Especialidades Luminotécnicas S.A.U.
Pol. Malpica c/ E nº 11 50016 Zaragoza (SPAIN)
www.elt.es
+34 976 573 660 elt@elt.es http://www.elt.es

INSTRUCTIONS MANUAL

CONSTANT CURRENT CONTROL GEAR FOR LED MODULES

Types: LC ...-A , LC ...-A-UN , DLC ...-A , LC ...-B y DLC ...-B

The constant current control gear 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

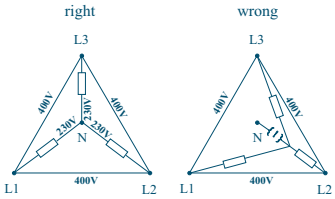
A very low voltage installation (LVI) must be carried out whilst taking the necessary precautions in order to respect the safety of all its parts. The contact or crossing between the mains supply conductors and the very low voltage installation conductors must be avoided and the insulation between the 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 cirrent regulations must be strictly followed.

ELECTRIC POWER SUPPLY

The voltage and frequency of the mains supply must be within the normal operating range.

In 400V triphase installations, the neutral must always be connected, if it is interrupted the 400V could reach the equipment and there would be a risk of damage. When the installation is carried out the charge between the phases must be as equally balanced as possible.



PROTECTION SWITCHES

Each group of control gear for LED modules must be protected by a magnetothermical 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. ....)**

INSULATION TEST

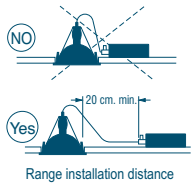
If an insulation test in the circuits which supply the LED driver in the installation is carried out, it must be done applying the test voltage between the phases and the neutrals all together and the earth wire.

The test voltage must never be applied 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 ta marked on the equipment, and an adequate degree of protection against humidity must be provided.

Under no circumstances must the tc 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.



Range installation distance

TERMINAL BLOCK AND WIRE PREPARATION

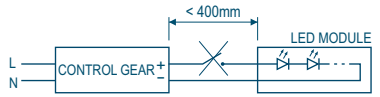
The use of only one wire with a section between 0,5 and 1,5mm² and a stripped length 5mm is recommended.

Don't put a higher torque than 0,5Nm to the screw.

0,5-1,5mm²

INSTALATION

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.

RADIO FREQUENCE INTERFERENCES (RFI)

To comply with IEC / EN 55015 (EMC), the wiring length of the load terminals should not exceed 400 mm.

The mains power cables should not be crossed with the cables going to the load and separated as far as possible from these.

CONSTANT CURRENT CONTROL GEAR FOR LED MODULES AND PROTECTION SYSTEM RESPONSE				
Type	Absence of lamp. Open circuit	Overload	Overtemperature	Short-circuit in output to lamps
LC ...-A LC ...-A-UN DLC ...-A LC ...-B DLC ...-B	Blocks: Waits for a lamp replacement	Limited output power	No protection	Blocks: It reconnects when problem is solved.

Block: Stand-by or rest situation

LUMINOUS FLUX REGULATION

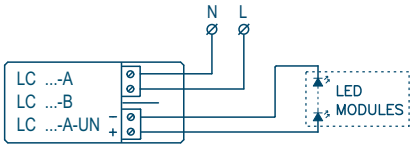
It is possible to connect a dimmer or a Leading-edge (beginning of phase) or a trailing-edge (end of phase) type dimmer to obtain a reduction in the luminous flux. LC

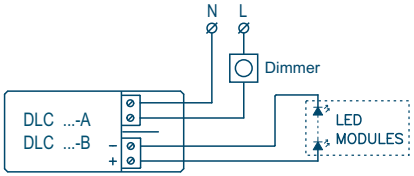
It is necessary to ensure that the regulating device or dimmer is designed to operate with LED type charges.

Recommended ELT dimmer list for DLC drivers:

- eDIM 100
- eDIM 440
- Without excluding other brands existing in the market. Should you have any doubt, do not hesitate to contact us.

WIRING DIAGRAMS





INRUSH CURRENT

The ignition of LED modules with these control gears is simultaneous. At the moment of connection, the equipment's capacitors create a strong pulse of current of very short duration, this is called Inrush current. The installation of a maximum number of control gear depending on the type and characteristics of the magnetothermical protection is recommended. See table.

Type	Inrush Current		Max no. of equipment per circuit breaker				
	I. Peak	Time	Type B		Type C		RCCB
	A	µs	10A	16A	10A	16A	30mA
LC 125/...-A	18	200	12	16	17	27	43
LC 116/...-A	10	180	22	30	32	52	84