



DATA CENTRE

DATA HALL LIGHTING SOLUTIONS



innovative.authentic.high-performing

Why we are your perfect partner

Heritage & Reliability

For more than 70 years, RIDI has represented German engineering at its best. As a family-owned company, we stand for reliability, precision, and long-term commitment in professional lighting solutions.

Integrated Expertise

Our team combines lighting design, control system planning, emergency lighting integration, installation, and commissioning. Every stage is handled in-house – ensuring seamless, technically sound project execution.

One Partner. All Solutions.

With RIDI, clients benefit from a one-stop partner for indoor lighting, control, and commissioning. Fully integrated. Technically precise. Built for the future.

Innovation & Technology

RIDI has always been ahead of the curve – from early LED adoption to the integration of modern BLE control systems. Continuous innovation drives our mission to create intelligent, efficient lighting environments.

The right solution for your specific need

Your benefits

Investor

Perfect match! RIDI offers a comprehensive portfolio of lighting solutions, ranging from economical designs to durable, high-efficacy, fully redundant lighting systems.

Builder

Great! We consult you based on your needs and stay by your side throughout the entire project. In addition, we offer replacement spares for 10 years.

Main Contractor

Excellent fit! We understand your needs and support you flexibly at every stage of your project – with one trusted contact by your side.

**YOU
ARE**

Installer

Spot on! We offer sub-contracting to save your precious resources – from lighting installation to control commissioning.

Consultant / Specifier

Just right! Your RIDI specialist is at your side – personal, local, and hands-on. We make technology easy to understand and bring it to life with mock-ups.



REQUIREMENTS AND STANDARDS

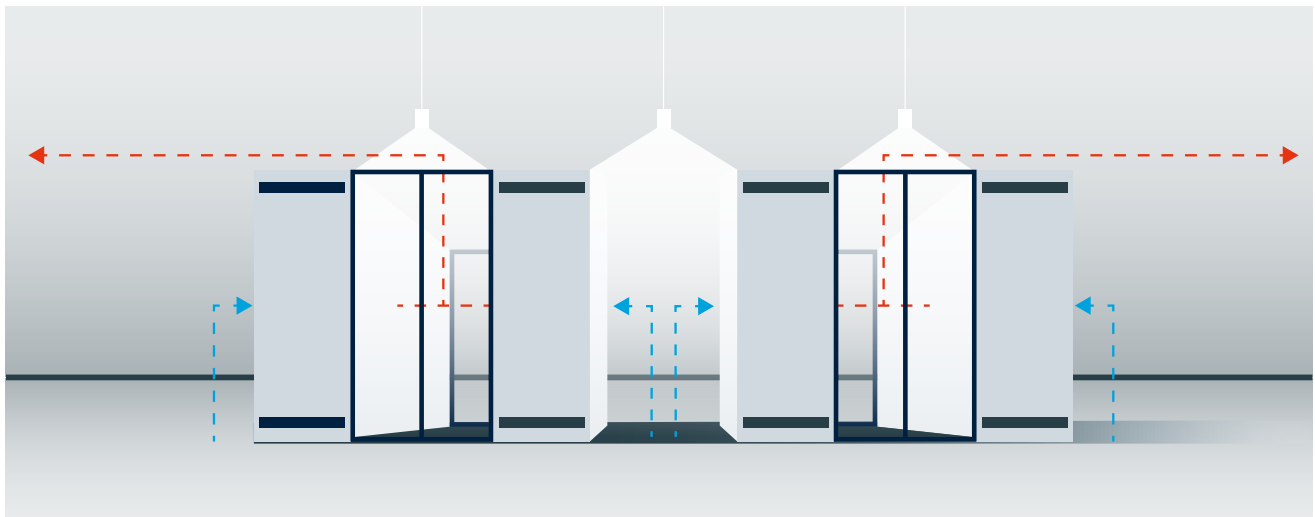
Data halls

- Controllable lighting for different operating states (normal operation, maintenance)
- High uniformity of lighting for safe orientation between racks and aisles
- Prevention of glare and reflections on shiny surfaces (e.g. cabinet fronts, displays)
- Vertical lighting for clear recognition of labels and connections on server racks
- Reliable operation even at elevated ambient temperatures
- Illuminance up to 500 lx during maintenance, with adjustable dimming for lower illuminance levels during normal operation
- High colour rendering ($Ra \geq 80$) for precise visual inspection of cabling and components
- Optional emergency lighting function in accordance with EN1838 and BS5266-1 for safe evacuation in case of emergency

LIGHTING SOLUTIONS | DATA HALLS

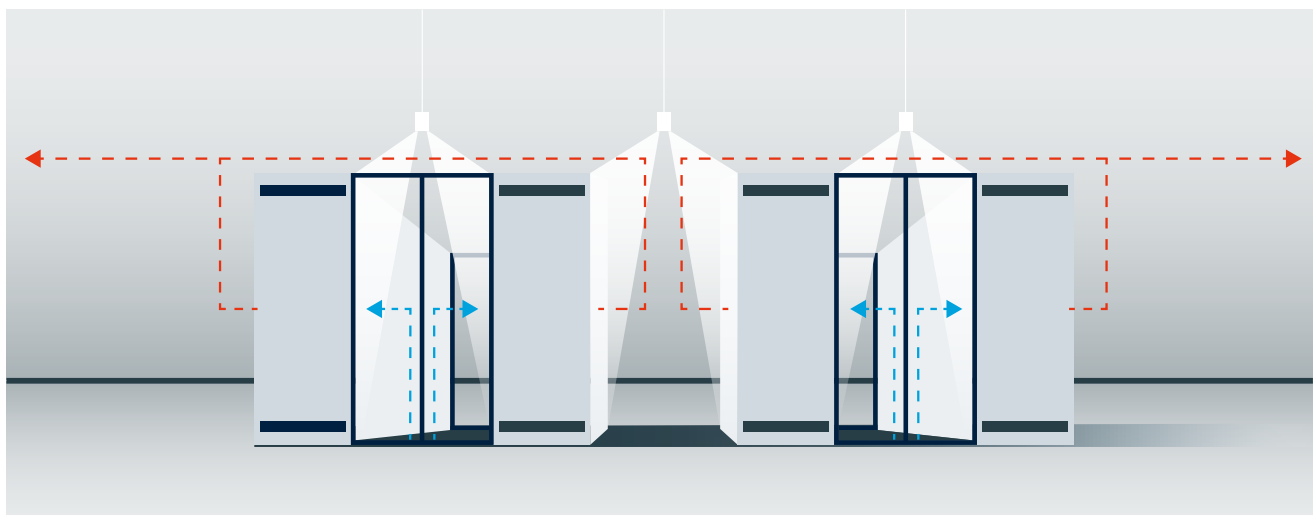
Requirements of lighting design for hot and cold aisles

In hot and cold aisle environments, every watt counts. Our systems are designed to deliver precise illumination without disturbing airflow or adding unwanted heat, ensuring energy efficiency, reduced heat load and reliability throughout the data hall.



Hot Aisle

- High thermal resistance of luminaires
- Uniform corridor illumination
- Good colour rendering



Cold Aisle

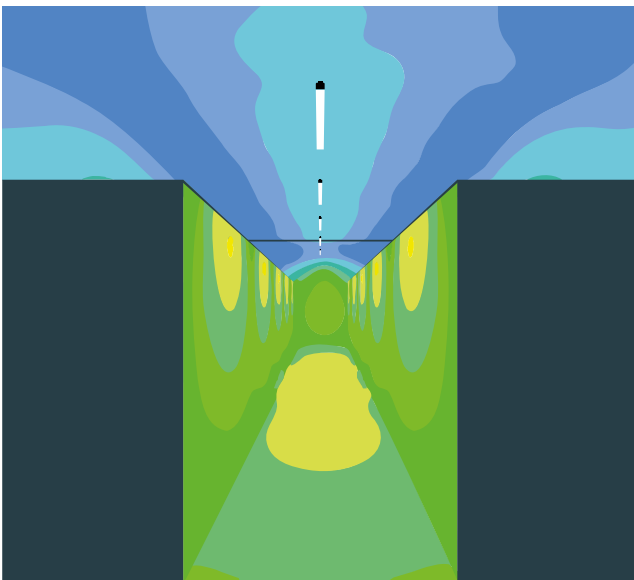
- Uniform vertical illumination of rack fronts
- Glare-free and low-shadow lighting



Energy saving throughout by smart dealing with the hot and cold aisles

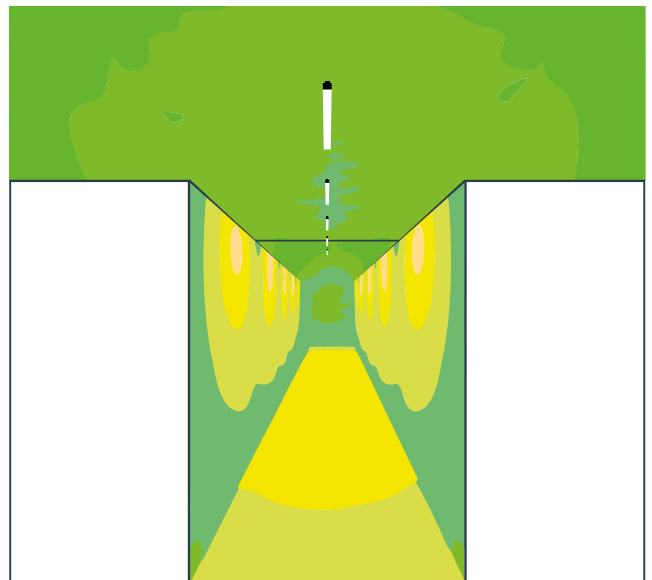
Did you know? Switching from dark to light coloured racks can reduce energy consumption by over 40 %. The improved reflectance not only enhances overall brightness but also lowers the thermal load within the data hall.

This dramatic increase in brightness means the required illumination levels can be achieved with significantly fewer luminaires. In a data hall of 830 m², this allows a reduction of around 40 % from 107 to 65 luminaires. This change lowers the thermal load by approximately 2 kW and can reduce the ambient temperature by up to 1°C, contributing to greater energy efficiency and sustainability.



RAL 9004

- 5 % reflection
- 502 Lux

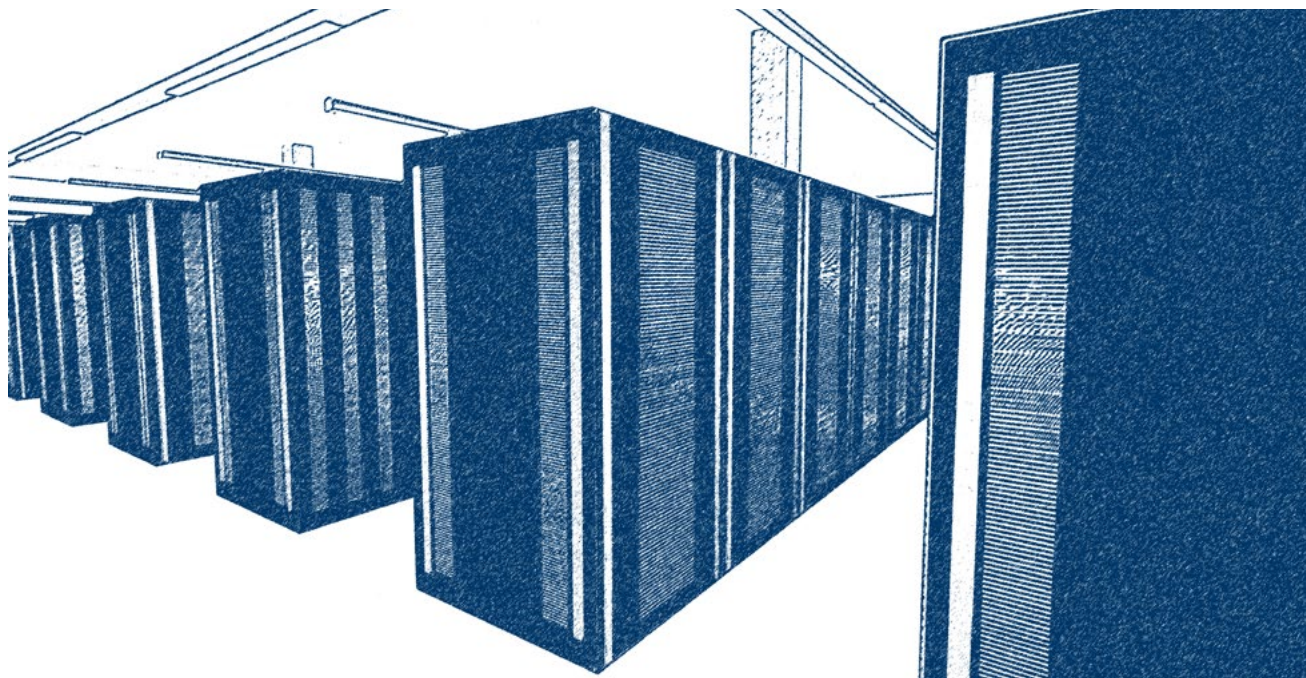


RAL 9003

- 85 % reflection
- 864 Lux

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Practical example of lighting design



Requirement	Solution
Continuous operation 24/7	Durable luminaires with minimal maintenance
Operational reliability & environmental influences	Temperature resistant up to 55 °C, IP54, emergency lighting capable
Visual comfort	High colour rendering index (CRI ≥ 90), optimised glare control (UGR ≤ 19)
Energy efficiency	High system efficiency and intelligent lighting control
Lighting control & integration into building technology	APCON Unlimited lighting control solution
Emergency lighting	Fully integrated emergency lighting solution
Sustainability & future-proofing	Energy savings and modular, scalable system architecture

Product recommendation

RIDI LINIA EVO | HIGH TEMPERATURE

The modular system RIDI LINIA EVO offers more than 200,000 combinations, some with heat-resistant technology up to 55 °C to fulfill any lighting solution, even complicated areas or applications.



Item no.	Designation
2561351	VL2P-GL150-7DAWS840B0900-HT
2561352	VL2P-GL150-7DAWS840B0600-HT
2561353	VL2P-GL200-7DAWS840B1100-HT
2561354	VL2P-GL200-7DAWS840B0850-HT
2561355	VL2P-GLS150-7DAWS840B0900-HT
2561356	VL2P-GLS150-7DAWS840B0600-HT
2561357	VL2P-GLS200-7DAWS840B1100-HT
2561358	VL2P-GLS200-7DAWS840B0850-HT

RIDI Service

With decades of experience in lighting design, we create over 100 lighting calculations for data halls each year, ensuring efficient, reliable and compliant solutions for every project.

LIGHTING SOLUTIONS | DATA HALLS

APCON UNLIMITED

Scalable DALI-2 solution to control, monitor and maintain lighting centrally. Integrated API's enable to connect lighting into the BMS (building management system).

sceneCOMevo TRIDONIC

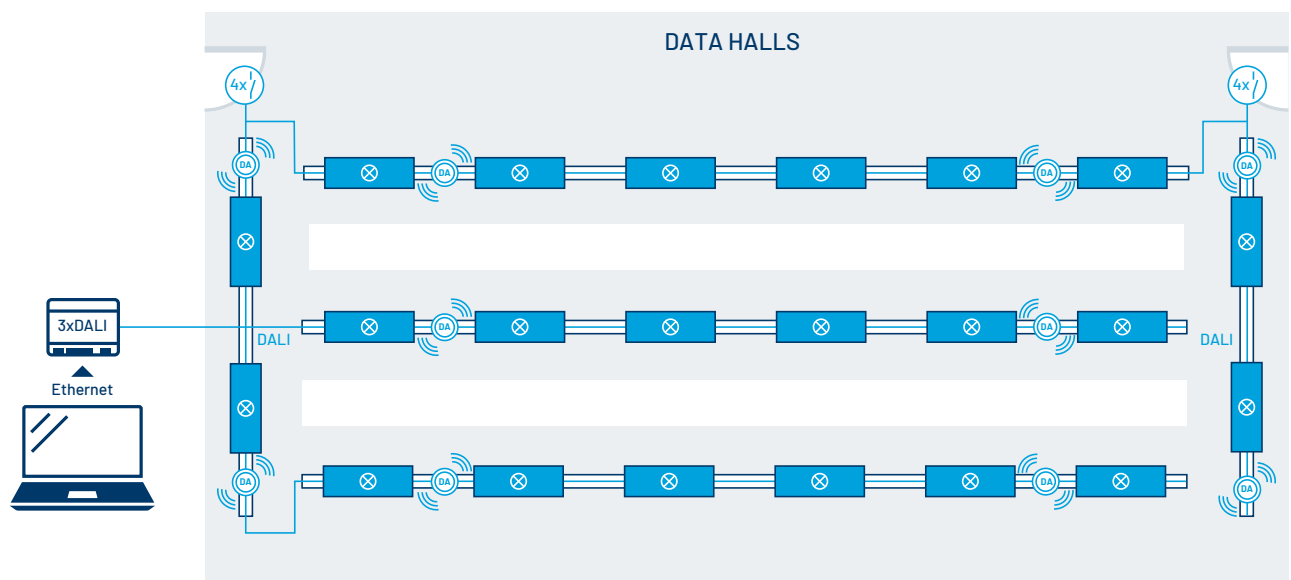
APCON UNLIMITED is offering both and a combination of

- manual control
- automated control (daylight scenes, motion control, ...)
- automated control of emergency lighting
- data services

RIDI is certified to plan and commission the system as a service-offering.

Planning example APCON light control

- APCON UNLIMITED Controller as a single master DALI-2 application controller with 3 DALI circuits for controlling up to 192 luminaires, plus sensors and push-button couplers.
- Individual controllers can be linked via Ethernet or BACnet.
- Connection to higher-level systems via BACnet, RestAPI and MQTT
- Configuration via PC or tablet web browser.
- APCON UNLIMITED Datascreen enables monitoring of the entire lighting system. Data from luminaires and sensors is continuously read out and visualised in a dashboard (energy monitoring – status reports – remote control).
- APCON UNLIMITED Analysis Tool enables long-term monitoring of the entire lighting system. Data from luminaires and sensors is continuously recorded, stored in a cloud and made available for evaluation (usage analyses & optimisation options – heat mapping – effectiveness tests – performance reports – predictive maintenance).
- Depending on the application conditions and functional requirements, presence detection, scene control and schedule control are possible.



SYSTEM COMPONENTS

APCON UNLIMITED controller with 3 DALI circuits as central intelligence enables full flexibility, functional diversity and networkability.

SENSORS

APCON DALI-2 sensor in various designs as a LINIA EVO module insert, with a large detection field for low planning effort and reliable presence detection.

OPERATING AND CONTROL ELEMENTS

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

Built for Heat. Made to Last.

RIDI LINIA EVO

With a comprehensive portfolio of more than 3,000 gear trays, RIDI LINIA EVO provides tailor-made lighting solutions for modern data-hall requirements. Its heat resistant configurations withstand ambient temperatures of up to 55 °C, maintaining consistent luminous output and quality. Certified to IP54 and built with impact resistant components, it delivers reliable, high-quality lighting with excellent colour rendering ($R_a > 90$) even in demanding industrial environments.



RIDI LINIA EVO – Customised Precision.

- Everything perfectly tailored to the customer.
- Every project is designed around the customer's specific requirements.
- Custom and refurbishment solutions ensure perfect integration into any environment.
- Fast implementation is achieved through in-house planning, engineering and production.
- This guarantees flexibility, precision and quality – all from a single source.

Your perfect system for data halls, corridors and office spaces

- Flexible luminaire & track layouts
- 2.5 mm² conductors - 16A capacity
- Flexible conductor configurations - 5, 7, 11, 13 or 14 core - flexible & sustainable
- Luminaires for all applications
- Integrated lighting controls solutions
- Integrated emergency lighting solutions
- RIDI production - German quality, comprehensive stocking & sustainability



B wide beam

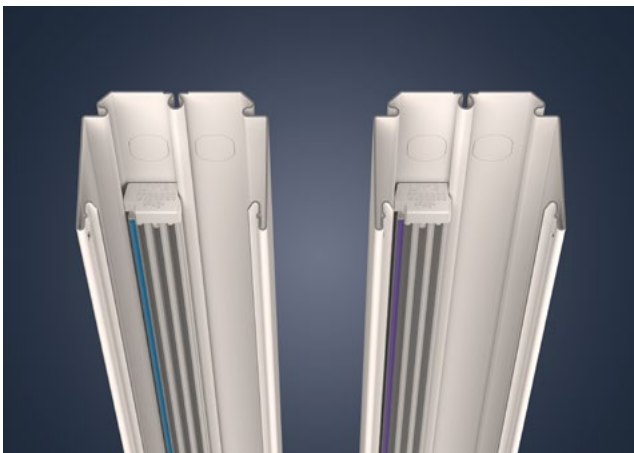


R double asymmetric beam

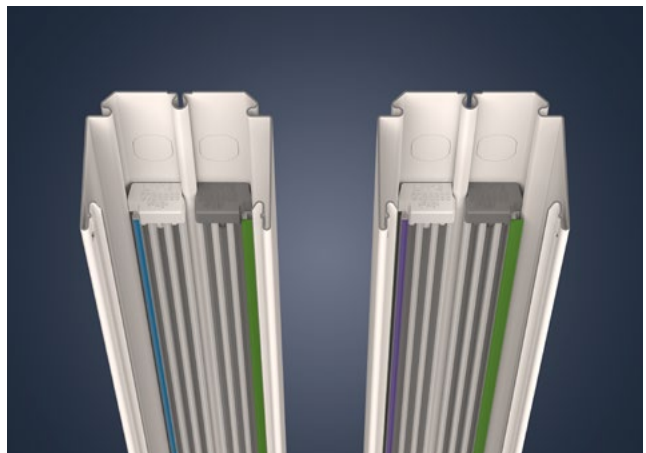
Adaptable to all electrical requirements

The newly developed trunking offers maximum flexibility and perfect adjustments. It allows easy, collision free mounting at joints, greatly simplifying the installation of luminaire inserts.

Overview of design variants:



- 5-core: Ideal for cost optimised projects
- 7-core: Perfect for entry into lighting management or emergency light integration



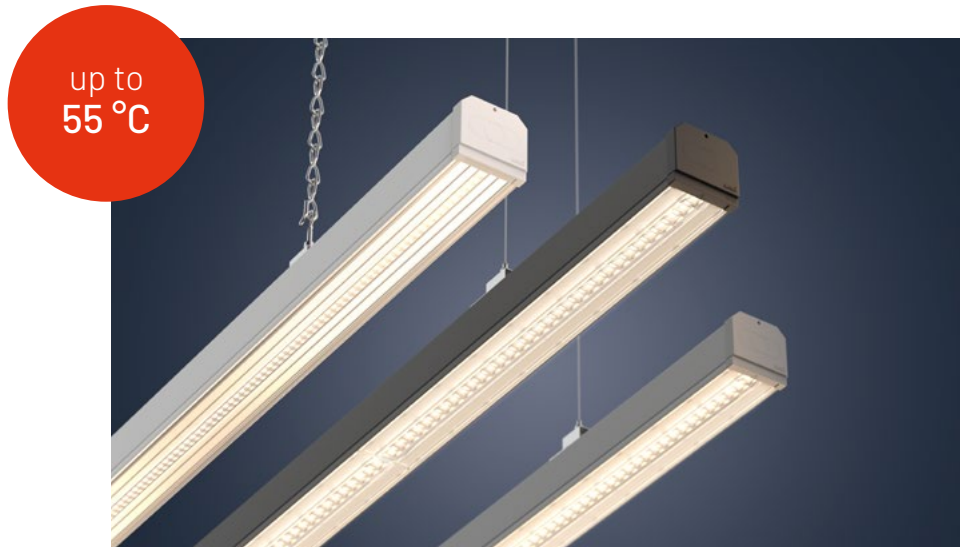
- 11-core: Ideal for projects with integrated emergency light integration and a DALI controlled general lighting and emergency lighting function
- 13-core: Ideal for projects with integrated emergency light function and sensors / light control. Through wiring: $7 \times 2.5 \text{ mm}^2$ (purple) and $6 \times 2.5 \text{ mm}^2$ (green) for two independent emergency light circuits with sensors/light control components.



14-core (2x7-core):

for complex installations with two DALI three-phase circuits

High temperature



High efficacy



Optics options

- Lenses – IP20 & IP54 individual lens per LED 360° optical control
- Prisms – IP20 & IP54 linear prisms 90° + 90° optical control
- Panels – IP54 – 360° Control + low visual brightness & diffuse shadowing

Module options

- Three lengths
- Three colours
- IP20 or IP54
- DALI / xFlex – xFlex adjust luminaire output on site without dimming controls

DUO CONNECT – Super Safe, Smart Connection

The new **DUO CONNECT** trunking connector within the **RIDI LINIA EVO** system sets a new standard for safe and efficient installation.



Its innovative 2-in-1 design combines two functions by incorporating the mechanical and electrical connector in one component. This practical solution significantly reduces installation effort, saves time during preparation and enables effortless assembly. An advanced approach that combines efficiency and user-friendliness in one product.

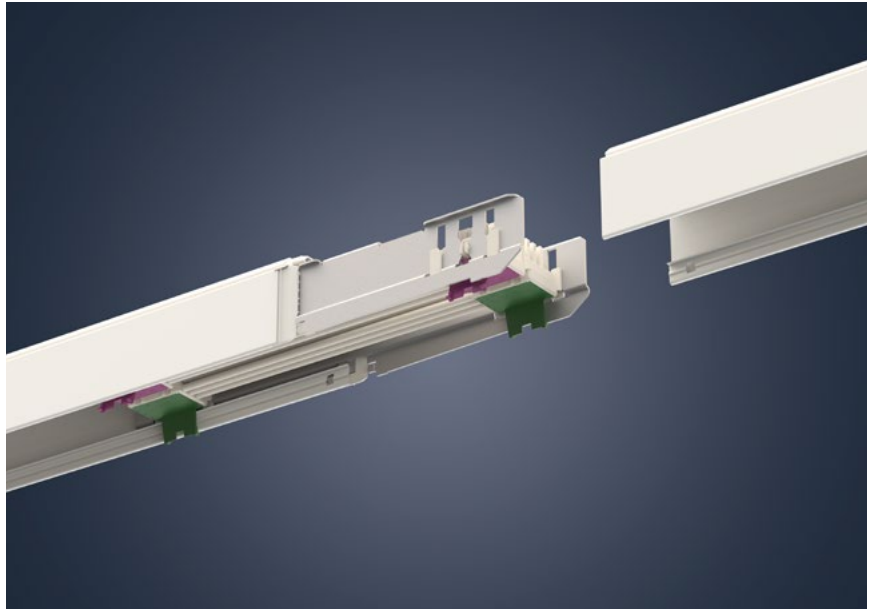
Available versions

- Standard version (IP20)
- Version with sealing gasket (IP54)
- Accessories for IP54 configuration
- Dummy cover seals (required, specified separately)
- End caps supplied as standard

Note: IP54 luminaires must be ordered separately.

Effortless installation

The optimised connector interface enables easy two-finger assembly and ensures collision-free fitting of gear trays, even at joint points. The result is a clearly structured design that simplifies installation and improves handling on site.



Internal seal

With protection class IP54, the seal is pre-attached to the DUO CONNECT trunking connector. It is located on the inside, offers optimum protection and is only discreetly visible from the outside.

RIDI LINIA EVO

More about our continuous-row lighting system can be found on our Micropage.



Fully integrated project solutions for maximum safety

Emergency lighting

RIDI is working with professional, specialised emergency partners to enable you full freedom in your project.

There is a lot to consider when you are designing a central emergency lighting system. Manufacturers of such systems who are highly specialised in the field, such as CEAG / EATON, INOTEC, RP Group, GAZ / GSYSTEMS and Gessler, offer the right solution for every application.

For us as a lighting manufacturer, this means integrating emergency lights to illuminate escape routes with so-called monitoring modules from a given manufacturer for the project at hand, especially where the RIDI LINIA EVO continuous-row lighting system is used. These modules communicate with the central emergency lighting system.



The additional designs UR and Z-UR of the RIDI LINIA EVO continuous-row lighting system are designed for project-specific equipment like this to enable comprehensive lighting solutions.

In addition to the integration of monitoring modules, CEAG / EATON, INOTEC, RP Group, GAZ / GSYSTEMS and Gessler also offer complete emergency lights and emergency sign lights as module inserts for the RIDI LINIA EVO continuous-row lighting system.



Please let us know your preferred emergency partner or central battery partner you work with. We will integrate their solution.

Expert Support. Every Step of the Way.

Services

From planning to implementation, RIDI provides comprehensive project services with technical precision and personal commitment.

Services

RIDI supports every project phase with dedicated specialists – from the initial concept and detailed planning through to implementation and after-sales support.

As a manufacturer, RIDI guarantees the availability of replacement components and system extensions for up to 10 years.

RIDI at your side

Wherever your project takes place – nationally or internationally – RIDI is close by.

Our International Key Account Specialists and local partners offer personal consultation, on-site demonstrations and tailored control solutions to suit your project requirements.

Lighting

With experience from more than 100 data centre projects each year, RIDI brings deep expertise in technical lighting design.

We provide complete lighting layouts, visualisations and installation plans for complex environments.

Controls, motion / daylight detection

RIDI partners with **Tridonic SceneCOM S** for lighting control systems.

Our certified team designs and configures all levels of lighting control, providing a complete concept from a single source – from functional planning to commissioning.

Emergency, central battery systems

Our planning team coordinates lighting and control layouts with your preferred emergency or central battery system provider, ensuring seamless integration and reliable operation.

Installation packages

RIDI offers subcontracted installation services for luminaire solutions and control systems.

Our in-house specialists also handle commissioning of **DALI or SceneCOM S systems** to ensure optimal functionality and performance.

APCON UNLIMITED is offering both and a combination of

- manual control
- automated control (daylight scenes, motion control, ...)
- automated control of emergency lighting
- data services

RIDI is certified to plan and commission the system as a service-offering.

Warranty

Visit us at ridi.de for more information regarding services and warranty-certificates



Efficient. Renewable. Measurable.

Sustainability

Sustainability as a consistent part of RIDI's corporate responsibility.

RIDI pursues a long-term sustainability strategy based on economic, ecological and social values. Guided by the UN Sustainable Development Goals, we continuously improve our processes, products and energy use to achieve measurable progress.

Heat from renewable resources (BEK Jungingen)

approx. **82 %**

Use of green power for all locations in Germany

100 %

Number of single-family homes that could be supplied with power by our solar power system (570,000 kWh):

190

1500

Total emissions saved since 2019 in t CO₂e



EPD Environmental Product Declaration

Sustainability Report

The RIDI Sustainability Report provides a comprehensive overview of the company's sustainability goals and programmes.



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