Newlab
Electronic Solutions

user guide

dimmer

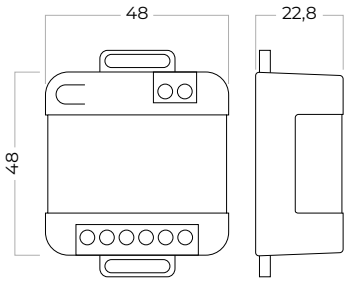
DALI2-CV-M2

update:
3/2026

DALI2-CV-M2

DALI2 input
PWM constant voltage output

48x48x22,8 mm
weight: 35 gr



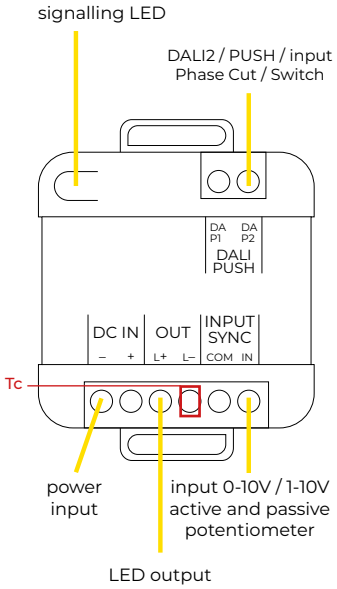
TECHNICAL FEATURES

- Dimmer with isolated Push input, Potentiometer/0-10V/1-10V active and passive, switch, sensor, Phase cut, DALI2 DT6 and DALI2 DT6 high compatibility for voltage current converters
- Master/slave functionality
- Programmable timed switching on
- Menu for minimum dimming change, fade ON-OFF, curve type and frequency setup (flicker free) accessible via the entry button
- **LED indicating correct power supply**
- Power supply and output terminals 0.05÷3 mm² (30÷12 AWG)
- **PWM frequency: 390Hz-3000Hz**
- Protection against: polarity inversion, short circuit, open circuit, spikes voltage
- Power delivered 144W at 12V, 288W at 24V, 576W at 48V
- **UL printed circuit board**

SAFETY WARNINGS

- Storage temperature min: -40 max: 60° C
- Operating temperature min: -20 max: 50° C
- Tc point max: 85° C
- Tc is positioned on the terminal screw corresponding to the Tc indication *(see figure A)*

figure A



The **DALI2-CV-M2** dimmer is a **very low voltage** 12, 24 and 48V DC PWM dimmer suitable for controlling LED strips and PWM dimmable LED loads. The dimmer can be controlled via BUS DALI1 or DALI2, push button control (N/O normally open) at mains voltage or 12-24-48V, analogue signal 0-10V or 1-10V coming from an active actuator (which therefore generates a variable voltage between 0 and 10V) or passive, 47KOhm potentiometer or presence sensor. The operating modes of the DALI2-CV-M2 dimmer can be selected via onboard dip switches. In the event of a change in input type, it is necessary to remove the power supply voltage and restore it.

The dimmer is also equipped with a signaling LED to identify the correct power supply. The DALI2-CV-M2 dimmers must be powered according to the polarity indicated in **FIG. 1** through the DC IN terminals (+ and -). If the power supply polarity is reversed, the device will not suffer any damage.
The connection of the LED load must be made using the OUT terminals (L+ and L-).

CODE	VOLTAGE RANGE	CURRENT	POWER	OUTPUT	INPUT	LOAD TYPE	PART NUMBER
DALI2-CV-M2	8÷53 V DC	12A	576W a 48V 288W a 24V 144W a 12V	1	**DALI2** / 0-10V / 1-10V PUSH / POT / INTERRUTTORE / SENSORE / TAGLIO DI FASE	monochrome	L800MA0FT1A01

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.

Modes of operation
PUSH mode

Dip switch setting:

In order to activate this control/operation mode it is necessary to set the Dip switches as indicated above.

Control via button can be carried out directly using the mains voltage (110÷230VAC) as in **FIG. 1**, or the output voltage of the power supply (8÷53VDC), as in **FIG. 2**.
To install the dimmer in the system, it is preferable to use the diagram shown in **FIG. 1**.
In this configuration the dimmer guarantees isolation from the mains voltage.

The input range between the DA P1 and DA P2 poles is DC: 10÷265V, AC 12÷265VAC 50÷65Hz.

The maximum current absorbed by the PUSH interface is approximately 2mA.
The maximum distance of the dimmer from the button must not exceed 20m; the use of shielded cables is recommended. For cable lengths of more than 20 m or in the presence of several control buttons, the use of a supporting normally open relay is recommended. See diagram on page 12.

The dimmer, in the event of a power failure, saves the state of the output so as to restore the set level when it returns.

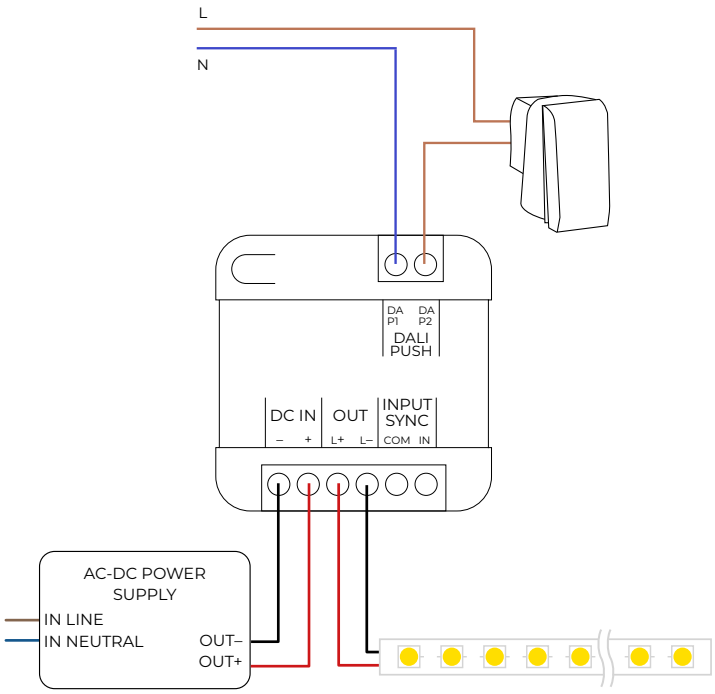


FIG. 1 - mains voltage pulsating connection

PUSH interface operation

Single Click (rapid pressure <1sec)
- Switches the output on or off (ON/OFF).

Double Click (rapid pressure <1sec)
- Set maximum brightness (output = 100%).
Fast maximum light mode.

Long Press (prolonged pressure >1sec)
- If the dimmer is in the OFF state, set the output to the minimum value (default= 1%). Disturbance-free night mode.
- If the dimmer is in the ON state, prolonged pressure allows the output to be dimmed (up/down).

n.b.: check that the input and output connection cables are correctly inserted in the terminal carriage and not under the carriage itself. Incorrect insertion of the cable inside the carriage can lead to overheating or malfunctioning.

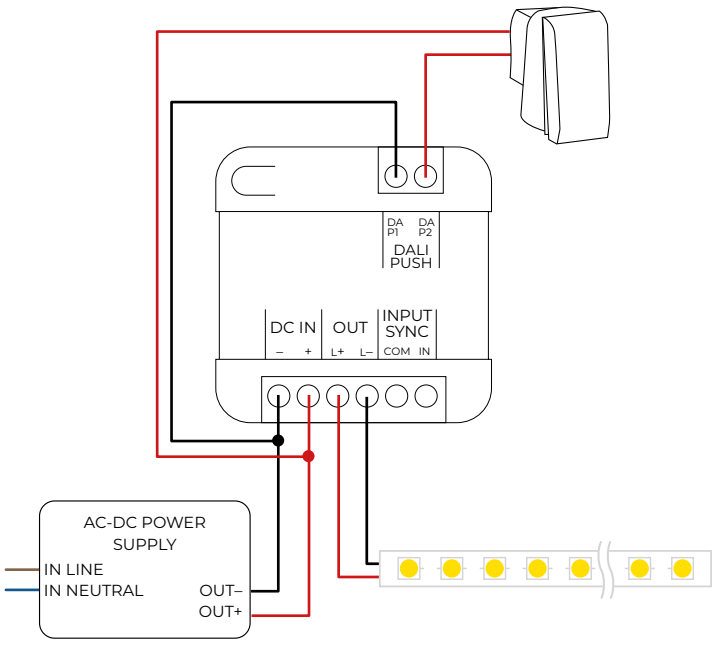
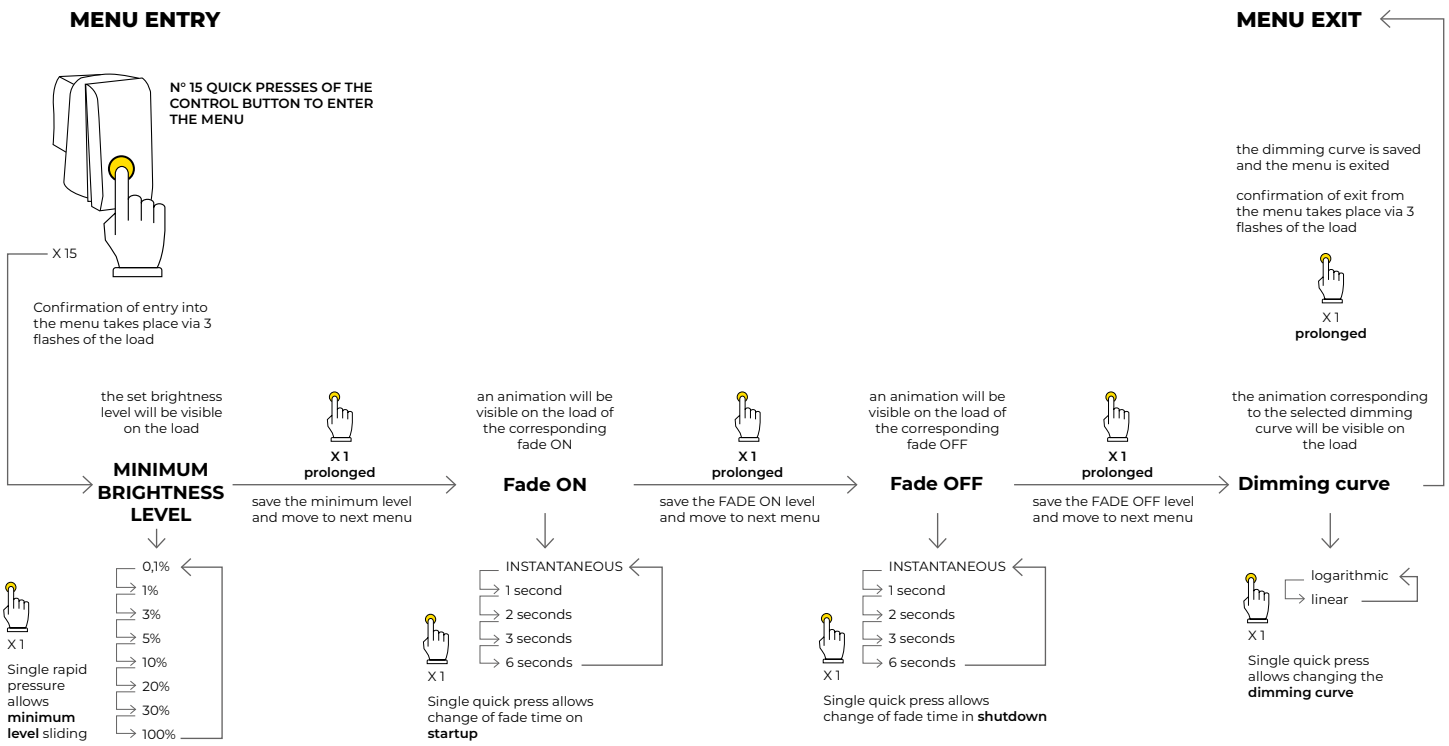


FIG. 2 - pulsating connection with voltage coming from the power supply

Parameter configuration
PUSH mode



The **DALI2-CV-M2** dimmer is equipped with a configuration menu of the operating parameters.
Entry into the configuration menu of the 4 operating parameters occurs with **15 quick presses or more** of the control button.
Confirmation of entry into the menu takes place via three slow flashes of the load.

First parameter: ***Minimum level setup***, useful in the case of indirect light or compliance with the rules on minimum ambient lighting. Minimum levels that can be set: 0.1%, 1%, 3%, 5%, 10%, 20%, 30%,100%.
Switching between the different levels occurs with a quick press of the control button.
A long press saves the minimum level and the menu automatically switches to the second parameter.

Second parameter: ***Fade ON time***, makes the switching on of the load “soft”.
Settable times: INSTANTANEOUS, 1 second, 2 seconds, 3 seconds, 6 seconds.
Switching between the different times occurs with a quick press of the control button.
In this parameter the dimmer shows a cyclic simulation of a Fade ON (0%-100% in the set time). A long press saves the Fade ON time and the menu automatically switches to the third parameter.

Third parameter: ***Fade OFF time***, makes the switching off of the load “soft”.
Settable times: INSTANTANEOUS, 1 second, 2 seconds, 3 seconds, 6 seconds.
Switching between the different times occurs with a quick press of the control button.
In this parameter the dimmer shows a cyclic simulation of a Fade OFF (100%-0% in the set time).
A long press saves the Fade OFF time and the menu moves on to the fourth parameter.

Fourth parameter: ***Curve change*** (logarithmic - linear). It allows each quick pressure to change the curve and simulate it. A long press saves the dimming curve and exits the dimmer from the parameter menu.

The default parameters in this mode are: minimum 0.1%, FADE ON 1 second, FADE OFF 1 second, linear dimming curve.

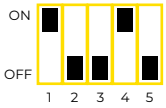
To reset the dimmer to factory settings, double-click to set the load to maximum brightness, then hold for at least 40 seconds. When the button is released, the dimmer will be reset and restart at maximum brightness.

Modes of operation
DALI DT6 mode

Dip switch setting:

High compatibility for voltage current converters
Short-circuit detection: OFF
Open circuit detection: OFF

High compatibility with open circuit detection
Short-circuit detection: OFF
Open circuit detection: ON



Full compliant DALI2
Short-circuit detection: ON
Open circuit detection: ON

In order to activate this control/operation mode it is necessary to set the Dip Switches located on the back of the box and connect the DA P1 and DA P2 inputs to the DALI bus. The dimmer offers 3 different operating modes with DALI2 input:

- The "**High compatibility mode for voltage converters current**" allows the control of resistive and resistive/capacitive loads such as switching voltage/current converters or other loads with small capacities.
  In this mode the short-circuit and open-circuit flags are not reported on the DALI bus.

- The "**High compatibility with open circuit detection**" mode allows the control of resistive and resistive/capacitive loads such as switching voltage/current converters or other loads with small capacities. In this mode the short circuit flag is not reported on the DALI bus.

- The "**Full compliant DALI2**" mode allows solo control of resistive loads. In this mode, the short circuit and open circuit flags are reported on the DALI bus. nb: in case of use with loads with capacity, the dimmer turns off the load once the short-circuit flag has been reported. The open circuit flag may be reported for low power loads with reduced dimming.

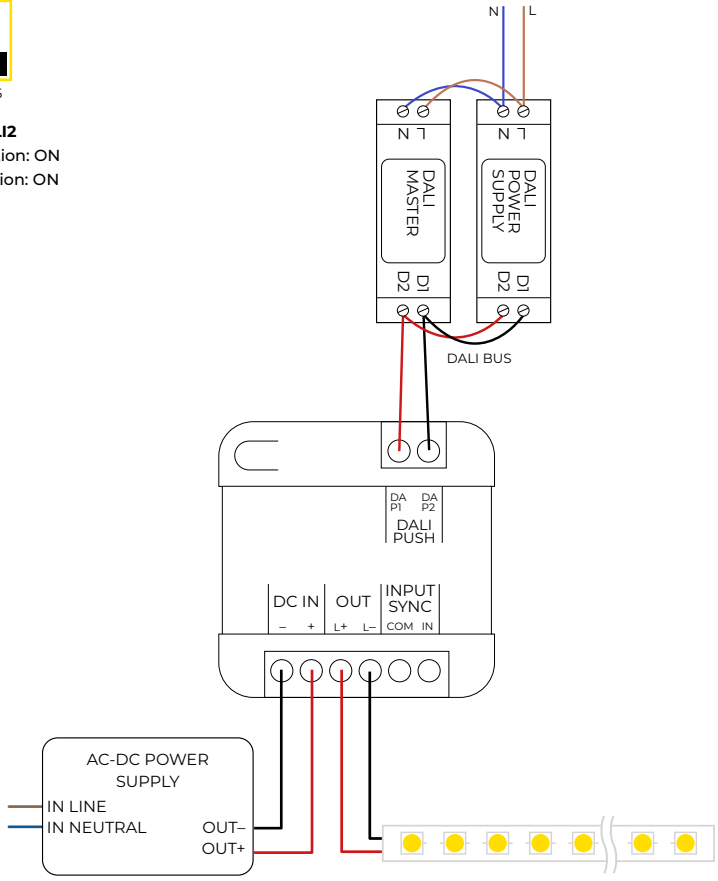


FIG. 3 - DALI connection

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

The max current absorbed by the DALI bus is approximately 2mA.

Reference standards:
- IEC 62386-101 ED2
- IEC 62386-102 ED2
- IEC 62386-207 ED2 (DT6)

Modes of operation
2-pole PHASE CUT mode

Dip switch setting:

In order to activate this control/operation mode it is necessary to set the Dip Switches located on the back of the box and connect an alternating voltage signal (AC voltage range 12÷265Vac 50÷65Hz) interrupted by a phase-cut dimmer.

The control input can operate with phase cut or neutral cut.
The input signal does not require polarization.
The max current absorbed by the PHASE CUTTING interface is approximately 2mA.

The scheme in FIG. 4 represents the connection diagram with dimmer equipped with two output poles for phase cutting.
The connection of the DALI2-CV-M2 must be made as if the dimmer itself were a mains voltage dimmable load.

The interface is able to work with all types of phase cutting:
- TE: Trailing Edge: Descending Phase
- LE: Leading Edge: Ascending Phase
- Hybrid, central, delayed and mixed phase cutting.

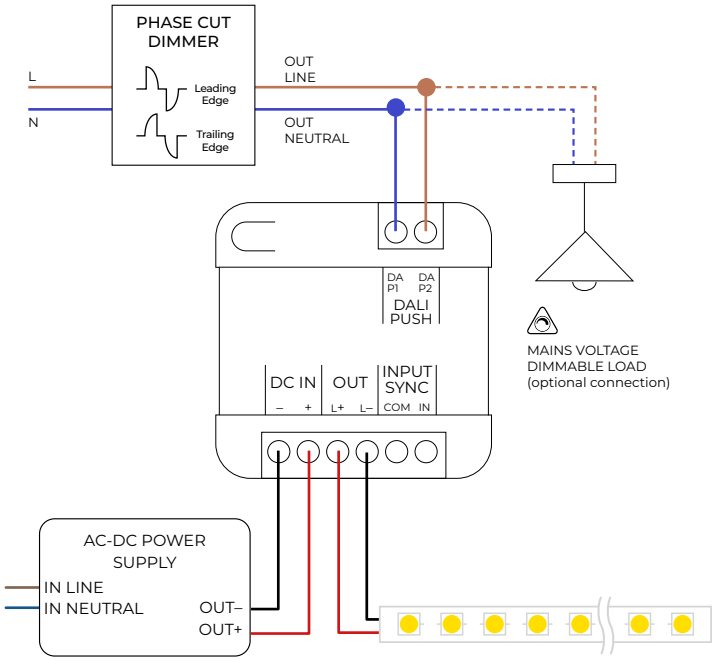


FIG. 4 - 2-pole PHASE CUT connection

Phase-cut dimmers that do not handle a minimum current of 2mA could lead to flashing or flickering of the dimmer output. In the event of flickering or flashing, it may be necessary to increase the output load on the phase-cut dimmer. To increase the load it is possible to use a load resistor and position it at the output of the phase cutting dimmer between terminals DA P1 and DA P2.
Below are some resistance values and related wattage:

Mains voltage 230V
Resistance value 27K minimum resistance power 3W: perceived load of the dimmer phase cutting at full light 2W
Resistance value 10K minimum resistance power 7W: perceived load of the dimmer phase cutting at full light 5.5W
Resistance value 5K minimum resistance power 15W: perceived load of the phase cutting dimmer at full light 10W

Mains voltage 110V
Resistance value 13K minimum power resistance 3W: perceived load of the dimmer phase cut at full light 2W
Resistor value 5K minimum power resistance 7W: perceived load of the dimmer phase cut at full light 5.5W
Resistance value 2.7K minimum power resistance 15W: perceived load of the phase cut dimmer at full light 10W

ATTENTION!
The resistor used as a dummy load may become hot. Be careful not to place it near the dimmer.

For the complete list of verified compatibilities see page 15

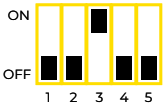
Several DALI2-CV-M2 can be connected in parallel for each phase-cut dimmer. The maximum number of DALI2-CV-M2 dimmers corresponds to: **MAXIMUM PHASE CUT DIMMER CURRENT/0.002**

E.g. Phase cutting dimmer with 0.5A maximum current = 0.5/0.002 = 250 maximum dimmers in parallel.

nb: For the operation of the DALI2-CV-M2 dimmer with PHASE CUT input, coupled with the connected **BTICINO** dimmers with phase cut output (K4411C, 4411C, L4411C) it is necessary to set the latter in **dimmer mode** compared to the default mode ON/OFF with which they are sold.

Modes of operation
1-pole PHASE CUT mode

Dip switch setting:



In order to activate this control/operation mode it is necessary to set the Dip Switches located on the back of the box and connect the NEUTRAL of the system to the DA P1 terminals and the cut PHASE to the DA P2 terminals (AC voltage range 12÷265Vac 50÷65Hz) coming from the phase cutting dimmer.

The control input can operate with phase cut or neutral cut.
In case of cut neutral it will be necessary to bring the system phase directly to DA P1 and the cut neutral to DA P2.
The input signal does not require polarisation. The max current drawn by the phase-cut interface is approx. 2mA.

The scheme in **FIG. 4** represents the connection diagram with a dimmer equipped with 1 output pole for phase cut (phase cut).
The connection of the DALI2-CV-M2 should be realised as if the dimmer itself were a dimmable load at mains voltage.

The interface is capable of operating with all types of phase cuts:
- TE: Trailing Edge: Descending Phase
- LE: Leading Edge: Ascending Phase
- Hybrid, Centre, Delayed and Mixed Phase cuts.

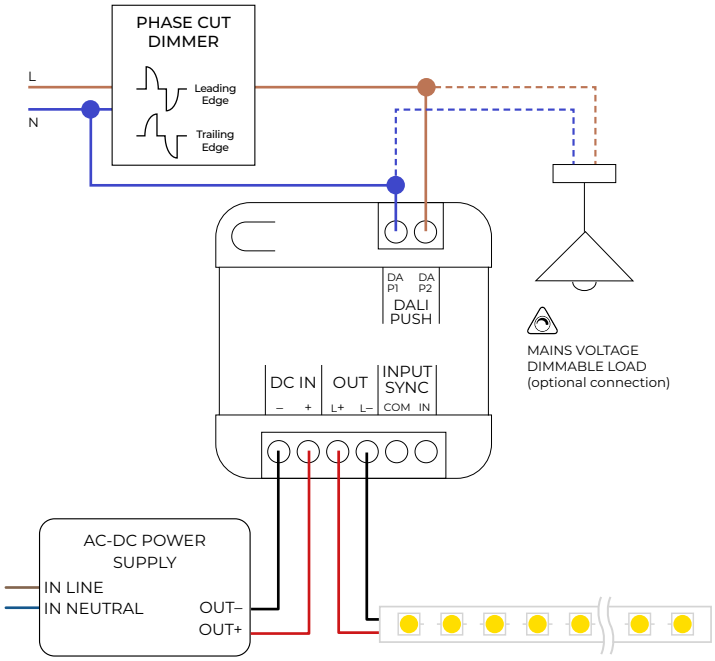


FIG. 5 - PHASE CUT connection 1 pole phase cut

Phase-cut dimmers that do not handle a minimum current of 2mA could lead to flashing or flickering of the dimmer output. In the event of flickering or flashing, it may be necessary to increase the output load on the phase-cut dimmer.
To increase the load it is possible to use a load resistor and position it at the output of the phase cutting dimmer between terminals DA P1 and DA P2.
Below are some resistance values and related wattage:

Mains voltage 230V
Resistor value 27K minimum power resistance 3W: perceived load of the dimmer phase cut at full light 2W
Resistor value 10K minimum power resistance 7W: perceived load of the dimmer phase cut at full light 5.5W
Resistor value 5K minimum power resistance 15W: perceived load of the 10W full light phase cutting dimmer

Mains voltage 110V
Resistor value 13K minimum power resistance 3W: perceived load of the dimmer phase cut at full light 2W
Resistor value 5K minimum power resistance 7W: perceived load of the dimmer phase cut at full light 5.5W
Resistor value 2.7K minimum power resistance 15W: load perceived of the 10W full light phase cut dimmer

ATTENTION!
The resistor used as a dummy load may become hot. Be careful not to place it near the dimmer.

For the complete list of verified compatibilities see page 15

Several DALI2-CV-M2 can be connected in parallel for each phase-cut dimmer. The maximum number of DALI2-CV-M2 dimmers corresponds to: **MAXIMUM PHASE CUT DIMMER CURRENT/0.002**

E.g. Phase cutting dimmer with 0.5A maximum current = 0.5/0.002 = 250 maximum dimmers in parallel.

nb: For the operation of the DALI2-CV-M2 dimmer with PHASE CUT input, coupled with the connected **BTICINO** dimmers with phase cut output (K4411C, 4411C, L4411C) it is necessary to set the latter in **dimmer mode** compared to the default mode ON/OFF with which they are sold.

Modes of operation

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

Dip switch setting:

In order to activate this control/operation mode it is necessary to set the Dip Switches located on the back of the box and connect the control signal coming from the active or passive actuator to the INPUT COM (negative pole) and INPUT IN (positive pole) terminals 0- 10/1-10V.

The max current absorbed 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 lower than 1V is interpreted as a load off.

In case of detachment of the 0-10V/1-10V signal, the dimmer sets the output to the maximum level Compliant IEC/EN60929.

The maximum distance of the dimmer from the 0-10/1-10V actuator must not exceed 10m; we recommend the use of shielded cables and SELV double insulation separation from the mains voltage.

Pay attention to the polarity of the cables, reversal could lead to flashing, malfunction or damage.

For the complete list of verified compatibilities see page 15

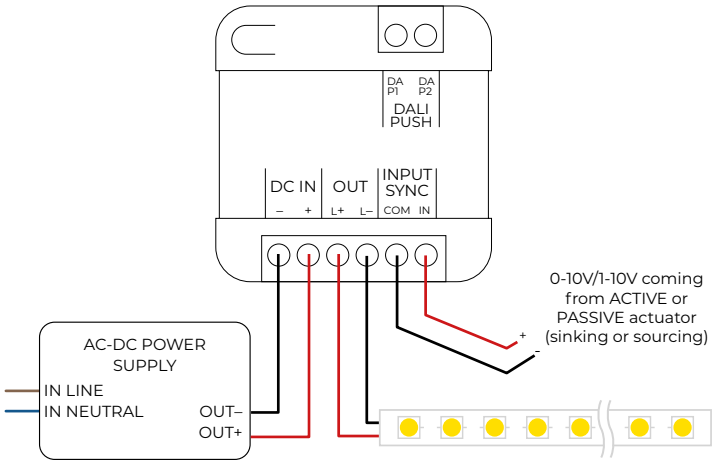
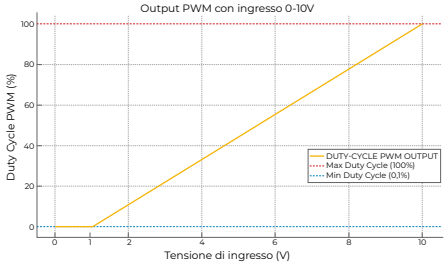


FIG. 6 - 0-10/1-10V connection



47Kohm linear potentiometer mode

In order to activate this control/operation mode it is necessary to set the Dip Switches located on the back of the box and connect the control signal coming from a 47Kohm linear potentiometer to the INPUT COM and INPUT IN terminals.

A resistance value lower than 2.5 Kohm is interpreted as a load off. The maximum brightness value is reached when the value of 45 Kohm is exceeded. If the potentiometer is disconnected, the dimmer sets the output to maximum brightness.

We recommend using good quality potentiometers to avoid flickering or instability of the output. The maximum distance of the dimmer from the potentiometer must not exceed 2m; we recommend the use of shielded cables and SELV double insulation separation from the mains voltage.

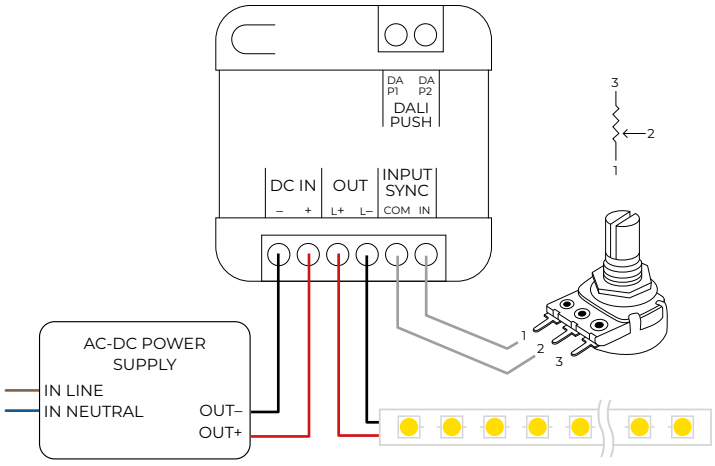
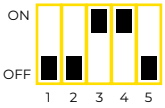


FIG. 7 - potentiometer connection

Modes of operation

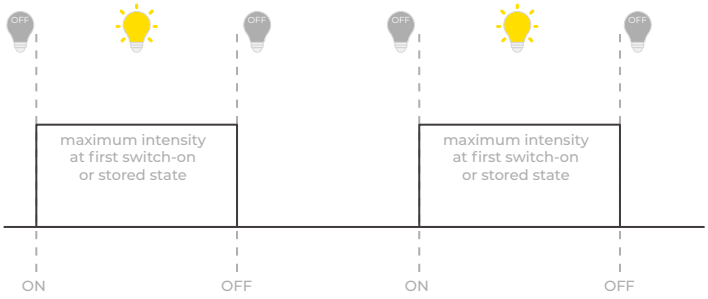
Dimming mode on power failure

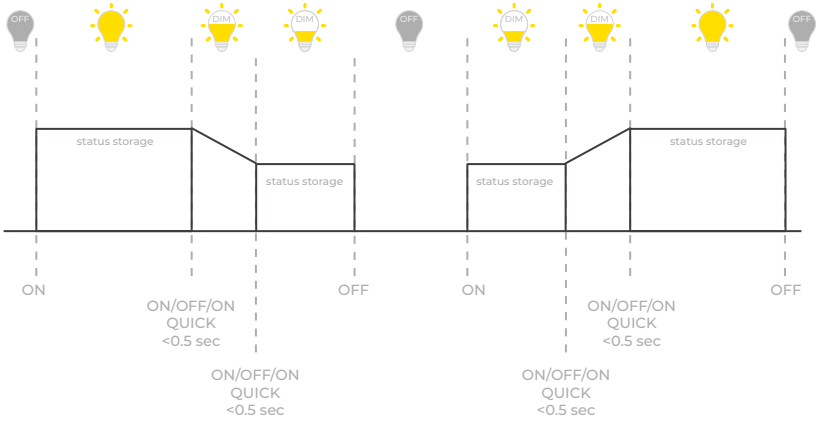
Dip switch setting:



In order to activate this control/operation mode it is necessary to set the Dip Switches located on the back of the box and connect the PHASE and NEUTRAL coming from the system to the DA P1 and DA P2 terminals. This PHASE or NEUTRAL can be interrupted by a switch, diverters or inverter to turn the load connected to the dimmer on, off and dimming.

The logic with which the load dimming will be performed is represented by the diagram below:





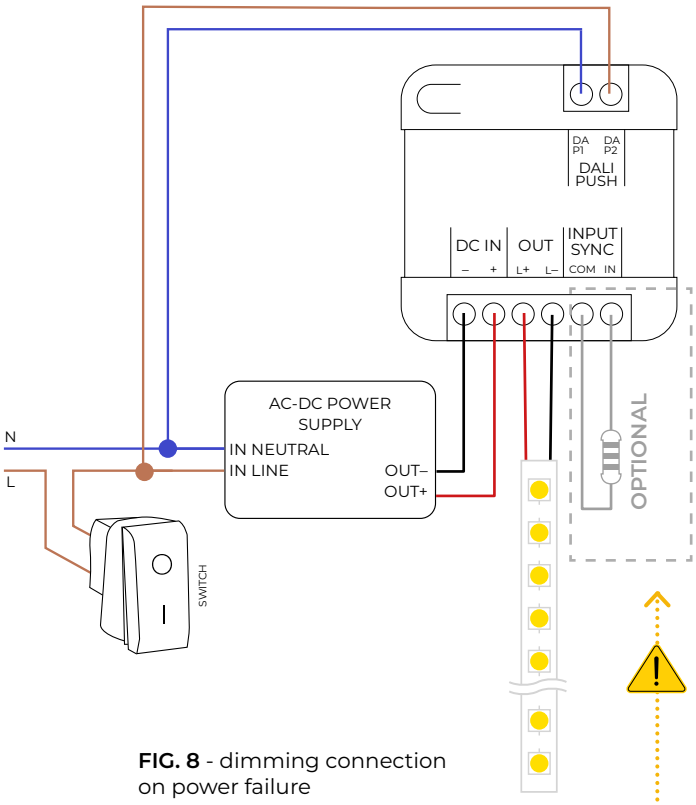


FIG. 8 - dimming connection on power failure

To adjust the minimum brightness level, if different from 5% (default), it is possible to insert a resistor (1/4 Watt or higher) or a potentiometer between the INPUT SYNC COM and IN poles.
The minimum level will vary depending on the resistance value according to the table below.

- Use the wall switch to turn on the lights.
- Quickly turn off the lights with the wall switch and then turn them back on (within a maximum of 0.5 seconds). The brightness will gradually increase.
- Press the switch again to the desired brightness to adjust it. The chosen brightness will be stored automatically.
- If you do not press the switch again within 8 seconds, the brightness will reach the maximum level. This level will be stored automatically.

MINIMUM LEVEL	RESISTANCE VALUE
5%	Not available or >47Kohm
10%	37Kohm
20%	35Kohm
30%	30Kohm
40%	27Kohm

To control several DALI2-CV-M2 dimmers in parallel with a single switch use the diagram shown on page 12.

Modes of operation

Timed switch-off mode on push-button or non-timed presence sensor

Dip switch setting:

In order to activate this control/operation mode it is necessary to set the Dip switches as indicated above.

The control via button can be carried out directly using the mains voltage (110÷230VAC) as in **FIG. 9**, or the output voltage of the power supply (8÷53VDC), **FIG. 10**. To install the dimmer in the system, it is preferable to use the diagram shown in **FIG. 9**. In this configuration the dimmer guarantees isolation from the mains voltage.
The input range between the DA P1 and DA P2 poles is DC: 10÷265V, AC 12÷265VAC 50÷65Hz.

The maximum current absorbed by the PUSH interface is approximately 2mA. The maximum distance of the dimmer from the button must not exceed 20m; the use of shielded cables is recommended.
The dimmer, in the event of a power failure, saves the state of the output so as to restore the set level when it returns.

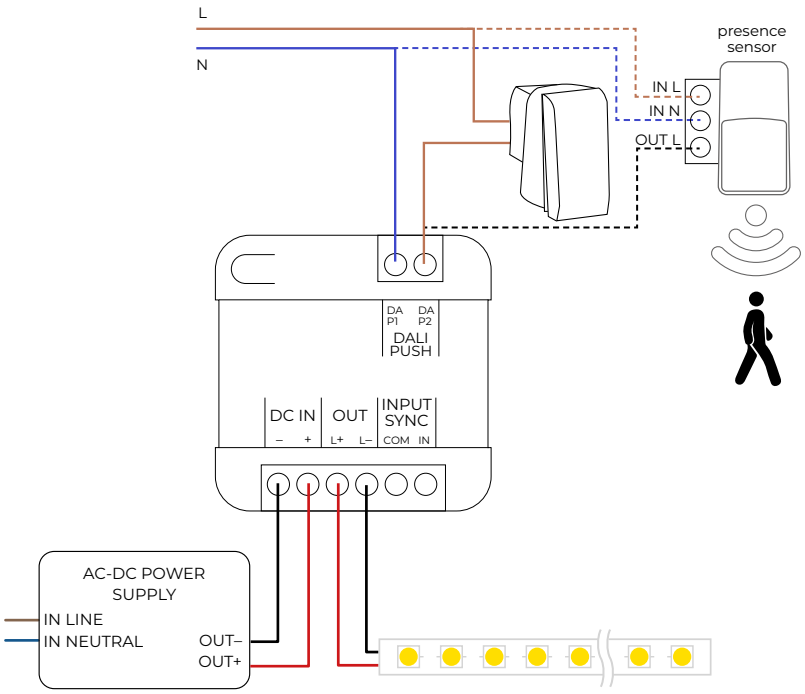
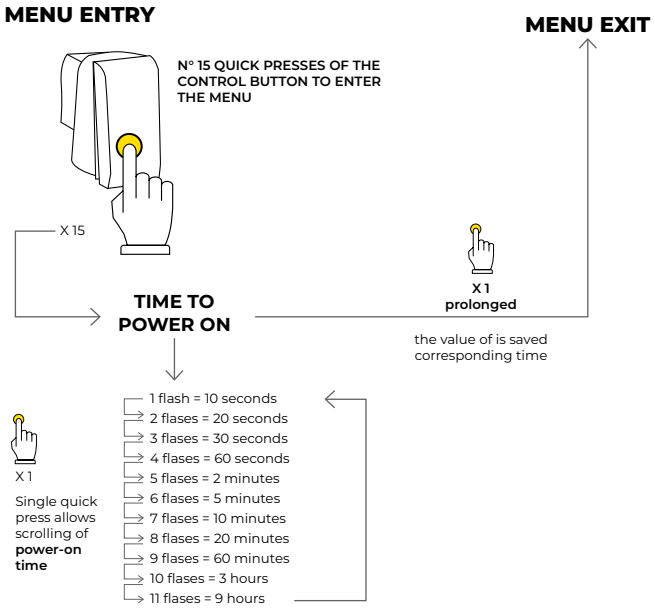


FIG. 9 - mains voltage button/sensor connection

PUSH interface operation

Single Click (quick press <1sec)
- Timing begins at the first command impulse; with each subsequent pulse the timing resumes according to the set time. Once the timing is over, the load turns off.



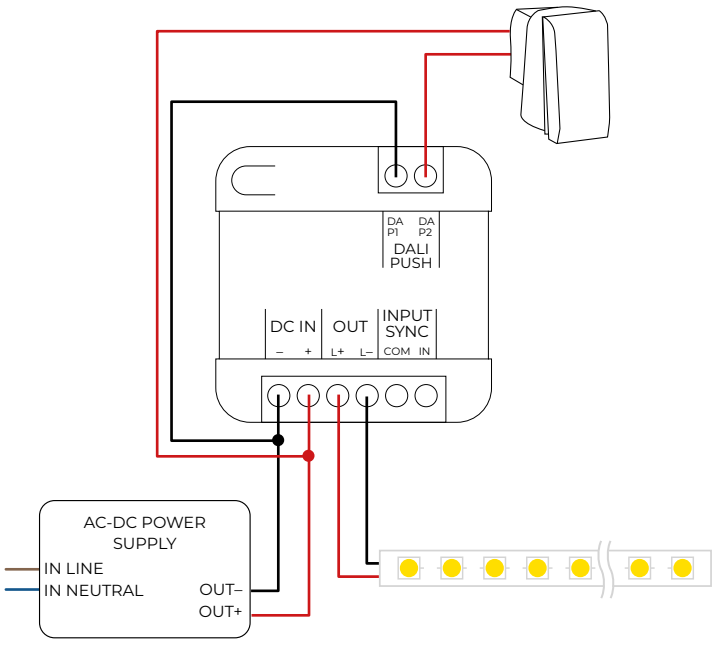
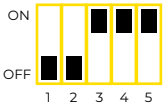


FIG. 10 - pulsating connection with voltage coming from the power supply

Modes of operation
Slave mode

Dip switch setting (on SLAVE):



In order to activate this control/operation mode it is necessary to set the Dip switches as indicated above. In SLAVE mode the dimmer is able to receive a digital synchronization signal coming from another DALI2-CV-M2.

The DALI2-CV-M2 that generates the synchronization signal must be configured in any mode except those that use the INPUT SYNC COM and IN poles as input.

The maximum connection distance between the DALI2-CV-M2 must not exceed 20m. The maximum number of DALI2-CV-M2 slaves that can be connected is 10.
We recommend using a shielded cable with a cable section suitable for the type of load used.

From 2 to 4A: >1.5mm² From 4A to 12A: >2.5mm²
This indication is necessary for the correct alignment of the negative pole of the DC power supply - which corresponds to the INPUT SYNC COM pole.

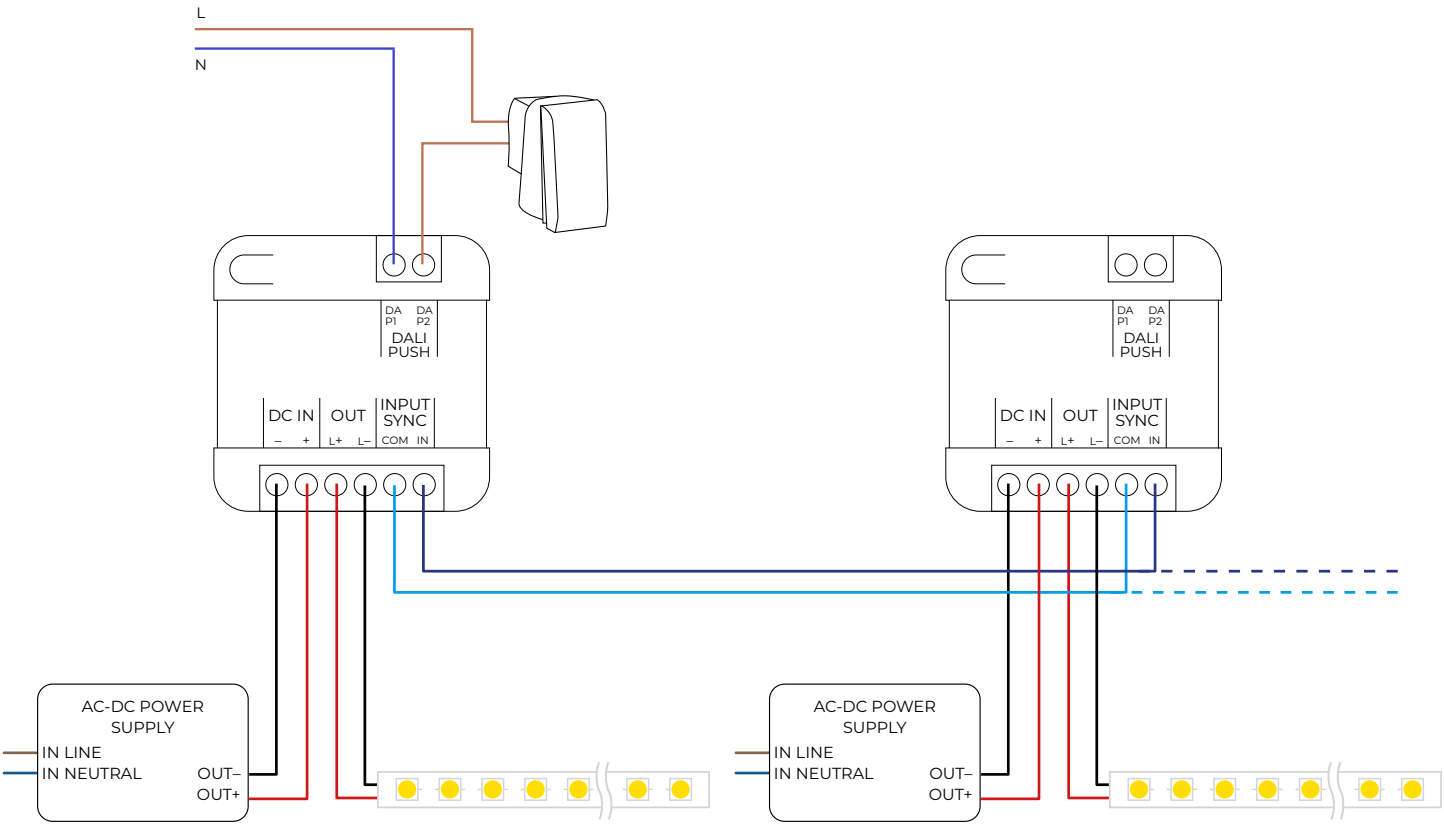


FIG. 11 - slave connection to DALI2-CV-M2 with BUTTON input

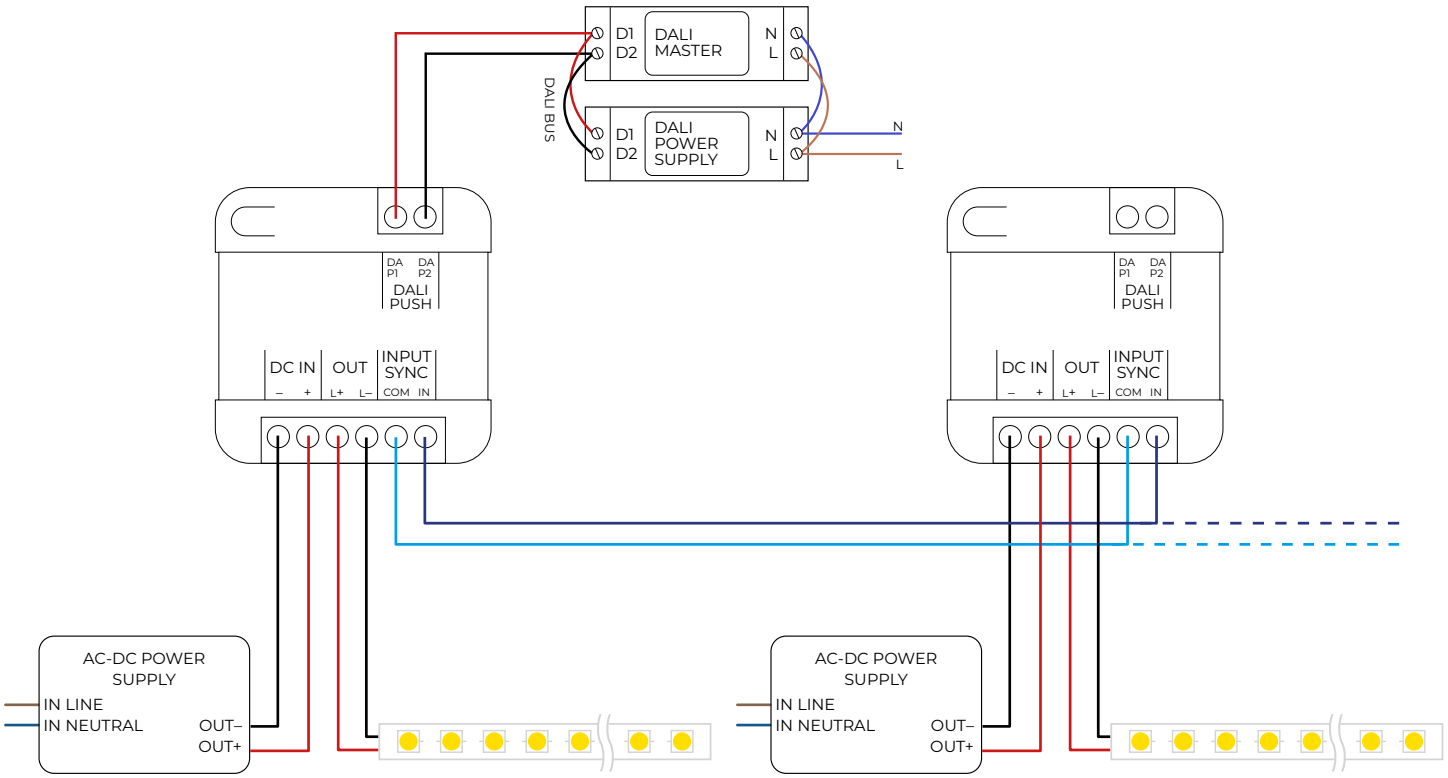


FIG. 12 - slave connection to DALI2-CV-M2 with DALI input

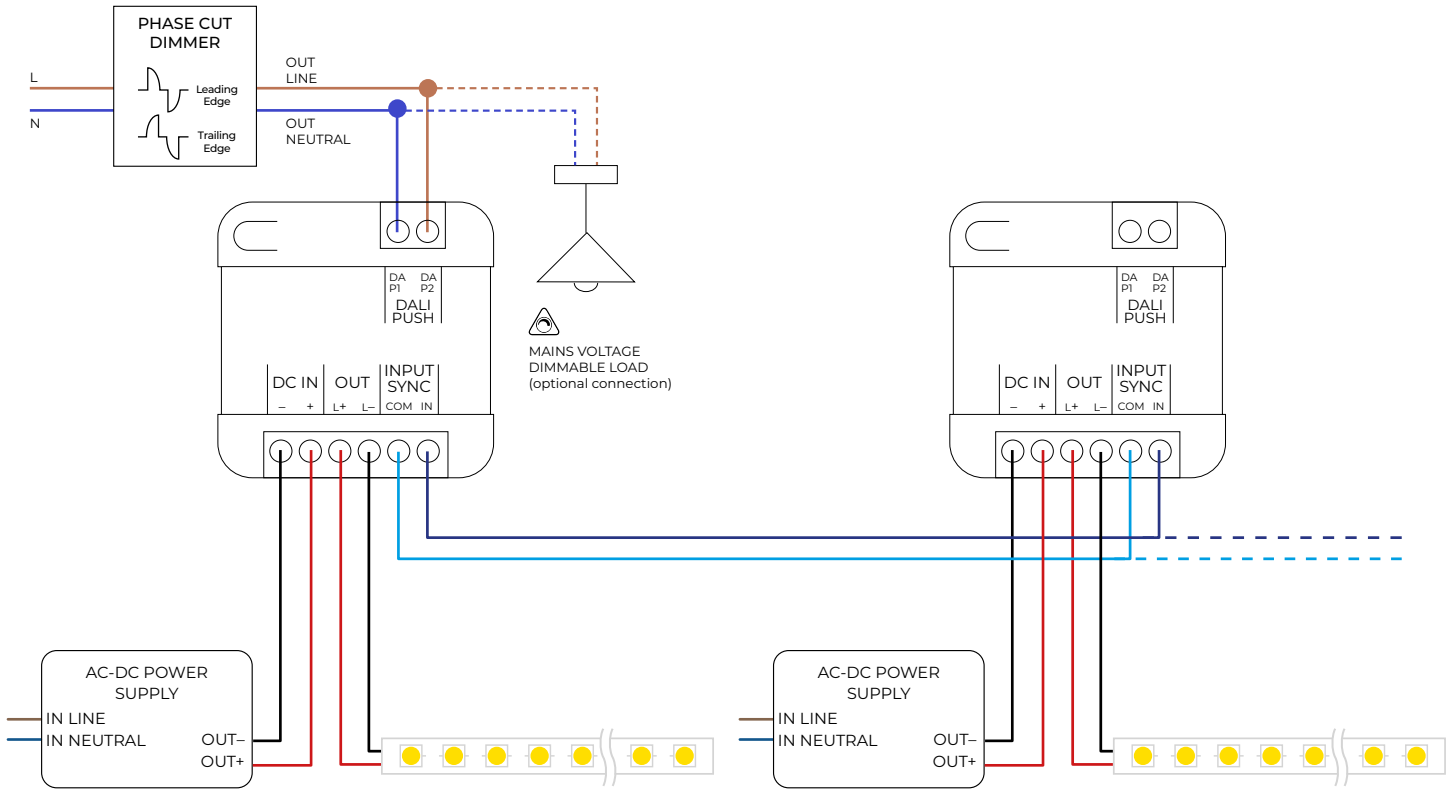


FIG. 13 - slave connection to DALI2-CV-M2 with 2-pole PHASE CUT input

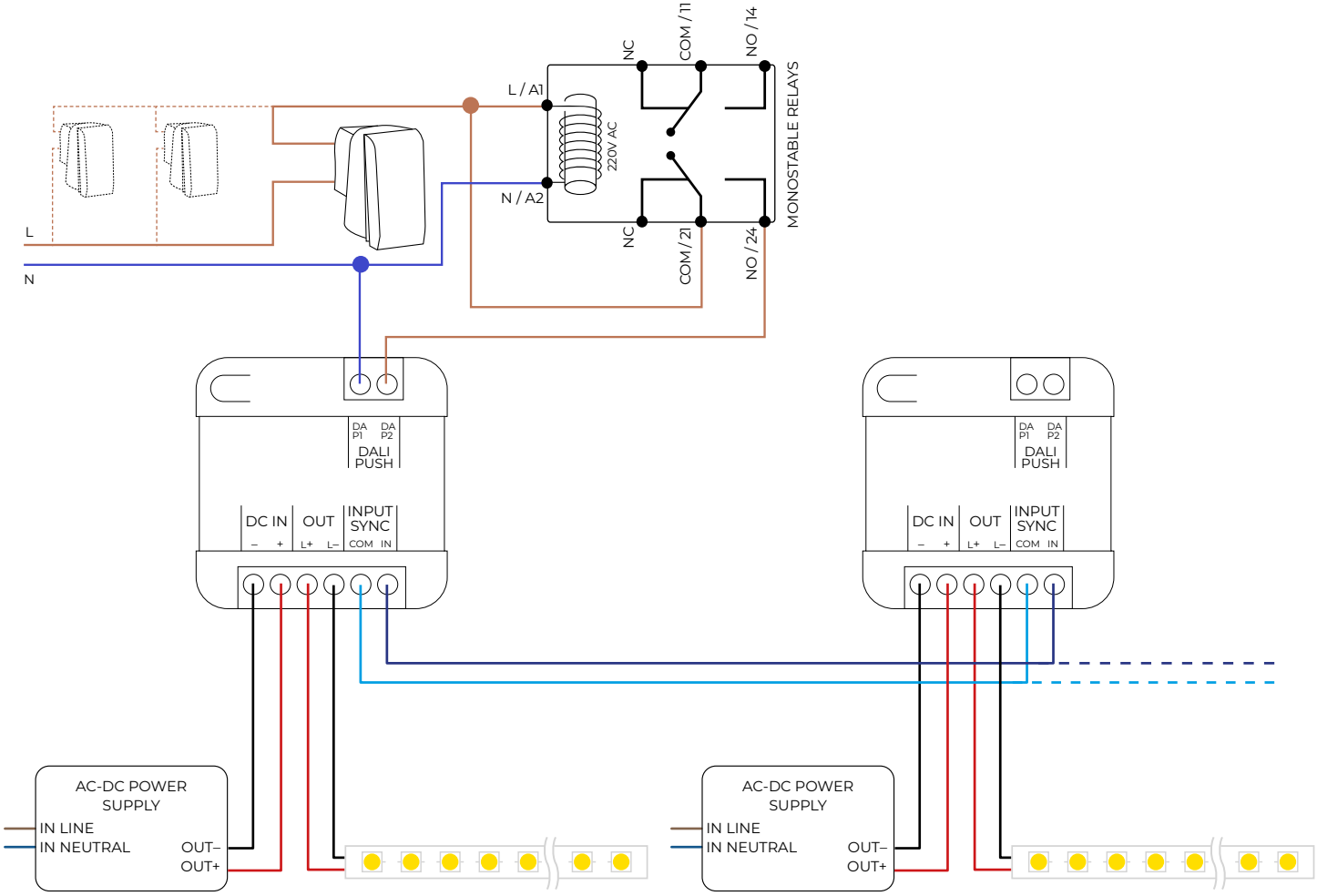


FIG. 14 - Connecting multiple DALI2-CV-M2 with multiple inputs from push buttons through supporting relays

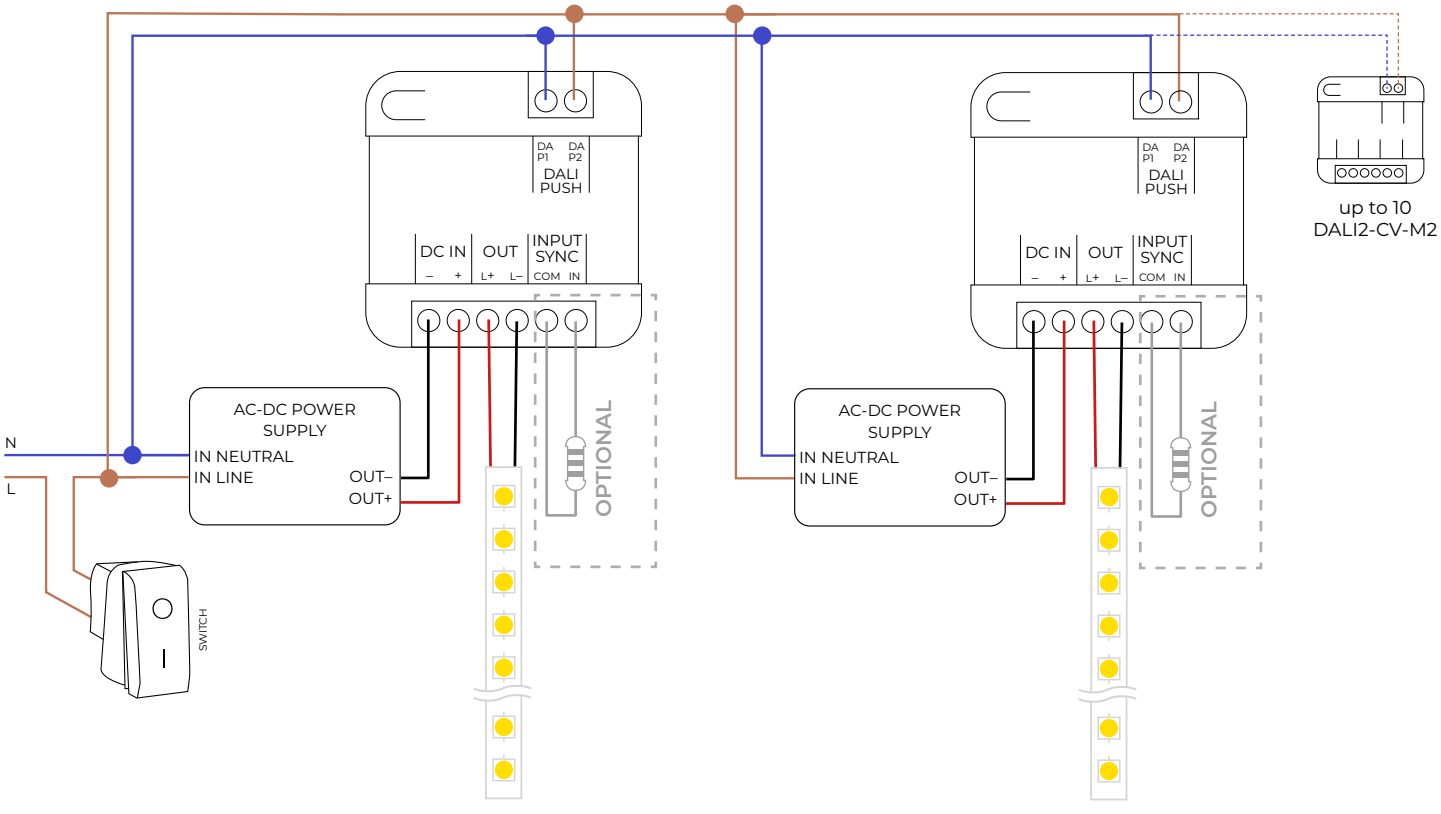
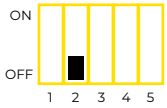


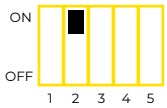
FIG. 15 - connection of several DALI2-CV-M2 with control input from switch

Setup PWM output frequency

Dip switch setting for PWM output frequency change:



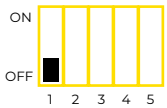
PWM output frequency 390Hz (default)



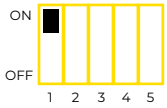
PWM output frequency 3000Hz (Flicker Free)

Using dipswitch 2 it is possible to set the PWM output frequency. The default output frequency (Dip Switch 2 on OFF) is 390Hz. This frequency is suitable for the use of all resistive or resistive capacitive loads including switching or linear voltage current converters with limited frequency.
By setting dip switch 2 to ON the output frequency is set to 3000Hz. This parameter allows the dimmer to be adapted to the IEEE1789-2015 directive and declared FLICKER FREE.
Setting the output with a frequency of 3000Hz does not involve lowering the maximum current of 12A.
The use of the 3000Hz frequency output must be suitable for the type of load used which must allow the use of this frequency*.
If the 3000Hz output is used with capacitive loads, suitable for dimming via high frequency PWM, it is recommended to disable the active internal short circuit protection. This disabling occurs by setting dip switch 1 to OFF.

Dip switch setting for enabling/disabling ACTIVE short-circuit:



short-circuit protection ACTIVE: OFF



short-circuit protection ACTIVE: ON

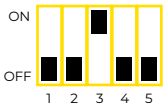
If you disable ACTIVE short circuit protection, always use an LED power supply compliant with EN61347-1, EN647-2-13 or equivalent protected against short circuit. Alternatively, use an external fast fuse with a tripping current commensurate with the load. Failure to take these precautions in the event of a short could lead to irreversible damage to the dimmer.

* the use of loads not suitable for PWM dimming with a frequency of 3000Hz could compromise the operation of the dimmer or load and lead to irreversible damage to the same.

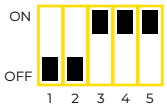
Dip switch settings summary

PUSH mode

PHASE CUT mode



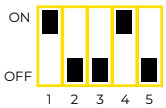
Slave mode



DALI DT6 mode

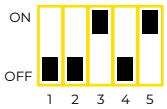
High compatibility for voltage current converters
Short-circuit detection: OFF
Open circuit detection: OFF

High compatibility with open circuit detection
Short-circuit detection: OFF
Open circuit detection: ON

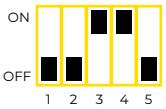


Full compliant DALI2
Short-circuit detection: ON
Open circuit detection: ON

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

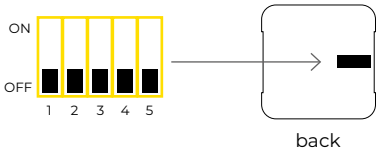


Dimming mode on power failure



Timed shutdown mode

ATTENTION!
The Dip switch MUST be on the right side of the back of the dimmer box!



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 relays

BRAND	DEVICE	CONTACT MAPPING
FINDER	40.62.8.230.000 (relays) 40.52.8.230.000 (relays)	COM = 11 / 21 NO = 14 / 24 A1 = L interrupted A2 = N
FINDER	95.65 (relay holder)	COM = 11 / 21 NO = 14 / 24 A1 = L interrupted A2 = N
FINDER	26.01.8.230.000 (relays)	COM = 2 NO = 1 A1 = L interrupted 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
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
*(additional load required at the output of the phase cutting dimmer)	

Wiring compatible products
PHASE CUTTING

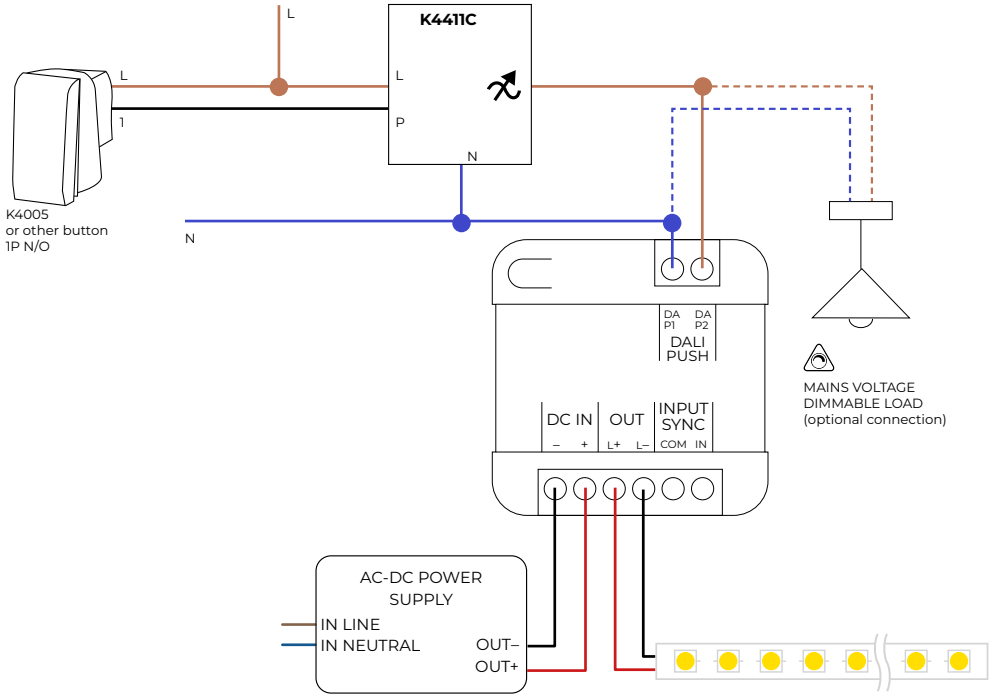


FIG. 16 - PHASE CUT connection 1 pole phase cut + **BTICINO K4411C**

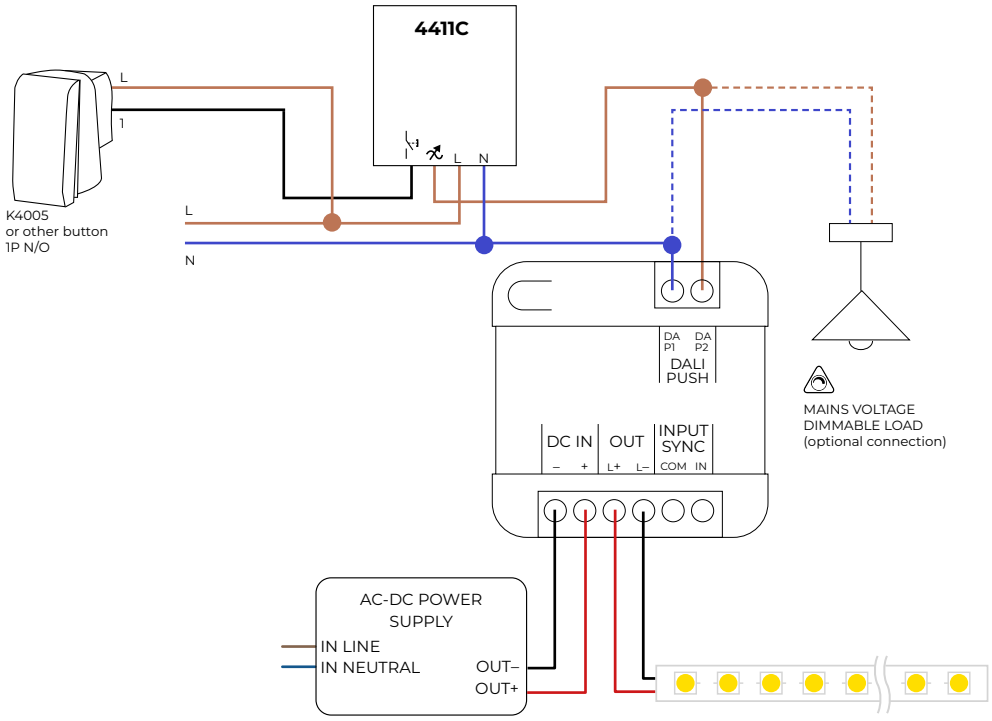


FIG. 17 - PHASE CUT connection 1 pole phase cut + **BTICINO 4411C**

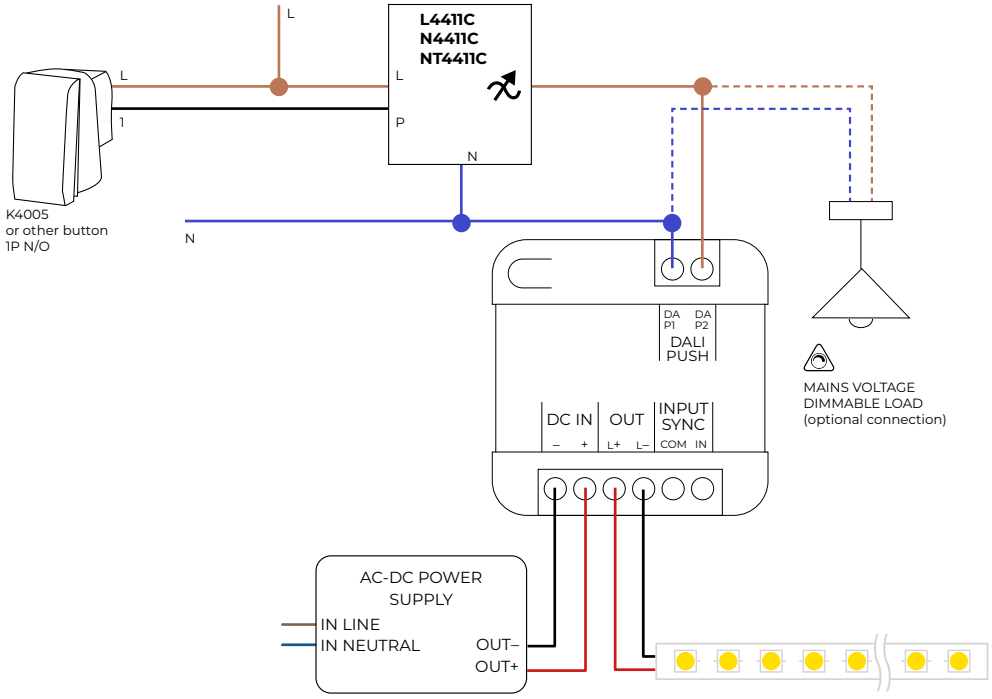


FIG. 18 - PHASE CUT connection 1 pole phase cut + **BTICINO L4411C / N4411C / NT4411C**

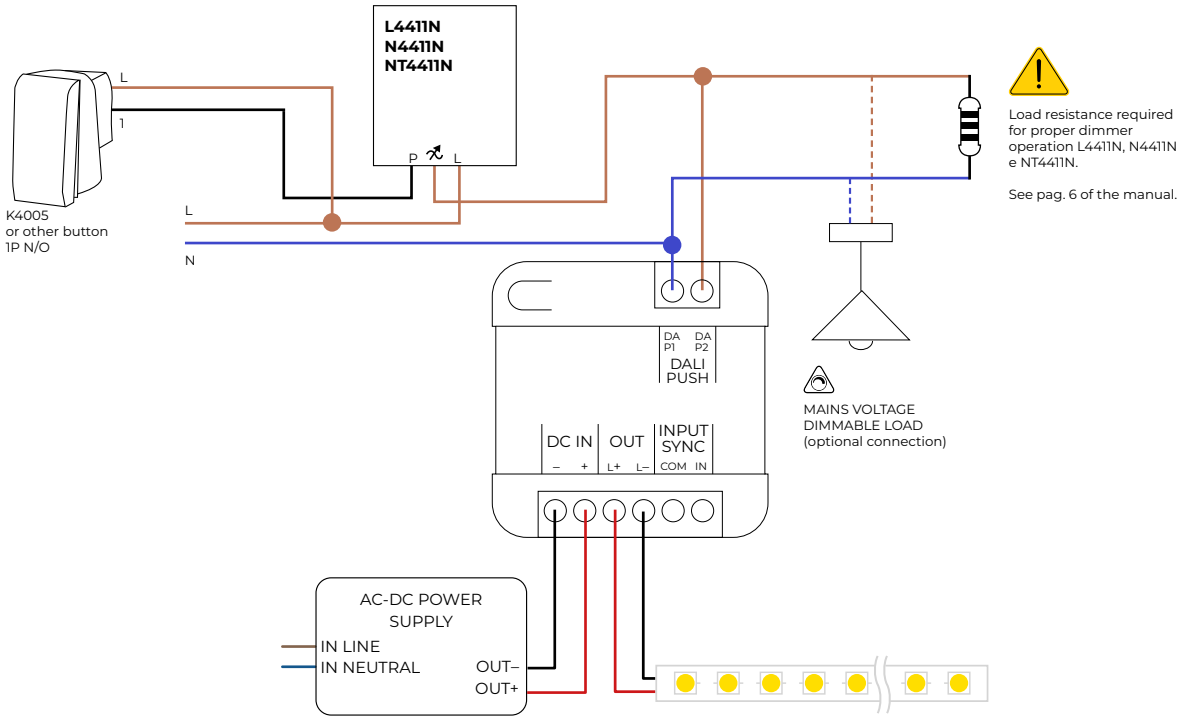


FIG. 19 - PHASE CUT connection 1 pole phase cut + **BTICINO L4411N / N4411N / NT4411N**