
user guide

dimmer

MULTI-4CV-DIN

TECHNICAL FEATURES

MODES OF OPERATION

- | | |
|--|--|
| 1 DALI2 DT6 1 OUTPUT | 11 PUSH + BLE 2 TUNABLE WHITE OUTPUTS |
| 2 DALI2 DT6 4 OUTPUTS | 12 PUSH + BLE 1 DIMTOWARM OUTPUT |
| 3 DALI2 DT8 1 TUNABLE WHITE OUTPUT | 13 PUSH + BLE 1 STATIC RGBW OUTPUT |
| 4 DALI2 DT8 1 RGBW OUTPUT | 14 PUSH + BLE 1 DYNAMIC RGBW OUTPUT |
| 5 DMX512A-RDM 1 OUTPUT | 15 0-10 V/1-10 V ACTIVE/PASSIVE AND 47 K Ω LINEAR POTENTIOMETER – 1 OUTPUT |
| 6 DMX512A-RDM 3 OUTPUTS | 16 0-10 V/1-10 V ACTIVE/PASSIVE AND 47 K Ω LINEAR POTENTIOMETER – 4 OUTPUTS |
| 7 DMX512A-RDM 4 OUTPUTS | 17 PHASE CUT 1 OUTPUT |
| 8 PUSH + BLE 1 OUTPUT | 18 DIMMING ON POWER CUT 1 OUTPUT |
| 9 PUSH + BLE 4 OUTPUTS | 19 TIMED/GARAGE MODE 1 OUTPUT |
| 10 PUSH + BLE 1 TUNABLE WHITE OUTPUT | 20 TIMED/GARAGE MODE, 4 OUTPUTS |

SUPPLEMENTARY DIAGRAMS

COMPATIBILITY LIST

OIKOS APP

SUMMARY OF SETTINGS - DIP SWITCH

MULTI-4CV-DIN

Multiple inputs 4-channel PWM output

TECHNICAL FEATURES

- Dimmer with inputs: isolated PUSH, active and passive 0-10V/1-10 potentiometer, switch, sensor, phase cut, DALI2 DT6, DALI2 DT8, DMX512A-RDM, BLE
- Master/slave functionality on DMX512A-RDM
- Status LEDs for output channels and dimmer configuration (see Figure A)
- **PWM frequency: 390 Hz-3000 Hz-10000 Hz***
- Protection against: reverse polarity, short circuit, open circuit and voltage spikes
- Power supply and output terminals: 0.05÷3 mm² (30÷12 AWG)
- **Local control buttons integrated into the front panel**
- **Output current from 0 A to 8 A per channel (384 W at 48 V per channel)**
- **Output current in single-channel mode from 0 A to 32 A (1536 W at 48 V)**

SAFETY WARNINGS

- Thermal cut-out: 150°C on uC
- Storage temperature min: -40° C, max: 60° C
- Operating temperature min: -20, max: 50° C
- Maximum Tc point: 85° C
- Tc is positioned on the terminal screw corresponding to the Tc marking (see Figure A)
- Protection class: IP20
- Use only in dry environments
- For operating modes involving a push-button input: if the control voltage of the PUSH input exceeds the SELV voltage, the optional terminal cover/cable clamp must be used to ensure the product remains in Class II

* The output frequency can be set to 10,000 Hz for all modes except those with a DMX input. The maximum current at 10,000 Hz is 5 A per channel.



71x90x58 mm
weight: 98 gr

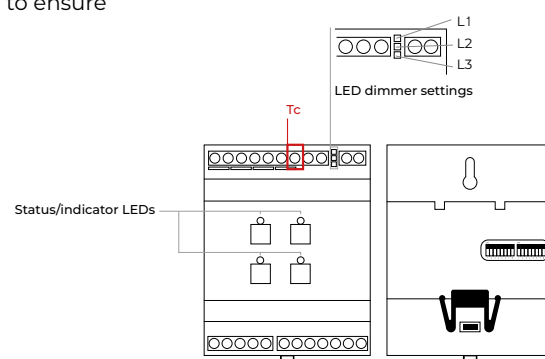
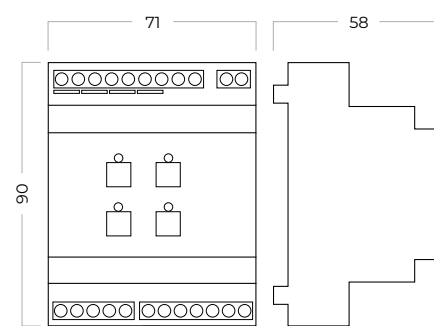


figure A



Product certified by DIIA (DALI Alliance):

<https://www.dali-alliance.org/products/10970/multi-4cv-din>

<https://www.dali-alliance.org/products/10974/multi-4cv-din>

<https://www.dali-alliance.org/products/10975/multi-4cv-din>



CODE	VOLTAGE RANGE	OUTPUT CURRENT	OUTPUT POWER	OUTPUTS	INPUT	LOAD TYPE	PART NUMBER
MULTI-4CV-DIN	8÷53 V DC	8A*	384W a 48V 192W a 24V 96W a 12V	4	DALI2 DT6 DT8 / 0-10V / 1-10V PUSH / POT / SWITCH / SENSOR / PHASE CUT / DMX512A-RDM / BLE	single colour tunable white rgb rgbw	L806MA02T4A01

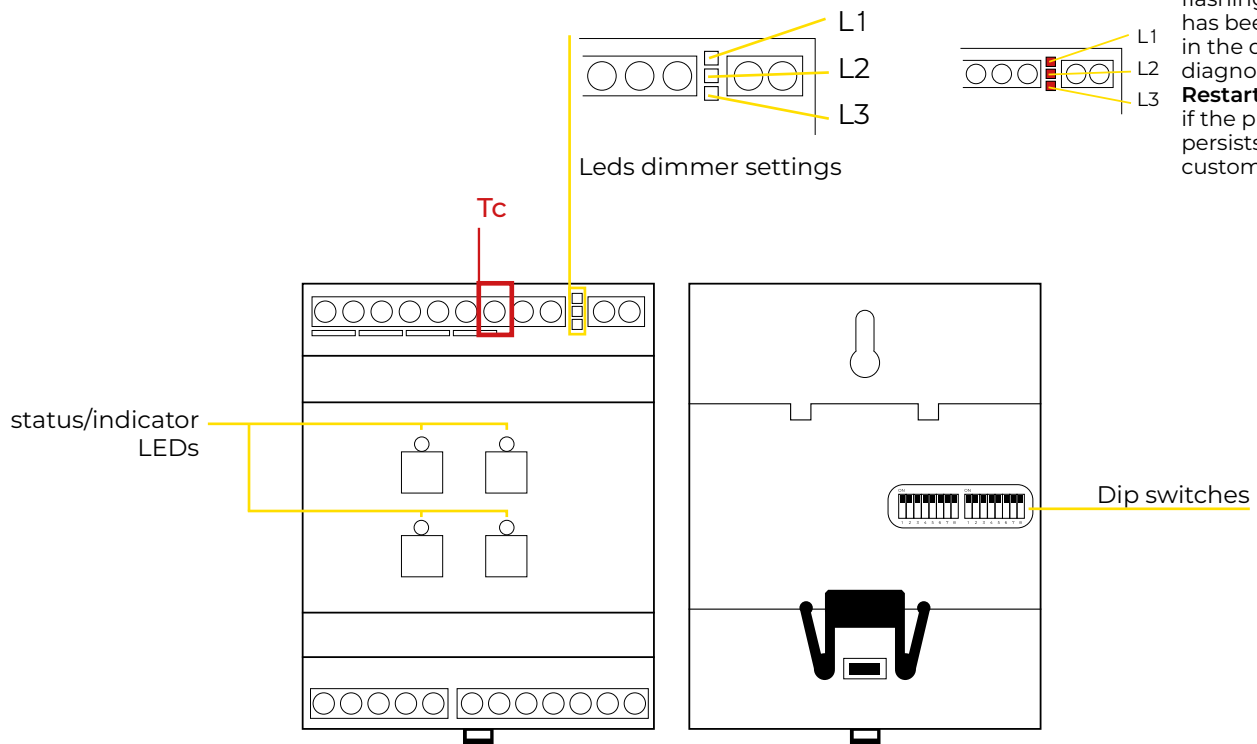
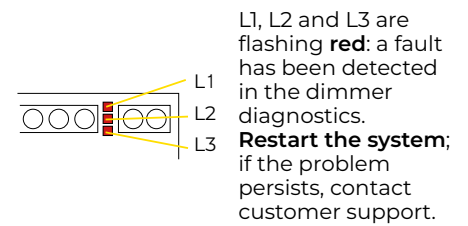
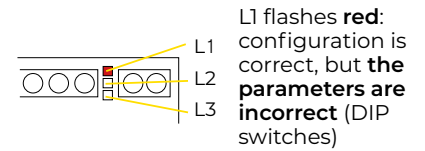
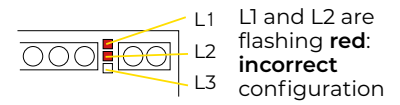
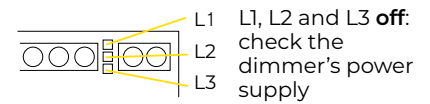


Maintenance: The appliance is maintenance-free.
Use a dry cloth to clean it.
The use of solvents or other aggressive substances
should be avoided at all costs.

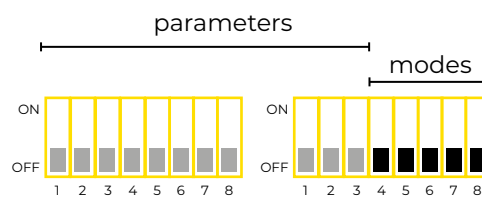


Disposal: at the end of its useful life, the product described in this data sheet is classified as waste from electronic equipment according to the European Directive 2012/19/EU (WEEE recast), implemented in Italy with Legislative Decree no. 49 of 14 March 2014, and cannot be disposed of as unsorted 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.

Dimmer



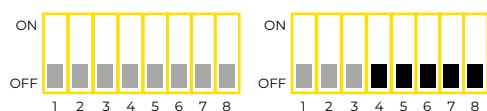
Dip switches



Modes of operation

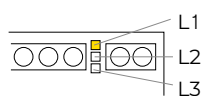
1 | DALI2 DT6 1 output

Dip switch settings:



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

If the configuration is **correct**, once power is supplied to the dimmer, the L1 LED will light up **yellow**.



If the configuration is **incorrect**, LEDs L1 and L2 will flash **red**.

If the configuration is correct but the **parameters are incorrect** (grey DIP switches in the figure above), LED L1 will **flash red**.

The dimmer must be powered in accordance with the polarity shown in **FIG. 1** via the DC IN+ and DC IN- terminals.

If the polarity of the power supply is reversed, the device will not be damaged. The outputs must be wired as shown in **FIG. 1**.

In this mode, the device operates as a DALI2 DT6 single-output dimmer, with a maximum current of 32A.

The maximum current drawn by the DALI2 bus is approximately 2mA.

Once the dimmer has been configured in DALI2 mode and disconnected from the DALI2 bus, the output status changes to the POWER ON LEVEL set via the DALI2 bus (default: ALL ON).

Relevant regulations:

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

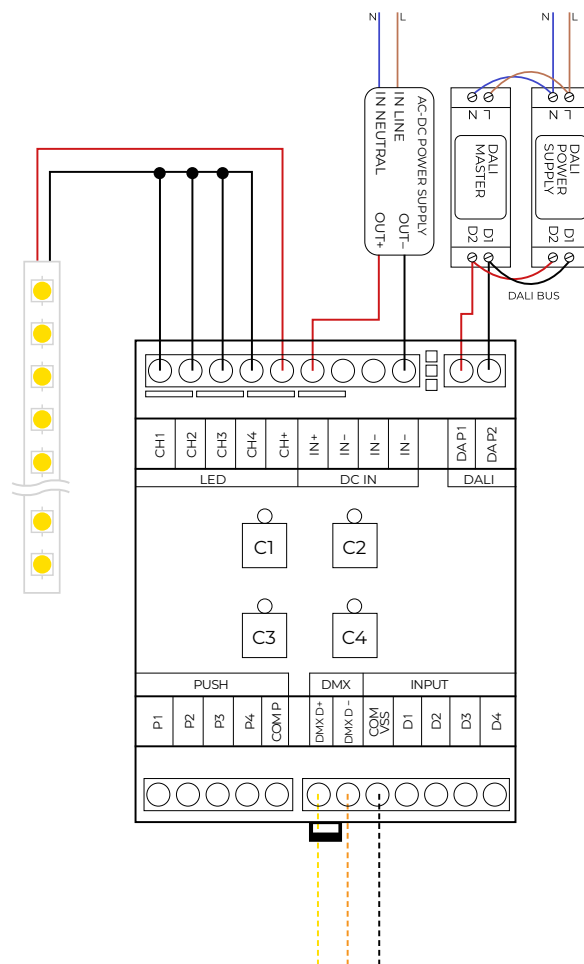
NB: In this mode, BLE (Bluetooth) control is disabled.

In this mode, the parameters received from the DALI2 bus are also sent to the DMX512A-RDM bus on fixed channels 1–2–3–4:

First DALI2 device → DMX ADDRESS 1–2–3–4



WARNING!
If using loads >24A,
see the diagram on page 58



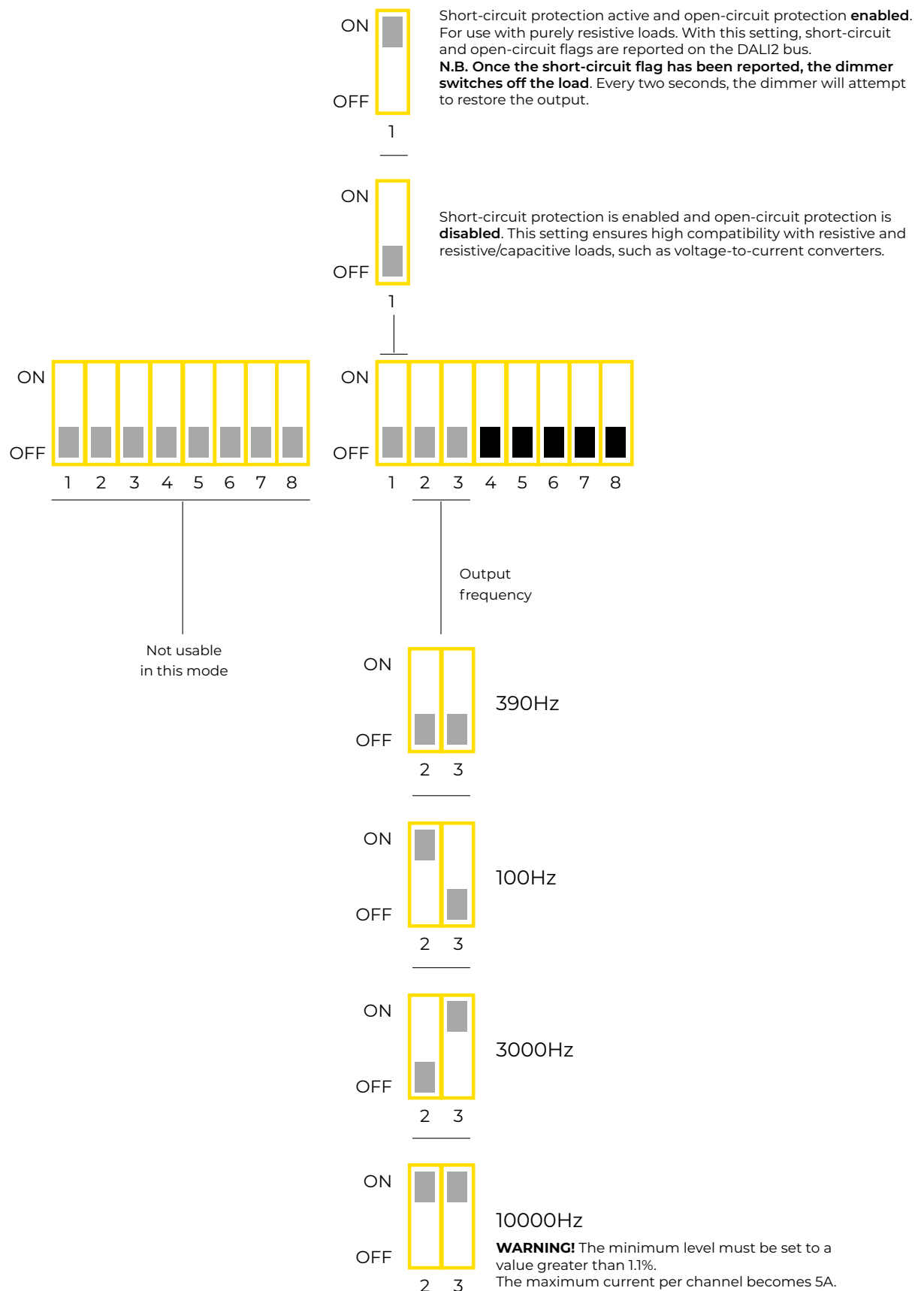
OPTIONAL
DMX512A-RDM synchronisation link
for other MULTI-4CV-DIN units – see
diagram on page 59

FIG. 1 - DALI DT6 connection, 1 output

➔ To switch from the preset mode to **manual** mode, press buttons C1 and C2 simultaneously for 2 seconds. All indicator LEDs will **start to flash**. In manual mode, pressing any of the buttons switches all channels on and off simultaneously. The status of the outputs in manual mode is indicated by the status LEDs (**steady on with a brief flash = output channel on; steady off with a brief flash = output channel off**). To exit **manual** mode, press buttons C1 and C2 simultaneously for 2 seconds, or switch the dimmer off and on again by disconnecting the power supply.

Modes of operation

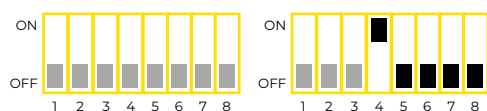
1 | DALI2 DT6 1 output - parameters



Modes of operation

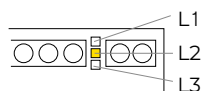
2 | DALI2 DT6 4 outputs

Dip switch settings:



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

If the configuration is **correct**, once power is supplied to the dimmer, the L2 LED lights up **yellow**.



If the configuration is **incorrect**, LEDs L1 and L2 will flash **red**.

If the configuration is correct but the **parameters are incorrect** (grey DIP switches in the figure above), LED L1 will **flash red**.

The dimmer must be powered in accordance with the polarity shown in **FIG. 2** via the DC IN+ and DC IN- terminals.

If the polarity of the power supply is reversed, the device will not be damaged. The outputs must be wired as shown in **FIG. 2**.

In this mode, the device functions as a DALI2 DT6 4-output dimmer and is recognised during addressing as four completely independent DALI2 devices.

The maximum current drawn by the DALI2 bus is approximately 2mA.

Once the dimmer has been configured in DALI2 mode and disconnected from the DALI2 bus, the output status changes to the POWER ON LEVEL set via the DALI2 bus (default: ALL ON).

Relevant regulations:

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

NB: In this mode, BLE (Bluetooth) control and open-circuit mode are disabled!

In this mode, the parameters received from the DALI2 bus are also sent to the DMX512A-RDM bus on fixed channels 1-2-3-4:

- First DALI2 device → DMX ADDRESS 1
- Second DALI2 device → DMX ADDRESS 2
- Third DALI2 device → DMX ADDRESS 3
- Fourth DALI2 device → DMX ADDRESS 4



WARNING!
If using loads >24A,
see the diagram on page 58

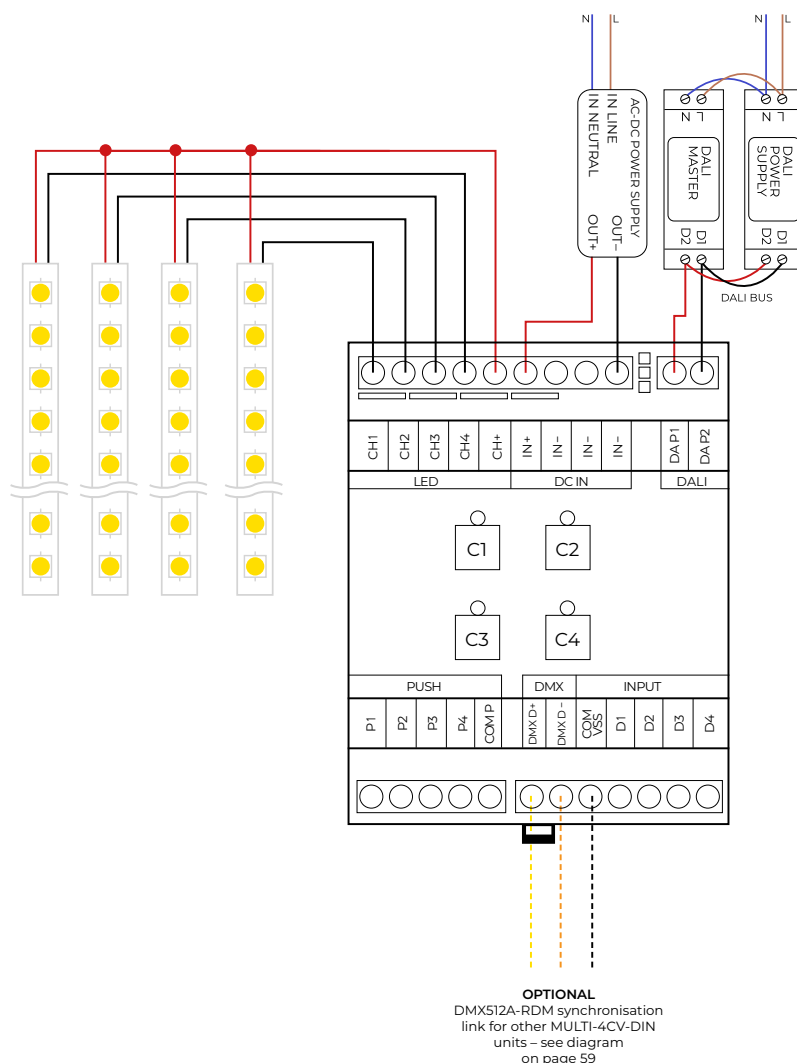
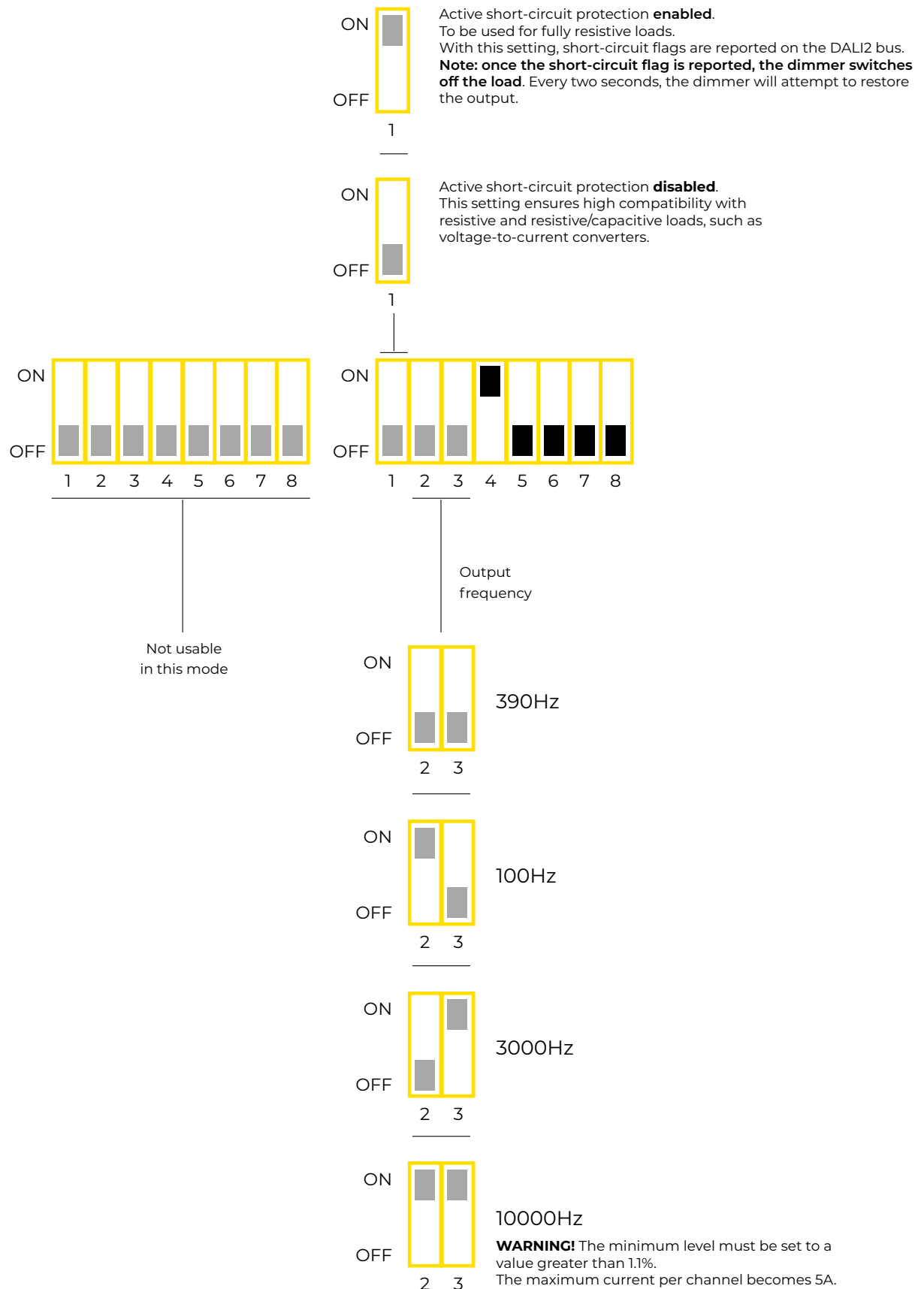


FIG. 2 - DALI DT6 connection, 4 outputs

- To switch from the preset mode to **manual** mode, press buttons C1 and C2 simultaneously for 2 seconds. All indicator LEDs will start to **flash**. In manual mode, pressing one of the buttons switches the corresponding channel on or off. The status of the output channel in manual mode is indicated by the corresponding LED (**steady on with a brief flash = output channel on; steady off with a brief flash = output channel off**). To exit **manual** mode, press buttons C1 and C2 simultaneously for 2 seconds, or switch the dimmer off and on again by disconnecting the power supply.

Modes of operation

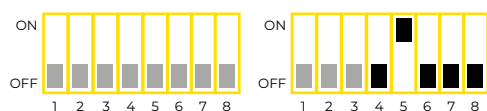
2 | DALI2 DT6 4 outputs - parameters



Modes of operation

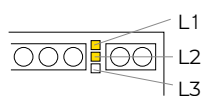
3 | DALI2 DT8 1 tunable white output

Dip switch settings:



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

If the configuration is **correct**, once power is supplied to the dimmer, LEDs L1 e L2 lights up **yellow**.



If the configuration is **incorrect**, LEDs L1 and L2 will flash **red**.

If the configuration is correct but the **parameters are incorrect** (grey DIP switches in the figure above), LED L1 will **flash red**.

The dimmer must be powered in accordance with the polarity shown in **FIG. 3** via the DC IN+ and DC IN- terminals.

If the polarity of the power supply is reversed, the device will not be damaged. The outputs must be wired as shown in **FIG. 3**.

In this mode, the device functions as a DALI2 DT8 1-output tunable white dimmer, with a maximum current of 16A per channel.

If loads exceeding 8A per channel are used, connect the CH1 output in parallel with CH3 and the CH2 output in parallel with CH4 (see diagram on page 58).

The maximum current drawn by the DALI2 bus is approximately 2mA.

Once the dimmer has been configured in DALI2 mode and disconnected from the DALI2 bus, the output status changes to the POWER ON LEVEL set via the DALI2 bus (Default: CH1-CH3 / warm white at 100%).

Relevant regulations:

- IEC 62386-101 ED2
- IEC 62386-102 ED2
- IEC 62386-209 ED2 (DT8)

NB: In this mode, BLE (Bluetooth) control is disabled.

In this mode, the parameters received from the DALI2 bus are also sent to the DMX512A-RDM bus on fixed channels 1-3 for warm white output and 2-4 for cold white output.



WARNING!
If using loads >8A,
see the diagram on page 58

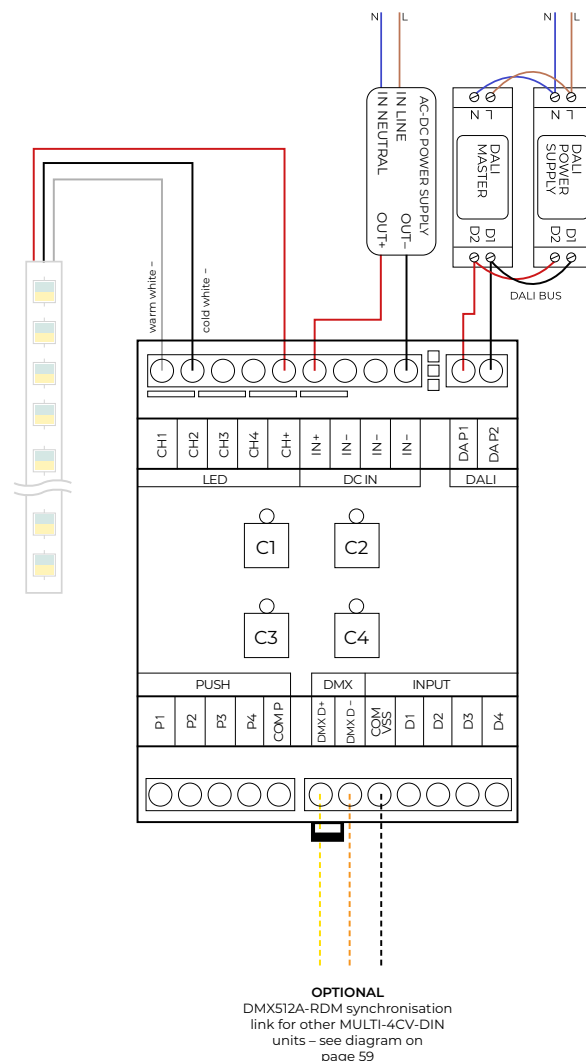
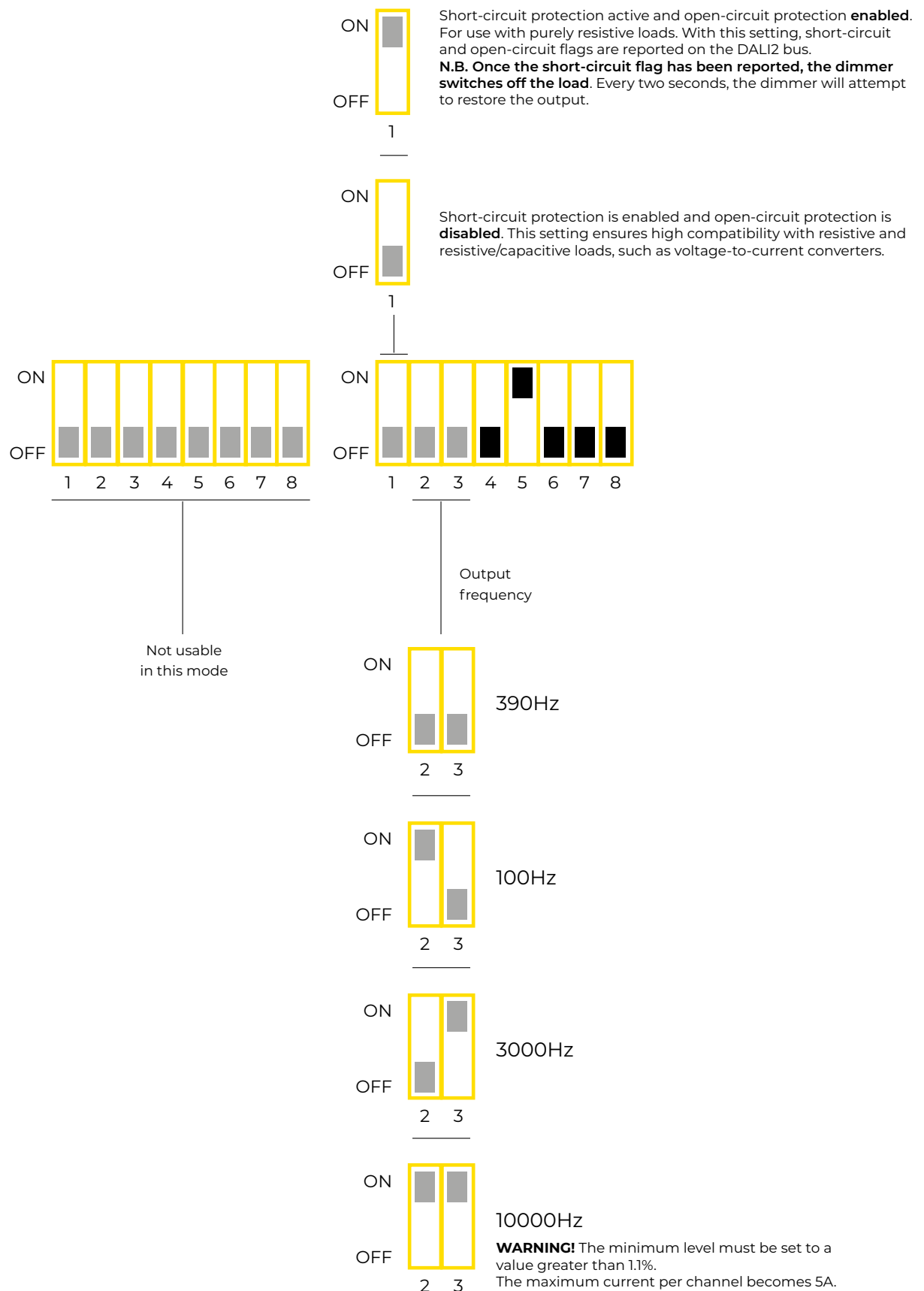


FIG. 3 - DALI DT6 connection, 1 tunable white output

- ➔ To switch from the preset mode to **manual** mode, press buttons C1 and C2 simultaneously for 2 seconds. All indicator LEDs will **start to flash**. In manual mode, pressing button C1 switches the warm white channel on and off.
- In manual mode, pressing button C2 switches the cold white channel on and off. The status of the outputs in manual mode is indicated by the status LEDs (**steady on with a brief flash = output channel on; steady off with a brief flash = output channel off**). To exit **manual** mode, press buttons C1 and C2 simultaneously for 2 seconds, or switch the dimmer off and on again by disconnecting the power supply.

Modes of operation

3 | DALI2 DT8 1 tunable white output – parameters



Modes of operation

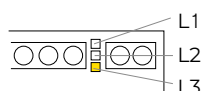
4 | DALI2 DT8 1 RGBW output

Dip switch settings:



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

If the configuration is **correct**, once power is supplied to the dimmer, LED L3 lights up **yellow**.



If the configuration is **incorrect**, LEDs L1 and L2 will flash **red**.

If the configuration is correct but the **parameters are incorrect** (grey DIP switches in the figure above), LED L1 will **flash red**.

The dimmer must be powered in accordance with the polarity shown in **FIG. 4** via the DC IN+ and DC IN- terminals.

If the polarity of the power supply is reversed, the device will not be damaged. The outputs must be wired as shown in **FIG. 4**.

In this mode, the device functions as a DALI2 DT8 RGBW dimmer with a single output, with a maximum current of 8A per channel. The DT8 operating mode is RGBWAF. The maximum current drawn from the DALI2 bus is approximately 2mA.

Once the dimmer has been configured in DALI2 mode and disconnected from the DALI2 bus, the output status switches to the POWER ON LEVEL set via the DALI2 bus (Default: CH1 / red at 100%).

Relevant regulations:

- IEC 62386-101 ED2
- IEC 62386-102 ED2
- IEC 62386-209 ED2 (DT8)

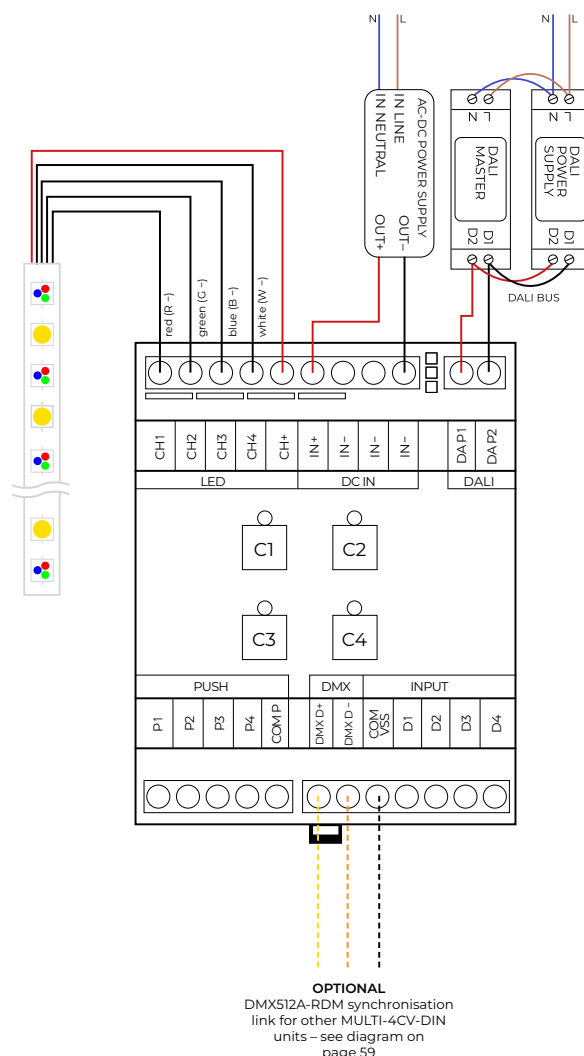
NB: In this mode, BLE (Bluetooth) control is disabled.

In this mode, the parameters received from the DALI2 bus are also sent to the DMX512A-RDM bus on fixed channels 1, 2, 3 and 4:

- DALI2 red channel → DMX ADDRESS 1
- DALI2 green channel → DMX ADDRESS 2
- DALI2 blue channel → DMX ADDRESS 3
- DALI2 white channel → DMX ADDRESS 4



WARNING!
If using loads >24A,
see the diagram on page 58



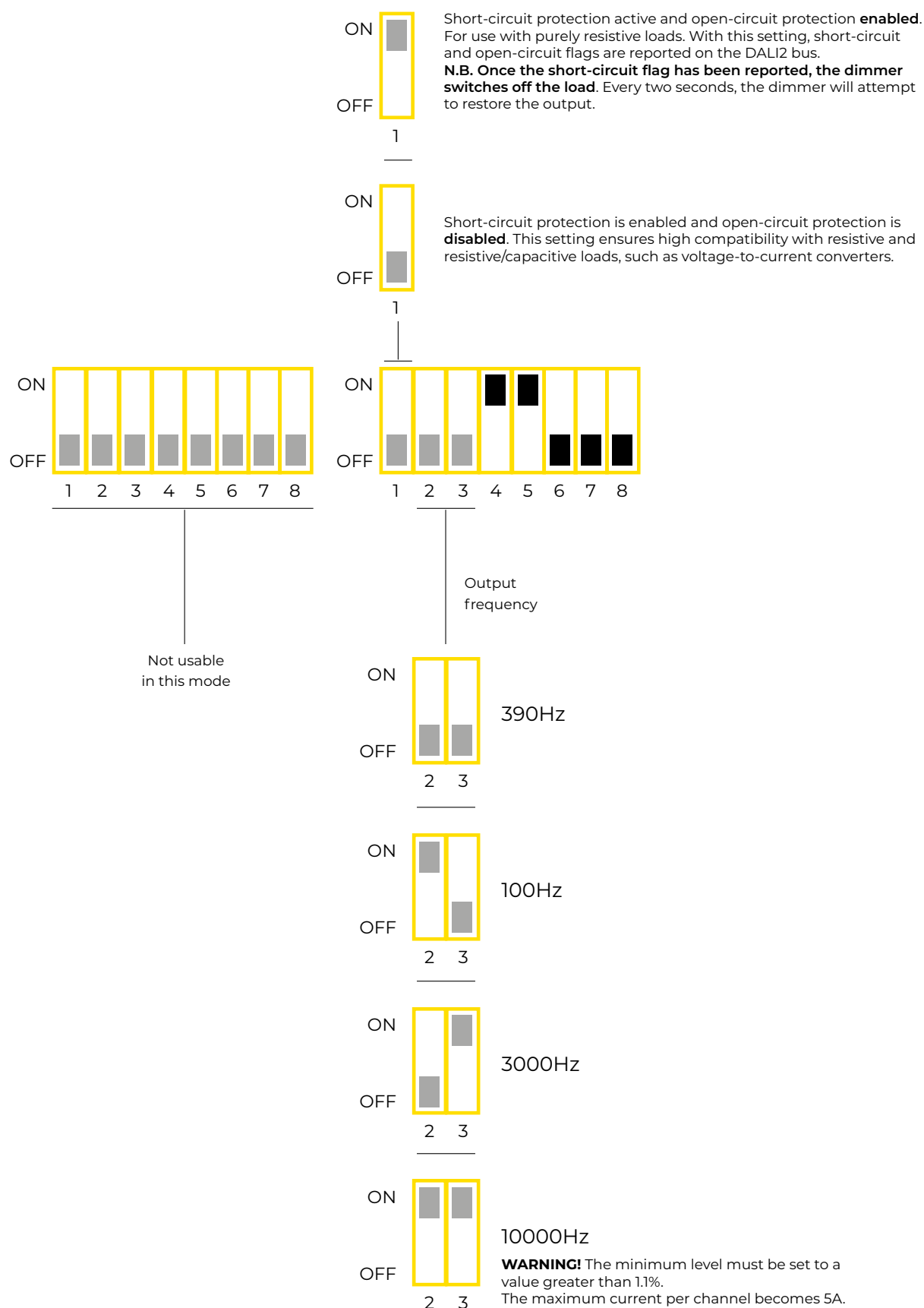
OPTIONAL
DMX512A-RDM synchronisation
link for other MULTI-4CV-DIN
units – see diagram on
page 59

FIG. 4 - DALI DT8 connection, 1 RGBW output

- ➔ To switch from the preset mode to **manual** mode, press buttons C1 and C2 simultaneously for 2 seconds. All the indicator LEDs will **start to flash**. In manual mode, pressing one of the buttons switches the corresponding channel on or off (C1 – red, C2 – green, C3 – blue, C4 – white). The status of the output channel in manual mode is indicated by the corresponding LED (**steady on with a brief flash = output channel on; steady off with a brief flash = output channel off**). To exit manual mode, press buttons C1 and C2 simultaneously for 2 seconds, or switch the dimmer off and on again by disconnecting the power supply.

Modes of operation

4 | DALI2 DT8 1 RGBW output – parameters



Modes of operation

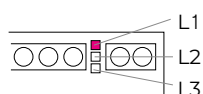
5 | DMX512A-RDM 1 output

Dip switch settings:



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

If the configuration is **correct**, once power is supplied to the dimmer, the L1 LED will light up **purple**.



If the configuration is **incorrect**, LEDs L1 and L2 will flash **red**.

If the configuration is correct but the **parameters are incorrect** (grey DIP switches in the figure above), LED L1 will **flash red**.

The dimmer must be powered in accordance with the polarity shown in **FIG. 5** via the DC IN+ and DC IN- terminals.

If the polarity of the power supply is reversed, the device will not be damaged. The outputs must be wired as shown in **FIG. 5**.

In this mode, the device operates as a single-output DMX512A-RDM dimmer with a maximum current of 32A.

Relevant regulations:

- ANSI E1.11 Entertainment technology - USITT DMX512-A
- ANSI E1.20 Entertainment technology RDM (Remote Device Management)

NB: In this mode, BLE (Bluetooth) control is disabled.



WARNING!
If using loads >24A,
see the diagram on page 58

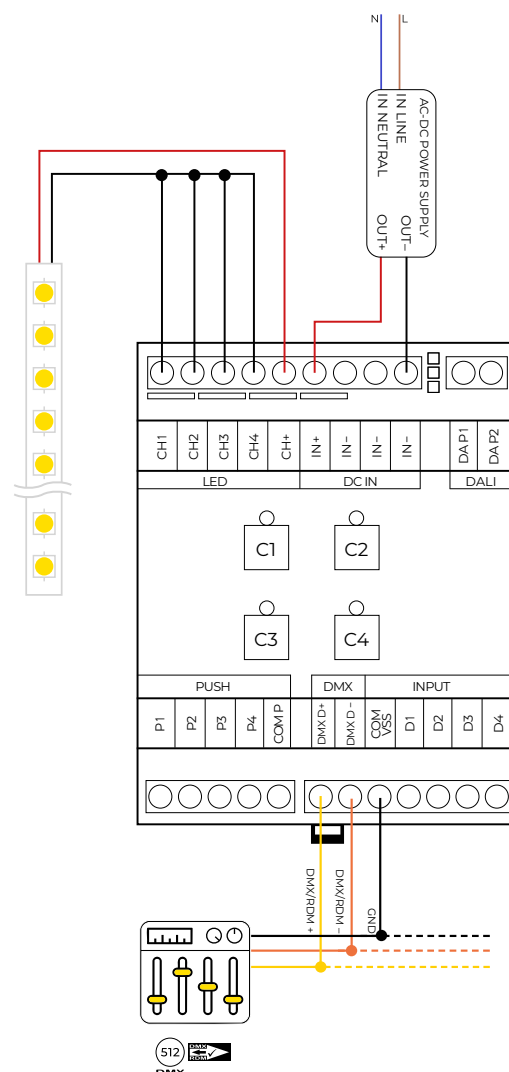
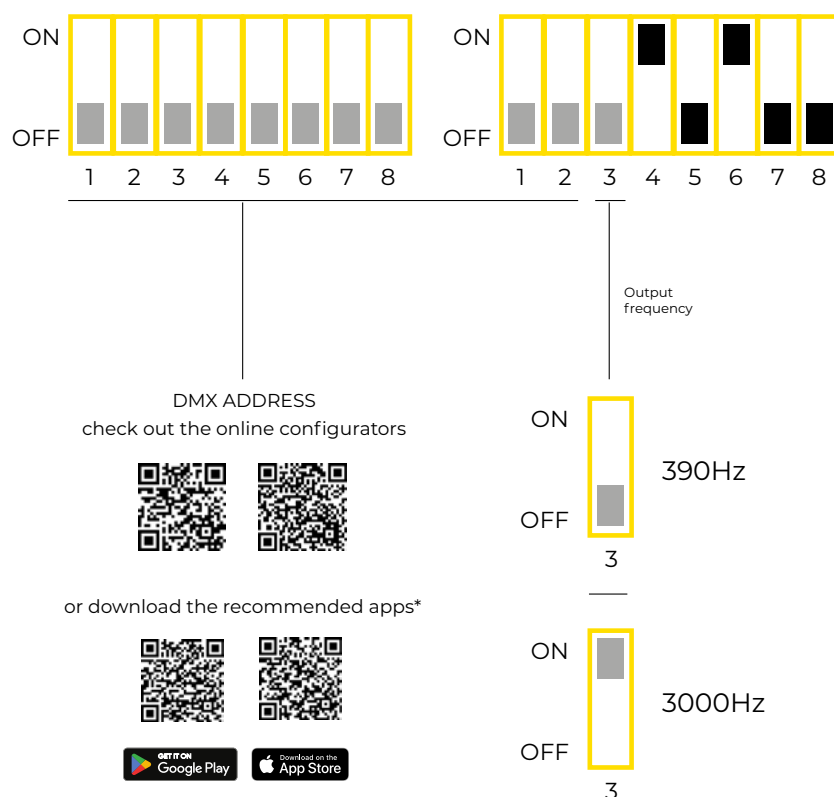


FIG. 5 - DMX512A-RDM connection, 1 output

- ➔ To switch from the preset mode to **manual** mode, press buttons C1 and C2 simultaneously for 2 seconds. All indicator LEDs will **start to flash**. In manual mode, pressing any of the buttons switches all channels on and off simultaneously. The status of the outputs in manual mode is indicated by the status LEDs (**steady on with a brief flash = output channel on; steady off with a brief flash = output channel off**). To exit **manual** mode, press buttons C1 and C2 simultaneously for 2 seconds, or switch the dimmer off and on again by disconnecting the power supply.

Modes of operation

5 | DMX512A-RDM 1 output - parameters



DMX ADDRESS											
CONFIGURATIONS	1	2	3	4	5	6	7	8		1	2
RDM address (default address 1)	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF		OFF	OFF
address 1	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF		OFF	OFF
address 2	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF		OFF	OFF
address 3	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF		OFF	OFF
address 4	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF		OFF	OFF
address 5	ON	OFF	ON	OFF	OFF	OFF	OFF	OFF		OFF	OFF
address 6	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF		OFF	OFF
address 7	ON	ON	ON	OFF	OFF	OFF	OFF	OFF		OFF	OFF
address 8	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF		OFF	OFF
address 9	ON	OFF	OFF	ON	OFF	OFF	OFF	OFF		OFF	OFF
address 10	OFF	ON	OFF	ON	OFF	OFF	OFF	OFF		OFF	OFF
address 11	ON	ON	OFF	ON	OFF	OFF	OFF	OFF		OFF	OFF
address 12	OFF	OFF	ON	ON	OFF	OFF	OFF	OFF		OFF	OFF
address 13	ON	OFF	ON	ON	OFF	OFF	OFF	OFF		OFF	OFF
address 14	OFF	ON	ON	ON	OFF	OFF	OFF	OFF		OFF	OFF
address 15	ON	ON	ON	ON	OFF	OFF	OFF	OFF		OFF	OFF

Setting the DMX address (other than the "RDM address") via DIP switches disables the ability to configure the address via RDM. Changing any of the DIP switches for the DMX address will NOT reset the RDM address. To reset the address set via RDM, you must change the operating mode (for the procedure, see 'Changing the mode' on page 67).

* The recommended apps are developed by third parties and are not linked to the use of the dimmer.

Modes of operation

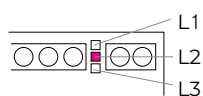
6 | DMX512A-RDM 3 outputs

Dip switch settings:



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

If the configuration is **correct**, once power is supplied to the dimmer, the L2 LED will light up **purple**.



If the configuration is **incorrect**, LEDs L1 and L2 will flash **red**.

If the configuration is correct but the **parameters are incorrect** (grey DIP switches in the figure above), LED L1 will **flash red**.

The dimmer must be powered in accordance with the polarity shown in **FIG. 6** via the DC IN+ and DC IN- terminals.

If the polarity of the power supply is reversed, the device will not be damaged. The outputs must be wired as shown in **FIG. 6**.

In this mode, the device acts as a DMX512A-RDM dimmer with 3 outputs, 8A per channel.

Output CH1 will correspond to the DMX address set via the parameter dip switches.

Output CH2 will correspond to the DMX address set via the parameter dip switches + 1.

Output CH3 will correspond to the DMX address set via the parameter dip switches + 2.

Output CH4 is NOT enabled in this mode.

Relevant regulations:

- ANSI E1.11 Entertainment technology - USITT DMX512-A
- ANSI E1.20 Entertainment technology RDM (Remote Device Management)

NB: In this mode, BLE (Bluetooth) control is disabled.

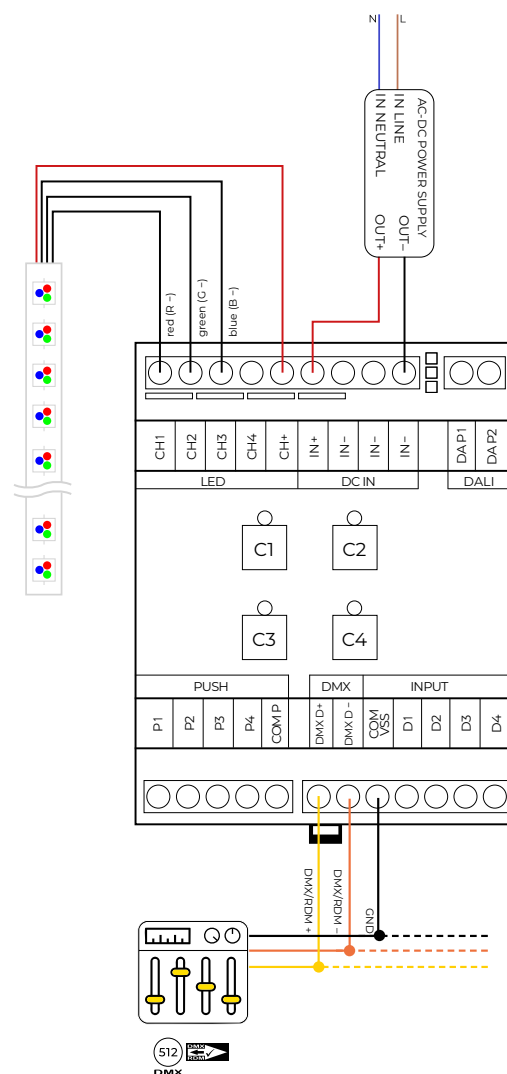
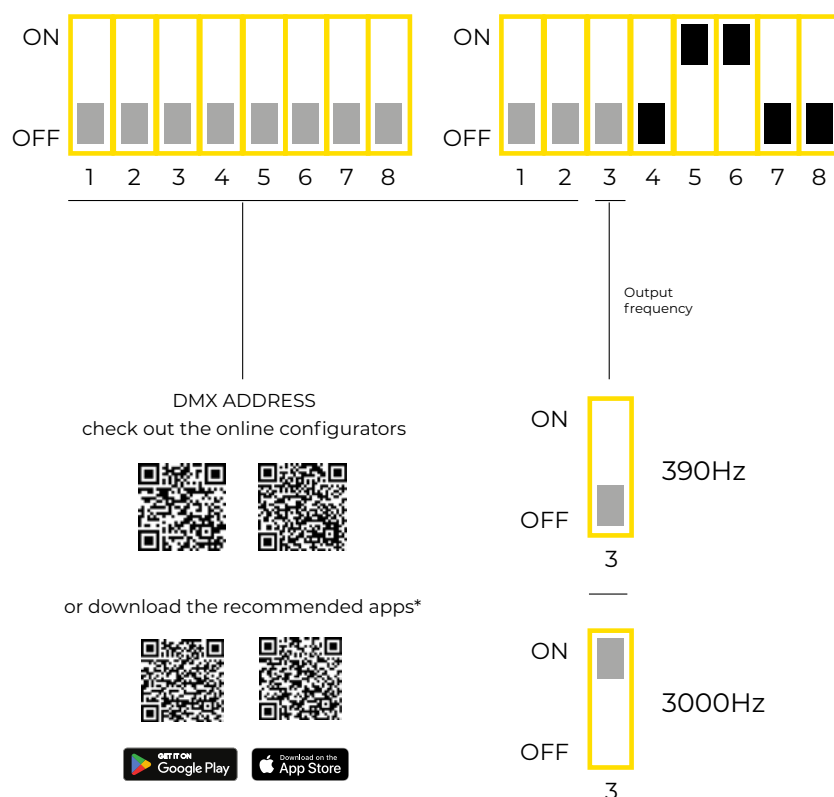


FIG. 6 - DMX512A-RDM connection 3 outputs

- ➔ To switch from preset to **manual** mode, press buttons C1 and C2 simultaneously for 2 seconds. All indicator LEDs will **start flashing**. In manual mode, pressing one of the buttons turns the corresponding channel on and off (C1 - red, C2 - green, C3 - blue). The status of the output channel in manual mode is indicated by the corresponding LED (**steady on with a short flash = output channel on; steady off with a short flash = output channel off**). To exit manual mode, press buttons C1 and C2 simultaneously for 2 seconds or turn the dimmer off and on again by removing the power supply.

Modes of operation

6 | DMX512A-RDM 3 outputs - parameters



DMX ADDRESS											
CONFIGURATIONS	1	2	3	4	5	6	7	8		1	2
RDM address (default address 1)	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF		OFF	OFF
address 1	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF		OFF	OFF
address 2	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF		OFF	OFF
address 3	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF		OFF	OFF
address 4	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF		OFF	OFF
address 5	ON	OFF	ON	OFF	OFF	OFF	OFF	OFF		OFF	OFF
address 6	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF		OFF	OFF
address 7	ON	ON	ON	OFF	OFF	OFF	OFF	OFF		OFF	OFF
address 8	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF		OFF	OFF
address 9	ON	OFF	OFF	ON	OFF	OFF	OFF	OFF		OFF	OFF
address 10	OFF	ON	OFF	ON	OFF	OFF	OFF	OFF		OFF	OFF
address 11	ON	ON	OFF	ON	OFF	OFF	OFF	OFF		OFF	OFF
address 12	OFF	OFF	ON	ON	OFF	OFF	OFF	OFF		OFF	OFF
address 13	ON	OFF	ON	ON	OFF	OFF	OFF	OFF		OFF	OFF
address 14	OFF	ON	ON	ON	OFF	OFF	OFF	OFF		OFF	OFF
address 15	ON	ON	ON	ON	OFF	OFF	OFF	OFF		OFF	OFF

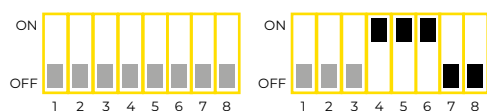
Setting the DMX address (other than the "RDM address") via DIP switches disables the ability to configure the address via RDM. Changing any of the DIP switches for the DMX address will NOT reset the RDM address. To reset the address set via RDM, you must change the operating mode (for the procedure, see 'Changing the mode' on page "Cambio di modalità" on page 67).

* The recommended apps are developed by third parties and are not linked to the use of the dimmer.

Modes of operation

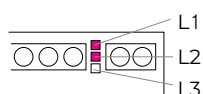
7 | DMX512A-RDM 4 outputs

Dip switch settings:



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

If the configuration **is correct**, once power is supplied to the dimmer, the L1 and L2 LEDs will light up **purple**.



If the configuration is **incorrect**, LEDs L1 and L2 will flash **red**.

If the configuration is correct but the **parameters are incorrect** (grey DIP switches in the figure above), LED L1 will **flash red**.

The dimmer must be powered in accordance with the polarity shown in **FIG. 7** via the DC IN+ and DC IN- terminals.

If the polarity of the power supply is reversed, the device will not be damaged. The outputs must be wired as shown in **FIG. 7**.

In this mode the device acts as a DMX512A-RDM dimmer with 4 outputs, 8A per channel.

The **CH1 output** will correspond to the DMX address set via the parameter dip switches.
The **CH2 output** will correspond to the DMX address set via the parameter dip switches + 1.
The **CH3 output** will correspond to the DMX address set via the parameter dip switches + 2.
The **CH4 output** will correspond to the DMX address set via the parameter dip switches + 3.

Relevant regulations:

- ANSI E1.11 Entertainment technology - USITT DMX512-A
- ANSI E1.20 Entertainment technology RDM (Remote Device Management)

NB: In this mode, BLE (Bluetooth) control is disabled.

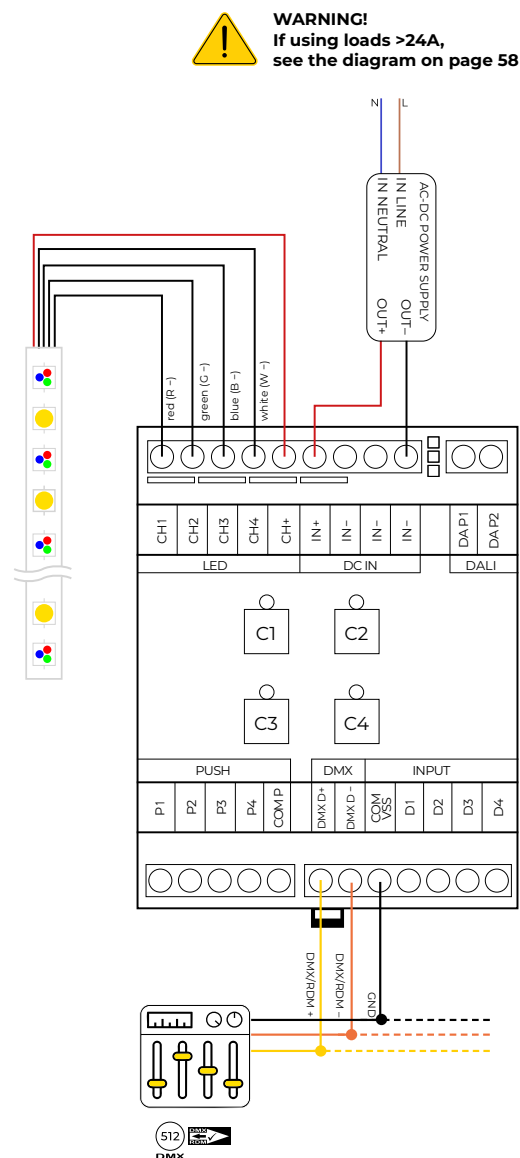


FIG. 7 - DMX512A-RDM connection 4 outputs

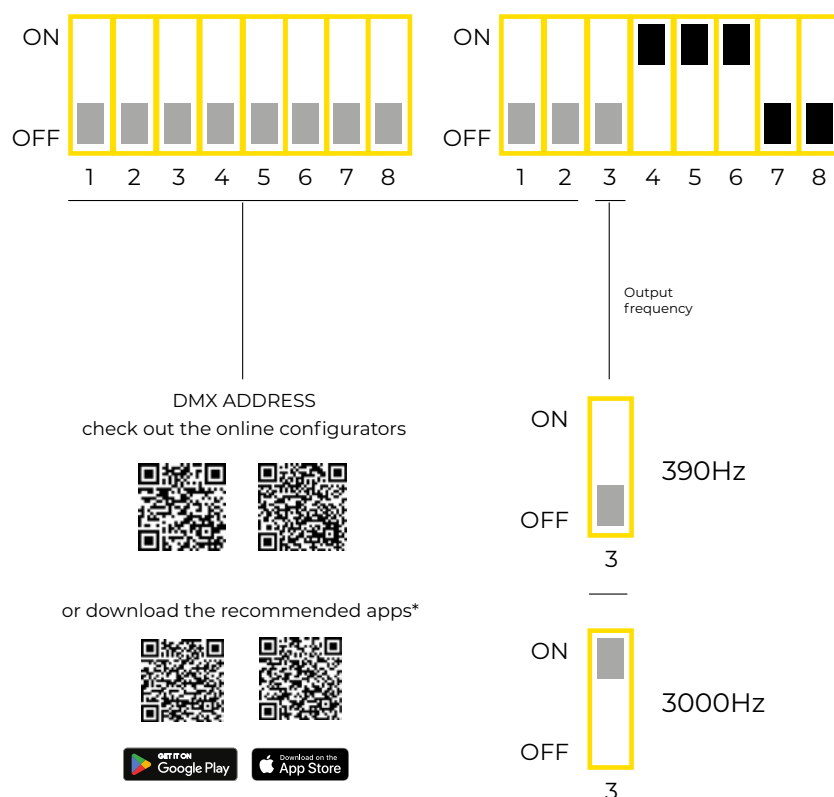
→ To switch from the preset mode to **manual** mode, press buttons C1 and C2 simultaneously for 2 seconds. All the indicator LEDs will **start to flash**. In manual mode, pressing one of the buttons switches the corresponding channel on or off (C1 – red, C2 – green, C3 – blue, C4 – white).

The status of the output channel in manual mode is indicated by the corresponding LED (**steady on with a brief flash = output channel on; steady off with a brief flash = output channel off**).

To exit manual mode, press buttons C1 and C2 simultaneously for 2 seconds, or switch the dimmer off and on again by disconnecting the power supply.

Modes of operation

7 | DMX512A-RDM 4 output – parameters



DMX ADDRESS											
CONFIGURATIONS	1	2	3	4	5	6	7	8		1	2
RDM address (default address 1)	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF		OFF	OFF
address 1	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF		OFF	OFF
address 2	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF		OFF	OFF
address 3	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF		OFF	OFF
address 4	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF		OFF	OFF
address 5	ON	OFF	ON	OFF	OFF	OFF	OFF	OFF		OFF	OFF
address 6	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF		OFF	OFF
address 7	ON	ON	ON	OFF	OFF	OFF	OFF	OFF		OFF	OFF
address 8	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF		OFF	OFF
address 9	ON	OFF	OFF	ON	OFF	OFF	OFF	OFF		OFF	OFF
address 10	OFF	ON	OFF	ON	OFF	OFF	OFF	OFF		OFF	OFF
address 11	ON	ON	OFF	ON	OFF	OFF	OFF	OFF		OFF	OFF
address 12	OFF	OFF	ON	ON	OFF	OFF	OFF	OFF		OFF	OFF
address 13	ON	OFF	ON	ON	OFF	OFF	OFF	OFF		OFF	OFF
address 14	OFF	ON	ON	ON	OFF	OFF	OFF	OFF		OFF	OFF
address 15	ON	ON	ON	ON	OFF	OFF	OFF	OFF		OFF	OFF

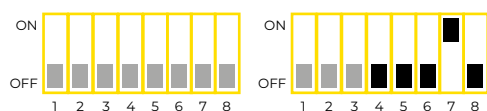
Setting the DMX address (other than the "RDM address") via DIP switches disables the ability to configure the address via RDM. Changing any of the DIP switches for the DMX address will NOT reset the RDM address. To reset the address set via RDM, you must change the operating mode (for the procedure, see 'Changing the mode' on page "Cambio di modalità" on page 67).

* The recommended apps are developed by third parties and are not linked to the use of the dimmer.

Modes of operation

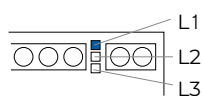
8 | PUSH + BLE 1 output

Dip switch settings:



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

If the configuration is **correct**, once power is supplied to the dimmer, the L1 LED will light up **blue**.



If the configuration is **incorrect**, LEDs L1 and L2 will flash **red**.

If the configuration is correct but the **parameters are incorrect** (grey DIP switches in the figure above), LED L1 will **flash red**.

The dimmer must be powered in accordance with the polarity shown in **FIG. 8** via the DC IN+ and DC IN- terminals.

If the polarity of the power supply is reversed, the device will not be damaged. The outputs must be wired as shown in **FIG. 8**.

Control via push-buttons can be achieved by using the mains voltage (110–230 V AC) directly, as shown in **FIG. 8**, or the output voltage of the power supply (8÷53VDC), **FIG. 9**. When installing the dimmer in a system, it is preferable to use the circuit shown in **FIG. 8**. In this configuration, the dimmer ensures isolation from the mains voltage.

The input range between the COM P and P1/2/3/4 terminals is DC: 10÷265 V, AC: 12÷265 VAC, 50÷65 Hz. In this mode, all buttons connected to inputs P1, P2, P3 and P4 will control outputs CH1/CH2/CH3/CH4, which will function as a **SINGLE OUTPUT** with a maximum current of 32A.

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

The maximum distance between the dimmer and the buttons for a single interface must not exceed a total of 20 metres (e.g. P1A 3 metres from the dimmer and P1B 8 metres from the dimmer = 11 metres total distance).

For cable lengths exceeding 20 metres or where multiple control buttons are used, the use of a normally open monostable support relay is recommended (see diagram on page 60).

If the power supply is lost, the dimmer saves the output status so that the set level is restored when power is restored.

WARNING!
If using loads >24A,
see the diagram on page 58

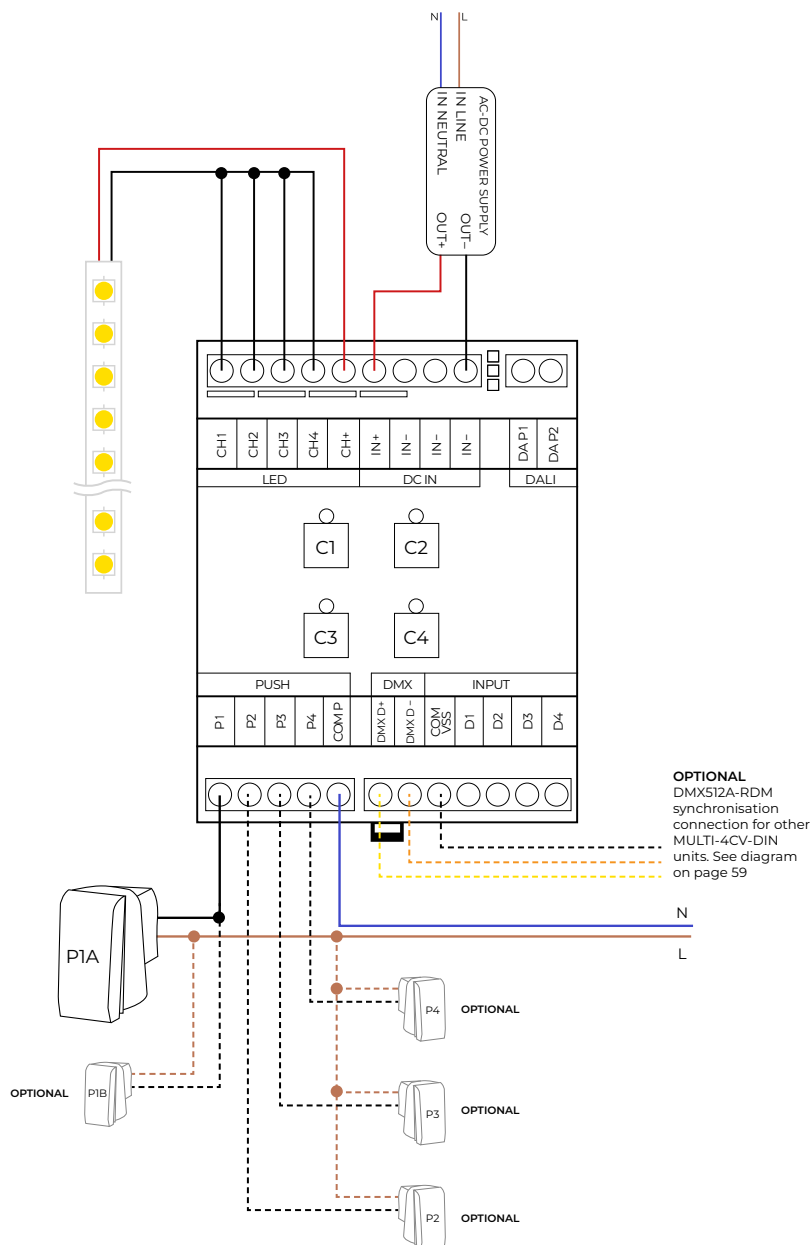


FIG. 8 - PUSH + BLE connection 1 output with buttons referred to L and N

➔ To switch from the preset mode to **manual** mode, press buttons C1 and C2 simultaneously for 2 seconds. All indicator LEDs will **start to flash**. In manual mode, pressing any of the buttons switches all channels on and off simultaneously. The status of the outputs in manual mode is indicated by the status LEDs (**steady on with a brief flash = output channel on; steady off with a brief flash = output channel off**). To exit **manual** mode, press buttons C1 and C2 simultaneously for 2 seconds, or switch the dimmer off and on again by disconnecting the power supply.

By default, the output level is set to 100%.
Changing the mode resets the output level to the default setting (100%).

Operation of the PUSH interface

Single click (quick press <1 sec)

- Switches the output on or off (ON/OFF).

Double click (quick press <1 sec)

- Set the maximum output brightness (100%).
Maximum light, fast mode.

Long Press (press and hold for >1 sec)

- If the dimmer is in the OFF state, it sets the output to the minimum value (configured via the DIP switches). Night-time anti-glare mode.
- If the dimmer is in the ON state, pressing and holding the button allows the output to be dimmed (up/down).

n.b.: Check that the input and output connection cables are correctly inserted into the terminal block carriage and not underneath it. Incorrect insertion of the cable inside the carriage may lead to overheating or malfunctions.

In this mode, the output status is also sent via the DMX512A-RDM bus on fixed channels 1, 2, 3 and 4.

In this mode, the BLE interface is enabled for controlling the output via the **OIKOS APP**.

OIKOS APP APP installation and configuration

To install the app on your Apple or Android device, scan the relevant QR code to be automatically redirected to the OIKOS app's product page.



WARNING! The MULTI-4CV-DIN dimmer can be controlled via the OIKOS app only in BLE mode.

For app instructions, see page 64.



WARNING!
If using loads >24A,
see the diagram on page 58

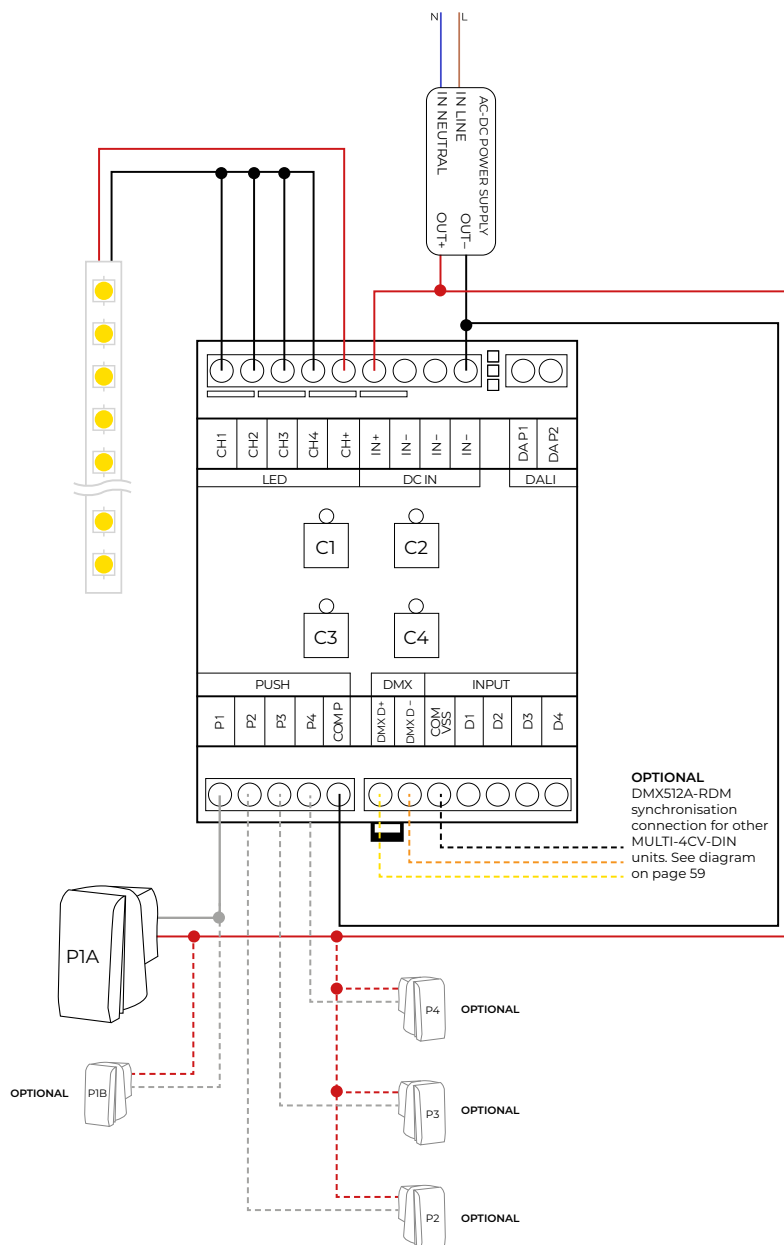


FIG. 9 - PUSH + BLE connection, 1 output with ultra-low-voltage buttons

➔ To switch from the preset mode to **manual** mode, press buttons C1 and C2 simultaneously for 2 seconds. All indicator LEDs will **start to flash**. In manual mode, pressing any of the buttons switches all channels on and off simultaneously. The status of the outputs in manual mode is indicated by the status LEDs (**steady on with a brief flash = output channel on; steady off with a brief flash = output channel off**). To exit **manual** mode, press buttons C1 and C2 simultaneously for 2 seconds, or switch the dimmer off and on again by disconnecting the power supply.

Modes of operation

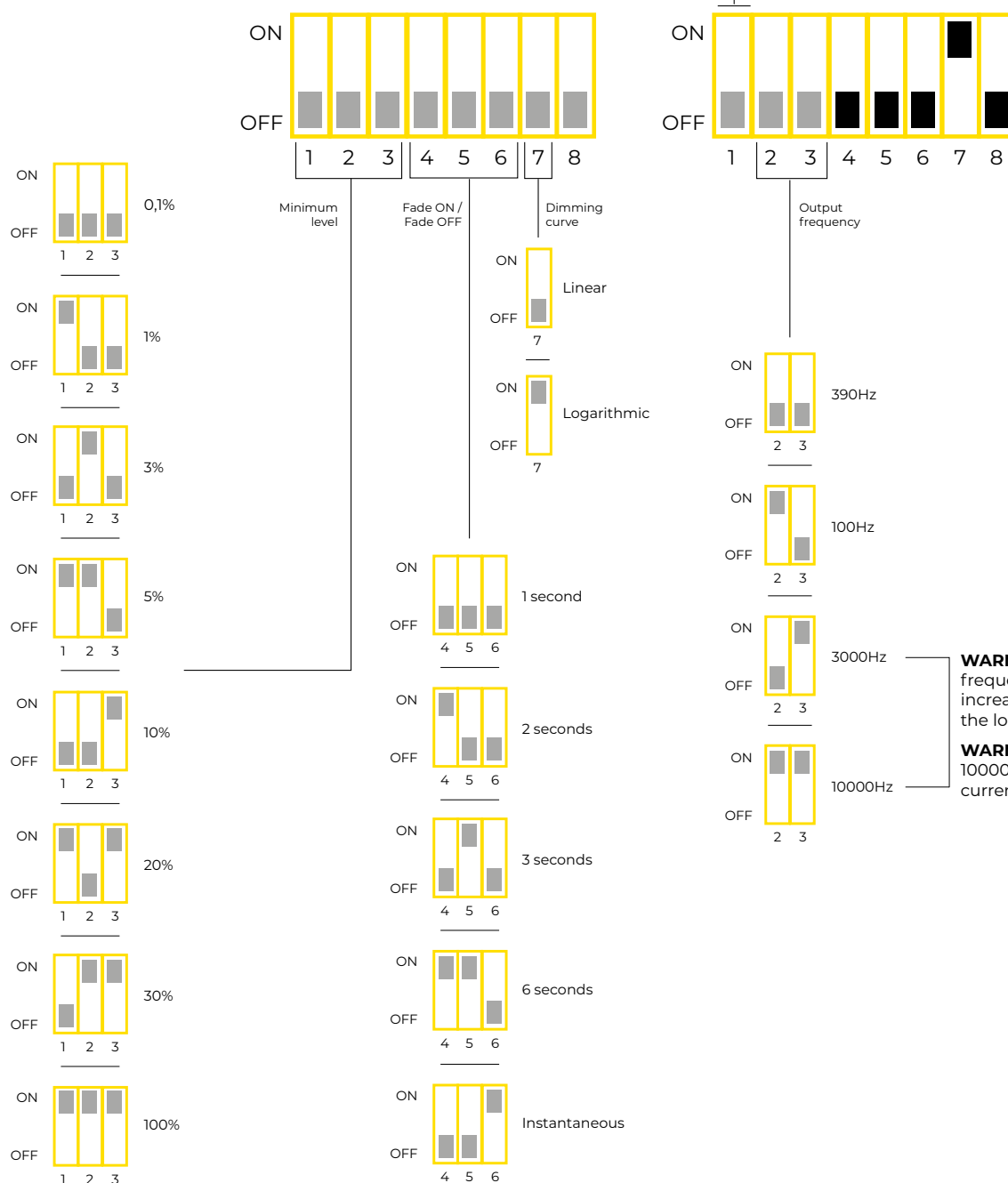
8 | PUSH + BLE 1 output – parameters

ON  OFF  1

Active short-circuit protection **enabled**.
For use with purely resistive loads.
N.B. Once the short-circuit protection has been triggered, the dimmer switches off the load. Every two seconds, the dimmer will attempt to restore the output.

ON  OFF  1

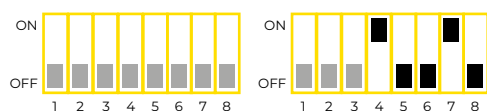
Active short-circuit protection **disabled**.
This setting ensures high compatibility with resistive and resistive/capacitive loads, such as voltage-to-current converters.



Modes of operation

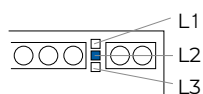
9 | PUSH + BLE 4 outputs

Dip switch settings:



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

If the configuration is **correct**, once power is supplied to the dimmer, the L2 LED will light up **blue**.



If the configuration is **incorrect**, LEDs L1 and L2 will flash **red**.

If the configuration is correct but the **parameters are incorrect** (grey DIP switches in the figure above), LED L1 will flash **red**.

The dimmer must be powered in accordance with the polarity shown in **FIG. 10** via the terminals DC IN+ e DC IN-.

If the polarity of the power supply is reversed, the device will not be damaged. The outputs must be wired as shown in the **FIG. 10**.

The buttons can be operated directly using mains voltage (110÷230 V AC), as shown in the **FIG. 10**, or the power supply's output voltage (8–53 V DC), as shown in **FIG. 11**.

When installing the dimmer in a system, it is preferable to use the circuit shown in **FIG. 10**.

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

The input range between the COM P and P1/2/3/4 terminals is DC: 10÷265 V, AC: 12÷265 VAC, 50÷65 Hz.

In this mode:

- The buttons on input **P1A** control output CH1.
- The buttons on input **P2** control output CH2.
- The buttons on input **P3** control output CH3.
- The buttons on input **P4** control output CH4.

Additional optional buttons can be connected in parallel with the main buttons (e.g. PIB).

The individual outputs can handle loads of up to 8A (32A in total). The maximum current drawn by each PUSH interface is approximately 2mA.

The maximum distance between the dimmer and the buttons for each interface must not exceed a total of 20 metres (e.g. P1A is 3 metres from the dimmer and PIB is 8 metres from the dimmer = a total distance of 11 metres). For cable lengths exceeding 20 metres or where there are multiple control buttons, the use of a normally open monostable relay is recommended (see diagram on page 60).



WARNING!
If using loads >24A,
see the diagram on page 58

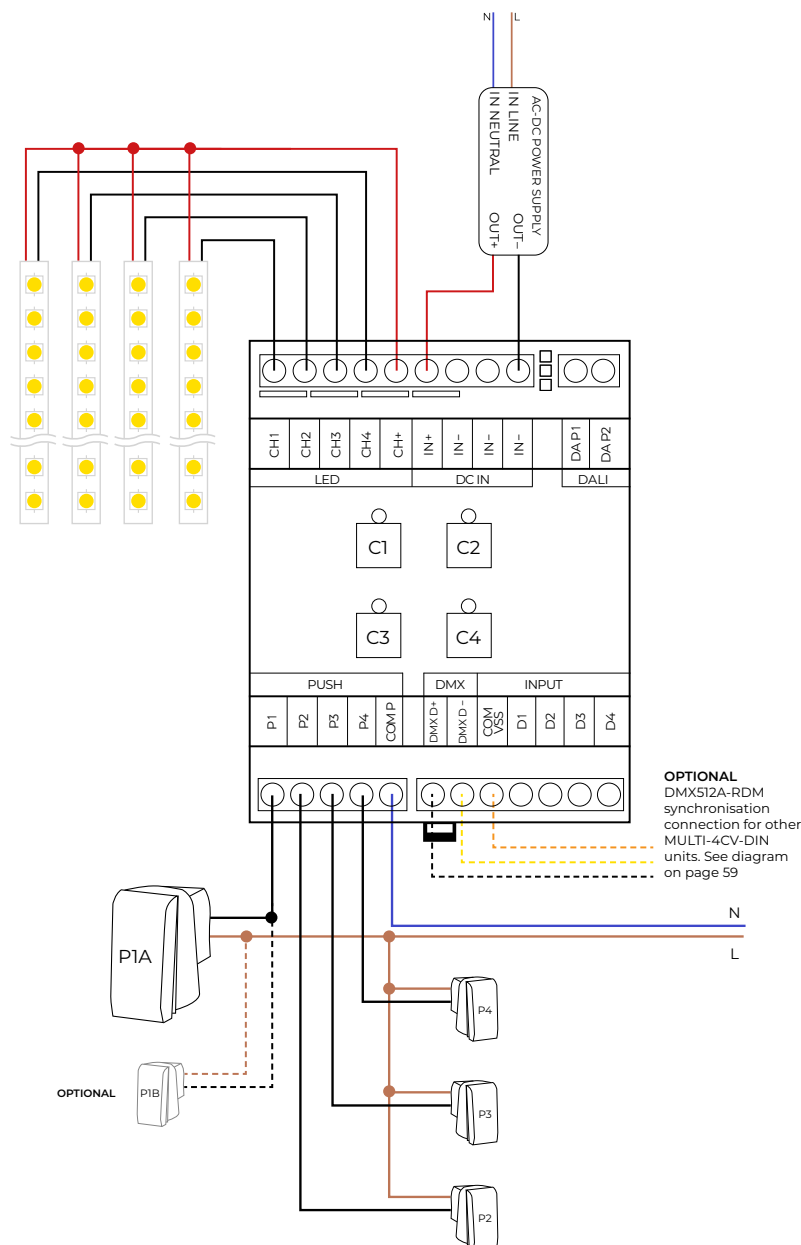


FIG. 10 - PUSH + BLE connection, 4 outputs with buttons connected to L and N

- ➔ To switch from the preset mode to **manual** mode, press buttons C1 and C2 simultaneously for 2 seconds. All indicator LEDs will start to **flash**. In manual mode, pressing one of the buttons switches the corresponding channel on or off. The status of the output channel in manual mode is indicated by the corresponding LED (**steady on with a brief flash = output channel on; steady off with a brief flash = output channel off**). To exit **manual** mode, press buttons C1 and C2 simultaneously for 2 seconds, or switch the dimmer off and on again by disconnecting the power supply.

If the power supply is lost, the dimmer saves the output status so that the set level is restored when power is restored. By default, the status of the 4 outputs is 100%. Changing the mode resets the output levels to their default setting (100%).

Interface Operation BUTTONS

Single click (quick press <1 sec)

- Switches the output on or off (ON/OFF).

Double click (quick press <1 sec)

- Set the maximum output brightness (100%).
Maximum light, fast mode.

Long Press (press and hold for >1 sec)

- If the dimmer is in the OFF state, it sets the output to the minimum value (configured via the DIP switches). Night-time anti-glare mode.
- If the dimmer is in the ON state, pressing and holding the button allows the output to be dimmed (up/down).

n.b.: Check that the input and output connection cables are correctly inserted into the terminal block carriage and not underneath it. Incorrect insertion of the cable inside the carriage may lead to overheating or malfunctions.

In this mode, the output states are also sent over the DMX512A-RDM bus on fixed channels 1, 2, 3 and 4:

Output CH1 → DMX ADDRESS 1
Output CH2 → DMX ADDRESS 2
Output CH3 → DMX ADDRESS 3
Output CH4 → DMX ADDRESS 4

In this mode, the BLE interface is enabled for controlling the output via the **OIKOS APP**.

OIKOS APP

APP installation and configuration

To install the app on your Apple or Android device, scan the relevant QR code to be automatically redirected to the OIKOS app's product page.



WARNING! The MULTI-4CV-DIN dimmer can be controlled via the OIKOS app only in BLE mode.

For app instructions, see page 64.



WARNING!
If using loads >24A,
see the diagram on page 58

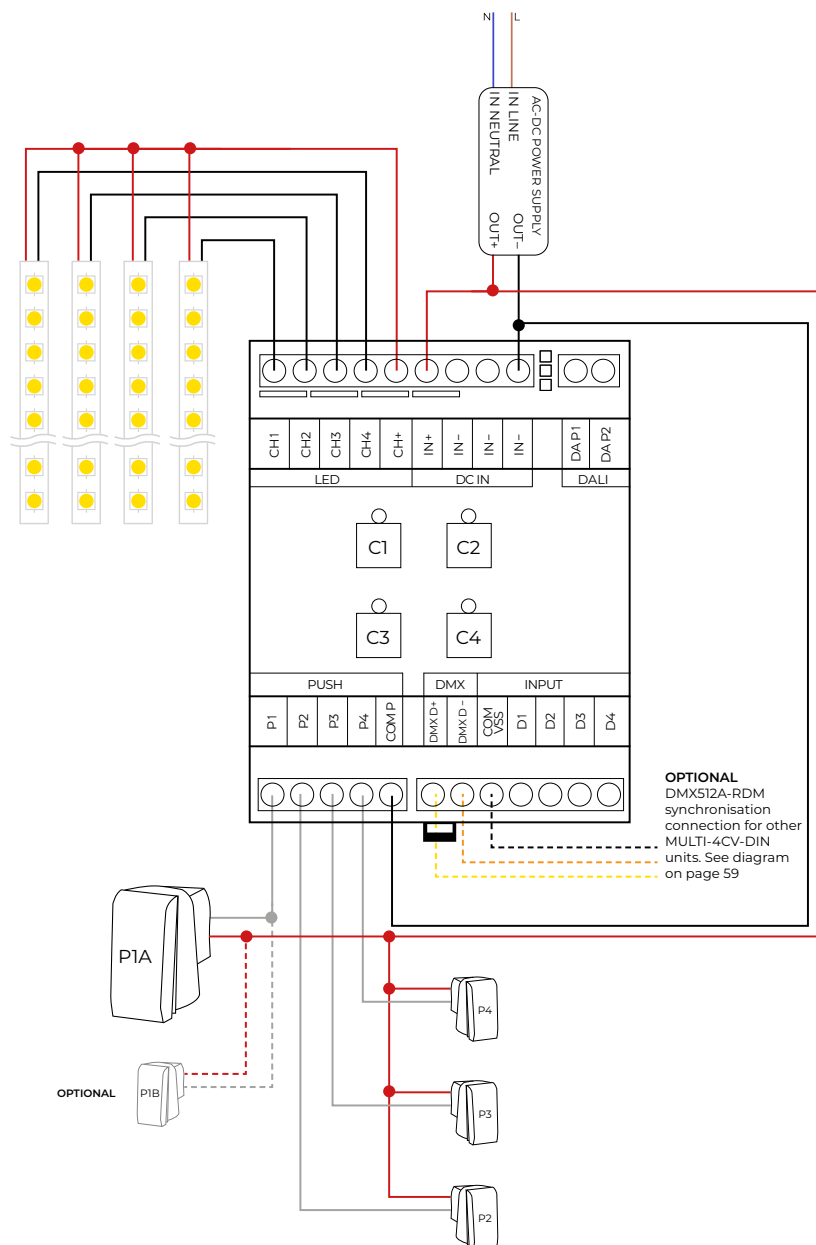


FIG. 11 - PUSH + BLE connection 4 outputs with buttons referring to very low voltage



To switch from the preset mode to **manual** mode, press buttons C1 and C2 simultaneously for 2 seconds. All indicator LEDs will start to **flash**. In manual mode, pressing one of the buttons switches the corresponding channel on or off. The status of the output channel in manual mode is indicated by the corresponding LED (**steady on with a brief flash = output channel on; steady off with a brief flash = output channel off**). To exit **manual** mode, press buttons C1 and C2 simultaneously for 2 seconds, or switch the dimmer off and on again by disconnecting the power supply.

Modes of operation

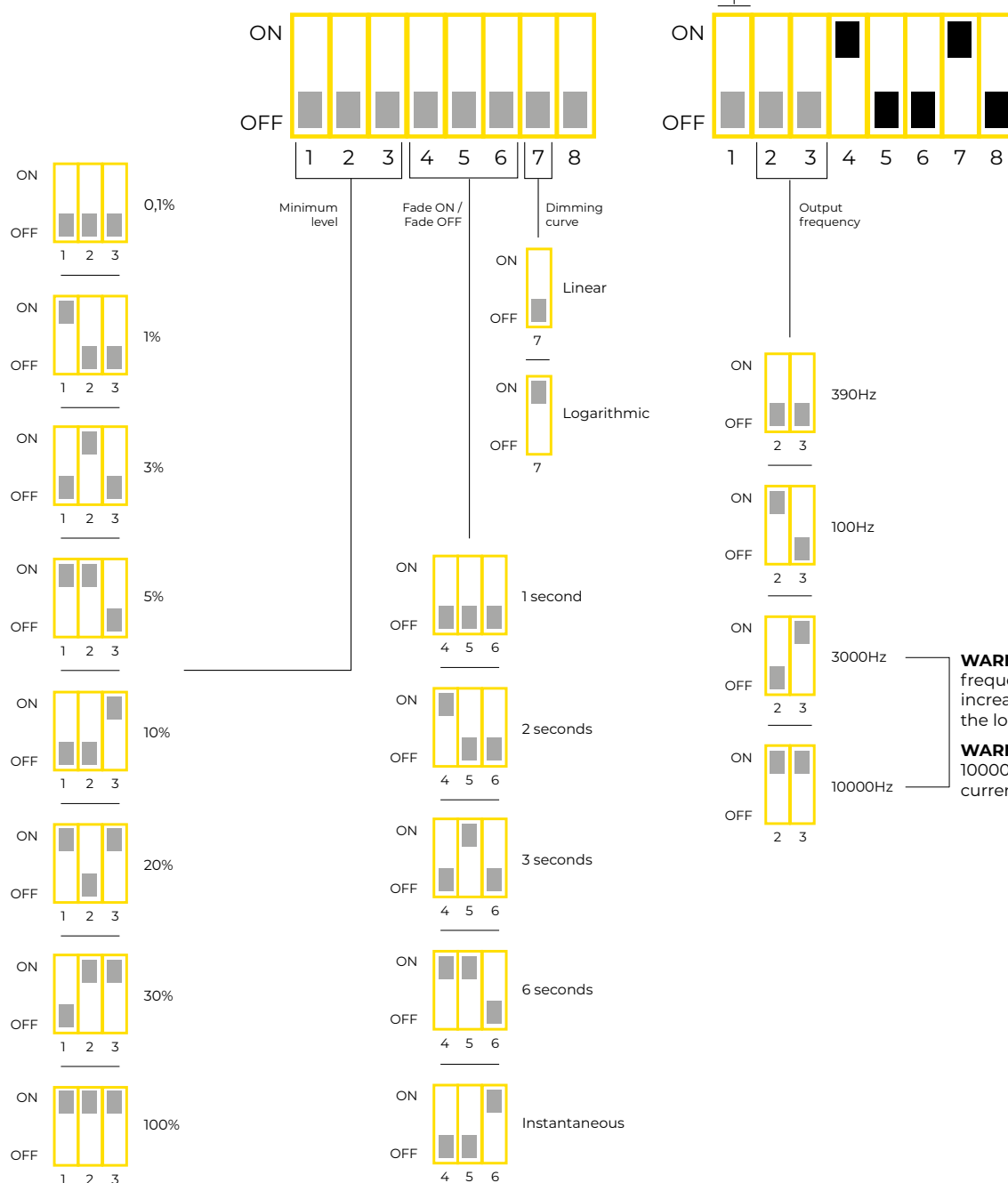
9 | PUSH + BLE 4 outputs - parameters

ON  OFF  1

Active short-circuit protection **enabled**.
For use with purely resistive loads.
N.B. Once the short-circuit protection has been triggered, the dimmer switches off the load. Every two seconds, the dimmer will attempt to restore the output.

ON  OFF  1

Active short-circuit protection **disabled**.
This setting ensures high compatibility with resistive and resistive/capacitive loads, such as voltage-to-current converters.



10 | PUSH + BLE 1 tunable white output

If the power supply is lost, the dimmer saves the output status so that the set level is restored when power is restored. By default, the output status is CCT 50%, intensity 100%. Changing the mode resets the output level to the factory default.

Operation of the P1A and P3 interface

Single click (quick press <1 sec)

- Switches the output on or off (ON/OFF).

Long Press (press and hold for >1 sec)

- Colour temperature change
(e.g. Warm → Cool and Cool → Warm).

Double click (quick press <1 sec)

- Set the maximum output brightness (100%).

Operation of the P2 and P4 interface

Single click (quick press <1 sec)

- Switches the output on or off (ON/OFF).

Long Press (press and hold for >1 sec)

- If the dimmer is in the OFF state, it sets the output to the minimum value (configured via the DIP switches).
- If the dimmer is in the ON state, pressing and holding the button allows the output to be dimmed (up/down).

Double click (quick press <1 sec)

- Set the maximum output brightness (100%).

n.b.: Check that the input and output connection cables are correctly inserted into the terminal block carriage and not underneath it. Incorrect insertion of the cable inside the carriage may lead to overheating or malfunctions.

In this mode, the output states are also sent over the DMX512A-RDM bus on fixed channels 1, 2, 3 and 4:

Output CH1 → DMX ADDRESS 1

Output CH2 → DMX ADDRESS 2

Output CH3 → DMX ADDRESS 3

Output CH4 → DMX ADDRESS 4

In this mode, the BLE interface is enabled for controlling the output via the **OIKOS APP**.

OIKOS APP APP installation and configuration

To install the app on your Apple or Android device, scan the relevant QR code to be automatically redirected to the OIKOS app's product page.



WARNING! The MULTI-4CV-DIN dimmer can be controlled via the OIKOS app only in BLE mode.

For app instructions, see page 64.



WARNING!
If using loads >8A,
see the diagram on page 58

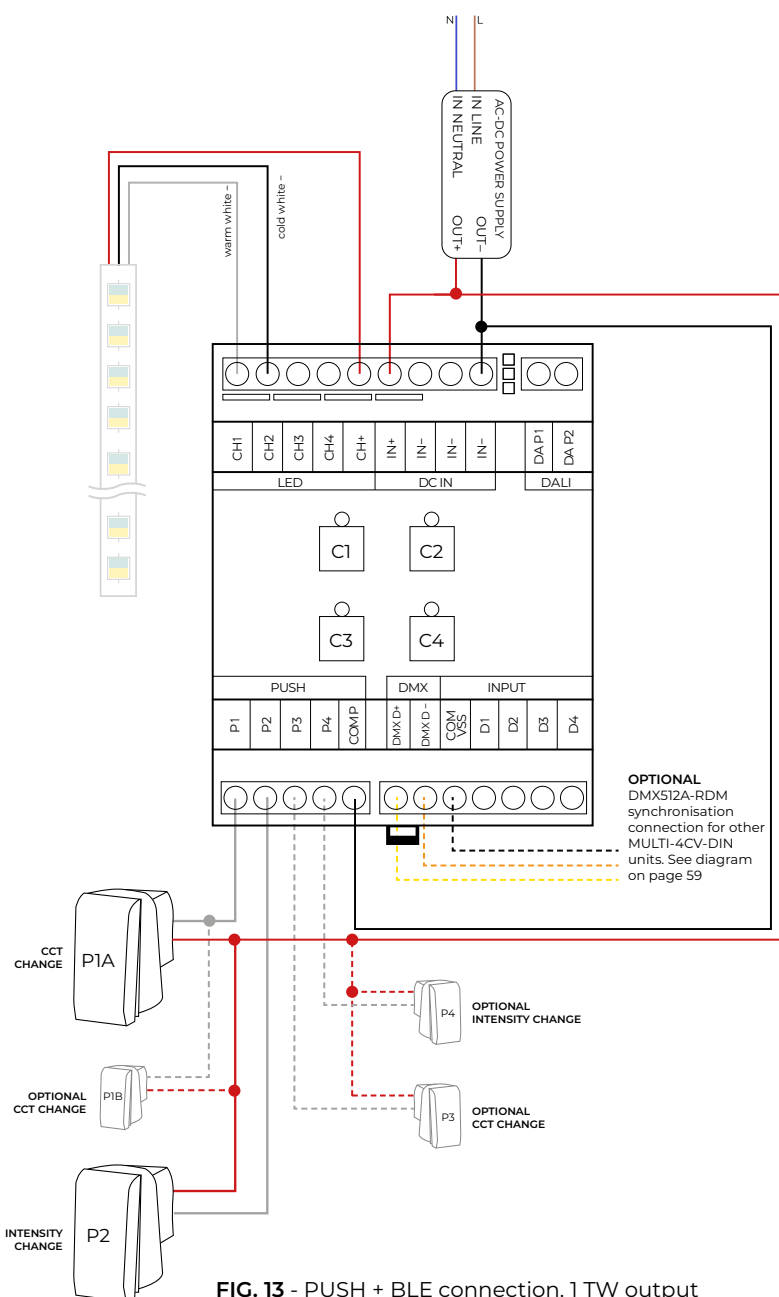


FIG. 13 - PUSH + BLE connection, 1 TW output with buttons for very low voltage

➔ To switch from preset to **manual** mode, press buttons C1 and C2 simultaneously for 2 seconds. All indicator LEDs will **start flashing**. In manual mode, pressing button C1 (or C3) turns the warm white channel on and off. In manual mode, pressing button C2 (or C4) turns the cold white channel on and off. The status of the outputs in manual mode is indicated by the status LEDs (**steady on with a short flash = output channel on; steady off with a short flash = output channel off**). To exit **manual** mode, press buttons C1 and C2 simultaneously for 2 seconds or turn the dimmer off and on again by removing the power supply.

Modes of operation

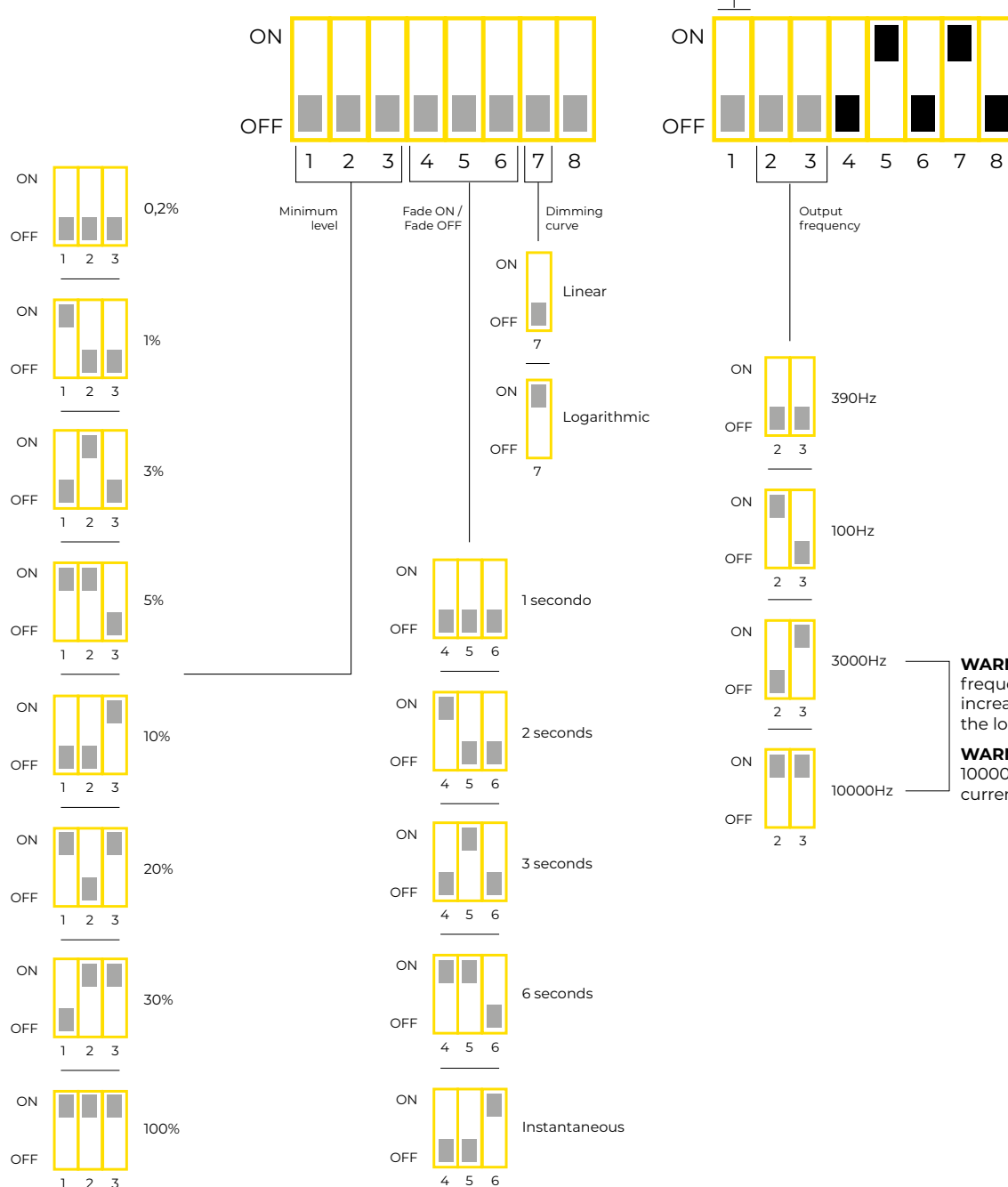
10 | PUSH + BLE 1 tunable white output - parameters

ON  OFF  1

Active short-circuit protection **enabled**.
For use with purely resistive loads.
N.B. Once the short-circuit protection has been triggered, the dimmer switches off the load. Every two seconds, the dimmer will attempt to restore the output.

ON  OFF  1

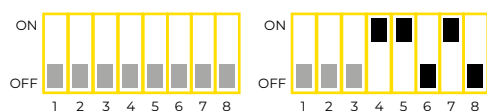
Active short-circuit protection **disabled**.
This setting ensures high compatibility with resistive and resistive/capacitive loads, such as voltage-to-current converters.



Modes of operation

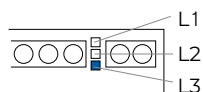
11 | PUSH + BLE 2 tunable white outputs

Dip switch settings:



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

If the configuration is **correct**, once power is supplied to the dimmer, the L3 LED will light up **blue**.



If the configuration is **incorrect**, LEDs L1 and L2 will flash red. If the configuration is correct but the **parameters are incorrect** (grey DIP switches in the figure above), LED L1 will flash red.

The dimmer must be powered in accordance with the polarity shown in **FIG. 14** via the DC IN+ and DC IN- terminals.

If the polarity of the power supply is reversed, the device will not be damaged. The outputs must be wired as shown in **FIG. 14**.

Control via push-buttons can be achieved by using the mains voltage (110–230 V AC) directly, as shown in **FIG. 14**, or the power supply's output voltage (8–53 V DC), as shown in **FIG. 15**. When installing the dimmer in a system, it is preferable to use the circuit shown in **FIG. 14**. In this configuration, the dimmer ensures isolation from the mains voltage. The input range between the COM P and P1/2/3/4 terminals is DC: 10÷265 V, AC: 12÷265 VAC, 50÷65 Hz.

In this mode:

- The buttons on input **P1** vary the color temperature of the TW1 output (CCT).
- The buttons on input **P2** control the intensity of the TW1 output.
- The buttons on input **P3** vary the color temperature of the TW2 output (CCT).
- The buttons on input **P4** control the intensity of the TW2 output.

Additional optional buttons can be connected in parallel with the main buttons.

Individual outputs can handle loads of up to 8A. The maximum current drawn by each PUSH interface is approximately 2mA. The maximum distance between the dimmer and the buttons for each interface must not exceed 20 metres in total (e.g. P1 3 metres away from the dimmer and another button connected in parallel to input P1, 8 metres away from the dimmer = 11 metres total distance). For cable lengths exceeding 20 metres or where there are multiple control buttons, the use of a normally open monostable relay is recommended (see diagram on page 60).

WARNING!
If using loads >24A,
see the diagram on page 58

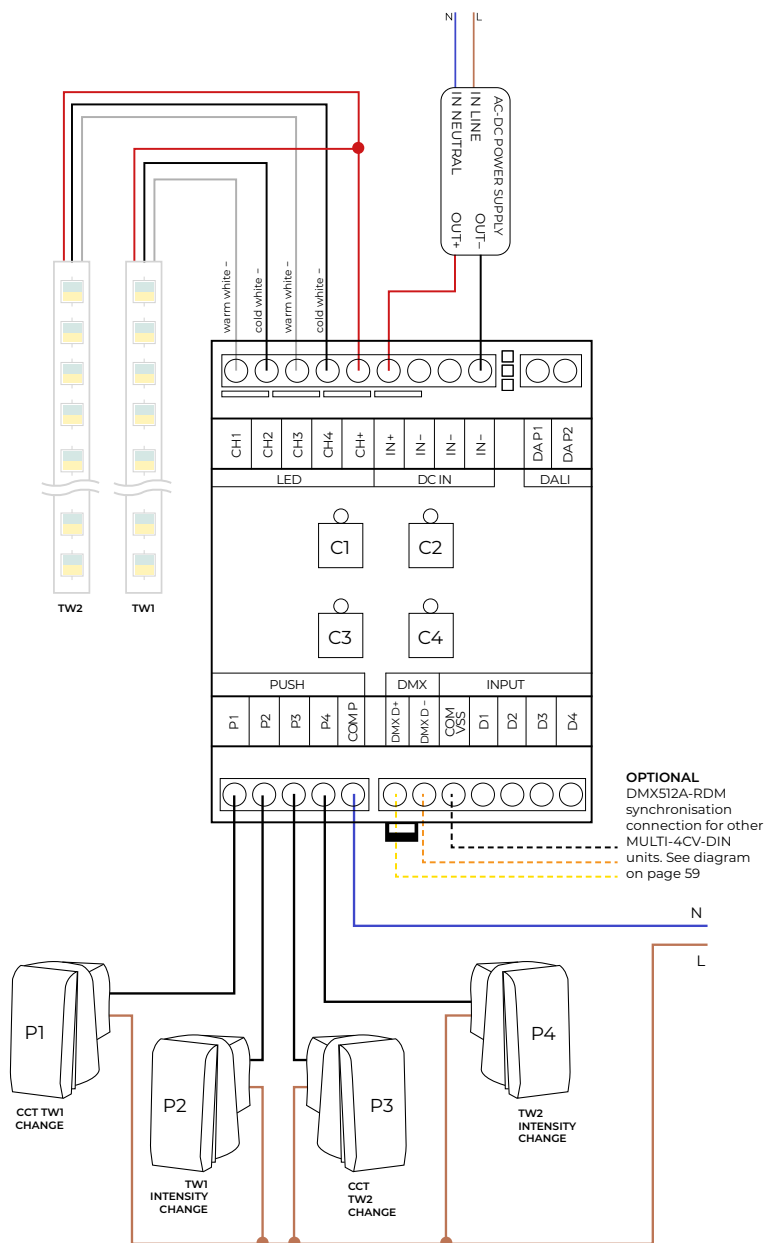


FIG. 14 - PUSH + BLE connection, 2 TW outputs with buttons connected to L and N

- ➔ To switch from the preset mode to **manual** mode, press buttons C1 and C2 simultaneously for 2 seconds. All indicator LEDs will **start to flash**. In manual mode, pressing button C1/C3 switches the warm white channel TW1/TW2 on and off. In manual mode, pressing button C2/C4 switches the TW1/TW2 cold white channel on and off. The status of the outputs in manual mode is indicated by the status LEDs (**steady on with a brief flash = output channel on; steady off with a brief flash = output channel off**). To exit **manual** mode, press buttons C1 and C2 simultaneously for 2 seconds, or switch the dimmer off and on again by disconnecting the power supply.

In the event of a power cut, the dimmer saves the status of the outputs so that the set level is restored when power is restored. By default, the status of both outputs is CCT 50% and 100% intensity. Changing the mode resets the output levels to their default settings.

Operation of the P1 and P3 interface

Single click (quick press <1 sec)

- Switches the corresponding output on or off (ON/OFF).

Long Press (press and hold for >1 sec)

- Change in the colour temperature of the corresponding output (e.g. Warm → Cool and Cool → Warm).

Double click (quick press <1 sec)

- Set the maximum brightness of the corresponding output (output = 100%).

Operation of the P2 and P4 interface

Single click (quick press <1 sec)

- Switches the corresponding output on or off (ON/OFF).

Long Press (press and hold for >1 sec)

- If the corresponding output is in the OFF state, set that output to the minimum value (configured via the DIP switches).

- If the output is in the ON state, pressing and holding the button allows you to dim the corresponding output (fade in/fade out).

Double click (quick press <1 sec)

- Set the maximum brightness of the corresponding output (output = 100%).

n.b.: Check that the input and output connection cables are correctly inserted into the terminal block carriage and not underneath it. Incorrect insertion of the cable inside the carriage may lead to overheating or malfunctions.

In this mode, the output states are also sent over the DMX512A-RDM bus on fixed channels 1, 2, 3 and 4:

Output CH1 → DMX ADDRESS 1
Output CH2 → DMX ADDRESS 2
Output CH3 → DMX ADDRESS 3
Output CH4 → DMX ADDRESS 4

In this mode, the BLE interface is enabled for controlling the output via the **OIKOS APP**.

OIKOS APP APP installation and configuration

To install the app on your Apple or Android device, scan the relevant QR code to be automatically redirected to the OIKOS app's product page.



WARNING! The MULTI-4CV-DIN dimmer can only be controlled via the OIKOS APP in BLE mode.



WARNING!
If using loads >24A,
see the diagram on page 58

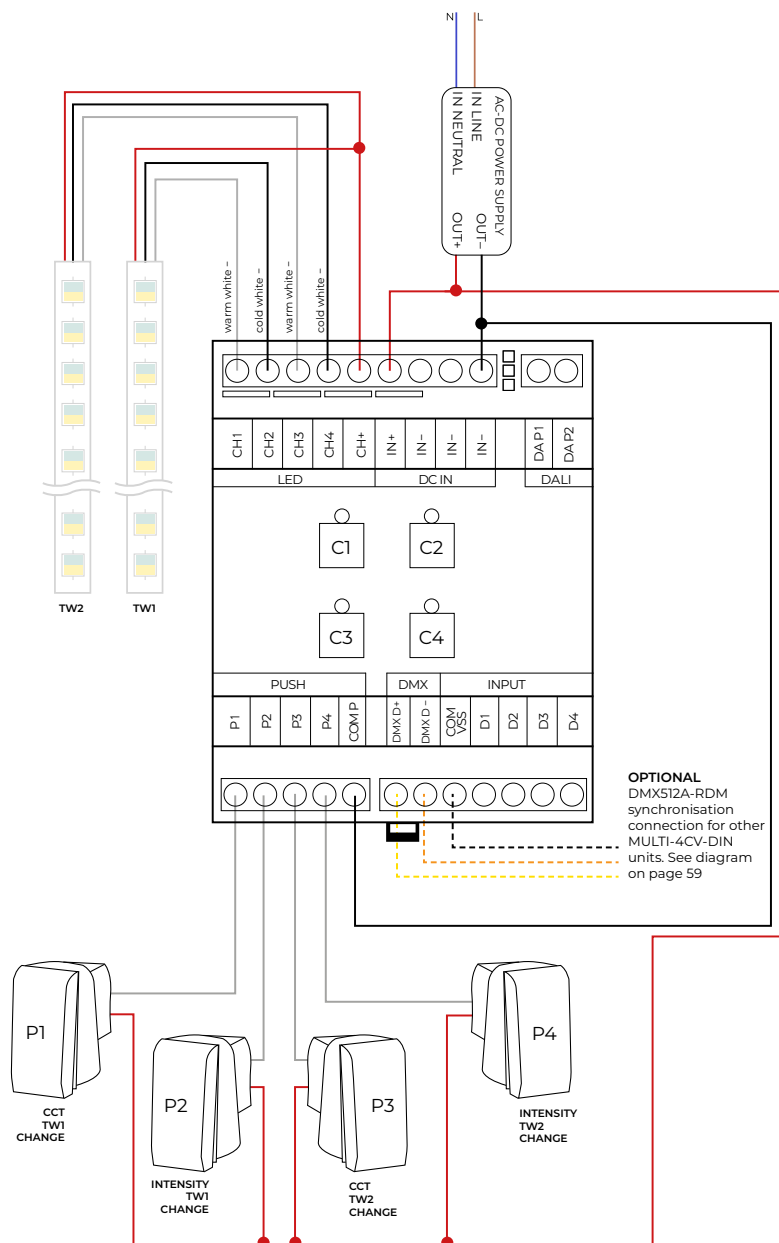


FIG. 15 - PUSH + BLE connection 2 outputs with buttons referring to very low voltage

➔ To switch from the preset mode to **manual** mode, press buttons C1 and C2 simultaneously for 2 seconds. All indicator LEDs will **start to flash**. In manual mode, pressing button C1/C3 switches the warm white channel TW1/TW2 on and off. In manual mode, pressing button C2/C4 switches the TW1/TW2 cold white channel on and off. The status of the outputs in manual mode is indicated by the status LEDs (**steady on with a brief flash = output channel on; steady off with a brief flash = output channel off**). To exit **manual** mode, press buttons C1 and C2 simultaneously for 2 seconds, or switch the dimmer off and on again by disconnecting the power supply.

For APP instructions, see page 64.

Modes of operation

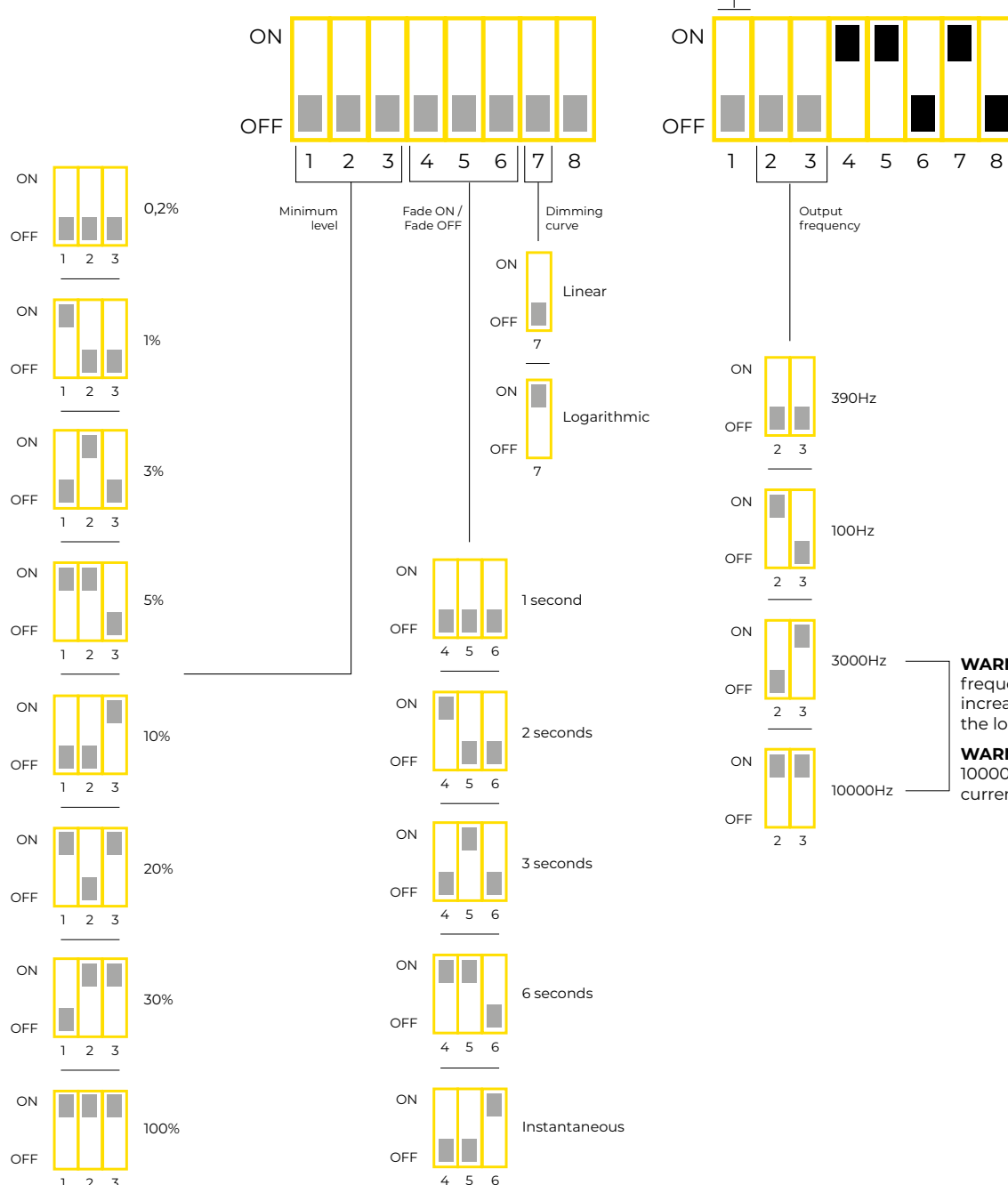
11 | PUSH + BLE 2 tunable white outputs – parameters

ON  OFF  1

Active short-circuit protection **enabled**.
For use with purely resistive loads.
N.B. Once the short-circuit protection has been triggered, the dimmer switches off the load. Every two seconds, the dimmer will attempt to restore the output.

ON  OFF  1

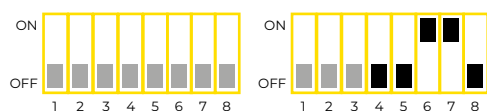
Active short-circuit protection **disabled**.
This setting ensures high compatibility with resistive and resistive/capacitive loads, such as voltage-to-current converters.



Modes of operation

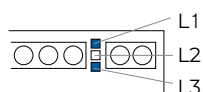
12 | PUSH + BLE 1 DimToWarm output

Dip switch settings:



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

If the configuration is **correct**, once power is supplied to the dimmer, the L1 and L3 LEDs will light up **blue**.



If the configuration is **incorrect**, LEDs L1 and L2 will flash **red**.

If the configuration is correct but the **parameters are incorrect** (grey DIP switches in the figure above), LED L1 will flash **red**.

The dimmer must be powered in accordance with the polarity shown in **FIG. 16** via the terminals DC IN+ and DC IN-.

If the polarity of the power supply is reversed, the device will not be damaged. The outputs must be wired as shown in the **FIG. 16**.

Control via push-buttons can be achieved by using the mains voltage (110–230 V AC) directly, as shown in **FIG. 16**, or the power supply's output voltage (8–53 V DC), as shown in **FIG. 17**.

When installing the dimmer in a system, it is preferable to use the circuit shown in **FIG. 16**.

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

The input range between the COM P and P1/2/3/4 terminals is DC: 10÷265 V, AC: 12÷265 VAC, 50÷65 Hz.

In this mode, all buttons connected to inputs P1A/ P1B, P2, P3 and P4 will control outputs CH1/CH2, which will function as a **SINGLE 8A DimToWarm output per channel**.

Outputs CH3 and CH4 can be used to increase the maximum current to 16A per channel.

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

The maximum distance between the dimmer and the buttons for a single interface must not exceed a total of 20 metres (e.g. P1A 3 metres from the dimmer and P1B 8 metres from the dimmer = 11 metres total distance).

For cable lengths exceeding 20 metres or where multiple control buttons are used, the use of a normally open monostable support relay is recommended (see diagram on page 60).

WARNING!
If using loads >8A,
see the diagram on page 58

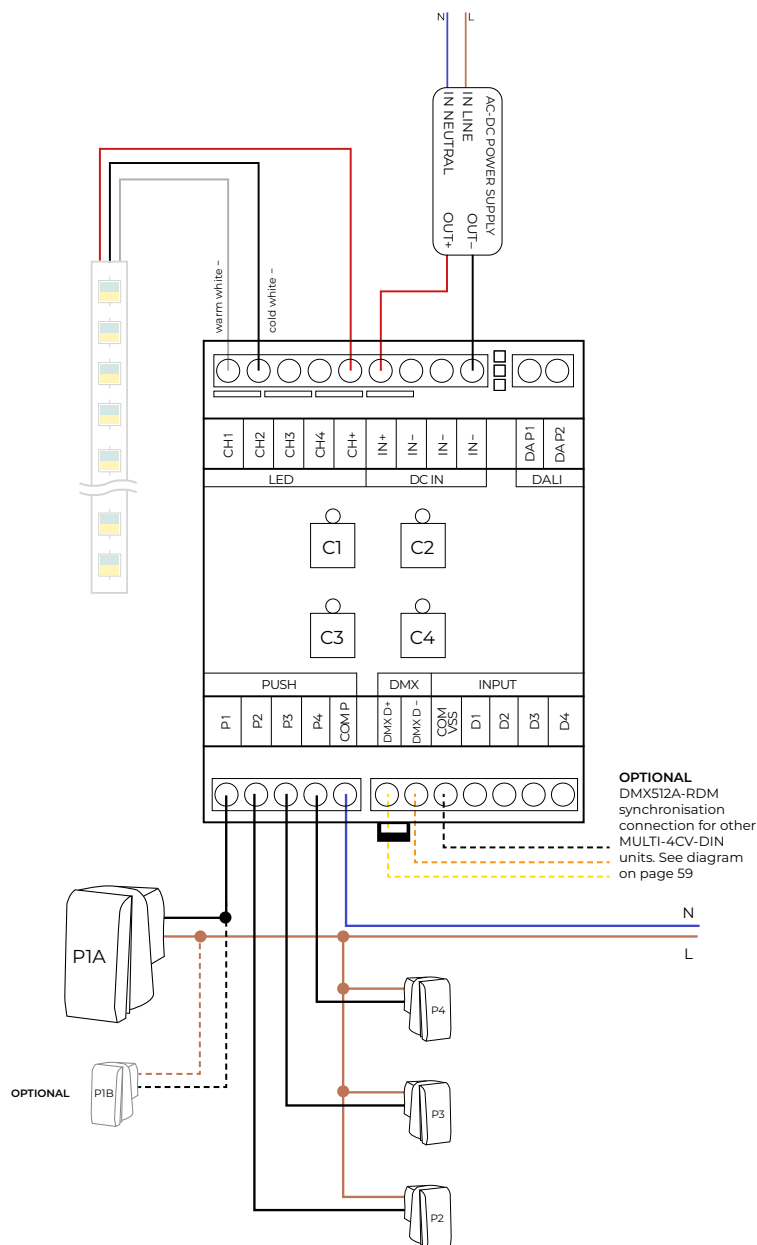


FIG. 16 - PUSH + BLE connection, 1 DimToWarm output with buttons linked to L and N

➔ To switch from the preset mode to **manual mode**, press buttons C1 and C2 simultaneously for 2 seconds. All indicator LEDs will **start to flash**. In manual mode, pressing button C1 (or C3) switches the warm white channel on and off. In manual mode, pressing button C2 (or C4) switches the cool white channel on and off. The status of the outputs in manual mode is indicated by the status LEDs (**steady on with a brief flash = output channel on; steady off with a brief flash = output channel off**). To exit **manual mode**, press buttons C1 and C2 simultaneously for 2 seconds, or switch the dimmer off and on again by disconnecting the power supply.

In the event of a power cut, the dimmer saves the status of the outputs so that the set level is restored when power is restored. By default, the output is set to 100% brightness. Changing the mode resets the output level to the default setting (100%).

Interface Operation BUTTONS

Single click (quick press <1 sec)

- Switches the output on or off (ON/OFF).

Double click (quick press <1 sec)

- Set maximum brightness (output = 100%, CCT = cool). Maximum light, fast mode.

Long Press (press and hold for >1 sec)

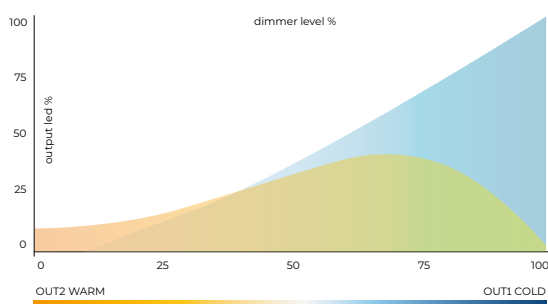
- If the dimmer is switched OFF, this sets the output to the minimum value set by the dip switches.

Non-disturbing night mode.

- If the dimmer is switched ON, a long press allows the output to be dimmed (up/down) whilst simultaneously changing the CCT.

LOW brightness = **WARM** colour temperature

HIGH brightness = **COOL** colour temperature



In this mode, the output states are also sent over the DMX512A-RDM bus on fixed channels 1, 2, 3 and 4:

Output CH1 → DMX ADDRESS 1

Output CH2 → DMX ADDRESS 2

Output CH3 → DMX ADDRESS 3

Output CH4 → DMX ADDRESS 4

OIKOS APP APP installation and configuration

To install the app on your Apple or Android device, scan the relevant QR code to be automatically redirected to the OIKOS app's product page.



WARNING! The MULTI-4CV-DIN dimmer can only be controlled via the OIKOS APP in BLE mode.



WARNING!
If using loads >8A,
see the diagram on page 58

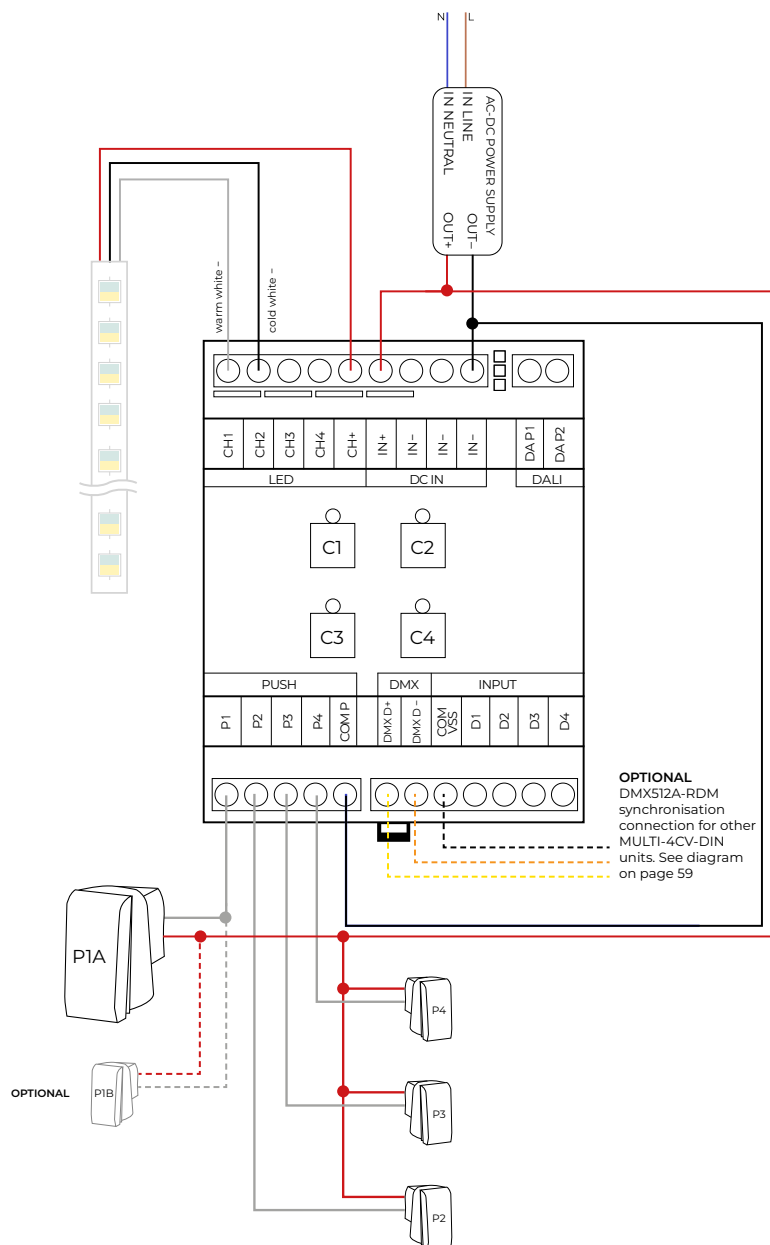


FIG. 17 - PUSH + BLE connection, 1 DimToWarm output with ultra-low-voltage buttons

➔ To switch from the preset mode to **manual** mode, press buttons C1 and C2 simultaneously for 2 seconds. All indicator LEDs will **start to flash**. In manual mode, pressing button C1 switches the warm white channel on and off. In manual mode, pressing button C2 switches the cold white channel on and off. The status of the outputs in manual mode is indicated by the status LEDs (**steady on with a brief flash = output channel on; steady off with a brief flash = output channel off**). To exit **manual** mode, press buttons C1 and C2 simultaneously for 2 seconds, or switch the dimmer off and on again by disconnecting the power supply.

For APP instructions, see page 64.

Modes of operation

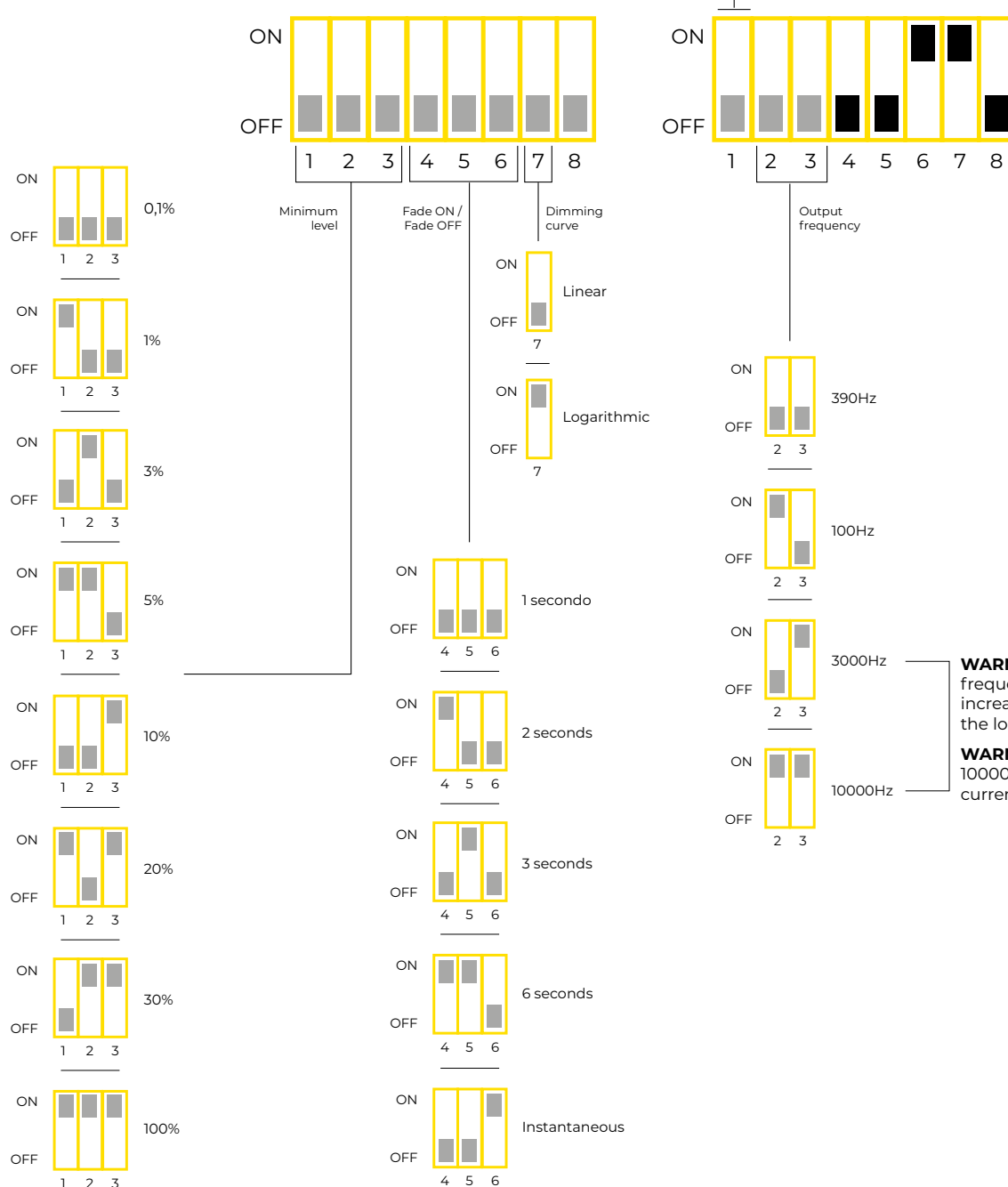
12 | PUSH + BLE 1 DimToWarm output – parameters

ON  OFF  1

Active short-circuit protection **enabled**.
For use with purely resistive loads.
N.B. Once the short-circuit protection has been triggered, the dimmer switches off the load. Every two seconds, the dimmer will attempt to restore the output.

ON  OFF  1

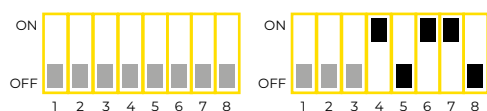
Active short-circuit protection **disabled**.
This setting ensures high compatibility with resistive and resistive/capacitive loads, such as voltage-to-current converters.



Modes of operation

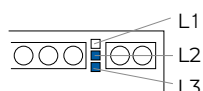
13 | PUSH + BLE 1 static RGBW output

Dip switch settings:



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

If the configuration is **correct**, once power is supplied to the dimmer, the L2 and L3 LEDs will light up **blue**.



If the configuration is **incorrect**, LEDs L1 and L2 will flash red. If the configuration is correct but the **parameters are incorrect** (grey DIP switches in the figure above), LED L1 will **flash red**.

The dimmer must be powered in accordance with the polarity shown in **FIG. 18** via the DC IN+ and DC IN- terminals.

If the polarity of the power supply is reversed, the device will not be damaged. The outputs must be wired as shown in **FIG. 18**.

Control via push-buttons can be achieved by using the mains voltage (110÷230 V AC) directly, as shown in **FIG. 18**, or the power supply's output voltage (8÷53 V DC), as shown in **FIG. 19**. When installing the dimmer in a system, it is preferable to use the circuit shown in **FIG. 18**.

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

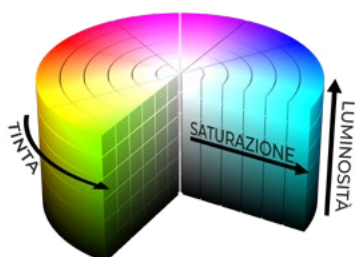
The input range between the COM P and P1/2/3/4 terminals is DC: 10÷265 V, AC: 12÷265 VAC, 50÷65 Hz.

In this mode:

- The buttons on input **P1** control the HUE (hue).
- The buttons on input **P2** vary the SAT (saturation).
- The buttons on input **P3** control the INT (output intensity).
- The buttons on input **P4** switch the dimmer on and off and recall scenes.

Other optional buttons can be connected in parallel to the main buttons.

The activation of the RGB and W channels is mutually exclusive. It is therefore not possible to activate an R, G or B channel at the same time as white (W).



WARNING!
If using loads >24A,
see the diagram on page 58

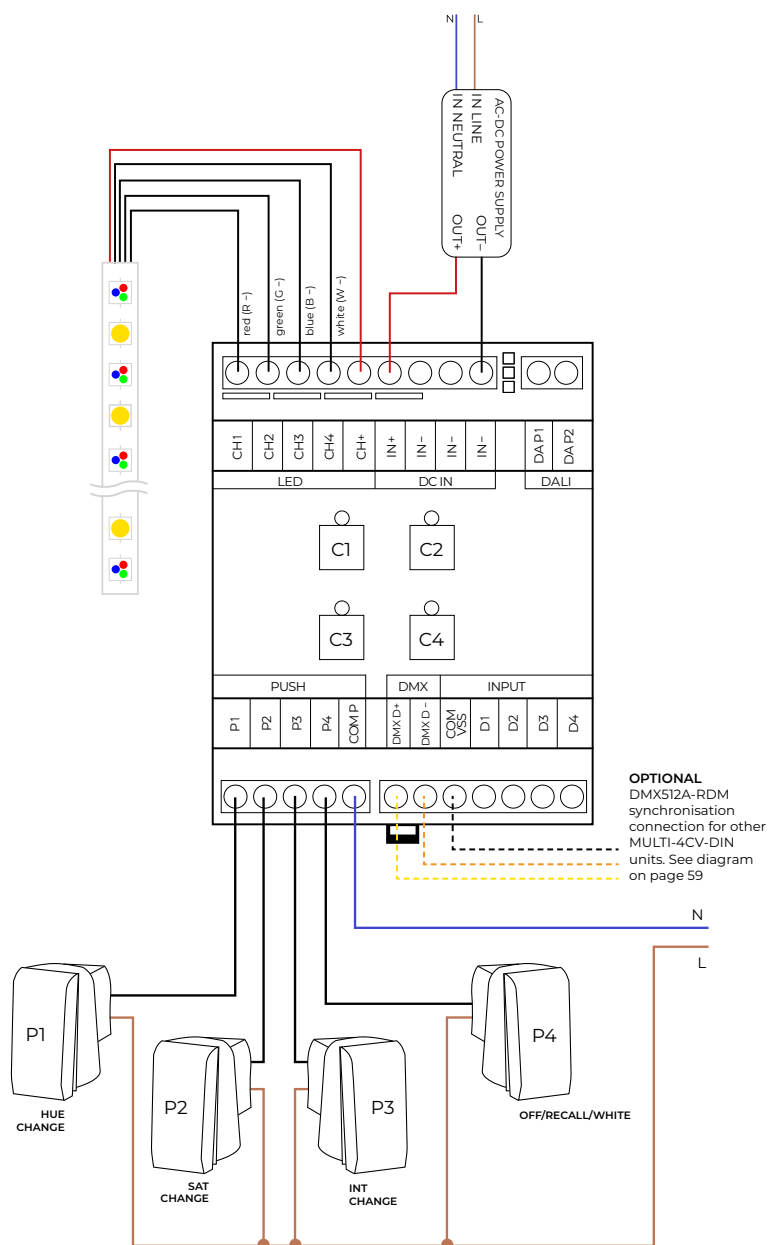


FIG. 18 - PUSH + BLE connection, 1 static RGBW output with buttons connected to L and N

- ➔ To switch from the preset mode to **manual** mode, press buttons C1 and C2 simultaneously for 2 seconds. All the indicator LEDs will **start to flash**. In manual mode, pressing one of the buttons switches the corresponding channel on or off (C1 – red, C2 – green, C3 – blue, C4 – white).
- The status of the output channel in manual mode is indicated by the corresponding LED (**steady on with a brief flash = output channel on; steady off with a brief flash = output channel off**).
- To exit manual mode, press buttons C1 and C2 simultaneously for 2 seconds, or switch the dimmer off and on again by disconnecting the power supply.

Individual outputs can handle loads of up to 8A.
The maximum current drawn by each PUSH interface is approximately 2mA.
The maximum distance between the dimmer and the buttons for each interface must not exceed a total of 20 metres (e.g. P1 3 metres from the dimmer and another button connected in parallel to input P1, 8 metres from the dimmer = 11 metres total distance). For cable lengths exceeding 20 metres or where multiple control buttons are used, the use of a normally open monostable relay is recommended (see diagram on page 60).

In the event of a power failure, the dimmer saves the status of the outputs so that the set level is restored when power is restored. By default, the output status is CH1 / red 100%. Changing the mode restores the output level to its factory setting.

Operation of the P1 interface

Single click (quick press <1 sec)

- Switches the output on or off (ON/OFF).

Double click (quick press <1 sec)

- Set INT output intensity to maximum (100%).

Long Press (press and hold for >1 sec)

- If the output is in the OFF state, set the INT (Intensity) to the minimum value (configured via the DIP switches).
- If the output is in the ON state, pressing and holding the button allows you to increase or decrease the HUE (colour tone).

Operation of the P2 interface

Single click (quick press <1 sec)

- Switches the output on or off (ON/OFF).

Double click (quick press <1 sec)

- Set INT output intensity to maximum (100%).

Long Press (press and hold for >1 sec)

- If the output is in the OFF state, set the INT (Intensity) to the minimum value (configured via the DIP switches).
- If the output is in the ON state, pressing and holding the button allows you to increase or decrease the SAT (Saturation) (increase/decrease).

Operation of the P3 interface

Single click (quick press <1 sec)

- Switches the output on or off (ON/OFF).

Double click (quick press <1 sec)

- Set INT output intensity to maximum (100%).

Long Press (press and hold for >1 sec)

- If the output is in the OFF state, set the INT-Intensity to the minimum value (configured via the DIP switches).
- If the output is in the ON state, pressing and holding the button allows you to increase or decrease the INT-Intensity (increase/decrease).



WARNING!
If using loads >24A,
see the diagram on page 58

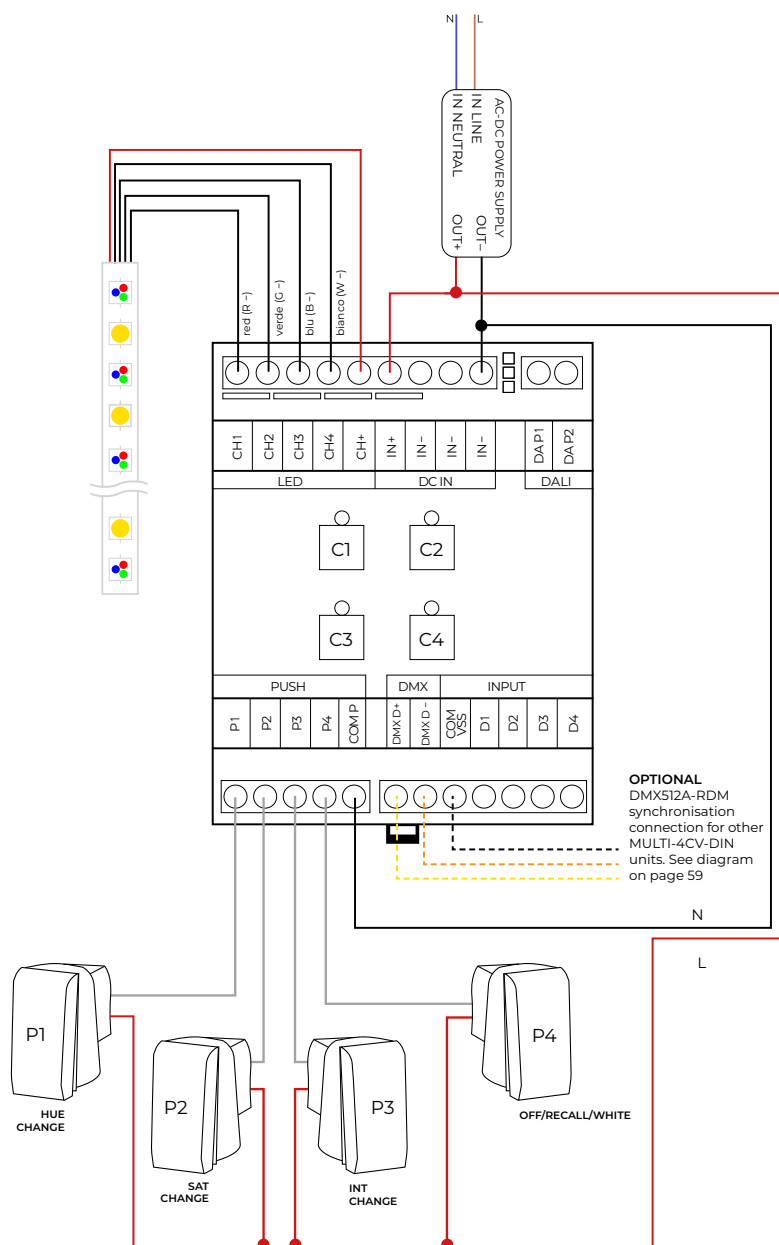


FIG. 19 - PUSH + BLE connection, 1 static RGBW output with ultra-low-voltage-controlled buttons



To switch from the preset mode to **manual** mode, press buttons C1 and C2 simultaneously for 2 seconds. All the indicator LEDs will **start to flash**. In manual mode, pressing one of the buttons switches the corresponding channel on or off (C1 – red, C2 – green, C3 – blue, C4 – white).

The status of the output channel in manual mode is indicated by the corresponding LED (**steady on with a brief flash = output channel on; steady off with a brief flash = output channel off**).

To exit manual mode, press buttons C1 and C2 simultaneously for 2 seconds, or switch the dimmer off and on again by disconnecting the power supply.

Operation of the P4 interface

Single Click (quick press <1 second, within 5 seconds of the last click)

- ON/OFF.

Single Click Repeat (within 5 seconds of the first single click)

- With the output set to ON, within 5 seconds of the first single click, the output cycles through the following states: RECALL*, White and OFF.

Double click (quick press <1 sec)

- Set the output to maximum INT-Intensity.

Long Press (press and hold for >1 sec)

- If the output is in the OFF state, pressing and holding the button sets the last state to the minimum brightness level (configured via the DIP switches).
- If the output is in the ON state, pressing and holding the button increases or decreases the brightness (up/down).

n.b.: Check that the input and output connection cables are correctly inserted into the terminal block carriage and not underneath it. Incorrect insertion of the cable inside the carriage may lead to overheating or malfunctions.

In this mode, the output states are also sent over the DMX512A-RDM bus on fixed channels 1, 2, 3 and 4:

Output CH1 → DMX ADDRESS 1
Output CH2 → DMX ADDRESS 2
Output CH3 → DMX ADDRESS 3
Output CH4 → DMX ADDRESS 4

In this mode, the BLE interface is enabled for controlling the output via the **OIKOS APP**.

OIKOS APP APP installation and configuration

To install the app on your Apple or Android device, scan the relevant QR code to be automatically redirected to the OIKOS app's product page.

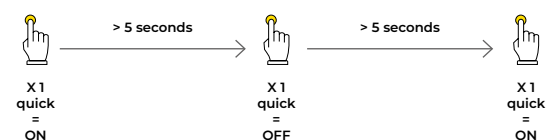


WARNING! The MULTI-4CV-DIN dimmer can only be controlled via the OIKOS APP in BLE mode.

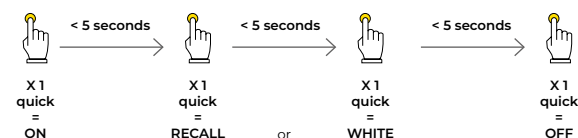
For APP instructions, see page 64.

The P4 button is particularly useful in situations where it is only possible to wire a single button.

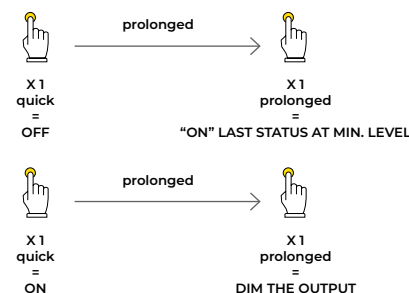
- The system is switched on and off by briefly pressing the P4 button at intervals of more than 5 seconds.



- To cycle the output between RECALL*, WHITE and OFF, you will need to press the P4 button again quickly within 5 seconds of the first click.



- Finally, the P4 button can also be used to dim the output (by pressing and holding) or, when the output is OFF, to switch the output to its last state at the minimum brightness level by pressing and holding.



* RECALL last RGB scene (= last setting set via P1, P2 and P3): this button allows you to control the output intelligently by recalling the colour or the WHITE channel, whilst simultaneously switching the lights on, off or dimming them.

Modes of operation

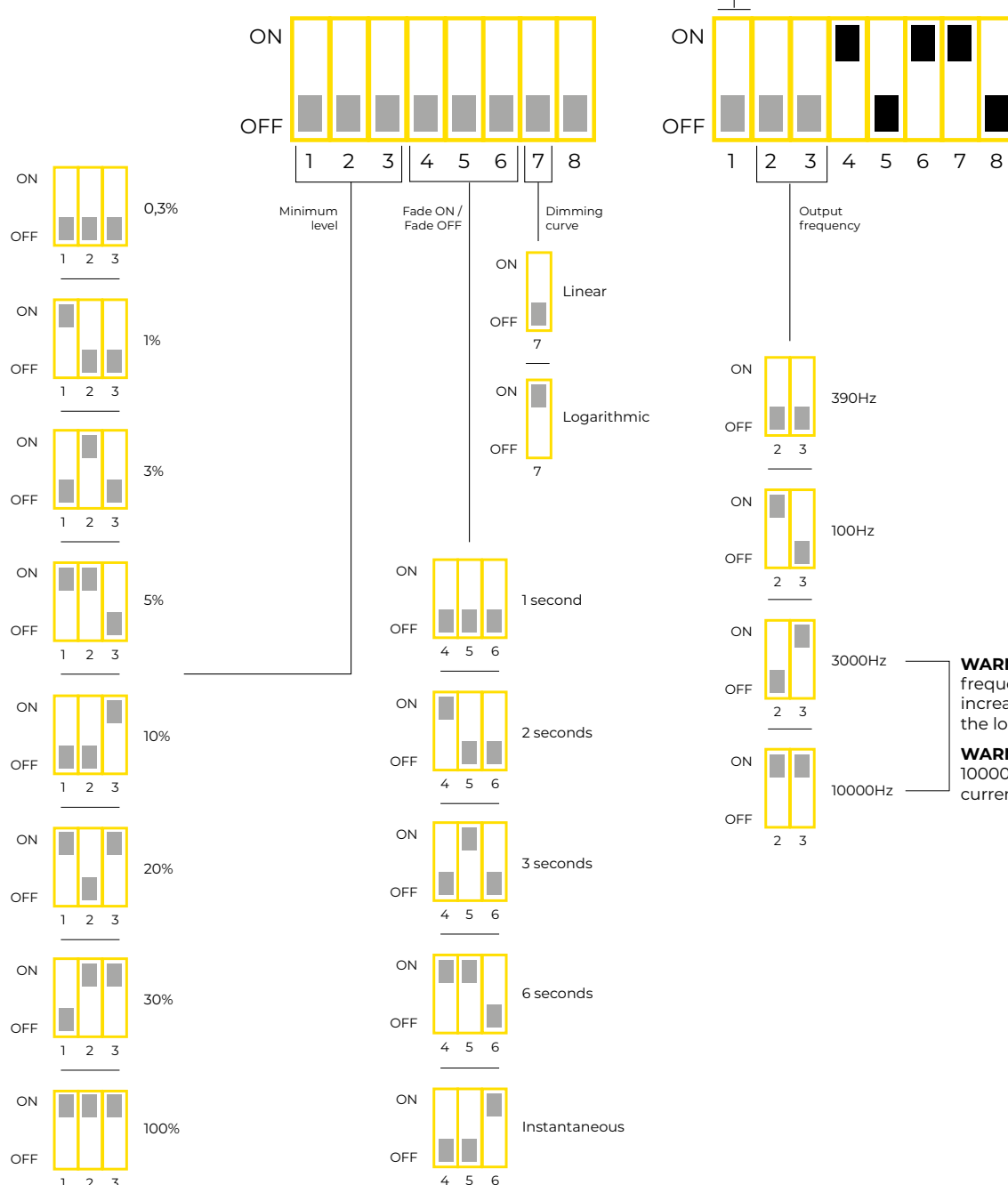
13 | PUSH + BLE 1 static RGBW output – parameters

ON  OFF 
1

Active short-circuit protection **enabled**.
For use with purely resistive loads.
N.B. Once the short-circuit protection has been triggered, the dimmer switches off the load. Every two seconds, the dimmer will attempt to restore the output.

ON  OFF 
1

Active short-circuit protection **disabled**.
This setting ensures high compatibility with resistive and resistive/capacitive loads, such as voltage-to-current converters.



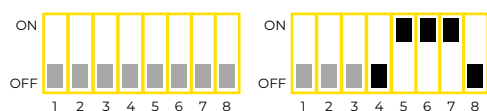
WARNING! With high output frequencies, you may need to increase the minimum level to see the load illuminated.

WARNING! At frequencies of 10000 Hz, the maximum output current per channel is 5A.

Modes of operation

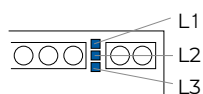
14 | PUSH + BLE 1 dynamic RGBW output

Dip switch settings:



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

If the configuration is **correct**, once power is supplied to the dimmer, the L1, L2 and L3 LEDs will light up **blue**.



If the configuration is **incorrect**, LEDs L1 and L2 will flash red. If the configuration is correct but the **parameters are incorrect** (grey DIP switches in the figure above), LED L1 will **flash red**.

The dimmer must be powered in accordance with the polarity shown in **FIG. 20** via the DC IN+ and DC IN- terminals.

If the polarity of the power supply is reversed, the device will not be damaged. The outputs must be wired as shown in **FIG. 20**.

Control via push-buttons can be achieved by using the mains voltage (110–230 V AC) directly, as shown in **FIG. 20**, or the power supply's output voltage (8–53 V DC), as shown in **FIG. 19**. When installing the dimmer in a system, it is preferable to use the circuit shown in **FIG. 20**.

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

The input range between the COM P and P1/2/3/4 terminals is DC: 10÷265 V, AC: 12÷265 VAC, 50÷65 Hz.

In this mode:

- The buttons on input **P1** change the show.
- The buttons on input **P2** control the speed of the show.
- The buttons on input **P3** control the INT (output intensity).
- The buttons on input **P4** switch the dimmer on and off and recall scenes.

Other optional buttons can be connected in parallel with the main buttons.

Individual outputs can handle loads of up to 8A.

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

The maximum distance between the dimmer and the buttons for each interface must not exceed a total of 20 metres (e.g. P1 3 metres from the dimmer and another button connected in parallel to input P1, 8 metres from the dimmer = 11 metres total distance). For cable lengths exceeding 20 metres or where multiple control buttons are used, the use of a normally open monostable relay is recommended (see diagram on page 60).

WARNING!
If using loads >24A,
see the diagram on page 58

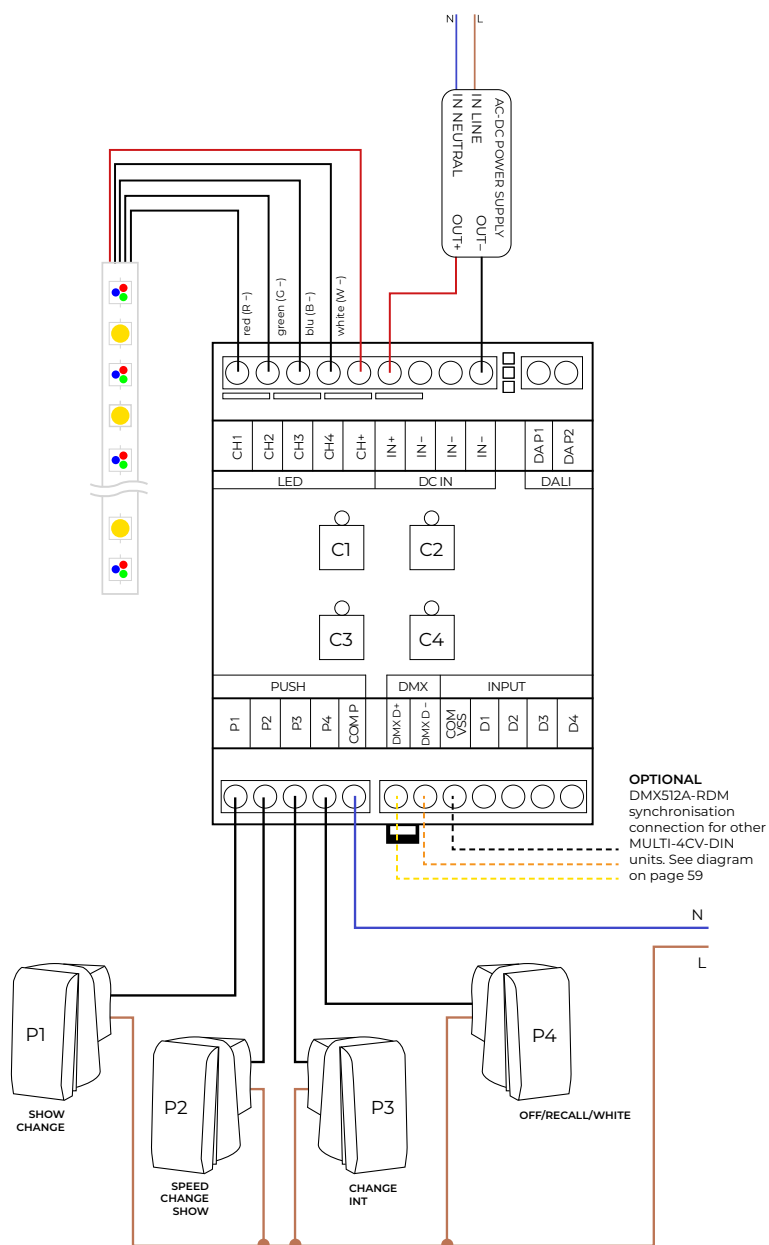


FIG. 20 - PUSH + BLE connection, 1 dynamic RGBW output with buttons linked to L and N

- ➔ To switch from the preset mode to **manual** mode, press buttons C1 and C2 simultaneously for 2 seconds. All the indicator LEDs will **start to flash**. In manual mode, pressing one of the buttons switches the corresponding channel on or off (C1 – red, C2 – green, C3 – blue, C4 – white). The status of the output channel in manual mode is indicated by the corresponding LED (**steady on with a brief flash = output channel on; steady off with a brief flash = output channel off**). To exit manual mode, press buttons C1 and C2 simultaneously for 2 seconds, or switch the dimmer off and on again by disconnecting the power supply.

If the power is cut off, the dimmer saves the status of the outputs so that the set level is restored when power is restored. By default, the output status is set to 'Hue Show', with an intensity of 100% and a duration of 10 seconds. Changing the mode resets the output level to the default setting.

Operation of the P1 interface

Single click (quick press <1 sec)

- Switches the output on or off (ON/OFF).

Double click (quick press <1 sec)

- Set INT output intensity to maximum (100%).

Long Press (press and hold for >1 sec)

- If the output is OFF, sets the last show to the minimum brightness level (configured via the DIP switches).
- If the output is ON, cycles through the shows and fixed colours according to the sequence shown in the table opposite.

Operation of the P2 interface for 'Show' type only (see table)

Single click (quick press <1 sec)

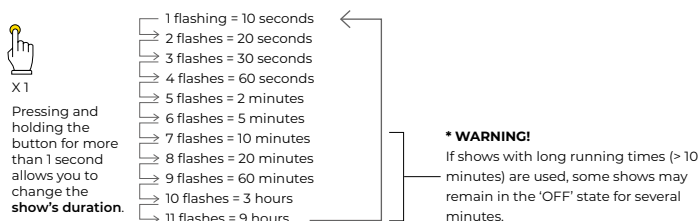
- Switches the output on or off (ON/OFF).

Double click (quick press <1 sec)

- Set INT output intensity to maximum (100%).

Long Press (press and hold for >1 sec)

- If the output is in the OFF state, pressing and holding the button sets the last show to the minimum brightness level (configured via the DIP switches).
- If the output is in the ON state, the duration of the show is adjusted. Each press corresponds to the number of flashes indicated below:



TYPE	COLOR
Show	Hue Show
	Color Dissolve Show
	Color Cold Dissolve Show
	Color Hot Dissolve Show
	Red Show
Fixed color	White
	Warm White
	Cold White
	Red
	Orange
	Tangerine
	Melon
	Yellow
	Lime
	Acid Green
	Green Apple
	Fluo Green
	Green
	Aqua Green
	Caribbean Green
	Sky Blue
	Clear Sky Blue
	Manganese Blue
	Blue
	Iris
	Lavender
	Violet
	Fluo Pink
	Pink
	Shocking Pink
	Dark Pink
	Pale Pink
	Purple

Operation of the P3 interface

Single click (quick press <1 sec)

- Switches the output on or off (ON/OFF).

Double click (quick press <1 sec)

- Set INT output intensity to maximum (100%).

Long Press (press and hold for >1 sec)

- If the output is in the OFF state, set the INT-Intensity to the minimum value (configured via the DIP switches).
- If the output is in the ON state, pressing and holding the button allows you to increase or decrease the INT-Intensity (increase/decrease).

Operation of the P4 interface

Single Click (quick press <1 second, within 5 seconds of the last click)

- ON/OFF.

Single Click Repeat (within 5 seconds of the first single click)

- With the output set to ON, within 5 seconds of the first single click, the output cycles through the following states: RECALL*, White and OFF.

Double click (quick press <1 sec)

- Set the output to maximum INT-Intensity.

Long Press (press and hold for >1 sec)

- If the output is in the OFF state, pressing and holding the button sets the last show to the minimum brightness level (configured via the DIP switches).
- If the output is in the ON state, pressing and holding the button increases or decreases the brightness (up/down).

n.b.: Check that the input and output connection cables are correctly inserted into the terminal block carriage and not underneath it. Incorrect insertion of the cable inside the carriage may lead to overheating or malfunctions.

In this mode, the output states are also sent over the DMX512A-RDM bus on fixed channels 1, 2, 3 and 4:

Output CH1 → DMX ADDRESS 1

Output CH2 → DMX ADDRESS 2

Output CH3 → DMX ADDRESS 3

Output CH4 → DMX ADDRESS 4

In this mode, the BLE interface is enabled for controlling the output via the **OIKOS APP**.

OIKOS APP APP installation and configuration

To install the app on your Apple or Android device, scan the relevant QR code to be automatically redirected to the OIKOS app's product page.

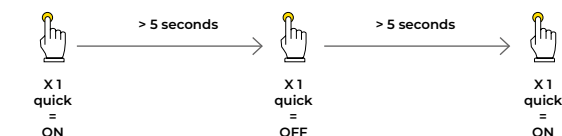


WARNING! The MULTI-4CV-DIN dimmer can be controlled via the OIKOS app only in BLE mode.

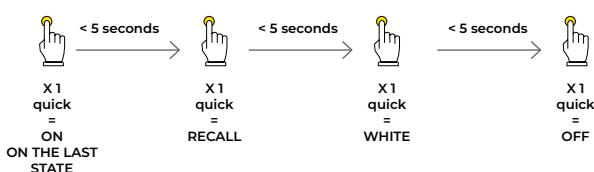
For app instructions, see page 64.

The P4 button is particularly useful in situations where it is only possible to wire a single button.

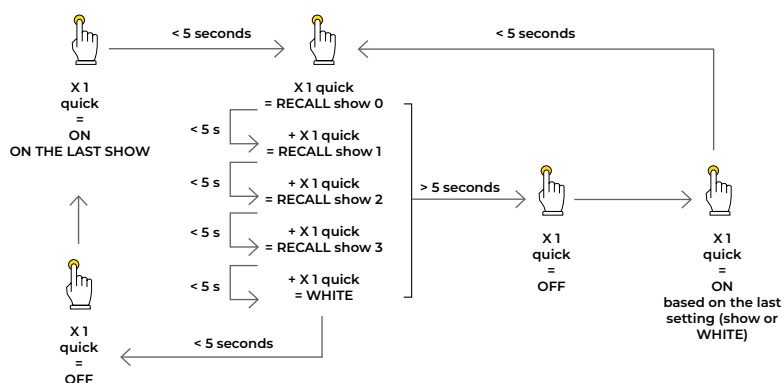
- The system is switched on and off by briefly pressing the P4 button at intervals of more than 5 seconds.



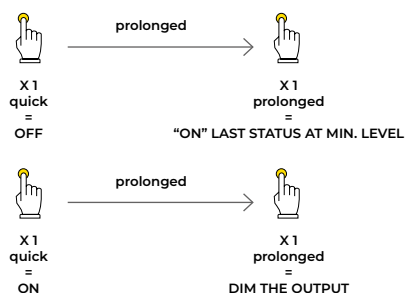
- To cycle the output between RECALL*, WHITE and OFF, you will need to press the P4 button again quickly within 5 seconds of the first click.



- If shows have been set up via the app (see page 64) to cycle the output between RECALL* (one per show set), WHITE and OFF, you will need to press the P4 button again quickly within 5 seconds of the first click. Pressing the button after 5 seconds saves the show.



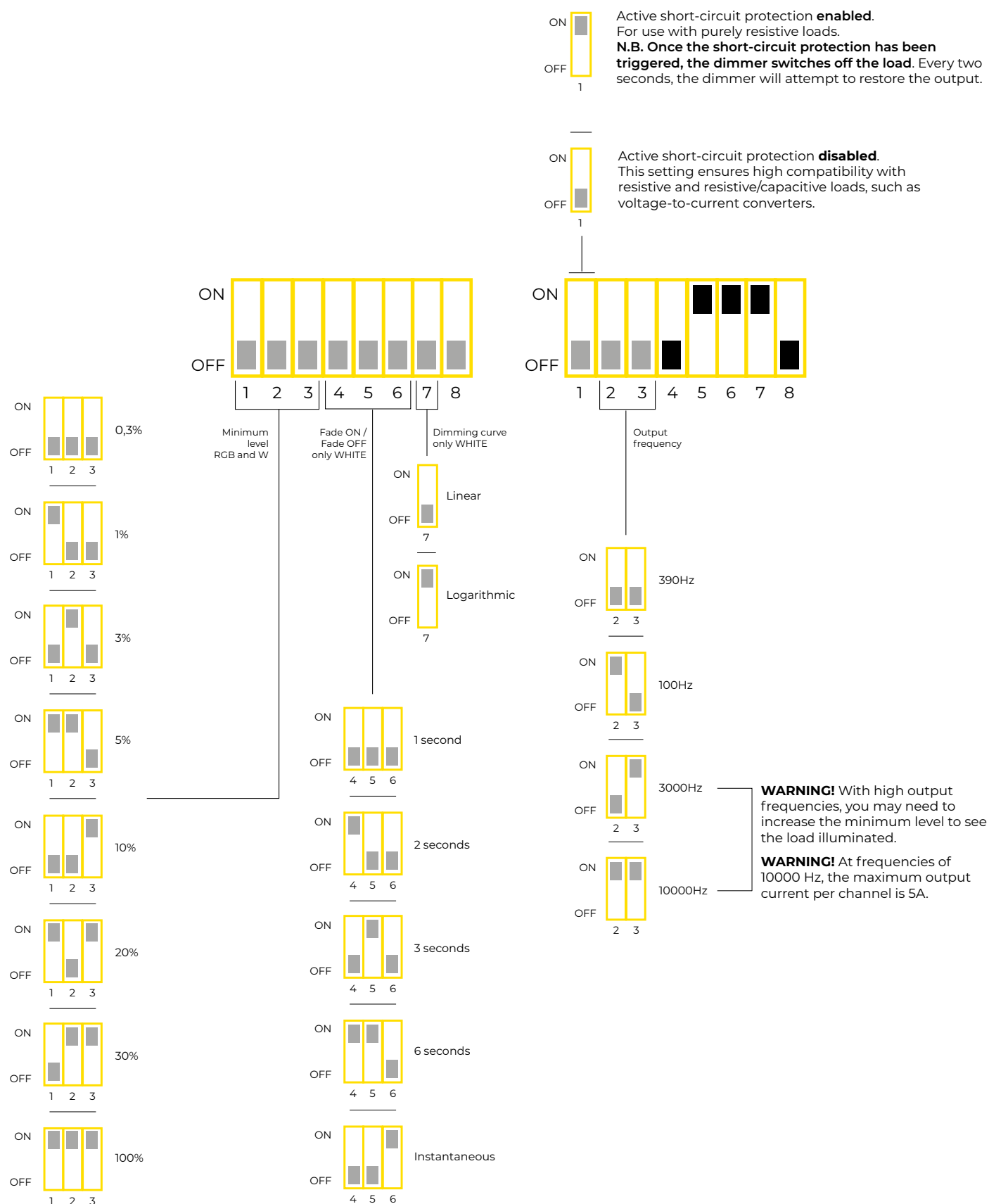
- Finally, the P4 button can also be used to dim the output (by pressing and holding) or, when the output is OFF, to switch the output to its last state at the minimum brightness level by pressing and holding.



* RECALL last RGB scene (= last setting given by P1, P2 and P3): this button allows you to intelligently control the output by recalling either a favourite show/colour or the WHITE channel and simultaneously turning on, off and dimming.

Modes of operation

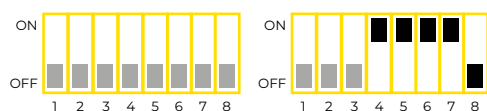
14 | PUSH + BLE 1 dynamic RGBW output – parameters



Modes of operation

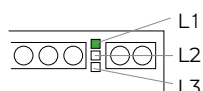
15 | 0–10 V/1–10 V active/passive and 47 kΩ linear potentiometer – 1 output

Dip switch settings:



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

If the configuration is **correct**, once power is supplied to the dimmer, the L1 LED will light up **green**.



If the configuration is **incorrect**, LEDs L1 and L2 will flash red. If the configuration is correct but the **parameters are incorrect** (grey DIP switches in the figure above), LED L1 will **flash red**.

The dimmer must be powered in accordance with the polarity shown in **FIG. 21** via the DC IN+ and DC IN- terminals. If the polarity of the power supply is reversed, the device will not be damaged. The outputs must be wired as shown in **FIG. 21**.

The control signal from an active or passive 0–10 V/1–10 V actuator must be connected to the terminals between the COM, VSS and D1 terminals to control the output.

The output can handle loads of up to 32 A.

The maximum current drawn by the dimmer from a single 0–10 V/1–10 V interface is 0.2 mA.

By default, the dimming curve follows a linear pattern proportional to the control voltage. A voltage value below 0.5 V is interpreted as the load being off. At a voltage of 1 V, the load will be switched on at the minimum level.

If the 0–10 V/1–10 V signal is lost, the dimmer sets the output to the maximum level in accordance with IEC/EN 60929. The maximum distance between the dimmer and the 0–10/1–10 V actuator must not exceed 10 metres; the use of shielded cables and SELV double insulation from the mains voltage is recommended.



Take care with the polarity of the cables; reversing them could cause flickering, malfunctions or damage.



WARNING!
If using loads >24A,
see the diagram on page 58

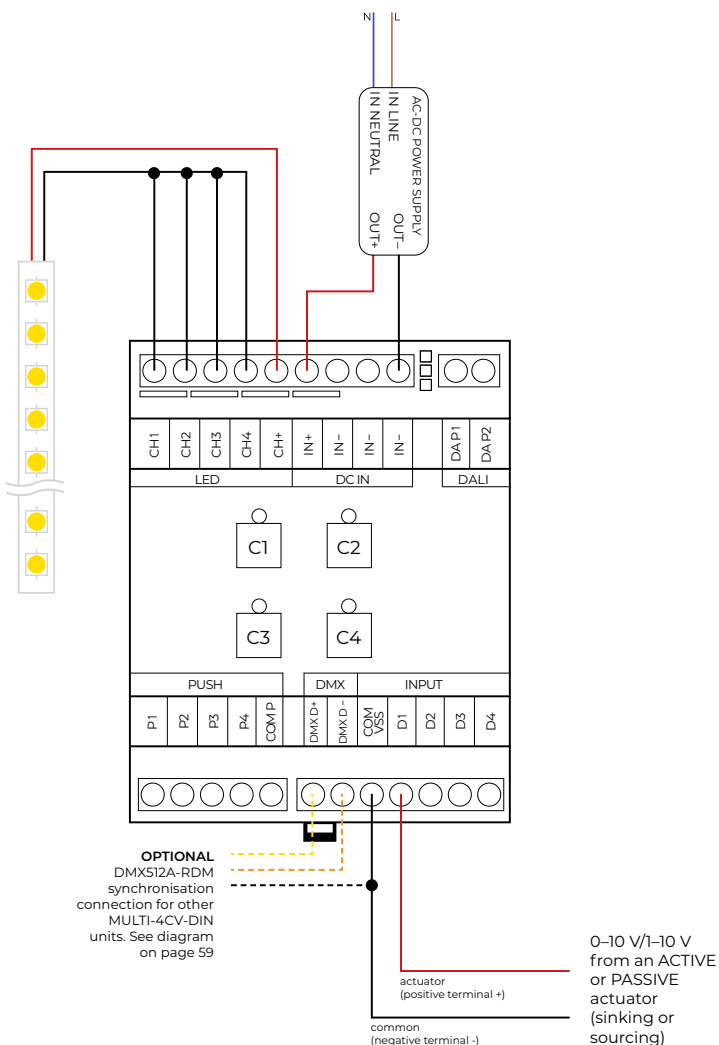


FIG. 21 - 0–10 V/1–10 V active/passive connection - 1 output



To switch from the preset mode to **manual** mode, press buttons C1 and C2 simultaneously for 2 seconds. All indicator LEDs will **start to flash**. In manual mode, pressing any of the buttons switches all channels on and off simultaneously. The status of the outputs in manual mode is indicated by the status LEDs (**steady on with a brief flash = output channel on; steady off with a brief flash = output channel off**). To exit **manual** mode, press buttons C1 and C2 simultaneously for 2 seconds, or switch the dimmer off and on again by disconnecting the power supply.

The control signal from the 47 kΩ linear potentiometer must be connected to the terminals between the COM, VS and D1 terminals to control the output.

The output can handle loads of up to 32 A.

The maximum current drawn by the dimmer from a single 0–10 V/1–10 V interface is 0.2 mA.

By default, the dimming curve follows a linear pattern proportional to the control voltage. A resistance value below 2.5 kohm is interpreted as the load being off. Maximum brightness is reached when the resistance exceeds 42 kohm.

If the potentiometer is disconnected, the dimmer sets the output to maximum brightness.

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

The maximum distance between the dimmer and the potentiometer must not exceed 2 metres; we recommend using shielded cables and SELV double insulation to isolate the circuit from the mains voltage.

The minimum output value can be set using DIP switches.

NB: In this mode, BLE (Bluetooth) control is disabled.

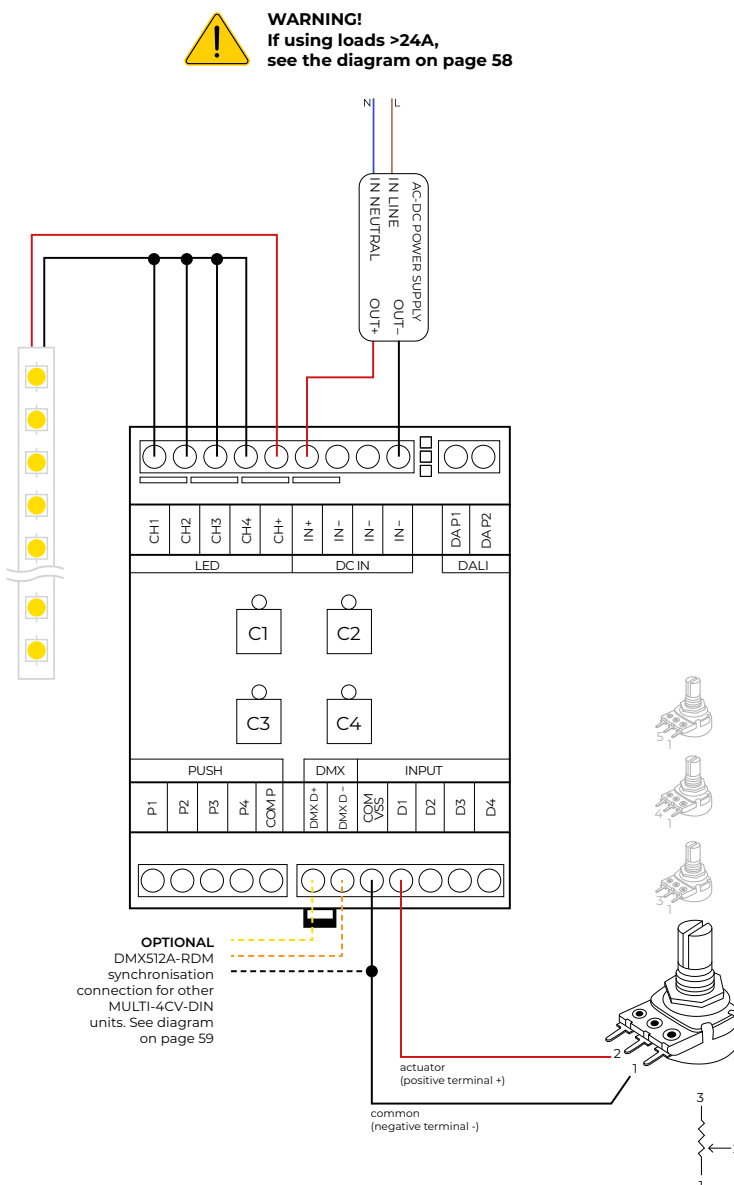
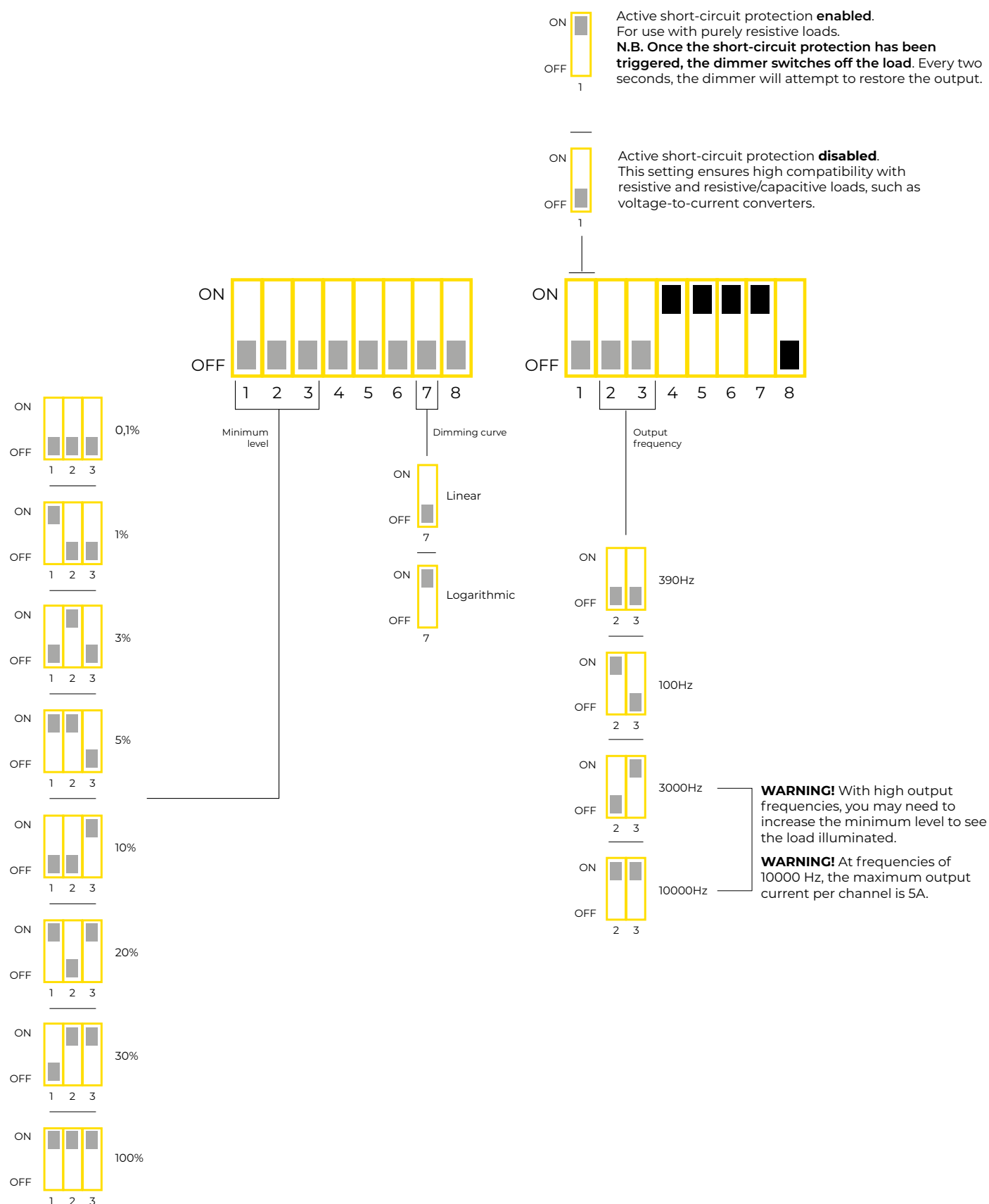


FIG. 22 - 47 kΩ linear potentiometer connection – I output

- To switch from the preset mode to **manual** mode, press buttons C1 and C2 simultaneously for 2 seconds. All indicator LEDs will **start to flash**. In manual mode, pressing any of the buttons switches all channels on and off simultaneously. The status of the outputs in manual mode is indicated by the status LEDs (**steady on with a brief flash = output channel on; steady off with a brief flash = output channel off**). To exit **manual** mode, press buttons C1 and C2 simultaneously for 2 seconds, or switch the dimmer off and on again by disconnecting the power supply.

Modes of operation

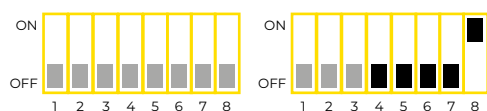
15 | 0–10 V/1–10 V active/passive and 47 kΩ linear potentiometer – 1 output – parameters



Modes of operation

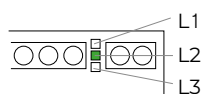
16 | 0–10 V/1–10 V active/passive and 47 kΩ linear potentiometer – 4 outputs

Dip switch settings:



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

If the configuration is **correct**, once power is supplied to the dimmer, the L2 LED will light up **green**.



If the configuration is **incorrect**, LEDs L1 and L2 will flash **red**.

If the configuration is correct but the **parameters are incorrect** (grey DIP switches in the figure above), LED L1 will **flash red**.

The dimmer must be powered in accordance with the polarity shown in **FIG. 23** via the terminals DC IN+ and DC IN-.

If the polarity of the power supply is reversed, the device will not be damaged. The outputs must be wired as shown in the **FIG. 23**.

The control signal from an active or passive 0–10/1–10 V actuator must be connected to the terminals between the following poles:

- COM, VSS and D1 to control output CH1;
- COM, VSS and D2 to control output CH2;
- COM, VSS and D3 to control output CH3;
- COM, VSS and D4 to control output CH4.

Individual outputs can handle loads of up to 8A. The maximum current drawn by the dimmer from a single 0-10V/1-10V interface is 0.2 mA. By default, the dimming curve follows a linear pattern proportional to the control voltage. A voltage value below 0.5V is interpreted as the load being off.

If the 0-10 V/1-10 V signal is lost, the dimmer sets the output to the maximum level in accordance with IEC/EN 60929. The maximum distance between the dimmer and the 0-10/1-10V actuator must not exceed 10 metres; the use of shielded cables and SELV double insulation from the mains voltage is recommended.



Take care with the polarity of the cables; reversing them could cause flickering, malfunctions or damage.



WARNING!
If using loads >24A,
see the diagram on page 58

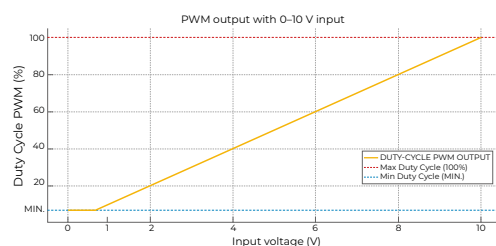
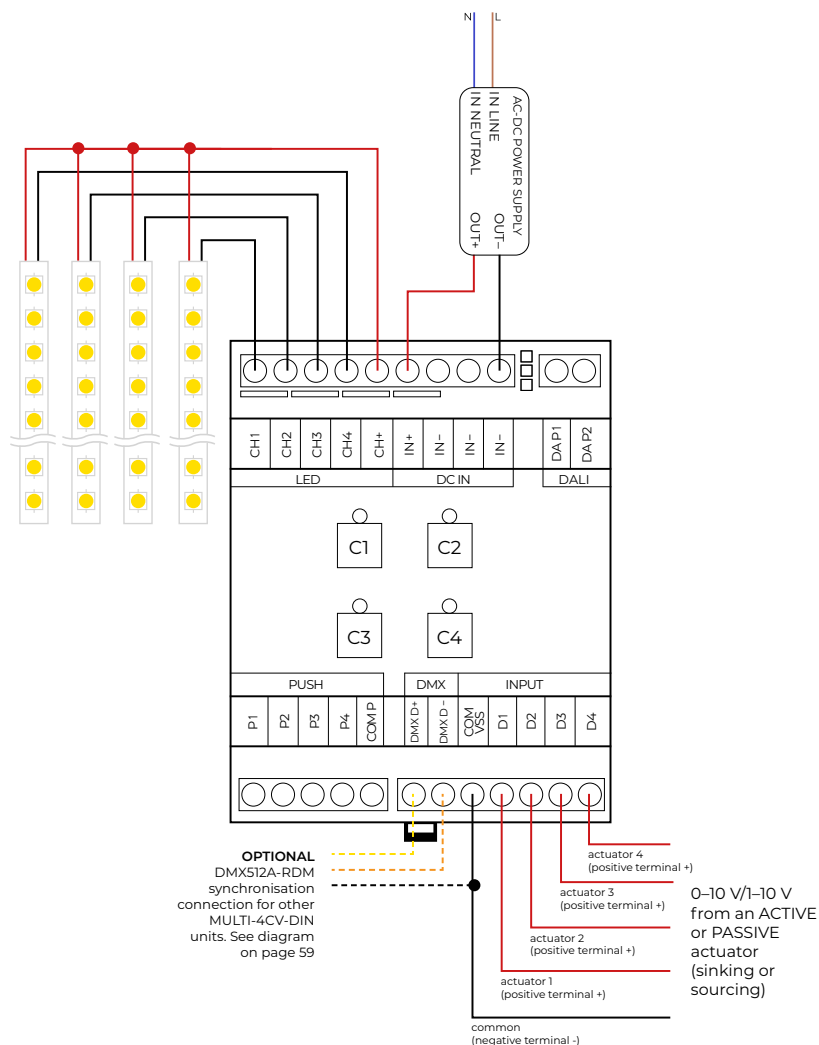


FIG. 23 – 0–10 V/1–10 V active/passive connection – 4 outputs



To switch from the preset mode to **manual** mode, press buttons C1 and C2 simultaneously for 2 seconds. All indicator LEDs will start to **flash**. In manual mode, pressing one of the buttons switches the corresponding channel on or off. The status of the output channel in manual mode is indicated by the corresponding LED (**steady on with a brief flash = output channel on; steady off with a brief flash = output channel off**). To exit **manual** mode, press buttons C1 and C2 simultaneously for 2 seconds, or switch the dimmer off and on again by disconnecting the power supply.

The control signal from the 47 k Ω linear potentiometer must be connected to the terminals between the COM, VSS and D1 terminals (optional D2/D3/D4) to control the output.

The output can handle loads of up to 32 A.
The maximum current drawn by the dimmer from a single 0–10 V/1–10 V interface is 0.2 mA.
By default, the dimming curve follows a linear pattern proportional to the control voltage.
A resistance value of less than 2.5 kohms is interpreted as the load being off.
Maximum brightness is reached when the resistance exceeds 42 kohms. If the potentiometer is disconnected, the dimmer sets the output to maximum brightness.

We recommend using good-quality potentiometers to avoid flickering or output instability. The maximum distance between the dimmer and the potentiometer must not exceed 2 metres; we recommend using shielded cables and SELV double insulation to isolate the circuit from the mains voltage.

The minimum output value can be set using DIP switches.

NB: In this mode, BLE (Bluetooth) control is disabled.

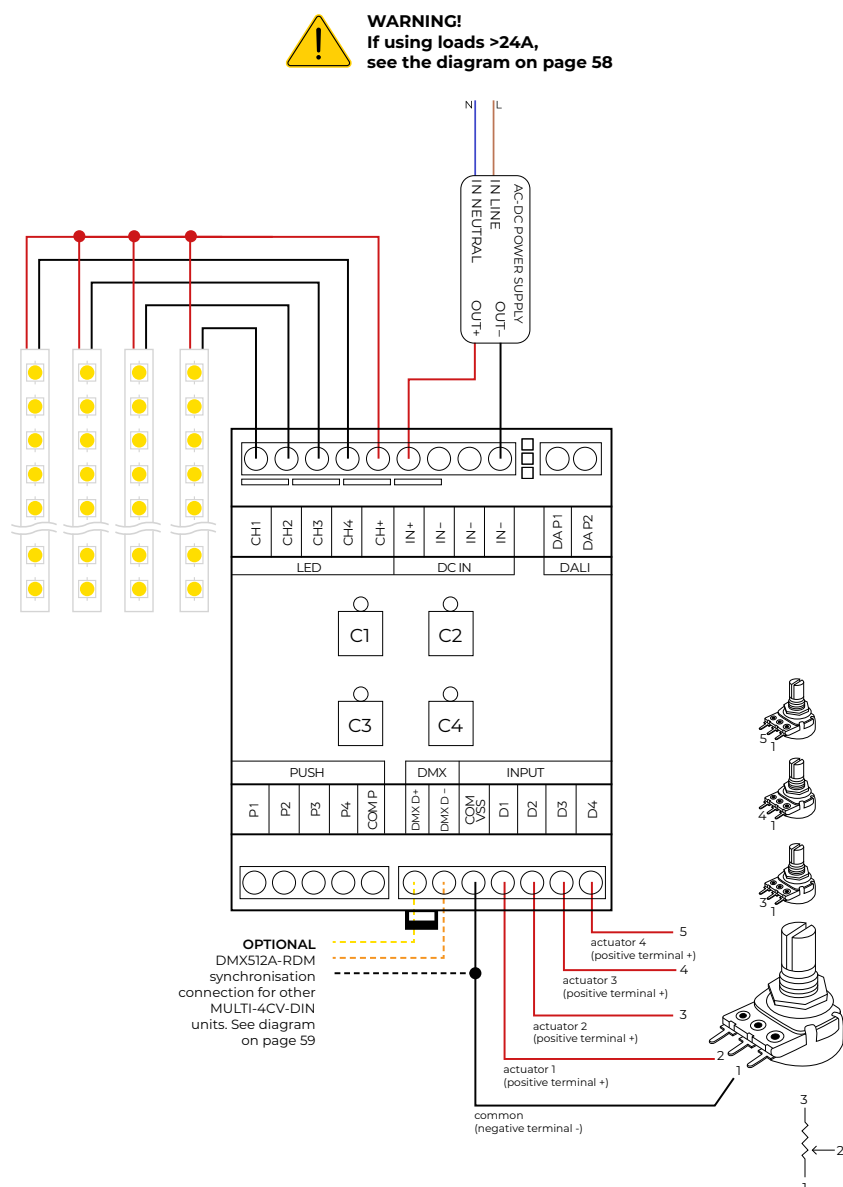
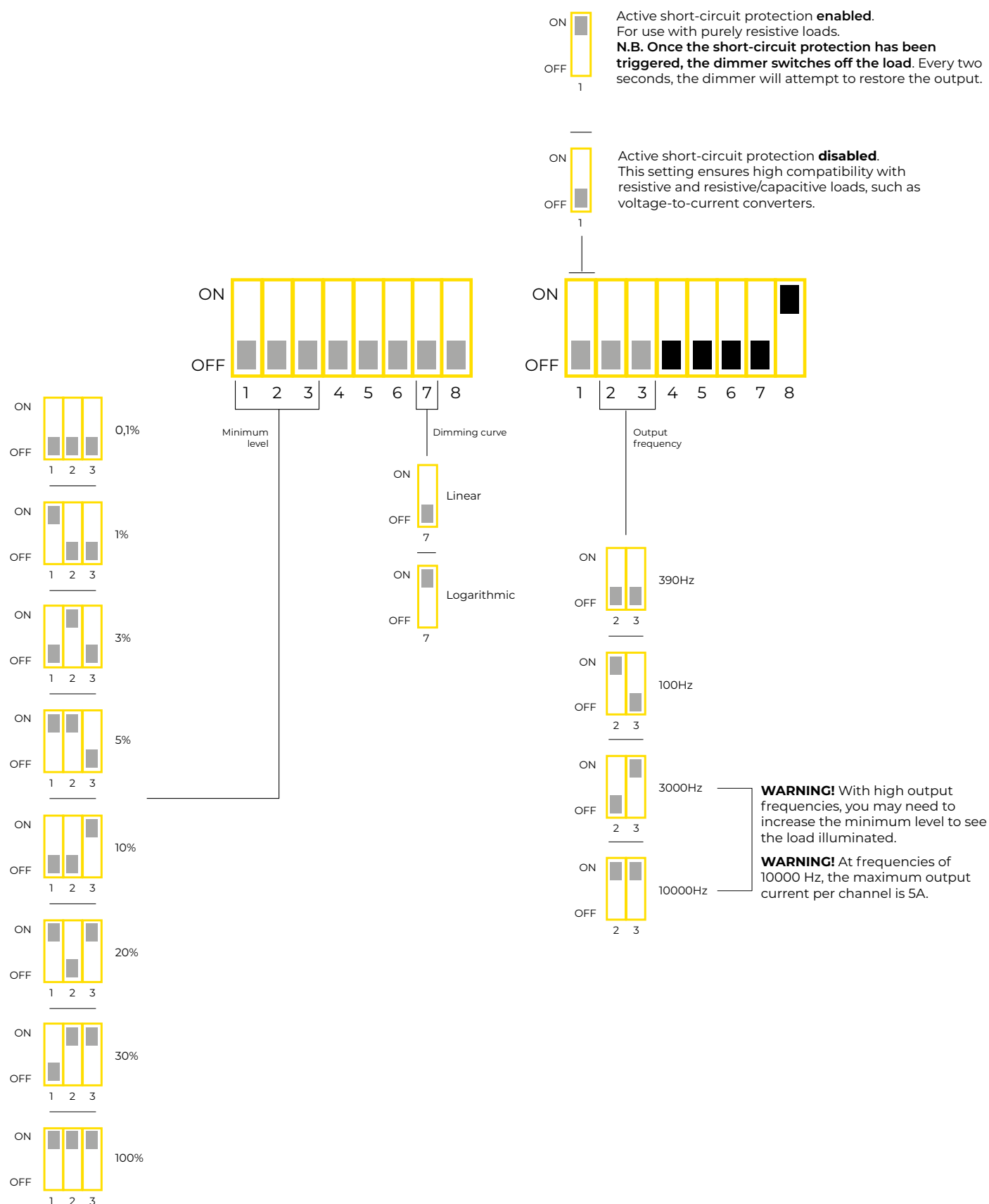


FIG. 24 - 47 k Ω linear potentiometer connection – 4 outputs

- ➔ To switch from the preset mode to **manual** mode, press buttons C1 and C2 simultaneously for 2 seconds. All indicator LEDs will start to **flash**. In manual mode, pressing one of the buttons switches the corresponding channel on or off. The status of the output channel in manual mode is indicated by the corresponding LED (**steady on with a brief flash = output channel on; steady off with a brief flash = output channel off**). To exit **manual** mode, press buttons C1 and C2 simultaneously for 2 seconds, or switch the dimmer off and on again by disconnecting the power supply.

Modes of operation

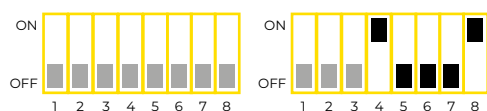
16 | 0–10 V/1–10 V active/passive and 47 kΩ linear potentiometer – 4 outputs – parameters



Modes of operation

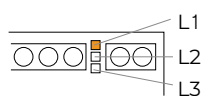
17 | PHASE CUT – 1 output

Dip switch settings:



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

If the configuration is **correct**, once power is supplied to the dimmer, the L1 LED will light up **orange**.



If the configuration is **incorrect**, LEDs L1 and L2 will flash **red**.

If the configuration is correct but the **parameters are incorrect** (grey DIP switches in the figure above), LED L1 will **flash red**.

The dimmer must be powered in accordance with the polarity shown in **FIG. 25** via the DC IN+ and DC IN- terminals. If the polarity of the power supply is reversed, the device will not be damaged. The outputs must be wired as shown in **FIG. 25**. The output can handle loads of up to 32A.

To use the PHASE-CUT signal to control the output, connect the cut phase (AC voltage range 12–265 Vac, 50–65 Hz) from the PHASE-CUT dimmer to P1, and the system NEUTRAL to COM P.

The control input can operate with either the **phase cut or the neutral cut**. In the case of neutral cut-off, the system phase must be connected directly to COM P and the cut-off neutral to P1. The input signal does not require polarisation. The maximum current drawn by the PHASE CUT interface is approximately 2mA.

The diagram in **FIG. 25** shows the connection diagram with a dimmer equipped with a single output pole for phase cut-off (phase cut-off). The dimmer must be connected as if the MULTI-4CV-DIN itself were a dimmable load at mains voltage.

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

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

NB: In this mode, BLE (Bluetooth) control is disabled.



WARNING!
If using loads >24A,
see the diagram on page 58

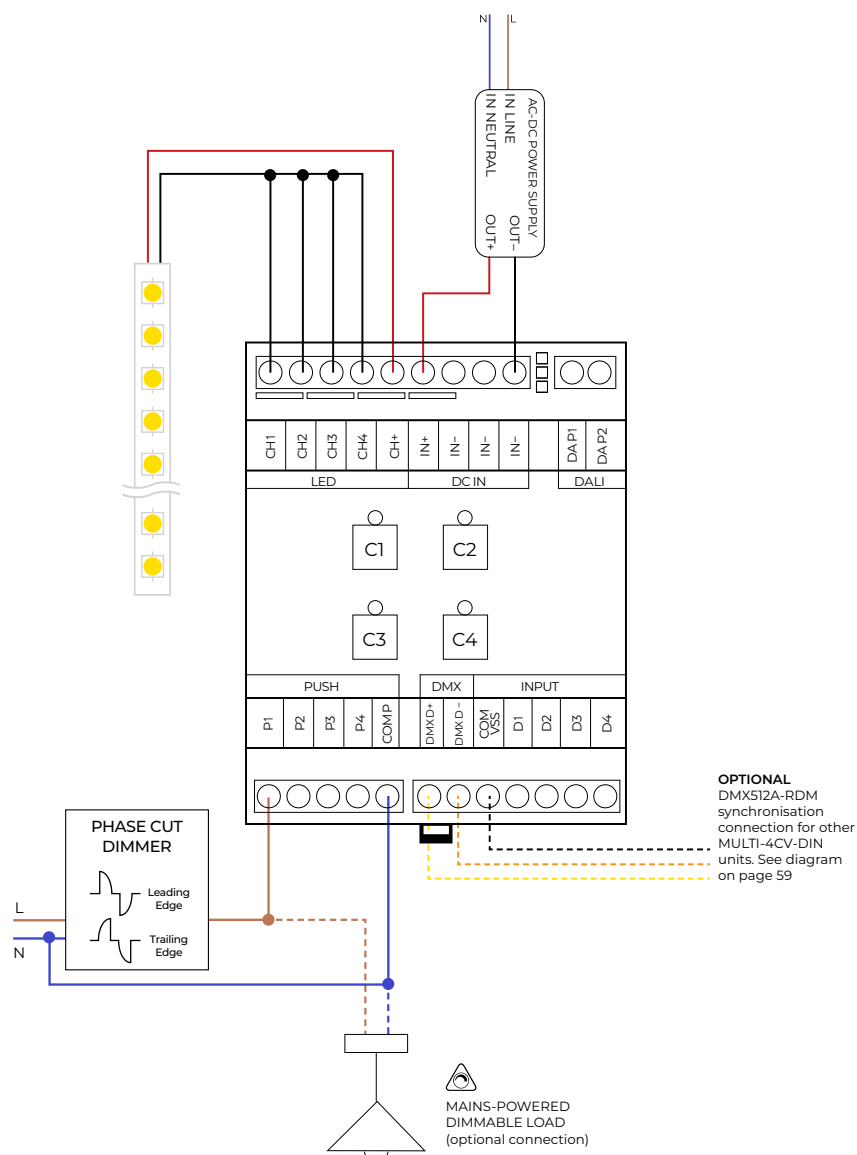


FIG. 25 - connection PHASE CUT 1 – cut phase terminal

- ➔ To switch from the preset mode to **manual** mode, press buttons C1 and C2 simultaneously for 2 seconds. All indicator LEDs will **start to flash**. In manual mode, pressing any of the buttons switches all channels on and off simultaneously. The status of the outputs in manual mode is indicated by the status LEDs (**steady on with a brief flash = output channel on; steady off with a brief flash = output channel off**). To exit **manual** mode, press buttons C1 and C2 simultaneously for 2 seconds, or switch the dimmer off and on again by disconnecting the power supply.

Phase-cut dimmers that do not handle a minimum current of 2mA 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, a load resistor can be used and positioned at the phase-cut dimmer's output between the COM P terminal and P1.

Below are some resistance values and their corresponding wattages:

Mains voltage 230V

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

Mains voltage 110V

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

WARNING!



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

For a full list of verified compatibility, see page 61

Several MULTI-4CV-DIN units can be connected in parallel for each phase-cut dimmer. The maximum number of MULTI-4CV-DIN dimmers is given by:

MAXIMUM CURRENT OF PHASE-CUT DIMMER / 0.002

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



nb: For the MULTI-4CV-DIN dimmer to operate with a PHASE-CUT input, when used in conjunction 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 supplied.

For further details on the scheme, see page 62



WARNING!
If using loads >24A,
see the diagram on page 58

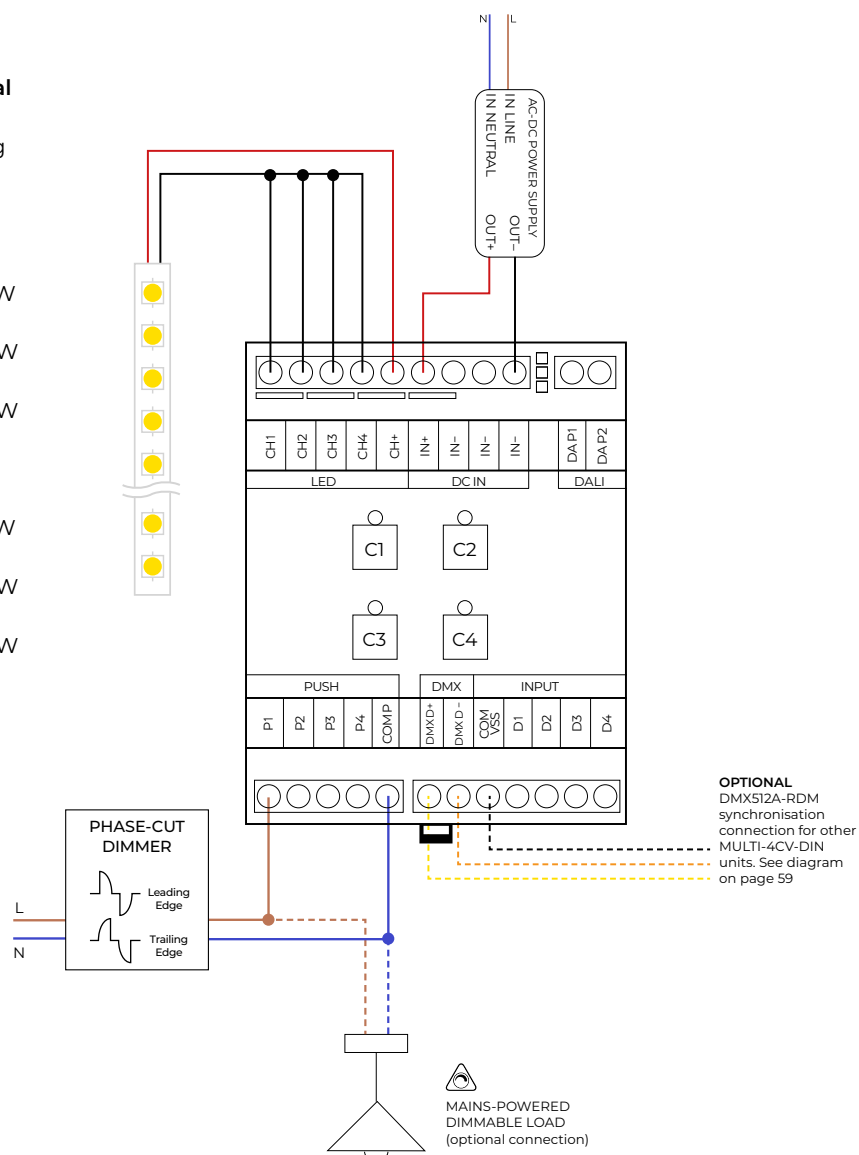
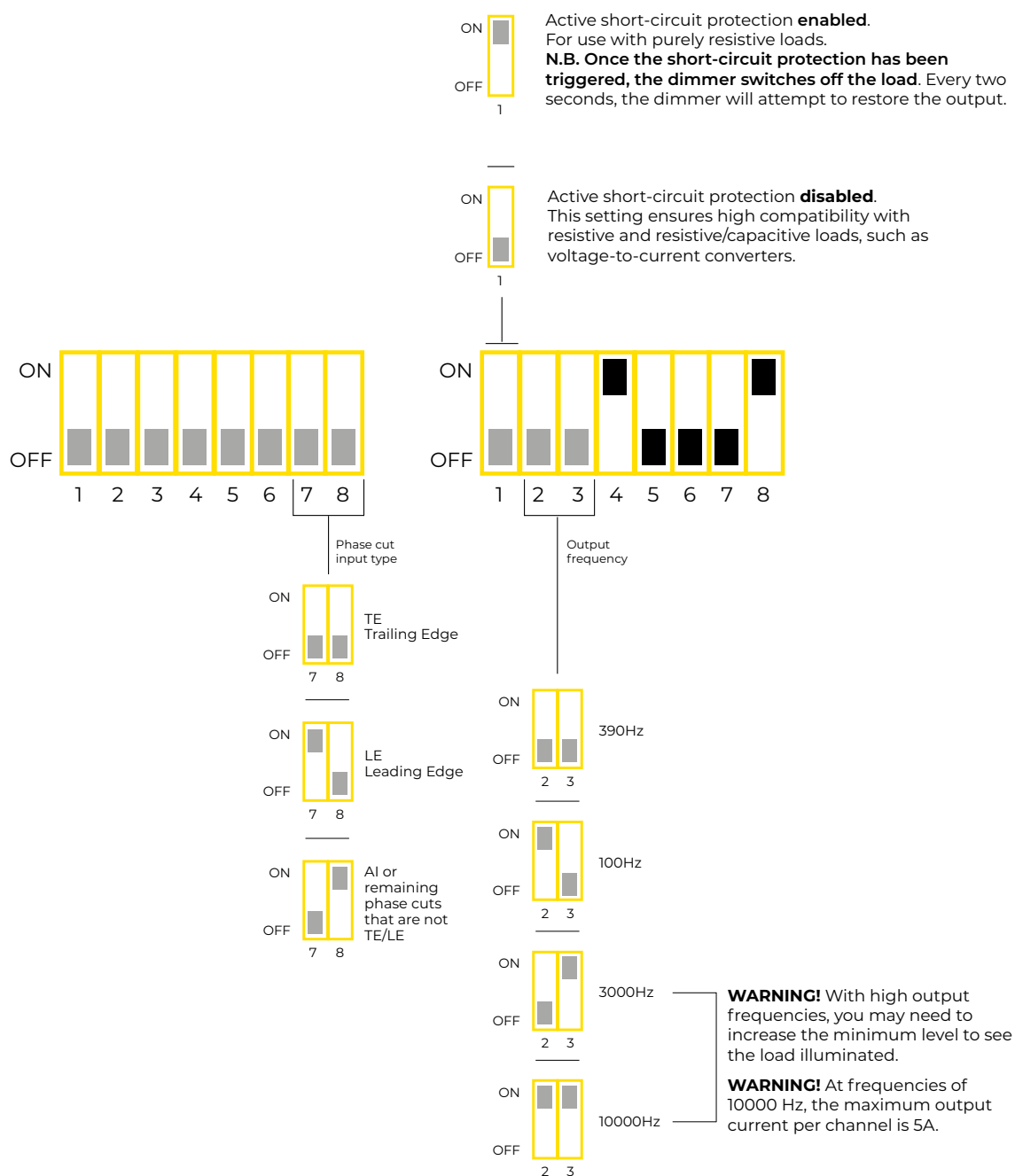


FIG. 26 - PHASE CUT connection 2 poles cut phase

➔ To switch from the preset mode to **manual mode**, press buttons C1 and C2 simultaneously for 2 seconds. All indicator LEDs will **start to flash**. In manual mode, pressing any of the buttons switches all channels on and off simultaneously. The status of the outputs in manual mode is indicated by the status LEDs (**steady on with a brief flash = output channel on; steady off with a brief flash = output channel off**). To exit **manual mode**, press buttons C1 and C2 simultaneously for 2 seconds, or switch the dimmer off and on again by disconnecting the power supply.

Modes of operation

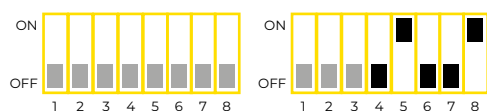
17 | PHASE CUT – 1 output – parameters



Modes of operation

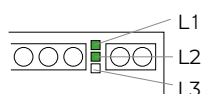
18 | Dimming on power cut – 1 output

Dip switch settings:



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

If the configuration is **correct**, once power is supplied to the dimmer, the L1 and L2 LEDs will light up **green**.



If the configuration is **incorrect**, LEDs L1 and L2 will flash **red**.

If the configuration is correct but the **parameters are incorrect** (grey DIP switches in the figure above), LED L1 will **flash red**.

The dimmer must be powered in accordance with the polarity shown in **FIG. 27** via the DC IN+ and DC IN- terminals. If the polarity of the power supply is reversed, the device will not be damaged. The outputs must be wired as shown in **FIG. 27**.

Control via a switch is achieved by connecting the mains voltage (12–265 V AC, 50–65 Hz) to terminals COM P and P1, as shown in **FIG. 27**.

The PHASE or NEUTRAL can be switched on or off using a switch, a changeover switch or a reversing switch to switch the load connected to the dimmer on, off or to adjust its brightness.

By default, the output level is set to 100%. Changing the mode resets the output level to the default setting.

NB: In this mode, BLE (Bluetooth) control is disabled.



WARNING!
If using loads >24A,
see the diagram on page 58

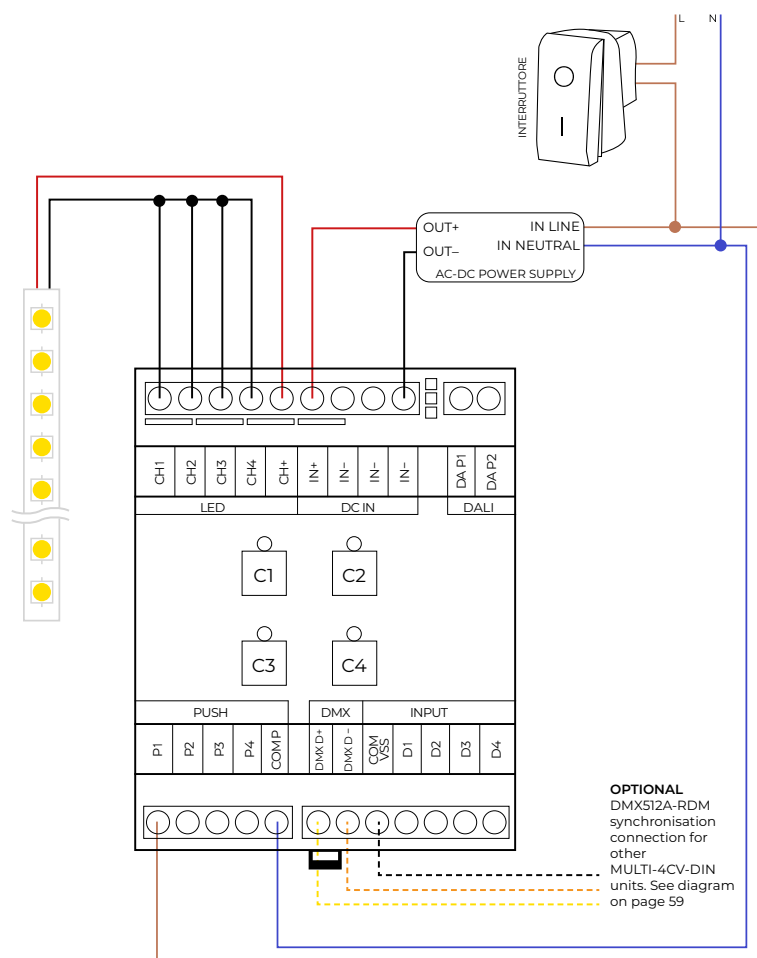
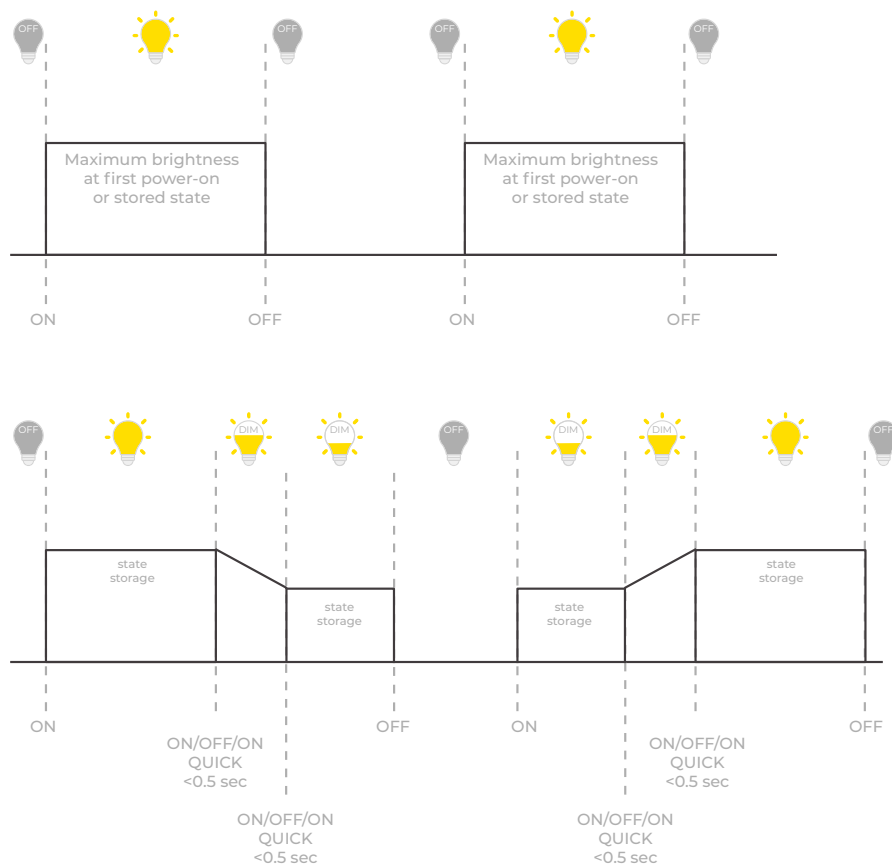


FIG. 27 - dimming circuit on power cut to 1 output

→ To switch from the preset mode to **manual** mode, press buttons C1 and C2 simultaneously for 2 seconds. All indicator LEDs will **start to flash**. In manual mode, pressing any of the buttons switches all channels on and off simultaneously. The status of the outputs in manual mode is indicated by the status LEDs (**steady on with a brief flash = output channel on; steady off with a brief flash = output channel off**). To exit **manual** mode, press buttons C1 and C2 simultaneously for 2 seconds, or switch the dimmer off and on again by disconnecting the power supply.

The logic used to dim the load is illustrated in the diagram below:

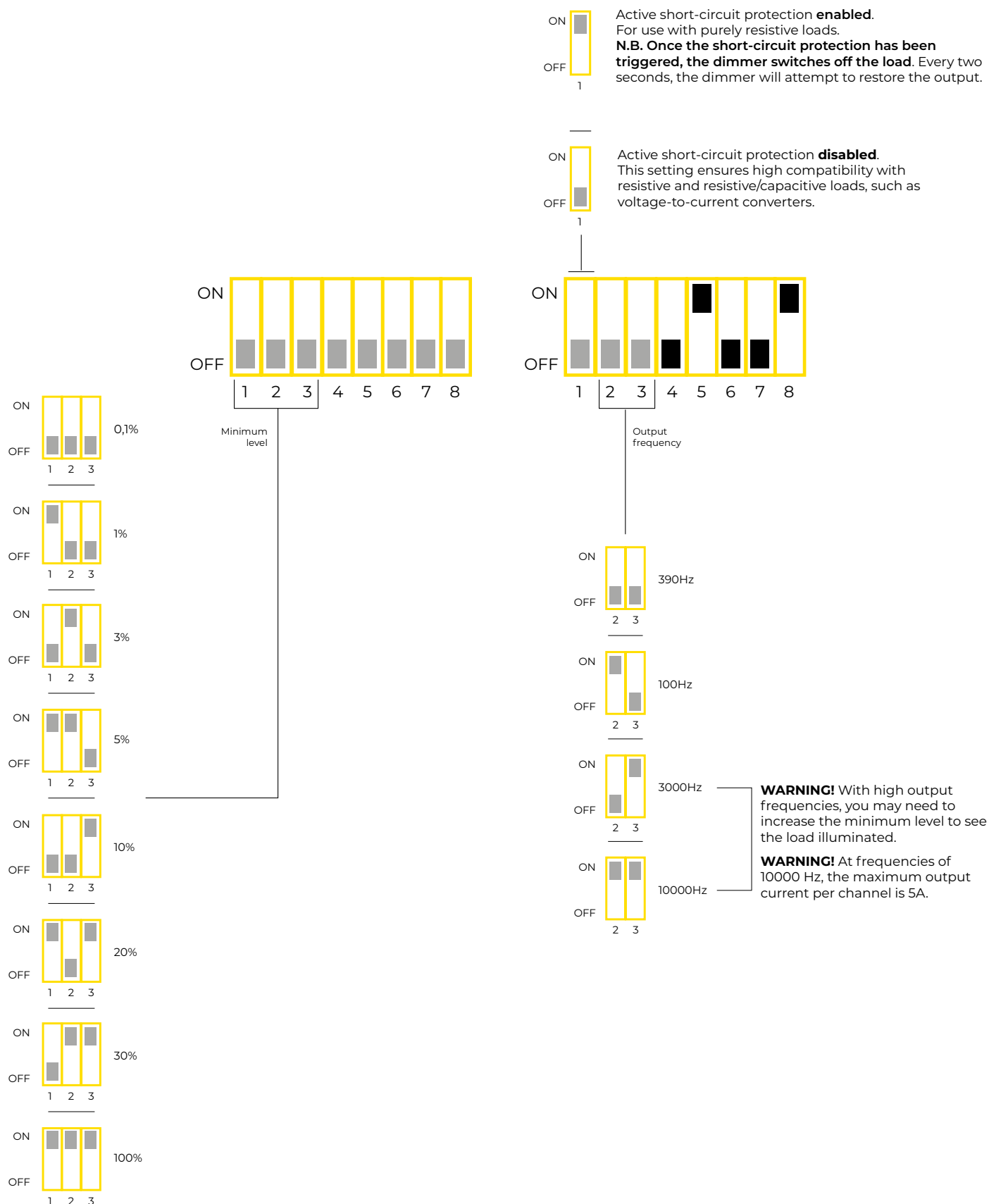


- Use the wall switch to turn on the lights.
- Quickly turn off the lights using the wall switch, and then turn them back on (within 0.5 seconds). The brightness will increase gradually.
- Press the switch again at the desired brightness level to adjust it. The selected brightness level will be saved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

You can adjust the minimum brightness using the DIP switches.

Modes of operation

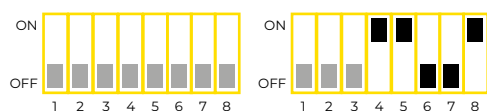
18 | Dimming on power cut – 1 output – parameters



Modes of operation

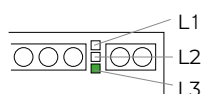
19 | Timed/Garage Mode 1 output

Dip switch settings:



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

If the configuration is **correct**, once power is supplied to the dimmer, the L3 LED will light up **green**.



If the configuration is **incorrect**, LEDs L1 and L2 will flash **red**.

If the configuration is correct but the **parameters are incorrect** (grey DIP switches in the figure above), LED L1 will **flash red**.

The dimmer must be powered in accordance with the polarity shown in **FIG. 28** via the DC IN+ and DC IN- terminals. If the polarity of the power supply is reversed, the device will not be damaged. The outputs must be wired as shown in **FIG. 28**.

Control via a switch is achieved by connecting the mains voltage (AC 12–265 VAC, 50–65 Hz) to the COM P and P1/P2/P3/P4 terminals, as shown in **FIG. 28**. PHASE or NEUTRAL can be activated via NO push-buttons or presence/motion sensors.

In this mode, any button (P1A/P2/P3/P4) controls all outputs (CH1/CH2/CH3/CH4) simultaneously.

In the idle state, each individual channel is set to 'minimum brightness' (a parameter adjustable via DIP switches, with the default set to 0). When a contact closes, on the rising edge of the signal, the output switches on at maximum brightness (default = 100%), which can also be set via DIP switches. This state is maintained for the duration of the sensor's activation, plus the activation time set via the DIP switches. Any further rising edge of the signal will reset the on-time. Once the set time has elapsed, the brightness returns to the minimum level.

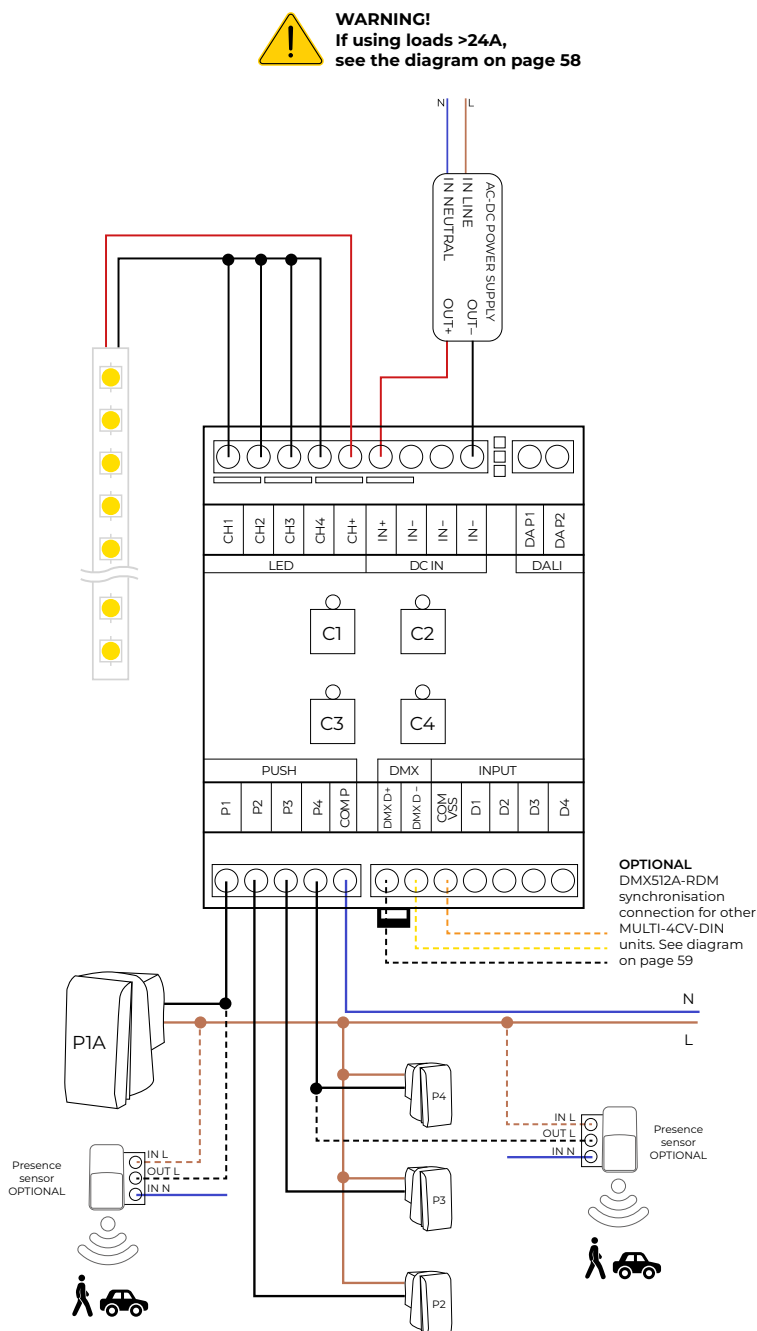


FIG. 28 - connection Timed/Garage Mode 1 output

➔ To switch from the preset mode to **manual** mode, press buttons C1 and C2 simultaneously for 2 seconds. All indicator LEDs will start to **flash**. In manual mode, pressing one of the buttons switches the corresponding channel on or off. The status of the output channel in manual mode is indicated by the corresponding LED (**steady on with a brief flash = output channel on; steady off with a brief flash = output channel off**). To exit **manual** mode, press buttons C1 and C2 simultaneously for 2 seconds, or switch the dimmer off and on again by disconnecting the power supply.

In this mode, the output states are also sent over the DMX512A-RDM bus on fixed channels 1, 2, 3 and 4:

Output CH1 → DMX ADDRESS 1

Output CH2 → DMX ADDRESS 2

Output CH3 → DMX ADDRESS 3

Output CH4 → DMX ADDRESS 4

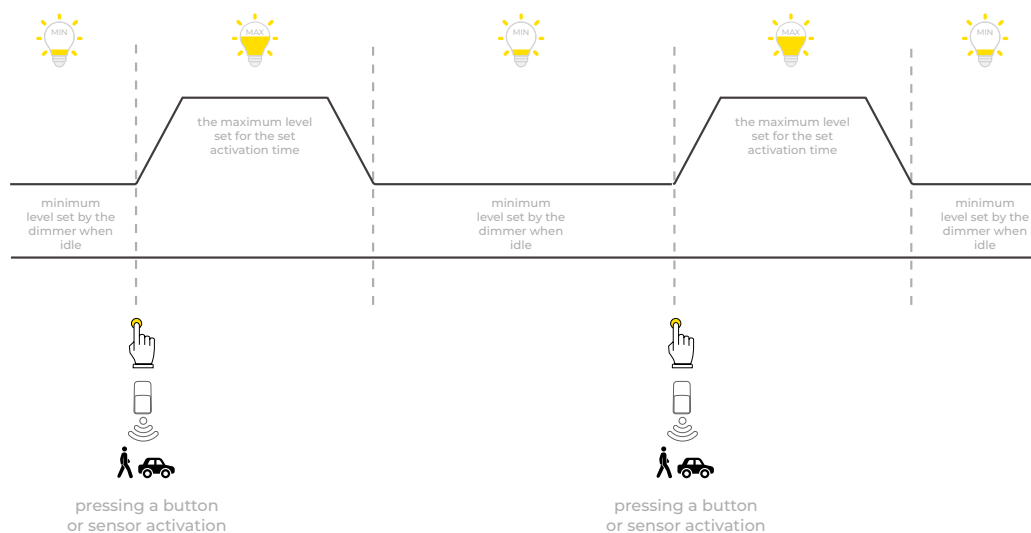
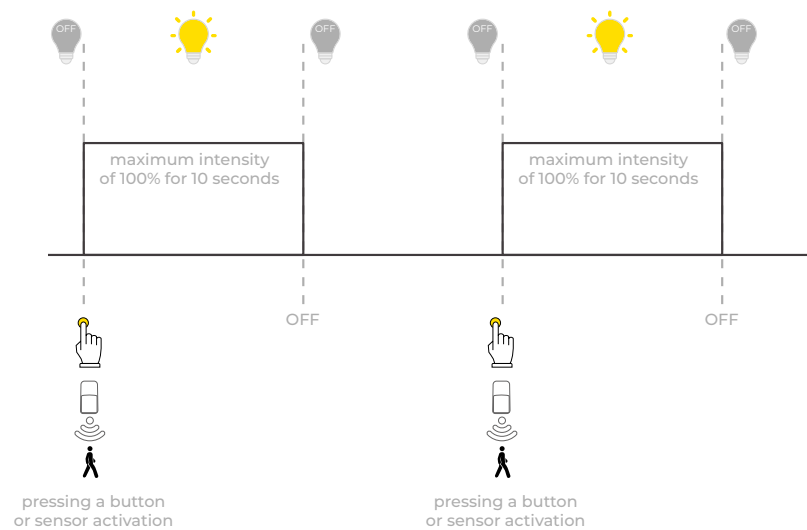
NB: In this mode, BLE (Bluetooth) control is disabled.

DEFAULT SETTINGS:

minimum 0%

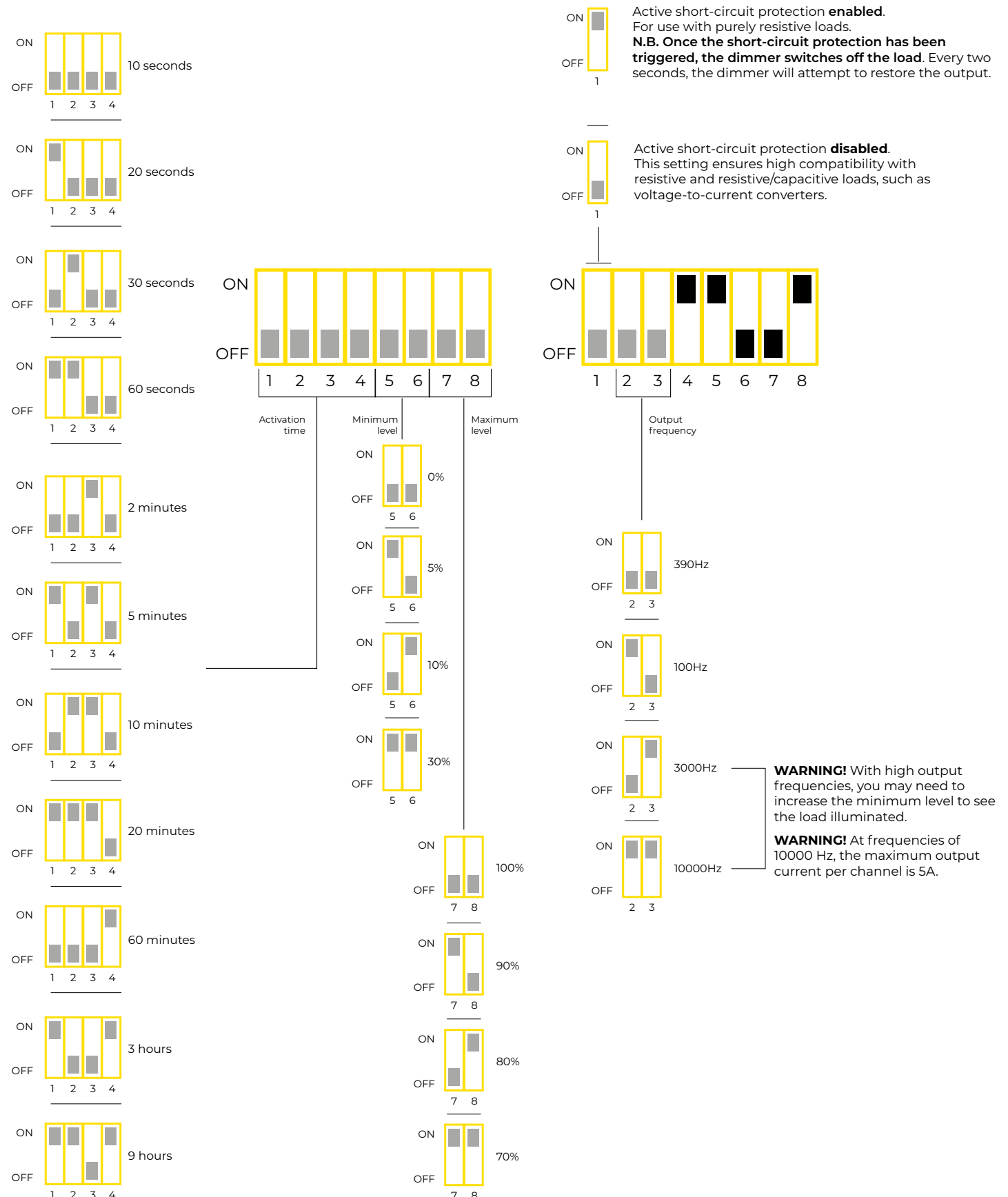
maximum 100%

activation time 10 seconds



Modes of operation

19 | Timed/Garage Mode 1 output – parameters



Modes of operation

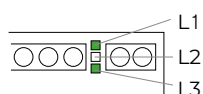
20 Timed/Garage Mode, 4 outputs

Dip switch settings:



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

If the configuration is **correct**, once power is supplied to the dimmer, the L1 and L3 LEDs will light up **green**.



If the configuration is **incorrect**, LEDs L1 and L2 will flash **red**.

If the configuration is correct but the **parameters are incorrect** (grey DIP switches in the figure above), LED L1 will **flash red**.

The dimmer must be powered in accordance with the polarity shown in **FIG. 29** via the DC IN+ and DC IN- terminals. If the polarity of the power supply is reversed, the device will not be damaged. The outputs must be wired as shown in **FIG. 29**.

Control via a switch is achieved by connecting the mains voltage (AC 12–265 VAC, 50–65 Hz) to the COM P and P1/P2/P3/P4 terminals, as shown in **FIG. 29**. PHASE or NEUTRAL can be activated via NO buttons or presence/motion sensors.

In this mode:

- The buttons/sensors on input **P1A** control output CH1.
- The buttons/sensors on input **P2** control output CH2.
- The buttons/sensors on input **P3** control output CH3.
- The buttons/sensors on input **P4** control output CH4.

In standby mode, each individual channel is set to 'minimum brightness' (a parameter that can be set via the DIP switches, with the default being 0). When a contact closes, on the rising edge, the corresponding channel switches on at maximum brightness (default = 100%), which can also be set via the DIP switches.

This state is maintained for the duration of the sensor's activation, plus the activation time set via the DIP switches. Any further activation edge will reset the on-time. Once the set time has elapsed, the brightness returns to the minimum level.



WARNING!
If using loads >24A,
see the diagram on page 58

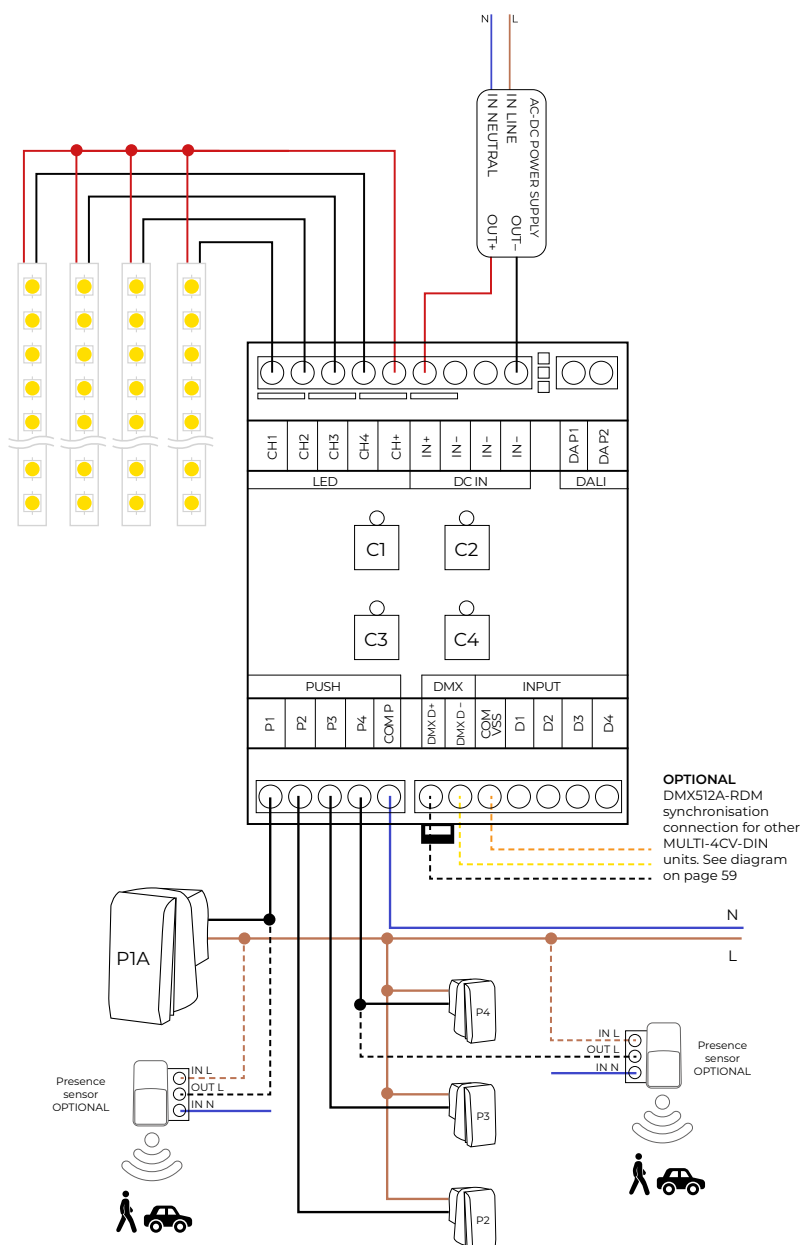


FIG. 29 - Timed Switch/Garage Mode with 4 outputs

- ➔ To switch from the preset mode to **manual** mode, press buttons C1 and C2 simultaneously for 2 seconds. All indicator LEDs will start to **flash**. In manual mode, pressing one of the buttons switches the corresponding channel on or off. The status of the output channel in manual mode is indicated by the corresponding LED (**steady on with a brief flash = output channel on; steady off with a brief flash = output channel off**). To exit **manual** mode, press buttons C1 and C2 simultaneously for 2 seconds, or switch the dimmer off and on again by disconnecting the power supply.

In this mode, the output states are also sent over the DMX512A-RDM bus on fixed channels 1, 2, 3 and 4:

Output CH1 → DMX ADDRESS 1

Output CH2 → DMX ADDRESS 2

Output CH3 → DMX ADDRESS 3

Output CH4 → DMX ADDRESS 4

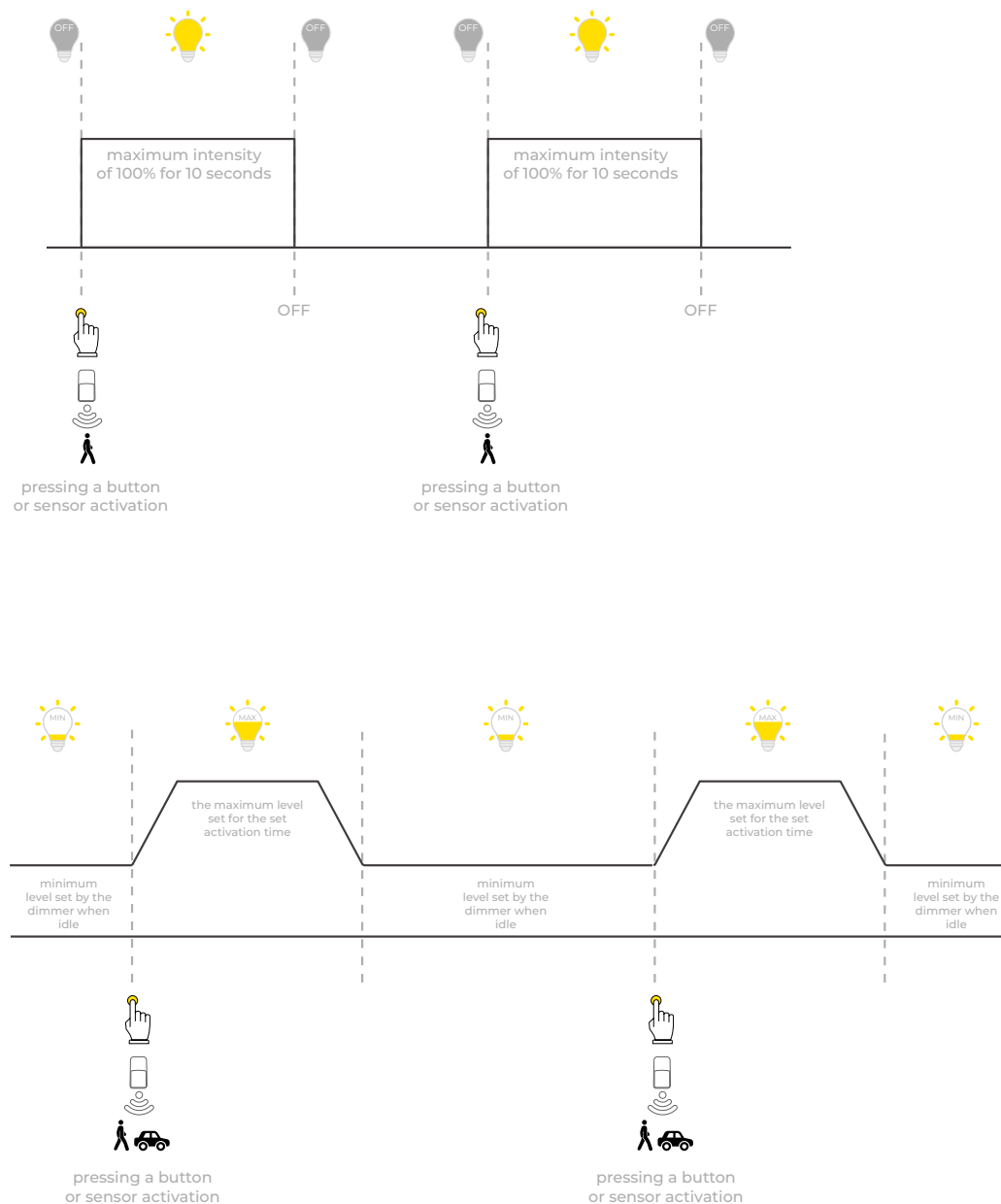
NB: In this mode, BLE (Bluetooth) control is disabled.

DEFAULT SETTINGS:

minimum 0%

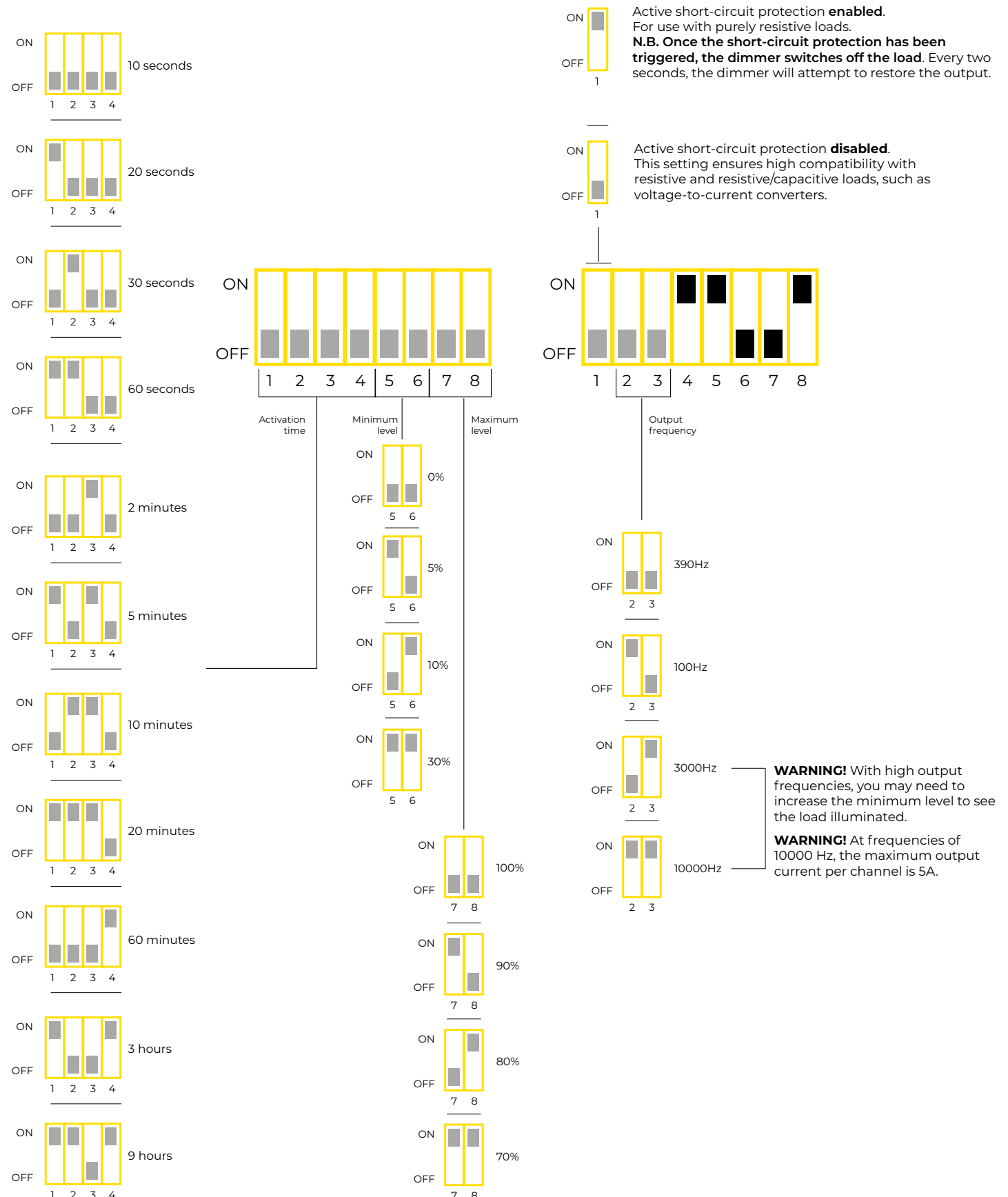
maximum 100%

activation time 10 seconds



Modes of operation

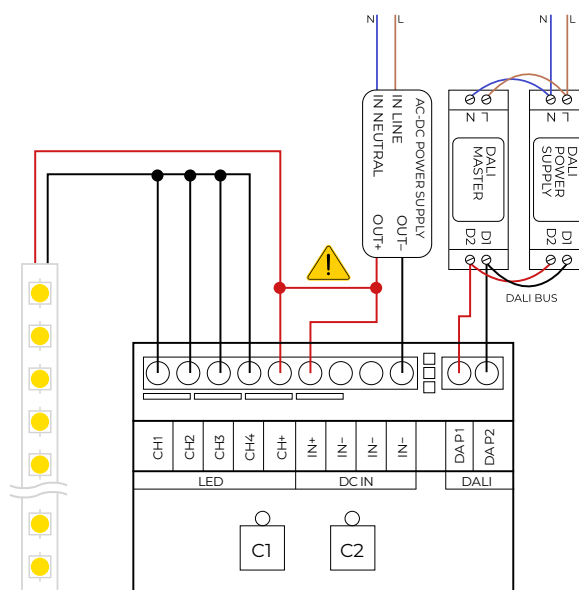
20 | Timed/Garage Mode 4 outputs – parameters



Supplementary diagrams

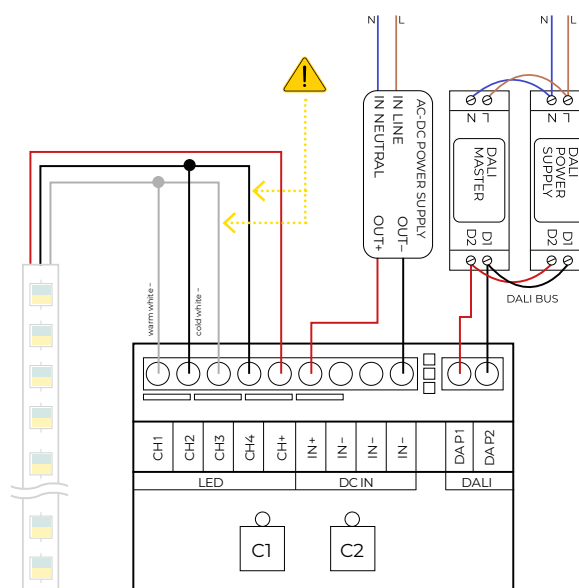
Power supply

When using loads >24A



When using loads >8A per channel

nb: If the load exceeds 24A, the connection between CH+ and IN+ must also be made (as shown in the previous figure)

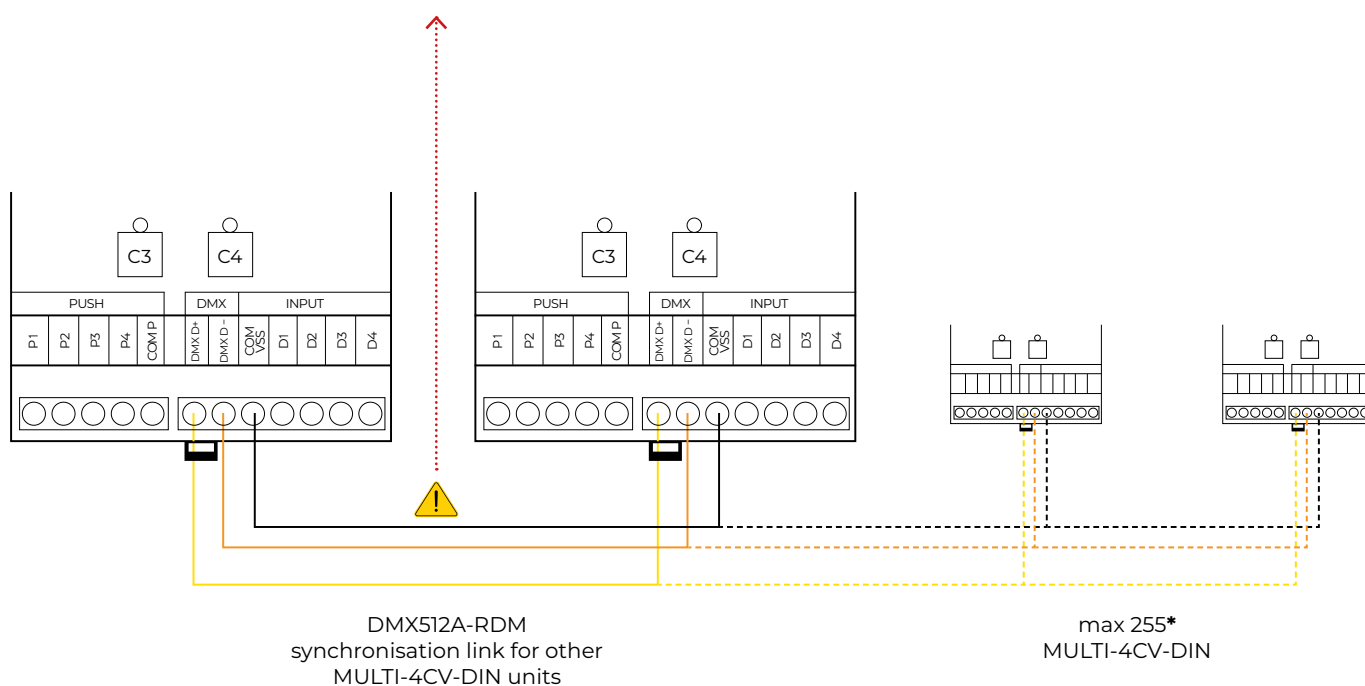


Supplementary diagrams

Master/slave

WARNING!

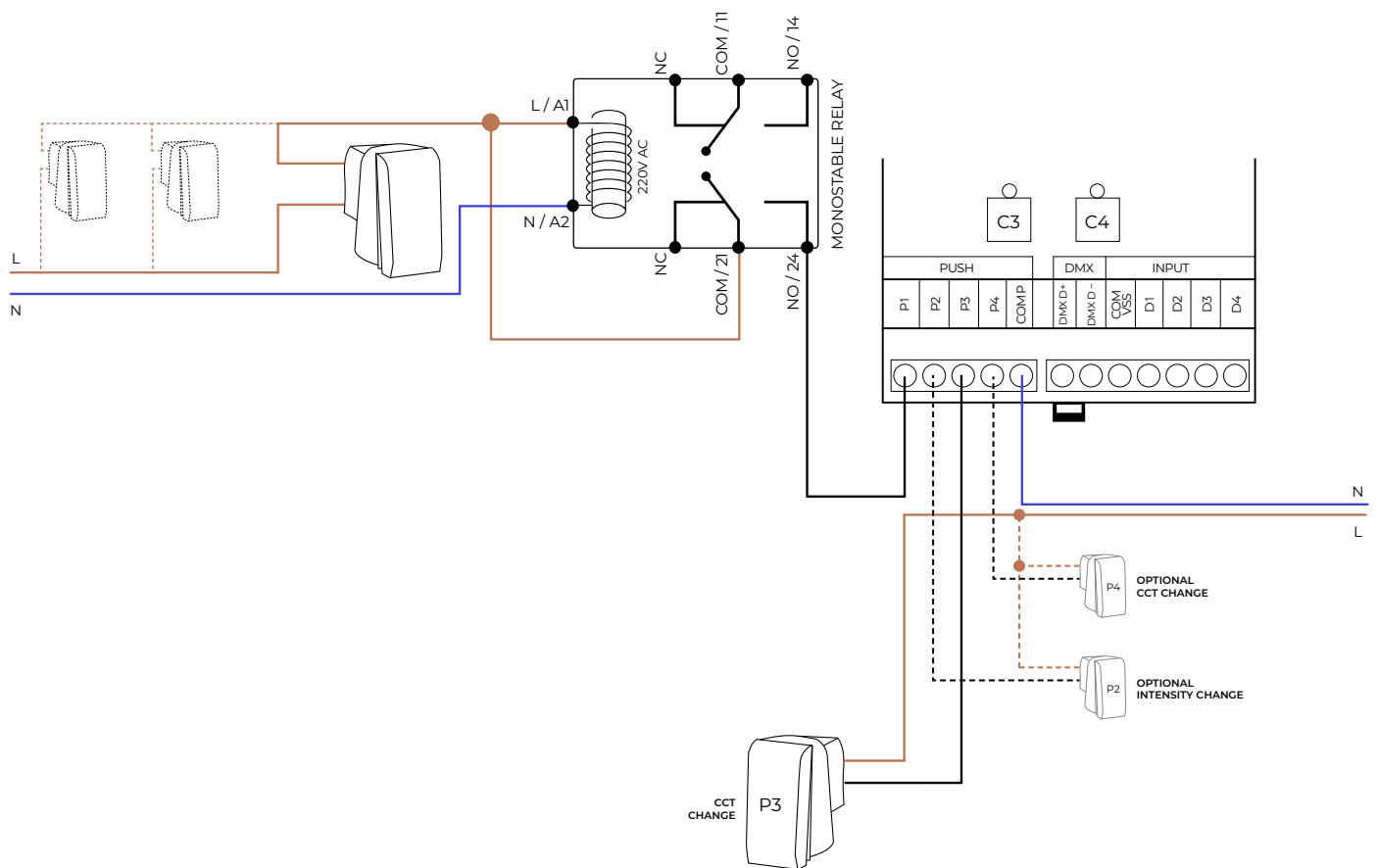
It is essential to connect the COM VSS cable, particularly when using separate power supplies for each MULTI-4CV-DIN dimmer.



* The RS485 driver used for DMX transmission can handle 32 unit-loads. In DMX slave mode, the RS485 driver has a weight of 1/8 of a unit-load. The theoretical limit on the number of slaves that can be connected to a single MULTI-4CV-DIN is therefore $32 \times 8 = 256$ slaves plus one master. This limit is theoretical, as the total length of the DMX bus, the quality of the cabling and the data rate can all affect the maximum number of dimmers that can be connected. We therefore recommend not exceeding 64 dimmers.

Supplementary diagrams

Support relay



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

Compatibility list

Monostable relay

BRAND	DEVICE	CONTACT MAPPING
FINDER	40.62.8.230.000 (relay) 40.52.8.230.000 (relay)	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 (relay)	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
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)	

Supplementary diagrams

Wiring of compatible products – PHASE CUT

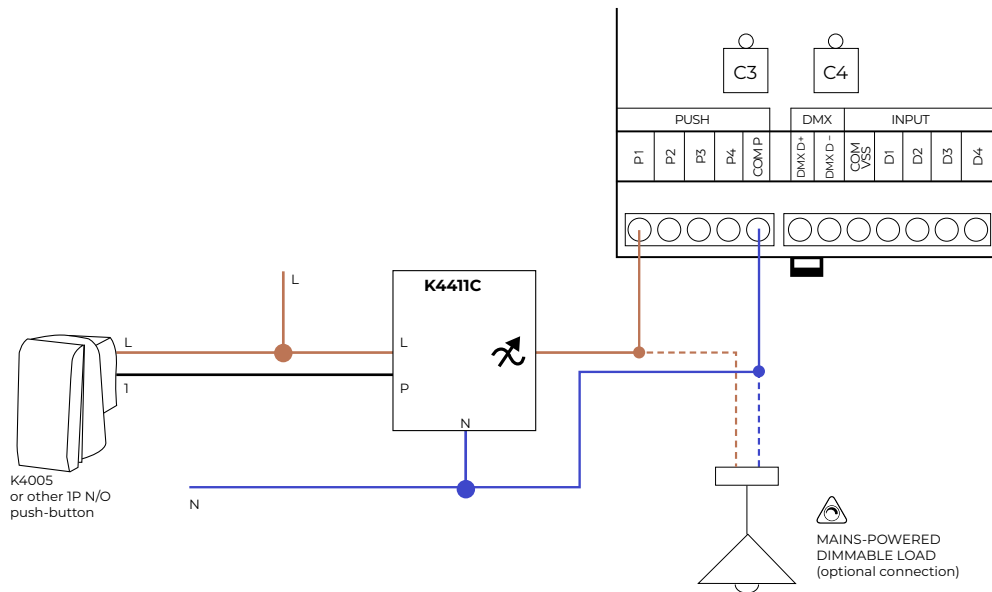


FIG. 30 - connection PHASE CUT 1 – cut phase terminal + BTICINO K4411C

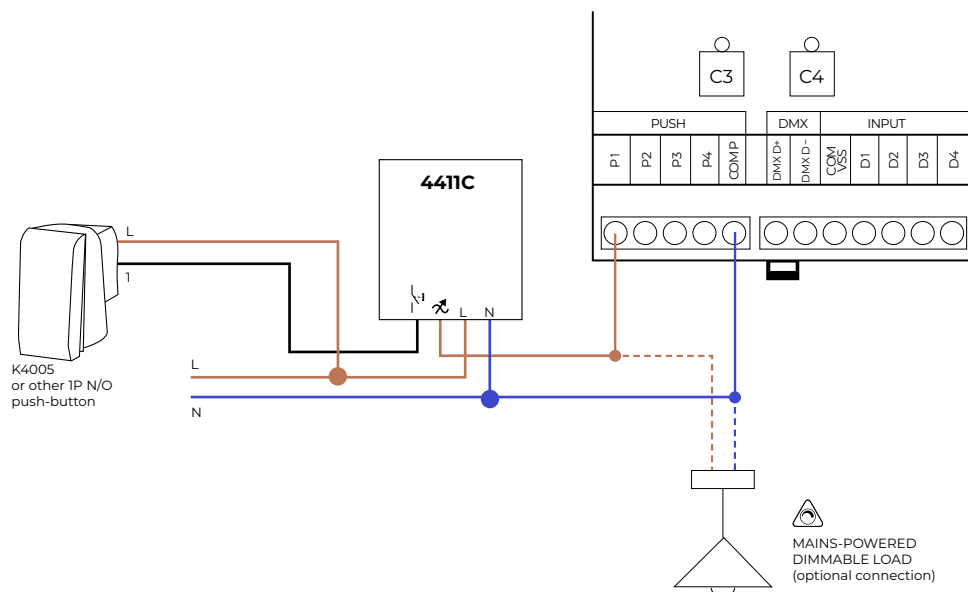


FIG. 31 - connection PHASE CUT 1 – cut phase terminal + BTICINO 4411C

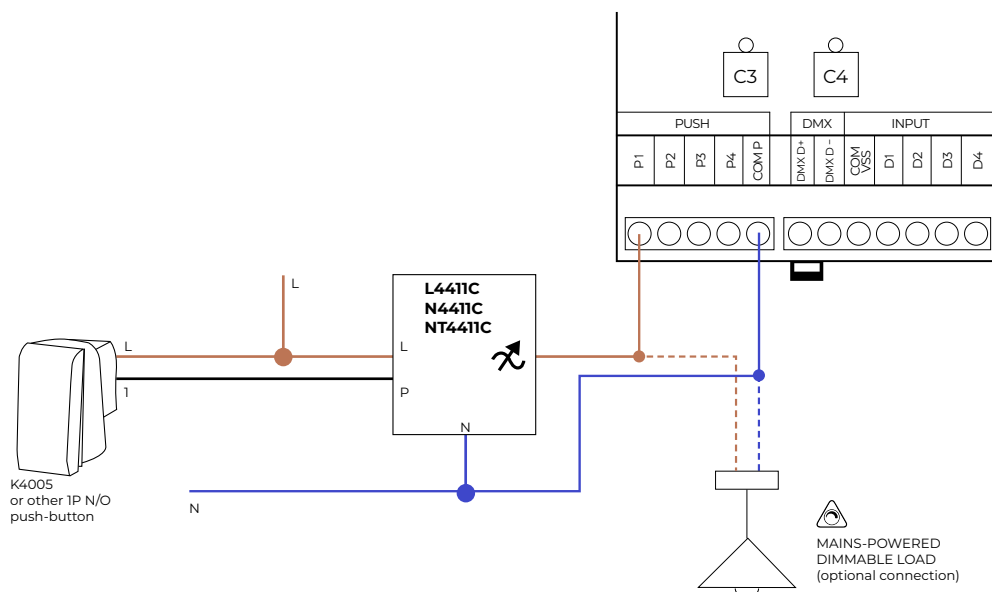


FIG. 32 - connection PHASE CUT 1 – cut phase terminal + BTICINO L4411C / N4411C / NT4411C

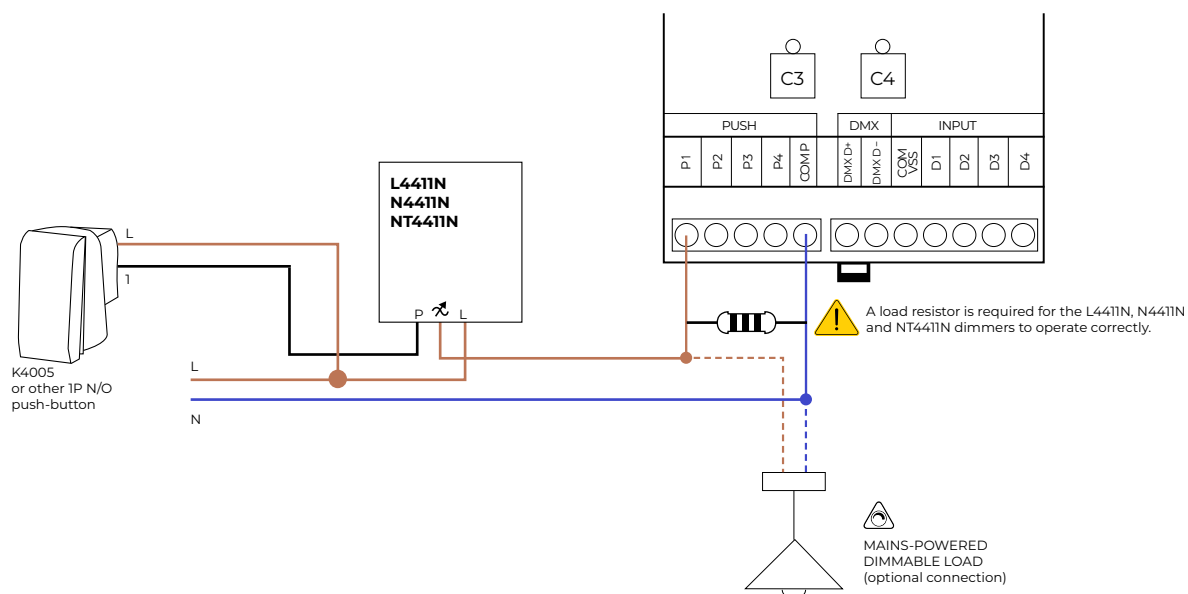


FIG. 33 - connection PHASE CUT 1 – cut phase terminal + BTICINO L4411N / N4411N / NT4411N

OIKOS APP

Installing and configuring the app

When you launch the OIKOS app, you will be asked which connection type you wish to use for the dimmer (default: Bluetooth).

The MULTI-4CV-DIN device can be managed via the OIKOS app and controlled only via **BLUETOOTH**.

Bluetooth control uses a point-to-point connection (the dimmer can only be connected to one device running the OIKOS app at a time).

The approximate Bluetooth signal range is 5 metres indoors and 10 metres in open spaces.

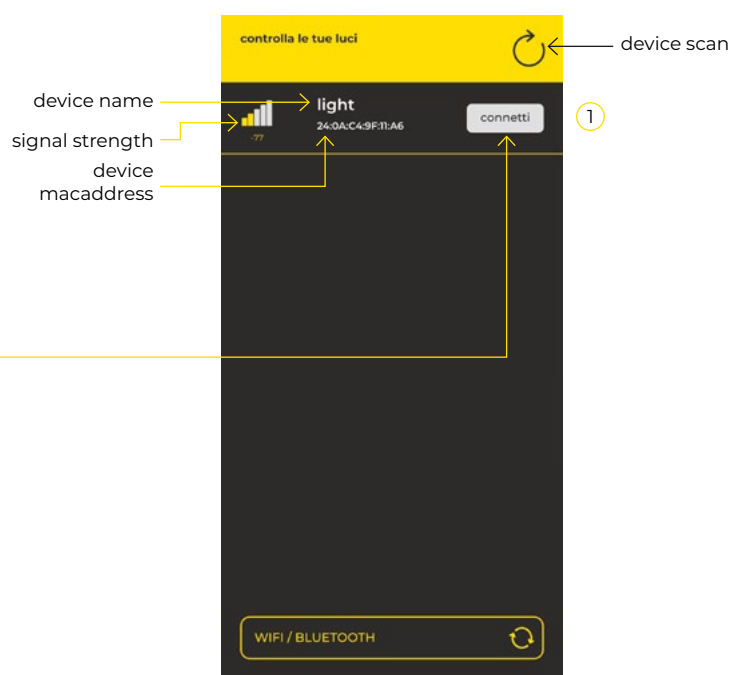
The Bluetooth connection does not support control via voice assistants.



Selecting a connection type

OIKOS APP

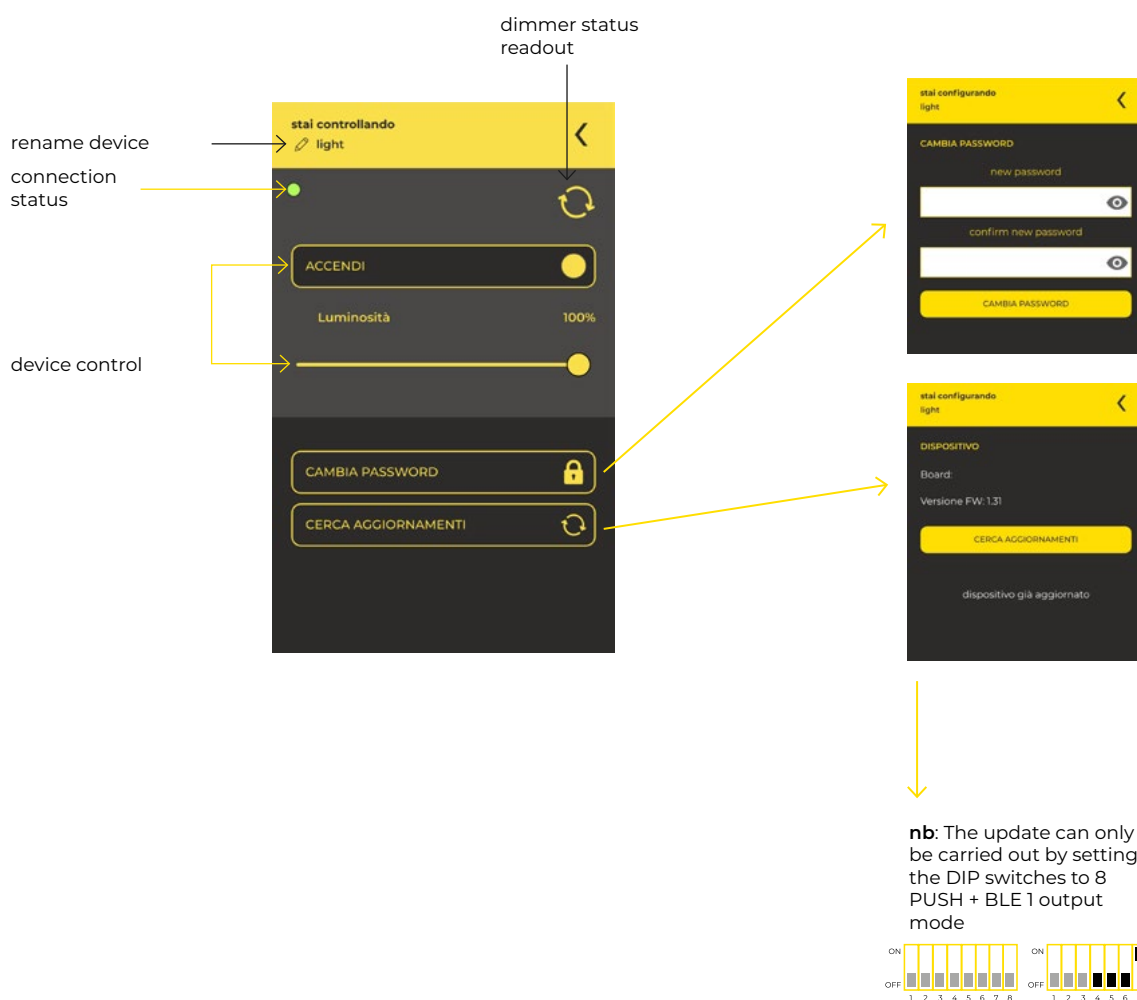
BLUETOOTH connection method



Device scan

① When you click '**Connect**' (1), the app will connect to the device.

If the default password (**01234**) has not been changed, the app will connect automatically once you click 'Connect'; if you have changed it, enter the password you have chosen.



Summary of settings

Dip switch

1 | DALI2 DT6 1 output



2 | DALI2 DT6 4 outputs



3 | DALI2 DT8 1 tunable white output



4 | DALI2 DT8 1 RGBW output



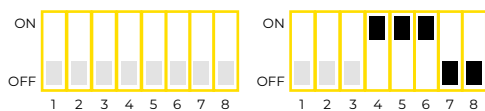
5 | DMX512A-RDM 1 output



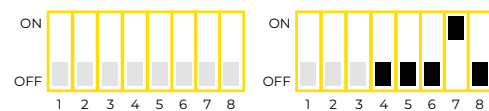
6 | DMX512A-RDM 3 outputs



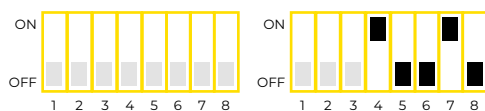
7 | DMX512A-RDM 4 outputs



8 | PUSH + BLE 1 output



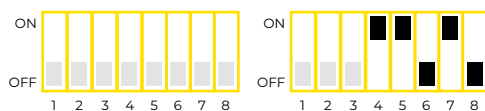
9 | PUSH + BLE 4 outputs



10 | PUSH + BLE 1 tunable white output



11 | PUSH + BLE 2 tunable white outputs



12 | PUSH + BLE 1 DimToWarm output



Summary of settings

Dip switch

13 | PUSH + BLE 1 static RGBW output



14 | PUSH + BLE 1 dynamic RGBW output



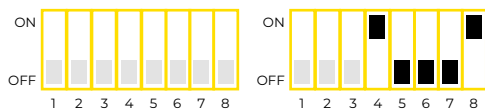
15 | 0–10 V/1–10 V active/passive and 47 kΩ linear potentiometer – 1 output



16 | 0–10 V/1–10 V active/passive and 47 kΩ linear potentiometer – 4 outputs



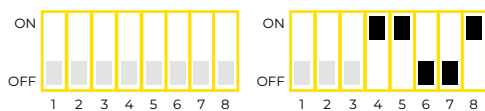
17 | PHASE CUT – 1 output



18 | Dimming on power cut – 1 output



19 | Timed/Garage Mode 1 output



20 | Timed/Garage Mode, 4 outputs



Change of mode

To change the operating mode, unplug the dimmer from the power supply, configure the dip switches, and restore power.

Please note that switching to a new mode automatically resets all parameters.