Active Light in industry is as unique and dynamic as the employees, the processes and the layout of different production halls. Human Centric Lighting puts the focus of the lighting design firmly on the individual. Visual, emotional and biological needs are fully supported by a blend of Active Light and additional workplace-oriented lighting for work during the day and the night. This approach also facilitates accurate working and improved quality. Pioneering lighting solutions with activity-based lighting use innovative sensor technology to automatically adapt to the specific situation.

Find out how Active Light works:
zumtobel.com/activelight
Active Light | Connecting with Nature
Creating Light Creates Precision

Active Light in industry is as unique and dynamic as the employees, the processes and the layout of different production halls. Human Centric Lighting puts the focus of the lighting design firmly on the individual. Visual, emotional and biological needs are fully supported by a blend of Active Light and workplace-oriented lighting for working during the day and the night. This approach also facilitates accurate working and improved quality.

Pioneering lighting solutions with activity-based lighting use innovative sensor technology to automatically adapt to the specifics of the situation.

Find out how Active Light works:
zumtobel.com/activelight

Intensity
Dynamically adjusted lighting levels help employees with their regular visual tasks. Active Light helps reduce error rates and increase worker safety.

Direction
Uniform and shadow-free illumination minimises glare – even with glossy surfaces. Adjusting the direction of the light towards the visual object with Active Light enhances visual quality. Precise work is promoted and fatigue is simultaneously kept to a minimum.

Colour
Active Light means tailoring light colours to reflect age, user preference and working hours, increasing well-being and boosting employee productivity.

Time
Artificial light based on the natural course of the day helps support the internal clock. Luminaires controlled by sensors, which only switch on when light is required, reduce costs and minimise energy consumption.
TECTON
The universal LED continuous-row system
HAWE Hydraulik, Kaufbeuren | DE
Architecture: Barkow Leibinger Architekten, Berlin | DE
Lighting design: Christian Kaindl Elektroplanung, Nandstadt | DE
Eurospar Schwefel, Dornbirn | AT
Electrical consultants: Müllner Energieberatung & Haustechnik GmbH, Dornbirn | AT
Menzi Muck, Schützenwiese Kriessern AG, Kriessern | CH
Architecture: Carlos Martinez, Berneck | CH
Lighting design and electrical consultants: Schmidheiny Engineering AG, Widnau | CH
System overview
TECTON continuous-row lighting system

1 Trunking

2 Continuous-row luminaire

3 Office and industrial luminaires

4 Spotlights

5 Emergency lighting

6 Lighting management
1 Trunking
The floating base

With an 11-pole current-conducting section built into the trunking, this system comes ready equipped to meet tomorrow’s needs. All functions such as power supply, lighting control and connection to emergency lighting are seamlessly integrated into this multifunctional trunking. Luminaires can be positioned flexibly and the system can be adapted to suit structural alterations at any time. TECTON copes effortlessly with various lighting requirements – at the time it is installed and whenever there are changes. The TECTON trunking remains unchanged and forms the functional backbone of the system. It is simply a matter of exchanging or adding luminaires and system components.
In a comparison of eight different continuous-row LED systems regarding the time required for installation of a continuous-row solution (15 m), independent refaconsult GmbH found that TECTON can be installed considerably faster than comparable products.
1 Trunking

5 connections for power supply (5 x 2.5 mm²)
- Load sharing allows triple continuous-row length
- Separately switchable circuits for extremely easy light control in triple circuit

4 poles for two independent emergency lighting circuits (4 x 1.5 mm²)
- Two independent emergency lighting circuits allow optimal integration of emergency lighting into general lighting
- High degree of design reliability, flexibility and adaptability after commissioning

2. Terminal for conductor
- An additional terminal offers the chance to connect more conductors

2 control lines with DALI control signal for brightness control (2 x 1.5 mm²)
- Efficient, flexible, customised lighting for industrial and commercial buildings
- Purposefully staged lighting scenes in shops and retail areas
- Intelligent lighting management system reports all faults (e.g. electronic ballast or lamp failure)
Surface in white, silver or black

- Roll-formed sheet steel with option of white, silver or black polyester resin enamel finish

Optional cable duct

- Additional cable duct for running cable on rear side
- No adverse effect on trunking suspension

Patented butt-joint connector for fast and easy mounting without any additional components

- Complete flexibility as power can be tapped into over the entire length of the track
- Preassembled connector makes it possible to install the continuous row without having to use any other tools or equipment
- Electrical and mechanical connection with a simple flick of the wrist
1 Trunking

Node connector

Using various node connectors, the TECTON continuous-row lighting system can be assembled and combined in a myriad of variants, fully meeting the respective requirements in terms of design and lighting technology. TECTON L-, T-, X- and flexible connectors open up many different options for creative design using light. Thus, the structures themselves become integral parts of the interior design. The electrical engineer will define the wiring sequence via the node connectors on site, depending on the application requirements.

TECTON node connector TECTON T-VT2

Wide range of trunking options
Design and implementation are made easy thanks to gradation in 0.5 m increments.

Trunking kit
Pre-assembled trunking unit which comprises T-trunking and TE electrical feed with end caps and protective covers.

Individual trunking units in three lengths
This means that individual luminaires have the same appearance as the continuous-row system.

Blank end trunking
Can be cut to length by the customer, at the end of the continuous-row system (1000 oE).
Calculating axial dimensions with node connectors

The axial dimension can be calculated very easily: two connectors together give 0.5 m. The trunking units are also provided in increments of 0.5 m. Therefore the axial dimension is always the trunking length plus 0.5 m.

Example: (view from above):  
Axial dimension (mm) = length of trunking + 500 mm

Axial dimension (135 mm + 365 mm = 500 mm) + trunking T 1500 – T 4500
1 Trunking
Installation options

Possible feed-in and feed-out points

TE Feed-in
Trunking end cap

T-1000 oE Empty end-trunking,
can be cut to length flexibly

T-EF End cap for termination in conformity
with relevant standards
(standard trunking unit cut to length)

T-TA Feed-out

TA-F Flexible feed-out

TM Central feed-in

TM TA-TA Central feed-in

Possible feed-in and feed-out points
TECTON provides a wide variety of possible feed-in and feed-out points
to cope with customer-specific requirements and conditions. An addi-
tional feed-in point is recommended for continuous-row systems which
are longer than 50 m. TECTON central feed-ins are perfect for this pur-
pose, especially since they do not disrupt the visual continuity of a con-
tinuous-row system.

Note: TECTON LED battens in lengths of 1000 mm, 1500 mm and
2000 mm fully conceal the input/output feeder (no emergency
luminaires). This is not possible with spotlights, sensors and RESCLITE
emergency luminaires due to the close rotary toggle spacing.
Fixing options

**Cord suspension using Clix mechanism**
Nothing is easier than fixing TECTON trunking. An ingeniously functional mounting bracket provides a clever link between the wall or ceiling and the trunking. The cord suspension can be fixed to the trunking without the use of any tool by exerting slight pressure, and it can also be moved as required. Pendant height adjustment is also entirely tool-free.

TECTON cord suspension | 1:1 scale

**Suspension spans**
A maximum suspension span of 3 m ensures quick and easy installation with fewer suspension points.

May be installed by qualified personnel only.
2 Continuous-row luminaire

Overview

TECTON
with split-lens technology
For maximum efficiency with the best light quality

TECTON MIREL
with MIREL lens optic
For high visual comfort

TECTON MPO
with micro-prismatic optic
For demanding visual tasks

TECTON BASIC
with diffuser optic
For basic lighting tasks
Different areas can come together in an industrial building – from production or storage areas and high-level racks, through offices, staff rooms and canteens, right through to underground car parks. This results in a multitude of requirements on the lighting, all of which are fully satisfied by the continuous-row lighting system. Consistent design is therefore combined with enormous flexibility.
2 Continuous-row luminaire

TECTON has become an intelligent object: Without visible change and large effort, it can be integrated into the continuous-row system with split-lens technology beacons. The customer location is determined in real time in applications such as supermarkets. This opens a world of completely new service offers for the retailer – and shopping becomes an experience for the customers. They receive individual push notifications about offers or can simply navigate to their desired product. A subsequent analysis of the traffic paths supplies useful data that can help optimise the customer experience.

Why is it an advantage to integrate beacons into lighting?

- Beacons and light are installed together:
  This simplifies handling, saves costs and creates a calm ceiling appearance.
- Wherever there is light, there is also room for a beacon:
  The wiring cover is outstanding.
- Beacons are supplied with power via the luminaires:
  If there are no batteries required, then they also do not have to be regularly replaced. This reduces the running costs.

“Thanks to virtual customer interaction, we are getting to know our customers and learning more about their individual wishes. With this knowledge, we will be able to increase satisfaction levels and thereby generate greater customer loyalty.”

Alain Lafforgue, CEO E.Leclerc Langon
The leading chain in France, E.Leclerc, was one of the first companies to strike the way into the internet of things with smart TECTON luminaires. Already after a few weeks, the overwhelmingly positive response to the pilot project in the Langon hypermarket could be acquired in the numbers: Product recommendations sent via smartphone to the test subjects led to an increase in sales numbers compared to the previous year by up to 40 percent*.

Would you like to learn more about the project? Then send an email to zgs@zumtobelgroup.com. We will be glad to send you our insight paper “Digital Services in Retail”.

* The setup is done in close cooperation with the management team from E.Leclerc Langon. The customers were invited via various communication channels (email, SMS, etc.) to participate in the project, the offers were matched to the specific target groups. The timeframe for observation was January, which represents a neutral month for retail businesses.
2 Continuous-row luminaire
TECTON with split-lens technology

- 2 m LED batten luminaire cuts installation time by 40%
- IP50 for LED and optic as standard

Linear lighting: TECTON is a visual and functional unit. Compact and yet versatile, the linear luminaire emits pure calmness. This continuous-row system is free from joints, forming unbroken light lines that traverse the room. Pre-assembled end-caps reduce the number of components, supporting a solution that is both seamless and quick to install. With a luminaire efficiency of up to 168 lumens per watt, TECTON also offers key economic benefits. Less maintenance work means fewer interruptions and reduced costs thanks to lower energy consumption. In addition, TECTON has an optimal colour rendering index of Ra 80 and an excellent service life – so that even after 50,000 hours of operation, 90 percent of the initial luminous flux will still be achieved.

Design TECTON: Zumtobel
module lengths

2000 mm, up to 16000 lm
1500 mm, up to 12000 lm
1000 mm, up to 8000 lm
2 Continuous-row luminaire

TECTON with split-lens technology

Split-lens technology
The split-lens directs the light in a targeted, efficient manner from the centre to the lateral areas. Accordingly, the lighting pressure in the middle is reduced, and the luminaire causes much less glare – without any negative effects on the light distribution curve. With the split-lens concept, all known beam patterns can be realised. The position of the LED remains visible, but in contrast to conventional lenses, the luminaire surface can be extended to the entire width, thus clearly gaining in homogeneity.
The wallwasher’s asymmetric light distribution is specially designed for presentation and retail areas where there are one-sided shelf surfaces. An unobtrusive reflector that can be clicked into place quickly and without any tools presents goods in the right light.

The Wide Beam optic is equally suitable for handling decorative as well as technical tasks. Its medium-wide light distribution is ideal for lighting shelf surfaces and aisle zones. It also illuminates surfaces without shelves, e.g. manufacturing areas, uniformly.

A milestone in the lighting of open spaces: never before have industrial production areas, logistics packing stations or vast retail spaces for seasonal and promotional goods been illuminated with so few luminaires. And with the best quality of light. Despite the high luminous flux, the perceived glare is very low.

Specially developed for use in industrial and engineering applications, the Narrow Beam optic ensures efficient, uniform illumination of the vertical fronts of shelving. With a maximum mounting height of around 18 m, it easily copes with medium and large room heights.

The Shelf Beam optic really comes into its own in presentation applications and retail spaces. Its symmetrical light distribution focuses on shelf surfaces; aisle zones are not as brightly lit. This way, customers’ attention is directed to the goods that are on display.

An excellent combination of first-class light that is perfectly focused on the goods for the retail food sector: the wide, double asymmetrical light distribution is tailor-made for any retail spaces in which the shelves are far apart or the ceiling height is very low.

The wallwasher’s asymmetric light distribution is specially designed for presentation and retail areas where there are one-sided shelf surfaces. An unobtrusive reflector that can be clicked into place quickly and without any tools presents goods in the right light.
2 Continuous-row luminaire
TECTON with split-lens technology
Typical applications

Wide Beam

- Emphasis is placed on uniform illumination of manufacturing areas.
- The lighting solution can be designed and deployed regardless of the positioning of the respective machines and production areas.
- This allows subsequent repositioning of machines and production areas – without the need to modify the placement of luminaires.

- Emphasis is placed on uniform illumination of aisle zones, shelf surfaces and larger surfaces.
- The lighting solution can be designed and deployed regardless of the positioning of the individual shelves.
- This allows subsequent alteration of the positions of shelves – without the need to modify the placement of luminaires.

Very Wide Beam

- The focus is on the uniform illumination of surfaces – with a uniquely small number of luminaires that does not affect high planning flexibility or the free arrangement of shelves, machines and production areas.
- Typical application areas in industry are the production areas, in logistics the packing zones and in retail the wide aisles for seasonal and promotional goods.
Continuous-row luminaire

3.5 m

19 m

18 m

2 m

4.2 m

2.6 m

2.6 m

4.2 m

2.6 m

3.5 m

Illuminance levels are optimised for medium to high shelving, emphasis is placed on aisle zones.

The lighting solution is specifically designed and fitted to match the relevant shelving situation.

This results in optimised lighting of the aisle zones in question.

Uniform illumination of shelf surfaces.

Wallwasher

Emphasis is placed on high-intensity, uniform illumination of one-sided shelf surfaces.

The lighting solution is specifically designed and fitted to match the relevant shelving situation.

An unobtrusive reflector is used to direct customers' attention directly to the shelf surfaces and products that are on display.

Shelf Beam

Emphasis is placed on high-intensity, uniform illumination of shelf surfaces.

The lighting solution is specifically designed and fitted to match the relevant shelving situation.

This directs customers' attention directly to the shelf space and product presentation.

Wide Shelf Beam

The focus is on the intensive and uniform illumination of the shelving surfaces – for wide aisles or low ceiling heights.

The lighting solution is planned and installed specifically for the respective shelving situation.

This draws attention directly to the shelf space and to the product presentation.
## 2 Continuous-row luminaire

TECTON with split-lens technology

Lumen packages

TECTON **High Output** and **Extreme High Output** allow for extended luminaire spacings on the continuous-row without reducing the quality or the amount of light, thanks to innovative lighting technology and high lumen packages. Even the distance between continuous-rows can be significantly increased.

In summary, fewer luminaires are required and the investment will pay off over a shorter period of time.

### 2-metre batten

<table>
<thead>
<tr>
<th>Lumen Package</th>
<th>Lumen Package Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Efficiency</td>
<td>7 400 lumens (up to 167 lm/W)</td>
</tr>
<tr>
<td>High Output</td>
<td>10 500 lumens (up to 163 lm/W)</td>
</tr>
<tr>
<td>Extreme High Output</td>
<td>16 000 lumens (up to 154 lm/W)</td>
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</tbody>
</table>

### 1.5-metre batten

<table>
<thead>
<tr>
<th>Lumen Package</th>
<th>Lumen Package Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Efficiency</td>
<td>5 500 lumens (up to 168 lm/W)</td>
</tr>
<tr>
<td>High Output</td>
<td>8 000 lumens (up to 162 lm/W)</td>
</tr>
<tr>
<td>Extreme High Output</td>
<td>12 000 lumens (up to 152 lm/W)</td>
</tr>
</tbody>
</table>

### 1-metre batten

<table>
<thead>
<tr>
<th>Lumen Package</th>
<th>Lumen Package Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Efficiency</td>
<td>3 700 lumens (up to 160 lm/W)</td>
</tr>
<tr>
<td>High Output</td>
<td>5 200 lumens (up to 158 lm/W)</td>
</tr>
<tr>
<td>Extreme High Output</td>
<td>8 000 lumens (up to 145 lm/W)</td>
</tr>
</tbody>
</table>
Product features

LED perfection
With a colour rendering index of up to $Ra > 80$ and colour temperatures of 3000 K, 3500 K, 4000 K and 6500 K, TECTON demonstrates its excellent lighting quality.

Chemical resistance
Only carefully selected materials with increased chemical resistance are used for all TECTON luminaires and components.

Selection of colours
All components in the TECTON continuous-row system, including accessories, are available in white, silver and black.

Split-lens technology
Light that is dispersed directly within the split lens increases the homogeneity of the light-emitting panel, reducing glare and lighting pressure at the same time – in all four optics. This versatility and precision perfectly prepares the TECTON luminaire for the manifold tasks in industrial facilities and retail settings; their light control fully displays the benefits of LED by optimising horizontal and vertical illuminance levels and avoiding spill light.

As standard: IP50 and IK07 rating
In all optical variants, TECTON continuous-row luminaires dispose of the increased IP50 rating for LEDs and optics. Overlapping lenses and end pieces provide protection against soiling, eliminating cleaning effort and resulting in high IK07 mechanical stability. The thus extended maintenance cycle is very convenient, especially in the case of major exposure to soiling.

Optional control gear
Upon request, TECTON continuous-row luminaires are available with industrial control gear from Tridonic, which offers an extremely long service life of 100,000 hours.

Quick installation
The continuous-row system is compatible with the entire TECTON product range. The luminaire and trunking are attached to each other quickly and securely thanks to a system that provides an audible and visible indication of locking. Familiar, tried-and-tested features, such as Plug & Play and no-tool installation, have been retained. TECTON is therefore also time-efficient.

Emergency lighting
The new TECTON C E3D and TECTON C E3 ensure clear visibility, even in an emergency. Long-lasting and self-sufficient, thanks to integrated emergency lighting. With local battery supply, they provide light for up to three hours in emergency operation. This guarantees maximum safety.

TRIDONIC
2 Continuous-row luminaire

TECTON with split-lens technology

2 m continuous-row luminaires

- up to 40% shorter installation times
- up to 25% fewer individual luminaires
- luminaire luminous flux levels of up to 16,000 lm

Regardless of conventional lamp lengths, TECTON is now available as a 2 m continuous-row luminaire. This reduces both the number of luminaires and the amount of work needed to install them. As compared to continuous-row luminaires with a length of 1.5 m, the new 2 m continuous-row luminaire also means less individual packaging and fewer parts at the installation site. Nevertheless, the 2 m unit comes with all the advantages of the conventional length: the lightweight continuous-row luminaire can still be mounted by one person.
Example of a 24 m continuous-row luminaire

Lower investment and quicker installation: as compared to conventional continuous-row luminaires with a length of 1.5 m, the number of luminaires required when using 2 m continuous-row luminaires is reduced by some 25 per cent. Mounting can be accelerated by a full 40 per cent.
2 TECTON continuous-row luminaire

TECTON MIREL with MIREL lens optic

- ideal for education and office applications (UGR < 19 and L65 < 3000 cd/m²)
- same slim design as the TECTON continuous-row luminaire
- as part of the TECTON product group, as flexible and comfortable to install as usual

TECTON MIREL with MIREL lens optic brings together the best of two worlds. While the slim continuous-row luminaire stands out with its enormous flexibility, the MIREL evolution office luminaire guarantees high visual comfort - even for demanding visual tasks. As a result, this continuous-row system satisfies a wide variety of requirements with a uniform design.

Factbox TECTON MIREL with MIREL lens optic

| Glare control: | UGR < 19 and L65 < 3000 cd/m² at 4000 lm |
|               | UGR < 19 at 5500 lm                      |
| Lumen packages: | 4000 lm, 5500 lm                        |
| System efficiency: up to 144 lm/W |
| Colour temperature: 3000 K, 4000 K |
| Colour rendering: Ra 80 |
| Service life: | 50,000 h at a reduction in luminous flux to 80% |
The visible LED lenses combine a directed light distribution with a brilliant appearance. The high lighting quality is manifested on the one hand by the good glare control and on the other in the batwing light distribution and high luminaire efficiency.
Workplaces for precision assembly laboratories, schools, supermarket check-outs and offices place higher demands on light quality. This is where LED technology can be combined with MPO optics to deliver tangible improvements. Micro-prisms free the 1.5-metre-long TECTON batten luminaires from disturbing reflections caused by visible light points and minimise the subjective glare sensitivity in the application. In this way, the strong light packages of 5500, 6500 and 8000 lumens gain a unique quality. With a colour temperature of 4000 Kelvin, a colour rendering index of Ra 80 and dimmable variants, TECTON with micro-prismatic optics represents a professional solution for specific application requirements. With a higher degree of protection and impact strength, the LED module and MPO optic are also suitable for industrial environments.

Design TECTON MPO with micro-prismatic optics: Zumtobel
Non-reflective light for demanding workplaces in industry, for example, production lines for cars.

High-quality light and a comfortable atmosphere are rewarded in classrooms, for example, with a better ability to concentrate.
2 TECTON continuous-row luminaire

TECTON BASIC with diffuser optic

TECTON BASIC 1.5 metre

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
<th>Lumens</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Efficiency</td>
<td>5200 lumens (up to 140 lm/W)</td>
<td></td>
</tr>
<tr>
<td>High Output</td>
<td>8000 lumens (up to 137 lm/W)</td>
<td></td>
</tr>
</tbody>
</table>

TECTON BASIC with a diffuser optic was especially developed for locations with reduced requirements, enabling Zumtobel LED technology to be used in areas that previously had to make do with conventional solutions. As an LED batten luminaire that has been simplified in terms of both technology and optics, TECTON BASIC delivers a luminous flux of more than 8000 lm and an efficiency of around 140 lm/W, making it especially suitable for less complex lighting tasks in industry and retail. The luminaire is based on the tried-and-tested TECTON trunking, which ensures easy installation, flexible use and virtually unlimited options when it comes to upgrading.
The TECTON BASIC continuous-row luminaire combines the tried-and-tested TECTON trunking and Zumtobel LED technology with an LED batten luminaire simplified in terms of optics for use in areas with reduced requirements.
Complete office luminaires really demonstrate the advantages of TECTON mounting. Both the trunking and the luminaires are optimised for the integration of emergency lighting and lighting controls.

ECOOS
This office luminaire is based on a combination of micro-pyramidal optic and diffuser-pearl covering with a 360-degree light distribution.

MELLOW LIGHT evolution/infinity
Taking inspiration from nature, MELLOW LIGHT creates pleasantly bright spaces with little shadowing.

LINCOR
Thanks to the balanced mixture of direct and indirect light, this narrow light line promises perfect visual comfort for office workplaces.
Office and industrial luminaires
3 Office and industrial luminaires
Luminaires for industrial applications

Working with TECTON means that a lighting solution remains permanently flexible. Already installed luminaires can be easily moved, while additional fittings and components simply have to be clicked into place at the required position.

**CRAFT**
Featuring unique thermal management, this compact high-bay luminaire is ideally equipped for industrial challenges.

**PERLUC**
This moisture-proof luminaire combines protection classes IP65 and IP54 with a wide variety of optics and various shapes.*

**AMPHIBIA**
The IP66 protection class luminaire meets even the most stringent industry targets: it is stable, dirt-repellent and illuminates rooms very evenly.*

* Protection class for entire continuous row: IP20
Easy installation is a major benefit of the light and compact CRAFT industrial luminaire.
By allowing integration of Zumtobel’s INTRO, VIVO, ONICO and FACTOR spotlight ranges, the TECTON continuous-row lighting system is able to create impressive lighting accents while fulfilling all other tasks as well. Thus, the lighting requirements for shops and retail spaces – ranging from uniform illumination to impressive lighting effects using high-precision reflectors – can be mastered with high efficiency. Here, too, installation is considerably facilitated by CLIX and plug-and-play mechanisms.
RESCLITE PRO offers the optimal solution for every application: compact and highly efficient emergency lighting that can be fully integrated into the TECTON continuous-row system without the need for tools.

**RESCLITE PRO escape**
Even long escape routes can be illuminated with just a few luminaires. The unique escape 90° optics aim the beam of light around the corner. This makes it possible to illuminate two right-angled intersecting corridors with a single emergency luminaire.

**RESCLITE PRO antipanic**
The wide-area illumination ensures good orientation in the room and helps minimise panic in an emergency – with a minimum number of luminaires.

**RESCLITE PRO spot**
In an emergency, a focused beam highlights essential objects, such as fire extinguishers.

**RESCLITE PRO high ceiling**
With escape-route and anti-panic lighting optimised for high rooms, even large halls can be ideally prepared for emergencies.
Emergency lighting

The RESCLITE PRO app provides a step-by-step guide to the planning and selection of emergency luminaires.

resclitewebapp.zumtobel.com
Even escape-sign luminaires can be perfectly integrated into the system via the TECTON trunking. This guarantees a high degree of efficiency and maximum safety in an emergency - and of course low installation effort.

**PURESIGN 150**
This slim luminaire conceals the most modern LED and lighting technology, which backlights the pictogram with optimum uniformity.

**CROSSIGN 110/160**
These all-round luminaires are ready to cope with the kind of tough ambient conditions often found in industry applications. The IP42-protected and IP54-protected luminaires are resistant against dirt and moisture.

The web app for escape-sign luminaires simplifies both the planning and the selection of emergency solutions.

signwebapp.zumtobel.com
5 Emergency lighting
Integration of TECTON

Self-contained battery supply

In the case of self contained luminaires, the battery is fitted in the actual luminaire. Such luminaires operate as completely self-contained units and are easy to install. There is no need for expensive structural measures or fire-resistant wiring accessories. Self contained luminaires are rated E1D or E3D depending on whether they provide 1 hour or 3 hours of operating time.

Function tests and annual system tests are performed automatically. The system is centrally monitored where an SB 128 Controller is used (optional).

eBox Central battery system

The centrally supplied emergency lighting system is perfectly adjusted to the specifics of LED luminaires and features double energy efficiency: if energy-saving luminaires are connected, eBox scores high on low system output. The emergency lighting system supplies luminaires with a total installed load of 1500 W with power for one hour, luminaires with a total of 500 W for three hours. Several systems can be linked quite easily.

CPS Central battery system

Based on a modular system, each central battery system is perfectly customised to the client’s requirements. The central battery system communicates via DALI. This way, each DALI luminaire can be used as a separately monitored emergency luminaire and be individually controlled. Other benefits include minimal maintenance effort and interference-free data communication.
Increased safety with four circuits

Two independent circuits for emergency lighting (4 x 1.5 mm²)

Escape-sign luminaires with TECTON adapter

Every escape-sign luminaire is available as a self-contained group battery or centrally powered version. These products are equipped with a TECTON adapter as standard. This ensures the TECTON installation concept is implemented consistently across the product range.
## 6 Lighting management

### Sensors

#### Overview of sensors for the TECTON continuous-row lighting system

<table>
<thead>
<tr>
<th>Sensor type and function</th>
<th>Sensor Standalone</th>
<th>Sensor System</th>
<th>Lighting management system</th>
<th>Mounting height</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multisensor Motion and presence</td>
<td>ED-SENS</td>
<td>ED-SENS</td>
<td>LITECOM LITENET DIMLITE</td>
<td>up to 3.5 m</td>
</tr>
<tr>
<td>Daylight sensor Daylight “look out”</td>
<td>ED-EYE</td>
<td>LITECOM LITENET DIMLITE</td>
<td>any</td>
<td></td>
</tr>
<tr>
<td>Motion sensor Corridor function</td>
<td>PST</td>
<td>PST-DIMLITE</td>
<td>DIMLITE Master/Slave ED-PST</td>
<td>up to 16 m</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>LITECOM LITENET</td>
<td>up to 16 m</td>
</tr>
</tbody>
</table>
bmLINK for wireless DALI connection

Cable-free, low-effort but still fully DALI-compatible: bmLINK wireless connects continuous rows that are difficult to integrate with conventional cables into existing or new DALI systems. Upgrading a non-dimmable solution to a completely dimmable one could not be easier, because even order picking is wireless via mobile devices.
6 Lighting management
Integration of TECTON

Plug & Play lighting management

**DIMLITE**

DIMLITE is a simple lighting management system, which nevertheless features the most important convenience and energy-saving functions and is ideal for small applications involving up to 100 DALI luminaires.

*zumtobel.com/dimlite*

**System limitations:**
- 25 DALI- or 50 DSI luminaires per channel

**Energy saving:**
- Uses indoor sensor to take daylight into account
- Presence detectors
- No-load disconnection of electronic ballasts by relay switching

**Initial operation:**
- Auto setup requires relatively little commissioning effort

**Add-on functions:**
- User-configurable lighting scenes
- CIRCLE control point and conventional momentary-action switches
- Switches

**Lighting management for luminaires, blinds and emergency lighting**

**LITECOM**

The scalable LITECOM system offers customised state-of-the-art bus technology for any size of installation. Lighting system and blinds are controlled on the basis of the current lighting and weather conditions. Energy consumption is sustainably optimised through daylight-based management, central time settings and presence detectors. LITECOM is suitable for installations with a medium number of DALI luminaires and blinds.

*zumtobel.com/litecom*

**System limitations:**
- max. 250 addresses per LITECOM CCD

**Energy saving:**
- Uses indoor light sensor to take account of daylight
- Automatic control of blinds
- Presence detectors
- Flexible calendar and timer functions

**Initial operation:**
- Commissioning via Zumtobel Service staff or wizard software

**Notlichtintegration:**
- eBox

**Add-on functions:**
- User-configurable lighting scenes
- Various local control options (CIRIA, CIRCLE, EnOcean radio etc.)
- Graphic user interface
- Touch panel integration
- Optional remote maintenance

**LITENET**

For installations with more than 250 addresses, the LITENET lighting management system must be used.

*zumtobel.com/litenet*

**System limitations:**
- Up to 500 “Economy topology” automation addresses
- Up to 2000 “Compact topology” automation addresses
- Up to 10 000 “Flexible topology” automation addresses
**TECTON groups**
1–4 (up to 25 x DALI or 50 x DSI luminaires per channel – can be extended by DALI-V or DSI-V)

**TECTON formation of user-selectable groups** – (individually addressable)
3 x 64 DALI luminaires max.
In a test organised to measure the installation time of eight different continuous-row systems (with a length of 15 metres), independent refaconsult GmbH found that TECTON can be installed considerably faster than comparable products. Time savings of up to 55 per cent certainly save a lot of money. Compared to conventional T16 solutions, 61 per cent of time can be saved on average with a TECTON solution. Moreover, TECTON already integrates emergency lighting circuits and DALI control lines.

<table>
<thead>
<tr>
<th>Time</th>
<th>System</th>
</tr>
</thead>
<tbody>
<tr>
<td>13:10</td>
<td>Zumtobel TECTON 2 m</td>
</tr>
<tr>
<td>14:41</td>
<td>Zumtobel TECTON 1.5 m</td>
</tr>
<tr>
<td>17:38</td>
<td>Competitor 1</td>
</tr>
<tr>
<td>17:39</td>
<td>Zumtobel METRUM</td>
</tr>
<tr>
<td>17:44</td>
<td>Competitor 2</td>
</tr>
<tr>
<td>20:08</td>
<td>Competitor 3</td>
</tr>
<tr>
<td>23:02</td>
<td>Competitor 4</td>
</tr>
<tr>
<td>29:02</td>
<td>Competitor 5</td>
</tr>
<tr>
<td>34:00</td>
<td>T16 Continuous-row system</td>
</tr>
</tbody>
</table>

Framework conditions test setup:
Length of continuous-row 15 m, ceiling height 3.7 m, height of continuous-row 3.2 m, 2 persons with ladders. The time indicated is for mounting excluding unpacking and excl. assembly of suspension systems (approx. 30 min).
One system – endless possibilities

Equipped with an 11-pole current-conducting section, TECTON not only performs all general and accent lighting tasks, but also integrates safety luminaires and sensors seamlessly into the system. If required, also wireless. Via bmLINK, extremely DALI-compatible.

Easy installation and flexibility

The complete continuous-row lighting system is characterised by very quick and easy installation. Only the trunking rails require an electrical feed, so the luminaires and sensors can simply be clicked into place – delivering absolute flexibility and ensuring that their position can be changed at any time.

Always up to date

The TECTON product portfolio is being continuously improved and extended. The installed trunking rail can be combined with the latest technology to create a truly future-proof solution.

Extensive solution competence

TECTON continuous-row luminaires with split-lens technology blend maximum efficiency with minimum glare, an impact resistance of IK07 and IP50 protection for the LED and the optic. Four different light distributions guarantee excellent flexibility.

100 per cent LED

Additional luminaires such as TECTON MIREL with MIREL lens optic, TECTON MPO with micro-prismatic optic and TECTON BASIC with diffuser optic, as well as the possibility to integrate other Zumtobel products, make TECTON a complete LED lighting solution.
TECTON
The universal LED continuous-row system

Overview

Mounting
- Ceiling surface-mounted
- Suspended

System configuration
- Trunking
- Continuous-row luminaire
- Office and industrial luminaires
- Spotlights

Colours
- White
- Silver
- Black
- Other colours available on request

Emergency lighting / lighting management
Zumtobel, a company of the Zumtobel Group, is an internationally leading supplier of integral lighting solutions for professional indoor and outdoor building lighting applications.

We provide unique customer benefits by integrating technology, design, emotion and energy efficiency. We combine the best possible ergonomic lighting quality for an individual’s well-being with the responsible use of energy resources. The company’s own sales organisations in twenty countries, as well as commercial agencies in fifty other countries, form an international network of experts and design partners providing professional lighting consulting, design assistance and comprehensive services.

Lighting and sustainability
In line with our corporate philosophy “We want to use light to create worlds of experience, make work easier and improve communications and safety while remaining fully aware of our responsibility to the environment”, Zumtobel offers energy-efficient high-quality products, while at the same time making sure that our production processes based on the considerate use of resources are environmentally compatible.

Top quality – with a five-year guarantee.
As a globally leading luminaire manufacturer, Zumtobel provides a five year manufacturer’s guarantee on all Zumtobel branded products in accordance with the terms of guarantee at zumtobel.com/guarantee.

Zumtobel.com/sustainability

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The Light.