



FEATURES

- CONVERTER+BUS
- DC Input: 12-24-48 Vdc
- BUS Command: DMX o DALI
- Local Command:
 - Normally Open Push Button
- Converter from DALI protocol to DMX protocol
- Converter from DMX protocol to DALI protocol
- Possibility to control device with protocol DALI by protocol DMX and viceversa
- Extended temperature range
- 100% Functional Test – 5 Years warranty

➤ **PRODUCT CODE**

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

(*) It requires power supply in the DALI bus

➤ **PROTECTIONS**

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

(**) Only control logic protection



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FW 1.0

> 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⁾		DMX-DALI Variant	DALI-DMX Variant	
		Typ	Min	Max
	@12V	101 mW	100 mW	184 mW
	@24V	161 mW	156 mW	248mW
@48V	274 mW	279 mW	380 mW	
Power loss in stand by mode		<500mW		
Storage Temperature		min: -40 max: +60 °C		
Ambient Temperature ¹⁾		min: -10 max: +40 °C		
Protection grade		IP10		
Wiring		2.5mm ² solid – 2.5mm ² 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		90g		

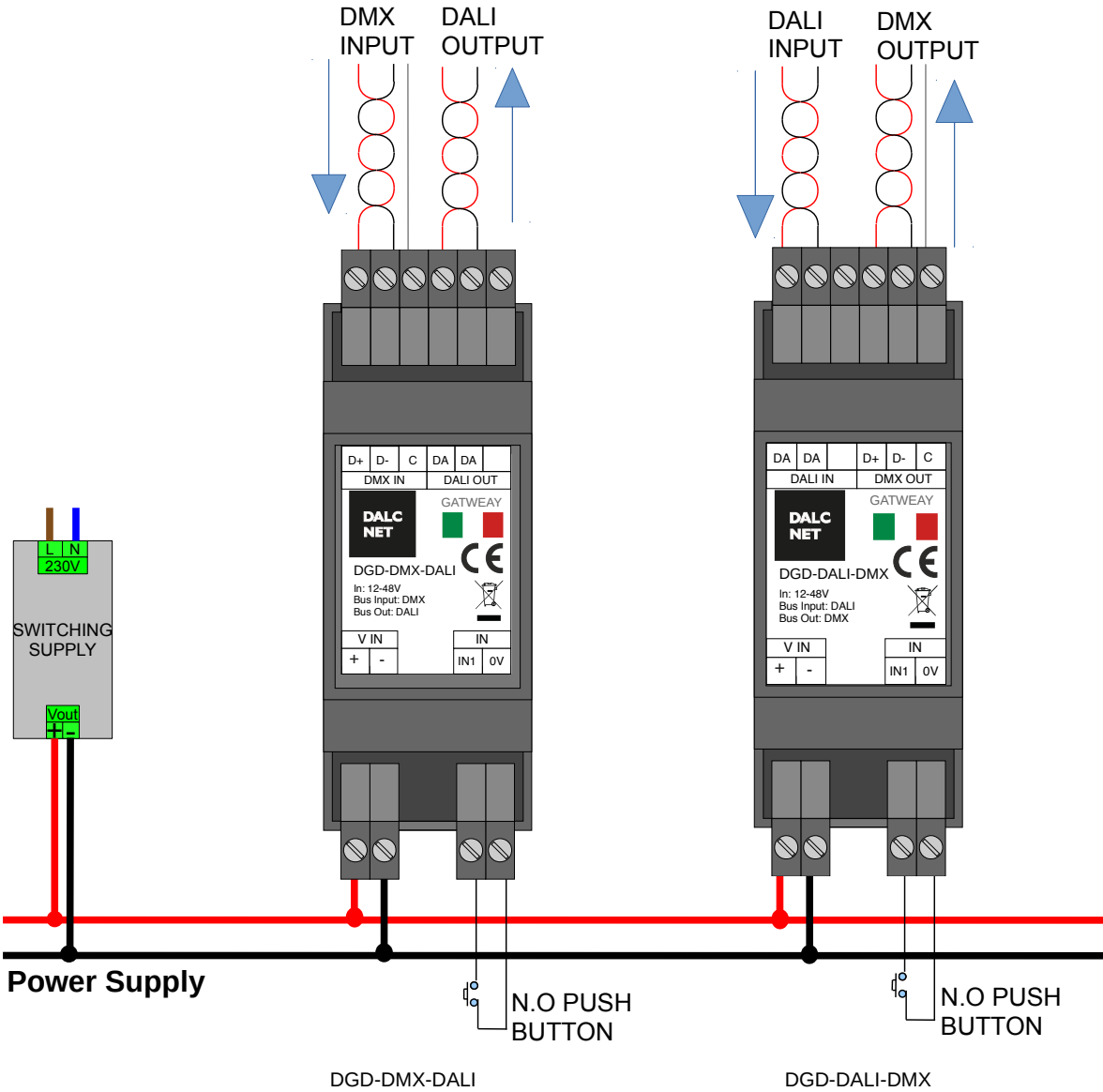
¹⁾ maximum value, dependent on the ventilation conditions.



INSTALLATION

Follow the drawing below to set the product:

- 1) Connect the BUS at 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".

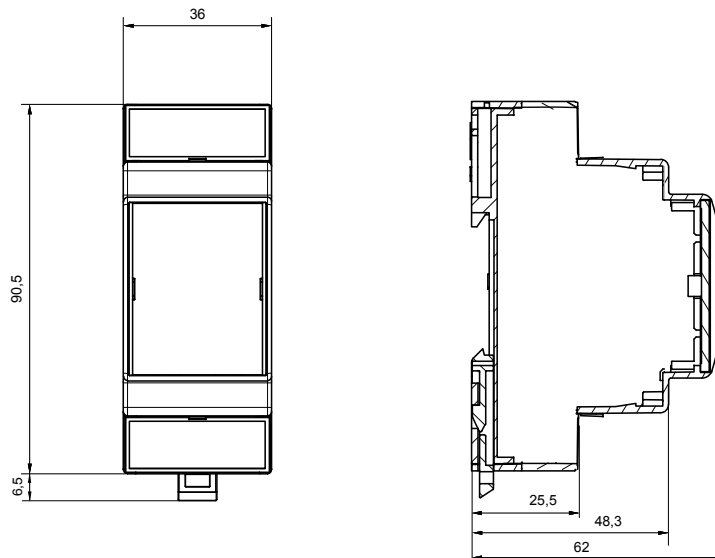


➤ **LOCAL COMMAND FEATURES – N.O. PUSH BUTTON**

The status of all channels are controlled by the N.O. push button.
 Local control command is active only in the absence of the DALI or DMX bus.
 The state of the N.O. push button is lost if the supply voltage power OFF.

Button	VALUE
Click	On / Off
Double Click	Set all channels to the maximum value: 255 (bus DMX) ; 254 (bus DALI)
Long pressure (>1s) from OFF	Set all channels at the value, 25, then dgd begins up or down.
Long pressure (>1s) from ON	Variation of the bus value from minimum to maximum and viceversa.

➤ **MECHANICAL DIMENSION**





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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.

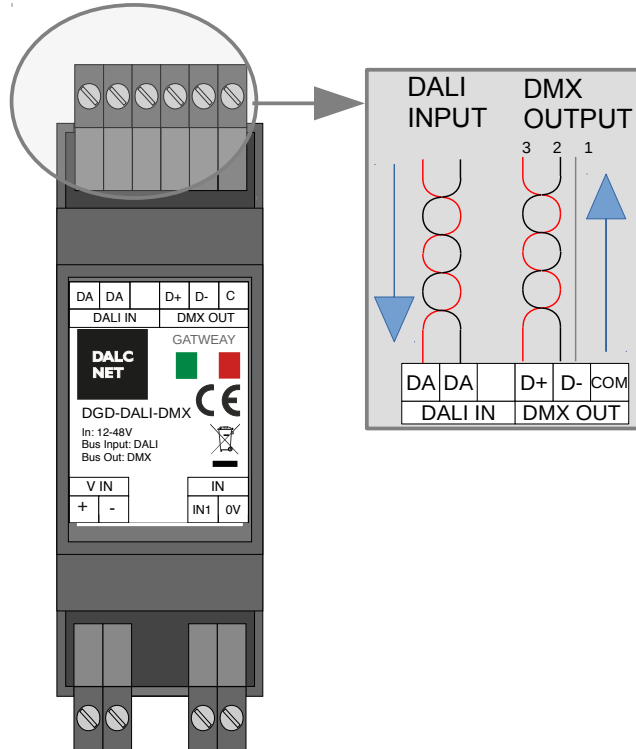
Power Supply:

- 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)

➤ **DGD-DALI-DMX SETUP**
CONVERSION FROM DALI PROTOCOL TO DMX PROTOCOL



Signal LED:

In the case of no bus power detected, or bus error, the led blinks fast (2 pulsed per second).
 In the case of bus power but no data, led blinks slow (1 pulse per second).
 In the case of data link active, the led stands on.

Relation with local commands:

At power-up, in case of absence of connection to the BUS, local control is active.
 When the BUS is detected, the control passes to the BUS. It remains to the BUS until there is signal.
 In the absence of signal the control passes to local command in the event of a N.O. push button pressure.

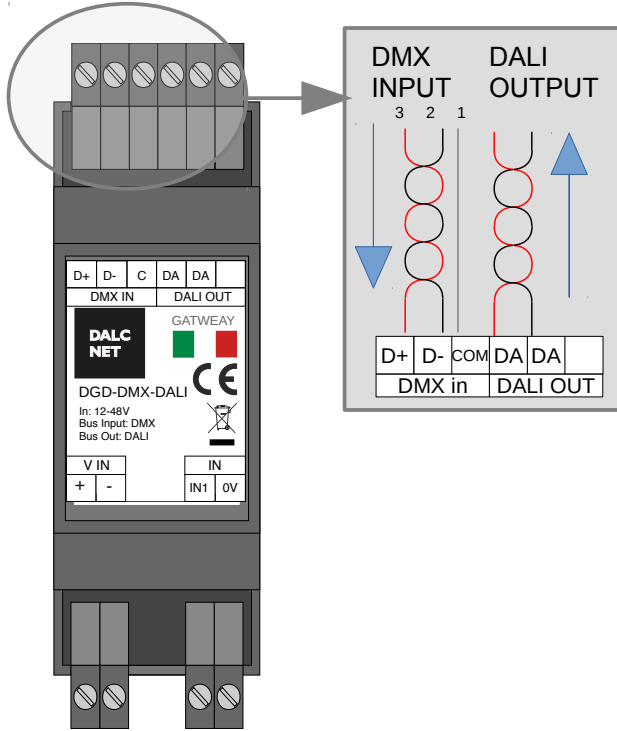
Conversion:

Il DGD-DALI-DMX convert all 64 DALI addresses in 64 DMX Channels.
 Il DGD-DALI-DMX converter from DALI protocol to DMX protocol and not viceversa
 The device does not manage the addressing of DALI bus. The addresses DALI from 0 to 63 is fixed and it is sent to DMX channel from 1 to 64.
 The commands implemented are: OFF, UP, DOWN, STEP UP, STEP DOWN, DIRECT ARC POWER, CALL MIN LEVEL, CALL MAX LEVEL, GOTO LAST ACTIVE LEVEL . The values of the commands are not stored in the absence of the supply voltage.

Conversion Table from DALI Addresses to DMX Channels:

Addr DALI	Channel DMX	Addr DALI	Channel DMX	Addr DALI	Channel DMX	Addr DALI	Channel DMX	Addr DALI	Channel DMX	Addr DALI	Channel DMX	Addr DALI	Channel DMX	Addr DALI	Channel DMX
+0	⇒ 1	+8	⇒ 9	+16	⇒ 17	+24	⇒ 25	+32	⇒ 33	+40	⇒ 41	+48	⇒ 49	+56	⇒ 57
+1	⇒ 2	+9	⇒ 10	+17	⇒ 18	+25	⇒ 26	+33	⇒ 34	+41	⇒ 42	+49	⇒ 50	+57	⇒ 58
+2	⇒ 3	+10	⇒ 11	+18	⇒ 19	+26	⇒ 27	+34	⇒ 35	+42	⇒ 43	+50	⇒ 51	+58	⇒ 59
+3	⇒ 4	+11	⇒ 12	+19	⇒ 20	+27	⇒ 28	+35	⇒ 36	+43	⇒ 44	+51	⇒ 52	+59	⇒ 60
+4	⇒ 5	+12	⇒ 13	+20	⇒ 21	+28	⇒ 29	+36	⇒ 37	+44	⇒ 45	+52	⇒ 53	+60	⇒ 61
+5	⇒ 6	+13	⇒ 14	+21	⇒ 22	+29	⇒ 30	+37	⇒ 38	+45	⇒ 46	+53	⇒ 54	+61	⇒ 62
+6	⇒ 7	+14	⇒ 15	+22	⇒ 23	+30	⇒ 31	+38	⇒ 39	+46	⇒ 47	+54	⇒ 55	+62	⇒ 63
+7	⇒ 8	+15	⇒ 16	+23	⇒ 24	+31	⇒ 32	+39	⇒ 40	+47	⇒ 48	+55	⇒ 56	+63	⇒ 64

➤ **DGD-DMX-DALI SETUP**
CONVERSION FROM DMX PROTOCOL TO DALI PROTOCOL



Signal LED:

In the case of bus error, the led blinks fast (2 pulsed per second).
 In the case of no bus detected, led blinks slow (1 pulse per second).
 In the case of data link active, the led stands on.

Relation with local commands:

At power-up, in case of absence of connection to the BUS, local control is active.
 When the BUS is detected, the control passes to the BUS. It remains to the BUS until there is signal.
 In the absence of signal the control passes to local command in the event of a N.O. push button pressure.

Conversion:

Il DGD-DMX-DALI convert only the first 64 DMX channels in 64 DALI addresses.
 Il DGD-DMX-DALI converter from DMX protocol to DALi protocol and not viceversa
 The DMX channels from 1 to 64 is fixed and it is sent to DALI addresses from 0 to 63 by DIRECT ARC POWER command.

NOTE: The DGD-DMX-DALI requires power supply in the DALI bus. The devices DALI must be addressed through DALI programmer. (for exsample with cod. DGM01-1248).

Conversion Table from DMX Channels to DALI Addresses:

Channel DMX	Addr DALI	Channel DMX	Addr DALI	Channel DMX	Addr DALI	Channel DMX	Addr DALI	Channel DMX	Addr DALI	Channel DMX	Addr DALI	Channel DMX	Addr DALI	Channel DMX	Addr DALI
1	⇒ +0	9	⇒ +8	17	⇒ +16	25	⇒ +24	33	⇒ +32	41	⇒ +40	49	⇒ +48	57	⇒ +56
2	⇒ +1	10	⇒ +9	18	⇒ +17	26	⇒ +25	34	⇒ +33	42	⇒ +41	50	⇒ +49	58	⇒ +57
3	⇒ +2	11	⇒ +10	19	⇒ +18	27	⇒ +26	35	⇒ +34	43	⇒ +42	51	⇒ +50	59	⇒ +58
4	⇒ +3	12	⇒ +11	20	⇒ +19	28	⇒ +27	36	⇒ +35	44	⇒ +43	52	⇒ +51	60	⇒ +59
5	⇒ +4	13	⇒ +12	21	⇒ +20	29	⇒ +28	37	⇒ +36	45	⇒ +44	53	⇒ +52	61	⇒ +60
6	⇒ +5	14	⇒ +13	22	⇒ +21	30	⇒ +29	38	⇒ +37	46	⇒ +45	54	⇒ +53	62	⇒ +61
7	⇒ +6	15	⇒ +14	23	⇒ +22	31	⇒ +30	39	⇒ +38	47	⇒ +46	55	⇒ +54	63	⇒ +62
8	⇒ +7	16	⇒ +15	24	⇒ +23	32	⇒ +31	40	⇒ +39	48	⇒ +47	56	⇒ +55	64	⇒ +63