



LEC A

The LEC A is an advanced 3-phase energy controller designed to control and stabilize the voltage provided to lighting elements. With the LEC A, voltage supplied to the lighting circuits can be reduced by up to 35V, in decrements of 2.5V.

BENEFITS

- 15% - 35% - energy saving
- Voltage Stabilization
- Full protection against overtemperature and overload
- Built-in display and keypad for easy programming
- Seamless integration with energy management systems (EMS)
- Compact and highly efficient
- No harmonic distortions, THD/EMI free

FEATURES

Automatic Bypass - Automatic and complete bypass via an internal contactor in case of over-temperature or overload, without disruption to the line or load.

Manual Bypass - The built-in manual bypass switch completely bypasses the LEC and supplies full net voltage to the lighting systems.

Ignition Sequence - Configurable ignition sequence enables igniting discharge lamps, from warm-up to full power, and then gradual reduction and stabilization of output voltage to the user defined level.

Re-ignition Sequence - Re-ignition is used in installation with multi-zone lighting. The LEC automatically switches to ignition mode when an increase of current is detected in one of the zones.

Operation Modes -

Manual - manual operation via the built-in keypad

Remote - activates the LEC via an external command (timer or photocell)

Automatic - activates the LEC and the load at a configured time

Astro Clock - activates the LEC and the load according to time of sunrise/sunset

Real-Time Clock - The real-time clock enables LEC operation in automatic and astro-clock modes, which depend on date and time.

Astronomic Clock - An astronomic clock allows lights to be turned on and off according to the time of sunset and sunrise. This minimizes the operating hours of the lighting and helps save additional 5-10% of energy.

Dual Lighting Circuits - The LEC enables activating of lighting circuits that are operated according to different time schedules. This mode is suitable for applications that combine outdoor and indoor lighting circuits connected to the same electric board, e.g. gas stations, outlets, etc.

Time Windows - Adjustable time windows with four intervals during a 24 hour period for controlling voltage levels.



ENERGY SAVING:
15%- 35%

LIGHTING SYSTEMS:
Metal Halide, HPS, LPS, Fluorescent, PL, CFL, Halogen, MV. LEC A is recommended for circuits with HID lamps (MH or HPS)

APPLICATIONS:
Street and road lighting, highways, tunnels, logistic centers, factories, service stations, retail and shops

RANGE:
3x20A - 3x250A





COMMUNICATION & CONTROL

| | |
|-----------|---|
| RS232/485 | Integrated MODBUS/RTU protocol for bi-directional communication with any SCADA system or control equipment. |
| Input | Dry contacts terminals to control LEC Start, Stop or Bypass mode. Can be connected to a photocell, timer or control device. |
| Output | Dry contacts terminals for triggering an auxiliary contactor by the LEC astronomic clock for dual circuits operation mode |

TECHNICAL SPECIFICATIONS

| | | | |
|---------------------|---|-----------------------|------------------------------|
| INPUT VOLTAGE | 3x230 VAC ± 10% | IP CLASS | IP 20 (with covers) |
| OUTPUT VOLTAGE | Up to 35V reduction First decrement - 15V Following decrements - 2.5V | CLIMATE CLASS | 4K4H |
| FREQUENCY | 50Hz/60Hz | HUMIDITY | 0% - 90% |
| EFFICIENCY | 99.5% | SURGE VOLTAGE | 2000V |
| THD | < 1% | SURGE CURRENT | According to circuit breaker |
| AMBIENT TEMPERATURE | -20°C - +50°C | SHORT CIRCUIT CURRENT | According to circuit breaker |

| CATALOG NUMBER | I (A) | KVA | DIMENSIONS HxDxW (mm) | WEIGHT (kg) | Ht (mm) | Hb (mm) | POWER TERMINALS |
|-----------------|-------|-----|-----------------------|-------------|---------|---------|--------------------|
| 0L35-A10200-380 | 3x20 | 14 | 610x250x300 | 32 | - | - | 10mm ² |
| 0L35-A10300-380 | 3x30 | 21 | 610x255x400 | 50 | 26 | 155 | 35mm ² |
| 0L35-A10500-380 | 3x50 | 35 | 610x255x400 | 50 | 26 | 155 | 35mm ² |
| 0L35-A10800-380 | 3x80 | 55 | 645x320x540 | 68 | 26 | 175 | 35mm ² |
| 0L35-A11000-380 | 3x100 | 69 | 780x305x590 | 110 | 26 | 190 | 70mm ² |
| 0L35-A11250-380 | 3x125 | 86 | 780x305x590 | 110 | 26 | 190 | 70mm ² |
| 0L35-A11600-380 | 3x160 | 110 | 1500x455x800 | 230 | - | - | 120mm ² |
| 0L35-A12000-380 | 3x200 | 138 | 1500x455x800 | 250 | - | - | 120mm ² |
| 0L35-A12500-380 | 3x250 | 172 | 1500x455x800 | 280 | - | - | 120mm ² |

PROTECTION

Over-temperature Protection

Thermo-switches that monitor the temperature of key components protect the LEC from over-temperature faults.

- A fan will be activated at 60°C.
- The LEC will automatically switch to bypass mode at 140°C and will supply net voltage to the load, without voltage interruption.

Overload Protection

The LEC has two types of overload protection:

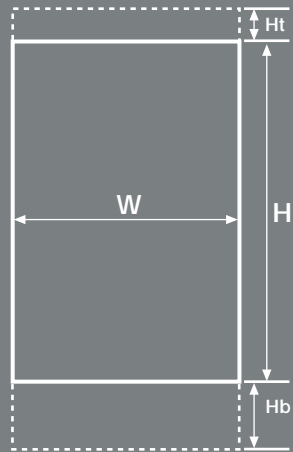
- Circuit breakers that protect against overload and short circuit current.
- Switches to bypass mode if the input current during saving mode is higher than 90% of the nominal current for more than 4 minutes.

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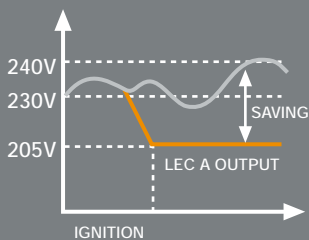
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NOTES:

- Ht and Hb are used for optional top and bottom covers
- 160A – 250A devices are supplied in metal cabinets.



The LEC A is EMC approved
VDE EN 50178, 60439-1
CE marking

PowerSines Ltd. is ISO 9001:2000
and IQNet approved



For more information please contact us at info@powersines.com | www.powersines.com