



# Philips outdoor lighting control solutions

Intelligent control and management of outdoor lighting

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# Simple intelligent solutions

Customers around the world have to operate under tremendous financial constraints. At the same time, they are under pressure to meet environmental protection goals by reducing their energy consumption and carbon footprint, while complying with light level standards.

Faced with the challenge of increasing urbanization, these same customers have to create cityscapes that are enjoyable to live, work and do business in. Providing better streets for both drivers and pedestrians, developing local commerce, promoting tourism and fostering civic identity are all high on outdoor lighting agendas.

The Philips portfolio of outdoor lighting controls solutions can help you achieve the best of both ambitions. Combining our intelligent controls with your outdoor lighting can help you provide an inviting nighttime experience, and save energy, decrease light pollution, reduce maintenance costs and potentially extend the life of your luminaire.

Philips offers the latest in simple, intelligent solutions designed specifically for outdoor lighting.

#### Luminaire-based solutions:

- Chronosense
- Dynadimmer

#### Wireless telemanagement solutions:

- AmpLight
- Starsense
- CityTouch

# Luminaire based controls systems

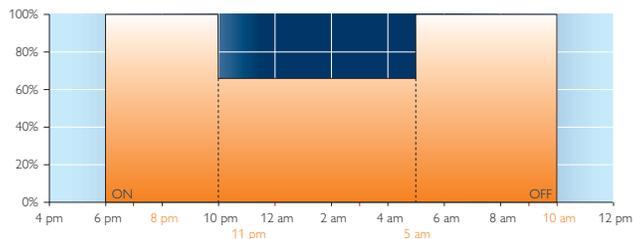
We offer two dynamic control systems that can be easily integrated directly into luminaires for a variety of outdoor lighting applications: Chronosense and Dynadimmer. Each system can be scheduled around your application's needs so that lights will dim during unoccupied hours to provide significant energy savings. Both options can be overridden by additional systems such as motion detectors to ensure optimal system operations.



## Chronosense

Chronosense is a bi-level lamp control device that enables energy savings via dimming with low installation efforts. The small, stand-alone, luminaire-based device can drive CWA or Super- CWA magnetic ballasts to facilitate on-demand light levels via bi-level dimming.

Easy to design around, install and program, the Chronosense dimming schedule is easily programmed via a PC using a standard USB cable. Future schedule changes are always possible, simply by reprogramming the original settings. Offering flexible dimming schedules, Chronosense is ideal for residential, roadway, parking, and industrial applications.



Example dimming schedule using Chronosense



Chronosense is designed to interact with Philips Advance CWA and super CWA magnetic ballasts that have either a 120V input or lead or 120V output tap.

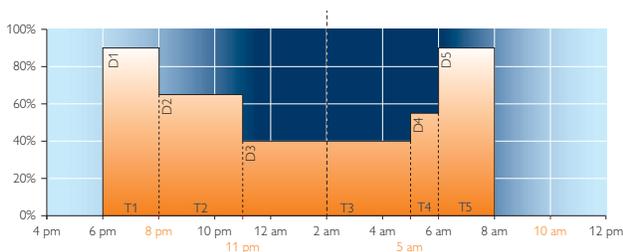
### Chronosense at a glance

- Stand alone controls solution for magnetic HID sources
- Provides bi-level dimming
- Reduced light pollution by dimming during off peak hours
- Small size and smart connectors for easy design-in
- Easy-to-use software that can provide an estimated forecast of system energy savings
- Case temperature rating of 105°C
- Standard 18 AWG leads rated at 150°C
- System can be overridden by a third controls system such as a motion sensor, without having to reprogram the unit



# Dynadimmer

The Dynadimmer 0-10V lighting control system is a perfect complement to the latest in energy-efficient, outdoor LED and eHID lighting solutions. Driving energy savings with minimum effort, Dynadimmer is a compact and independent luminaire-based device that works in conjunction with easy-to-use software and programming equipment. Providing up to five user-programmable dimming times and levels, Dynadimmer offers true flexibility and is ideal for a variety of outdoor lighting applications such as parking lots, residential streets and public areas.



Example user-programmable dimming schedule using Dynadimmer:  
This profile allows the user to specify five different dimming levels as needed.



Dynadimmer is designed to work with any driver with 0-10V leads.

## Dynadimmer at a glance

Provides energy savings via dimming protocols, decreases CO<sub>2</sub> emissions, and helps to lower energy bills while providing an energy forecast

Dimming is done seamlessly, always keeping light to a comfortable level

The schedules can be modified at any time with free, easy-to-use programming software

Projects a green image that attracts citizens and investors while controlling spill light

Override feature allows users to synchronize with photocells, motion sensors and time clock devices.





# The value of wireless controls

## **Energy savings for a greener tomorrow**

Philips outdoor wireless controls enable energy savings and can reduce operating and maintenance costs, improving both the control and monitoring of outdoor lighting. Dimming fixtures during off peak hours can yield considerable energy savings, thus helping to reduce CO<sub>2</sub> emissions in compliance with national and international environmental regulations and directives. Adjusting light levels to meet specific criteria may also help to obtain LEED innovation points, qualify for utility rebates and tax incentive programs.

## **Reduced maintenance costs**

Our wireless controls solutions can help monitor the age and condition of lamps and LED luminaires, and any failures can be reported by exact location. This offers the opportunity to significantly reduce maintenance costs through extended luminaire or lamp life and accurate scheduling of service calls. Increased life can result in less maintenance, and a lower cost of ownership over the life of the luminaire.

## **Scalability for the future**

Municipalities do not want to make an investment only to discover some years later that their system is no longer able to keep up with the growing demands of the application. Each Philips system is scalable, so it can keep pace with expanding networks. And each can be easily upgraded, as technology advances, or to accommodate new functionality, providing an easily integrated system.

## **The right light at the right time**

Our control solutions allow you to tailor your outdoor lighting schedule around the needs of its' users. This ensures that you will provide optimum light levels when they are needed. Reducing light levels during off peak hours can also help to reduce obtrusive light pollution and thus help to preserve the night sky.



## AmpLight Enterprise System - centralized streetlight control

AmpLight is an intelligent streetlight management and control system. It optimizes street light usage to help lower energy consumption (e.g. by decreasing the lighting level at off-peak traffic hours) and to help reduce maintenance cost – all without compromising on quality.

AmpLight can be easily integrated into existing installations without the need for new cabling. By providing light at the correct levels on highways, AmpLight can help to improve visibility. With installations worldwide, AmpLight has been proven to work in extreme climates and temperatures (from  $-40^{\circ}\text{C}$  to  $+60^{\circ}\text{C}$ ).

We know that reliability, stability and consistency are key elements of a well-functioning streetlight system, and AmpLight is a well-proven and extremely dependable solution with installations worldwide. We offer the most advanced and flexible solution on the market recognized by the largest customer base.

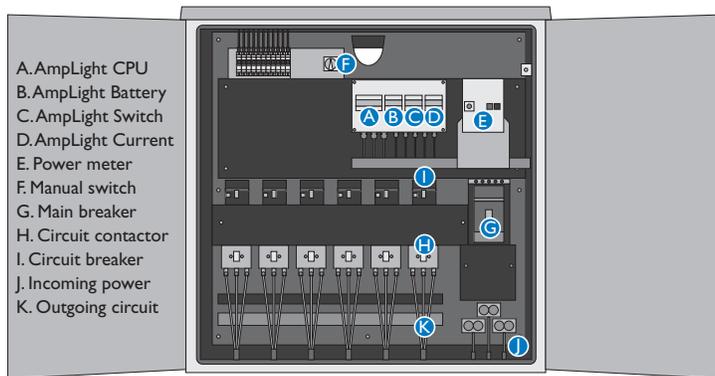
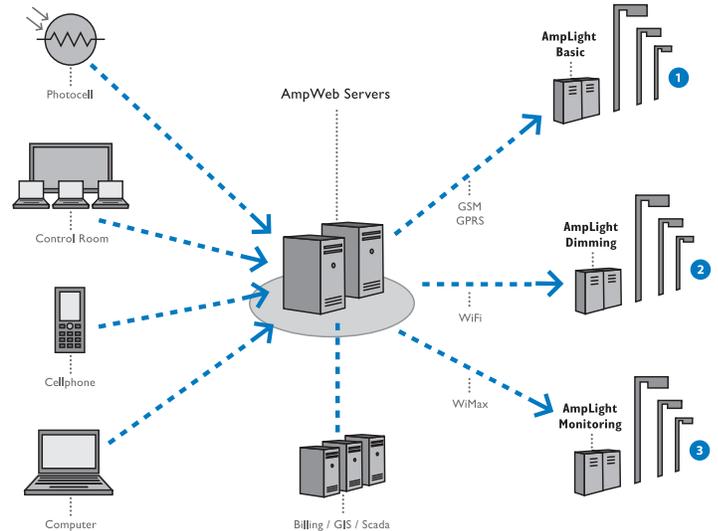


### AmpLight at a glance

- Control cabinet fault monitoring
- Remote reporting of usage and digital consumption recording
- Burn hour reports for proactive bulb change
- Local solar-time switching, supplemented by a central photocell which provides uniformity
- Lighting levels optimized for time of night and location
- Simplified maintenance
- Real-time, remote query and control with CityTouch user interface
- Load balancing
- Allows fast reaction to special traffic or weather conditions

# How AmpLight works

Hardware modules are installed in circuit boxes and enable communication from the central server to the circuit boxes via wireless (e.g. GPRS) or wired (e.g. fiber-optic) link. With AmpLight's building block system, the solution can be tailor-made for each client and easily upgraded by adding new modules with additional functionalities as needed. This highly flexible solution enables clients to choose from different configurations, depending on their requirements.



## Cabinet fault detection

An AmpLight Monitoring solution enables the client to fully monitor all faults and critical conditions in the control cabinet.

The options below can be mixed and matched as required. For instance, a municipality can be partly equipped with the basic solution, and still have dimming in other parts of town.

## Basic

The basic configuration provides on/off control for burn hour optimization, simplified maintenance and a remotely operated system. This configuration delivers an installation that is easy to operate and maintain, and can provide significant energy savings through precise on/off operation even without dimming.

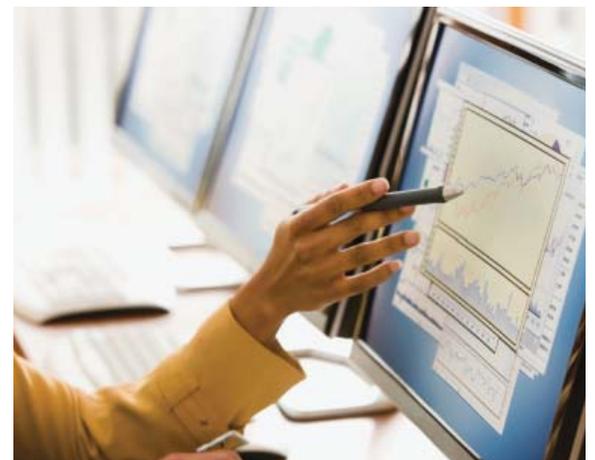
## Dimming

This configuration is ideal for roads with widely varying traffic patterns, where it makes good sense to dim during off-peak traffic hours. Centralized dimming can provide significant savings.

# CityTouch

Both AmpLight and Starsense feature the same user interface, which is provided by CityTouch, a user-friendly lighting management service platform. CityTouch extracts useful information from the lighting monitoring and control system (including third party systems) and facilitates conclusions in order to help municipal authorities reduce maintenance costs and energy consumption, and improve their lighting service.

Real-time lighting status reporting, energy use reporting, light level scheduling, automatic failure reporting and many other features are available at a click, with the possibility of multiple simultaneous views. It also offers the option of manual override, giving users independent control when needed.





## Starsense wireless telemanagement system

Starsense is a revolutionary, wireless telemanagement system for monitoring, controlling, metering and diagnosing outdoor lighting. The Starsense system is based on two-way wireless communication using the latest in mesh network technology.

The Starsense system enables individual light points to be switched on, dimmed, or off at any given time. They can also be set to any level, for instance, depending on traffic volume. Additionally, use of Starsense can even increase light levels as needed for problem areas. All of this results in energy savings and reduced operating and maintenance costs while helping to improve the reliability of outdoor lighting.

With Starsense, the age and condition of each lamp can also be monitored, and any failures can be reported by exact location. This offers the opportunity to significantly reduce maintenance costs through extended lamp life and accurate scheduling of service calls.



Luminaire with integrated Outdoor Luminaire Controller (OLC)

### Starsense Wireless at a glance

- Easy integration of the Outdoor Luminaire Controllers into the luminaire
- Simple, fast installation
- High level of freedom to locate the Segment Controller anywhere in the mesh network
- Easy-to-understand software for operating the system
- Easy access from everywhere with CityTouch user interface
- Reliable system: long range, limited interference, automatic back-ups
- Secure communication: no risk of hostile take-over of the system
- Customized reporting
- Future-minded: scalable network and upgradable over the air

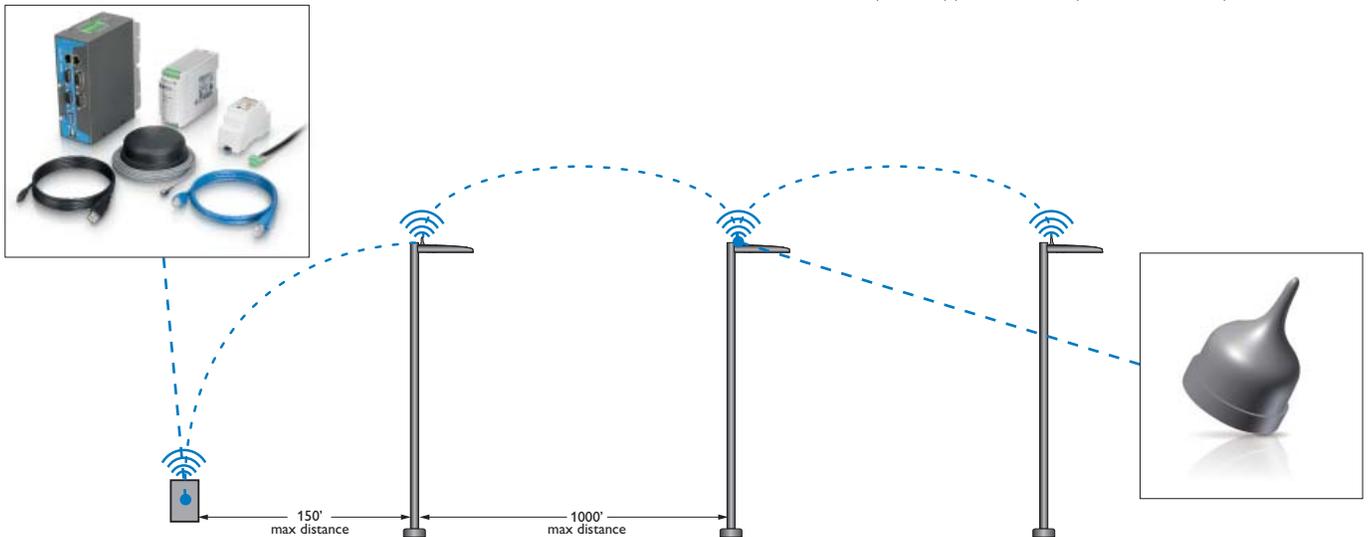
# Understanding Starsense

The Starsense system consists of Outdoor Luminaire Controllers (OLCs) installed into each luminaire, and a Segment Controller (SC) which controls up to 4,000 OLCs. The OLCs communicate with the SC in a mesh network, which means that every OLC in the network can receive and transmit messages. The system can be easily commissioned using the specially designed Outdoor Configuration Assistant tool.



## Commissioning made simple

Our specially designed Outdoor Configuration Assistant tool allows for simple and remote commissioning. This device allows easy and fast onsite installation, with bar code scanning and GPS positioning of the OLC, and local refinement of its position on street maps. It also allows you to customize your light plan around your specific application and upload it into the system.



## Segment Controller (SC)

The SC controls a number of OLCs and gathers data from them. This information is then sent securely, when required, to the remote PC via Ethernet.

Mounted on a DIN rail in a cabinet attached to the light pole or on the ground, the SC can be used to interface with other devices in the cabinet, such as traffic counters or weather sensors.

The Starsense network is scalable: each SC can control up to 4000 light points. Here too, the on-board software can be upgraded remotely.

## Outdoor Luminaire Controller (OLC)

The Outdoor Luminaire Controller is installed into a NEMA twist-lock receptacle on the top of the luminaire. It switches the lamp, adjusts the lighting level and detects lamp and system failures.

The OLC communicates to the SC wirelessly and securely, by RF signals, over a distance of up to 1,000 feet. It can interface with the electronic ballast and control dimming levels. It also registers burning hours and offers accurate metering of real energy consumption. Its on-board software can be upgraded over the air.

## The simple, intelligent choice

Choosing Philips outdoor lighting controls and management systems is a simple and smart decision. Combining our intelligent controls with your outdoor lighting will provide a more inviting and sustainable lighting solution.

Contact your Philips Lighting representative today to learn more about how Philips Lighting outdoor controls and management systems can contribute to your outdoor lighting needs.



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