FEATURES

• Power Supply	12/24/48 Vdc
• Bus ETHERNET	10/100 Mbit
• Bus Modbus	RTU, from 9600 to 250K baud
• Bus DMX 512	512 slots NSC, SIP, RDM
• Bus DALI	64 channels, buit in 125mA power supply

➔ *For the whole and updated **Device Manual** refer to producer's website: http://www.dalcnet.com*

Variants

CODE	Supply Voltage	BUS1	BUS2	BUS3
DGM01-1248	12/24/48V DC	Modbus RTU RS485 / DMX512	Modbus RTU RS485 / DMX512	DALI with supply
DGM01-1248-NDS	12/24/48V DC	Modbus RTU RS485 / DMX512	Modbus RTU RS485 / DMX512	DALI without supply External DALI supply required

Technical Specifications

Supply Voltage	min: 10.8 Vdc .. max: 52.8 Vdc
Input Current	

voltage	min	typ*	max
@ 12Vdc	110mA (1,2W)	320mA (3,84W)	500mA
@ 24Vdc	60mA (1,44W)	160mA (3,84W)	
@ 48Vdc	40mA (1,92W)	80mA (3,84W)	

*ethernet and all bus at full load

Storage temperature	min: -40 max: +60 °C
Ambient temperature	min: -10 max: +40 °C
Protection Grade	ALUMINIUM BOX: IP20 - PLASTIC BOX IP10
Weigth	ALUMINIUM BOX: 230g - PLASTIC BOX 125g
Mechanical dimensions	ALUMINIUM BOX: 105x70x47 - PLASTIC BOX: 72x92x62 mm DIN RAIL 4mod.
Packaging dimensions	85 x 124 x 71 mm
ETHERNET	10/100 Mbit baseT FULL DUPLEX AUTO NEGOTIATION
MODBUS RTU	RS-485, from 9600 to 250kbaud
DMX	Max 512 channels (it depends on the wiring) open fail safe - short fail safe
DALI	Max 64 channels, buit-in 125mA power supply

Reference Standards

EN 55022:2010	Information technology equipment - Radio disturbance characteristics - Limits and methods of measurement
EN 55024:2010	Information technology equipment - Immunity characteristics - Limits and methods of measurement
EN 60950-1:2006 + A1:2010 + A2:2013 + A11:2009 + A12: 2011	Information technology equipment - Safety
IEC/EN 62386-101	Digital addressable lighting interface - Part 101: General requirements - System
IEC/EN 62386-102	Digital addressable lighting interface - Part 102: General requirements - Control gear
IEC/EN 62386-207	Digital addressable lighting interface - Part 207: Particular requirements for control gear - LED modules (device type 6)
ANSI E 1.3	Entertainment Technology - Lighting Control Systems - 0 to 10V Analog Control Specification
ANSI E1.11	Entertainment Technology - USITT DMX512-A - Asynchronous Serial Digital Data Transmission Standard for Controlling Lighting Equipment and Accessories
ANSI E1.20	Entertainment Technology-RDM-Remote Device Management over USITT DMX512 Networks
-	MODBUS APPLICATION PROTOCOL SPECIFICATION V1.1b

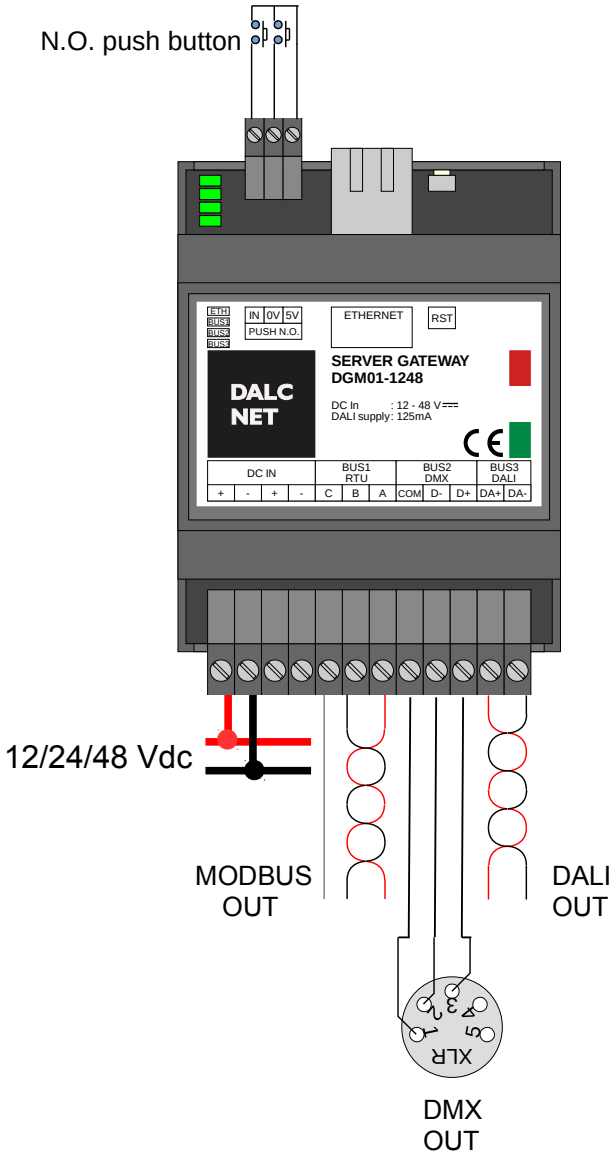
Technical Notes

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 the bottom-up position (with the lower face plate / label).
• Keep separate the 230V circuits (LV) and not SELV circuits from safety extra low voltage (SELV) and all connections for this product. It's absolutely forbidden to connect, for any reason, directly or indirectly, the 230V mains voltage to the bus or to other parts of the circuit.

Power Supply:
• For power supply use only SELV power supplies with limited current and short circuit protection, and of appropriately sized power. In case of power supplies provided with an earth terminal, ALL protective earthing points (PE = Protection Earth) must be connected to a valid protection earth.
• The connection cables between the power source and the product must be sized properly and should be isolated from any wiring or live parts not SELV. Use double insulated cables.

Commands:
• The length of the connecting cables between the local controls (push button, 0-10V, 1-10V, potentiometer, or other) and the product must be less than 10m; the cables must be sized properly and should be isolated from any wiring or live parts not SELV. Use double insulation shielded and twisted cables.
• The length and type of the bus cables (DMX512, Modbus, DALI, Ethernet or other) must comply with the specifications defined by the respective protocols and the respective regulations; They should be isolated from any wiring or live parts not SELV. Use shielded cables and twisted double insulation.
• All devices and related control signals to the bus (DMX512, Modbus, DALI, Ethernet or other) and to the local controls (push button, 0-10V, 1-10V, potentiometer, or other) must be SELV (connected devices must be SELV or otherwise provide a SELV signal).

Installation



Terminal block

Pin				
1	Vin			Vin+
2				Vin-
3				Vin+
4				Vin-
5	Modbus 1	C	DMX 1	Com
6		B		D-
7		A		D+
8	Modbus 2	C	DMX 2	Com
9		B		D-
10		A		D+
11	DALI			DA+
12				DA-

ETHERNET (Plug 8P8C)

Pin	RJ45/A (RJ45/B crossed)	RJ45/B (RJ45/A crossed)
1	White/Green	White/Orange
2	Green	Orange
3	White/Orange	White/Green
4	Blue	Blue
5	White/Blue	White/Blue
6	Orange	Green
7	White/Brown	White/Brown
8	Brown	Br

Configuration

RST BUTTON:

Push < 0.5s = reboot & switch to bootloader
Push > 4s = factory default

DEFAULT IP ADDRESS: **192.168.1.4**

LEDs:

LED	FUNCTION	ON	BLINK	Fast blink	OFF
LED1 (top)	Ethernet	OK	No communication	-	Error
LED2	BUS1 (DMX/RTU)	OK	No communication	-	Error
LED3	BUS2 (DMX/RTU)	OK	No communication	-	Error
LED4 (bottom)	BUS DALI	OK	No communication	-	no power or short circuit

LOCAL INPUT:

The device has a local input (push button normally open) which allows the use in stand-alone mode. This function, in addition to being a further possibility to manage the spot lights, is particularly useful to carry out a local test of the device and fixtures that are connected with, making on/off/dimmer function of the spot lights in broadcasting mode.

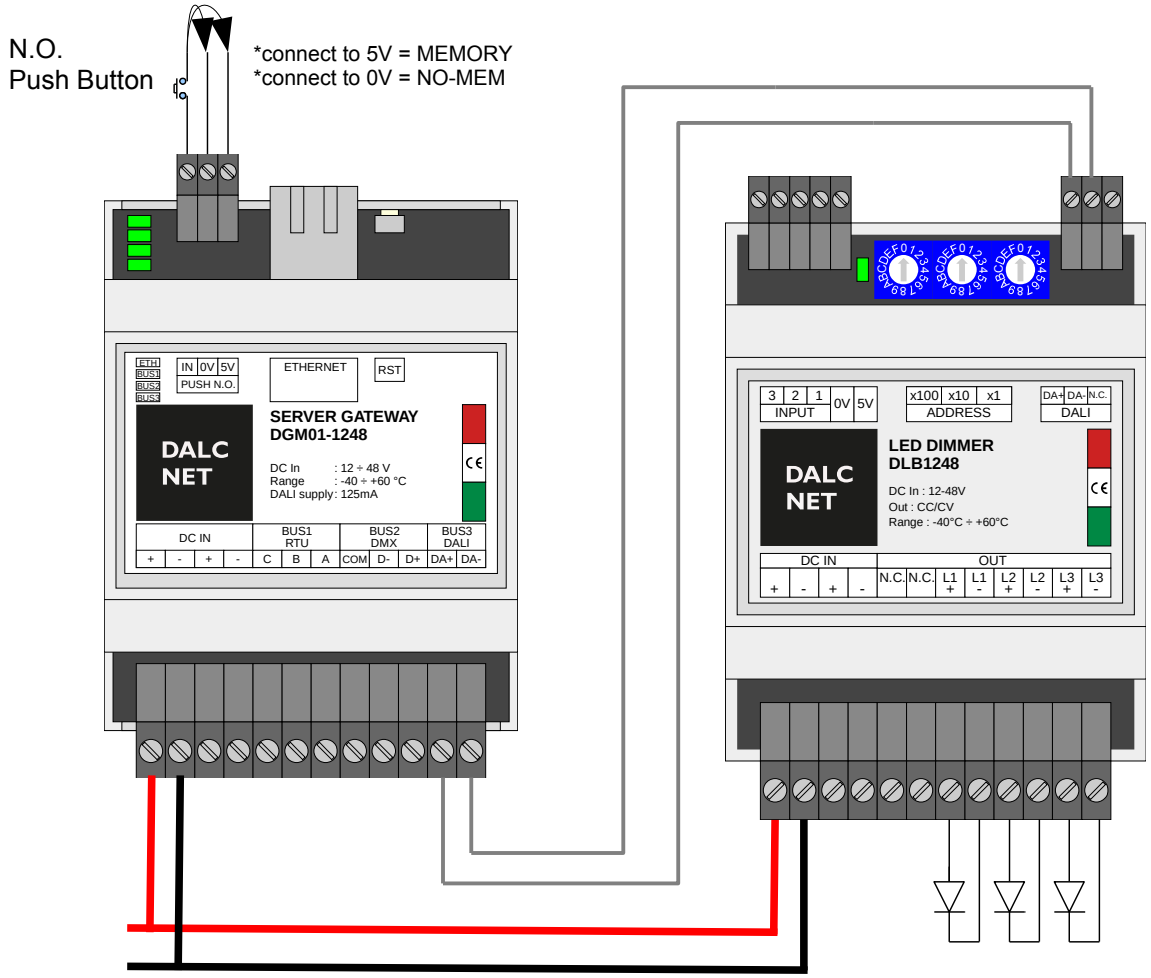
Button	Function		
	PUSH	Click Double Click Long pression (>1s) from OFF Long pression (>1s) from ON	ON/OFF Maximum intensity Turn ON at 10% (night) Dimmer UP/DOWN

1- Memory Function: The device stores its state in the event of blackout (N.O. push button connected to 5V).

2- Eco Function: The device starups turned off in the event of blackout (N.O. push button connected to 0V).

3- Preset Function: The installer stores the preset status (N.O. push button connected to 5V during installation, next to 0V).
The device starts from the preset in the event of blackout.

E.g. connecting local inputs:



SERVER GATEWAY APPLICATIONS

APPLICATION

DGM01 device acquires information coming from one or more bus (configured on reception mode) and from Ethernet network; it transmits the information to the buses (configured on transmission mode) and on Ethernet network, converting information between multiple protocols in real time.
A DMX512A+RDM universe is managed, which corresponds to 512 levels of light intensity.
The DMX512A+RDM bus transmits entirely the 512 channels of the buffer (512 slots).
On the DALI bus are sent the first 64 channels of the buffer as 64 short address, or 16 channels as 16 group address, or one broadcast channel, according to an algorithm that updates more frequently the channels that vary more rapidly.
On the Modbus RTU the first 480 channels of the buffer are transmitted to 80 modbus devices (id 1 .. 80) of 6 registers each.
This default configuration allows to manage a total of 512 levels of light intensity, with any control system provided of Ethernet connection, and to control different devices without need to know in detail the functioning of the related protocols (DMX512A+RDM, DALI, MODBUS).

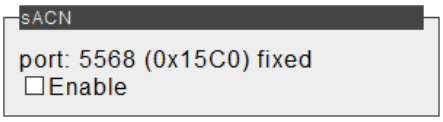
ETHERNET

DGM01 uses Ethernet port by IPv4 protocol. Default IP address is: 192.168.1.4.
NOTE: be careful to the fact that the “subnet” must match for all the devices that have to talk, for example with “net-mask” 255.255.255.0 all devices must have 192.168.1.* address to be visible.
A WEB SERVER interface is provided for the device use, supervision and configuration.

sACN (ETHERNET)

DGM01 implements ArtNet protocol and can be used as sACN → DMX and ArtNet → DALI gateway from main softwares and lighting desk.
The port UPD 5568 is used.

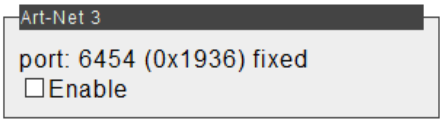
Configuration



Art-Net 3 (ETHERNET)

DGM01 implements Art-Net 3 protocol and can be used as Art-Net → DMX and Art-Net → DALI gateway from main softwares and lighting desk.
UPD 6454 port is used.

Configuration



Implemented packets

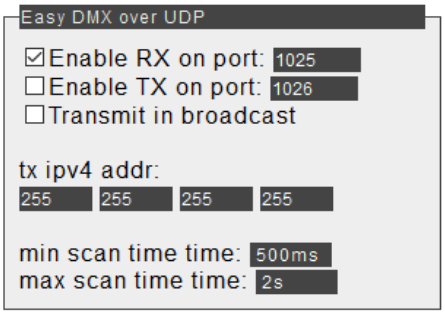
OpCode	Note
ArtDmx	Sub-Net and Universe are routed to the DGM universe
ArtPoll	

Dalcnet Easy DMX over UDP (ETHERNET)

DGM01 allows to receive and/or transmit a DMX512A+RDM universe from/to other DGM01 or other devices through UPD protocol.
Just need to send a packet of 512 bytes on the configured UDP port (default: 1025) for the communication of 512 levels of light intensity.
Each byte represents a DMX512A+RDM slot. DMX512A+RDM slot is a DMX512A+RDM brightness level from 0 to 255. As there are 512 slots, 512 levels of brightness from 0 to 255 are controlled.
It is not necessary to send any other command, since the interface is able to process data by itself.
When you want to change brightness levels, you have to re-send the packet, otherwise the device will continue the transmission of last values received.

For example, setting up:	send:				
	1° byte	2° byte	3° byte	...	512° byte
the first lamp to max level and the others off	255	0	0	. . .	0
the second lamp to max level and the others off	0	255	0	. . .	0
the second lamp to 50% level and the others off	0	128	0	. . .	0

Configuration



It is possible to set up a UPD receiving port and a UPD transmission port, or make a broadcast transmission.
The packets are transmitted with frequency fixed on “min scan time” every time that packets are received from Ethernet network or from field-buses (DMX512A+RDM/DALI/MODBUS). If there are no variations, packets are periodically sent according to the time fixed on “max scan time”. The zero value disables the periodical transmission.

MODBUS TCP/IP (ETHERNET)

DGM01 has a MODBUS TCP/IP server available which is able to receive and/or transmit a DMX512A+RDM universe towards one or more Modbus devices on Ethernet network.
512 registers are available, with Modbus address from 0 to 511 and value from 0 to 255.
TCP 502 port is used, the ID slave is not considered.

Configuration

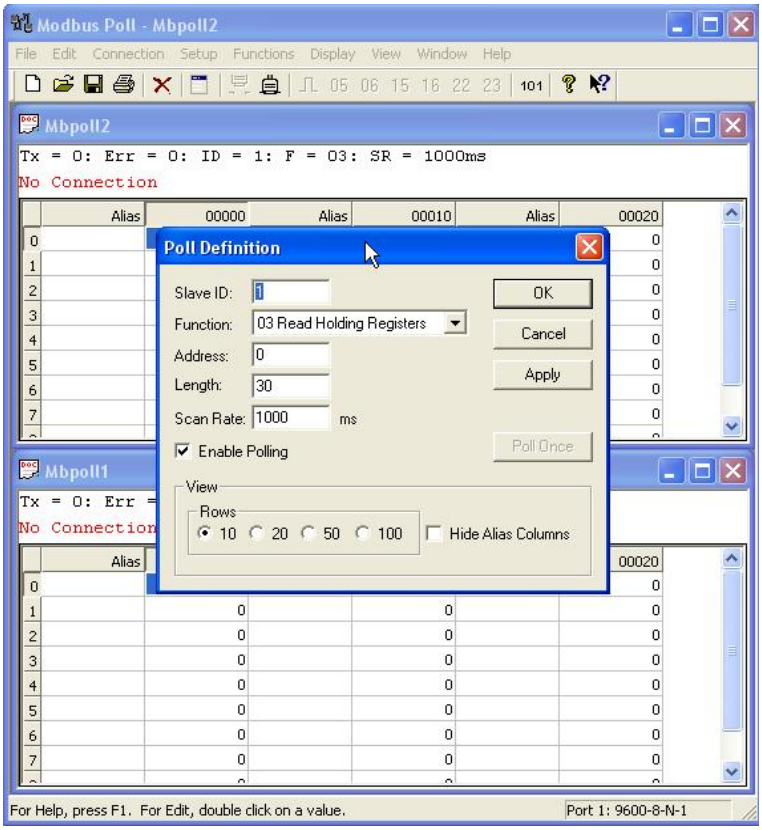
Modbus TCP
port: 502 (fixed, MODBUS default)

Implemented packets

Function Code	Function Name
03	Read holding registers
06	Write single register
16	Write multiple registers

Tested softwares

Brand	Name	Version
Witte Software	Modbus Poll	6.4.2



TCP Telnet (ETHERNET)

DGM01 provides a Telnet server which is able to receive and/or transmit a DMX512A+RDM universe from/to other devices by TCP protocol.
The communication takes place establishing a connection on TCP 23 port (Telnet).
It is possible to send the state of the 512 brightness levels (or even a lower number) on a single ASCII string.
The request is enclosed by the tags <data> and </data>:

```
<data addr='0000' size='0200'> .... </data>
```

- The field `addr` indicates, with hexadecimal notation, the first slot to be transmitted.
- The field `size` indicates, with hexadecimal notation, the number of slots to be transmitted.

Within the tags have to be inserted, with hexadecimal notation, the slots that has to be transmitted, from 00 to FF range.
The number of characters pairs between the tags `<data>` and `</data>` must be equal to the number of slots to transmit.

For example, to set :	send:
the first lamp to max level and the others off	`<data addr='0000' size='0200'>FF000000...00</data>`
the second lamp to max level and the others off	`<data addr='0000' size='0200'>00FF0000...00</data>`
the second lamp to 50% level and the others off	`<data addr='0000' size='0200'>00800000...00</data>`
the first lamp to max level and the others untouched	`<data addr='0000' size='0001'>FF<data>`
the second lamp to max level and the others untouched	`<data addr='0001' size='0001'>FF</data>`
the second and the third to 50% and the others untouched	`<data addr='0001' size='0002'>8080</data>`
to request the status without modifying any value	`<data addr='0000' size='0000'><data>`

NEW: (power-on default levels)

It is possible to save the current brightness levels as default power-on state. The request is enclosed by the tags <wdef> and </wdef>.

Save actual levels as power-on levels:	`<wdef></wdef>`

NEW: (FADE ENGINE)

It is possible to start one o more fading on the 512 brightness levels (fade). This request is done with a string enclosed by the tags <fade> and </fade>:

```
<fade time='0000' addr='0000' size='0200'> .... </fade>
```

- The field `time` indicates, with hexadecimal notation, the fade time in 0.1s units, with a range from 0.1 to 3600 seconds (1hour) The minimum slope is 25.5s per step; this means that the maximum fade time to go from 0 to 1 level (or from 35 to 34 for example) is 25.5s, to go from 0 to 2 level is 51s. The slope is internally limited. The value “0000” means to stop the fade at the actual value.

- The field `addr` indicates, with hexadecimal notation, the first slot to be transmitted.
- The field `size` indicates, with hexadecimal notation, the number of slots to be transmitted.

Slots to be transmitted have to be inserted within the tags, in the range from 00 to FF with hexadecimal notation.

The value set to “XX” means that the fade is not processed for the corresponding channel.

Maximum 64 values (i.e. channels) can be sent in a single packet, so to starting a fade on all 512 channels is required to send at least 8 packets.

For example, to set :	send:
the first lamp to max level and the third off, with 5 seconds fade time	`<fade time='0032' addr='0000' size='0003'>FFXX00</fade>`
To stop the fading of the third lamp at the actual value	`<fade time='0000' addr='0002' size='0001'>00</fade>`

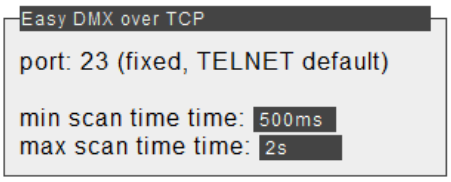
When packets are received from Ethernet network or fieldbuses, and with an active fading control, every time a string is received a string is sent as response with a minimum configurable time (min scan time) :

```
<data>010203040506070809.....</data>
```

It reports the state of all 512 levels of light intensity. If there are no changes, the string is sent anyway with a configurable time (max scan time) if greated than zero.

NOTE: The spacings and the order of the fields must be respected rigorously. The transmission string must be sent rigorously in a single TCP packet; the response string is sent in a single TCP packet.

Configuration



HTTP binary transfer (ETHERNET)

DGM01 provides an HTTP server which is able to receive and/or transmit a DMX512A+RDM universe from/to other devices by HTTP protocol.
The communication takes place establishing a connection on the TCP 80 port (Web Server).
The request is made to URL "**/dmem.bin**" through "POST" method and is encapsulated in the following way:

BYTE	SIZE	ENDIANESS	READ operations		WRITE operations	
			REQUEST	RESPONSE	REQUEST	RESPONSE
0	1byte	-	0x44	0x44	0x44	0x44
1	1byte	-	0x52	0x52	0x57	0x52
2	1byte	-	0x75	0x75	0x75	0x75
3	1byte	-	0x00	0x00	0x00	0x00
4,5	2bytes	little endian	0x0000	0x0000	0x0000	0x0000
6,7	2bytes	little endian	512	512	number of slots to write	512
8,9,10,11	4bytes	little endian	0	0	first slot to write	0
12,13,14,15	4bytes	little endian	0x00000000	0x00000000	0x00000000	0x00000000
16..	N bytes	-	do't transmit (N=0)	512 slot values (N=512)	transmit N slot values (N=number of slot to write)	512 slot values (N=512)

The request is sent with the following syntax:

```
POST /dmem.bin HTTP/1.1\r\n
Host: 192.168.1.4\r\n
Content-Length: 16\r\n
\r\n
\x44\x52\x75\x00\x00\x00\x00\x02\x00\x00\x00\x00\x00\x00\x00\x00
```

The answer is like this:

```
HTTP/1.1 200 OK\r\n
Content-Type: arraybuffer\r\n
\r\n
\x44\x52\x75\x00\x00\x00\x00\x02\x00\x00\x00\x00\x00\x00\x00\x00\x00\x01\x02\x03....\xFF
```

HTTP plain text (ETHERNET)

DEPRECATED - please don't use for new applications

DGM01 provides an HTTP server which is able to receive and/or transmit a DMX512A+RDM universe from/to other devices by HTTP protocol.
The communication takes place establishing a connection on the TCP 80 port (Web Server).
The request is made to URL "**/dmx.xml**" through "POST" method and is enclosed by the tags `<data> </data>`

See the section TCP-Telnet for the tag `<data> </data>` description

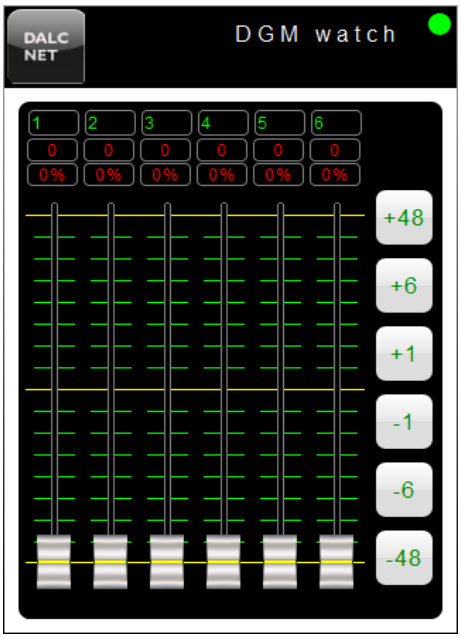
The request is sent with the following syntax:

```
POST /dmx.xml HTTP/1.1\r\n
Host: 192.168.1.4\r\n
\r\n
<data addr='0000' size='0200'>010203040506070809....</data>
```

The answer is like this:

```
HTTP/1.1 200 OK\r\n
Content-Type: text/plain\r\n
\r\n
<data>010203040506070809....</data>
```

WEB SERVER (ETHERNET)



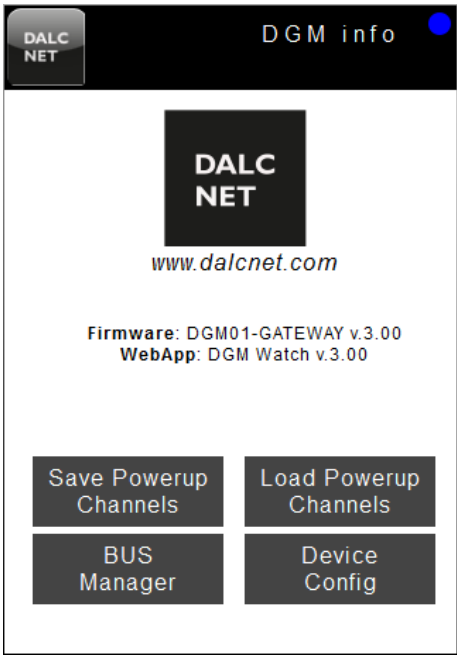
DGM01 provides a WebApp for supervision and setting of all available channels, which can be used from every modern device with an HTML5 capable browser.
A window with 6 visible channels is displayed. All the other channels can be scrolled to be visualized.

NOTE: It is necessary to use an **HTML-5, CSS-3 ,JS, XHR, CORS, JSON, ArrayBuffer** compliant browser to correctly access to the available services and applications.

Compatibility with:

Mozilla Firefox 45+	Apple Safari 9+	Google Chrome 49+

Device Info



From the homepage (channels' control page), it is possible to access Device Info page by pressing the logo on the top left side of the interface. Info page contains several device specifications.

On this page the following functions/sections can be selected:

→ **Exit**: back to previous page by pressing the logo on the top left side of the interface

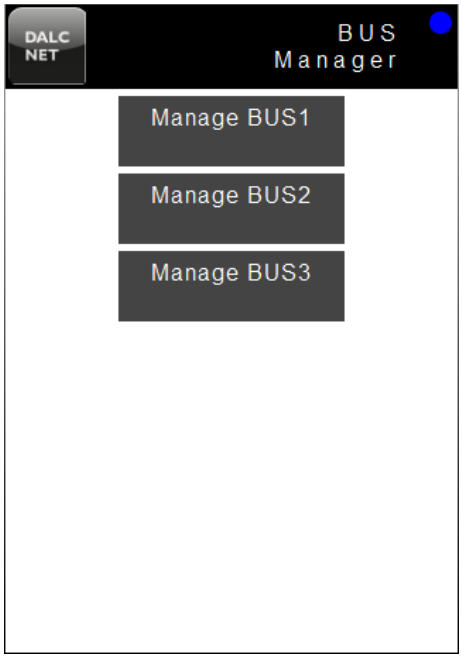
→ **Save Power-up Channels**:
Save actual channels' level as power-on levels' value

→ **Load Power-up Channels**:
Reload Power-on channels' value saved.
When a Power cycle is done, the device will restart with Power-on values previously saved

→ **BUS Manager** :
Control and Management of devices connected to BUS network (provided for DALI BUS)

→ **Device Config**:
Configuration Menu of the DGM01. In this section is possible to configure IP address, network protocol settings and BUS settings.

NEW: BUS Manager



On BUS Manager page is possible to:

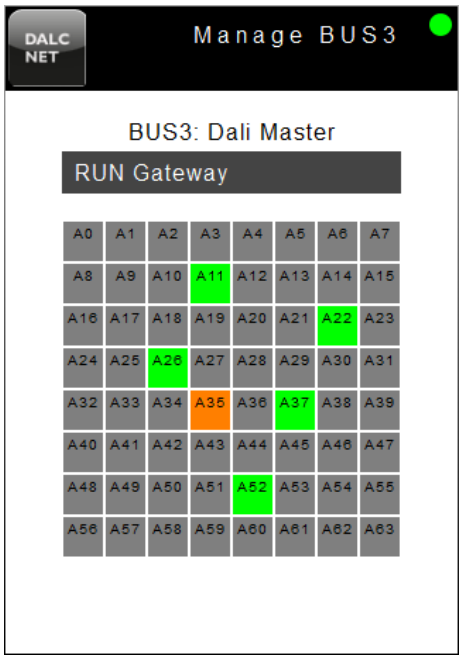
→ Enter BUS1 Managing page:
No managing provided.

→ Enter BUS2 Managing page:
No managing provided.

→ Enter BUS3 Managing page:
When the Bus is configured as **DALI Master**, it's possible to monitor, address and manage DALI devices connected on DALI BUS.
In *Manage BUS3* section there is a drop-down menu with which is possible to choose three operating modes that allow a complete configuration of a DALI system:

- **RUN Gateway**
- **Address Devices** (drag&drop)
- **Config Devices**

NEW: DALI BUS Manager - RUN Gateway



RUN Gateway Function

When this function is selected on the drop-down menu, the Gateway works on its standard operating mode.

On this operating mode, the 64 devices (i.e. a DALI universe) that can be managed are displayed in a grid.
It is possible to display the state of the connected devices directly on the grid; every grid box (i.e. every single device) can be shown with the following colours:

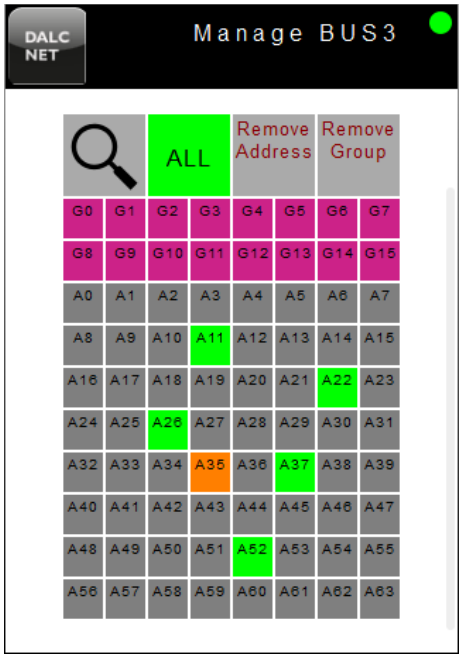
- **GREY**: the device is not present or does not respond

- **GREEN**: the device works properly

- **ORANGE**: the device works properly;
the lighting source could be disconnected or not working properly

- **RED**: some devices respond to the same address, or there are some communication errors in the system

NEW: DALI BUS Manager – Address Devices



Address Devices Function (drag&drop)

When this function is selected from the drop-down menu, the standard operating mode of the Gateway is suspended.
In this mode 64 devices (i.e. a DALI universe) and 16 groups appear on a grid. These addresses and groups can be managed by using the following functions:
- Search Devices (magnifying glass)
- ALL
- Remove Address
- Remove Group

In this section is possible to address and handle the connected devices and display their state.

"ALL" box becomes GREEN when at least one device is connected and responds through the net. This occurs regardless of whether the device is addressed or not

Note: during the execution of commands the interface's display screen becomes translucent.

ADDRESSING:
Press "Search Devices" button (magnifying glass). The waiting time could be a few minutes, tempo di attesa può essere di qualche minuto, depending on the type and number of connected devices.

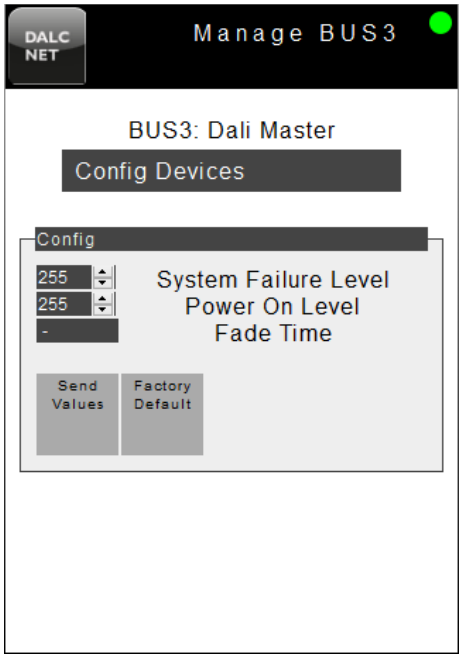
ERASE SYSTEM:
Drag "ALL" box into "Remove Address" box and release it.
The addresses of all connected devices will be deleted.

ADDRESS CHANGE:
Drag the box from the address that has to be changed and release it on the one chosen. The new address becomes green, while the old address turns grey.

ADDING TO A GROUP:
Drag the box from the address that has to be assigned and release it on the chosen group. The number of the group to which the address has been assigned appears on the address' box.

REMOVE FROM A GROUP:
Drag the box from the address that has to be removed from the group and release it on the "Remove Group" box.
The group number to which the device was part of will be removed from the address' box.

NEW: DALI Bus Manager – Config Devices



Config Devices Function

When this function is selected from the drop-down menu, the standard operating mode of the Gateway is suspended.
In this section is possible to broadcast the value of some useful parameters or configure the same parameters as factory default values.

The parameters that can be configured and sent to the devices on the network are:

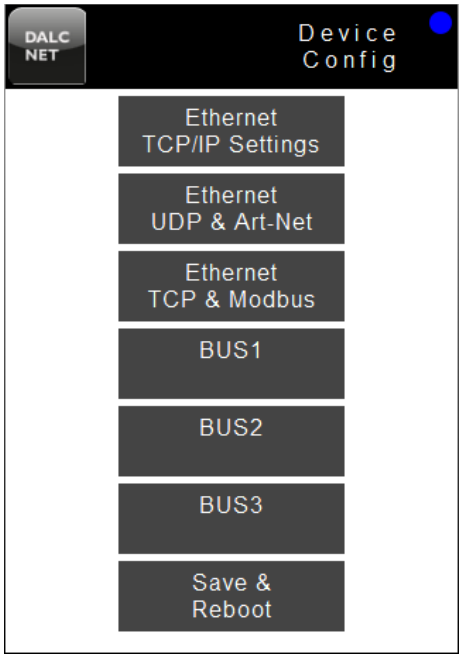
- *System Failure Level*
- *Power On Level*
- *Fade Time*

Note: during the execution of commands the interface's display screen becomes translucent.

SEND PARAMETERS
Set up the desired value on each parameter and then press "Send Values" to transmit the parameters to the connected devices.

RESET PARAMETERS:
Press "Factory Default" to restore factory default parameters' value of the Gateway.

Device Config



On the main page of the Gateway's Web interface, **Device Config** section is available.

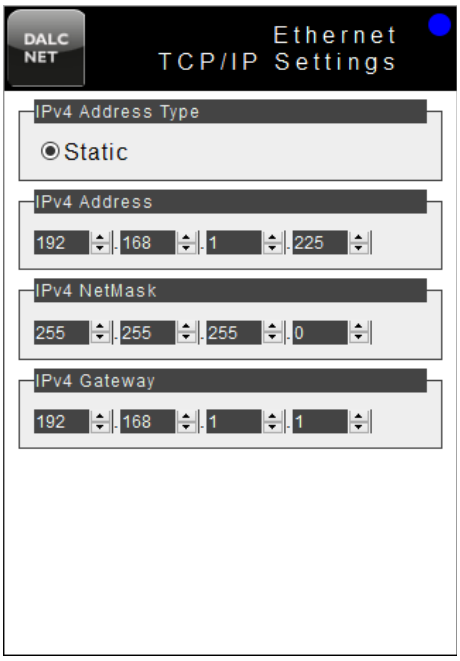
Clicking on the related button, you enter the configuration page of the Gateway, which allows to define settings for all communication types on the device.
In this section it is possible to make the configuration of the IP address, of the network protocols and of BUSES:

- *Ethernet TCP/IP Settings*
- *Ethernet UDP & Art-Net*
- *Ethernet TCP & Modbus*
- *BUS1*
- *BUS2*
- *BUS3*

Each BUS can be configured as input, output, or it can be disabled.

To activate and store desired settings, it is necessary to click on "Save and Reboot" button and wait for DGM01 restart.

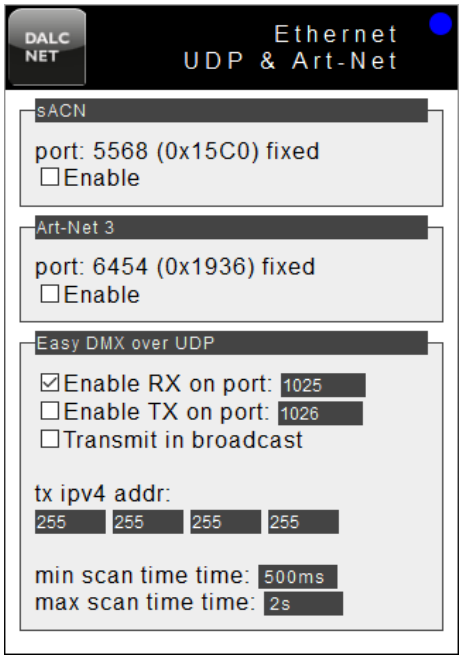
To exit the Device Config page it is necessary to click on Dalcnet logo on the top left side of the interface's display.



Ethernet TCP/IP Settings

DGM01 Server Gateway uses Ethernet port with IPv4 protocol.
Default IP address is 192.168.1.4

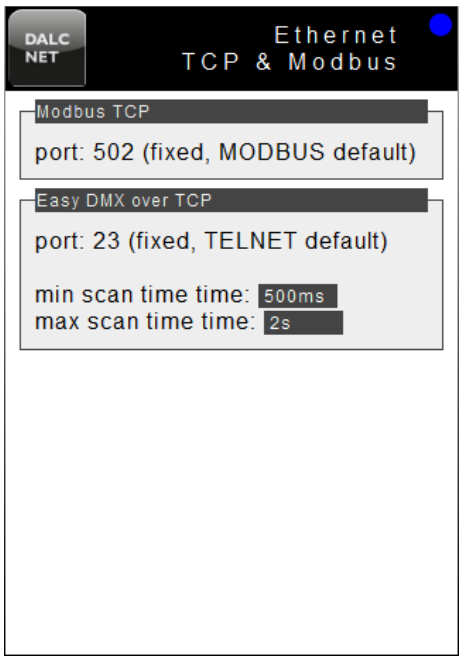
NOTE: the "*subnet*" must be the same for all devices that need to communicate; for example, with "net-mask" 255.255.255.0, all devices must have an address of the type 192.168.1.* to be visible on the net.



Ethernet UDP & Art-Net

In this section it is possible to enable the communication ports for *sACN* and *Art-Net 3* protocols.

Moreover, regarding *Easy DMX over UDP* mode, it is possible to set up a UDP receiving port and a UDP transmission port, o transmit in broadcast.
Every time packets are received from Ethernet or from field-buses (DMX512A+RDM/DALI/MODBUS), packets are transmitted with the frequency configured on “min scan time”.
If there are no variations, packets are sent periodically according to the time setted on “max scan time”
al tempo impostato su “max scan time”.
Zero value disables the periodic transmission.

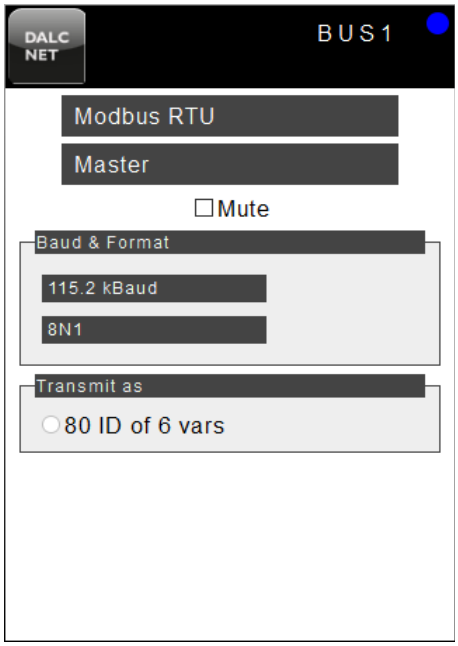


Ethernet TCP & Modbus

In this section the port used (502) from MODBUS TCP/IP server can be verified.

Moreover, it is possible to configure the sending timing of the response strings from the Telnet server, which is able to receive and/or transmit a DMX512A+RDM universe from/to other devices by TCP protocol.
The connection is established on TCP port 23 (Telnet).
The minimum settable interval for sending the response strings is defined as " min scan time".

In case of no variations detected, the interval with which the string is sent periodically is defined with the value on “max scan time”.



BUS 1 (or BUS 1&2) - MODBUS RTU MASTER

DGM01 provides two buses (BUS1 and BUS2) that can be configured as **MODBUS RTU MASTER** on RS-485 standard.

Configuration
Baud rate values can be selected from the following:

- 9600
- 38400
- 115200
- 125000
- 250000

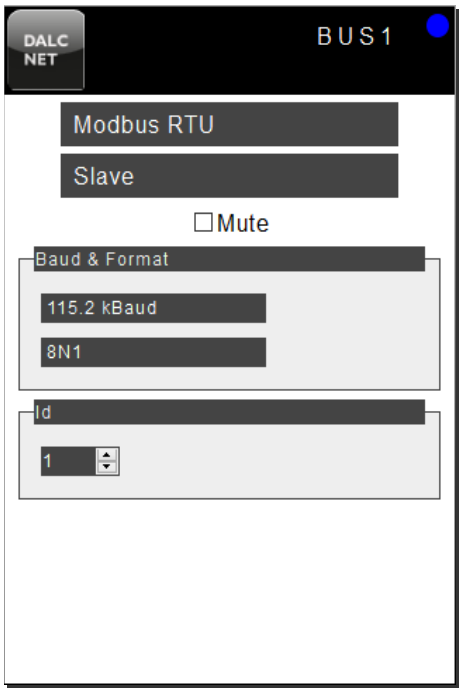
Format: 8 bit
Parity: even, odd, none
Stop bits: 1 or 2

The information are transmitted to 80 slaves (ID 1..80).
A group of 6 channels is sent to each slave:

- ID1: channels from 1 to 6 are transmitted to registers from 0 to 5
- ID2: channels from 7 to 12 are transmitted to registers from 0 to 5
…

- ID80: channels from 475 to 480 are transmitted to registers from 0 to 5

The BUS can be disabled by the flag “MUTE”.



BUS 1 (oppure BUS 1&2) - MODBUS RTU SLAVE

DGM01 provides two buses (BUS1 and BUS2) that can be configured as **MODBUS RTU SLAVE** on RS-485 standard.

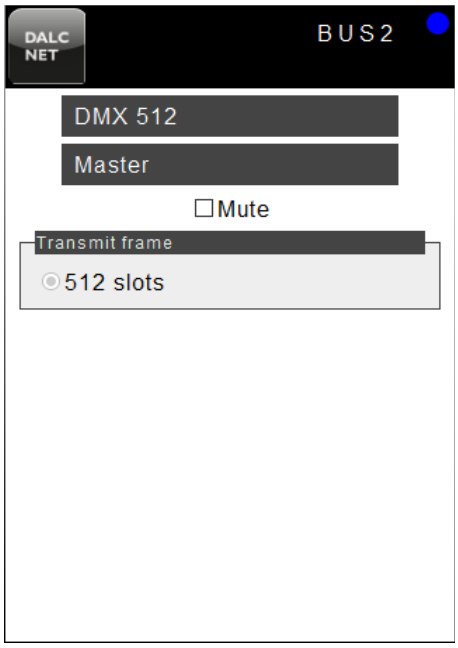
Configuration
Baud rate values can be selected from the following:

- 9600
- 19200
- 38400
- 115200
- 250000
- 500000

Format: 8 bit
Parity: even, odd, none
Stop bits: 1 or 2

The information are received from Modbus.
It is possible to read and write 512 registers with value from 0 to 255.
ID can be configured by web server interface.

The BUS can be disabled by the flag “MUTE”.



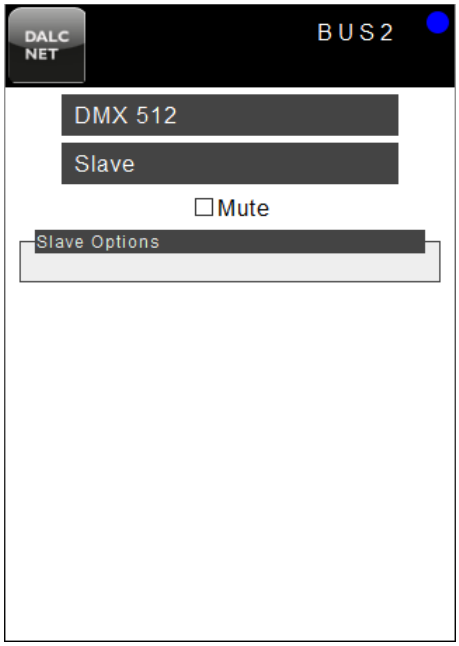
BUS 2 (oppure BUS 1&2) - DMX512 CONTROLLER

DGM01 provides two buses (BUS1 and BUS2) that can be configured as **DMX512+RDM CONTROLLER (MASTER)**.
Simply select the MASTER option from the drop-down menu in order to be able to transmit the entire DMX universe.
A 512-channels universe can be transmitted on both buses BUS1 and BUS2

Configuration

No configuration required.

The BUS can be disabled by the flag “MUTE”.



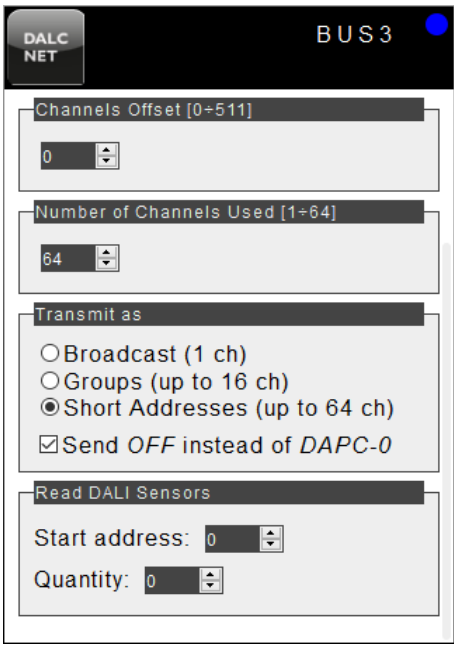
BUS 2 (oppure BUS 1&2) - DMX512 RESPONDER

DGM01 provides two buses (BUS1 and BUS2) that can be configured as **DMX512+RDM RESPONDER (SLAVE)**.
Simply select the SLAVE option from the drop-down menu in order to be able to receive the entire DMX universe.
A 512-channels universe can be received on both buses BUS1 and BUS2.

Configuration

No configuration required.

The BUS can be disabled by the flag “MUTE”.



BUS 3 - DALI CONTROLLER

DGM01 provides a bus (BUS3) that can be configured as **DALI CONTROLLER (MASTER)**.
Simply select MASTER option from the drop-down menu.

The device has an integrated DALI power supply, so it is not possible to use external DALI power supplies. In case of need it is possible to ask for the device with no integrated DALI power supply.

DGM01 transmits DALI channels according to an algorithm that updates more frequently the channels that vary more rapidly.

Configuration

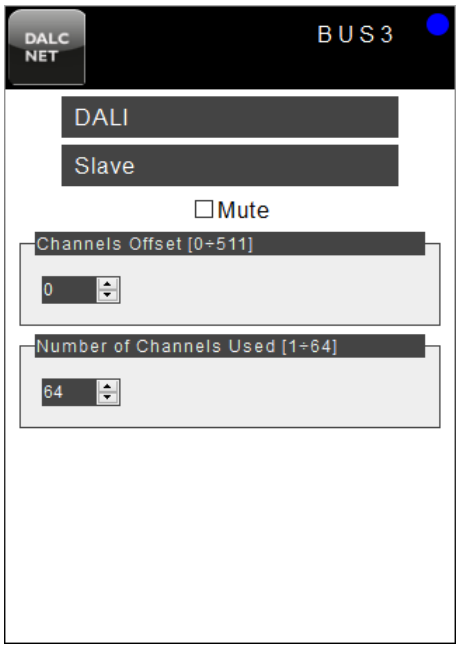
It is possible to choose whether to send commands:

- **Broadcast**: only one channel used for all DALI devices
- to **Groups**: from 1 to 16 DALI groups can be managed
- to **single Addresses**: from 1 to 64 DALI addresses can be managed

On this menu it is possible to specify the number of DALI channels used and assign an offset to 64 DALI channels inside the universe (up to 64 DALI channels che be slided within the universe).

When DALI sensors are present on the system, it is possible to use "*Read DALI sensors*" function to know the lamp's state by the sensor. DALI sensors have to be configured as slaves; it is possible to specify the quantity of sensors on the network and the research starting address to identify them on the net.

The BUS can be disabled by the flag "MUTE".



BUS 3 - DALI CONTROL GEAR

DGM01 provides a bus (BUS3) that can be configured as **DALI CONTROL GEAR (SLAVE)**.
Simply select SLAVE option from the drop-down menu.

The device has an integrated DALI power supply, so it is not possible to use external DALI power supplies. In case of need it is possible to ask for the device with no integrated DALI power supply.

In this case, DGM01 is detected as one or more DALI devices from the DALI controller; in other words, one or more virtual DALI devices are present inside DGM01.
From an electrical point of view, the load is corresponding to that of a single device, so DGM01 is able to work with other DALI devices on the same network.

Configuration

It is possible to choose the number of used channels, from 1 to 64.

Up to 64 DALI channels che be slided within the universe.

The BUS can be disabled by the flag "MUTE".