Light Management
A modern and functional investment should be equipped with lighting management systems that will make it possible to flexibly adjust lighting to the changing requirements of the facility’s users. Regardless of the selected solution, you will get a reliable and easy-to-use tool that will provide you with maximum user comfort.

Intuitive and functional lighting management

Functionalities
- identifying luminaires
- grouping luminaires
- configuring light scenes
- daylight harvesting
- scene schedule and calendar
- dimmers / switches
- light and motion sensors

Human Centric Lighting
- Circadian
- Tunable White
- adaptive lighting
- luminaires compatible with HCL
- switches

Luminaire diagnostics:
- maintaining the desired lighting intensity in the workplace
- test reports respected by the fire service
- functional and duration tests
- battery formatting
- current luminaire status

Façade illuminations
- stunning light animations in interiors and building façades
- scheduled light animations
- unlimited system scalability
- BWS
- RGB/RGBW
- monochrome light

Façade illuminations:
- maintaining the desired lighting intensity in the workplace
- test reports respected by the fire service
- functional and duration tests
- battery formatting
- current luminaire status
The innovative 3xS formula

All solutions used in the Intelligent Lighting Management Systems operate in accordance with the modern 3xS formula - Sensor, Software, Service.
Using Intelligent Lighting Control Systems reduces the demand for electricity consumption as much as 70%.

Simple and intuitive solutions available via the mobile app or any web browser.

Dedicated technical support at every stage of the project’s completion.

- Intelligent sensors
- Automatic presence detection
- Adjusting the artificial lighting intensity to the external lighting conditions
- Smooth light intensity changing
- DALI and DALI-2 compatibility
- BLUETOOTH compatibility

- Creating maps to visualize traffic in the lighting control zones
- Integration with the Building Management System (BMS)
- Complete autonomy of use
- Task synchronization
- Easy commissioning
- An intuitive mobile or internet app
- Creating global and group schedules and programming light scenes
- DALI and DALI-2 compatibility

- High quality, tested products
- Technical support from a dedicated team of engineers
- Building automation projects
- Maintaining the appropriate lighting intensity in the workplace
- Compliance with lighting standards and directives
- Emergency luminaire supervision
- Test reports respected by the State Fire Service Control Departments
- Effortless use via the mobile or web app
- Easy startup and use
- Easy configuration
- Training for affiliated companies in commissioning and operation

SAVINGS

COMFORT

SAFETY
Lighting control systems

The implementation of our management systems has virtually no limits. Their implementation depends on the size of the facility and the intended purpose. More technologically advanced solutions are available for new investments and wireless intermediary systems can be used to support existing installations.
A comparison of lighting control systems

<table>
<thead>
<tr>
<th>LUMINAIRE CONTROL</th>
<th>VERTEX ONLINE APP</th>
<th>DMX BASIC/ADVANCED ONLINE APP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Functionality</td>
<td>universal</td>
<td>Dimming/TW/RGB/RGBW</td>
</tr>
<tr>
<td>Number of devices per unit</td>
<td>192</td>
<td>basic = 60 advanced = unlimited</td>
</tr>
<tr>
<td>Maximum system size</td>
<td>unlimited</td>
<td>basic = 60 advanced = unlimited</td>
</tr>
<tr>
<td>Number of groups per device</td>
<td>unlimited</td>
<td>unlimited</td>
</tr>
<tr>
<td>Quick installation</td>
<td>ES service team / trained customer</td>
<td>ES service team / trained customer/partner</td>
</tr>
<tr>
<td>Startup</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Protocol</td>
<td>DALI</td>
<td>DMX &gt; A-DMX</td>
</tr>
<tr>
<td>CIRCADIAN</td>
<td>(DT8)*</td>
<td></td>
</tr>
<tr>
<td>Dynawhite</td>
<td>(DT8)*</td>
<td>(dual)</td>
</tr>
<tr>
<td>Variable lighting intensity</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>RGB/RGBW</td>
<td>(DT8)*</td>
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</tr>
<tr>
<td>Adaptive lighting (DLH)</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Astronomical clock</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Remote control</td>
<td>SLS / WWW</td>
<td>WWW</td>
</tr>
<tr>
<td>Luminaire diagnostics</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Integration with emergency lighting</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Illuminations</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Integration with BMS</td>
<td>Modbus IP / KNX (Gateway required)</td>
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</tr>
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</table>

Access to lighting control system supervision and configuration is possible via an intuitive online app from any device with web browser support (smartphones, tablets, computers) and on any system platform (Windows, Android, iOS).

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<tr>
<th>BIG 4</th>
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<tr>
<td>RAPTOR</td>
<td>4</td>
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<td>4x1A</td>
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</tr>
<tr>
<td>FALCON</td>
<td>30 pcs. (one network)</td>
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CC - constant current
* (DT6)* - DALI Type 6 compliant power supply in the luminaire
CV - constant voltage

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### Wired Lighting Control

- DALI (Vertex)
- A-DMX
- GridEye

- Power supply installation + communication bus
- Installation on a power board or in a control cabinet
- The number of devices should be adapted to the size of the installation
- Configuration is carried out using a convenient online application

- Automatic location of all devices in the system
- Assigning luminaires to control groups (zones)
- Selecting predefined lighting schedule scenarios or configuring own scenarios
- Configuration of control panels for manual control

### Wireless Lighting Control

- Bluetooth Big4 (BLE Casambi-Ready)
- Zlight (2.4 GHz ZigBee)

- Power supply installation + communication bus
- Installation on a power board or in a control cabinet
- The number of devices should be adapted to the size of the installation
- Configuration is carried out using a convenient online application

- Automatic location of all devices in the system
- Assigning luminaires to control groups (zones)
- Selecting predefined lighting schedule scenarios or configuring own scenarios
- Configuration of control panels for manual control

### Our solutions

- **Vertex**
- **A-DMX**
- **GridEye**

- **ZLight**
- **BIG4**
The implementation of ES-SYSTEM’s comprehensive product assortment allows for the full use of a facility's potential, ensures user safety and maximizes energy efficiency. Our dedicated lighting system management solutions are intuitive and make it easy to adapt the lighting to the changing needs of users.
Functionalities

**Luminaire identification**
Quick and easy luminaire identification using pulsating light sources

**Motion detectors**
Adjusting the lighting in specific rooms to the amount of natural daylight as well as the presence of users

**Lighting scene schedules and calendar**
Automatic triggering of programmed events and light scenes at the appropriate times in specific zones

**Adaptive lighting**
Automatic lighting intensity adjustment in individual rooms

**Dimmers / switches**
Simple lighting control using compatible wall switches and operator panels

**Grouping luminaires**
Convenient lighting control throughout the entire facility, regardless of its size
Human Centric Lighting is a lighting concept that puts the focus on people and their needs during the design process.

Circadian
DynaWhite
Adaptive lighting
HCL-friendly luminaires
HCL-friendly switches
The introduction of systems that imitate natural daylight helps to provide visual comfort for users, positively affecting their well-being. CIRCADIAN is a technology that best mimics sunlight. Thanks to the use of LEDs with the appropriate spectral characteristics and the right configuration of white, blue and red light emission, it affects the suppression and stimulation of melatonin release. A properly programmed cycle of changes affects the organism’s stimulation or relaxation, supporting the natural human circadian rhythm.

“Having talked with ES-SYSTEM about what is technologically possible when combining the latest LEDs with spectral power distribution coming as close as possible to sunlight, and photoreceptor-weighted adjustments in intensity based on local sky measurements, ES-SYSTEM’s way forward in designing lighting installations being in harmony with human circadian rhythms is the most advanced I have come across so far.”

Katharina Wulff, Ph.D., University Research Lecturer in Chronobiology and Sleep at the University of Oxford, United Kingdom

“The right-timed exposures to light benefit not only the treatment of seasonal mood disorders, but also that of non-seasonal depressive disorders and circadian rhythm sleep disorders. Thus, the concept of CIRCADIAN fits in the evidence-based approach to the treatment of the aforementioned mental disorders and supports their clinical management.”

Dr. Timo Partonen, Doctor of Medicine at the National Institute for Health and Welfare in Finland
Changing the light intensity

Adjusting the light brightness level gives the users a way to adapt the lighting intensity to their current needs, improves user comfort, and has a positive impact on achieving significant energy savings. It can be done manually – via control switches, or automatically using advanced lighting control systems.

Adaptive lighting

The intensity of natural daylight changes depending on the time of day and the season. Using supplementary artificial lighting is necessary when there is not enough natural daylight in the room. A fully automated adaptive lighting system uses sensors to gather information about daylight intensity and automatically adapts the lighting intensity level in the artificial lighting fixtures in the room. As a result, the entire work area is evenly lit, ensuring a sense of comfort for the users.
Changing the color temperature (DYNAWHITE)

The color temperature of white light can be smoothly adjusted: from a mild, warm shade, like at sunset, to an intense, cool white, like at midday. Warm light is calming and relaxing, whereas cool light mobilizes and stimulates activity. A lighting system that controls the light color temperature makes it possible to create the desired atmosphere depending on the current lighting preferences using luminaires with a specially designed LED system.
SLS, i.e. Smart Lighting Services collects information about luminaires connected to the lighting automation controller in a cloud and allows for the integration of many systems. It also makes it possible to manage several buildings using one account. The SLS platform sends the parameters of luminaires and automation elements to servers that collect their entire history, which allows for the remote management of the system as well as its analysis.
The system independently detects and classifies failures. The reporting frequency is configured by the user.

Luminaire status verification (in the case of emergency luminaires - access to reports) and lighting control in the facility.

Information about system errors can be sent to the manufacturer. This reduces response time and improves system efficiency.

Individually created offers for continued cooperation. Adapting our services to customer needs based on system data analyses.

Lighting control system initialization and verification of the installation via the SLS GSM access module from anywhere in the world with access to the Internet.

Convenient and efficient control over the entire lighting system, without having to be physically present on the premises of the facility. Graphics can be uploaded and luminaires can be placed on them in the corresponding locations.

Individually created offers for post-warranty maintenance, repairs and inspections.
Unlimited supervision of the entire lighting installation in one place.
Luminaire diagnostics

Ensures safety by providing lighting in the appropriate zones even directly after a duration test.

Programmable control elements depending on the time of day, year, and the way the facility is being used.

Schedules depending on the time of day, year, and the way the facility is being used.

Test reports respected by the State Fire Service and supervisory inspectors, saved to external media using a single button, without having to switch on a computer.

An encrypted connection with the remote supervision system allows for the supervision of many facilities from one place.

Operation using mobile devices ensures working freedom for service teams and the building personnel.

Adjusting luminaire brightness levels for luminaires in the maintained operating mode, with the possibility to temporarily switch off the luminaires.
A special feature of LED technology is the direct production of colored light in the semiconductor connector. The use of RGB, RGBW and RGBA LEDs makes it possible to obtain color without the use of filters and introduces an infinite number of colors to lighting technology. When combined with LED luminaires that generate color, lighting systems are an extremely efficient and effective tool in illumination lighting. The technical properties of light sources allow for the creation of dynamic or smooth animations. LED technology makes it possible to let creativity run loose while shaping spaces with color on both an architectural and urban scale.
A-DMX

An original ES-SYSTEM solution that extends the DMX protocol to include the function of autoaddressing. A-DMX unifies all supported luminaires, simplifies startup and reduces operating costs.

A-DMX Power

is a decoder with autoaddressing for voltage LED strips

Decoder features:
- Power supply voltage: 12–24 V DC
- Maximum load: 7.5 (180 W)
- 4 operating modes: RGB, RGBW, MONO, DUAL
- Simple configuration
- A-DMX through-wired output
- WAGO connector
- Built-in terminator

A-DMX

<table>
<thead>
<tr>
<th>A-DMX</th>
<th>DMX</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automatic addressing via the A-DMX bus</td>
<td>Requires addressing for each luminaire. Most of the luminaires are addressed during production; replacing a luminaire requires producing a replacement with the same address</td>
</tr>
<tr>
<td>Five cables: D+, D-, A+, A-, GND. D+, D- and A+, A- are differential cables (twisted pair cables). Cat 6. UTP cables can also be used</td>
<td>Three cables: +, -, GND. + and - are differential cables (twisted pair cables). Cat 6. UTP cables can also be used</td>
</tr>
</tbody>
</table>

A-DMX PWM

is a decoder with autoaddressing for use inside luminaires with high-power LEDs and impulse current stabilizers (e.g. for LEDPIPE luminaires and floodlights)

Decoder features:
- Power supply voltage: 12–24 V DC
- 4 operating modes: RGB, RGBW, MONO, DUAL
- Simple configuration
- A-DMX through-wired output
Media server

Art-Net

Fiber optics (up to 2 km)

A-DMX Splitter

unlimited number

UTP6E (up to 100 m)

A-DMX Splitter

unlimited number

UTP6E (up to 100 m)

A-DMX Splitter

unlimited number

UTP6E (up to 100 m)
GridEye

GridEye is high-performance, independently controlled RGB pixels. It’s a fully customizable solution for creative and demanding media projects and architectural applications. GridEye is a universal solution that makes it easy to design extensive installations with decorative illumination systems and multimedia effects: dynamic graphics, banners, etc.

<table>
<thead>
<tr>
<th>GridEye C1</th>
<th>GridEye C36 and C62</th>
</tr>
</thead>
<tbody>
<tr>
<td>a safe power supply voltage of 24 V DC</td>
<td>a safe power supply voltage of 5VDC</td>
</tr>
<tr>
<td>easy installation</td>
<td>low power consumption</td>
</tr>
<tr>
<td>intuitive lighting control</td>
<td>easy assembly</td>
</tr>
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Discover cutting-edge ES-SYSTEM products that will create functional and intuitive lighting control for your investment project.
Vertex - an advanced lighting automation system based on the universal DALI control protocol. The installation is transparent, with intuitive supervision and significantly lower assembly costs. System operation is characterized by advanced testing, reporting and configuration possibilities.

### All-in-one
- All luminaires on one signal bus
- The universal, international DALI, DALI-2 bus
- Emergency luminaires combined with general lighting supervision
- The possibility to connect luminaires in extensive work groups

### Plug & Play
- Automatic adding of luminaires to the lighting system
- Automatic software updates
- Mobile device support
- Lighting control using any system platform

### Support for DALI and DALI-2 modules compliant with the following standards:
- IEC62386-101 Ed.2, Ed.1
- IEC62386-102 Ed.2, Ed.1
- IEC62386-209 Ed.1
- IEC62386-301
- IEC62386-303
- IEC62386-202 Ed.1
- IEC62386-207 Ed.1
- IEC62386-103
- IEC62386-302
- IEC62386-304

### Lighting system commissioning, configuration and monitoring using a simple and convenient online application
- Luminaire grouping
- Lighting scene configuration
- Changing individual luminaire parameters
- Displaying the general status of the system in the form of a ring graph
- Displaying the current parameters of the luminaires in a table
- Test schedule programming for emergency lighting

### Unlimited system scalability
- Up to 192 devices can be connected to a single controller thanks to three DALI ports
- The lighting system can be expanded by adding more Vertex controllers
- Connecting Vertex controllers within a single lighting control system via Ethernet
- Creating control groups among devices from different controllers

### Access possible via WiFi after connecting an additional accessory
Vertex automation controllers

access point (optional)

Ethernet switch

c Control device

sensor

UTP 5e (TCP/IP)

YDY 2x1.5 mm² DALI

up to 300 m

UTP 5e - up to 100 m

up to 300 m
Big4

Wireless lighting

Big4 consists of 16 controllers that allow wireless lighting management via Bluetooth technology. Big4 is made up of the following controllers: **Raptor, Falcon, Total and Viper**.

The Total and Raptor controllers are adapted for use with DALI Type 6 or Type 8 power supply units, whereas the Falcon and Viper controllers function as power supply units for constant voltage LED strips or as a PWM signal source for controlling LED modules equipped with current stabilization circuits.

**Standards and certificates**

- **PN-ETSI EN 300 328 V2.1.1:2017-05**
  
  Broadband transmission systems - Data transmission devices operating in the ISM 2.4 GHz band and using broadband modulation techniques.

- **PN-ETSI EN 301 489-1 V2.1.1:2017-08**
  
  Electromagnetic compatibility (EMC) standard concerning radio equipment and systems - Part 1: common technical requirements.

- **PN-ETSI EN 301 489-17 V2.2.1:2013-05**
  
  Electromagnetic compatibility (EMC) standard concerning radio equipment and systems - Part 17: Specific requirements for broadband data transmission systems.

**Raptor**

An intermediary lighting control device between the DALI bus and the Casambi-compatible Bluetooth control system. Because of the device’s small size and cross-section, it can easily be placed in almost any luminaire, even in linear lighting systems. The wireless communication range is up to 50 m.

**Falcon**

The Falcon device from the Casambi series is a 4-channel current controller for powering LEDs. Maximum output voltage: $U_{\text{out}} = 22$ V (up to 6 LEDs). The device functions wirelessly using Bluetooth technology, is compatible with Casambi, and is intended for use with powersupplies in the maintained operation mode. The wireless communication range is up to 50 m.

**Viper**

The VIPER device from the Casambi series works wirelessly using Bluetooth technology and is compatible with Casambi. The wireless communication range is up to 50 m. VIPER controls 1 (mono) to 4 (RGBW) channels for constant voltage LED strips.

**Total**

An intermediary lighting control device between the DALI control bus and the Casambi-compatible Bluetooth (BLE - Bluetooth Low Energy) control system. The lighting controls carried out using the CASAMBI app.
### Luminaire control

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<tr>
<td>Number of devices per unit</td>
<td>4</td>
<td>1</td>
<td>4x1A</td>
<td>64</td>
</tr>
<tr>
<td>Maximum system size</td>
<td>30 pcs. (one network)</td>
<td>30 pcs. (one network)</td>
<td>30 pcs. (one network)</td>
<td>30 pcs. (one network)</td>
</tr>
<tr>
<td>Number of groups per device</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Quick installation</td>
<td>✔</td>
<td></td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Startup</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Protocol</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CIRCADIAN</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dynawhite</td>
<td>✔ (DT8)*</td>
<td>✔</td>
<td>✔ (DT8)*</td>
<td>✔ (DT8)*</td>
</tr>
<tr>
<td>Variable lighting intensity</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>RGB/RGBW</td>
<td>✔ (DT8)*</td>
<td>✔ CC*</td>
<td>✔ CV*</td>
<td>✔ (DT8)*</td>
</tr>
<tr>
<td>Adaptive lighting (DLH)</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Astronomical clock</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
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<tr>
<td>Remote control</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Luminaire diagnostics</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
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<tr>
<td>Integration with emergency lighting</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Illuminations</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Integration with BMS</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
</tbody>
</table>

* (DT8)* - DALI Type 8 compliant power supply in the luminaire
CC - constant current
CV - constant voltage
* (DT6)* - DALI Type 6 compliant power supply in the luminaire

---

### BIG 4

#### MOBILE APP (AVAILABLE FOR DOWNLOAD)

#### RAPTOR
- Dimming/TW/RGB/RGBW
- 4 devices per unit
- 30 pcs. (one network)
- 4 customer accounts
- Bluetooth Low Energy > DALI

#### FALCON
- Dimming/TW/RGB/RGBW
- 1 device per unit
- 30 pcs. (one network)
- 1 customer account
- Bluetooth Low Energy > CC 4CH

#### VIPER
- Dimming/TW/RGB/RGBW
- 4x1A devices per unit
- 64 devices (one network)
- 4 customer accounts
- Bluetooth Low Energy > DALI

#### TOTAL
- Dimming/TW/RGB/RGBW
- 64 devices (one network)
- 4 customer accounts
- Bluetooth Low Energy > DALI
Switches and sensors

In order to create a fully automated facility, it’s essential to use sensors and switches. We offer a wide range of sensors and switches for various applications, from office spaces to educational and medical facilities, stores and shopping centers, to hotels and apartments, as well as industrial facilities. Elements that contribute to full building automation include sensors, controllers and switches with various uses, selected depending on the room types and necessary functionalities.
Sensor features

- Device identification possible
- Different motion detection areas
  - Low-Bay
  - Mid-Bay
  - High-Bay
  - Corridor
- Communication using various protocols
  - BLE (CASAMBI BIG4)
  - DALI, DALI-2 (compatibility is important)
- Different ingress protection
- Multi-functionality
  - The influence of natural daylight (Daylight Harvesting, Constant Light)
  - Motion detection
  - Presence detection
- IP20
- IP65
- Different operating temperature ranges
  - from -20°C to +50°C
- Individual parameter adjustment using software
- The influence of natural daylight (Daylight Harvesting, Constant Light)
  - Motion detection
  - Presence detection
ZLight
Wireless street lighting system

Local (SMART) controller placed in the luminaire or inside the pole

- GPS signal receiver
- built-in power meter
- DALI controller
- memory for storing power reduction curves and events
- motion sensor input
- access point to the ZigBee network
- software

Sector (GATEWAY) controller located in the electrical switchboard

- up to 150 smart controllers
- access point for mobile internet
- GPS signal receiver
- 3-phase group power meter
- access point to the ZigBee network
- input/output card
- control computer
- software

Server for collecting data

A web browser that allows access to and the management of the RACER system

Discover the advantages of the ZLight wireless lighting control system

Electricity costs reduced by as much as 75%

Preview of the most important technical parameters of the luminaires:
- energy consumption
- operating temperature
- operating time
- ZigBee signal quality

Get to know all the advantages of the system:
- simple and reliable radio communication via the ZigBee system
- an independent internal control system for each luminaire
- remote software updates
- auto-location of luminaires outdoors (GPS)
- compatibility with motion and lighting intensity detection systems
- mobile device support
- lighting management services available for purchase
- access via a web browser on any system platform (smartphones, tablets, PCs) and in any operating system without having to install any additional software
ZLight

GPS + 2.4 GHz Mesh

Racer + Smart

Gateway

servers

cloud management

online application
Smart lighting

Intelligent lighting control systems
Maximum comfort and reliable operation

Easy access and installation
The lighting control system is available in the form of a mobile app (downloaded from the App Store or the Google Play store), or via any web browser

Intuitive lighting control
The app automatically searches for all devices connected to the network

Simple configuration and reconfiguration
Easily changeable settings for the programmed lighting scenes and schedules throughout the entire facility
Various spaces

Office buildings

- Excellent conditions that help employees focus on their work better
- Even workplace lighting throughout the entire work day, regardless of the available natural daylight intensity

Educational spaces

- Support for the students’ correct development through providing an environment that helps them study effectively
- Providing adequate lighting regardless of the time of day and weather conditions

Medical facilities

- Support for patients’ treatment and their recovery process
- The implementation of light scene-schedules improves the safety of the patients and hospital personnel

See what benefits - in addition to energy savings - you can achieve by using Intelligent Lighting Control Systems in a variety of facilities.

Stores and shopping centers

- Modeling the spaces with light to provide a functional division in shopping and relaxation zones
- Creating intuitive communication routes to simplify finding the desired locations

Hotels and apartments

- The lighting can be individualized in different rooms, improving the guests’ comfort during their stay
- Stunning façade illuminations and functional light scenes enhance the prestige of the facility

Industrial facilities

- Complete remote control over the entire lighting installation
- Ensuring comfort and safety in a multi-shift system by using dedicated lighting schedules
Product cards
Total DT6 - Wireless DALI converter

Product code: N000017 (DALI Type 6)

- **Parameter**: Value
  - $T_c$: 80°C
  - $T_a$: -20° to +40°C
  - Humidity: 0–80%, non-cond.
  - Lifetime: 100,000 h (for $T_c$ max)
  - Power supply voltage: 110–230 V AC, 50/60 Hz or 170–275 V DC
  - Power consumption: 4 W@230 V AC, $T_a=25°C$
  - Current consumption: 40 mA@230 V AC
  - Power factor: 0.6
  - THD I: <20%
  - Radio module frequency: 2.4–2.483 GHz
  - Radio module output power: +4 dBm
  - Antenna: built-in, internal antenna
  - Antenna socket: no
  - Radio technology: Bluetooth + MESH (automatically)
  - DALI protection: short circuit and overvoltage
  - Maximum length of DALI wiring: up to 300 m (for 1.5 mm² wiring)
  - Maximum number of DALI devices: 64 (DALI Type 6)
  - Built-in DALI bus power supply: yes
  - DALI galvanic insulation: yes
  - DALI output current: 180 mA

Dimensions and fastening:

- Length: 190 mm
- Width: 31 mm
- Height: 23 mm
- Mounting: screw-on housing
- Connectors: WAGO
- Weight: 65 g
- Wire diameter: 5 mm
- Wire cross section: 0.5–1.5 mm²
- Ingress protection rating: IP20

Total Dynawhite - Wireless DALI converter

Product code: N000057 (DALI Type 8)

- **Parameter**: Value
  - $T_c$: 80°C
  - $T_a$: -20° to +40°C
  - Humidity: 0–80%, non-cond.
  - Lifetime: 100,000 h (for $T_c$ max)
  - Power supply voltage: 110–230 V AC, 50/60 Hz or 170–275 V DC
  - Power consumption: 4 W@230 V AC, $T_a=25°C$
  - Current consumption: 40 mA@230 V AC
  - Power factor: 0.6
  - THD I: <20%
  - Radio module frequency: 2.4–2.483 GHz
  - Radio module output power: +4 dBm
  - Antenna: built-in, internal antenna
  - Antenna socket: no
  - Radio technology: Bluetooth + MESH (automatically)
  - DALI protection: short circuit and overvoltage
  - Maximum length of DALI wiring: up to 300 m (for 1.5 mm² wiring)
  - Maximum number of DALI devices: 1 (DALI Type 8)
  - Built-in DALI bus power supply: yes
  - DALI galvanic insulation: yes
  - DALI output current: 180 mA

Dimensions and fastening:

- Length: 190 mm
- Width: 31 mm
- Height: 23 mm
- Mounting: screw-on housing
- Connectors: WAGO
- Weight: 65 g
- Wire diameter: 5 mm
- Wire cross section: 0.5–1.5 mm²
- Ingress protection rating: IP20
### Total DT8 RGB - Wireless DALI Converter

**Product code:** N000058 (DALI Type 6)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tc</td>
<td>80°C</td>
</tr>
<tr>
<td>Ta</td>
<td>-20°C to +40°C</td>
</tr>
<tr>
<td>Humidity</td>
<td>0-80%, non-cond.</td>
</tr>
<tr>
<td>Power supply voltage</td>
<td>110-230 V AC, 50/60 Hz or 170-275 V DC</td>
</tr>
<tr>
<td>Current consumption</td>
<td>4 mA@210 V AC</td>
</tr>
<tr>
<td>THD</td>
<td>0.6</td>
</tr>
<tr>
<td>Radio module frequency</td>
<td>&lt;= 20%</td>
</tr>
<tr>
<td>Radio module output power</td>
<td>2.4-2.483 GHz</td>
</tr>
<tr>
<td>Antenna socket</td>
<td>built-in, internal antenna</td>
</tr>
<tr>
<td>Radio technology</td>
<td>Bluetooth + MESH (automatically)</td>
</tr>
<tr>
<td>Maximum length of DALI wiring</td>
<td>short circuit and overvoltage</td>
</tr>
<tr>
<td>Maximum number of DALI devices</td>
<td>up to 300 (for 1.5 mm² wiring)</td>
</tr>
<tr>
<td>Built-in DALI bus power supply</td>
<td>1 (DALI Type 8)</td>
</tr>
<tr>
<td>DALI galvanic insulation</td>
<td>yes</td>
</tr>
<tr>
<td>DALI output current</td>
<td>180 mA</td>
</tr>
</tbody>
</table>

**Dimensions and fastening:**

- **Length:** 190 mm
- **Width:** 31 mm
- **Height:** 23 mm
- **Mounting:** screw-on housing
- **Connectors:** WAGO
- **Weight:** 65 g
- **Wire diameter:** 5 mm
- **Wire cross section:** 0.5-1.5 mm²
- **Ingress protection rating:** IP20

---

### Total RGBW - Wireless DALI Converter

**Product code:** N000059 (DALI Type B)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tc</td>
<td>80°C</td>
</tr>
<tr>
<td>Ta</td>
<td>-20°C to +40°C</td>
</tr>
<tr>
<td>Humidity</td>
<td>0-80%, non-cond.</td>
</tr>
<tr>
<td>Power supply voltage</td>
<td>110-230 V AC, 50/60 Hz or 170-275 V DC</td>
</tr>
<tr>
<td>Current consumption</td>
<td>4 mA@210 V AC</td>
</tr>
<tr>
<td>THD</td>
<td>0.6</td>
</tr>
<tr>
<td>Radio module frequency</td>
<td>&lt;= 20%</td>
</tr>
<tr>
<td>Radio module output power</td>
<td>2.4-2.483 GHz</td>
</tr>
<tr>
<td>Antenna socket</td>
<td>built-in, internal antenna</td>
</tr>
<tr>
<td>Radio technology</td>
<td>Bluetooth + MESH (automatically)</td>
</tr>
<tr>
<td>Maximum length of DALI wiring</td>
<td>short circuit and overvoltage</td>
</tr>
<tr>
<td>Maximum number of DALI devices</td>
<td>up to 300 (for 1.5 mm² wiring)</td>
</tr>
<tr>
<td>Built-in DALI bus power supply</td>
<td>1 (DALI Type B)</td>
</tr>
<tr>
<td>DALI galvanic insulation</td>
<td>yes</td>
</tr>
<tr>
<td>DALI output current</td>
<td>180 mA</td>
</tr>
</tbody>
</table>

**Dimensions and fastening:**

- **Length:** 190 mm
- **Width:** 31 mm
- **Height:** 23 mm
- **Mounting:** screw-on housing
- **Connectors:** WAGO
- **Weight:** 65 g
- **Wire diameter:** 5 mm
- **Wire cross section:** 0.5-1.5 mm²
- **Ingress protection rating:** IP20

---

### Total RGBW - Wireless DALI Converter

**Product code:** N000059 (DALI Type B)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
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<tbody>
<tr>
<td>Tc</td>
<td>80°C</td>
</tr>
<tr>
<td>Ta</td>
<td>-20°C to +40°C</td>
</tr>
<tr>
<td>Humidity</td>
<td>0-80%, non-cond.</td>
</tr>
<tr>
<td>Power supply voltage</td>
<td>110-230 V AC, 50/60 Hz or 170-275 V DC</td>
</tr>
<tr>
<td>Current consumption</td>
<td>4 mA@210 V AC</td>
</tr>
<tr>
<td>THD</td>
<td>0.6</td>
</tr>
<tr>
<td>Radio module frequency</td>
<td>&lt;= 20%</td>
</tr>
<tr>
<td>Radio module output power</td>
<td>2.4-2.483 GHz</td>
</tr>
<tr>
<td>Antenna socket</td>
<td>built-in, internal antenna</td>
</tr>
<tr>
<td>Radio technology</td>
<td>Bluetooth + MESH (automatically)</td>
</tr>
<tr>
<td>Maximum length of DALI wiring</td>
<td>short circuit and overvoltage</td>
</tr>
<tr>
<td>Maximum number of DALI devices</td>
<td>up to 300 (for 1.5 mm² wiring)</td>
</tr>
<tr>
<td>Built-in DALI bus power supply</td>
<td>1 (DALI Type B)</td>
</tr>
<tr>
<td>DALI galvanic insulation</td>
<td>yes</td>
</tr>
<tr>
<td>DALI output current</td>
<td>180 mA</td>
</tr>
</tbody>
</table>

**Dimensions and fastening:**

- **Length:** 190 mm
- **Width:** 31 mm
- **Height:** 23 mm
- **Mounting:** screw-on housing
- **Connectors:** WAGO
- **Weight:** 65 g
- **Wire diameter:** 5 mm
- **Wire cross section:** 0.5-1.5 mm²
- **Ingress protection rating:** IP20

---
Raptor DT6 - Wireless DALI converter
Product code: N000076 (DALI Type 6)

Raptor
An intermediary lighting control device between the DALI control bus and the Casambi compatible Bluetooth control system. The SMD connectors used in the module allow for the devices quick and reliable installation, and its dimensions make it suitable for use in virtually any luminaire, even in linear systems. RAPTOR DT6 can physically support up to 4 pcs. DALI DT6 power supplies in the maintained operation mode. The wireless communication range is up to 50 m.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tc</td>
<td>70°C</td>
</tr>
<tr>
<td>Ta</td>
<td>-20° to +60°C</td>
</tr>
<tr>
<td>Lifetime</td>
<td>100,000 h</td>
</tr>
<tr>
<td>Power supply voltage</td>
<td>220–230 V AC</td>
</tr>
<tr>
<td>Power consumption</td>
<td>0.69 W</td>
</tr>
<tr>
<td>Current consumption</td>
<td>3 mA</td>
</tr>
<tr>
<td>Radio module frequency</td>
<td>2.4–2.4835 GHz</td>
</tr>
<tr>
<td>Radio module output power</td>
<td>&lt;4 dBm</td>
</tr>
<tr>
<td>Antenna socket</td>
<td>no</td>
</tr>
<tr>
<td>Radio technology</td>
<td>Bluetooth + MESH (automatically)</td>
</tr>
<tr>
<td>DALI protection</td>
<td>short circuit</td>
</tr>
<tr>
<td>Maximum length of DALI wiring</td>
<td>up to 20 m (for 0.5 mm² wiring)</td>
</tr>
<tr>
<td>Maximum number of DALI devices</td>
<td>8 (DALI Type 6)</td>
</tr>
<tr>
<td>Built-in DALI bus power supply</td>
<td>yes</td>
</tr>
<tr>
<td>DALI galvanic insulation</td>
<td>no</td>
</tr>
<tr>
<td>DALI output current</td>
<td>8 mA</td>
</tr>
</tbody>
</table>

Dimensions and fastening:

Raptor Dynawhite
An intermediary lighting control device between the DALI control bus and the Casambi compatible Bluetooth control system. The SMD connectors used in the module allow for the devices quick and reliable installation, and its dimensions make it suitable for use in virtually any luminaire, even in linear systems. RAPTOR DT8 Dynawhite can physically support 1 DALI DT8 power supply in the maintained operating mode. The wireless communication range is up to 50 m.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tc</td>
<td>80°C</td>
</tr>
<tr>
<td>Ta</td>
<td>-20° to +40°C</td>
</tr>
<tr>
<td>Lifetime</td>
<td>100,000 h (for Tc max)</td>
</tr>
<tr>
<td>Power supply voltage</td>
<td>220–230 V AC</td>
</tr>
<tr>
<td>Power consumption</td>
<td>0.85 W</td>
</tr>
<tr>
<td>Current consumption</td>
<td>3 mA</td>
</tr>
<tr>
<td>THD</td>
<td>&lt;20%</td>
</tr>
<tr>
<td>Radio module frequency</td>
<td>2.4–2.4835 GHz</td>
</tr>
<tr>
<td>Radio module output power</td>
<td>&lt;4 dBm</td>
</tr>
<tr>
<td>Antenna socket</td>
<td>no</td>
</tr>
<tr>
<td>Radio technology</td>
<td>Bluetooth + MESH (automatically)</td>
</tr>
<tr>
<td>DALI protection</td>
<td>short circuit</td>
</tr>
<tr>
<td>Maximum length of DALI wiring</td>
<td>up to 20 m (for 0.5 mm² wiring)</td>
</tr>
<tr>
<td>Maximum number of DALI devices</td>
<td>1 (DALI Type 8)</td>
</tr>
<tr>
<td>Built-in DALI bus power supply</td>
<td>yes</td>
</tr>
<tr>
<td>DALI galvanic insulation</td>
<td>no</td>
</tr>
<tr>
<td>DALI output current</td>
<td>8 mA</td>
</tr>
</tbody>
</table>

Dimensions and fastening:
### Raptor RGB - Wireless DALI converter

**Product code:** N000075 (DALI Type 8)

**Dimensions and fastening:**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>77 mm</td>
</tr>
<tr>
<td>Width</td>
<td>31 mm</td>
</tr>
<tr>
<td>Height</td>
<td>21 mm</td>
</tr>
<tr>
<td>Mounting</td>
<td>Screw-on housing</td>
</tr>
<tr>
<td>Connectors</td>
<td>WAGO</td>
</tr>
<tr>
<td>Weight</td>
<td>22 g</td>
</tr>
<tr>
<td>Wire cross section</td>
<td>0.5–0.75 mm²</td>
</tr>
</tbody>
</table>

**Ingress protection rating:** IP20

---

### Raptor RGB

An intermediary lighting control device between the DALI control bus and the Casambi compatible Bluetooth control system. The SMD connectors used in the module allow for the device’s quick and reliable installation, and its dimensions make it suitable for use in virtually any luminaire, even in linear systems. RAPTOR DT8 RGB can physically support 1 DALI DT8 in maintained operation mode. The wireless communication range is up to 50 m.

---

### Raptor DT8 RGBW - Wireless DALI converter

**Product code:** N000076 (DALI Type 8)

**Dimensions and fastening:**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>77 mm</td>
</tr>
<tr>
<td>Width</td>
<td>31 mm</td>
</tr>
<tr>
<td>Height</td>
<td>21 mm</td>
</tr>
<tr>
<td>Mounting</td>
<td>Screw-on housing</td>
</tr>
<tr>
<td>Connectors</td>
<td>WAGO</td>
</tr>
<tr>
<td>Weight</td>
<td>22 g</td>
</tr>
<tr>
<td>Wire cross section</td>
<td>0.5–0.75 mm²</td>
</tr>
</tbody>
</table>

**Ingress protection rating:** IP20

---

### Raptor RGBW

An intermediary lighting control device between the DALI control bus and the Casambi compatible wireless Bluetooth control system. The SMD connectors used in the module allow for the device’s quick and reliable installation, and its dimensions make it suitable for use in virtually any luminaire, even in linear systems. RAPTOR DT8 RGBW can physically support 1 DALI DT8 power supply in the maintained operation mode. The wireless communication range is up to 50 m.

---

### Specifications

- **Parameter**
- **Value**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature range</td>
<td>70°C</td>
</tr>
<tr>
<td>Life time</td>
<td>100,000 h</td>
</tr>
<tr>
<td>Power supply voltage</td>
<td>220–230 V AC</td>
</tr>
<tr>
<td>Power consumption</td>
<td>0.69 W</td>
</tr>
<tr>
<td>Current consumption</td>
<td>3 mA</td>
</tr>
<tr>
<td>THD</td>
<td>&lt;20%</td>
</tr>
<tr>
<td>Radio module frequency</td>
<td>2.4–2.483 GHz</td>
</tr>
<tr>
<td>Radio module output power</td>
<td>+4 dBm</td>
</tr>
<tr>
<td>Antenna</td>
<td>Built-in, internal antenna</td>
</tr>
<tr>
<td>Antenna socket</td>
<td>No</td>
</tr>
<tr>
<td>Radio Technology</td>
<td>Bluetooth + MESH (automatically)</td>
</tr>
<tr>
<td>DALI protection</td>
<td>Short circuit</td>
</tr>
<tr>
<td>Maximum length of DALI wiring</td>
<td>up to 20 m (for 0.5 mm² wiring)</td>
</tr>
<tr>
<td>Maximum number of DALI devices</td>
<td>1 (DALI Type 8)</td>
</tr>
<tr>
<td>Built-in DALI bus power supply</td>
<td>8 mA</td>
</tr>
<tr>
<td>DALI galvanic isolation</td>
<td>No</td>
</tr>
<tr>
<td>DALI output current</td>
<td>8 mA</td>
</tr>
</tbody>
</table>

---

### Additional Information

- **Raptor RGBW**

  - Wireless DALI Converter
  - Product code: N000076 (DALI Type 8)
  - Dimensions and fastening:
    - Length: 77 mm
    - Width: 31 mm
    - Height: 21 mm
    - Mounting: Screw-on housing
    - Connectors: WAGO
    - Weight: 22 g
    - Wire cross section: 0.5–0.75 mm²
    - Ingress protection rating: IP20

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### Notes

- RAPTOR DT8 RGB is suitable for use in virtually any luminaire, even in linear systems.
- RAPTOR DT8 RGBW can physically support 1 DALI DT8 power supply in the maintained operation mode.
- The wireless communication range is up to 50 m.

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### Contact Information

For more information, visit [Raptor Lighting](https://www.raptorlighting.com) or contact [support@raptorlighting.com](mailto:support@raptorlighting.com).
Falcon - Wireless constant current driver
Product code: N000086

Falcon
A device from the Casambi series – FALCON. A 4-channel current controller for powering LEDs. It is equipped with 4 independent current stabilization circuits. Up to 6 LEDs can be connected in series to each individual channel. Maximum output voltage: $U_{out} = 22V$ (up to 6 LEDs). The device functions wirelessly using Bluetooth technology, is compatible with Casambi, and is intended for use with Casambi power supplies in the maintained operation mode. The wireless communication range is up to 50 m.

Parameter | Value
--- | ---
$T_c$ | 70°C
$T_a$ | -20° to +60°C
Lifetime | 100,000 h
Power supply voltage | 24 V DC
Maximum output power | 48 W@24 V DC
Output current for a single channel | 0.5 A
Total maximum output current (all channels) | 2 A@24 V DC

Falcon RGB
A device from the Casambi series – FALCON RGB is a 3-channel current controller for powering LEDs. It is equipped with 3 independent current stabilization circuits. Up to 6 LEDs can be connected in series to each individual channel. Maximum output voltage: $U_{out} = 22V$ (up to 6 LEDs). The device functions wirelessly using Bluetooth technology, is compatible with Casambi, and is intended for use with Casambi power supplies in the maintained operation mode. The wireless communication range is up to 50 m.

Parameter | Value
--- | ---
$T_c$ | 70°C
$T_a$ | -20° to +60°C
Lifetime | 100,000 h
Power supply voltage | 24 V DC
Maximum output power | 36 W@24 V DC
Maximum output current | 1.5 A@24 V DC

Dimensions and fastening:

---

Falcon RGB - Wireless constant current driver
Product code: N000087

Falcon RGB
A device from the Casambi series – FALCON RGB is a 3-channel current controller for powering LEDs. It is equipped with 3 independent current stabilization circuits. Up to 6 LEDs can be connected in series to each individual channel. Maximum output voltage: $U_{out} = 22V$ (up to 6 LEDs). The device functions wirelessly using Bluetooth technology, is compatible with Casambi, and is intended for use with power supplies in the maintained operation mode. The wireless communication range is up to 50 m.

Parameter | Value
--- | ---
$T_c$ | 70°C
$T_a$ | -20° to +60°C
Lifetime | 100,000 h
Power supply voltage | 24 V DC
Maximum output power | 30 W@24 V DC
Maximum output current | 1.5 A@24 V DC

Dimensions and fastening:
### Falcon RGBW - Wireless constant current driver

Product code: N000088

**Falcon RGBW**

It is equipped with 4 independent current stabilization circuits. Up to 6 LEDs can be connected in series to each individual channel. Maximum output voltage: $U_{\text{out}} = 22\text{V}$ (up to 6 LEDs). The device functions wirelessly using Bluetooth technology, is compatible with Casambi, and is intended for use with power supplies in the maintained operation mode. The wireless communication range is up to 50 m.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>$T_c$</td>
<td>70°C</td>
</tr>
<tr>
<td>$T_a$</td>
<td>-20° to +60°C</td>
</tr>
<tr>
<td>Lifetime</td>
<td>100,000 h</td>
</tr>
<tr>
<td>Power supply voltage</td>
<td>24V DC</td>
</tr>
<tr>
<td>Maximum output power</td>
<td>48 W@24 V DC</td>
</tr>
<tr>
<td>Maximum output current</td>
<td>2 A@24 V DC</td>
</tr>
</tbody>
</table>

### Falcon Dynawhite - Wireless constant current driver

Product code: N000089

**Falcon Dynawhite**

Dynawhite device from the Casambi series is a 4-channel current controller for powering LEDs. It is equipped with 4 independent current stabilization circuits that work in pairs - COOL and WARM. Up to 6 LEDs can be connected in series to each individual channel. Maximum output voltage: $U_{\text{out}} = 22\text{V}$ (up to 6 LEDs). The device functions wirelessly using Bluetooth technology, is compatible with Casambi, and is intended for use with power supplies in the maintained operation mode. The wireless communication range is up to 50 m.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>$T_c$</td>
<td>70°C</td>
</tr>
<tr>
<td>$T_a$</td>
<td>-20° to +60°C</td>
</tr>
<tr>
<td>Lifetime</td>
<td>100,000 h</td>
</tr>
<tr>
<td>Power supply voltage</td>
<td>24V DC</td>
</tr>
<tr>
<td>Maximum output power</td>
<td>48 W@24 V DC</td>
</tr>
<tr>
<td>Maximum output current</td>
<td>2 A@24 V DC</td>
</tr>
</tbody>
</table>

### Dimensions and fastening:

- **Falcon RGBW**
  - Length: 190 mm
  - Width: 31 mm
  - Height: 23 mm
  - Mounting: screw-on housing
  - Connectors: WAGO
  - Weight: 65 g
  - Wire cross section: 0.2–0.5 mm$^2$ / 0.2–1.5 mm$^2$
  - Ingress protection rating: IP20

- **Falcon Dynawhite**
  - Length: 190 mm
  - Width: 31 mm
  - Height: 23 mm
  - Mounting: screw-on housing
  - Connectors: WAGO
  - Weight: 65 g
  - Wire cross section: 0.2–0.5 mm$^2$ / 0.2–1.5 mm$^2$
  - Ingress protection rating: IP20
Viper - Wireless constant voltage driver

Product code: N000090

**Dimensions and fastening:**

- **Parameter:** T<sub>c</sub>  
  **Value:** 70°C
- **Parameter:** Ta  
  **Value:** -20° to +65°C
- **Parameter:** Length  
  **Value:** 200 mm
- **Parameter:** Width  
  **Value:** 31 mm
- **Parameter:** Height  
  **Value:** 23 mm
- **Parameter:** Mounting  
  **Value:** screw-on housing
- **Parameter:** Connectors  
  **Value:** WAGO
- **Parameter:** Weight  
  **Value:** 65 g
- **Parameter:** Wire cross section  
  **Value:** 0.2-1.5 mm²
- **Parameter:** Ingress protection rating  
  **Value:** IP20

**Parameter Value**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>200 mm</td>
</tr>
<tr>
<td>Width</td>
<td>31 mm</td>
</tr>
<tr>
<td>Height</td>
<td>23 mm</td>
</tr>
<tr>
<td>Mounting</td>
<td>screw-on housing</td>
</tr>
<tr>
<td>Connectors</td>
<td>WAGO</td>
</tr>
<tr>
<td>Weight</td>
<td>65 g</td>
</tr>
<tr>
<td>Wire cross section</td>
<td>0.2-1.5 mm²</td>
</tr>
<tr>
<td>Ingress protection rating</td>
<td>IP20</td>
</tr>
</tbody>
</table>

**Product code:** N000090

**Viper**

Device from the Casambi series is a 4-channel PWM driver for constant voltage LED strips or a PWM signal source for controlling LED modules equipped with current stabilization circuits. The device works wirelessly using Bluetooth technology and is compatible with Casambi. The device’s operating mode is designed to control 4 monochrome channels. The brightness level for each channel can be set independently. The wireless communication range is up to 50 m.

**Parameter Value**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>190 mm</td>
</tr>
<tr>
<td>Width</td>
<td>31 mm</td>
</tr>
<tr>
<td>Height</td>
<td>23 mm</td>
</tr>
<tr>
<td>Mounting</td>
<td>screw-on housing</td>
</tr>
<tr>
<td>Connectors</td>
<td>WAGO</td>
</tr>
<tr>
<td>Weight</td>
<td>65 g</td>
</tr>
<tr>
<td>Wire cross section</td>
<td>0.2-1.5 mm²</td>
</tr>
<tr>
<td>Ingress protection rating</td>
<td>IP20</td>
</tr>
</tbody>
</table>

**Parameter Value**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power supply voltage</td>
<td>12 – 24 V DC</td>
</tr>
<tr>
<td>Maximum output power</td>
<td>95 W@24 V DC, 48 W@12 V DC</td>
</tr>
<tr>
<td>Maximum output current</td>
<td>4 A@24 V DC, 4 A@12 V DC</td>
</tr>
<tr>
<td>Maximum current of a single PWM channel</td>
<td>1 A</td>
</tr>
<tr>
<td>Maximum total current of all used PWM channels</td>
<td>4 A</td>
</tr>
</tbody>
</table>

Viper RGB - Wireless constant voltage driver

Product code: N000091

**Dimensions and fastening:**

- **Parameter:** T<sub>c</sub>  
  **Value:** 70°C
- **Parameter:** Ta  
  **Value:** -20° to +65°C
- **Parameter:** Length  
  **Value:** 200 mm
- **Parameter:** Width  
  **Value:** 31 mm
- **Parameter:** Height  
  **Value:** 23 mm
- **Parameter:** Mounting  
  **Value:** screw-on housing
- **Parameter:** Connectors  
  **Value:** WAGO
- **Parameter:** Weight  
  **Value:** 65 g
- **Parameter:** Wire cross section  
  **Value:** 0.2-1.5 mm²
- **Parameter:** Ingress protection rating  
  **Value:** IP20

**Parameter Value**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>200 mm</td>
</tr>
<tr>
<td>Width</td>
<td>31 mm</td>
</tr>
<tr>
<td>Height</td>
<td>23 mm</td>
</tr>
<tr>
<td>Mounting</td>
<td>screw-on housing</td>
</tr>
<tr>
<td>Connectors</td>
<td>WAGO</td>
</tr>
<tr>
<td>Weight</td>
<td>65 g</td>
</tr>
<tr>
<td>Wire cross section</td>
<td>0.2-1.5 mm²</td>
</tr>
<tr>
<td>Ingress protection rating</td>
<td>IP20</td>
</tr>
</tbody>
</table>

**Parameter Value**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power supply voltage</td>
<td>12 – 24 V DC</td>
</tr>
<tr>
<td>Maximum output power</td>
<td>72 W@24 V DC, 36 W@12 V DC</td>
</tr>
<tr>
<td>Maximum output current</td>
<td>3 A@24 V DC, 3 A@12 V DC</td>
</tr>
<tr>
<td>Maximum total current of all used PWM channels</td>
<td>3 A</td>
</tr>
<tr>
<td>Maximum current of a single PWM channel</td>
<td>1 A</td>
</tr>
</tbody>
</table>

**Viper RGB**

Device from the Casambi series is a 3-channel PWM driver for constant voltage LED strips. It is used for controlling LED modules equipped with current stabilizers or RGB LED strips. The device operates wirelessly using Bluetooth technology and is compatible with Casambi. The wireless communication range is up to 50 m.
**Vertex**

Vertex is an advanced lighting automation system based on the universal DALI control protocol. The installation is transparent, with intuitive supervision and significantly lower assembly costs. The transparent system operation combined with advanced testing, reporting and configuration possibilities make it possible to take full advantage of the latest technological achievements in the field of lighting control, supervision and connectivity.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power supply voltage</td>
<td>230 VAC ± 10% @ 50/60 Hz</td>
</tr>
<tr>
<td>Maximum power consumption</td>
<td>14 W</td>
</tr>
<tr>
<td>Ambient temperature</td>
<td>0 ÷ 40 °C</td>
</tr>
<tr>
<td>Number of DALI output ports</td>
<td>3</td>
</tr>
<tr>
<td>Current capacity of a single port</td>
<td>180 mA</td>
</tr>
<tr>
<td>Maximum number of luminaires</td>
<td>192</td>
</tr>
<tr>
<td>Ethernet port</td>
<td>10/100 Mbit/s RJ45</td>
</tr>
</tbody>
</table>

- **Lighting system commissioning, configuration and monitoring using a simple and convenient web application**
- **Luminaire grouping**
- **Light scene configuration**
- **Changing individual luminaire parameters**
- **Displaying the general status of the system in the form of a ring graph**
- **Displaying the current parameters of the luminaires in a table**
- **Test schedule programming for emergency lighting**
- **Generating unified emergency lighting test reports (functional, duration and battery formatting) for the entire system**
- **Unlimited system scalability**
- **Up to 192 devices can be connected to a single controller thanks to three DALI ports**
- **The lighting system can be expanded by adding more Vertex controllers**
- **Connecting Vertex controllers within a single lighting control system via Ethernet**
- **Creating control groups among devices from different controllers**
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