

CANx DALI gateway manual

ENG - manual

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Application

DALI (Digitally Addressable Lighting Interface) CANx gateway is a device specially designed for management and control of dimmable lights via CAN FT bus. In a typical application, a DALI-bus consists of one gateway (master), and multiple slaves. In DALI-bus segment a master can control up to 64 individually addressable slaves who are also called (digital addressable) ballasts. The DALI standard enables compiling these slaves into: 16 light scenes (incl. dimming values and transitional periods) and 16 lighting groups (multiple assignments of the devices are possible).

The configuration and monitoring of the device is done through LogicMachine CANx and separate DALI commissioning application.

The device is designed for DIN-rail mounting and requires 2 DIN-units.



Types of product

CAN-DALI	CANx DALI gateway
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Standards and norms compliance

EMC:	EN61000-6-1 EN61000-6-3
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Technical data:

Power supply:	24V DC Power consumption 16-18V DC	Power supply for gateway 11 mA Power supply for the DALI bus
Interface:	CAN FT DALI output	1 1
DALI interface	Maximum count of Ballasts per one CANx DALI gateway	64
Clamps:	Power supply: DALI output: CAN FT DALI power supply	1.5mm ² 1.5mm ² CAN FT Connection Terminal 0.8mm ² 1.5mm ²
Enclosure:	Material: Color: Dimensions:	Polyamide Gray 36(W)x91(H)x56(L) mm
Protection:	IP20 according to EN 60529	
Usage temperature:	-5C ... +55C	
Storage temperature:	-20C ... +70C	
Net weight:	61g	
Gross weight:	73g	



Caution

Security advice

The installation and assembly of electrical equipment may only be performed by skilled electrician. The devices must not be used in any relation with equipment that supports, directly or indirectly, human health or life or with application that can result danger of people, animals or real value

Mounting advice

The devices are supplied in operational status. The cables connections included can be clamped to the housing if required.

Electrical connection

The devices are constructed for the operation of protective low voltage (SELV). Grounding of device not needed. When switching the power supply on or off, power surges must be avoided.

Default settings

Line ID: 0

Node ID: 1

Max. number of group addresses per object : 16

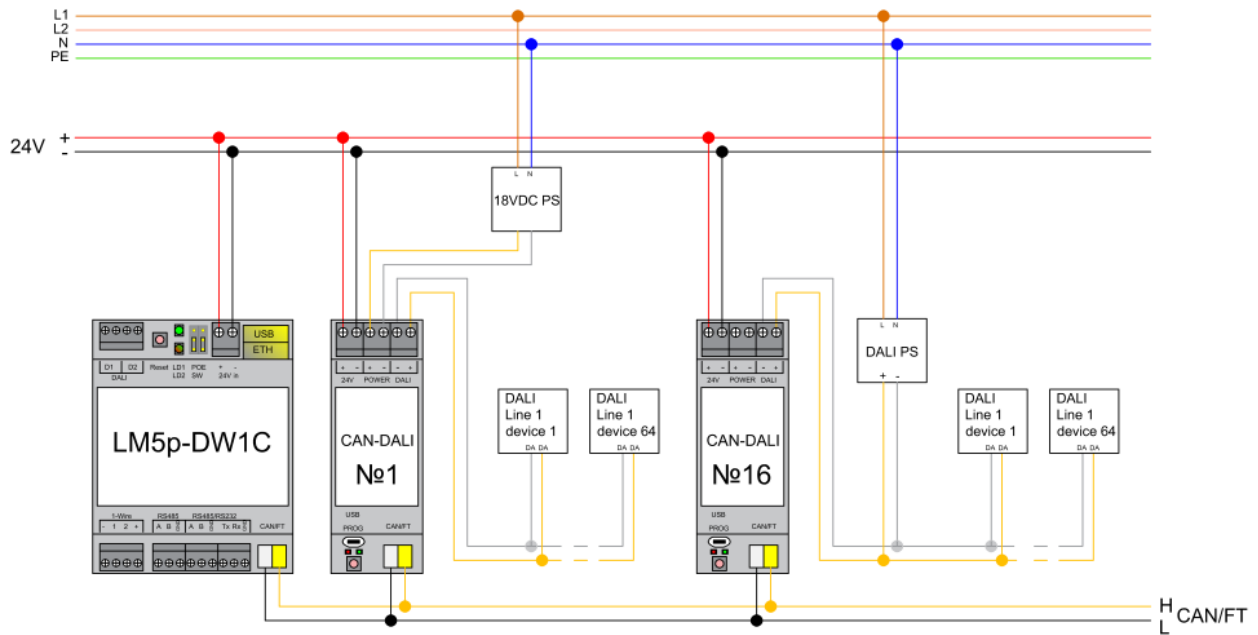
Reset to defaults

Press programming button for 5 seconds, the RED LED blinks 2 times, then release button - GREEN lights up shortly.

Programming physical address

Press *Tools* → *Write device address* from CANx app. Choose address and press *Write*. Then press programming button shortly on the device, GREEN LED lights up shortly. The LED is switched off automatically in 1 second which means address is written.

Connection diagram



Software configuration

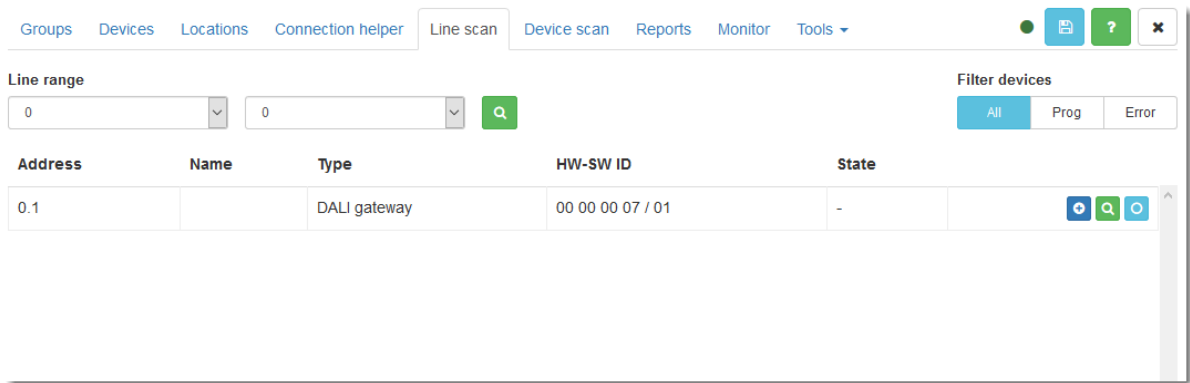
Two apps are mandatory for the CANx DALI Gateway:

- CANx app
- CANx DALI gateway

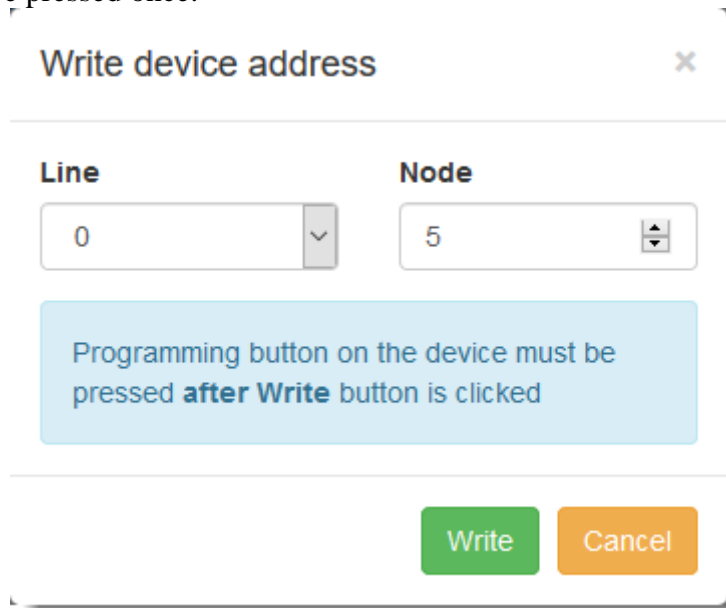
1. CANx app

As first step CANx DALI gateway must be configured in CANx app

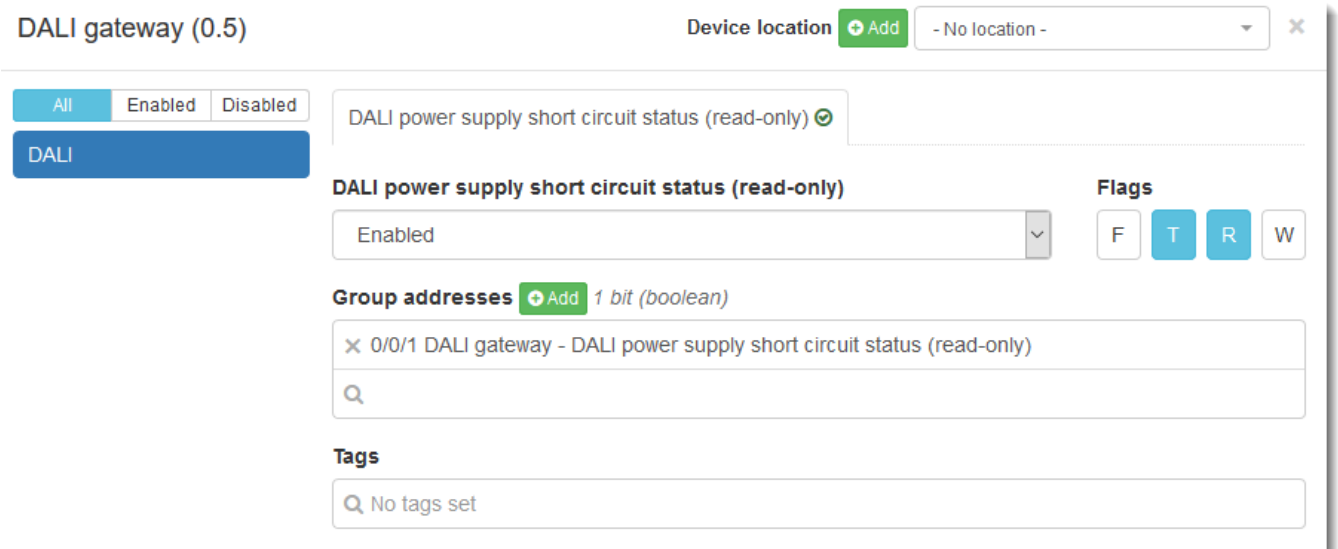
- Open the app and scan the line under **Line scan** tab. The gateway will be found as 0.1 default address.

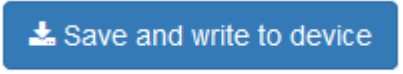


- Readdress the gateway to desire number by selecting **Tools** -> **Write device address**. Set the node number and press **Write**. After this procedure programming button on the DALI gateway has to be pressed once.



- Add device to Project by pressing 
- Go to Devices tab and select Configure 
- Set the **optional** association to DALI power supply short circuit status.

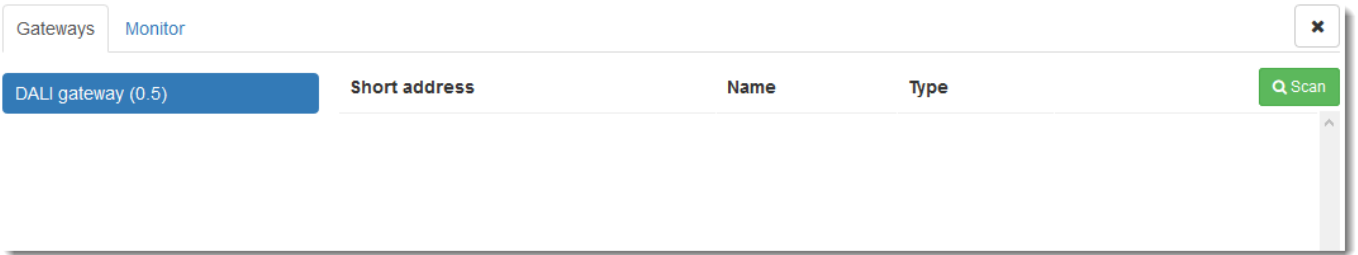


 Save and write to device

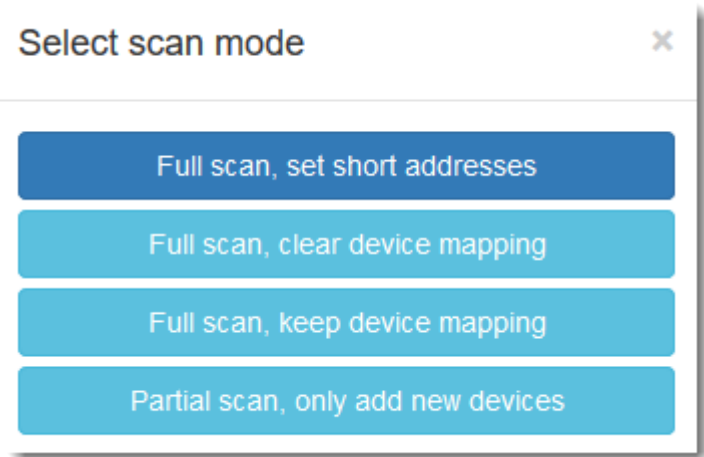
- Once done press

2. CANx DALI gateway app

- Open the CANx DALI gateway app and the configured DALI gateway will be available to select.




- Press **Scan** to search for connected slaves. Four options are possible




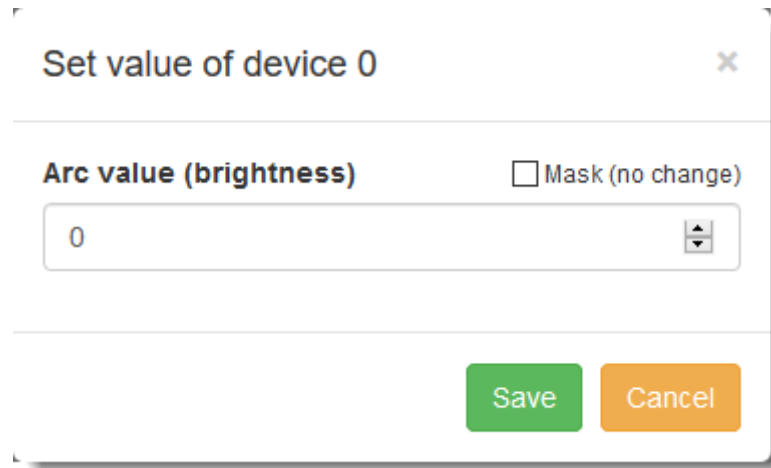
- Select desire option and scan will proceed. Found slaves will be available as list.



- Select  to assign group addresses to slave.

- Give a name to the slave, Select or create new group address for the **On/Off** and **Arc value**. On preset leve is the value which will be sent to the salve on **On** command. 254 is equal to 100%. Mapped group addresses are available both in CANx app objects list as well as in LogicMachine objects list.

- Press  to manually control the slave arc level.



Monitor

Monitor tool is used to monitor and send all commands on the DALI network.

Gateways Monitor

Line: 0 Node: 1 Command: arc Address type: Broadcast Address: Value (0..255): 0

#	Time	Type	Transaction	Address	Raw data	Information
2881	11:16:16.252	RX	36 62 F4 E2 5D 4E A6 40	0.5	11 00	ACK; DATA = 00
2880	11:16:16.219	TX	36 62 F4 E2 5D 4E A6 40	0.5	50 01 A0	ANSW; SHORT 0; CMD = queryactual (160)
2879	11:15:22.719	RX	BC 8B 44 EC 8E 9B 5C 08	0.5	11 00	ACK; DATA = 00
2878	11:15:22.685	TX	BC 8B 44 EC 8E 9B 5C 08	0.5	50 01 A0	ANSW; SHORT 0; CMD = queryactual (160)
2877	11:15:16.900	RX	A4 5F 9B 23 10 DC 0F 5A	0.5	10	ACK
2876	11:15:16.869	TX	A4 5F 9B 23 10 DC 0F 5A	0.5	10 00 00	SHORT 0; ARC; VAL = 0
2875	11:15:11.088	RX	49 BC EB 20 F7 A8 49 71	0.5	11 FE	ACK; DATA = FE

- To send a command select DALI gateway line and a node. Select command, address type, address and respective value.
- All the commands correspond to DALI specifications.