

MICROSENS



PoE Lighting
Efficient and flexible
lighting via the data network

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PoE Lighting is the most efficient and flexible lighting solution for buildings of all sizes. LED luminaires are managed via the data network and supplied with power via the data cabling using Power-over-Ethernet. The interaction of sensors, LED luminaires and intelligent control offers users a maximum of comfort and efficiency that cannot be achieved with conventional lighting solutions. Investors and building operators benefit from significantly lower costs both during installation and operation.

High efficiency

LED luminaires require far less energy for the same amount of light than conventional luminaires. This alone is an enormous advance, but it is only in combination with appropriate sensors and an intelligent control system which automatically adjusts the brightness level to the respective requirements quickly and easily that LED luminaires can unfold their full potential. This way, a reduction in power consumption of lighting by more than 70 percent compared to old-fashioned lighting is realistic.

Automatically optimized light

By managing the lighting via the data network, it is very easy to automate the lighting. The light comes on automatically when it is needed and turns off again when the last person leaves the room. The

Smart Lighting Controller
with 1, 2 or 6 channels upto 90W

Distributed intelligence in MICROSENS Micro Switches

Sensor for temperature, brightness,
motion and humidity measurement incl.
Bluetooth Beacon for indoor navigation

problem of employees forgetting to switch off the lights after work, is now a thing of the past.

The management via the data network can do much more: with daylight harvesting, the LED lighting is adjusted to the daylight in the room to achieve the desired brightness level at all times. The set point can be specified individually for each area and for each workstation. The dimming of the luminaires is so subtle that the people present are not aware of it.

Ergonomics and comfort

Users can conveniently adjust the lighting to their individual preferences and needs via smartphone, tablet, PC and also as before via a light switch. If desired, brightness and light colour can be adapted to the course of the day corresponding to natural sunlight (Human Centric Lighting). This balances the employees' internal clock and improves concentration, mood and motivation. It has been proven that the increased comfort of ergonomic lighting leads to increased productivity.



Quick, simple configuration

As PoE Lighting is controlled via software, all functions and settings can be configured quickly and easily – much more easily than with bus systems. Subsequent changes can also be made in no time; luminaires can be grouped and groupings adjusted or removed in the event of a change in room layout in a matter of seconds at the click of a mouse. PoE Lighting offers a degree of flexibility that no other system can offer.

Simple structure

The central element of PoE Lighting is the Smart Lighting Controller, an intelligent ballast unit to which the (manufacturer-independent) LED luminaires and the sensors are connected. It establishes the connection to the data network, controls the luminaires and supplies them with power. At the same time, it processes the data from the sensors. These Smart Lighting sensors can record different parameters simultaneously, for example brightness, presence, temperature and humidity. This data can also be made available to other systems such as heating, air conditioning and ventilation, so that these systems do not need their own sensors.

The management software that runs the lighting runs directly on a switch in the network. A server is not needed, a micro switch is fully sufficient. Users switch and regulate the lighting conveniently via switch, control panel, with their tablet, smartphone or PC; an existing browser is all that is needed. All communication is encrypted and therefore highly secure.



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Universal, standardised cabling

PoE Lighting uses universal, internationally standardised cabling according to DIN EN 50173-6 and ISO/IEC 11801-6. These standards, which are almost identical, specify application-neutral cabling for distributed building services. These include lighting, Wi-Fi access points, IP cameras, building services and building automation. This universal, application-neutral cabling has a simple structure and is easy to install with little effort. It can be used flexibly without being restricted to certain applications, manufacturers or luminaire types. Power-over-Ethernet uses one single cable for control and power supply, which minimises cabling work. And due to international standardisation, there are no national differences, in contrast to classical electrical engineering.



No electrical installation required

As the controller and luminaires are supplied with power via the data cable, the lighting system does not require any electrical installation: no wires, no terminals, no circuit breakers, no electrical sub-distribution board, and no electrical connection. PoE Lighting is operated with extra-low voltage of less than 60V; no electrician is required for installation, maintenance, changes or extensions. This reduces costs for materials and labour both during installation (CapEx) and operation (OpEx).

Increased reliability

By limiting the current of the powering devices, it is ensured that even in the event of a fault, no intolerable high currents flow that could cause damage or a fire. If it is connected to an uninterruptible power supply (UPS), the lighting also functions in the event of a power failure. And since the conventional electrical supply is eliminated, far fewer cables are needed, which reduces the fire load in the building.

Easy expansion

Because PoE Lighting uses universal star-shaped IT cabling, section-by-section and even room-by-room expansions are easily possible. There is no need to switch off the power anywhere when PoE Lighting is expanded or changed. The expansion is done entirely according to demand and budget,

which makes renovations and conversions that are to be done gradually much easier. Only that which is actually needed is installed.

Your partner for PoE Lighting

MICROSENS has always been a pioneer and trendsetter in the field of smart building technologies. As one of the first companies worldwide, MICROSENS made the advantages of PoE Lighting available to its customers. The significantly lower effort required for installation, maintenance and operation as well as the considerably lower power consumption compared to conventional lighting systems paved the way for the LED luminaire. However, LED luminaires can only fully unfold their advantages in combination with intelligent control and power supply via the data network. Ergonomic lighting with individually adjustable brightness levels and light colours that follow the course of the day increase the well-being and performance of employees. The intelligent control with fully automatic daylight tracking subtly adjusts the brightness in order to achieve an optimal brightness throughout the day and switches off the lighting when no people are present. This significantly reduces power consumption and operating costs and offers an energy efficiency that cannot be achieved with conventional lighting solutions. PoE lighting offers tangible economic benefits, from planning and installation to operation and maintenance.