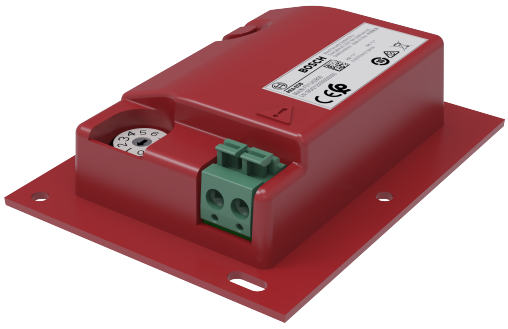
PRA-EOB End-of-branch device
PRAESENSA



- Compact device for loudspeaker end-of-branch supervision
- Fault detection in amplifier without additional wiring
- Compatible with 70 V or 100 V loudspeaker lines
- Flexible mounting options
- Open-circuit fault detection

The end-of-branch device is a reliable solution for the supervision of loudspeaker lines, which is a requirement for emergency sound systems.
The entire 70 V or 100 V loudspeaker line, including all branches, is monitored for continuity and shorts.
Depending on the location of the fault, multiple end-of-branch devices can report errors, and the pattern of these indications assists in pinpointing the fault.
It communicates with the PRAESENSA amplifier channel through addressable, smart-pilot tone-handshake technology, which verifies the integrity of the driven loudspeaker line.
Where impedance measurements might not detect a disconnected loudspeaker, depending on the number of connected loudspeakers and cable type, or report false faults, the end-of-branch device provides a superior solution to report the correct status of the loudspeaker lines.
The enclosure size is compatible with the mounting provisions in most Bosch loudspeakers for supervision boards or devices.

Functions

Supervision

- Reliable supervision of loudspeaker branches.
- The operation is based on pilot tone detection from the amplifier to the addressable end-of-branch devices. No additional wiring is needed for fault or status reporting.
- The A/B outputs of a PRAESENSA amplifier channel are supervised individually, with separate end-of-branch devices.
- To reduce the power consumption, the PRAESENSA amplifier channels use pilot tone modulation.
- The audibility of the pilot tone is virtually eliminated through a pilot tone amplitude of only 12 VRMS with a frequency of 25.5 kHz. This frequency is amply outside the human hearing range, even for young children.

Mounting

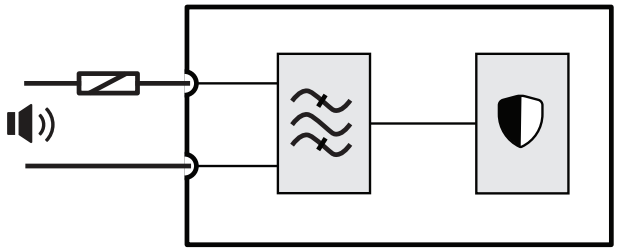
- The PRAESENSA end-of-branch device is small, lightweight, and fits to the mounting provisions in most Bosch loudspeakers for supervision boards.
- The PRA-EOB comes with a connection wire with thermal fuse, which connects to the last loudspeaker of the branch.
- The device enclosure is compliant to IP30 for use outside a loudspeaker enclosure. The enclosure contains a wiring strain relief for additional protection.
- Various mounting holes in the enclosure allow for mounting the device in most standard cable junction boxes. In this case, the loudspeaker line enters the box through a standard cable gland and is connected with the wires.

Compatibility

- The PRAESENSA end-of-branch device can only be used with the PRA-AD604 and PRA-AD608 amplifiers.
- Up to eight end-of-branch devices can be connected to each of the A and B terminals of an amplifier output, in a total of 16 devices per output, eight on A and eight on B.

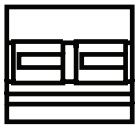
Refer to the PRAESENSA installation manual for details on the cable topology and connection limits.

Connection and functional diagram



	Loudspeaker line		Bandpass filter
	Thermal fuse		Supervision receiver/transmitter

Device connections

	Loudspeaker line	

Architects' and engineers' specifications

The end-of-branch device shall be designed exclusively for use with Bosch PRAESENSA systems. The end-of-branch device shall incorporate addressable, smart pilot tone handshake technology, allowing the amplifier to identify any disconnected end-of-branch device. The supervision of the end-of-branch shall be reliable as long as the load does not exceed the specified maximum. Supervision shall be inaudible and not interrupt audio content. The end-of-branch device shall be certified for EN 54-16 / ISO 7240-16, marked for CE and be compliant with the RoHS directive. Warranty shall be three years minimum. The end-of-line device shall be a Bosch PRA-EOB.

Regulatory information

Emergency standard certifications	
Europe	EN 54-16 (0560-CPR-182190000)
International	ISO 7240-16

Emergency standard compliance	
Europe	EN 50849
UK	BS 5839-8

Regulatory areas	
Safety	EN/IEC 62368-1
Immunity	EN 55035 EN 50130-4
Regulatory areas	
Emissions	EN 55032 EN 61000-6-3 EN 62479 FCC/ICES-003
Environment	EN/IEC 63000

Installation/configuration notes

This is a professional product that should be installed, used and maintained by trained professionals only.

Parts included

Quantity	Component
1	PRA-EOB End-of-branch device
1	Set of connection wires with thermal fuse
1 per box	Quick installation guide
1 per box	Safety and security information

The end-of-branch device can only be ordered in multiples of eight devices, packed in one box.

Technical specifications

Electrical

Control	
Pilot tone frequency (kHz)	25.50 kHz
Pilot tone level (VRMS)	6 VRMS - 12 VRMS
Maximum input power (mW)	100 mW
Maximum input voltage (V)	100 V
Power consumption (W)	< 1 W
Supervision	End-of-branch
Fault detection	Open loudspeaker line fault detection
Fault reporting	Through the amplifier

Connectivity	
Connector type	2-pole spring terminal
Wire size (mm²) (minimum - maximum)	0.2 mm² - 1.5 mm²
Wire size (AWG) (minimum - maximum)	24AWG - 16AWG
Cable length (m) (maximum)	Up to 1000 m
Maximum cable capacitance (nF)	80 nF

Cable temperature range (°C)	-5 °C - 50 °C
Cable temperature range (°F)	23 °F - 122 °F

Reliability	
Mean time between failures (MTBF) (h) (Telcordia ST-332 Issue 3)	4670000 h

Environmental	
Operating temperature (°C)	-25 °C – 50 °C
Operating temperature (°F)	-13 °F – 122 °F
Storage temperature (°C)	-30 °C – 70 °C
Storage temperature (°F)	-22 °F – 158 °F
Operating relative humidity, non-condensing (%)	5% – 95%
Air pressure (hPa)	560 hPa – 1,070 hPa
Installation altitude (m)	-500 m – 5,000 m
Installation altitude (ft)	-1,640 ft – 16,404 ft
Operating vibration	
Amplitude (mm)	0.70 mm
Acceleration (G)	2 G
Bump (transport) (G)	10 G (IEC 60068-2-27)

Mechanical	
Dimensions (H x W x D) (mm)	60 mm x 78 mm x 16 mm
Dimensions (H x W x D) (in)	2.40 in x 3.10 in x 0.60 in
IP rating	IP30
Material	Plastic
Color (RAL)	RAL 3000 Flame red
Weight (g)	25 g
Weight (lb)	0.0550 lb

Ordering information

PRA-EOB End-of-branch device
PRAESENSA device for supervision of loudspeaker branches.
Order number **PRA-EOB | F.01U.428.066**

https://www.boschsecurity.com

© Bosch Security Systems 2025