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Universale - 8

4000mA LED DRIVER
1 CHANNEL – 180W

QUICK USER AND INSTALLATION MANUAL

ENGLISH

REVIEW 1.40

Review: February 2023

Index:

1. Safety Information

1.1 Fire hazards prevention

- Do NOT install the equipment onto flamable surfaces.
- The minimum safety distance to keep from flamable surfaces and substances is 0,1m.
- If not used with phase cut dimming input, this equipment must be powered from a breaker/differential-switch-protected mains/power line.

1.2 Electric discharges prevention

- HIGH VOLTAGE: remove power and await 1 minute before opening the equipment's protective case/lid and before operating on or inside the equipment.
- Please make sure to follow all Safety Instructions included in this manual to correctly connect to mains and power up the equipment
- *Universale-S* is a highly sophisticated electronical equipment, only authorised and trained personnel should operate on it; please make sure to forward any technical assistance or service related query, only to **delectra** authorised service centers.
- Please ensure that the power cable does NOT come into contact with any other cable.
- Please do NOT handle the equipment with wet or sweaty hands, or on and around liquids in general.
- Please do NOT install the equipment outdoors in direct exposure to rain/water or in high-humidity environments.

1.3 General Safety Notices

- Do NOT install the equipment in spaces without a constant circulating air flux.
- Ambient temperature must NOT be higher than 45°C or lower than -20°C.
- The equipment contains electrical and electronic components that must NOT get into contact with water, oil or any other liquid substance in general otherwise safety and reliability of the equipment may be affected or compromised.
- Never install the equipment in areas where condensation may occur.

1.4 Ingress Protection Grade

- This appliance conforms to any ordinary equipment with Ingress Protection grade of: IP20

2. Warranty and Regulations

2.1 Normative Regulations

- This equipment complies with all essential requirements as per CE Regulations (please review technical specifications at chapter 3.1 or the product's conformity declaration).

2.2 Warranty Conditions

- The Equipment's warranty is valid 36 months from purchase date and it covers manufacturing processes and material related defects.
- This Warranty waives the OEM from covering any fault/breakage that is due to negligence or misuse; either derived from any non-compliant installation or any fault/breakage that result from an installation that is non-compliant with the environment type and/or device usage restrictions - as explicitely and clearly set out throughout this user and installation manual -. Furthermore, the OEM will not cover any fault/breakage due to the lack of trained personnel or the lack of service maintenance as advised or as needed. (Please make sure to carefully read this manual and thoroughly follow all the guidance set out in it).
- This Warranty is void if the appliance is modified or opened by non authorised personnel and/or in case that any safety or warranty seal appears broken or has been tampered with.
- This Warranty does not include equipment substitution.
- Serial Number and Equipment type/model-number are necessary when opening technical queries or whenever technical assistence is sought from the OEM, the vendors or any reseller.

3. Product Specifications

Universale-S is a 1 channel current regulator for LED systems with an embedded power supply; the device can output a maximum Total Power of 180W; maximum constant output current can be up to 4A: it can be set between 0,5A and 4A, selectable by the display function panel.
The device can be connected to a phase cut dimmer (leading or trailing edge) and, at the same time, it can be set through the local potentiometer or through a DMX console; control priority is regulated in according to LTP mode (Latest Takes Precedence).
The multifunctional display allows for easy access to all its settings menus, measurements, system diagnostics as well as software updates. The embedded bidirectional communication sub system allows to remotely control all system's features; this functionality is made possible by using RDM protocol or by using *Remoto* Delectra.

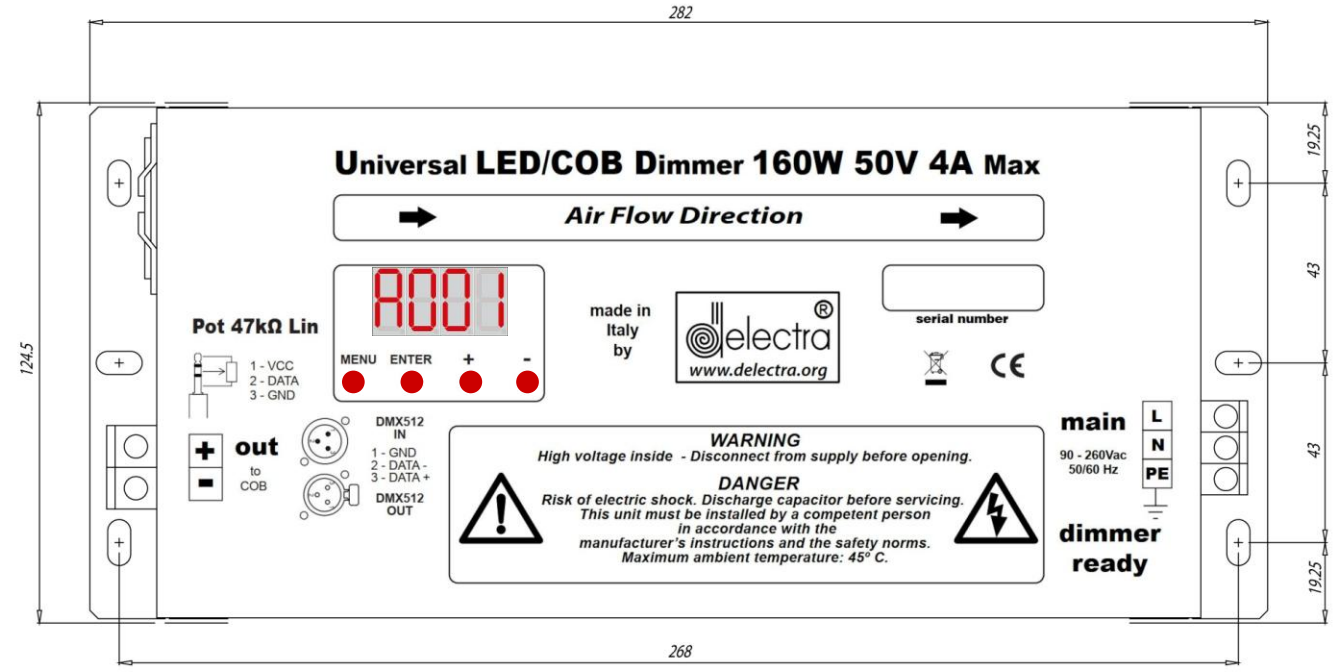
Please take a look at the website www.delectra.it for anyother news or updates.

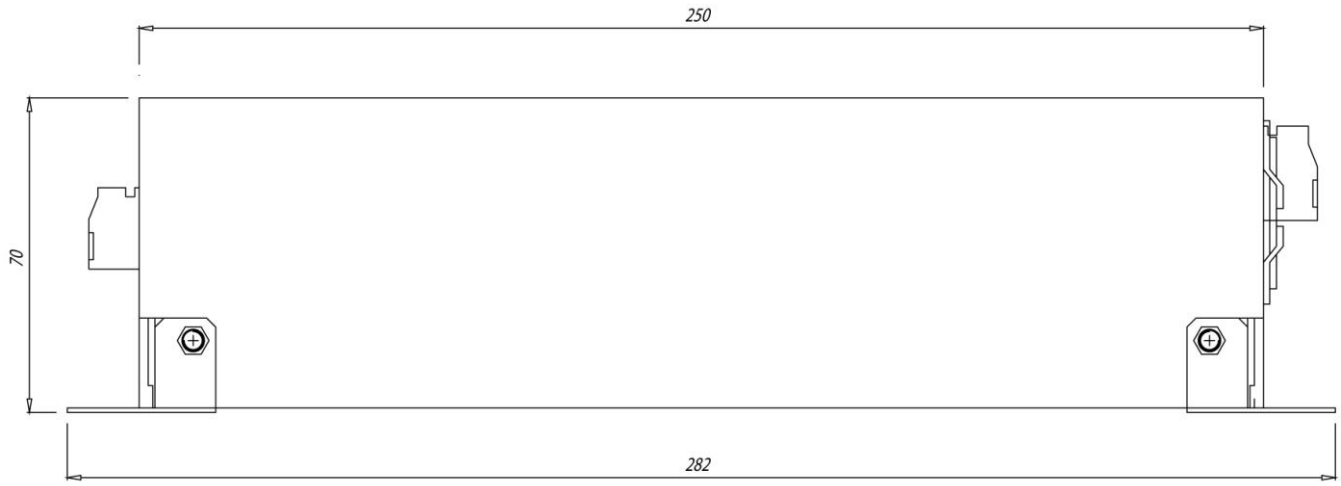
3.1 Products main features

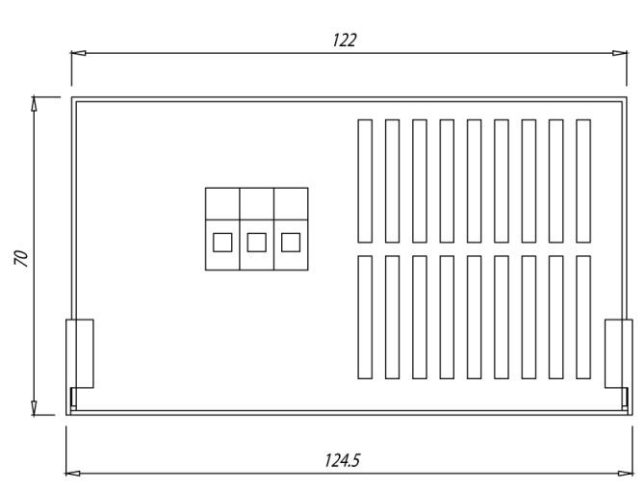
Input Technical Specifications	
Powering Voltage	100-240Vac (+/- 10%)
Frequency	47-63Hz
Nominal Input Power (from mains)	210W @ 240Vac 50Hz 25°C
Power Factor	> 0,99 @ 230Vac
Efficiency	> 0,85 @ 230Vac
Inrush current	6,3A @ 230Vac
Output Technical Specifications	
Maximum Voltage (@ max load)	45Vdc
Rated Current	Between 500mA to 4000mA (selectable)
Number of Channels	1 channel
Maximum Power	180W
Regulation Type/Mode	Current / PWM
PWM Frequency	Between 320Hz to 1200Hz (selectable)
Flicker free	Yes
Interface Technical Specifications	
Power Connector	AWG 14 7,5mm pitch, terminal block
Potentiometer Connector	Stereo jack 3,5mm
DMX Signal Connector	XLR3 M/F 3 pins
Lighting Sources Connector	AWG 12 10mm pitch, terminal block
Display	4 Digit / 7 segments
DMX512	1 x DMX512-A
DMX Channels	1 – 2 (default) – 3
Phase dimming (leading or trailing edge)	Yes
Potentiometer Input	Yes (47KΩ linear)
RDM	Yes
Remoto© system compatibility	Yes
Firmware Update	Yes (using Remoto©)
Fan Output	1 x 12Vdc @ 1W. Linear control. Fan is activated when exceeding a pre-defined thermal threshold

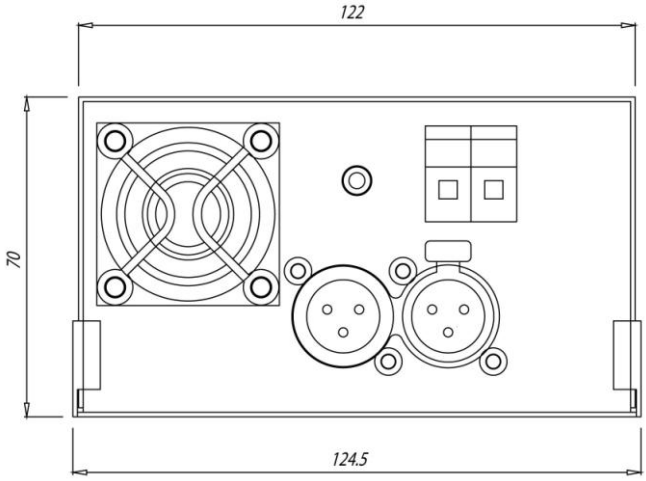
Protections	
Fuse (on board)	F – 5A
Over-Temperature	Yes
Power Derating feature	Yes
Output Short-circuit	Yes
Measurements Availability	
Internal Temperature	Yes
LED Temperature	No
DMX Signal	Yes
PWM Frequency setting	Yes
Output Current	Yes
Output % Level	Yes
Life Time	Yes
Environmental Operating Ranges	
Working Temperature	-20…+45°C
Relative Umidity	0-90% (condensation free)
Conformal Coating	Yes
Safety& EMC	
The device is compliant with the following CE regulations:	
Electro Magnetic compatibility (EMC) Regulations	2014-30-EU
Low Voltage Directive (LVD) Electric Material Regulations	2014-35-EU
ROHS Regulations	2011-65-EU
For further details refer to the product Declaration of Conformity	
Other Characteristics	
Dimensions LxHxW (mm)	282x70x125
Weight (Kg)	1,2
IP rating	IP 20
Insulation Class	Class1
Accessories	
Remoto©	DEREMOTO000000
Accendo© Dmx 512 Opto Hub	DEOPTOHUB00000

4. Dimensions

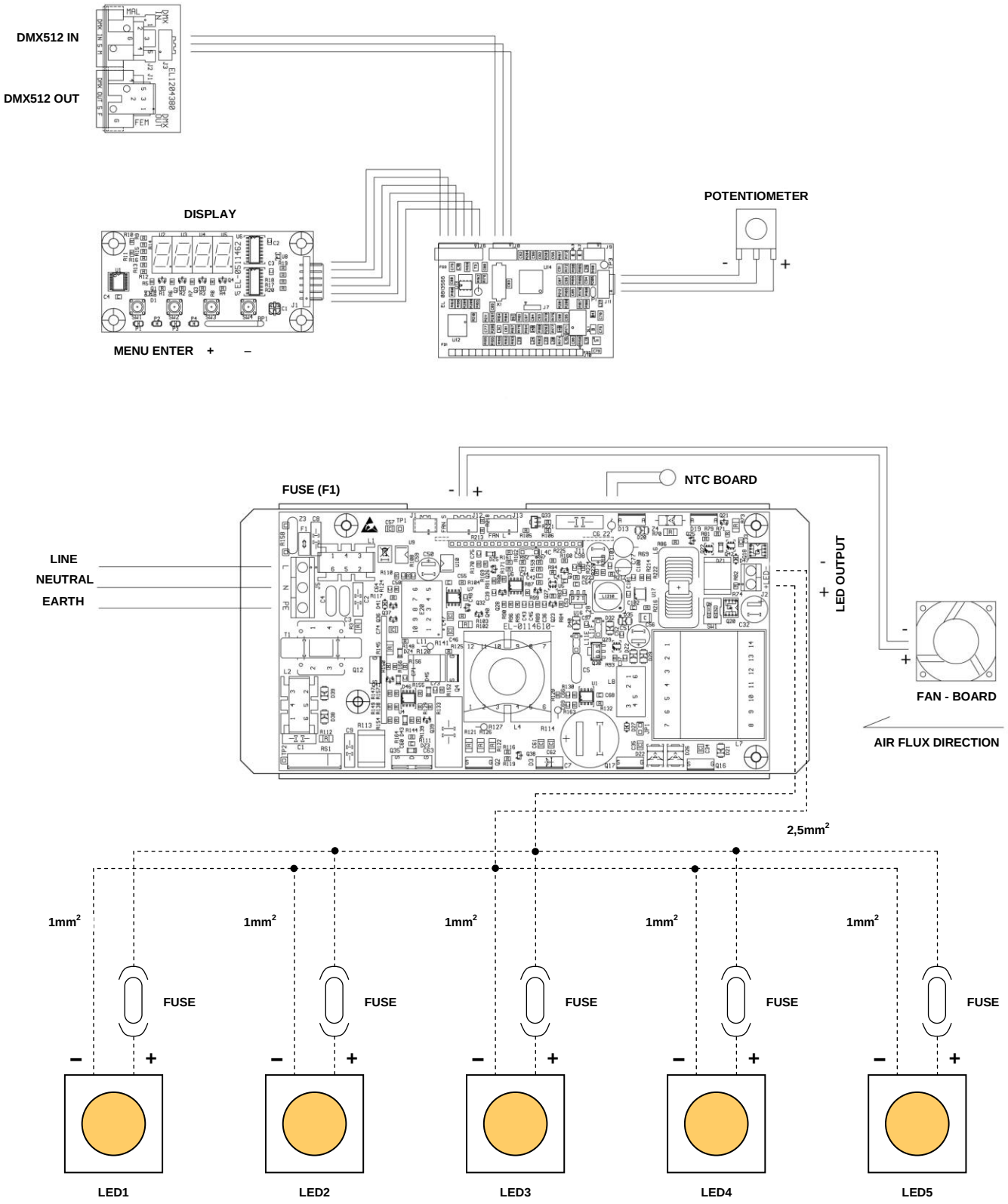








5. Internal connections



Note: this diagram is just one of the many examples of safe wiring; the wirings and the fuses depend on the type of the LED and the current set by the **Universale-S** control panel.

6. DMX Charts

6.1 DMX Chart – 1 Channel Mode

1 Channel MODE					
DMX Channel	**Function**	**Control Type**	**Effects**	**DMX Value**	**Output**
1	Master Dimmer	Proportional	Output lighting intensity adjustment	0-255	0-100%

6.2 DMX Chart – 2 Channels Mode

2 Channels MODE					
DMX Channel	**Function**	**Control Type**	**Effects**	**DMX Value**	**Output**
1	Master Dimmer	Proportional	Output lighting intensity adjustment	0-255	0-100%
2	Fine Dimmer	Proportional	Fine dimmer control 16 bits	0-255	0-100%

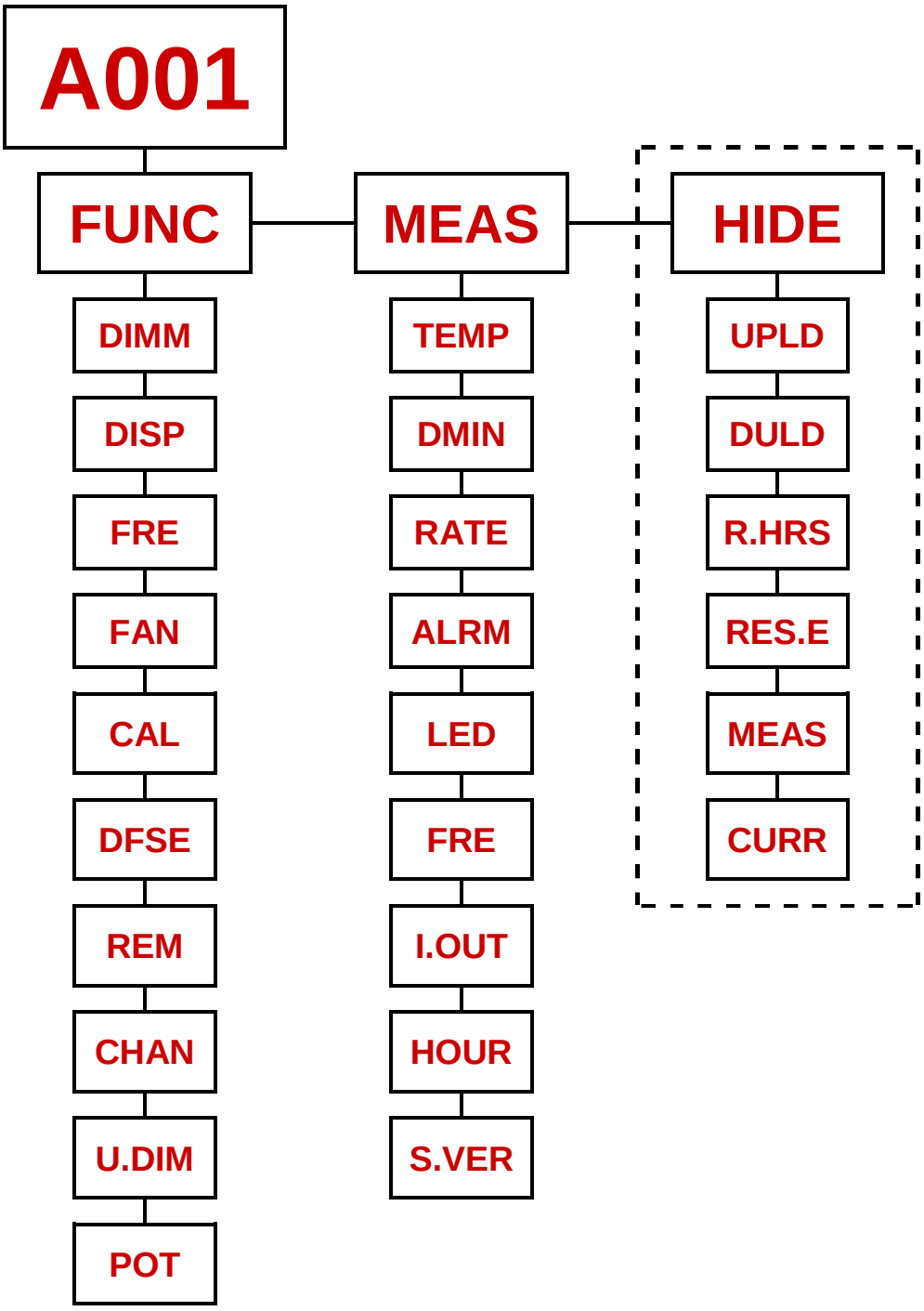
6.3 DMX Chart – 3 Channels Mode

3 Channels MODE					
DMX Channel	**Function**	**Control Type**	**Effects**	**DMX Value**	**Output**
1	Master Dimmer	Proportional	Output lighting intensity adjustment	0-255	0-100%
2	Fine Dimmer	Proportional	Fine dimmer control 16 bits	0-255	0-100%
3	Strobe	Step	No effect	0-9	---
		Proportional	Variable speed strobo effect, from slow to fast	10-57	0,4 – 30 p/sec
		Step	No effect	58-59	---
		Proportional	Sequenced pulse effect, slow closing, fast opening (variable speed pulsing, from slow to fast)	60-108	1,45 – 380 p/min
		Step	No effect	109-110	---
		Proportional	Sequenced pulse effect, fast closing, slow opening (variable speed pulsing, from slow to fast)	111-159	1,45 – 380 p/min
		Step	No effect	160-161	---
		Proportional	Random strobe effect with variable speed from slow to fast	162-207	---
		Step	No effect	208-209	---
		Proportional	Random strobe effect with variable speed from slow to fast	210-255	---

7. Display

Through the control panel it is possible to set the device mode of functioning (**FUNC** menu); device diagnostic can be carried out through the measurements functionality (**MEAS** menu).
In order to access any functionality, from the main screen displayed, press the **MENU** button, browse around the various options with the + or – keys, once the desired sub-menu is selected, press the **ENTER** button.
To save any particolar setting press the **ENTER** button: if the display blinks 3 times it means correct / successful saving.
Use the **MENU** button to move from a sub-menu to its parent menu (i.e. going back).

7.1 Menu – Blocks diagram



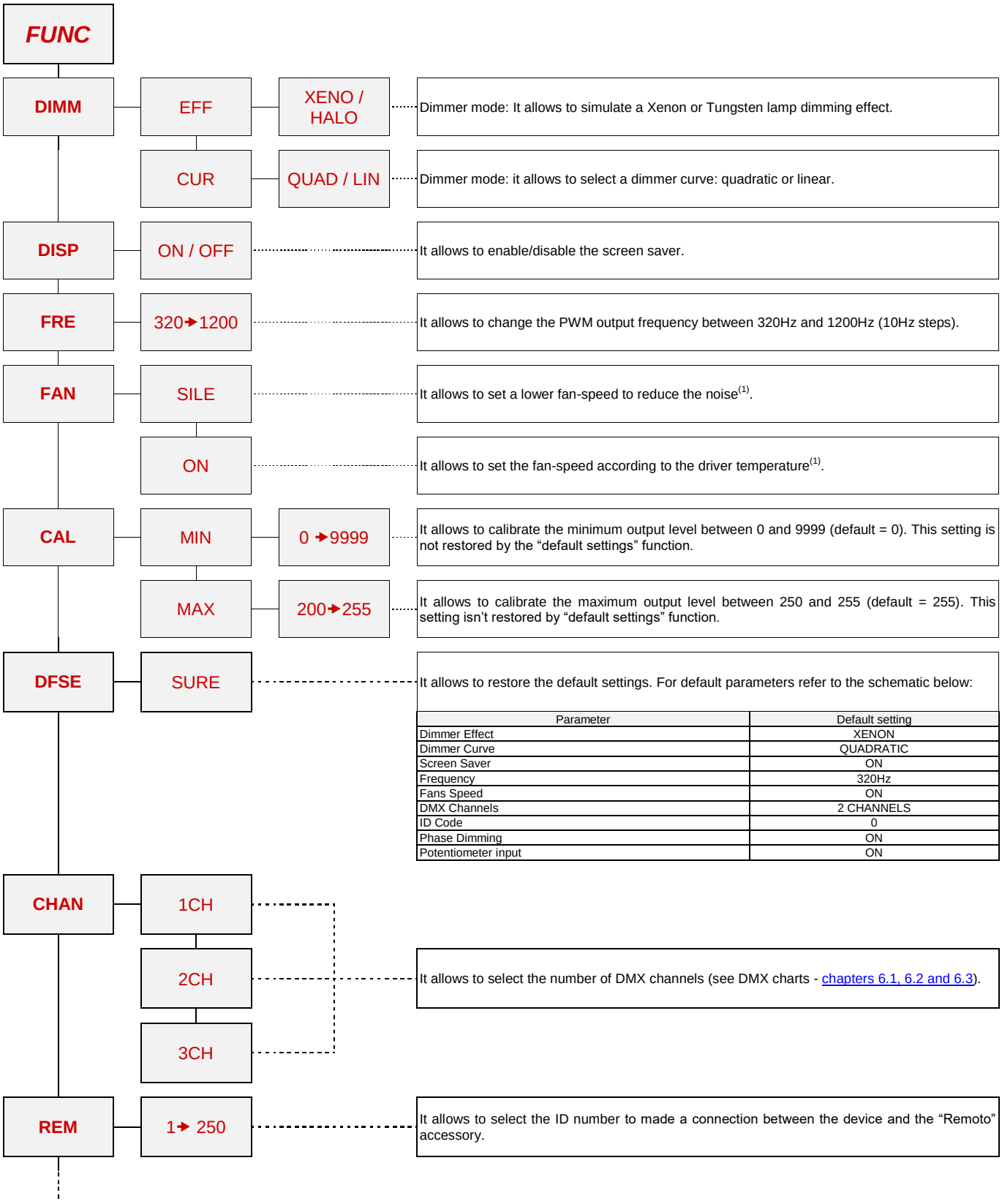
7.2 MAIN menu

The **MAIN** menu is displayed when the driver is turned on:

A001	It allows to set the DMX address between 1 and 512 by pressing the + and – keys and then confirming by ENTER. The panel displays "nDMH" if DMX signal is not connected.

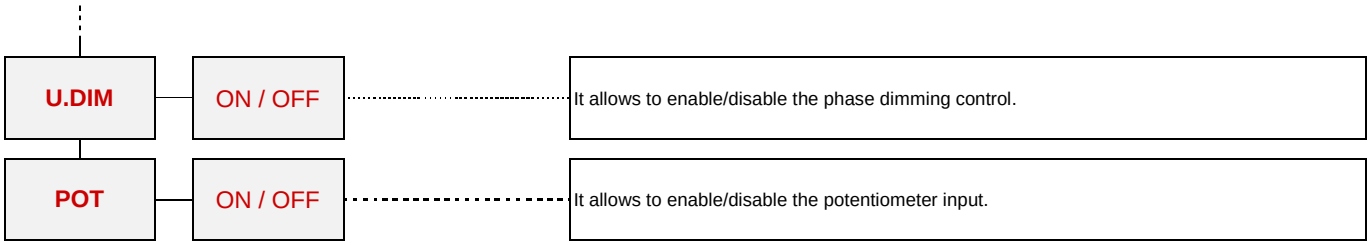
7.3 FUNCTIONS menu

The **FUNCTION** menu allows to change and customize some functional settings of *Universale-S*, e.g. dimming curve or DMX channels. For more details please refer to the schematic below:



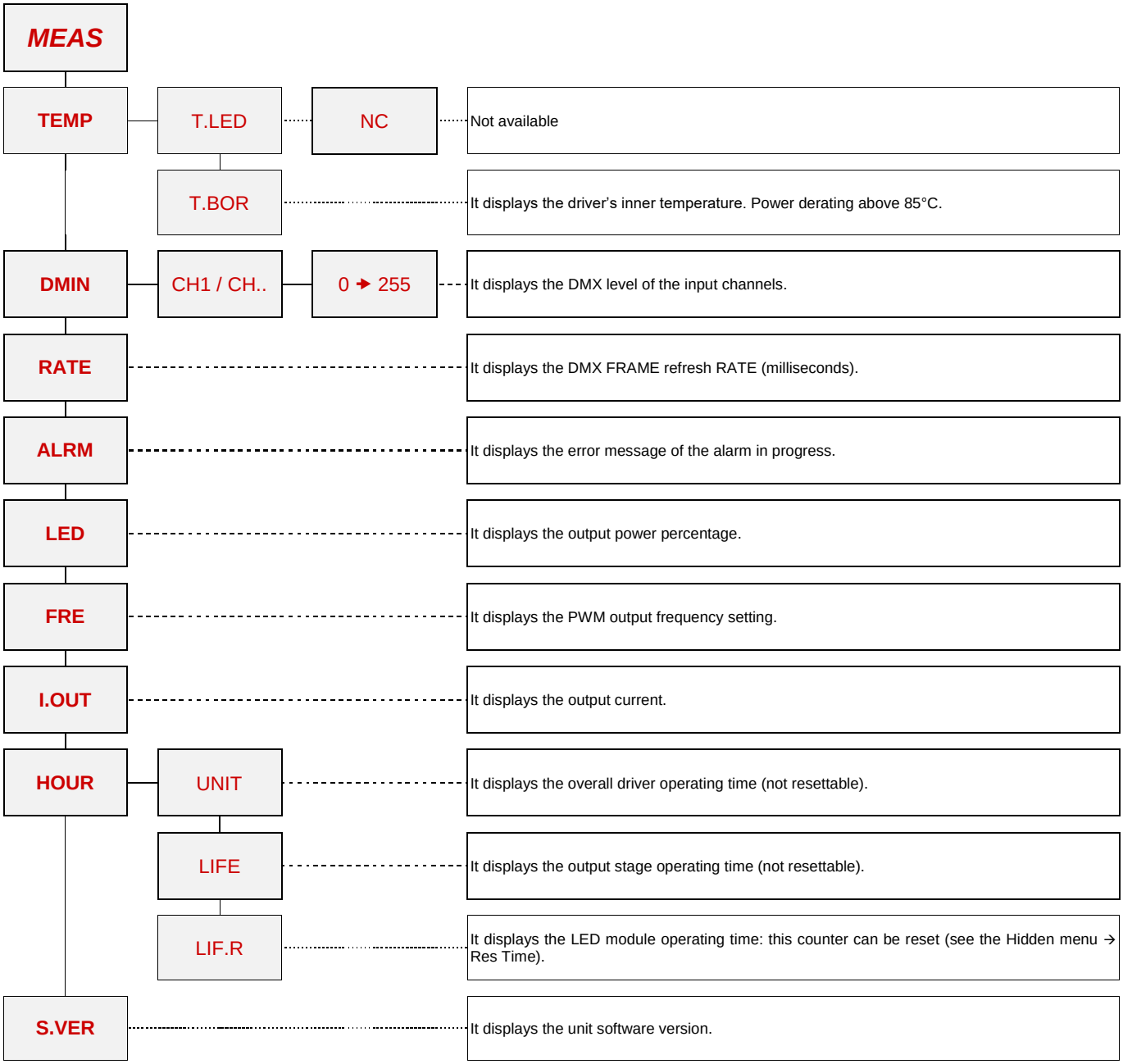
Parameter	Default setting
Dimmer Effect	XENON
Dimmer Curve	QUADRATIC
Screen Saver	ON
Frequency	320Hz
Fans Speed	ON
DMX Channels	2 CHANNELS
ID Code	0
Phase Dimming	ON
Potentiometer input	ON

(1) If the temperature exceeds the maximum admitted value (85°C), the system is protected by a security power de-rating. Once the temperature fall back within the admitted range, the original output is automatically restored



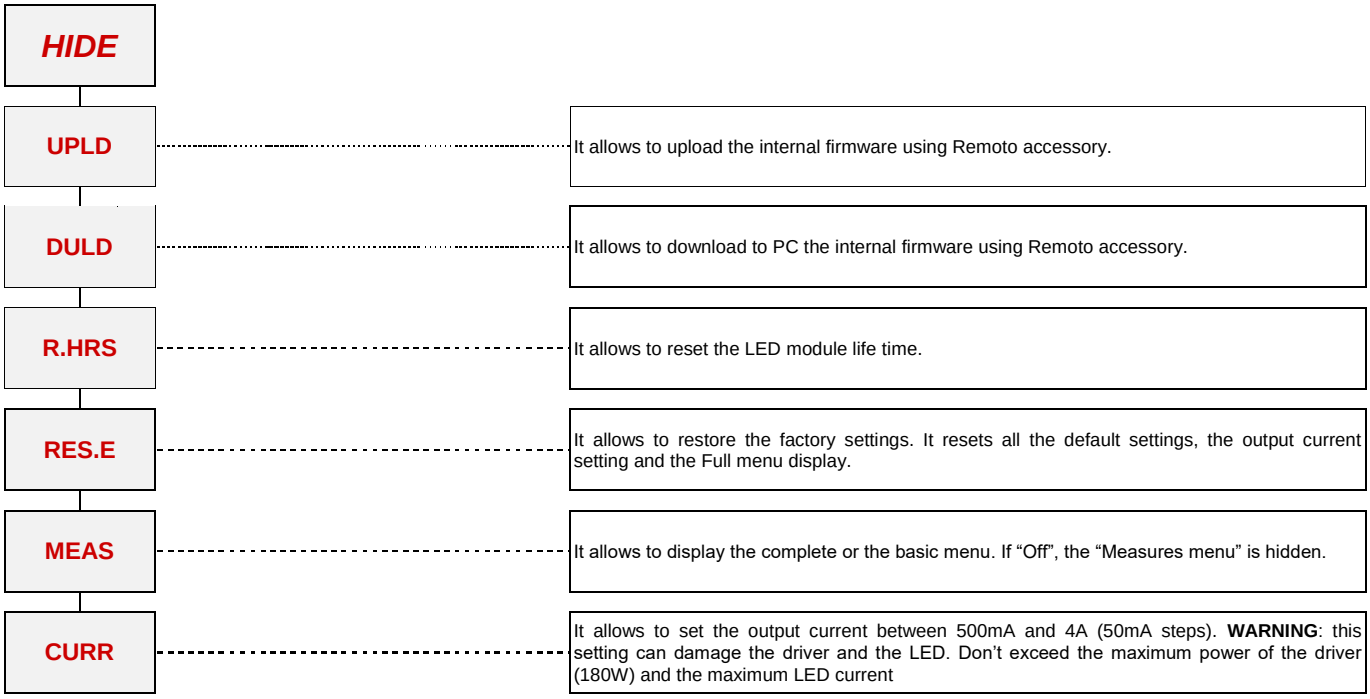
7.4 MEASURES menu

The **MEASURE** menu allows to access key parameter measurements of the device such as for instance, internal temperature, DMX input value or the POH meter, which counts the device's life-span so far. For more details please refer to the schematic below:



7.5 HIDDEN menu

The hidden functionalities (**HIDE** menu), reserved to the installation personnel only, allows to perform some particolar administrative operations such as firmware upgrades, output current setting, etc.
It can be displayed by pressing the **MENU** and **ENTER** keys simultaneously at the unit's switch on:



8. Environmental Safety and waste disposal

	Information
	This device must be correctly disposed of in a suitable and law fully regulated disposal center that allows for the recycling of electrical and electronical equipment, components and materials, when its EOL (end of life) is reached. Following the correct environmental safety regulations and the current modern waste disposal procedures, greatly helps avoiding negative impact of these materials on the environment and on people's life and health, while contributing to correct recycling, re-using and redistribution of the main component materials. It is prohibited to unlawfully dispose of this device and its materials; any inadequate or illegal disposal procedure followed, may lead to administrative sanctions or penalties to the user, in accordance with currently applied laws and regulations in your country.