

EURODIM Twin Tech

Quick Start
Guide
Issue 1.0



ADB
Technologies

ADB
Lighting Technologies

1. Dimmer Room	2
1.1 Preparation.....	2
1.2 Ventilation of the Dimmer Room	2
1.2.1 Example.....	2
1.3 Installation of the Cabinets.....	3
1.3.1 Tools for commissioning.....	3
2. Description of the Unit	4
2.1 Contractor's Compartment – Supply.....	4
2.1.1 Supply voltage	5
2.1.2 Supply busbar	5
2.1.3 Protected Earth (PE).....	6
2.1.4 Connecting power supply cables.....	6
2.1.5 Earthing	6
2.2 Contractor's Compartment – Outputs	7
2.2.1 Outputs to the loads.....	8
2.2.2 DMX and Ethernet terminals	8
2.2.3 DMX Connection – type of cable	8
2.2.4 Pin numbering.....	9
2.2.5 DIP switches SW1 – termination of the DMX data lines.....	9
2.2.6 Local / Remote selector switch CPU1 – CPU2 – Automatic	10
2.3 Power Module Example	11
2.4 Central Processor Unit (CPU) - Power Supply Unit (PSU).....	11
3. The Human Machine Interface.....	12
3.1 Installation of the Human Machine Interface	12
3.2 Description of the Unit.....	12
3.3 Using the TTD HUMAN INTERFACE (HMI)	13
3.3.1 LCD Display.....	13
3.3.2 Numeric Keyboard.....	13
3.3.3 Navigation Wheel.....	14
3.4 Accessing the TTD HUMAN INTERFACE (HMI).....	14
4. Screensaver	15
5. Online Assistance.....	16
6. Menu Tree-Structure.....	17
7. Cabinet Configuration	18
7.1 Synchronization.....	18
7.2 Module Control.....	19
8. Presentation of the Home Page	20
9. Presentation of the Cabinet Diagnostic Page.....	21
9.1 Controller (CTRL) Information.....	21
10. Description of the Menus.....	23
11. Patch Menu.....	25
12. ARTNET Patch Menu	27
12.1 Range Key	28
13. ARTNET Info Menu	29
13.1 ARTNET Information.....	29
14. ARTNET Configuration Menu	31
14.1 Selecting Universe Mode	31
14.2 Subnet and Universe Port.....	31

1. Dimmer Room

1.1 Preparation

- Determine the dimensions of the dimmer room so as to place all EURODIM TWIN cabinets easily. Provide for an open space of approximately 90 cm in front of the cabinets to facilitate maintenance. Verify that the room access doors are large enough to permit passage of the equipment. The cabinets can be placed against a wall or back to back. The supply cables and the load cables can enter the wiring compartment either from the top or bottom of the cabinet. See drawing for size and location of cable entries.
- Provide for a free space, minimum 30 cm above the EURODIM TWIN so as to facilitate the exhaust airflow. The dimensions and weight of the cabinets are included in the Chapter “Characteristics”.
- Plan for fire extinguishers in compliance with local regulations.
- The lighting of the area should be sufficient for maintenance and inspection. A level of 300 lux is considered satisfactory.
- Plan for mains outlets in the room, independent of the supply of the dimmers.
- Plan for an Ethernet network to the control room and a cable for remote “CPU1 - CPU2” selection (if applicable).

1.2 Ventilation of the Dimmer Room

The dimmer room should be dry at all times, free from dust and ventilated in such a manner as to comply with the following:

- Relative humidity: 5% to 80% without condensation.
- Temperature between + 5 °C and + 35 °C (ideal: + 20 °C).

In order to size the air-conditioning equipment required for the dimmer room, refer to the following dissipations:

- Cabinet electronics including 150 W global value for CPU(s), PSU and fans
- Thyristor modules:
 - 4 x 3 kW modules: 37 W per dimmer (worst case)
 - 3 x 5 kW modules: 69 W per dimmer (worst case)
 - 1 x 10 kW modules: 170 W per dimmer (worst case)

In practice, you may consider an utility factor of 0.6: that is, on the average, 60% of the dimmers are at full load, while 40% are off.

1.2.1 Example

A dimmer room with a EURODIM TWIN TECH cabinet equipped with 128 thyristor dimmers of 3 kW and a second cabinet with 96 thyristor dimmers of 5 kW. The cabinets are fitted with a back-up power supply for the processor unit. Utility factor = 0.6

Cabinet N°1

Electronics: 1 x 150 W

Dimmers 128 x 37 W x 0.6 = 2841 W

Cabinet N°2

Electronics: 1 x 150 W

Dimmers 96 x 69 W x 0.6 = 3974 W

ROOM TOTAL: 7115 W (1 W = 0.86 kcal/hour) or 6119 kcal/hour.

In this example, it will be necessary to evacuate approximately 7115 W of losses.

1.3 Installation of the Cabinets

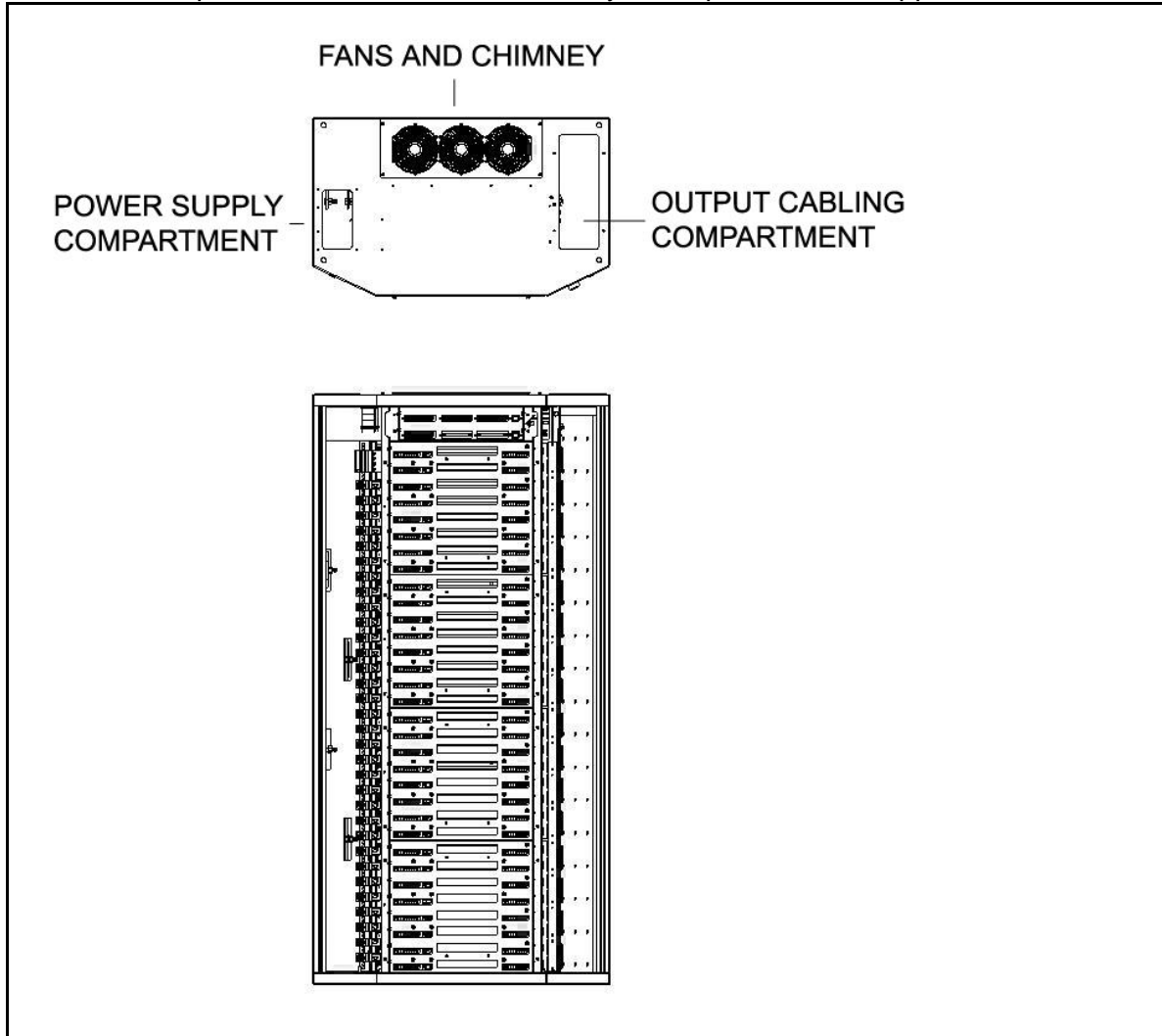
1.3.1 Tools for commissioning

Operation	Connection Designation	Qty	Torque	Tools
Remove Doors	Pan Head Screw M4x12 PZ	1	1.5 Nm	Screw Driver PZ2
Remove Card Cage Dimmers	Pan Head Screw M4x12 PZ	5	2 Nm	Screw Driver PZ2
	Slotted Flat Head Screw M4x12 PZ	16	1.5 Nm	Screw Driver PZ 2
Open Cables aperture In & Out	Pan Head Screw M4x12 PZ	8	2 Nm	Screw Driver PZ 2
PE Connection Power In	Nut M10	1	8 to 10 Nm	Metric Wrenches 17
Input Connection (Bus Bar)	Nut M12	4	8 to 10 Nm	2 x Metric Wrenches 19
	Bolt M12	4	8 to 10 Nm	
Output Connection (Output)	Terminal Connection Free Drive Screw	256	1.5 Nm	Flat Screw Driver 1 x 6.5
PE connection (Output)	Screws M4x8	128	1.5 Nm	Screw driver PZ 1
DMX Connection	RJ 45	1		
	Phoenix MSTBVA 2.5 – 6	6	0.5 Nm	Flat Screw Driver 0.5 x 3.5
Ethernet Connection	RJ 45	1		

2. Description of the Unit

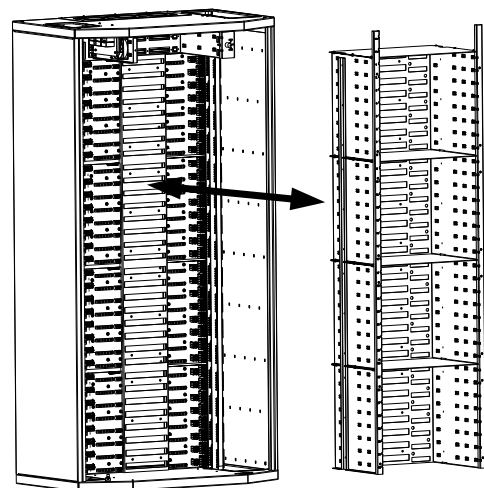
2.1 Contractor's Compartment – Supply

Front access only is required. Cable entry is possible through bottom and top of the cabinet. Cover panels for the unused cable entry/ exit apertures are supplied.



In order to gain maximum space to access the cabinet for installation and maintenance purposes, remove the two doors, loosen the 16 crosshead screws in the back and 3 left + right at the bottom and dismount the entire card cage in one piece.

Mounting the cabinet, first insert the card cage, **enter two power modules to align the rack** and fasten the 16 screws. Put the doors in place and **reconnect the doors earth connection**.



2.1.1 Supply voltage

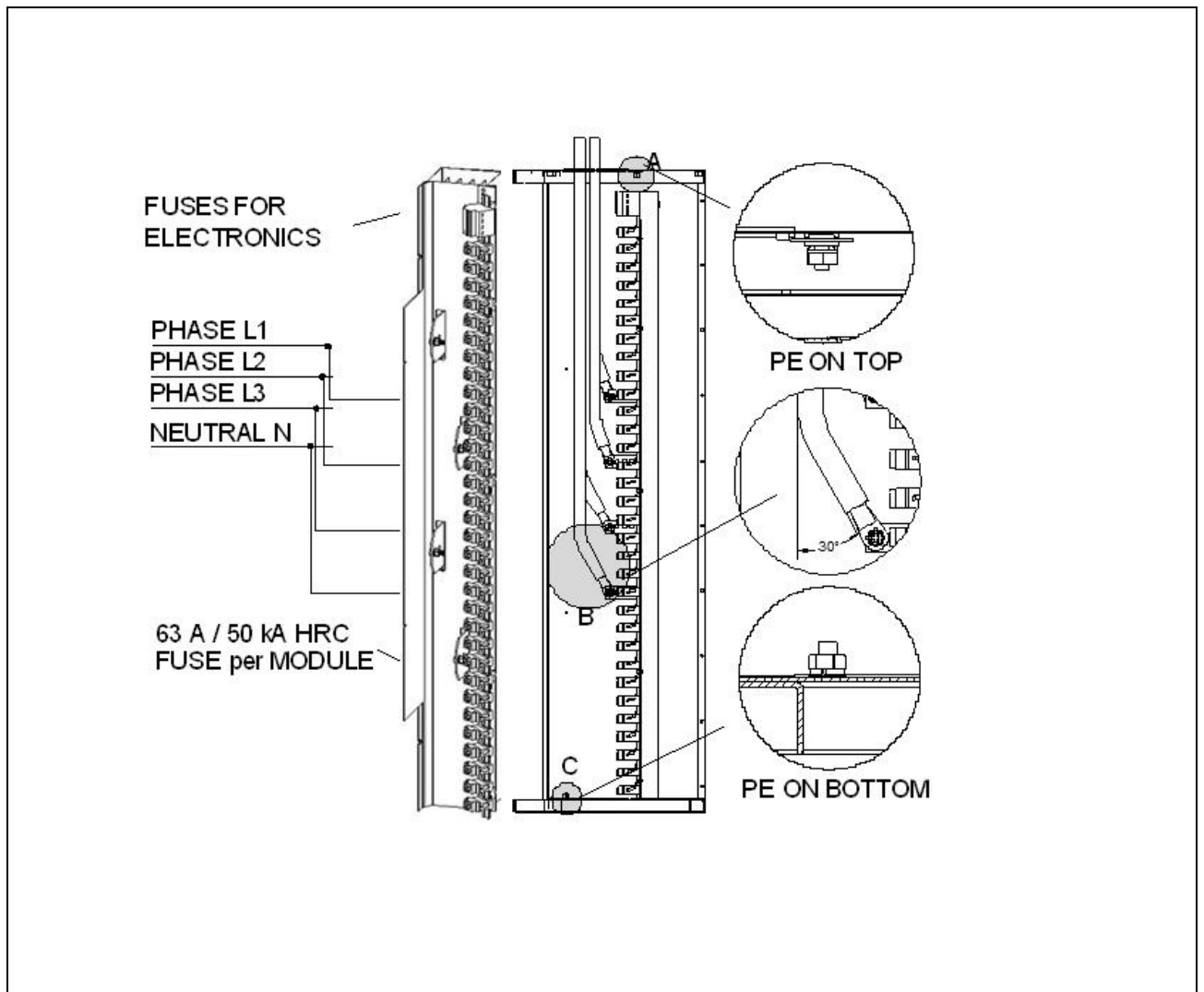
The high voltage/low voltage power transformer **MUST ABSOLUTELY** provide a three phase star system with available neutral (3NPE-400), and rated line voltage 380 V to 415 V between phases and 220 V to 240 V rated voltage between each phase and neutral. See “Protections” for more details.

The supply cable must have the four current-carrying power conductors (not necessarily the PE conductor) twisted under the same sleeve, in order to reduce the noise induced by large dimmed currents.

The neutral conductor must be of equal or larger size than the phase conductors.

See the Appendix to this manual for more details about power supply systems for dimmer systems.

2.1.2 Supply busbar

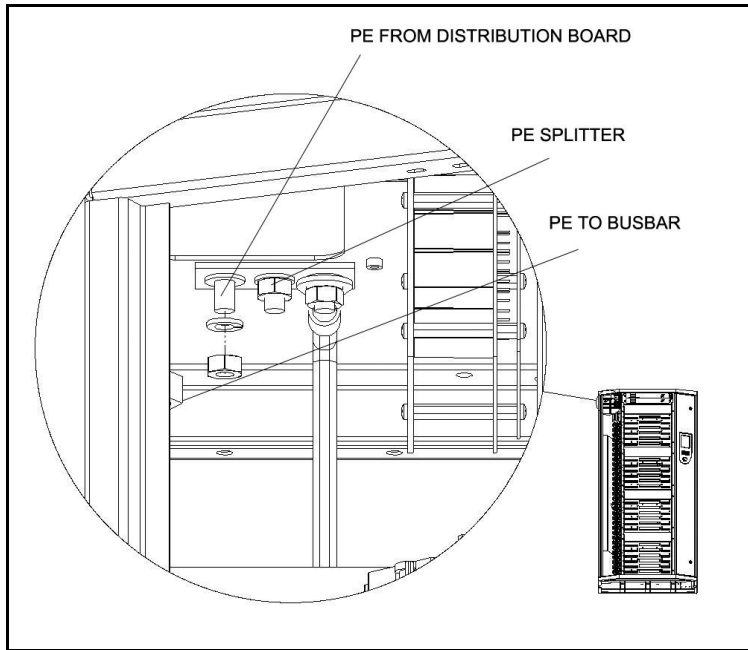


The three phase connection points are labeled L1 (phase No. 1, phase R), L2 (phase No. 2, phase S) and L3 (phase No. 3, phase T).

The Neutral is labeled N and the colour code for the Neutral is blue, as per IEC Recommendation 446.

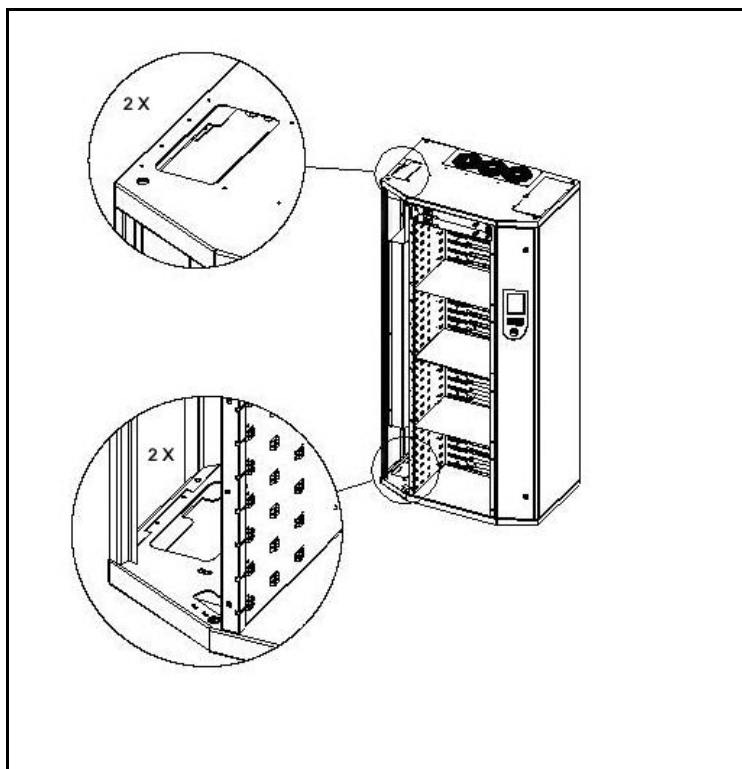
The Phase and Neutral connection bars have 4 holes of \varnothing 13 mm, with 22 mm distance between centers. Connections are suitable for size M 12 bolts and nuts, for connection of up to four supply conductors. The conductors must be fitted with cable lugs.

2.1.3 Protected Earth (PE)



The Protective Earth (PE) on the busbar connection is a bolt and nut, size M10. Colour code: green/yellow. The equipotential connection, connecting the metal frame, is provided at the top of the supply cabling compartment. This connection is already wired to the busbar PE. An additional PE connection is provided on the cabinet's bottom of the supply compartment. All necessary nuts and washers are included.

2.1.4 Connecting power supply cables.



Supply cables can be wired in parallel, while of these cables must contain the three phases and the Neutral under the same sleeve. This cable must be protected in the switchboard. The total size of the conductors must be chosen depending on the total power of the dimmers, the utility factor, the general protection on the supply side, the voltage drop in the line and local regulations. We suggest the use of several cables placed in parallel, to facilitate the work of the contractor: the cables usually have a bending radius of min. 15 times their external diameter. Respect an angle of 30 degree to connect the supply cable in order to achieve necessary distance between the cables and busbar. Use the

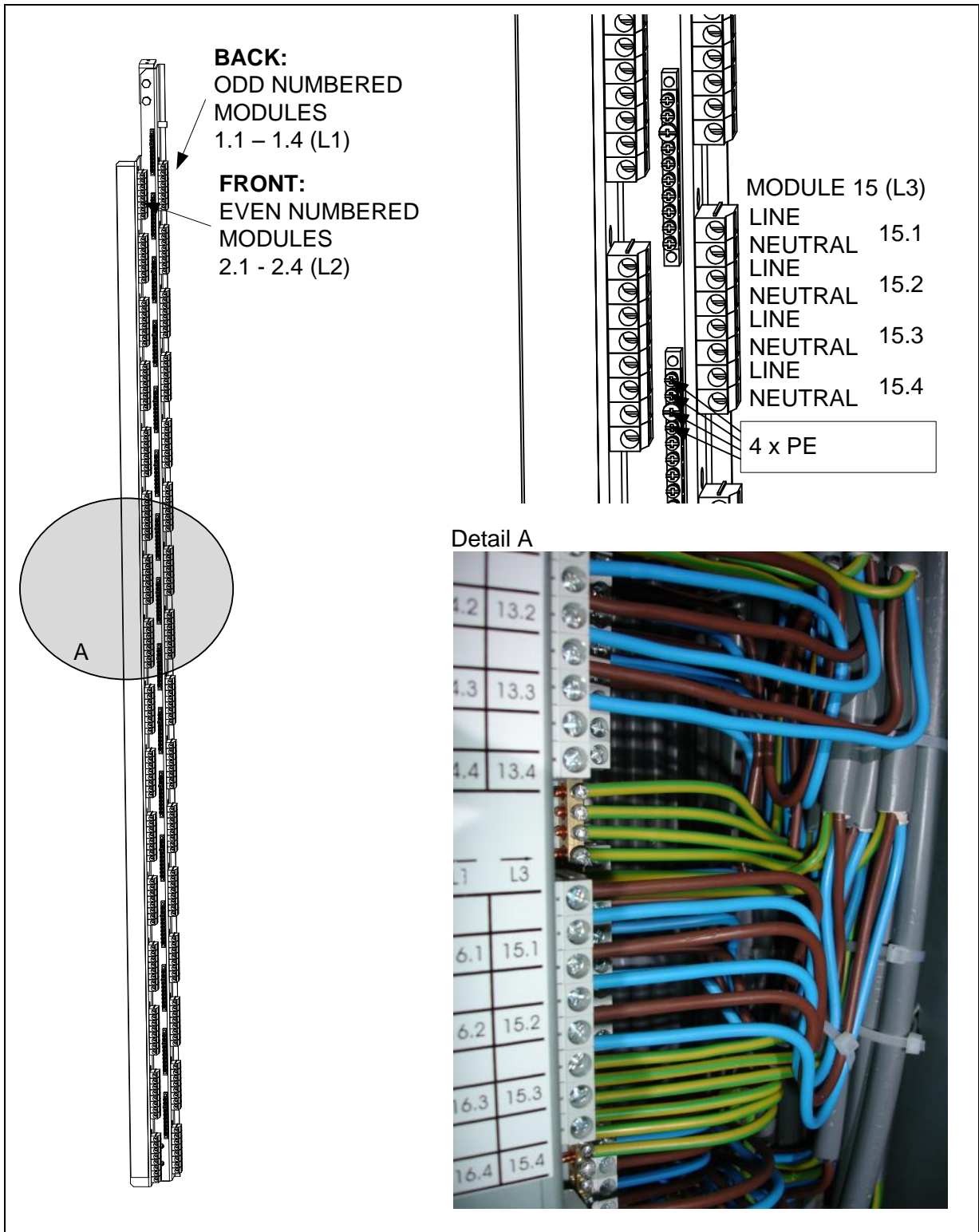
wholes on bottom and top to connect the cable wraps for stress relief.

2.1.5 Earthing

The sound or video earth should be separated from the dimmer earth. The distance between the dimmer earth and the others should be as large as possible. Refer to local regulations for earthing.

2.2 Contractor's Compartment – Outputs

Front access only is required. Cable entry is possible through bottom and top of the cabinet.



2.2.1 Outputs to the loads

The cabling compartment with output terminals is on the right hand side. The load terminals are mounted next to the relevant module. The numbering is shown on self-adhesive labels.

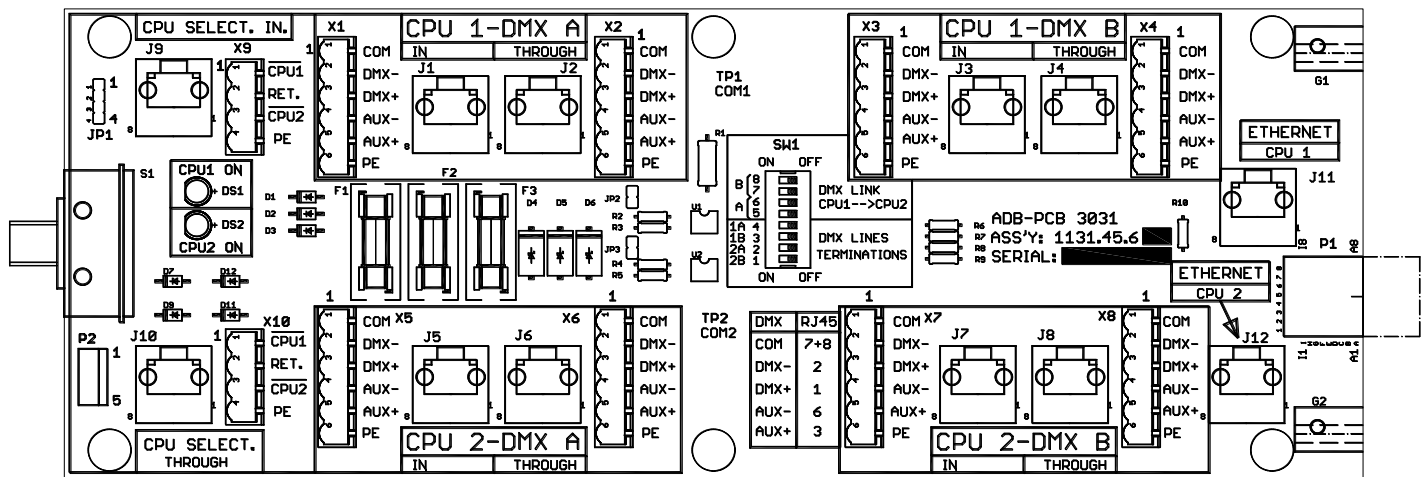
These terminal blocks are suitable for cable sizes up to 10 mm². Adaptors are available for cables up to 25 mm². Grey = L; blue = N.

The load cables must be sized in accordance with local regulations. Increased sizes may be required in order to reduce the voltage drop on the line to the luminaire. We suggest limiting the voltage drop to 3%.

The data cables may follow the power cables on the condition that they are minimum 250 mm apart or in a separate shielded trunking (e.g. steel tube). Sound and video cables must be kept at a minimum distance of 500 mm from all power cables. If cables or ducts have to cross, then a crossing at right angles will reduce interferences.

2.2.2 DMX and Ethernet terminals

All control signals are connected to the data input board PCB3031, located at the top of the right-hand cabling compartment.



PCB 3031

2.2.3 DMX Connection – type of cable

Use data cable with two twisted pairs + 1 conductor (can be from a third pair) + overall screen. Use data cable which is suitable for digital data transmission (EIA 485 / RS 485; 250 kBaud). The data cable must meet the DMX512-A specification (ANSI E1.11 – 200x). Do not use audio cable for DMX, as this has the wrong capacitance and impedance and WILL NOT reliably transmit DMX signals. The DMX signal uses fairly high frequencies, well above 1000 kHz.

Cable model LIYCY 3 x 2 x 0.35 + shield is suitable for this purpose. Two pairs are used for data transmission, and one conductor for the 0V (common) GND. The cable shield is connected to the PE.

Use of Ethernet cables for DMX



It is allowed to use Cat5 (or higher) STP and FTP Ethernet cable for DMX.

STP = shielded twisted pair.

FTP = foil twisted pair.

UTP = unshielded twisted pair.

WARNING: UTP Ethernet cable is not suitable for DMX.

Each EURODIM TWIN TECH processor is equipped with two physical DMX inputs, and one Ethernet port. For cabinets with optional 'instant back-up', each processor has its own independent data connectors.

2.2.4 Pin numbering

For standard DMX cables (2 pairs + screen), the connectors X1 through X8 are connected as follows:

- 1 screen, and 0 V
- 2 data 1- (DMX)
- 3 data 1+ (DMX)
- 4 data 2- (second data pair)
- 5 data 2+ (second data pair)

Note: this numbering is different from the XLR5.

For optimum EMC (Electro-Magnetic Compatibility) performance however, we recommend to separate 0V from PE. The wiring should be as follows:

- 1 0 Volt conductor (different from the screen)
- 2 data 1- (DMX)
- 3 data 1+ (DMX)
- 4 data 2- (second data pair)
- 5 data 2+ (second data pair)
- 6 screen in the DMX cable and connection to PE.

All screens in all cables should be interconnected. One end only should be connected to PE, to prevent an earth loop.

Pin configuration of the RJ45-for-DMX:

- pin 2 = data 1- (DMX)
- pin 1 = data 1+ (DMX)
- pin 6 = data 2-
- pin 3 = data 2+
- pin 7 and 8 = common 0V

2.2.5 DIP switches SW1 – termination of the DMX data lines

On PCB3031, SW1 switches 1 through 4 allow termination of the cabinets four DMX inputs.

To terminate CPU1-DMXA: set Switch 4 to ON.

To terminate CPU1-DMXB: set Switch 3 to ON.

To terminate CPU2-DMXA: set Switch 2 to ON.

To terminate CPU2-DMXB: set Switch 1 to ON.

DIP switches instead of link cables

On PCB3031, SW1 switches 5 and 6 connect "DMX1A Through" with "DMX2A In".

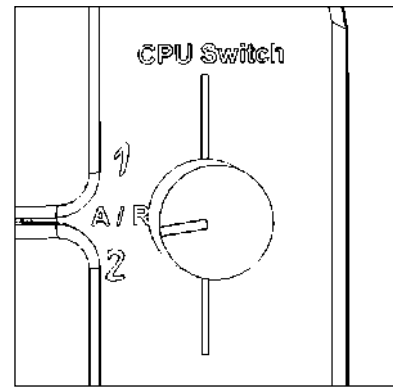
Similarly, SW1 switches 7 and 8 connect "DMX1B Through" with "DMX2B In".

This is a convenient and reliable alternative for short jumper cables.

2.2.6 Local / Remote selector switch CPU1 – CPU2 – Automatic

The CPU selector switch is located next to the CPU slots. The connection for the remote selector switch is provided in the right compartment on the PCB 3031. Please see the attached drawing for the exact wiring of the switch.

The following table explains the use of the local and remote switch.



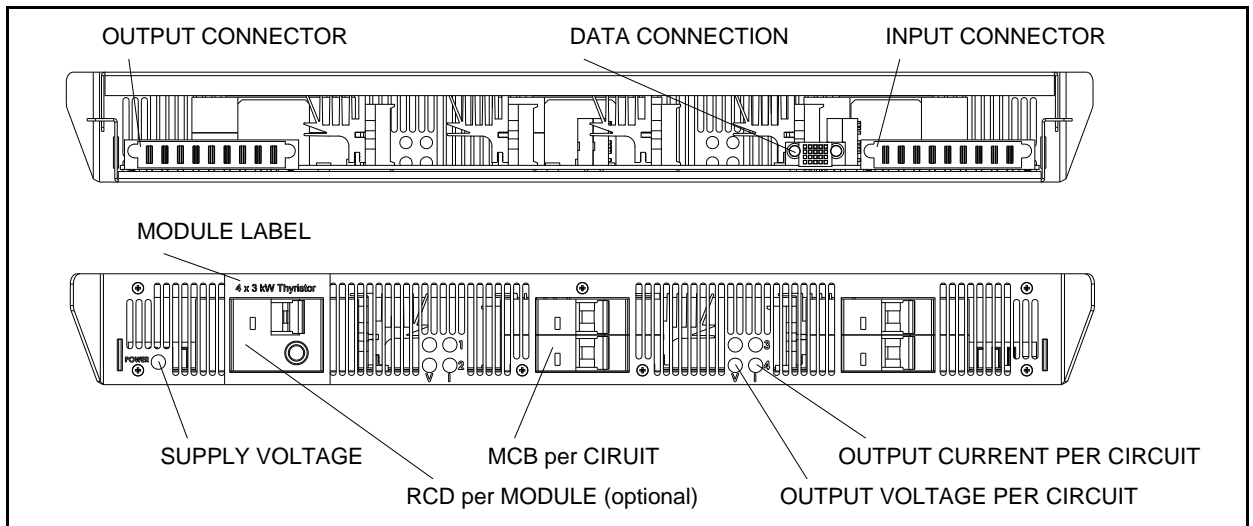
Jumpers J1 (PCB3031)	Local switch	Remote Switch	Terminal signals (*)		CPU Active
			Enable_CPU1	Enable_CPU2	
Not mounted	CPU1	N/A	1	0	CPU1 (**)
	CPU2	N/A	0	1	CPU2 (**)
	A-R	CPU1	1	0	CPU1 (**)
	A-R	CPU2	0	1	CPU2 (**)
	A-R	Automatic or not connected Wires short circuited (***)	1	1	Automatic software selection
		0	0		
Mounted	N/A	N/A	0 (****)	0 (****)	

The jumper J1 is by default NOT mounted.

- Power supply voltage: Vcc = 24V (thru 1.5K and protection fuses on PCB3031)
- Enable_CPU signals are active high
- (*) 0 = terminal connected to 0 V; 1 = terminal is open
- (**) Manual selection by the user
- (***) Only for information
- (****) Value forced by presence of Jumpers J1

For remote CPU selection, use a shielded cable of 3 x 0.5 mm². The shield should at one end be connected to PE. See wiring and interconnection diagram in 30-490 and 30-500.

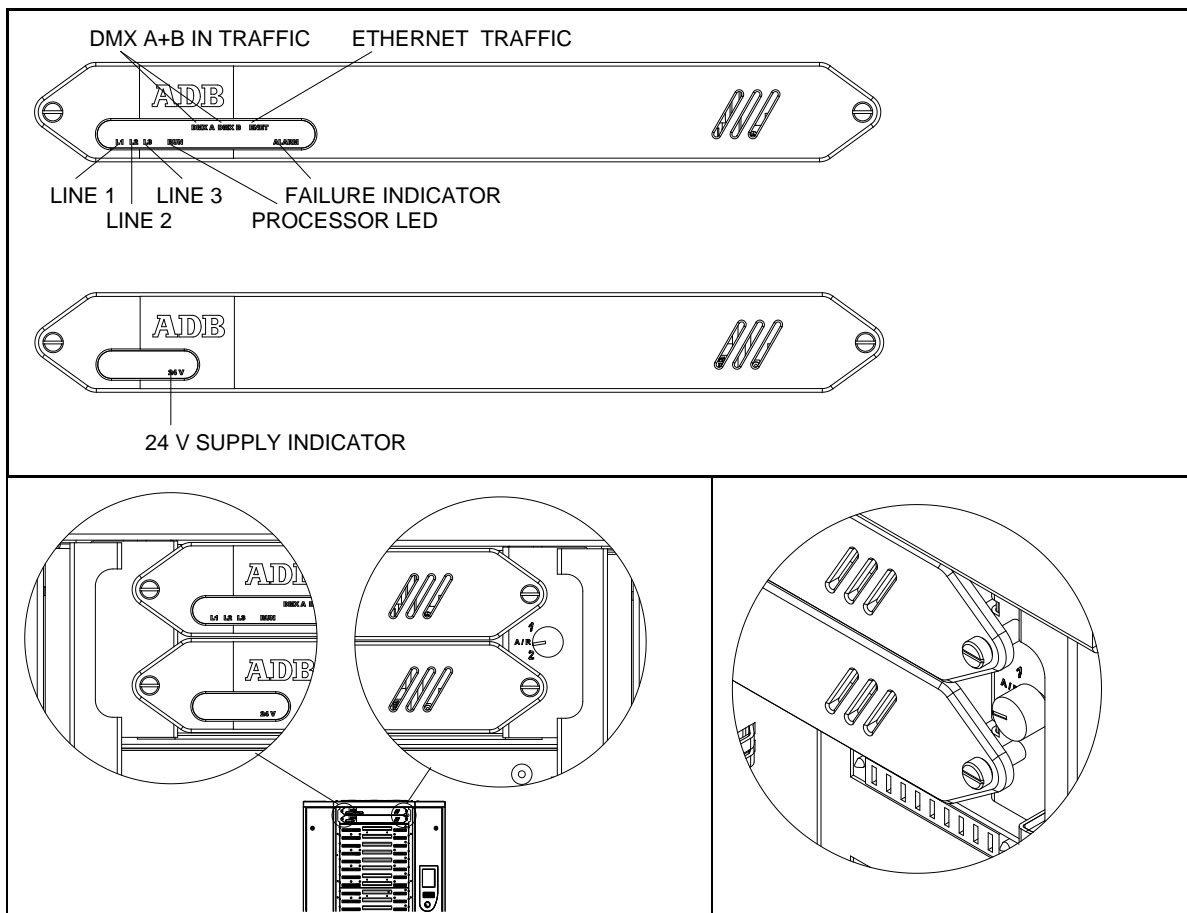
2.3 Power Module Example



2.4 Central Processor Unit (CPU) - Power Supply Unit (PSU)

Ordering EURODIM TWIN TECH you have the choice to either configure the cabinet with 2 identical CPU units for full data and power backup or 1 CPU unit + 1 PSU unit for power supply backup.

In order to assure permanent contact with the CPU backplane the units shall be secured with one screw left and right. (See below)



3. The Human Machine Interface

3.1 Installation of the Human Machine Interface

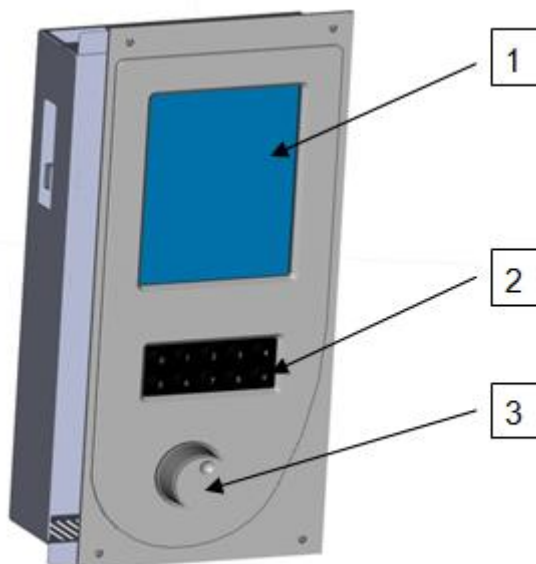
The EDTT may be delivered without the TTD Human Interface installed. In some areas this unit is optional. If the TTD Human Interface is not present, then the dimmer shall be controlled by the TTD Management Software.

The TTD Human Interface is found in a separate packing. In case such a unit has to be reordered the ADB code Nr is: 1115.10.055. The package includes the TTD HUMAN INTERFACE with a mounted metal back part, one connection cable, one SD card (mounted in HUMAN INTERFACE) and one EURODIM Twin Tech user and programming manual in English and French.

Installation Procedure:

1. Open the door of the right compartment.
2. Remove the protective cover covering the opening in the door panel.
3. Take the metal lid off the back of the Human Interface.
4. Prepare the flat cable (included in package) – It has on one side a large connector and on the other two smaller connectors.
5. Plug the flat cable (large connector) into the socket on the upper right hand corner (viewed from the PCB side) with the red cable facing towards the right. Do not force the multi pin connector into the socket!
6. Fit the Human Interface with its metal cover from the backside on the door and screw the nut tight with a 7 mm wrench.
7. Connect the 2 flat cable connectors to the CPU communication panel connectors CPU0 and CPU1 (see drawing). The Connector with the red cable facing out shall be connected to the connector CPU1

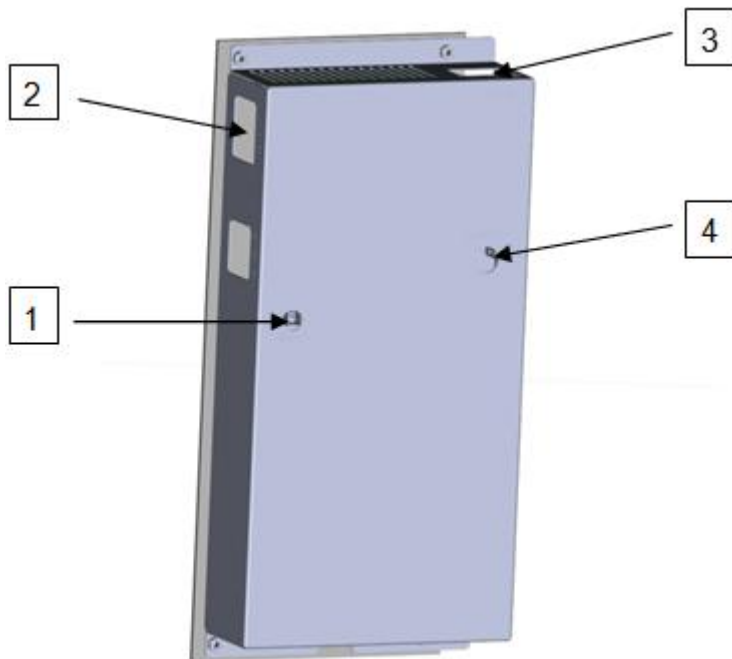
3.2 Description of the Unit



The user is provided with:

- 1 - A backlit LCD touch-screen enabling access to all menus.
- 2 - A numeric keyboard.
- 3 - A navigation/validation pushbutton – wheel.

When the right-hand side door of the cabinet is opened, the rear of the Unit gives access to the following:



- 1 - An opening on the rear face to activate the software reset button (in the event that the touch screen becomes blocked)
- 2 - An opening in the side face for insertion of the SD memory card
- 3 - A connector to link up to the Twin Tech cabinet Controller units.
- 4 - A contrast potentiometer and a brightness potentiometer for the LCD touch-screen

3.3 Using the TTD HUMAN INTERFACE (HMI)

3.3.1 LCD Display

When the cabinet is activated, an initial home page appears on the LCD display, allowing access to the “Cabinet diagnostic” screen page, which is considered as the main screen. Manually pressing the touch-zones on the main screen or the screens of the different menus generally enables the user to:

- Edit a field to be filled in,
- Validate the said field,
- Increment or decrement a value,
- Validate or cancel a function,
- Display one of the different available menus,
- Return to the main screen or the list of menus.

The key or zone selected is highlighted.

There is no recording confirmation when the screen page is changed.

When a field is edited and its value is modified, it is possible to cancel its recording before validation by pressing another touch-zone on the screen.

3.3.2 Numeric Keyboard

The numeric keyboard enables the user to:

- Add a field's value when the field is edited,
- Increment a field's value (by pressing key 1) or decrement (by pressing key 0),

- Directly access a screen page: next page using key 1; previous page using key 0;
- Enter the access code in order to access the different user levels.

Note: any value entered that is beyond the user range is limited to the maximum value.

3.3.3 Navigation Wheel

The wheel may be handled by rotating clockwise or anti-clockwise in order to:

- Select a field from a menu or choose a menu from the two menu screen pages,
- Cancel the validation of a field when the latter is edited.

Pressing the navigation wheel enables the user to:

- Edit a field to be filled in,
- Validate the highlighted field,
- Validate or cancel a function,
- Select a menu or function.

3.4 Accessing the TTD HUMAN INTERFACE (HMI)

There are several possible user access levels. The first two screens (home and main screen) are accessible to all users.

An access code needs to be entered in order to access the “Menu” screen. Depending on the authorised access level, the user will be able to make modifications or launch functions.

The table below indicates the functions accessible to the user according to the access level:

Function/menu	Level 0 Code 5555	Level 1 Code 6666	Level 2 Code 7777	Level 3 Code 8888
View the parameters	No	Yes	Yes	Yes
Edit the patch	No	No	Yes	Yes
Test a dimmer	No	No	Yes	Yes
Alter the settings	No	No	Yes	Yes
Scan the loads	No	No	No	Yes
Edit the laws and multiplying factor	No	No	No	Yes
Edit the ARTNET parameters	No	No	Yes	Yes
Manage the Cues	No	No	Yes	Yes
Load/Save the parameters	No	No	No	Yes
Manually synchronise between controllers	No	No	No	Yes
ADB service	No	No	No	No

Level 0 does not allow access to any menu or function.

Depending on the authorised access level, certain functions or menus remain blocked. Should you attempt to access these, the software will ask you to enter the access code for the next level in order to authorise access to the function or menu.

The access-level indication can be viewed on all the screen pages. It is located in the top right-hand corner and is signalled by a figure representing the current access level (from 0 to 3), followed by a key symbol.



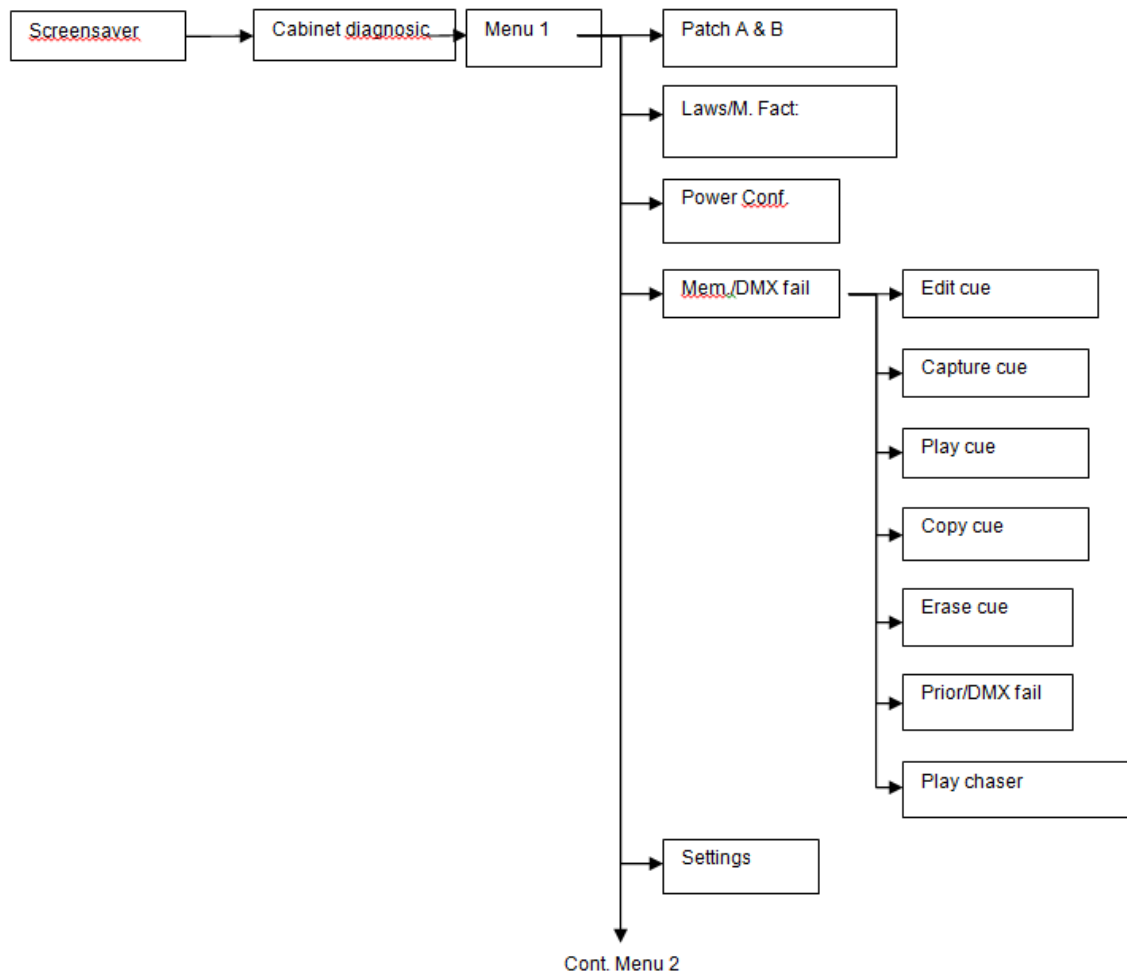
4. Screensaver

If whilst accessing a screen page other than the home page, the user does not handle the touch-screen, keyboard or wheel for a period of more than one minute, the software returns to the home page. The access code will become 0. To access the "Menu" screen pages, an access code will again need to be entered.

5. Online Assistance

A "HELP" key is provided in the bottom right-hand corner of all of the screen pages, allowing touch-access to a help function, relating to the page consulted. Press the "BACK" touch-button to return to the screen page.

6. Menu Tree-Structure

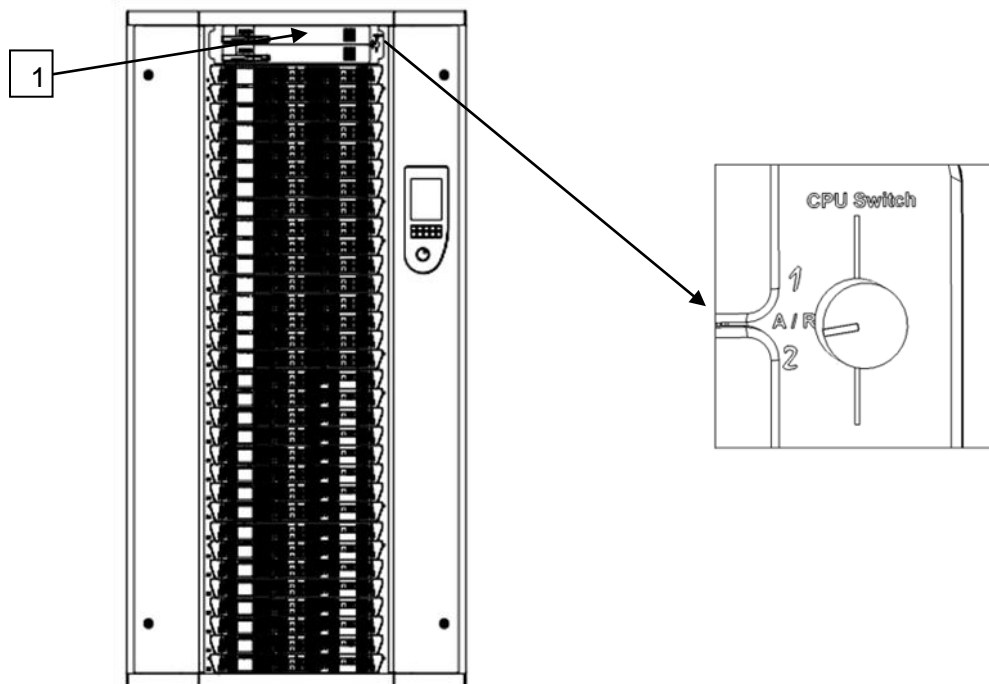


7. Cabinet Configuration

The upper part of the Twin Tech cabinet may be equipped with:

- Two Controller units,
- or a Controller unit and a backup power supply module.

The Controller units, control all of the circuits (128 max.) constituting the modules available in the cabinet (32 max.), according to the configuration recorded by the Unit software (patch) and the channel values present on the DMX A, DMX B and ARTNET inputs (ETHERNET connection).



7.1 Synchronization

The human interface is synchronized continuously between two controllers (if present).

If two controllers are present, data from a controller (the one inserted into the slot from the top), with the exception of the page "Diagnosis of the cabinet" or information from the selected controller using the tabs "CTRL1" and "CTRL2".

If the controller 1 is not functional, timing continues with the controller 2.

If the cabinet has only one controller all the information obtained from this controller

Note: Only the controller in slot from the top is able to detect modules in the cabinet (see Chapter Power Configuration) and to report the status of sinewave and thyristor modules with full diagnostic option (see section "Module Measuring" and "Diagnostic Modules").

If one controller is functional and inserted into the slot at the bottom, the cabinet will work but the human interface will not be able to present the modules or diagnostic information modules

7.2 Module Control

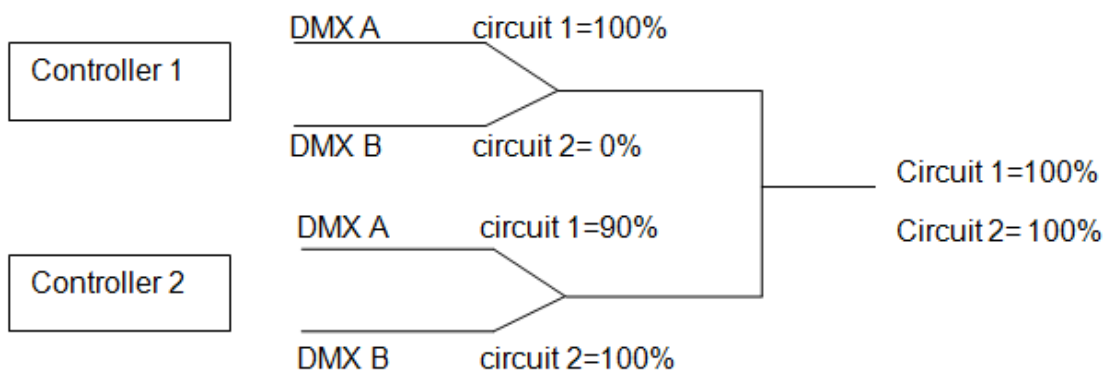
The selector allows the Controller unit in service to be chosen. It may be set to position 1, A/R or 2.

When a controller is selected (1 or 2), the DMX A, DMX B and ARTNET signals present at this controller's input are used.

The software configuration is HTP (Highest Take Precedence) by default. It is the highest value of the DMX A, DMX B and ARTNET inputs (three available universes) and cue played and allocated to a circuit that is taken into account in order to give the output dimming level.

When the selector is set to A/R, the circuits of each module are controlled according to the following rule: the highest value amongst the DMX A, DMX B and ARTNET inputs of the two controllers is taken into account when controlling this circuit.

Example: Control using DMX A and DMX B inputs



Notes: The PCB3031 board also enables:

- the DMX A inputs to be connected between controllers (SW1, selectors 5 and 6 set to ON)
- the DMX B inputs to be connected between controllers (SW1, selectors 7 and 8 set to ON)

8. Presentation of the Home Page



This screen page is displayed as soon as the cabinet is switched on. It gives the information concerning the start address for the DMX A and B inputs and the three ARTNET universes.

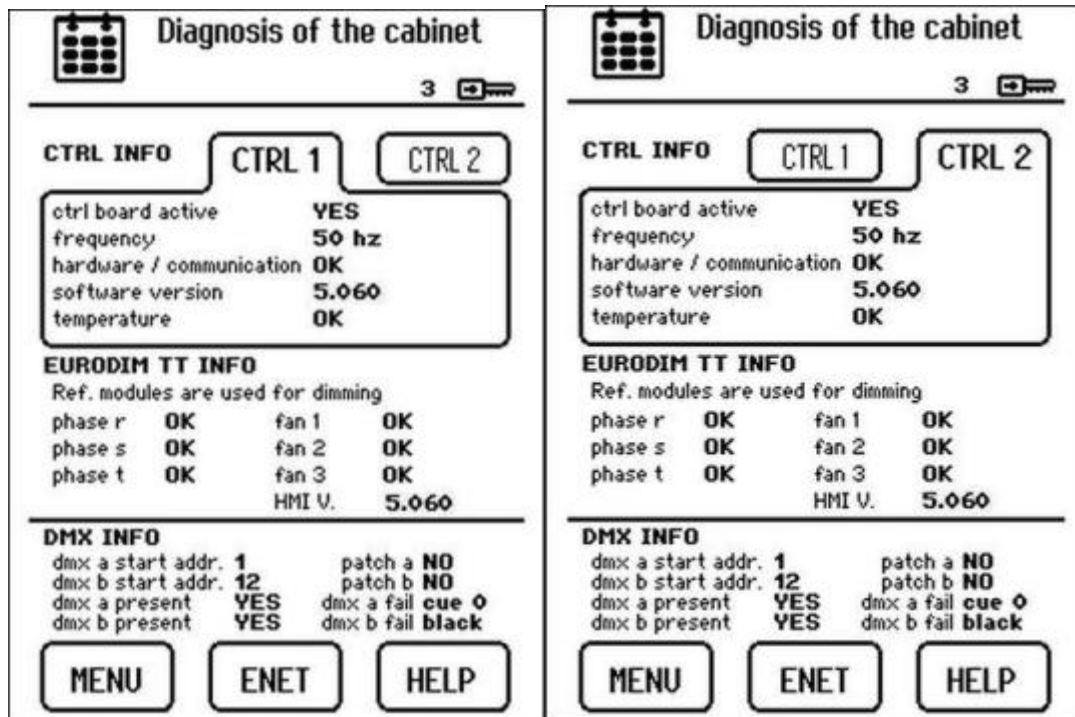
Information available for start address (valid for DMX and ARTNET):

- "x": channel value to address cabinet output 1, $1 \leq x \leq 512$
- "not used": channel value = 0 or > 512
- "- - - -": no circuit physically present in cabinet location 1, or circuit identification error in cabinet location 1 or operating fault

To access the diagnostic page, press the arrow.

9. Presentation of the Cabinet Diagnostic Page

This screen shows the cabinet diagnostic information.



This page is divided into three zones:

- A zone (CTRL1 or CTRL2 tab) providing information on the controllers,
- A zone (EURODIM TT INFO) providing general information on the cabinet's operation, identification of the modules by the controller and signalling the alarms,
- A zone (INFO DMX) providing information on the DMX inputs and the functions associated with these inputs.

Two keys enable the user to:

- Access the two menu screen pages; MENU key. To access the Menu, when prompted by a specific window the user access code needs to be entered using the keyboard, without validating.
- Access the ARTNET information; ENET key. This page is accessible regardless of the user access level.

9.1 Controller (CTRL) Information

Note: The information is present if the controller is physically connected and operational in the cabinet.

- CTRL board active:
 - "Yes" if the controller is selected by the cabinet controller selector (position 1 for controller 1 and position 2 for controller 2 or A/R for both),
 - "No" if the controller is not selected (circuits not controlled by this controller).
- Frequency: displays the network frequency measured at the controller's input

- Hardware/communication:
 - "OK" if the controller is operating correctly,
 - "Not OK" if a problem is detected. In this case, an error message and an exclamation mark appear in the EURODIM TT INFO zone.

- Software version: software version present in the controller

- Temperature:
 - "OK" if the temperature measured in the controller is acceptable,
 - "Not OK" if the temperature measured in the controller is too much high. In this case, the control value of all of the active circuits is reduced by 1% every minute until the temperature measured becomes again acceptable* (also see paragraph on the operation of the ventilation within the cabinet). Looks can be recorded in variety of methods, but a pop-up window gives you options about what is to be recorded.

10. Description of the Menus



Two screen pages are available in order to choose a function, enabling the cabinet to be configured using one of the following menus:

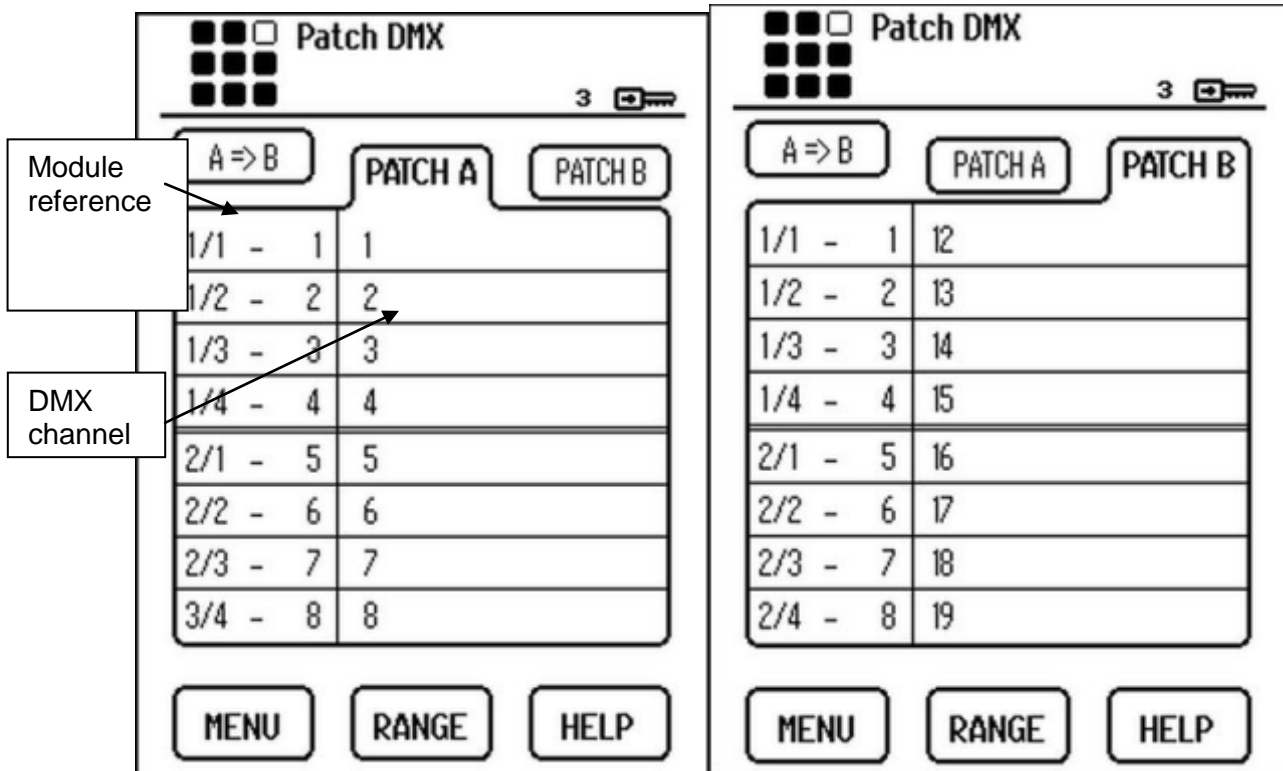
- Patch: to edit patch A or B for each circuit
- Laws/Mult.F: to choose the law used and the multiplying factor for each of the circuits
- Conf. Power: to assign the modules used and detected in the 32 cabinet locations
- Cues/DMX fail: cue management and action to be performed after a absence of DMX/ARTNET
- View all: overall view of all the parameters per module or per circuit
- Test/Flash: to launch a test or the flash of a circuit
- Load/Save: to save and load the parameters of the controllers and of each circuit
- Settings: Human-Machine interface configuration
- Scan loads: to measure/scan the loads connected at the outputs of each circuit
- Mod. Meas.: gives the voltage and current measurements for each circuit
- Mod. Diag.: gives the diagnosis of the outputs of each module
- ARTNET patch: to edit the patch of the three ARTNET universes for each circuit
- View ARTNET: general information on the ARTNET universes and the Ethernet connection
- ARTNET set.: to configure the three ARTNET universes
- ADB Service: function available to ADB technical service only
- Synchro: to synchronise the parameters recorded between each of the controllers

Note: All the information displayed in the different menus originates from controller 1 if two controllers are present in the cabinet.
If only controller 2 is present, all the information displayed in the different menus will originate from the latter. When changing the patch, power multiplication factor, law... the new data is sent to each controller. The circuits defined as « empty slot » or « undefined slot » are not editable and not visible in any screens. It appears again when the circuit will not be declared as “empty slot” or “undefined slot”.

11. Patch Menu

This function is used to configure a patch on a circuit or set of circuits for the DMX A and DMX B signal.

This configuration enables the user to attribute the value of a DMX A and DMX B signal channel to the control of one of the cabinet's circuits.



Reminder

The referencing of the modules in the cabinet starts at 1 in relation to the first location located at the top of the cabinet, up to 32.

The left-hand column contains the referencing of the modules and circuits present in the cabinet.

The figure in the right-hand column is the channel attributed in the DMX signal.

Select patch A or B to start with

Use the wheel to rapidly move between all the rows of the patch. The row selected is highlighted.

To attribute a channel, position on a row and use:

- The touch-screen and the numeric keyboard to enter a value,
- Press key 1 directly to increment the value by 1 (between 1 and 512) in relation to the first value available on a previous row,
- Press key 0 directly to decrement the value by 1 (between 1 and 512) in relation to the first value available on a previous row,
- The Range key in order to enter values between two circuit references.

Important: Specific case for row 1/1: if key 0 or 1 is used, the value taken into consideration corresponds to the content of output 128 if available, otherwise output 127, and so on.
If the value entered is 0 or greater than 512, the circuit is not controllable and the message "Not used" is displayed.

12. ARTNET Patch Menu

This function is used to configure a patch on a circuit or a set of circuits for each of universes 1, 2 and 3.

This configuration is used to attribute the value of a channel of each universe to the control of a circuit of the cabinet.

The image shows three screenshots of the 'Patch Artnet' menu, each with a different universe selected. Each screenshot includes a table of channel assignments and three buttons: MENU, RANGE, and HELP.

Screenshot 1: UNIV. 1 selected

1/1 - 1	100
1/2 - 2	101
1/3 - 3	102
1/4 - 4	103
2/1 - 5	104
2/2 - 6	105
2/3 - 7	106
2/4 - 8	107

Screenshot 2: UNIV. 2 selected

1/1 - 1	200
1/2 - 2	201
1/3 - 3	202
1/4 - 4	203
2/1 - 5	204
2/2 - 6	205
2/3 - 7	206
2/4 - 8	207

Screenshot 3: UNIV. 3 selected

1/1 - 1	300
1/2 - 2	301
1/3 - 3	302
1/4 - 4	303
2/1 - 5	304
2/2 - 6	305
2/3 - 7	306
2/4 - 8	307

Reminder

The referencing of the modules in the cabinet starts at 1 in relation to the first location situated at the top of the cabinet, up to 32.

The left-hand column contains the referencing of the modules and circuits present in the cabinet:

- Example: Value 1/1: references module 1/circuit 1 of the module
- The right-hand figure indicates the output on the cabinet (from 1 to 128).

The channel attributed for each universe is given in the right-hand column.

Start by selecting universe 1, 2 or 3.

Use the wheel to rapidly move between all the rows of the patch. The row selected is highlighted.

To attribute a channel, position on a row and use:

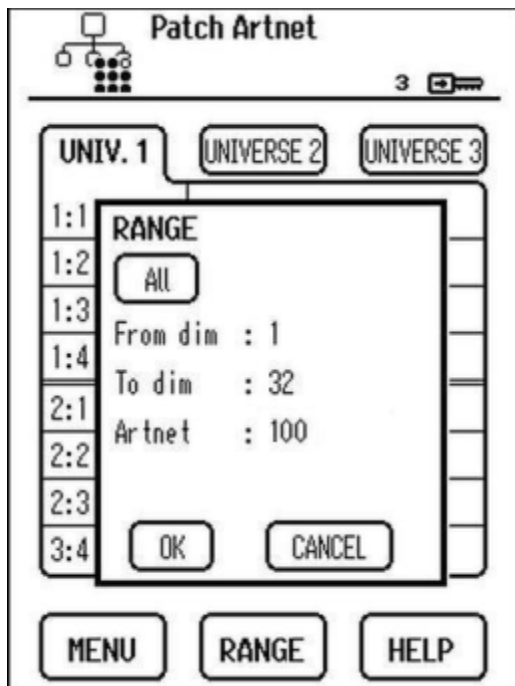
- The touch-screen and the numeric keyboard to enter a value,
- Press key 1 directly to increment the value by 1 (between 1 and 512) in relation to the first value available on a previous row,
- Press key 0 directly to decrement the value by 1 (between 1 and 512) in relation to the first value available on a previous row,
- The Range key in order to enter values between two circuit references.

Important: Specific case for row 1/1: If key 0 or 1 is used, the value taken into consideration corresponds to the content of output 128 if available, otherwise to output 127, and so on.

If the value entered is 0 or greater than 512, the circuit cannot be coordinated and the message "Not used" is displayed.

12.1 Range Key

Used to attribute an ascending patch value in graduations of 1 to a set of circuits, included within a range.



Enter:

- The start dimmer number (From dim),
- The end dimmer number (To dim),
- The start channel value to be taken into consideration for the increment in steps of 1
- Confirm with the OK button.

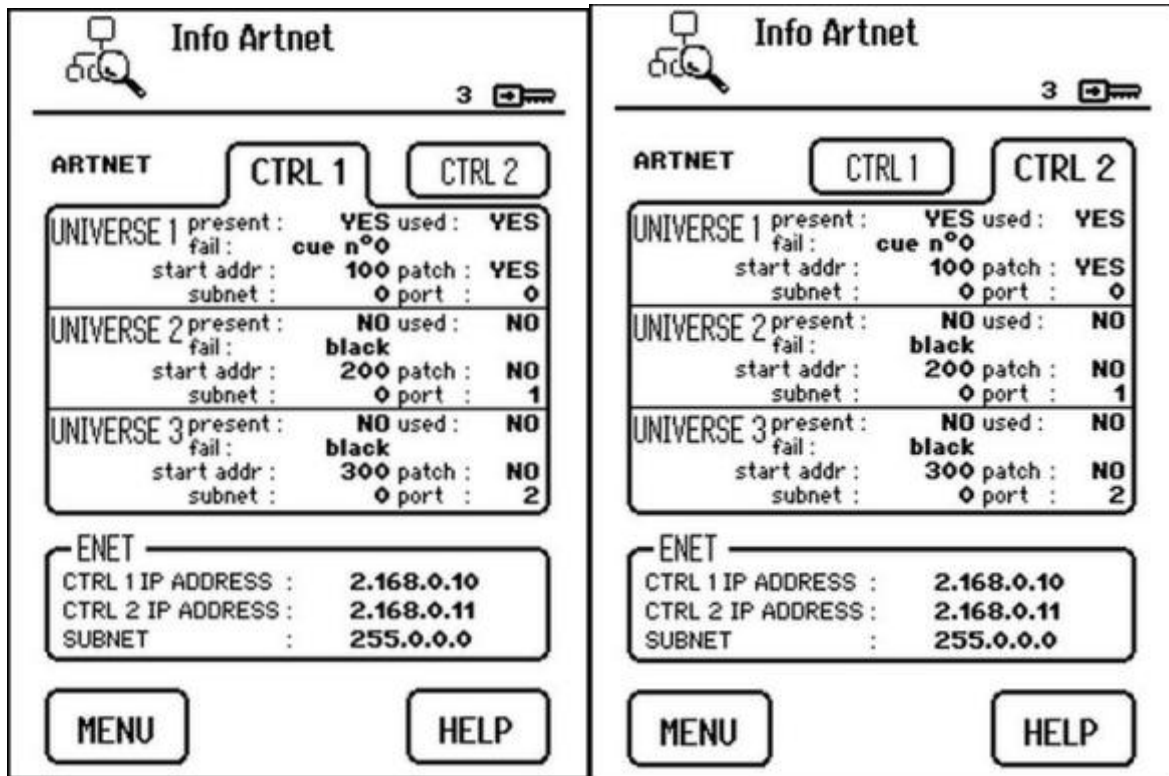
Note: the circuit's first number ("From dim") must be \leq the circuit's second number ("To dim") during definition of the range. Otherwise, the range between two circuits cannot be validated.

The ALL key is used in order to directly enter the 128 circuits of the cabinet.

13. ARTNET Info Menu

These two screens show the status of the ARTNET connections, the configuration information for the three universes managed by each controller, as well as the IP addresses entered at each controller.

To Dock a window:



This page is divided into two zones:

- A zone (CTRL1 or CTRL2 key) providing information on the status of the universes and their configurations for each controller,
- A zone (ENET) providing the IP addresses entered for each controller.

Note: Only the "ARTNET present/missing" information depends on the controller. In effect, each controller has its own ARTNET input. The back button, called "MENU" or "DIAG" is used to return to the previous screen.

13.1 ARTNET Information

For each of the three universes (1, 2, 3), the following information is available:

- Present:
 - "Yes": detection of the Ethernet frame corresponding to the universe,
 - "No": no reception of the Ethernet frame corresponding to the universe.
- Used: see "ARTNET Configuration" menu
 - "yes": the universe values are taken into consideration for the control of the circuits
 - "no": the universe values are not taken into consideration for the control of the circuits

- Fail: action implemented in the absence of the universe (see "Priority/DMX fail" menu), three actions are possible:
 - "last value": the last values received to control the circuits are used permanently as long as the universe is missing,
 - "cue" 0: the values of the universe channels are replaced by the content of cue 0 and will be played as long as the universe is missing,
 - "black": the control value of each circuit fades to zero intensity (black) in 5 seconds.
 - When the universe is present once more, a fade is launched to the intensities given by ARTNET in a time of 5 seconds.

When the universe is present once more, a fade is launched to the intensities given by ARTNET in a time of 5 seconds.

- start addr.: value of the universe channel to address cabinet output 1, see "ARTNET PATCH" menu
 - "x": $1 \leq x \leq 512$
 - "not used": channel value = 0 or > 512
 - "- - - -": no circuit physically present in cabinet location 1, or circuit identification error in cabinet location 1 or operating fault.
- Patch: see "ARTNET PATCH" menu,
 - Yes: the addressing entered in each patch at the circuits is not in ascending order,
 - No: the addressing entered in each patch at the circuits is in ascending order, e.g. 1, 2, 3, 4,....., 128 in the case where 32 modules are present in the cabinet.
- Subnet: value between 0 and 15, see "ARTNET config" menu
- Port: value between 0 and 15, see "ARTNET config" menu

Note: When the ARTNET entries are controlled by an ISIS rotating ADB console, all the subnets must have the same number.

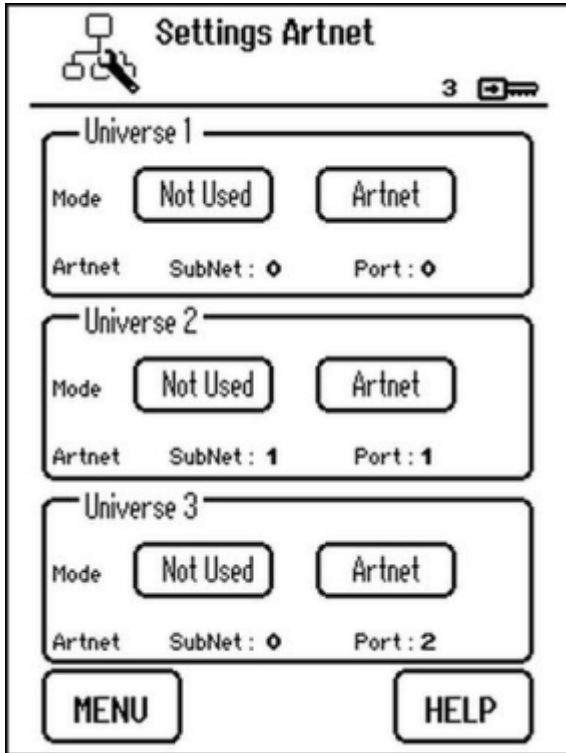
Ethernet Information

The IP address of each controller and the value of the sub-network mask are given.

Important: the IP addresses of each controller must be different. If this is not the case, it is imperative to address the ADB technical department.

14. ARTNET Configuration Menu

This function configures the ARTNET universes for the two controllers as well as the subnet and port values.



14.1 Selecting Universe Mode

For each universe, choose the operating mode:

- "Not Used" mode: the universe is not taken into consideration for the control of the circuits,
- "ARTNET" mode: the universe is taken into consideration for the control of the circuits.

Touch to select the mode. The mode selected must be highlighted.

14.2 Subnet and Universe Port

For each universe, fill-in the subnet and the port such that it is identical to the configuration of the control console.

Subnet and port value: between 0 and 15.

Position on the subnet value (port), either by touching the screen or using the wheel. The value is highlighted.

- Type the value using the keyboard,
- Validate the value by touching the screen to select the zone in question, or using the wheel.

Personal Notes



ADB - Your Partner for Light

Belgium	N.V. ADB-TTV Technologies S.A. (Group Headquarters) Leuvensesteenweg 585, B-1930 Zaventem Tel : +32.2.709.32.11, Fax : +32.2.709.32.80, E-Mail : adb@adblighting.com
France	ADB S.A.S. Sales Office: 92, Avenue Jean Jaurès F-92120 Montrouge Tel : +33.1.41.17.48.50, Fax : +33.1.42.53.54.76, E-Mail : adb.fr@adblighting.com Factory & Group Logistics Centre: Zone industrielle Rouvroy F-02100 Saint-Quentin Tel : +33.3.23.06.35.70, Fax : +33.3.23.67.66.56, E-Mail : adb.fr@adblighting.com

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