



Controls from Griesser.
Planning documents Griesser KNX





KNX

- [1 to 8 sections, individually controllable](#)
- [Master operation](#)
- [Automatic sun control](#)
- [Automatic wind, rain, temperature, frost control 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 large buildings. With proven functions, such as sun tracking, 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.



Blind actuators for 9, 6 and 3 motors

The blind actuators 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. Blind actuators with 9 and 6 independent motor channels can be installed in control cabinets. Blind actuators with 3 independent motor channels can be installed locally in cable ducts, false bottoms or false ceilings.



Operation

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.



Weather centre 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.

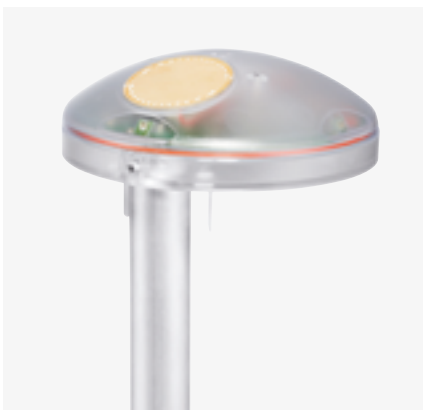
Simulation mode for the support of commissioning and for fault diagnosis.

Reception and evaluation of sensor data via KNX BUS.

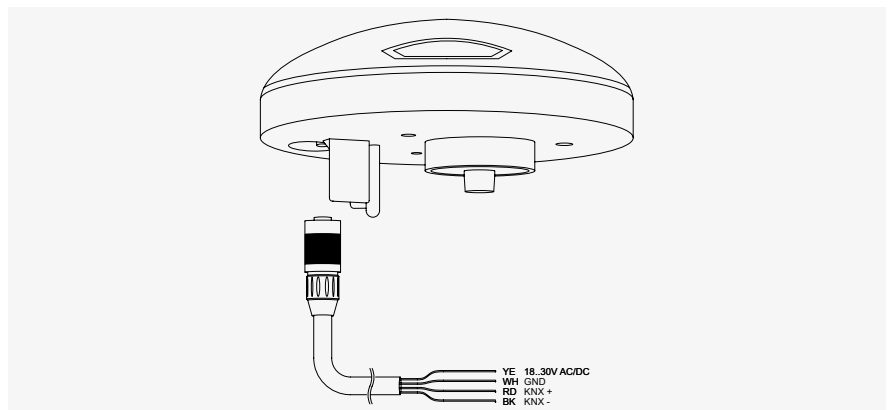
Transmission of internal sensors as well as time of day and date via KNX BUS.

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 mm ² 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
-----------------	--------------

Precipitation sensor

Switching delay	dry => wet: at once wet => dry: 3.5 minutes
-----------------	--

Temperature sensor

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

Global radiation sensors

Measuring range	0 ... 1300 W/m ²
-----------------	-----------------------------

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.

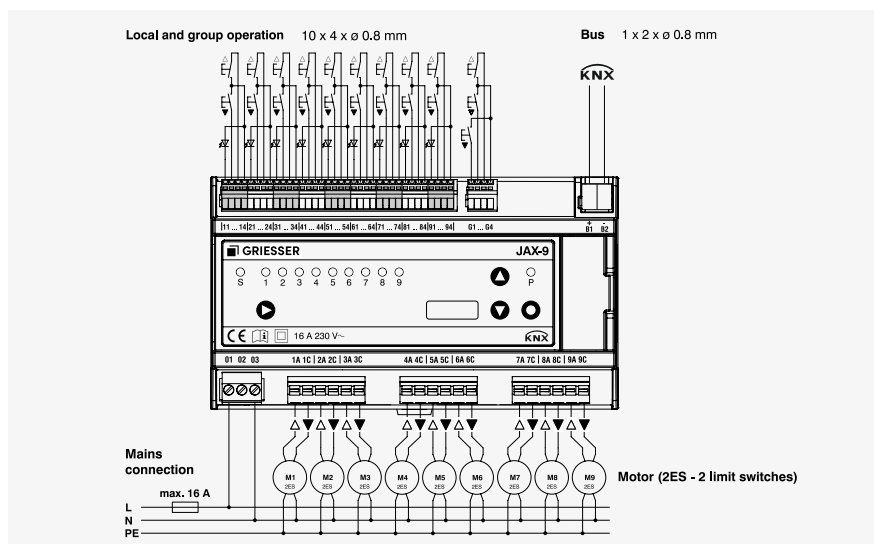
PURPOSE

- 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

Device type	JAX-9
-------------	-------

Connections

Voltage	230 V AC +10% / -20%, 50 Hz
Standby power per channel	0.1 W
Circuit breaker	max. 16 A

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

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

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
---------------	--

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

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

Local operation

Number	9
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	18

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

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)

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](#)

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.

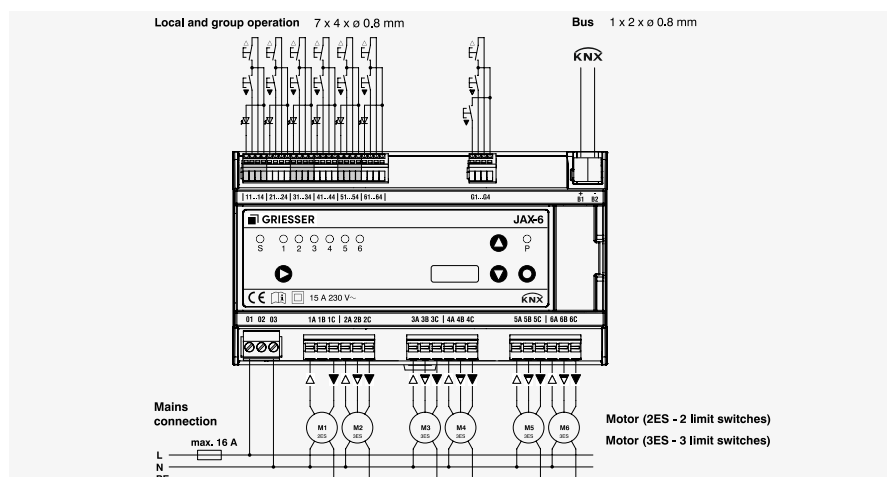
PURPOSE

- 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



JAX-6



TECHNICAL DATA

Device

Device type	JAX-6
-------------	-------

Connections

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

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

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

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 mm ² , single or fine-strand

Motor

Number	6
Connection	spring type terminal 3-pin
Cable	3 cables (UP, DOWN2, DOWN1), 1.5 mm ² , 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

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

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

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)

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](#)

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.

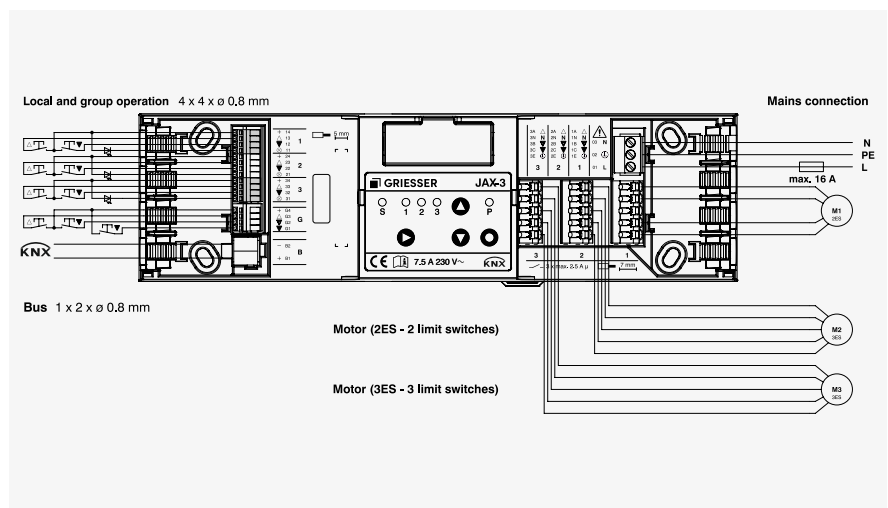
PURPOSE

- 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



JAX-3



TECHNICAL DATA

Device

Device type	JAX-3
-------------	-------

Connections

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

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

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

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 mm ² , single or fine-strand

Motor

Number	3
Connection	spring type terminal 5-pin
Cable	5 cables (PE, DOWN2, DOWN1, N, UP), 1.5 mm ² , single or fine-strand
Current	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

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

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

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)

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.



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-1 and SFB-5 hand-held transmitter

Up to 32 transmitter channels can be assigned per remote module

TECHNICAL DATA BGT-UP & BGT-AP

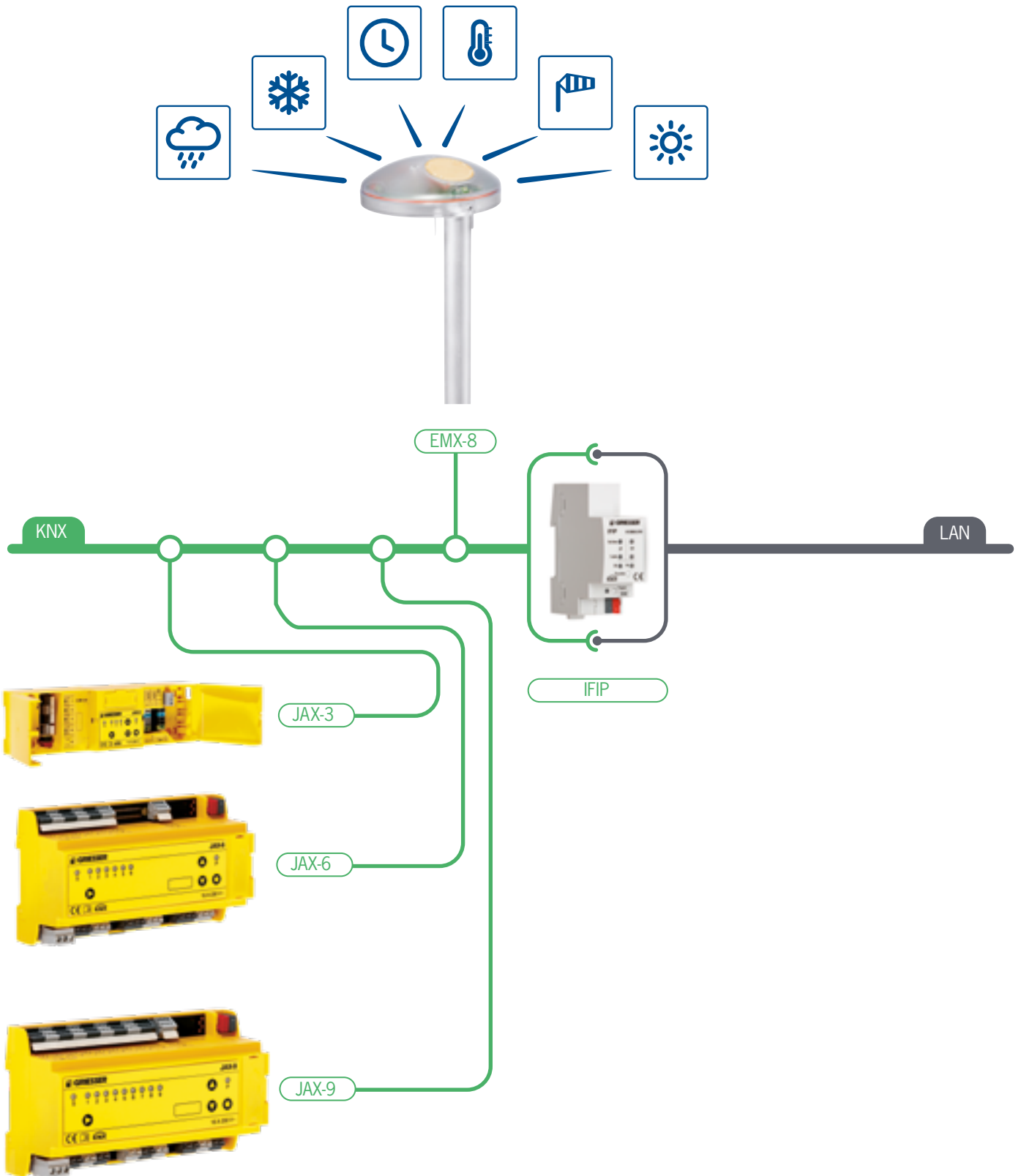
SFB-1M / SFB-5M

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 51x 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

KNX system



Functionality of EMX-8 weather control center



EMX-8

System size

Number of central units	1
Number of motors	arbitrary
Number of sectors	8
	Including 2 sectors for conventional motor control units

Configuration

Remote maintenance	with ETS
Programming	with ETS

Functions

Shading programme (SP)	
Solar shading / visual protection	x
Twilight	x
Solar tracking	x
Shadow outline tracking	x
Roof/vertical louvres	-
Horizon limitation	2 points
Global radiation	x
Timer programmes (ZP)	16 time commands
Wind programmes (WP)	x
Rain programmes (RP)	x
Frost programme (FP)	x
Temperature programme (TP)	-
Heat programme (HP)	-
Input programme (EP) for a third-party system	-
Automatic energy control	x
Configurable priority handling	-

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.



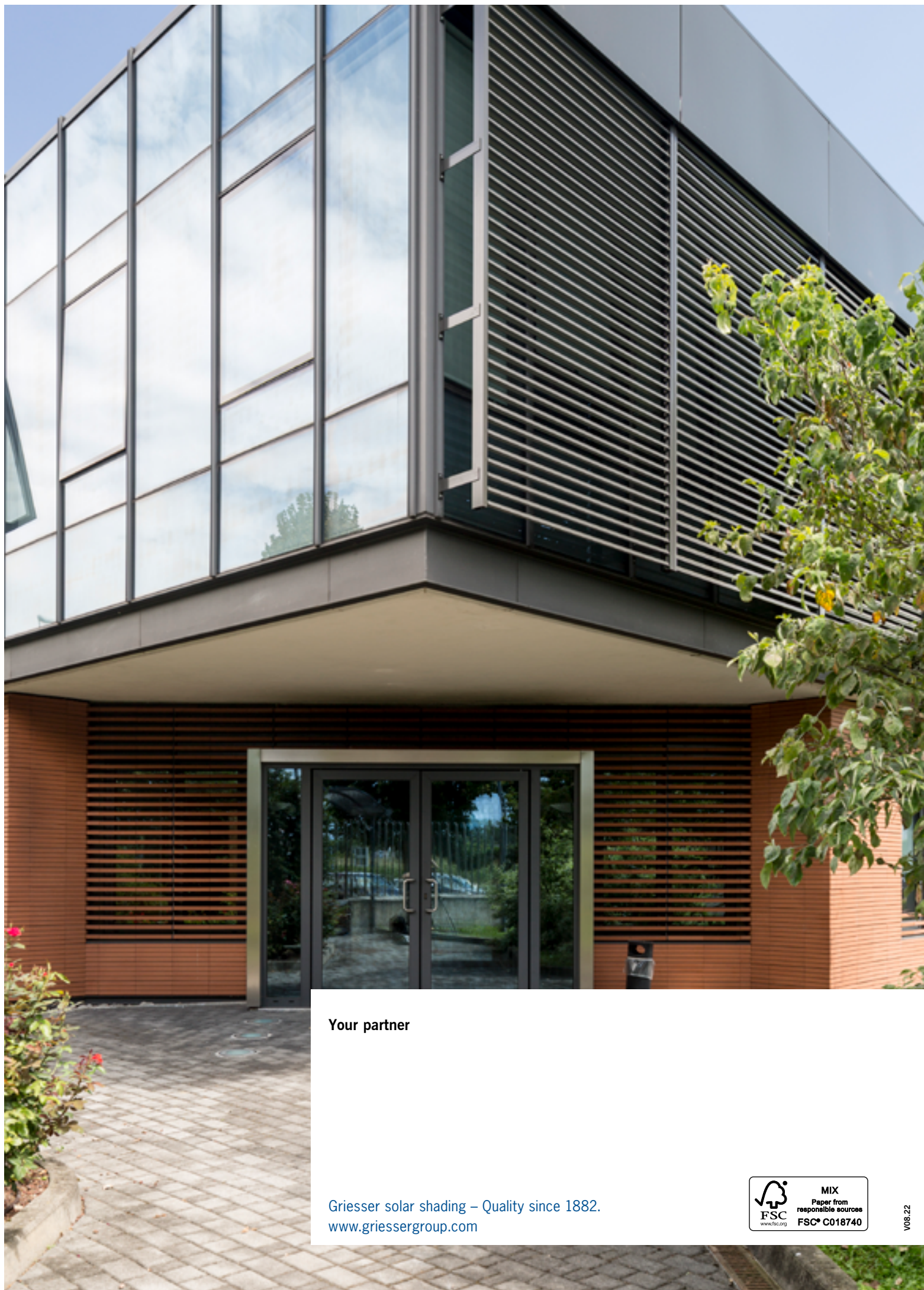
Solar tracking

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.



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.



Your partner

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

