with UL 1971.

## LED operation

The module provides a bicolor LED that shows its status.

Normal: Green LED flashes

Active: Red LED flashes

## Installation

### WARNINGS

- This module will not operate without electrical power. As fires frequently cause power interruption, you should discuss further safeguards with your local fire protection specialist.
- This module does not support conventional smoke detectors.

**Note:** The module is shipped from the factory as an assembled unit; it contains no user-serviceable parts and should not be disassembled.

### To install the module:

1. Verify that all field wiring is free of opens, shorts, and ground faults.
2. Make all wiring connections as shown in "Wiring."
3. Set the module address as follows:

Use a screwdriver to adjust the two rotary switches on the front of the module. Set the TENS rotary switch (0 through 12) for the 10s and 100s digit and the ONES rotary switch for the 0 through 9 digit. For example: device address 21, set TENS rotary switch to 2 and set the ONES rotary switch to 1.

Refer to "Specifications" for available address numbers.

4. Mount the module on the electrical box using screws provided with the electrical box.
5. Mount the wall plate on the module using #4-24 x 1/2 in. (13 mm) self-tapping screws.

Figure 1: Module address

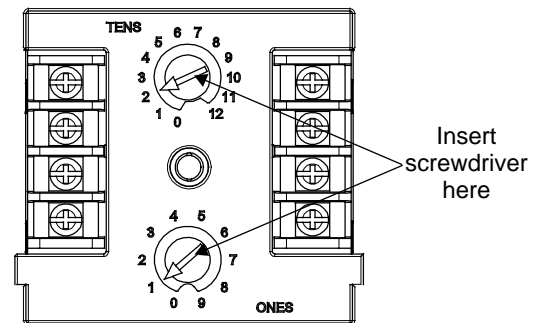
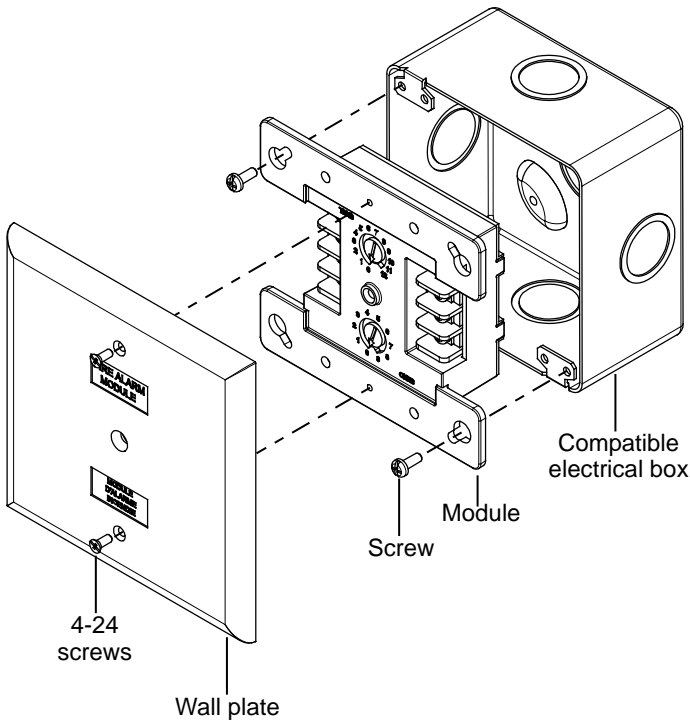


Figure 2: Module installation



## Wiring

Wire in accordance with NFPA 72 and CAN/ULC-S524. Be sure to observe the polarity of the wires as shown in Figure 3.

## Transient protection caution

The module requires transient protection for installations that connect electromechanical bells or horns to output circuits. The module's circuitry requires a bipolar transient protector (P/N 235196P) for protection against transient spikes caused by the inductive load of bells or horns.

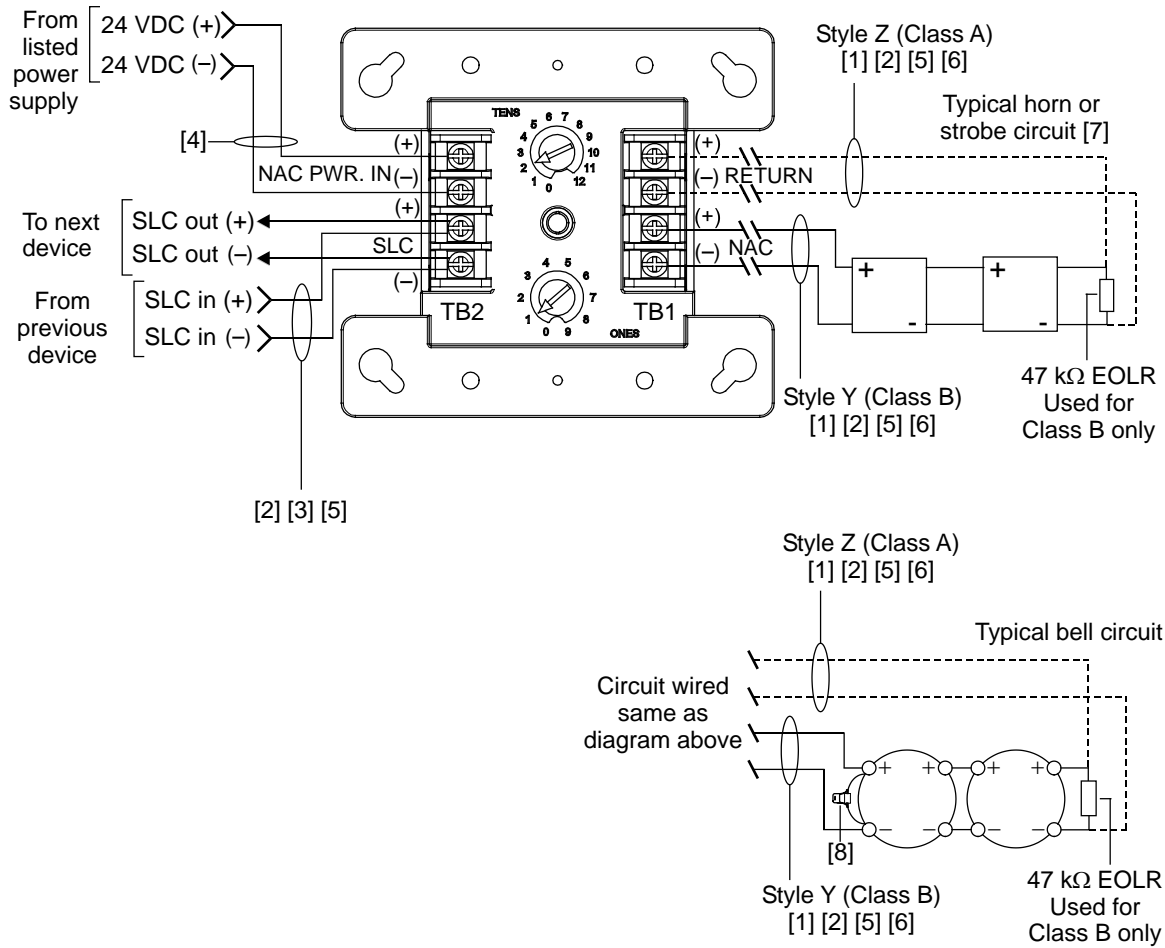
Connect the bipolar transient protector assembly across the terminals of the bell or horn electrically closest to the module. The bipolar transient protector is not polarity-sensitive.

Locate bells and horns at least 6 ft. (1.83 m) from the module.

## Specifications

Communication line voltage	Maximum 20.6 V peak-to-peak
Current	
Standby	350 $\mu$ A
Activated	200 $\mu$ A
Ground fault impedance	10 k $\Omega$
Operating environment	
Temperature	32 to 120° F (0 to 49° C)
Humidity	0 to 93% RH, noncondensing at 90° F (32° C)
Output ratings	
Circuit current	24 VDC at 2 A max.
EOL resistor value	47 k $\Omega$ , (P/N: EOL-47)
Storage temperature range	-4 to 140° F (-20 to 60° C)
Compatible electrical boxes	North American 4 inch square x 2-1/2 in. (64 mm) deep 2 gang box Standard 4 in. square box 1-1/2 in. (38 mm) deep
Wire size	12, 14, 16, or 18 AWG wire (2.5, 1.5, 1.0, or 0.75 mm <sup>2</sup> ) (Sizes 16 and 18 AWG are preferred)
Device address	01 to 64 (64 point control panel) 01 to 127 (127 point control panel)

Figure 3: Module wiring



Notes

- [1] Maximum 25  $\Omega$  resistance per wire. Maximum circuit capacitance of 0.1  $\mu$ F
- [2] Maximum 12 AWG (2.5 mm<sup>2</sup>) wire; minimum 18 AWG (0.75 mm<sup>2</sup>) wire
- [3] Refer to the control panel technical reference manual for wiring specifications
- [4] If the NAC power riser is used for more than one notification zone, install in accordance with the survivability from attack by fire requirements in NFPA 72
- [5] Supervised
- [6] Polarity shown in alarm condition. Polarity reverses on supervisory condition
- [7] Typical synchronized temporal horn/strobe circuit when configured as Class A/B auto sync signal output module through programming
- [8] Transient protection (see "Transient protection caution")

