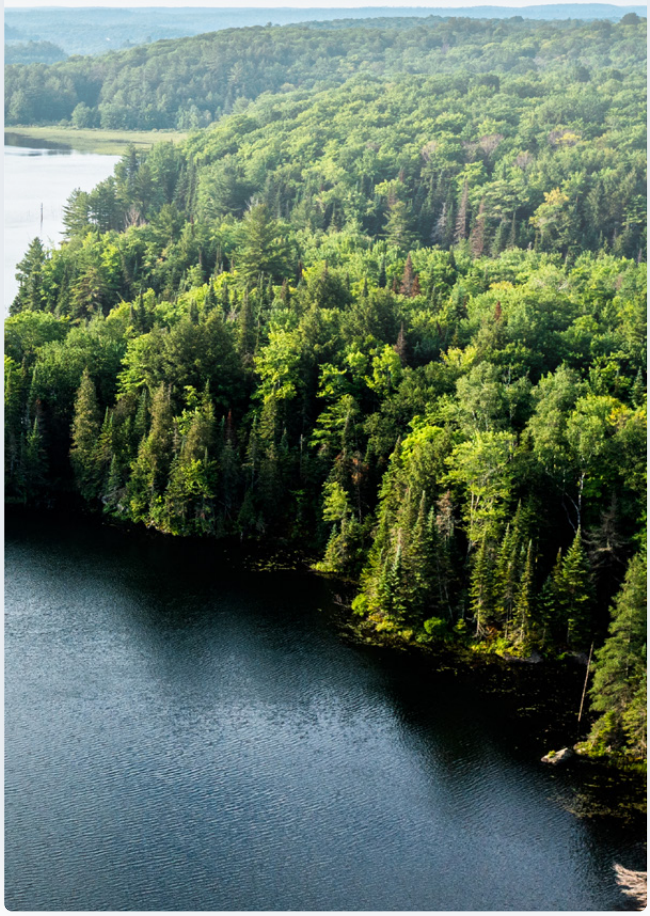
Schréder EKINOX POWERED BY SUNNA DESIGN

Cutting-edge solar lighting solutions

Why solar lighting?

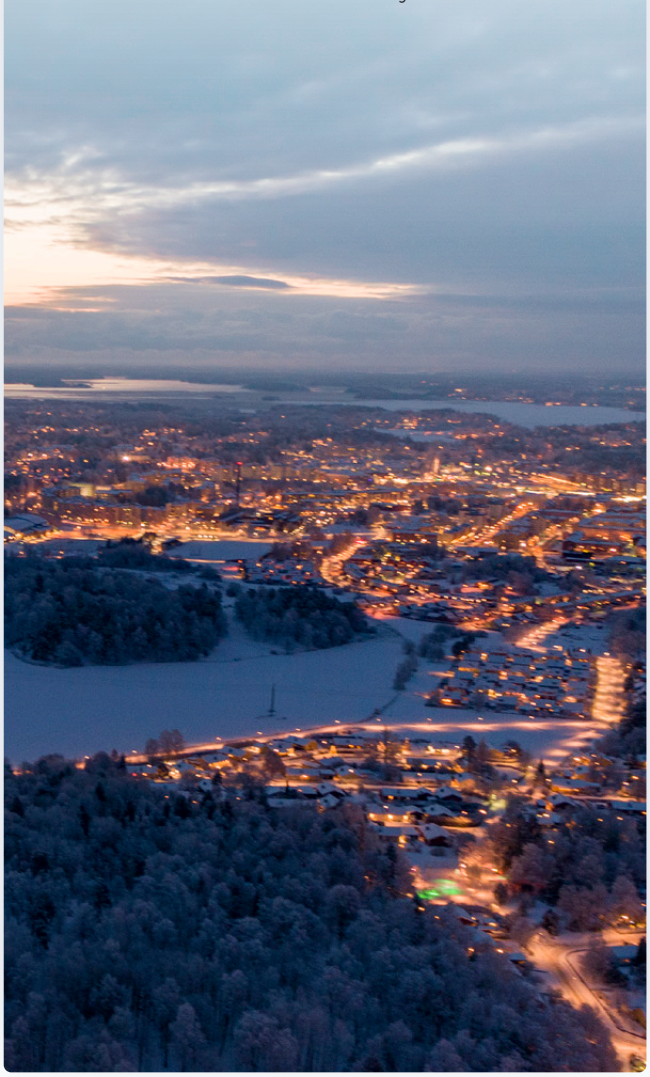
Abundant, carbon-neutral energy

Solar energy is the most abundant energy resource on Earth as it constantly receives approximately 173,000TWh of energy from the sun. This is more than 10,000 times the world's total energy consumption.



Increased energy security

Off-grid lighting reduces vulnerability to energy price fluctuations or network disruption and decreases pressure on energy demand, which benefits the whole community.



Equity among citizens

The electricity grid is not necessarily available everywhere. However, this is no reason to deprive a part of the population of safety and comfort after dark.

Low installation and operating costs

Solar lighting does not require heavy infrastructure work (no underground cabling needed). Its installation and commissioning are more straightforward, with a reduced impact on the environment. And, as it is off the grid, the operating costs are virtually zero.

Schréder & Sunna Design partner to unlock the potential of solar lighting for your projects.

Experts in Lightability™

As the leading independent outdoor lighting solution provider worldwide, Schréder believes that lighting can empower people, impact lives, support communities, and transform spaces, cities and the planet. Schréder is an expert at using light to its fullest potential, to bring meaningful moments to people in public spaces.
Our lighting solutions deliver the right light in the right place, at the right time and in the most sustainable way possible. Schréder has developed numerous photometric options, to provide the best solution for every project in terms of performance, efficiency, comfort, desired outcome and return on investment.
Schréder has been bringing the world to light since 1907.

Schréder
Experts in lightability™

Leader in solar lighting

Founded in 2011, Sunna Design is the leader in solar energy management for autonomous and connected applications, with solar street lighting being its core business.
Its unique know-how revolves around the complete mastery of technologies for solar energy generation, storage and management.
With many patented innovations, Sunna Design offers high quality 'Plug and Play' solutions that stand out for their remarkable robustness, durability, recyclability and unequalled performance in hot, temperate or cold climates.

Sunna DESIGN

2 studies to maximise your benefits

Harvest as much solar energy as possible

Our experts support you during every stage of your project. We analyse all key criteria to select the solutions that are most suited to your project requirements. To design your efficient solar lighting solution, we take into account numerous factors:

- **Site latitude**
- **Orientation of the installation**
- **Installation direction**
- **Climatic conditions**
- **Potential solar shading**

Make the best use of every available watt

As the amount of available energy is limited by the battery capacity, it is crucial to maximise the use of every lumen that the system is able to generate.
A comprehensive lighting study is necessary to maximise energy efficiency while providing the appropriate light distribution for the project.

Our lighting study is based on various parameters that influence the choice of light distribution, colour temperature and dimming scenario.

- **Applicable norms and standards**
- **Lighting class**
- **Light pollution requirements**
- **Environment to be lit (width, surface, use, etc.)**
- **Installation layout (height, spacing, overhang, etc.)**

A **smart** lighting package

From seafronts to secondary roads, bike paths, parks, commercial facilities and residential streets, solar lighting has become a truly beneficial and sustainable alternative to traditional grid-powered lighting. Schréder EKINOX powered by Sunna Design sets new standards for quick and easy deployment of lighting solutions based on renewable energy.

Frameless solar panels

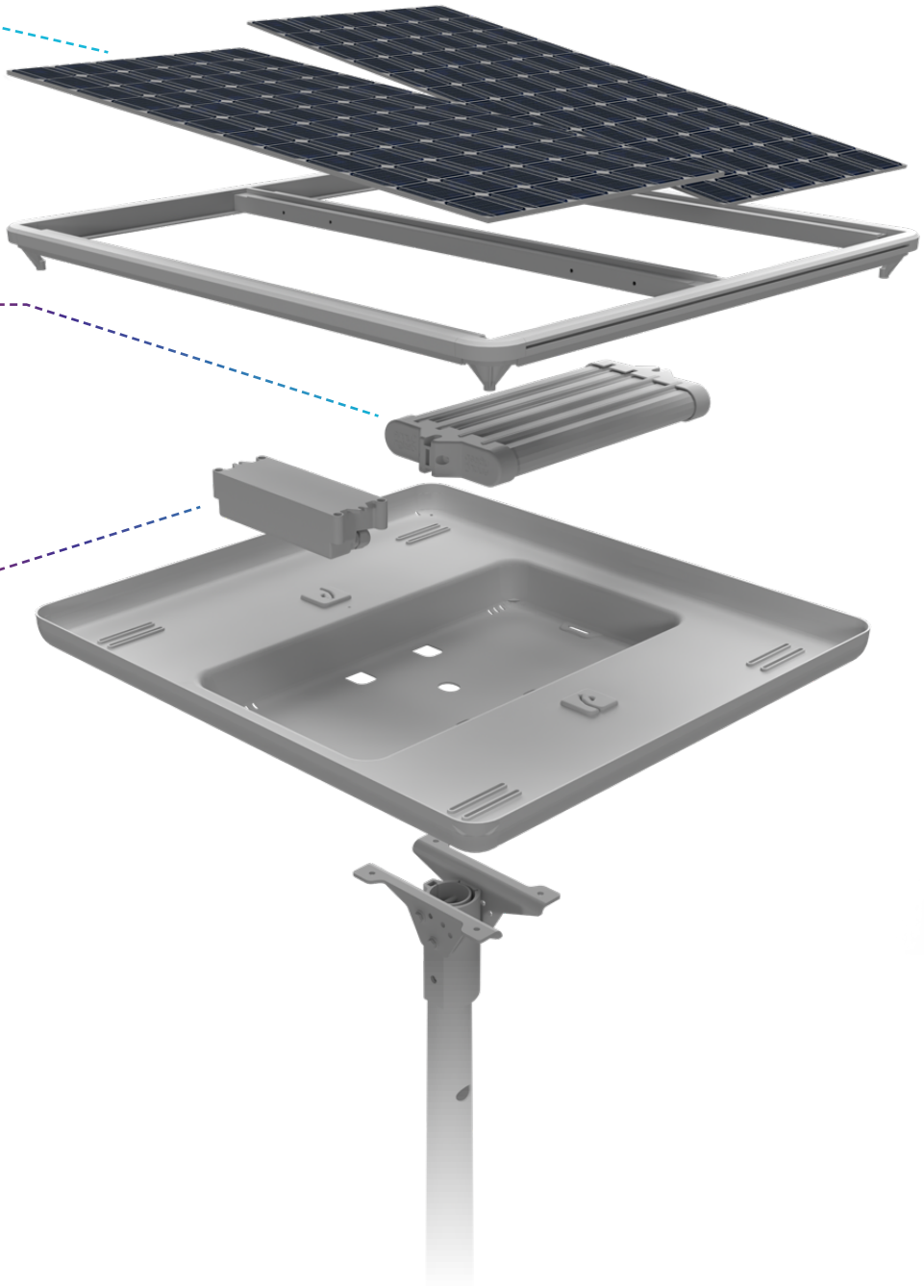
Converting solar energy into electricity.

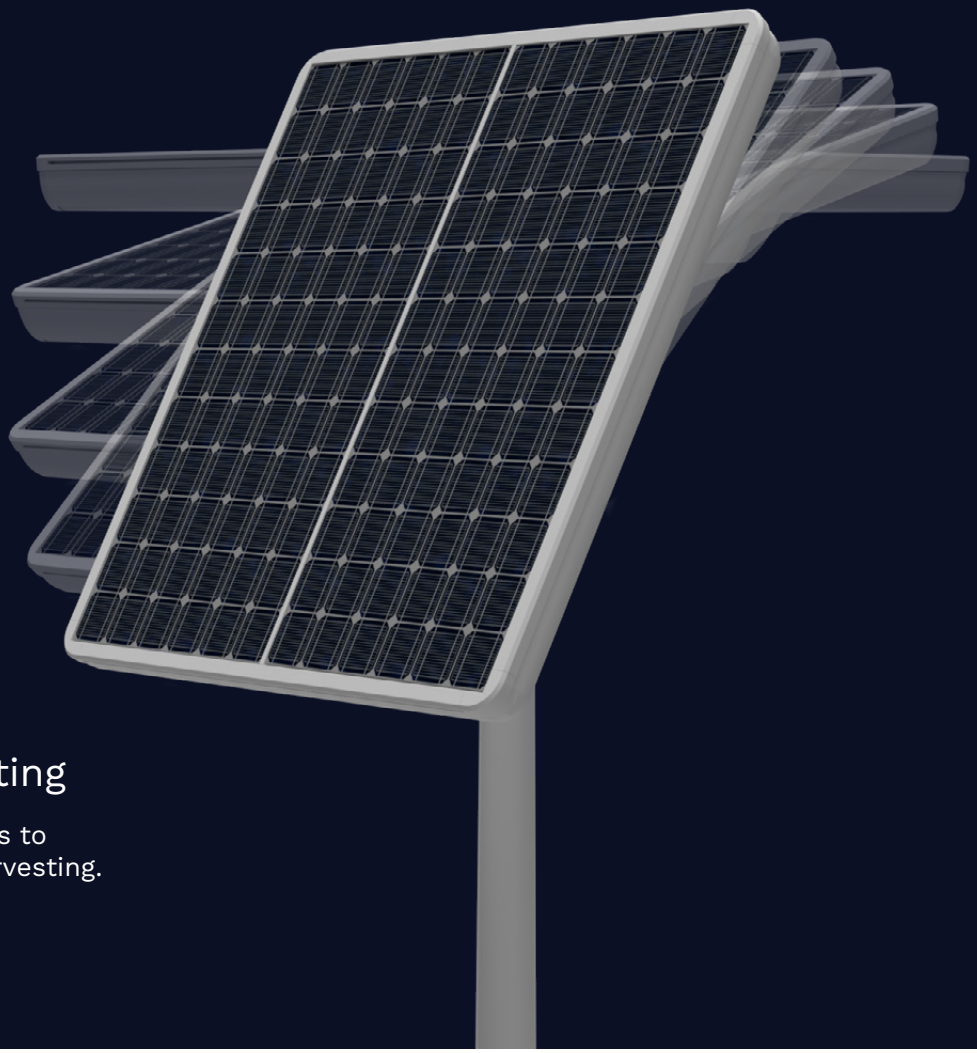
Battery

Storing the electricity produced during the day and powering the luminaire at night.

In-built electronics

Controlling the luminaire (ON/OFF, smart dimming, detection scenarios, etc.) and managing battery charging and discharging to maximise battery life and prevent blackouts.





Adjustable mounting

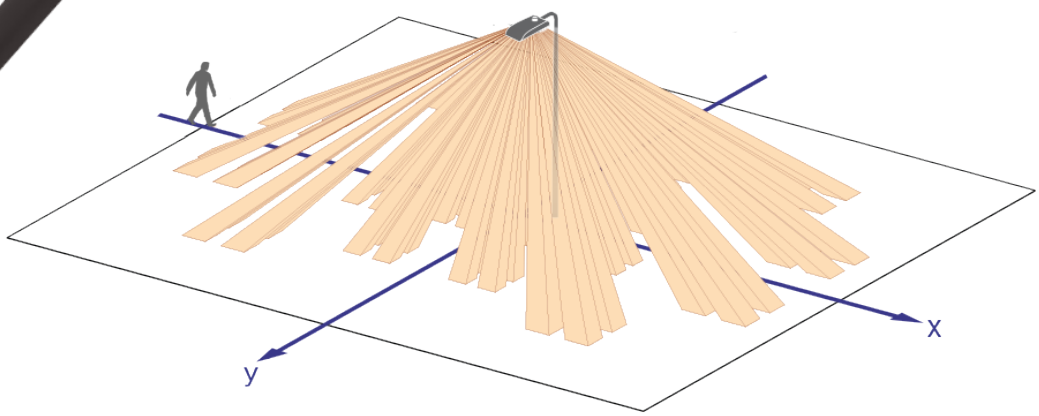
Integrated tilt adjustments to maximise solar energy harvesting.

State-of-the-art luminaires

Providing cutting-edge light distributions to make the most of the available energy.

Optional PIR sensor

Overriding the dimming profile to provide a higher light intensity upon presence detection.

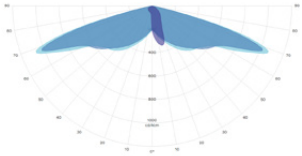
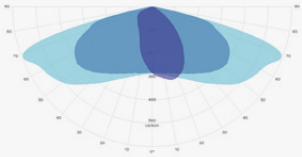
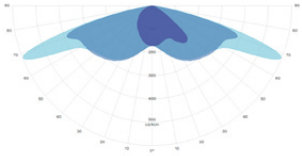
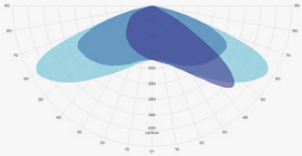
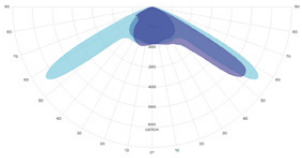
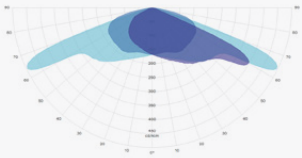


Available **solar kits**

	UP1	UP2	UP4
Solar panel dimensions (mm | inch)	1,000x350 | 39x14	2 panels 776x350 | 31x14	4 panels 776x350 | 31x14
Weight (kg | lbs)	13 | 28.6	23 | 50	47 | 103
Aerodynamic resistance (CxS)	0.40m²	0.62m²	1.24m²
Mounting type (solar kit)	Post-top Ø60mm	Post-top Ø60mm	Post-top Ø76mm
Power	50Wp	80Wp (2x40Wp)	160Wp (4x40Wp)
Tilt settings (steps)	5°, 25°, 50°	10°, 25°, 40°, 50°	0°, 20°, 30°, 45°
Battery type	Maintenance-free NiMH	Maintenance-free NiMH	Maintenance-free NiMH
Battery capacity	120Wh	240Wh	480Wh
Operating temperature	-40°C to +70°C -40°F to +158°F	-40°C to +70°C -40°F to +158°F	-40°C to +70°C -40°F to +158°F
Compatibility with Schréder luminaires	Luminaires equipped with LensoFlex®4 20 LED photometric engines	Luminaires equipped with LensoFlex®4 20 or 40 LED photometric engines	Luminaires equipped with LensoFlex®4 40 or 80 LED photometric engines

The **right light** for your project

Thanks to its LensoFlex®4 photometric engines developed around performance, compactness and versatility, Schréder offers a wide range of light distributions, colour temperatures and lumen outputs to meet the precise needs of your project, while maximising energy efficiency, visual comfort and protecting the environment.

Optics	Type	Typical applications	LENSO FLEX® 4
5300	Asymmetrical ultra-narrow	Bike paths	
5301	Asymmetrical narrow	Residential streets, seafronts	
5305	Asymmetrical medium	Squares and pedestrian areas, parks	
5308	Asymmetrical wide	Squares and pedestrian areas, parks	
5366	Asymmetrical extra-wide	Squares and pedestrian areas, parks, car parks, playgrounds, recreational sports fields	
5393	Asymmetrical ultra-wide	Car parks, large areas, playgrounds, recreational sports fields	

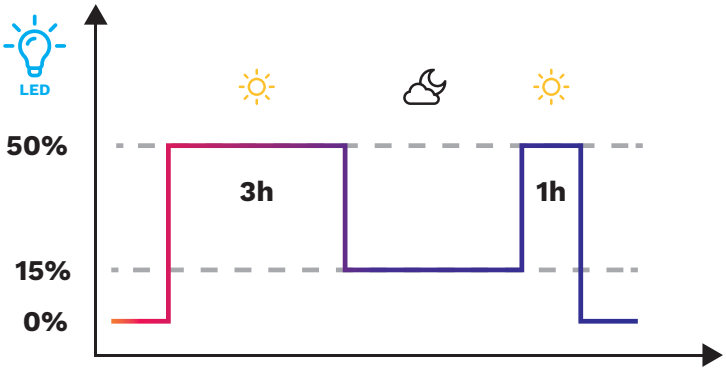
** This is just a selection of the photometrical solutions available.*
For more information, please visit www.schreder.com or contact your sales representative.

LED count	Solar kit	Typical lumen output without dimming (100%)	Typical lumen output with temporary overdrive*	System efficiency
20 LEDs	SE1	1,800lm	3,500lm	Up to 180lm/W
20/40 LEDs	SE2	3,500/3,700lm	6,100/7,100lm	Up to 180lm/W
40/80 LEDs	SE4	7,100/7,500lm	12,300/13,800lm	Up to 180lm/W

* *Upon detection with a PIR motion sensor*

Dimming scenarios

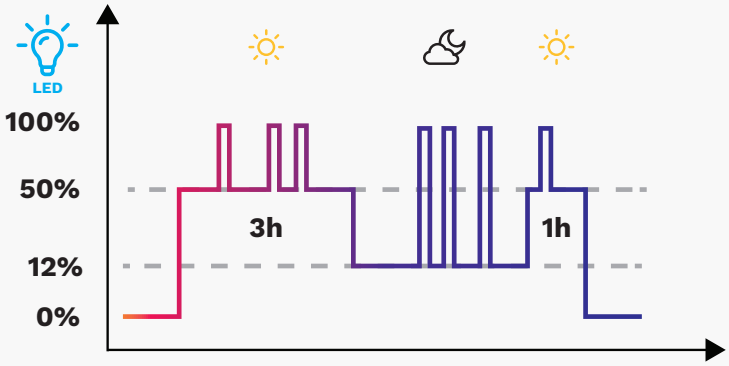
Without detection



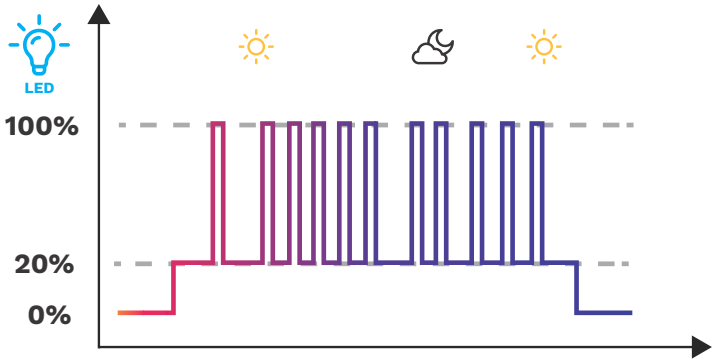
At nightfall, the luminaire is switched on at 50% of its maximum output for 3 hours. It then reduces its output to 15% to provide safety lighting throughout the night. At sunrise, the light output returns to 50% for one hour before the luminaires switch off.

With motion detection in places with little nocturnal traffic

At nightfall, the luminaire switches on at 50% of its maximum power for 3 hours. It then reduces its power to 12% to ensure safety lighting throughout the night. At sunrise, the light output returns to 50% for one hour before the luminaires switch off. Throughout its operation, the dimming scenario can be overridden by motion detection (car, bike or pedestrian) with the light level rising to 100% for a short period. It maximises visibility to ensure safety and well-being for users.



With motion detection in popular places

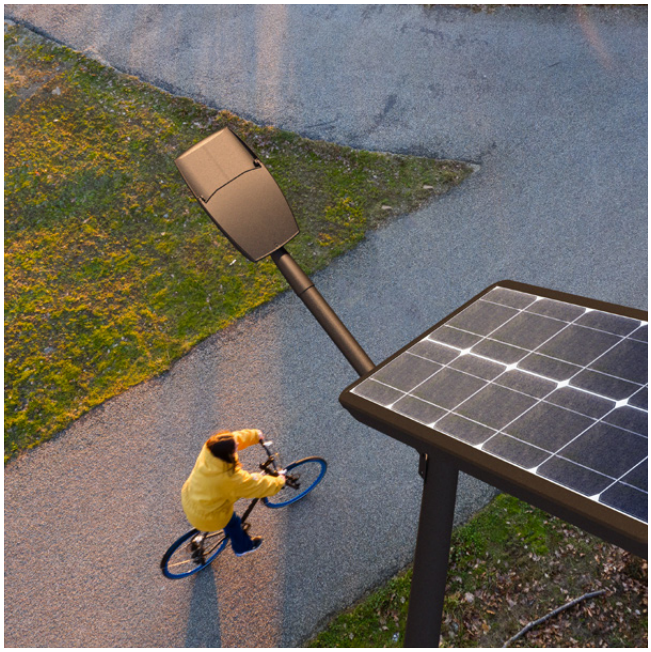


At nightfall, the luminaire is switched on at 20% of its maximum output for the whole night. When movement is detected (car, bicycle or pedestrian), the lighting level is temporarily increased to 100% to provide maximum safety and comfort to users. This dimming profile allows up to 450 detections per night.

** This is just a selection of the dimming profiles available.*
We can customise the dimming scenario according to the requirements of your project.

Smart dynamic lighting profile to prevent blackouts

As the level of charge in the battery when the luminaire is switched on can vary according to the energy accumulated during the day, it is important to manage energy use intelligently. The on-board electronics divide the night into three parts and adjust the light level as necessary to avoid a blackout situation.



Typical applications

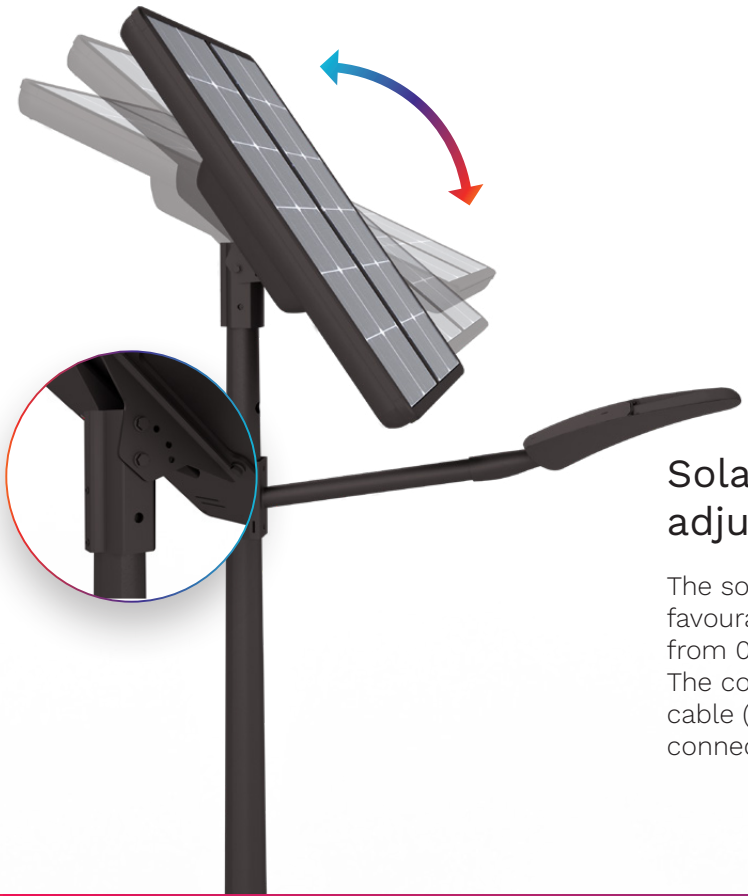
- Bike paths
- Residential streets
- Seafronts
- Squares & pedestrian areas
- Parks
- Car parks
- Playgrounds
- Recreational sports fields
- Large areas

Straightforward implementation

Schréder EKINOX powered by Sunna Design is designed for simple on-site deployment and easy adjustment for optimal results.

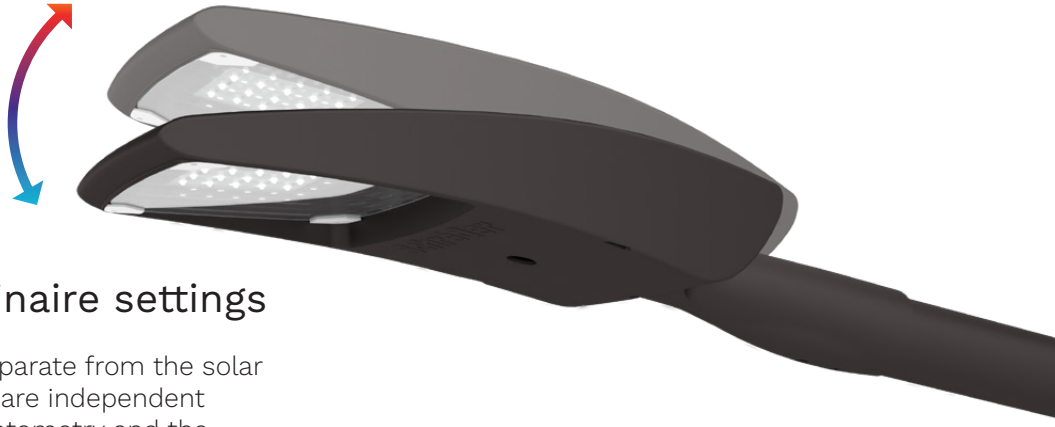
Standard fixation

The UP solar kits come with post-top mounting for Ø60mm (UP1 and UP2) or Ø76mm (UP4) spigots. Together with its partners, Schréder offers complete solutions, including the appropriate reinforced poles and brackets according to the EN40 calculation and with CE marking.



Solar panels with adjustable tilt angle

The solar panels can be tilted to the most favourable angle (according to the solar study), from 0 to 50°, depending on the selected UP kit. The connection to the luminaire is made by a cable (power and control) equipped with coded connectors to avoid any installation errors.



Independent luminaire settings

With the luminaire being separate from the solar kit, the adjustment options are independent in order to optimise the photometry and the detection area if the luminaire is equipped with a PIR sensor. Schréder luminaires offer a wide range of tilt settings.

Easy commissioning & diagnostics

With its built-in status indicators, the solar kit enables the initialisation process to be monitored, day and night detection, Bluetooth™ connection status, alarms and sleep mode.

On-site system settings

Although it must be defined when ordering, we can update the dimming profile and override the properties of the PIR sensor on-site, using the Sunna mobile application and a Bluetooth™ connection to the solar kit.

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www.schreder.com