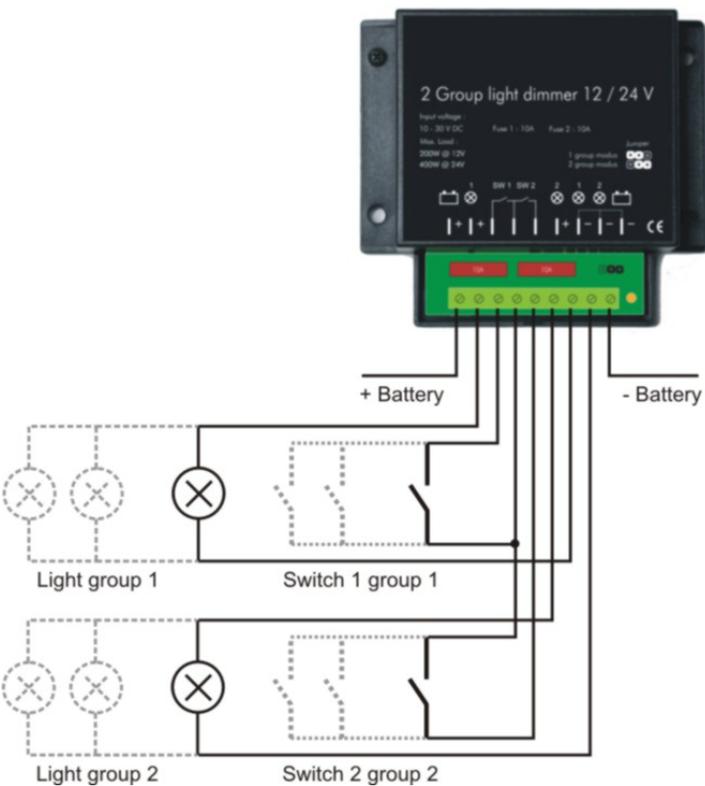


wiring diagram 1: 'Controlling both groups with one switch'.



wiring diagram 2: 'Controlling each group with its own (set of) switch(es)'.

**Technical specifications**

Maximal load	: 200W @ 12V and 400W @ 24V
Per group	: 100W @ 12V and 200W @ 24V
Input voltage range	: 8 - 30 V DC
System voltage	: 12V or 24 V DC
Number groups	: 2
Switches per group	: unlimited
Type switch	: Momentary normally open contact
Dimensions (l x b x h)	: 99 x 89 x 41 mm
Weight	: 140 gram
Protections	: 2 x 10 A fuse, overload, temperature and low voltage.

**User manual 2 group light dimmer**

The 2 group light dimmer is unique in its kind. It offers the opportunity to control the amount of light of one lightgroup or two separate light groups. It can handle normal and halogen light bulbs. The selection to use one or two groups is done by a jumper. A dimmer with a capacity of 200W @ 12 V and 400W @ 24V is selected when the two groups are combined into one with the jumper. Each output can handle a load of 100W @ 12V and 200W @ 24V.

When the battery is charged the voltage can rise to 14.4V or 28.8V. This voltage shortens the life of the light bulbs. The internal voltage regulation increases the life of the light bulbs. It takes care that the (effective) voltage doesn't rise higher than 12V or 24V. Halogen light bulbs have a high inrush current. This is why each group has a softstart. The softstart also lengthens the life of the light bulbs.

The low voltage protection prevents the battery against deep discharge. This turns the lights off when the battery voltage is lower than 9 V or 18V. The lights can be switched on again when the battery is charged and reaches 12V or 24V.

**Controlling the dimmer**

The 2 group light dimmer is controlled by one or more parallel connected switches per group. The following description is for both groups.

**Turn on / off:**

The lights will turn on when the switch is 'tipped' (pushed for a short time). The brightness will be the same as the last time. The lights will turn off when the switch is 'tipped' again.

**Controlling the brightness:**

Brightness control is only possible when the lights are on. If the switch is pushed for a long time the brightness will increase or decrease. The switch can be released when the desired brightness is reached. If during the changing of the brightness the minimum brightness is reached it will automatically increase. When the maximum brightness is reached it will automatically decrease.

**Explanation led signals**

- Green** One or two groups activated. Green flash four times a minute, both groups are switched off.
- Orange** The 2 group light dimmer is switched off on low voltage or through overloading for a long time. It is now possible to switch on the lights.
- Red** The 2 group light dimmer is switched off on low voltage or through overloading for a long time. In this case it isn't possible to switch on the lights until the batteries are charged or it is cooled down and the led is orange.

**Installation**

The dimmer can be used in two modes: One group: with one (set of) switch(es) controlling both outputs. Or two groups: each output is controlled by its own (set of) switch(es). This can be selected by moving the position of the jumper as shown on the front of the dimmer. The ground terminals are common.

**Be sure to use switches with a pulse - normally open contact.**

Mount the 2 group light dimmer on a solid surface. Use reliable terminals and end sleeves to avoid bad connections. Fasten the screws tightly but do not overtighten them. Use appropriate wiring, a current of 20 Ampere can run through the wires. Make the part of the installation voltage free on which the dimmer is to be connected. Strip the isolation 5 mm from the wires. Connect the wires according to the following description:

**1 group dimmer:**

One or more switches can be connected in parallel to SW1 in this mode as shown in wiring diagram 1: 'Controlling both groups with one switch'. Place the jumper in the 1group mode. Each output can handle 100W @ 12V and 200W @ 24 V. So divide the load over the two outputs.

**2 group separate dimmer:**

Connect one or more switches in parallel to SW1 and separate one or more switches in parallel to SW2 as shown in wiring diagram 2: 'Controlling each group with its own (set of) switch(es)'. Place the jumper in the 2 group mode. Each output can handle 100W @ 12V and 200W @ 24 V. So divide the load over the two outputs.

**Safety measures**

- o Use wiring with the appropriate size.
- o Mount the 2 group light dimmer in a dry and ventilated place.
- o Never use the 2 group light dimmer at locations where there is danger of gas or (dust) explosion.
- o Make the connections and protections according to the locally applicable regulations.
- o Check the wiring and connections once a year and repair the faults.
- o The manufacturer can not be held responsible for damage resulting from the use of the light dimmer.