

D610H, D610H MKII,
D610S, D610T

dimmer pack

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1 General information

This manual contains important instructions for the safe operation of the unit. Read and follow the safety instructions and all other instructions. Keep the manual for future reference. Make sure that it is available to all those using the device. If you sell the unit please make sure that the buyer also receives this manual.

Our products are subject to a process of continuous development. Thus, they are subject to change.

1.1 Further information

On our website (www.thomann.de) you will find lots of further information and details on the following points:

Download	This manual is also available as PDF file for you to download.
Keyword search	Use the search function in the electronic version to find the topics of interest for you quickly.
Online guides	Our online guides provide detailed information on technical basics and terms.
Personal consultation	For personal consultation please contact our technical hotline.
Service	If you have any problems with the device the customer service will gladly assist you.

1.2 Notational conventions

This manual uses the following notational conventions:

Letterings

The letterings for connectors and controls are marked by square brackets and italics.

Examples: *[VOLUME]* control, *[Mono]* button.

Displays

Texts and values displayed on the device are marked by quotation marks and italics.

Examples: *'24ch'*, *'OFF'*.

1.3 Symbols and signal words

In this section you will find an overview of the meaning of symbols and signal words that are used in this manual.

Signal word	Meaning
DANGER!	This combination of symbol and signal word indicates an immediate dangerous situation that will result in death or serious injury if it is not avoided.
NOTICE!	This combination of symbol and signal word indicates a possible dangerous situation that can result in material and environmental damage if it is not avoided.
Warning signs	Type of danger
	Warning – high-voltage.
	Warning – danger zone.

2 Safety instructions

Intended use

This appliance is designed for professional use only and is intended to be used to control the brightness of connected headlights. Any other use or use under other operating conditions is considered to be improper and may result in personal injury or property damage. No liability will be assumed for damages resulting from improper use.

This device may be used only by persons with sufficient physical, sensorial, and intellectual abilities and having corresponding knowledge and experience. Other persons may use this device only if they are supervised or instructed by a person who is responsible for their safety.

Safety



DANGER!

Danger for children

Ensure that plastic bags, packaging, etc. are disposed of properly and are not within reach of babies and young children. Choking hazard!

Ensure that children do not detach any small parts (e.g. knobs or the like) from the unit. They could swallow the pieces and choke!

Never let children unattended use electrical devices.



DANGER!

Electric shock caused by high voltages inside

Within the device there are areas where high voltages may be present. Never remove any covers.

There are no user-serviceable parts inside.



DANGER!

Hazardous voltage

Hazardous voltage may be present at cable ends and screw terminals.

The connection of screw terminals as well as all maintenance and repair work on the electrical installation of the device must only be performed by qualified electrical personnel in volt-free condition. Failure to do so may result in electric shock and risk of fire and loss of life.

By all means you have to observe all electrical safety instructions applicable at the place of operation.



DANGER!

Electric shock caused by short-circuit

Do not modify the mains cable or the plug. Failure to do so could result in electric shock/death or fire. If in doubt, seek advice from a registered electrician.



NOTICE!

Risk of fire

Do not cover the device nor any ventilation slots. Do not place the device near any direct heat source. Keep the device away from naked flames.



NOTICE!

Operating conditions

This device has been designed for indoor use only. To prevent damage, never expose the device to any liquid or moisture. Avoid direct sunlight, heavy dirt, and strong vibrations.



NOTICE!

Power supply

Before connecting the device, ensure that the input voltage (AC outlet) matches the voltage rating of the device and that the AC outlet is protected by a residual current circuit breaker. Failure to do so could result in damage to the device and possibly injure the user.

Unplug the device before electrical storms occur and when it is unused for long periods of time to reduce the risk of electric shock or fire.

3 Features

General features

- 6 dimmer channels
- Digital control system
- Control via DMX 512
- Preheat, dimmer curve and maximum voltage can be adjusted individually
- Indicators for temperature and operation
- Test function
- Intelligent cooling control, large cooling ribs
- Single channel fuse (10 A)
- Made in Europe

Device-specific features**D610H (item no. 163737)**

- Output: 1 × Harting, 16 Pole
- Voltage supply via CEE plug (32 A)

D610H MKII (item no. 190914)

- Outputs: 2 × Harting, 16 Pole
- Voltage supply via CEE plug (32 A)

D610S (item no. 171141)

- Outputs: 6 × safety sockets
- Voltage supply via CEE plug (32 A)

D610T (item no. 327885)

- Outputs: 2 × screw terminal blocks
- Voltage supply via three-phase screw terminal block (32 A)

4 Installation and starting up

Unpack and carefully check that there is no transportation damage before using the unit. Keep the equipment packaging. To fully protect the device against vibration, dust and moisture during transportation or storage use the original packaging or your own packaging material suitable for transport or storage, respectively.

Establish all connections as long as the unit is switched off. Use the shortest possible high-quality cables for all connections.

The device is designed for mounting in 19" racks, it occupies two rack units (RU).

First, connect the loads to the terminals on the back of the device. Establish the DMX link to the controller. Finally, connect the mains power plug of the unit to a 32 A CEE socket (D610H, D610H MKII, D610S) or connect the device via the three-phase phoenix-terminal to the power supply (D610T).

Connection options for blocks L1, L2 and L3 (D610T):

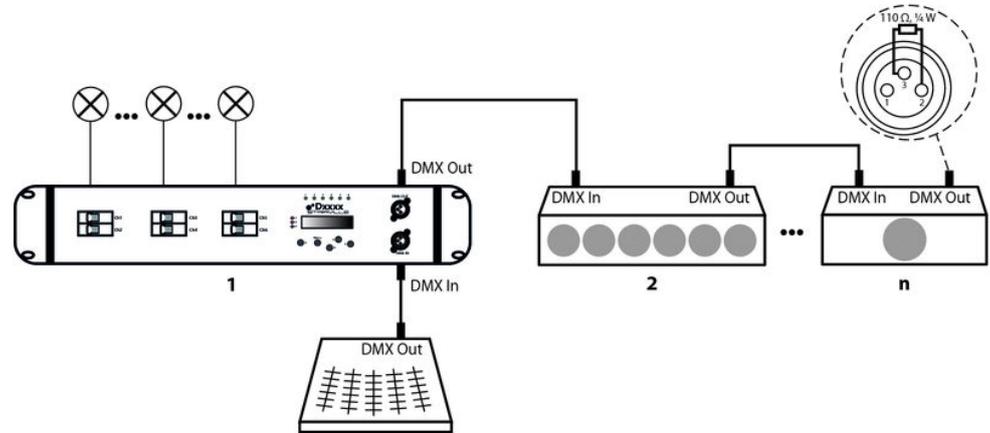
- one block per phase
- one block to one phase, two blocks to a second phases
- all blocks to one phase



Regardless of the actual use, all three blocks should always be connected.

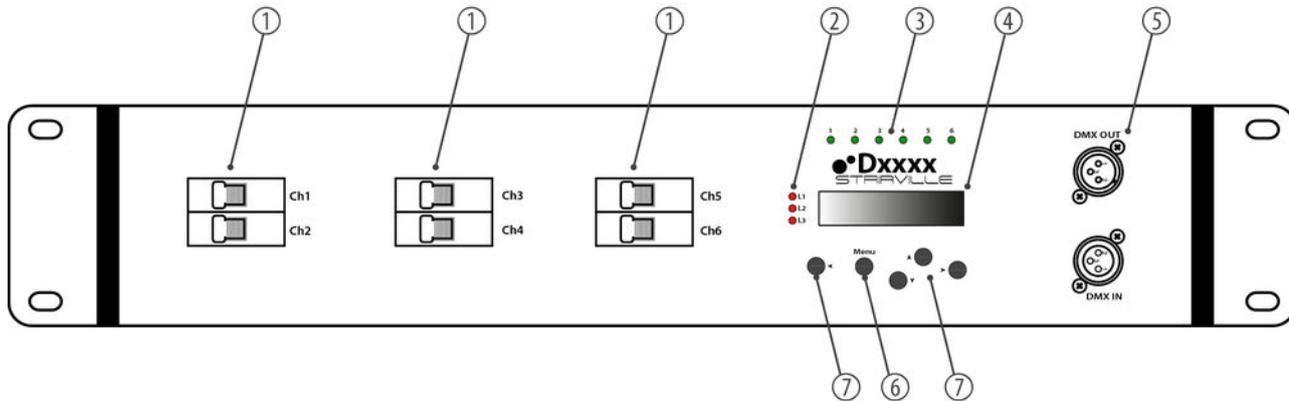
Connections in 'DMX' mode

Connect the DMX input of the device to the DMX output of a DMX controller or other DMX device. Connect the output of the first DMX device to the input of the second and so on, to form a series connection. Make sure that the output of the last DMX device in the chain is terminated by a resistor (110 Ω , 1/4 W).



5 Connections and operating elements

Front panel D610H, D610H MKII,
D610S, D610T



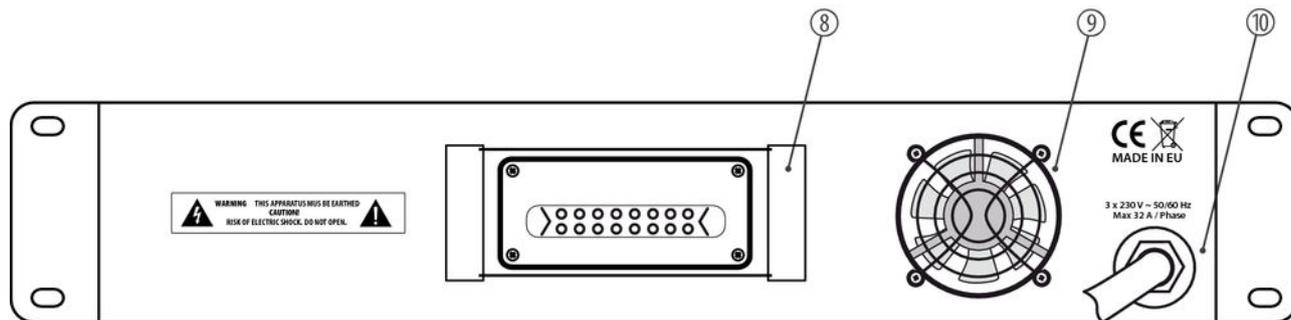
D610H, D610H MKII, D610S, D610T

1	<i>[Ch1]...[Ch6]</i> Circuit breakers for channels 1...6, arranged in three blocks (L1...L3). With the circuit breakers, the desired channels are being activated (<i>[I - ON]</i>) or deactivated (<i>[O - OFF]</i>).
2	<i>[L1]...[L3]</i> Voltage indicators of blocks L1...L3. The LEDs of the connected blocks light red as soon as mains power is applied to the device.
3	<i>[1]...[6]</i> Voltage indicators of channels 1...6. The LEDs of active channels light solid green during operation.
4	Display.
5	<i>[DMX IN] [DMX OUT]</i> DMX input, DMX output.

6	<i>[Menu]</i> Button to open the main menu and confirm display values.
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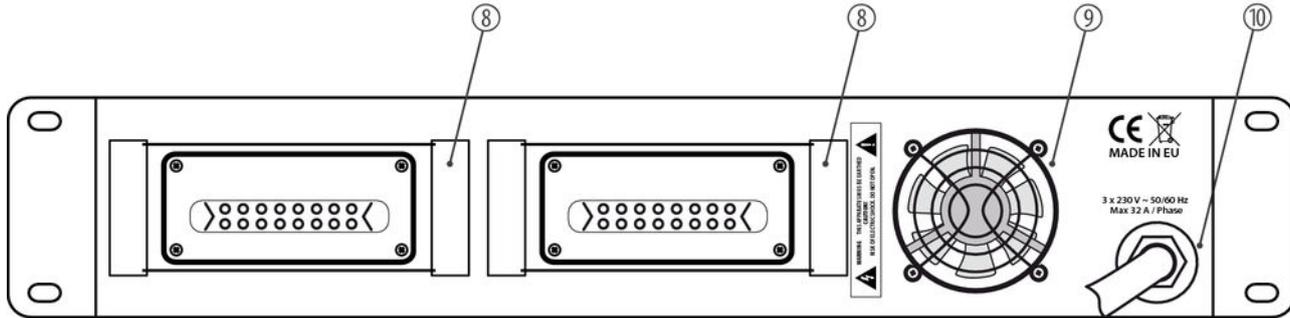
7	Navigation buttons Buttons to navigate the device menu.
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Rear panel D610H



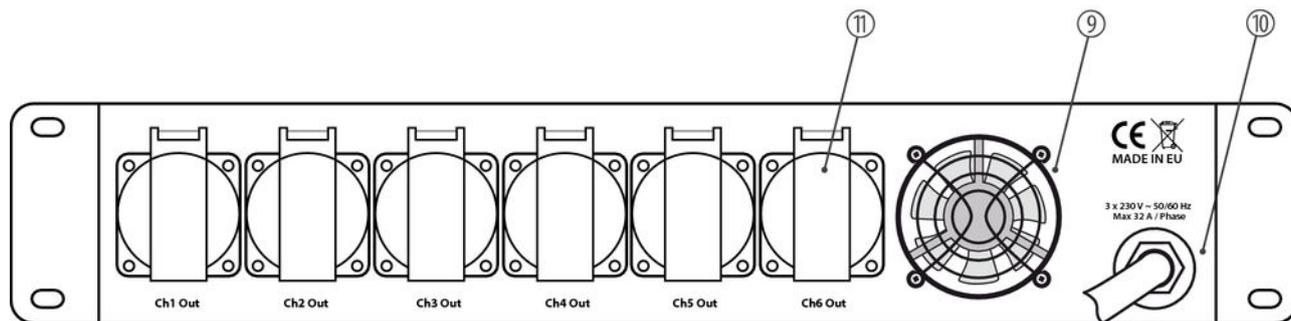
- | | |
|----|--|
| 8 | Dimmer output, 16-pin Harting industrial connector (note the device label when connecting the cables). |
| 9 | Fan. |
| 10 | Power cord with 5-pin CEE plug (32 A, 3 x 230 V). |

Rear panel D610H MKII



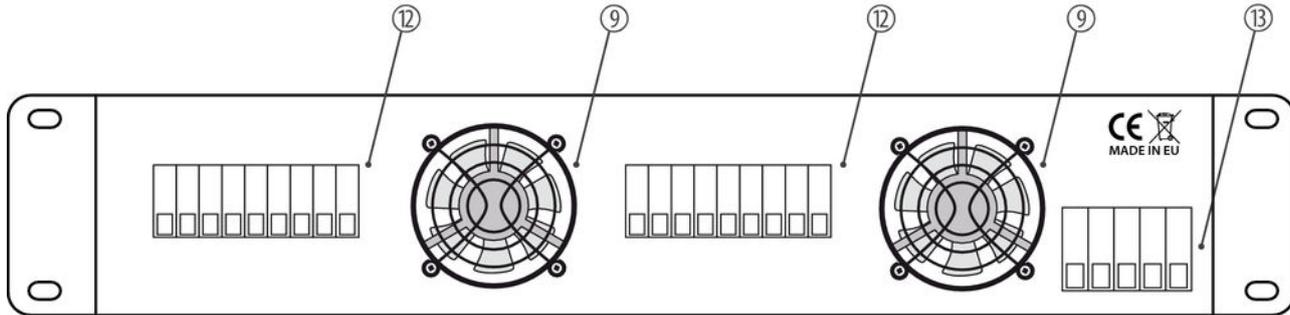
- | | |
|----|--|
| 8 | Dimmer outputs, 2 × 16-pin Harting industrial connectors (note the device label when connecting the cables). |
| 9 | Fan. |
| 10 | Power cord with 5-pin CEE plug (32 A, 3 × 230 V). |

Rear panel D610S



- | | |
|----|---|
| 9 | Fan. |
| 10 | Power cord with 5-pin CEE plug (32 A, 3 × 230 V). |
| 11 | Dimmer outputs, 6 × safety chassis sockets with hinged cover. |

Rear panel D610T



9	Fan.
12	Dimmer outputs, 2 × screw terminals (note the device label when connecting the cables).
13	Power connector (screw terminals), 3-phase (32 A, 3 × 230 V).

D610H, D610H MKII, D610S, D610T

6 Operating

Turning on and off

Once you connect the device to the power supply, it is in standby mode. The LEDs of the connected blocks light red, the display shows *'StandBy Mode / Press StandBy'*.

Press *[Menu]* to switch from standby to normal operation.

Turn on the required channels via the associated circuit breakers (LEDs of active channels light up green).

Use the navigation button ◀ to return to standby mode in order to switch off (menu item *'StandBy Mode / Press StandBy'*) and disconnect the power plug from the 32-A-CEE outlet.

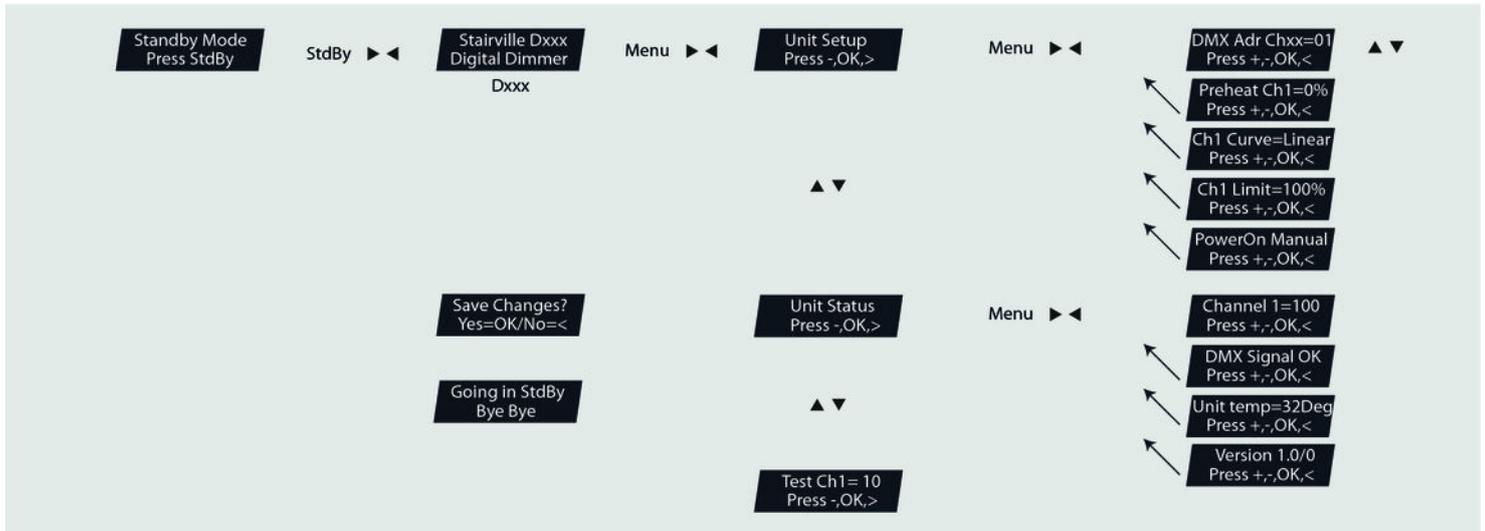
**DANGER!****Hazardous voltage**

Even in standby mode, mains voltage is present on the outputs of the device and on the connected loads.

Hence there is danger to life and the risk of damage to property when connecting and disconnecting loads as well as during maintenance.

Disconnect the power plug from the CEE mains socket before connecting and disconnecting loads as well as prior to maintenance to turn the unit volt-free.

Menu overview



Setting the dimmer curve

The device can be operated in dimmer mode (Linear, Sqrt, Exp1, Exp2) or in Switch mode ('Off' to DMX 64, 'On' from DMX 64).

Proceed as follows to adjust the dimmer curve:

1.  Open the menu 'Unit Setup', 'Ch Curve' (see menu overview).
2.  Confirm with the [Menu] button.
 - ⇒ The channel number display flashes.
3.  Select the desired channel with the navigation buttons ▲ or ▼.
4.  Use the navigation button ► to change to the curve value.
 - ⇒ The displayed value flashes.
5.  Select the desired setting with the navigation buttons ▲ or ▼.
6.  Press the [Menu] button.
 - ⇒ The display shows the confirmation prompt 'Save Changes?'.
7.  Confirm the prompt with [Menu] to save the new settings. To discard the changes, press the navigation button ◀ to return to the previous menu level.

Setting the maximum voltage

The device offers the possibility to limit the maximum voltage for each channel, for example, to extend the life of the illuminants used.

Proceed as follows to adjust the maximum voltage:

1. ▶ Open the menu 'Unit Setup', 'Limit Ch 1=100' (see menu overview).
2. ▶ Confirm with the [Menu] button.
 - ⇒ The channel number display flashes.
3. ▶ Select the desired channel with the navigation buttons ▲ or ▼.
4. ▶ Use the navigation button ▶ to change to the voltage value.
 - ⇒ The displayed value flashes.
5. ▶ Adjust the value using the navigation buttons ▲ or ▼.
6. ▶ Press the [Menu] button.
 - ⇒ The display shows the confirmation prompt 'Save Changes?'.
7. ▶ Confirm the prompt with [Menu] to save the new settings. To discard the changes, press the navigation button ◀ to return to the previous menu level.

Setting the preheat

The preheat can be adjusted in a range from 0...15 %. This function is not available in Switch mode ('Off' to DMX 64, 'On' from DMX 64).

Proceed as follows to adjust the preheat:

1.  Open the menu 'Unit Setup', 'Preheat Ch1 = 0' (see menu overview).
2.  Confirm with the [Menu] button.
 - ⇒ The channel number display flashes.
3.  Select the desired channel with the navigation buttons ▲ or ▼.
4.  Use the navigation button ► to change to the preheat value.
 - ⇒ The displayed value flashes.
5.  Adjust the value using the navigation buttons ▲ or ▼.
6.  Press the [Menu] button.
 - ⇒ The display shows the confirmation prompt 'Save Changes?'.
7.  Confirm the prompt with [Menu] to save the new settings. To discard the changes, press the navigation button ◀ to return to the previous menu level.

Setting the DMX address

Proceed as follows to set the DMX address:

- 1.** ▶ Open the menu 'Unit Setup', 'DMX Addr Ch 1 =01' (see menu overview).
- 2.** ▶ Confirm with the [Menu] button.
 - ⇒ The channel number display flashes.
- 3.** ▶ Select the desired channel with the navigation buttons ▲ or ▼.
- 4.** ▶ Use the navigation button ▶ to change to the set DMX address.
 - ⇒ The displayed value flashes.
- 5.** ▶ Adjust the value using the navigation buttons ▲ or ▼.
- 6.** ▶ Press the [Menu] button.
 - ⇒ The display shows the confirmation prompt 'Save Changes?'.
- 7.** ▶ Confirm the prompt with [Menu] to save the new settings. To discard the changes, press the navigation button ◀ to return to the previous menu level.



When setting channel 1, the following channels are automatically addressed consecutively. This addressing may be adjusted as described above.

Switch mode

The unit is operational as soon as power is applied. The activation is done automatically in 'Power on' mode and in 'Manual' mode using the [Standby] button.

Proceed as follows to adjust the Switch mode:

- 1.** ➤ Open the menu 'Unit Setup', 'PowerOn' (see menu overview).
- 2.** ➤ Confirm with the [Menu] button.
 - ⇒ The current setting appears on the display.
- 3.** ➤ Select the desired Switch-on mode with the navigation buttons ▲ or ▼.
- 4.** ➤ Press the [Menu] button.
 - ⇒ The display shows the confirmation prompt 'Save Changes?'.
- 5.** ➤ Confirm the prompt with [Menu] to save the new settings. To discard the changes, press the navigation button ◀ to return to the previous menu level.

Test mode

In Test mode, you can check the individual channels.

- 1.** ▶ Open the menu 'Test Ch 1=0' (see menu overview).
- 2.** ▶ Confirm with the [Menu] button.
 - ⇒ The channel number display flashes.
- 3.** ▶ Select the desired channel with the navigation buttons ▲ or ▼.
- 4.** ▶ Change with the navigation buttons ▶ and ◀ between channel number and channel value.
- 5.** ▶ Press the [Menu] button to exit Test mode.
 - ⇒ The display shows the confirmation prompt 'Save Changes?'.
- 6.** ▶ Confirm the prompt with [Menu] to save the changed settings.

Channel value display

Proceed as follows to display the channel values:

1. ▶ Open the menu *'Unit Setup'*, *'Channel 1= 68'* (see menu overview).
2. ▶ Confirm with the *[Menu]* button.
 - ⇒ The channel number display flashes.
3. ▶ Select the desired channel with the navigation buttons ▲ or ▼.
4. ▶ Press the *[Menu]* button to exit the menu.

Block temperature display

Open the menu *'Unit Status'*, *'Unit Temp=34Deg'* to display the temperature of the individual blocks (see menu overview). Select the desired block with the navigation buttons ▲ or ▼.

Above a temperature of 45 °C, the internal fans will be switched on. The fan power will be increased continuously up to 100 % to a temperature of 65 °C. Above a temperature of 95 °C, the over-temperature protection responses and turns the corresponding block off. Then the display shows *'L...Overheat | Unit Overheated'*. Once the temperature has dropped back below 80 °C, the block is automatically reconnected.

Checking DMX status

To retrieve the DMX status, open the menu *'Unit Status'*, *'DMX Signal'* (see menu overview). When the signal is received correctly, the display will show *'DMX Signal OK'*. On a faulty signal, *'No DMX Signal'* appears. In this case, check the connecting cables and DMX settings on the device.

7 Technical specifications

Operating supply voltage		AC 380 V ~ , 50 Hz
Electrical connection		Three-phase connection, max. 32 A per phase
Channel fuse		1 × circuit breaker per channel, 10 A, 'C' characteristic
Signal input		DMX 512 via 3-pin XLR socket
Dimmer outputs	D610H	1 × Harting industrial connector, 16-pin
	D610H MKII	2 × Harting industrial connectors, 16-pin
	D610S	6 × safety chassis sockets
	D610T	2 × screw terminal blocks
Dimensions (W × H × D)		483 mm × 90 mm × 390 mm
Weight		10.8 kg

D610H, D610H MKII, D610S, D610T

8 Plug and connection assignment

Introduction

This chapter will help you select the right cables and plugs to connect your valuable equipment so that a perfect light experience is guaranteed.

Please take our tips, because especially in 'Sound & Light' caution is indicated: Even if a plug fits into a socket, the result of an incorrect connection may be a destroyed DMX controller, a short circuit or 'just' a not working light show!

DMX connections

The unit offers a 3-pin XLR socket for DMX output and a 3-pin XLR plug for DMX input. Please refer to the drawing and table below for the pin assignment of a suitable XLR plug.



Pin	Configuration
1	Ground, shielding
2	Signal inverted (DMX-, 'cold signal')
3	Signal (DMX+, 'hot signal')

9 Protecting the environment

Disposal of the packaging material



For the transport and protective packaging, environmentally friendly materials have been chosen that can be supplied to normal recycling.

Ensure that plastic bags, packaging, etc. are properly disposed of.

Do not just dispose of these materials with your normal household waste, but make sure that they are collected for recycling. Please follow the notes and markings on the packaging.

Disposal of your old device



This product is subject to the European Waste Electrical and Electronic Equipment Directive (WEEE). Do not dispose with your normal household waste.

Dispose of this device through an approved waste disposal firm or through your local waste facility. When discarding the device, comply with the rules and regulations that apply in your country. If in doubt, consult your local waste disposal facility.



