LIMAS

Light on Demand
by intelligent light control

Radio antenna

GPS receiver (optional)

Electronic ballast

Controller

Motion detector (optional)

⌒LIMAS - Light Management System

Light on demand

Light only where it is needed and only as long as it is required – all while optimally exploiting the efficiency potential of LED technology and making maximum savings on energy costs.

With the LIMAS light management system from SCHUCH, you can create a needs-oriented, intelligent lighting control system both for streets, squares and cycle paths and for industrial buildings.

Intelligent components built into the light fittings automatically generate a wireless network to communicate with each other. As desired, or when motion is detected, they can either turn up a dimmed lighting level or return it to a pre-set background level. What is more, programmed operating modes can be altered at any time, and lighting operating data read through encrypted remote access at a PC or via a tablet and USB dongle on site.

So your lighting network can be efficiently monitored, controlled, measured and operated at all times.

When does it make sense to use LIMAS?

1. General energy cost savings using light on demand.

2. With changing usage profiles, e.g. to accommodate temporary city-centre events (public events like markets, festivals etc.), when you want the lighting level to only drop later or not at all.

3. With different requirement profiles in different city areas (e. g. residential areas, industrial zones, the old town area, and conflict zones or social flashpoints).

Benefits

(G)+(D) - **optimised energy saving** through light on demand
(G)+(D) - **easy cost control** through energy consumption metering
(G) - **evaluation and export** of selected/stored lighting data from the data base
(G) - **proactive, targeted maintenance and failure elimination** through the light fittings' automatic failure reporting and location display
(G)+(D) - **user-friendly interface** with graphic display of the light fittings' operating status, energy consumption, function and location
(G)+(D) - **flexibility** thanks to straightforward wireless modification of dimming profiles, together with easy integration of new light fittings into the system with a self-organising mesh network
(G)+(D) - **security** thanks to system-wide encryption with PIN code protection
(G)+(D) - **central control and (with (G) automatic) monitoring** of every single light point
(G)+(D) - **no additional wiring required**

(G) = Solution with gateway and server **(D)** = Solution with USB dongle

Outdoor Light Fittings

System functions

1. **Freely configurable dimming profiles** based on time of day, duration and dimming level

2. **Real-time access to the light fittings** for Instant On or to alter dimming profiles as required

3. **Integrated constant luminous flux function** to keep the luminous flux constant over the LEDs' entire useful life

4. **Component temperature monitoring** (overheating protection)

5. **Energy consumption metering**

6. **Optional:** motion detection with a motion sensor (light on demand)

7. **Optional:** optimised On/Off with brightness sensor

8. **Optional:** time, date, parameter and position monitoring via GPS receiver and GPS-enabled control unit, together with automatic error messages with location information
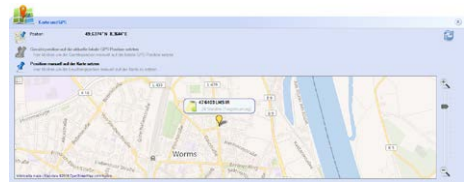
Setting of dimming profiles
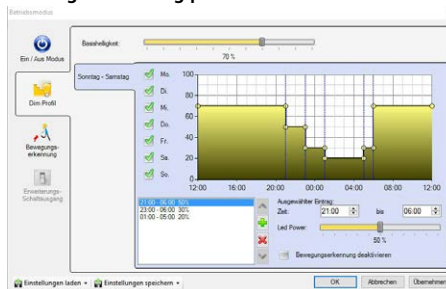

Energy consumption indicator

Location indicator

„Light on Demand"

When a road user passes along the street, this is recognised by the motion sensors integrated in the light fittings, and the dimmed lights automatically adjust up to the programmed lighting level. The signal is transmitted wirelessly from light fitting to light fitting, and all the fittings increase their lighting level. The result is that the light accompanies the road user dynamically.
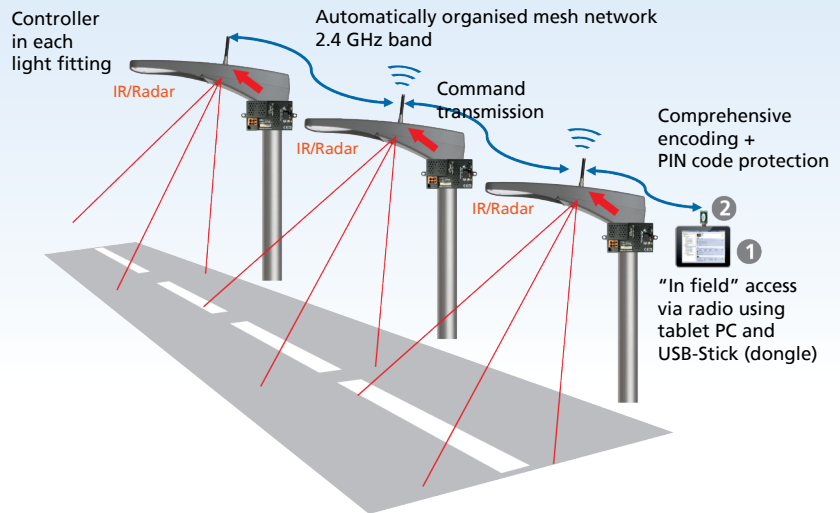After the programmed hold period the light fittings automatically return to the pre-set dimming level.

SCHUCH
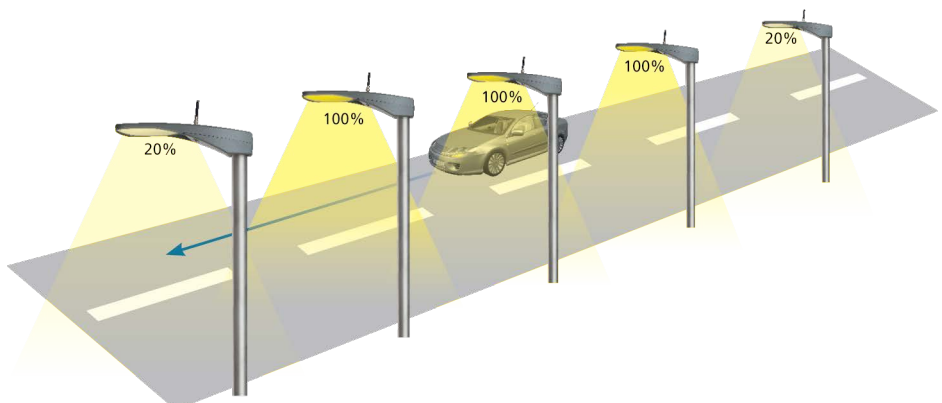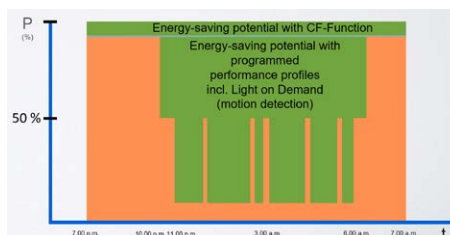
System versions

With USB dongle and software

The light fittings can also be operated independently without a server. Programming, and any subsequent adjustments, are done on site using a tablet PC 1 and USB dongle 2 .
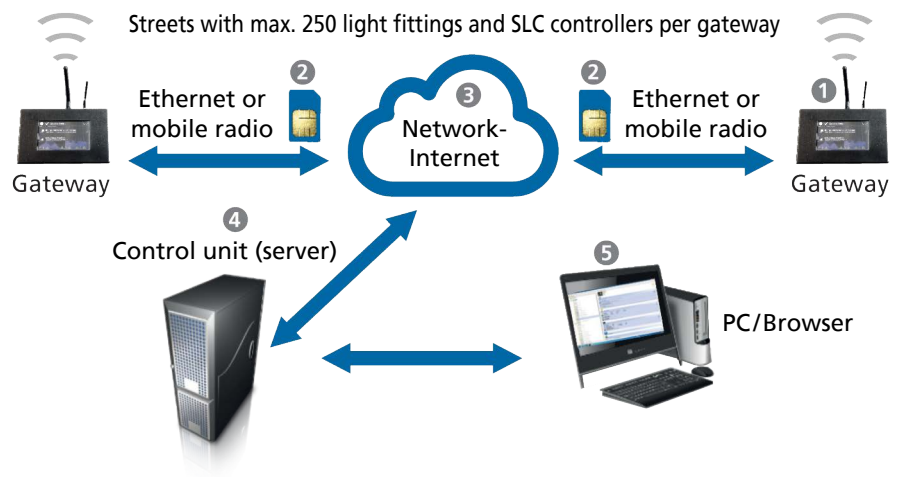
Up to 250 light fittings can be controlled by each USB dongle.

Controller in each light fitting

Automatically organised mesh network 2.4 GHz band

IR/Radar

Command transmission

IR/Radar

Comprehensive encoding + PIN code protection

IR/Radar

"In field" access via radio using tablet PC and USB-Stick (dongle)

With gateway

The gateways ❶, are installed in switch cabinets within radio range of the light fittings and communicate via mobile radio ❷ and internet ❸ with the server ❹. The light fittings in the field ❻ can be controlled with the server and a PC ❺.

The server collects the data from the gateways and provides access to the system functions via a web / browser application, so the lights can be monitored, checked and controlled.

Streets with max. 250 light fittings and SLC controllers per gateway

❷ Ethernet or mobile radio

❸ Network-Internet

❷ Ethernet or mobile radio

❶

Gateway

Gateway

❹ Control unit (server)

❺

PC/Browser

With a gateway, several networks can be linked and controlled. Consequently, there is theoretically no limit to the range and number of light fittings. Up to 250 light fittings can be controlled per gateway.

Outdoor Light Fittings

SCHUCH

LED-Outdoor Light Fittings
with Light Management System ⌢LIMAS

Street light fittings   **47, 48, 541, Cupina, Planeo**

Rope supported light fittings   **49, 59**

**Plane Surface floodlights**   **47A, 48A, 7800A**

Further series on demand.

Design:
– **IR** with infrared sensor for demand-based lighting - „Light on Demand"
– **LMG** with GPS antenna used for precisely timed dimming in connection with autonomous operation without gateway
– **LMP** with photocell / twilight switch (external)
– **USB-Dongle + Software** for subsequent adjustments of factory programmed settings and for controlling the light fittings in the field, including an energy consumption indicator
– **Gateway** for monitoring and controlling the light fittings from a distance with SIM card and mobile network incl. data logger function

Options:
– factory programming of performance profiles according to customer requirements (timed dimming) -> if the installation does not include a gateway, at least one light fitting must be of type LMG.

– factory programming of a constant light function (CF) according to customer requirements
– 3,000K (light colour 730)
– special painting in RAL colours

Foto: Andrea Badrutt, Chur
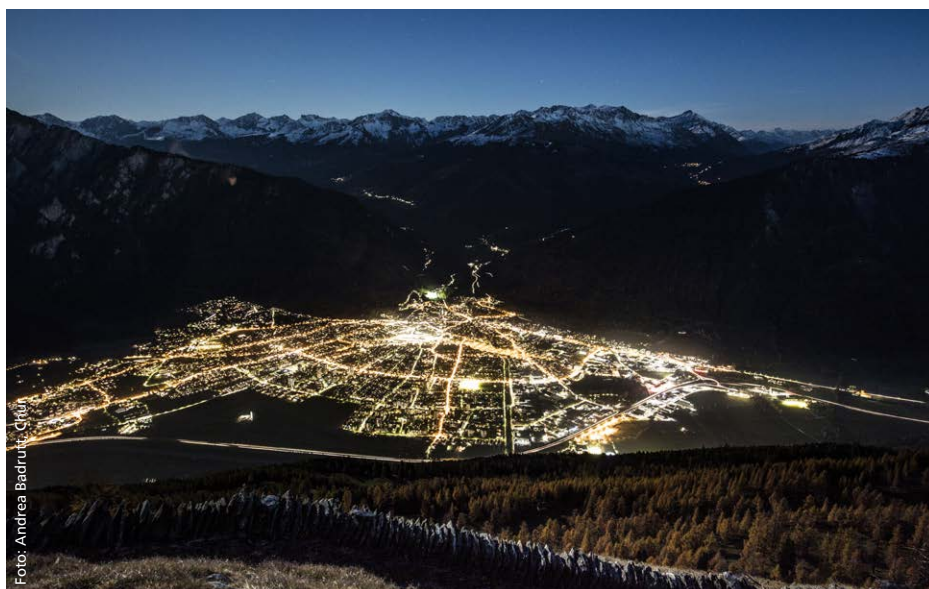
Since 2015 more than 2.500 SCHUCH light fittings of series 47 and 48... with light management ⌢LIMAS **have been installed in Chur (town in switzerland), browser based with gateways, spread all over the town.**