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Made in Czech Republic

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EN

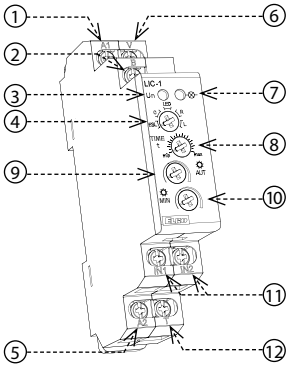
LIC-1

Lighting intensity controller

Characteristics

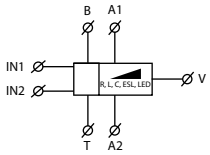
- Designed for dimming of incandescent bulbs and halogen lights with wound or electronic transformer, dimmable light bulbs and dimmable LED².
- Automatically regulates the intensity of light in a room.
- External sensor scans the intensity and based on the preset value it decreases or increases the brightness of light.
- Operating status:
  1 - Off.
  2 - Automatic regulation.
  3 - Cleaning (maximum level of illumination).
  4 - Setting the minimum lighting brightness.
  5 - Setting the desired level of illumination.
- Optional connection of buttons with 50 neon lamps.
- Blocking the automatic control via external signal.
- Power supply 230 V AC.
- 1-MODULE, DIN rail mounting, clamping terminals.

Description

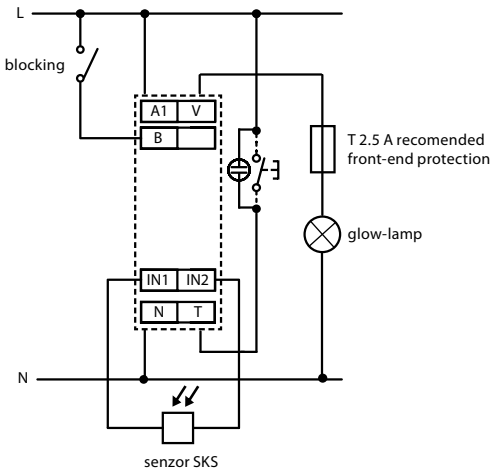


1. Supply voltage L
2. Blocking input
3. Supply voltage indication
4. Light source type selection
   ESL - energy saving light bulb
   C - halogen light with electronic transformer
   LED - LED bulb 230 V
   R -bulb 230 V
   L - halogen light with ferromagnetic transformer
5. Supply voltage N
6. Output
7. Output indication
8. Automatic fade luminance setting
9. Automated reg. luminance level adjustment
10. Min. luminance adjustment
11. Terminals for connecting sensor
12. Controlling input

Symbol



Connection



Recommendation for mounting

Keep distance between devices at min. width of 0.5 module (cca 9 mm / 0.4˝) for better cooling of device.

Product loadability

a	b	c	d	e
R	L	C	ESL	LED²
●	●	●	●	●

a) lamp,halogen light
b) low-voltage el.bulbs 12/24V wound transformers
c) low-voltage el.bulbs 12/24V electronic transformers
d) energy saving bulbs
e) dimmable LED bulbs designed for dimmers with phase or phase-to-phase phase control (dimmers with MOSFET)

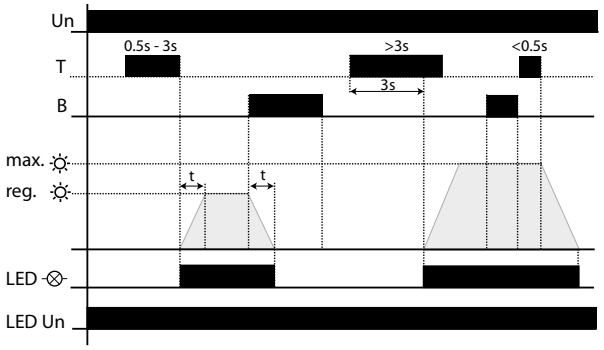
Technical parameters

	LIC-1
Supply terminals:	A1 - A2
Voltage range:	AC 230 V / 50 - 60 Hz
Burden (unloaded):	max. 1.6 VA / 0.8 W
Max. dissipated power:	1 W
Supply voltage tolerance:	±15 %
Supply indication:	green LED
Control	
Button - control. terminals:	A1 - T
Control voltage:	AC 230 V
Power the control input:	max. 0.6 VA
Impulse length:	min. 80 ms / max. unlimited
Glow tubes connection (terminals: A1 - T):	Yes
Max. amount of glow lamps connected to controlling input:	max. amount 50 pcs (measured with glow lamp 0.68 mA / 230 V AC)
Blocking input - terminals:	A1 - B
Control. voltage:	AC 230 V
Power input:	max. 0.1 VA
Glow tubes connetions (terminals A1 - B):	No
Impulse length:	min. 80 ms / max. unlimited
Output	2x MOSFET
Output status indication:	red LED
Load capacity:*	300 W (at cos φ =1)
Other information	
Operating temperature:	-20 °C to 35 °C (-4 °F to 95 °F)
Storage temperature:	-20 °C to 60 °C (-4 °F to 140 °F)
Operating position:	any
Mounting:	DIN rail EN 60715
Protection degree:	IP40 from front panel / IP10 terminals
Overvoltage category:	III.
Pollution degree:	2
Max. cable size (mm²):	solid wire max. 2x 2.5 or 1x 4 / with sleeve max. 1x 2.5 or 2x 1.5 (AWG 12)
Dimensions:	90 x 17.6 x 64 mm (3.5˝ x 0.7˝ x 2.5˝)
Weight:	66 g (2.33 oz.)

* Due to a large number of light source types, the maximum load depends on the internal construction of dimmable LEDs and ESL bulbs and their power factor cos φ. The power factor of dimmable LEDs and ESL bulbs ranges from cos φ = 0.95 to 0.4. An approximate value of maximum load may be obtained by multiplying the load capacity of the dimmer by the power factor of the connected light source.

- list of tested light sources can be found here: www.elkoep.com/solutions/

Function



T-button control:
- pressing button shortly (< 0.5 s) always turns of lamp
- pressing button longer (0.5.. 3 s) turns on lamp in automatic regulation mode
- pressing button long (> 3 s) turns on lamp to full illumination - „cleaner" mode
- after turning on the power supply, the dimmer is always turned off

Thyristor B:
Serves to block automatic regulation (lamp turns off).
WARNING! The lamp may be turned on in "cleaner" mode even while blocked.
After ending block mode, the lamp remains off.

Control elements on the instrument panel:
- load switch - has 2 positions for each type of load that differ in their regulation curves (sets the best position for the connected load)
- the lamp turns off (if previously on) whenever the switch settings are changed
- potentiometer setting of minimal luminance
- potentiometer setting of desired lighting level during automatic regulation
- the potentiometer status is stored in short-term memory whenever a change occurs - a green LED flashes (approx. 3s) while storing
- both lighting levels are storing in EEPROM memory during a power supply failure - LED meanwhile briefly turns off

WARNING!
- both lighting levels must be reset when switching load type
- both lighting levels may only be set in automatic mode while the lamp is on
- potentiometer setting of lighting level fade speed - only available in automatic regulation mode
- determines the reaction time to changes in surrounding lighting level

LED indicators:
green LED:
- illuminates, if supply voltage is present
- flashes when storing set luminance values
- shortly turns off when power failure occurs - stores settings

red LED:
- illuminates during active output (at arbitrary luminance level)
- flashes slowly when operating temperatures exceeded, output is simultaneously disconnected
- flashes quickly when overvoltage protection is activated (approx. 1 minute); output is simultaneously disconnected

Photosensor SKS

Sensor is external and is connected to terminals IN.
Sensor is installable to panel (by screw-able transparent cover) to opening with diameter 16 mm. A part of the sensor is a plastic holder for placing into the wall or to another place. Length of a line connector to the sensor cannot be more than 50 m (164´). Doublecure cable can be used as wire diameter min. 2x 0.35 mm² and max. 2x 2.5 mm². Protection degree is IP44.
It is possible to use photoresistor, which changes resistance in accordance with ambient illumination, as a sensor. Tolerance sensor ± 33 %.

Installation ans setup of photosensor:
- sensor has to be mounted vertically over working area where is the constant value of lighting
- sensor can not be installed nearby the windows (min. 2 m / 6.6´) and shouldn't be exposed to direct sunlight (neither artificial light)
- setting of desired level of illumination shoud be performed at a maximum darkness (e.g. shutters down) to exclude influence of any illumination from the outside

Warning

Device is constructed for connection in 1-phase main AC and must be installed according to norms valid in the state of application. Connection must be realized according to the details in this instruction manual. Installation, connection, setting and operating should be made by qualified electrician staff only, who has learnt these instruction and functions of the device. This device contains protection against overvoltage peaks and disturbancies in supply. For correct function of the protection of this device there must be a suitable protections of higher degree (A, B, C) installed in front of them. Before installation the main switch must be in position "OFF" and the device should be de-energized. Don´t install the device to sources of excessive electro-magnetic interference. By correct installation ensure ideal air circulation so in case of permanent operation and higher ambient temperature the maximal operating temperature of the device is not exceeded. For installation and setting use screw-driver cca 2 mm (0.1˝). The device is fully-electronic - installation should be carried out according to this fact. Non-problematic function depends also on the way of transportation, storing and handling. In case of any signs of destruction, deformation, non-function or missing part, don´t install and claim at your seller. After the product exceeds lifetime, it should be removed and placed in protected dump.
Important instructions and cautions - dimmer is not designated for controlling of motors. HDO warning signals and other similar signals spreaded by main, can cause interruption of dimmer. Interruption is active only during transmitting of these signals.