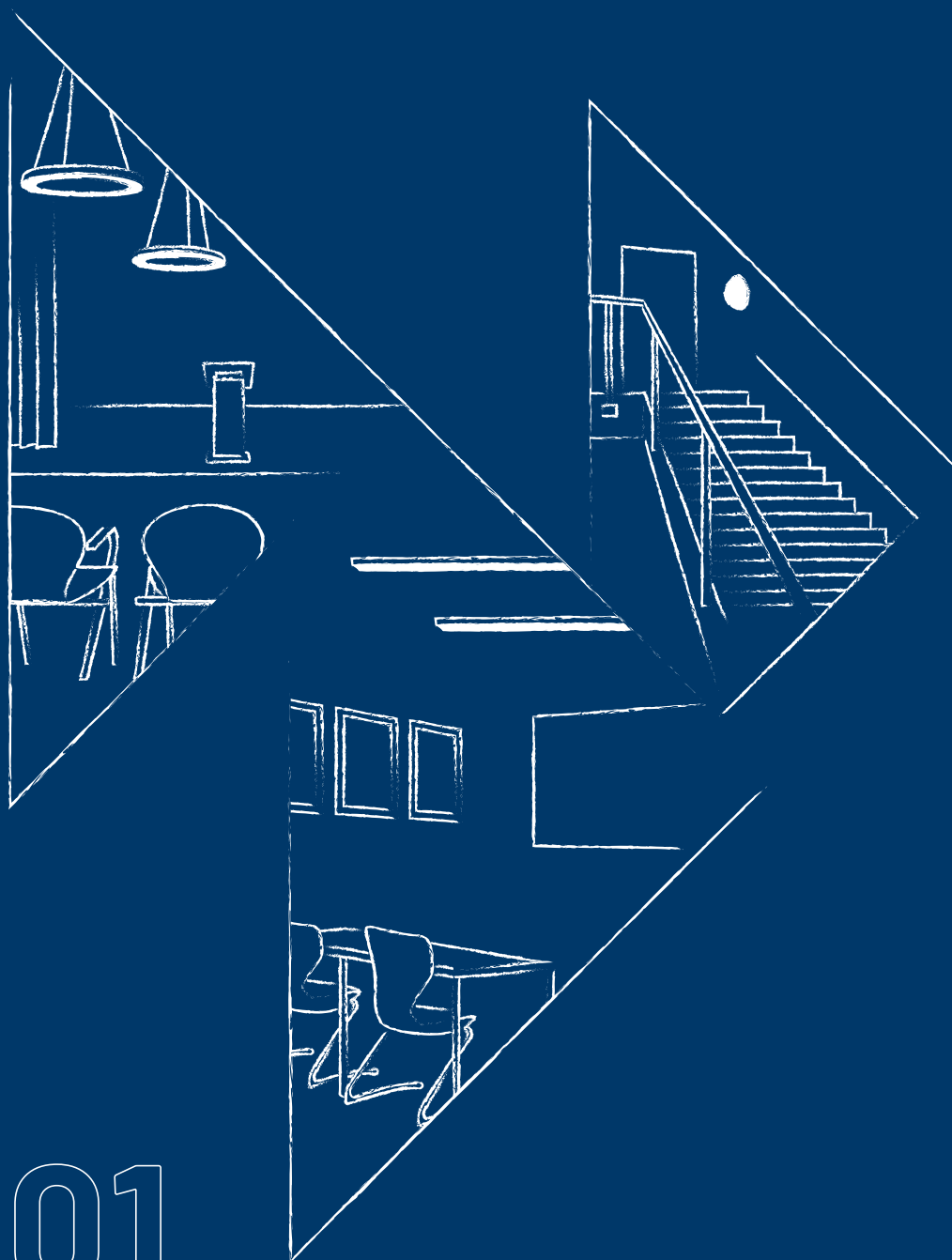




# SOLUTION BROCHURE

LIGHTING FOR EDUCATIONAL INSTITUTIONS



01

# LIGHTING FOR SCHOOLS AND PUBLIC AREAS

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## User comfort & compliance with standards

# What good lighting has to achieve today



### Visual comfort & standards

- Uniform, low-glare light
- Flicker-free to reduce fatigue and headaches
- Ergonomic lighting & concentration enhancement
- Suitable for blackboards, screens and group work
- Good colour rendering and low colour deviation



### Sustainability & Promotion

- Resource-conscious materials
- Funding available through national and regional programmes
- Low maintenance for low operating costs
- Robust construction for high frequency of use
- Take-back and recycling concepts available





## Energy efficiency

Up to 70 % energy savings thanks to sensor technology

LED with high luminous efficacy up to 140 lm / W

Presence and daylight control as standard



## Safety & Operational Safety

Emergency lighting option can be integrated

Emergency lighting with delay-free start

Long service life reduces failures

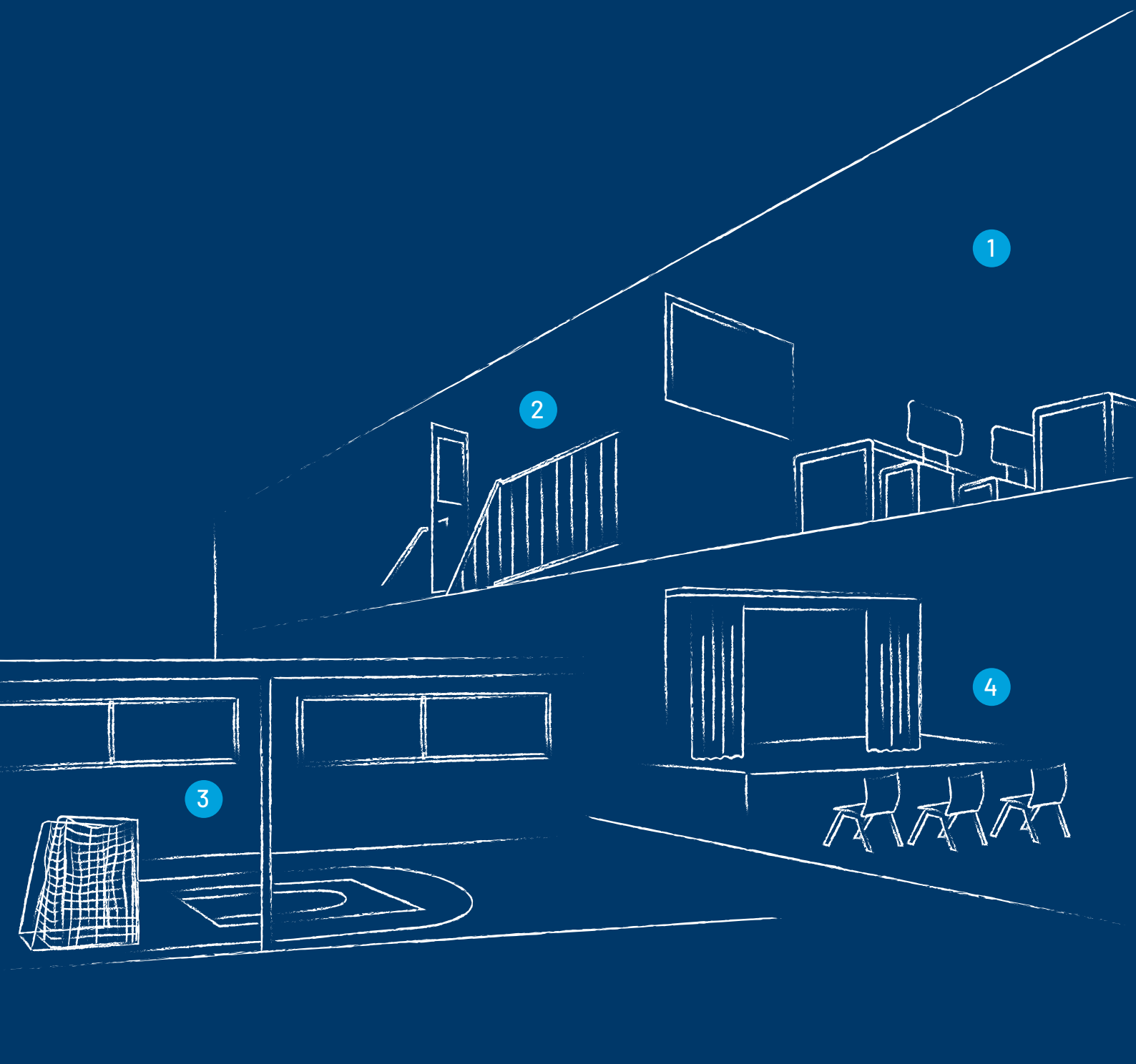


## Future-proof integration

DALI / KNX-compatible and IoT-ready

Easy connection to existing control systems

Flexibly expandable for hybrid use



1 Classroom

3 Sports halls

2 Corridors

4 Lounges



5 Staff room

7 Stairwells

9 Sanitary

6 Specialist rooms

8 Administrative  
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## REQUIREMENTS AND STANDARDS

### Classroom

- Lighting controllability for different uses
- Consideration of daylight
- Avoiding mirror reflections
- Cylindrical illuminance on teaching staff, 150 lx at a height of 1.6 m
- Vertical illumination of boards, 500 lx
- Illuminance at table height of 0.75 m, 500 lx
- Good glare control of luminaires from all viewing angles,  $UGR \leq 19$

### Specialist rooms

- Adjusting the lighting to suit the subject being taught
- Enhanced colour rendering in art rooms at art schools
- Required characteristics of the luminaires, e.g. higher protection rating in training workshops
- Lighting intensities of over 500 lx depending on the use of the specialist rooms

# LIGHTING SOLUTIONS | CLASSROOMS

## Practical example of lighting design



| Requirement                                                          | Solution                                                |
|----------------------------------------------------------------------|---------------------------------------------------------|
| Low ceiling height, no suspended ceiling                             | Surface-mounted luminaires                              |
| High visual comfort                                                  | Flat luminaire with microprismatic cover, UGR $\leq 19$ |
| Can also be used as continuous light runs in other rooms if required | The luminaire must be continuous run compatible         |
| Timeless angular design                                              | Linear rectangular surface-mounted luminaires           |
| Blackboard lighting, light distribution primarily on the blackboard  | Asymmetrical distribution luminaires                    |
| Sustainable luminaire                                                | LED unit and driver can be replaced separately          |
| Controllable via presence and daylight sensors                       | DALI luminaires and sensor technology                   |

### *Lighting expertise sets a precedent – for over 50 years*

Since the 1970s, RIDI has stood for excellent lighting technology in the field of educational institutions. Our many years of expertise guarantee you the highest quality, which is reflected in each of our tailor-made solutions.

## Product recommendations

### ARKA

(in the practical example)



- Microprismatic technology makes it ideal for offices and educational institutions
- Continuous lighting versions available
- Recessed, illuminated surface for an attractive design

### RIDI LINIA EVO | VL2-GMS



- UGR  $\leq 19$  for optimum visual comfort and BAP-compatible
- IP54 dust and splash-proof
- 24% indirect component for gentle ceiling brightening

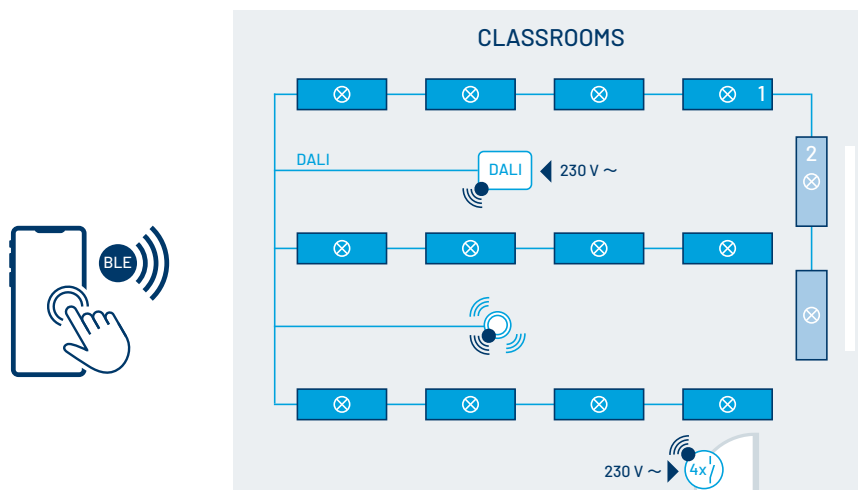
### EL



- Universally applicable in system ceilings, panel ceilings and existing installations
- Multilens technology for focused learning
- Asymmetrical light distribution for targeted illumination

## Planning example APCON light control

- APCON EASY BLE – wireless or DALI cable-based hybrid solution based on the proven Casambi wireless / mesh system.
- Configure all APCON components and luminaires conveniently via the Casambi app on your smartphone or tablet.
- Fully or semi-automatic operation of room lighting, presence-dependent and / or daylight-dependent. Manual operation is also possible at any time – for switching on and off as well as for individual dimming via push buttons.
- Manual control of panel lighting for switching on and off as well as individual dimming via push buttons.
- Connection option for standard DALI luminaires and for DALI luminaires with colour light control.
- Wireless networking of individual rooms for central control – including higher-level systems – and flexible scaling for complete building solutions.



### SYSTEM COMPONENTS

**APCON EASY BLE hybrid box** for two lighting groups as central intelligence enables the full range of Casambi functions.



### SENSORS

**APCON DALI-2 sensor** as surface-mounted or recessed ceiling version with large detection field for easy planning and reliable detection.



### OPERATING AND CONTROL ELEMENTS

**APCON EASY BLE push-button coupler** with four inputs for flush mounting. Supports switching, dimming and lighting scenes.





# LIGHTING SOLUTIONS | SPECIALIST ROOMS

## Practical example of lighting design



| Requirement                                    | Solution                                                       |
|------------------------------------------------|----------------------------------------------------------------|
| Varying room sizes and mains phases            | Flexible mounting rail system                                  |
| Invigorating lighting with high visual comfort | Luminaires with direct / indirect output                       |
| Quality glare-free light                       | Same luminaire for blackboard and room lighting, UGR $\leq$ 19 |
| Homogenous illumination without harsh shadows  | Linear luminaire with microprismatic cover                     |
| Long service life                              | 100.000 hours                                                  |
| Various uses                                   | Adjustable brightness                                          |
| Sensors can be integrated as required          | Sensors can be freely positioned in the mounting rail system   |

### *Long-lasting quality that pays off for your project*

RIDI stands for products that offer stable value over many years thanks to their outstanding quality and durability. This sustainability ensures that your investment is protected in the long term while minimising maintenance costs.

## Product recommendations

### RIDI LINIA EVO | VL2-GMS (in the practical example)



- UGR  $\leq$  19 for optimum visual comfort and BAP-compatible
- IP54 dust and splash-proof
- 24% indirect component for gentle ceiling brightening

### RIDI LINIA EVO | VL2-GLS



- Operating range up to 6 metres
- Excellent to reduce glare with UGR  $\leq$  19 (up to 7000 lm) combined with protection rating IP54
- Improved working environment thanks to first-class light quality

### F-LINE

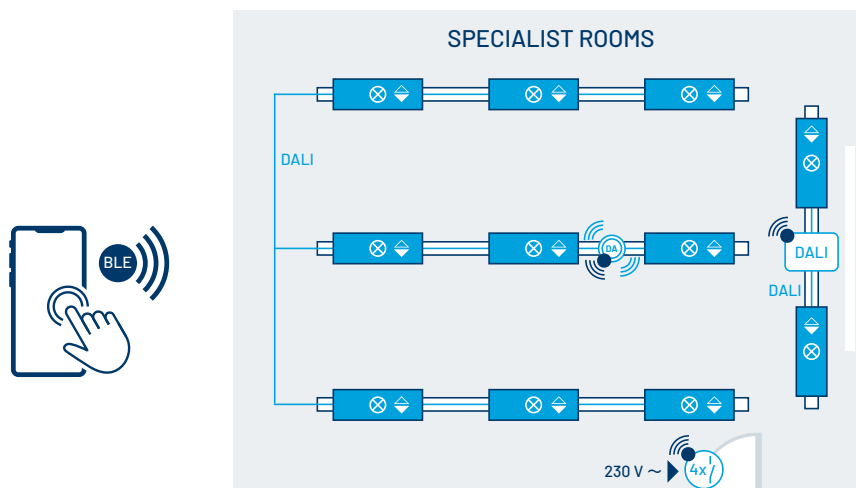


- Flat pendant luminaire with Multilens technology or microprismatic
- Flexible use as a single luminaire, continuous arrangement or shape structure
- Efficient and sustainable



## Planning example APCON light control

- APCON EASY BLE – wireless or DALI cable-based hybrid solution based on the proven Casambi wireless / mesh system.
- Configure all APCON components and luminaires conveniently via the Casambi app on your smartphone or tablet.
- Fully or semi-automatic operation of room lighting – presence-dependent and / or daylight-dependent – via the sensor module integrated in the RIDI LINIA EVO light strip. Alternatively, manual operation for setting fixed lighting scenes, switching on and off, and individual dimming via push-button.
- Manual control of panel lighting for switching on and off as well as individual dimming via push buttons.
- Easy-to-maintain broadcast operation for standard DALI-RIDI LINIA EVO gear trays and designs for coloured light control.
- Wireless networking of individual rooms for central control – including higher-level systems – and flexible scaling for complete building solutions.



### SYSTEM COMPONENTS

RIDI LINIA EVO – Module insert with APCON EASY BLE hybrid box for separate control of the luminaires.



### SENSORS

RIDI LINA EVO master sensor module insert with large detection field for low planning effort and reliable detection.



### OPERATING AND CONTROL ELEMENTS

APCON EASY BLE push-button coupler with four inputs for flush mounting. Supports switching, dimming and lighting scenes.







**Theodor Heuss Secondary School,  
Leverkusen**

**Renovation:** 2025

**Subject area:** Educational institutions

**Photographer:** Frieder Blickle





## REQUIREMENTS AND STANDARDS

### Lounges

- Uniform indirect lighting for rest and relaxation
- Presence control of the luminaires
- Lighting intensity of 200 lx in communal areas, recreation rooms and canteens

### Administrative offices

- Ergonomic lighting in the workplace
- Presence and daylight control of luminaires for maximum energy savings
- Lighting intensity of 500 lx in computer based work rooms
- Limitation of luminance to  $< 3,000 \text{ cd/m}^2$  at beam angles  $> 65^\circ$
- Luminaires with glare reduction from all viewing angles to  $\text{UGR} \leq 19$

### Staff rooms

- Division of staff rooms into lighting zones (e.g. relaxation, meetings, screen work)
- Lighting controllability for different uses
- Lighting intensity of 300 lx in the staff room
- Lighting intensity of 500 lx for computer work



# LIGHTING SOLUTIONS | LOUNGES

## Practical example of lighting design



| Requirement                                     | Solution                                  |
|-------------------------------------------------|-------------------------------------------|
| Pleasant and inviting lighting                  | Pendant luminaires direct / indirect beam |
| Harmonious and calming luminaire shape          | Round luminaires                          |
| Relaxed atmosphere                              | Uneven luminaire arrangement              |
| Glare-free luminaires, when working on a laptop | UGR $\leq 19$                             |
| Simple group work possible                      | At least 300 lx                           |
| Presence detection with two follow-up times     | DALI luminaires and sensor technology     |

## Product recommendations

### IRIS

(in the practical example)



- Flexible use as a pendant, surface-mounted or wall light
- Available in 2 sizes
- Transparent housing with opal or transparent ring disc

### PURELIGHT



- Uniform light distribution
- Round and square designs
- Suitable for surface, pendant or wall mounting

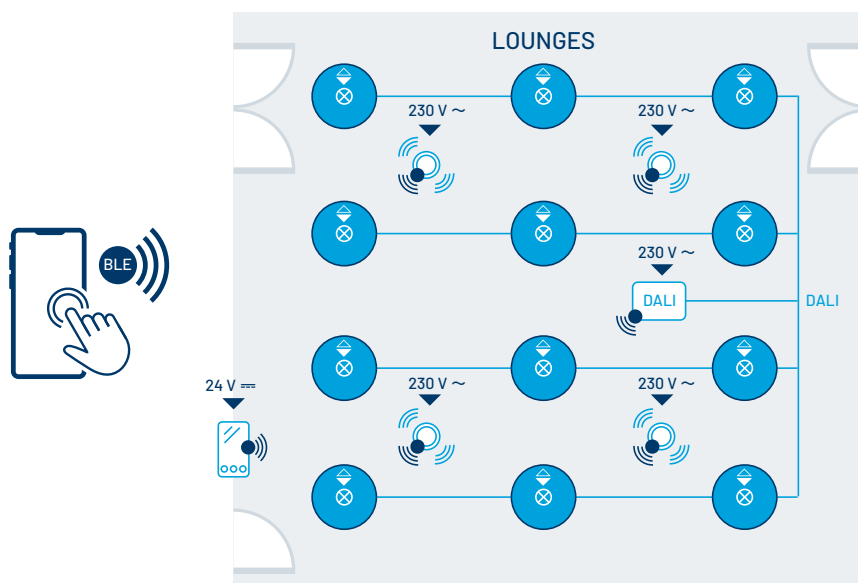
### MAXI



- Available in 3 sizes
- 4 standard colours available, special colours possible
- Fire-retardant textile covering according to B1 in accordance with DIN 4102

## Planning example APCON light control

- APCON EASY BLE – wireless or DALI cable-based hybrid solution based on the proven Casambi wireless / mesh system.
- Configure all APCON components and luminaires conveniently via the Casambi app on your smartphone or tablet.
- Lighting scene control, individual control, time- and / or daylight-dependent lighting in common areas via push buttons and / or display, presence-dependent control of adjacent corridors according to room layout.
- Luminaires are individually addressed and can be freely grouped for repurposing and assigned to the desired sensors and control elements.
- Connection option for standard DALI luminaires and for DALI luminaires with light colour control.
- Wireless networking of individual rooms for central control – including higher-level systems – and flexible scaling for complete building solutions.



### SYSTEM COMPONENTS

**APCON EASY BLE hybrid box** for individually addressed luminaires as central intelligence enables the full range of Casambi functions.



### SENSORS

**APCON EASY BLE sensor** as a surface-mounted or flush-mounted version with a large detection field for easy planning and reliable detection.



### OPERATING AND CONTROL ELEMENTS

**APCON EASY BLE 4.8" colour display** for switching on and off, dimming, Tunable White / TW, RGBW colour and scene control. With integrated room temperature sensor.



### *Individual project planning and professional on-site service*

RIDI offers you not only products, but also comprehensive planning and implementation. Our lighting design and on-site service ensure that your lighting solutions are perfectly tailored to your project requirements – from the initial idea to mounting.



# LIGHTING SOLUTIONS | ADMINISTRATIVE ROOMS

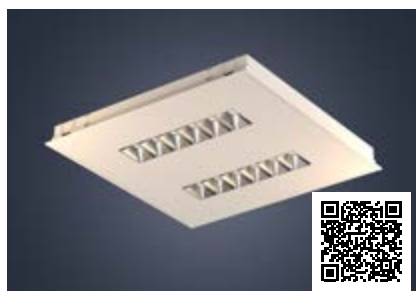
## Practical example of lighting design



| Requirement                              | Solution                                        |
|------------------------------------------|-------------------------------------------------|
| 600 grid ceiling                         | Recessed light                                  |
| Efficient lighting                       | Directional light, less wall illumination       |
| Very good lumen per watt ratio           | At least 160 lm / W                             |
| Sustainable luminaire                    | LED unit and ballast can be replaced separately |
| Long service life                        | 100.000 hours                                   |
| Glare-free luminaire                     | UGR $\leq$ 19                                   |
| Daylight control with presence detection | DALI luminaires and sensor technology           |

## Product recommendations

### EL (in the practical example)



- Universally applicable in system ceilings, panel ceilings and existing installations
- Multilens technology for focused learning
- Asymmetrical light distribution for targeted illumination

### AB2



- Renovation-optimised housing dimensions
- Glare-free lighting for offices (UGR  $\leq$  19)
- Available as xFlex or DALI variants

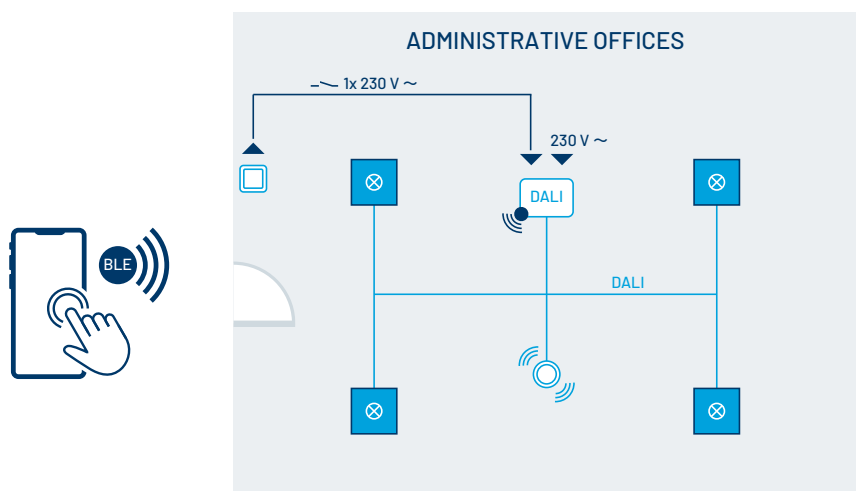
### FPL4



- Selectable light colour via colour switch
- Variably adjustable luminous flux thanks to xFlex
- On the room side protection rating IP44

## Planning example APCON light control

- APCON EASY BLE – wireless or DALI cable-based hybrid solution based on the proven Casambi wireless / mesh system.
- Configure all APCON components and luminaires conveniently via the Casambi app on your smartphone or tablet.
- Fully or semi-automatic operation of room lighting, presence-dependent and / or daylight-dependent. Manual operation is also possible at any time – for switching on and off as well as for individual dimming via push buttons.
- Maintenance-friendly broadcast operation for standard DALI luminaires and DALI luminaires for light colour control.
- Wireless networking of individual rooms for centralised control – including higher-level systems – and flexible scaling for complete building solutions.



### *Special solutions from our own production*

Whether LED assembly, sheet metal processing or mounting – with consistent in-house production, we also implement complex lighting solutions precisely, efficiently and in a project-specific manner.

### SOLUTION PACKAGE

**APCON EASY BLE SOLUTION PACKAGE ONE** – Room solution package for connecting up to 20 dimmable Device Type 6 (DT6) and Tunable White DALI luminaires Device Type 8 (DT8). Includes an APCON hybrid box and a combined light and presence sensor DALI-2. Optional push-button connection for switching on / off and dimming.



# LIGHTING SOLUTIONS | STAFF ROOMS

## Practical example of lighting design



| Requirement                                                  | Solution                                                  |
|--------------------------------------------------------------|-----------------------------------------------------------|
| Plasterboard ceiling                                         | Recessed luminaire                                        |
| No separate sensors                                          | Sensors are integrated into the luminaire                 |
| Workplace with homogenous illumination without harsh shadows | Linear luminaire with microprismatic cover, $UGR \leq 19$ |
| Long pendant luminaire for wall, ceiling and table lighting  | Tubular luminaire, opal cover, $UGR \leq 19$              |
| Workstations with presence and daylight control              | DALI luminaires and sensor technology                     |
| Various controllable lighting groups                         | Lighting control with control elements                    |

### *Lighting solutions that last*

RIDI focuses on repairable products with replaceable components. Replaceable light sources extend service life, reduce maintenance costs and contribute to the sustainable use of resources.

## Product recommendations

### ARKA

(in the practical example)



- Microprismatic technology makes it ideal for offices and educational institutions
- Continuous light-compatible versions available
- APCON EASY BLE sensor technology controls up to 30 DALI luminaires

### PURELIGHT OFFICE

(in the practical example)



- Ideal for computer workstations thanks to  $UGR \leq 19$
- Homogeneous, direct-indirect beam pendant luminaire
- First-class light quality

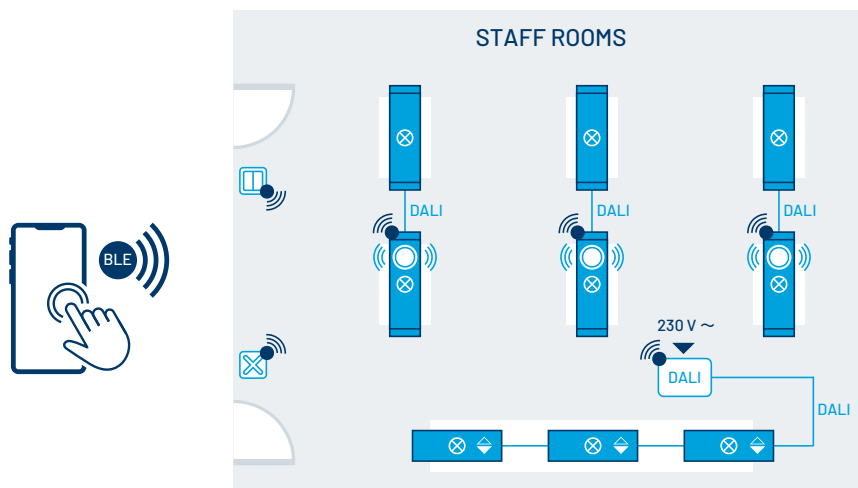
### EL



- Universally applicable in system ceilings, panel ceilings and existing installations
- Multilens technology for focused learning
- Asymmetrical light distribution for targeted illumination

## Planning example APCON light control

- APCON EASY BLE – wireless or DALI cable-based hybrid solution based on the proven Casambi wireless / mesh system.
- Configure all APCON components and luminaires conveniently via the Casambi app on your smartphone or tablet.
- Daylight and presence-dependent control of lighting above desks via the sensor integrated into the luminaire. An additional luminaire connected via DALI is automatically controlled as well.
- In addition, manual operation is possible for fixed lighting scenes, switching on and off, and individual dimming via the battery-free push button.
- Separate manual control of direct-indirect lighting in the meeting area via a multifunctional control element. Luminaires can be dimmed individually, adjusted in light colour value and stored with fixed lighting scenes.
- Connection option for standard DALI luminaires and for DALI luminaires with light colour control.
- Wireless networking of individual rooms for central control – including higher-level systems – and flexible scaling for complete building solutions.



### SYSTEM COMPONENTS

**APCON EASY BLE hybrid box** for two lighting groups controls direct and indirect components and, as a central intelligence unit, offers the full range of Casambi functions.



### SENSORS

**ARKA luminaire** with integrated **APCON EASY BLE sensor** controls both its own and connected DALI luminaires.



### OPERATING AND CONTROL ELEMENTS

**APCON EASY BLE XPRESS** – Control element for switching on / off, dimming, Tunable White / TW and scene control.

**APCON EASY BLE double push button** – with identical functions.







***Reliable after-sales service  
and direct support for your projects***

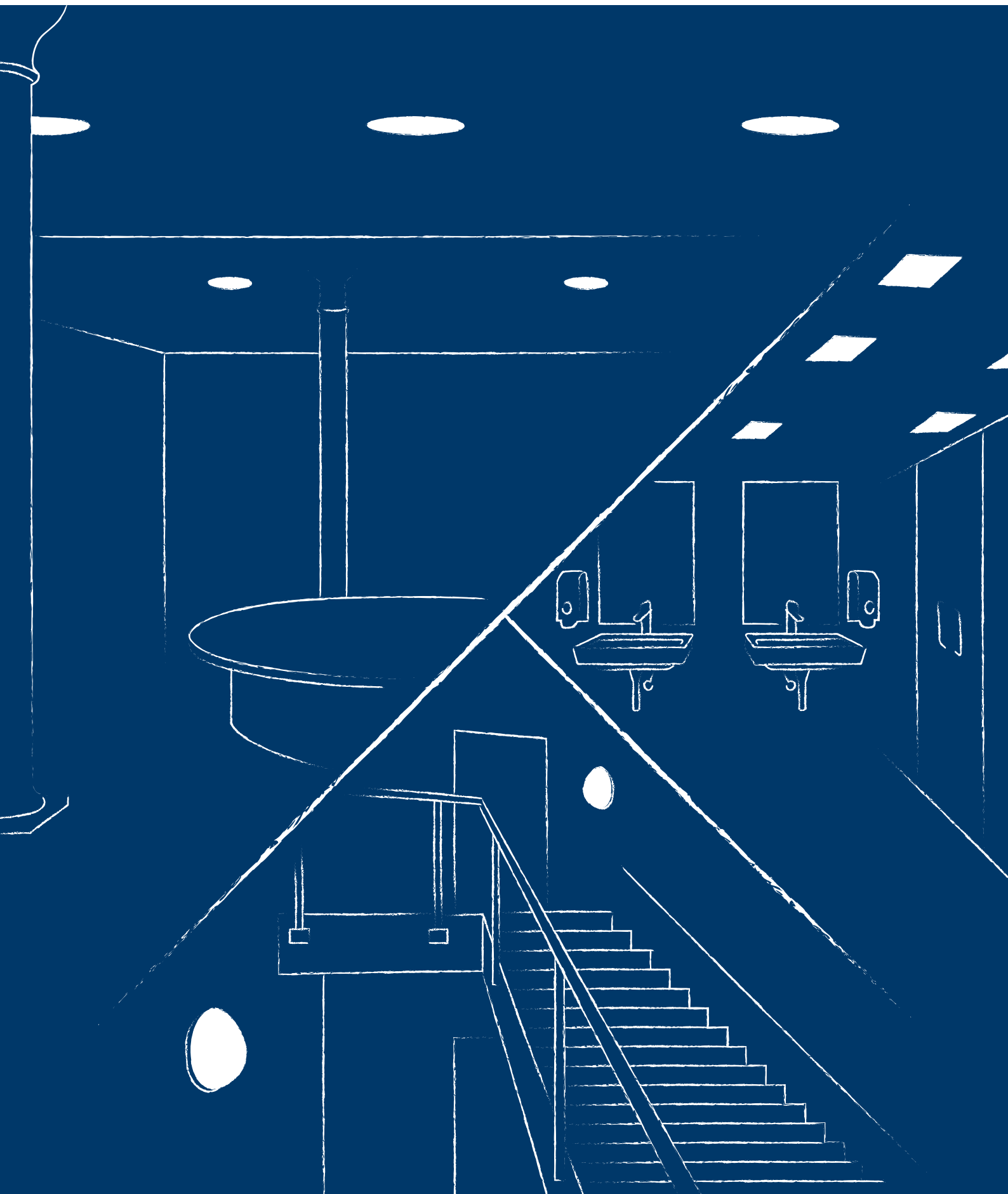
With RIDI, you have a partner who is there for you even after installation. Our dedicated after-sales service ensures that your lighting solutions always function optimally, while our direct support guarantees quick solutions when needed.





Theodor Heuss Secondary School, Leverkusen





## LIGHTING FOR SCHOOLS AND PUBLIC AREAS

### CORRIDORS, STAIRWELLS & SANITARY

## REQUIREMENTS AND STANDARDS

### Corridors

- Presence and daylight control of luminaires for maximum energy savings
- Design of exits and entrances as transition zones to avoid sudden changes in lighting
- Provision of safety-related lighting
- Recommendation for higher lighting levels in windowless corridors
- Illuminance of 100 lx on the floor
- Lighting intensity of 200 lx in the 1-metre area in front of the lift

### Stairwells

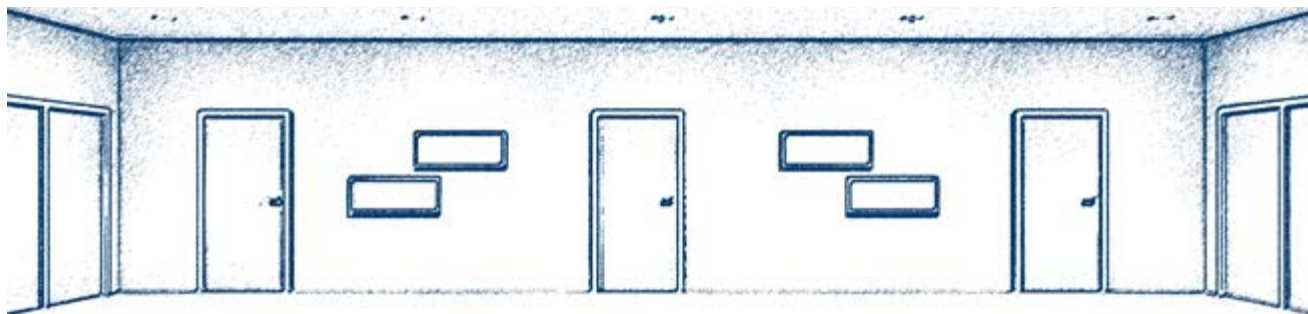
- Low-glare and adequate illumination of stairways to prevent an increased risk of accidents
- Provision of safety-related lighting
- Compliance with the required illuminance per stair step
- Illuminance of 150 lx on the floor in educational institutions

### Sanitary

- Presence control of the luminaires
- Illuminance of 200 lx at a height of 75 cm
- Vertical facial illumination of 200 lx at a distance of 50 cm in front of the mirror

# LIGHTING SOLUTIONS | CORRIDORS

## Practical example of lighting design



| Requirement                                            | Solution                                |
|--------------------------------------------------------|-----------------------------------------|
| Plasterboard ceiling                                   | Recessed luminaire                      |
| Lighting alignment for easy installation               | Round downlight                         |
| Colour of the luminaire housing same as ceiling colour | similar to RAL9010                      |
| With wall brightening                                  | Opal panel, white reflector             |
| Glare-limited                                          | Light emission significantly controlled |
| 10% basic lighting, 100% when motion is detected       | DALI luminaires and sensor technology   |

### *Efficient and cost-effective lighting solutions for your project*

RIDI offers you economical lighting solutions that reduce costs in the long term. Our products are characterised by high energy efficiency and low maintenance costs, making them a smart choice for sustainable and cost-effective projects.

## Product recommendations

### ALBA

(in the practical example)



- Can be used as a surface-mounted, recessed, or suspended variant
- Four light distributions for versatile applications
- Brilliant lighting comfort thanks to unique light mixing chamber

### RUF02



- Available as a semi-circular or cylindrical diffuser
- Available in an impact-resistant design
- Variants with HF sensor or 2-channel function available

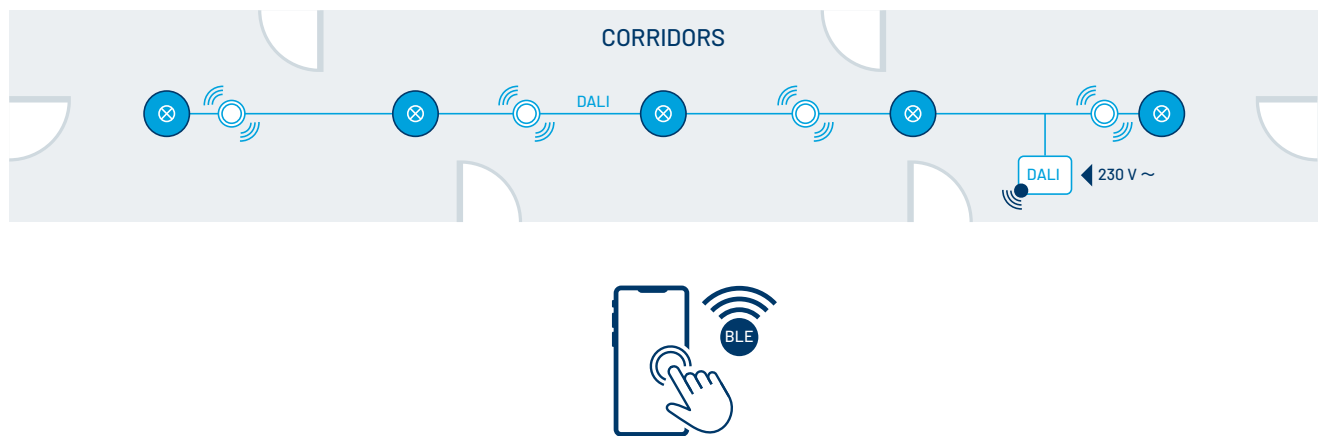
### SARA



- Flexible mounting thanks to multi-cutout options
- Selectable light colour via Multi Colour Switch
- Multi Power Switch for switchable versions

## Planning example APCON light control

- APCON EASY BLE – wireless or DALI cable-based hybrid solution based on the proven Casambi wireless / mesh system.
- Configure all APCON components and luminaires conveniently via the Casambi app on your smartphone or tablet.
- Fully automatic, presence-dependent operation of corridor lighting, optionally with time-controlled basic lighting at a low lighting level when no one is present.
- Easy-to-maintain broadcast operation for standard DALI luminaires and DALI luminaires with light colour control. Larger corridors can be divided into sections.
- Wireless networking of individual rooms for central control – including higher-level systems – and flexible scaling for complete building solutions.



### SYSTEM COMPONENTS

**APCON EASY BLE hybrid box** in various designs as central intelligence enables the full range of Casambi functions.



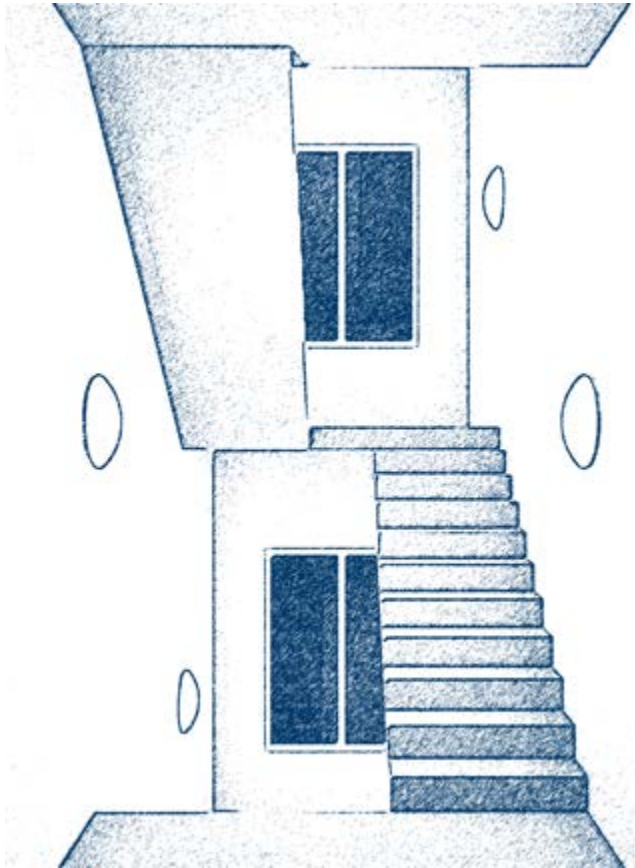
### SENSORS

**APCON DALI-2 sensor** as surface-mounted or recessed ceiling version, as well as flush-mounted wall version with large detection field for easy planning and reliable detection.



# LIGHTING SOLUTIONS | STAIRWELLS

Practical example of lighting design



| Requirement                                         | Solution                                                              |
|-----------------------------------------------------|-----------------------------------------------------------------------|
| Increased risk of accidents                         | Luminaires must avoid disability glare                                |
| Reduced glare                                       | Do not install luminaires in the main line of sight when wall mounted |
| Reduced glare                                       | Large surface luminaires with opal cover                              |
| Reduced glare                                       | Luminance from all angles < 10,000 cd / m <sup>2</sup>                |
| Easy to install                                     | Round luminaires for wall mounting                                    |
| Impact resistance for luminaires within hands reach | Impact resistance rating IK10                                         |
| Motion detection with long follow-up times          | Switchable lights with integrated sensor technology                   |
| Safety lighting available for general lighting      | Emergency light and monitoring module integrated into luminaire       |

## Product recommendations

### RUF02

(in the practical example)



- Available as a semi-circular or cylindrical diffuser
- Available in impact-resistant design
- Variants with HF sensor or 2-channel function available

### KJU



- Round and square design
- Prismatic or opal designs
- Direct or direct-indirect radiation

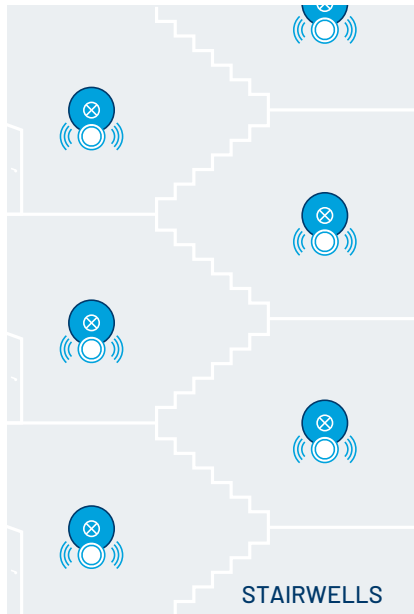
### LFN



- Classic linear single luminaire with IP50 protection rating
- Ceiling or wall mounting
- Opal diffuser made of UV-stabilised PMMA



## Planning example APCON light control



- Round diffuser luminaire with integrated APCON HF radar motion sensor behind impact-resistant luminaire cover.
- Three-pole luminaire connection.
- Adjustable follow-up times on the sensor.
- Luminaire that switches on when the sensor detection field is entered and switches off automatically after a set delay time.

### SENSORS

APCON HF radar motion sensor  
integrated into luminaire.



### *Sustainable lighting solutions, awarded the silver medal by EcoVadis*

RIDI is committed to sustainability in all areas. Our products, and processes have been awarded the silver medal by EcoVadis, which underlines our commitment to environmental and social standards. With RIDI, you are investing in future-proof solutions that meet the highest sustainability requirements.

## LIGHTING SOLUTIONS | SANITARY

### Practical example of lighting design



| Requirement                                             | Solution                                                                                      |
|---------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| 600 grid ceiling                                        | Recessed light                                                                                |
| Low budget                                              | Luminaire in the lower price segment                                                          |
| Flexible installation for rooms with different ceilings | Mounting frames and mounting frames available as accessories                                  |
| No mirror light                                         | Flat luminaire and wide beam light distribution                                               |
| Mirror light                                            | Higher basic brightness > 300 lx to meet facial illumination requirements in front of mirrors |
| Motion detection with two follow-up times               | DALI luminaires and sensor technology                                                         |

### Product recommendations

#### FPL4

(in the practical example)



- Selectable light colour via colour switch
- Variably adjustable luminous flux thanks to xFlex
- On the room side, protection rating IP44

#### SPN



- Narrow mirror light with smooth surface
- UV-stabilised PMMA diffuser
- Optionally with power switch and socket

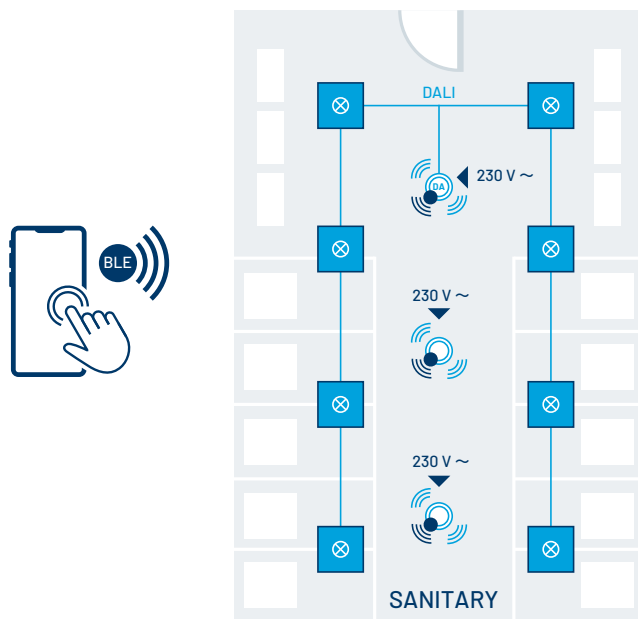
#### ALBA



- Can be used as a surface-mounted, recessed, or suspended variant
- Four light distributions for versatile applications
- Brilliant lighting comfort thanks to unique light mixing chamber

## Planning example APCON light control

- APCON EASY BLE – wireless or DALI cable-based hybrid solution based on the proven Casambi wireless / mesh system.
- Configure all APCON components and luminaires conveniently via the Casambi app on your smartphone or tablet.
- Fully automatic operation of room lighting, presence-dependent and daylight-dependent as required.
- Maintenance-friendly broadcast operation for standard DALI luminaires.
- Wireless networking of individual rooms for central control – including higher-level systems – and flexible scaling for complete building solutions.



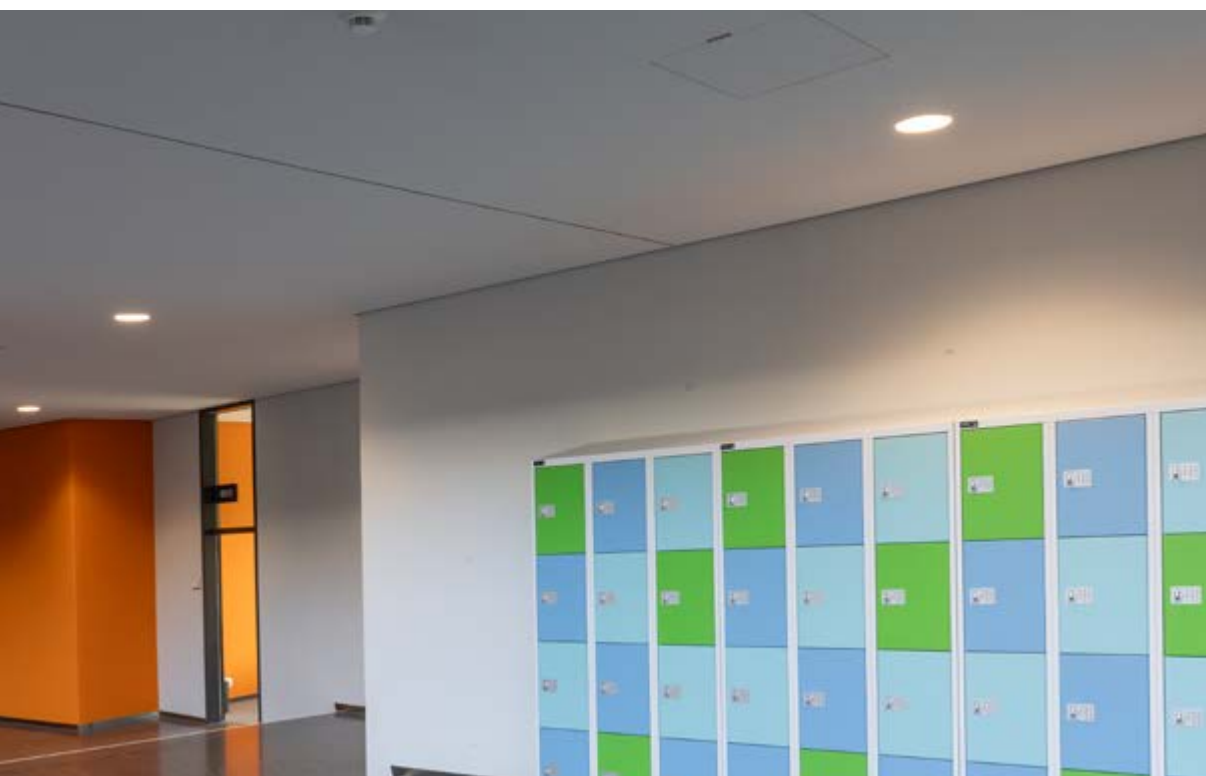
### *Individual solutions for renovations and tailor-made luminaires*

Whether you need simple refurbishments or tailor-made luminaires for complex projects, RIDI offers you the right solution. Our in-depth production expertise enables us to implement both standard solutions and specialised lighting solutions for any construction project.

#### SENSORS

**APCON EASY BLE sensor** as master or extension sensor, available for surface mounting and flush mounting, with large detection field for low planning effort and reliable detection.

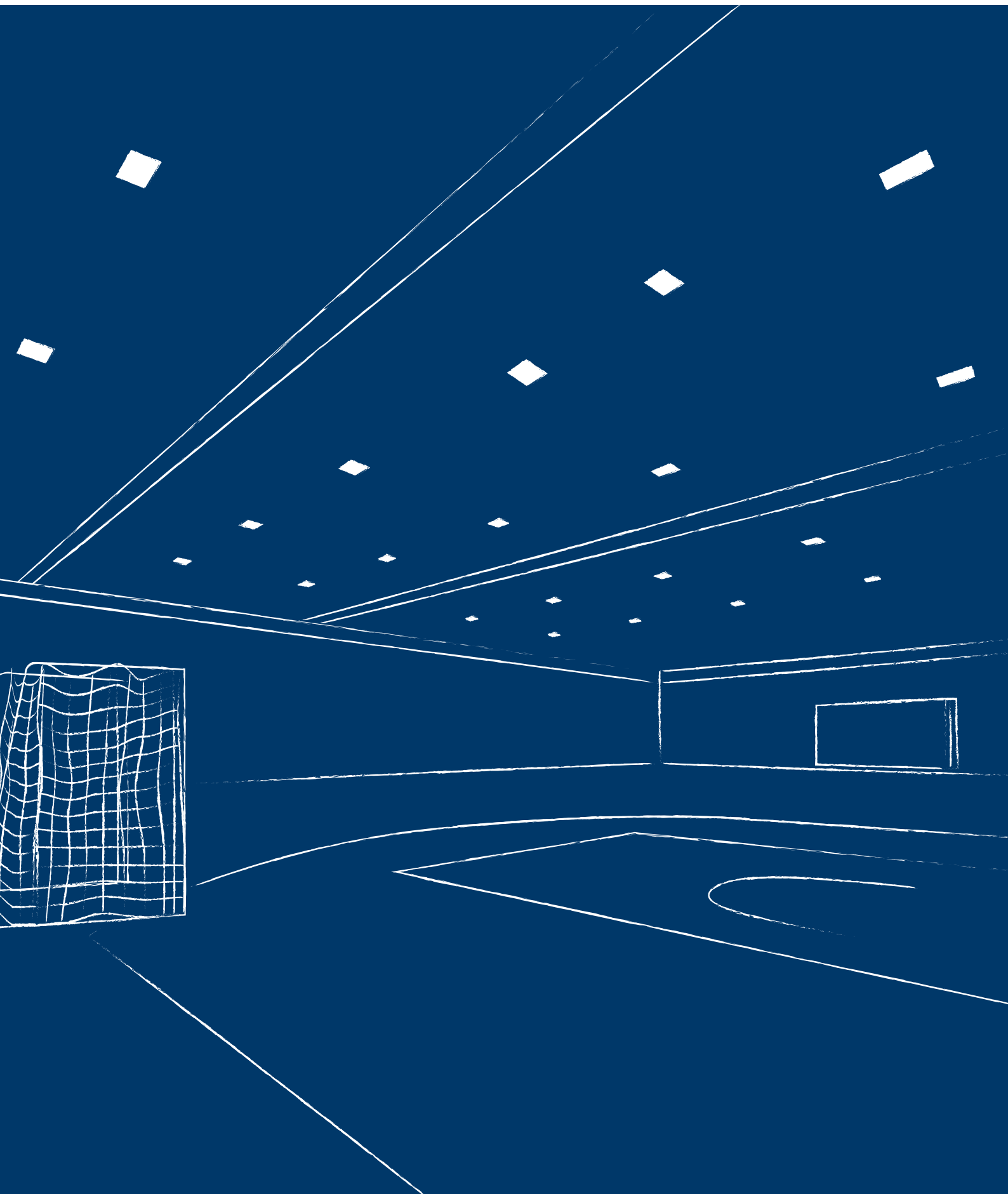








Theodor Heuss Secondary School, Leverkusen





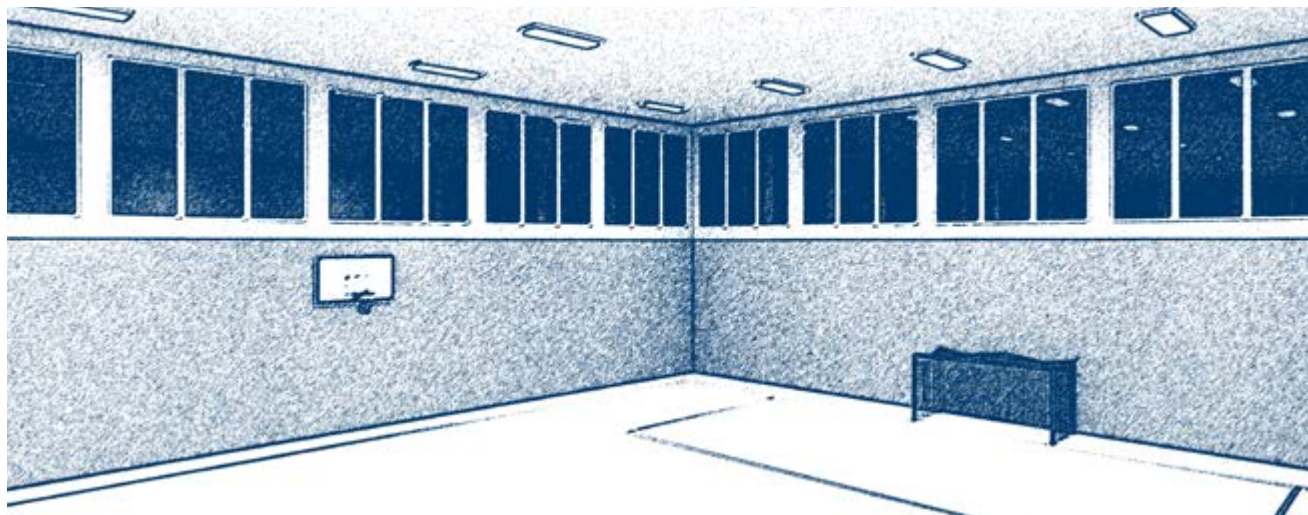
## REQUIREMENTS AND STANDARDS

### Sports halls

- Even illumination across the entire playing field
- Sufficient vertical illuminance
- Ball resistant lighting design
- Flicker-free design of the luminaires
- Provision of safety-related lighting
- Illuminance of 300 lx on the floor for pure school sports
- Recommended illuminance of 500 lx due to the diverse use of the sports hall
- Glare limitation  $UGR \leq 22$
- Minimisation of glare from all angles thanks to luminaires with a large light emission surface

# LIGHTING SOLUTIONS | SPORTS HALLS

## Practical example of lighting design



| Requirement                                                     | Solution                                             |
|-----------------------------------------------------------------|------------------------------------------------------|
| Solid ceiling, no recessed installation possible                | Surface-mounted luminaires                           |
| Fixed mounting, "no ball trap"                                  | Surface-mounted luminaires                           |
| Suitable for sports halls                                       | Ball resistant                                       |
| Good wall illumination and high vertical illuminance levels     | LVK wide beam                                        |
| Luminaires must be glare-free                                   | UGR $\leq 22$                                        |
| Low glare when looking directly into the luminaire, e.g. tennis | Large flat luminaire                                 |
| The sports hall is also used for extracurricular training       | Illuminance 500 lx on the floor                      |
| Motion detection and 3 fixed light adjustable values            | DALI luminaires, ball resistant sensors, touch panel |

### *Lighting solutions from standard to special*

Whether it's a product series or a custom-made item, we offer the complete range of lighting solutions, flexibly adaptable to your project requirements.

## Product recommendations

### ABR-BWS

(in the practical example)



- Ball resistant surface-mounted luminaires
- Robust construction
- Sustainable through consistent reparability

### HER02



- Up to 60,000 lumens of luminous flux
- Controllable via APCON
- Wide beam or narrow-beam

### SHL2



- Ball resistant enclosed single-mount luminaire
- Particularly robust and insensitive to dirt
- Impact-resistant PMMA acrylic panel

## Solution packages for sports halls



Lighting control solutions do not have to be complicated. They should be easy to plan, convenient to install and intuitive to operate. The experience gained from numerous sports hall lighting solutions and close cooperation with planners, installers and users has been incorporated into the development of the APCON INDIVIDUAL lighting control packages for sports halls and translated into tailor-made solutions. Plug & Play – with or without on-site commissioning: twelve ready-made solution packages for sports hall projects, well thought out from planning and installation to daily use. Solution packages for 1-, 2- and 3-court sports halls, equipped with various functional options, including detailed connection diagrams and descriptions – all from a single box.

Included in all APCON INDIVIDUAL solution packages: Touch panel as control element and DALI / USB interface for configuration via free PC software.



- 3 fixed light values selectable
- Individually adjustable light value

### One-field sports hall

APCON | SP-SH-**F1**

Art. no. 0209292

Plug and play

Without commissioning

### Two-field sports hall

APCON | SP-SH-**F2**

Art. no. 0209293

Plug and play

Without commissioning

### Three-field sports hall

APCON | SP-SH-**F3**

Art. no. 0209294

Plug and play

Without commissioning



- 3 fixed light values selectable
- Individually adjustable light value
- Motion detection with 15-minute delay time and automatic switch-off

### One-field sports hall

APCON | SP-SH-**FM1**

Art. no. 0209295

Plug and play

Without commissioning

### Two-field sports hall

APCON | SP-SH-**FM2**

Art. no. 0209297

Plug and play

Without commissioning

### Three-field sports hall

APCON | SP-SH-**FM3**

Art. no. 0209298

Plug and play

Without commissioning



- 3 light values selectable
- daylight-dependent control
- Individually adjustable light value
- Daylight-dependent lighting control

### One-field sports hall

APCON | SP-SH-**FD1**

Art. no. 0209299

Plus commissioning

### Two-field sports hall

APCON | SP-SH-**FD2**

Art. no. 0209300

Plus commissioning

### Three-field sports hall

APCON | SP-SH-**FD3**

Art. no. 0209301

Plus commissioning



- 3 light values selectable
- daylight-dependent control
- Individually adjustable light value
- Motion detection with 15-minute delay time and automatic switch-off
- Daylight-dependent lighting control

### One-field sports hall

APCON | SP-SH-**FDM1**

Art. no. 0209302

Plus commissioning

### Two-field sports hall

APCON | SP-SH-**FDM2**

Art. no. 0209303

Plus commissioning

### Three-field sports hall

APCON | SP-SH-**FDM3**

Art. no. 0209304

Plus commissioning

## Ball resistant lighting for every challenge

# Robust & tested

When planning, testing and implementing lighting in sports halls and multi-purpose halls, safety, compliance with standards and tested quality are key factors with RIDI.

### 1 Safety in accordance with standards

Ball impact resistance is mandatory: DIN 18032-3 requires 36 ball impacts at 60 km / h. RIDI luminaires reliably pass this test – for standard-compliant safety in halls where ball games are played.

### 2 Resilient & functionally reliable

RIDI luminaires remain fully functional even after repeated impacts. No deformation, no loosening of components – mechanical stability under maximum stress. Robust construction for high frequency of use.

### 3 Tested in our own laboratory

The ball impact test is carried out in-house at RIDI – under realistic conditions, at high speed and with documented evidence. Testing is carried out in accordance with ceiling category 1.

#### Ball resistant

Find out how we test ball resistant luminaires at RIDI Lighting here.



4

## Certifiable on a project-specific basis

RIDI offers individual certificates for your project – optionally also through external testing laboratories. This gives you security and documentation that is precisely tailored to the tender.

5

## RIDI LINIA EVO SPORT – modular and safe

With the accessory upgrade, RIDI LINIA EVO becomes a certified, ball resistant solution – without the need for special luminaires. Suitable for ceiling and pendant mounting.

6

## Efficient, robust, future-proof

Up to 100,000 hours of service life, up to 206, lm / W and low-glare light with  $UGR \leq 19$ : RIDI LINIA EVO SPORT combines ball resistant performance with high efficiency and light quality.

### RIDI LINIA EVO SPORT

You can find the right accessories for upgrading to RIDI LINIA EVO Sport here.





## RIDI offers solutions for complex requirements in existing buildings

# Renovation with a systematic approach and vision

**Renovation usually means complex, individual requirements that go beyond standard solutions. This is exactly where RIDI comes in – with experience, technical expertise and an eye for the big picture. At RIDI, renovation therefore means not only replacing old luminaires, but also modernising existing models.**

When modernising an existing luminaire, the existing infrastructure remains intact. This allows challenges such as complex ceiling systems, listed buildings or harmful substances in the ceiling to be reliably overcome. Historic buildings with special room conditions often require individual lighting solutions. Conversion systems from RIDI offer an ideal solution here: they are quick to install and impress with their durability.

New luminaires are useful when subsidy programmes are available, economic efficiency is a priority, or existing luminaires are defective. Many RIDI luminaires have renovation-optimised housing dimensions. Existing suspension points, drilling patterns and connection points can continue to be used – without additional work from other trades. This keeps interference with the existing infrastructure to a minimum.

A lighting calculation by RIDI illustrates which solution is more suitable in each individual case – for economical and future-proof results. In both cases, an individually planned light control system from RIDI rounds off your successful renovation project.

### Downlight renovation assistant

Even large ceiling cut-outs are no problem: they can be neatly concealed using special renovation rings – products such as ALBA, EDLR-E2 and PAT fit perfectly and create a visually uniform ceiling appearance.



#### ◀ Easy mounting

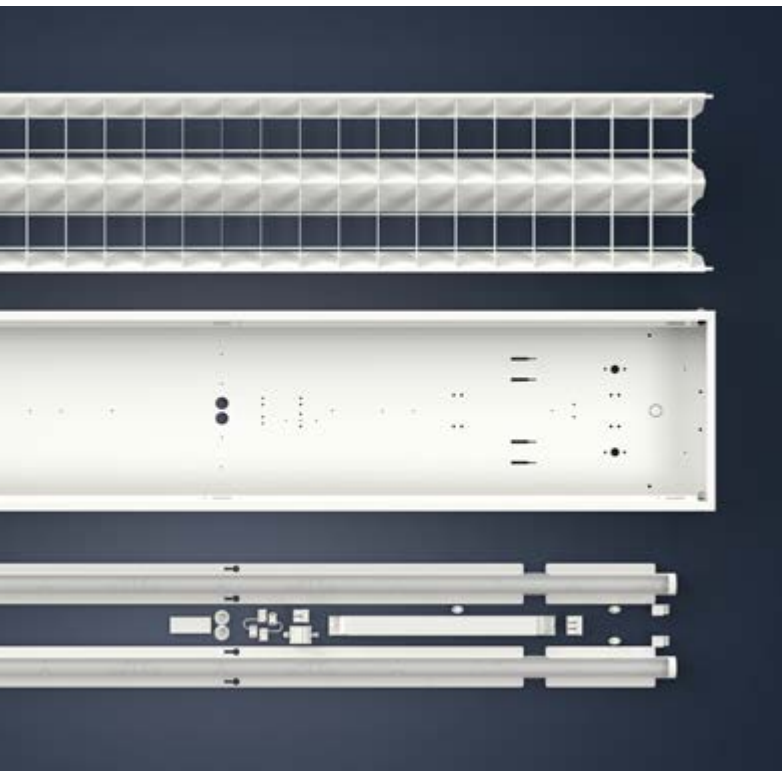
Uncomplicated, user-friendly handling



### Renovation

Further information on the topic of "renovation", including suitable product accessories, can be found here.





### Thinking ahead after renovation

An essential part of the RIDI philosophy is to develop luminaires in a modular fashion right from the start. Wherever possible, repairability is taken into account during the design phase so that components such as electrical components or LED modules can be easily replaced later on. This ensures that the light point remains unchanged throughout the entire service life of the luminaire. As a result, the luminaires remain sustainable, repairable and durable in the long term.

Series such as AB2 and ABR-BWS / EBR-BWS demonstrate how future-proofing and resource conservation are implemented in practice.

Naturally, the products are ZHAGA-compliant and labelled in accordance with the Ecodesign Directive.

## Renovation with RIDI at a glance

Efficiently modernise existing buildings with RIDI solutions.

Use existing drill patterns and openings; assembly marks disappear (e.g. AB2).

Identical feed-in points facilitate replacement.

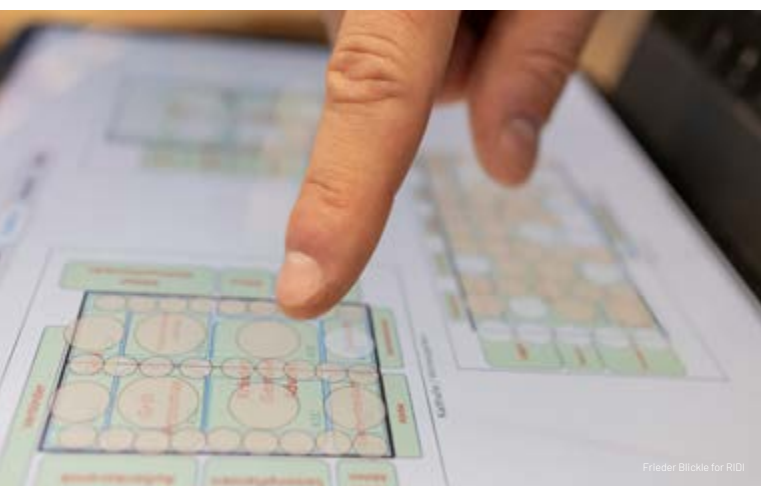
Energy-efficient, eligible for subsidies, flexible thanks to in-house production.

Renovation rings conceal large cut-outs, e.g. ALBA, EDLR-E2, PAT.

Modularly repairable, ZHAGA-compliant, ecodesign-compliant.

### Why light control?

- Reduction of energy costs and CO<sub>2</sub> emissions
- Contribution to climate protection and sustainability
- Increased efficiency in building renovations
- Compliance with legal requirements (GEG)
- Access to government funding programmes
- Extended service life through dimming and power reduction
- Future-proof thanks to digital expandability (APCON)
- Increased ease of use and flexibility



The APCON EASY BLE planning examples shown in this brochure can be networked with each other via radio. This allows individual room solutions to be combined to create scalable, building-wide control concepts – including the option of integrating central control commands, even from higher-level systems.

# APCON®

## Lighting and building control

### APCON offers!

- Energy savings through intelligent light control
- Reduction of CO<sub>2</sub> emissions during operation
- Promotability through high energy efficiency
- Suitability for refurbishment projects with existing infrastructures
- Scalability from individual rooms to complex building structures
- Maximum flexibility in terms of functions and system architecture
- High ease of use thanks to user-oriented controls
- Investment security through modular expandability
- Future-proofing through integrated digitalisation options
- High functional reliability thanks to optimised coordination with RIDI luminaires
- Support from RIDI throughout all project phases – from planning to commissioning
- Consistent project management with a designated contact person
- Clear responsibility through one supplier with overall responsibility: RIDI

## APCON EASY BLE

APCON EASY BLE is a radio-based, hybrid lighting control system based on the established Casambi system – ideal for applications where additional wiring for switching and dimming is not possible or undesirable. Depending on the project requirements, hybrid systems combining wireless and wired control can also be implemented.



**APCON®**

In addition to basic functions such as switching, dimming and daylight- and motion-dependent control, APCON EASY BLE supports numerous advanced functions. These include light colour controls such as RGB, RGBW, Tunable White and circadian light sequences based on the principle of Human Centric Lighting (HCL).

A wide range of control components enables convenient configuration and operation – via smartphone or tablet app.

### ◀ **APCON BLE SOLUTION PACKAGE ONE**

User-friendly room refurbishment solutions, reduced to the essentials

## APCON INDIVIDUAL

APCON INDIVIDUAL is a wired DALI lighting control system for demanding, tailor-made applications. It offers a high degree of functionality and flexibility and enables holistic control solutions that are precisely tailored to the respective project.

Various sensors and a wide range of control elements are available for controlling the lighting – from push-button couplers and design-oriented touch panels to displays. In addition, customisable user interfaces on smartphones or tablets enable intuitive operation.

The system supports light colour controls such as RGB, RGBW, Tunable White and circadian light sequences based on the principle of Human Centric Lighting (HCL). This is achieved using freely selectable control and operating elements.

The luminaires, sensors, control and operating units can be configured as required using a smartphone or tablet app or PC software with advanced analysis and monitoring functions.

### **APCON lighting and building control**

All current information and details on the technology, specifications and features of APCON products can be found on our website at any time.



## Fully integrated project solutions for maximum safety

# Emergency lighting

**When considering lighting solutions, life-saving emergency lighting in the event of a power failure must also be taken into account. Suitable RIDI luminaires are marked accordingly in the data sheets.**

Whether with an integrated battery as a single battery luminaire or as a central battery version for connection to a central emergency power supply – a fully integrated emergency luminaire is available for every requirement, which fits seamlessly into holistic lighting solutions.



### Single-battery emergency lights

EDS3 luminaires are equipped with a fully automatic emergency lighting element that includes an integrated self-test device and a visual status indicator (red / green LED). The standard-compliant tests are performed automatically and the test result is indicated by the LED.

The luminaires are designed for continuous operation and have a maintenance-free battery that maintains operation at reduced light intensity for 3 hours.

### Central battery emergency lights

Most of the luminaires are equipped with a switchable or DALI-dimmable electronic driver and are therefore suitable for direct voltage operation and use in a central battery emergency lighting system.

In addition, some RIDI luminaires can be equipped with a changeover relay that enables switching between mains and emergency voltage directly in the luminaire.

Monitoring modules from all common manufacturers of safety lighting systems, such as CEAG / EATON, INOTEC, Gessler, RP Group and GAZ / GSYSTEMS, can be integrated into suitable luminaires. These modules communicate with the central emergency lighting system and transmit the status of the emergency light. This flexibility enables a highly integrated and holistic lighting solution. In addition, these manufacturers offer an extensive product portfolio for a wide range of applications.



## FURTHER LINKS

### Lighting solutions

Further information on the application area "Lighting for educational institutions" can be found on the RIDI website.



### Quick planning guide

The RIDI quick planning function is available on our product pages, allowing you to perform lighting calculations directly online.





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