

GSA-T3T4 Temporal Pattern Generator Installation Sheet

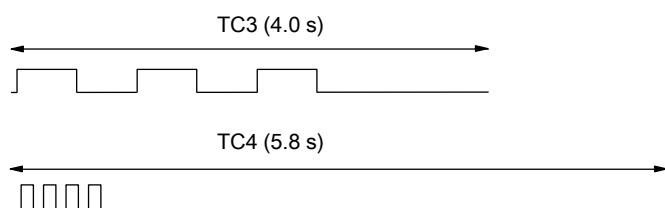
Description

The model GSA-T3T4 Temporal Pattern Generator is an addressable device that generates sound patterns for fire or carbon monoxide (CO) alarms for compatible audible (sounder) bases. Table 1 and Figure 1 below show the pattern characteristics.

Table 1: Temporal patterns

Name	Code	For	Description of pattern per cycle
TC3	NFPA 72	Fire	0.5 s on, 0.5 s off, 0.5 s on, 0.5 s off, 0.5 s on, 1.5 s off
TC4	NFPA 720	CO	0.1 s on, 0.1 s off, 0.1 s on, 0.1 s off, 0.1 s on, 0.1 s off, 0.1 s on, 5.1 s off

Figure 1: Temporal pattern wavelengths



The GSA-T3T4 module uses two addresses on the signaling line circuit (SLC). Address 1 is tied to Channel 1; Address 2 is tied to Channel 2. Channel 1 always has the highest priority.

Channel selection

The control panel sends synchronization and channel commands to the GSA-T3T4. Channel selection determines the pattern. The control panel can also send silencing commands to the GSA-T3T4.

During system initialization, the SLC controller determines which pattern plays on each channel, depending on the marketplace setting. For example, in the US and Canadian marketplaces, a fire alarm takes priority over a CO alarm, so the TC3 pattern is assigned to Channel 1. Settings for other markets are governed by local requirements.

Synchronization

When an alarm condition occurs, the detector notifies the panel and the panel commands the GSA-T3T4 to activate the T3T4 riser. The GSA-T3T4 generates the appropriate pattern and synchronizes all the audible bases on a single SLC. The SLC controller synchronizes multiple GSA-T3T4s installed on the same SLC.

Silencing the GSA-T3T4

The alarm signal continues until the system resets or is manually silenced. The GSA-T3T4 can receive silencing commands from the control panel.

LEDs

Diagnostic LEDs provide visible indication of the status of the module through the cover plate:

- Normal: green LED flashes
- Alarm/active: red LED flashes

Personality code

The default personality code is 70, Unsupervised Relay Output. This configures the GSA-T3T4 to select the desired sound pattern based on the activated channel.

Installation

Install this device in accordance with the latest editions of CAN/CSA-6.19, CAN/ULC-S524, CSA C22.1, NFPA 72, NPFA 720, and the local authority having jurisdiction.

Caution: Electrical supervision requires the wire run to be broken at each terminal. Do not loop the signaling circuit field wires around the terminals.

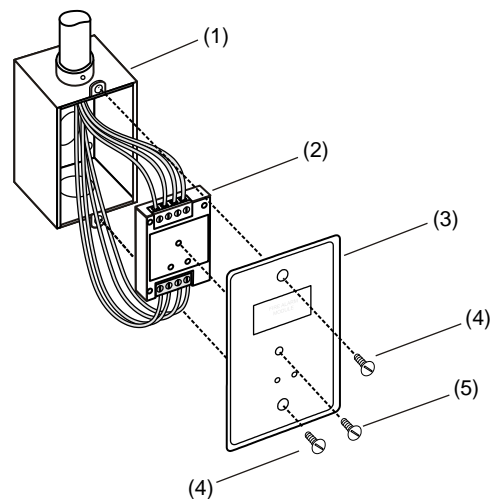
Notes

- The GSA-T3T4 Temporal Pattern Generator is shipped from the factory as an assembled unit; it contains no user-serviceable parts and should not be disassembled.
- Only one module is required for each T3T4 riser.
- When determining allowable wire resistance, refer to the voltage rating of the module, the signaling appliance, and the control panel specifications.
- Wire in accordance with NFPA 70 *National Electrical Code* or CSA C22.1 *Canadian Electrical Code*.
- Each terminal on the GSA-T3T4 module is limited to a single conductor.
- Strip 1/4 in. (about 6 mm) from the ends of all wires that connect to the terminal block of the module. Exposing more bare wire may cause a ground fault and exposing less wire may result in a faulty connection.

To install the module:

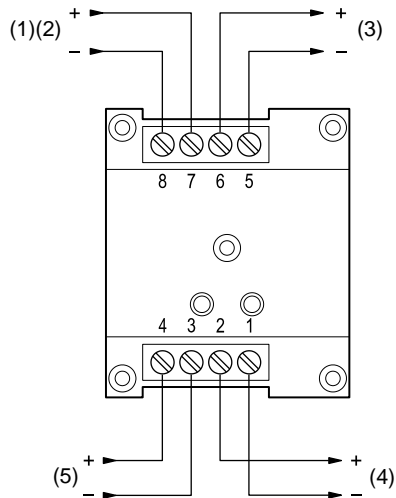
1. Verify that all field wiring is free of opens, shorts, and ground faults.
2. Make the wiring connections as shown in Figure 3.
3. Install the module as shown in Figure 2. See "Specifications" on page 2 for compatible electrical boxes.

Figure 2: Mounting in a single-gang box



- | | |
|-------------------------------|------------------------|
| (1) Compatible electrical box | (4) #6-32 x 1/2 screws |
| (2) GSA-T3T4 | (5) #4-24 x 1/2 screw |
| (3) Wall plate | |

Figure 3: Wiring diagram



- (1) Use a power-limited and regulated 24 VDC primary or auxiliary power supply that is UL/ULC Listed for fire protective signaling systems. Note: Additional equipment is required for supervision. Class E
- (2) AUX_RISER
- (3) TCDR_RISER, to audible bases. Note that terminal 5 connects to the positive (+) power or signal terminal of the base; terminal 6 connects to the negative (-) power or signal terminal of the base.
- (4) SLC, to next device
- (5) SLC, from previous device

Applications

For applications, refer to the installation sheet for the audible base, or contact our Application Engineering department.

Maintenance

For Canadian installations, be sure to follow CAN/ULC-S536 *Standard for the Inspection and Testing of Fire Alarm Systems*.

Specifications

Operating voltage	
Riser	16 to 33 VDC
SLC	15.2 to 19.0 VDC
Current	
Standby	53 μ A
Alarm TC3	373 μ A
Alarm TC4	530 μ A
Output rating	3.5 A max. Actual value limited by system power outputs
Wire size	12 to 18 AWG (0.75 to 2.50 mm ²)
Circuit designation	Signaling line circuits (SLC) are Style 4 (Class B) or Style 6 (Class A)
Compatible audible bases	GSA-SBT, SIGA-AB4G-LF, SB4U-LF
Electrical box	
Compatible	2-1/2 in. (64 mm) deep single-gang box
Recommended	4 in. square box 1-1/2 in. (38 mm) deep with single-gang trim ring
Operating environment	
Temperature	32 to 120°F (0 to 49°C)
Relative humidity	0 to 93% noncondensing
Storage temperature	-4 to 140°F (-20 to 60°C)

Regulatory information

UL rating	Regulated 24 DC
Environmental class	UL: Indoor
North American standards	ANSI/UL 864 ANSI/UL 2017 CAN/ULC-S527
FCC compliance	This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
Industry Canada compliance	This Class A digital apparatus complies with Canadian ICES-003.

Contact information

For contact information, see www.kiddelivesafety.com.