



Power Amplifiers

EN 54-16

ABT-PA8080BE / ABT-PA4160BE / ABT-PA8160BE
ABT-PA1650BE / ABT-PA2650BE

- ✓ *Compliance with EN 54-16*
- ✓ *Can be used in every Public Address System*
- ✓ *Designed for the MULTIVES system*

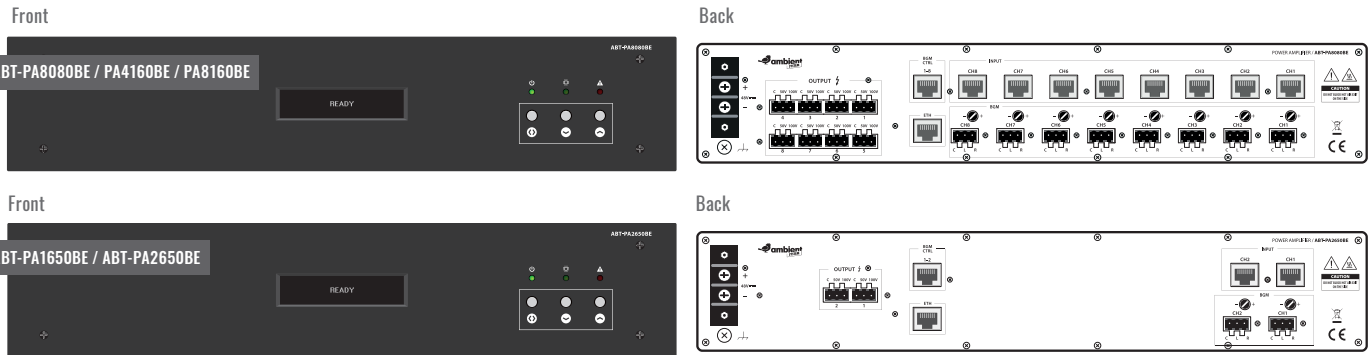


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EN 54-16

POWER AMPLIFIERS



The Amplifiers are designed for perfect integration into the Ambient System solutions. Thanks to their flexibility, they can also be used for any other Public Address and Voice Evacuation applications. These amplifiers have been developed to meet the specific requirements of the EN 54-16 standard for safety installations.

The ABT-PAXXXXBE is a family of 2U, rack mountable, 8-channel (ABT-PA8080BE, ABT-PA8160BE), 4-channel (ABT-PA4160BE), 2 channel (high power ABT-PA2650BE) and 1 channel (ABT-PA1650BE) class-D transformer isolated power amplifiers for 50 V and 100 V distributed loudspeaker systems. Amplifier ABT-PA8080BE can deliver up to 8x 80W, for ABT-PA8160BE and ABT-2650BE delivering power increases respectively to the 8x 160 W and 2x 650 W. In a bridged mode amplifier channels are combined and

can deliver 4x 160 W for ABT-PA8080BE, 4x 320 W for ABT-PA8160BE and 1x 1300 W for ABT-PA2650BE. These amplifiers have 48 VDC input which allows to connect with battery backup system for maximum availability and durability in an voice evacuation system.

The ABT-PAXXXXBE amplifiers are powered from external power supply module ABT-PS48800 working in a block. The current from block is distributed to individual amplifiers through the “power manager” ABT-PSM48 (device includes a battery charger and is in compliance with EN 54-4).

The ABT-PAXXXXBE amplifiers are prepared to connect an external audio source by using up to the eight BGM inputs (1 per channel) with the sensitivity level regulation. In the alarm mode the BGM inputs have to be muted by shorting the lines from BGM CTRL to the ground.

CHARACTERISTICS

- » **Front panel indicators include:**
 - › **Supply**
 - › **Active**
 - › **Fault**
- » **100 / 50 Volt available via terminal blocks at the rear**
- » **Output channels can be linked into:**
 - › **ABT-PA8080BE, ABT-PA4160BE, ABT-PA8160BE:**
4x 160 W, 2x 320 W or 4x 320 W by daisy-chaining 50 V tapping (input on parallel)
 - › **ABT-PA2650BE:**
1x 1300 W by daisy-chaining 50 V tapping (input on parallel)
- » **ABT-PAXXXXBE series combines with the ABT-PSM48 Power Supply Manager (charger and back-up supply)**
- » **At the rear of the ABT-PAXXXXBE you will find:**
 - › **Individual level adjusters**
 - › **General fault contact** (Dry contact)
 - › **BGM inputs**

ABT-PA8080BE / 8x 80 Watt class-D power amplifier
Can be bridge into: 1x 160 W + 6x 80 W; 2x 160 W + 4x 80 W; 3x 160 W + 2x 80 W or 4x 160 W

ABT-PA4160BE / 4x 160 Watt class-D power amplifier
Can be bridge into: 1x 320 W + 2x 160 W or 2x 320 W

ABT-PA8160BE / 8x 160 Watt class-D power amplifier
Can be bridge into: 1x 320 W + 6x 160 W; 2x 320 W + 4x 160 W; 3x 320 W + 2x 160 W or 4x 320 W

ABT-PA1650BE / 1x 650 Watt class-D power amplifier

ABT-PA2650BE / 2x 650 Watt class-D power amplifier
Can be bridge into: 1x 1300 W

ABT-PAXXXXBE casings: are 2U high, 19-inch rack mountable.

	ABT-PA8080BE	ABT-PA4160BE	ABT-PA8160BE	ABT-PA1650BE	ABT-PA2650BE
Power supply					
Nominal DC input voltage	48 V				
DC input voltage range	42 – 57 V				
DC fuse rating (internal)	6x 7,5 AF-H	2x 15 AF-H 2x 7,5 AF-H	4x 15 AF-H 2x 7,5 AF-H	1x 15 AF-H 2x 7,5 AF-H	2x 15 AF-H 2x 7,5 AF-H
Overall power efficiency nominal DC input max output power at 1 kHz	80%				
Power consumption (48 V DC)					
Standby	0,2 A	0,18 A	0,2 A	0,15 A	0,15 A
Active	0,7 A	0,43 A	0,7 A	0,23 A	0,33 A
Max. nominal current	20 A	19 A	38 A	19 A	38 A
Amplifier					
Continuous nominal output power per channel, all channels driven into nominal load at 1 kHz 30°C ambient	80 W 125 Ω / 100 nF	160 W 62 Ω / 200 nF	160 W 62 Ω / 200 nF	650 W 15,4 Ω / 200 nF	650 W 15,4 Ω / 200 nF
Continuous nominal output power per channel, all channels driven into nominal load at 1 kHz 55°C ambient	TBA				
Nominal balanced input level for 100 V output at 1 kHz and nominal load	1 V				
Balanced input level trim range for 100 V output at 1 kHz and nominal load	0,95 – 3 V				
Max balanced input level	3 V				
Input impedance at 1 kHz	22 kΩ				
Input common mode rejection at <1 kHz	>61 dB				
Frequency response (-6 dB)	75 Hz – 20 kHz 125 Ω / 100 nF	75 Hz – 20 kHz 62 Ω / 200 nF	75 Hz – 20 kHz 62 Ω / 200 nF	75 Hz – 22 kHz 15,4 Ω / 200 nF	75 Hz – 22 kHz 15,4 Ω / 200 nF
S/N ref nominal power at 1 kHz 22 Hz – 22 kHz	>85 dB 125 Ω / 100 nF	>85 dB 62 Ω / 200 nF	>85 dB 62 Ω / 200 nF	>85 dB 15,4 Ω / 200 nF	>85 dB 15,4 Ω / 200 nF
THD power 1 kHz (42 V – 57 V)	<10%				
Crosstalk between channel 50 Hz – 20 kHz nominal load dB	< -70 dB 125 Ω / 100 nF	< -70 dB 62 Ω / 200 nF	< -70 dB 62 Ω / 200 nF	< -70 dB 15,4 Ω / 200 nF	< -70 dB 15,4 Ω / 200 nF
Connectivity					
DC input socket	DG58C-A-2P13				
Audio output socket	3 pin PHOENIX 5.08 mm				
Nominal output voltage taps V	50 / 100				
Mechanical					
Front panel width	482 mm				
Back panel width	445 mm				
Height	88.5 mm				
Net Weight	15 kg	13 kg	18,6 kg	10,8 kg	15 kg
Gross weight (including packaging)	16,2 kg	14,2 kg	19,8 kg	12 kg	16,2 kg
Packaging dimensions	150 x 530 x 610 mm				



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Ambient System products are continually improved. All specifications are therefore subject to change without prior notice.

v. 4.0