

 **GRIESSER**



Controls from Griesser.
Planning documents Griesser KNX





KNX



For information on sensors and accessories, see the planning documents "Sensors, operation and accessories."

- 1 to 320 sections, individually control-
lable
- Master operation
- Automatic sun control
- Automatic wind, rain, temperature,
frost control and hail protection
- Time programs
- Automatic locks
- Motor control with test button
- Error diagnosis
- KNX-certified bus system
- KNX BUS system

Griesser KNX – at a glance

The Griesser KNX solar shading control offers sophisticated, end-to-end functionality in a comprehensive system suitable for smaller to very large buildings. With proven functions, such as sun tracking and horizon restrictions, even the highest demands placed on a solar shading control are met.

Precise, optimal solar shading is achieved thanks to product settings tailored exactly to different blind and facade products. Existing systems can be easily upgraded for the future at any time. Existing systems can be easily expanded at any time to take care of future needs.

Griesser controls – automatically good.

Weather and solar shading control center

KNX weather and solar shading control centers record current meteorological data and it to provide convenient and protective functions. From simple control functions to extensive sun protection automation systems, everything can be easily and quickly adjusted.



Facade wind sensor

The WHX sensor offers the ability to measure wind conditions directly on the facade.



Motor controls for blinds

The motor controls for blinds can be used for all common motors with 2 or 3 limit switches and Comfort drives. Thanks to sophisticated end position detection, all facade products can be optimally controlled. Motor controls for blinds with 6 or 9 independent motor channels can be installed in control cabinets. Motor controls for blinds with 3 independent motor channels or 1 motor channel can be installed locally in wall ducts, false floors or hollow ceilings.



Operation

The touch panel is connected to the solar shading control center and enables operation of a system with up to 128 sections from one location. The touch panel is available for concealed installation or wall-mounting. The SFB-1M and SFB-5M hand-held transmitters can be used to operate individual or several blind actuators with integrated MOFUB remote module at the same time.



Visualisation, remote maintenance

The Griesser Terminal Server connects the Griesser LINK via Ethernet/TCP/IP. It enables remote access to the solar shading control center and the automation functions of the entire shading system.



GTS Evolution

The GTS Evolution allows for implementation of sophisticated visualization and automation requirements in combination with other trades.



Weather centre unit for residential construction, 1 to 8 sectors

Detection of brightness, wind, precipitation, temperature and global solar radiation

Maintenance-free wind measurement

Date and time reception

Status indicator for KNX and wind measurement

5 m connector cable with plug on device (operating power and BUS)

Installation on sensor mast (Ø 25 mm)

The EMX-8 weather centre unit combines the core and the sensors of the Griesser KNX control in a single unit. The central unit offers flexible and extensive options for the solar shading automation of small to large systems, especially in residential construction. The advantage lies in the central configuration and administration of all important automatic programs using ETS. This makes it easy to set interdependencies dealing with automatic timing or shading.

Programming and commissioning are quick, secure and simple due to the communication with the motor control via the Griesser object.

The Griesser object links the central unit with all motor controls via a group address.

Purpose

Up to 8 sections can be controlled, including 2 sections for conventional blind actuators. Full functionality in combination with Griesser blind actuators.

Automatic sun control with solar tracking or guide for shade edge

Automatic program for safety sensing edge (wind, rain, frost)

Energy utilisation function and global radiation assessment.

Automatic daylight-savings/standard time switching.

8 timer programs for Mon. - Fri. and Sat./Sun. with twilight function.

Logic programs for the processing of external inputs.

Blocking functions with various priorities.

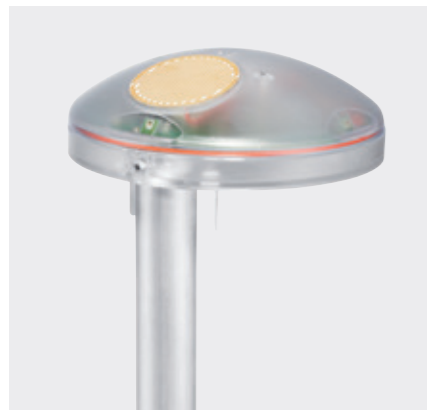
Simulation mode for the support of commissioning and for fault diagnosis.

Reception and evaluation of sensor data via KNX BUS.

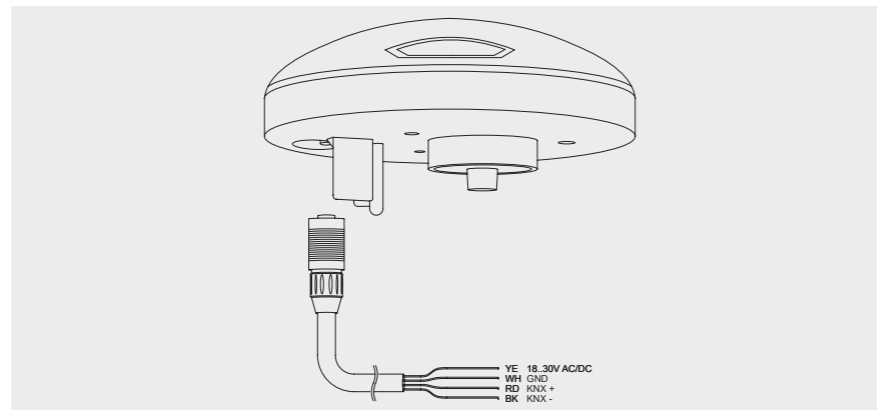
Transmission of internal sensors as well as time of day and date via KNX BUS.

BUS monitoring

Configuration is performed with the ETS.



EMX-8



TECHNICAL DATA

Device

Device type	EMX-8
Housing material	PC Makrolon
Dimensions	Ø 130 x 63.5 mm
Installation	wall, sensor mast
Type of protection	IP44, EN 50491
Operating environment	-30 until +60°C
Weight	215 g

Connections

Supply voltage

Voltage	18 V ... 30 V AC/DC, 50/60 Hz
Current consumption	120 mA @ 24 V (max. 300mA)
Electric circuit	SELV
KNX BUS	in accordance with KNX Standard
Cable	connection cable, Ø 4.5 mm with 4 x 0.25 mm² fine-stranded conductors, 5 m, extendable to max. 100m (DC), 50m (AC)

Brightness sensor

Recording range	horizontal 360°, 4 brightness sensors
Measuring range	0 ... 100 kLux, including twilight

Wind sensor

Measuring range	0 - 100 km/h
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Precipitation sensor

Switching delay	dry => wet: at once wet => dry: 3.5 minutes
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Temperature sensor

Measuring range	typically -30 to +60°C
Resistance	PT 1000 DIN EN 60751

Global radiation sensors

Measuring range	0 ... 1300 W/m²
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The WHX KNX facade wind sensor

Accurate – attractive – unobtrusive

Smart controls meet deft design

Precise wind measurements directly on the facade

Integrates perfectly into the building's architecture

Excellent for weather protection and blind control

An ideal supplement to a central weather station

Installation notes

Device

- The facade wind sensor must be affixed horizontally to the facade, in a location that is free of shadow or light reflections, and with the sensor pointing down.

KNX bus

- To KNX standard



Reliable and aesthetically attractive weather monitoring devices play a central role in building automation today. Efficiently controlling blinds and protecting them from adverse weather conditions demands advanced solutions that also blend seamlessly into the building's architecture so as not to detract from its visual appeal.

After conducting intensive research and accumulating extensive practical experience, Griesser is pleased to announce the WHX KNX facade wind sensor. The WHX has been specially developed to fit discreetly and harmoniously into a building's visual appearance. With market entry planned for this fall, the new WHX sensor will provide an almost invisible solution that meets the most discerning users' needs.

Turbulence, vortices and other complex wind conditions require special monitoring to ensure that solar shading solutions are kept safe from harm and continue to deliver optimum building comfort. The WHX sensor enables wind conditions to be measured and monitored directly on the building's facade. This localized monitoring permits the blinds of any solar shading system to be precisely managed and controlled – which is especially valuable on larger facades, within which wind conditions may vary.

When used in combination with a central EHX weather station on the building's roof, the decentralized WHX facade wind sensors offer additional measuring capabilities that are finely attuned to localized weather conditions.

Use and application

The WHX KNX facade wind sensor is the ideal solution for building automation today.

The sensor permits local wind conditions to be precisely measured and monitored directly on a building's facade. And this in turn allows the building's blinds and other weather protection systems to be optimally managed and controlled.

With its inconspicuous design, the WHX sensor blends harmoniously into the building's architecture without impinging on its aesthetics.

Ideal for large facades and demanding user needs, the WHX sensor offers a reliable and aesthetically appealing wind monitoring solution.

Configuration

- Configuration is via the engineering tool software (ETS) of the Konnex Association. Detailed setting and function options are described in the application's online help.
- Programming mode is turned on or off via the reed switch, which is actuated externally by magnet. The flashlight with integrated magnet is included with the product.

Technical data

Device

Device type	WHX
Housing material	PC
Installation location	facade
Installation type	screwed
Type of protection	IP54
Operating environment	-30 to +60°C
Weight	150 g

Brightness sensor

Recording range	horizontal
Measuring range	0 ... 150 kLux

Wind sensor

Recording range	horizontal
Measuring range	0 – 144 km/h

Connections

KNX bus	in accordance with KNX standard
Current consumption	< 30 mA

Sun protection control center for 1 to 32 groups

The Griesser solar shading control center is available in 3 versions: FMX-8IH, FMX-16IH, FMX-32IH

Can be used as a weather sensor in combination with an EMX-8.

Connection for up to four sensors such as brightness, wind, precipitation, temperature or contact input

Connector for DCF-77 to Griesser LINK

Status indicator for device and BUS

Connector for BUS and Griesser LINK

Installation on DIN rail (DIN 43880)

The sun protection control center is the heart of the Griesser KNX control. The flexible concept enables individual controls to be fitted to form an extensive sun protection automation system in large systems. The benefit of this is that all key automatic programs can be managed centrally, enabling the dependences between automatic timers, automatic temperature functions and automatic sun control to be easily set up. Communication with the motor control via the KNX Griesser product makes for quick, reliable and easy programming and commissioning.

The Griesser object links the central unit with all motor controls via a group address.

Purpose

Up to 32 sections can be controlled (modularly expandable up to 320 sections)

Shading program with various shading strategies and adaptive delay times for reducing motion

Automatic programs for safety sensing edge (wind, rain, frost)

Automatic programs for shading, temperature, heat, operation and shock.

Horizon limitation for taking into account shadows cast by adjacent buildings onto the facade

Automatic switching between summer time/winter time.

8 timer programs with daily and weekly automatic settings and an astro function. The timer programs can be selected per sector. Within the 8 automated timer programs, 50 timed commands can be managed.

Calendar for setting the time programs during the freely selectable periods

Interdependencies among automatic programs are freely configurable

Locking functions can be coordinated using 14 priority levels.

Simulation mode to support commissioning and for error diagnosis.

Reception and evaluation of sensor data via the KNX BUS

Internal sensor values with time and date can be sent to the KNX BUS

Input programs for processing external inputs like venetian blind push buttons or potential-free contacts in external systems which are integrated for individual control.

Output program for producing output signals on the KNX BUS for signaling other systems.

Diffuse-light analysis optimizes shading during direct and diffuse light conditions.

BUS monitoring

Configuration is performed with the Griesser FlexTool and the ETS



FMX-32IH

TECHNICAL DATA

Device

Device type	FMX-8IH, FMX-16IH, FMX-32IH
Housing design	REG 6TE, DIN 43880
Housing material	Impact-resistant and flame-retardant plastic, yellow
Dimensions	161 x 91 x 63 mm
Installation	In switch cabinet on top-hat rail 35 mm (EN 50022) or equivalent
Type of protection	IP 20, EN 60529
Operating environment	Dry rooms, 0–50°C, level of pollution 2
CE conformity	In compliance with the EMC Directive, Low Voltage Directive and RoHS Directive
Weight	260 g

Connections

Mains

Voltage	230 V AC ±10%, 50 Hz
Current consumption	Typically 30 mA
Connection	Screw terminals, 4-pin
Cable	3 conductors (L, N, PE), 1.5 mm ² , single stranded or finely stranded

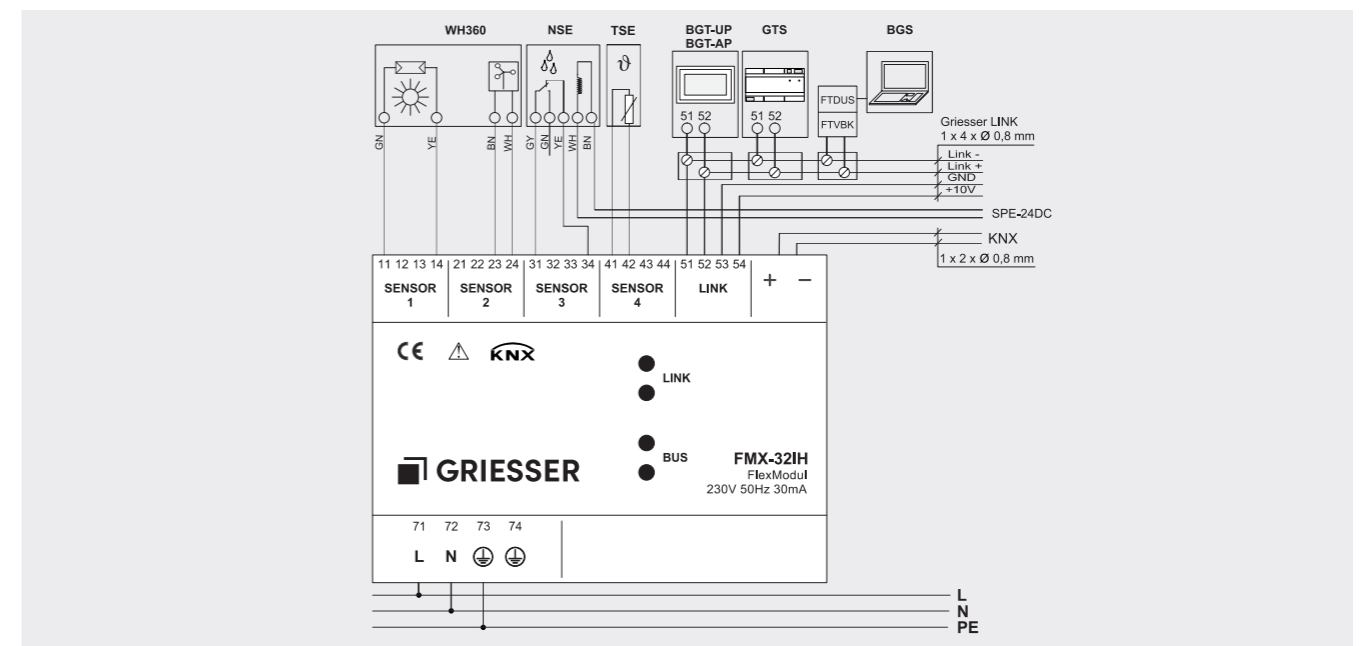
Sensors

Number	4
Connection	Pluggable screw terminals, 4-pin
Electric circuit	PELV
Cable	2 or 3 conductors, Ø 0.5–0.8 mm ² , single stranded or finely stranded, twisted (at least 5 twists per meter)

In order to ensure the expandability of the system, we recommend providing a 3 x 4 cable on the sensor pole for the connection to the central unit.

KNX BUS

Connection diagram



Motor control for 9 motors

- 9 independent motor channels for motors with 2 mechanical limit switches
- End position detection via motor channel
- Status indicator for each motor channel
- Power metering for each motor channel
- Series mounting housing Reg 9TE according to DIN 43880
- Button for checking motor rotation direction
- Connection for local operation (for each motor channel) as full-fledged bus button, including signaling of blocking functions
- Connection for simultaneous operation (all motor channels)
- Spring-type terminal for motor and operation connections
- Plug terminal for network and BUS connection
- Holder for optional remote module

The sophisticated and robust 9-panel blind actuator controls all common facade products such as external venetian blinds, rolling shutters or patio awnings. Using an integrated mathematical model, the mechanical properties of each facade product can be exactly modeled. Then, in combination with automatic end position detection, it makes a precise adjustment with minimal dark phases.

Common commercial controls, such as buttons or switches, are directly connected to the blind actuator and are also fully functional for each channel, even without KNX BUS. Using the group input, all channels can be operated simultaneously.

The blind actuator offers even more possibilities when combined with Griesser's weather and solar shading control center. The greatest possible comfort is always ensured at work or home, whether for storm protection, having the proper amount of shade or adjusting slats to the sun's position.

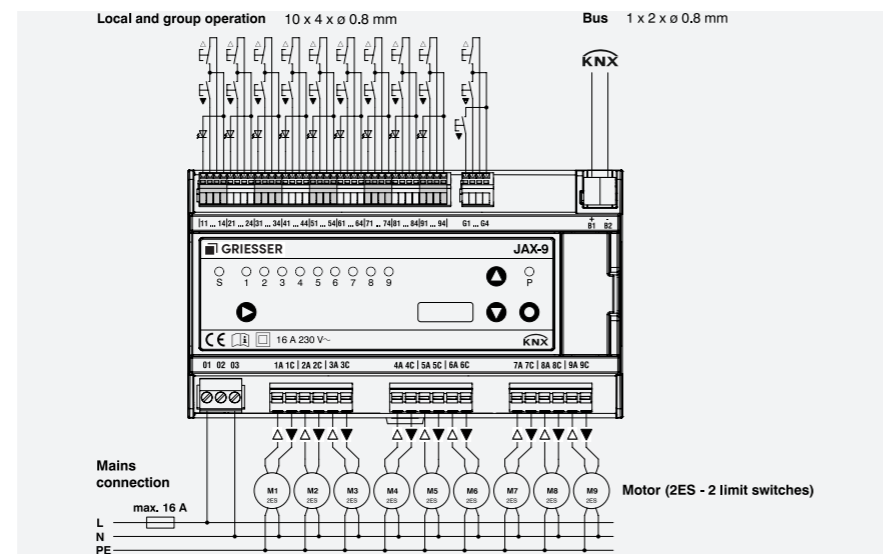
Purpose

- Integrated facade product library with standard positions per facade product for accurate solar tracking control
- Exact positioning of the facade product for uniform facade appearance while taking the aging process and temperature fluctuations into account
- Temporary blocking function for automatic glare protection for each motor channel following manual operation by the user
- Restricted range of motion for user operation when frost protection is active or higher energy radiation
- Feedback on status per motor channel to Griesser visualization



JAX-9

Connection diagram



TECHNICAL DATA

Device		Number	
Device type	JAX-9	Number	9
		Connection	spring type terminal 2-pin
		Cable	2 cables (UP, DOWN2), 1.5 mm ² , single or fine-strand
		Current	max. 2.5 A per channel, sum of channels max. 16 A
		End position detection	existing, asynchronous motor 230 V AC, 50 Hz, with 2 mech. end switches, power factor > 0,9 Comfort drive is supported
Connections		Local operation	
Voltage	230 V AC +10% / -20%, 50 Hz	Number	9
Standby power per channel	0.1 W	Connection	spring type terminal, 4-pin
Circuit breaker	max. 16 A	Cable	4 cables (LED, DOWN, UP, +12 V DC), Ø 0.8 mm, single, twisted (min. 5 turns per meter)
		Length of lead	up to 100 m
		Circuit	SELV according to EN 60730-1
		LED current	type 2 mA
		Switch contact	12 V DC, 3 mA, isolated, gilded
		Binary input	18
Mechanical data		Group operation	
Dimensions	157 x 90 x 57 mm (W x H x D)	Number	1
Housing shape	Series built-in housing REG 9TE according to DIN 43880	Connection	spring type terminal, 4-pin
Housing material	ABS, flame-resistant and halogen-free plastic	Cable	4 cables (DOWN2, DOWN1, UP, +12 V DC), Ø 0.8 mm, single, twisted (min. 5 turns per meter)
Color	zinc-yellow RAL 1018	Length of lead	up to 100 m
Installation	in switch cabinet on DIN rail 35 mm according to DIN EN 60715	Circuit	SELV according to EN 60730-1
Weight	approx. 320 g	Switch contact	12 V DC, 3 mA, isolated, gilded
		Binary input	3
Electric Safety		KNX BUS	
Type of protection	IP 20 according to EN 60529 in correctly installed switch cabinet, IP 00 according to EN 60529	Number	1
Protection class	II according to EN 60730-1	Connection	spring type terminal, pluggable, 2 x 4-pin
Software class	A according to EN 60730-1	Cable	2 cables (+, -), Ø 0.5-0.8 mm, single wire
Contamination level	2 according to EN 60730-1	Protocol	KNX
Mode of operation	1 according to EN 60730-1	Current	12 mA (normal operation) 30 mA (without 230 V power supply)

Surrounding conditions

Surroundings	weather protected
Operating temperature	5 bis +45 °C
Humidity	≤ 95 %, non-condensing
Surroundings class	3K5 according to EN 60721

Labeling

CE conformity	In compliance with Low Voltage Directive, EMC Directive and RoHS Directive
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Connections

Power supply	
Number	1
Connection	screw terminal, pluggable, 3-pin
Cable	2 cables (L, N), max 2.5 mm ² , single or fine-strand

Motor

Motor control for 6 motors

- 6 independent motor channels for motors with 2 or 3 mechanical limit switches
- End position detection via motor channel
- Status indicator for each motor channel
- Power metering for each motor channel
- Series mounting housing Reg 9TE according to DIN 43880
- Button for checking motor rotation direction
- Connection for local operation (for each motor channel) as full-fledged bus button, including signaling of blocking functions
- Connection for simultaneous operation (all motor channels)
- Spring-type terminal for motor and operation connections
- Plug terminal for network and BUS connection
- Holder for optional remote module



JAX-6

The sophisticated and robust 6-panel blind actuator controls all common facade products such as external venetian blinds, rolling shutters or patio awnings. Using an integrated mathematical model, the mechanical properties of each facade product can be exactly modeled. Then, in combination with automatic end position detection, it makes a precise adjustment with minimal dark phases.

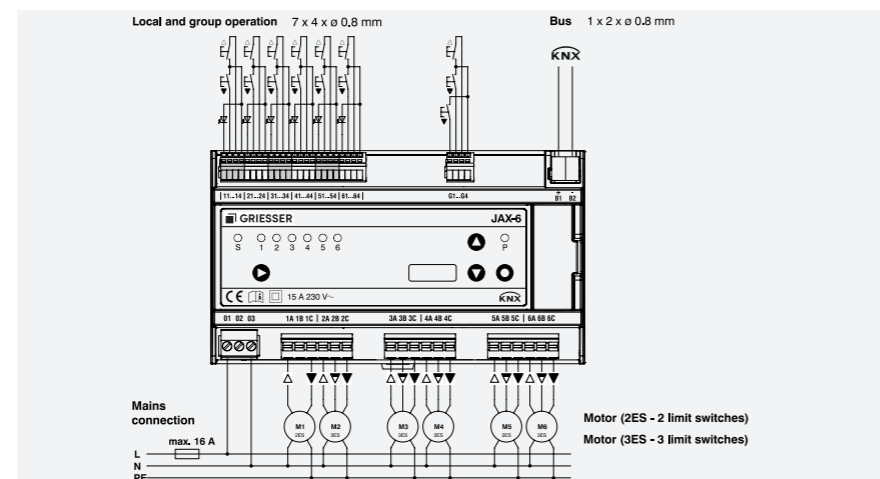
Common commercial controls, such as buttons or switches, are directly connected to the blind actuator and are also fully functional for each channel, even without KNX BUS. Using the group input, all channels can be operated simultaneously.

The blind actuator offers even more possibilities when combined with Griesser's weather and solar shading control center. The greatest possible comfort is always ensured at work or home, whether for storm protection, having the proper amount of shade or adjusting slats to the sun's position.

Purpose

- Integrated facade product library with standard positions per facade product for accurate solar tracking control
- Exact positioning of the facade product for uniform facade appearance while taking the aging process and temperature fluctuations into account
- Temporary blocking function for automatic glare protection for each motor channel following manual operation by the user
- Restricted range of motion for user operation when frost protection is active or higher energy radiation
- Feedback on status per motor channel to Griesser visualization

Connection diagram



TECHNICAL DATA

Device

Device type JAX-6

Cable 3 cables (UP, DOWN2, DOWN), 1.5 mm², single or fine-strand
 Current max. 2.5 A per channel
 End position detection included, asynchronous motor 230 V AC, 50 Hz, with 2 or 3 mech. end switches, power factor > 0.9
 Comfort drive is supported

Connections

Voltage 230 V AC +10% / -20%, 50 Hz
 Standby power per channel 0.2 W
 Circuit breaker max. 16 A

Local operation

Number 6
 Connection spring type terminal, 4-pin
 Cable 4 cables (LED, DOWN, UP, +12 V DC), Ø 0.8 mm, single, twisted (min. 5 turns per meter)
 Length of lead up to 100 m
 Circuit SELV according to EN 60730-1
 LED current type 2 mA
 Switch contact 12 V DC, 3 mA, isolated, gilded
 Binary input 12

Mechanical data

Dimensions 157 x 90 x 57 mm (W x H x D)
 Housing shape Series built-in housing REG 9TE according to DIN 43880
 Housing material ABS, flame-resistant and halogen-free plastic
 Color zinc-yellow RAL 1018
 Installation in switch cabinet on DIN rail 35 mm according to DIN EN 60715
 Weight approx. 320 g

Group operation

Number 1
 Connection spring type terminal, 4-pin
 Cable 4 cables (DOWN2, DOWN1, UP, +12 V DC), Ø 0.8 mm, single, twisted (min. 5 turns per meter)
 Length of lead up to 100 m
 Circuit SELV according to EN 60730-1
 Switch contact 12 V DC, 3 mA, isolated, gilded
 Binary input 3

Electric Safety

Type of protection IP 20 according to EN 60529 in correctly installed switch cabinet, IP 00 according to EN 60529
 Protection class II according to EN 60730-1
 Software class A according to EN 60730-1
 Contamination level 2 according to EN 60730-1
 Mode of operation 1 according to EN 60730-1

KNX BUS

Number 1
 Connection spring type terminal, pluggable, 2 x 4-pin
 Cable 2 cables (+, -), Ø 0.5-0.8 mm, single wire
 Protocol KNX
 Current 12 mA (normal operation)
 30 mA (without 230 V power supply)

Surrounding conditions

Surroundings weather protected
 Operating temperature 5 bis +45 °C
 Humidity ≤ 95 %, non-condensing
 Surroundings class 3K5 according to EN 60721

Labeling

CE Guidelines In compliance with Low Voltage Directive, EMC Directive and RoHS Directive

Connections

Power supply

Number 1
 Connection screw terminal, pluggable, 3-pin
 Cable 2 cables (L, N), max 2.5 mm², single or fine-strand

Motor

Number 6
 Connection spring type terminal 3-pin

Motor control for 3 motors

- 3 independent motor channels for motors with 2 or 3 mechanical limit switches
- End position detection via motor channel
- Status indicator for each motor channel
- Power metering for each motor channel
- Bar-type housing for decentralized installation with integrated anti-drag mechanism
- Button for checking motor rotation direction
- Connection for local operation (for each motor channel) as full-fledged bus button, including signaling of blocking functions
- Connector for simultaneous operation (all motor channels) directly on device
- Spring-type terminal for motor and operation connections
- Plug terminal for network and BUS connection
- Holder for optional remote module



JAX-3

The sophisticated and robust 3-panel blind actuator controls all common facade products such as external venetian blinds, rolling shutters or patio awnings. Using an integrated mathematical model, the mechanical properties of each facade product can be exactly modeled. Then, in combination with automatic end position detection, it makes a precise adjustment with minimal dark phases.

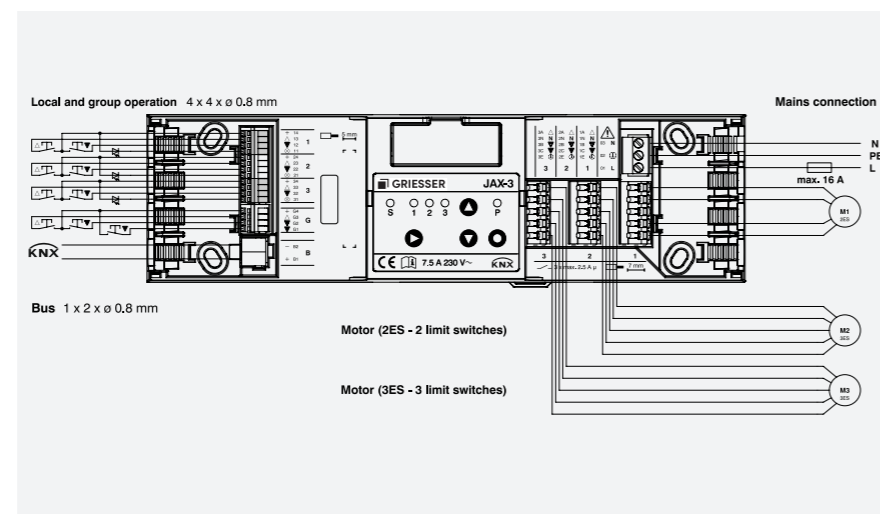
Common commercial controls, such as buttons or switches, are directly connected to the blind actuator and are also fully functional for each channel, even without KNX BUS. Using the group input, all channels can be operated simultaneously.

The blind actuator offers even more possibilities when combined with Griesser's weather and solar shading control center. The greatest possible comfort is always ensured at work or home, whether for storm protection, having the proper amount of shade or adjusting slats to the sun's position.

Purpose

- Integrated facade product library with standard positions per facade product for accurate solar tracking control
- Exact positioning of the facade product for uniform facade appearance while taking the aging process and temperature fluctuations into account
- Temporary blocking function for automatic glare protection for each motor channel following manual operation by the user
- Restricted range of motion for user operation when frost protection is active or higher energy radiation
- Feedback on status per motor channel to Griesser visualization
- Localized installation in cable ducts, false bottoms or false ceilings, resulting in shorter motor connection cables

Connection diagram



TECHNICAL DATA

Device

Device type JAX-3

Number	3
Connection	spring type terminal 5-pin
Cable	5 cables (PE, DOWN2, DOWN1, N, UP), 1.5 mm ² , single or fine-strand
Electricity	max. 2.5 A per channel
End position detection	existing, asynchronous motor 230 V AC, 50 Hz, with 2 or 3 mech. end switches, power factor > 0,9 Comfort drive is supported

Connections

Voltage 230 V AC +10% / -20%, 50 Hz
Standby power per channel 0.3 W
Circuit breaker max. 16 A

Local operation

Number	3
Connection	spring type terminal, 4-pin
Cable	4 cables (LED, DOWN, UP, +12 V DC), Ø 0.8 mm, single, twisted (min. 5 turns per meter)
Length of lead	up to 100 m
Circuit	SELV according to EN 60730-1
LED current	type 2 mA
Switch contact	12 V DC, 3 mA, isolated, gilded
Binary input	6

Mechanical data

Dimensions 250 x 70 x 50 mm (W x H x D)
Housing shape Bar-type housing for decentralized installation with integrated anti-drag mechanism
Housing material ABS, flame-resistant and halogen-free plastic
Color zinc-yellow RAL 1018
Installation DIN rail, railing channel, false floor, wall or false ceiling
Weight approx. 380 g

Group operation

Number	1
Connection	spring type terminal, 4-pin
Cable	4 cables (DOWN2, DOWN1, UP, +12 V DC), Ø 0.8 mm, single, twisted (min. 5 turns per meter)
Length of lead	up to 100 m
Circuit	SELV according to EN 60730-1
Switch contact	12 V DC, 3 mA, isolated, gilded
Binary input	3

Electric Safety

Type of protection IP 20 according to EN 60529 (closed)
Protection class I according to EN 60730-1
Software class A according to EN 60730-1
Contamination level 2 according to EN 60730-1
Mode of operation 1 according to EN 60730-1

KNX BUS

Number	1
Connection	spring type terminal, pluggable, 2 x 4-pin
Cable	2 cables (+, -), Ø 0.5-0.8 mm, single wire
Protocol	KNX
Current	12 mA (normal operation) 30 mA (without 230 V power supply)

Surrounding conditions

Surroundings weather protected
Operating temperature 5 bis +45 °C
Humidity ≤ 95 %, non-condensing
Surroundings class 3K5 according to EN 60721

Labeling

CE Guidelines In compliance with Low Voltage Directive, EMC Directive and RoHS Directive

Connections

Power supply

Number 1
Connection screw terminal, pluggable, 3-pin
Cable 3 cables (L, N), max 2.5 mm², single or fine-strand

Motor

Motor control for blinds for 1 motor

- 1 motor channel
- for motors with 2 (gMS-1) and motors with 2 or 3 mechanical limit switches (gMS-1S)
- End position detection
- Status indicator
- Bar-type housing for decentralized installation with integrated anti-drag mechanism
- Button for checking motor rotation direction
- Connector for local operation incl. blocking function signal directly on the device
- Connector for simultaneous operation directly on device
- Spring-type terminal for motor and operation connections
- Plug terminal for network and BUS connection
- Holder for optional remote module



JAX-1

The sophisticated but robust 1-panel motor control for blinds is for controlling all common facade products such as external venetian blinds, rolling shutters or patio awnings. Using an integrated mathematical model, the mechanical properties of each facade product can be exactly modeled. Then, in combination with automatic end position detection, it makes an extremely precise adjustment with minimal dark phases.

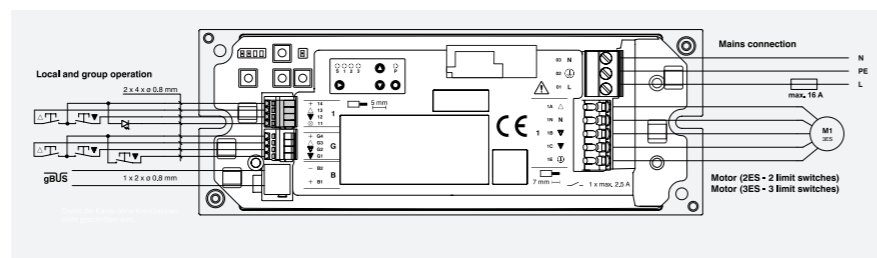
Common commercial control elements, such as buttons are directly connected to the motor control system for the blinds and are also fully functional for each channel without gBUS. Using the group input, all channels of several motor controls for blinds can be operated simultaneously.

The motor control system for blinds offers even more possibilities when combined with Griesser's weather and solar shading master control. Whether for storm protection, the proper amount of shade or adjusting slats to the sun's position - having the greatest possible comfort possible is a given at work or home.

Purpose

- Integrated facade product library with standard positions per facade product for accurate solar tracking control
- Exact positioning of the facade product for uniform facade appearance while taking the aging process and temperature fluctuations into account
- Temporary blocking function for the automatic glare protection per motor channel after having been manually operated by user
- Restricted range of motion for user operation when frost protection is active or higher energy radiation
- Feedback on status to Griesser visualization

Connection diagrams



TECHNICAL DATA

Device		Power supply	
Device type	gMS-1 / gMS-1S	Number	1
		Connection	screw terminal, pluggable, 3-pin
		Cable	2 cables (L, N), max 2.5 mm ² , single or fine-strand
Connections		Motor	
Voltage	230 V AC +10% / -20%, 50 Hz	Number	1
Standby power per channel	0.3 W	Connection	spring type terminal 5-pin
Circuit breaker	max. 16 A	Cable	gMS-1: 4 cables (PE, DOWN, N, UP), max 2.5 mm ² , single-strand or finely stranded gMS-1S: 5 cables (PE, DOWN2, DOWN1, N, UP), max 2.5 mm ² , single-strand or finely stranded
		Current	max. 2.5 A per channel
		End position detection	included, asynchronous motor 230 V AC, 50 Hz, with 2 (gMS-1) or 3 (gMS-1S) mechanical limit switches, power factor > 0.9 Motors with integrated electronic on request!
Mechanical data		Local operation	
Dimensions	190 x 70 x 52 mm (W x H x D)	Number	1
Housing shape	Bar-type housing for decentralized installation with integrated anti-drag mechanism	Connection	spring type terminal, 4-pin
Housing material	ABS, flame-resistant and halogen-free plastic	Cable	4 cables (LED, DOWN, UP, +12 V DC), Ø 0.8 mm, single, twisted (min. 5 turns per meter)
Color	zinc-yellow RAL 1018	Length of lead	up to 100 m
Installation	DIN rail, railing channel, false floor, wall or false ceiling	Circuit	SELV according to EN 60730-1
Weight	approx. 300g	LED Current	type 2 mA
		Switch contact	12 V DC, 3 mA, isolated, gilded
		Binary input	6
Electric Safety		Group operation	
Type of protection	IP 20 according to EN 60529 (closed)	Number	1
Protection class	I according to EN 60730-1	Connection	spring type terminal, 4-pin
Software class	A according to EN 60730-1	Cable	4 cables (DOWN2, DOWN1, UP, +12 V DC), Ø 0.8 mm, single-strand, twisted (min. 5 turns per meter)
Contamination level	2 according to EN 60730-1	Length of lead	up to 100 m
Mode of operation	1 according to EN 60730-1	Circuit	SELV according to EN 60730-1
		Switch contact	12 V DC, 3 mA, isolated, gilded
		Binary input	3
Surrounding conditions		Communication BUS	
Surroundings	weather protected	Number	1
Operating temperature	5 bis +45 °C	Connection	spring type terminal, pluggable, 2 x 4-pin
Humidity	≤ 95 %, non-condensing	Cable	2 cables (+, -), Ø 0.5-0.8 mm, single wire
Surroundings class	3K5 according to EN 60721	Current	12 mA (normal operation) 30 mA (without 230 V power supply)
Labeling			
CE Guidelines	in compliance with the EMC Directive, Low Voltage Directive and RoHS Directive		
Connections			

Operation

BGT touch panel operating terminal

5.7" graphic display

On-wall BGT for surface-mounted installation

BGT-UP for concealed installation

Compatible with Feller EDIZIOdue**

Master and group operation

Intuitive operation using sequences

Up to 128 sections can be controlled

Visualization of sensor and group statuses

Switch programs on/off

Colored status indicator

The touch panel (BGT) provides a modular solution for convenient operation and visualization of a Griesser blind control system.

The touch panel is connected directly to the Griesser LINK. It is used to intuitively operate all the blinds in a building and display the status of the automatic functions. The contact-sensitive indicator enables the system to be directly operated and provides information about operation.

The hand-held transmitters (SFB-1M, SFB-5M) can be used to operate JAX blind actuators without major installation effort. Any changes required due to adaptations in the room design can be made quickly and flexibly.

The following accessories for the BGT-UP must be ordered separately:

BGT - FRONT front plate touch panel

BGT frame (white)

** EDIZIOdue cover frame Size 3x2

SFB-1M / SFB-5M hand-held transmitters

Operation of JAX blind actuators with integrated MOFUB remote module

Hand-held transmitter for one and five local operating groups

Manual commands such as up, stop, down, and shading position

Additional button for the automatic lock

Up to 16 local control inputs can be assigned

MOFUB remote module

The module can be integrated into all JAX blind actuators

Operation with SFB-1M and SFB-5M hand-held transmitter

Up to 32 transmitter channels can be assigned per remote module



SFB-5M und MOFUB



BGT-UP

TECHNICAL DATA

BGT

Dimensions	BGT-UP 108 x 148 x 42 mm BGT-AP 199 x 178 x 89 mm
Installation	In-wall inlet box size 3x2 box 9926EIB, E no. 372.116.129
Image area	5.7", approx. 115 x 86 mm
Colors	65536 (16Bit)
Resolution	320 x 240 pixels (QVGA)
Display technology	Active TFT LCD
Touch sensor	Resistive
Memory card	Slot for microSD™ Card, 1 or 2 GByte Accessible once front cover has been removed
Type of protection	IP20, EN 60529
Operating environment	Dry rooms, 0–50°C
CE conformity	In compliance with the EMC Directive, Low Voltage Directive and RoHS Directive

Connections

Mains

Voltage	230 V AC ±10%, 50 Hz
Power consumption	max. 8 W
Standby performance	3 W
Connection	Pluggable screw terminals, 3-pin
Cable	3 conductors (L, PE, N), 1.5 mm ² , single stranded or finely stranded
Ethernet	RJ45 plug, 8-pin

Griesser LINK

Electric circuit	PELV
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Connection	Pluggable screw terminal, 4-pin
Cable	2 cables, Ø 0.8 mm, single, twisted (min. 5 turns per meter), cable length max. 200 m (terminals 51 / 52) or 4 cables, Ø 0.8 mm, single, twisted (min. 5 turns per meter), cable length max. 200 m (terminals 51 / 52 / 53 / 54)

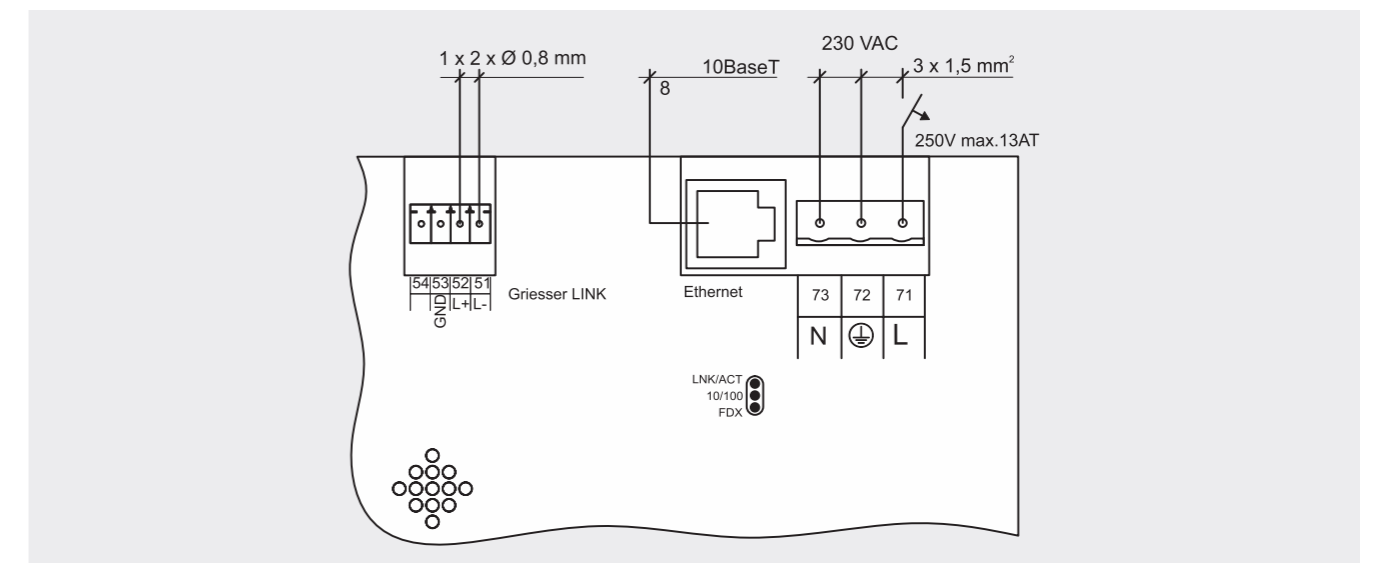
SFB-1M / SFB-5M

Operating voltage	3 VDC
Battery type	2 x LR06 (AA Mignon)
Protection class	IP 20
Temperature range	0 ... +55 °C
Radio frequency	868 Mhz-Band
Dimensions	120 x 51 x 26 mm
Weight	120 g

MOFUB

Protection class	IP 20
Temperature range	0 ... +55 °C
Radio frequency	868 Mhz-Band
Dimensions	45 x 35 x 16 mm
Weight	80 g

Connection diagram BGT-UP/BGT-AP



Visualization, remote maintenance

Griesser-Box

Visualization enables the control of the entire solar shading system
Protection against hail based on SRF weather radar forecast
Remote access via VPN connection
Automated logging of all settings and events



Griesser-BOX

The Griesser BOX provides you with a simple and convenient means of controlling venetian blinds, timers and other customized modules. For example, you can visualize all the data relating to your home technology including the weather, the status of the venetian blinds, etc. Regardless of whether you use the Griesser BOX from home or from your place of work, you can create the visualization solution best suited to your environment. This enables you to interact with the building in a functional manner.

The GTS Griesser Terminal Server links the Griesser LINK with the ethernet/TCP-IP. It enables remote access to the solar shading central which makes it possible to remotely control the Griesser blinds control device. Remote control can take place over the internet or intranet. Using the Griesser Terminal Server and the configuration software (FlexTool), the solar shading central can be selected and reconfigured and events can be recorded. The user or a facility manager can thus access the system at any time independently of the building location. In addition, the Griesser Terminal Server offers the possibility of linking the Griesser control to a third-party system for communication via a Modbus/TCP interface.

The GTS Evolution server allows complex visualization and automation requirements to be met. A facility manager can incorporate the Griesser shading control into the building control system by means of the simple and user-friendly management system. Communication is also possible with external systems, such as Bacnet or Modbus, without limiting the number of process points or visualization pages.

The GTS Evolution server provides users with full user control along with a comprehensive analysis and evaluation of the performance of modern buildings. The GTS Evolution server is connected to the Griesser solar shading control via the Griesser Terminal Server.

GTS Griesser Terminal server

Connection between Griesser LINK and Ethernet/TCP-IP
Enables remote maintenance with FlexTool
Connections to supervisory system via Modbus/TCP



GTS Griesser Terminal Server

GTS EVOLUTION

Integration into the building control systems
Connection between Griesser GTS and Ethernet / TCP-IP
Connection to the superordinated system
FMX template facilitates remote maintenance



GTS Evolution

TECHNICAL DATA GRIESSER-BOX & GTS GRIESSER TERMINAL SERVER

Griesser-BOX

Device type	BOX Housing
Housing material	POM processed
Dimensions	74 x 95 x 32 mm
Installation	IT rack or panels (DIN mounting rails 43880)
Protection class	IP 20, EN 60529
Operating environment	-0 to +50°C
Weight	169 g
CE conformity	in compliance with EMC Directive

GTS Griesser Terminal Server

Housing design	REG 9TE, DIN 43880
Housing material	Impact-resistant and flame-retardant plastic, yellow
Dimensions	161 x 91 x 63 mm
Installation	In switch cabinet on top hat rail 35 mm (EN 50022) or equivalent
Memory card	Slot for microSD™ Card, 1 or 2 GByte Accessible once switch cabinet cover has been removed
Type of protection	IP20, EN 60529
Operating environment	Dry rooms, 0-50°C
CE conformity	In compliance with EMC Guideline, Low Voltage Directive and RoHS Directive

Connections

Operating voltage

Voltage	100 - 240 V AC +/-10 % 50 / 60 Hz / 5VDC / 1A
Power consumption	Max. 2 W
Connections	1 x Ethernet 10 / 100, 4 x USB 2.0

Connections

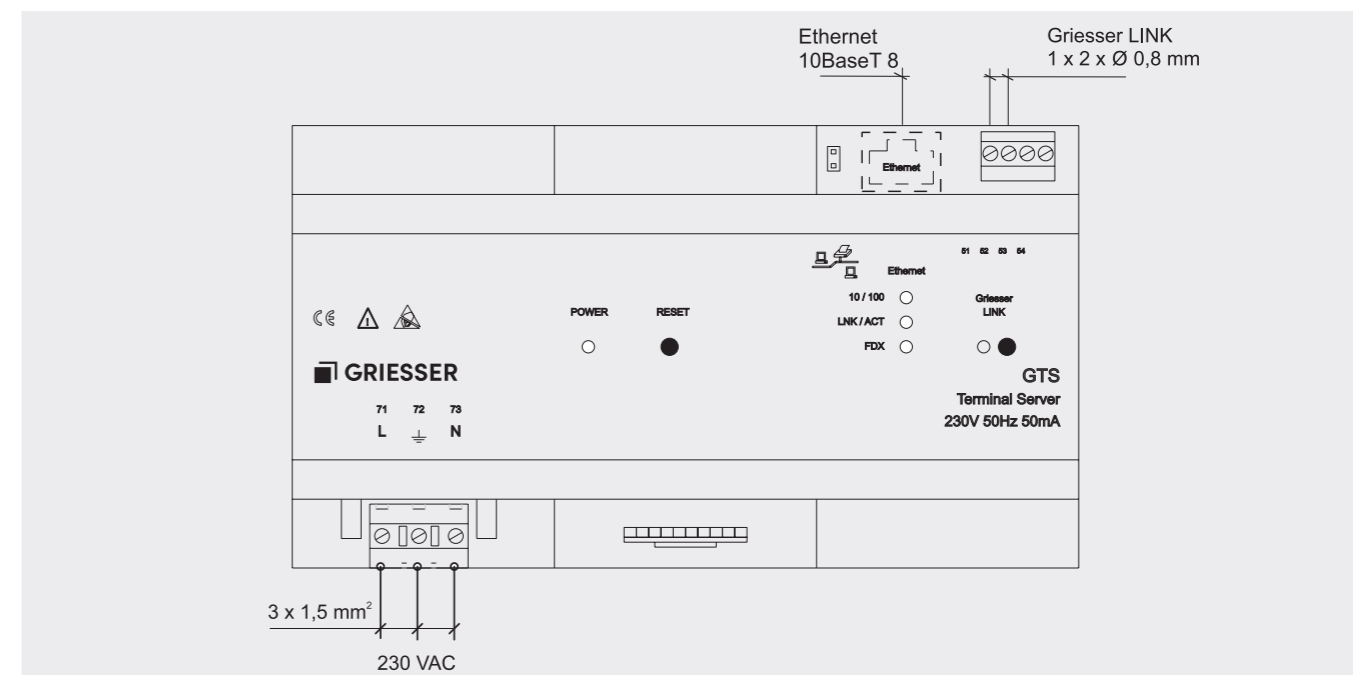
Mains

Voltage	230 V AC ±10%, 50 Hz
Power consumption	type 6 W
Connection	Pluggable screw terminals, 3-pin
Cable	3 conductors (L, PE, N), 1.5 mm ² , single stranded or finely stranded
Ethernet	RJ45 plug, 8-pin

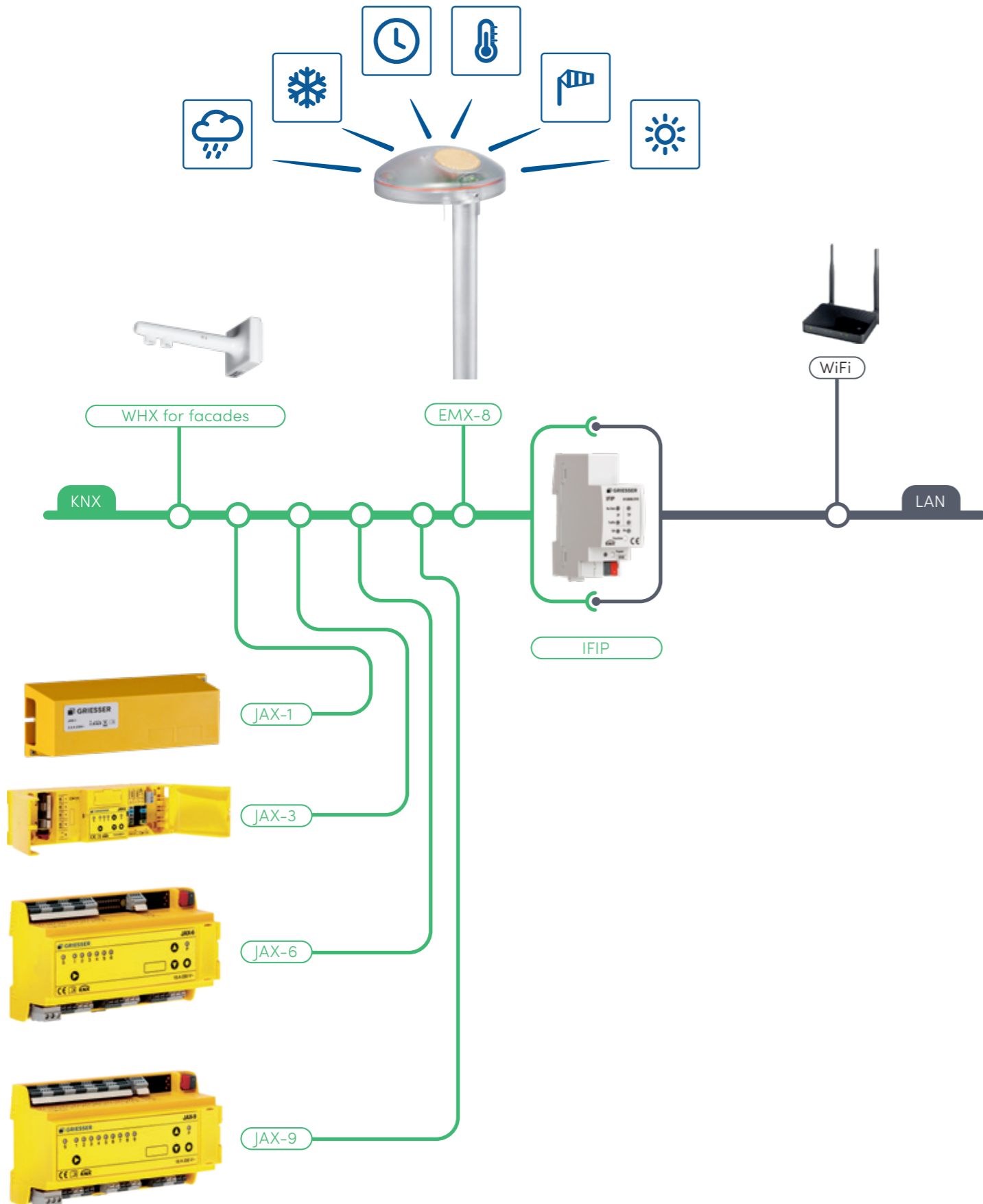
Griesser LINK

Electric circuit	PELV
Connection	Pluggable screw terminal, 4-pin
Cable	2 cables, Ø 0.8 mm, single, twisted (min. 5 turns per meter), cable length max. 200 m (terminals 51 / 52) or 4 cables, Ø 0.8 mm, single, twisted (min. 5 turns per meter), cable length max. 200 m (terminals 51 / 52 / 53 / 54)

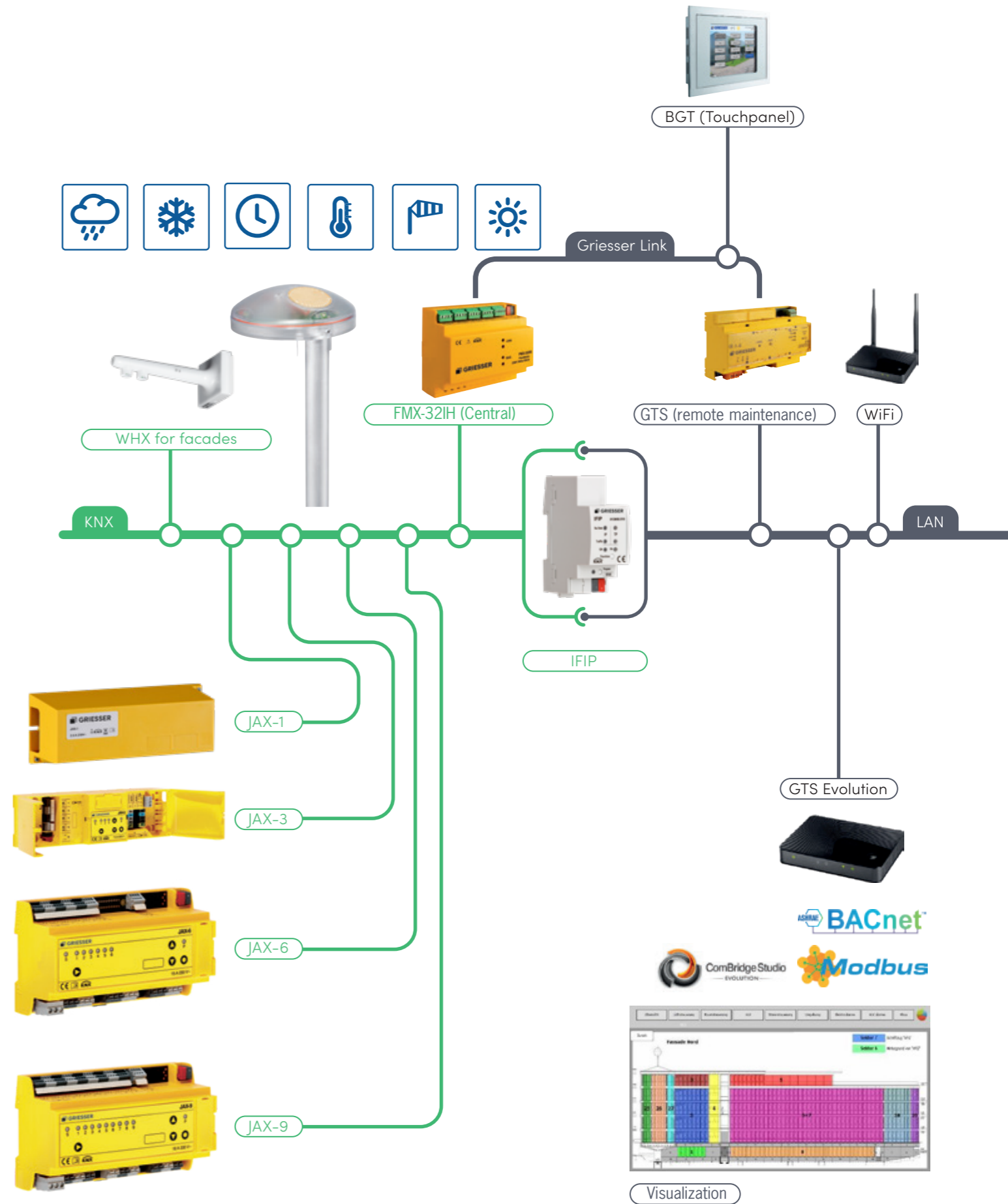
Connection diagram GTS Griesser Terminal Server



KNX residential building system



KNX functional building system



Functionality of EMX-8 weather control center and FMX-IH solar shading control center



System size		
Number of central units	1	10 via Griesser LINK
Number of motors	arbitrary	arbitrary
Number of sectors	8	up to 320
	Including 2 sectors for conventional motor control units	1 per control center for conventional blind actuators
Configuration		
Remote maintenance	with ETS	via GTS
Programming	with ETS	ETS + FlexTool
Functions		
Shading programme (SP)		
Solar shading / visual protection	x	x
Twilight	x	x
Solar tracking	x	x
Shadow outline tracking	x	x
Roof/vertical louvres	-	x
Horizon limitation	2 points	x digital On / Off
Global radiation	x	x
Timer programmes (ZP)	16 time commands	50 time commands
Wind programmes (WP)	x	x
Rain programmes (RP)	x	x
Frost programme (FP)	x	x
Temperature programme (TP)	-	x
Heat programme (HP)	-	x
Input programme (EP) for a third-party system	-	x
Automatic energy control	x	x
Configurable priority handling	-	x

Shading functions



Automatic sun control

Sensors measure the outside brightness. If the sun shines too strongly on a window or a patio, the solar shading products move automatically into a defined position. The control also recognizes which parts of the building are exposed to the sun and shades only them. Thanks to a time-delay reaction, it remains pleasantly quiet, even with rapidly changing light conditions, and optimum shading is guaranteed at all times.



Solar tracking

The external venetian blinds adjust their angle of inclination automatically to the sun's position. This means that no solar radiation falls directly onto the workstation, and the formation of alternating strips of light and shade on documents or monitor screens which is so unfavorable for working does not occur. Nonetheless, the rooms are supplied with natural light at all times thanks to the half-open slats.



Shadow calculation

Not all of the window areas of many buildings with large-surface facades are always exposed to sunlight (e.g. due to shadows cast by neighboring buildings). The shadow calculation ensures that the only facade segments to be shaded are those which are actually exposed to the sun.



Tracking large slats

Large slats are sometimes used in horizontal or vertical designs in architectural facades. Even for these forms and varieties, Griesser makes it possible for these large slats to follow the sun with up to 180 positions.



Horizon limitation

If a nearby building casts a shadow on parts of the facade, some rooms will be left in the dark. Solar shading is superfluous in this case. Griesser's solar shading control computes the shadows cast on each section of the facade. Solar shading is only active when the sun shines on the sunlit window.



Global solar radiation

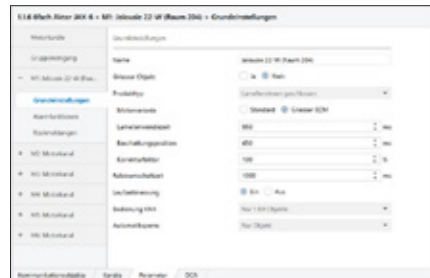
In addition to brightness, the inclusion of global solar radiation for shading is an important aspect. If the energetic solar input is high, operation of the user can be set so that the slats are only adjusted to such an extent that no direct exposure of the room occurs. Shading, e.g. for presentations or screen work, is possible at any time.

Configuration

Easy configuration

Upgrade to DCA

ETS Version 5.6 and higher



Griesser blind actuators are easily, quickly and safely configured in the familiar manner using the ETS. In this way, most objects can be implemented without having to focus on the fine details of a blind control system. Proven Griesser expertise is easily accessible thanks to predefined parameters and default algorithms, allowing you to commission a system in the shortest possible time. The range of functions can be extended almost endlessly by upgrading to the free DCA.

ETS parameter settings include:

Facade product and motor parameters of common types of blinds

Griesser object address

Automatic lock, three safety interlocks

Notification of position (height/angle) as well as seven notification criteria

KNX operation and simultaneous operation

Graphical configuration with tiles

Predefined tile functions

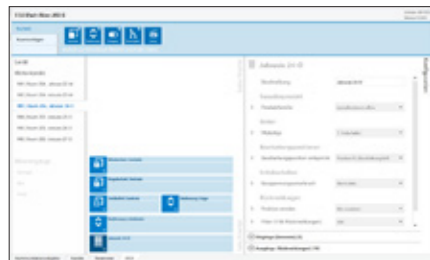
Tiles freely combinable per channel

Online diagnostics

ETS Version 5.6 and higher

If there are additional requirements on a property, for example during a room automation project or as a result of special functions of facade products, the range of functions can be extended almost infinitely with the Griesser DCA. The Griesser DCA offers innovative configuration options. Using a tile system, functions are «stacked» according to their priority. This is similar to the list of priorities in a requirements specification.

The following tiles are available:



Operation (for operation in the room or from a central location)

Priority command input (for safety-related inputs like fire, cleaning)

Command input (for input of motion detectors, thermostats, etc.).

Scenes (for management of 64 scenes per channel)

Griesser object (for communication with Griesser control center)

Control switch (for heating/cooling requirements or summer/winter operation or presence/absence, etc.)

Despite the high degree of flexibility, no programming language has to be learned because the intuitive tiles are configured in the predefined and tested scope. Each tile also contains «its own» communication objects and specific settings options.

After successful configuration, the functionality can be tested online and the individual statuses of each tile can be graphically visualized. As a result, a system can be reliably tested or functions can be tracked when combined with the simulation mode of the Griesser control center.

Our services with 12 Griesser centers in Switzerland

As a Member of the Facility Management Switzerland professional society, we are able to provide comprehensive supervision of solar shading systems on buildings of any and all types and size throughout their entire periods of utilization. Furthermore, it is primarily also expert support that we provide in cases of renovations and adapt existing buildings to the current state-of-the-art technology and comfort. Particularly as well with respect to energy savings with automatic solar shading systems.

Our service offering

Support of electrical planners and building owners in the project planning and request for quotation stages

Testing your existing system

Checking the compatibility of blinds motors and Griesser control

Creation of a remodeling plan

Study for the placement of wind sensors

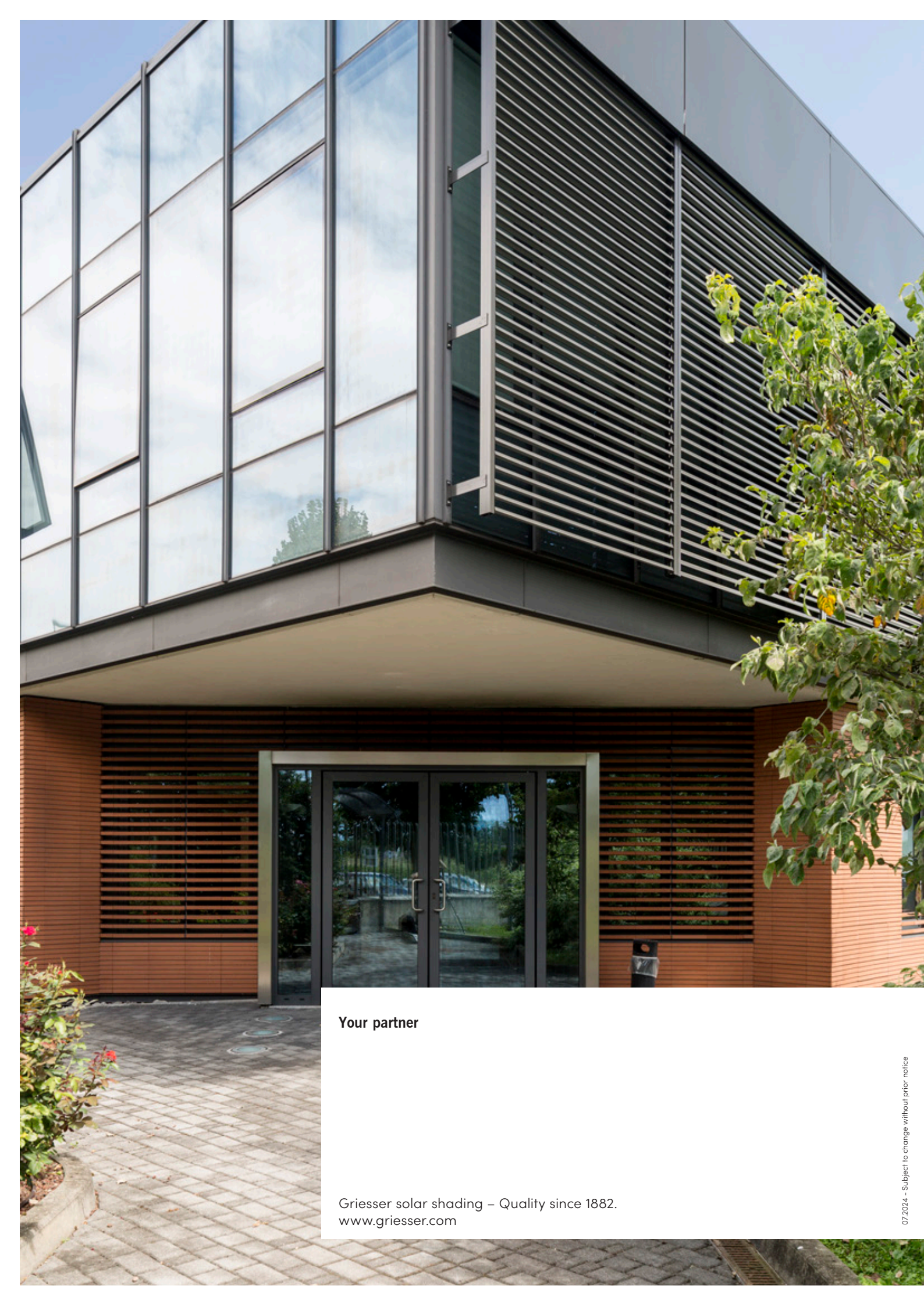
Shade management with building simulation

Energy optimization with horizon limitation

Continuously staffed telephone hotline with option of remote diagnostics

Service subscription, remote maintenance, expert assessments

Preparation of general object-specific diagrams



Your partner

Griesser solar shading – Quality since 1882.
www.griesser.com