

Unlimited Possibilities

With WAREMA's KNX solutions

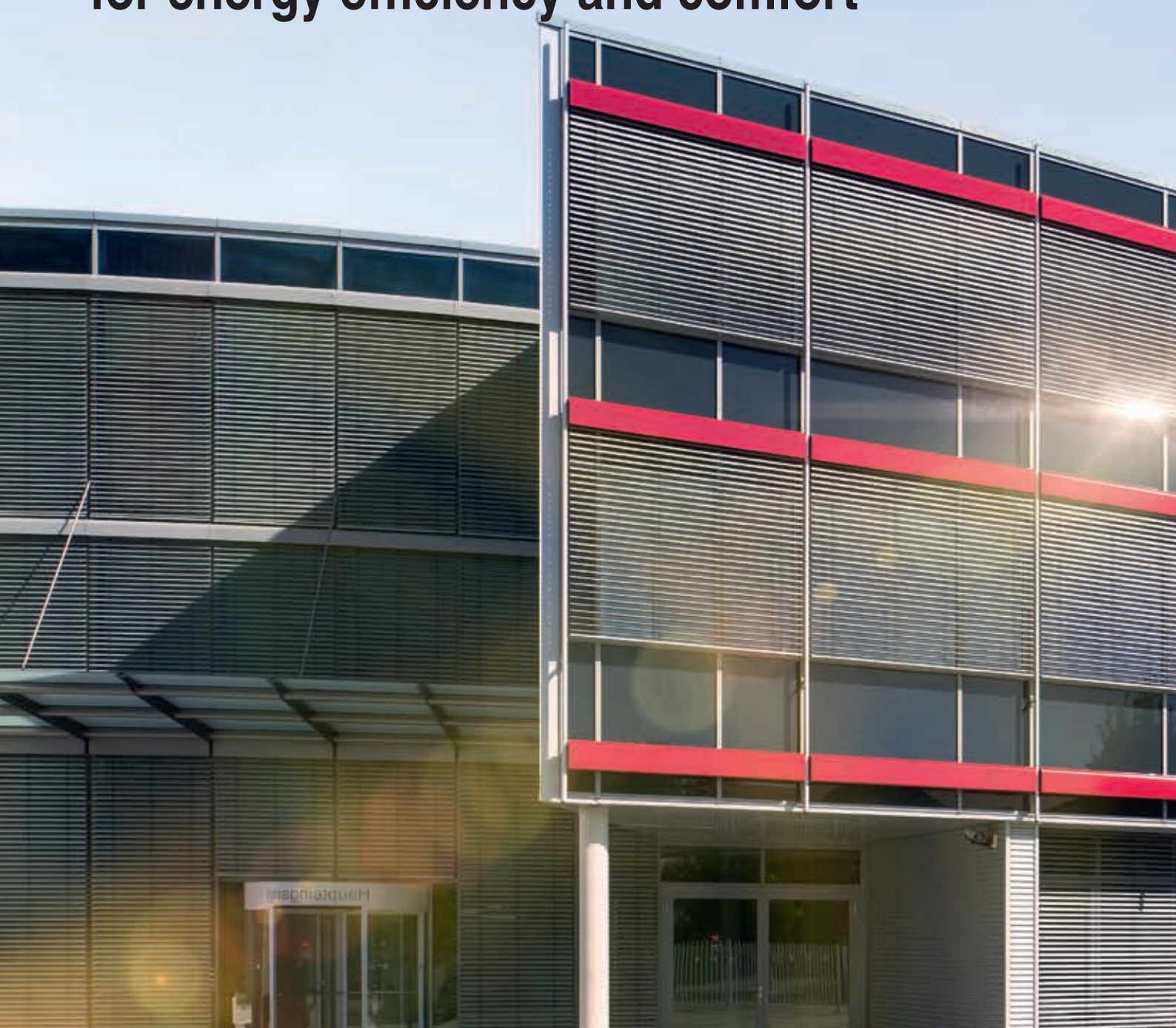
Der SonnenLichtManager



Visit us online:

www.warema.com/control-systems

KNX – intelligent automation for energy efficiency and comfort



Energy efficiency, comfort, safety and flexibility – these are the requirements placed on modern buildings today. And we have the technology to meet all these requirements: KNX – the global standard for home and building automation. This allows all functions in the building to be connected and controlled easily. Whether sun shading, light, air conditioning, heating or safety systems – with KNX, all of these power consumers can be regulated centrally with a control panel or even automatically through intelligent sensors. This versatility offers clever solutions for all buildings and applications. Limitless comfort – as if by magic.

Printing errors, changes and deviations from the technical specifications and product presentation are possible due to the individual structural conditions and apply to all the products included in this brochure.

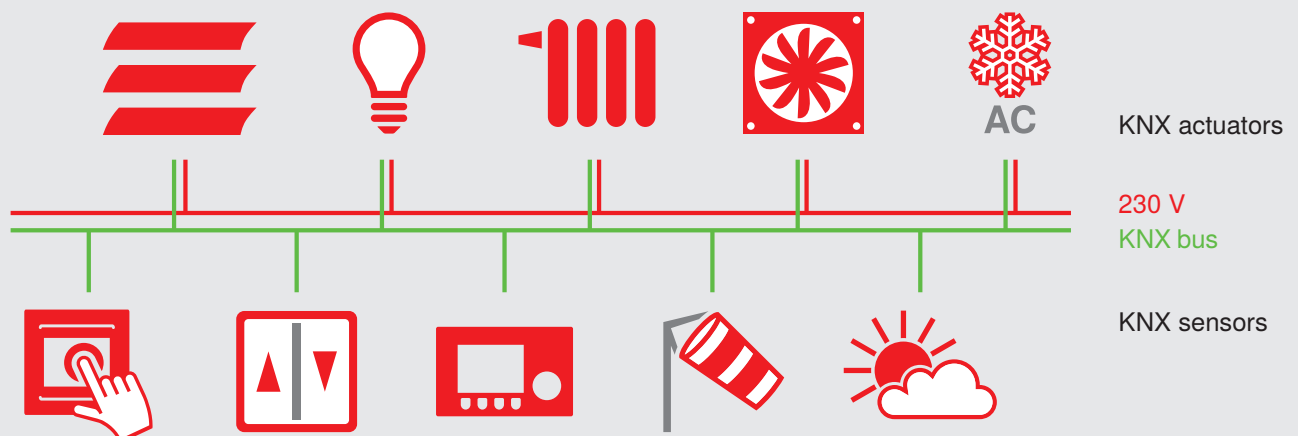


KNX: an overview

- Combination of any number of products and systems (heating, cooling, light, etc.)
- Compatibility across manufacturers for all available KNX products
- Simple planning for complex requirements
- Flexible expansion with additional components
- Changes in user requirements can be easily implemented via software (ETS); no rewiring necessary

The benefits speak for themselves

- Perfect working conditions and ideal conditions for relaxation at home
- Reduction in energy costs
- Improved efficiency class for the building (A or B)
- Individually programmable controls
- Future-proof thanks to the international automation standard
- WAREMA's many years of experience guarantee seamless coordination of sun shading systems with KNX.



Control functions



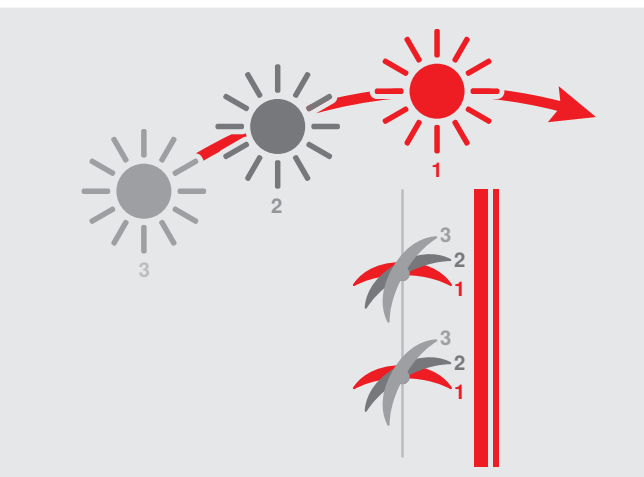
Control function and DIN EN 15232	D	C	B	A
Lighting that can be automatically switched, controlled and dimmed	–	–	•	•
Sun control	–	•	–	–
Slat tracking	–	–	•	•
Shading correction (annual shading)	–	–	•	•
Thermo-automatic (heating and cooling support in unoccupied rooms to use solar gain)	–	–	•	•
Specified for new buildings	–	•	•	•

Room automation functions in accordance with VDI 3813-2



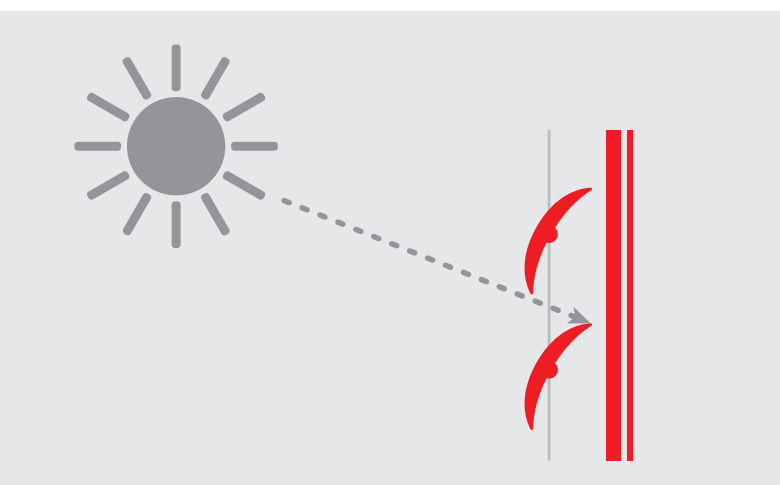
Individual automation

- Sun control
- Presence detection
- Monitoring of wind, precipitation and ice
- Scene control
- Time switch
- Control timer



Slat tracking based on the sun's position

The control system tracks the position and angle of the sun and moves the slats accordingly. It even takes into account sunlight shining in from the side when doing so. This maximises interior daylight without sunrays entering the room directly – ideal for glare-free work. Sensors can also detect the level of brightness in the room to switch artificial lighting on or off as required. Brightness control and slat tracking based on the sun's position work together to keep daylight at the ideal level. At WAREMA, our slat tracking based on the sun's position even exceeds the requirements of VDI 3813.



Cut-Off

If the sun shading system does not regulate the sunlight entering a room, the temperature can quickly rise above comfortable levels. An ideal slat position (referred to as Cut-Off) keeps out direct sunrays while efficiently illuminating the entire room with diffused daylight. This function automatically adapts to the weather and position of the sun. To prevent glare, the user can close the sun shading slats further, but is unable to open them beyond their Cut-Off position. This reduces the cooling load to the minimum required.

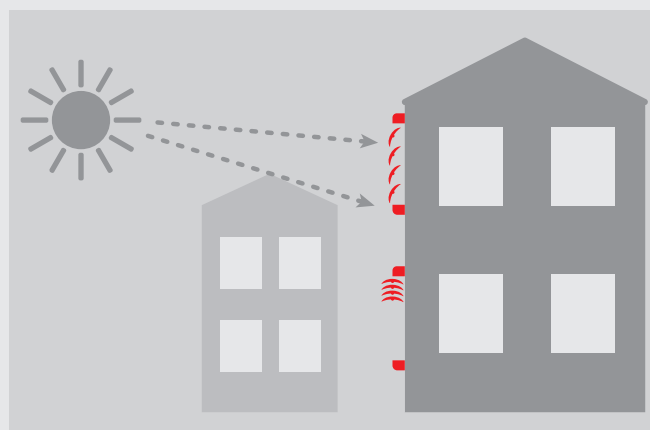
Annual shading (shading correction)

The bus technology allows adjacent building sections, courtyards and neighbouring developments to be shaded at once. The changes in shadows over the course of the day are calculated and evaluated. The sun shading system behaves as though a sunlight sensor were fixed to each product, meaning they provide shade only when direct sunlight falls upon the window.

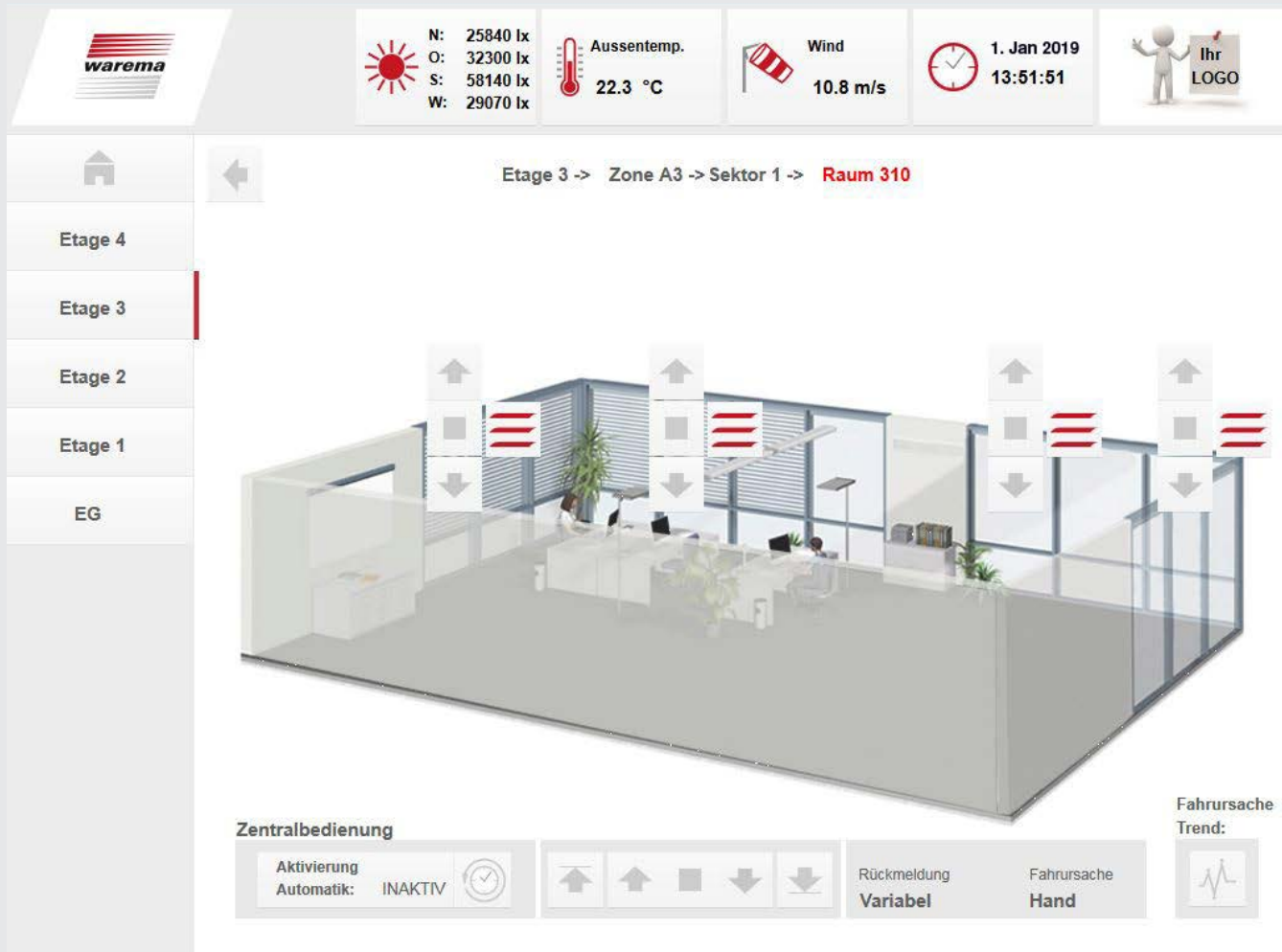
Want to know more?

Our short films can provide you with a clear explanation of the multiple uses of our intelligent control functions:

www.warema.com/control-function

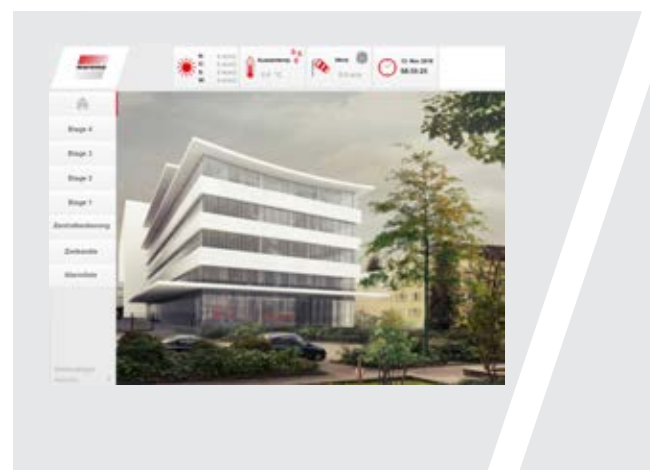


Visualisation and remote access



Visualisation and operation of KNX networks

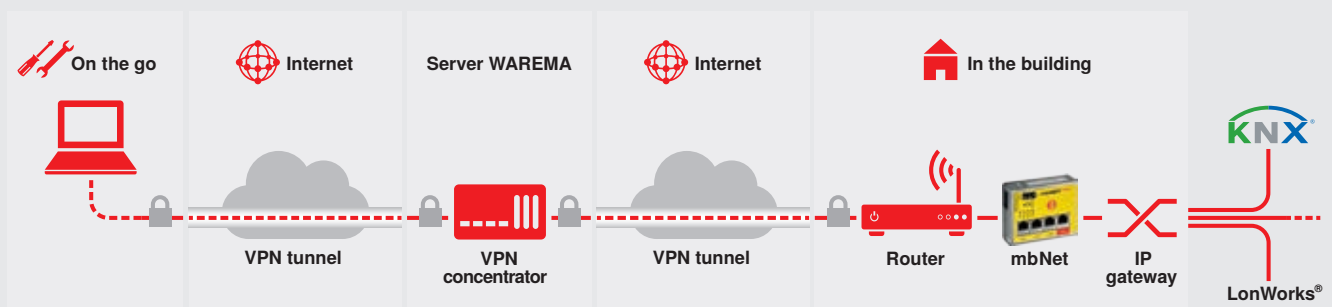
- Project-specific visualisation
- Display of current weather data and time
- Area and room illustrations (with floor plans)
- Manual operation of sun shading products
- Control of each facade
- Trendlogs
- Alarm display





WAREMA Connect

- Encrypted remote access to WAREMA KNX control systems
- Remote maintenance by WAREMA possible
- No open incoming ports required, as the connection is established only outward from the property
- Hosting in WAREMA's own network, all connection data is secured on the WAREMA premises
- VPN connection via the OpenVPN (SSL) protocol
Encrypted connection with AES256
- Connection can be enabled and disabled by the system operator
- Future-proof thanks to IPv6 support
- Alternative connection via mobile



Functional principle: WAREMA Connect



Manual override
operation via
Bluetooth!
(Surface-mounted
actuators)



KNX sun shading actuators

Highlights

- Surface-mounted actuators: manual override and easy operation of the KNX programming button via smartphone (Bluetooth LE) – suspended ceilings or double floors present no problem when commissioning
- Surface-mounted actuators: standard (venetian blind) push buttons can be connected via integrated binary inputs (freely available on the bus), visualisation of the binary inputs in the smartphone app
- REG actuators with the most compact design on the market (8 motor outputs with a modular width of only 6)
- **NEW:** control with SMI drives (see page 10)

RED and surface-mounted actuators

- Control of 2 to 8 sun shading drives with 230 V AC voltage or 4 sun shading drives with 24 V DC voltage (pole changer switching)
- Interchangeable miniature fuses for line protection of connected power consumers
- Spring terminals for easy installation
- Voltage input as screw terminals for flexible extension

Functions

- Manual override protection at REG actuator via keypad
- Activation or deactivation of the automatic inputs (e.g. sun control, slat tracking)
- Manual operation can be limited through automatic inputs (e.g. cut-off)
- 8 scene objects per output
- Highest safety level thanks to 3 global safety objects and an additional safety object per output:
 - Different priorities considered
 - Cyclical monitoring
- Convenience thanks to integrated status objects: curtain height, slat angle, dwell time active and upper limit position
- Crawling speed at engine start-up can be parameterised
- Maximum telegram rate can be limited globally per actuator
- Factory-set basic parameters for:
 - Venetian blind / external venetian blind
 - Roller shutters / textile sun shading systems
 - Window awning with ZIP guidance



KNX SA 4M230 REG



KNX SA 4M230.8 AP



Strain relief surface-mounted actuator





Bluetooth functionality with SMI REG and surface-mounted actuators

SMI actuators

- Control of up to 16 SMI and/or SMI LoVo motors in up to 16 groups
- Emergency/manual operation using buttons on the actuator, the ETS DCA app or Bluetooth LE smartphone app
- SMI drives can be switched off via integrated relay to prevent long-term standby current consumption
- Individual motors are automatically parametrised after replacement
- Surface-mounted actuators with integrated binary inputs for standard (venetian blind) push buttons and replaceable miniature fuses for line protection
- Manual override operation and easy operation of the KNX programming button via smartphone (Bluetooth LE) and push buttons on the surface-mounted actuator

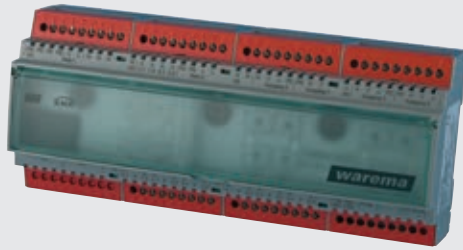
ETS DCA app for the ETS:

- SMI motor parametrisation
- Emergency/manual operation (SMI Broadcast, group, individual motors)
- Synchronisation of ETS project and actuator (for SMI commissioning via smartphone app)
- Status display of binary inputs



KNX MSE 6M230

- Multiple combination actuator for the independent control of 230 V AC sun shading drives and lighting systems
- 12-point binary input available on the KNX bus
- Interchangeable miniature fuses for line protection of connected power consumers



KNX EWFS Receiver

- Wireless operation of KNX products via EWFS hand-held transmitters and wall-mounted transmitters as well as EWFS weather stations
- Venetian blind and roller shutter controller, switching, dimming, scene control and more
- Ideal for retrofitting through installation in flush-mounted box
- Voltage supply through the bus coupler



WAREMA KNX room controller

- Room temperature sensor with touch display
- Integrated weekly time switch
- Individual configuration of different display and operation sides
- 4 inputs for binary contacts or temperature sensors T-NTC
- Suitable in all standard switch programs for use 55 x 55 mm



Overview KNX actuators

Actuator	Operating voltage	Number of drives	Switching capacity per drive	Number of binary inputs	Manual override operation	Dimension
KNX SA 2M230 REG	230 V AC	2	500 VA with 230 V AC cos φ = 0.6	—	●	4 MW
KNX SA 2M230.4 AP				4	● ¹⁾	6 MW
KNX SA 4M230 REG		4		—	●	4 MW
KNX SA 4M230.8 AP				8	● ¹⁾	9 MW
KNX SA 6M230 REG		6		—	●	6 MW
KNX SA 6M230.12 AP				12	● ¹⁾	12 MW
KNX SA 8M230 REG		8		—	●	6 MW
KNX SA 8M230.16 AP				16	● ¹⁾	12 MW
KNX MSE 6M230 AP/REG		6 drives or 5 drives + 2 lights or 4 drives + 4 lights		12	●	12 MW
KNX SA 4MDC REG	24 V DC	4	max. 3 A at 24 V DC (72 W)	—	●	4 MW
KNX SA 4MDC.8 AP				8	● ¹⁾	6 MW
KNX SA 16M230 SMI REG	230 V AC SMI	16	16 x 230 V AC SMI	—	●	3 MW
KNX SA 16M230.32 SMI AP	230 V AC SMI	16	16 x 230 V AC SMI	32	●	12 MW
KNX SA 16MDC SMI LoVo REG	SMI LoVo	16	16 x SMI LoVo	—	●	3 MW
KNX SA 16MDC.32 SMI LoVo AP	SMI LoVo	16	16 x SMI LoVo	32	●	12 MW
KNX SA 2M100.4 AP	100 V AC	2	200 VA with 100 V AC cos φ = 0.6	4	● ¹⁾	6 MW
KNX SA 4M100.8 AP		4		8	● ¹⁾	9 MW
KNX SA 6M100.12 AP		6		12	● ¹⁾	12 MW

● yes

— = no

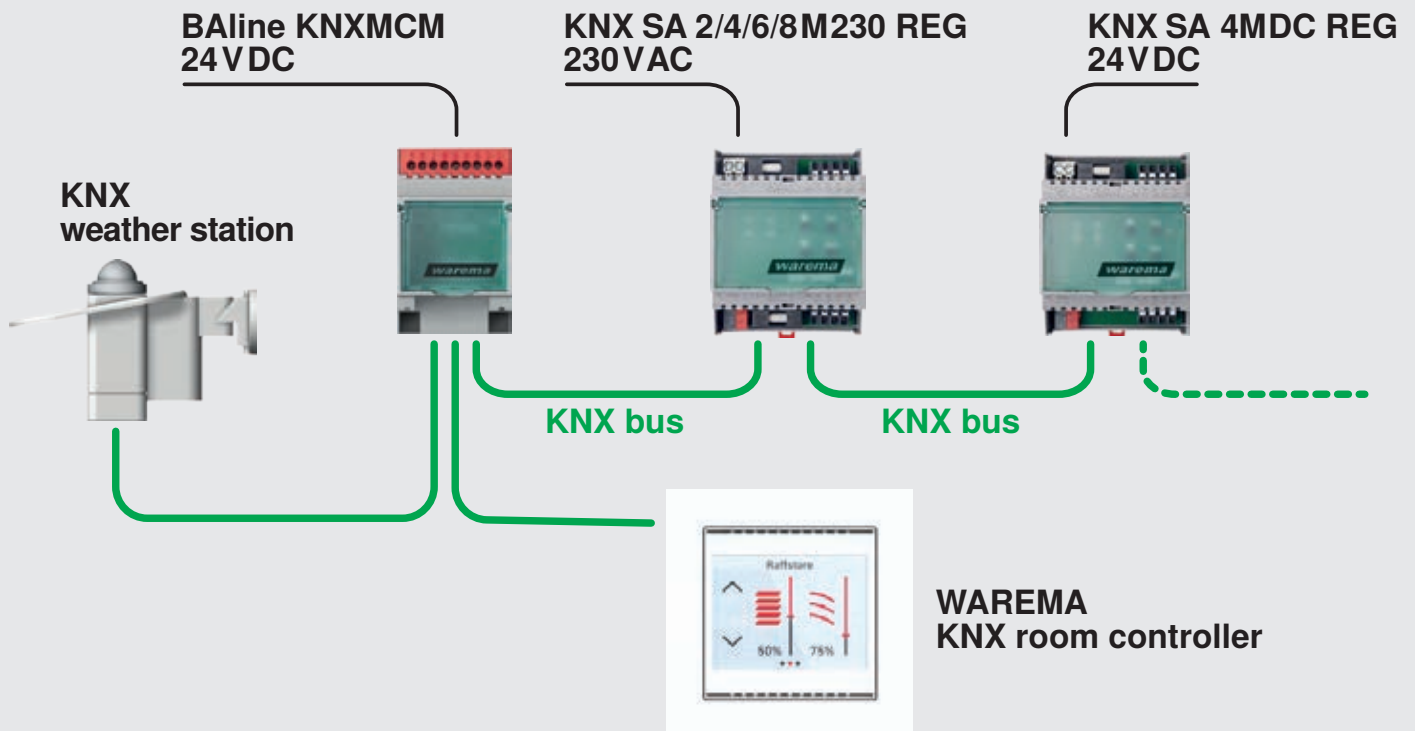
¹⁾ via smartphone app





KNX technology

Practical application



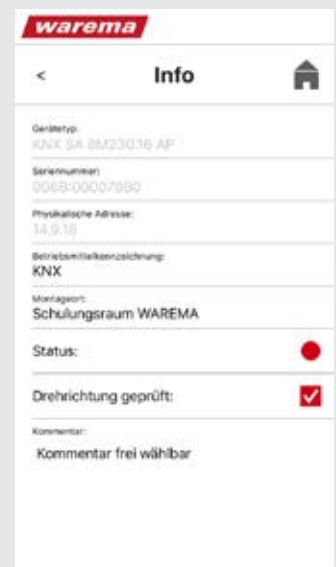
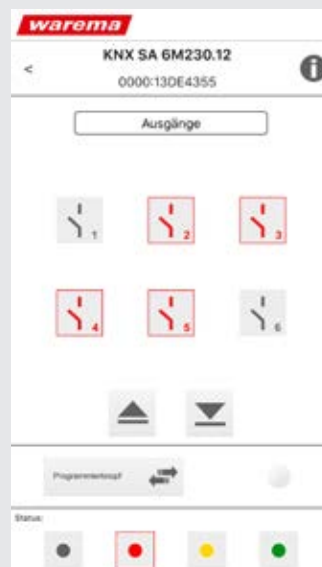
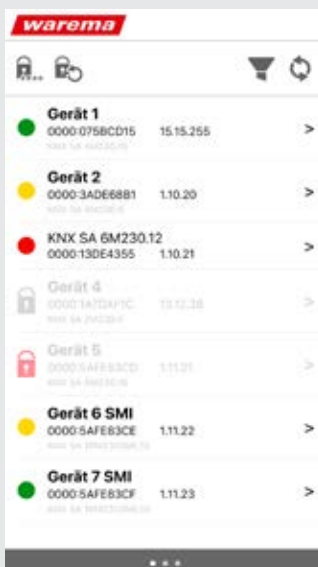
Room automation solution

The complete room automation solution for KNX with WAREMA devices allows connected power consumers to be operated and parameterised in up to 64 channels. The sun shading or lighting system is controlled via slat tracking based on the sun's position, dawn/dusk control, scenes and many other functions.



Actuators with Bluetooth LE – unique benefits

- Available for KNX SA surface-mounted actuators and KNX SMI surface-mounted and REG actuators
- Pressing the KNX programming button
- Status display of binary inputs
- Device access is protected with an access code
- Storage of device information (device status, installation location, equipment identification and note)
- Notes are saved on the smartphone and the actuator
- Commissioning/allocating the SMI drives
- After commissioning, the Bluetooth interface can be deactivated via ETS





WAREMA climatronic® KNX central weather unit

for a perfect indoor climate

WAREMA climatronic® 3.0 controls sun shading, temperature and light according to environmental conditions in both small and large buildings. Intuitive operation makes it easy to comfortably create your personal ideal climate for work and leisure.

With the KNX Gateway, a complete KNX system is created. Sensors allow for the highest degree of comfort thanks to dawn/dusk control, wind monitoring and slat tracking according to the position of the sun. The KNX Gateway sends time and weather information to the KNX network and thus ensures the perfect indoor climate.



WAREMA climatronic® KNX central weather unit

- Central weather unit for KNX bus systems for operating the comfort and safety functions without ETS
- Integrated temperature and humidity sensor
- Diverse functionality for a perfect indoor climate
- Energy saving thanks to automatic control
- Simple operation with large 5.7" TFT display
- Control of up to 64 channels
- Operation via EWFS hand-held or wall-mounted transmitter and via smartphone using WAREMA climatronic® web control



WAREMA climatronic® weather station

- Detects brightness, dawn/dusk, wind speed, wind direction, precipitation, time (DCF77), outside temperature
- Photo sensors for measuring brightness in 4 compass directions
- Up to 3 weather stations can be connected to one WAREMA climatronic®





WAREMA BAline

Simple implementation of complex requirements

Modularisable control systems allow the seamless combination of different items of equipment in room automation units – based on a single device family. The modular BAline control system satisfies the prerequisites for the straightforward planning, configuration and commissioning of room automation units. Energy efficiency, thermal and visual comfort can be brought into harmony from the facade in.



Functional principle

Using the bus coupler KNXMCM and the BAline extension modules, a range of power consumers are combined for a bespoke application. This results in an individual room automation solution. Free programming capability and modularity form the basis for the flexibility and future orientation of the system.

Many different standard push buttons, analogue sensors and digital signal transmitters can be connected to the BAline MIOs' universal inputs. This allows for simple control of:

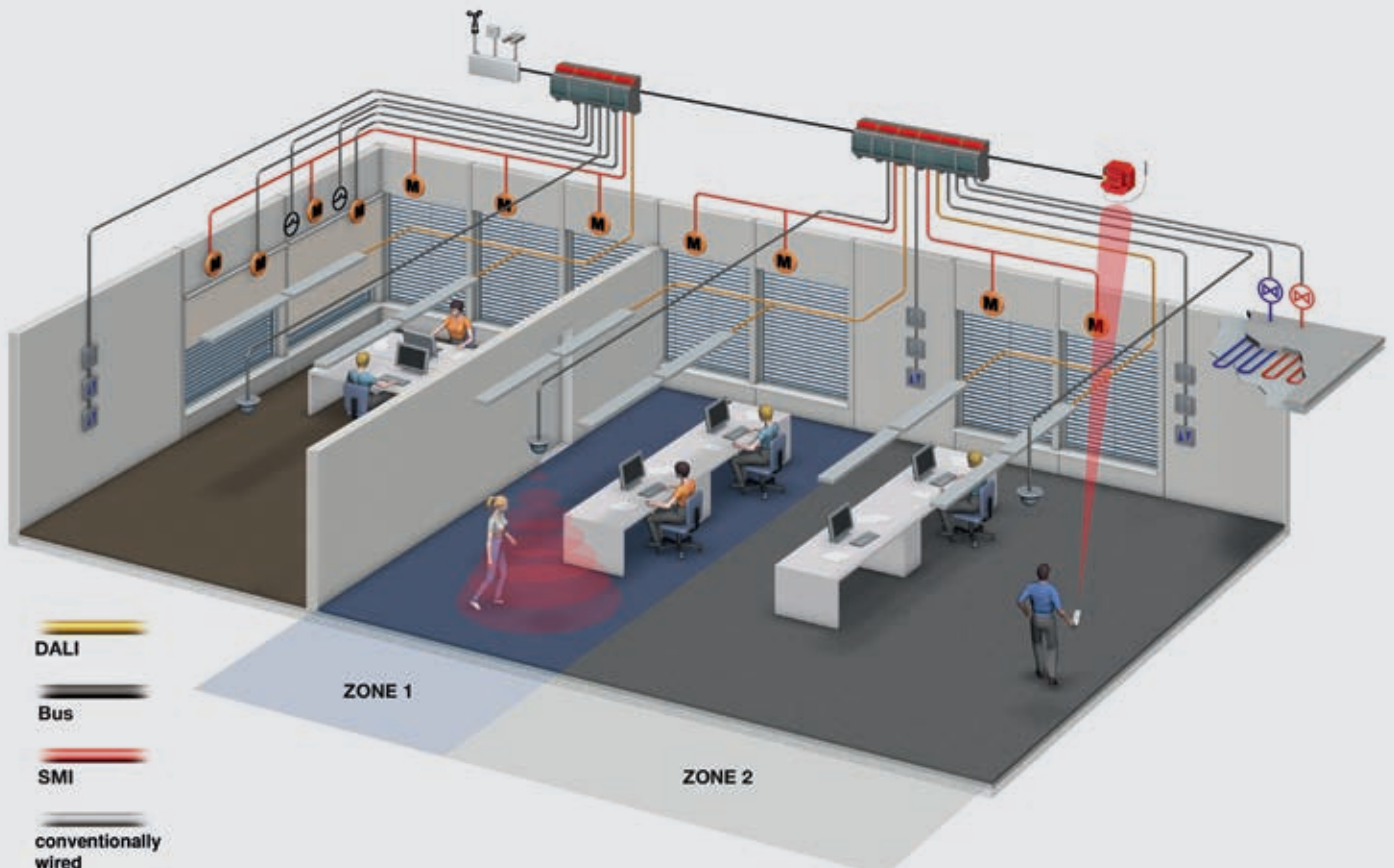
- Sun shading control system 230 V AC, 24 V DC, SMI
- Lighting control DALI, 0-10 V, switching
- Ventilation control, 10 V, Triac



BAline KNXMCM

The benefits for you

- Freely programmable logic module BAline KNXMCM for implementing complex function processes and automation processes
- Reduction of energy and operating costs
- Creation of application software using the free BAline Studio software
- Up to 8 different modules (BAline MIOs) can be mounted side-by-side in any order
- Functional safety thanks to simulation before commissioning
- Free management of 500 KNX objects and 100 parameters in to ETS
- USB interface for programming



Discover SunLight Management!

You can find out even more about solutions and product highlights from WAREMA in our other brochures. Simply download or request them at www.warema.de/prospekte.



Consultation brochure, WAREMA climatronic® 3.0



Consultation brochure, control systems



Consultation brochure, WAREMA Mobile System (WMS)

For further information, please contact your WAREMA Partner:

Visit us online at www.warema.com/knx

WAREMA International GmbH
Dillberg 14 • 97828 Marktheidenfeld • Germany
www.warema.com • info@warema.com

Find us here:

