Smart Sunlight

The magazine for electrical professionals

2024

Matter
New Smart Home standard

Omnexo
Easy sunlight automation

KNX
Sun shading actuators with
even more functions

warema

Der SonnenLichtManager

Our innovations and solutions for your business success

Dear WAREMA Partners,

In this issue, our focus is on the sustainable future of building automation in combination with sun shading systems. We will be presenting innovative products and functions, such as the Omnexo bus system, the latest developments in KNX and the cross-manufacturer "Matter" solution for the Smart Home. You can also learn more about how our highly energy-efficient WELLUMIC lighting management system works.

All of these innovations have one goal: to optimise your work as an electrical technician, planner or installer and at the same time to pave the way for greater energy efficiency and sustainability in intelligent sun shading and building control.

With all innovations, you can always depend on us at WAREMA as a reliable partner at your side. We hope you find lots of inspiration and look forward to working with you.

With best wishes,

Angelique Renkhoff-Mücke
Chief Executive Officer WAREMA Renkhoff SE

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www.warema.de – info@warema.de – **Photos:** WAREMA (unless otherwise specified)

This makes WAREMA so unique

140 actuators

Make perfectly customised projects a reality thanks to the greater range of functions for sun shading automation.
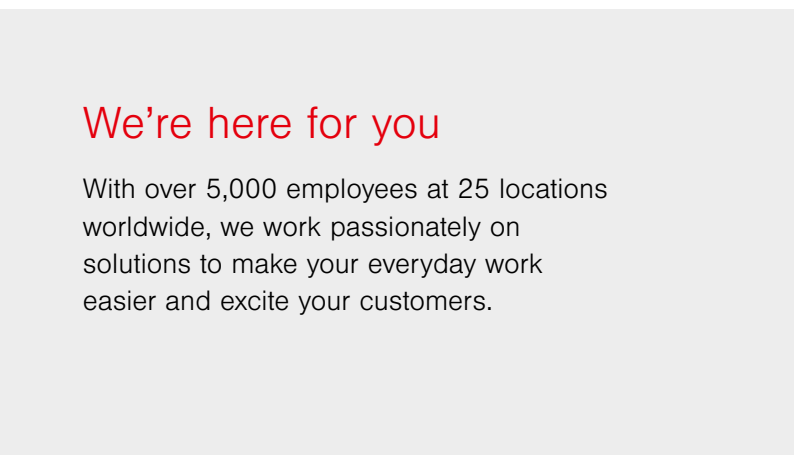
Over 60 years of experience

Lead your projects to success with our wealth of experience.

Save energy

Studies confirm it: with automated sun shading, you save more than 30% of heating energy and up to 50% of cooling energy for your customers.

We're here for you

With over 5,000 employees at 25 locations worldwide, we work passionately on solutions to make your everyday work easier and excite your customers.
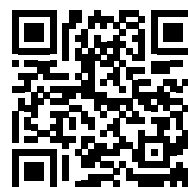
Made in Germany

Depend on reliable and future-proof hardware and software developed and manufactured in Germany.

Contents

Go behind the scenes at WAREMA. Visit

smartbuildings.warema.com

Making homes really smart

Find out in an interview with Stefan Ruf, Radio Systems Product Line Manager, why Matter could offer WAREMA's partners major competitive advantages and give end customers maximum freedom in the Smart Home.

Matter – What does this technology, currently on everyone's lips when we talk about Smart Homes, mean?
It is a cross-manufacturer connection standard designed to simplify and improve device communication in the Smart Home sector. For WAREMA's partners in the electrical and sun shading industries this represents an important improvement: Matter puts an end to the complicated search for compatible Smart Home products. No matter whether lamps, washing machines, TVs, thermostats, plug receivers or sensors, they can all be seamlessly integrated into

various systems, as long as they are Matter-compliant. A plug receiver that connects to Amazon Alexa, for example, also links with Apple Home, Google Home, Samsung SmartThings or other compatible solutions. However, the differences between the systems themselves will remain.

And how will our partners' end customers benefit?
This results in significant added value for users. Matter makes it easier to select products, as compatible devices work with a variety of different Smart Home systems. The

"Matter has the potential to revolutionise the Smart Home."

Stefan Ruf
Product Line Manager of Radio Systems at WAREMA

differences between these systems remain, but Matter ensures that all certified Matter products support a defined basic range of functions. However, manufacturers have the option of improving on these requirements. With their apps or control centres, they can create their own functions and thus set themselves apart from the competition.

How does the technology from Matter work?

Matter is an interoperable connection protocol that enables standardised communication between Smart Home devices from different manufacturers. It supports local device control without requiring an internet connection, while cloud connections for remote access are still optional. Each Matter-compliant device must be certified and is provided with a unique 11-digit set-up code, usually in the form of a QR code, for easy set-up using a smartphone.

And especially important for technicians: security is a top priority, as communication is end-to-end encrypted. During the initial installation, an encrypted connection to the network is established using the setup code. This encryption remains in place during ongoing communication between the devices to prevent unauthorised access and hacking.

What challenges and opportunities does the new new Matter standard bring for the trade, especially for electrical planners and installers, and how is WAREMA dealing with these developments?

There are a number of challenges in industry when using Matter. This includes commissioning, programming and operation, which are currently carried out via centralised platforms such as Amazon or Apple - proprietary software and programming via hand-held transmitters are not yet available. Many products will be priced favourably and will be easily comparable thanks to the standard. WAREMA is exploring how Matter works in the B2B sun shading sector and which solutions could be possible. All in all, for electrical planners and installers, Matter as a wireless system standard, similar to the well-known KNX standard, offers advantages for a wide selection of devices from different manufacturers as well as standardised programming and commissioning.

Matter – the new Smart Home standard

Compatibility: Networking of cross-manufacturer products on a single platform

Future-proof: Continuous integration of new products and manufacturers

Operability: Versatile and simple via smart speakers from Amazon, Apple and Google, via iOS and Android app, switch or remote control

Certification: Easy networking and the highest security standards

Omnexo

PLUS X AWARD
2021/2022 | Achieved for:
High Quality
Design
Ease of Use
Functionality
www.plusxaward.com

Omnexo
Easy sunlight automation

For our partners, the Omnexo bus system offers the ideal solution for the automation of medium-sized properties such as nurseries, schools or office buildings. It allows up to 500 sun shading products to be controlled individually or 3,000 products in groups per central unit. Flexible control is made possible by push button, app or PC, with optional remote control via the cloud.

Omnexo can be used to enable various functions such as user management and automation. The integrated slat tracking makes a significant contribution to a building's energy savings.

"New devices, new functions and update capability - with Omnexo you have a modern and future-proof control."

Lukas Kohlhepp
Product Line Manager for Central Control Systems at WAREMA

Omnexo Innovations 2024

New function

Twelve freely definable modes can now be set in the Omnexo system, for example summer or winter mode or office holiday mode. The control functions can be flexibly adapted to the users' needs. It is also easy to change modes at any time using the Omnexo software. Another advantage in the Omnexo system: with the online update function, new functions can be easily loaded into the central control unit or actuators for existing projects.

An overview of the new Omnexo products:

Actuators 24 V DC

/ Control of sun shading drives or window drives with 24 V DC

/ 4 outputs

/ REG and AP product variants

/ Interchangeable miniature fuses

/ REG actuators with spring terminals

Floating actuators

/ Control of sun shading drives or power consumers (lighting/load - e.g. playground lighting)

/ 4 floating outputs

/ REG and AP product variants

/ Interchangeable miniature fuses

/ REG actuators with spring terminals

Sensor Splitter, REG

The new REG Sensor Splitter allows several Omnexo central control units to be supplied with measuring values from up to three weather stations. It is ideal for buildings with multiple units and also impresses with its optimised appearance and lower costs.

Universal Interface

In the Omnexo system, 16 interfaces can each be connected with 8 inputs for sensors or push buttons. The universal interface allows conventional WAREMA sensors to be integrated into an Omnexo system and provides digital inputs for additional push button controls, for example for central push-buttons to control an entire floor.

Simple commissioning

In addition to the many innovations, a special focus is still placed on the commissioning of Omnexo. Each sun shading product can be individually parameterised and is pre-configured with standard values. The intelligent plausibility check ensures no errors are made in the settings. The award-winning software allows the system to be conveniently commissioned via tablet. As there's no need to connect to the central control unit, commissioning preparations can be conveniently completed in the office. With the central control unit's hotspot function, parameterisation with your tablet or PC is also possible without a direct network connection.

Omnexo sun shading control system
For a modern co-working space

Planning was actually already complete for the automated sun shading at the new Factory Campus in Düsseldorf and the contract had been awarded for implementation. But then WAREMA came up with their innovation Omnexo: the next generation of automation for intelligent sun shading. Everyone involved in the planning and implementation agreed that it is never too late for improvements, meaning Omnexo was brought on board.

Built on the site of the former Metso machine plant in Düsseldorf's Lierenfeld district, the Factory Campus is a modern office locale that particularly appeals to young, dynamic companies with its flexible rooms and premises – a modern co-working space spanning 34,000 square metres. With solar panels on the roofs, a localised power supply and a communal power station, this complex of new and renovated buildings is an ecological and energetic innovation. One key target was to use a fully automated sun shading system from WAREMA.
People work at the Campus round the clock and at constantly changing times. And there are always individual requirements which don't always correlate with the programmed automation. In addition to programming that is easy to alter, another key requirement for sun shading

systems was simple individual control. The redesigned, fully automated Omnexo control system is designed for medium-sized buildings such as schools, office buildings and campuses. It provides easy commissioning and operation as well as a high degree of flexibility. It has won over everyone involved in the project.

Another crucial argument for Omnexo was that it is completely integrated into the building network. It can be installed and commissioned, altered and updated directly using any browser-compatible device – a tablet, PC or laptop. Omnexo is also ideally designed for the Factory Campus. In combination with the WAREMA weather station move, an Omnexo central control unit at the Campus locally controls 16 switch actuators spread throughout the building

3 questions for Thomas Gladbach

Technical Director at ES Project GmbH

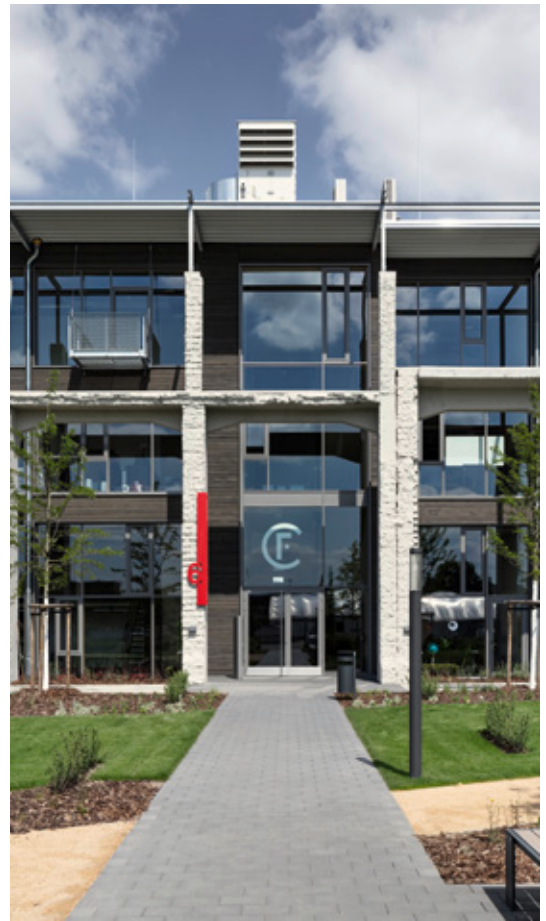**Has automated sun shading become a standard feature of your projects?**
Yes. Automated sun shading systems have definitely become standard in commercial buildings over the last few years. Owners find it adds value to their properties.

What does future-oriented sun shading automation mean to you?
I think the control system needs, in particular, to fulfil the requirements of younger generations in terms of app operation, etc. The system should be easy to program with remote control options.

Do you think it was worth switching to Omnexo for the Factory Campus control system? Would you do it all again?
Yes, definitely. The simple, easily alterable programming allowed us to respond quickly to the needs of individual tenants.

via bus signals. 76 external venetian blinds with intelligently controlled slat tracking perfectly control daylight and optimise energy fully automatically. In addition, all sun shading products can be operated using conventional push buttons or via an app with the user management function already integrated into the central control unit.

The project members were won over by the outstanding performance of the Omnexo central control unit and its almost limitless flexibility. For example, a wide range of scenarios and special applications can be integrated via digital universal inputs – these include a cleaning circuit, a central fire alarm or a superordinate building control system.

Another particular benefit was the option to configure all these settings in the office in preparation for commissioning, without the need to connect to the central unit. Omnexo studio can be used on any Windows PC or Mac. The same user-friendliness was also available to the project team during commissioning. The entire system worked perfectly right from the start. And if anything changes, that's no problem either: The system can be quickly adapted to changes in usage conditions and the technology is always up to date – any new updates are installed at the touch of a button. All project team members are confident that the Campus is perfectly equipped for the sun shading of the future.

/ **Building**:
Factory Campus, Düsseldorf

/ **Owner**:
EK 401 Grundstücksverwertungs-GmbH & Co. KG, Düsseldorf

/ **Purpose**:
3,000 m² office building with 38 state-of-the-art offices ranging from 38 m² to 218 m² in size

/ **Architecture**:
Dipl.-Ing. Ralf Petersmann, Düsseldorf

/ **Control system implementation**:
ES Project GmbH, Essen

/ **Completion**
2023

/ **Sun shading system**
76 basic external venetian blinds E80A6S

/ **Control**
1 x Omnexo Central control unit
6 x Omnexo switch actuators 4M230 AP
10 x Omnexo switch actuators 6M230 AP
1 x Weather station move

KNX
New attractive functions

KNX devices from several manufacturers can communicate with each other unencrypted. Using KNX secure actuators increases the security of communication while maintaining user-friendliness. For increasingly complex projects, you will receive support from WAREMA. The extension of the tried and tested KNX secure series offers numerous new and helpful functions. These include integrated slat tracking, simplified commissioning thanks to 3-byte objects and predefined external venetian blind types, making for faster commissioning. In future, updates can be conveniently loaded into the app.

The binary inputs also make button assignment easier. Further improvements include extensive diagnostic functions for reading out movement causes and troubleshooting, active support for heating and cooling modes and the option of freely assigning priorities.

Overview of new the functions

/ Simplified commissioning with pre-defined WAREMA sun shading parameters

/ Integrated slat tracking and sun position calculation

/ Numerous automated functions with freely definable priorities

/ Limit values can be set using the Engineering Tool Software parameters and the group object

/ Simplified direct button allocation for easier use

/ Wide range of diagnostic functions (e.g. reading out of movement causes and errors) via the group object and via the KNX app

/ Linking WAREMA KNX devices made easier thanks to additional 3 byte object

Summary:
The enormous range of functions offered by WAREMA's KNX sun shading actuators provides every electrical professional with optimum solutions to successfully master any project.

Our new Product Line Manager for Bus Systems
Stefan Stöckl

As Product Line Manager for Bus Systems, Stefan Stöckl brings a wealth of experience and expertise, as well as openness and curiosity for future developments in our company. Having joined WAREMA in 2009, he has learned an incredible amount about everything from the technical hotline to system integration and technical coordination. His background as an electronics technician, supplemented by his further training as a business IT specialist and most recently his bachelor's degree in business information systems, give him a unique understanding of important technical and economic topics - the perfect combination for his new challenges with us.

What made you want to be Product Line Manager for Bus Systems?
I wanted to actively contribute my practical experience in system integration to the future design and direction of the bus systems product line. Thanks to my many years of work as a system integrator, I already know the target group and the requirements of the projects in detail, and with the support of other system integrators I have also been able to gain experience with devices from our competitors.

What do you want to achieve in the coming years?
WAREMA already offers the most innovative KNX sun shading actuators on the market and we want to uphold and build on this advantage.

How do you envision the development of the various bus systems at WAREMA?
During my many years in system integration, I experienced the heyday of LON® technology, in which KNX played a rather subordinate role. That particular tide has since turned and customers are now heavily focused on KNX. With BACnet and Modbus, we also offer other bus technologies in our portfolio.

What advantages do the WAREMA bus system components offer to electrical planners and engineers?
With our bus components, especially with the new KNX secure series, the most complex requirements such as wind assessments, annual shading or slat tracking can be realised. And thanks to reliable hardware and smart software, this is not only secure, but also really fast.
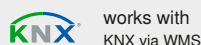
New components

KNX Weather station pro

The newly developed KNX secure weather station records the outside temperature, wind speed and direction, brightness and dawn/dusk, rainfall and the position of the sun. This comprehensive weather data is sent to the intelligent bus system, which compares it with defined limit values and then regulates the sun shading products as required. The weather station is separated from the actual device participant in the KNX network, making revision easier.

A further benefit of the new KNX Weather station from WAREMA: Wind speed and direction are measured via ultrasound. Meaning no more mechanical wear parts. The KNX weather station pro can also be updated via the KNX bus line.

works with KNX via WMS

KNX converter WMS

/ Control of WMS radio receivers in a KNX system (integration of WMS-controlled products, e.g. Lamaxa, into a KNX system)

/ Combine the benefits of the KNX system with those of WMS radio remote control

/ Ideal for retrofitting or expanding an existing KNX system without any hassle

/ Commands are transmitted to the KNX converter WMS via KNX and relayed to the WMS receivers by radio

/ Operation and automation possible with WMS transmitters and sensors

WMS Socket

/ The WMS receiver for devices with conventional safety plugs

/ Compact, modern design

/ Receives commands and weather data and forwards them (routing)

/ The integrated time switch and dawn/dusk control can control the connected devices if required - meaning that a home office workstation can be switched off from 8 p.m. onwards to avoid remaining on power-consuming standby, for example

/ Button on the device for switching on and off with integrated LED

/ No electrical connection work required because the WMS Socket is inserted into the existing 230 V AC power socket

WMS

Intelligent technologies

**Annual shading –
Seasonal Daylight Management**
The annual shading considers the shadows cast by the surroundings, e.g. by neighbouring buildings, and calculates the shade pattern for each individual window and for every time of day and season to ensure the optimum sun protection setting. The ideal complement to slat tracking, this solution achieves a high level of user acceptance thanks to the perfect daylight yield and comfortable room climate. Thanks to the decentralised storage on the motor control units, a high level of failure safety and low load on the bus line are achieved. The system permits efficiency classes A and B and can be implemented with KNX, LonWorks® and BAline.
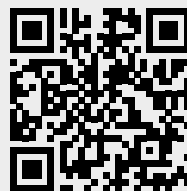
**Slat tracking –
ideal for glare-free daylight**
With slat tracking, the control ensures through a fully automated process that the slats track the position of the sun at an exact angle - even when the sunlight falls on a slant. The result: maximum natural light yield indoors for working without glare, while minimising the cooling load and energy demand since the rooms are prevented from heating up. Slat tracking meets the requirements for energy efficiency classes A and B and can be combined with Omnexo, KNX, LonWorks® and BAline. Cut-Off ensures the ideal slat position to effectively keep out direct sunlight, while allowing in sufficient diffuse daylight to illuminate the room. The slat angles vary depending on the weather, time and position of the sun. This intelligent use of natural light achieves optimal energy efficiency, as less artificial light is required and the air conditioning system does not need to be cooled as much. Users cannot manually override the Cut-Off angle.

Watch video on annual shading

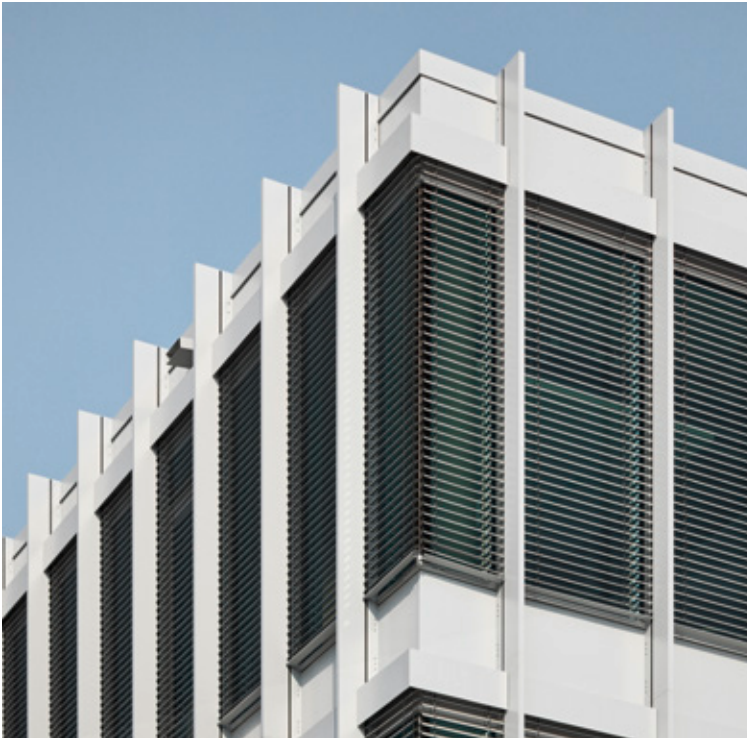Watch video on slat tracking

ALWAYS IN THE RIGHT LIGHT

Zehnder Center of Climate, Lahr

The new, future-oriented Zehnder Group building in Lahr was born from stringent sustainability criteria and a desire to ensure well-being in the workplace. Inspired by the Zehnder maxim of "always the best climate", the developers turned to the innovative WELLUMIC light management system. The building extends across 5,000 square metres and offers office space, conference and meeting rooms as well as rooms for training courses and events. WELLUMIC is an innovative part of the Center of Climate and its overall sustainable concept. The result: minimal energy consumption and optimal lighting conditions at all times of day.

WELLUMIC:
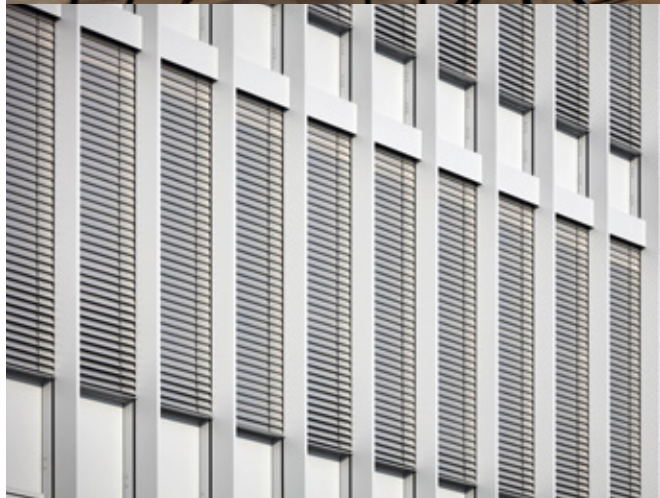**FEEL THE RIGHT LIGHT.**

warema

The team of the future

WELLUMIC is the intelligent light management system developed jointly by WAREMA and TRILUX. WELLUMIC provides sun shading and lighting through closely interlinked technologies and harmonised interfaces. This allows architects, property developers and lighting designers to bring holistic and sustainable solutions to life.

Products

- WAREMA external venetian blinds E80A6S with SMI drive
- TRILUX HCL lighting technology (PereliaACT, B.Veo, Finea, Sonnos, Luceo S, Limba)
- WELLUMIC automation in KNX technology
- WAREMA BAline control system
- WAREMA weather station with wind sensor (heated), photo/radio clock, and outside temperature
- Touchscreen PCs 15'' & 22 WAREMA KNX Room Controllers

One system – a host of advantages

- **Reliable planning & reduced interfaces** thanks to a perfectly coordinated system of sun shading and lighting (incl. professional lighting design)
- **Increased energy efficiency** thanks to maximised daylight yield and light management, reduction of the incidence of energy in summer and utilisation of solar input in winter
- **Improved well-being** and visual and thermal comfort comfort thanks to more daylight and harmonised artificial lighting
- **Perfect working conditions** for creativity and productivity thanks to glare-free daylight and artificial lighting in the workplace

TRILUX SIMPLIFY YOUR LIGHT.

EXTEND
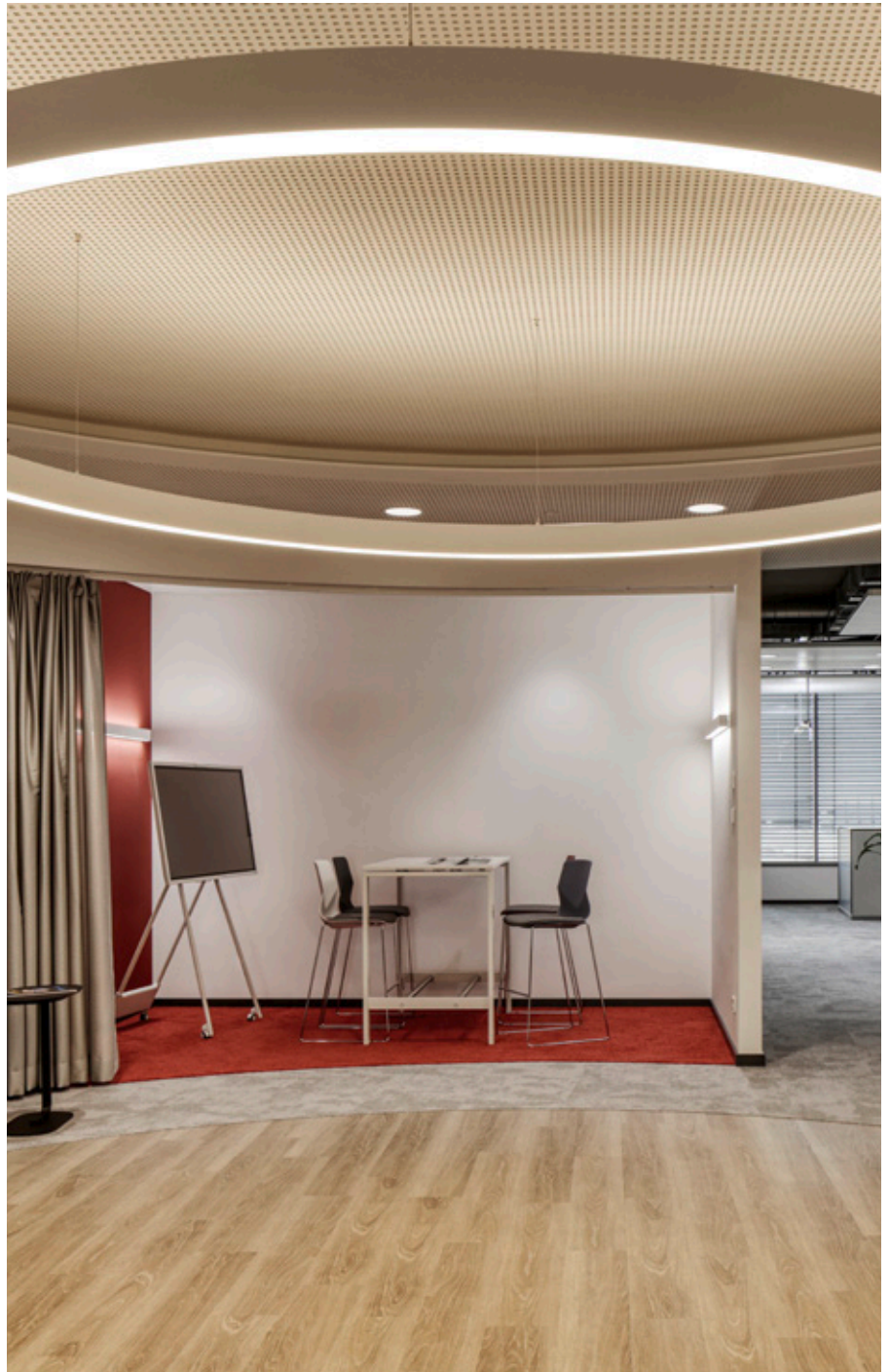DAYLIGHT WITH
TRILUX
HCL LIGHTS

GUIDE DAYLIGHT
WITH WAREMA
EXTERNAL VENETIAN
BLINDS

The meaning of light

Light plays a decisive role in the architecture of the Zehnder Center of Climate. The rooms, flooded with light, seem larger, friendlier and bring the sustainable architecture to life.

Light is crucial for well-being, performance and health. But not all light has this biological effect. Only light with a high dynamic range of brightness and light colour, such as daylight, is biologically effective. WELLUMIC uses state-of-the-art technologies to ensure that this valuable resource is fed into the added value of the building.

ALWAYS IN THE RIGHT LIGHT AND WITH THE BEST CLIMATE WITH WELLUMIC

Services for electrical professionals

Take advantage of our digital services. Here you will find commissioning software, video instructions and much more.

Equal partnership
Just as a service should be

WAREMA is your reliable partner in electrotechnical planning and offers a comprehensive range of support options, no matter whether you want to use our digital services or the personal advice of our experts. Together we will always find the right solution, just for you. Our service team is here for you. With us you can save time, effort and costs and enjoy the fruits of a successful project.
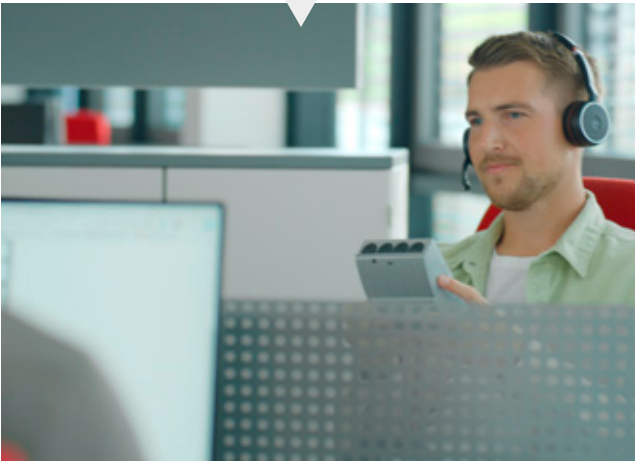
01

From consultation...

We offer you personalised consultations on site and at the construction site at any times to optimally understand and meet your specific needs and requirements.

02

... and system integration...

Our support for you ranges from commissioning to complete system integration, whether it's a radio system in a family home or a bus system in a large property.

03

to support...

With our telephone hotline, our product experts are available to provide fast and efficient solutions for any enquiry. And thanks to our clever call-back option you avoid annoying waiting times.

04

... to service.

WAREMA takes 1st place in the Service Champions Award for excellent customer service. Accordingly, our team provides you with reliable support for repairs, refurbishment or optimisation of control systems.

Experience our showrooms:

www.warema.com/experience

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