LBD193x/Amplifiers

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Invented for life

- ▶ Wide range of power amplifier from 120W, 240W and 480W
- ▶ Multiple outputs - 70 V / 100 V and 8/4 ohm
- ▶ Temperature controlled forced front to back ventilation, directly stackable
- ▶ Mains, battery back-up, and pilot tone supervision
- ▶ Dual inputs with priority switching (LBD1938)

The LBD 193x amplifiers are powerful power amplifier in a 2U high 19"case (3U housing for LBD 1938) for rack mounting or tabletop use. The Bosch Plena power amplifier series with its varied amplification range fulfills a wide variety of public address requirements at a surprisingly low cost.

System overview

The LBD193x amplifiers feature colorful LED bar on the front side to indicate the acoustic level of the signal in dB.LBD193x amplifiers have 100V input for slave operation of the amplifier, XLR loop in and loop through facility for ease of installation and 100V output as well as 70V output for connecting to the loudspeakers with line matching transformers, 8ohm and 4ohm outputs for connecting to the Low impedance speakers. The output voltage can be selected between 100V and 70V internally. Additionally LBD1938/00 amplifier features a dual XLR inputs with priority switching. Gain or level control is located on the rear of the unit to avoid accidental setting change. The amplifier works on 24VDC power supply during emergency situations.

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, if the internal temperature reaches a critical limit due to poor ventilation or overload.

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 100V line input is provided to connect the amplifier to a 100V loudspeaker line to provide more power to remote locations.
Gain or level control is located on the rear of the unit to avoid accidental setting change. A meter with LED-bar shows the output level.

Output
The amplifier has 70V and 100V outputs for constant voltage loudspeaker systems, and a low impedance output for 8 ohm or 4 ohm loudspeaker loads.LBD1938 amplifier also has priority controlled 100V outputs which can be used to route audio coming into priority and program inputs to the loudspeaker. The LBD1938/00 amplifier has priority

input and program input on the rear which can be used for routing important or emergency announcements when the amplifier is being used as a independent amplifier(ex: with local music source connected to program input).
There are Priority input enable and Program input enable pins which are default off and default on respectively, when these enabled by a 24VDC signal then the respective inputs are activated. Whenever the priority enable input is supplied with continuous 24VDC signal, the program input is over-rided by the priority input.

Certifications and approvals

Safety acc. to EN 60065

Technical specifications

Electrical

	LBD1930/00	LBD1935/00	LBD1938/00
Power supply			
Input Voltage	230VAC ±10% at 50/60Hz or 24VDC ±10%	230VAC ±10% at 50/60Hz or 24VDC	230VAC ±10% at 50/60Hz or 24VDC
Inrush Current	8A at 230 VAC, 6A at 24 VDC	9A at 230 VAC, 11A at 24 VDC	19A at 230 VAC, 30A at 24 VDC
Performance			
Rated Output (RMS)	120W	240W	480W
Power reduction on backup power	-1 dB	-1 dB	-1 dB
Frequency response	60 Hz to 18 kHz (+1 / -3 dB at -10 dB ref. rated output)	60 Hz to 18 kHz (+1 / -3 dB at -10 dB ref. rated output)	60 Hz to 18 kHz (+1 / -3 dB at -10 dB ref. rated output)
Distortion	<1% at rated output, 1 kHz	<1% at rated output, 1 kHz	<1% at rated output, 1 kHz
S/N (flat at max volume)	> 65 dB	> 85 dB	> 90 dB
Power consumption			
Max power consumption	400 VA	760 VA	1600 VA
Mains operation			
Max power	274W	451W	990W
-3 dB	193W	340W	715W
Pilot tone	41W	55W	110W
Idle	18W	16W	25W
24V DC operation			
Max power	7.0A (168W)	12.1A (290W)	32A (770W)
-3 dB	6.0A (144W)	11.4A (274W)	26A (625W)
Pilot tone	0.9A (22W)	1.7A (41W)	3.8A (91W)
Idle	0.1A (2.4W)	0.3A (7W)	0.7A (17W)
Line Input s	2 x	2 x	2 x

Connector	3-pin XLR, balanced	3-pin XLR, balanced	3-pin XLR, balanced
Sensitivity	1 V	1 V	1 V
Impedance	>20k ohm	>20k ohm	>20k ohm
CMRR	>25 dB (50 Hz to 20 kHz)	>25 dB (50 Hz to 20 kHz)	>25 dB (50 Hz to 20 kHz)
Gain	40 dB	40 dB	40 dB
100 V input			
Connector	Screw, unbalanced	Screw, unbalanced	Screw, unbalanced
Sensitivity	100 V	100 V	100 V
Impedance	330k ohm	330k ohm	330k ohm
Line l oop through output	**2 x**	**2 x**	**2 x**
Connector	3-pin XLR	3-pin XLR	3-pin XLR
Nominal level	1V	1V	1V
Impedance	Direct connection to line input	Direct connection to line input	Direct connection to line input
Loudspeakers outputs	**3 x**	**3 x**	**3 x**
Connector	Screw, floating	Screw, floating	Screw, floating
Direct output	100 V, 70 V, 8/4 ohm	100 V, 70 V, 8/4 ohm	100 V, 70 V, 8/4 ohm
Priority only (from input 1)			100V/70V internally selectable
Music (non-priority) only			100V/70V internally selectable
Mechanical			
Dimensions (H x W x D)	100 x 430 x 270 mm	100 x 430 x 270 mm	145 x 430 x 370 mm
Weight	10.5kg	12.5 kg	25 kg
Color	Charcoal	Charcoal	Charcoal
Mounting	19" rack, 2U height	19" rack, 2U height	19" rack, 3U height
Environmental			
Operating temperature	-10 ºC to +45 ºC	-10 ºC to +45 ºC	-10 ºC to +45 ºC
Storage temperature	-40 ºC to +70 ºC	-40 ºC to +70 ºC	-40 ºC to +70 ºC
Relative humidity	<95%	<95%	<95%
Acoustic noise level of fan	<48dB SPL at 1m(max output)	<48dB SPL at 1m(max output)	<48dB SPL at 1m(max output)

Ordering information

Plena Booster Amplifier 120 W
Plena Booster Amplifier 120 W
Order number **LBD1930/00**

Plena Booster Amplifier 240 W
Plena Booster Amplifier 240 W
Order number **LBD1935/00**

Plena Booster Amplifier 480 W
Plena Booster Amplifier 480 W
Order number **LBD1938/00**