

TIP-224A

Addressable Alarm Notification Sounder

Technical Manual



TELEFIRE FIRE & GAS DETECTORS LTD

PO Box 7036
Petach Tikva 49250
Israel

Tel: 972 3 970 0400
Fax: 972 3 921 1816
eMail: info@telefire.co.il
Web: www.telefire.co.il



Revision 1.13
May 2014

1 Introduction

Telefire's TIP-224A is an addressable device that integrates an indoor horn and an addressable output card, eliminating the need for an output module installed in a separate box, therefore reducing material and labor cost. As an added benefit, the unit contains a high-brightness LED. The TIP-224A is compatible with the ADR-3000 Addressable Control Panel.

The address of the TIP-224A is programmed into the memory of the horn and can be assigned or changed by using the PROG-4000 programmer.

The sounder contains an alarm LED that is viewable from 360°. This LED flashes when polled by the control panel, indicating normal operation. During an alarm THE TIP-224A will sound interrupted beeps and the LED will flash more rapidly and brightly than during normal operation.

2 Compatibility

2.1 Control Panels

The TIP-224A is compatible with the full range of Telefire's ADR-3000 control panels.

2.2 Bases

The TIP-224A is compatible with Telefire's TFB-110 Standard Sounder Base.

3 Installation

Planning of quantity and location of sounders shall be done according to the local codes and regulations and in accordance to the planning consultant's requirements.

The TIP-224A should be installed in an indoor location.

Mount the module on a solid wall at a height that will allow comfortable access to connecting the cables and maintenance personnel for ongoing operations and in a location where it is possible to supervise and clearly see the indicators.

3.1 Pre-Installation Planning

3.1.1 Capacity Planning

Ensure that there are a sufficient number of sounders as specified by the applicable standards and regulations and that the control panel has a sufficient number of available addresses.

3.1.2 Cabling Planning – Wire Characteristics' Effect on System Performance

The sounder is connected to the control panel via a TFB-110 standard sounder base via a four-wire connection (the control panel's SLC loop and 24Vdc supply from the control panel or an auxiliary power supply such as the TPS-34A). Please look at the technical manual of the TFB-110 for additional details about connecting the cables.

i

Note

Notify the operator or the security personnel that the system will be temporary disconnected before adding sounders to the control panel.

Cable type selection and wiring shall be done according to local regulations.

System connections shall be done when power sources are disconnected. Changing/installing electric activation modules shall be done after the system is in quiescence state (push buttons and detectors in normal state).

The following table shows the effect of wiring characteristics on system performance:

Characteristic	Effect on SLC	Effect on 24Vdc Supply
Electric resistance	Minimal	Very high
Capacitance	High	No influence
Inductance	High	Minimal
Mechanical Strength	High	High

Table 1 Wire Characteristics' Effect on System Performance

3.1.3 Cabling Planning – Signaling Line Circuits (SLC)

The module connects to the control panel via a two-wire cable 12 – 18 AWG (cross section of 0.8mm² to 3.3mm²). Twisted-pair cable is recommended.

Wire Size	Cross Section (mm ²)	Maximum SLC branch length for wire size
18 AWG	0.8 mm ²	950 m
16 AWG	1.3 mm ²	1,520 m
14 AWG	2.1 mm ²	2,420 m
12 AWG	3.3 mm ²	3,830 m

Table 2 Selecting SLC Wires

3.1.4 Cabling Planning – 24Vdc Supply from Control Panel or Auxiliary Power Supply

The module requires 24Vdc from the ADR-3000 or an auxiliary power supply such as the TPS-34A.

Use an auxiliary power supply such as the TPS-34A whenever the TIP-224A is installed a long distance from the ADR-3000 or whenever the total current consumption of all output devices exceeds the capability of the ADR-3000's 24Vdc output.

3.2 Wiring

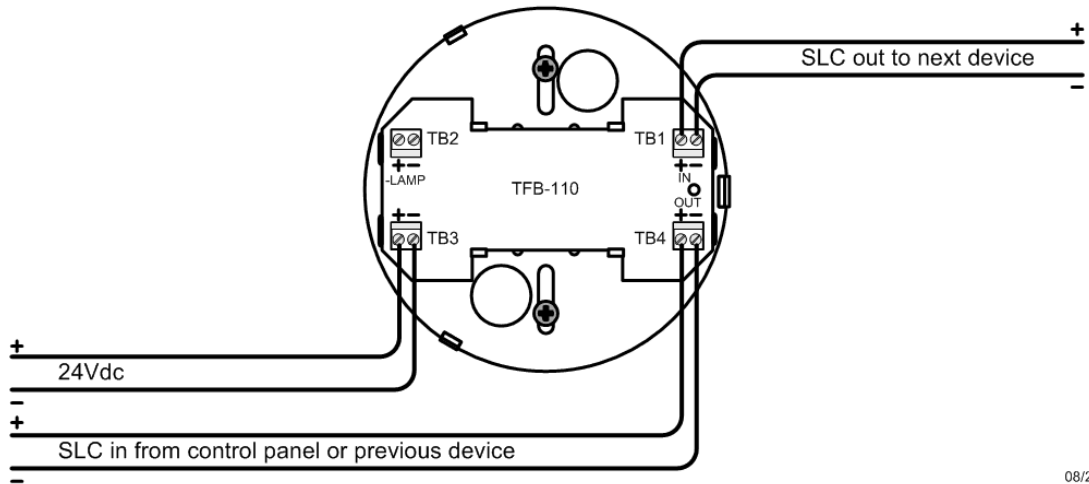
i

Note

Measure the wiring to ensure there are no shorts before connecting the wiring to the control panel.

Connecting or adding zone, devices, outputs etc shall be done when all power to the control power (AC and batteries).

Connect the TFB-110 base as shown in Figure 1



08/2012

Figure 1 TFB-110 cabling for TIP-224A installation

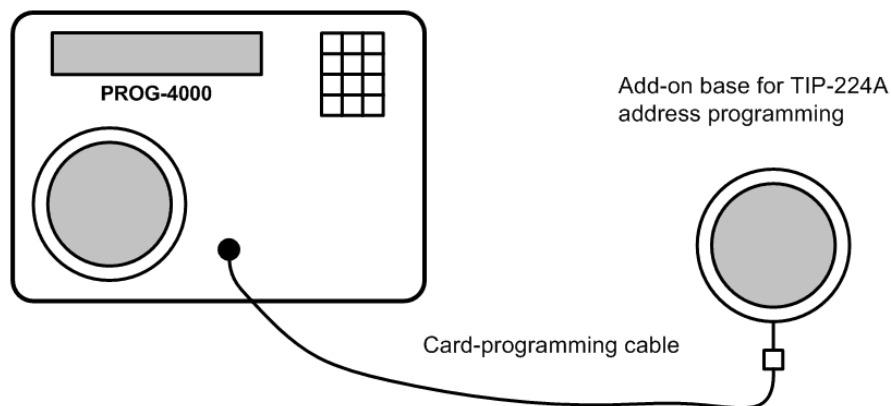
3.3 Installation

3.3.1 Location

The TIP-224A sounder is intended for use in indoor locations. Observe NFPA 72 guidelines and local fire codes when installing the TIP-224A. Use only Telefire's TFB-110 Standard Sounder Base.

3.3.2 Address Programming

Assign the TIP-224A address in the range of 1 – 127 prior to installation by using the PROG-4000 Addressable Sounder and Accessory Programmer. Plug the module programming cable to the PROG-4000's "Card Prog" output and connect the add-on base for TIP-224A sounder to the cable (see Figure 2). Please refer to the PROG-4000 manual for additional details.



08/2012

Figure 2 Connecting to the PROG-4000

3.3.3 Configuring the ADR-3000

Configure the TIP-224A as "Sounder" in the ADR-3000. Configure the sounder's activation matrix as required.

Please refer to the ADR-3000 technical manual for a detailed description of programming and configuration.

3.4 Post-Installation

3.4.1 Post-Installation Test

Test the activation matrix by activating the appropriate initiating devices and verify that the outputs are activated as specified by the planning consultant.

3.5 Documentation

Mark the sounder's address on its label

4 Troubleshooting

The red LED flashes on each system communication request to the sounder. The LED will latch on when the sounder is activated.

5 Specification

Diameter (including base)	124 mm
Height (including base and LED).....	58 mm
Weight	195 gr.
Operating Temperature range.....	-10 °C – +60 °C (14 °F – 140 °F)
Relative Humidity Range	10% – 93% non-condensing
Operating Voltage	
(supplied by ADR-3000 via SLC)	21V, modulated
(supplied by ADR-3000 or auxiliary power supply) .	24Vdc nominal ± 10%
Maximum current consumption (SLC)	0.12mA (quiescence mode) 5mA (Alarm)
Maximum current consumption (24Vdc).....	0.1mA (quiescence mode) 45mA (Alarm)
Local Indication.....	Local red LED (light-emitting diode)

All values are nominal. Specifications are subject to change without prior notice

6 Certification

Telefire's TIP-224A Addressable Notification Sounder has the following approvals:

- UL 464 Compliant
- GOST Approved
- CP 10 Compliant
- IS 1220 Approved