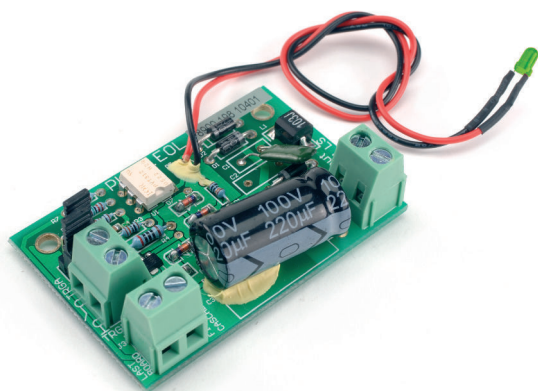


# PLN-1EOL Plena End-of-Line Boards

www.boschsecurity.com



**BOSCH**  
Invented for life



- ▶ Pilot tone detection on 100 V loudspeaker lines
- ▶ Voltage free switch 200 V 1 A and LED indications of pilot tone
- ▶ Daisy chainable for monitoring multiple zones on a single input contact
- ▶ Fits on built-in mounts on selected Bosch loudspeakers
- ▶ EN 54-16 certified

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.

## 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.

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.

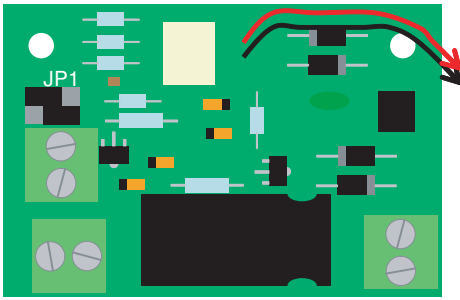
## Certifications and approvals

Immunity	acc. to EN 50130-4
Emergency	acc. to EN 54-16 * / EN 60849 *

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

Region	Certification	
Europe	CE	Declaration of Conformity
	CPD	
	CPD	

**Installation/configuration notes**

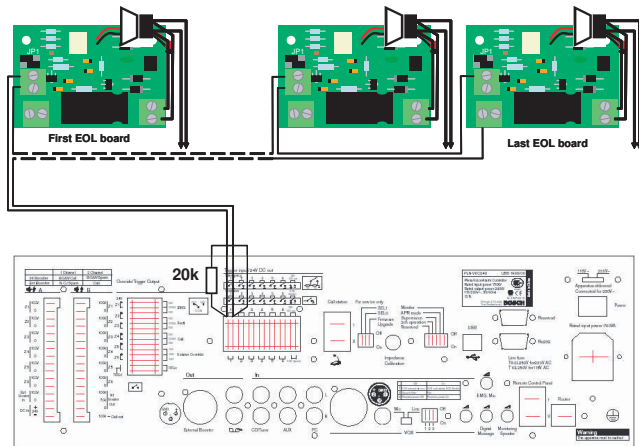


*JP1 configuration for trigger output configuration*

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**

<b>Input</b>	1 x
Voltage	100 V loudspeaker line
Detection threshold	5 to 50 V @ 20 kHz
<b>Output</b>	2 x
Indicator	Green 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**

End-of-line supervision boards (set of 6 pieces).

Order number **PLN-1EOL**

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