

USER'S MANUAL
BEDIENUNGSANLEITUNG
MANUEL D'UTILISATION
MANUAL DE USUARIO
INSTRUKCJA OBSŁUGI
MANUALE D'USO

LDsystems 



AMP 106 T

1-CHANNEL MINI INSTALLATION POWER AMPLIFIER 60 W @ 4 OHM / 70V / 100V
LDAMP106T

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ENGLISH

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YOU HAVE MADE THE RIGHT CHOICE!

We have designed this product to operate reliably over many years. LD Systems stands for this with its name and many years of experience as a manufacturer of high-quality audio products. Please read this User's Manual carefully, so that you can begin making optimum use of your LD Systems product quickly. You can find more information about **LD SYSTEMS** at our Internet site WWW.LD-SYSTEMS.COM

ABOUT THIS MANUAL

- Read the safety instructions and the entire manual carefully before commissioning.
- Observe the warnings on the unit and in the operating instructions.
- Always keep the operating instructions within reach.
- If you sell or pass on the appliance, be sure to hand over these operating instructions as well, as they are an essential part of the product.

INTENDED USE

The product is a device for professional audio installation! The product has been developed for professional use in the field of audio installation and is not intended for use in households! Furthermore, this product is intended for installation by qualified persons with specialist knowledge and for operation by instructed persons! The use of the product outside the specified technical data and operating conditions is considered as not intended! Liability for damages and third party damages to persons and property due to non-intended use is excluded!

The product is not suitable for:

- Persons (including children) with limited physical, sensory or mental capabilities or lack of experience and knowledge.
- Children (children must be instructed not to play with the device)

EXPLANATIONS OF TERMS AND SYMBOLS

1. **DANGER:** The word DANGER, possibly in combination with a symbol, indicates immediately dangerous situations or conditions for life and limb.
2. **WARNING:** The word WARNING, possibly in combination with a symbol, indicates potentially dangerous situations or conditions for life and limb.
3. **CAUTION:** The word CAUTION, possibly in combination with a symbol, is used to indicate situations or conditions that may lead to injury.
4. **ATTENTION:** The word ATTENTION, possibly in combination with a symbol, refers to situations or states that can lead to damage to property and/or the environment.



This symbol identifies hazards that can cause electric shock.



This symbol identifies hazardous areas or hazardous situations.



This symbol indicates hazards caused by hot surfaces.



This symbol indicates dangers due to high volume levels.



This symbol denotes a device that does not contain any user-serviceable parts.



This symbol indicates additional information on the operation of the product.

SAFETY INSTRUCTIONS



DANGER:

1. Do not open the device and do not perform any modifications.
2. If your device no longer functions properly, if liquids or objects get inside it or if it has been damaged in any other way, switch it off immediately and disconnect it from the mains. The device may be repaired only by authorised repair technicians.
3. For devices of protection class 1, the protective conductor must be connected correctly. Never disconnect the protective conductor. Devices of protection class 2 do not have a protective conductor.
4. Ensure that live cables are not kinked or otherwise mechanically damaged.
5. Never bypass the device fuse.



WARNING:

1. The device may not be operated if it shows obvious signs of damage.
2. The device may only be installed in a voltage-free state.
3. If the mains cable of the device is damaged, do not operate the device.
4. Permanently connected power cables may only be replaced by a qualified person.



CAUTION:

1. Do not operate the device if it has been exposed to strong temperature fluctuations (for example, after transport). Moisture and condensate could damage the device. Do not switch on the device until it has reached ambient temperature.
2. Make sure that the voltage and frequency of the mains supply match the values indicated on the device. If the device has a voltage selector switch, do not connect the device until it is set correctly. Use only suitable power cords.
3. To completely disconnect the device from the power supply, unplug the power cable or power adapter from the outlet. It is not sufficient to press the on/off switch on the unit.
4. Only replace the fuse with a fuse of the same type and rating indicated on the device.
5. Make sure that suitable measures have been taken against overvoltage (e.g. lightning strike).
6. Observe the specified maximum output current on devices with Power Out connection. Ensure that the total current consumption of all connected devices does not exceed the specified value.
7. Replace pluggable mains cables only with original cables.

**DANGER:**

1. Choking hazard! Plastic bags and small parts must be kept out of reach of persons (including children) with reduced physical, sensory or mental capabilities.
2. Danger of falling down! Make sure that the device is securely installed and cannot fall down. Only use suitable stands or mountings (especially for fixed installations). Make sure that accessories are properly installed and secured. Make sure that applicable safety regulations are observed.

**WARNING:**

1. Use the device only in the manner intended.
2. Operate the device only with the accessories recommended and intended by the manufacturer.
3. During installation, observe the safety regulations applicable in your country.
4. After connecting the device, check all cable routes to prevent damage or accidents, e.g. due to tripping hazards.
5. It is essential to observe the specified minimum distance to normally flammable materials! If this is not explicitly stated, the minimum distance is 0.3 m.

**CAUTION:**

1. In the case of moving components such as mounting brackets or other moving components, there is a possibility of jamming.
2. In the case of units with motor-driven components, there is a risk of injury from the movement of the unit. Sudden device movement can cause shock reactions.

**CAUTION:**

1. Do not install or operate the unit near any radiators, heat registers, stoves, or other sources of heat. Always ensure that the device is installed in such a way that it is sufficiently cooled and cannot overheat.
2. Do not place ignition sources such as lighted candles near the unit.
3. Ventilation openings must not be covered and fans must not be blocked.
4. Use the original packaging or packaging provided by the manufacturer for transport.
5. Avoid shocks or impacts to the device.
6. Observe the IP protection class as well as the ambient conditions such as temperature and humidity according to the specification.
7. Devices may be subject to continuous development. In case of deviating information on operating conditions, performance or other device characteristics between operating instructions and device labeling, the information on the device always has priority.
8. The device is not suitable for tropical climates and for operation above 2000 m above sea level.
9. Unless explicitly stated, the device is not suitable for operation under marine conditions.

**NOTICE:**

In the case of conversion or retrofit kits or accessories provided by the manufacturer, be sure to follow the enclosed instructions.

**CAUTION HIGH VOLUME AUDIO PRODUCTS!**

This device is intended for professional use. Commercial operation of this device is subject to applicable national regulations and guidelines for accident prevention. Hearing Damage from High Volume and Continuous Exposure: Use of this product may generate high sound pressure levels (SPL) that can cause hearing damage. Avoid exposure to high volume levels.

**NOTES FOR INDOOR INSTALLATION EQUIPMENT**

1. Units for installation applications are designed for continuous operation.
2. Units for indoor installation are not weatherproof.
3. Surfaces and plastic parts of installation equipment can also age, e.g. due to UV radiation and temperature fluctuations.
This does not usually lead to functional restrictions.
4. with permanently installed units, the deposition of impurities, e.g. dust, is to be expected. Be sure to observe the care instructions.
5. Unless explicitly stated otherwise on the unit, the units are intended for installation heights of less than 5 m.

PACKAGING CONTENT

Remove the product from the packaging and remove all packaging material. Please check the completeness and integrity of the delivery and notify your distribution partner immediately after purchase if the delivery is not complete or if it is damaged.

The packaging includes:

- 1 x AMP 106 T installation amplifier
- 1 x power supply unit
- 1 set of terminal blocks
- 1 x mounting set for under- or on-table mounting
- User manual

INTRODUCTION

The AMP 106 T is a 1-channel mini installation amplifier from the TICA® series and is ideal for use in sound installations where small dimensions, passive cooling and high efficiency are required.

The highly efficient 60W Class-D amplifier, with Lo-Z / Hi-Z selector switch and 4 Ohm / 100V / 70V outputs, is convection-cooled and a straightforward solution for professional installers.

With a size of 1/4 19" rack, 1U, the mini AMP 106 T fits perfectly in any installation location. The supplied mounting plates offer maximum flexibility and facilitate discreet mounting, whether on the table or on the wall. Installation in suspended ceilings is also no problem thanks to the compact size and passive cooling.

For space-saving installation in the rack, an optional rack tray offers you the possibility to place up to four products of the TICA® series next to each other.

Terminal strip connections on the balanced line inputs and speaker outputs make wiring particularly easy.

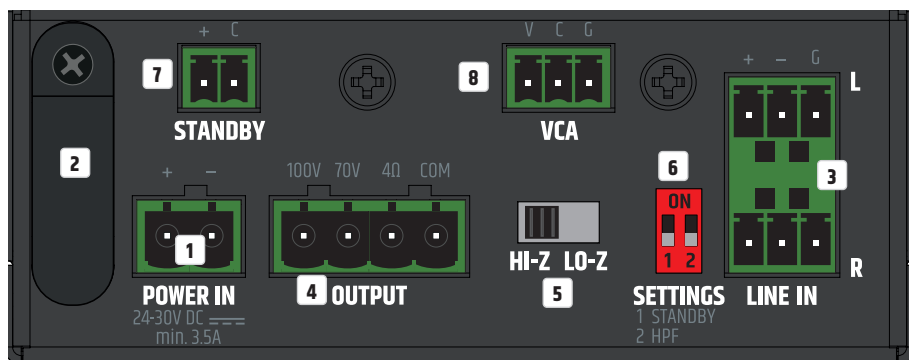
Thanks to the option of remote control through third-party devices, you can conveniently adjust the volume or put the power amplifier into standby mode at any time, even when it's hidden.

The perfect solution for professional installers and users looking for a compact, highly efficient and easy-to-integrate solution.

FEATURES

- Professional mini amplifier
- 60W Class-D amplifier with Lo-Z / Hi-Z selector switch and 4 Ohm / 100V / 70V outputs
- Small form factor 1/4 19" rack, 1U
- Silent operation due to passive cooling
- Third-party connectivity for remote standby and volume control
- External wide-range switch mode power supply
- Incl. mounting plates for inconspicuous audio installations
- Suitable for fixed installation in suspended ceilings
- Balanced line input and speaker output with terminal strips
- User-friendly front panel with signal, clip and protection LEDs
- Optional rack tray for combination with other products of the TICA® series

CONNECTIONS, OPERATING AND DISPLAY ELEMENTS



1 TERMINAL BLOCK CONNECTION FOR POWER SUPPLY

Terminal block connection for the device's power supply. To avoid damage to the unit, please use only the original power supply (power supply unit included).

2 STRAIN RELIEF

Use the strain relief for the flexible cable of the power supply unit to protect the device's power terminal block connector and the power supply terminal block from damage and to prevent the terminal block from being pulled out unintentionally.

3 LINE IN L/R

Analogue audio inputs with balanced terminal block connections. The +, - and G poles are for the balanced input signal (suitable for unbalanced cabling). The signals of the inputs L and R are internally mono summed. Terminal blocks are included in the packaging content.

4 OUTPUT

The loudspeaker output with terminal block connection (terminal block included in the packaging content) enables the use of low-impedance loudspeakers with an impedance of at least 4 ohms (switch LO-Z/HI-Z in position LO-Z) as well as 70 V or 100 V loudspeakers (switch LO-Z/HI-Z in position HI-Z). Please observe the correct assignment of the terminal block poles (see TERMINAL BLOCK CONNECTIONS in this manual). The total power handling of the connected speakers should be approximately equal to the amplifier power.

5 HI-Z / LO-Z

Before operating the unit, make sure that the switch is in the correct position!

Low impedance loudspeakers: LO-Z

70 V and 100 V loudspeakers: HI-Z

6 SETTINGS

DIP switch 1 STANDBY: Move the switch to the ON position to activate the automatic standby function of the unit. If the standby function is activated, the amplifier is automatically set to standby mode if no audio signal is detected for about 20 minutes. This reduces power consumption in a sensible way. As soon as an audio signal is present, the amplifier is automatically booted up from standby mode and is fully operational again within approximately 3 seconds. The power symbol on the front panel lights up red in standby mode. If the power symbol lights up white, the unit is ready for operation.

DIP switch 2 HPF: Move the switch to ON position to activate the high-pass filter (HPF 110 Hz).

7 STANDBY

Standby mode can be activated manually with the help of an external button (momentary switch). Press the button to activate standby mode and mute the speaker outputs. Press the button again to end standby mode. The standby function via external button has priority over the automatic standby function (see SETTINGS).

8 VCA

Terminal block connector for the use of an external volume control. The maximum volume is set on the VOLUME control on the front panel. Once you have set the maximum volume, you can use the external volume control to adjust the volume of the unit from the minimum value to the preset value as desired. Please observe the correct assignment of the terminal block poles (see TERMINAL BLOCK CONNECTIONS in this manual).



9 POWER SYMBOL

The power symbol lights up white when the installation amplifier is ready for operation. In standby mode, the symbol lights up red.

10 VOLUME

Volume control. Turning to the right increases the volume, turning to the left decreases it.

11 SIG (SIGNAL)

As soon as an audio signal is present at the amplifier, the signal indicator lights up white.

12 CLIP

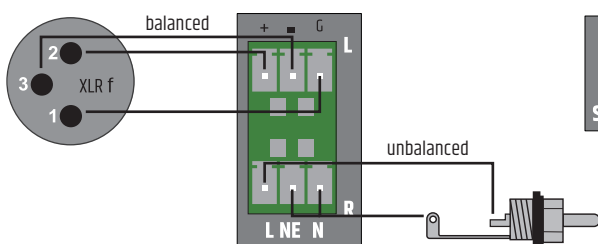
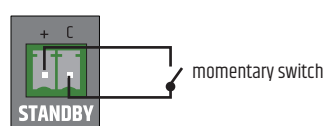
The CLIP indicator lights up when the amplifier is overdriven. In this case, reduce the volume level. Failure to do so may result in distorted sound reproduction and damage to the amplifier and speakers.

13 PROT (PROTECT)

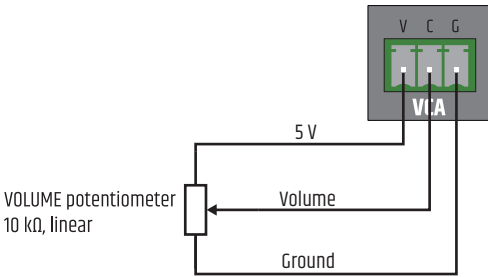
The Protect indicator lights up permanently if the system is overloaded or overheats, in case of a short circuit in the loudspeaker path and in case of a defect. The amplifier is automatically muted. Disconnect the amplifier from the power supply and let it cool down for some time. Eliminate a possible short circuit in the speaker path. Reconnect the amplifier to the power supply. If the Protect indicator still lights up, there is a defect in the amplifier electronics. Contact an authorised service workshop.

AIR VENTS

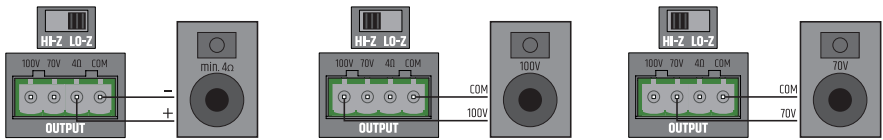
To prevent damage to the device, do not cover the ventilation openings on the left and right sides and on the top and bottom of the device and ensure that air can circulate freely. Covering the ventilation openings on the top or bottom of the enclosure when mounting it underneath or on top of a table is not critical, as the cooling provided by the ventilation openings on the remaining sides is sufficient.

TERMINAL BLOCK CONNECTIONS**LINE IN L / R CONNECTIONS****STANDBY CONNECTIONS**

CONNECTIONS VCA

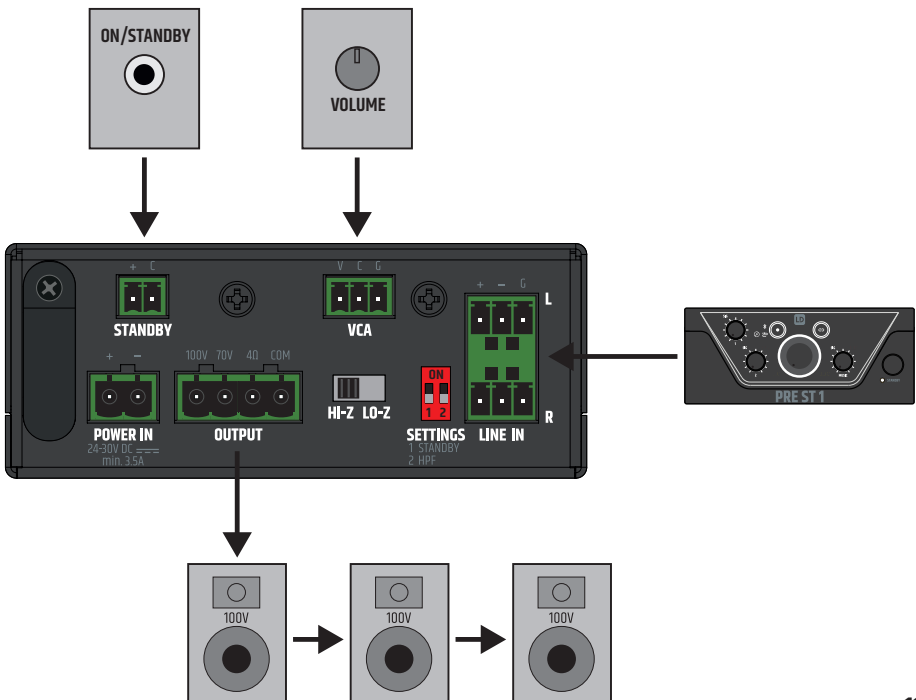


OUTPUT CONNECTIONS



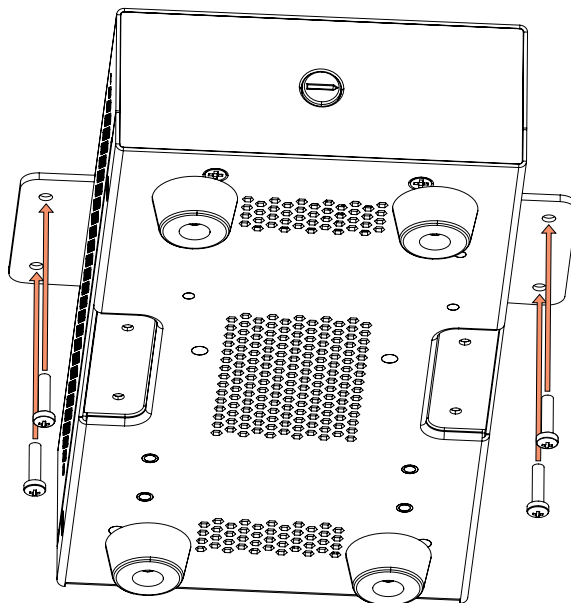
ATTENTION: When wiring terminal blocks, please note the correct assignment of the poles/ terminals. The manufacturer accepts no liability for damage caused by faulty wiring!

CONNECTION EXAMPLE



UNDER / ON-TABLE MOUNTING

There are two recesses on the top and bottom of the enclosure, each with two M3 threaded holes, for mounting underneath or on top of the table. Screw the two enclosed mounting plates to the top or bottom side using the enclosed M3 countersunk screws. Now the amplifier can be fixed in the desired position (see illustration, fixing screws not included). For tabletop mounting, the four rubber feet must be removed beforehand.



CARE, MAINTENANCE AND REPAIR

To ensure the proper functioning of the device in the long term, it must be cared for regularly and serviced as required. The care and maintenance requirements depend on the intensity of use and environment.

We generally recommend a visual inspection before each start-up. Furthermore, we recommend carrying out all the maintenance measures listed below every 500 operating hours or, in the case of less intensive use, after one year at the latest. Defects due to insufficient care may result in limitations of the warranty claims.

MAINTENANCE (user performable)



WARNING! Prior to any maintenance measures, the voltage supply and, if possible, all device connections must be disconnected.



NOTE! Improper maintenance may impair the device or even destroy it.

1. Housing surfaces must be cleaned with a clean, damp cloth.
Make sure that no moisture can penetrate the device.
2. Air inlets and outlets must be regularly cleaned of dust and dirt.
If compressed air is used, make sure that damage to the device is prevented
(e.g. fans must be blocked in this case).
3. Lines and plug contacts must be cleaned regularly and dust and dirt must be removed.
4. In general, no cleaning agents or abrasive agents may be used, otherwise the surface
finish may be damaged. Especially solvents, such as alcohol, can impair the function of
housing seals.
5. Devices must generally be stored dry and protected from dust and dirt.

MAINTENANCE AND REPAIR (by qualified personnel only)



DANGER! There are live components in the device. Even after disconnection from the mains, residual voltage may still be present in the device, e.g. due to charged capacitors.



NOTE! There are no assemblies in the device that require maintenance by the user.

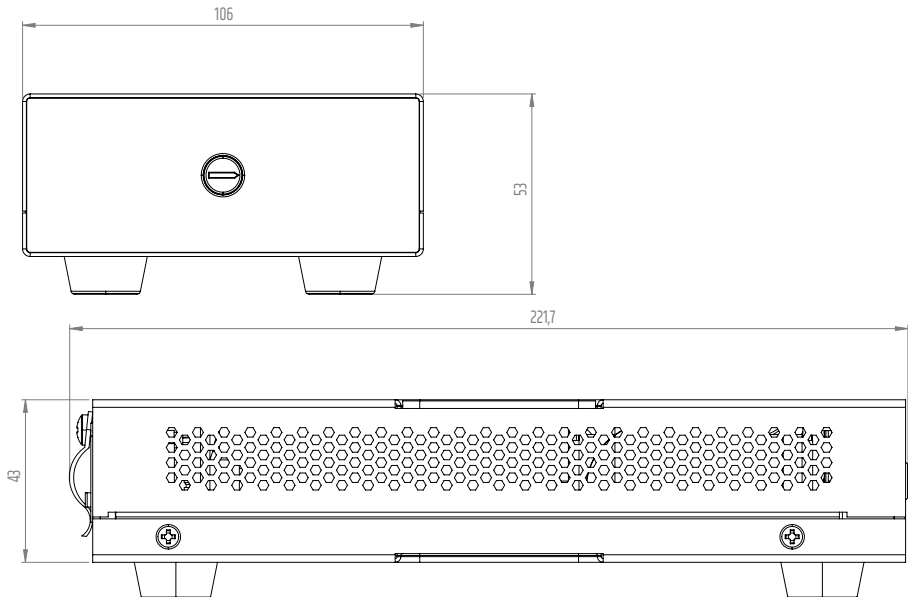


NOTE! Maintenance and repair work may only be carried out by qualified personnel authorized by the manufacturer. In case of doubt, contact the manufacturer.



NOTE! Improperly performed maintenance work may affect the warranty claim.

DIMENSIONS



TECHNICAL DATA

Item number	LDAMP106T
Product type	Installation power amplifier
Line inputs	2
Line input connectors	balanced line inputs, pitch 3.81 mm terminal block (3-pin)
Line outputs	0
Powered outputs	1 with output mode selector (LO-Z / HI-Z)
Cooling system	Convection cooling
Priority levels	1

Input Section

Nominal input sensitivity	8.5 dBu (sine 1 kHz, gain max)
Nominal input clipping	18 dBu (sine 1 kHz, gain 0dB)
THD+N	< 0.02% (SPK OUT, 4 dBu, 20 kHz BW)
Frequency response	20 Hz – 20 kHz (LO-Z SPK OUT, -0.5 dB)
Input impedance	12 kohms (balanced)
SNR	> 100 dB (SPK OUT, 8 dBu, gain max, 20 kHz BW, A-weighted)
SNR (best conditions)	> 102 dB (SPK OUT, +13 dBu, 22 kHz BW, A-weighted)
CMRR	> 48 dB (SPK OUT, 4 dBu 1 kHz)
Gain	-33 to 18 dB
Connector	2 x 3.81 mm terminal block 3-pin
Standby wake up threshold	-30 dBu

3rd Party Control

Main volume	10k (linear taper) External potentiometer, pitch 3.5 mm terminal block (3-pin)
Power standby	External momentary button, pitch 3.5 mm terminal block (2-pin)

Amplifier output

Type	Class D
Amplifier outputs	1-channel, mono summed, LO-Z: 4 ohm minimum load, HI-Z 70 V or 100 V outputs
Connector	4-pin terminal block (pitch 5.08 mm)
RMS output power	60 W (continuous sine wave 1 kHz, 4 ohm load)
Peak output power	72 W (100 msec sine 1 kHz burst @ 4 ohm load)
Frequency response	15 Hz – 20 kHz (LO-Z, -1 dB) 20 Hz – 20 kHz (HI-Z, -1 dB)
High pass filter	110 Hz
Protection	Over/Undervoltage, Overtemperature, Short-Circuit, DC-Detection

Item number	LDAMP106T
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Power Supply

Type	External SMPS
Voltage range	100 VAC – 240 VAC (+/-10%), 50 – 60 Hz
Mains fuse	none
Secondary connector	Terminal block 5.08 mm 2-pole
Secondary Voltage	24 V DC
Secondary Current	3,5 A
Primary connector	IEC Jack
Safety class	Class 1
Max power consumption	75 W (sine 1 kHz with 4 ohm load)
Idle power consumption	2 W (no signal input)
Standby power consumption	< 1 W
Operating temperature	0°C – 40°C; < 85% humidity, non condensing

General

Time to standby	20 min.
Material	Steel chassis, plastic front panel
Dimensions (w x h x d)	106 x 53 x 221.7 mm (height with rubber feet)
Weight	1.3 kg
Included accessories	External power supply, mounting plates for surface mount applications, terminal blocks for electrical connections.

ENGLISH

DEUTSCH

FRANÇAIS

ESPAÑOL

POLSKI

ITALIANO

DISPOSAL



Packaging:

1. Packaging can be disposed of via the usual waste disposal channels.
2. Please separate the packaging according to the waste disposal and materials regulations in your country.



Device:

1. This device is subject to the European Directive on Waste Electrical and Electronic Equipment in its applicable version. WEEE Directive- Waste Electrical and Electronic Equipment. Old devices and batteries do not belong in household waste. The old device or batteries must be disposed of via an approved waste disposal service or a municipal waste disposal facility. Follow the directives in your country!
2. Follow the disposal laws in your country.
3. As a private customer, you can obtain information on environmentally friendly disposal options from the retailer from whom you purchased the product or from the relevant regional authorities.



Batteries and rechargeable batteries:

1. Batteries and rechargeable batteries do not belong in household waste. Batteries and rechargeable batteries must be disposed of via an authorised disposal company or a municipal disposal facility.
2. Observe all disposal laws and regulations applicable in your country.
3. As a private customer, you can obtain information on environmentally friendly disposal options from the dealer from whom the product was purchased or from the relevant regional authorities.
4. Appliances with batteries or accumulators that cannot be removed by the user must be handed in at a collection point for electrical appliances.

MANUFACTURER'S DECLARATIONS

MANUFACTURER'S WARRANTY & LIMITATIONS OF LIABILITY

Adam Hall GmbH, Adam-Hall-Str. 1, D-61267 Neu Anspach / E-mail Info@adamhall.com / +49 (0)6081 / 9419-0.

Our current warranty conditions and limitation of liability can be found at:

https://cdn-shop.adamhall.com/media/pdf/MANUFACTURERS-DECLARATIONS_LD_SYSTEMS.pdf.

Contact your distribution partner for service.

UKCA-CONFORMITY

Hereby, Adam Hall Ltd. declares that this product meets the following guidelines (where applicable) Electrical Equipment (Safety) Regulations 2016

Electromagnetic Compatibility Regulations 2016 (SI 2016/1091)

The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulation 2012 (SI 2012/3032)

Radio Equipment Regulations 2017 (SI 2016/2015)

UKCA-DECLARATION OF CONFORMITY

Products that are subject to Electrical Equipment (Safety) Regulation 2016, EMC Regulation 2016 or RoHS Regulation can be requested at

info@adamhall.com. Products that are subject to the Radio Equipments Regulations 2017

(SI 2017/1206) can be downloaded from

www.adamhall.com/compliance/

CE CONFORMITY

Adam Hall GmbH hereby confirm that this product meets the following guidelines (where applicable):

R&TTE (1999/5/EC) or RED (2014/53/EU) as of June 2017.

Low Voltage Directive (2014/35/EU)

EMC Directive (2014/30/EU)

RoHS (2011/65/EU)

The complete Declaration of Conformity can be found at www.adamhall.com.

Furthermore, you can also request it at info@adamhall.com.

CE DECLARATION OF CONFORMITY

Declarations of conformity for products subject to the LVD, EMC, RoHS Directive can be requested from info@adamhall.com.

Declarations of conformity for products subject to RED Directive

can be downloaded from www.adamhall.com/compliance/.

Subject to misprints and errors, as well as technical or other modifications!

