



Robust. Modern. Efficient.

MESINA

LUMINAIRE

Advanced Level: Control. Monitoring.
Innovation.

MODULES

M - L - XL

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ABOUT URBIO



URBIO, a Romanian technology company, is shaping the **future of smart infrastructure** through its Lighting Ai ecosystem - a comprehensive **smart-city** platform that seamlessly connects IoT hardware, intelligent lighting, environmental sensors, and cloud-based software into one unified network.

Designed to **empower** municipalities and operators, **Lighting Ai** enables real-time monitoring and management of public lighting and infrastructure, providing **AI-driven** insights for optimized performance.

By centralizing operations within a single digital interface, it drives greater efficiency, reduces energy consumption, and promotes long-term urban **sustainability**.

URBIO

ABOUT MESINA

MESINA represents URBIO's vision of intelligent, sustainable, and durable lighting for modern cities. Designed for decades of operation, it combines superior optical efficiency, robust construction, and seamless digital connectivity, a true smart-ready luminaire family.



Symbol of reliability, precision, and sustainability



M / L / XL for any type of street, park, or industrial zone



"Plug-and-Play" connectivity with **Smart City platforms** and **Lighting AI**



Built to adapt, for today's cities and tomorrow's needs.

Lighting has always been an important aspect for every community. In full progress of the digital era, cities and villages are becoming smart cities and smart villages. Mesina contributes to this phenomenon through solutions at the highest level of performance possible today for control, monitoring and efficiency of energy consumption. Thus, today's results increasingly improve the quality of life in the community and support the effort to reduce greenhouse gases to create a better, sustainable future for generations to come.



MESINA

VISION TO PRECISION



MESINA is more than a luminaire, it's the embodiment of URBIO's pursuit of purposeful innovation. Every line, angle, and component reflects years of engineering expertise and design thinking aimed at redefining how cities experience light



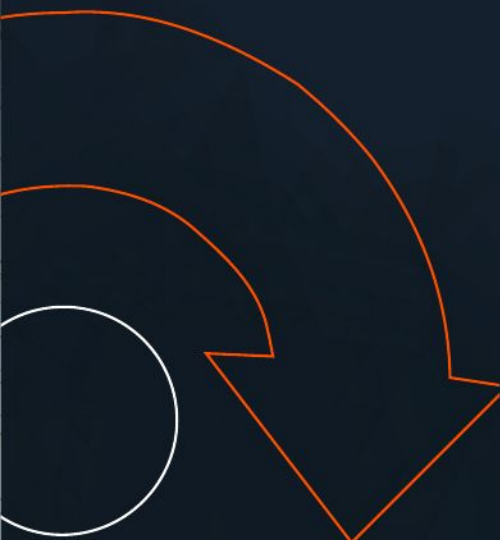
Design Philosophy
Balanced form and function



Enduring Value
Built from recyclable, corrosion-resistant aluminum and engineered for decades of performance



Smart DNA
Native connectivity through Zhaga, NEMA, and Lighting AI



THE URBIO ECOSYSTEM

Smart lighting within an intelligent network



Lighting AI

Cloud platform for remote control, monitoring, predictive maintenance



NEOS Gateway

Communication hub (LoRa, PLC, 4G)



KAMSENS

Multifunctional sensor (traffic, noise, weather)



Lighting Intelligence

AI algorithms for adaptive brightness and energy optimization



Real BENEFITS

Smarter. Greener. Simpler.



Performance

High optical efficiency > 160
lm/W luminaire / up to 193lm/W

Excellent thermal management
without striations

Lifetime > 50,000 hours /
5-year warranty

Wide power range (10-180W)

Modular M / L / XL options



Sustainability

Optional solar (24/12 V DC)
configuration

Reduced CO₂ emissions via
smart dimming

Long lifecycle → less waste



Ease & Integration

Tool-free opening and
plug-in modules

Built-in level bubble
+ Angle Indexer

Smart-ready via NEMA 7-pin
/ Zhaga Book 18 interfaces

Compatible with Lighting
AI, DALI, LoRa, PLC



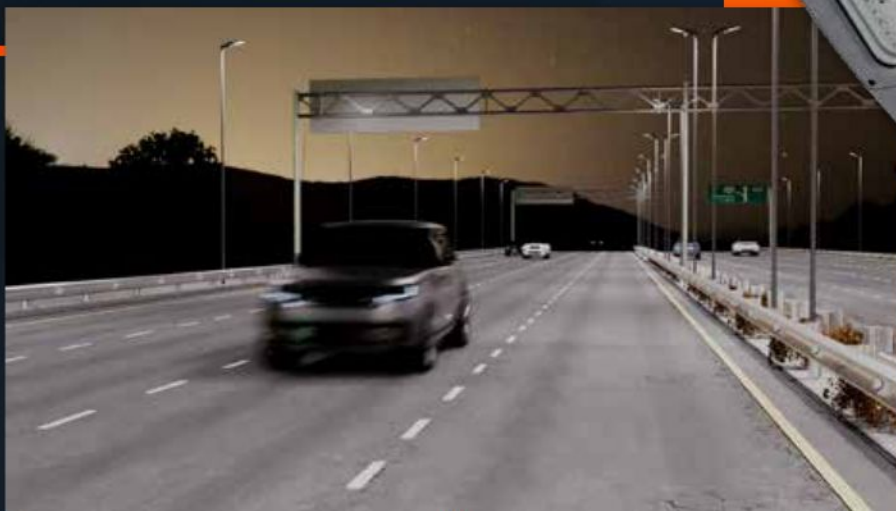
MESINA APPLICATIONS

One luminaire family. Infinite possibilities.

MESINA XL

Highways & Motorways

High-power version (MESINA XL) for uniform, glare-free lighting and high speed visibility



MESINA L

Urban Streets & Boulevards

MESINA L with adaptive dimming for pedestrian safety and energy savings



MESINA M

Parks & Green Areas

Low-power MESINA M integrated with PIR and KAMSENS sensors for eco-efficiency



MESINA

Adaptive Lighting

Color-temperature adaptive lighting for comfort and security

4000 K



5000 K



3000 K





SMART CONTROL & CONNECTIVITY



Each MESINA luminaire connects via
NEMA 7-pin or **Zhaga Book 18** port

Communicates through
LoRa, PLC, or 4G network

FEATURES LIGHTING AI



On/off scheduling & dynamic scenarios



Self-diagnosis & alerts
(temperature, voltage, faults)



Real-time monitoring of
status and energy



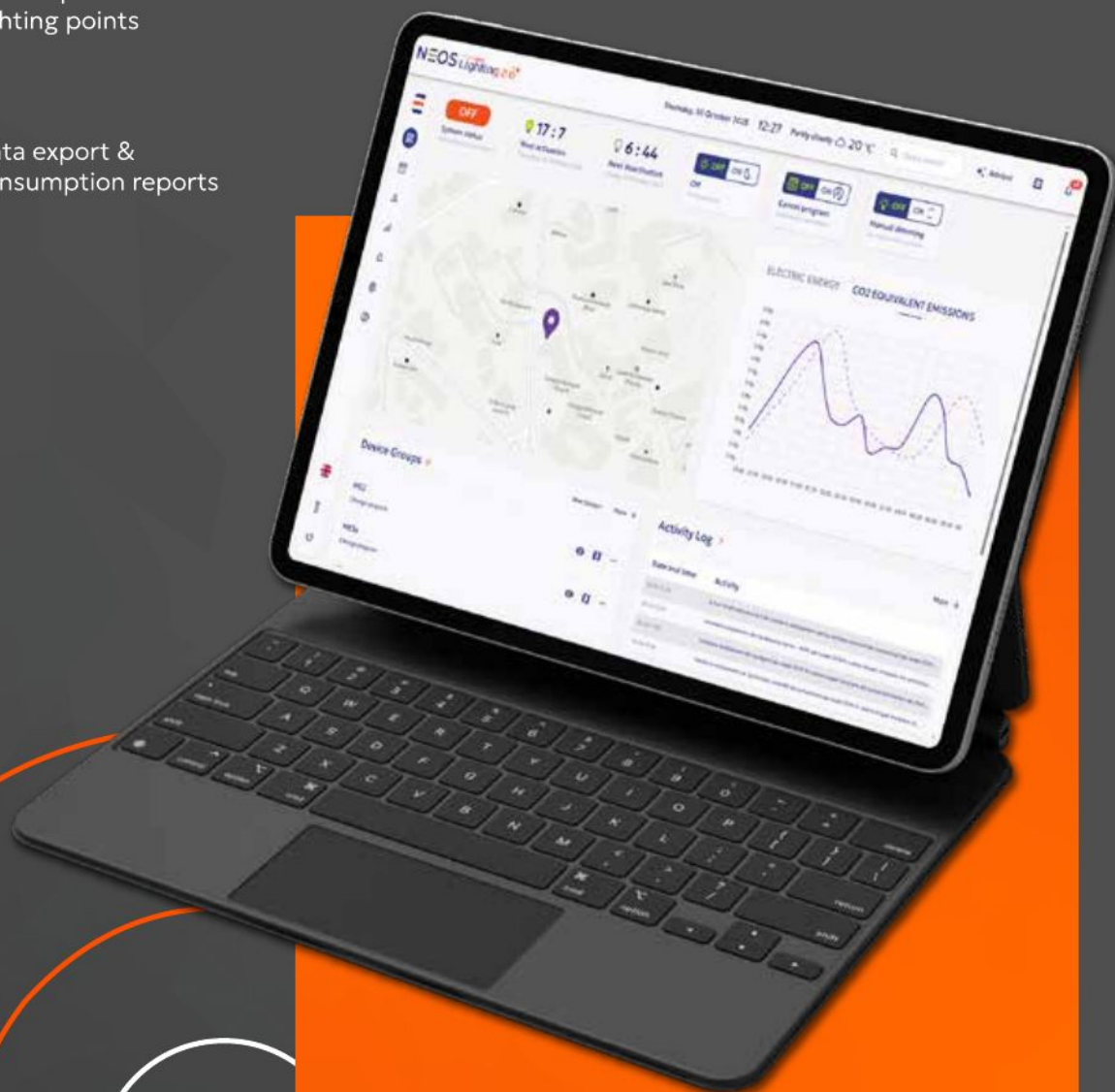
Predictive maintenance
based on AI patterns



Live map view for all
lighting points



Data export &
consumption reports

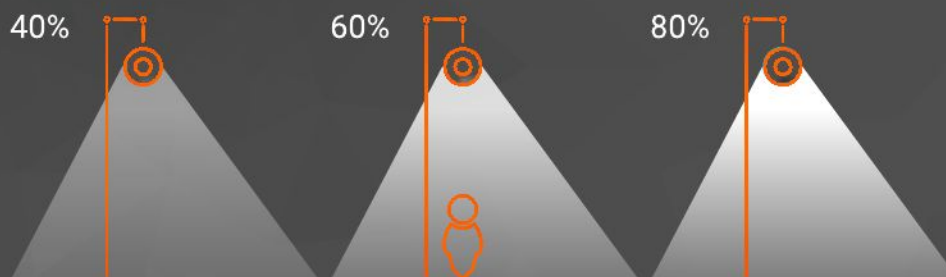


SENSOR INTEGRATION



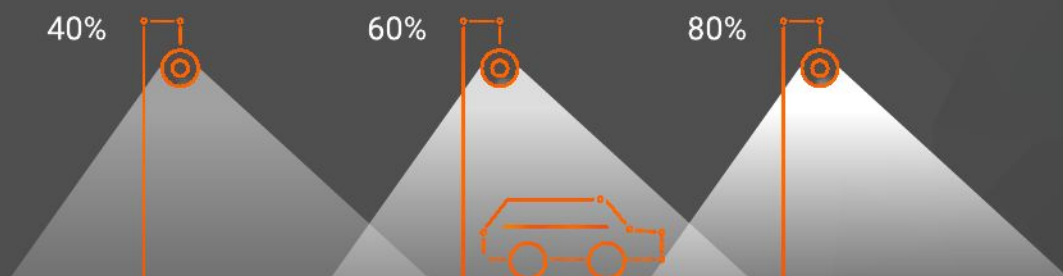
PIR Sensors (Passive Infrared)

- Detect pedestrian presence
- Trigger localized dimming and brightness increase
- Reduce energy consumption when no motion is detected



Radar Sensors

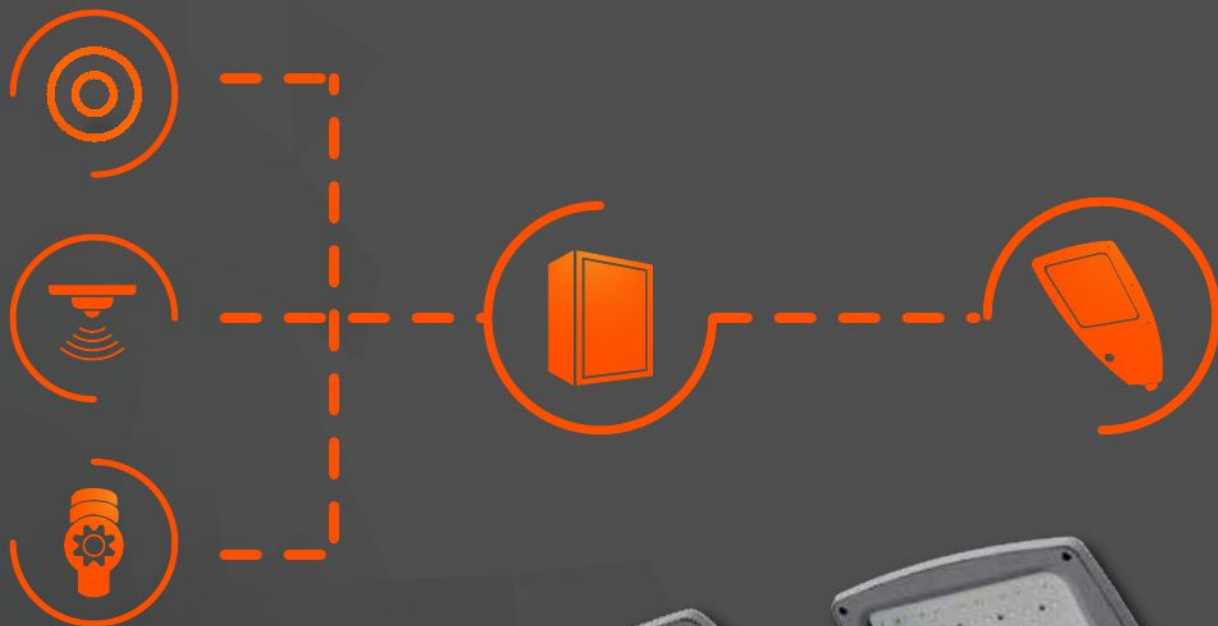
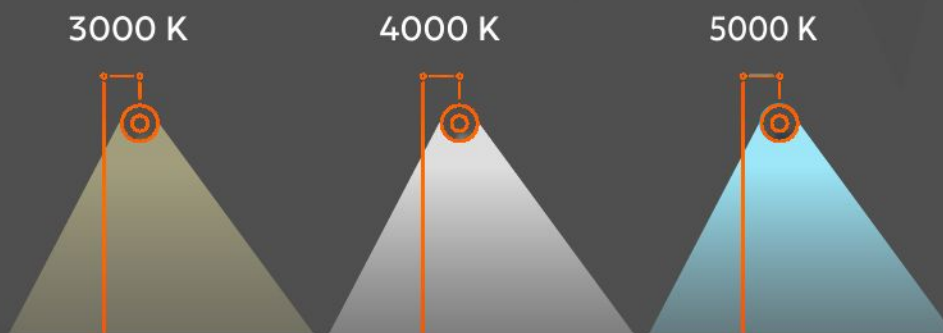
- Detect moving vehicles or bicycles at longer ranges
- Enable progressive light activation ahead of traffic





KAMSENS Multifunctional Sensor

- Detects motion, noise, light, fog, rain, snow
- Sends data to Lighting AI for real-time adjustment
- Adjusts color temperature (3000 K → 5700 K) for visibility
- Enhances road safety and reduces energy waste



TECHNICAL SPECIFICATIONS

General

Parameter	Value
Lifetime	50.000 H
Warranty	5 years
Sizes	M / L / XL

Optical

Feature	M	L	XL
LED type	5050 series	5050 series	5050 series
LEDs qty	24/36	48/72	80/120
Color Temp	2200 K; 2700 K; 3000 K; 4000 K; 5000K		
CRI	≥ 70; ≥ 80		
Luminaire efficiency	≥ 160lm/W up to 193 lm/W		
Lens	PMMA / PC		
Distribution angle	138°		



Electrical

Parameter	Value
Power	10 – 180 W $\pm$ 1 %
Voltage	277-100 V AC
Power factor	$\geq$ 0.95
Frequency	60/50 Hz
SPD	10 kV / 20 kV optional
CLO & lifetime alert	Yes
Insulation Class	Class I / Class II

Mechanical

Parameter	Value
Housing	Die-cast aluminum
Finish	Electrostatic powder coating
Ingress Protection	IP67
Impact Resistance	IK10
Weight	3.6 / 6.5 / 8.0 kg

Connectivity

Interface	Standard
Smart Socket	NEMA 7-pin / Zhaga Book 18
Communication	LoRa / PLC / 4G
Control Protocol	DALI / D4i / Lighting AI
Sensors	PIR / Radar / KAMSENS

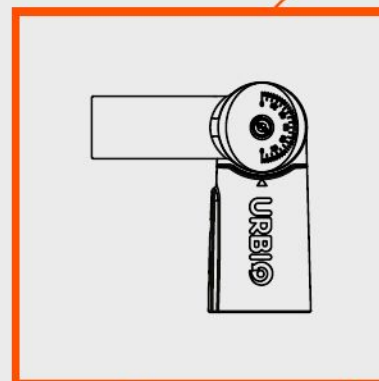
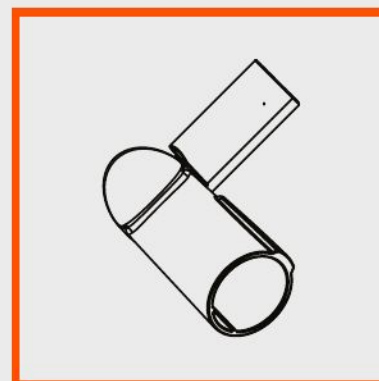
ANGLE INDEXER & MOUNTING



Precision made simple

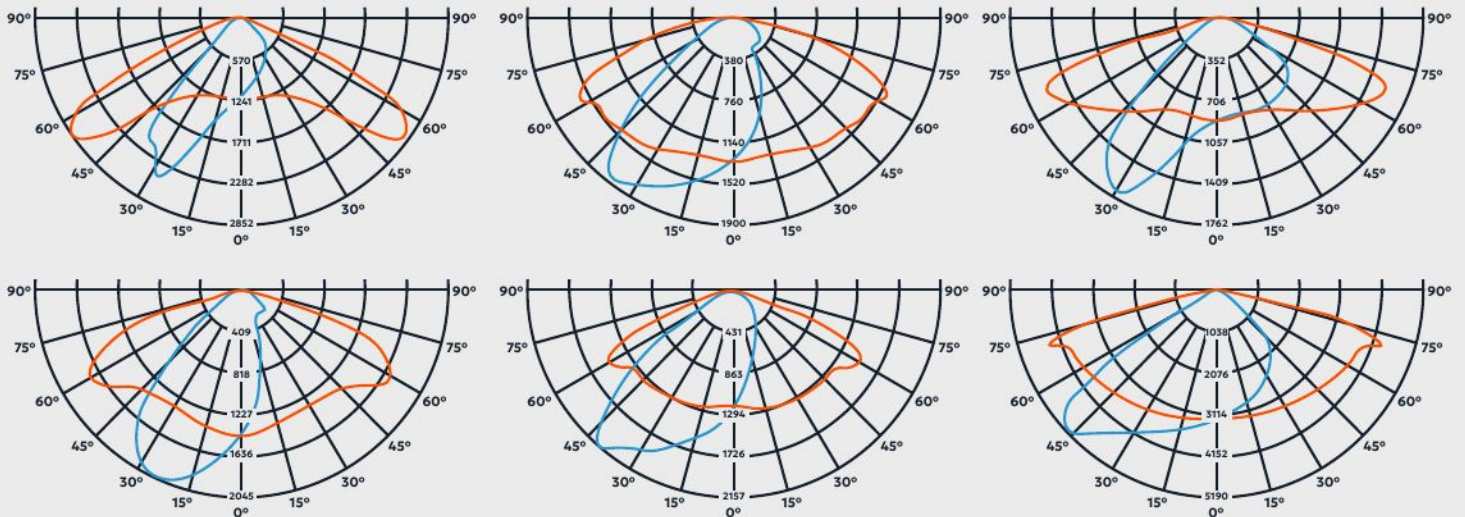
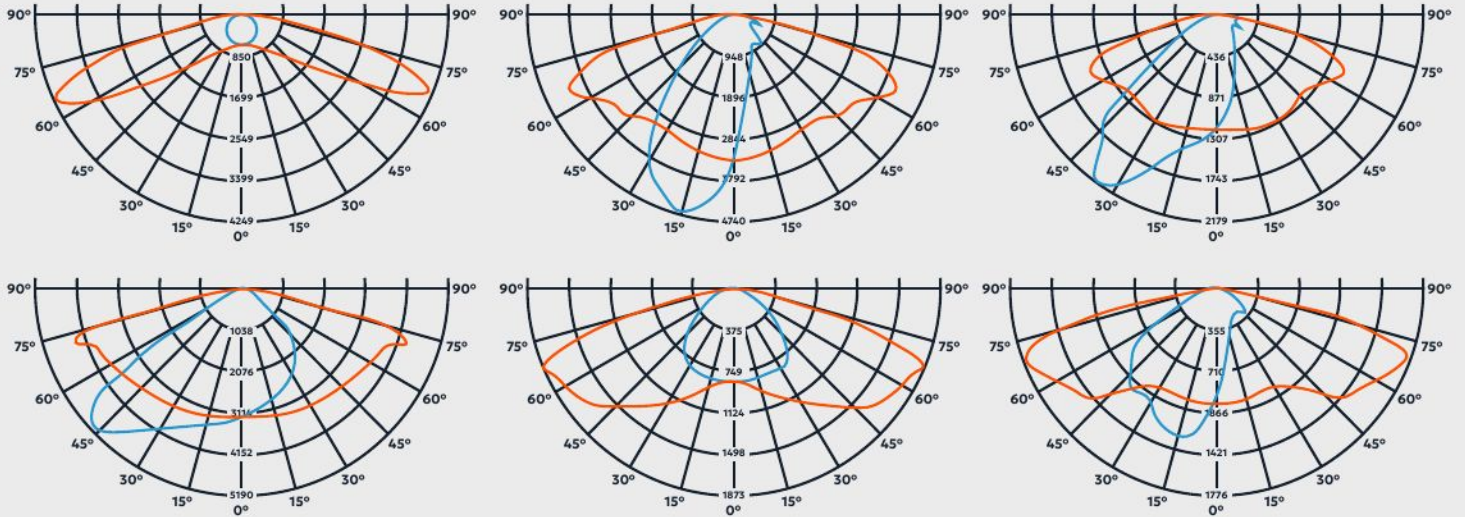
- Adjustable tilt: -90° to $+90^{\circ}$, with graduated markings every 5°
- Universal die-cast mount for poles $\varnothing$ 60–32 mm
- Safe and quick installation even in tough conditions

Best tilt angle available: 180°





PHOTOMETRIC DISTRUBTIONS



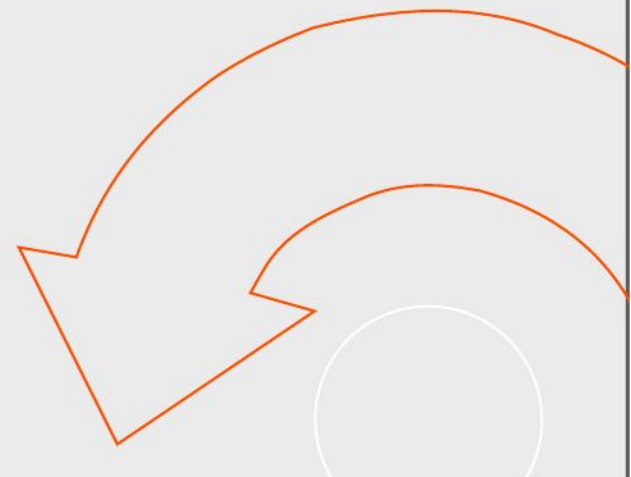
RENEWABLE ENERGY COMPATIBILITY

Energy independent. Sustainable by nature.



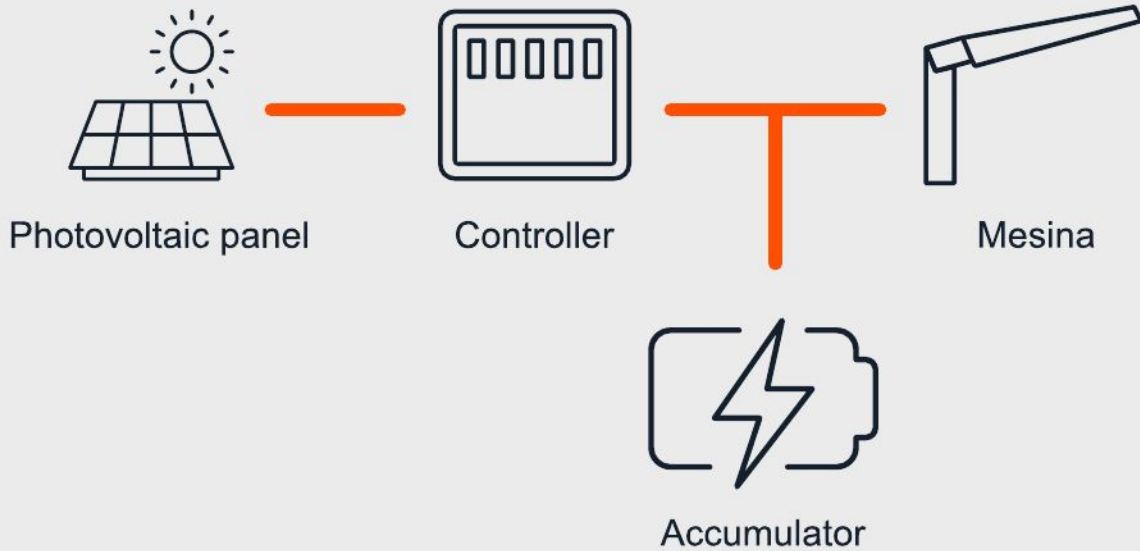
Designed to harness clean and sustainable energy, this system ensures continuous operation even in remote locations. Its compatibility with photovoltaic panels and inverter options allows for flexible installation and reduced environmental impact, making it ideal for off-grid or eco-friendly applications.

- Solar operation via 24/12 V DC input or inverter
- Ideal for remote or off-grid areas



Sustainable Power System:

The system guarantees reliable performance through renewable energy integration, minimizing the need for traditional power sources. Its efficient design maximizes energy storage and usage, providing long-lasting autonomy and consistent functionality in isolated or energy-limited environments.



CERTIFICATIONS & COMPLIANCE

Engineered for European Excellence



Product Compliance

CE

ENEC

RoHS

REACH

WEEE

DALI/D4i

NEMA

Zhaga

LoRa

PLC



Safety & Protection

IP67

IK10

SPD 10–20 kV

Class I / Class II



Corporate Standards

ISO 9001

ISO 14001

ISO 45001



Eco-Design

100 % Recyclable Materials

Eco-efficient Production

Low Carbon Manufacturing



PROVEN PROJECTS

Validated performance in the field

+200

Over 200 installations nationwide
in urban and rural projects



RECOMMENDED CERTIFICATIONS & STANDARDS SECTION

1 • Core Electrical & Safety Certifications (mandatory for EU market)

Certification	Standard	What It Ensures	Suggested Label on Brochure
CE	EU Low Voltage Directive 35/2014/EU + EMC 30/2014/EU + Ecodesign 125/2009/EC	Product complies with EU safety, electromagnetic compatibility, and energy efficiency directives	CE Certified
ENEC	ENEC Mark (EN 1-60598 / EN 3-2-60598)	Independent European certification for luminaires, confirming compliance with harmonized safety and performance standards	ENEC Approved
RoHS	Directive 65/2011/EU	Restriction of hazardous substances (lead, mercury, cadmium, etc.)	RoHS Compliant
REACH	Regulation (EC) No. 2006/1907	No harmful chemicals beyond accepted thresholds	REACH Compliant

2 • Environmental & Protection Ratings

Mark	Standard	Description
IP67	EN 60529	Full protection against dust ingress and water immersion
IK10	IEC 62262	Impact resistance, protection against 20 J mechanical impact
Class I	EN 61140	Protective earth connection for electrical safety
SPD 10 kV / 20 kV	EN 11-61643	Surge protection device rating (electrical transient immunity)

3 • Optical & Photometric Standards

Certification / Reference	Standard	What It Covers
Photometric Data	EN 1-13032 / LM-79	Standardized testing of luminous flux, intensity distribution, and efficiency
Color Rendering Index (CRI)	EN 2-12464	Light quality in road and outdoor lighting applications
Glare and Uniformity	EN 2-13201 / EN 3-13201	Ensures compliance with road lighting classes (ME, CE, S, etc.)

4 • Environmental & Quality Management (Corporate Level)

Certification	Standard	Purpose
ISO 9001	Quality Management System	Guarantees product consistency and traceability
ISO 14001	Environmental Management	Ensures controlled environmental impact and sustainable production
ISO 45001	Occupational Health & Safety	Demonstrates responsibility toward workers and operational safety

5 • Sustainability & Lifecycle Indicators (optional, premium layer)

Element	Description	Suggested Visual
100% recyclable aluminum body	Emphasize circular design	Circular Design %100 Recyclable Materials
Eco-Design / Life Cycle Optimized	Minimized environmental footprint across production and usage	Eco-Design & Low Carbon Manufacturing
WEEE	EU Waste Electrical & Electronic Equipment Directive compliance	WEEE Directive Compliant

RECOMMENDED CERTIFICATIONS & STANDARDS SECTION

6 • Control & Connectivity Standards (Smart Lighting Compatibility)

Interface	Standard	Benefit
NEMA / Zhaga socket ready	ANSI C136.41 / Zhaga Book 18	Compatibility with telemanagement systems (e.g., Lighting AI)
DALI / D4i driver ready	IEC 62386	Digital dimming and control communication standard
LoRa / PLC compatible	IEEE 802.15.4g / ISO 14908	Wireless / powerline control readiness







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