# PERTRONIC INDUSTRIES LTD

## INSTALLATION NOTE

# PLS LED AND SOUNDER ALARM

## Overview

The ***PLS*** is a **Sounder and LED** unit that provides both an audible and visual warning in accordance with the AS2220.1 –1989.

The ***PLS*** light output is generated from a matrix of 6 RED LED emitters which together provide an output of 30 mcd Max. It also has a maximum sound level of 98dBA. The sound level may be adjusted by the volume control.

The ***PLS*** is normally connected to the monitored bell or sounder circuit of a fire alarm panel, and it is activated when the sounder circuit voltage polarity is reversed to the alarm state.

If necessary, the sounder and LED can be wired separately for applications where the LED or sounder may be required to work independently of each other.

The ***PLS*** may be mounted in a standard single-gang electrical flush-box fitting.

## Specification

| | | |
|---|---|---|
| Dimensions: | 117mm (height) x 74mm (width), 21mm (LED height above flush-box)<br>Designed to fit into a standard flush-box fitting. | |
| Colour Options: | Red or White Flush Plate. | |
| Light Output Level: | 30mcd Max, 120° viewing angle. | |
| Sound Level Output: | Sound pressure level at 1m (peak ± 3dB),<br>Alert, Evacuation: | 95dBA (12V)<br>98dBA (24V) |
| Power Requirements: | **BELL IN** terminal (Supplied from the bell circuit): | |
| | Operating Voltage | 9.5V to 28Vdc |
| | Quiescent current (non alarm) | 0.2μA (12V)<br>0.4μA (24V) |
| | Operating current (alarm state) | 12mA average, 20mA peak (12V)<br>24mA average, 30mA peak (24V) |
| Controls: | Third wire for *Alert/Evacuation control. 0V for Alert, open for Evac. | |

## Operation

### 1. Normal Operation

Usually the PLS will be connected to the Panel Bells circuit with the Lamp inputs disconnected. In this mode, both Sounder and Lamp will activate in the event of bell reversal.

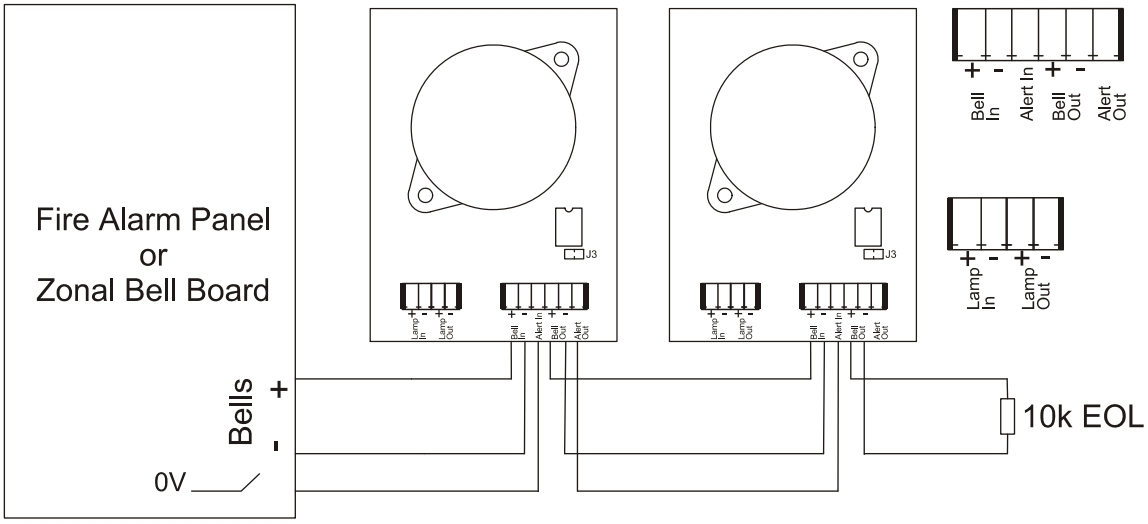
The panel Bells circuit is connected to the ***PLS*** as shown below. Bell terminals '+' and '-' are connected to the corresponding sounder '+' and '-' terminals. If the bells are not active, the panel monitors the Bell circuit by applying a negative voltage to the Bell +' terminal. The quiescent current drawn by the ***PLS*** under this condition is less than 0.4μA.

When the panel Bell circuit is active, the panel Bell circuit voltage is reversed (applying positive voltage to the Bell '+' terminal). This causes the ***PLS*** to operate. If the Alert terminal is left open, the evacuation tone will be generated, and the lamp will flash at approximately 0.5Hz. When the Alert terminal is connected to 0V (negative), the alert signal will be generated and the lamp will flash.

***PLS*** **Normal Operation Mode**

| Bell Input | Alert Terminal | Sound Generated | Flash Generated |
|---|---|---|---|
| Monitor mode | Don't care | None | None |
| Active | Open | Evacuate | Flash |
| Active | 0V | Alert | Flash |

**Connection Diagram**




## 2. Lamp-Only Mode

The PSL Lamp can be operated individually by connecting the Panel Bells to the Lamp Input. Bell terminals '+' and '-' are connected to the corresponding lamp '+' and '-' terminals.

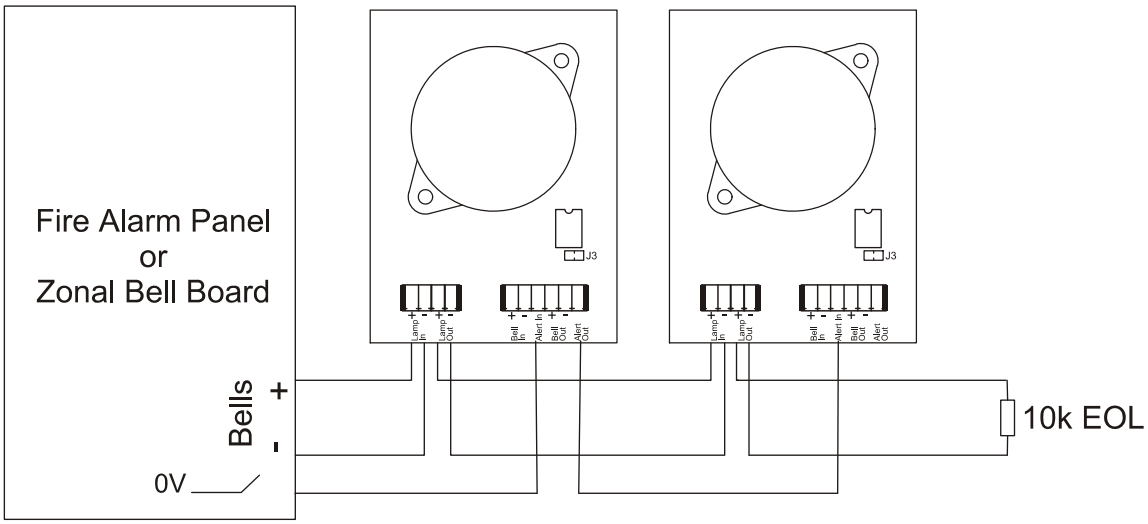
The panel Bells circuit is connected to the as shown below. Bell terminals '+' and '-' are connected to the corresponding lamp '+' and '-' terminals. If the bells are not active, the panel monitors the Bell circuit by applying a negative voltage to the lamp '+' terminal. The quiescent current drawn by the ***PLS*** under this condition is less than 0.4μA.

When the panel Bell circuit is active, the panel Bell circuit voltage is reversed (applying positive voltage to the lamp '+' terminal). This causes the **Lamp** to operate. The lamp will flash at approximately 0.5 Hz.

***PLS*** **Normal Operation Mode**

| Lamp Input | Alert Terminal | Flash Generated |
|---|---|---|
| Monitor mode | Don't care | None |
| Active | Don't care | Flash |

**Connection Diagram**




Communication Friendly
This product conforms with: AS/NZS3548