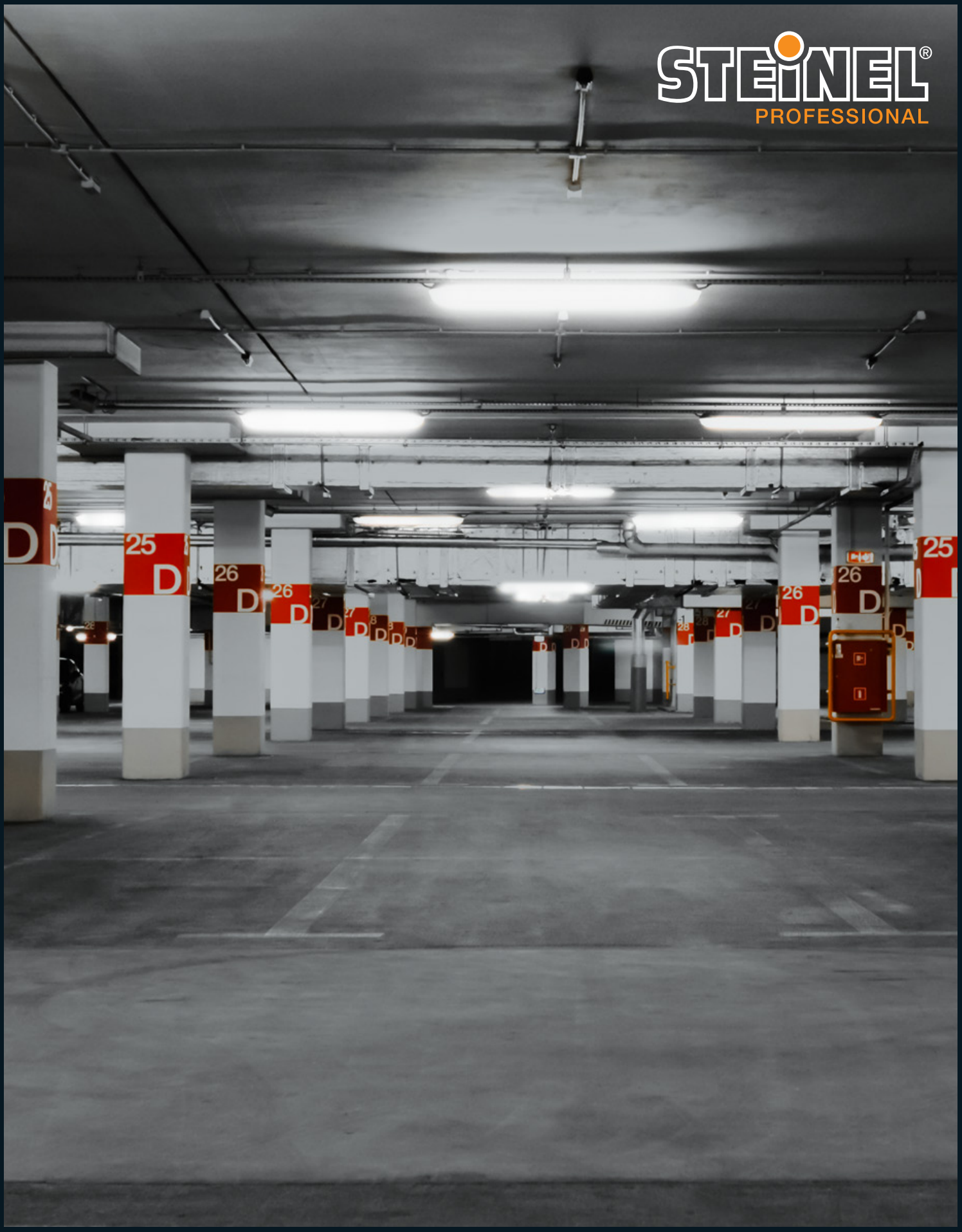
STEINEL®
PROFESSIONAL



Building Intelligence

Parking Solutions

Intelligent lighting solution for multi-storey car parks

Until now, illuminating multi-storey car parks has above all been one thing for those operating them: cost-intensive. By combining LED technology with integrated sensor technology and wireless connectivity, STEINEL has developed an intelligent lighting system that provides illumination to satisfy actual needs. Its efficiency is significantly enhanced by means of an all-inclusive solution covering all aspects from planning to implementation. The STEINEL solution concept not only includes the hardware but also software and a whole range of services.

Potential customers perceive an illuminated multi-storey car park as being safer and more pleasant. The innovative lighting systems from STEINEL generate more light using less energy – only providing light whenever it is actually needed. This reduces costs and boosts lighting convenience in multi-storey car parks.

Technology is our passion

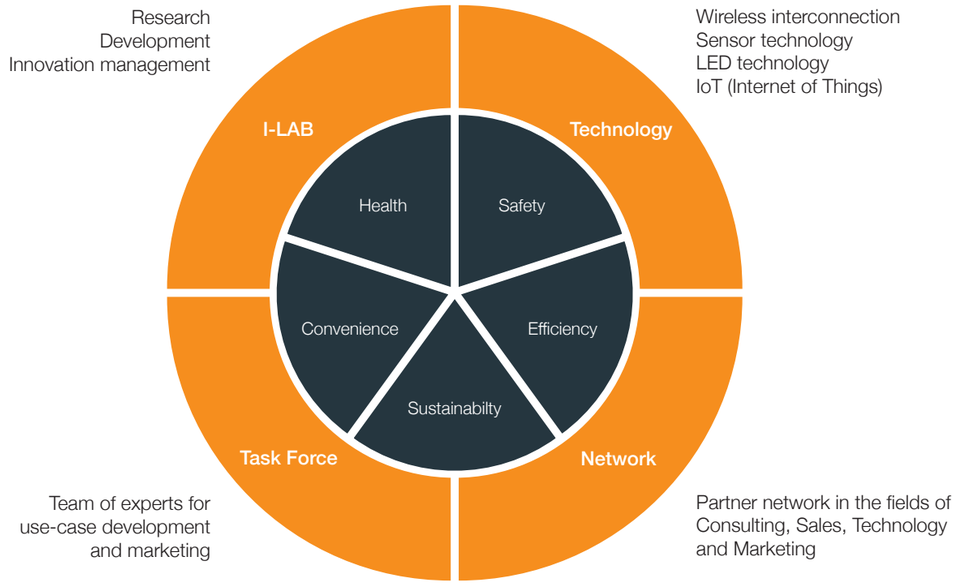
Pioneering spirit and experience for making buildings more intelligent

We have consistently evolved from pioneer to technology and innovation leader in sensor-controlled lighting since 1959. Intelligent products of world renown are created at our own development centres. This is where we set store by innovation and durability.

STEINEL has been developing solutions for the future for more than 70 years. In 1959, Heinrich Wolfgang founded STEINEL in Rheda-Wiedenbrück. With the arrival of Ingo Steinel, who joined the management team in 2004, STEINEL has consistently evolved from pioneer to technology and innovation leader in the sensor-controlled lighting, heat-tool and hot-melt glue applicator markets. STEINEL has been using high-frequency sensor technology for detecting movements in spaces and buildings since 2002. Today, products and solutions are available under the STEINEL brand for DIY enthusiasts and professional users alike. All products are manufactured by company-owned factories in Germany, Switzerland, Romania, Czech Republic and the Republic of Moldova. Made in Europe is STEINEL's formula for success. Partners and subsidiaries sell our products in 62 countries. With more than 1,600 employees, we are a leading global supplier for sensor-controlled LED technology, ensuring that there's always suitable light in any situation.

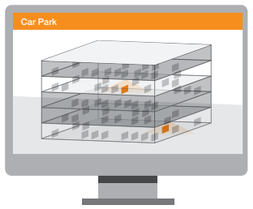
The STEINEL portfolio for Building Intelligence

More and more, intelligent systems are being used for controlling all sorts of building types. Buildings are becoming intelligent. This makes it possible to save energy, automate recurring processes, facilitate the usability and operation of rooms and installations and achieve a completely new dimension of function and flexibility. This is where our new generation of sensors will make a key contribution. They not only control light but also count people and detect true presence. This is STEINEL's vision of building intelligence. In an innovation lab, a task force will continue to work on network solutions, and STEINEL Systems too will help us make buildings more intelligent in the future.

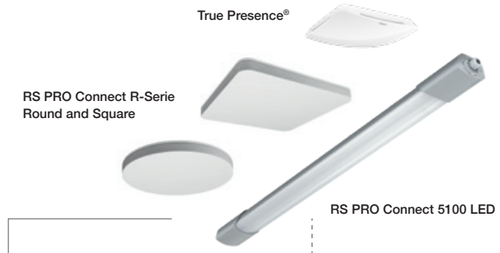


The intelligent multi-storey car park
High lighting quality – low costs

Illuminating car parks can be expensive if light needs to be provided 24/7. The RS PRO Connect 5100 LED linear light and the lights from the R series can be used to create a wireless LED lighting system that saves energy with presence detection capability and wireless connectivity via Bluetooth for setting up lighting zones. When the system detects pedestrians or cars, the way ahead of them is illuminated at full output. When movement is no longer detected, illumination either dims to a courtesy light level or switches off completely. This means there is always sufficient light wherever it is needed. A well-lit multi-storey car park conveys a sense of security and looks more attractive from the outside.



Maximum cost saving
Energy-efficient LEDs and intelligent control technology reduce energy consumption. This saves up to 90 percent of everyday running costs.



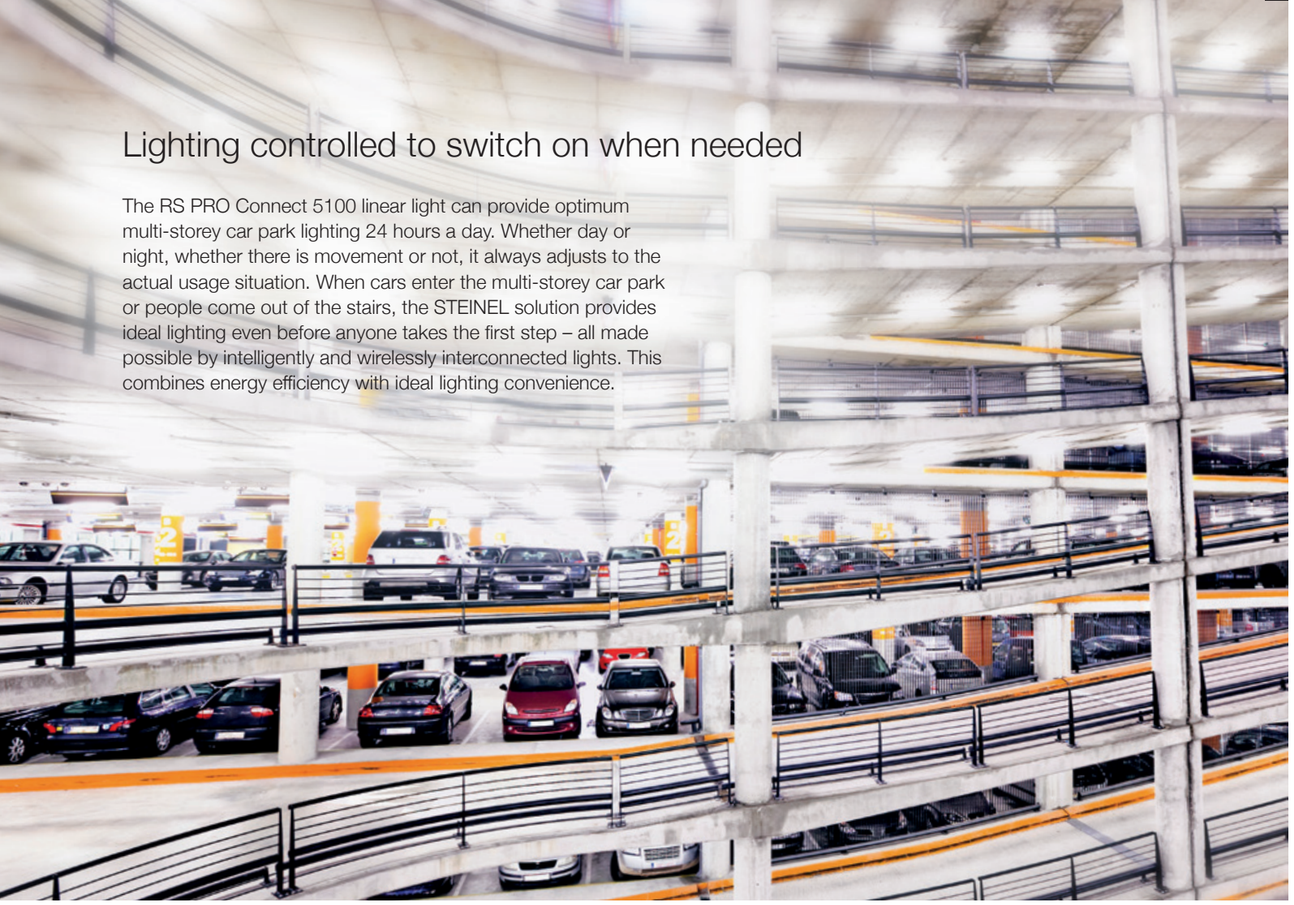
Intelligent sensor-switched lighting
Lighting switches on in response to detected movements and the level of ambient light measured. Areas in which nobody is present are illuminated at a basic light level of 10 to 50 percent.

Connected via Bluetooth®

Fast installation and commissioning
Wireless connectivity reduces installation work and makes planning easier and more flexible. An app is used for selecting the appropriate settings (e.g. dimming level) and group interconnection.

Swarm function for preceding and accompanying light
When vehicles or people move through the multi-storey car park, the lighting ahead of them is activated at full output. When movement is no longer detected, light is dimmed or switched off after a specific period.

Sense of security guaranteed
A dark multi-storey car park or stairwell is rarely inviting. This problem is resolved with the courtesy-light function provided by the RS PRO Connect 5100 and the R series. When no one is present, the STEINEL solution still provides dimmed light as a way of saving energy while at the same time making visitors feel safe and comfortable.



Lighting controlled to switch on when needed

The RS PRO Connect 5100 linear light can provide optimum multi-storey car park lighting 24 hours a day. Whether day or night, whether there is movement or not, it always adjusts to the actual usage situation. When cars enter the multi-storey car park or people come out of the stairs, the STEINEL solution provides ideal lighting even before anyone takes the first step – all made possible by intelligently and wirelessly interconnected lights. This combines energy efficiency with ideal lighting convenience.

More light for more personal safety

It is important for multi-storey car park lighting to provide good, round-the-clock visibility throughout. Well-lit parking levels make visitors feel safer and more comfortable. Cutting-edge LED technology provides optimum lighting. The lights are fitted with high-frequency sensors that regulate light in response to movement in the multi-storey car park.

Smart solutions
Benefits to the multi-storey car park operator and visitor

Multi-storey car park operators

- Running costs for lighting reduced to a minimum
- Optional maintenance contract for worry-free lighting-system operation
- Wireless light connectivity for easy installation and planning flexibility
- Hardware, software, installation and commissioning from a single source
- Perfectly planned lighting through our own planning office
- Optimum illumination 24 hours a day
- Extremely long light life

Multi-storey car park visitors

- Sense of feeling secure and comfortable on entering the multi-storey car park
- No dimly lit car-park payment machines, doors or corridors
- In the stairwell, the next level is illuminated even before the parking guest has arrived
- Aesthetically attractive both inside and out

"Connected Lighting" provides a balanced combination of convenience, safety, security and energy efficiency

RS PRO Connect 5100 LED

Ready for change in parking facilities, halls, garages, hallways and all other rooms that are still equipped with antique diffuser lights. Basically, it is so easy: use the existing wiring, attach to the existing holes, wirelessly configure the new installation and adjust all parameters via app.

The result: state-of-the-art illumination based on existing wiring, cutting-edge user friendliness with many features and immediate cost savings from maximum energy efficiency.

RS PRO Connect R-Serie

This lighting system not only features needs-based functions, but also an understated design that is geared to suit many different applications. Technology that is not only the right decision today, but also tomorrow.

High-precision HF presence sensor, warm and neutral white options delivering up to 3200 lumens of light. Backlight, courtesy light, emergency light powered by rechargeable battery, flexible stay-ON time and connectivity to create zone groups. All configurable via an app.

Calculation: Building Intelligence "Parking"

Multi-storey car park in Zurich with 240 lights

	Unit	Without "Connected Lighting"	With "Connected Lighting"
Area of multi-storey car park	m^2	7,320	7,320
Output on standby	kW	2.388	0.0186
Max. operating output	kW	19.26	7.98
Full-load hours, multi-storey car park	h/a	5,318	1,009
Energy consumption for multi-storey car park	kWh/a	102,426	8,052
Costs/kWh	€	0.16	0.16
Costs per year	€	16,388.16	1,288.32
Spec. energy consumption	kWh/m^2	13.99	1.1
Saving for multi-storey car park	%		92 %
Annual saving of			**€ 15,100**
Customer investment of			€ 35,000
Return on Investment (ROI)			after ca. 2.5 years

Stefan Gasser
Managing Director, eLight GmbH

"Before it was modernised, the lighting in the Heuried multi-storey car park (Switzerland) was on the cutting edge of the pre-LED age: extremely efficient fluorescent tubes, electronic ballasts and infrared presence detectors. It is hard to imagine that ***switching to STEINEL sensor-switched lights*** *has nonetheless produced a* ***saving of 92 percent*** *– but clearly verified by load-profile measurements.*

In addition to greater efficiency from the interconnected lights, the high level of savings has also come from the integrated HF sensor system with a minimal stay-ON time of one minute and from dimming to a basic light level (a further 15 minutes). And on top of all this: ***illuminance and light distribution from the new lighting are visibly better*** *than they were with the old set-up."*

Intelligent lighting

Integrating three innovative technologies into the lighting systems saves energy while at the same time enhancing the quality of light:

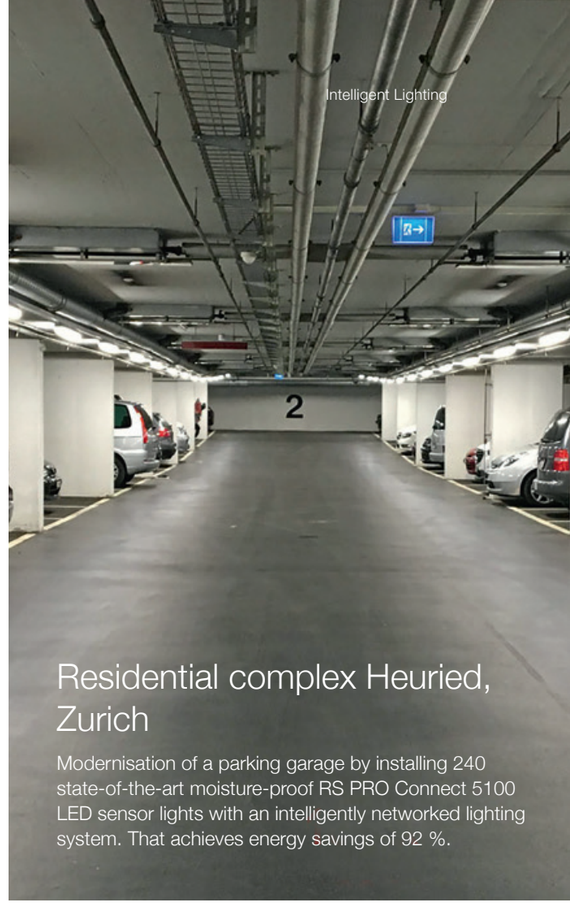
LED

LED is the most efficient light source to date and comes with key additional qualities. It can be switched on almost without any wear, works equally well at low ambient temperatures and can be dimmed for attractive lighting effects.

HF-sensor: STEINEL high-frequency sensors instantly identify movements without "sensitivity" being restricted by ambient temperature and the direction in which the object being detected is moving.

Wireless connection: intelligently controlling lights on a wireless basis provides the framework for taking full advantage of the potential of LED lighting. The lights exchange information on movements detected and light levels measured and, in this way, ensure efficient on-demand illumination.

Wireless connectivity reduces installation work and makes planning easier and more flexible. STEINEL can provide multi-storey car park operators with every assistance with regard to selecting the right sensors, planning, connection to the local software platform and final acceptance testing of the working system.



Residential complex Heuried, Zurich

Modernisation of a parking garage by installing 240 state-of-the-art moisture-proof RS PRO Connect 5100 LED sensor lights with an intelligently networked lighting system. That achieves energy savings of 92 %.

Park-and-ride car park, Bamberg

The new park-and-ride park in Bamberg offers more safety in the dark thanks to intelligent lighting. Here, 65 Bluetooth-networked sensor lights were installed for added light.

www.steinel-professional.de

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STEINEL Vertrieb GmbH | Dieselstr. 80-84 | 33442 Herzebrock-Clarholz | Germany
Phone +49 (0) 5245-448-0 | Fax +49 (0) 5245-448-197

www.steinel-professional.de
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