

## INSTRUCTIONS MANUAL

# CONSTANT CURRENT CONTROL GEAR FOR LED MODULES

## Street lighting applications Type: LC ...-XT

The constant current control gears for LED modules use sensitive electronic components and should be handled with the same care as any other electronic equipment. In order to achieve a long life and correct functioning, both in the control gear and in the LED module, it is necessary to follow these manufacturer's recommendations.

### SECURITY



A very low voltage installation (LVI) must be carried out whilst taking the necessary precautions in order to respect the safety of all its parts. The contact or crossing between the mains supply conductors and the very low voltage installation conductors must be avoided and the insulation between the conductors must be > 4kV. Maintenance and the changing of parts must be carried out by a qualified person with the mains disconnected and the instructions and current regulations must be strictly followed.

### EARTH WIRE

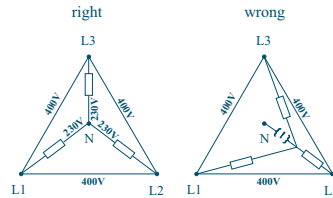


The use of the earth wire is **COMPULSORY**. The said wire must be connected to the LED driver and the lighting fixture. It is convenient to connect the metallic structure of the suspended ceiling (if one exists) to the earth wire.

### ELECTRICAL SUPPLY



The voltage and frequency of the power line must be within the normal working range specified on the equipment. The polarity indicated must be respected (phase and neutral). In 400 V triphase installations, it must be ensured that the **neutral is always connected**; otherwise the 400 V could reach the equipment with the consequent risks. When the installation is being carried out the load distribution between phases must be balanced as much as possible.



### INSULATION TEST



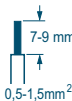
If an insulation test in the circuits which supply the LED driver in the installation is carried out, it must be done applying the test voltage between the phases and the neutrals all together and the earth wire. The test voltage must never be applied between the phases and the neutral or between phases.

### OPERATING TEMPERATURE



It must be ensured that the maximum atmospheric temperature in the installation does not exceed the  $t_a$  marked on the equipment, and an adequate degree of protection against humidity must be provided. Under no circumstances must the  $t_c$  temperature marked on the driver's casing be exceeded due to the fact that continued operation at higher temperatures produces a progressive reduction in life expectancy.

### TERMINAL BLOCK AND WIRE PREPARATION



The use of only one rigid wire with a section between 0,5 and 1,5mm<sup>2</sup> and a stripped length 7-9 mm is recommended. If a previously inserted wire is to be extracted, do not use excessive force on the connection supports to avoid breaking.

### INSTALLATION



Placing a switch in the output of the control gear is not allowed. May cause damages in control gear and LED module.

**Any procedure at LED lamp connection must be made without electrical supply.**



### PROTECTION SWITCHES

Each group of control gear for LED modules must be protected by a magnetothermal circuit breaker and a differential dedicated circuit breaker. Equipments are resistant to transient overvoltages specified in regulations, and must be installed on different circuits separated from each other inductive loads (inductive ballasts, motors, fans etc. ....)

### PROTECTION AGAINST ELECTROSTATIC DISCHARGES IN THE LED MODULE

Just in the only case that electrostatic discharge troubles were happening in a luminaire, ODP+ and ODP- terminals might be connected to the LED module, making sure that a right isolation is always present between the connection to the rest of the luminaire (>4kV).

CONSTANT CURRENT CONTROL GEAR FOR LED MODULES AND PROTECTION SYSTEM RESPONSE				
Type	Absence of LED module. Open circuit	Overload	Short-circuit	Overtemperature
LC ...-XT	Blocks	Blocks	It restarts when problem is solved	Blocks

Block: The driver is in protection mode. The disconnection and connection of the mains will make operate again the equipment.

### WIRING DIAGRAMS

