TELEFIRE
FIRE & GAS DETECTORS

TPB-800x

Analog Addressable Push button

Technical Manual

TPB-800XEN103.PDF

Revision 1.03

February 2013

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Note

The terms "**Trouble**" as used in NFPA 72 guideline and UL 864 standard and "**Fault**" as used in EN 54 standards are used interchangeably throughout this manual.

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Note

Do not install, operate, and maintain this Product before fully reading this manual.

1   Introduction

The TPB-800x is available in two models:

- TPB-800ASR – red fire alarm push button
- TPB-800ASY – yellow extinguishing activating push button

The TPB-800ASR is an analog addressable push button. It consists of a standard alarm push button unit and an analog addressable interface module mounted behind the front part of the break-glass section.

The address is assigned to the TPB-800ASR by using the PROG-4000 Programmer.

The TPB-800ASR is connected to the SLC loop in the same way as an analog detector.

The TPB-800ASY is an analog addressable extinguishing push-button.

It is mechanically and electronically identical to the TPB-800ASR, with the exception of its bright yellow color to alert users that this is an extinguishing push-button rather than a fire alarm push-button.

Both the TPB-800ASR and TPB-800ASY are configured as "push button", but typically they are configured so that pressing the TPB-800ASY manual extinguishing push button activates the system extinguishers, whilst the TPB-800ASR is treated as an alarm.

2   Compatibility

The TPB-800x is compatible with Telefire's ADR-3000 product line.

3   Installation

3.1   Pre-Installation Planning

3.1.1   Capacity Planning

Ensure that the control panel has a free address for the TPB-800x.

3.1.2   Cabling Planning – Wire Characteristics' Effect on System Performance

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

Characteristic	Effect on SLC
Electric resistance	Minimal
Capacitance	High
Inductance	High
Mechanical Strength	High

Table 1   Wire Characteristics' Effect on System Performance

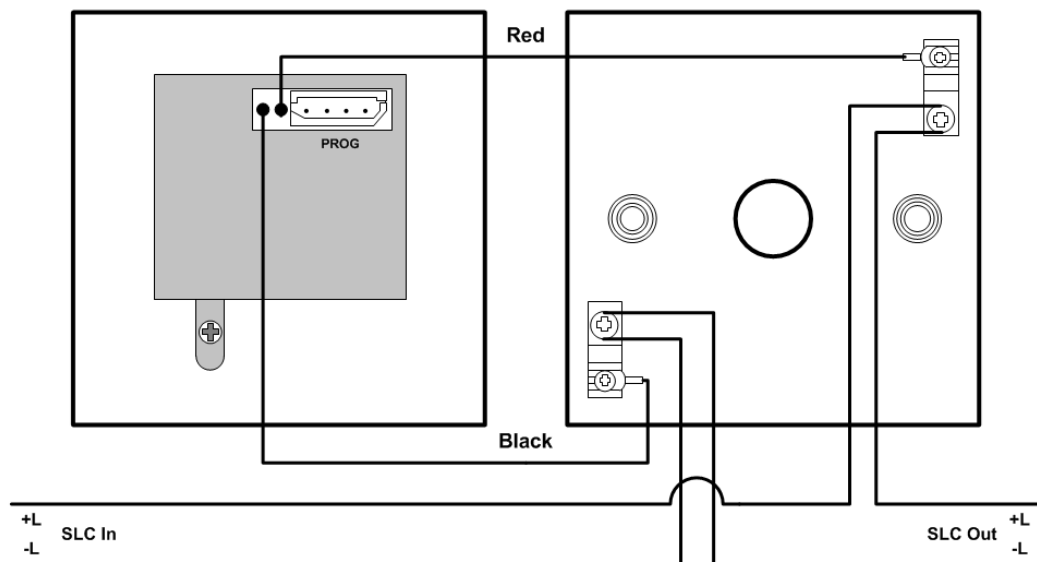### 3.1.3   Cabling Planning – Signaling Line Circuits (SLC)

The TPB-800x connects to the control panel via a two-wire cable 12 – 18 AWG (cross section of $0.8mm^2$ to $3.3mm^2$). 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

3.2   Installation

Connect the SLC line to the TPB-800x using a 12 – 18 AWG (cross section of $0.8mm^2$ to $3.3mm^2$).

Figure 1   Connection Diagram

3.2.1   Configuring the ADR-3000

Define the TPB-800x as **Pushbutton**. Please see the ADR-3000 technical manual for additional information on device configuration and matrix activations.

3.2.2   Location

The TPB-800x should be installed in a closed location. Avoid exposure to outdoor environment to prevent high humidity or dust or air pollution.

Mount the TPB-800x on a solid wall at a height that will have comfortable access to connecting the cables and where it is possible to supervise and clearly see the LED indicators. Ensure that cable length limitations are met.

3.2.3   Connecting SLC lines

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> **Note**
>
> Measure the wiring to ensure there are no shorts before connecting the wiring to the TPB-800x.
>
> Connecting or adding zone, devices, outputs etc shall be done when all power to the control power is disconnected (AC and batteries disconnected).

Connect the SLC cable.

3.3   Post-Installation

Test the push button to ensure that it operates properly and verify that it is included in the appropriate matrices as specified by the planning consultant.

3.4   Documentation

Mark the module's addresses on a label that is easily visible.

4   Troubleshooting

The TPB-800x includes a red LED that flashes upon being addressed by the control panel. This LED turns on when the TPB-800x is in alarm.

An alpha-numeric message on the ADR-3000's LCD screen and annunciators will be indicated with a detailed description of the event.

5   Specification

Dimensions (W / H / D) .... 70 / 100 / 100 mm

Weight .... 240 gr.

Operating Temperature range.. -10℃ – +60℃ (14℉ – 140℉)

Operating Voltage (supplied by control panel)............... 20 V modulated

Maximum Current Consumption..................................... 120 µA (quiescence mode)
                                                                                        2.0 mA (Alarm)

Local Indication   Local red LED (light-emitting diode) flashes upon being addressed by the control panel and turns solid on upon alarm.

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

6   Certification

Telefire's TPB-800x Analog Addressable Conventional Description has the following approvals:

- EN 54 Approved
- UL 864 Edition 9 Compliant
- IS 1220 Approved
- CE Marked