Next

DDP 1212 RK

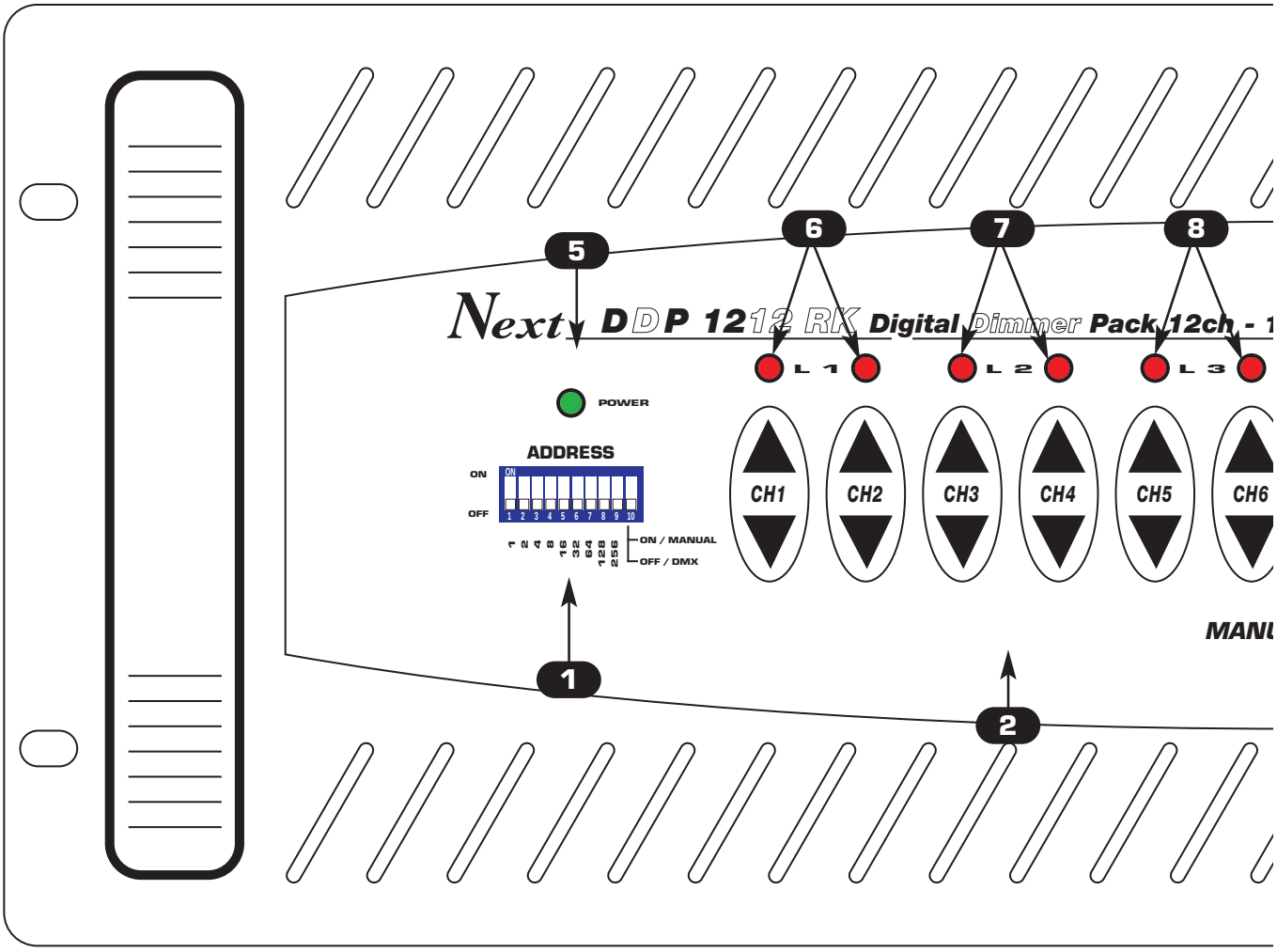
Digital Dimmer Pack 12ch - 12A

GB **USER'S MANUAL**

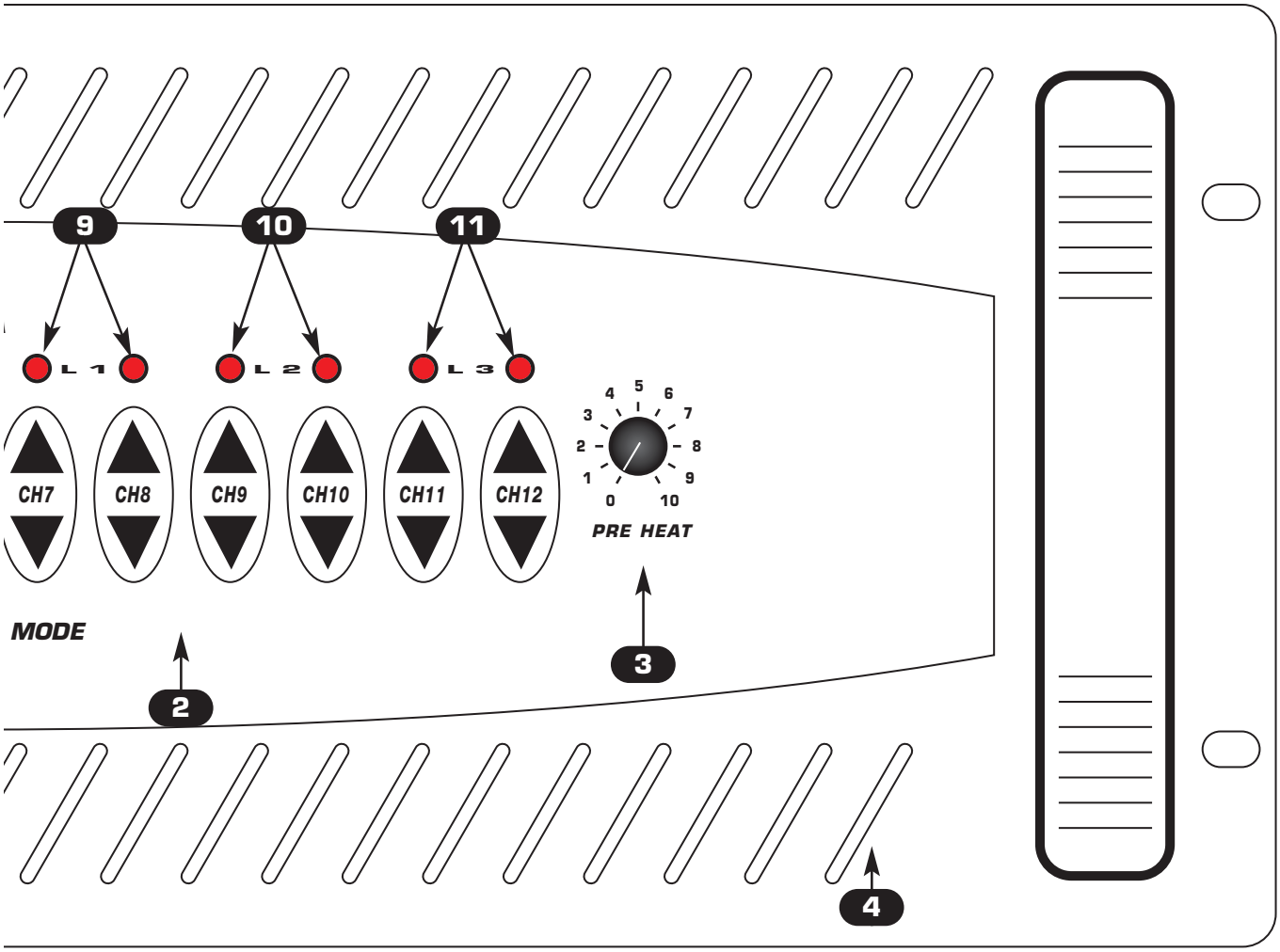
LEGRAND VERSION

INDEX

We congratulate you on your purchase of DDP 1212RK.
Before you proced using this product it should be necessary to read carefully the following user's manual to install it correctly and to get the best of its potentialities.



1. Dip-switch for DMX 512 address
2. MANUAL function channels 1/12
3. Pre Heat
4. Buttonholes for forced dissipation
5. Green light Power
6. Red light channel 1/2 phase L1
7. Red light channel 3/4 phase L2
8. Red light channel 5/6 phase L3
9. Red light channel 7/8 phase L1
10. Red light channel 9/10 phase L2
11. Red light channel 11/12 phase L3


9
10
11
L1
L2
L3
CH7
CH8
CH9
CH10
CH11
CH12
0
1
2
3
4
5
6
7
8
9
10
PRE HEAT
MODE
2
3
4

1.2 Unpacking of the equipment

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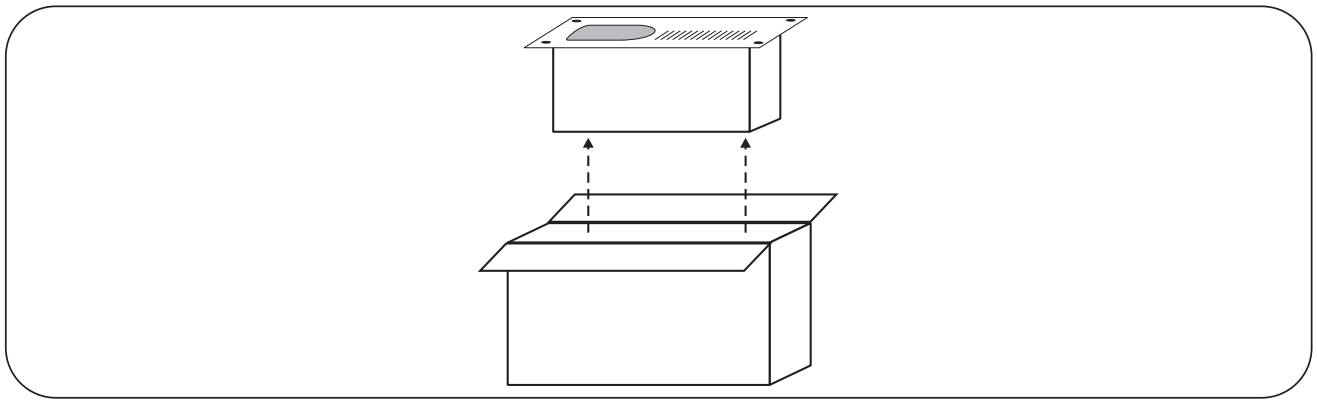
Open the box; take the documentation out.

Take the equipment out of the box as shown in the picture below.



1.3 Acessories issued with the equipment and relative documentation

Verify the contens of the packing.
If one of the following parts of the packing is missing or damaged, please, contact your dealer immediately.

- **DDP 1212RK**
- **Instruction manual.**
- **Guarantee**
- **1 XLR 5 P male connector**
- **1 XLR 5 P female connector**

Read the following warnings before beginning installation.

• This unit is not intended for home use.
• Read this manual thoroughly and observe the following precautions before working with the dimmer.
• Take care not to spill liquids on to the dimmer and do not use it in excessively humid conditions.
• Do not install the dimmer near heat sources or expose it to direct sunlight and do not install in dusty environments without suitable protection.
• Do not obstruct the air intake openings or the cooling fans.
• Do not use the dimmer unless the mains cable and plug are in perfect condition (replace or repair if necessary).
• Do not use solvents such as acetone or alcohol to clean the dimmer or the finish and panel lettering will be damaged.
• If a fault occurs, consult your nearest service centre or a specialized light equipment repair service. Do not attempt to repair the dimmer yourself.
Attention! The unit must be grounded. If this rule is not followed, the guarantee will automatically be considered annulled.

2.1 Description of the rear panel

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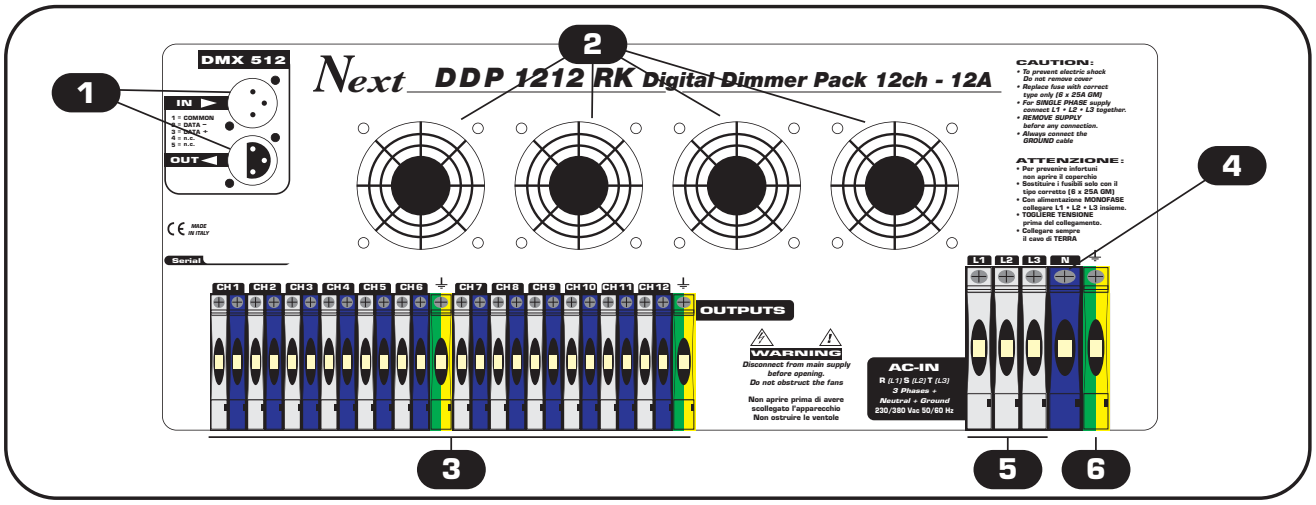


1 Standard DMX 512 signal INPUT/OUTPUT with a 5 or 3-pin XLR connector.

2 FANS for forced ventilation.

3 OUTPUT CHANNELS CONNECTOR: CHANNELS 1/12

4 OUTPUT CHANNELS CONNECTOR: NEUTRAL

5 SUPPLY CONNECTORS: L1 - L2 - L3

NOTE: WITH MONO-PHASE SUPPLY connect the phase wire to the three connectors L1 - L2 - L3 together.

6 CONNECTOR FOR GROUND WIRE ⏚

2.2 DMX 512 input connection

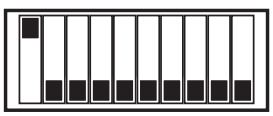
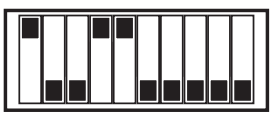
Make sure you are using shielded twisted cables suitable for the transmission of the DMX 512 signal with connectors of good quality and connection as shown on the side of the connector.

Plug the 5/3-pin XLR connector coming from the mixer completly in the DMX 512 input **1**

Use the “push” safety hook to disconnect it and than extract it gently.

ATTENTION: the shielded part of the cable must never be connected to the ground of the electrical system as this could cause faults during the working of the DIMMER.

The “start” channel of the DIMMER is channel n°1, for other DMX address you can follow the tabel below.

DIMMER N° 1 **Address DMX: 1** 	**DIMMER N° 3** **Address DMX:25** 
DIMMER N° 2 **Address DMX:13** 	**DIMMER N° 4** **Address DMX:37** 

2.3 DMX 512 signal cable construction

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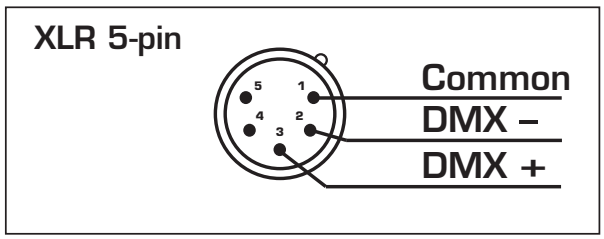
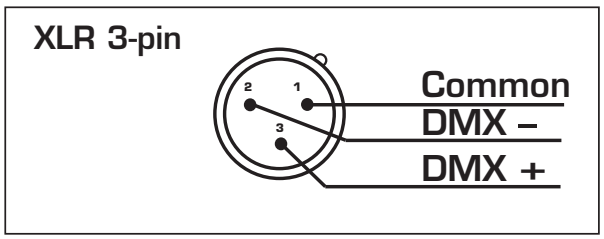
DDP 1212RK has a **DMX 512** input/output that uses standard **XLR 5-pin** or **XLR 3-pin** connectors in accordance with the versions.
The connection must be put into practice with cable shielded by these characteristics:

- **2 conductors plus screen**
- **120 Ohm impedance**
- **low capacity**
- **maximum transmission rate 250 Kbaud.**

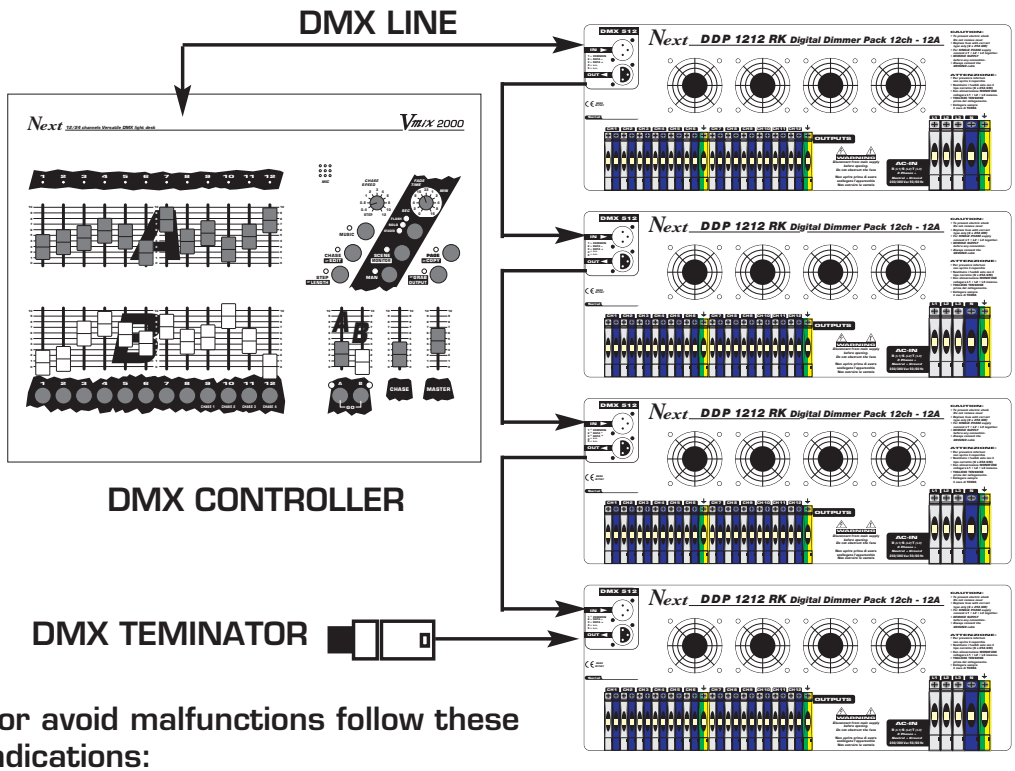
For the connection do reference to the underlying figure





ATTENTION: the shielded part of the cable must never be connected to the ground of the electrical system as this could cause faults during the working of the DIMMER.

2.4 Example of DMX 512 line connection



For avoid malfunctions follow these indications:
Maximum cable length: 500 m
Maximum units connected: 32
DMX termination: 120 ohm resistor across Pins 2 and 3 on the last **Dimmer**.

3.1 Installation of LEGRAND version

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ALL THE OPERATION OF INSTALLATION OR SERVICE MUST BE MADE BY QUALIFIED PERSONNEL !

This unit can accept two type of power supply:

- **230Vac supply (MONO-PHASE CONNECTION: 1 PHASE + NEUTRAL + GROUND).**
- **380Vac supply (TRHEE-PHASE CONNECTION: 3 PHASES + NEUTRAL + GROUND).**

NOTE: Channels 1/2/7/8 are connected to L1 phase, channels 3/4/9/10 are connected to L2 phase, channels 5/6/11/12 are connected to L3 phase.

BEFORE INSTALLATION BE SURE THAT:

- Power supply is capable to deliver enough power for the total load connected at outputs.

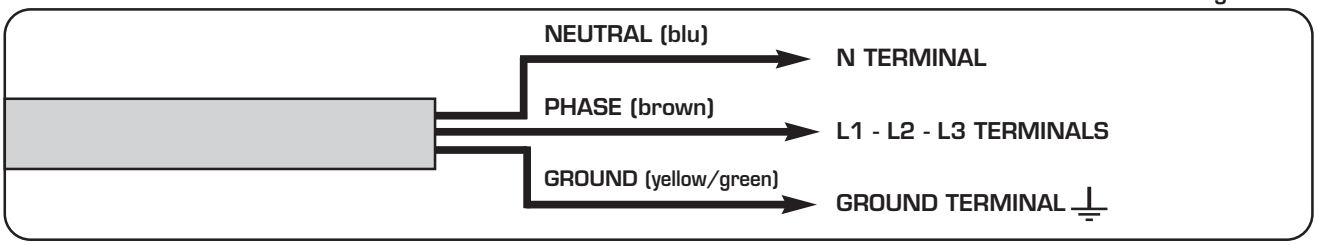
- Power supply and lamps wires have a suitable section depending of their length and total current flow.

3.2 Connection with SINGLE-PHASE supply

LEGRAND VERSION:
Unscrew the 3 fixing screw and remove protection plexiglass over the terminals block.
Connect the 3 wires of power supply cable in the screw terminals as show in fig.1.
Fix through the 3 screw the protection plexiglass over the terminals block.

NOTE: In mono-phase operation the L1-L2-L3 terminals must be wired together through a suitable section wire.

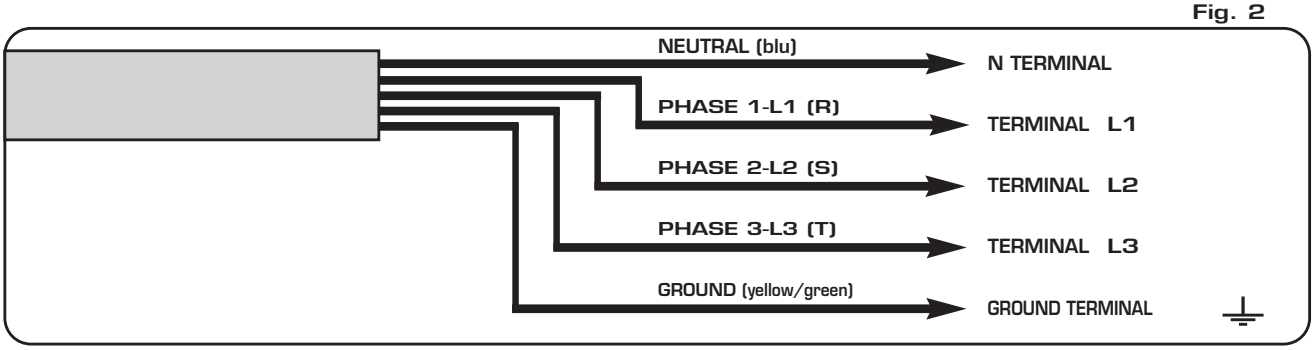
Fig. 1



3.3 Connection with THREE-PHASES supply

LEGRAND VERSION:
Unscrew the 3 fixing screw and remove protection plexiglass over the terminals block.
Connect the 5 wires of power supply cable in the screw terminals as show in fig.2.
Fix through the 2 screw the protection plexiglass over the terminals block.

Fig. 2



3.4 Connection of the output channels

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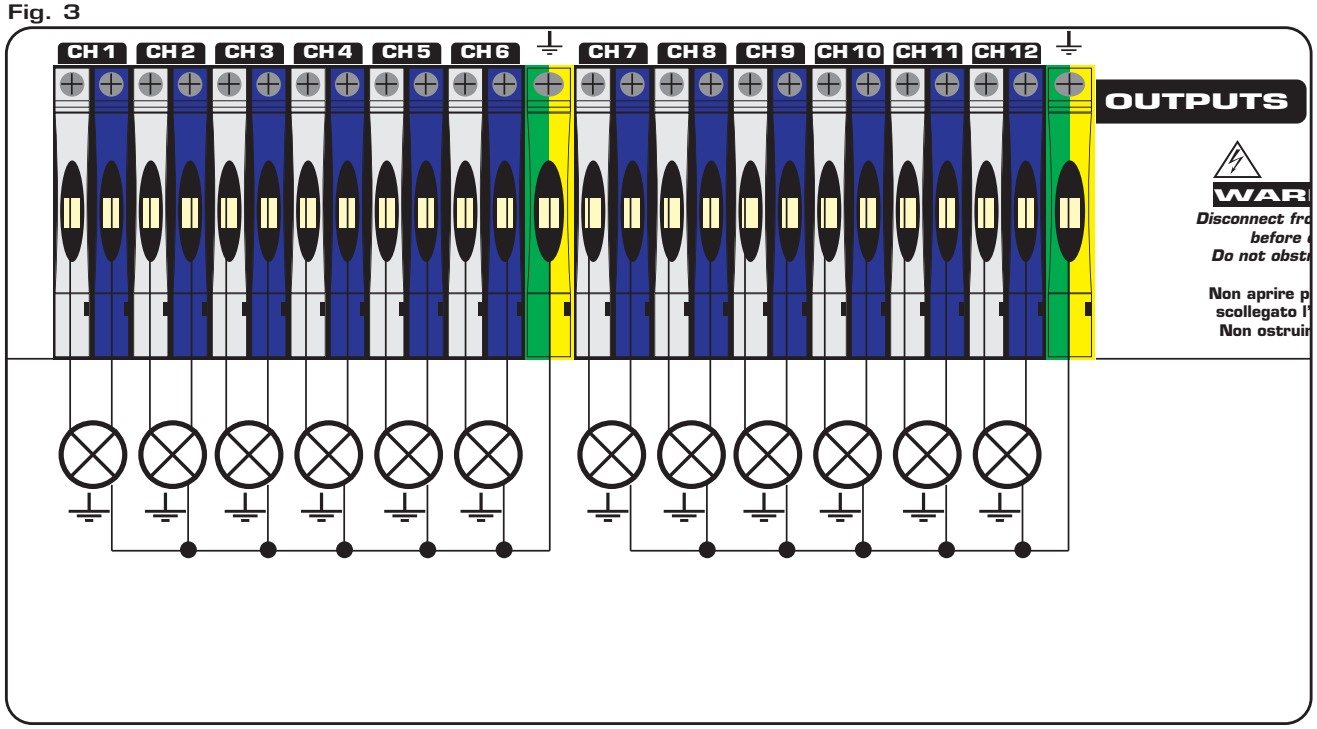
LEGRAND VERSION:

Unscrew the 3 fixing screw and remove protection plexiglass over the terminals block.

Connect the lamp cable in the screw terminals as show in fig.3.

Fix through the 3 screw the protection plexiglass over the terminals block.

Fig. 3



It is possible to connect one or more lamps in one channel, verifing that **TOTAL LOAD OF THE CHANNEL NOT EXCEED 12A (2600 W).**

In any case the output is electronically limited to a maximum of **12 A** per channel, no matter what load is applied

NOTE: IT IS VERY IMPORTANT TO USE A SUITABLE SECTION WIRES TO CONNECT THIS EQUIPMENT TO THE LAMPS: THE SECTION DEPENDS OF THE LENGTH OF THE CABLE AND THE LOAD OF THE CHANNEL.

THE NEUTRAL CABLE MUST HAVE A SECTION SUITABLE TO SUPPLY ALL THE CHANNELS CONNECTED TO IT.

THE SECTION OF NEUTRAL DEPENDS ALSO OF SUPPLY TYPE (MONO-PHASE OR THREE-PHASES).

4.1 Switching on

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As soon as it's switching on, **DDP 1212RK** it begins a test routine to check for any irregularities in the power supply and on the output.
In the case there is a malfunction, a problem in the power supply or no DMX signal , the **DDP 1212RK** signals the error through the flashes of the red light up the keys **CH1 –> CH12**

FOR A DESCRIPTION MORE DETAILED SEE PAR. 6.1 (CODES OF ERROR)

4.2 DMX Operation

This function allows to activate the Dimmer through a remote control (mixer)

The **Dmx** operation is activated carrying the dip-switch 10 on the **OFF** position. Fig.4

Find out to have assigned the correct DMX address **(see par. 2.2)** and that the DMX signal is present in the connector set on the rear.

IF ONE OR MORE RED LIGHT UP THE KEYS CH1/ CH12 FLASHES SEE THE PAR. 6.1

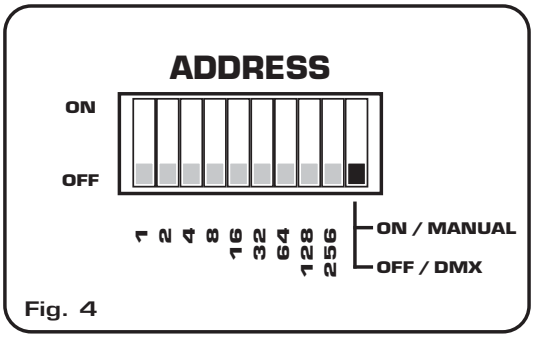

Fig. 4

4.3 MANUAL Operation

This function allows to activate the Dimmer manually (without DMX)

The **Manual** operation is activated carrying the dip-switch 10 on the **ON** position Fig.5

Pressing the keys **CH1/ CH12** you adjust the value of the corresponding channel.

IF ONE OR MORE RED LIGHT UP THE KEYS CH1/ CH12 FLASHES SEE THE PAR. 6.1

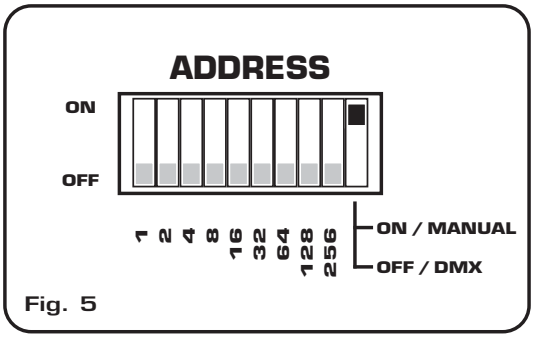

Fig. 5

4.4 PRE HEAT Function

This function allows to activate, for all the channels, the level of preheating.

The function PRE HEAT is always active
When the incandescent lamps are cold, before voltage is applied, the filament has a very low resistance, so at the moment in which the voltage is applied, a very high current will pass through the lamp.

Through the knob ***PRE HEAT*** Fig.6 it is possible to activate an express value in percentage from 0% to 10%.
IT IS RECOMMENDED Leave it to zero for inductive loads (neon, Par 36).

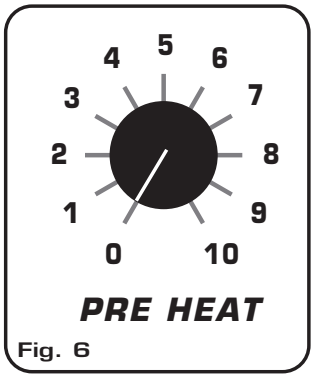

Fig. 6

The **DDP 1212RK** is endowed with efficient protections for avoid that any malfunction could damage it, the protections are:

5.1 PROTECTION AGAINST SHORT-CIRCUITING

When a Short circuit occurs, the **DDP 1212RK** disables the relative channel immediately, for afterward try to be switched on it again.
After 3 attempts, if the Short Circuit persists, the **DDP 1212RK** switches off the channel definitely for protect the installation.

5.2 OVERLOAD PROTECTION

Each output channel of the **DDP 1212RK** has set for delivery not more than **12 A** continuous, up this threshold the output is electronically limited.

5.3 OVER-HEATING PROTECTION.

The maximum temperature of work is 90º C. and it is measured on the heat sink inside of the **DDP 1212RK**. When exceeded this temperature, the 12 outputs come disable up to when the temperature doesn't return within normal values.

5.4 PROTECTION AGAINST INCORRECT CONNECTIONS

In the eventuality that the dimmer is wired incorrect, each electronic inside circuit is protected from fuses of appropriate value, the fuses in normal conditions of use don't operate.

5.5 FORCED VENTILATION

Through the use of two low noise fans and speed electronic rotation control, the system of cooling is optimized.
This system allowed to maintain the dimensions of the dimmer in 4 units rack standard. The flow of ventilation occurs through the frontal panel and the rear one, becoming possible the installation of the dimmer without allow any space between one and the other, reducing the total sizes of the rack.
The fans doesn't compromise the use in the environments where the noise must be least (theaters), the **DDP 1212RK** varied the speed of rotation and therefore the noise, proportionally of the inside temperature.

5.6 - POWER SUPPLY

Thanks to its advanced design, the power supply of the logical part of the **DDP 1212RK** is taken from all the three phases.
Whitout presence of one of the three phases the channels powered with the others two phases will work correctly too.

6.1 Codes of error

The evolved software keeps the various sections of the dimmer under constant control, intervening with special protection procedure in the event of faulty operation.
The problem has signalled following the codes of the underlying table.

SIGNALING	*CAUSE*
Flash of all red light CH1–>CH12	*No signal DMX 512* *Address DMX 512 not activate correctly* *High temperature inside*
Flash of red light CH1/CH2/CH7/CH8	*No power supply of PHASE L1*
Flash of red light CH3/CH4/CH9/CH10	*No power supply of PHASE L2*
Flash of red light CH5/CH6/CH11/CH12	*No power supply of PHASE L3*
Flash of red light CH1	*Situation of short-circuit on the channel CH1*
Flash of red light CH2	*Situation of short-circuit on the channel CH2*
Flash of red light CH3	*Situation of short-circuit on the channel CH3*
Flash of red light CH4	*Situation of short-circuit on the channel CH4*
Flash of red light CH5	*Situation of short-circuit on the channel CH5*
Flash of red light CH6	*Situation of short-circuit on the channel CH6*
Flash of red light CH7	*Situation of short-circuit on the channel CH7*
Flash of red light CH8	*Situation of short-circuit on the channel CH8*
Flash of red light CH9	*Situation of short-circuit on the channel CH9*
Flash of red light CH10	*Situation of short-circuit on the channel CH10*
Flash of red light CH11	*Situation of short-circuit on the channel CH11*
Flash of red light CH12	*Situation of short-circuit on the channel CH12*

***N.B.** The sophisticated circuit of protection from the short-circuits intervenes immediately for protect each channel of the Dimmer.*

*When a Short circuit occurs, the **DDP 1212RK** disables the relative channel immediately, for afterward try to be switched on it again.*

*After 3 attempts, if the Short Circuit persists, the **DDP 1212RK** switches off the channel definitely for protect the installation.*

For restore the normal operation, switching off the Dimmer, eliminate the cause and switching on the DDP 1212RK.

If the problem persists contact qualified personnel.

TECHNICAL FEATURES OF DDP 1212RK

Technical features:

- **Digital Dimmer Unit 12 channel DMX**
- Input **Signal DMX 512/1990** STANDARD.
- **Power** : **12A**
- **3 phase operation 380 Vac** 50/60 Hz **+ NEUTRAL**
- **Single phase operation 230 Vac** 50/60 Hz.
- **Dip-switch** for digital address. (1/512).
- Digital **lamps pre-heat control** through **knob**.
- **LC interference filter.**
- Digital **Protection** from high temperature.
- Digital **Protection** from short circuit and overload.
- **DMX-512** with **5** pin **XLR** male and female **input/output.**

Climatic condition for the use

- Humidity: **35% ÷ 80%**
- Temperature: **5 ÷ 50 °C**

Dimensions and weight

Dimension (L x H x P) / Weight: **482 x 176 x 340 mm (4U rack) / 16 Kg.**

Note

CODEM MUSIC S.r.l. *- Via G.Pierini, 13 - 61100 PESARO - ITALY*
Tel. +39 0721 204357 - Fax +39 0721 203554
www.codemmusic.com - www.wi-dmx.com - info@codemmusic.com