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**DALC NET**

# DGD CASAMBI

*Made in Italy*

*Device Manual*          *FW 1.0*

Rev. 2018-06-29
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CE

## FEATURES

- CONVERTER+CASAMBI+BUS
- DC Input: 12-24-48 Vdc
- Command: APP CASAMBI
- Local Command Programmable from APP CASAMBI:
  - Normally Open push button
- DGD Casambi is converter from Casambi signal to DALI or DMX protocol
- Possibility to control devices with protocol DALI or DMX by CASAMBI APP
- Extended temperature range
- 100% Functional test – 5 Years warranty

➢ **PRODUCT CODE**

| CODE | Input Voltage | Channel | Input Command | Output Command | Type of Command | |
|---|---|---|---|---|---|---|
| DGD-CBM-DALI(*) | 12-48V DC | 1 | APP CASAMBI | DALI | N° 1 N.O. Push Button | CONVERTER |
| DGD-CBM-DMX | 12-48V DC | 1 | APP CASAMBI | DMX | N° 1 N.O. Push Button | CONVERTER |

(*)Bus DALI power supply is required.

The management of address (DALI variant) or of channels (DMX variant) depends on the module Casambi configuration.
This item is made by default with fixture "DGD W"

➢ **PROTECTIONS**

| OVP | Over voltage protection (**) | ✓ |
|---|---|---|
| UVP | Under voltage protection (**) | ✓ |
| RVP | Reverse polarity protection (**) | ✓ |
| IFP | Input fuse protection (**) | ✓ |

(**) Only control logic protection.

➢ **TYPE OF PROFILES SELECTABLE FROM CASAMBI APP**

| Profile | Output Addresses / channals | Commands | |
|---|---|---|---|
| DGD W | 4 | APP CASAMBI – 1 pulsante N.A. | DIMMER |
| DGD TW | 2 | APP CASAMBI – 1 pulsante N.A. | TUNABLE WHITE |
| DGD RGB | 3 | APP CASAMBI – 1 pulsante N.A. | RGB |
| DGD RGBW | 4 | APP CASAMBI – 1 pulsante N.A. | RGB / W |
| DGD MRGB+S | 5 | APP CASAMBI – 1 pulsante N.A. | Master / RGB / Strobo |
| DGD MRGBW+S | 6 | APP CASAMBI – 1 pulsante N.A. | Master / RGB / W / Strobo |
| DGD Moving MRGBWS [1] | 8 | APP CASAMBI – 1 pulsante N.A. | Moving Head DMX |

[1] This profile is implemented and managed only for DGD-CBM-DMX

## ➢ REFERENCE STANDARDS

| EN 61347-1 | Lamp controlgear - Part 1: General and safety requirements |
|---|---|
| EN 55015 | Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment |
| EN 61547 | Equipment for general lighting purposes - EMC immunity requirements |

## ➢ TECHNICAL SPECIFICATION

| | | Constant Voltage | | | | |
|---|---|---|---|---|---|---|
| Supply Voltage | | min: 10,8 Vdc .. max: 52,8 Vdc | | | | |
| Nominal Power [1] | | DALI Variant | | DMX Variant | | |
| | | Min | Max | Min | Typ | Max |
| | @12V | 61 mW | 115 mW | 122 mW | 174 mW | 261 mW |
| | @24V | 120 mW | 176 mW | 182 mW | 236 mW | 325 mW |
| | @48V | 230 mW | 296 mW | 302 mW | 365 mW | 464 mW |
| Power loss in stand by mode | | <500mW | | | | |
| Storage Temperature | | min: -40 max: +60 °C | | | | |
| Ambient Temperature [1] | | min: -25 max: +60 °C | | | | |
| Protection grade | | IP10 | | | | |
| Wiring | | 2.5mm² solid – 2.5mm² stranded - 30/12 AWG | | | | |
| Wire preparation length | | 5,5 ÷ 6.5 mm | | | | |
| Mechanical dimensions | | 92 x 36 x 62 mm DIN RAIL 2M | | | | |
| Package dimensions | | 124 x 71 x 48 mm | | | | |
| Casing material | | Plastic | | | | |
| Weight | | 88g | | | | |

[1] maximum value, dependent on the ventilation conditions.

## ➢ INSTALLATION

Follow the drawing below to set the product:

1) Connect the BUS in "DALI OUT or DMX OUT" terminal blocks of the device (depending on the DGD variant).
2) Optional: connect the local command (N.O. Push Button) to the device terminal blocks "IN".
3) Connect the power supply (12-48Vdc) to the device terminal blocks "DC IN".



DGD-CBM-DMX

DGD-CBM-DALI
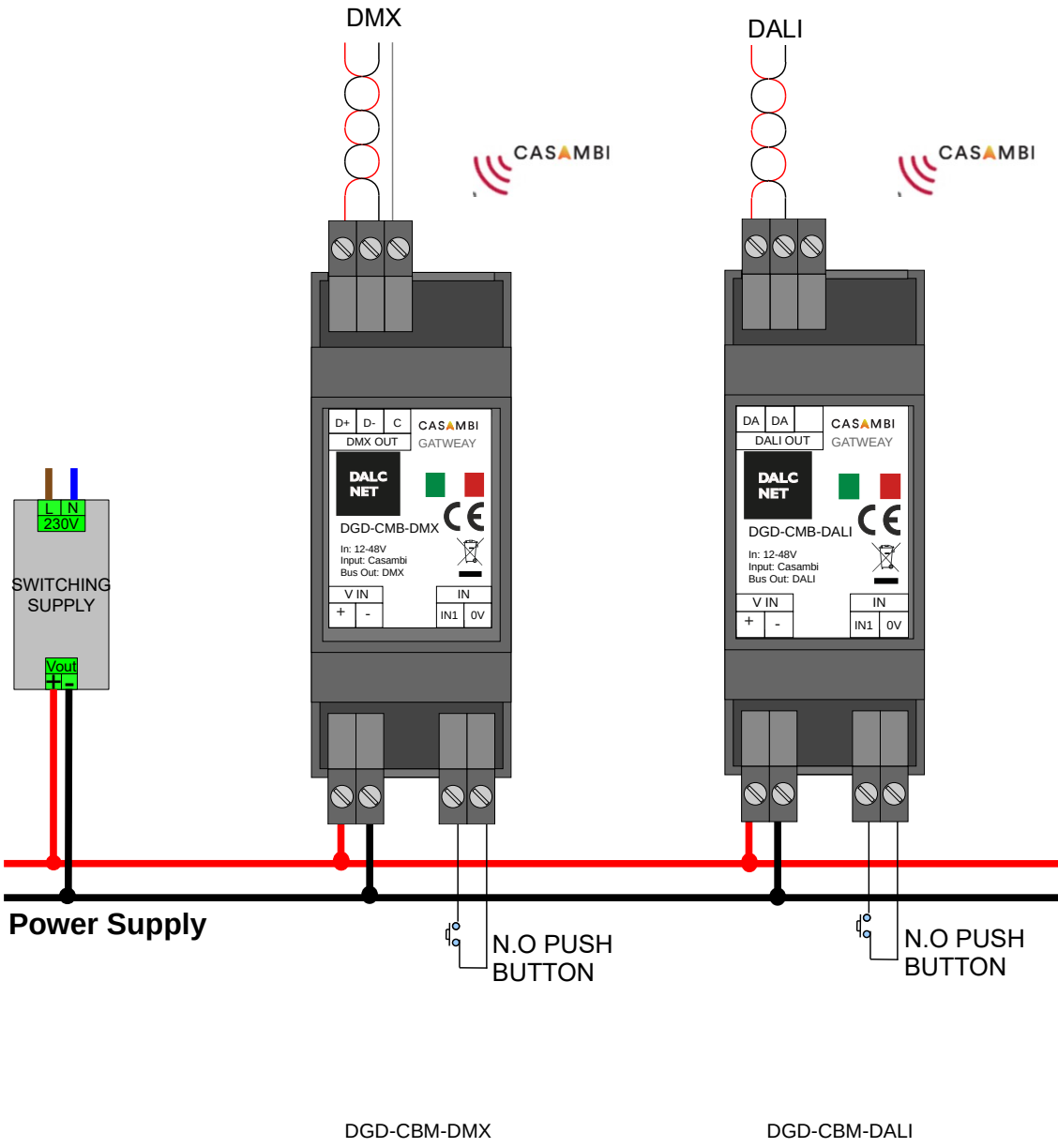
## ➤ PUSH DIMMER FEATURE

Casambi App allows to program the local command with some preset functions.

| Button | Function (*) | | |
|---|---|---|---|
| 1 | Controls a luminaire | Click<br>Long pressure (>1s) from ON | Tap to turn a luminaire on or off – hold to adjust luminaire brightness |
| 1 | Controls an elements | Click<br>Long pressure (>1s) from ON | Tap to turn a device elements on or off – hold to adjust the element value |
| 1 | Control scene | Click<br>Long pressure (>1s) from ON | Tap to turn a scene on or off – hold to adjust scene brightness |
| 1 | Active / Standby | Click<br>Long pressure (>1s) from ON | Tap to switch between two scenes – hold to adjust current scene brightness |
| (*) FOR THE ALL THE OTHER FUNCTIONS CHECK CASAMBI APP INSTRUCTION ON WEB-SITE: HTTP://www.casambi.com | | | |

NOTE: N.O. Push Button by default is set in "Controls a luminaire"

Switch on, switch off and output dimming can be managed also by a normally open push button, conveniently set by Casambi APP.

## ➤ MECHANICAL DIMENSION
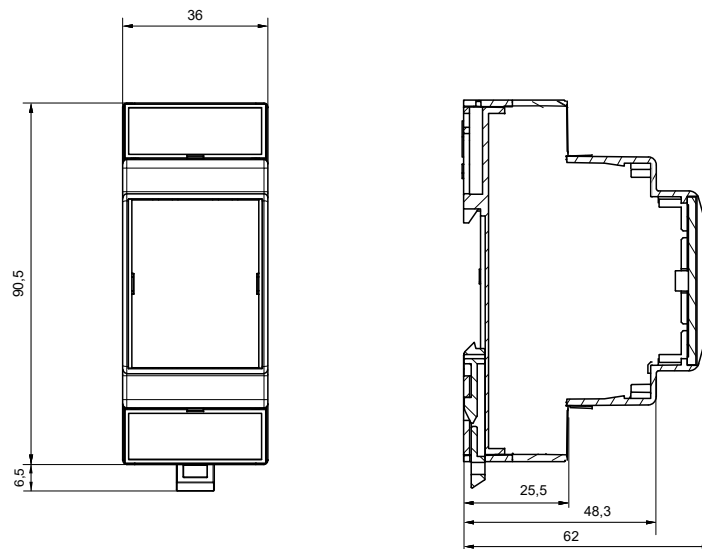
## TECHNICAL NOTE

Installation:

• Installation and maintenance must be performed only by qualified personnel in compliance with current regulations.
• The product must be installed inside an electrical panel protected against overvoltages.
• The product must be installed in a vertical or horizontal position with the cover / label upwards or vertically; Other positions are not permitted. It is not permitted to bottom-up position (with the cover / label down).
• Keep separated the circuits at 230V (LV) and the circuits not SELV from circuits to low voltage (SELV) and from any connection with this product. It is absolutely forbidden to connect, for any reason whatsoever, directly or indirectly, the 230V mains voltage to the bus or to other parts of the circuit.

Power Supply:
• For the power supply use only a SELV power supplies with limited current, short circuit protection and the power must be dimensioned correctly.
In case of using power supply with ground terminals, all points of the protective earth (PE = Protection Earth) must be connected to a valid and certified protection earth.
• The connection cables between the power source "low voltage" and the product must be dimensioned correctly and they should be isolated from every wiring or parts at voltage not SELV. Use double insulated cables.
• Dimension the power supply for the load connected to the device. If the power supply is oversized compared with the maximum absorbed current, insert a protection against over-current between the power supply and the device.

Command:
• The length of the connection cables between the local commands (N.O. Push button or other) and the product must be less than 10m; the cables must be dimensioned correctly and they should be isolated from every wiring or parts at voltage not SELV. It is suggested to use double insulated shielded and twisted cables.
• The length and type of the connection cables at the BUS (DMX512, DALI or other) use cables as per specification of the respective protocols and regulations and they should be isolated from every wiring or parts at voltage not SELV. It is suggested to use double insulated shielded and twisted cables.
• All the product and the control signal connect at the bus (DMX512, DALI or other) and at the local command (N.O. Push Button or other) must be SELV (the devices connected must be SELV or supply a SELV signal)

**WARNING: For optimal functionality of the Casambi signal, do not put the device into metal or aluminum boxes and do not shield the device.**

DGD FROM CASAMBI TO BUS                                                                                    CONVERTER

## ➢ DGD-CBM-DALI SETUP
## CONVERSION FROM CASAMBI SIGNAL TO DALI PROTOCOL.
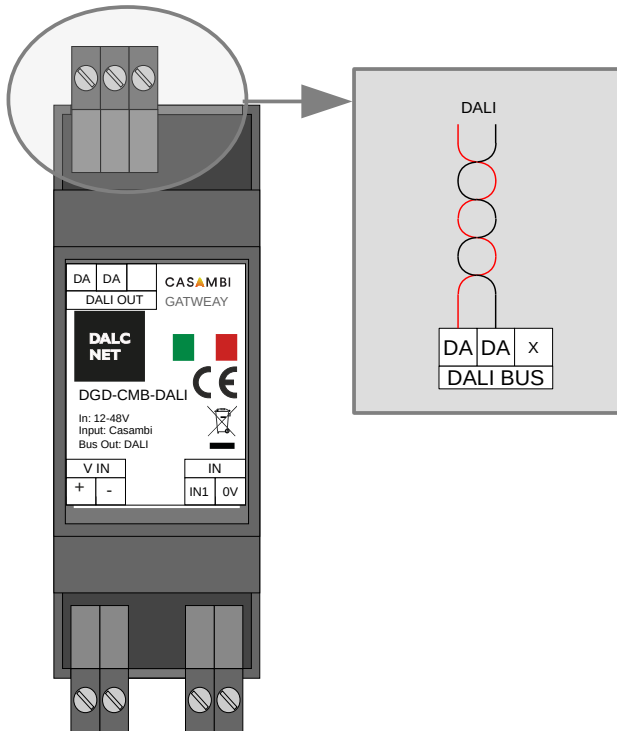


### Features

The DGD-CBM-DALI is a Casambi-DALI converter.
The device receives the command signal of Casambi APP and, depending on the profile previously set, transforms the signal in a preset sequence of DALI addresses.
To control the conversion addresses Casambi-DALI , check the reference chart "ADDRESSES MAP – DALI". Page 7.

### Signal LED

In case of Casambi command is correctly transmitted to the device, the LED signal stays consistently switched on.
In case of the device is power on, the signal LED slowly flashes (1 pulse per second).
In case of the bus power detected, the signal LED blinks fast (2 pulsed per second).

### Relation with local commands:

When the device is switched on, by default, the local command (N.O. push button) is set on "controls a luminaire".
The local command can be set by Casambi APP.
The local command and the command from Casambi APP have the same priority.

NOTE: Bus DALI power supply is required.
When switched on the DGD-CBM-DALI resets the first 10 addresses of the DALI bus.

ADDRESSES MAP – DALI

Load Type: White – up to 4 loads

| Addr | Function | Map: Dimmer |
|---|---|---|
| +0 | Dimmer 1 | Dimmer (Brightness Value) 0 .. 254 |
| +1 | Dimmer 2 | Dimmer (Brightness Value) 0 .. 254 |
| +2 | Dimmer 3 | Dimmer (Brightness Value) 0 .. 254 |
| +3 | Dimmer 4 | Dimmer (Brightness Value) 0 .. 254 |

Load Type: Tunable White – up to 2 loads

| Addr | Function | Map: Tunable White |
|---|---|---|
| +0 | Dimmer | Dimmer (Brightness Value) 0 .. 254 |
| +1 | Color Correction | Color Correction Temperature 0 .. 254 |

Load Type: RGB

| Addr | Function | Map: RGB |
|---|---|---|
| +0 | R | R 0 .. 254 |
| +1 | G | G 0 .. 254 |
| +2 | B | B 0 .. 254 |

Load Type: Mater+RGBW+Strobo

| Addr | Function | Map: MRGB+ |
|---|---|---|
| +0 | Master Dimmer | Master Dimmer (Brightness Value) 0 .. 254 |
| +1 | R | R 0 .. 254 |
| +2 | G | G 0 .. 254 |
| +3 | B | B 0 .. 254 |
| +4 | Strobo Rate (*) | STROBO 0 .. 254 |

Load Type: RGBW

| Addr | Function | Map: RGBW |
|---|---|---|
| +0 | R | R 0 .. 254 |
| +1 | G | G 0 .. 254 |
| +2 | B | B 0 .. 254 |
| +3 | W | W 0 .. 254 |

Load Type: Master+RGBW+Strobo

| Addr | Function | Map: MRGBW+ |
|---|---|---|
| +0 | Master Dimmer | Master Dimmer (Brightness Value) 0 .. 254 |
| +1 | R | R 0 .. 254 |
| +2 | G | G 0 .. 254 |
| +3 | B | B 0 .. 254 |
| +4 | W | W 0 .. 254 |
| +5 | Strobo Rate (*) | STROBO 0 .. 254 |

(*) Strobo Rate execute the functions of the strobe address of the control unit connected to the DGD-CBM-DALI. For example, if you connect the DGD-CBM-DALI to the DLD1248-4CV-DALI control unit, which is also set with the MRGB+ or MRGBW+ map, the Strobo Rate address has the following characteristics:

| +5 | Strobo Rate | fix<br>0 .. 15 | blackout<br>16 .. 31 | 1fps<br>32 .. 47 | 2fps<br>48 .. 63 | 3fps<br>64 .. 79 | 4fps<br>80 .. 95 | 5fps<br>96 .. 111 | 6fps<br>112..127 | 7fps<br>128..143 | 8fps<br>144..159 | 9fps<br>160..175 | 10fps<br>176..191 | 12fps<br>192..207 | 14fps<br>208..223 | 16fps<br>224..239 | fix<br>240..254 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

For other devices, if present the Strobo address, check the behavior of the Strobe address.

Custom maps can be requested on request.

DGD FROM CASAMBI TO BUS

CONVERTER

➢ **DGD-CBM-DMX SETUP**
**CONVERSION FROM CASAMBI SIGNAL TO DMX PROTOCOL**
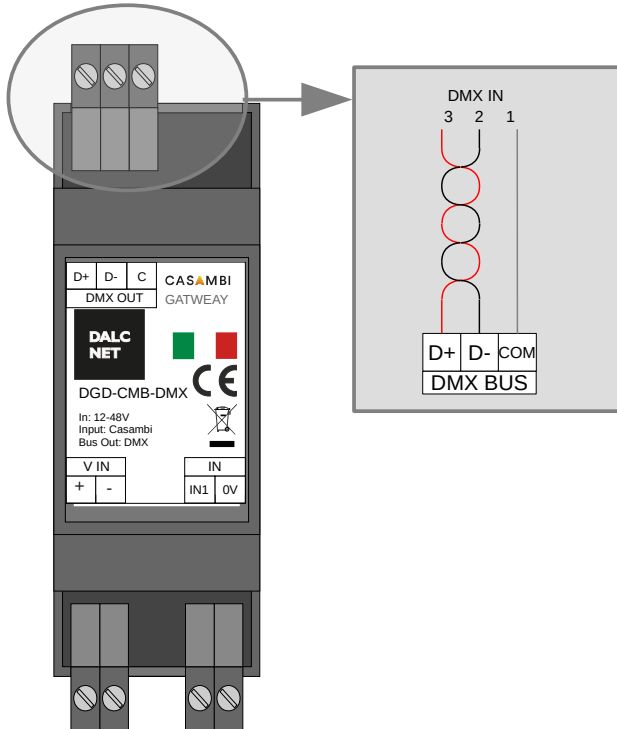


**Features**

The DGD-CBM-DMX is a Casambi-DMX converter.
The device receives the command signal of Casambi APP and, depending on the profile previously set, converts the signal into a preset sequence of DMX channels.
To consult the conversion channels Casambi-DMX , check the reference chart "CHANNELS MAP – DMX". Page 9.

**Signal LED**

In case of Casambi command is correctly transmitted to the device, the LED signal stays consistently switched on.
In case of the device is power on, the signal LED slowly flashes (1 pulse per second).

**Relation with local commands:**

When the device is switched on, by default, the local command (N.O. push button) is set on "controls a luminaire".
The local command can be set by Casambi APP.
The local command and the command from Casambi APP have the same priority..

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*FW 1.0*

CHANNELS MAP – DMX512

## Load Type: White – up to 4 loads

| Ch. | Function | Map: Dimmer |
|---|---|---|
| 1 | Dimmer 1 | Dimmer (Brightness Value) 0 .. 255 |
| 2 | Dimmer 2 | Dimmer (Brightness Value) 0 .. 255 |
| 3 | Dimmer 3 | Dimmer (Brightness Value) 0 .. 255 |
| 4 | Dimmer 4 | Dimmer (Brightness Value) 0 .. 255 |

## Load Type: Tunable White – up to 2 loads

| Ch. | Function | Map: Tunable White |
|---|---|---|
| 1 | Dimmer | Dimmer (Brightness Value) 0 .. 255 |
| 2 | Color Correction | Color Correction Temperature 0 .. 255 |

## Load Type: RGB

| Ch. | Function | Map: RGB |
|---|---|---|
| 1 | R | R 0 .. 255 |
| 2 | G | G 0 .. 255 |
| 3 | B | B 0 .. 255 |

## Load Type: Mater+RGBW+Strobo

| Ch. | Function | Map: MRGB+ |
|---|---|---|
| 1 | Master Dimmer | Master Dimmer (Brightness Value) 0 .. 255 |
| 2 | R | R 0 .. 255 |
| 3 | G | G 0 .. 255 |
| 4 | B | B 0 .. 255 |
| 5 | Strobo Rate (*) | STROBO 0 .. 255 |

## Load Type: RGBW

| Ch. | Function | Map: RGBW |
|---|---|---|
| 1 | R | R 0 .. 255 |
| 2 | G | G 0 .. 255 |
| 3 | B | B 0 .. 255 |
| 4 | W | W 0 .. 255 |

## Load Type: Master+RGBW+Strobo

| Ch. | Function | Map: MRGBW+ |
|---|---|---|
| 1 | Master Dimmer | Master Dimmer (Brightness Value) 0 .. 255 |
| 2 | R | R 0 .. 255 |
| 3 | G | G 0 .. 255 |
| 4 | B | B 0 .. 255 |
| 5 | W | W 0 .. 255 |
| 6 | Strobo Rate (*) | STROBO 0 .. 255 |

(*) Strobo Rate execute the functions of the strobe address of the control unit connected to the DGD-CBM-DMX. For example, if you connect the DGD-CBM-DMX to the DLD1248-4CV-DMX control unit, which is also set with the MRGB+ or MRGBW+ map, the Strobo Rate address has the following characteristics:

| 6 | Strobo Rate | fix | blackout | 1fps | 2fps | 3fps | 4fps | 5fps | 6fps | 7fps | 8fps | 9fps | 10fps | 12fps | 14fps | 16fps | fix |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 0 .. 15 | 16 .. 31 | 32 .. 47 | 48 .. 63 | 64 .. 79 | 80 .. 95 | 96 .. 111 | 112..127 | 128..143 | 144..159 | 160..175 | 176..191 | 192..207 | 208..223 | 224..239 | 240..254 |

For other devices, if present the Strobo address, check the behavior of the Strobe address.

Load Type: MOVING HEAD DMX [1)]

| Ch. | Function | Map: Moving MRGBW |
|---|---|---|
| 1 | PAN | Moving Yoke / Moving Mirror Pan Coarse<br>0 .. 255 |
| 2 | TILT | Moving Yoke / Moving Mirror Tilt Coarse<br>0 .. 255 |
| 3 | Master Dimmer / Strobo | Master Dimmer (Brightness Value) 0 .. 127 ‖ Strobo 128 .. 255 |
| 4 | R | R 0 .. 255 |
| 5 | G | G 0 .. 255 |
| 6 | B | B 0 .. 255 |
| 7 | W | W 0 .. 255 |
| 8 | Extra | 0 .. 255 |

[1)] *Thia prifile is only for DGD-CBM-DMX*
Custom maps can be requested on request.