



Application Manual

SPORTS HALLS

REGIOLUX

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Lighting controllers instruction manual

Sports halls

Players need good light to ensure a top performance and spectators need it to really enjoy sports. Special luminaires for sports halls and gymnasiums achieve very high light outputs, even in large rooms. The introduction of LED technology - which now has high-power options - is a considerable aid to the requirements for these lighting systems. Coupled with modern light management, the best possible conditions have been put in place to use this technology even more energy-efficiently.

Depending on the operational requirements for sports halls, which are often used as multi-purpose facilities, Regiolux provides both custom light management solutions as well as sophisticated, pre-assembled systems.

Example 1: 3-zone sports hall

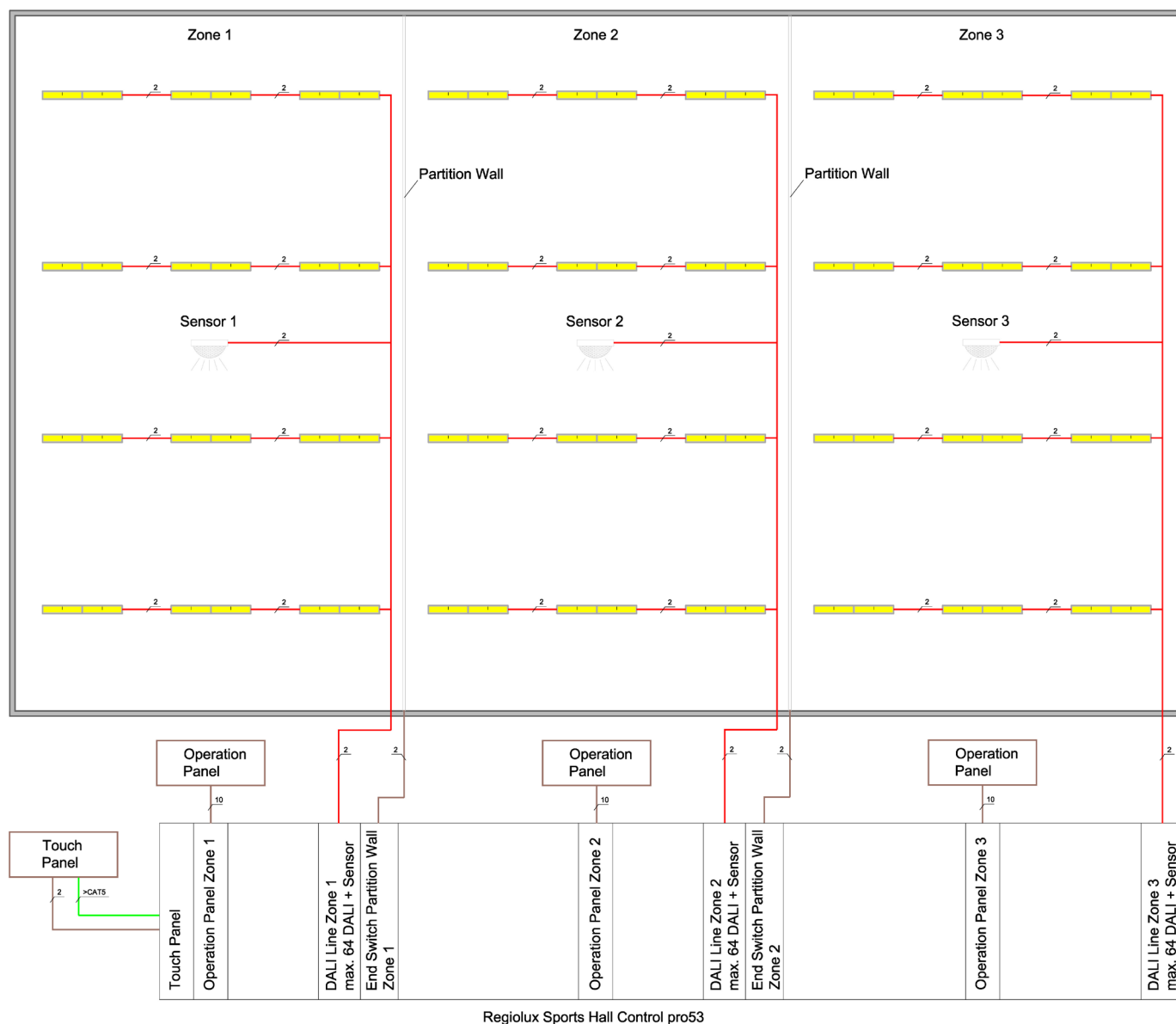
Requirements:

- Daylight-dependent control per hall zone with 3 selectable lighting setpoints
- Daylight-dependent control in entire hall operation with 3 selectable lighting setpoints
- Presence/motion detection per hall zone
- Presence/motion detection in entire hall operation
- Partition walls can be used to convert usage to 2-zone and/or entire hall operation
- Operation of the hall zones or entire hall using individual control panels
- Manual control can be used to override automatic system
- DALI signal for controlling the luminaires

Solution:

- Regiolux sports hall controller, pre-wired and assembled ready for connection in a switch cabinet
- 1 sensor for light, presence/motion detection for each hall zone, with protective wire cage
- Processing of the Open/Close signals of the hall partition walls in the controller
- Fully automatic operation of the individual hall zones
- Individual hall zones or the entire hall can be operated from control points provided on site
- Individual hall zones or the entire hall can be operated at the controller's touch panel
- The controller's touch panel provided can be used to override automatic operation
- Settings for basic values, such as setpoints, shut-off delays, etc. at the controller's touch panel
- 3 DALI lines for controlling a max. of 64 DALI devices each per hall zone

System diagram



The Regiolux sports halls controller is also available as an option for a max. of 128 DALI devices per hall zone. Accordingly, 2 DALI lines are made available per hall for controlling a max. of 64 DALI devices each.

The DALI sensors and the DALI lines must be installed in the low-voltage line (e.g. NYM) on account of the operating voltage. The operation panels and the end switches can be operated with extra-low voltage line (e.g. JY(St)Y).

Lines for the voltage supply to the luminaires and the controller are not shown.

Function and system description

Regiolux sports hall controller for 3-zone sports halls (max. 192 DALI devices)

The lighting system is controlled from a central controller installed in the control cabinet. The luminaires are operated on three DALI lines. Up to 64 DALI devices can be operated on each DALI line. As a result, the luminaires of a hall zone are permanently assigned to a group and do not have to be separately identified, addressed and grouped using the software, as is typical for DALI.

A daylight- and motion-dependent controller is provided as usage-oriented energy-saving measure. A combination of light sensor and motion sensor is used for each hall zone.

Three adjustable setpoints are possible for daylight control e.g. 600 lux, 400 lux and 200 lux. As the amount of daylight increases, the lighting is dimmed more and more and will be switched off when there is sufficient daylight. If the level of light falls, the lighting system switches on again.

In fully automatic mode, a motion sensor switches the lighting on when the respective hall zone is entered, the light value is controlled depending on the lowest setpoint. As soon as no more motion is detected, the light switches off again after the configurable delay time has elapsed. Beyond fully automatic operation, the respective hall zones are operated by retrieving the setpoints using buttons provided on site. A central off-function is also available.

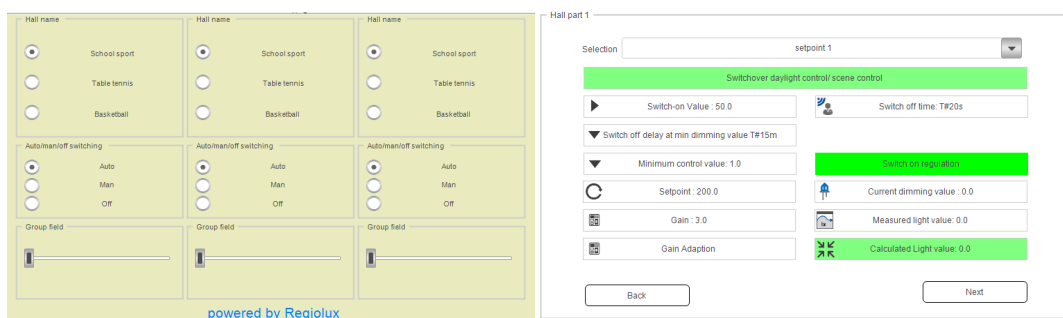
The position of the partition walls is queried using an end switch provided on site. As soon as one of the partition walls is opened, the operating panel for the middle hall zone takes over the light control, the other one remains inactive. When opening both partition walls, only the operator panel for the middle hall zone remains active and it controls the entire hall.

A touch panel for operation of the three hall zones is delivered in addition to the control cabinet; this enables manual operation and dimming of the hall zones. Entries for the lighting setpoints, time delays etc. are made at this panel. Further optional touch panels can be supplied so that each hall zone can be operated conveniently on site.

Feedback messages are made available to signal the operating states of the hall zones.

Circuit and connection diagrams as well as overview and functional diagrams are supplied for installation of the system.

The system is commissioned using a special set-up menu on the touch panel. A detailed operating manual is provided. The only tool needed is a professional luxmeter.



Example of visualisation

Options (on request):

Expansion for lighting for the stands

Expansion of hall circuits and signals

Expansion of controllable DALI devices up to 384 units



Example of a sports hall controller

Components/tender texts

DALI lighting controller for 3-zone sports hall;
3 external control points and 2 partition walls can be connected;
incl. control cabinet and components for up to 192 DALI devices;
incl. 1 in-wall 7" touch panel and surface-mounted housing, various accessories;
incl. project planning and programming;
incl. connection diagram and operating manual;
delivery only; assembly, connection work and commissioning by others

Type: RX-Control pro53

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Sensor package

3 x light and motion sensors
for connection to DALI controller RX-Control pro53;
incl. protective cages and various accessories;
incl. connection diagram and operating manual;
delivery only; assembly, connection work and commissioning by others

Type: RX-Control pro53-SP

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Touch-sensitive control panel in hall
for connection to DALI controller RX-Control pro53;
1 x 7" touch panel for installation in the wall;
incl. various accessories;
incl. project planning and programming;
incl. connection diagram and operating manual;
delivery only; assembly, connection work and commissioning by others

Type: RX-Control pro53-TP

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On-wall housing for 7" touch panel, white
incl. assembly accessories;
delivery only; assembly by others

Type: RX-Control pro53-TPG
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8-port network switch
delivery only; assembly by others

Type: RX-Control pro53-SW
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Commissioning service
Commissioning on site, creation of documentation,
travel to and from the site, travel expenses,
accommodation costs if applicable and allowance;
daily rate, billed at actual cost

Type: RX-Control commissioning
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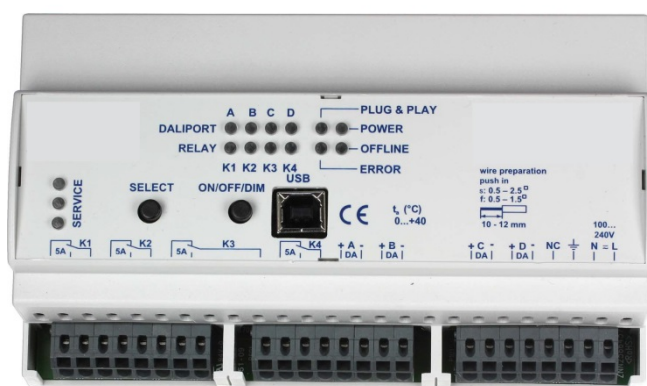
Example 2: 2-zone sports hall

Requirements:

- Daylight-dependent control per hall zone with 1 adjustable lighting setpoint
- Lighting control via two further pre-set lighting levels
- Presence/motion detection per hall zone
- Operation of the hall zones or entire hall using individual control panels
- Manual control can be used to override automatic system
- DALI signal for controlling the luminaires

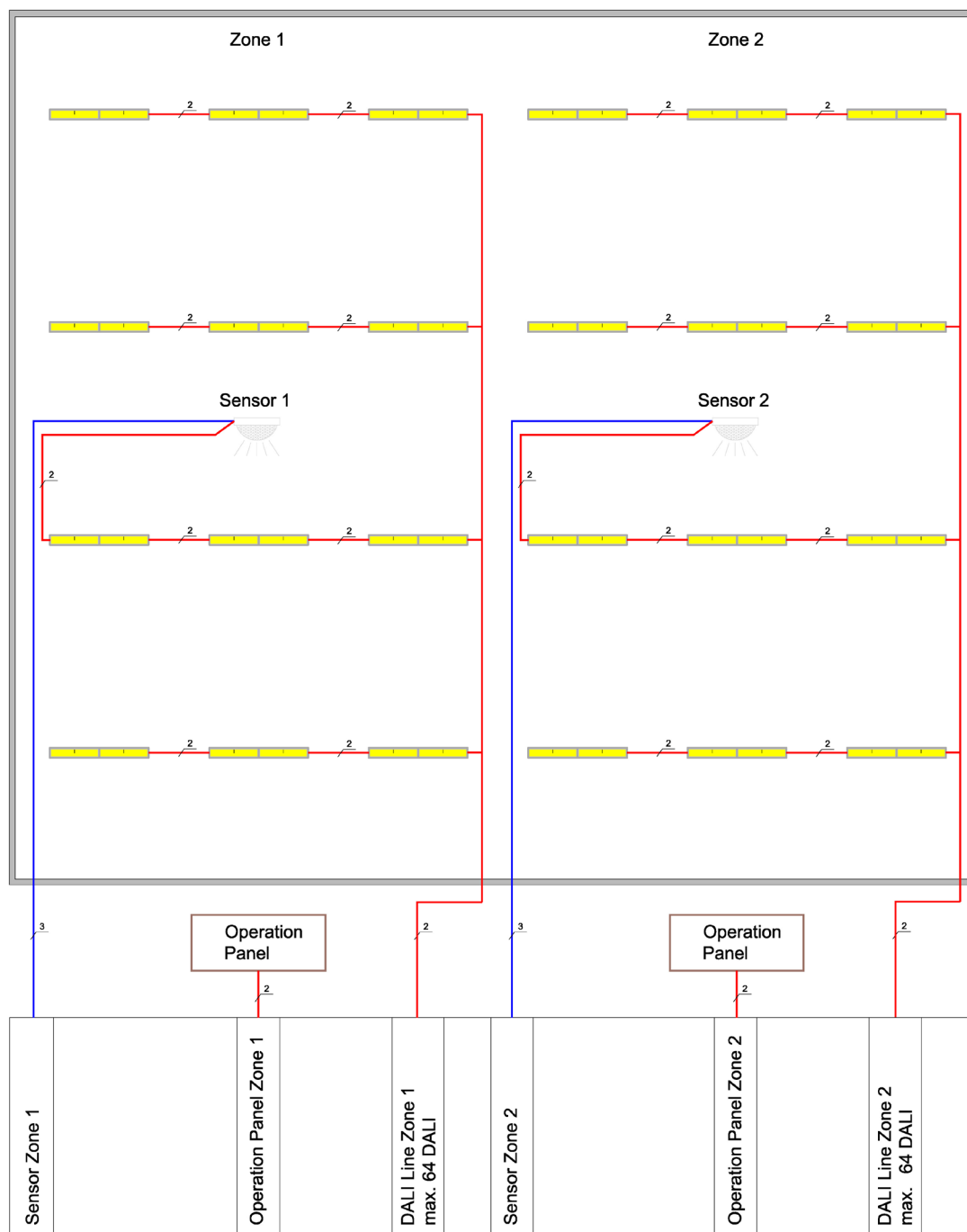
Solution:

- Regiolux sports hall controllers, as inline devices for distributors or switch cabinets
- 1 sensor for light, presence/motion detection for each hall zone, with protective wire cage
- Individual hall zones or the entire hall can be operated from control points provided on site
 - Select between 2 lighting values (scenes) using button
 - Start daylight-dependent control
- 2 DALI lines for controlling a max. of 64 DALI devices each per hall zone



Example of a controller

System diagram



Regiolux Sports Hall Control pro52

The Regiolux sports halls controller is also available as an option for a max. of 128 DALI devices per hall zone. 2 DALI lines per hall are available in each case for a maximum of 64 DALI devices.

The units and the DALI lines must be installed in the low-voltage line (e.g. NYM) on account of the operating voltage.

Lines for the voltage supply to the luminaires and the controller are not shown.

Function and system description

Regiolux sports hall controller for 2-zone sports halls (max. 128 DALI devices)

The lighting system is controlled using a central controller that is installed in the distribution cabinet provided on site. The luminaires are operated on two DALI lines. Up to 64 DALI devices can be operated on each DALI line.

A daylight- and motion-dependent controller is provided as usage-oriented energy-saving measure. A combination of light sensor and motion sensor is used for each hall zone.

A setpoint can be set for each hall zone for daylight control. As the amount of daylight increases, the lighting is dimmed more and more and will be switched off when there is sufficient daylight. If the level of light falls, the lighting system switches on again.

In automatic mode, the motion sensor switches the lighting on when a person enters the hall, the light value is controlled according to the saved setpoint. As soon as no more motion is detected, the light switches off again after the configurable delay time has elapsed.

The respective hall zones are operated by calling up the lighting values (scenes) from the control elements (buttons or switches) provided on site. The lighting values (scenes) can be changed and saved individually using the respective button. The daylight-dependent control is started using the Automatic mode button. The setpoint can also be changed and saved here at any time.

Circuit and connection diagrams as well as overview and functional diagrams are supplied for installation of the system.

The system is commissioned in accordance with the instructions supplied. The only tool needed is a professional luxmeter.

Options (on request):

Expansion for lighting for the stands

Extending the lighting values

Expansion of controllable DALI devices up to 256 units

Components/tender texts

DALI lighting controller for 2-zone sports hall;
2 external control points can be connected;
incl. all components for installation in a distribution box for up to 128 DALI devices;
incl. project planning and parameter setting;
incl. connection diagram and operating manual;
delivery only; assembly, connection work and commissioning by others

Type: RX-Control pro52

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Sensor package

2 x light and motion sensors
for connection to DALI controller RX-Control pro52;
incl. protective cages and various accessories;
incl. connection diagram and operating manual;
delivery only; assembly, connection work and commissioning by others

Type: RX-Control pro52-SP

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Commissioning service

Commissioning on site, creation of documentation,
travel to and from the site, travel expenses,
accommodation costs if applicable and allowance;
daily rate, billed at actual cost

Type: RX-Control commissioning

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Example 3: Multi-purpose hall/indoor tennis centre

Requirements:

- Daylight-dependent control with adjustable lighting setpoint
- Lighting control via two further pre-set lighting levels
- Presence/motion detection
- Manual control can be used to override automatic system
- DALI signal for controlling the luminaires

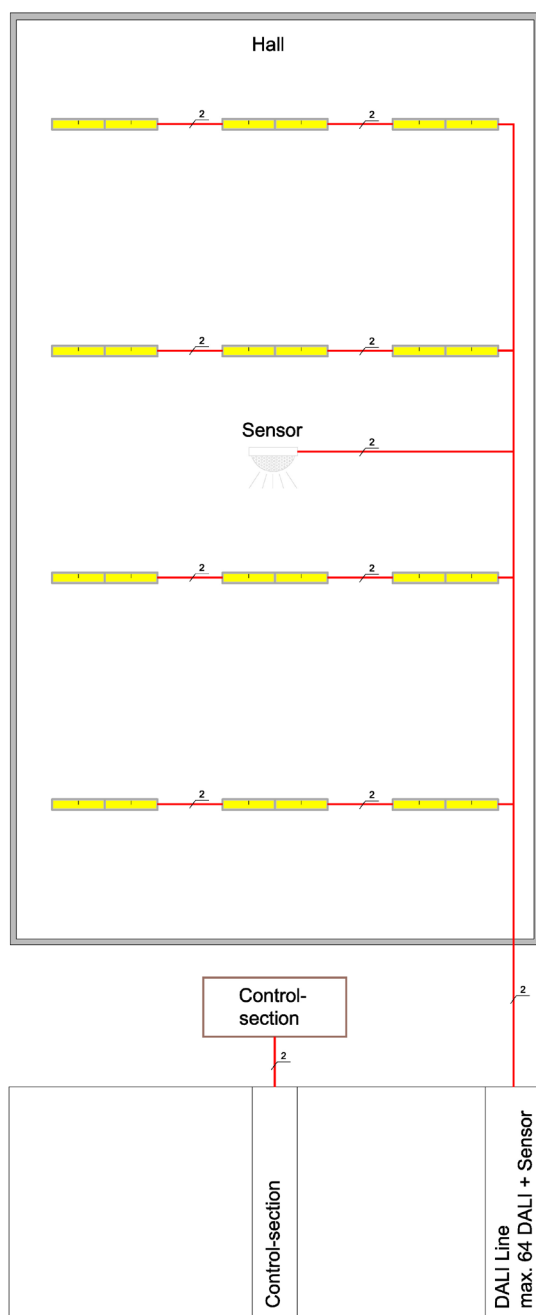
Solution:

- Regiolux hall controller as an inline device for distributors or switch cabinets
- 1 sensor for light, presence/motion detection; with protective wire cage
- Individual luminaire groups or lighting scenes can be controlled using control points provided on site
- Automatic operation using presence/motion detectors
- Configuration and settings via app
- 1 DALI line for controlling max. 64 DALI devices



Example power supply

System diagram



Regiolux Sports Hall Control pro51

The units and the DALI line must be installed in the low-voltage line (e.g. NYM) on account of the operating voltage.

Lines for the voltage supply to the luminaires and the controller are not shown.

Function and system description

Regiolux hall controller for multi-purpose halls and indoor tennis centres (max. 64 DALI devices)

The lighting system is controlled using a central controller that is installed in the sub-distribution box provided on site. The luminaires are operated on a DALI line with up to 64 DALI devices. The individual functions and lighting values of the luminaires are configured using the B.E.G. DALI LINK app. The necessary steps and measures are explained in detail and in an understandable manner in the provided operating manual. The app has an online help feature and is intuitive to use.

A light and presence/motion-dependent controller by means of a sensor is provided as a usage-oriented energy-saving measure. A setpoint can be set for daylight control. As the amount of daylight increases, the lighting is dimmed more and more and will be switched off when there is sufficient daylight. If the level of light falls, the lighting system switches on again.

In automatic mode, the motion sensor switches the lighting on when a person enters the hall, the light value is controlled according to the saved setpoint. As soon as no more motion is detected, the light switches off again after the configurable delay time has elapsed.

The necessary lighting setpoint is saved via the app. The Bluetooth push button coupler serves as an interface for communication with the system. Additional lighting values can be stored for freely-definable luminaire groups. Commands are given using the four freely-assignable digital inputs on the push button coupler.

Circuit and connection diagrams as well as overview and functional diagrams are supplied for installation of the system.

The system is configured and commissioned in accordance with supplied instructions. The only tool needed is a professional luxmeter.

Options (on request):

Push button coupler for further control points

Sensors for extending the detection range

Commissioning service

Components/tender texts

DALI lighting controller for multi-purpose hall;
external control point can be connected;
incl. all components for up to 64 DALI devices;
incl. project planning;
incl. connection diagram and operating manual;
delivery only; assembly, connection work and commissioning by others

Type: RX-Control pro51

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Sensor package
1 x light and motion sensor
for connection to DALI controller RX-Control pro51;
incl. protective cage and various accessories;
incl. connection diagram and operating manual;
delivery only; assembly, connection work and commissioning by others

Type: RX-Control pro51-SP

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More information

The aforementioned examples provide a representative overview for common use cases. Modifications to pre-assembled systems are possible within the scope of the technical specifications of the device on request.

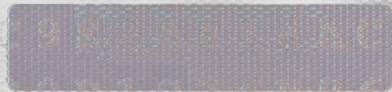
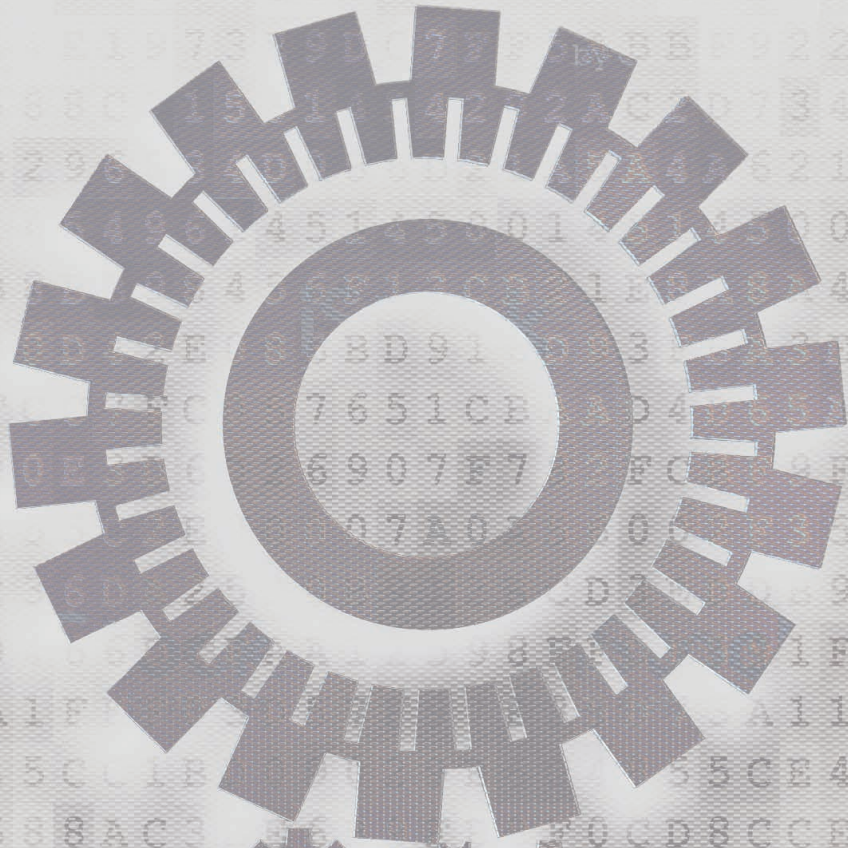
The systems described consist of several individual components that are not necessarily listed individually. Regiolux guarantees the compatibility and functionality of the systems according to the function descriptions.

If an order is placed, detailed documentation will be provided for each system, e.g. performance data, installation diagrams and operating manuals.

Further details on request.

Please note!

DALI is not SELV (safety extra-low voltage)! Voltages >50 V can occur in the DALI bus. For this reason, a low-voltage line with a minimum cross section of 1.5 mm² must be installed. We recommend you install the DALI bus in a line together with the mains power supply.



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