IMPORTANT NOTE

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Check for the most up to date information on the website: www.jisoiluminacion.com

JISO ILUMINACIÓN is not responsible for any errors that may appear in this document.

Remember that electrical installations must be carried out by qualified personnel.

If your question is not answered in this document, JISO ILUMINACIÓN, SL. invites you to make further inquiries related to our products through your usual supply warehouse or by contacting us by phone at (0034) 96 252 3061 or by email: asistenciatecnica@jisoiluminacion.com.

GENERAL ISSUES LED LIGHTING

Frequently asked questions (FAQ)

Why does my LED luminary flicker or not turn off (residual light)?

LED technology, although apparently similar to traditional lighting, has differences which must be taken into account for their normal functioning:

General recommendations:

1- Firstly, follow the installation and connection order for the different elements:
   A. Perform line checks, the neutral without direct current to DRIVER/LUMINARY and the phases to switch elements.
   B. Connection order: connect the LED luminary to your DRIVER, then connect the Driver to the Line and finally introduce the current.

2- Each DRIVER with the appropriate LED luminary! The power supplies (DRIVERS) are electronic devices and not merely transformers. They deliver regulated voltages and currents and have direct current outputs, so respect connections and polarities. CAUTION especially in installations which feature different LED luminary models. Check the driver, the type of current, the voltage and the polarity, taking into account that the current can be 300mA, 350mA, 600mA, 700mA, 1000mA, etc., and that the output current of the driver is continuous.

3- Wiring. Splices and Connections. It is important to use suitable section wiring, considering that the current required is very small. The splices require welding and insulation with heat shrink tubing or tape. Observe the connections, whether they are series or in parallel according to the manufacturer's installation recommendations.

4- It may be that the LED luminary is giving off any light but always remember that current is still circulating in the system.

If you encounter any issue, please give us the opportunity to resolve it before returning the product. Most technical assistance questions can be answered through our knowledge base on the website: www.jisoiluminacion.com, or via the technical support service by email: asistenciatecnica@jisoiluminacion.com. The use of the electronic elements and parts of the installations can cause some very specific and sporadic incidents which do not damage the LEDs but which are striking, such as residual luminescence (brightness), flickering or switching off shortly after installation (temporary block which works by removing and returning the switch).

All these effects existed previously but were not detected because lighting technologies were not as efficient; a lot of energy was needed for their operation and the "residual" voltages, the induction generated voltages, the commuted point installations and the mechanisms with light signal did not affect them.

Most frequent causes of the effects mentioned above:

1- The switches of the electrical installation cut the neutral whereby the phase reaches the LED.

2- Current flows through the neutral, due to earthing shunt or other causes.

3- Induced current. This can be generated by the presence of large household appliances or industrial machinery.

4- Pilot signalling switches (Neon or LED). This type of switch admits a current of 12 to 30 volts.

5- In switched-point installations, a residual voltage may be produced (due to the length of the crossing lines) which acts as a capacitor generating small voltages which can maintain some brightness, flickering or blocking of the LED luminary driver.

Possible solutions:

In points 1, 2 and 5, we recommend checking the electrical installation.

Neutral direct to Driver - Phase to switch

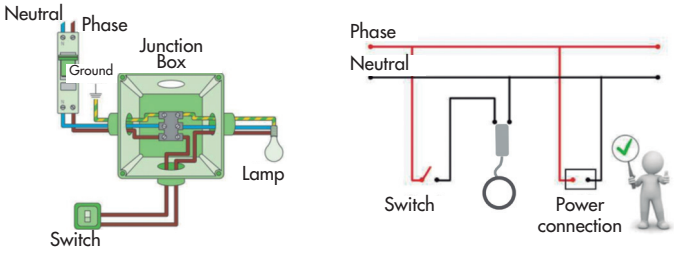
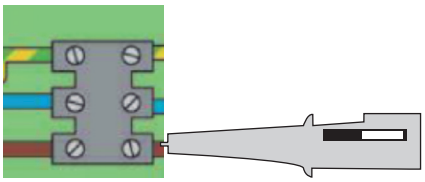


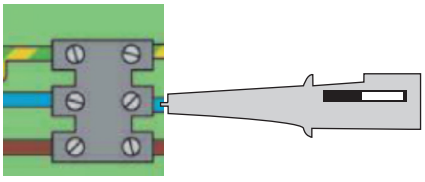
Image 1. LED luminary connection diagram + switch

To easily check if it is neutral or phase, we can use a pole detector, or Multimeter/Tester.

- When you touch the phase conductor with a pole detector, the neon light shines. In the new models with an LCD display showing the voltage, when you touch the phase it will read 220v.



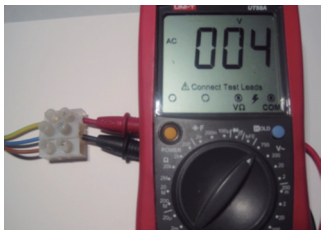
- In pole detectors, neither the neutral nor the earth triggers the neon light. And in the pole detectors with an LCD display, no voltage is indicated for the neutral or earth.



With the Multimeter or tester using Voltmeter AC 750V function

Between phase - neutral 220V-240V will be indicated

Between neutral and earth 0V.



And between phase-earth 220V-240V.

Another possible solution in cases of residual current would be to install a capacitor of 0.47uF 400V (Solution points 3 and 4).

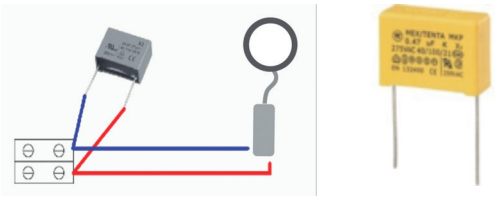


Image 2. Condenser REF. DCCONDEN-1

You can also use bipolar switches or contactors to count the current flow to the lighting lines. (Solution points 3 and 4

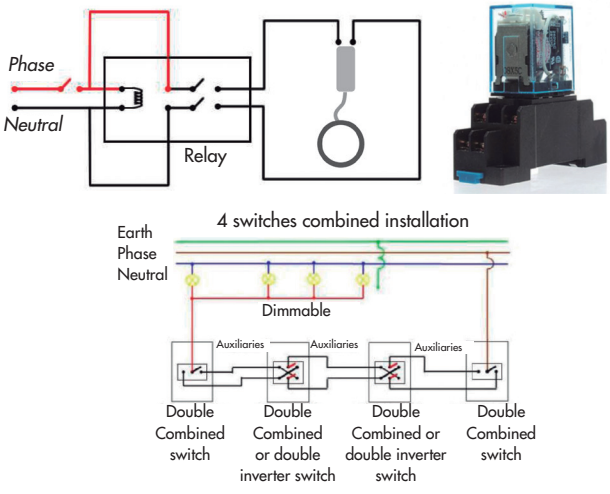


Image 3. Contactor REF. DCCONTACT-1

My home network features two active poles ("biphasic"). Might there be any incompatibility with JISO ILUMINACIÓN, SL. LED luminaries?

Yes.

In this type of installation, in which the two cables which arrive to the luminary driver contain voltage, with no difference between phase and neutral, it is possible that the drivers will block themselves (in self-protection) or that the light emitted by the LED luminary is visible even with the switch open (since only one of the phases is cut).

This is because the JISO ILUMINACIÓN, SL. LED luminaries which include the JISO driver have a voltage supply which generally ranges from 100-240V and, like the conductor cables of the installations discussed, have a potential such that they are capable of activating these drivers at any time due to the generation of a voltage, according to potential difference, greater than 100V and less than 240V. This potential difference causes the driver to activate and powers the SMD LED chips at low strength.

In order to avoid problems with this type of installation, the following options exist:

<u>If you have not yet ordered the material:</u>

- Select a reference number that incorporates a driver with a voltage range between 220-240V. This does not mean that the driver will not continue to have a permanently connected active pole (phase) but, since a potential difference greater than 220-240V is required for its activation, the LEDs will not receive power from the driver.

<u>If you have already ordered the material (choose one of the two options):</u>

- Add an omnipolar circuit breaker which, when cutting the two active poles on the switch, will leave the driver completely unpowered whenever the switch is used to turn off the light.
- Add a relay to generate an effect similar to that achieved by the omnipolar circuit breaker.

Can I install a fan on the same line?

It is recommended that you do not do this on the same line as booting the fan/extractor may damage the luminary driver.

This can also occur when the power supply of the fan or any other equipment that needs high intensities to boot is close enough to the power wiring of the luminaries. This is because electromagnetic inductions can be generated which damage the drivers and generate flickers or residual light in the luminaries, among others.

Which driver is compatible with the luminary I purchased?

On p. 322 of the catalogue you can find the table showing the reference numbers of the drivers compatible with each luminary model. These drivers can be either adjustable or non-adjustable.

If you need a replacement driver or an adjustable driver compatible with any of the JISO ILUMINACIÓN, SL. luminaries, refer to the aforementioned table in order to request the reference number that best suits your needs.

Is it possible to leave the luminary hanging before placing it in its final position?

NO.

Remember that when any equipment supplied by JISO ILUMINACIÓN is being installed, it should be placed in its final position, attached to the ceiling, so as to avoid unforeseen stress on the connection cables between the driver and LED modules.

Is it possible to use triple lighting luminaries with a commuting switch?

It depends.

Commuted circuits, depending on the length of the wiring, can generate electromagnetic induction that activates the drivers and, therefore, does not allow for the resetting of same after being powered off for between 10-15 seconds.

The consequence of this would be an incoordination between the luminaries of the installation and its consequent inconvenience to the user.

I have an installation with triple lighting luminaries and I would like the lighting cycle to start in position 3. Is that possible

NO.

Currently this type of function is not provided since the operation of the driver associated with this LED luminary is as follows:

1st lighting: Power from the driver to the SMD LED strip (indirect light)
2nd lighting: Power from the driver to the COB chip (focused light)
3rd lighting: Power from the driver to the SMD LED strip and the COB chip

Due to the above, the design of the driver does not allow for start-up directly in the 3rd lighting.

JISO ILUMINACIÓN, SL. is working to modify these features in the future but, to date, there is no way we can change the configuration outlined in the catalogue.

Is it possible to use switches with indicator lights on circuits with LED luminaries?

Using these switches with the LED luminaries is NOT recommended since, due to the way the light-emitting diode works, a residual current capable of activating the LED chips, albeit at low light intensities, will always reach the LED luminary and still generate residual light with the switches open.

Is it possible to install LED luminaries and other kinds of luminaries (compact fluorescent, halogen, etc.) in the same circuit?

NO.

The mix of technologies in the same circuit can generate incompatibilities that cause serious faults both in the LED luminaries and in the other kinds of luminaries.

I have a display and only half lights up. Is this normal?

NO.

In those of 60x60cm the light is generated by two LED strips, with constant current, connected in parallel and facing each other so that, if only half lights up, one of them has stopped working and you should contact your supplier in order to solve the problem.

Is it possible to connect several luminaries by means of the same driver?

NOT recommended (even if technically possible).

JISO ILUMINACIÓN, SL. supplies its luminaries with the appropriate driver according to their internal characteristics (Vdc and Idc).

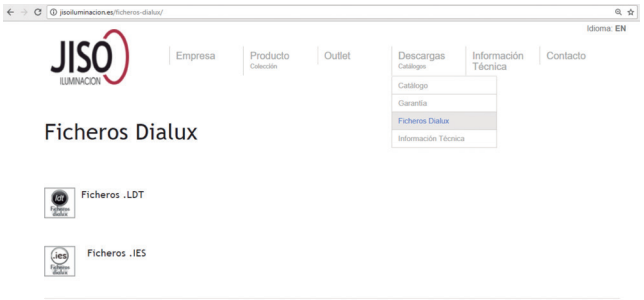
It is technically possible to use several luminaries, in series or in parallel, with a single driver that meets the needs of the designed installation. However, our past experience means that we DO NOT recommend this type of installation. If attempted, the warranty of the products supplied will no longer be valid.

It should be remembered that each luminary comes with its associated driver (or drivers). DO NOT connect one driver to several of our luminaries without the express authorisation of JISO ILUMINACIÓN, SL.

Where can I obtain the .IES or .LDT files for the LED luminaires from JISO ILUMINACIÓN, SL?

On the website www.jisoiluminacion.com there are two ways to download the lighting files in IES and/or LDT format. You can either download the individual file for each luminaire at each product link or you can directly download all the files for the products from the catalogue in the download area.

Below is a screenshot showing how to access the complete download of all the lighting files.



Below we also show a screenshot of a specific product page where you can see the individual download area of the specific product file, highlighted in red.

Is it possible to keep my LED luminaires from JISO ILUMINACIÓN, SL. switched on 24h/day?

NO.

As a general rule, continuous 24h/day operation is NOT possible since they are designed to be used for a maximum of 14h/day.

In cases where you need the luminaires to operate for a greater number of h/day, please consult us in order to receive personalised information.

Is it possible to cover the LED luminaires with stone wool or another type of insulating material?

NO.

All the recessed LED luminaires feature the following symbol which clearly indicates the NON- suitability of this type of product for covering with insulating material.

Is it possible to connect a JISO ILUMINACIÓN downlight to a battery?

NO.

The downlights that JISO ILUMINACIÓN features in its catalogue operate with a constant current driver and so they need a fixed current supply which is capable of bearing a load that varies within a set range. This is completely different from how a battery works.

For installations with a battery it would be logical to use 12V or 24V LED strips if the battery allows it, taking into account all the conditions set out for the installation of LED strips.

Is it possible for my LED downlight to take more than 1 second to turn on?

YES.

Moreover, this is not just linked to the activation of the driver. It may also depend on the type of installation, operating mechanisms, etc. In fact, in a line with different LED devices e.g. with light bulbs and downlights, the difference in the time it takes to switch on may be appreciable.

Is it possible to position the driver at a distance greater than the factory setting?

NO.

The drivers are supplied connected to the downlights and this is how they should be installed. Any other type of installation is the responsibility of the installer.

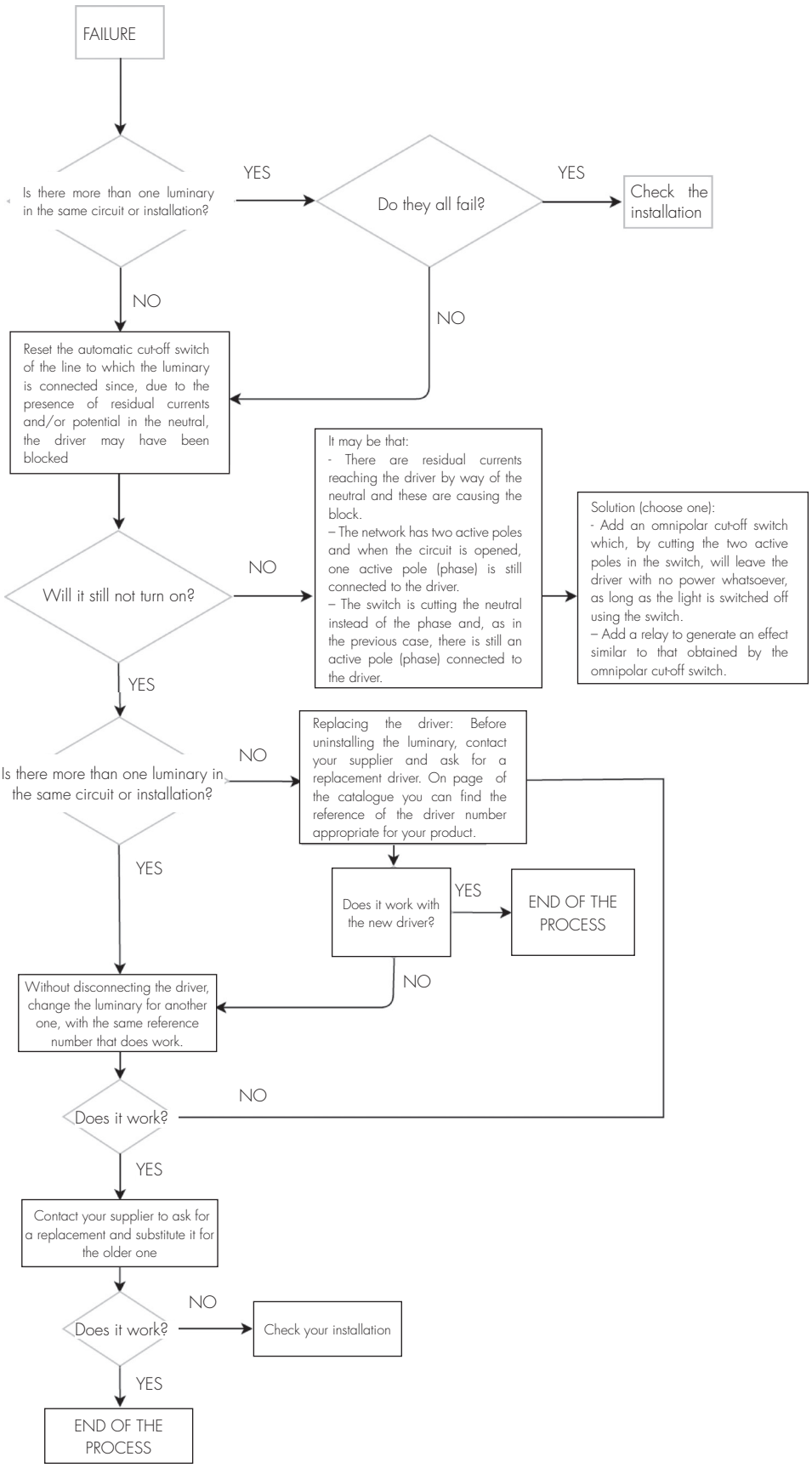
What does it mean if a luminaire is UGR<19?

A luminaire is normally indicated as being UGR<19 if, in the Unified Glare Rating parameterised table obtained according to the photometric examination of the luminaire in question in accordance with CIE 190:2010, it is observed that most of the positions set in it have a value of less than 19.

This must be interpreted correctly since, unlike what is usually thought, this does not mean that UGR<19 will always be the case, regardless of the installation. The reference standard clearly indicates that the Unified Glare Rating must be calculated for each specific installation, according to the number of units, their position, the position of the observer, the visual field of the observer, etc.

The luminaire concept UGR<19 and the associated UGR table helps the designer or installer to distinguish some luminaires from others quickly but it does not prove UGR<19 in a particular installation. For this, the designer must carry out the appropriate calculations based on what was outlined above:

What should I do if my luminary has been turned off and will not turn on again?



NOTE: Remember to perform the operations with the automatic circuit breakers of the affected lines disconnected so that there is no supply voltage in the affected circuits.

GENERAL ISSUES CONCERNING DIM ADJUSTMENT WITH A TCI DRIVER (DALI//1-10V//PUSH)

Frequently asked questions (FAQ)

Restoring factory settings in luminaires with TCI driver. I have a luminaire connected to a switch but I want to change the dimmer switch for a 1-10V dimmer. Is this possible?

Devices with 1-10V, PUSH and/or DALI dim adjustment, from our provider TCI, have the option of being able to be reset in order to change the function in which they were configured.

In other words, if I have a driver that permits dim adjustment by means of 1-10V and PUSH and I have been using it for a while with a switch and later on I want to change it to a 1-10V dimmer, then it is possible to restore the factory settings so that the new dimmer switch can be connected with a change of function.

For the above, it is important to be aware that:

- The drivers do not in general have a preset function from the ones that are possible given their characteristics. When a dimmer switch is connected when it is powered on for the first time, this dim adjustment mechanism is the one that is set.
- The driver can only dim adjust within the system that is indicated in its specifications. Therefore, if it does NOT feature the option of dim adjusting in a particular system (for example DALI), it will never be able to be adjusted using dimmers for control of that system.
- When you wish to change the configuration of a driver which is being dim adjusted with a specific system in order to use another type of compatible dim adjustment mechanism or when you want to restore the factory settings because these, instead of coming with open configuration, come with a set dim adjustment configuration, the following should be done:

1. Disconnect the system from the mains in order to avoid the risk of electrical contact.
2. Connect the AC 220-240V input cables to the driver (L and N).
3. Make a bridge (short circuit) between the "+" and "-" terminals of the 1-10V dim adjustment control of the driver.
4. Connect the luminaire.
5. Supply the system with power for at least one second.
6. Eliminate the bridge (short circuit) between the "+" and "-" terminals of the 1-10V dim adjustment control of the driver.
7. The light of the luminaire will turn on and the factory settings of the device will be restored and it will be ready to be connected to a new dimmer switch.

(see image on next page)

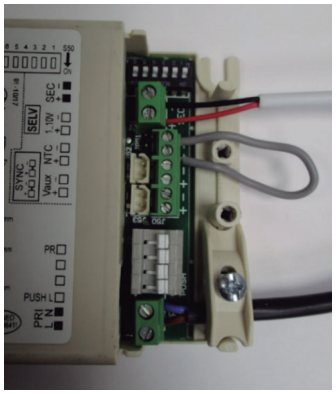


Image 4. Example connection with driver 3030-33MmA