

PRS-xBxxx Basic Amplifiers

www.boschsecurity.com



BOSCH

Invented for life



- ▶ High efficiency class-D amplifier channel(s)
- ▶ Switched mode power supply
- ▶ Local audio inputs
- ▶ Mains and battery operation
- ▶ Complete supervision

The basic amplifiers are cost effective alternatives to the regular Praesideo power amplifiers, for situations where no built-in digital signal processing functions, such as equalizers, delay and AVC are required. They do not have a Praesideo network connection. Instead, these amplifiers are connected to the Praesideo network via the PRS-16MCI Multi Channel Interface, which provides the basic amplifier with audio signals and has full control. There are four versions, the PRS-1B500 (1 x 500 W), PRS-2B250 (2 x 250 W), PRS-4B125 (4 x 125 W) and the PRS-8B060 (8 x 60 W).

The basic amplifiers are completely supervised and fault events are reported via the multi channel interface to the Praesideo network controller.

The basic amplifiers provide connections for separate group A and group B loudspeakers for each zone, and support class-A loudspeaker loop wiring. The units should be mounted in a 19"-rack with the included mounting brackets.

Functions

Amplification

The PRS-1B500 is a single channel, 500 W unit, the PRS-2B250 is a two-channel amplifier with 250 W per channel, the PRS-4B125 is a four-channel amplifier with 125 W per channel and the PRS-8B060 is an eight-channel amplifier with 60 W per channel. The power supply is switched mode with low inrush current and the units can run on 48 V, battery stand-by power.

Connection

The amplifiers have built-in output transformers for driving 70 and 100 V loudspeakers. They have separate overload-protected group A and group B loudspeaker connections, which support class-A loop wiring. The separate A and B groups of each channel can be configured for redundancy. The units connect to the PRS-16MCI Multi Channel Interface for audio, control and supervision, but stand-alone operation is possible.

Audio

The amplifiers have analog audio line inputs for low priority local audio. Networked audio from the multi channel interface overrides the local audio.

Security

The units operate both on mains power and on a 48 V battery power supply for emergency back up, with automatic switchover. They supervise both of the power supplies, as well as themselves. They can optionally monitor loudspeakers and their lines, when used together with the PRS-16MCI Multi Channel Interface. Complete channel separation allows one channel of the amplifier to function as a spare amplifier for the other amplifier channel.

The amplifier has overload and short circuit protection. An overheat protection circuit switches off the power stage and activates the fault LED on the front panel if the internal temperature reaches a critical limit.

Controls and indicators

Front

- Two two-color LEDs for mains and battery status
- Four amplifier status/level LEDs (per channel)

Back

- Mains on/off switch
- Mains voltage selector
- Rotary volume control for local audio inputs (per channel)

Inside

- 70 V / 100 V selection (per channel)

Interconnection

Back

- Mains socket
- Battery backup input
- Two loudspeaker output screw terminals (per channel)
- Spare amplifier input screw terminal (per channel)
- Two RJ45 connectors (per channel)
- Local audio input screw terminal (per channel)

Certifications and approvals

Safety	acc. to IEC 60065 / EN 60065
Immunity	acc. to EN 55103-2 / EN 50130-4 / EN 50121-4
Emissions	acc. to EN 55103-1 / FCC-47 part 15B
Emergency	acc. to EN 60849 / EN 54-16 / ISO 7240-16
Maritime	acc. to IEC 60945

Region	Certification
Europe	CE
	CPD

Parts included

Quantity	Component
1	PRS-1B500 Basic Amplifier 1x500 W or

PRS-2B250 Basic Amplifier 2x250 W
or
PRS-4B125 Basic Amplifier 4x125 W
or
PRS-8B060 Basic Amplifier 8x60 W

2/4/8/16	CAT 5-cables (for PRS-1B500 / PRS-2B250 / PRS-4B125 / PRS-8B060)
1	Power cord
1	Set of mounting brackets (large) for 19" rack
1	Set connectors

Technical specifications

Electrical

Mains power supply	
Voltage	115/230 VAC $\pm 10\%$, 50/60 Hz
Power consumption	P _{max} -3 dB* / idle** / standby
PRS-1B500	450 / 52 / 17 W
PRS-2B250	378 / 46 / 18 W
PRS-4B125	395 / 62 / 16 W
PRS-8B060	400 / 80 / 16 W
	* Alarm tone level ** With pilot tone 15 V

Battery power supply

Voltage	48 VDC -10% to +20%
Power consumption	P _{max} -3 dB* / idle** / standby
PRS-1B500	365 / 34 / 6 W
PRS-2B250	370 / 38 / 6 W
PRS-4B125	375 / 48 / 9 W
PRS-8B060	385 / 62 / 10 W
	* Alarm tone level ** With pilot tone 15 V

Performance

Frequency response	60 Hz to 19 kHz (-3 dB)
	80 Hz to 19 kHz (-3 dB, PRS-8B060)
Total harmonic distortion	<0.3% (1 kHz) at 50% of rated power
Cross talk	-70 dB (1 kHz) nominal (only multichannel)
Signal-to-noise ratio	>85 dB with pilot tone off

Line inputs

Local audio input	0 dBV (symmetrical)
-------------------	---------------------

Speaker outputs	PRS-1B500
Rated load resistance	20 ohm (100 V); 10 ohm (70 V)
Rated load capacitance	250 nF (100 V); 500 nF (70 V)
Rated output power	500 W (1 min. at 55 °C) 250 W (30 min. at 55 °C, cont. at 30 °C) 125 W (cont. at 55 °C)

Speaker outputs	PRS-2B250
Rated load resistance	40 ohm (100 V); 20 ohm (70 V)
Rated load capacitance	125 nF (100 V); 250 nF (70 V)
Rated output power (per channel)	250 W (1 min. at 55 °C) 125 W (30 min. at 55 °C, cont. at 30 °C) 60 W (cont. at 55 °C)

Speaker outputs	PRS-4B125
Rated load resistance	80 ohm (100 V); 40 ohm (70 V)
Rated load capacitance	60 nF (100 V); 125 nF (70 V)
Rated output power (per channel)	125 W (1 min. at 55 °C) 60 W (30 min. at 55 °C, cont. at 30 °C) 30 W (cont. at 55 °C)

Speaker outputs	PRS-8B060
Rated load resistance	160 ohm (100 V); 80 ohm (70 V)
Rated load capacitance	30 nF (100 V); 60 nF (70 V)
Rated output power (per channel)	60 W (1 min. at 55 °C) 30 W (30 min. at 55 °C, cont. at 30 °C) 15 W (cont. at 55 °C)

Mechanical

Dimensions (H x W x D)	
rack use, with brackets	88 x 483 x 400 mm (3.5 x 19 x 15.7 in)
in front of brackets	40 mm (1.6 in)
behind brackets	360 mm (14.2 in)
Weight	
PRS-1B500	12 kg (26.5 lb)
PRS-2B250	14 kg (30.9 lb)
PRS-4B125	15 kg (33.4 lb)
PRS-8B060	13.7 kg (30.5 lb)
Mounting	19" rack
Color	Charcoal with silver

Environmental

Operating temperature	-5 °C to +55 °C (+23 °F to +131 °F)
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Relative humidity	15% to 90%
Air pressure	600 to 1100 hPa

Ordering information

PRS-1B500 Basic Amplifier 1 x 500 W

1 x 500 W. Amplifier for connection to PRS-16MCI (multi-channel interface).

Order number **PRS-1B500**

PRS-2B250 Basic Amplifier 2 x 250 W

2 x 250 W. Amplifier for connection to PRS-16MCI (multi-channel interface).

Order number **PRS-2B250**

PRS-4B125 Basic Amplifier 4 x 125 W

4 x 125 W. Amplifier for connection to PRS-16MCI (multi-channel interface).

Order number **PRS-4B125**

PRS-8B060 Basic Amplifier 8 x 60 W

8 x 60 W. Amplifier for connection to PRS-16MCI (multi-channel interface).

Order number **PRS-8B060**

PRS-1B500-US Basic Amplifier 1 x 500 W

US version

Order number **PRS-1B500-US**

PRS-2B250-US Basic Amplifier 2 x 250 W

US version

Order number **PRS-2B250-US**

PRS-4B125-US Basic Amplifier 4 x 125 W

US version

Order number **PRS-4B125-US**

PRS-8B060-US Basic Amplifier 8 x 60 W

US version

Order number **PRS-8B060-US**

PRS-1B500-CN Basic Amplifier 1 x 500 W

Chinese version

Order number **PRS-1B500-CN**

PRS-2B250-CN Basic Amplifier 2 x 250 W

Chinese version

Order number **PRS-2B250-CN**

PRS-4B125-CN Basic Amplifier 4 x 125 W

Chinese version

Order number **PRS-4B125-CN**

PRS-8B060-CN Basic Amplifier 8 x 60 W

Chinese version

Order number **PRS-8B060-CN**

Represented by:

Americas:

Bosch Security Systems, Inc.
12000 Portland Avenue South
Burnsville MN 55337, USA
Phone: +1-800-392-3497
Fax: +1-800-955-6831
audiosupport@us.bosch.com
www.boschsecurity.com

Europe, Middle East, Africa:

Bosch Security Systems B.V.
P.O. Box 80002
5617 BA Eindhoven, The Netherlands
Phone: + 31 40 2577 284
Fax: +31 40 2577 330
emea.securitysystems@bosch.com
www.boschsecurity.com

Asia-Pacific:

Robert Bosch (SEA) Pte Ltd, Security
Systems
11 Bishan Street 21
Singapore 573943
Phone: +65 6571 2808
Fax: +65 6571 2699
apr.securitysystems@bosch.com
www.boschsecurity.asia

China:

Bosch (Shanghai) Security Systems Ltd.
201 Building, No. 333 Fuquan Road
North IBP
Changning District, Shanghai
200335 China
Phone +86 21 22181111
Fax: +86 21 22182398
www.boschsecurity.com.cn

America Latina:

Robert Bosch Ltda Security Systems Division
Via Anhanguera, Km 98
CEP 13065-900
Campinas, Sao Paulo, Brazil
Phone: +55 19 2103 2860
Fax: +55 19 2103 2862
al.securitysystems@bosch.com
www.boschsecurity.com