

MICROSENS



CENTRAL SMART LIGHTING CONTROLLER

Intelligent solution for large-scale lighting units

 Made
 in
 Germany

TOP FEATURES



- Multiport contact power source for 24 LED lamps
- Supply of the LED lamps via twisted pair cables
- Ideally suited for the supply of areas with a high density of lamps, as in open-plan offices, hospitals, hotels, schools and universities, libraries, shopping centres, industrial buildings, and many other premises
- Immediate integration of sensors for brightness as well as motion and presence detection groups via four bus inputs
- Integration of light switches or additional sensors and actuators via radio over an optional automation gateway (EnOcean and IP500 radio standards)
- Flicker-free dimming of the LED lamps from 0 to 100 %
- Automatic control of the lamps ensures compliance with the target intensity of illumination
- Measurement of energy consumption per connection
- Two power supply inputs for higher fault-tolerance
- Fan-less design for noiseless operation and troublefree installation in office distribution units and in suspended ceilings
- Exchangeable SD card for firmware and configuration
- Integrated Smart Director App for convenient management
- Can be integrated fully into the MICROSENS Smart Building Solution

CENTRAL SMART LIGHTING CONTROLLER

Intelligent solution for large-scale lighting units

Lighting must work reliably, energy-efficiently, and economically and should be simple to operate at the same time. Simultaneously, modern lighting must adapt itself to the individual requirements within the building. The new Central Smart Lighting Controller by MICROSENS is the optimal solution for all places, where you want to centrally manage a large number of LED lamps, supply them with power, and adapt them to individual requirements at any time.

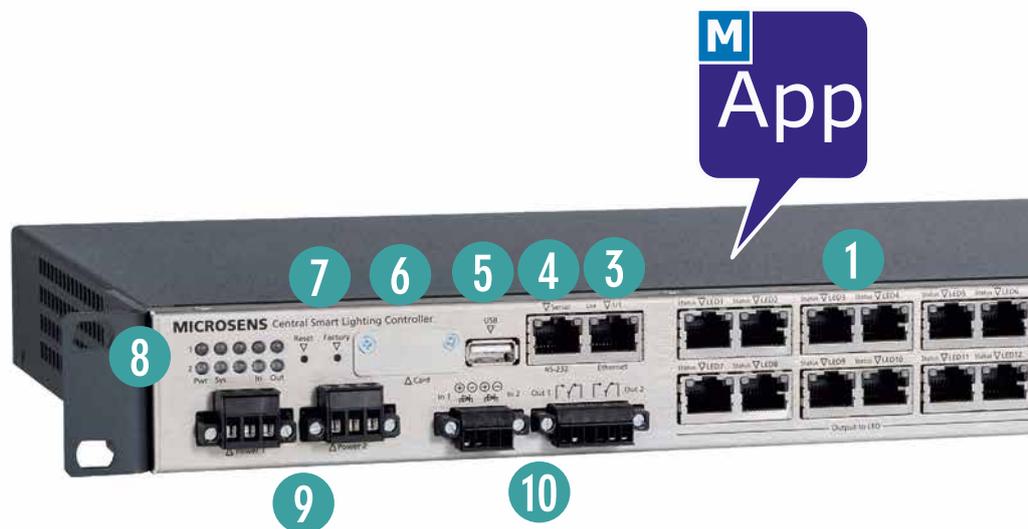
Intelligent Lighting for Intelligent Buildings

Efficient, individually adjustable lighting with LEDs is increasingly replacing the standard, uniform lighting with fluorescent tubes. LED lamps require less energy, can be dimmed continuously, and offer light similar to natural daylight. The integration into a coherent and consistent overall concept is of major significance for the optimal use of all technological benefits.

Smart Lighting: Comprehensive concept for individual requirements

Good solutions are simple ones. MICROSENS Smart Lighting controls LED lamps and supplies them with power at the same time. Only a few components are required: Sensors capture the brightness, temperature, and presence of persons in the room. The MICROSENS Smart Director App evaluates the sensor data and sends the appropriate instructions to the Smart Lighting Controllers controlling the lamps. The users can adjust the lighting to their personal preferences via smartphone, tablet, personal computer, and of course by means of the light switch, as usual. In addition to better ergonomics and a higher convenience, Smart Lighting offers a level of energy efficiency which cannot be reached with conventional solutions: The lighting complements the incident daylight only up to a target intensity of illumination instead of working on a maximum level. When the last employee leaves the room, it switches off automatically. MICROSENS Smart Lighting uses universal, standard-compliant cabling according to DIN EN 50173-6.

The benefit: Only one unified network is required for the dispersed building services: Building automation, security technology, WLAN, as well as the lighting use the same, commercially available data lines. Smart



Lighting by MICROSENS allows for both decentralised solutions with one controller per lamp and centralised solutions for the control of many lamps at the same time.

When more is a must: Central Smart Lighting Controller

The Central Smart Lighting Controller was specifically designed for the supply and control of large groups of lamps, as can be found in open-plan offices, hospitals, hotels, schools and universities, shopping centres, and in industrial environments. Thanks to its flexible placement options, it is easily accessible for maintenance tasks and device inspections. This is particularly advantageous if the lamps are installed in high ceilings or outdoor areas, as well as in places where it would be difficult to install controllers close to the lamps. The Central Smart Lighting Controller only requires one height unit in the distribution unit. Motion or presence sensors can be connected via four wired bus inputs. In addition, it is possible to integrate light switches or further sensors or actors via wireless communications into the system (EnOcean and IP500). The 24 ports are not only responsible for the power supply and controlling of the lamps, but also provide two incoming and outgoing alarm ports, which can be

used, for instance, for cabinet surveillance, the integration of sensors/actuators, or for the coupling of an existing alarm system. All accesses are fitted on the front for the purpose of convenient and time-saving handling. An output of up to 50 W is supplied for each lamp connection. Each access can be set up with an individual power output limit.

Robust, reliable, and noiseless

The Central Smart Lighting Controller is based on the proven MICROSENS technology, which has been tried and tested in industrial environments. Fault tolerance is a top priority in the system specifications of these proven devices. That is why the firmware, Smart Director App, and the configuration data of the Controller are stored on an SD card. Should hardware have to be replaced, the SD card is simply reinserted and the new Controller automatically takes over all the configuration data. Two inputs for a redundant power supply ensure a high fault tolerance. If the Central Smart Lighting Controller is connected to an interruption-free power supply (UPS), the lighting will still work in the case of a power outage. Due to the fan-less design, the Central Smart Lighting Controller works without any noise and can also be installed in suspended ceilings and raised floors, for instance in the zone cabling of open-plan offices, conference rooms, lecture halls and corridors, or in smaller cabinets, as is often seen in hotels, medical practices, or legal offices.



TECHNICAL FEATURES



- 24 individually controllable supply channels
- Power restriction can be defined per channel; max.: 1 A per channel
- Power output up to 50 W available per channel
- 1000 W total power output
- 100 m maximum line length to the lamps
- Twisted pair lines of category 5 or higher
- Redundant power supply 2 x 54 V DC with 3-pin screwed plug-in connectors
- 19" assembly, 1 height unit (1 U)
- Four RJ-45 BUS inputs for connecting sensor groups
- Two digital, potential-free inputs/outputs
- 10/100Base-TX uplink port for high-performance integration into the data network
- High-performance CPU with 1000 MHz ARM processor
- Functional scope can be expanded with firmware updates
- Web Manager with powerful graphic user interface
- SNMP v1/v2c/v3 for integration in management system platforms
- Convenient CLI for automation with scripts
- Integration into the MICROSENS Smart Building Manager Software for the easy configuration, administration, and monitoring of networks
- HTTPS for Web Manager



Smart Director-App

Users control the lighting via smartphone, tablet, PC, or of course via the light switch, as usual. The Smart Director App evaluates the requirements and controls the lamps. In the scope of a comprehensive Smart Building concept, the coupling with an electronic calendar is also possible, just like the interaction with other systems of building technology, such as shading, heating, air-conditioning, and access control. The intelligent networking of the components and technology installed in the building permits a previously unmatched energy efficiency with simultaneously increased convenience and higher security.

CENTRAL SMART LIGHT

1 LED driver output (24x)

To feed and control the connected LED lamps.

2 Connection for sensor (4x)

To connect external sensors. Evaluation of sensor data by the Smart Director App on the Central Smart Lighting Controller. The latter takes over the power supply for the connected sensors.

3 Fast Ethernet Uplink Port (1x)

10/100Base-TX, to integrate the Central Smart Lighting Controller with the IT network.

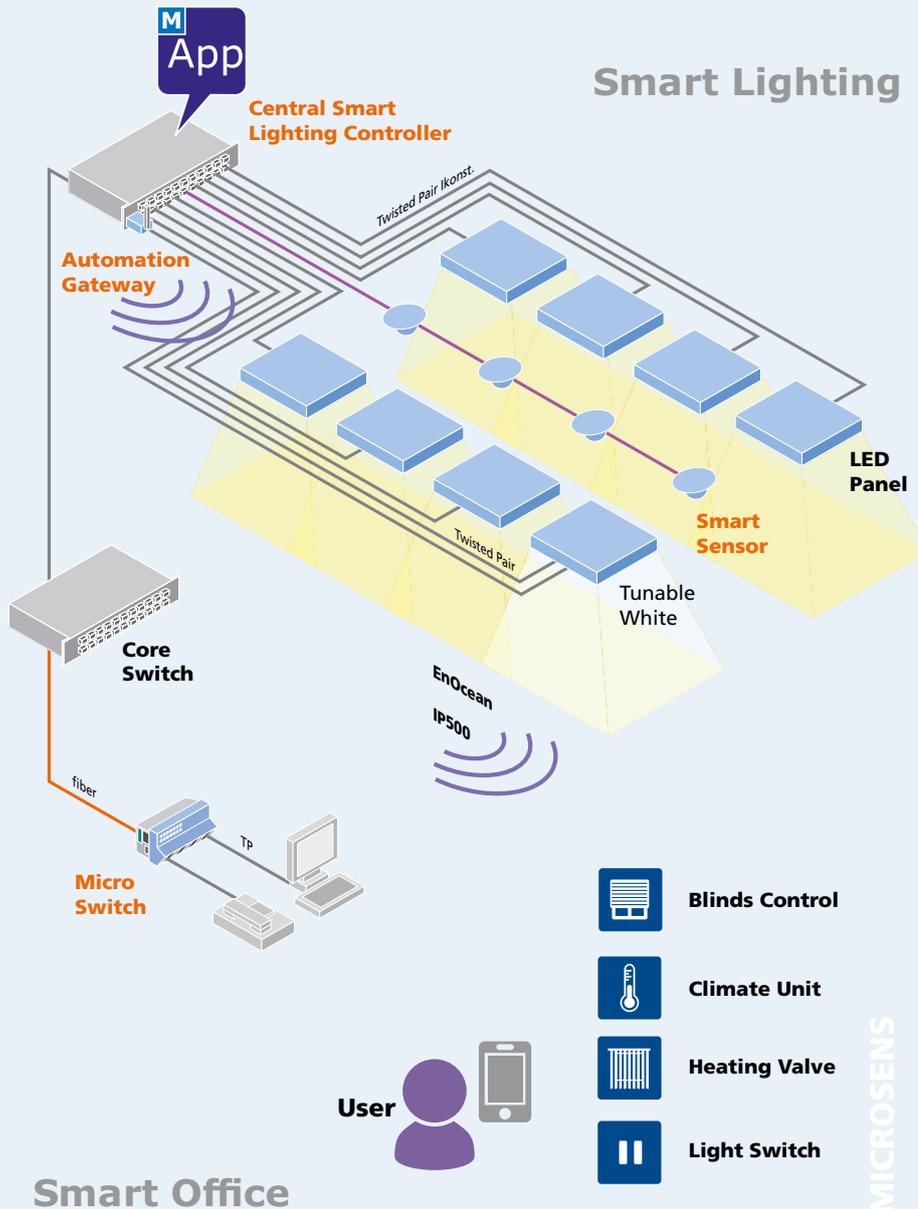
4 Terminal / Expansion Port

Serial (RS-232) terminal port for access to the Command Line Interface (CLI). Enables the outband management of the device

5 USB-Port

USB port for connecting supported peripheral devices such as radio interface IP500 or EnOcean.

SMART LIGHTING & SMART OFFICE



Smart Lighting

The innovative MICROSENS Smart Lighting solution: LED lamps are supplied with power and managed by means of a universal, standard-compliant cabling according to DIN EN 50173-6. Sensors provide data on the brightness, temperature, and the presence of persons in the room. The Smart Director App controls the lighting according to the requirements of the users and ensures a higher energy efficiency in addition to ergonomics and convenience. In this context, both decentralised solutions with one sensor per lamp are possible as well as the particularly economically efficient supply of many lamps and large groups of lamps with the Central Smart Lighting Controller.

Smart Building Solutions

Smart Lighting is part of the MICROSENS Smart Building Solutions, a holistic concept for intelligent and efficient buildings. It also permits the coupling with heating/ventilation/air-conditioning units, access control and security technology – as well as with electronic calendars. In this way, it is possible, for example, to switch off the lighting on public holidays or company holidays, to operate the heating and air-conditioning units at reduced operation, and to block the network accesses against unauthorised access in the absence of the employees. Securely, conveniently, and efficiently.

ING CONTROLLER

- 6 SD card**
 The device configuration and firmware are stored on an SD card. When replacing the device, it suffices to plug in the SD card into the new device. All device settings will be transferred.
- 7 Reset / Factory settings**
 Resetting of the controller by pressing the reset button. Loading of factory settings by clicking the factory button, useful in case of accidental misconfiguration.
- 8 LED display**
 Clear display of all cross-device functions: power supply status, system status, I/O ports.
- 9 Redundant power connections**
 For the uninterrupted power feed from two separated power sources with 54 VDC. Status is monitored via management.
- 10 Relay Contact (2x) / Digital Input (2x)**
 Galvanically separated switch output, e.g. as alarm contact. Galvanically separated input, e.g. for cabinet surveillance. Functions can be configured via the Controller Management.

MICROSENS IS KNOWN FOR COMPETENCE ON THE SECTOR OF ACTIVE FIBER OPTIC SOLUTIONS

For 25 years, MICROSENS has been offering high-quality, active fiber optic components for corporate networks, manufacturing companies, the industrial sector, and access networks. Development and manufacture "Made in Germany" make a significant contribution to the product quality.



www.microsens.com/smart-lighting

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