BOTEX
STAGE TECHNOLOGY

DPX-1210T NET

User Manual

Dimmer Pack

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DPX-1210T NET
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1 General information

This document contains important instructions for the safe operation of the product. Read and follow the safety instructions and all other instructions. Keep the document for future reference. Make sure that it is available to all those using the product. If you sell the product to another user, be sure that they also receive this document.

Our products and documentation are subject to a process of continuous development. They are therefore subject to change. Please refer to the latest version of the documentation, which is ready for download under *www.thomann.de*.

1.1 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 document.

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 spotlights. Use the device only as described in this user manual. 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!

Risk of injury and choking hazard for children!

Children can suffocate on packaging material and small parts. Children can injure themselves when handling the device. Never allow children to play with the packaging material and the device. Always store packaging material out of the reach of babies and small children. Always dispose of packaging material properly when it is not in use. Never allow children to use the device without supervision. Keep small parts away from children and make sure that the device does not shed any small parts (such knobs) that children could play with.

DANGER!

Danger to life due to electric current!

Within the device there are areas where high voltages may be present. Never remove any covers. There are no user-serviceable parts inside. Do not use the device when covers, safety equipment or optical components are missing or damaged.

DANGER!

Risk of death from electrical current!

Hazardous voltage may be present at cable ends and screw terminals. The connection of screw terminals and all maintenance and repair work on the electrical installation of the device may only be performed by a qualified electrician. Always perform maintenance and repair work when the device is free from voltage. Failure to comply may result in electric shock and risk of fire and loss of life. Always observe all electrical safety instructions applicable in the country of operation.

NOTICE!

Risk of fire due to covered vents and neighbouring heat sources!

If the vents of the device are covered or the device is operated in the immediate vicinity of other heat sources, the device can overheat and burst into flames. Never cover the device or the vents. Do not install the device in the immediate vicinity of other heat sources. Never operate the device in the immediate vicinity of naked flames.

NOTICE!

Damage to the device if operated in unsuitable ambient conditions!

The device can be damaged if it is operated in unsuitable ambient conditions. Only operate the device indoors within the ambient conditions specified in the "Technical specifications" chapter of this user manual. Avoid operating it in environments with direct sunlight, heavy dirt and strong vibrations. Avoid operating it in environments with strong temperature fluctuations. If temperature fluctuations cannot be avoided (for example after transport in low outside temperatures), do not switch on the device immediately. Never subject the device to liquids or moisture. Never move the device to another location while it is in operation. In environments with increased dirt levels (for example due to dust, smoke, nicotine or mist): Have the device cleaned by qualified specialists at regular intervals to prevent damage due to overheating and other malfunctions.

NOTICE!

Damage to the device due to high voltages!

The device can be damaged if it is operated with the incorrect voltage or if high voltage peaks occur. In the worst case, excess voltages can also cause a risk of injury and fires. Make sure that the voltage specification on the device matches the local power grid before plugging in the device. Only operate the device from professionally installed mains sockets that are protected by a residual current circuit breaker (FI). As a precaution, disconnect the device from the power grid when storms are approaching or it the device will not be used for a longer period.

3   Features

General features

- 12 dimmer channels
- 12-channel installation dimmer with connection terminals
- Control via DMX 512, Art-Net or manually via buttons and display on the unit
- Built-in DMX recorder for recording and storing of up to 99 static scenes
- Scenes can be played as a chase in a loop with adjustable fade time
- Live display for dimmer channel status
- Dimmer curve or switch mode adjustable per channel
- Silent mode for noise-sensitive environments

4 Installation and starting up

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

Create all connections while the device is off. Use the shortest possible high-quality cables for all connections. Take care when running the cables to prevent tripping hazards.

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

Connector

First, connect the loads to the terminals on the back of the device. Establish the DMX link to the controller. Connect the mains connection terminals with a mains cable. Finally, connect the power plug of the device to a 32 A CEE socket.

Connection options for blocks L1, L2 and L3:

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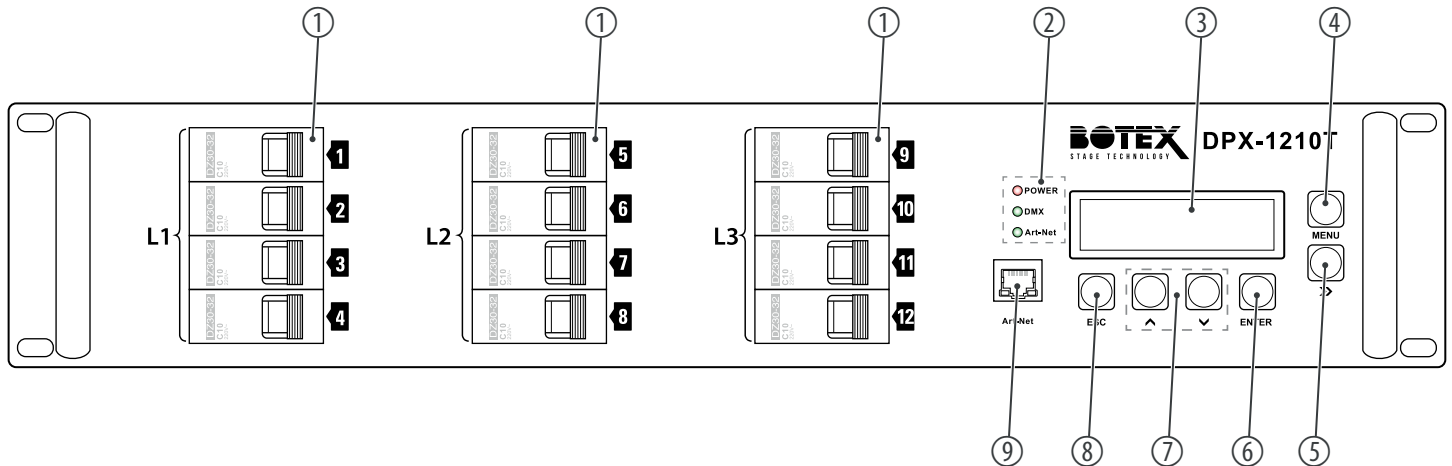- all blocks to one phase

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 another DMX device. Connect the output of the first DMX device to the input of the second one 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, ¼ W).
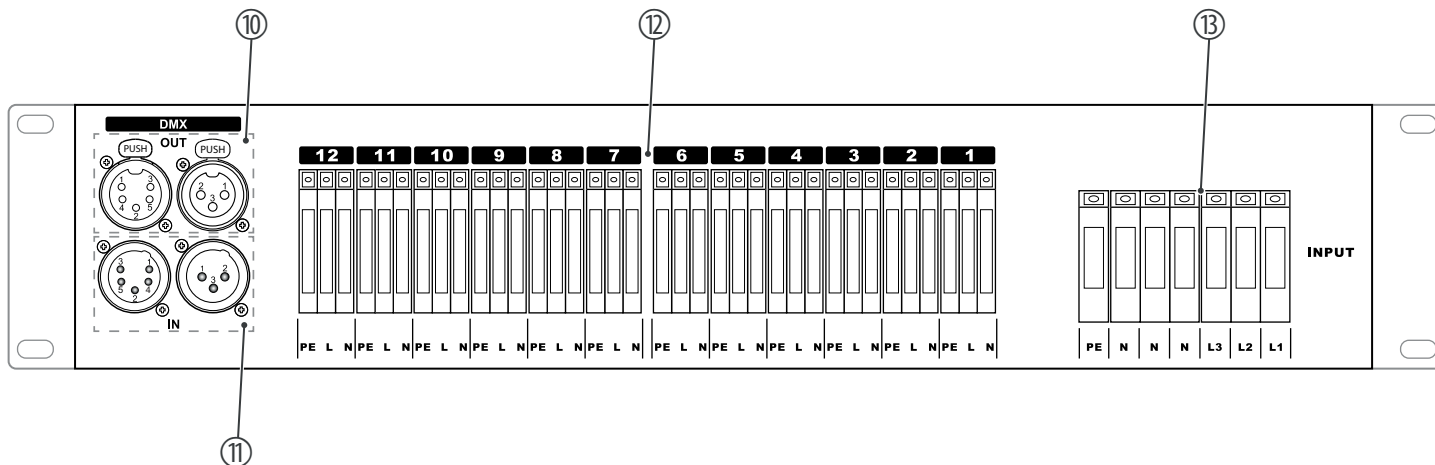
5   Connections and controls

Front

1	*[1]…[12]* | Circuit breakers for channels 1…12, arranged in three blocks (L1…L3). The required channels are activated or deactivated with the line circuit breakers.
2	*[POWER]* | Power indicator. The LED lights up red when the device is connected to the power supply.
	[DMX] | Control indicator. The LED flashes when the device receives a DMX control signal.
	[Art-Net] | Control indicator. The LED flashes when the device receives an Art-Net control signal.
3	Display
4	*[MENU]* | Opens the main menu.
5	▶▶ | Toggles between the submenus. Moves the cursor to the right.
6	*[ENTER]* | Confirms a selected value or opens a submenu.
7	▼ | Toggles between the menu items of a menu level, decreases the displayed value by one
	▲ | Toggles between the menu items of a menu level, increases the displayed value by one
8	*[ESC]* | Closes an open menu without saving any changes.
9	*[Art-Net]* | RJ45 input socket for the network connection

Back

10	*[DMX OUT]*	XLR output socket, 3-pin, XLR output socket, 5-pin
11	*[DMX IN]*	XLR input socket, 3-pin, XLR input socket, 5-pin
12	*[CH1]…[CH12]*	Dimmer outputs, 12 × connection terminals (note the device label when connecting the cables).
13	*[INPUT]*	Mains connection terminals (note the device label when connecting the cables).

6   Operating

Turning the device on / off

1. ▶ Connect the device to the power supply.

   ⇨ The *[POWER]* LED lights up. The display shows *'Initialize...'* while the device is starting up. The start sequence is finished when the current device settings are shown on the display. The device is operational.

2. ▶ Switch on the required channels using the assigned circuit breakers.

3. ▶ To switch off the device, pull the mains plug from the 32 A CEE socket.

6.1   Main menu

1. ▶ Press *[MENU]* to activate the main menu.

2. ▶ Press ▼ or ▲ repeatedly until the desired submenu is shown on the display.

3. ▶ Press ▶▶ to scroll through the various options of the submenu or to move the cursor to the right.

4. ▶ Press *[ENTER]* to activate a displayed sub menu.

5. ▶ Press *[ESC]* to exit the menu and return to display mode.

After 5 seconds of inactivity, the menu is closed and the device automatically returns to display mode.

In the *'LOCAL CONTROL'* and *'PLAY SCENE'* submenus, the menu remains open even after 5 seconds of inactivity.

6.2 DMX and Art-Net settings

Setting the DMX address

Menu level 1	Menu level 2	Menu level 3	Function
'ADDRESS'	'DMX-512A'	'Start:001…512'	Sets the DMX start address.
		'Patch:01…12>>001…512'	Selects the channel for which the start address is being set.
	'ArtNET'	'SubNET:001…255'	Sets the ArtNET address for a SubNET.
		'Universe:001…255'	Sets the ArtNET address for an ArtNET universe.

The DMX start address is set and assigned to a channel via the *'ADDRESS'* menu.

1. ▷ Press *[MENU]* to activate the main menu.

2. ▷ Press ▼ or ▲ repeatedly until the *'ADDRESS'* submenu is shown on the display.

3. ▷ Press ▶▶ to select the *'DMX-512A'* submenu and confirm with *[ENTER]*.

4. ▷ Press *[ENTER]* to activate the Cursor.

5. ▷ Press ▼ or ▲ repeatedly until the display shows the desired DMX start address (display shows *'001'* … *'512'*) and confirm with *[ENTER]*.

⇨ The value is confirmed. The parent menu level is displayed.

6. ▷ Press ►► to select the *'Patch:'* submenu for channel selection.

7. ▷ Press *[ENTER]* to activate the Cursor.

8. ▷ Press ►► to move the cursor between the fields *'Patch:'* for channel selection and *'Start:'* for entering the start address.

9. ▷ Press ▼ or ▲ repeatedly until the display shows the desired channel (display shows *'01'* … *'12'*) or the desired start address (display shows *'001'* … *'512'*) and confirm with *[ENTER]*.

⇨ The DMX start address is assigned to the selected channel.

Setting the Art-Net address   The ArtNET address is set via the *'ADDRESS'* menu.

1. ▷ Press *[MENU]* to activate the main menu.

2. ▷ Press ▼ or ▲ repeatedly until the *'ADDRESS'* submenu is shown on the display.

3. ▷ Press ►► to select the *'ArtNET'* submenu and confirm with *[ENTER]*.

4. ▷ Press ►► to select the *'SubNET:'* submenu for a subnet or the *'Universe'* submenu for an ArtNET universe and confirm with *[ENTER]*.

5. ▷ Press ▼ or ▲ repeatedly until the display shows the desired address for the subnet or the Art-Net universe (display shows *'000'* … *'255'*) and confirm with *[ENTER]*.

⇨ The ArtNET address is assigned to the selected SubNET or ArtNET universe.

6.3 Dimmer settings

Setting parameters of the dimmer channel

The parameters of the selected dimmer channel are set via the *'LOCAL CONTROL'* menu.

1. ▶ Press *[MENU]* to activate the main menu.

2. ▶ Press ▼ or ▲ repeatedly until the *'LOCAL CONTROL'* submenu appears on the display and activate the submenu with *[ENTER]*.

⇨ The set dimmer channel flashes.

3. ▶ Press ▶▶ to move the cursor to the number of the dimmer channel (display shows *'LIVE 123456789012'*) whose parameters you want to change.

4. ▶ Press ▼ or ▲ repeatedly until the display shows the desired value for the selected dimmer channel.

5. ▶ Press *[ESC]* to exit the menu and return to display mode.

⇨ The set value is applied.

Setting the dimmer curve

Menu level 1	Menu level 2	Function
'CURVES'	*'Linear'*	A linear dimmer curve is set.
	'Square'	A square dimmer curve is set.
	'NO-DIM'	Switch mode is activated. The output power is 0% or 100%.

The dimmer curve for individual or all channels is set via the *'CURVES'* menu.

1. ▶ Press *[MENU]* to activate the main menu.

2. ▶ Press ▼ or ▲ repeatedly until the *'CURVES'* submenu appears on the display and confirm with *[ENTER]*.

    ⇨ The cursor flashes at channel one.

3. ▶ Press ▶▶ to move the cursor to the desired channel.

4. ▶ Press ▼ or ▲ repeatedly until the display shows the desired dimmer curve (display shows *'Linear'*, *'Square'* or *'NO-DIM'*) and confirm with *[ENTER]*.

5. ▶ To exit the menu without making changes, press *[ESC]*.

6.4 Scenes

Saving a scene

Menu level 1	Menu level 2	Function
'SCENE REC'	*'Copy'*	Saves a scene under a number from 01 to 99.
	'Assign'	Assigns a saved scene to a channel.

Scenes are saved via the *'SCENE REC/copy'* menu.

1. ▶ Press *[MENU]* to activate the main menu.

2. ▶ Press ▼ or ▲ repeatedly until the *'SCENE REC'* submenu is shown on the display.

3. ▶ Press ▶▶ to select the *'Copy'* submenu and confirm with *[ENTER]*.

4. ▶ Press ▼ or ▲ repeatedly until the display shows the number under which you want to save the scene (display shows *'01'* … *'99'*).

Scenes 71…99 are preset sample scenes. You can modify or overwrite them.

5. ▶ Press ▶▶ to move the cursor to *'ENTER'*.

⇨ The *'ENTER'* display flashes.

6. ▶ Press *[ENTER]*.

⇨ The incoming DMX signal is saved as a scene under the set number. At the end of the saving process, the scene numbering display automatically jumps to the next higher number.

Setting a scene manually

Scenes can be created and saved manually using the *'SCENE REC/Assign'* menu.

1. ▶ Press *[MENU]* to activate the main menu.

2. ▶ Press ▼ or ▲ repeatedly until the *'SCENE REC'* submenu is shown on the display.

3. ▶ Press ▶▶ to select the *'Assign'* submenu and confirm with *[ENTER]*.

4. ▶ Press ▶▶ to move the cursor to the number of the channel whose value you want to change.

5. ▶ Press ▼ or ▲ to set the dimmer value of the channels of the selected scene (display "01" ... '99' / 'FL').

6. ▶ Press *[ENTER]*.

⇨ The set values are adopted. The display automatically jumps to the next scene.

7. ▶ To exit the menu without making changes, press *[ESC]*.

Playing a Chase

Menu level 1	Menu level 2	Menu level 3	Function
'PLAY SCENE'	*'Chase'*	*'Once'*	Plays the selected scene once.
		'Loop'	Plays the selected scene in an endless loop.
		'Fad1s…Fad9s'	Sets the fade time from 1 to 9 seconds.
		'E01…E99'	Selects the final scene 01 to 99.
		|	Playback pauses.
		>	Playback is running.

Menu level 1	Menu level 2	Menu level 3	Function
	'Scene'	*'Sc01' … 'Sc99'*	Selects the start scene.
			Plays a selected single scene on the set channel.

Chases are played via the *'PLAY SCENE/Chase'* menu.

1. ▶ Press *[MENU]* to activate the main menu.

2. ▶ Press ▼ or ▲ repeatedly until the *'PLAY SCENE'* submenu is shown on the display.

3. ▶ Press ▶▶ to select the *'Chase'* submenu and confirm with *[ENTER]*.

4. ▶ Press ▼ or ▲ until the display shows the number of the scene with which the chase should start (display shows *'01' … '99'*).

5. ▶ Press ▶▶ to move the cursor to the display mode options.

6. ▶ Press ▼ or ▲ to select the play mode *'Once'* (single play) or *'Loop'* (loop playback).

7. ▶ Press ▶▶ and then press ▼ or ▲ to select the fade time *'Fad1s…Fad9s'*.

8. ▶ Press ▶▶ and then press ▼ or ▲ to select the closing scene *'E01…E99'*.

9. ▶ Press *[ENTER]* to pause the chase (display |) or play (display ⟩).

Playing a scene

Individual scenes are played via the *'PLAY SCENE/Scene'* menu.

1. ▶ Press *[MENU]* to activate the main menu.

2. ▶ Press ▼ or ▲ repeatedly until the *'PLAY SCENE'* submenu is shown on the display.

3. ▶ Press ▶▶ to select the *'Scene'* submenu and confirm with *[ENTER]*.

4. ▶ Press ▼ or ▲ to select the desired single scene (display shows *'Sc01'* … *'Sc99'*).

5. ▶ Press *[ENTER]*.

   ⇨ The selected scene is played on the set channel.

6. ▶ To exit the menu without making changes, press *[ESC]*.

6.5   General Settings

Menu level 1	Menu level 2	Menu level 3	Function
'SETUP'	*'Protocol Assign'*	*'D'*	The control protocol DMX is selected.
		'A'	The control protocol ArtNet is selected.
	'ArtNET Failed'	*'Off'*	The device is blacked out.

Menu level 1	Menu level 2	Menu level 3	Function
		'Hold'	The last setting is retained.
		'Off After 10min'	The device is blacked out after 10 minutes.
		'ArtNet fail DMX'	The control protocol DMX gets activated.
		'GoScene##'	The scene selected in this setting is played.
	'DMX Failed'	'Off'	The device is blacked out.
		'Hold'	The last setting is retained.
		'Off After 10min'	The device is blacked out after 10 minutes.
		'DMX fail ArtNet'	The control protocol ArtNET gets activated.

Menu level 1	Menu level 2	Menu level 3	Function
		'GoScene##'	The scene selected in this setting is played.
	'Fan Cooling'	*'Normal'*	The fan runs in 'Normal' mode. The device is kept at a maximum temperature of 70° C.
		'Silent'	The fan runs in 'Silent' mode. The fan runs slower than in normal mode. The device is kept at a maximum temperature of 90° C.
		'Full On'	The fan runs at maximum speed.
	'Default'	*'Confirm'*	Resets the device to factory defaults.

Selecting a control protocol   The control protocol is selected via the *'SETUP/Protocol Assign'* menu.

1. ▶ Press *[MENU]* to activate the main menu.

2. ▶ Press ▼ or ▲ repeatedly until the *'SETUP'* submenu is shown on the display.

3. ▶ Press ▶▶ to select the *'Protocol Assign'* submenu and confirm with *[ENTER]*.

4. ▶ Press ▶▶ to move the cursor to the number of the channel to which you want to assign the control protocol.

5. ▶ Press ▼ or ▲ to select either *'D'* (DMX) or *'A'* (ArtNET) and confirm with *[ENTER]*.

   ⇨ The control protocol for the selected channel is set.

Setting the behaviour on ArtNet signal failure

The *'SETUP/ArtNET Failed'* menu is used to set how the device reacts when the ArtNET signal fails.

1. ▶ Press *[MENU]* to activate the main menu.

2. ▶ Press ▼ or ▲ repeatedly until the *'SETUP'* submenu is shown on the display.

3. ▶ Press ▶▶ to select the *'ArtNET Failed'* submenu and confirm with *[ENTER]*.

4. ▶ Press ▼ or ▲ to select the desired option for the behaviour of the device in the event of ArtNET control failure.

5. ▶ If you have chosen the *'GoScene##'* option, press ▶▶ to activate the cursor and use ▼ or ▲ to select a scene between 01 and 99.

6. ▶ Press *[ENTER]* to confirm the selection.

   ⇨ The selected settings are adopted.

7. ▶ To exit the menu without making changes, press *[ESC]*.

Setting the behaviour on DMX signal failure

The *'SETUP/DMX Failed'* menu is used to set how the device reacts when the DMX signal fails.

1. ▶ Press *[MENU]* to activate the main menu.

2. ▶ Press ▼ or ▲ repeatedly until the *'SETUP'* submenu is shown on the display.

3. ▶ Press ▶▶ to select the *'DMX Failed'* submenu and confirm with *[ENTER]*.

4. ▶ Press ▼ or ▲ to select the desired option for the behaviour of the device in the event of ArtNET control failure.

5. ▶ If you have chosen the *'GoScene##'* option, press ▶▶to activate the cursor and use ▼ or ▲ to select a scene between 01 and 99.

6. ▶ Press *[ENTER]* to confirm the selection.

   ⇨   The selected settings are adopted.

7. ▶ To exit the menu without making changes, press *[ESC]*.

Fan settings

The *'SETUP/Fan Cooling'* menu is used to adjust the fan.

1. ▶ Press *[MENU]* to activate the main menu.

2. ▶ Press ▼ or ▲ repeatedly until the *'SETUP'* submenu is shown on the display.

3. ▶ Press ▶▶ to select the *'Fan Cooling'* submenu and confirm with *[ENTER]*.

4. ▶ Press ▼ or ▲ to select the desired option for the behaviour of the fan (display shows *'Normal'* , *'Silent'* , *'Full On'*).

5. ▶ Press *[ENTER]* to confirm the selection.

    ⇨   The selected settings are adopted.

6. ▶ To exit the menu without making changes, press *[ESC]*.

Reset to factory defaults

The *'SETUP/Factory Default'* menu is used to reset the device to factory defaults.

1. ▶ Press *[MENU]* to activate the main menu.

2. ▶ Press ▼ or ▲ repeatedly until the *'SETUP'* submenu is shown on the display.

3. ▶ Press ▶▶ to select the *'Factory Default'* submenu and confirm with *[ENTER]*.

    ⇨   The display shows *'Confirm'* .

4. ▶ Press *[ENTER]* to confirm the selection.

    ⇨   The device is reset to factory default settings.

5. ▶ To exit the menu without making changes, press *[ESC]*.

6.6 System information

Menu level 1	Menu level 2	Function
'INFORMATION'	*'Software Version'*	Indicates the software version used.
	'Temperature'	Displays the device temperature for dimmer channels 1 to 6 and 7 to 12.

The *'INFORMATION'* menu is used to call up system information.

1. ▸ Press *[MENU]* to activate the main menu.

2. ▸ Press ▼ or ▲ repeatedly until the *'INFORMATION'* submenu is shown on the display.

3. ▸ Press ▶▶ to select the *'Software Version'* submenu and confirm with *[ENTER]*.

    ⇨ The current software version of the device is displayed.

4. ▸ Press ▶▶ to select the *'Temperature'* submenu and confirm with *[ENTER]*.

    ⇨ The device temperature for dimmers 1 to 6 (display shows *'L='*) and dimmer 7 to 12 (display shows *'R='*).

5. ▸ To exit the menu, press *[ESC]*.

7 Technical specifications

Control principle		Leading edge phase control
Input connections	Power supply	Terminals (3-phase connection, 400 V, 32 A max. per phase)
	Signal input	DMX 512 via 3-pin XLR plug
		DMX 512 via 5-pin XLR plug
		1 × ArtNET via RJ45 socket
Output connections	Power supply	12 × terminal connection
	Signal output	DMX 512 via 3-pin XLR socket
		DMX 512 via 5-pin XLR socket
Output current		Max. 10 A / channel, 96 A (in total)
Channel fuse	Single-phase	1 × circuit breaker per channel, each 10 A, 96 A max.
	Three-phase	1 × circuit breaker per channel, each 10 A, 32 A max. per phase
Supply voltage	Single-phase	230 V ∼ 50 Hz
	Three-phase	400 V ∼ 50 Hz
International Protection Rating		IP20

Installation properties		19 inches, 2 RU
		Installation depth 380 mm
Dimensions (W × H × D)		482 mm × 89 mm × 379 mm
Weight		15 kg
Ambient conditions	Temperature range	0 °C…40 °C
	Relative humidity	20%…80% (non-condensing)

Further information

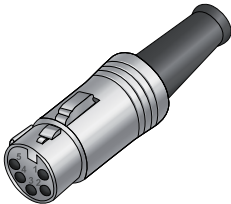| Dimmer channels	12
Output	Terminal

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

Three- and five-pin XLR sockets serve as DMX outputs, a three- or five-pin XLR connector (optionally) serves as DMX input. The figure below and the table show the pin assignment.

Pin	5-pin	3-pin
1	Ground (shielding)	Ground (shielding)
2	Signal inverted (DMX–, 'cold')	Signal inverted (DMX–, 'cold')
3	Signal (DMX+, 'hot')	Signal (DMX+, 'hot')
4	unused / second connection (DMX–)	
5	unused / second connection (DMX+)	

9   Protecting the environment

Disposal of the packing material

Environmentally friendly materials have been chosen for the packaging. These materials can be sent for normal recycling. Ensure that plastic bags, packaging, etc. are disposed of in the proper manner.

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

Observe the disposal note regarding documentation in France.

Disposal of your old device

This product is subject to the European Waste Electrical and Electronic Equipment Directive (WEEE) as amended.

Do not dispose of your old device with your normal household waste; instead, deliver it for controlled disposal by an approved waste disposal firm or through your local waste facility. When disposing of the device, comply with the rules and regulations that apply in your country. If in doubt, consult your local waste management facility. Proper disposal protects the environment as well as the health of your fellow human beings.

Also note that waste avoidance is a valuable contribution to environmental protection. Repairing a device or passing it on to another user is an ecologically valuable alternative to disposal.

You can return your old device to Thomann GmbH at no charge. Check the current conditions on *www.thomann.de*.

If your old device contains personal data, delete those data before disposing of it.

Notes

Notes