

operating instructions

integrated amplifier inspiration a6 preamplifier inspiration v6



Dear customer,

thank You for purchasing this AVM product. You own now a versatile, excellent sounding hifi component. Before enjoying music, please read this manual carefully. After that You will know how to use Your new AVM component in the optimal way.

Sincerely Yours

Your AVM-Team

Declaration of conformity (for EC only)

We herewith confirm, that the unit to which this manual belongs fullfills the EC rules necessary to obtain the sign



the necessary measurements were taken with positive results.

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Table of contents

Chapter	page
Preamble	2
Table of contents	3
1. Basic informations	4
1.1 Mechanical construction	4
1.2 Power supply	4
1.3 Preamplifier section	4
1.4 Power amplifier	4
2. inspiration a6 v6 overview	5
2.1 Installation and cooling	6
2.2 Connection to mains	6
2.3 Connecting the signal sources	6
2.4 Connecting a tape recorder	6
2.5 Connecting processors / equalizers	6
2.6 Connecting the loudspeakers (a6 only)	6
2.7 Connecting poweramplifiers / subwoofer	6
2.8 Remote outputs	7
2.9 Communication port	7
3. Basic operation	8
3.1 Switching on / standby	8
3.2 Selecting the signal source	8
3.3 Volume setting	8
4. The menu system	8
4.1 General	8
4.2 Menu system (overview)	9
4.3 Details about the several menu points	10
5. Remote control	14
6. Installation of modules	14
7. Cleaning	14
8. If something doesn't work	14
9. Technical data	15

1. Basic informations about inspiration amplifiers

The **inspiration a6 and v6** need only a few elements to be operated. For basic operation You can select the source and set the volume very easily. The other settings (which are not often needed) can be accessed by the menu system (for example sound setting, level adjustment etc).

1.1 Mechanical construction

The case is fully made of aluminum. The transformer (a6 only) is a toroidal type, has a very low impedance and produces nearly no stray field. The audio-connectors are all gold plated to minimize electrical losses and provide long lasting perfect contacts.

1.2 Power supply

A switch mode power supply delivers clean, hum-free electrical energy for the preamplifier section. All voltages are additionally buffered by large capacitors directly in the circuitry where they are needed.

The power amplifier (a6 only) has it's own power supply. A powerful toroidal transformer which can deliver 500 Watts continuously and up to 1000 Watts for a short period of time supplies exclusively the energy for the poweramp.

1.3 Preamplifier section

The circuitry for right and left channel is constructed in dual mono mode. So there is nearly no interference between the channels. The input circuits act extremely fast and use special semiconductors for exact and nearly noise free sound reproduction. SMD technique allows a very compact circuit layout and thus extremely short signal paths.

The volume control is done by highly precise integrated circuits. They allow setting in 0,5 dB steps and their channel balance is better than 0,05 dB. All this provides an absolutely precise, musical sound reproduction from lowest to highest listenig levels.

If You wish to correct the frequency response at low listening levels or to have more or less treble or bass, You can activate the sound processor and set the frequency response. For linear reproduction the whole circuitry is removed out of the signal path by relays and has absolutely no influence.

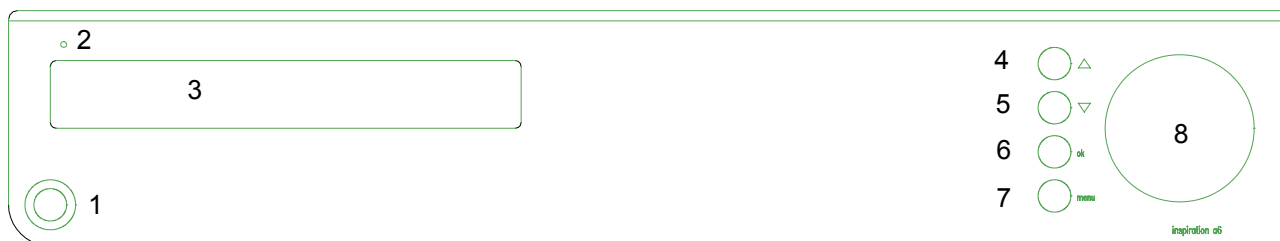
1.4 Power amplifier (a6 only)

The power amplifier is built on a pc-board with double thick copper coating. The short signal paths allow high damping factors in order to achieve optimal speed and speaker control. Protection circuitry against overheat and short circuit is on board to protect Your equipment. The power amplifier of the EVOLUTION C5/R5 uses two output stages and two power supplies. One output stage is working from a low voltage supply when only low power is demanded. During this time the other output stage is also working, but doesn't deliver current to the speaker (and therefore produces no heat). When the output power increases (for example when a drum is beaten), the second output stage with it's high voltage supply is activated without delay and delivers high peak power to the speakers. In a music signal peak power is only demanded for a short period of time. Thus the power amplifier of the EVOLUTION a6 works in a very efficient way and produces no unnecessary heat. Of much more importance is the advantage in musical reproduction: the output stage for small signals acts extremely quick and nearly noise free. So it can unveil the finest details of the music signal. The much more powerful second output stage delivers the current only for dynamic peaks. These are very important for realistic reproduction of music, but make only a very small part of the music signal. So this output stage stays cool and therefore reproduces a fresh and clear dynamic music at any time without ever sounding stressed.

2. inspiration a6 v6 overview

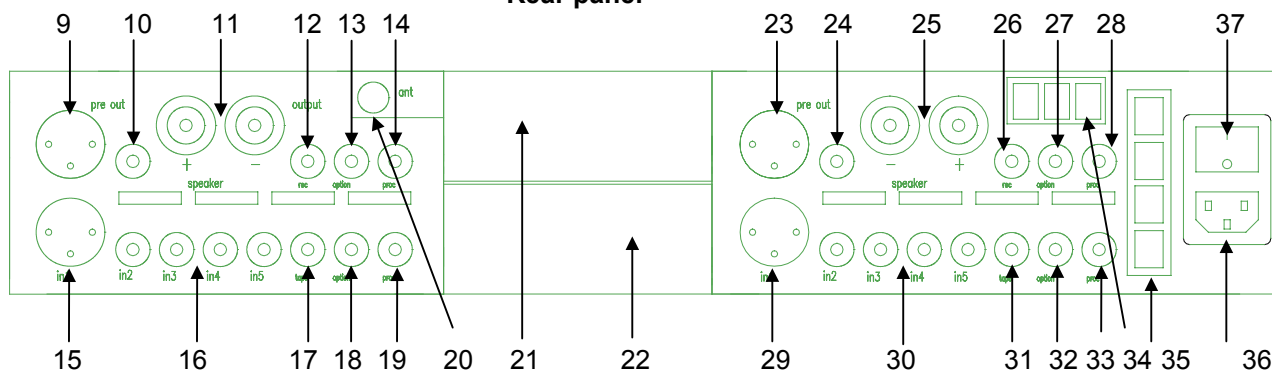
The numbers in the drawings below mark the control elements. They refer to the numbers in the text, where the operation of the **inspiration a6 v6** is described.

Front panel



- | | |
|---------------------------------------|-----------------------|
| 1. Button power (on / standby) | 5. Button ▽ (DOWN) |
| 2. LED (lights up, when unit is on) | 6. Button ok |
| 3. Display | 7. Button menu |
| 4. Button △ (UP) | 8. Rotary encoder |

Rear panel



- | | |
|--|---|
| 9. Output pre out XLR right | 23. Output pre out XLR left |
| 10. Output pre out Cinch right | 24. Output pre out Cinch left |
| 11. speaker terminals right (a6 only) | 25. speaker terminals left (a6 only) |
| 12. Output rec (to tape recorder) right | 26. Output rec (to tape recorder) left |
| 13. Output option (to surround decoder) right | 27. Output option (to surround decoder) left |
| 14. Output proc (to processor / equalizer) right | 28. Output proc (to processor / equalizer) left |
| 15. Input in1 (XLR) right | 29. Input in1 (XLR) left |
| 16. Inputs in2 - in5 (Cinch) right | 30. Inputs in2 - in5 (Cinch) left |
| 17. Input tape right | 31. Input tape left |
| 18. Input option (from surround decoder) right | 32. Input option (from surround decoder) left |
| 19. Input proc (from processor / equalizer) right | 33. Input proc (from processor / equalizer) left |
| 20. Antenna connector (option, Germany only) | 34. Remot outputs |
| 21. Option slot a | 35. Communication port (option, Germany only) |
| 22. Option slot b | 36. Mains connector |
| | 37. Mains switch |

2.1 Installation and cooling

The **inspiration a6** can become hot depending on demanded output power and environmental temperature. Therefore it is important, that the cooling air can flow unhindered into the air inlet in the a6's bottom (right under the display) and flow out through the holes in the rear panel.

Additionally direct exposure to sunlight is not recommended because this will heat up the a6 / v6.

2.2 Connection to mains

Connect the amplifier to the mains outlet by using the power cord which is delivered together with the unit. Make shure that mains voltage is according to the value printed on the rear panel of the amp (near mains connector).

Let the amp be switched off until all audio connections are made.

2.3 Connecting the signal sources

Connect the outputs of Your CD player, tuner etc to the a6 / v6. The inputs **in1** (15, 29) to **in5** (16, 30), and **option** can be connected to any high level source. The inputs **tape** (17, 31) and **processor** (19, 33) provide special functions, which are described below.

NOTE: The connectors **option in / option out (18, 32 / 13, 27)** have special functions when the a6 / v6 is equipped with an analog 7.1 input (option, see manual of 7.1 input). If no 7.1 input is installed, You may use the input connectors **option** (18, 32) as normal high level inputs. The output **option** (13, 27) must not be used.

2.4 Connecting a tape recorder

Connect the recorder's output to the inputs **tape** (17, 31) of Your a6 / v6. The inputs of the recorder must be connected to the outputs **rec** (12, 26) of the a6.

2.5 Connecting processors / equalizers

Connect the processor's output to the inputs **proc** (19, 33) of Your a6 / v6. The inputs of the processor must be connected to the outputs **proc** (14, 28) of the a6.

2.6 Connecting the loudspeakers (a6 only)

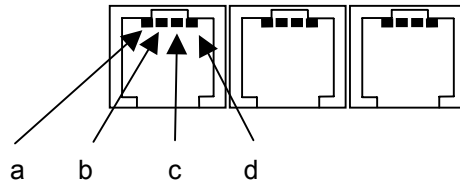
Connect the speakers to the speaker terminals (11, 25) of the a6. Use only good speaker cables with sufficient diameter. Make shure, that the red terminals are connected to the red or " + " terminals of the speakers and the black terminals to the black or " - " terminals of the speakers.

2.7 Connecting poweramplifiers / subwoofer

You can use the **pre out** Cinch (10, 24) or **pre out** XLR (9, 23) independently to connect the a6 / v6 to power amplifiers or an additional active subwoofer.

2.8 Remote outputs

The three remote outputs (34) of the a6 / v6 are connected in parallel. The output voltage is 5 Volts, the impedance is 15 kOhm. To make the connection use telephone connectors 4P4C. The contacts of the remote outputs are connected as follows:



a = Ground

b = + 5 V if a6 is on, 0V while stand by.

c = + 5 V if 7.1 input (option) is active, 0V while not active.

d = can be assigned to one or more inputs (Menü **8 remote trigger...**). + 5V if this input is selected, 0V if not.

2.9 Communication port (35)

only available for german models (planned for 2004)

3. Basic operation

In case the a6 v6 was not connected to mains a self test will be performed when it is switched on by mains switch (37) for the first time. The unit checks it's configuration and if all installed components work properly. The procedure is shown in the display.

3.1 Switching on / standby

Using the button **power** (1) You can switch between on (operate) and stand by. In the on state the display (3) and the LED (2) light up. In stand by mode the display (3) is off and the LED glows to indicate that the amplifier is still connected to mains.

CAUTION: When switched to stand by the unit is still connected to mains. In case of thunderstorm or if You leave the house for a longer time we recommend that You switch the amplifier off by using the mains switch (37) or pull the mains plug.

3.2 Selecting the signal source

Press the buttons Δ (4) or ∇ (5) to select a source. The selected source is indicated in the display (3).

3.3 Volume setting

Use the rotary encoder (8) to set the desired volume. Depending on rotating speed the volume increases / decreases in 0,5 dB steps (slow) or 3 dB steps (fast). The actual setting is shown in the display (3).

4. The menu system

4.1 General

To access special functions (such as sound setting, setting of input sensitivity etc.) You have to use the menu system. First some general informations about it:

The menu system consists of several levels, which sometimes have several sub levels. The actual level is shown in the display (3). In the upper line the actual level is displayed, in the lower line the selectable sub levels are indicated. Additionally the upper line shows on the right side the number of the actual menu level (up to 5 digits).

To enter the menu You have to press the button **menu** (7). You can then select the different points by pressing the buttons Δ or ∇ (4/5). To select a certain point You have to press the **ok** button (6). If there exists a sub menu this will be indicated by two or three dots following the actual menu name (for example: sound setting..). To make settings You can use the rotary encoder.

If You want to change to a higher menu level or exit the menu and change to normal operation mode You have to press the button **menu** (7) once or several times.

The next page shows the structure of the menu system.

4.2 Menu system (overview)

setup system (enter: press menu button, exit: press menu button a second time)

main menu

1 sound setting...

1.1 set equalizer...on/off

1.1.1 set bass -16 to + 15,5

1.1.2 set treble -16 to + 15,5

1.2 sub correction on/off

1.3 set loudness... on/off

1.3.1 set loudness 1 to 5

2 set balance < 9 to 9 >

3 output control

3.1 set cinch out on/off

3.2 set XLR out on/off

3.3 set speaker out on/off

4 set tape monitor on/off

5 set processor on/off

6 input parameter

6.1 input name

6.1.1 input name <# of actual source>

6.1.1.1 default to

6.1.1.2 edit

6.1.1.2.1 edit name <act. source>

6.2 input level

6.2.1 <act. source> -12 dB to +12 dB

7 display brightness

7.1 set brightness 25% to 100%

8 remote trigger

8.1 if <act. source>: on/off

9 system menu

9.1 service ID (press OK for display)

9.2 hardware scan (start by pressing OK)

9.3 remote control

9.3.1 avm system rc1/avm system rc2/philips standard rc5

9.4 factory setting (activate by pressing OK)

slot a (configuring unit in slot b, only if installed)

slot b (configuring unit in slot b, only if installed)

Navigation

vertically (previous setting within the same level)

button Δ (4)

vertically (next setting within the same level)

button ∇ (5)

horizontally (change to lower menu level)

button ok (6)

horizontally (change to upper menu level)

button menu (7)

change settings

rotary encoder (8)

4.3 Details about the several menu points

When the **menu** button (7) is pressed for the first time. The display (3) shows **setup system** in the upper line. The line below shows **main menu....** By pressing the buttons Δ or ∇ (4/5) You can access other menus: **slot a**, **slot b** (only if a pcb is installed). By pressing the **ok** button (6) You enter the selected menu.

main menu

in this menu You can activate the special functions of the a6 / v6. Choose by pressing the buttons Δ or ∇ (4/5) and select the desired point by pressing the **ok** button (6). The following settings can be made:

1. sound setting...

upper level of sound menu. Press **ok** (6) to enter and choose by pressing the buttons Δ or ∇ (4/5):

1.1 set equalizer... on/off

By using the rotary encoder You can switch the equalizer on or off. You can also choose by pressing the buttons Δ or ∇ (4/5) between:

1.1.1 set bass

Press **ok** (6) to enter and set bass level between +15,5 and -16 by using the rotary encoder. Press **menu** (7) to exit.

1.1.1 set treble

Press **ok** (6) to enter and set treble level between +15,5 and -16 by using the rotary encoder. Press **menu** (7) to exit.

1.2 sub correction on/off

Press **ok** (6) to enter and set bass correction on or off by using the rotary encoder. Press **menu** (7) to exit.

NOTE: This feature is useful, when listening with small loudspeakers. In this case the sub correction will extend the frequency response to lower frequencies.

1.3 set loudness... on/off

Press **ok** (6) to enter and set loudness on or off by using the rotary encoder. Press **menu** (7) to exit or again **ok** (6) to enter:

1.3.1 set loudness

If You listen to music at low levels, You often recognize that bass and treble reproduction are weak. This is because the human ear is not sensitive to bass and treble at low sound levels. To compensate this You can use the parametric loudness function of the a6 / v6. This function will increase bass and treble levels when You decrease the volume. When the volume is increased the frequency response will be more and more flat and remain linear at high volume levels. In order to obtain best results You have to proceed in the following way:

Set the amplifier to the normal listening mode (by pressing several times the button **menu** (7), if You are in the menu). Then select a source and set volume to a moderate level. Now enter Menu **1.3.1 set loudness**. Use the rotary encoder to select the correction curve (1 to 5) You like the best. Now leave the menu system by pressing the button **menu** (7) several times until the amp is again in normal listening mode.

NOTE: If one or more functions of the sound menu are activated. The display (3) shows a small note in the upper line to indicate this.

2. set balance

Press **ok** (6) to enter and set channel balance by using the rotary encoder (8). The range is 9 dB.

3. output control

Press **ok** (6) to enter and select using the buttons Δ or ∇ (4/5) between:

3.1 set cinch out on/off

3.2 set XLR out on/off

3.3 set speaker out on/off (a6 only)

switching on or off is done by pressing **ok** (6) and then using the rotary encoder (8). Press **menu** (7) to exit.

4. set tape monitor on/off

Press **ok** (6) to enter and set tape monitor on / off by using the rotary encoder (8). Press **menu** (7) to exit.

If the monitor is activated, a tape symbol in the middle of the upper display line is shown. For more information about monitor function refer to the user's manual of Your tape recorder.

5. set processor on/off

Press **ok** (6) to enter and set processor loop on / off by using the rotary encoder (8). Press **menu** (7) to exit.

If the processor function is activated, the symbol \Leftrightarrow in the middle of the upper display line is shown. For more information about processor function refer to the user's manual of Your processor / equalizer.

6. input parameter...

In this menu You can assign individual features to each input.

6.1 input name...

6.1.1 input name <# of actual input>
select "<actual name>"...

Select an input by pressing Δ or ∇ (4, 5). Then press **ok** (6). Now You can chose between:

6.1.1.1 input <# of actual input>
default to "<actual name>"

With the rotary encoder (8) You can select under several preprogrammed names. The selected name is stored, if You leave the menu by pressing **menu** (7).

6.1.1.2 input <# of actual input>
edit "<actual name>"...

By pressing **ok** (6) You come to

6.1.1.2.1 input <# of actual input>
edit name "<actual name>"...

Now You can create an individual name with up to eight characters. Chose the position of character by pressing Δ or ∇ (4, 5) and the chracter itself with the rotary encoder (8). The created name is stored, if You leave the menu by pressing **menu** (7).

6.2 input level...

The level of signal sources (CD, Tuner and so on) differs often by several dBs. So You recognize a step in volume, when switching between two inputs. It is also possible, that a source which is too loud overdrives the input and causes distortion. With the level menu You can avoid this. The sensitivity of each input can be set between – 12 dB and + 12 dB.

6.2.1 input level

<name of actual input> <actual sensitivity>

Select an input by pressing Δ or ∇ (4, 5). Now set the sensitivity using the rotary encoder (8). Switching between the several inputs by buttons Δ or ∇ (4, 5) allows You to compare the levels. If an input is overdriven (audible distortion occurs) set the sensitivity of this input to –6,5 dB or less. In this case You will hear a relay clicking, which attenuates the incoming signal and thus avoids overdrive of the input amplifier.

7. display brightness...

Press **ok** (6) and You come to:

7.1 set brightness <actual brightness setting>

Now set the desired display brightness by using the rotary encoder (8).

NOTE: Settings of 75% and 100% can lead to "burn in" of some display segments if the display is on for more than a few hours. Therefore we recommend that You switch Your amplifier to standby for the times when You don't use it.

8. remote trigger...

The a6 has three trigger outlets (34) with three signals each (see also 2.10 Remote outputs). These outputs can switch other components on or off. One of the signals can be assigned to one or more inputs. If these inputs are selected the signal goes to high level, otherwise to low level.

Press **ok** and You come to:

8.1 remote trigger

if "<name of actual input>": on/off

By pressing Δ or ∇ (4, 5) You choose the input for which You want to configure the trigger output. With the rotary encoder (8) You can decide whether the trigger signal is high or low, if the actual input is selected.

9. system menu...

Press **ok** (6) and select by pressing the buttons \triangle or ∇ (4, 5):

9.1 service ID...

Pressing the **ok** key (6) shows the identcode of Your amplifier on the display.

9.2 hardware scan...

Pressing the **ok** key (6) initializes a self test of the amplifier. The results are shown in the display.

9.3 remote control...

After pressing **ok** (6) You can select the remote control.

9.3.1 remote control

Using the rotary encoder (8) You can select:

philips standard rc5: Nearly all PHILIPS standard remote controls using RC5 code.

avm system rc2: AVM touch screen remote control (ask Your dealer).

avm system rc1: AVM standard remote control (ask Your dealer).

After leaving the menu by pressing **menu** (7) the setting is stored.

9.4 factory setting...

By pressing **ok** (6) You can reset the amplifier to the factory setting. All individual settings are cancelled. For security reason You are asked to press **ok** (6) again before the reset procedure begins. If You don't want to reset the unit, press **menu** to exit without resetting.

5. Remote control (option)

As accessories we offer two different infrared remote control transmitters. Ask Your dealer.

6. Installation of modules

On the rear panel are two slots for installation of additional modules. (for example phono input, multichannel in/out, additional XLR input).

To install a module You have to unscrew the cover of one of the slots. Then insert the module and fix it by two screws. For details about the modules refer to their individual operating instructions.

CAUTION: Before installing a module we recommend strongly that You pull the mains plug of Your amplifier. Otherwise the amplifier or the module can be damaged.

7. Cleaning

Use a soft cloth and normal glass cleansing fluid.

CAUTION: Make shure that no fluid comes into the unit. Do not use scouring cleaners. They may damage the surface.

8. If something doesn't work.....

Some putative defects are often caused by mistakes in operation. Sometimes other units connected to the amplifier can ause problems. Therefore please read the following tips before You consult Your dealer or us.

1. Amplifier is muted

- a) Outputs of the amplifier are disabled. Switch them on (**Menü 3 output control...**).
- b) MONITOR function is activated. Switch monitor off (**Menü 4 set monitor on/off**).
- c) PROCESSOR function is activated. Switch processor off (**Menü 5 set processor on/off**).
- d) Inadvertent switching to standby by remote control. Press **power** (1). If the LED indicator and display do not light up a fuse can be blown due to overvoltage (thunderstorm). Please contact Your dealer.

2. Amplifier swiches off during normal operation

This can happen if the temperature inside the unit becomes too high (a6 only). In this case the amplifier switches off and the display shows "**overheat**". Switch the amplifier off and let it cool down for five minutes.

If the Display shows "**overload**" (a6 only) please check if there is a short circuit in the speaker cables. Switch the amplifier off by pressing **power** (1) remove the short circuit and switch the amplifier again on.

If the display shows "**DC left**" or "**DC right**", this indicates a DC voltage coming from a signal source which is connected to the amplifier. Disconnect the defective unit from the a6 / v6.

If the display shows "**power fail**", this indicates that a short drop in mains voltage occured. The amplifier then switches off for security reasons. In this case switch the amplifier off by using the mains switch (37) and then after 5 seconds on again. If the display shows again "**power fail**", please contact Your dealer.

3. Hum

- a) Hum while playing records: Make shure that the chassis of Your record player is properly grounded.

4. Infrared remote control doesn't work

- a) Check the batteries of Your remote control transmitter
- b) Point whith the remote control transmitter directly to the amplifier.
- c) Wrong type of remote control is selected (**Menü 9.3 remote control...**).

9. Technical data inspiration a6 / v6

	pre out	speaker out (a6 only)
Input sensitivity		
High level in (180W into 4 Ohms, 1 V at pre out)	0,075 – 1,2 V (variable)	0,075 – 1,2 V (variable)
Input impedance		
High level in Processor	4,7 kOhms 10 kOhms	
S/N ratio	>102 dB(A)	>96 dB(A)
Frequency response		
Frequency response (4 Ohms)	< 5 Hz - > 100 kHz	<5 Hz - >100 kHz
Load bandwidth 25 W/4 Ohms	< 5 Hz - > 100 kHz	<5 Hz - >100 kHz
Rise time 4 Ohms	< 1 μ s	<2 μ s
Output impedance / damping factor	50 Ohms/150 Ohms (RCA-Cinch / XLR)	>150
Output		
Power into 8 Ohms load		> 110 Watts
Power into 4 Ohms load		> 180 Watts
Power into 2 Ohms load		> 220 Watts
THD+N (1 V / 1 kOhm 25 W/4 Ohms)	< 0,01%	< 0,015 %
General		
Power supply	a6: 230 Volt / 50 Hz / 550 VA (standby 6 VA)	
Power supply	v6: 230 Volt / 50 Hz / 30 VA (standby 6 VA)	
Dimensions (w x h x d)	430 mm x 95 mm x 380 mm	
Weight	a6: 12 kg, v6: 8 kg	

We reserve the right for changes without notice

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