BOSCH
Invented for life

PLN-1P1000 Plena Power Amplifier

- ▸ **1000 W power amplifier in a 3U high housing**
- ▸ **70 V / 100 V and 8 ohm outputs**
- ▸ **Dual inputs with priority switching**
- ▸ **100 V input for slave operation on 100 V speaker line**
- ▸ **Temperature-controlled forced front-to-back ventilation, directly stackable**
- ▸ **Mains, battery back-up and pilot tone supervision**

The PLN-1P1000 is a powerful 1000 W power amplifier in a 3U high 19" case for rack mounting or tabletop use. LEDs on the front panel show the status of the amplifier: power, audio output level, and supervised functions. This high-performance unit fulfills a wide range of public address requirements at a surprisingly low cost.

Functions

Dependability

The amplifier is protected against overload and short circuits. A temperature-controlled fan ensures high reliability at high output levels, and low acoustic noise at lower output levels. An overheat protection circuit switches off the power stage and activates an LED on the front panel, if the internal temperature reaches a critical limit due to poor ventilation or overload.

The unit operates both on mains power and on a 24 V battery power supply for emergency back up, with automatic switchover.

For emergency and evacuation use, the following functions are monitored: mains presence, battery present, pilot tone presence, amplifier operation. Front panel LEDs indicate the status of supervised functions. The of pilot tone supervision and battery status LEDs can be switched off for general public address use. Failsafe (normally

energized) relays are provided for each supervised function. These relays are always active regardless of the switches on the rear panel.

Input

The system has two balanced inputs with priority control, each with a loop-through facility. This makes it easy to connect remote systems that require priority control. An additional 100 V line input can connect the amplifier to a 100 V loudspeaker line, to provide more power to remote locations.

Output

The amplifier has 70 V and 100 V outputs for constant voltage loudspeaker systems, and a low impedance output for 8 ohm loudspeaker loads. A meter with LED-bar shows the output level.

The PLN-1P1000 has two separate priority controlled 100 V outputs for zones that only need announcements made via the priority input, and for zones that will not get any announcements made via the priority input.

Controls and indicators

Front

- LED level meter
- Battery operation LED
- Overheat LED

Back

- Power button
- Mains switch

Interconnections

Back

- Priority line input 1 (XLR/balanced)
- Line loop-through 1 (XLR/balanced)
- Program line input 2 (XLR/balanced)
- Line loop-through 2 (XLR/balanced)
- Priority controlled loudspeaker outputs
- 24 VDC power supply terminal
- Three loudspeaker direct outputs
- Two 100 V slave inputs
- Input 1 enable control terminal
- Input 2 priority control terminal
- Earth connection screw
- Mains socket

Certifications and Approvals

Region	Certification
Europe	CE
Safety	acc. to EN 60065
Immunity	acc. to EN 55103-2
Emission	acc. to EN 55103-1
EVAC	acc. to EN 60849 acc. to EN 54-16

Parts Included

Quantity	Component
1	PLN-1P1000 Plena Power Amplifier
1	Power cord
1	Set of 19" mounting brackets
1	Installation and User Instructions

Technical Specifications

Electrical

Mains power supply

Voltage	230 VAC, ±10%, 50/60 Hz
Inrush current	16 A
Max power consumption	2200 VA

Battery power supply

Voltage	24 VDC +15% / -15%
Current max	48 A

Performance

Output power (rms/maximum)	1000 W / 1500 W
Power reduction on backup power	-1 dB
Frequency response	50 Hz to 20 kHz (+1/-3 dB at -10 dB ref. rated output)

Mains power supply

Distortion	<1% at rated output power, 1 kHz
S/N (flat at max volume)	>90 dB
Line inputs	2 x
Connector	3-pin XLR, balanced
Sensitivity	1 V
Impedance	20 kohm
CMRR	>25 dB (50 Hz to 20 kHz)
Gain	40 dB
100 V input	
Connector	Screw, unbalanced
Sensitivity	100 V
Impedance	330 kohm
Line loop-through output	2 x
Connector	3-pin XLR
Nominal level	1 V
Impedance	Direct connection to line input
Loudspeaker outputs	3 x
Connector	Screw, floating
Direct output	100 V, 70 V, 8 ohm
Priority only (from input 1)	100 V or 70 V internally selectable
Music (non-priority) only	100 V or 70 V internally selectable

Power consumption

Mains operation

Max power	2200 W
-3dB	1472 W
-6dB	1058 W
Pilot tone*	345 W
Idle	115 W

24 VDC operation

Max power	62 A (1500 W)
-3 dB	34 A (823 W)
-6 dB	25 A (597 W)
Pilot tone*	7.6 A (182 W)
Idle	1.5 A (36 W)

* 20 kHz -20dB with maximum loudspeaker load

Mechanical

Dimensions (H x W x D)	145 x 430 x 430 mm (19" wide, 3U high, with feet)
Weight	Approx. 32 kg
Mounting	Standalone, 19" rack
Color	Charcoal

Environmental

Operating temperature	-10 ºC to +55 ºC (14 ºF to +131 ºF)
Storage temperature	-40 ºC to +70 ºC (-40 ºF to +158 ºF)
Relative humidity	<95%
Acoustic noise level of fan	<48 dB SPL at 1 m (max output)

Ordering Information

PLN-1P1000 Plena Power Amplifier   **PLN-1P1000**
powerful 1000 W power amplifier in a
3U high 19" case for rack mounting or tab-
letop use