Nuvolight SMARTgateway
DALI / DMX / Input

The Nuvolight SMARTgateway has several inputs and outputs for connection to the Nuvolight controller. It is integrated into the existing network via the network interface. The device has a DMX universe with two outputs and eight digital button inputs. In addition, a DALI bus can be operated, which is also supplied with power via the SMARTgateway.

Nuvolight SMARTgateway

Technical Specifications

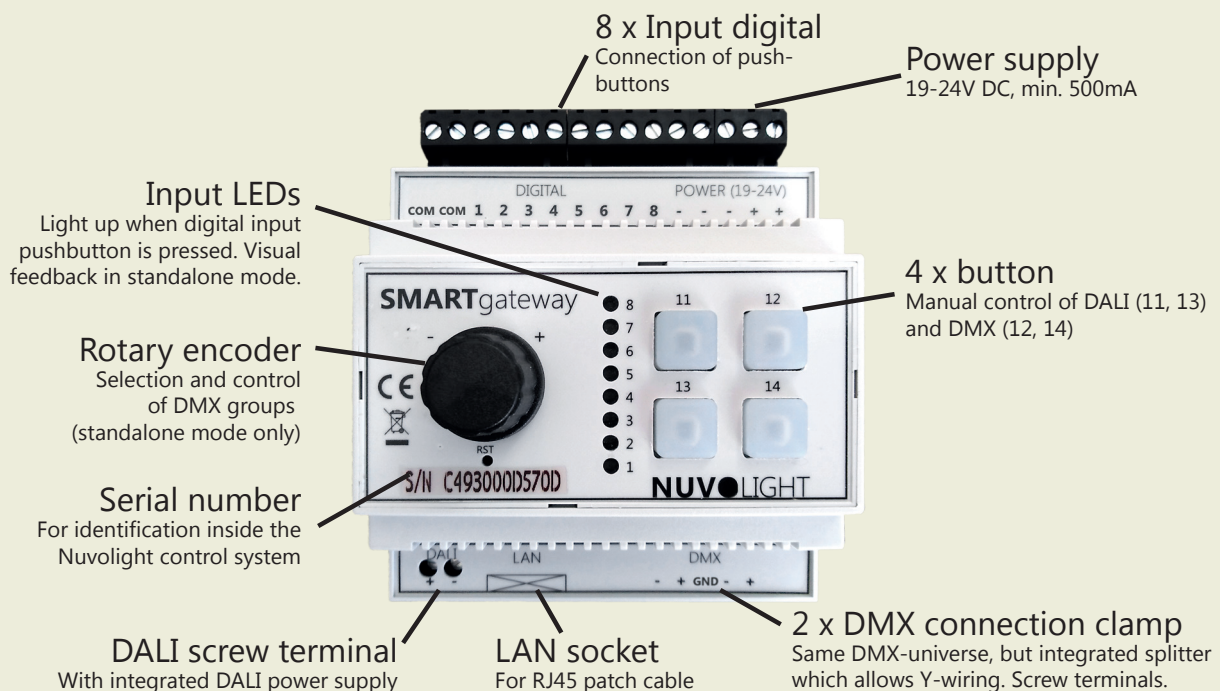|	
Width (WxHxD)	87 x 107 x 77 mm (width: 5 units)
Supply voltage	19V to 24VDC
Power consumption	130 mA + 250 mA (Dali) + 120 mA (DMX)
Mounting	DIN rail
Operating temperature	-25 ... +60° C
Humidity	0% ... 85% non-condensing
Network	100 Mbit/s Ethernet Port, WiFi
Weight	150 g
Colour	white
Outputs (short-circuit proof)	1 x DALI +- (max. 250 mA), 2 x DMX +- (max. 120 mA)
Inputs	8 x digital Input for push buttons, 1 x analogue input for sensors
Protection	IP20
Connection	Screw terminals 1,5 mm^2

Installation

1. Mount the SMARTgateway on DIN rail
2. Connect the DALI bus. Note, that the SMARTgateway also acts as a bus power supply
3. Connect the DMX bus
4. Connect Inputs, according to the example scheme on page 4
5. Plug in the network cable and connect it to the Nuvolight network (RJ45)
6. Connect the power supply
7. Activate the power supply

Notes on wiring

Dali-Bus: Two cores 0,8mm^2 for up to 100m distance, 1,5mm^2 and above for up to 300m distance.
              Polarity protected bus

DMX-Bus: Two cores of a CAT7 cable or similar with shield wire.
              Cross section 0,6mm^2 to 0,8mm^2
              Termination with 120 Ohm resistor between DMX+ and DMX- at the last DMX luminaire
              Cable goes from DMX-luminaire to DMX-luminaire (Daisy-Chain)

Anschlüsse und Bedienelemente

8 x Input digital
Connection of push-buttons

Power supply
19-24V DC, min. 500mA

Input LEDs
Light up when digital input pushbutton is pressed. Visual feedback in standalone mode.

Rotary encoder
Selection and control of DMX groups (standalone mode only)

Serial number
For identification inside the Nuvolight control system

4 x button
Manual control of DALI (11, 13) and DMX (12, 14)

DALI screw terminal
With integrated DALI power supply

LAN socket
For RJ45 patch cable

2 x DMX connection clamp
Same DMX-universe, but integrated splitter which allows Y-wiring. Screw terminals.

Quick-Start
Connection to Nuvolight SMARThub server

The Nuvolight SMARTgateway ist a powerful control unit focussed on light control. It offers the following connection possibilities:
- Control of DMX devices (e.g. colored luminaires or event technology)
- Control of DALI devices (e.g. luminaires with white light color)
- Connection of push buttons or other automation devices with closing contacts (GPO)
- Connection e.g. to cinema projection technology via LAN network interface

In combination with e.g. **Nuvolight SMARTreceiver 2ch Relais**:
- Switching of electric loads with integration power relays, e.g. for curtain control

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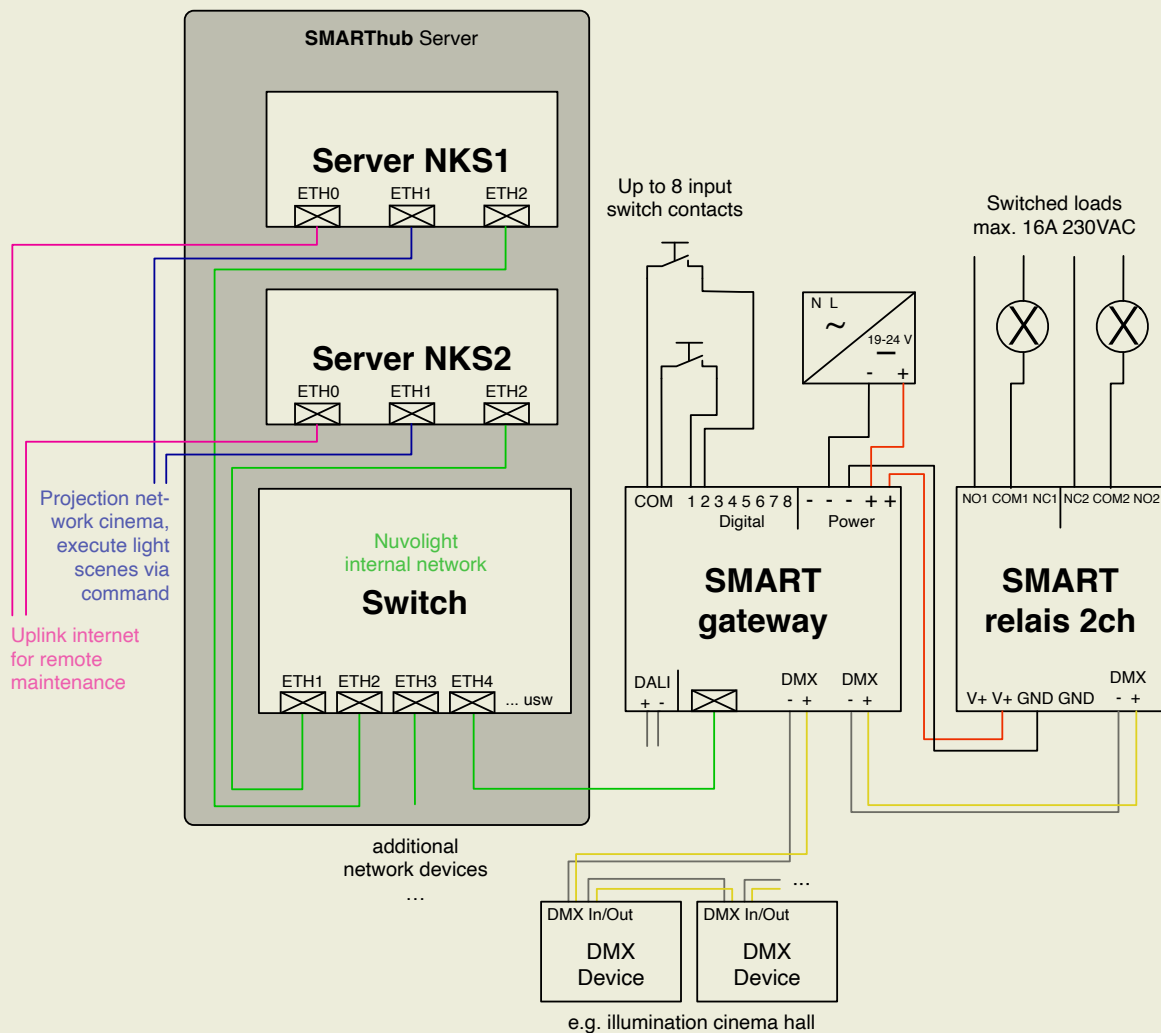
Configuration of the SMARTgateways via webbrowser
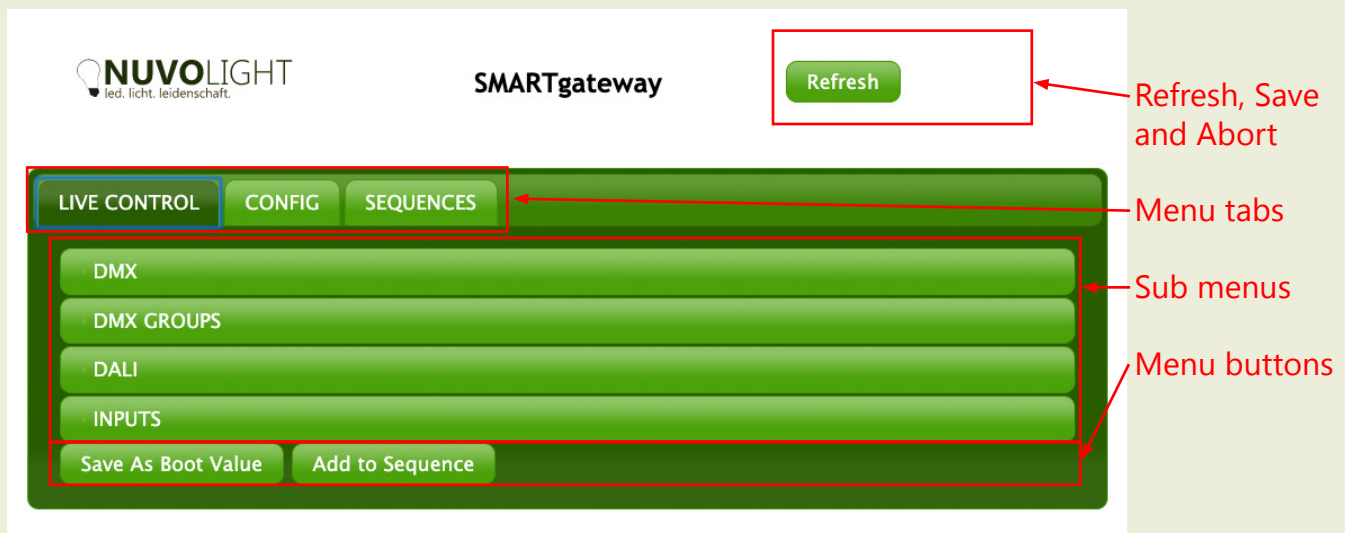
The SMARTgateway provides a web interface for configuration and control. You can achieve this by following these steps:

1. Power the SMARTgateway. The SMARTgateway now provides a WiFi network for a configurable period of time.

2. Connect your computer, tablet or mobile phone to the SMARTgateway's network via WiFi.

Network name: SMARTgw_XX:XX:XX:XX:XX:XX
Password: **nuvolight123**

3. Type the following address into your browser:
                     http://192.168.4.1

The following web interface is displayed:

LIVE CONTROL

The following submenus are available for live control of the DMX and DALI outputs:

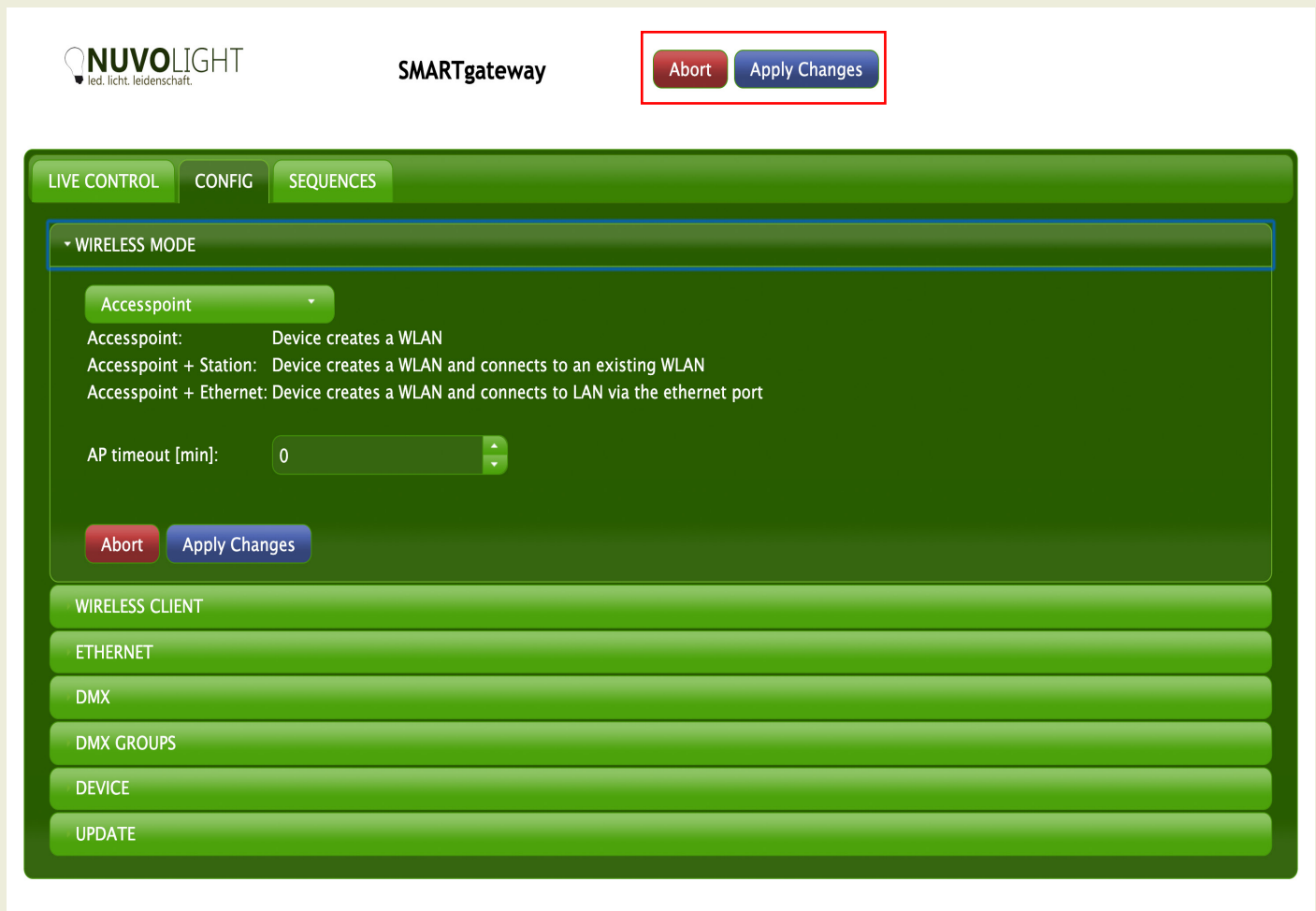| Submenu	Selection Option	Function
DMX	1-512 DMX Channels Brightness values 0-255	Current values of the DMX channels. Slider for setting the brightness values of the DMX channels.
DALI	Broadcast, DALI groups und DALI channels. Brightness values 0-255	Current DALI values. Slider for setting the brightness values of the DALI luminaires
INPUTS	Analogue and digital inputs	Shows if an Input has been triggered, e.g. by a connected push button Black circle → Pushbutton is open White circle → Pushbutton is closed
Save as Boot Value	Button	Saves the current DMX and DALI values as the standard setting when the SMARTgateway is switched on.

CONFIG

The CONFIG tab is hidden by default. You must click the NUVOlight logo several times after another and enter the protection password (contact us via Email).

Basic settings of the SMARTgateway can be made in the „CONFIG" tab. These include:
- network settings
- DMX settings
- Firmware updates
- Download the scenes as a text file for data backup

The table on the following page provides a detailed overview of the individual functions.

Each time an option is changed, the „*Abort*" and „*Apply Changes*" buttons appear. If you click on „*Abort*", all changes that have not been saved will be undone. When you select *"Apply Changes"*, the SMARTgateway reinitializes and takes over the changes.
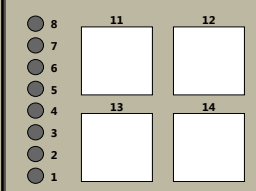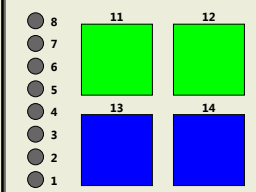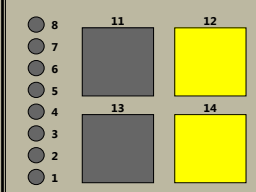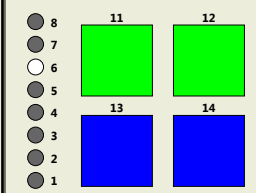
Submenu	Selection option	Funktion
WIRELESS MODE	Accesspoint	The SMARTgateway offers its own WiFi to connect to it via a browser interface.
	Accespoint + Station	The SMARTgateway also tries to connect to another existing WiFi network so that it can be controlled wirelessly.
	Accesspoint + Ethernet **Default setting**	The SMARTgateway also tries to connect to another existing network using a LAN cable so that it can be controlled.
	AP Timeout	The time after the device is switched on after which the SMARTgateway's own WiFi is switched off. If the value is set to 0, the WiFi stays on permanently.
WIRELESS CLIENT	SSID, Password	Network name and password of the WiFi with which the SMARTgateway is to connect.
	Hostname	The name under which the SMART gateway logs on to the network.
	DHCP	*On*: The SMARTgateway expects that it will be assigned an IP in the network (**default setting**) *Off*: The SMARTgateway uses the self-assigned IP address, gateway, subnet mask and DNS IP addresses below.
ETHERNET	Hostname	The name under which the SMART gateway logs on to the network.
	DHCP	*On*: The SMARTgateway expects that it will be assigned an IP in the network (**default setting**) *Off*: The SMARTgateway uses the self-assigned IP address, gateway, subnet mask and DNS IP addresses below.

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| DMX	Art-Net Enable	*On:* The SMARTgateway can be controlled via Art-Net. Live control is not possible. *Off:* The SMARTgateway cannot be controlled via Art-Net. Live control is possible.
	Art-Net Universe	Art-Net setting to which the SMART gateway responds.
DMX GROUPS	DMX channels and groups	Setting which DMX channels should belong to which groups.
DEVICE	UI Encoder	*Enabled*: The rotary encoder, the input LEDs and the buttons can be used to control the SMARTgateway. *Disabled*: The rotary encoder, the input LEDs and the buttons are blocked for controlling the SMARTgateway.
Update	Current Firmware	Die current firmware version number.
	Serial	The serial number of the SMARTgateway.
	Uptime	Time since the last start of the SMARTgateway.
	Firmware Upload	Firmware update. The new firmware can be uploaded as a file from the computer to the SMARTgateway.
	Sequence Backup Upload	A sequence backup can be uploaded as a .txt file.

States and functions of the LEDs and buttons

| Buttons	Constantly white	Device is booting after power up Takes about 5 seconds	
Buttons	Green (top) and blue (bottom)	Button functions: Top left: All DALI-luminaires 100% Bottom Left: All DALI-luminaires 0% Top right: All DMX-Channels 100% Bottom right: All DMX-Channels 0%	
Buttons	Constantly yellow	Top and bottom left: Sending DALI Top and bottom right: Sending DMX	
Input-LED 1-8	Light up white	Digital Input 1-8 have contact to minus pole (reference voltage)	

Connection examples
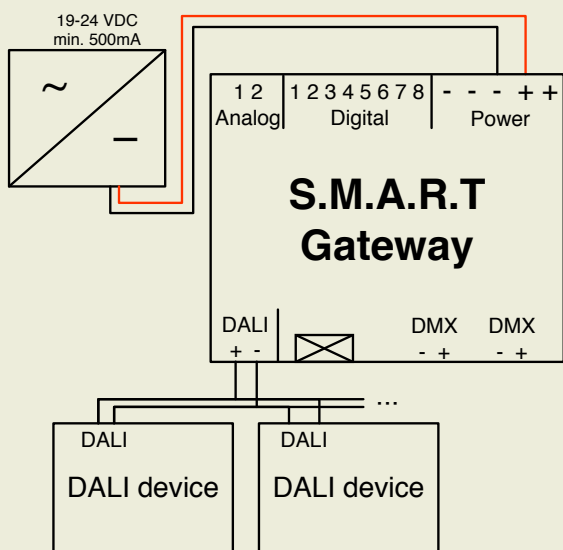
Connection example DALI
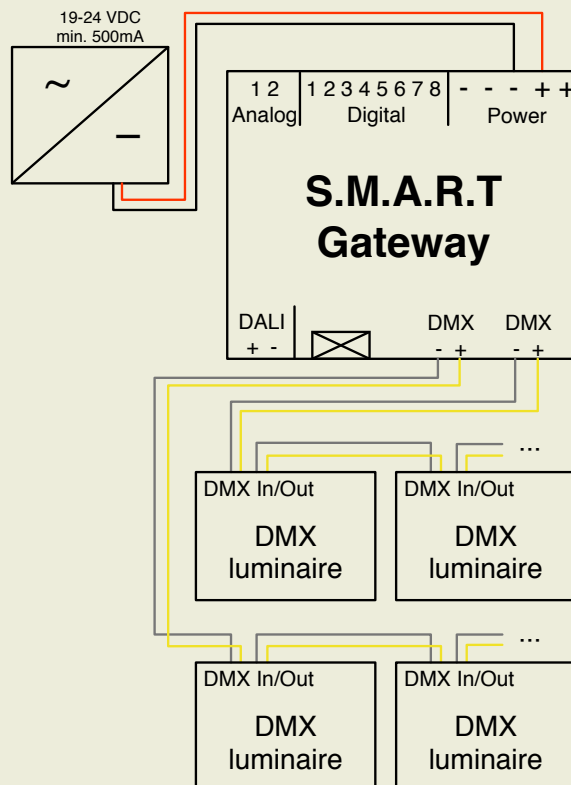
Connection example DMX
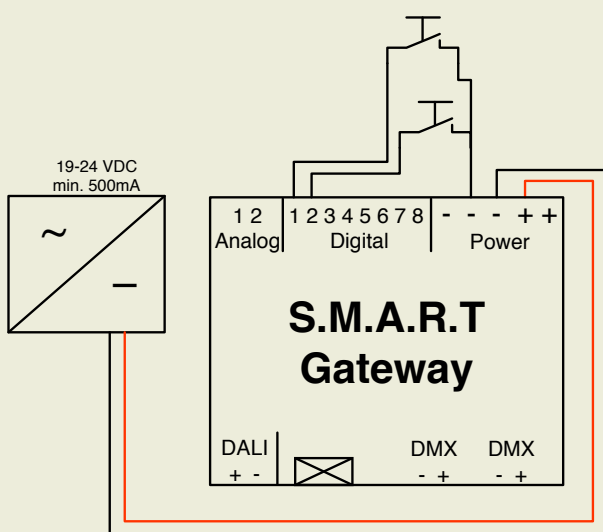
Connection example Push button