



► ILUEST+: Regulation + Control = Saving

The days of employing simple voltage dimmers or 'dual-level' voltage regulation to decrease lighting consumption, methods which were perfectly valid before, are long over. Today, it is not sufficient just to stabilize and dim the voltage power supply to lightings to bring about important energy savings. Through the use of advanced technology available, the various lighting equipment installed can be remotely monitored, measured and quantified, thus enabling the sustainability of the lighting installation.

The **ILUEST +** series of advanced Lighting flow regulators from **SALICRU**, takes over from its highly successful and field-tested predecessor, has vast improvements in critical aspects of modularity, power density, protection and telemanagement. As a result, greater flexibility in areas of power growth, maintenance, commissioning and equipment integration can be better realized along with superior reliability and shorter payback periods.

The **ILUEST +** series is available in a wide range of powers, has 3 implementation variants - indoor, outdoor and OEM Kit - and 2 monitoring versions. Used in conjunction with our powerful telemanagement **SICRES** technology, the **ILUEST +** is now the state-of-the-art reference in lighting regulation and control.

► QUALITY PERFORMANCES

- Bi-directional 'Buck' converter with IGBTs, electronic, static and transformerless.
- Continuous regulation of the output voltage, no voltage steps; higher lamp lifetime.
- Lineal and programming ramps.
- High response time.
- Stabilization better than $\pm 1\%$ + saving voltage periods = savings $>40\%$.
- Protections with automatic programming rearm due to overload and overtemperature.
- Protections with fuses ⁽¹⁾ and against lightning arrestors ⁽²⁾.
- Automatic bypass per phase, independent operating, manual operating ⁽³⁾, active by default and make before break.
- RS-232 and RS-485 ports + MODBUS protocol, as standard.
- **SICRES** telemanagement card built in completely. ⁽⁴⁾
- Duty cycle adapted to the warm up curve of the lamp.
- Programming of two saving levels and start voltage via software. ⁽⁴⁾
- Average payback of the investment between 6 and 24 months.
- Low weight and dimensions, higher power density.
- No harmonic injection to mains.

► ILUEST+ model



► ILUEST+ module

► APPLICATIONS: Better management of lightings

The **ILUEST +** is suitable for use in many areas, both industrial and commercial e.g. roads and highways, road bridges & tunnels, airports, hospitals, commercial centres, ports, railroads, car parks and many more. The superior supervisory and remote control capability of the **ILUEST +** will result in the better and more efficient management of lightings, regardless of their applications.

As an example, our studies have shown that a town of 10,000 inhabitants with 1,700 public lighting points would consume an average of 1,210 MW of electricity per year. By using just 13 units of the **ILUEST +** rated 30 KVA each, potential annual savings of 490 MW can be realized, translated to 270 Tm less CO₂ to the atmosphere.

(1) In the equipment.
(2) MOV (Metal Oxid Vastisor).

(3) Through stated input or keypad.
(4) In COM version.

► MONITORING

- **LCD version:** Stabilizer equipment with LCD synoptic for local communication. Based on:

- **LCD panel:** It provides input / output voltages, frequency, load and saving percentage levels, output currents, power factor, load type and temperature. It includes timer, astronomical clock and event data logger.



► LCD version

- **COM version:** Stabilizer module LCD version with SICRES card for remote communication.

- **SICRES card:** Interface for Ethernet networks with TCP-IP and SNMP protocols and GSM / GPRS modems and RTC.

► IMPLEMENTATIONS



► Indoor horizontal format



► Outdoor version



► OEM Kit

► AVAILABLE options

- External or internal manual bypass.
- GSM and GPRS modem.
- **SICRES** (converts LCD version to COM).
- Digital I/O (digital inputs and outputs).
- Lightning arrestor.

► SERVICES

- Customized studies and simulations of the saving and payback.
- Extended guarantees (under request).
- Multiple formulas of maintenance and telemaintenance (**SICRES**).



LIGHTING FLOW DIMMER-STABILIZERS

► TECHNICAL SPECIFICATIONS

MODEL		ILUEST +
TECHNOLOGY		Bidirectional 'Buck' converter with IGBTs, electronic, static and transformerless
INPUT	Voltage	Single phase: 230 V / Three phase: 3 x 400 V
	Voltage range	+ 25% / - 7% nominal voltage + 25% / - 17% saving voltage HPSV + 25% / - 10% saving voltage MV
	Frequency	40 ÷ 65 Hz
	Module protection	Input / output fuses ; electronic for temperature, overload, fault and varistors
	Equipment protection per phase	Single phase circuit breaker
OUTPUT	Voltage	Adjustable from 215 V to 230 V (220 V as standard)
	Accuracy inside voltage range	Better than ± 1%
	Soft start voltage	Preset ⁽¹⁾ and adjustable
	Saving voltage	Adjustable from 180 V to 210 V
	Speed ramp setting	From 1 V/minute to 6 V/minute
	Response time	< 40 ms
	Control	Lineal and independent per phase
	Efficiency	96% ÷ 98%
	Phase unbalancing	100% permissible
	Selectable saving voltage	Through LCD panel or RS-232 port
	Permissible overload	150% for 30 seconds; 120% for > 1 minute
BYPASS	Type	No-break
	Features	Automatic, reversible, independent per phase, independent operating, input for manual activation
	Activation criteria	Overtemperature, overload, fault, output fault, manual activation
	Rearm	Automatic by alarm cancelling. Quantity of retries: 10; time between retries: 8 seconds
COMMUNICA-TION	Ports	RS-232 and RS-485
	Monitoring	SICRES system (COM version)
GENERALS	Operating temperature	- 20° C ÷ + 55° C ⁽²⁾
	Relative humidity	Up to 95%, non-condensing
	Maximum altitude	2400 m.a.s.l.
	Mean Time Between Failures (MTBF)	60.000 hours
	Mean Time To Repair (MTTR)	30 minutes
	Acoustical noise at 1 metre	48 dBA (at typical load)
IMPLEMENTA-TIONS	Indoor	Vertical
		Horizontal
	Outdoor	Indoor built in a polyester cabinet IP54
STANDARDS	OEM Kit	Modules + Supports + Control wiring + Power Supply
	Safety	EN 60950-1; UNE AENOR EA 0032-2007
	Electromagnetic compatibility (EMC)	EN 61000-6-2; EN 61000-6-3
	Operating	UNE AENOR EA 0033-2007
	Marking	CE
	Quality and environmental management	ISO 9001 and ISO 14001 TÜV

(1) Depending on type of lamp

(2) 4% power derating per each degree over 45°C

► RANGE

MODEL	POWER (kVA)	OEM KIT		
		QUANTITY OF MODULES	DIMENSIONS PER MODULE (D x W x H mm)	WEIGHT (Kg)
KIT NET + 7,5-4-LCD	7,5	3	200 x 172 x 310	11
KIT NET + 10-4-LCD	10	3	200 x 172 x 310	11
KIT NET + 15-4-LCD	15	3	200 x 172 x 310	12
KIT NET + 20-4-LCD	20	3	200 x 172 x 310	12
KIT NET + 25-4-LCD	25	3	200 x 172 x 470	19
KIT NET + 30-4-LCD	30	3	200 x 172 x 470	20
KIT NET + 45-4-LCD	45	3	200 x 172 x 470	20

MODEL	POWER (kVA)	INDOOR IMPLEMENTATION ⁽³⁾		OUTDOOR IMPLEMENTATION	
		DIMENSIONS (D x W x H mm)	WEIGHT (Kg)	DIMENSIONS (D x W x H mm)	WEIGHT (Kg)
NET + 7,5-3	7,5	240 x 520 x 610	29	320 x 750 x 1105	64
NET + 10-3	10	240 x 520 x 610	30	320 x 750 x 1105	65
NET + 15-3	15	240 x 520 x 610	31	320 x 750 x 1105	66
NET + 20-3	20	240 x 520 x 610	33	320 x 750 x 1105	68
NET + 25-3	25	240 x 520 x 770	54	320 x 750 x 1105	89
NET + 30-3	30	240 x 520 x 770	55	320 x 750 x 1105	90
NET + 45-3	45	240 x 520 x 770	56	320 x 750 x 1105	91

(3) Horizontal

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