

IPC-6608

Industrial PC Chassis

User's Manual

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Table of Contents

Chapter 1 General Information.....	1
Introduction.....	2
Specifications.....	2
Passive Backplane Options.....	2
Power Supply Options.....	2
Dimension of IPC-6608.....	4
Bidirectional mounting.....	5
Chapter 2 System Setup.....	7
Removing the cover.....	8
Adding disk drives.....	9
Hold-down clamp.....	9
Appendix A Passive Backplanes.....	14
PCA-6108E: 8-slot ISA-bus backplane.....	14
PCA-6108P4: 3 ISA / 4 PCI / 1 CPU-slot backplane.....	15
PCA-6108P6-B: 1 ISA / 6 PCI / 1 CPU-slot backplane.....	16
Appendix B Exploded Diagram.....	17
Exploded Diagram & Parts List.....	18
Appendix C Safety Instructions.....	19
English.....	20
German - wichtige sicherheishinweise.....	21

CHAPTER

1

**General
Information**

Introduction

Specifically designed for factory floors and other harsh industrial environments, the IPC-6608 Wall-mount IPC Chassis is ideal for system integrators or users who require a compact, rugged PC/AT compatible system. The IPC-6608 features an 8-slot passive backplane and a wide selection of power supplies to meet different application needs. The chassis is only 6.8" wide and can easily be mounted bidirectionally on panels or walls with the supplied brackets.

Specifications

- **Construction:** Heavy-duty steel
- **Disk drive capacity:** One 3.5" and two 5.25" bays, front accessible
- **Indicators:** LEDs for power On/Off and HDD
- **Controls:** Power on and reset switches on front panel
- **Cooling fan:** One 86-CFM fan on front panel with air filter
- **Weight:** 12.3 lb (5.6 Kg)
- **Dimensions:** 6.8" (W) x 12.4" (H) x 16.1" (D)
(173 mm x 315 mm x 410 mm)

Passive Backplane Options

- **PCA-6108E:** 8 ISA slots
- **PCA-6108P4:** 3 ISA, 4 PCI and 1 system slots
- **PCA-6108P6-B:** 1 ISA, 6 PCI and 1 system slots

For detailed specifications of other backplane options please contact your local sales representative or visit Advantech's web site: <http://www.advantech.com>

Power Supply Options

250W ATX Power Supply (PS-250X-DPS)

- **Output rating:** 250 watts max.

- **Input rating:** 90 ~ 135 Vac or 180 ~ 265 Vac @ 47 ~ 63 Hz, switchable
- **Output voltage:** +5 V @ 25 A, +12 V @ 8 A, -5 V @ 0.5 A, -12 V @ 0.8 A, +3.3 V @ 14 A, +5 VSB @ 1 A
- **Minimum load:** +5 V @ 1.5 A, +12 V @ 0.2 A
- **MTBF:** 100,000 hours @25° C, full load
- **Safety:** UL/C-UL/TUV/Nemko/FCC/CE/CB

300W ATX Power Supply (PS-300ATX-Z)

- **Output rating:** 300 watts max, 275 watts max. @ 50°C
- **Input rating:** 90 ~ 135 Vac or 180 ~ 265 Vac @ 47 ~ 63 Hz, auto-switch
- **Output voltage:** +5 V @ 30 A, +12 V @ 15 A, -5 V @ 0.3 A, -12 V @ 0.8 A, +3.3 V @ 24 A, +5 VSB @ 2 A
- **Minimum load:** +5 V @ 1 A, +12 V @ 0.5 A, +3.3 V @ 0.3 A
- **Power Factor Correction:** meets EN 61000-3-2 Class D
- **MTBF:** 100,000 hours @ 25°C, 275 watts load
- **Safety:** UL/CSA/CE/NORDIC /CB

260W AT Power Supply (PS-260-610E)

- **Output rating:** 260 watts max.
- **Input rating:** 90 ~ 130 Vac or 180 ~ 265 Vac @ 47 ~ 63 Hz, switchable
- **Output voltage:** +5 V @ 25 A, +12 V @ 9 A, -5 V @ 0.5 A, -12 V @ 2A
- **Minimum load:** +5 V @ 1 A, +12 V @ 0.1 A
- **MTBF:** 140,000 hours @ 50°C, full load
- **Safety:** UL/CSA/CE/TUV

For detailed specifications of other backplane options please contact your local sales representative or visit Advantech's web site: <http://www.advantech.com>

Environmental Specifications

- **Operating temperature:** 32 to 122°F (0 to 50°C)
- **Relative humidity:** 10 to 95% @ 40°C, non-condensing
- **Safety:** CE compliant

Dimension of IPC-6608

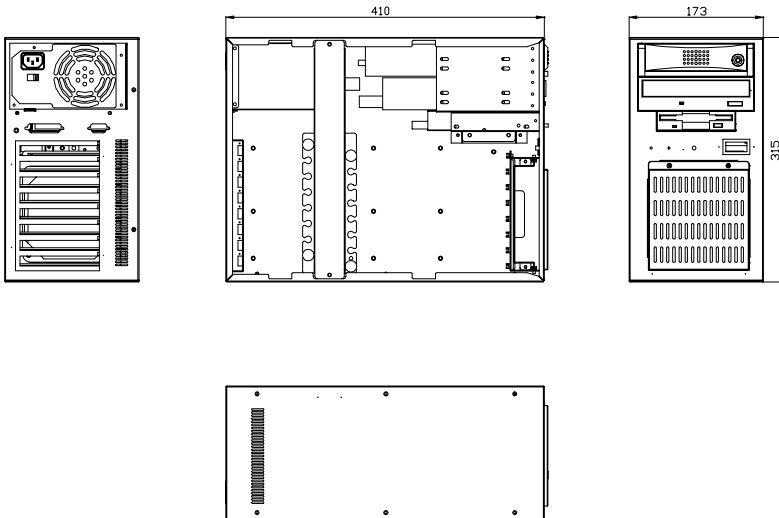


Figure 1-1 : Dimension of IPC-6608

Units = mm

Bidirectional mounting

Attached the IPC-6608 with two mounting brackets to the bottom or right-side of the chassis (see figure 1-2). These special mounting brackets allow you to mount the chassis onto most surfaces, such as wall, panel, work bench, underneath or on top of a desk or table.

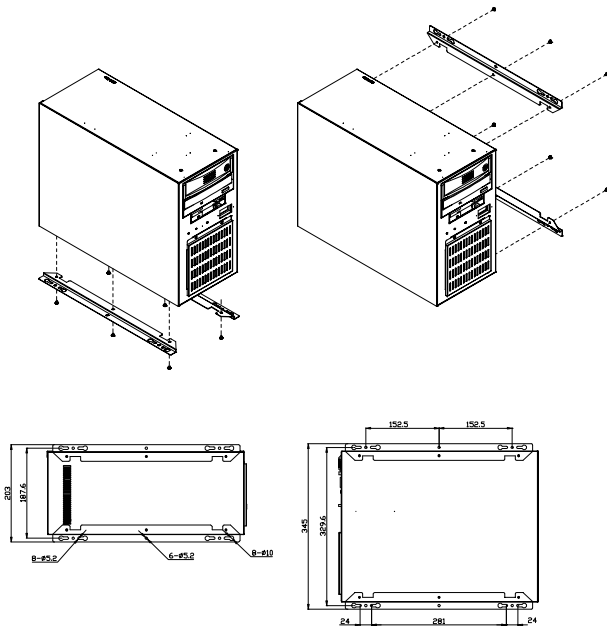


Figure 1-2 : Bottom and Right-side of mounting

Units = mm

CHAPTER
2

System Setup

The following procedures are provided to assist you in installing drives, plug-in cards and the hold-down clamp into the IPC-6608.

Removing the cover

To remove the cover, hold-down clamp and disk bay, please refer to figure 2-1.

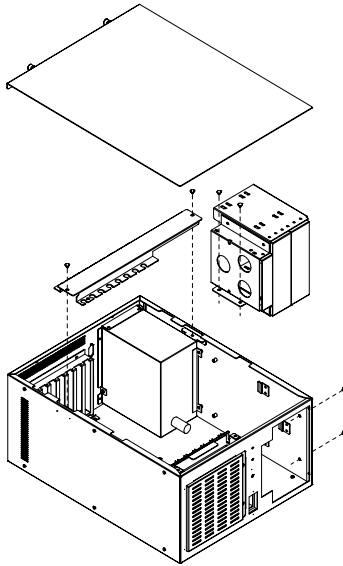


Figure 2-1. Removing the cover

Adding disk drives

To install a HDD or FDD, refer to Fig. 2-2 and proceed as follows:

Floppy disk & Hard disk drive:

- a. Attach the FDD to the bracket with four screws and connect a 34-pin flat-cable & power cable to the FDD.
- b. Attach the HDD to the bracket with four screws and connect a 40-pin flat-cable & power cable to the HDD.

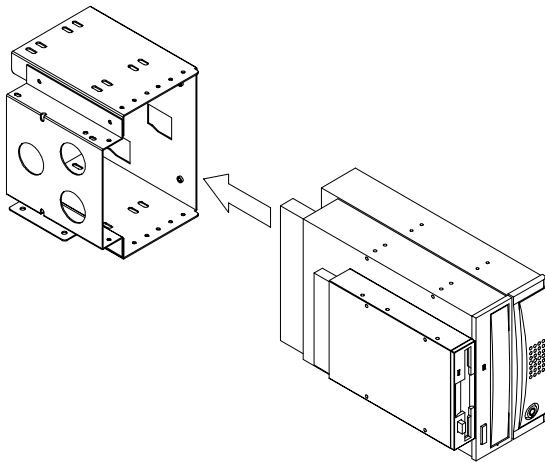


Figure 2-2. Installing the drives

Hold-down clamp

1. Insert the rubber buffers into the hold-down clamp (see Fig. 2-3). Buffers cushion plug-in cards from shock and vibration. The hold-down clamp has two rows of notches for the rubber buffers to be inserted, one row is for PCI cards, the other row for ISA cards. Depending on the card height, the buffers can be inserted as the narrow end face upwards or downwards.

2. After inserting the rubber buffers, fasten the hold-down clamp to the card cage with the two screws (see Fig. 2-3).

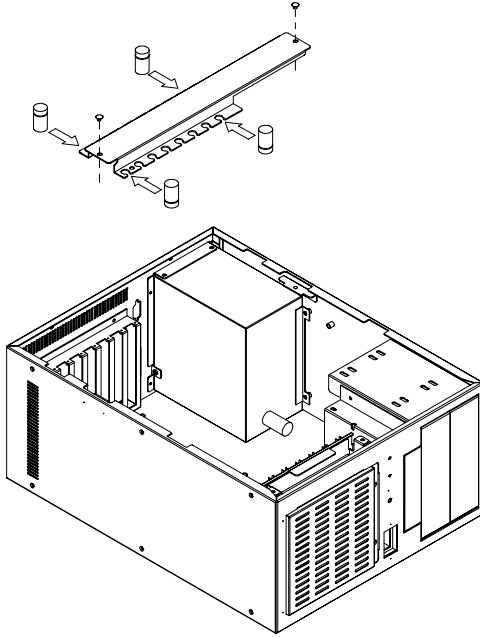


Figure 2-3. Hold-down clamp installation

Replacing the filter

To change the filter, located at the front end of the chassis, see Fig. 2-4.

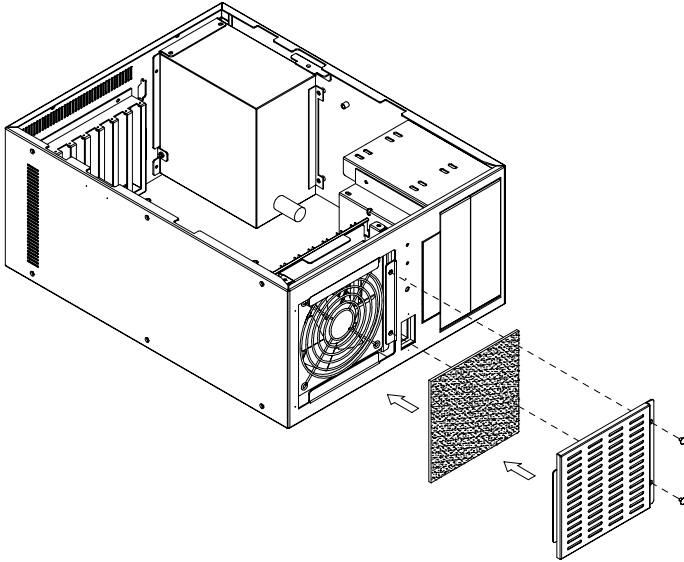


Figure 2-4 Changing the filter

1. Remove the two screws located on the right side of the filter cover.
Gently but firmly pull the cover from the chassis.
2. Remove the filter and replace it with a new one.
3. Reinsert the filter and replace the cover onto the chassis.

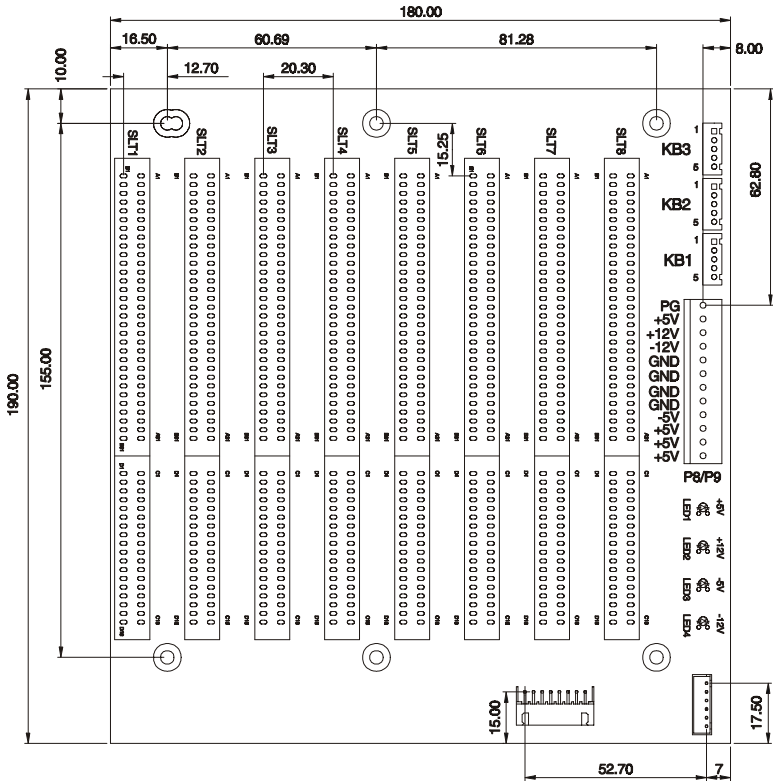
APPENDIX
A

Passive Backplanes

Appendix A Passive Backplanes

PCA-6108E: 8-slot ISA-bus backplane

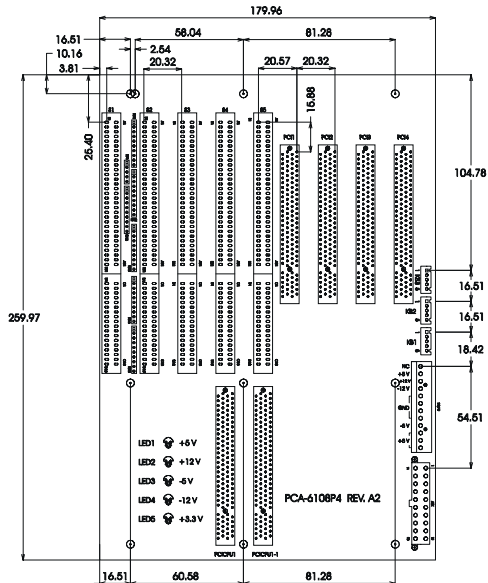
Dimensions: 180 x 190 mm



Unit: mm

PCA-6108P4: 3 ISA / 4 PCI / 1 CPU-slot backplane

Dimensions: 180 x 260 mm



1. CONNECTORS

CONNECTOR	DESCRIPTION
SLI4 ~ 5	PICMG connectors
SLI1 ~ 3	16-bit ISA-bus connector
PCI1 ~ 4	32-bit PCI-bus connectors
KB1 ~ 3	Keyboard connector extension adapter
P8/P9	To PS/2 power connector
ATX	ATX power connector

2. PIN ASSIGNMENTS

KB1 ~ 3	
PIN	NAME
1	KBCLK
2	KBDDATA
3	NC
4	GND
5	+5 V

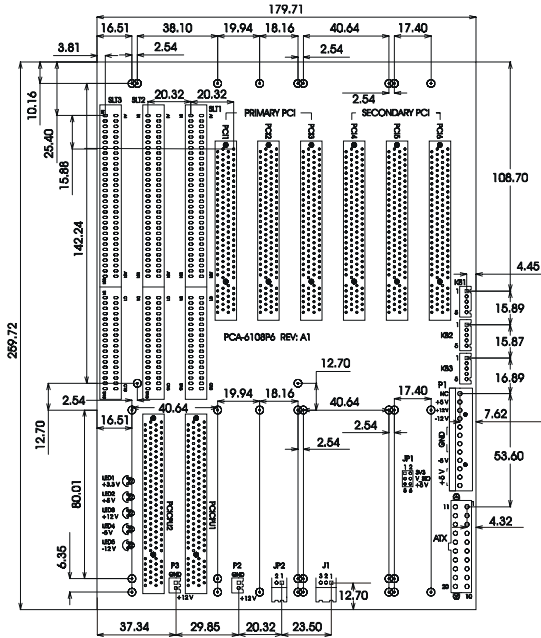
P8/P9	
PIN	NAME
1	NC
2	+5 V
3	+12 V
4	-12 V
5	GND
6	GND
7	GND
8	GND
9	-5 V
10	+8 V
11	+5 V
12	+5 V

ATX			
PIN	NAME	PIN	NAME
1	+3.3 V	11	+3.3 V
2	+3.3 V	12	-12 V
3	GND	18	GND
4	+5 V	14	PS-ON
5	GND	15	GND
6	+5 V	16	GND
7	GND	17	GND
8	NC	18	-5 V
9	NC	19	+5 V
10	+12 V	20	+5 V

Unit: mm

PCA-6108P6-B: 1 ISA / 6 PCI / 1 CPU-slot backplane

Dimensions: 180 x 260 mm



1. CONNECTORS

CONNECTOR	DESCRIPTION
S11 ~ 2	PICMG connectors
S13	16-bit ISA-bus connector
PC1 ~ 3	32-bit PCI-bus connectors (primary)
PC4 ~ 6	32-bit PCI-bus connectors (secondary)
KB1 ~ 3	Keyboard connector extension adaptor
P1	PS/2 power connector
ADX	ADX power connector
* P1, ADX use one connector only	
J1	To CPU card for ADX power signal
JP2	Power ON for ADX power supply
P2, P3	For CPU fan and system fan
JPI	V- IO for secondary PCI bus

* JPI	
1-3, 2-4 closed	V _{IO} = +3.3 V for secondary PCI bus
3-5, 4-6 closed	V _{IO} = +5 V for secondary PCI bus

* Default

2. PIN ASSIGNMENTS

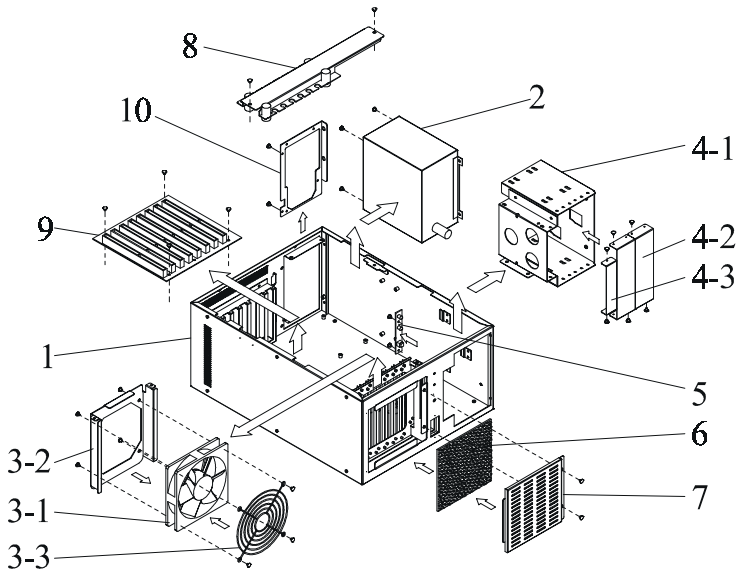
KB1 ~ 3		P1		ADX	
PIN	NAME	PIN	NAME	PIN	NAME
1	KBCLK	1	NC	1	+3.3 V
2	KBODATA	2	+5 V	2	+3.3 V
3	NC	3	+12 V	3	GND
4	GND	4	-12 V	4	+5 V
5	+5 V	5	GND	5	GND
6	GND	6	GND	6	+5 V
7	GND	7	GND	7	GND
8	GND	8	NC	8	-5 V
9	-5 V	9	5 V STB	9	+5 V
10	+5 V	10	+5 V	10	+12 V
11	+5 V	11	+5 V	11	+3.3 V
12	+5 V	12	+5 V	12	-12 V

* JP2	
Closed	ADX power supply power ON
Open	ADX power supply power OFF

APPENDIX **B**

Exploded Diagram

Exploded Diagram & Parts List



Parts List			
1	Body of Chassis IPC-6608	5	LED Board
2	PS/2 Power Supply	6	Air Filter
3-1	Cooling Fan	7	Fan Cover
3-2	Fan Bracket	8	Hold-Down Clamp
3-3	Fan Guard	9	Backplane
4-1	Disk Drive Bay	10	Bracket for Power Unit
4-2	Cover of 5.25" Drive Bay		
4-3	Cover of 3.5" Drive Bay		

APPENDIX

C

Safety Instructions

C.1 English

1. Read these safety instructions carefully.
2. Keep this installation reference guide for later reference.
3. Disconnect this equipment from any AC outlet before cleaning. Do not use liquid or spray detergents for cleaning. Use a damp cloth.
4. For pluggable equipment, the power outlet must be installed near the equipment and must be easily accessible.
5. Keep this equipment away from humidity.
6. Put this equipment on a reliable surface during installation. Dropping it or letting it fall could cause damage.
7. The openings on the enclosure are for air convection. Protect the equipment from overheating. **DO NOT COVER THE OPENINGS.**
8. Make sure the voltage of the power source is correct before connecting the equipment to the power outlet.
9. Position the power cord so that people cannot step on it. Do not place anything over the power cord.
10. All cautions and warnings on the equipment should be noted.
11. If the equipment is not used for a long time, disconnect it from the power source to avoid damage by transient over-voltage.
12. Never pour any liquid into an opening. This could cause fire or electrical shock.
13. Never open the equipment. For safety reasons, the equipment should be opened only by qualified service personnel.
14. If any of the following situations arises, get the equipment checked by service personnel:
 - a. The power cord or plug is damaged.
 - b. Liquid has penetrated into the equipment.
 - c. The equipment has been exposed to moisture.
 - d. The equipment does not work well, or you cannot get it to work according to the installation reference guide.
 - e. The equipment has been dropped and damaged.
 - f. The equipment has obvious signs of breakage.
15. **DO NOT LEAVE THIS EQUIPMENT IN AN UNCONTROLLED ENVIRONMENT WHERE THE STORAGE TEMPERATURE IS BELOW -20° C (-4° F) OR ABOVE 60° C (140° F). THIS MAY DAMAGE THE EQUIPMENT.**

The sound pressure level at the operator's position according to IEC 704-1:1982 is equal to or less than 70 dB(A).

DISCLAIMER: This set of instructions is given according to IEC 704-1. Advantech disclaims all responsibility for the accuracy of any statements contained herein.

C.2 German - wichtige Sicherheitshinweise

1. Bitte lesen Sie sich diese Hinweise sorgfältig durch.
2. Heben Sie diese Anleitung für den späteren Gebrauch auf.
3. Vor jedem Reinigen ist das Gerät vom Stromnetz zu trennen. Verwenden Sie keine Flüssig- oder Aerosolreiniger. Am besten dient ein angefeuchtetes Tuch zur Reinigung.
4. Die Netzanschlußsteckdose soll nahe dem Gerät angebracht und leicht zugänglich sein.
5. Das Gerät ist vor Feuchtigkeit zu schützen.
6. Bei der Aufstellung des Gerätes ist auf sicheren Stand zu achten. Ein Kippen oder Fallen könnte Verletzungen hervorrufen.
7. Die Belüftungsöffnungen dienen zur Luftzirkulation die das Gerät vor Überhitzung schützt. Sorgen Sie dafür, daß diese Öffnungen nicht abgedeckt werden.
8. Beachten Sie beim Anschluß an das Stromnetz die Anschlußwerte.
9. Verlegen Sie die Netzanschlußleitung so, daß niemand darüber fallen kann. Es sollte auch nichts auf der Leitung abgestellt werden.
10. Alle Hinweise und Warnungen die sich an den Geräten befinden sind zu beachten.
11. Wird das Gerät über einen längeren Zeitraum nicht benutzt, sollten Sie es vom Stromnetz trennen. Somit wird im Falle einer Überspannung eine Beschädigung vermieden.
12. Durch die Lüftungsöffnungen dürfen niemals Gegenstände oder Flüssigkeiten in das Gerät gelangen. Dies könnte einen Brand bzw. elektrischen Schlag auslösen.
13. Öffnen Sie niemals das Gerät. Das Gerät darf aus Gründen der elektrischen Sicherheit nur von autorisiertem Servicepersonal geöffnet werden.
14. Wenn folgende Situationen auftreten ist das Gerät vom Stromnetz zu trennen und von einer qualifizierten Servicestelle zu überprüfen:
 - a. Netzkabel oder Netzstecker sind beschädigt.
 - b. Flüssigkeit ist in das Gerät eingedrungen.
 - c. Das Gerät war Feuchtigkeit ausgesetzt.
 - d. Wenn das Gerät nicht der Bedienungsanleitung entsprechend funktioniert oder Sie mit Hilfe dieser Anleitung keine Verbesserung erzielen.
 - e. Das Gerät ist gefallen und/oder das Gehäuse ist beschädigt.
 - f. Wenn das Gerät deutliche Anzeichen eines Defektes aufweist.
15. Bitte lassen Sie das Gerät nicht unbehehrt hinten unter -20° C (-4° F) oder oben 60° C (140° F), weil diesen Temperaturen das Gerät zerstören könnten.

Der arbeitsplatzbezogene Schalldruckpegel nach DIN 45 635 Teil 1000 beträgt 70dB(A) oder weniger.

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