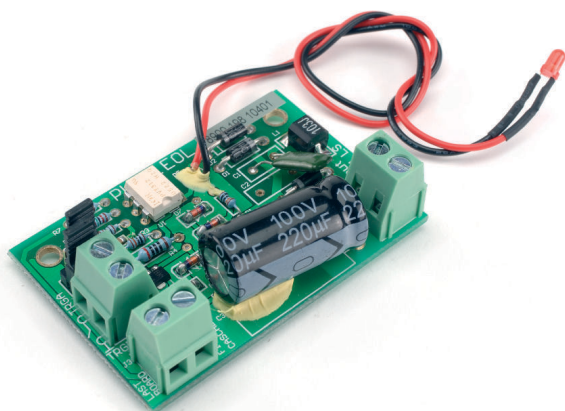




# PLN-1EOL Plena End-of-Line Boards



- ▶ **Pilot tone detection on 100 V loudspeaker lines**
- ▶ **Voltage free switch 200 V 1 A and LED indications of pilot tone**
- ▶ **10 kohm resistors on board for optional supervised connection**
- ▶ **Daisy chainable for monitoring multiple zones on a single input contact**
- ▶ **Fits on built-in mounts on selected Bosch loudspeakers**

A Plena end-of-line board is a PCB designed to detect the 20 kHz pilot tone generated by a supervised public address or voice alarm system. It activates a voltage free switch in the presence of a 20 kHz signal (pilot tone) above 5 V, as well as an LED for easy visual confirmation of operation.

Several EOL boards can be daisy-chained to a single fault input. This allows a loudspeaker line with several branches to be monitored.

Since the background music also includes a 20 kHz pilot tone signal, there is no need to interrupt background music.

## Functions

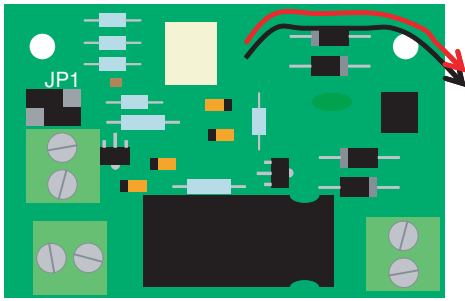
Plena end-of-line boards monitor the presence of a pilot tone on a loudspeaker line. The board connects at the end of a loudspeaker line and detects the 20 kHz pilot tone signal. This signal is always present on the line: when back ground music (BGM) is playing, when a call is in progress, and when no signal is present. The 20 kHz tone is inaudible and at a very low level (-20dB). When the pilot tone signal is present, an LED lights up, and a contact on the board is closed. When the pilot tone fails, the contact opens, and the LED goes off. If mounted at the end of the loudspeaker line, this applies to the integrity of the whole line. Presence of the pilot tone signal does not depend on the number of loudspeakers on the line, the load on the line, or the line capacitance. The contact can be connected to a PA system, such as the Bosch Voice Alarm System, to detect and report faults on a loudspeaker line.

## Certifications and Approvals

Region	Certification
Europe	CE Declaration of Conformity
Immunity	acc. to EN 55103-2
Emergency	acc. to EN 54-16 * / EN 60849 *

*\* When used with the Voice Alarm System and installed according to the Installation and User Instructions*

**Installation/Configuration Notes**

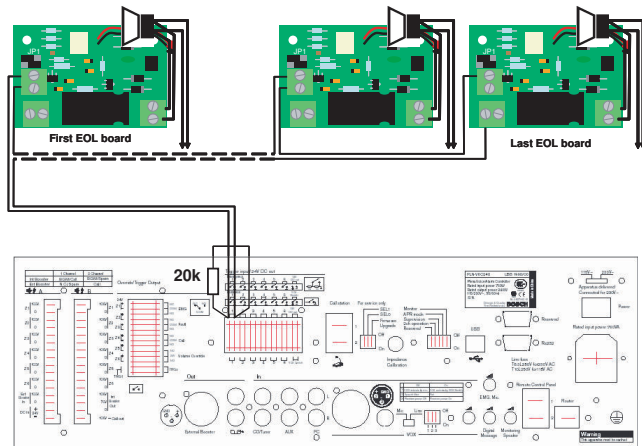


JP1 configuration for trigger output configuration

Using a daisy chain configuration it is possible to:

- Supervise several loudspeaker lines with only one fault input.
- Supervise several branches of a loudspeaker line with just one fault input

When connecting more than one EOL board on a single trigger input, and to supervise the boards, a 20 kohm or 22 kohm resistor should be connected in parallel with the trigger input. The boards are connected as shown in the following drawing.



Multiple boards on a single trigger input

**Parts Included**

Quantity	Components
6	PLN-1EOL Plena End of Line Board
1	Application note

**Technical Specifications**

**Electrical**

Input	1 x
Voltage	100 V loudspeaker line
Detection threshold	5 to 50 V @ 20 kHz
Output	2 x
Indicator	Red LED
Contact	Normally closed fail safe Bipolar MOS switch 250 Vp 190 mA max
Detection threshold*	5 to 50 V @ 20 kHz (contact and LED)

\* LED threshold and switch threshold may be slightly different.

**Mechanical**

Dimensions (H x W x D)	17 x 60 x 40 mm
Mounting	WLS II
Weight	Approx. 40 g

**Environmental**

Operating temperature	-10 °C to +55 °C (14 °F to +131 °F)
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Relative humidity	<95%

**Ordering Information**

**PLN-1EOL Plena End-of-Line Boards**  
set of 6 end-of-line supervision boards

**PLN-1EOL**

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