



DIGIPOWER 2x250T/02 POWER AMPLIFIER MANUAL



Designed and Manufactured by
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 **ITEC**
itec-audio.com

Dear Customer,

The power amplifiers of the series “ITEC DigiPower” offer due to the latest digital technology in place an extremely high efficiency. Another feature is the very low power consumption in the automatic standby mode. Therefore “ITEC DigiPower amplifiers” are ideal for the use in voice alarm systems. For this application alternatively to the standard 230V AC power supply a supply from a 24V DC backup battery can be provided.

LEDs on the front panel show the proper function of the power amplifier and the power supplies. This information can be passed on to higher-order control and fault indication systems via floating relay contacts.

ITEC DigiPower amplifiers are very robust and reliable. They are designed for a continuous operation in professional sound reinforcement systems. Dynamic limiters provide an effective overload protection and avoid distortion or damages of the speaker systems. Short-circuit and over temperature protection ensure a maximum operational safety. Various practical details and the convenient, streamlined design facilitate installation and operation.

Please read this instruction manual carefully and observe all instructions in particular those safeties related to ensure a long lasting and trouble-free operation.

We are happy to assist you in any other questions concerning sound, voice alarm, security, sound, speech technology, media remote control, conference room facilities, etc.

Your ITEC acoustics team

ITEC DigiPower 2x250T/02 – Features

- LED indicators for signal and operating conditions
- Monitoring contacts for battery
- Monitoring contacts for the output amplifier
- 2 channels in a 19-inch, 2 units of height case
- Low installation depth of only 260 mm
- All feed lines with plug-in, screw terminals
- Balanced Inputs
- Automatic standby mode
- Protection against open circuit, short circuit, over temperature, DC
- 230 VAC and 24 VDC power supply
- Switching on delay

Safety instructions

Please read this instruction manual carefully before installation and putting the “ITEC DigiPower” amplifier into operation. Keep this document easy to find on a safe place to have it available as a later reference.

Instruct all persons dealing with this device and make them familiar with its use and in particular with the safety regulations.

When installing the device, local connection conditions, required protective measures and all relevant standards must be observed.

Do not block, cover or obstruct the vent slots: The air circulation has to remain ensured.

The device is designed for installations in 19“ cabinets / racks / frame / housing. Improper installations in furniture, cabinets or distribution systems as well as a free putting have to be avoided.

Operate the device only via a grounded safety power outlet. Make sure the power cable is not damaged. Never remove the ground wire of the feeder.

Before connecting to the mains supply check that the data on the backside of the device match with the local network.

The device must necessarily be checked by trained personnel in case:

The power cable or plug are damaged, small objects or liquids got into the device, the device operates in a different way than usual, the device was exposed to a severe impact or the housing has been damaged.

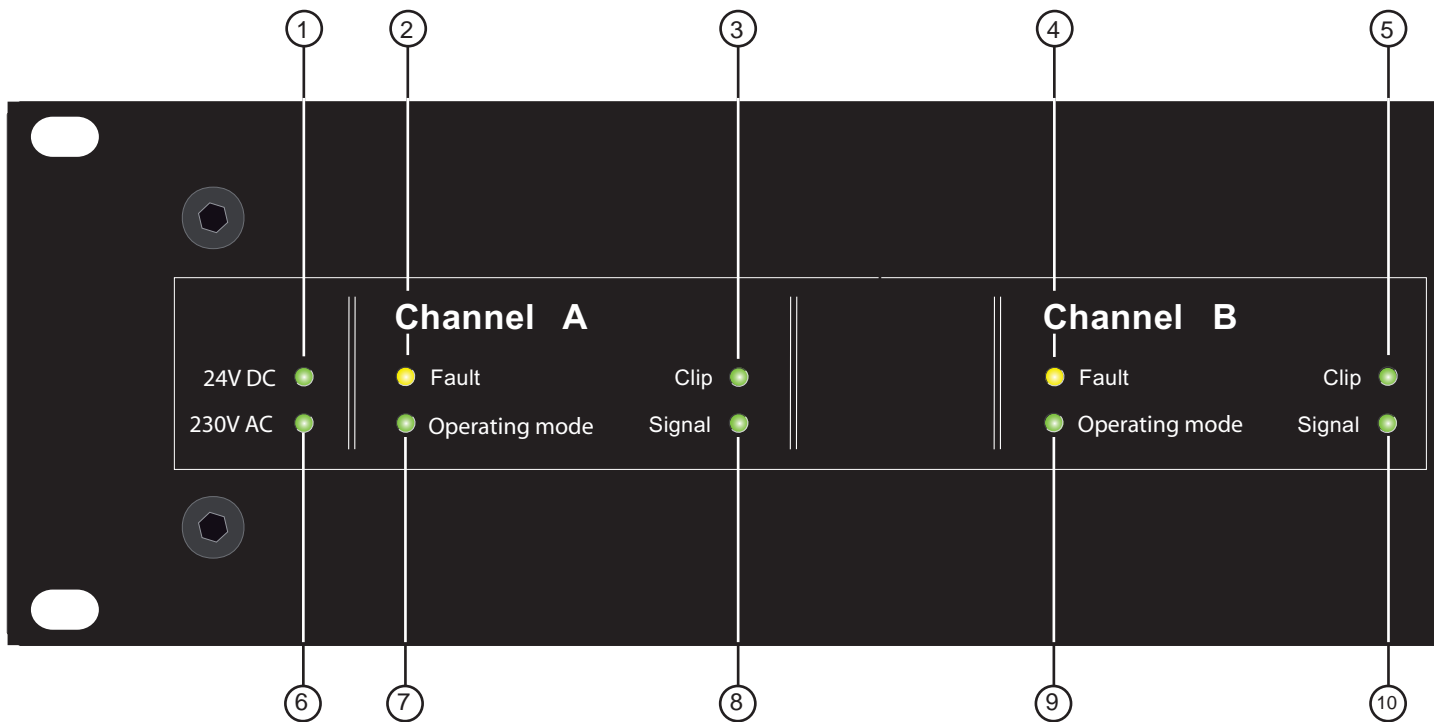
Extended storage or operating in rooms with high humidity, during rain or under the influence of splash water can lead to damages or malfunctions.

Do not apply temperatures above 50 °C, humidity larger than 95% or rain to the device.

Never try to open the device by force or by unscrewing. The product does not contain parts that can be repaired by amateurs. Please contact the manufacturer or a local distributor.

For cleaning use a soft, dry cloth only. Never use cleaning agents or solvents which attack the surface or could enter the device. Unplug the device before cleaning.

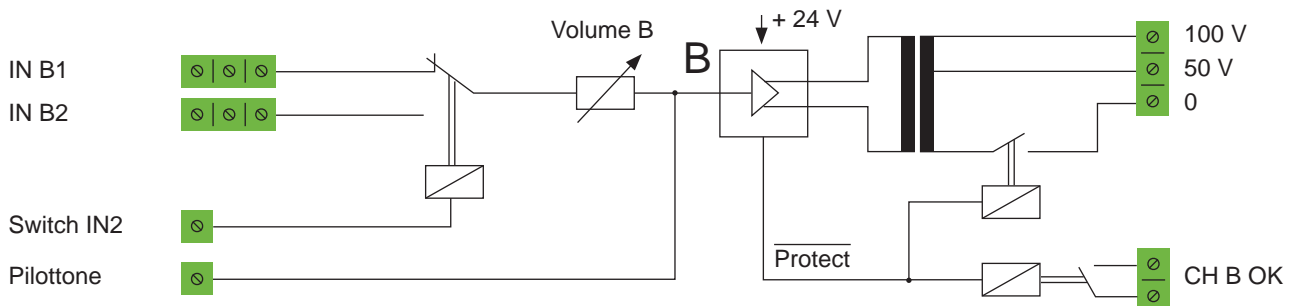
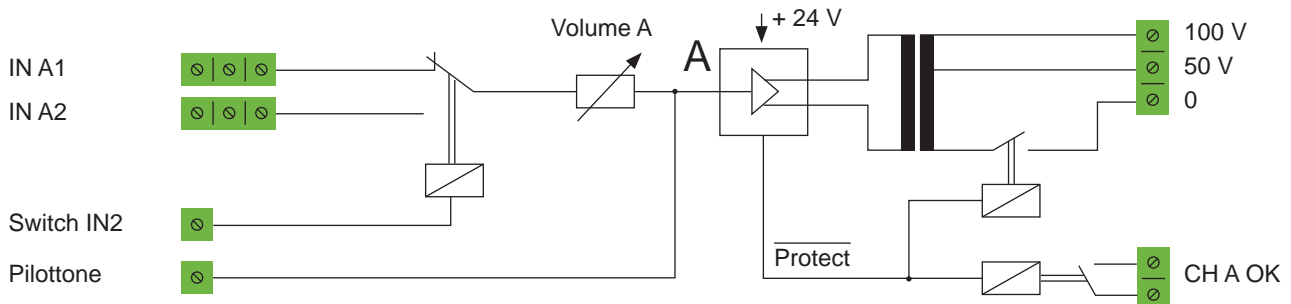
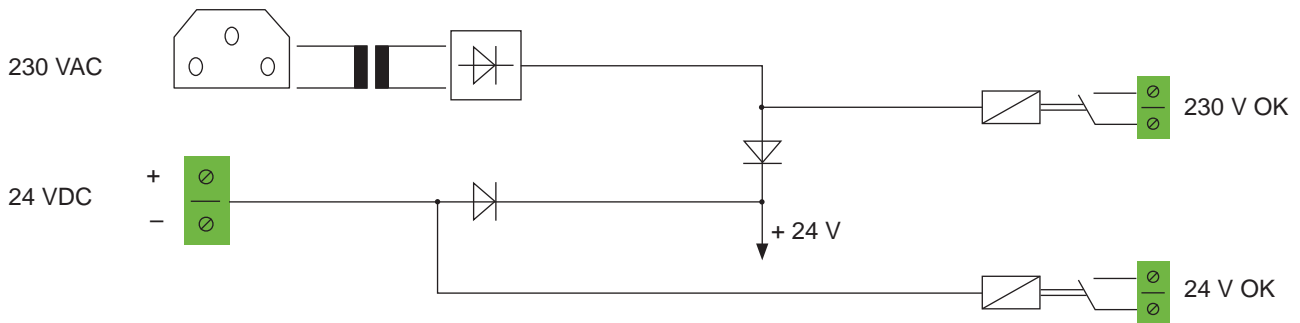
NOTE: Before carrying out any modifications of the device by a specialist, the device has to be disconnected both from the mains supply as well as from the 24V DC power supply.

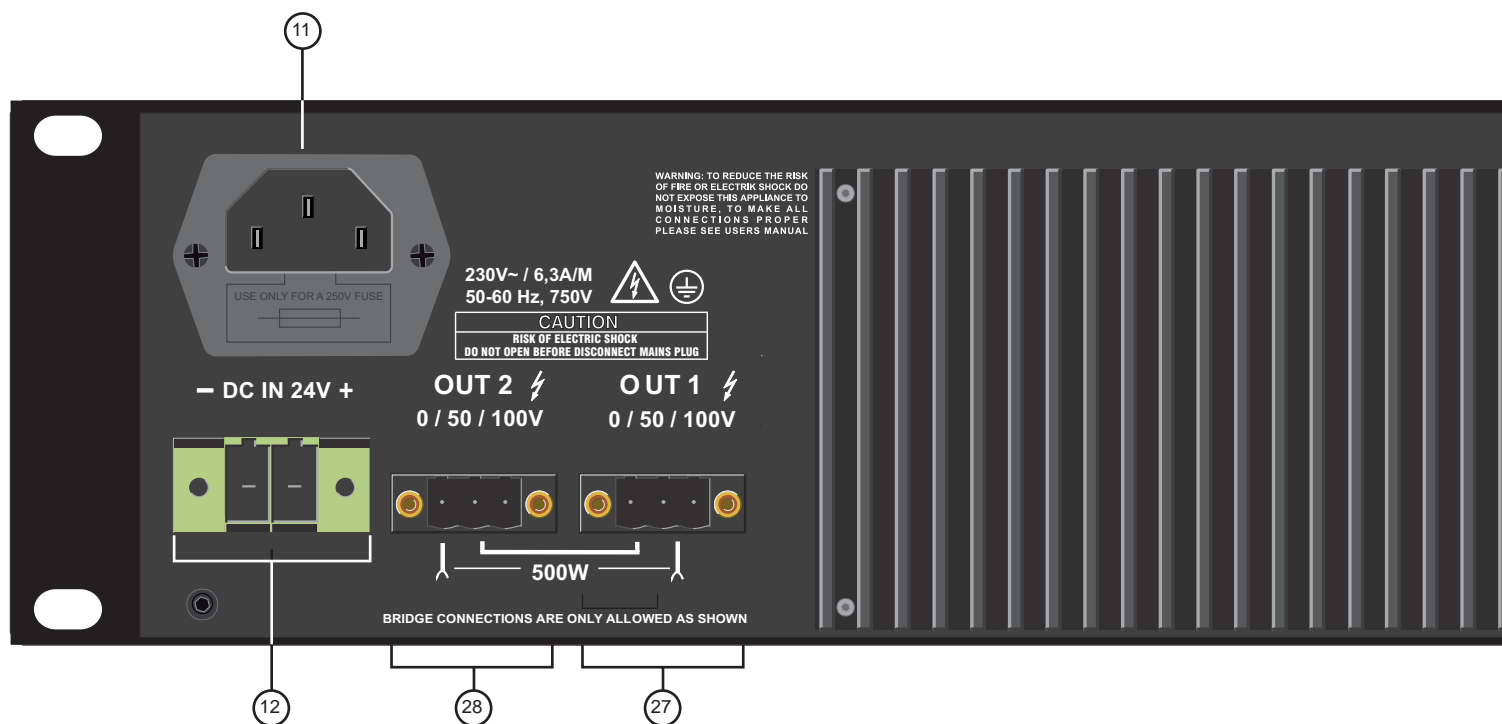


1. 24 VDC: indicates that 24V DC power is applied
2. Channel A Fault: indicates a fault, e.g.: thermal overload at channel A
During normal operation this LED flashes shortly after powering up until the protection mode is terminated and the speaker output is enabled.
3. Channel A Clip: indicates an excessive input signal and the activation of the built-in limiter to prevent a clipping of the signal
4. Channel B Fault: as item 2, but for channel B
5. Channel B Clip: as item 3, but for channel B
6. 230 VAC: indicates that the applied voltage is 230V AC. The device is supplied by this voltage - the 24V DC remains unloaded.
7. Channel A Operating Mode: Indicates that channel A is active. This means a signal at input A is present, which is amplified. If no signal is detected, the amplifier switches to a low power standby mode - the LED turns off.
8. Channel A Signal: indicates that the signal is > 30dB.
9. Channel B Operating Mode: as item 7, but for channel B
10. Channel B Signal: as item 8, but for channel B

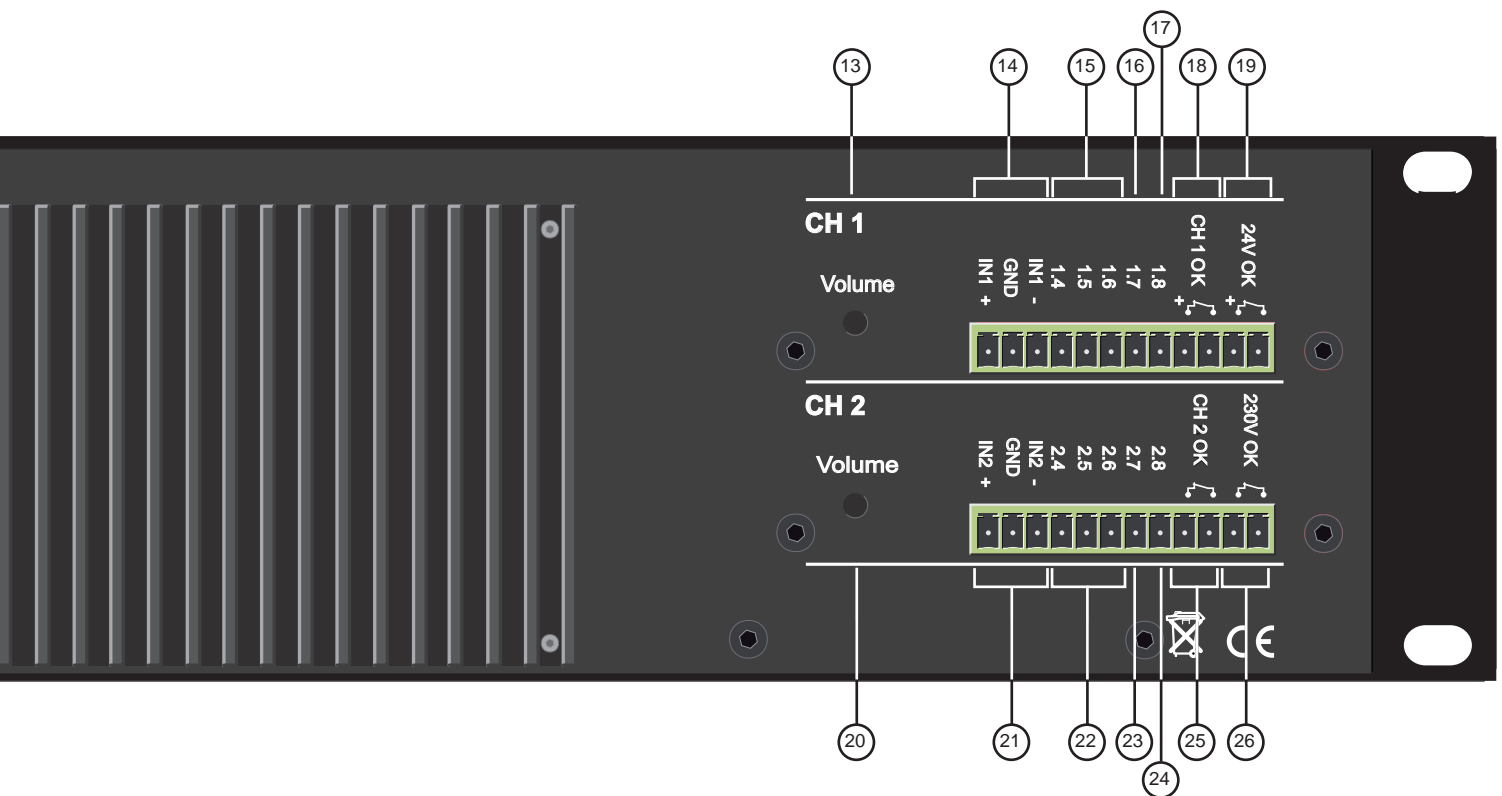
ITEC DIGIPOWER 2x250T/02 - BLOCK DIAGRAM

ITEC DigiPower 2x250T/02 Block diagram





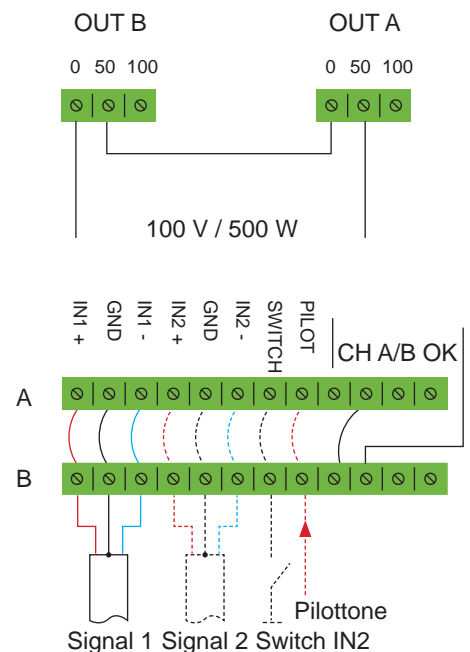
- 11. AC 230V: The power cord is plugged in to the panel connector containing an integrated fuse (6,3A). The device becomes active, when a voltage of 230V AC is applied
- 12. DC IN 24V: The 24V DC power supply is connected to the terminal block. In case of a breakdown of the 230 V supply a switch to the 24V DC supply is carried out without interruption. As long as a supply via 230V AC is made the power consumption at the 24V DC input is kept at a minimum level (40mA for measurements).
- 13. CH A Volume: Volume control for channel A; adjustable with a little screwdriver.
- 14. A IN1: Balanced signal input for channel A.
- 15. A IN2: Second, symmetrical signal input for channel A. If the corresponding terminal is „Switch IN2“ to set to GND, this signal is alternatively used instead of “A IN1”.
- 16. SWITCH IN2: Used for switching from A IN1 to A IN2. Becomes active when contact is set to GND. See also item 15
- 17. PILOTTONE: A pilot tone signal connected to this terminal (unbalanced) is added to the input signal A. The volume control has no effect on the pilot tone.
- 18. CH A OK: Floating contact, closed in case channel A works in proper conditions. After switching on the contact remains open for a few seconds until the protection mode is terminated and the speaker output is enabled.
- 19. 24V OK: Floating contact, closed when 24 V DC is applied properly



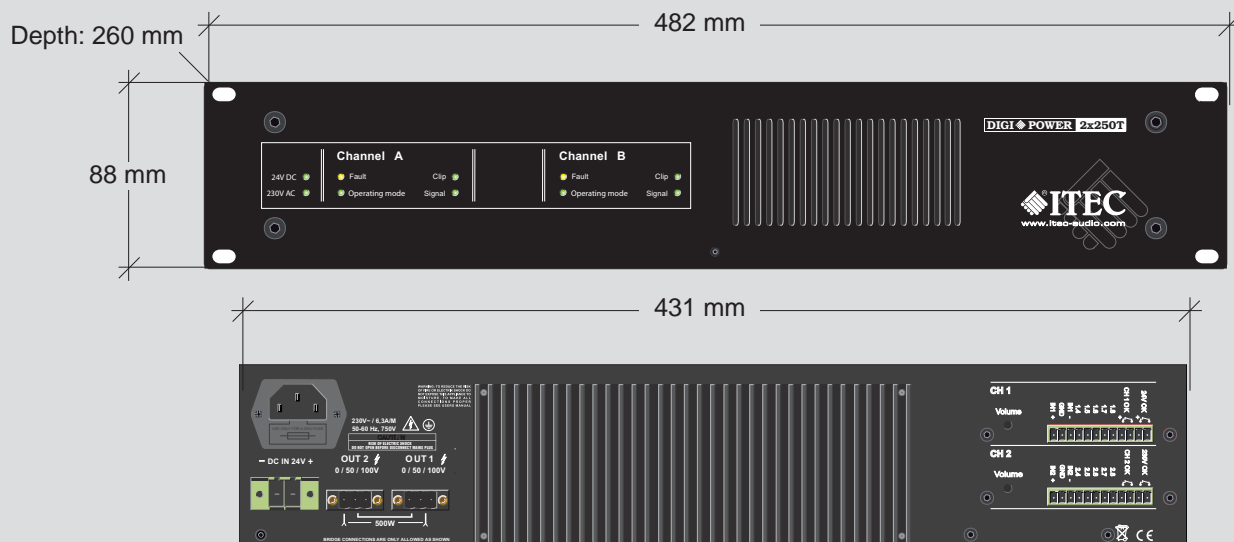
- 20. CH B Volume: like item 13, but for channel B.
- 21. B IN1: like item 14, but for channel B.
- 22. B IN2: like item 15, but for channel B.
- 23. SWITCH IN2: like item 16, but for channel B
- 24. PILOTTONE: like item 17, but for channel B
- 25. CH B OK: like item 18, but for channel B
- 26. 230V OK: Floating contact, closed when the 230V AC power is applied properly.
- 27. OUT A: Output terminal A. Floating, transformer-balanced power output (100V or 50V)
- 28. OUT B: like item 27, but for channel B.

Bridged-Modus:

A series connection of the two outputs A and B is possible. The output power in this case is 500W / 100V. Using the bridged mode, the input signal has to be applied in parallel to “A IN1” and “B IN1”. The two volume controls of “CH A Volume” and “CH B Volume” must be placed into the same position. If the alternative inputs “A IN2” and “B IN2” are used, the alternative signal has to be applied in parallel to both inputs. The two terminals “SWITCH IN2” must be connected in parallel in this case as well. If a pilot tone has to be added at the power amplifier, it has to be applied in parallel to both pilot tone terminals. The fault signal contacts “CH A OK” and “CH B OK” and can be connected in series to a common alarm message.



ITEC DIGIPOWER 2x250T/02 - SPECIFICATIONS



TYPE	2x250T/02
Output Power	2 x 250 W bzw. 1 x 500 W
THD + N	< 0,29 %
Input sensitivity 90 Hz - 20 kHz	1V eff
Input Impedance	10 kOhm
Signal-to-Noise Ratio @ 1kHz, 250 W, Vol 0.5	85 dB
Output transformer	2 x 50 V / 100 V
Current consumption 230VAC sinus 100 V @ 40 Ohms	4 A
Current consumption 24VDC sinus 100 V @ 40 Ohms	26 A
Current consumption Standby 230 VAC	0,058 A
Current consumption Standby 24 VDC	0,43 A
Power consumption in standby mode (230 V)	13 W
Power consumption at full load (230 V)	920 W
Inputs	symmetrical on screw terminal
Supply voltage	230 VAC / 24 VDC
Operating temperature	-5° C bis +40° C
Protection circuits	DC, short circuit, resonance, over temperature
Frequency response	90 Hz ÷ 21 kHz / -3 dB
Dimensions	19" / 2 RU (482 mm x 88 mm x 272mm)
Weight	16.5 kg

All information without guarantee. Subject to technical changes.



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