
user guide

dimmer

DALI2-FORREST

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DALI2-FORREST

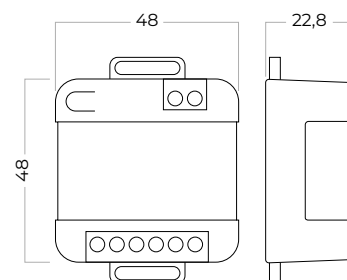
Pixel-to-Pixel 3-wire LED strip generator

TECHNICAL FEATURES

- Pixel-to-Pixel LED strip controller with programmable "RUN" effect
- Show start and stop via an isolated N/O button or a home automation switch/relay
- Show control and dimming via DALI2 DT6, phase cut, active and passive 0/10V–1/10V, 47K potentiometer, sensor, remote push button with proprietary wireless protocol
- Suitable for use with all home automation systems available on the market
- Compatible with Pixel to Pixel SPI LED strips
- Strip length, direction and speed programmable via the Newlab Forrest app
- DMX512 output
- **Power supply status indicator LED**
- Power and output terminals: 0.05–3 mm² (30–12 AWG)
- Protection against: reverse polarity, open circuit, voltage spikes
- Input power supply: 5/12/24/48 V DC, 15 A max
- **UL-approved printed circuit board**
- Configuration via Bluetooth Low Energy and the Forrest control app, available for iOS and Android
- ARTNET to SPI/DMX converter mode (512 channels)



48x48x22,8 mm
weight: 35 gr



SAFETY WARNINGS

- Storage temperature: min: -40°C, max: 60°C
- Operating temperature: min: -20°C, max: 45°C
- Maximum Tc point: 55°C
- Tc is located on the terminal screw marked IN+

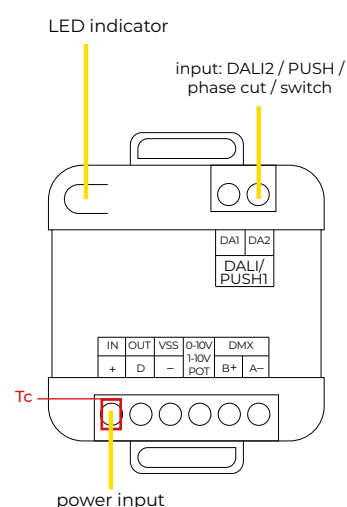
DALI2-FORREST is Newlab's dimmer designed for controlling multi-input pixel-to-pixel LED strips.

Supported data transmission protocols:

WS2811, WS2812, WS2814, WS2801, WS2808, WS2813, WS2814, WS2815, WS2818, WS2851, GS8208, GS8206, SK6805, SK6812, SK6813, SK688, SK6822, UCS1904, UCS2903, UCS2904, UCS7804, UCS8903, UCS8904.

You can set the control parameters for the LED strips by selecting them from a preconfigured list tested by Newlab, or manually, choosing the protocol type and colour mode compatible with the installed LED strip.

figure A



CODE	VOLTAGE RANGE	INPUT	LOAD TYPE	PART NUMBER
DALI2-FORREST	5÷48 V DC	DALI2 / PUSH / PHASE CUT / 0-10V / 1-10V / POTENTIOMETER / REMOTE PUSH BUTTON / ARTNET	led strip Pixel to Pixel 3-wire DMX512	L865MA0F51A01



Maintenance: The appliance is maintenance-free.
Use a dry cloth to clean it.
The use of solvents or other aggressive substances should be avoided at all costs.

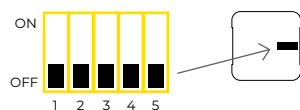


Disposal: at the end of its useful life, the product described in this data sheet is classified as waste from electronic equipment according to the European Directive 2012/19/EU (WEEE recast), implemented in Italy with Legislative Decree no. 49 of 14 March 2014, and cannot be disposed of as unsorted municipal solid waste. **Important:** Improper disposal of the product may cause serious harm to the environment and human health. For proper disposal, inquire about the collection and treatment methods provided by the local authorities.

Operating mode

PUSH mode

Dip switch settings:



To enable this control/operating mode, you must set the DIP switches as indicated above.

The dimmer can be controlled via a push button by using mains voltage (110÷230 VAC) directly, as shown in **FIG. 1**, or by using the power supply's output voltage (8÷53 VDC), as shown in **FIG. 2**. When installing the dimmer in a system, it is preferable to use the wiring diagram shown in **FIG. 1**. In this configuration, the dimmer ensures isolation from the mains voltage.

The input range between terminals DA1 and DA2 is DC: 10÷265 V, AC: 12÷265 VAC, 50÷65 Hz.

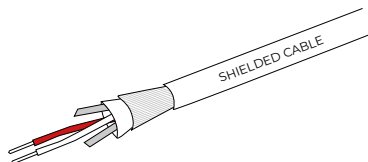
The maximum current drawn by the PUSH interface is approximately 2 mA.

The maximum distance between the dimmer and the switch must not exceed 20 meters; we recommend using shielded cables.

For cable lengths exceeding 20 meters or when multiple control buttons are used, it is recommended to use a monostable relay.

See diagram on page 12.

Always use standard electrical cables with a cross-sectional area of at least 1.5 mm² when connecting to the LED strip. If the distance between the DALI2-FORREST and the strip exceeds **5 meters**, or if flickering occurs, replace the data cable (green) and use a shielded cable for digital signal transmission.



Use one of the wires in the pair as the data cable (D). Connect the remaining wire and the metal shield to the negative terminal on both the LED strip and the DALI2-FORREST.



If you notice any issues with the LED strip, such as uneven lighting, flickering, or flashing, it is **ESSENTIAL** to place the DALI2-FORREST close to the LED strip and perform a functional test to rule out any issues related to the electrical system.

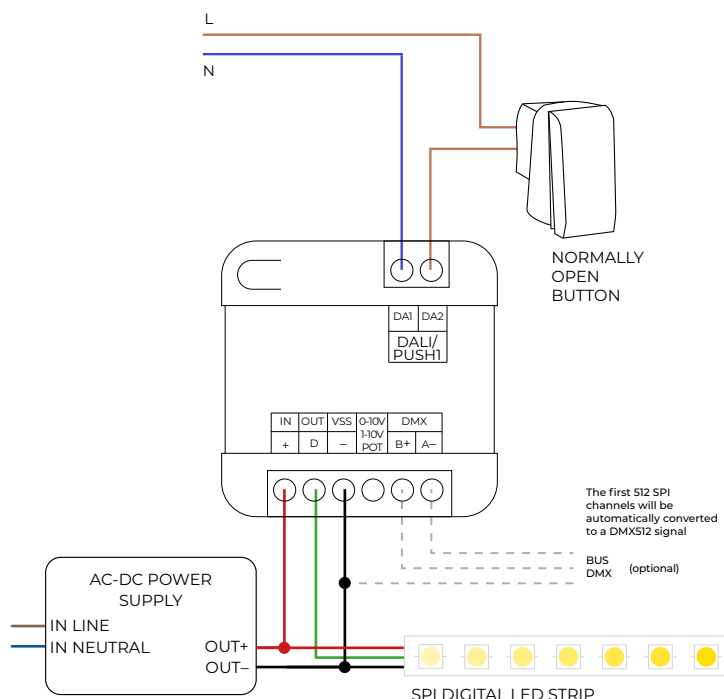


FIG. 1 - Mains-powered button connection

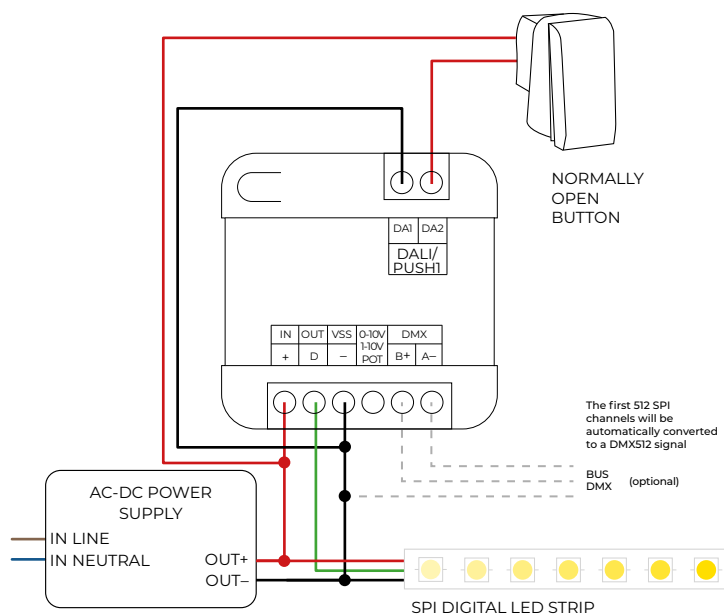


FIG. 2 - button connection powered by the power supply (12/24/48V DC)

Operating mode

DALI DT6 mode

Dip switch settings:



To activate this control/operating mode, you must set the DIP switches located on the rear of the unit and connect inputs DA1 and DA2 to the DALI bus.

Once the dimmer has been configured in DALI mode and disconnected from the DALI bus, the output status switches to the POWER ON LEVEL set via the DALI bus (default: ALL ON).

The maximum current drawn from the DALI bus is approximately 2mA.

Relevant standards:

- IEC 62386-101 ED2
- IEC 62386-102 ED2
- IEC 62386-207 ED2 (DT6)

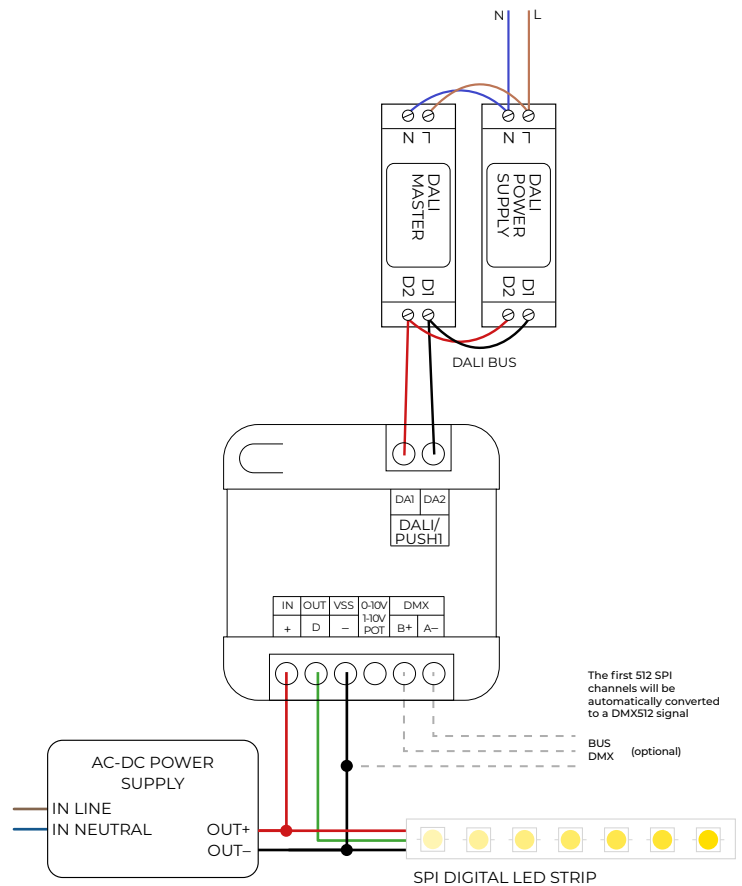
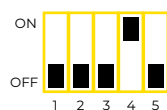


FIG. 3 - DALI connection

Operating mode

0-10 V/1-10 V active/passive mode and 47 k Ω linear potentiometer

Dip switch settings:



To activate this control/operating mode, you must set the DIP switches located on the back of the enclosure and connect the control signal from an active or passive 0-10V/1-10V actuator to the VSS (negative terminal) and 0-10V/1-10V/POT (positive terminal) terminals.

The maximum current drawn by the dimmer from the 0-10V interface is 0.2 mA.

By default, the dimming curve follows a linear trend proportional to the control voltage.

A voltage value below 1V is interpreted as the load being off.

The maximum distance between the dimmer and the 0-10/1-10V actuator must not exceed 5 meters; the use of shielded cables and double-insulated SELV separation from the mains voltage is recommended.

Pay attention to the polarity of the cables; reversing them could cause flickering, malfunctions, or damage.

For a full list of verified compatibility, see page 30

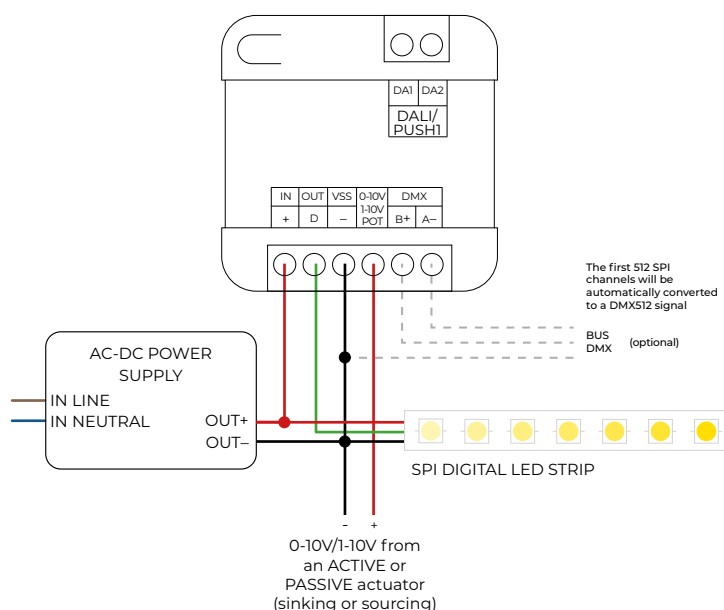


FIG. 4 - 0-10/1-10V connection

47 k Ω linear potentiometer mode

To activate this control/operating mode, you must set the DIP switches located on the back of the unit and connect the control signal from a 47-k Ω linear potentiometer to the VSS and 0-10V/1-10V/POT terminals.

A resistance value lower than 2.5 k Ω is interpreted as the load being off. Maximum brightness is reached when the resistance exceeds 45 k Ω .

We recommend using high-quality potentiometers to avoid *flickering* or output instability.

The maximum distance between the dimmer and the potentiometer must not exceed 2 meters; we recommend using shielded cables and SELV double-insulated isolation from the mains voltage.

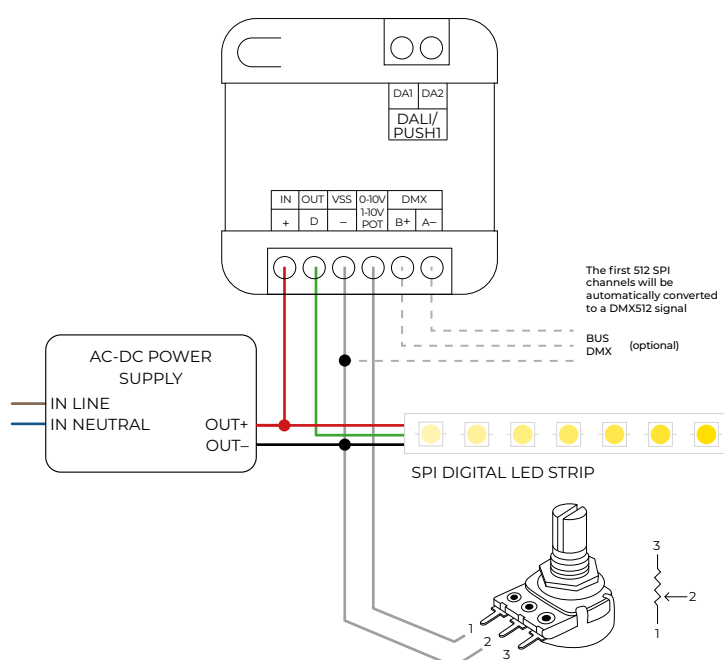
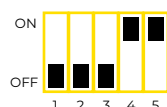


FIG. 5 - 47K potentiometer connection

Operating mode

2-pole phase-cut mode

Dip switch settings:



To activate this control/operating mode, you must set the DIP switches located on the rear of the unit and connect an AC signal (voltage range 12–265 VAC, 50–65 Hz) to terminals DA1 and DA2, which must be controlled by a phase-cut dimmer.

The control input can operate with phase cut or neutral cut.

The input signal does not require polarisation.

The maximum current drawn by the PHASE CUT interface is approximately 2mA.

The diagram in **FIG. 6** shows the connection diagram for a dimmer fitted with two output terminals for phase-cutting. The DALI2-FORREST must be connected as if the dimmer itself were a dimmable load operating at mains voltage.

The interface is capable of operating with all types of phase cut:

- TE: Trailing Edge: Falling edge
- LE: Leading Edge: Rising edge
- Hybrid, central, delayed and mixed phase cuts.

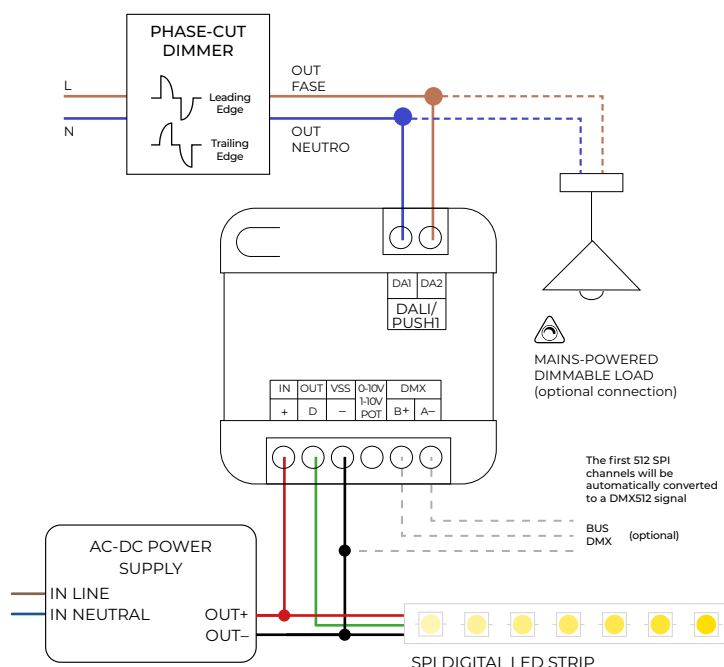


FIG. 6 - 2-pole phase-cut connection

Phase-cut dimmers that do not handle a minimum current of 2 mA may cause the dimmer output to flicker. If flickering occurs, it may be necessary to increase the load on the phase-cut dimmer's output. To increase the load, you can use a load resistor and connect it to the phase-cut dimmer's output between terminals DA1 and DA2.

Below are some resistance values and their corresponding wattage:

Mains voltage 230V

- Resistor value 27K, minimum power 3W: perceived load of the phase-cut dimmer at full brightness 2W
- Resistor value 10K, minimum power 7W: perceived load of the phase-cut dimmer at full brightness 5.5W
- Resistor value 5K, minimum power 15W: perceived load of the phase-cut dimmer at full brightness 10W

Mains voltage 110V

- Resistor value 13K, minimum power 3W: perceived load of the phase-cut dimmer at full light 2W
- Resistor value 5K, minimum power 7W: perceived load of the phase-cut dimmer at full light 5.5W
- Resistor value 2.7K, minimum power 15W: perceived load of the phase-cut dimmer at full light 10W



WARNING!

The resistor used as a dummy load may become hot. Take care not to place it near the dimmer.

For a full list of verified compatibility, see page 30

Several DALI2-FORREST units can be connected in parallel for each phase-cut dimmer. The maximum number of DALI2-FORREST dimmers is calculated as follows:
MAXIMUM CURRENT OF THE PHASE-CUT DIMMER / 0.002
 E.g. Phase-cut dimmer with a maximum current of 0.5A = 0.5/0.002 = 250 dimmers maximum in parallel.

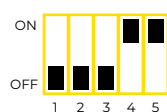


note: For the DALI2-FORREST dimmer with a phase-cut input to operate correctly when paired with connected **BTICINO** phase-cut output dimmers (K4411C, 4411C, L4411C), the latter must be set to **dimmer mode** rather than the default ON/OFF mode in which they are sold.

Operating mode

1-pole phase-cutting mode

Dip switch settings:



To activate this control/operating mode, you must set the DIP switches located on the rear of the unit and connect the system's NEUTRAL to terminal DA1 and the phase-cut phase (AC voltage range 12–265 VAC, 50–65 Hz) from the phase-cut dimmer to terminal DA2.

The control input can operate with phase cut or neutral cut.

If the neutral wire is cut, the system phase must be connected directly to DA1 and the cut neutral wire to DA2.

The input signal does not require polarisation.

The maximum current drawn by the PHASE CUT interface is approximately 2mA.

The diagram in **FIG. 7** shows the connection diagram for a dimmer equipped with a single output pole for phase cutting (phase cut).

The DALI2-FORREST must be connected as if the dimmer itself were a dimmable load operating at mains voltage.

The interface is capable of operating with all types of phase cut:

- TE: Trailing Edge: Falling edge
- LE: Leading Edge: Rising edge
- Hybrid, central, delayed and mixed phase cuts.

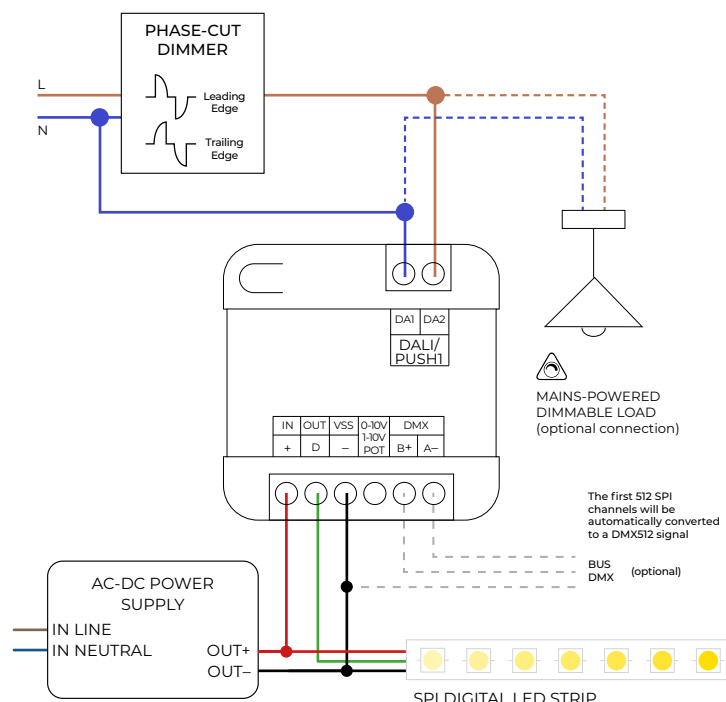


FIG. 7 - PHASE CUT connection: 1 phase terminal cut

Phase-cut dimmers that do not handle a minimum current of 2 mA may cause the dimmer output to flicker. If flickering occurs, it may be necessary to increase the load on the phase-cut dimmer. To increase the load, you can use a load resistor and connect it to the phase-cut dimmer's output between terminals DA1 and DA2.

Below are some resistance values and their corresponding wattage:

Mains voltage 230V

- 27K resistor, minimum power rating 3W: perceived load of the phase-cut dimmer at full brightness 2W
- 10K resistor, minimum power rating 7W: perceived load of the phase-cut dimmer at full brightness 5.5W
- 5K resistor, minimum power rating 15W: perceived load of the phase-cut dimmer at full brightness 10W

Mains voltage 110V

- Resistor value 13K, minimum power rating 3W: perceived load of the phase-cut dimmer at full brightness 2W
- Resistor value 5K, minimum power rating 7W: perceived load of the phase-cut dimmer at full brightness 5.5W
- Resistor value 2.7K, minimum power rating 15W: perceived load of the phase-cut dimmer at full brightness 10W



WARNING!

The resistor used as a dummy load may become hot. Take care not to place it near the dimmer.

For a full list of verified compatibility, see page 30

Several DALI2-FORREST units can be connected in parallel for each phase-cut dimmer. The maximum number of DALI2-FORREST dimmers is calculated as follows:

MAXIMUM CURRENT OF THE PHASE-CUT DIMMER / 0.002

E.g. Phase-cut dimmer with a maximum current of 0.5A = 0.5/0.002 = 250 dimmers maximum in parallel.



note: For the DALI2-FORREST dimmer with a phase-cut input to operate correctly when paired with connected **BTICINO** phase-cut output dimmers (K4411C, 4411C, L4411C), the latter must be set to **dimmer mode** rather than the default ON/OFF mode in which they are sold.

Operating mode

Switch mode

Dip switch settings:



To enable this control/operating mode, you must set the DIP switches as indicated above.

The dimmer can be controlled via a switch by using the mains voltage (110–230 VAC) directly, as shown in **FIG. 8**, or by using the power supply's output voltage (8–53 VDC), as shown in **FIG. 9**.

For installing the dimmer in a system, it is preferable to use the diagram shown in **FIG. 8**.

In this configuration, the dimmer ensures isolation from the mains voltage.

The input range between terminals DA1 and DA2 is DC: 10÷265 V, AC: 12÷265 VAC, 50÷65 Hz.

The maximum current drawn by the SWITCH interface is approximately 2 mA.

The maximum distance between the dimmer and the switch must not exceed 20 meters; we recommend using shielded cables.

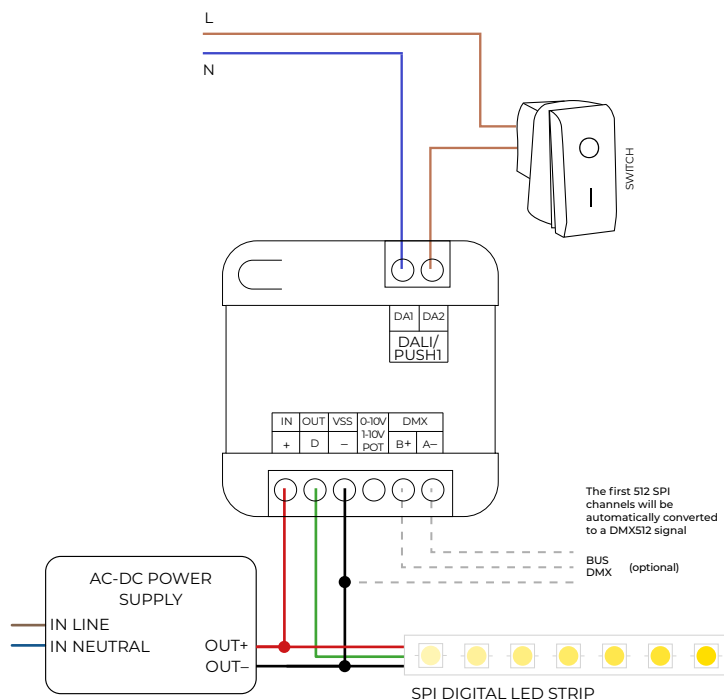


FIG. 8 - mains-voltage switch connection

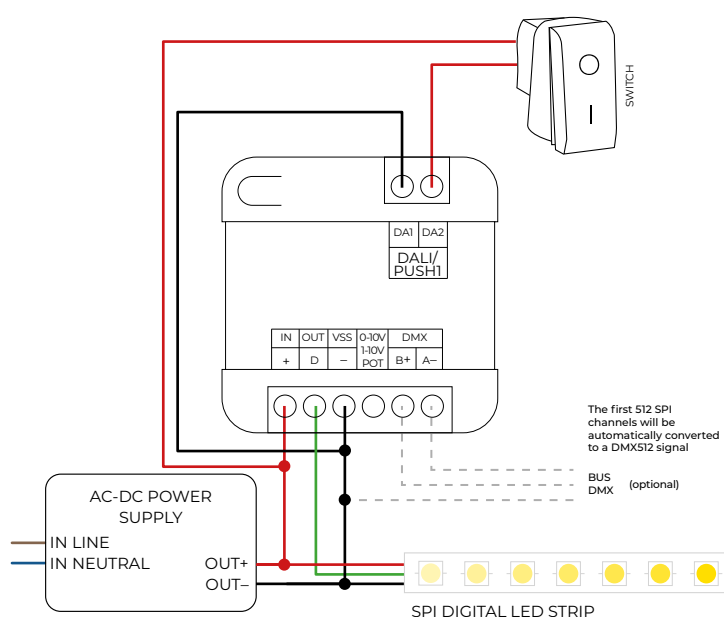


FIG. 9 - connection of the switch to the power supply

Operating mode

Switch mode, presence sensor wiring

Dip switch settings:



To enable this control/operating mode, you must set the DIP switches as indicated above.

Control via a presence sensor can be achieved by directly using mains voltage (110–230 VAC), as shown in **FIG. 10**. In this configuration, the dimmer ensures isolation from the mains voltage.

The input range between terminals DA1 and DA2 is DC: 10÷265 V, AC: 12÷265 VAC, 50÷65 Hz.

The maximum current drawn by the SWITCH interface is approximately 2 mA.

The maximum distance between the dimmer and the motion sensor must not exceed 20 meters; we recommend using shielded cables.

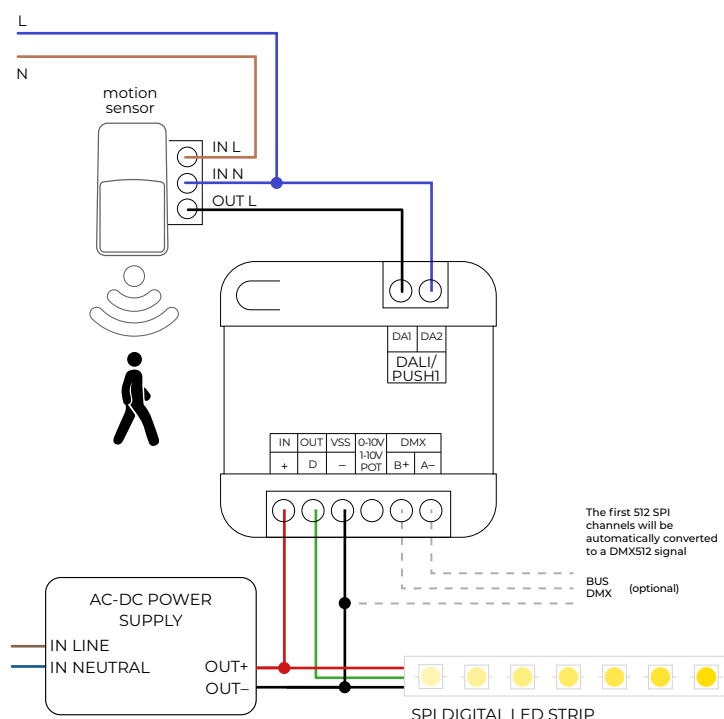
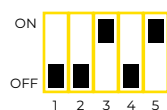


FIG. 10 - connection of a mains-powered presence sensor

Operating mode

DMX to SPI converter mode

Dip switch settings:



To activate this control/operating mode, the DIP switches must be set as indicated above.

In this mode, the dimmer acts as a DMX512-to-SPI signal converter.

The signal from the DMX interface will be converted into an SPI signal that controls the first 512 channels.

Connecting the PUSH interface is **OPTIONAL** and is only used to perform a factory reset.

Use the Forrest app to change the SPI protocol and the strip control driver. By enabling the 16-bit driver, the device automatically upscales the data from 8 to 16 bits at the data source; no data conversion is required on the DMX master.

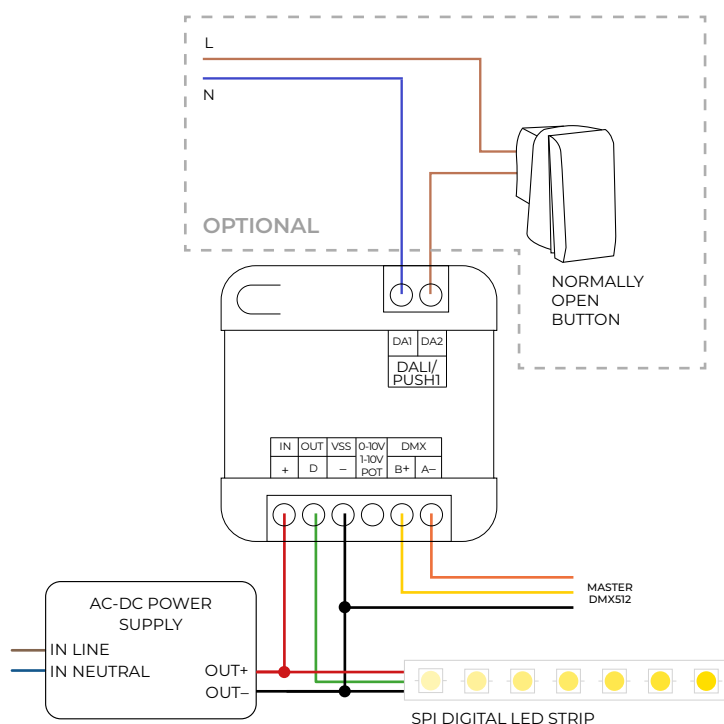


FIG. 11 - mains-powered button connection

Operating mode

ARTNET mode (from Firmware version 2.40)

Dip switch settings:



To enable this control/operating mode, you must set the DIP switches as indicated above.

In this mode, the dimmer is able to receive an **Artnet** signal via WIFI and send it simultaneously to the SPI LED strip and to the DMX BUS (on the DMX BUS only the first 512 channels).

The device must be paired with a WIFI network using the following procedure (see also the example on the next page):

1. connect to the WIFI network created by the device "config-XXX" (XXX is the device's unique identifier).
2. Enter the default password **12345678**
3. Open the browser and connect to the address **http://192.168.4.1**
4. Enter the administration password **admin123**
5. Enter the credentials of the WIFI network to which the DALI2-FORREST device should be connected. Click "Save WiFi Credential and Reboot", then reconnect to your own WIFI network.
6. Locate the device's IP address using, for example, **Artnet** protocol tools (e.g.: DMX Workshop).

7. For any further **Artnet** parameter configuration, to change the password, or to perform a factory reset:

- Connect to the address found (e.g.: **http://XXXXX**).
- Log in with the administration password **admin123**
- Proceed with the desired action.

By enabling the 16-bit driver, the device automatically performs upscaling of the data from 8 to 16 bit on the data source; data conversion on the **Artnet** master is not required.



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OEMCODE 0x2EDB
Art-Net™ is a registered trademark of Artistic Licence Engineering Ltd

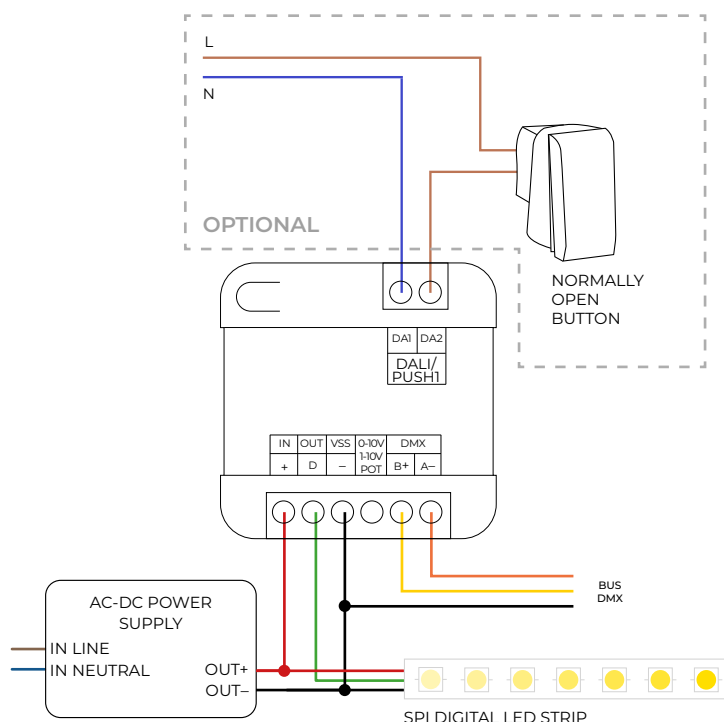
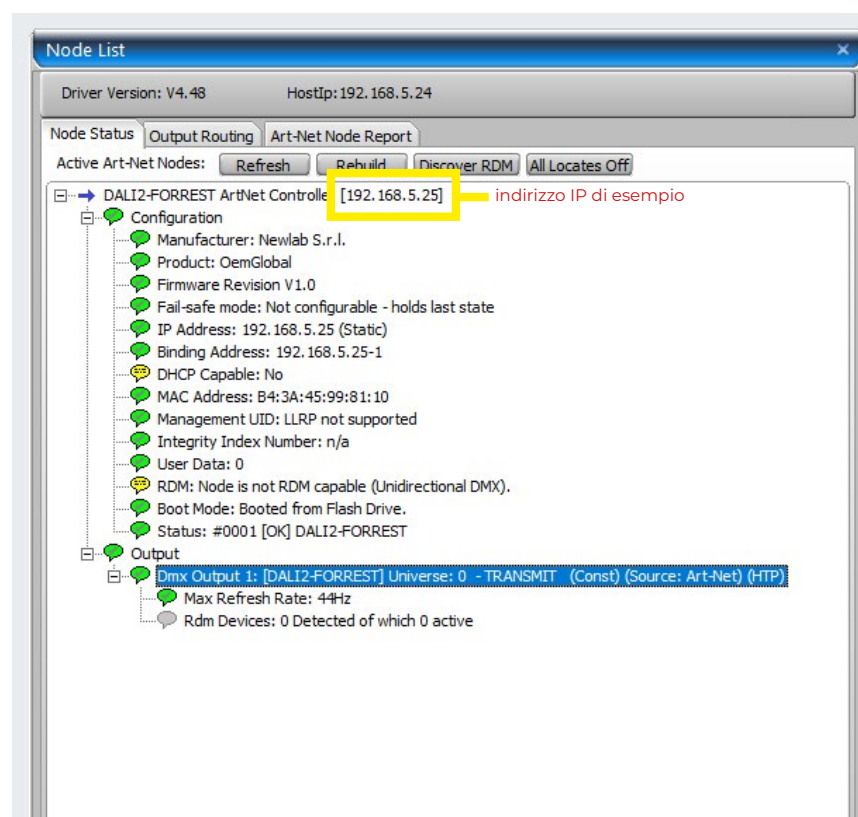
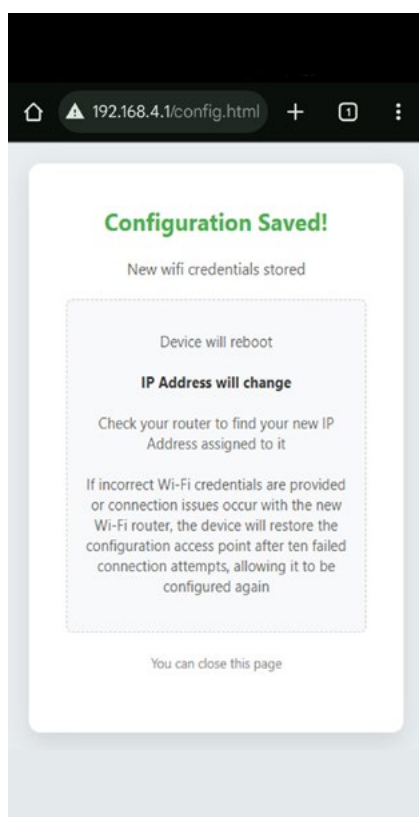
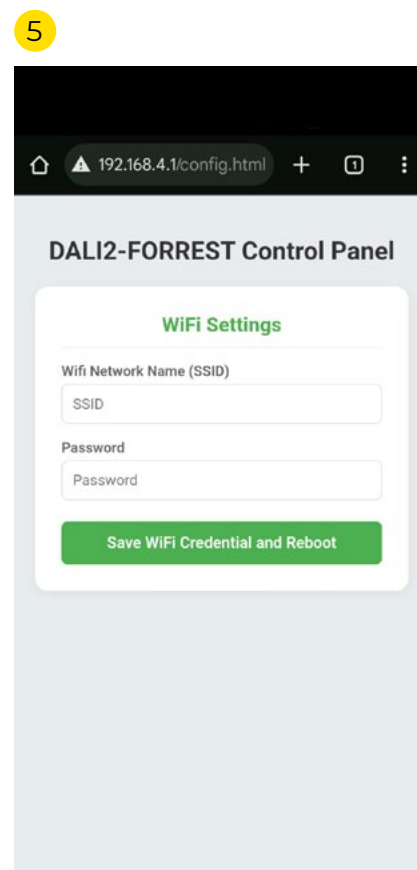
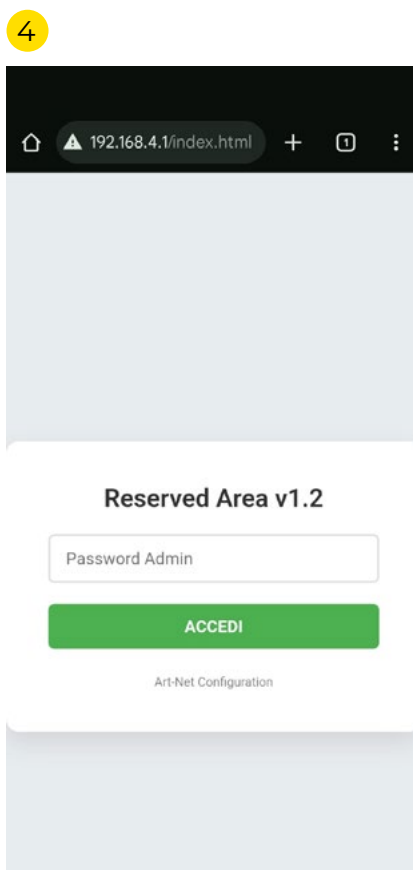
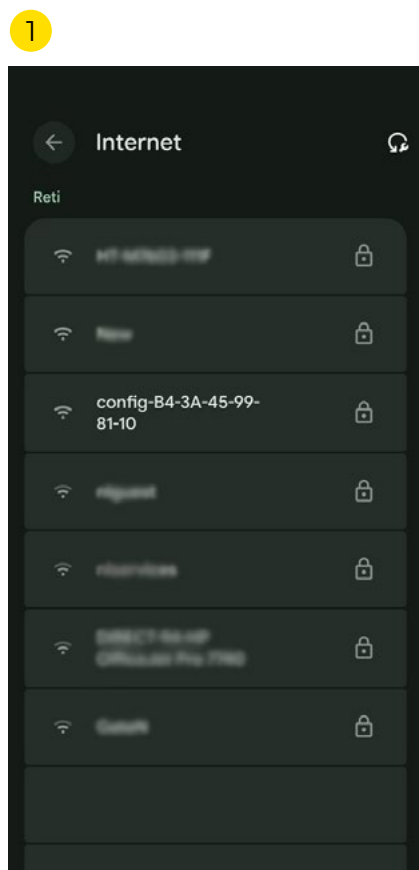


FIG. 12 - Artnet mode connection

7

7



Firmware update

ARTNET mode (from Firmware version 2.40)

1. Go to the site <https://forrest.newlablight.com/ota/latest.html>

2. Download the two files shown in the adjacent figure;

3. Connect to the IP address of the device to be updated <http://x.x.x.x/ota> (replace "x.x.x.x" with the device's address);

4. Enter the administrator password (default **admin123**);

5. Select the File Storage just downloaded;

6. Select the File Firmware just downloaded;

7. Start OTA and wait a few seconds for the update to complete.

8. Verify that the operation was successful by checking the File Storage **8a** and File Firmware versions **8b**.

2

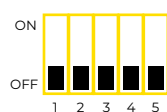
Download Files

[Scarica L865_2040.bin](#)
[Scarica L865_STORAGE_1002.bin](#)


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OEMCODE 0x2EDB
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Wiring of the physical button in the event of faults

Dip switch settings:



To enable this control/operating mode, you must set the DIP switches as indicated above.

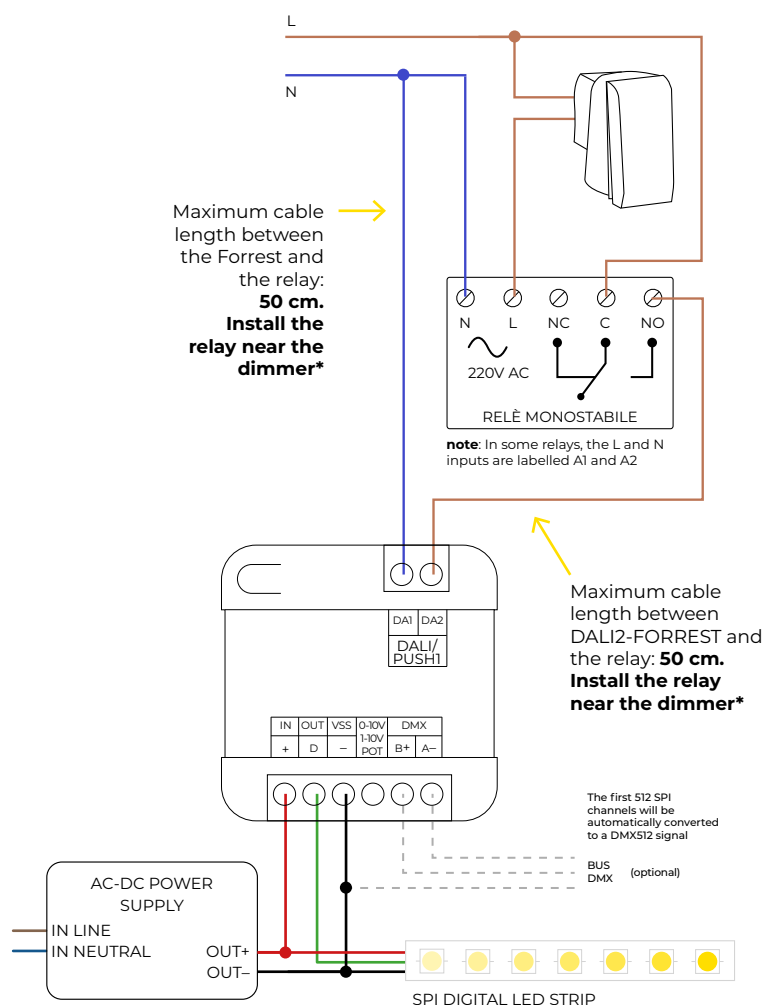


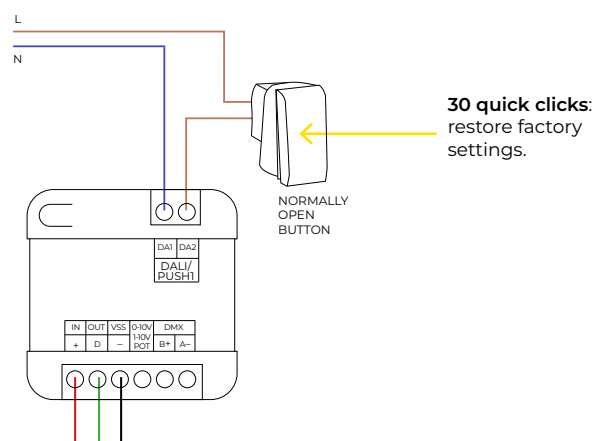
FIG. 13 - connection of the physical button in the event of a malfunction

Device Configuration

Resetting the device and restoring factory settings

To restore the **factory settings**, press the button 30 times quickly.

The device will restart automatically once the process is complete.



APP FORREST

App Installation and Setup

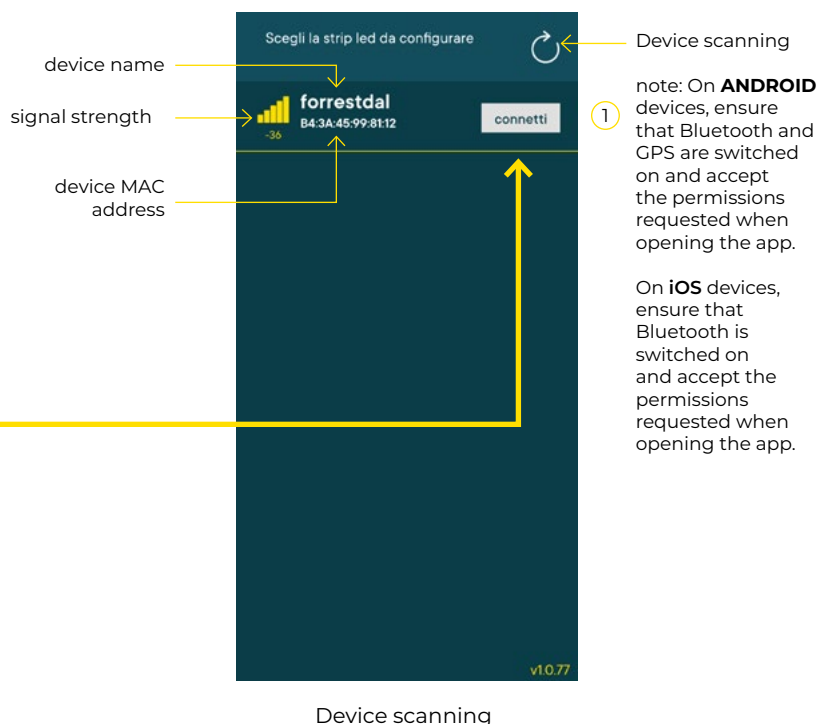
Use the QR codes to install the **Forrest app** on your Android or iOS device.



When launched, the app searches for all nearby Forrest devices that are switched on. Device control is **point-to-point**.

Note: The Bluetooth signal range is generally a few metres indoors, and roughly double that in open spaces.

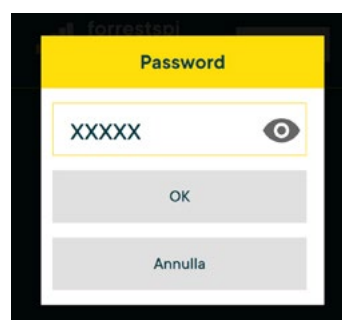
- By clicking “**connect**” (1), the app will connect to the device, which will request a security password: **the default password is 01234**.



Device scanning

If you have previously changed your password, please enter the correct one.

Once you have entered your password, press “**OK**” (3) to access the device’s **main menu**, or “**Cancel**” to cancel the connection process.



Login

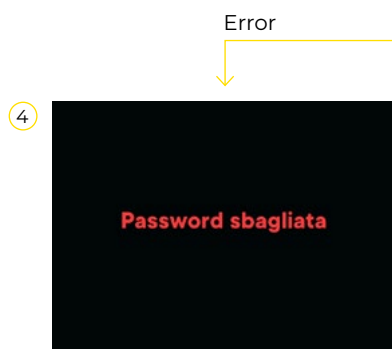
- ② While connecting to the device, a loading screen (2) will appear; once this has finished, provided the procedure was successful, the **main menu** (3) will appear.

- ④ In the event of an **error**, a message corresponding to the error will be displayed (4) (e.g. incorrect password, failed connection attempt, etc.).

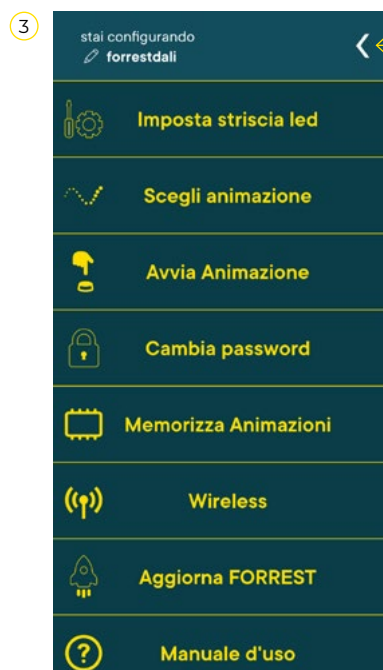
nb: When a user is connected to the device, it will no longer be visible to other users during the scanning process via the app. To become visible again during scanning, you must disconnect.



Waiting for connection



Report an error



Main menu

APP FORREST

Setting up the LED strip

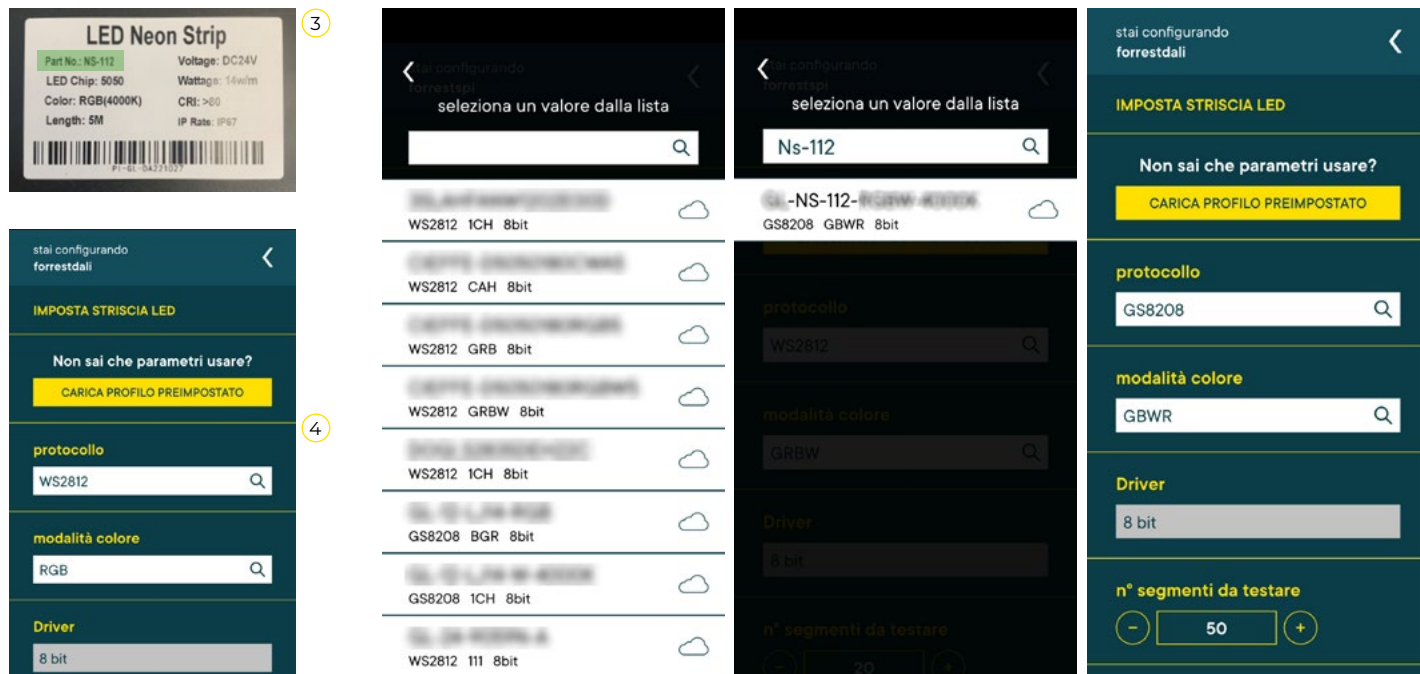
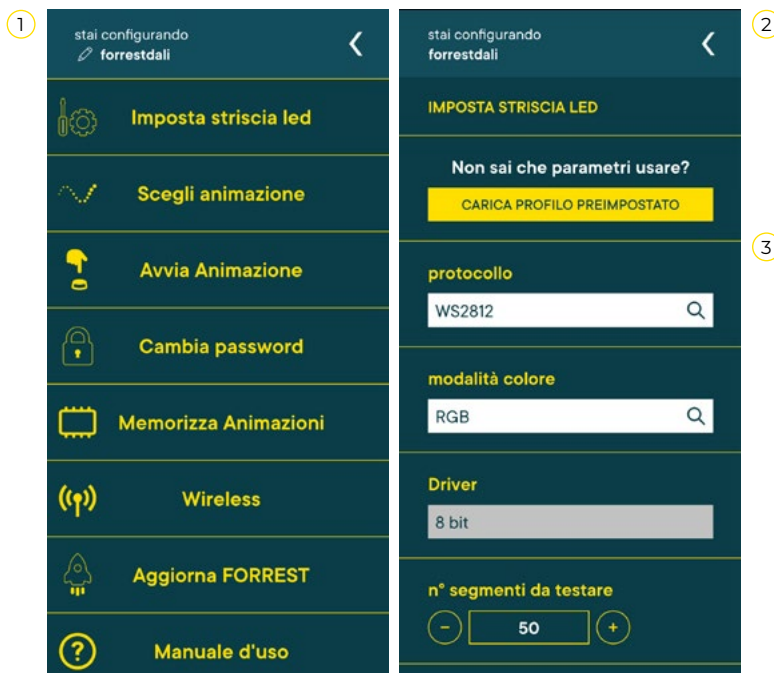
In order to properly control LED strips (single-channel, dynamic white, or colored), the dimmer must know **4 parameters**:

- 1) The pixel-to-pixel protocol used (WS2811, WS2812, WS2814, GS8208).
- 2) The color mode (e.g., 1CH, RGB, GBR, BRG, etc.).
- 3) Driver
- 4) The number of segments to control.

- ① These parameters must be set via the app using the “**Set LED Strip**” function (1).
- ② The default settings will appear on the next screen (2).

Simplified Procedure

- ③ If you know the strip's **part number** (3), settings such as the **protocol** and **color mode** will be set automatically by selecting a value from the “**Preset Profiles**” list (4).
- ④



Select a preset value from the list

The text field and the magnifying glass are used to filter the selection data

Newlab constantly updates its list of preset profiles with the part numbers of LED strips that have been verified to be 100% compatible with the Forrest dimmer.

- ① Select the number of segments using the (1)
- ② – and + buttons, then press “**Apply and Test**” (2) to run test color cycles on the strip; the configuration is correct when the first and last segments of your LED strip flash and the color sequence matches the one you selected.

Example: if you choose the BGR configuration, you will first see the color BLUE (B) flash, then the color GREEN (G), and finally the color RED (R).



Adjust the number of segments until the ends of the strip light up correctly, as shown in the example:

Only one end lights up. The number of segments exceeds the number shown on the strip. The value must be decreased.	Light up one end and a segment in the middle of the strip. The number of segments is fewer than those on the strip. The value must be increased.	Highlight one end and a segment at the end of the strip. The number of segments is fewer than those on the strip. The value must be increased.	Both ends of the strip light up. The value is correct.
---	---	---	---

Manual procedure

If you do not know the strip's part number or do not have the technical specifications, you can identify the correct parameters using the **test procedure**.

Example of a typical procedure:

- 1) Set the WS2811 protocol.
- 2) Set a color mode compatible with the strip (e.g., for a colored strip, try setting the RGB mode).
- 3) Press “**Apply and Test**”.
If the beginning of the strip flashes, the protocol has been identified; otherwise, repeat the procedure from step 1, using the value WS2812, WS2814, or GS8208.
- 4) Press the “**Apply and Test**” button again and pay attention to the color sequence displayed: this sequence indicates the correct color mode.
Example: if the flashing sequence is GREEN (G) RED (R) BLUE (B), the color mode to set is GRB. **(See the tables on the following page for all color options)**
Once you have selected the color mode, adjust the number of segments until both ends of the LED strip flash (see the previous step).

note: Entering incorrect settings will not damage the strip or the dimmer!

Color mode

SINGLE-CHANNEL

SINGLE-CHANNEL PROFILES	
1CH	Standard profile
111	Hardware fade disabled / high compatibility

DYNAMIC WHITE

DYNAMIC WHITE PROFILES	POWER-UP SEQUENCE
NHC	Channel disabled, warm white, cool white
NCH	Channel disabled, cool white, warm white
CAH	Cool white, amber, warm white
HCN	Warm white, cool white, channel disabled
CHN	Cool white, warm white, channel disabled
HNC	Warm white, channel disabled, cool white
CNH	Cool white, channel disabled, warm white

N = Channel disabled (not used)
H = Warm white (hot)
C = Cool white (cold)
A = Amber

RGB

RGB PROFILES	POWER-UP SEQUENCE
RGB	Red, Green, Blue
RBC	Red, Blue, Green
GRB	Green, Red, Blue
GBR	Green, Blue, Red
BGR	Blue, Green, Red
BRG	Blue, Red, Green

R = Red
G = Green
B = Blue

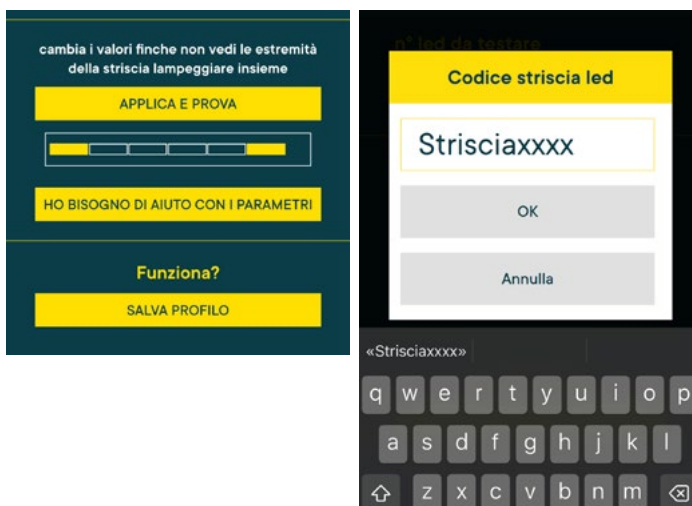
RGBW

RGBW PROFILES	POWER-UP SEQUENCE
RGBW	Red, Green, Blue, White
GBWR	Green, Blue, White, Red
BWRG	Blue, White, Red, Green
WRGB	White, Red, Green, Blue
GRBW	Green, Red, Blue, White

R = Red
G = Green
B = Blue
W = White

Save LED strip profile

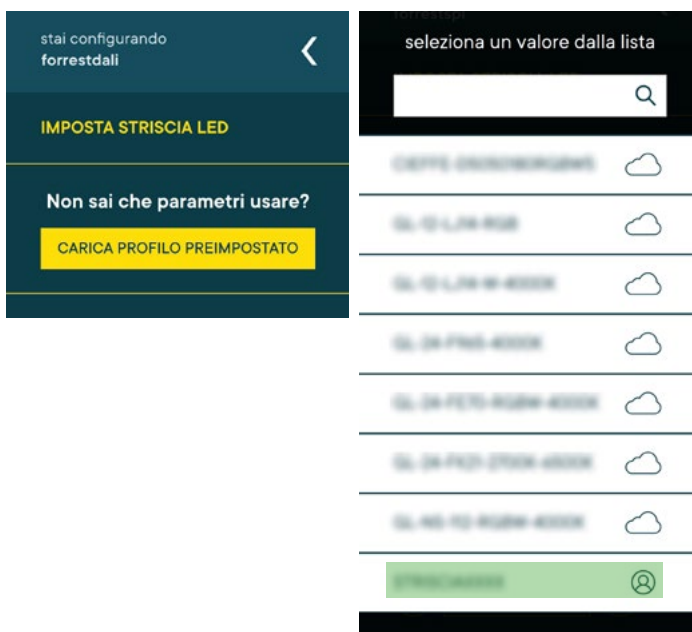
To quickly configure other Forrest devices connected to the same type of LED strip, save and rename the profile you just configured by clicking the “**Save Profile**” button.



Loading LED strip user profiles

- ① **Saved user profiles** are stored alongside the preset profiles from Newlab.

To **delete** a user profile, press and hold the profile button for a few seconds.



APP FORREST

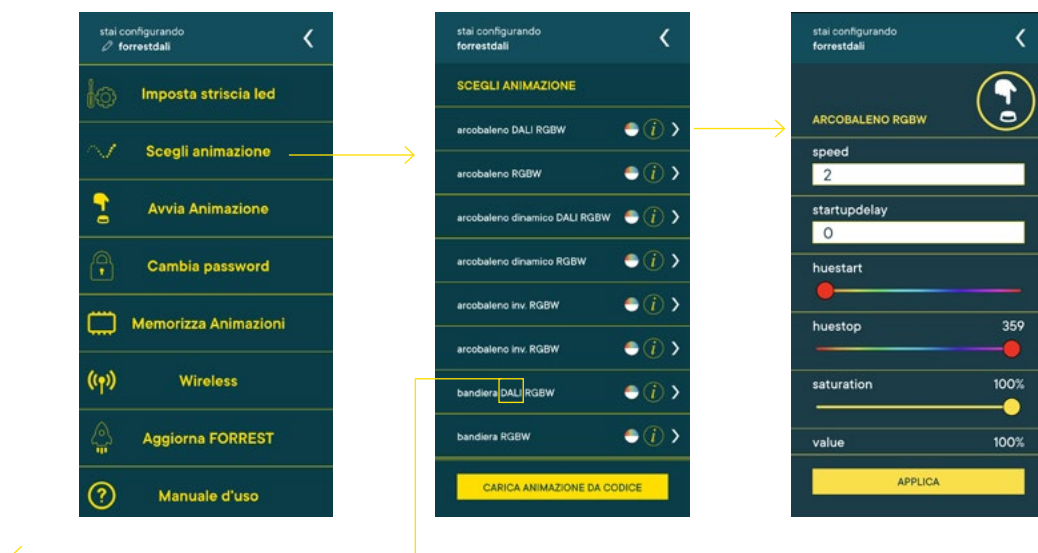
Animation selection

The DALI2-FORREST dimmer comes with a preset animation called “*left-right*.”

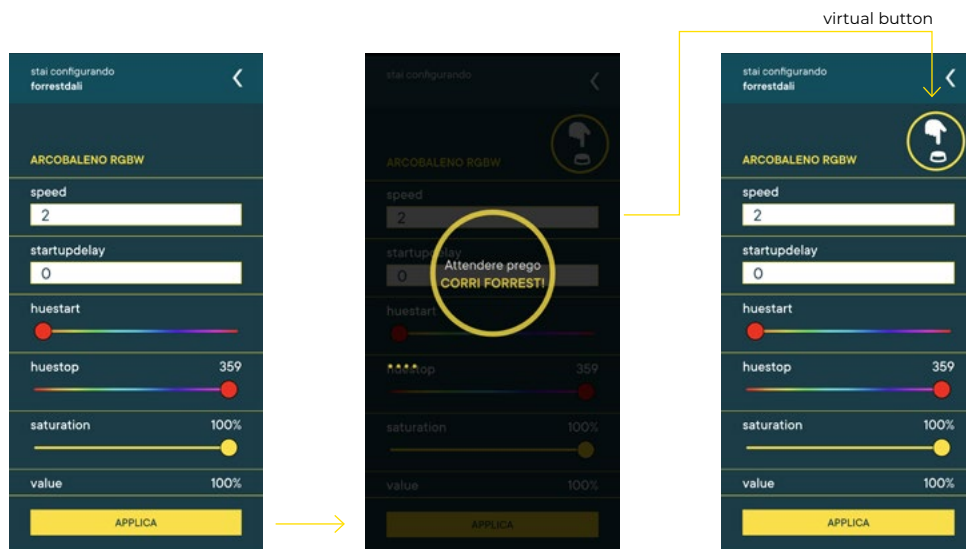
Using the FORREST APP, you can download **additional animations**, filtered by strip type, from the Newlab Cloud, which is constantly updated.

note: The DALI2-FORREST dimmer is compatible with all legacy animations from the FORREST-SPI product that use the push-button input. **To use the DALI2, 0-10 POT, Phase Cut, or Switch inputs, you must select the new scenes where the “DALI” option appears.**

The scenes are identical to the legacy ones.



Once you have selected the desired parameters, click **APPLY** to load the show into the dimmer and view a **preview of the animation** using the “virtual button” function.



APP FORREST

Information about the animation

The animation selection screen displays:

- ① show name
- ② color mode
- ③ *i*: details for each individual show.



Tapping the “*i*” opens the page describing the show’s parameters.



↓

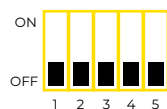
To view the complete list of available shows, visit the “Shows” section on sitoforrest.newlablight.com



APP FORREST

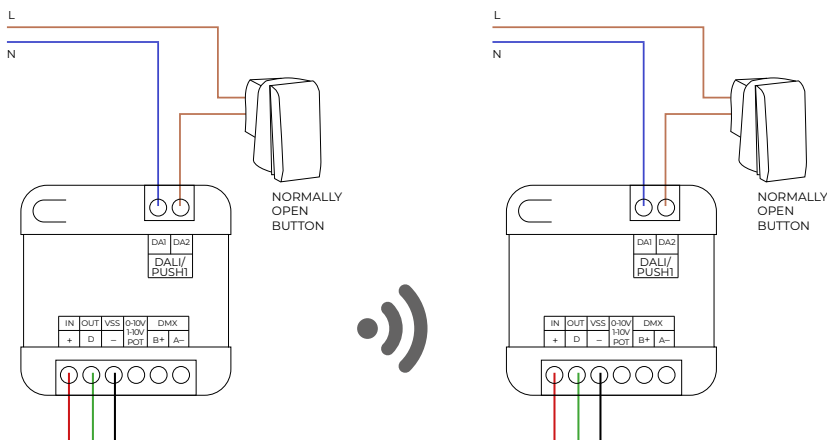
WIRELESS PUSH mode

Dip switch settings:



To enable this control/operating mode, you must set the DIP switches as indicated above.

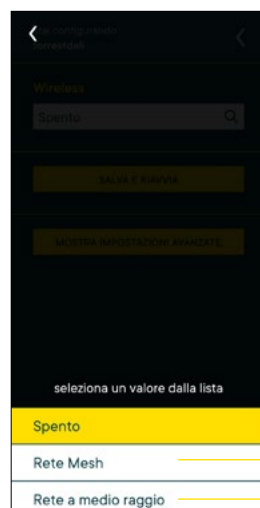
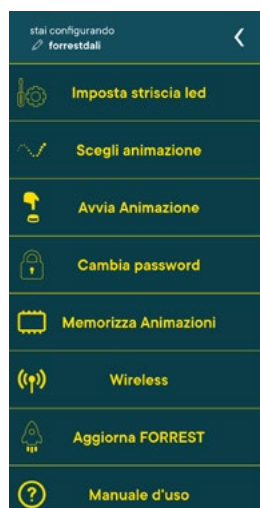
Using the diagram shown in **FIG. 1**, the PUSH WIRELESS mode allows multiple DALI2-FORREST devices to be connected together for use as remote buttons. Pressing a button on any of the DALI2-FORREST devices connected to the same network will trigger a broadcast signal to all other devices.



By default, the WIRELESS mode is always disabled. Two proprietary networks are available (Mesh Network / Medium-range Network):

- use the **Mesh Network** when devices are spread across multiple levels or separated by thick walls;
- use the **Medium-range Network** in open spaces.

When WIRELESS mode is enabled, the device restarts automatically and the app disconnects. You will need to reconnect.



APP FORREST

Advanced settings for WIRELESS PUSH mode

Button

By default, when WIRELESS mode is enabled, the button functions as a secondary button ("Button 2"). This is used in the "Corridor" scene to control the starting point of the animation. To change the starting point of the animation, set the "Button" parameter to "Button 1".

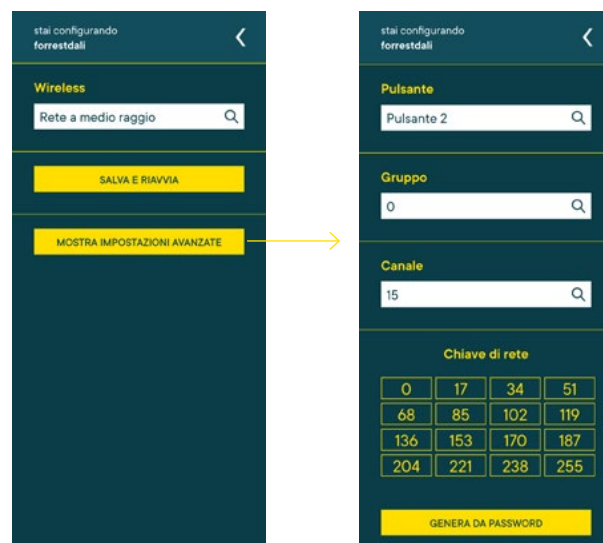
Group

The Group parameter allows you to group multiple DALI2-FORREST devices within your system.

The Group is always identified by a number.

Network parameters

When wireless mode (Mesh Network / Medium-range Network) is enabled, the default network keys and other connection parameters are used automatically. These allow you to isolate/secure communication and prevent interference with other DALI2-FORREST devices in other systems (e.g. your neighbour's system). It is always recommended to change only the default network keys using the "Generate from password" function.



Startup Delay

Use the "Startup Delay" parameter to stagger the animations

To achieve an effect like the one shown in the image, you will need 3 DALI2-FORREST devices, each connected to its own strip and set to WIRELESS mode.

Set the startup delay values as shown in the figure.

In this case, only one of the devices should have the button connected.



Forrest Left Side
startup delay: **1s**

Forrest Central
startup delay: **0s**

Forrest Right Side
startup delay: **3s**

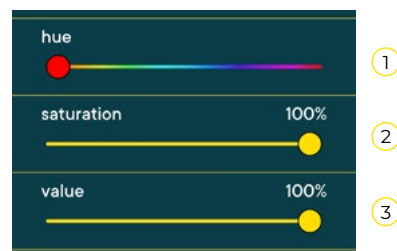
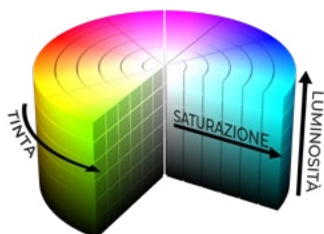


To check whether the selected show supports the "Startup Delay" parameter, refer to the show's specifications in the information (i) section on the animation selection screen (page 19 of the manual).

Parameter Configuration

Color (for color profiles only)

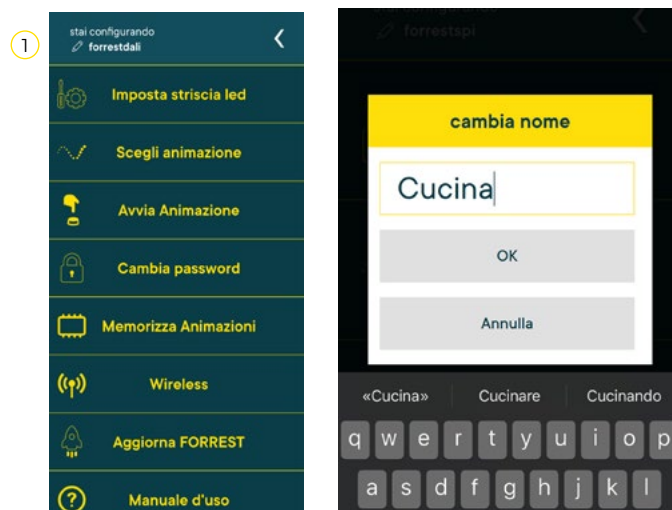
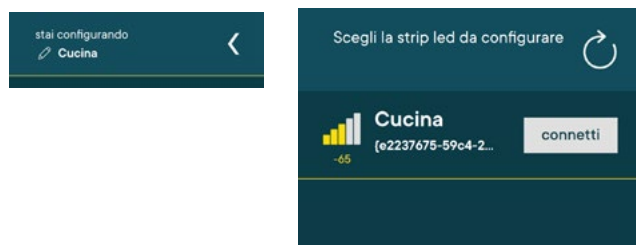
- ① ② ③ The **Color** of the LED strip can be changed by adjusting the hue (1), saturation (2), and brightness (3) sliders, then pressing the “Apply and Test” button. The sliders move within the HSV color space as shown in the figure.



Rename the device

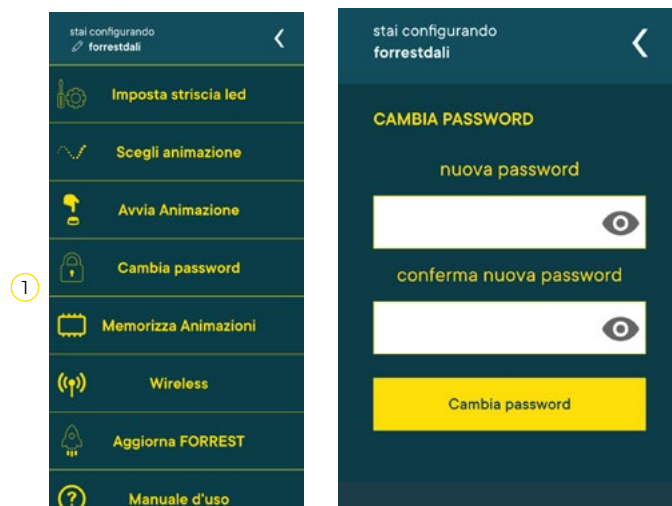
- ① To **rename** the device, tap the pencil icon (1) in the main menu, enter the new name and tap “OK”.

The new name will appear on all screens relating to that device.



Change your device password

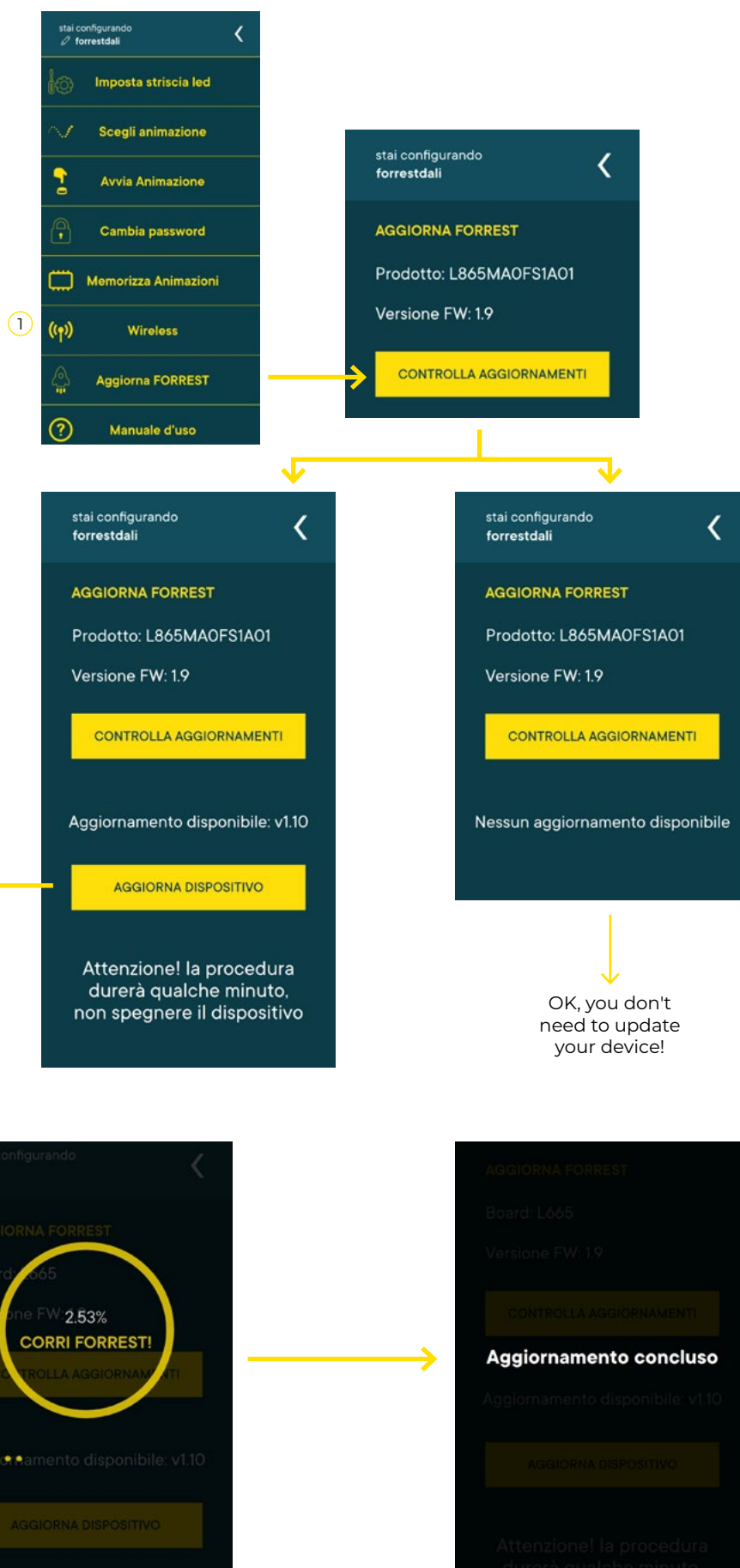
- ① To **change the device password**, press the “Change Striscia Password” button (1), enter the password, confirm it by entering it again, and press the “Change password” button.



Parameter configuration

Device update

To **update** the device, press the “Update FORREST” button (1), then “Check for Updates” (2) and finally “Update Device” (3) if updates are available.

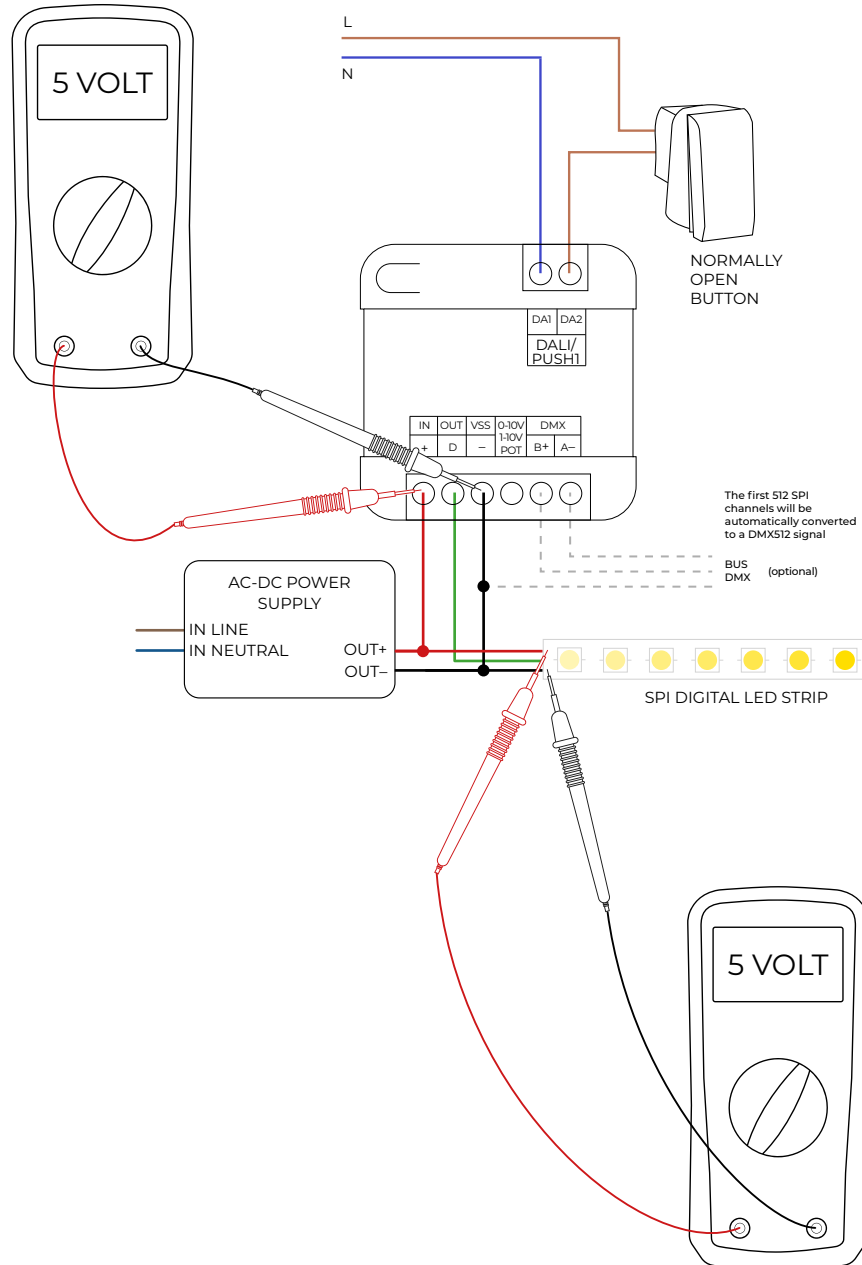


Warning!

Do not press the button or switch off the power during operation: this could cause irreparable damage to the device.

Check for power supply issues with 5-volt LED strips

Given the high current rating of the 5-volt strips, check that the voltage at the In+ and VSS- terminals of the DALI2-FORREST device and the voltage across the strip is **indeed at least 5 volts**.



Wiring for using hardware synchronisation with LED strips

Hardware synchronisation of LED strips allows you to create complex patterns and trigger cascading animations using a single DALI2-Forrest dimmer. Simply tap into the data signal (usually marked 'D' on the LED strip) and run a cable to the start of a new LED strip.

Follow the LED strip manufacturer's instructions to power the strip correctly. (E.g.: "replicate the power supply every 5 metres").

The hardware split operation can be performed multiple times on the same LED strip or on different LED strips.

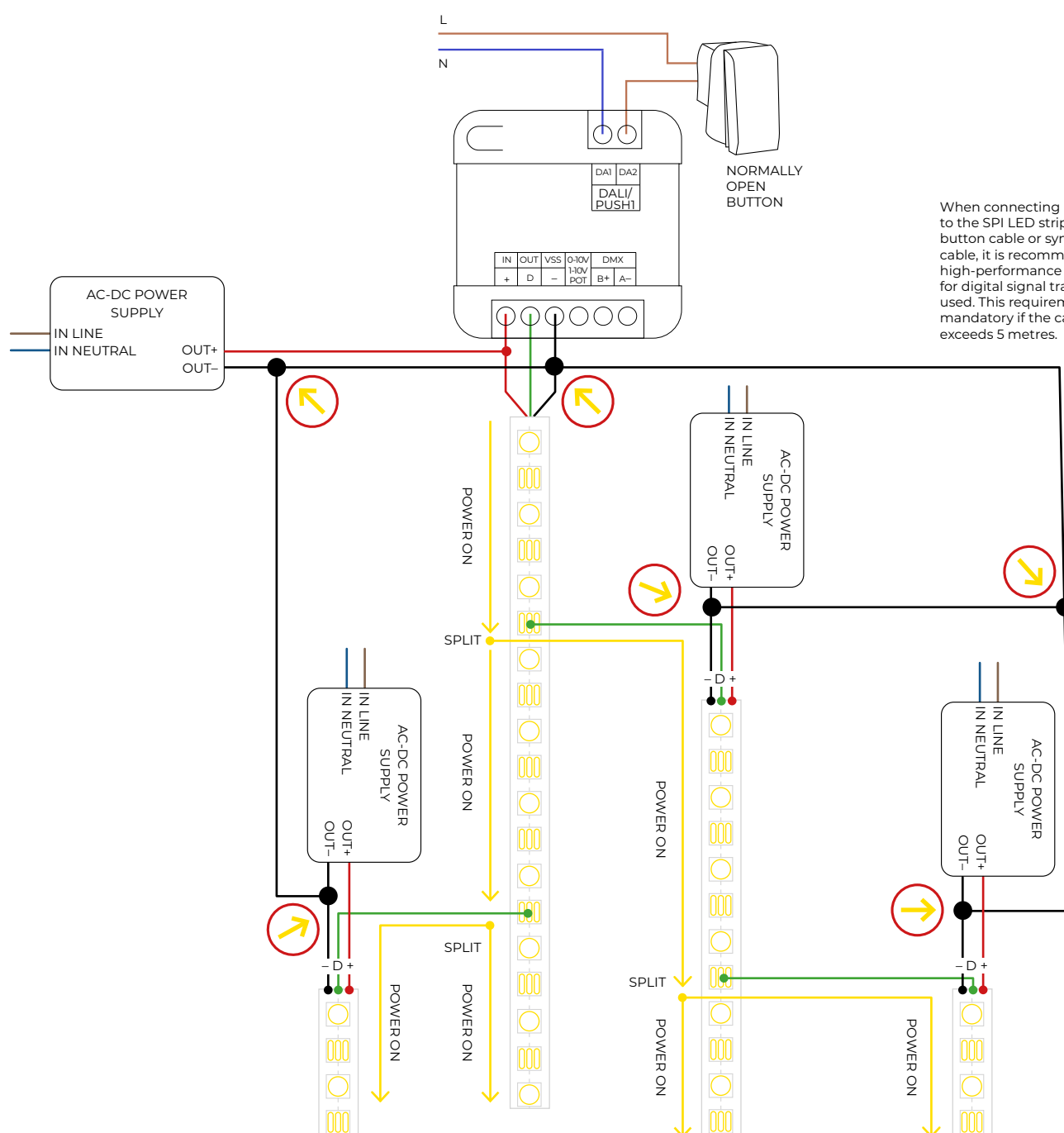
NOTE: with this type of wiring, the phase-shifted switching effect can no longer be changed unless the strips are wired differently. The “start-up delay” parameter (available in PUSH WIRELESS mode) cannot be used.

If using multiple power supplies, remember to connect all negative terminals together to align the grounds.



**PLEASE ENSURE THAT ALL
NEGATIVE TERMINALS OF
THE POWER SUPPLIES
ARE CONNECTED TO THE
COMMON TERMINAL!**

Failure to connect the device properly could cause irreversible damage to the dimmers or LED strips, even if they appear to be working correctly at first.



When connecting pin D (green) to the SPI LED strip, or to the button cable or synchronisation cable, it is recommended that high-performance cables designed for digital signal transmission be used. This requirement becomes mandatory if the cable length exceeds 5 metres.

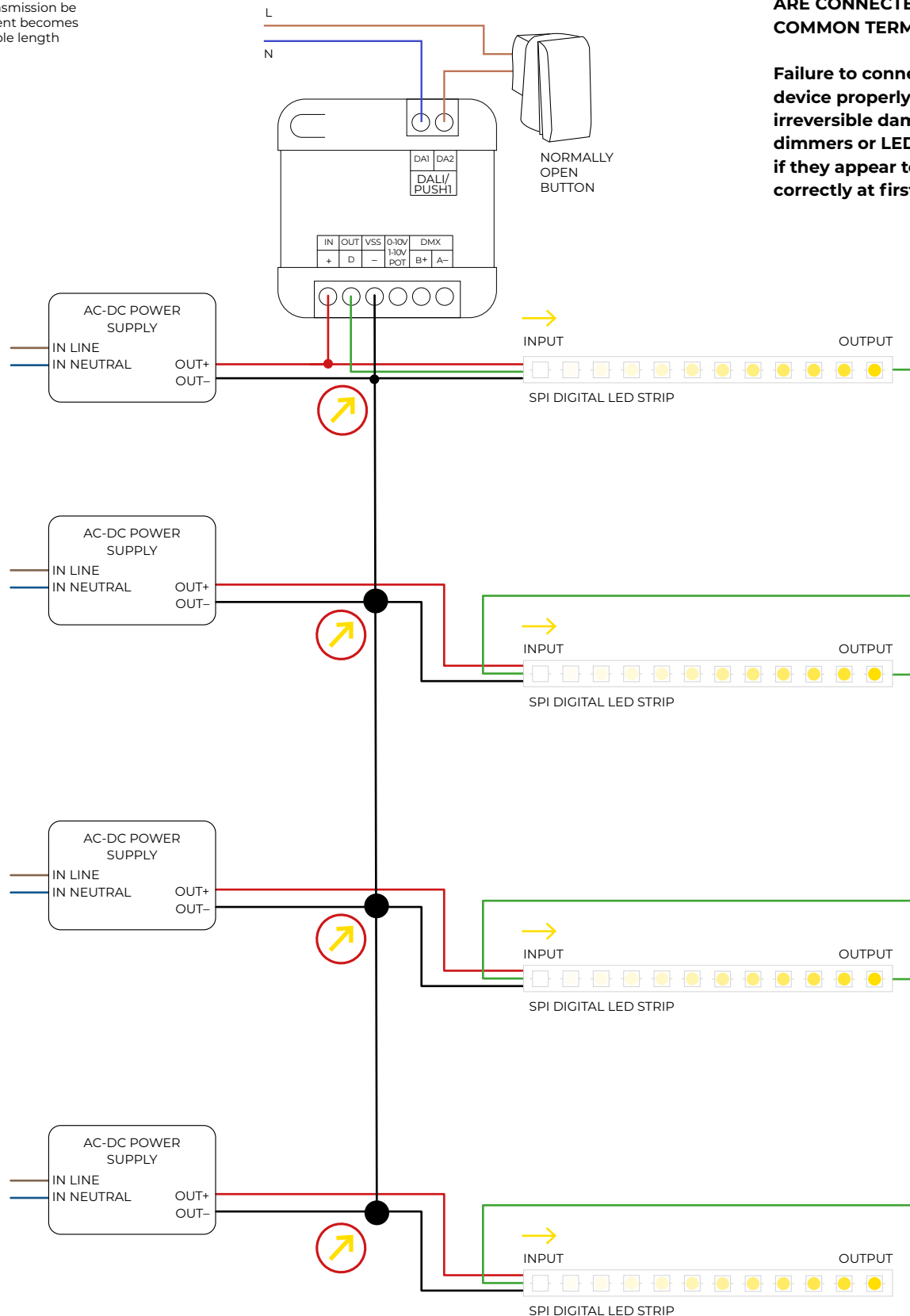
DALI2-Forrest wiring with multiple sections of the same type of strip

When connecting pin D (green) to the SPI LED strip, or to the button cable or synchronisation cable, it is recommended that high-performance cables designed for digital signal transmission be used. This requirement becomes mandatory if the cable length exceeds 5 metres.



PLEASE ENSURE THAT ALL NEGATIVE TERMINALS OF THE POWER SUPPLIES ARE CONNECTED TO THE COMMON TERMINAL!

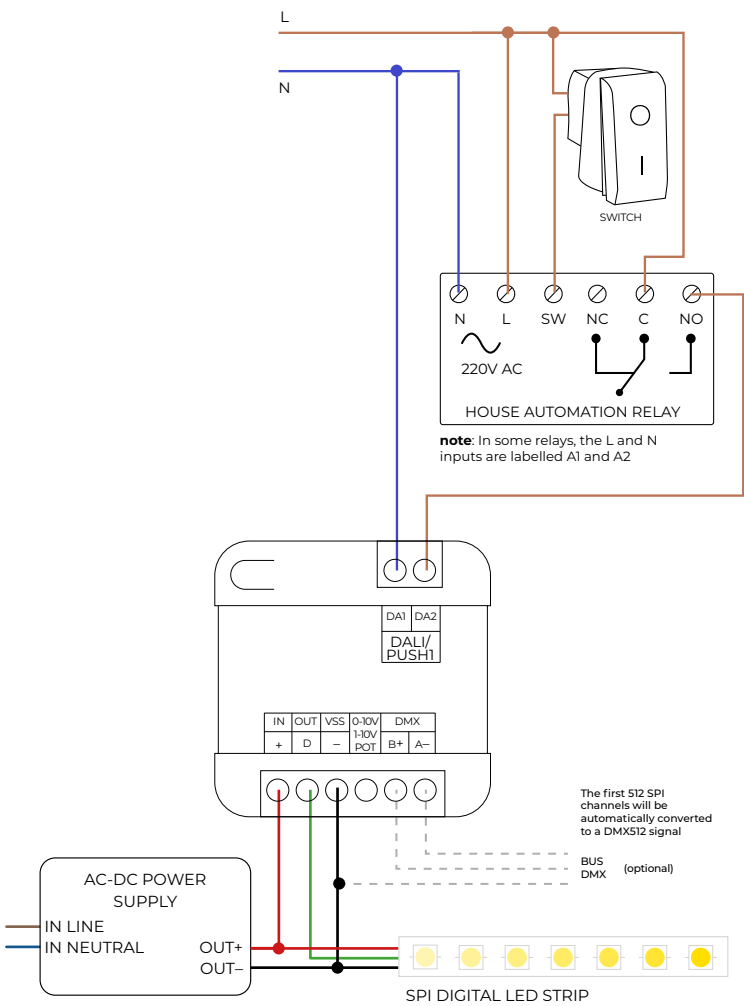
Failure to connect the device properly could cause irreversible damage to the dimmers or LED strips, even if they appear to be working correctly at first.



Wiring with home automation relays with dry contacts*

* Valid only for the SWITCH option

When connecting pin D (green) to the SPI LED strip, or when connecting the relay cable or synchronisation cable, it is recommended that high-performance cables designed for digital signal transmission be used. This requirement becomes mandatory if the cable length exceeds 5 metres.



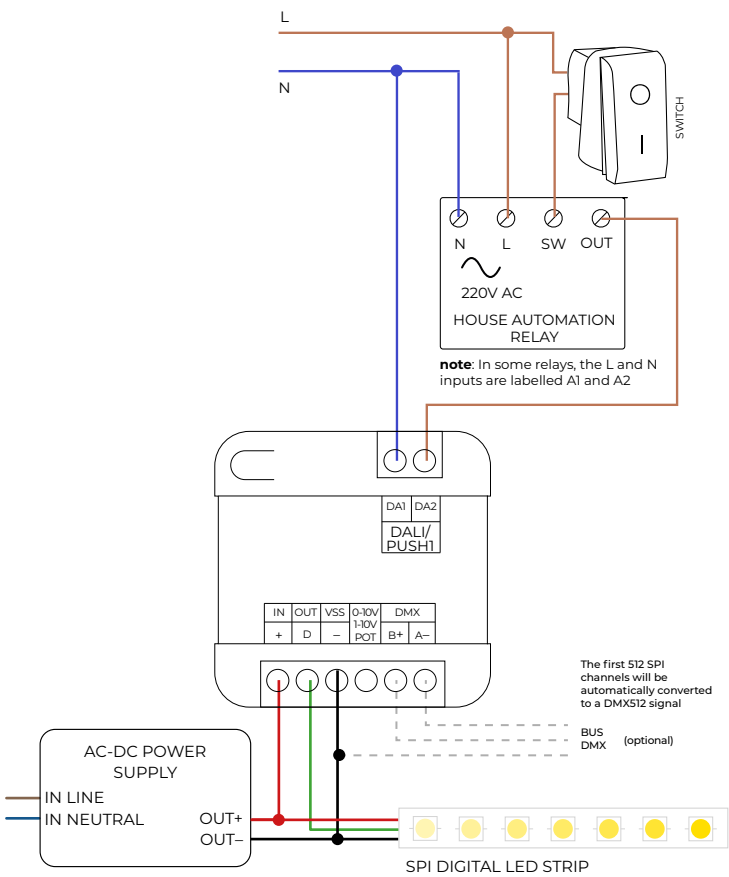
Compatibility list – home automation relays with dry contacts

BRAND	DEVICE
SHELLY	1 Gen3
SHELLY	PLUS 1
SHELLY	Pro 1

Wiring with home automation relays (220V output)*

* Valid only for the SWITCH option

When connecting pin D (green) to the SPI LED strip, or when connecting the relay cable or synchronisation cable, it is recommended that high-performance cables designed for digital signal transmission be used. This requirement becomes mandatory if the cable length exceeds 5 metres.



Compatibility list – monostable relay

BRAND	DEVICE
FINDER	40.52.8.230.0000 (relay)
FINDER	95.65 (relay terminal)

Compatibility list – home automation relays with 220V output

BRAND	DEVICE
NEWLAB	WIFI-IRELE
NEWLAB	DALI-IRELE
VIMAR	03981
VIMAR	01471
VIMAR	01477
VIMAR	01470.1
BTICINO	3584C
BTICINO	3586C
BTICINO	FC80RC
AVE	441074-W
AVE	442074-W

BRAND	DEVICE
AVE	445074-W
AVE	449074-W
SOMFY IZYMO IO	1822649
SONOFF	MINIR4
SONOFF	MINIR2
SONOFF	Basic R2
SHELLY	1PM Gen3
SHELLY	1 Mini Gen3
SHELLY	1PM Mini Gen3
SHELLY	PLUS 11PM
SHELLY	Pro 1 PM

Saving animations*

* Valid only for
PUSH mode

1) Select an animation from the app and set its parameters (see page 18).

2) Once the animation is playing as desired, go to the “Save Animations” menu and choose which slot to save the current animation to.

Repeat the process from step 1, saving the new animation to a different slot, until all slots are full.

note: the “Change Show” function works by saving at least two different scenes.

To change the scene, simply triple-click quickly and the DALI2-FORREST will cycle through the shows stored in the slots.

You don't need to use all 4 slots for everything to work.

E.g.:

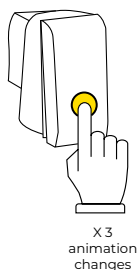
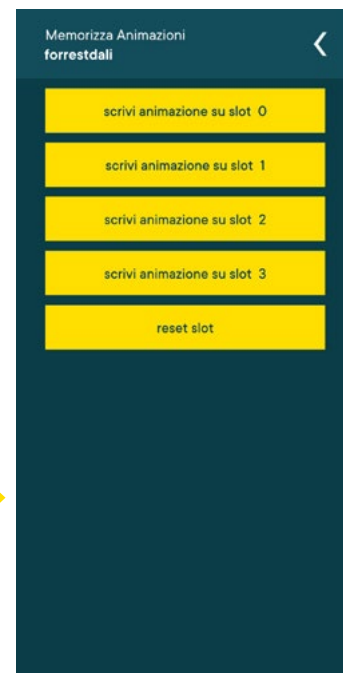
Slot 0 → “left right”

Slot 1 → “lava lamp”

Slot 2 → “comet”

Each triple-click moves to the next animation (e.g. from “left right” to “lava lamp” to “comet” to “left right” and so on).

note: changing the animation takes a few seconds for the device to restart and for the new scene to load; if the user is logged into the app, they will be logged out.



Compatibility list

0-10/1-10V

BRAND	DEVICE
OSRAM	AA589970035
JUNG	F-6661-51165010
ACTEC	SDF30
LUTRON	DVSTV-XX DVSCSTV-XX DVSTV-453PH-VH DVSTV-453PH-VH-C
TCI	REG1-10V
LEF	VM7780M DAE0503
OSRAM	AA589970035

Compatibility list

Monostable relay

BRAND	DEVICE	CONTACT MAP
FINDER	40.62.8.230.000 (relè) 40.52.8.230.000 (relè)	COM = 11 / 21 NO = 14 / 24 A1 = L interrotta A2 = N
FINDER	95.65 (porta relè)	COM = 11 / 21 NO = 14 / 24 A1 = L interrotta A2 = N
FINDER	26.01.8.230.000 (relè)	COM = 2 NO = 1 A1 = L interrotta A2 = N

Compatibility list

Phase Cut

BRAND	DEVICE
BTICINO	K4411C 4411C L4411C N4411C NT4411C L4411N* N4411N* NT4411N*
VIMAR	ARKÉ 19595 PLANA 14135* PLANA 14135.1 PLANA 14136.1 PLANA 14139 PLANA 14595 EIKON 20595.0 LINEA 30805
NEWLAB	PUSH-230V-AI DALI-230V DALI-230V-500W DALI-230V-1KW
TECNEL	TE7636 TE7637
FINDER	TYPE 15,91
RELCO	RTMOMEGA A RN 0865*
DALCNET	DAC-230-1CH-DALI DAC230-1CH
ARENALUCI	LC1019ZGSAC-HP
EKINEX	EK-GD1-TP-4-HV EK-GD1-TP-4-HV-N EK-GD2-TP-1-HV EK-GD2-1-HV EK-GD2-DL-1-HV EK-GD1-DL-4-HV
SUNRICHER	SR-ZG9101SAC-HP SR-2303SAC-HP
LEF	KEYDIMECOTC
GEWISS	CHORUSMART GEWGWA1221
*(an additional load is required at the output of the phase-cut dimmer)	

FAQ

The shows start randomly without anyone pressing the button

In most cases, this problem is caused by electromagnetic interference at the push-button input.

To resolve it, you can try the following solutions:

1. If possible, shorten the cables connecting the push-button to the DALI2-FORREST, reducing the distance between the push-button and the device.
2. Use a monostable relay mounted near the DALI2-FORREST (see the wiring diagram in the manual "Wiring the physical push-button in the event of interference").

The LED strip or its segments flicker randomly, or light up randomly without running the show

This problem is usually caused by electromagnetic interference between the DALI2-FORREST output and the strip input.

To resolve this, you can try the following solutions:

1. If possible, shorten the cables between the DALI2-FORREST and the strip.
2. Ensure that the cables run alone in the conduit and not alongside other cables.
3. Check that you have set the protocol correctly. Almost all SPI LED strips use the WS2812 protocol. If you encounter problems, try changing the communication protocol to the one specified by the strip manufacturer.

I can't connect to the DALI2-FORREST device via the app

This issue may be due to the distance between your smartphone and the DALI2-FORREST. If moving closer to the DALI2-FORREST does not resolve the problem, it may be a Bluetooth issue with your smartphone. To resolve this, you can try the following solutions:

1. Close the FORREST app, turn off Bluetooth, wait a few seconds, turn Bluetooth back on, and reopen the app.
2. If you are asked for a password, use the default one (01234) or the one you previously set. When there is a connection issue, the app assumes the device is password-protected and asks you to re-enter it.

The Forrest app does not detect devices

This issue is usually caused by missing Bluetooth permissions on your mobile phone. Android and iOS operating systems generally reset permissions after a few weeks of inactivity with the app. To resolve this, you can try the following solutions:

1. Check the permissions for the FORREST app in your phone's settings; Bluetooth and Location permissions must be enabled.
2. Try uninstalling and reinstalling the app to reset the permissions if you are unable to configure them via your smartphone's settings.

The LED strip doesn't light up

Check the wiring and power supply of the strip and the DALI2-FORREST dimmer. If the wiring and power supply are correct but the protocol setting in the LED strip settings is incorrect, consult the FORREST-SPI product video guide (same configuration method): <https://youtu.be/BC9WZyERfJA>

The LED strip stays lit

The protocol setting in the LED strip settings is incorrect. Please refer to the FORREST-SPI product video guide (the configuration procedure is the same):
<https://youtu.be/BC9WZyERfJA>

The colours I set in the app don't match the ones I see on the LED strip

The colour profile setting in the LED strip settings is incorrect. Please refer to the FORREST-SPI product video guide (same configuration method):
<https://youtu.be/BC9WZyERfJA>