



SOLUTIONS FOR BIOCLIMATIC FAÇADES

animeo 

Multi-faceted façade management  
through intelligent sun protection

somfy®



## About Somfy

Founded in 1960 in Cluses (France), Somfy has invented, designed and created controls and motors for openings and closures in residential and commercial buildings, using high-tech motorisation and automation systems. The Somfy enterprise – "Société et de Mécanique du Faucigny" is listed on the Paris Stock Exchange and operates internationally.

Today, Somfy has 76 subsidiaries in 60 countries with a total of around 7,100 employees.

Established in Australia for over 25 years, Somfy Oceania leads the market in the development of solutions for solar shading in both the commercial and residential markets.

Somfy is sensitive to environmental issues and operates a strategy of anticipating comfort and energy cost reductions for buildings of all types.

Dynamic Insulation™, daylight management and natural ventilation are Somfy's three unique areas of expertise dedicated to the development of bioclimatic façades: with our automatic controls, façades become bioclimatic, solar protections react to weather variations offering occupants greater comfort while saving energy.

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# Solutions for buildings

## Somfy solutions for greater comfort and energy savings

Somfy solutions offer the capability to manage all types of buildings thanks to innovative products (motors, façade management systems and local controls).

Discover a Somfy solution for any project compatible with all sunshading and opening devices.



External venetian blinds



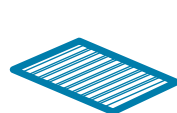
Roller shutters



External screens



Projection screens



Horizontal blinds



Internal blinds



Window openers



Internal roller blinds

## Somfy solutions include



### 1. animeo intelligent building controls

Façade management systems enable the control of all or part of solar shadings and windows via a PC or a dedicated control system. Motors and automation devices communicate with each other via a proprietary Somfy bus (Solo, IB+) or market standards (KNX or LON).



animeo Motor Controller



### 2. Motors

Whatever the end product (indoor or outdoor shading devices, roller shutters, projection screens), Somfy's motorisation will always meet its exact specification.



Somfy tubular motor



Motor for exterior venetian blinds



### 3. Local commands

Depending on the number of blinds and configuration of the room, there will always be a specific Somfy unit available with the required number of channels. The various technologies (radio, wired, digital) offer a number of advantages that are adapted to each type of building (hospital, school, office).



Telis 1  
RTS pure



Telis 1 Mod/Var  
RTS pure



Smoove IB

## animeo: why and what for?



Sun path

With animeo, solar protections constantly adapt to the exterior environment and occupants needs inside the building.

Throughout the day the azimuth and elevation of the sun are constantly changing as well as the occupants activities, the animeo range of intelligent controls ensure the movement of blinds to maintain comfort levels of occupants.

The main elements to be taken into account are:

### 1. The geolocation of the building



Sun and shadow impacting a city at different times of the day



Each building is unique, both in terms of its size, geographical location, environment or architecture. The sun path, the shadow generated by surrounding buildings or the building shape itself have an impact on its energy needs. Consideration of these elements is essential in the choice of solar protection and control strategy.

### 2. User needs



Zone Timer in animeo IB+ and KNX software.



Each building is designed for a specific purpose (office, school, hospital) with different occupancy periods: a school will be closed during some weeks, a hospital will always be occupied.

» For example blind management in an office not occupied during the weekend.

### 3. The definition of zones

It is therefore essential to enhance the building energy performance and deliver the occupants requirements.

A zone can be:

A façade



A floor



A window



Within the same zone, all blinds operate the same way. Smaller zones provide a more accurate building performance.

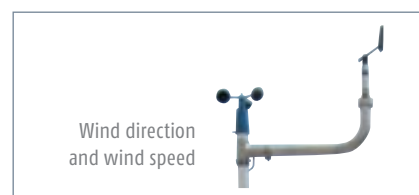
## All benefits at a glance

### Intuitive animeo KNX Operating Software

Simplified programming of all functions, such as wind direction and sun-tracking.

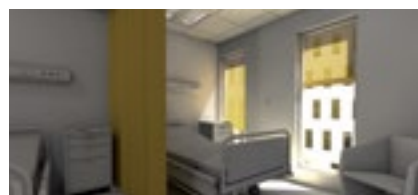
### Wind direction measurement

The blinds move up into the security position only when the façade is affected by wind speed, depending on wind direction. All other areas of the façade remain shaded. In the event of a storm, the blinds on all façades move up.



### Zone based daylight/shadow management

animeo KNX guarantees optimum lighting management, glare protection, and better viewing comfort. This saves energy spent on artificial lighting and improves the visual lighting conditions in the room.



### Energy savings through

- » Solar gains from the sun in winter when users are absent.
- » Diminished slat-turn angles and reduced cooling requirements in summer.
- » Intelligent wind protection controlled using only the wind affected façades. In all other façade zones, the blinds remain in the sun protection position and thus reduce the need for cooling.



### Functions integrated with other systems

Other applications like lighting, heating, cooling, can be integrated.

### High levels of user comfort

All blinds can be operated locally. The user is able to override the automatic function.

### More functions

- » Individual sun protection control per façade and thus, improved working conditions in every room.
- » Sensors can be used in multiple ways.
- » All types of blinds and façade elements can be controlled. 19 different blind and façade elements are available.
- » Manual override of automatic orders possible at a room level.



Wall mounted  
Motor Controller



Din rail  
Motor Controller

*Compatible with all installation environments*









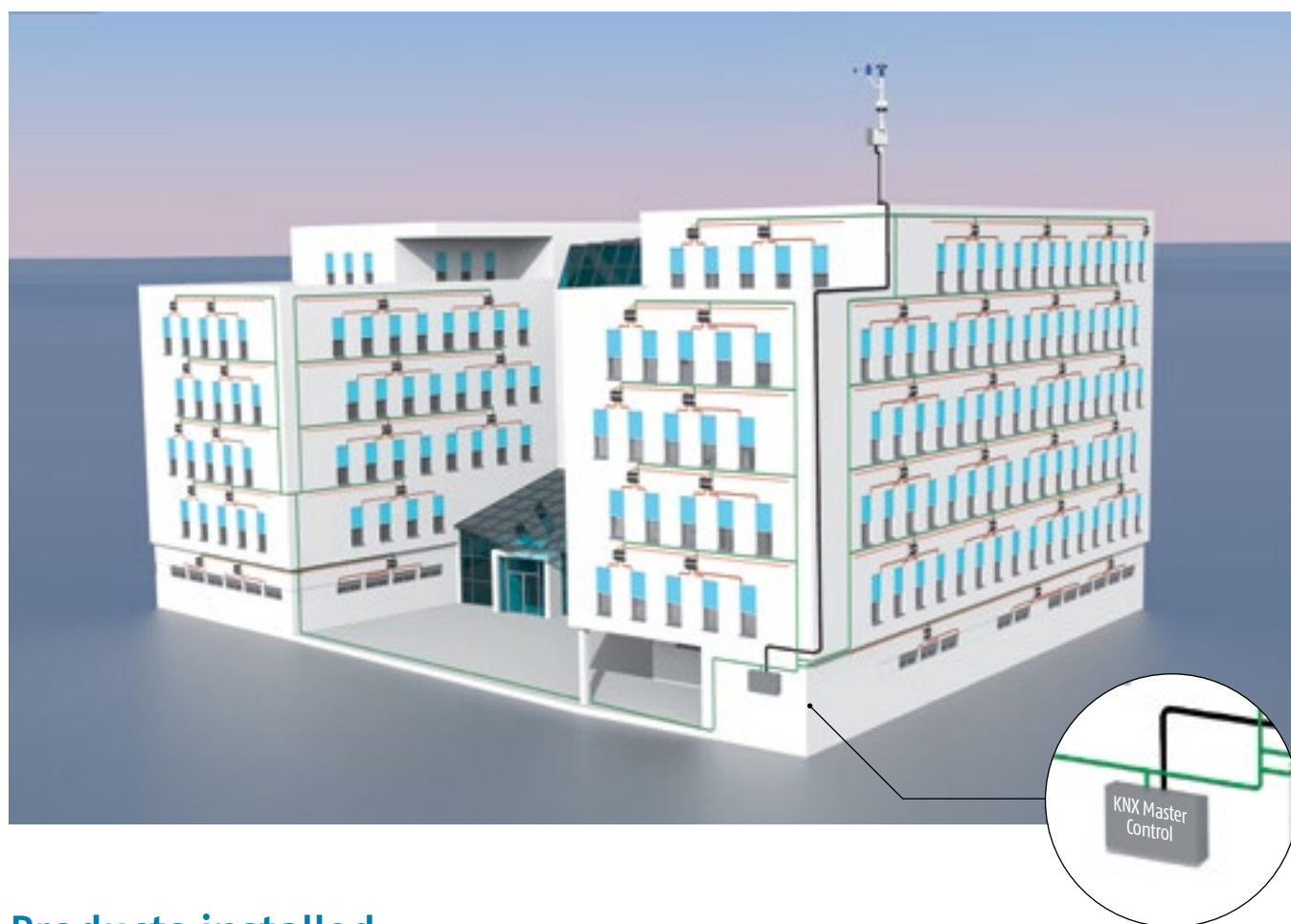
## Project example

### Building owner desired and specified functionalities

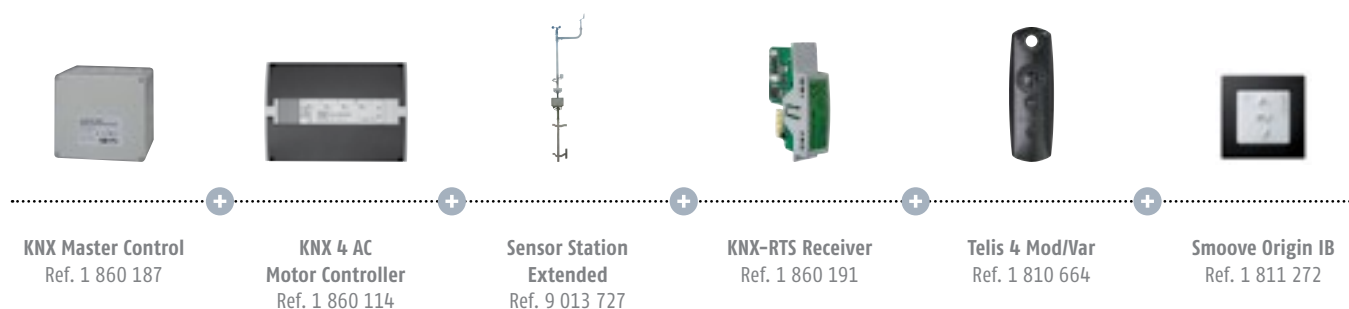
- » Unrestricted number of zones to control exterior venetian blinds
- » Interaction with lighting and HVAC system
- » Zone based shadow management
- » Controlling of blinds and light through Somfy RTS technology

#### Legend

	Links to sensors
	Bus line KNX
	Power supply
	Motor cable



## Products installed

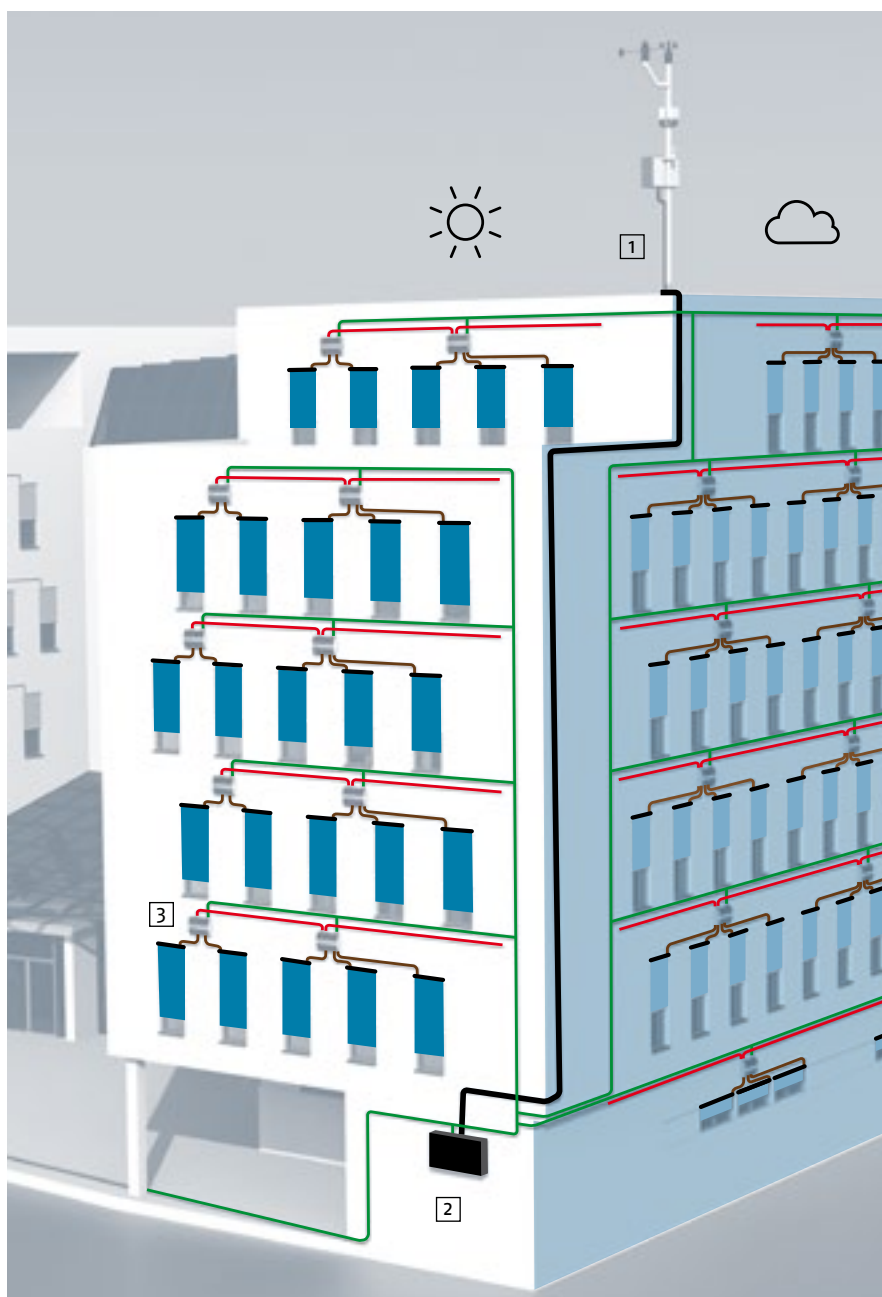




## Automatic functions

- » Wind speed, as well as wind direction dependent
- » Sun tracking including zone based shadow management to provide a maximum of user comfort and energy saving
- » Integration to a BMCS via an OPC link.
- » Presence detectors are used to switch between the energy saving mode and comfort functions. The presence detectors are integrated into the bus system using the universal binary inputs of the Motor Controller.

## Installation details



All Motor Controllers are connected to the same KNX network via the animeo KNX Building Controller.

One KNX Building Controller can create up to 16 zones, it's possible to create more zones by adding more Building Controllers.

The Sensor Station is directly linked to the KNX Building Controller and each zone is separately managed depending on the weather and other parameters to be defined.

1. **Sensor station**
2. **animeo KNX Master Control**
3. **animeo KNX Motor Controller**

# Project Examples: animeo KNX in action

## One Hyde Park, London (UK)

**“One Hyde Park is regarded as the most prestigious residential development undertaken in Europe over recent months. As part of the extensive building and entertainment control solutions used throughout the property, the specification called for a sophisticated solar blind control system to ensure occupier comfort and stringent energy management requirements were met.”**

*(Jeremy Aston, System Integrator, Reality Logic)*



A critical part of this solution is the motor control provided by Somfy KNX products. Reality Logic were responsible for commissioning a KNX solution consisting of several hundred Motor Controllers controlling over 2000 individual interstitial solar blinds throughout 84 apartments. In addition, Somfy KNX hardware provides environmental data via roof mounted weather stations.

The Motor Controllers are distributed on each floor of the four pavilions within the development. All the KNX traffic is marshalled through KNX-IP gateways and tightly integrated with the visualisation front end. Binary inputs on the Motor Controllers were also configured to allow simple and robust integration with the lighting control system so that occupants can override automated processes.

The Motor Controllers have been configured so that solar gain through the glass is effectively managed. As part of this, each of the 16 façades have been individually configured for solar path tracking and daylight management.

The sophistication of the mathematical representation of the façades in the KNX system is such that the 3D models used to test and prove the system match real world situations to within one minute.

Although the system is highly sophisticated, the commissioning process was relatively straightforward. The Somfy KNX hardware has proven to be robust and consistent in its operation meaning that we were easily able to guide the other contractors to issues in wiring or blinds where problems were encountered. Once the solar model had been refined we had a very high level of confidence in its accuracy and this was proven by the witnessing of the whole system being undertaken in the minimum of time yet to the complete satisfaction of the consultants. The system was completed on time and within budget and a major part of this success is down to the choice of Somfy KNX hardware at the heart of the system.



### Technical Data

- 2,523 interior roller blinds
- 721 animeo KNX Motor Controller 4 AC
- 16 KNX Building Controller AS 315N

## TownTown Business Park, Vienna (Austria)

**“In order to provide the user of the building with an optimum in operative easiness and energy savings, it was necessary to work hand in hand with the companies who were directly involved with sun protection technology. Here, Hella, Elin and Somfy performed professional planning work through intensive consultation, taking into account the individual conditions on site and carrying out diverse tests before starting up. Doing it this way meant that the site managers were supplied with an economical and tailor-made solution, which from a technical standpoint, does much more than just fulfil requirements.”**

*(Werner Heindl, engineer, Electrical Planning Enterprise Elin GmbH)*

The Viennese TownTown area with its 21 buildings totalling around 80,000 m<sup>2</sup>, is one of the top office complexes in the heart of Vienna – and an example of sustainable building methods. By using construction elements activation, cold and warmth are fed to all parts of the building through pipes. Together with the building's insulation, a projected cost savings of up to 40% had been targeted. In 2009, TownTown was awarded with the silver prize for sustainable building technology (DGNB).

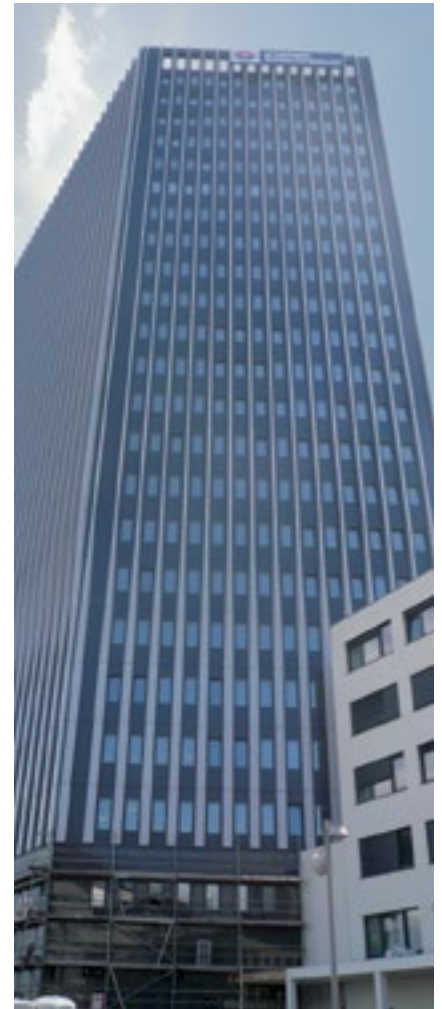
An important component of the sustainability concept is the intelligent sun protection system. With its intelligent controlling, it contributes to cooling and heating rooms naturally. To find a tailor-made offer for the operator, Somfy works in close collaboration with planners, architects, and electrical planners. Through working together, solutions are developed which at the same time, take into account all the requirements of all those involved in the building project.

In test phases, the move-strategy which can best guarantee an efficient sun protection is analysed and at the same time, keeping actual moves at a possible minimum.

The reduction in moves of the inside sun protection contributes to guaranteeing a long life expectancy of the roller blind mechanics and avoiding disturbances to the user through noise.

For the high-rise, “Company Building 21” as a part of the third construction phase, 2000 Somfy low-voltage motors J 101 were installed for motorised inside sun protection.

To control sun protection, the animeo KNX technology was used. Any desired motor group can be configured and defined over the KNX wire to design the sun protection for all areas of the building as individually and efficiently as possible. This way, costly KNX operating points are not needed.



### Technical Data

- 2,000 interior Venetian blinds (24 V)
- 520 animeo KNX Motor Controller 4 DC
- 260 animeo Power Supply DC 4,5 A
- Integration of conventional local push buttons over binary inputs on the animeo KNX Motor Controller 4 DC



# Project Examples: animeo KNX in action

## Hermitage Museum, Amsterdam (Netherlands)

**"ULC has been working with Somfy Netherlands for quite some time now and the reasons are: good quality products, a wide product range, solutions right from top to bottom and not forgetting of course, highly qualified personnel."**

*(Leo Verstoep, Senior Planning Manager, ULC)*



### Dignity and modern technology combined

"The Amsterdam Heritage, the former 'Amstelhof', has been given a new lease on life in becoming a museum. Originally built in 1881, the building was a shelter for elderly women and has been recently completely rebuilt. Without damaging its characteristics, the architects not only had to design a beautiful and functional building, but it also had to be energy efficient, as a real 'child' of its days. With these prerequisites in mind, ULC Elektra in Utrecht installed modern Somfy technology."

### The essence of automated solar protection

"The importance of an efficient use of energy is commonly accepted. Of course, this has its consequences for designers of utility buildings and houses. It also has its influence on the revitalisation of existing buildings. Recent research has made it clear that a lot of building users are not aware of the fact that automated sun protection can save energy costs."

Automated solar protection means to use the sun depending on the need of cooling and/or heating. Somfy constantly brings this to the attention of consultants and designers."

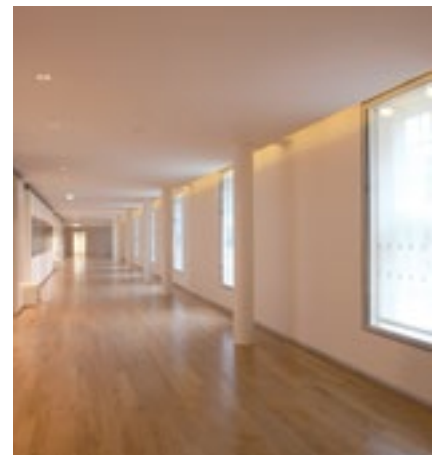
### Hermitage requires differentiation

"A museum requires a certain amount of light, depending on the kind of exhibition. Automation of solar shading has to be flexible. ULC Elektra has involved the CBS department of Somfy to find a solution."

ULC Elektra has a lot of experience in designing and realising electrical installations. Somfy Netherlands is the market leader in the Netherlands when it comes to project controls for solar protection.

To meet requirements of the Hermitage Museum, Somfy and ULC decided to choose animeo KNX/ IEB, an advanced facade solution. Nearly five hundred screens and interior window sun protections were installed. In the larger exhibition rooms blind control is possible via touch panels.

As both central and individual controlling is possible, the building controller can measure the demand for any number of lights and the amount of light can also be determined for smaller, individual spaces."



### Technical Data

- 140 animeo KNX Motor Controller 4 AC
- 2 KNX Building Controller AS 315N
- 443 external screens and interior blinds

## Queensland University of Technology (Australia)

Located next to the Brisbane River and the Botanic Gardens, QUT Gardens Point is Brisbane's inner-city university campus. The \$230 million development of their Science and Engineering Centre has created a world-leading model for teaching and research in science, technology, engineering and mathematics. The dynamic new centre was designed to dramatically re-engage both the community and students and houses more than 1,200 staff and students in the centre.



At the heart of the Science and Engineering Centre's redevelopment is The Cube, one of the world's largest digital interactive learning and display spaces. It soars across two levels and is designed to support interactive displays using advanced digital technology. Focusing on sustainable and secure infrastructure, the centre aims to reduce greenhouse emissions and energy consumption with integrated systems and sensor technologies. A perfect match for Somfy's range of façade control options for commercial buildings.

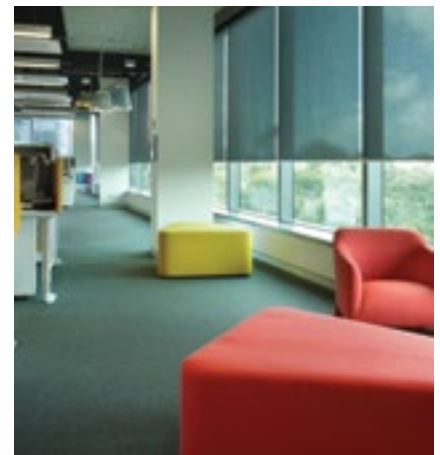
In keeping with the high level of technology used throughout the project, along with the goal of enhancing the occupant's thermal and visual comfort, a sophisticated system for a high performance façade was crucial. Somfy's animeo KNX provided the perfect façade management system for this project and is the first of its kind in Australia. The fully automated system is intuitive and provides simplified programming of all functions, including sun tracking. It also provides the option of manual override at a room level.

Controlling multiple blinds, animeo KNX guarantees natural light management, glare protection and better viewing comfort. This not only saves energy spent on artificial lighting and improves and harmonises the lighting conditions in the room; it also actively enhances the occupants' well-being and learning capacity.

The automated solar shading system ensures that the centre's high performance façade quickly adapts to the changing weather during the course of the day and the changing seasons over the course of a year; utilising multi-point sun sensors. Somfy's intelligent controls ensure the impressive display contained within The Cube is always protected from the sun's harsh light. The displays include 14 high-definition projectors, and over 40 multi-touch screens and sound technology.

The Somfy animeo KNX system also has the ability to give occupants the flexibility to adapt to their needs by overriding the control of blinds in their local area. The system is remotely linked and is accessible at any time through the use of the internet or smartphones.

The Science and Engineering Centre has achieved a 5-star Design Education V1 Certified rating from the Green Building Council of Australia.



### Technical Data

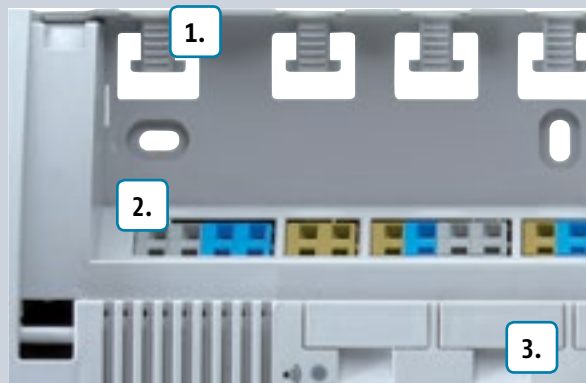
- 100 animeo KNX Motor Controller
- 317 Sonesse WT motors
- 17 Sonesse RTS motors

# A complete service all around your project. From planning right through to operation.

**Cost-optimised and comfort-  
optimised preparation**



**Quick and effective installation**



## Planning

- » Dedicated Commercial Building Solution team, available to assess your building needs and assist throughout design and specification stages.
- » Somfy provides you with tailor-made solutions.

## Installation

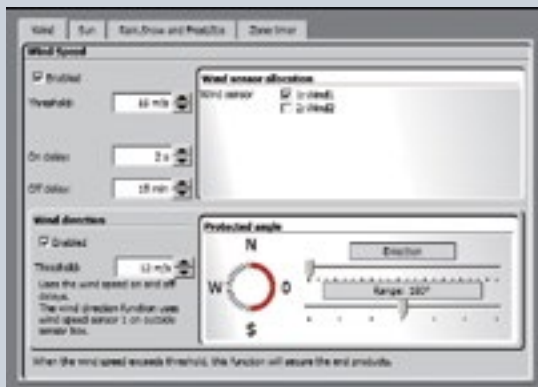
Quick installation and connection of the Motor Controllers through

- » Integrated strain relief.  
More safety without additional expenditure.
- » Spring tension terminals and double terminals.  
Time savings through not having a junction box.
- » Generous design.  
More space for the connection of single cables.
- » Specialised electrical connection and programming of motors and controls through Somfy Electrical Services.



# "Somfy as your partner"

**Trouble-free programming of sun protection controllers**



**Smooth and time-optimised operation**



## Commissioning

- » Self-explanatory, intuitive animeo KNX Operating software provides the facility manager an independent self explanatory programming procedure. Usual ETS software is not necessary for parameter changes.
- » Sample projects can be established through Somfy support to simplify programming.
- » Supported by a Somfy employee on site.

## Operation

- » For maintenance work (e. g. window cleaning) locking individual façades is possible through the Operating Software.
- » Display of the active functions. It is always clear which command is currently controlling the sun protection system.
- » animeo KNX Operating software allows changes in settings without using the ETS software usual for KNX Bus systems. They can be made directly in the animeo KNX Operating software.
- » Monitoring of all weather data for energy optimisation.
- » Somfy Oceania offers continued after sales services.

# Product solutions on KNX basis



## Building Controller

### KNX Master Control W2 / W8



Ref. 1 860 187



Ref. 1 860 193



Façade management provides optimum light and climatic conditions in residential and functional buildings.

The environmental factors are measured with a weather station (Outside sensor box) and passed on to the KNX bus.

Dimensions (w × h × d):	180 × 182 × 110 mm
Degree of protection:	IP 20
Protection class:	III
Operating voltage:	24 V AC
Operating temperature:	0° C to + 55° C

#### **KNX Master Control W2** **Ref. 1 860 187**

For wall-mounted installation. For 2 wind speed sensors

Dimensions (w × h × d):	180 × 254 × 110 mm
Degree of protection:	IP 20
Protection class:	III
Operating voltage:	24 V AC
Operating temperature:	0° C to + 55° C

#### **KNX Master Control W8** **Ref. 1 860 193**

For wall-mounted installation. For 8 wind speed sensors

### Product benefits

- 1 – 16 façade zones incl. Operating Software – parameter setting without ETS.
- The weather station (IP 65) is able to define 2 x (W2) or 8 x (W8) wind speed, wind direction, rain, snow, frost, ice, outside temperature and 8 x sun zones.
- Time and date are sent to the KNX bus.
- Indoor temperature values can be defined and assigned to zones to gain maximum energy savings.
- Weekly and annual timers are also included and can be integrated freely on the KNX bus.
- Automatic functions can be allocated by the user selectively and can be overridden.
- Monitoring of all weather data for energy optimisation.
- All real values can be sent to the KNX bus and viewed at the same time via the Windows graphical user interface on the PC.
- The status of the façades can be called up from memory and the set values, by using a password, can be changed in the menu by the user without prior ETS knowledge.

### Further features

- All safety functions (wind speed, wind direction, rain, snow, frost, ice, outside temperature) are sent cyclically on the bus.
- Using one wind direction sensor, multiple individual wind speed sensors on the façade can be avoided.
- For each of the 16 façades, individual response and delay times can be configured for all available functions.
- Slat tracking for each zone depending on the sun's elevation and azimuth can be configured in the user software.
- The entire configuration of the sun protection control centre is done over a user-friendly Windows interface.
- Individual façades can be controlled over the operating user interface.
- Direct adjustment to a freely determinable position is possible.
- For maintenance purposes it is possible to block single façades or the complete building over the user interface.



## Building controller

### KNX Building Controller AS 315 N



#### Compact Sensor

The complete Compact Sensor in a small format. 3 x sun, 1 x wind, 1 x outside temperature, 1 x rain, GPS receiver. Additional requirements: 24 V DC power supply.



Dimensions (w × h × d):	140 × 90 × 64 mm
Degree of protection:	IP 20
Protection class:	II
Operating voltage:	230 V AC
Operating temperature:	-5° C to + 45° C

#### KNX Building Controller AS 315 N Ref. 1 860 068

For DIN-rail installation.

Dimensions (w × h × d):	96 × 77 × 118 mm
Degree of protection:	IP 44
Protection class:	III
Operating voltage:	230 V AC
Operating temperature:	-25° C to + 50° C

#### Compact Sensor Ref. 9 015 079

For DIN-rail installation.

#### Kit AS 315 N + Compact Sensor Ref. 1 860 069

Delivery including 1 × KNX Building Controller AS 315 N + 1 × Compact Sensor

#### Product benefits

- More precise sensor measurements.
- Easy wiring as all sensors are integrated in the device.
- Monitored communication between Building Controller and Compact Sensor.
- Façade automation system for 3 façades.
- Controls sun protection and window systems ranging from a detached family house to a large building.
- Provides optimum light and climate inside the building.
- The connected Compact Sensor communicates the following information to the KNX Building Controller AS 315 N: brightness from east, south and west, dusk, wind speed, rain, outside temperature, time and date via integrated GPS.
- Wiring benefits: only one cable (2 × 2 × 0.8 mm) needs to be laid from the AS 315 N to the Compact Sensor.
- An optional Inside Temperature Sensor (e. g. for a conservatory) can be connected.
- The KNX Building Controller AS 315 N evaluates and processes all weather signals so that the sun protection and window system can be controlled from a user and energy standpoint.
- The most important functions can be set over the ETS as well as directly over the display on the AS 315 N.

#### Further features

- Integrated sensors.
- Three Sun Sensors in fixed direction 90 ° (east), 180 ° (south) and 270 ° (west).
- Wind Speed Sensor without moving parts.
- Outside Temperature Sensor.
- Heated Rain Sensor.
- GPS Receiver for time synchronisation.
- Bracket for wall or post mounting.

## Sensor accessories

### Inside Temperature Sensor



For interior temperature control and air ventilation. Ideal for conservatories. To connect to the AS 315 N.

Dimensions (w × h × d):	84 × 50 × 32 mm
Degree of protection:	IP 20
Protection class:	II

#### Inside Temperature Sensor Ref. 9 001 461

For wall-mounted installation.

## Motor controller

### KNX 4 AC Motor Controller



For roller shutters, interior blinds, screens, exterior venetian blinds and windows.

For the control of 4 x 230 V AC motors.

#### Product benefits

- Cost savings through use of 8 freely-definable binary inputs.
- Upgradable for local operation by radio or infrared.
- User-friendly and intuitive parameter settings in the ETS software.
- Intelligent switching between manual and automatic operation to guarantee excellent user-friendliness and energy savings.
- Extendability: extendable at any time with the animeo RTS radio module. Without any additional wiring investment, 4 motors can be controlled individually or in a group by radio using the Somfy RTS Technology.
- New: through the animeo KNX RTS Radio Receiver (Ref. 1 860 191) signals can be linked to the KNX bus.

#### Further features

- Position feedback per motor output during movement and when reaching the top and bottom end position.
- Two different safety positions freely definable for each individual motor output.
- Safety position after mains voltage return freely definable.
- Automatic cascading of the outputs with mains voltage return and bus safety function to minimise current peaks.
- The device can be used "out of the box", without requiring programming with the ETS software.
- Mixed systems: in contrast to Motor Controllers based on the Somfy Controlling Technology, with KNX different motor types can be connected to one Motor Controller device (e. g. for venetian blinds, screens, windows).
- Advanced operating mode: greater user comfort through local disabling of non-security commands (e. g. sun) as soon as local operation is assigned. At a defined time, the system switches back to automatic again.

Dimensions (w × h × d):	255 × 180 × 61 mm
Degree of protection:	IP 20
Protection class:	II
Operating voltage:	230 V AC
Operating temperature:	0° C to + 45° C
Output voltage:	230 V AC
Max current consumption:	max. 3.15 A per output

**KNX 4 AC Motor Controller** **Ref. 1 860 114**

For wall-mounted installation.

Dimensions (w × h × d):	90 × 210 × 61 mm
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**KNX 4 AC Motor Controller DRM** **Ref. 1 860 116**

For DIN-rail installation.

### KNX 4 DC Motor Controller



For interior blinds, interior venetian blinds and windows.

For the control of 4 x 24 V DC motors. External 24 V DC power supply required (see accessories).

#### Product benefits

- Cost savings through use of 8 freely-definable binary inputs.
- Clear, self-explanatory ETS index cards.
- Configurable slat tilting speed for optimum user ergonomics.

#### Further features

- Output protected through current detection.

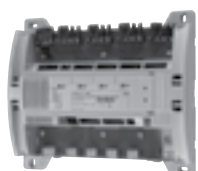
Dimensions (w × h × d):	255 × 180 × 61 mm
Degree of protection:	IP 20
Protection class:	III
Operating voltage:	240 V DC
Operating temperature:	0° C to + 45° C
Output voltage:	24 V DC
Max current consumption:	max. 2,1 A per output

**KNX 4 DC Motor Controller WM-P8** **Ref. 1 860 128**

For wall-mounted installation.

## Motor controller with specific connectors

### KNX 4 AC Motor Controller WM-P2



For roller shutters, interior blinds, screens, exterior venetian blinds and windows.

For the controlling of 4 x 230 V AC motors.

#### Product benefits

- For Wago Winsta® plug connectors.
- Clear, self-explanatory ETS index cards.

#### Further features

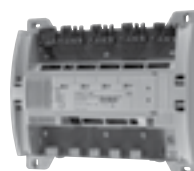
- Easily accessible safety fuse per output.

Dimensions (w × h × d):	255 × 180 × 63 mm
Degree of protection:	IP 20
Protection class:	II
Operating voltage:	230 V AC
Operating temperature:	0° C to + 45° C
Output voltage:	230 V AC
Max current consumption:	max. 3.15 A per output

**KNX 4 AC Motor Controller WM-P2** **Ref. 1 860 197**

For wall-mounted installation.

### KNX 4 AC Motor Controller WM-P



For roller shutters, interior blinds, screens, exterior venetian blinds and windows.

For the control of 4 x 230 V AC motors.

#### Product benefits

- For Wieland plug connectors.
- Cost savings through use of 8 freely-definable binary inputs.
- Upgradable for local operation by radio or infrared.
- Clear, self-explanatory ETS index cards.

#### Further features

- Easily accessible safety fuse per output.

Dimensions (w × h × d):	255 × 180 × 63 mm
Degree of protection:	IP 20
Protection class:	II
Operating voltage:	230 V AC
Operating temperature:	0° C to + 45° C
Output voltage:	230 V AC
Max current consumption:	max. 3.15 A per output

**KNX 4 AC Motor Controller WM-P** **Ref. 1 860 219**

For wall-mounted installation.

## Motor controller

### KNX 4 DC / DC-E Motor Controller



For interior blinds and interior venetian blinds. For the control of 4 x 24V DC or DC-E Somfy Encoder motors (eg Somfy Concept 25 Series).

#### Product benefits

- Easy installation: integrated 230 V AC power supply.
- Cost savings through use of 8 freely-definable binary inputs.

- Especially precise positioning of the slats in combination with the Somfy DC Encoder motor and the Somfy CTS winding system.
- Exact positioning of the venetian blind.
- Upgradable for local operation by radio.
- Local setting of intermediate position and user ergonomics.
- Clear, self-explanatory ETS index cards.

#### Further features

- Output protected through current detection.

Dimensions (w × h × d):	255 × 180 × 61 mm
Degree of protection:	IP 20
Protection class:	III
Operating voltage:	230 V DC
Operating temperature:	0° C to + 45° C
Output voltage:	24 V DC
Max current consumption:	max. 0.5 A per output

**KNX 4 DC / DC-E Motor Controller WM** **Ref. 1 860 127**

For wall-mounted installation.

**KNX 4 DC / DC-E Motor Controller DRM** **Ref. 1 860 192**

For DIN-rail installation.



## KNX/RS485 Motor Controller – Excellent screen control

### KNX RS485 Motor Controller



KNX RS485 Motor Controller which connects with the KNX bus to control a group of 1 to 6 similar Somfy RS485 motors.

Further technical features are explained in full in the operating instructions.

#### Product benefits

- To control Somfy tubular motors in screens and roller shutters.
- The interface enables bi-directional data exchange between the KNX bus and the Somfy tubular motor.
- The exact position of the motor during a move is sent to the KNX bus.
- The top and bottom positions of the motor are sent when the positions are reached.

- A conventional double push button and window contact can be connected directly to the interface. Both inputs can be used as universal binary inputs.

#### Further features

- Using a byte telegram, the motor can be moved to any desired position (0 – 100 %).
- The current position of the motor (0 – 100 %) can be viewed on an external display / BMCS System.
- The motor, based on parameter settings and if a window or door contact is open, is moved to one of four blocking positions and disabled for further move commands.
- Following a safety telegram, the motor moves to one of various configurable safety positions and is blocked for further move commands.

#### Important for site managers

- Precise façade design through positioning of the blinds with help of the increment encoder technology of the RS485 motor.

Dimensions (w × h × d):	85 × 45 × 26 mm
Degree of protection:	IP 20
Protection class:	II
Operating voltage:	24 V DC
Operating temperature:	0° C to + 40° C
Nominal current consumption KNX bus:	< 10 mA DC

**KNX RS485 Motor Controller WM** **Ref. 1 860 236**

For wall-mounted installation.

**KNX RS485 Motor Controller PCB** **Ref. 1 860 238**

For DIN-rail installation. Additional DIN-rail adapter needed (Ref. 9 008 049).

### DIN-rail adapter



For installation on 35 mm DIN-rail for mounting of circuit board versions for animeo 1 AC Motor Controller and animeo KNX RS485 Motor Controller.

Dimensions (w × h × d): 70 × 105 × 23 mm

**DIN-rail adapter** **Ref. 9 008 049**

For 35 mm DIN-rail, colour; black.

## Accessories

### RTS Radio module



Radio module for retrofitting KNX 4 AC, 4 DC or 4 DC/DC-E Motor Controllers. Directly pluggable into the Motor Controller.

Dimensions (w × h × d):	52 × 92 × 27 mm
Degree of protection:	IP 20
Protection class:	II
Supply voltage:	5 V DC, from animeo IB+ Motor Controller
Operating temperature:	0° C to + 45° C
Radio frequency:	433 MHz
Radio range:	20 m through 2 walls

**KNX RTS Receiver** **Ref. 1 860 105**

### KNX RTS Receiver



- Selection of usual applications such as venetian blinds, light switch/dimming, scene call-up.
- Comfortable operation using scroll wheel with Modulis handheld sender – ideal for venetian blinds and dimming lights.

Radio receiver for forwarding the Somfy RTS radio signals to the KNX bus.

#### Product benefits

- Economic radio operation for KNX.
- No additional bus subscriber (physical address).
- Pluggable into existing animeo KNX Motor Controller.

#### Further features

- Up to 5 universal radio channels.
- Application per radio channel freely defineable (venetian blinds, switching, turning venetian blinds slowly).
- Up to 4 Somfy RTS sender addresses per radio channel can be learned.

Dimensions (w × h × d):	52 × 92 × 27 mm
Degree of protection:	IP 20
Protection class:	II
Supply voltage:	5 V DC, from animeo IB+ Motor Controller
Operating temperature:	0° C to + 45° C
Radio frequency:	433 MHz
Radio range:	20 m through 2 walls

**KNX RTS Receiver** **Ref. 1 860 191**

## Sensors accessories

### Outside Sensor Box



The Outside Sensor Box is the interface between the weather station and the animeo KNX Master Control W2 / W8. All measurement values are evaluated here and sent to the animeo KNX Master Control W2 / W8. It requires an external 24 V AC/DC power supply.

#### Product benefits

- Convenient lightning protection – only two cables (power supply 24 V AC/DC and data cable) need to be laid to the outside.

#### Further features

- All sensors incl. Outside Sensor Box can be fixed to the Sensor Station mast.
- Up to 8 sun sensors, 2 wind sensors, 1 wind direction sensor, 1 rain sensor, 1 outside temperature sensor.

Dimensions (w × h × d):	235 × 207 × 90 mm
Degree of protection:	IP 65
Protection class:	III
Operating voltage:	24 V AC / DC
Operating temperature:	-30° C to + 70° C
<b>Outside Sensor Box</b>	<b>Ref. 9 001 606</b>

For wall-mounted installation.

### Power Supply DRM 24 V 1.5 A



To supply the Outside Sensor Box (without heated sensors) or the animeo KNX Compact Sensor.

Dimensions (w × h × d):	78 × 93 × 56 mm
Degree of protection:	IP 20
Protection class:	II
Operating voltage:	230 V AC
Output voltage:	24 V DC
Output current:	1.5 A
<b>Power Supply DRM 24 V DC 1.5 A</b>	<b>Ref. 9 017 611</b>

### Compact Sensor



The complete weather station in a small format. 3 x sun, 1 x wind, 1 x outside temperature, 1 x rain, GPS receiver. Additional requirements: 24 V DC power supply.

#### Product benefits

- Wiring made easy as all sensors are integrated in the device.
- Monitored communication between Building Controller and Compact Sensor.

#### Further features

- Integrated sensors:
- Three sun sensors in fixed direction 90 ° (east), 180 ° (south) and 270 ° (west).
- Wind speed sensor without moving parts.
- Outside temperature sensor.
- Heated rain sensor.
- GPS receiver for time synchronisation.
- Bracket for wall or post mounting

Dimensions (w × h × d):	96 × 77 × 118 mm
Degree of protection:	IP 65
Protection class:	III
Operating voltage:	24 V DC ± 10 %
Operating temperature:	- 25° C to + 50° C
<b>animeo Compact Sensor</b>	<b>Ref. 9 015 047</b>



## Sensors and accessories

### animeo Power Supply DC



To supply the Outside Sensor Box (with heated sensors), the animeo KNX Master Control W2/W8 and the animeo LON Sensor Interface.

Dimensions (w × h × d):	130 × 180 × 61 mm
Degree of protection:	IP 20
Protection class:	II
Operating voltage:	230 V AC
Output current:	2.5 A (switch on duration 100%) 4.5 A (switch on duration 50%: 3 min. on, 3 min. off)

**animeo Power Supply DC** Ref. 1 860 093

For wall-mounted and DIN-rail installation.

### Wind Sensor



Measurement of wind speed.

Dimensions:	Height 200 mm, Ø 240 mm max. Ø-mast: 48 mm
Degree of protection:	IP 65
Wiring recommendations:	2 × 0.8 mm <sup>2</sup>

**Wind Sensor** Ref. 9 001 608

### Heated Wind Sensor



Power supply via Outside Sensor Box.  
Measurement of wind speed.

Dimensions:	Height 190 mm, Ø 240 mm max. Ø-mast: 48 mm
Degree of protection:	IP 54
Wiring recommendations:	5 × 1.5 mm <sup>2</sup>

**Heated Wind Sensor** Ref. 9 140 180

### Sensor Station extended without sensors



Sensor Station Extended without sensors and Outside Sensor Box. Incl. accessories for wind direction sensor.

Dimensions / mast height:	3200 mm
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**Sensor Station extended without sensors** Ref. 9 014 302

### Rain Sensor Ondeis 24 V DC



Power supply through the Outside Sensor Box.

Dimensions (w × h × d):	115 × 100 × 85 mm
Degree of protection:	IP 44
Wiring recommendations:	3 × 1.5 mm <sup>2</sup>

**Rain Sensor Ondeis** Ref. 9 016 344

## Sensors and accessories

### Outside Sensor Box



With high-quality bearing.

Dimensions:	Height 303 mm, Arrow length 515 mm, max. ø-mast: 48 mm
Degree of protection:	IP 54
Wiring recommendations:	5 × 1.5 mm <sup>2</sup>
<b>Wind Direction Sensor</b>	<b>Ref. 9 013 807</b>

### Outside Temperature Sensor



With solar radiation sensor protective housing.

Dimensions:	Height 150 mm, ø 115 mm
Degree of protection:	IP 65
Wiring recommendations:	2 × 0.8 mm <sup>2</sup>
<b>Outside Temperature Sensor</b>	<b>Ref. 9 001 611</b>

### Sun Sensor



For direct connection to the Outside (Extension) Sensor Box.

Dimensions (w × h × d):	34 × 88 × 47 mm
Degree of protection:	IP 43
Protection class:	III
Wiring recommendations:	2 × 0.8 mm <sup>2</sup>
Angle position:	150°

<b>Sun Sensor without mounting bracket</b>	<b>Ref. 9 050 100</b>
<b>Mounting bracket for Sun Sensor</b>	<b>Ref. 9 127 888</b>
<b>Complete pack</b>	<b>Ref. 9 154 043</b>

### Sensor Station



The Sensor Station consists of an aluminium mast with pre-mounted and pre-wired Outside Sensor Box, 4 sun sensors, 1 wind sensor and 1 outside temperature sensor. The Sensor Station can be equipped with additional sensors such as sun sensors and a rain sensor. Wall brackets included.

Dimensions / mast height:	3200 mm
<b>Sensor Station</b>	<b>Ref. 9 013 726</b>

## Sensors and accessories

### Sensor Station without sensors



Sensor Station without sensors and Outside Sensor Box.

Dimensions / mast height: 3200 mm

**Sensor Station without Sensor** Ref. 9 014 301

### Sensor Station extended



The Sensor Station consists of an aluminium mast with pre-mounted and pre-wired Outside Sensor Box, 4 sun sensors, 1 wind sensor and 1 Outside temperature sensor. The Sensor station can be equipped with additional sensors such as sun sensors and a rain sensor. Wall brackets included.

Dimensions / mast height: 3200 mm

**Sensor Station extended** Ref. 9 013 727

### Roof mounting



For the roof-mounting of the Sensor Station. Stainless steel.

Roof mounting Ref. 9 014 300

**Strain connection for roof mounting only** Ref. 9 014 303

### Lightning protection



To protect the controls inside. Is used in combination with the Outside Sensor Box or Compact Sensor.

**Electronic lightning protection power supply** Ref. 9 001 629

**Electronic lightning protection RS 485** Ref. 9 001 630



## Local controls

### Light Balancing Switch



A wall-mounted KNX switch designed to control the natural and artificial light level in the room. Fits ideally with the Somfy animeo KNX range and Philips KNX range. Available in two versions: white and black. Both with glass-finish front.

Light Balancing  
**PHILIPS** | **somfy**

#### Product benefits

- Four buttons with dedicated application marking.
- One switch allows the control of four functions: 1. Solar shading control (up, down, stop, tilt), 2. Lighting control on/off, 3. Lighting dimming, 4. Scenes. – Reaction times of individual buttons can be programmed individually.

#### Further features

- Flexible pre-mounting of frame to provide accurate positioning of the switch.
- Standard KNX connection of the bus coupling unit through KNX terminal.
- Easy, clip-on installation of front cover.

Dimensions (w × h × d):	86 × 86 × 35 mm
Degree of protection	IP 20
Protection class:	II
Operating voltage:	21...30 V DC
Operating temperature:	- 5° C to + 55° C
KNX current consumption:	< 25 mA
KNX standby current:	< 5 mA
<b>Light Balancing switch-w</b>	<b>Ref. 1 860 232</b>
<b>Light Balancing switch-b</b>	<b>Ref. 1 860 233</b>

## System accessories

### KNX Power Supply 320 mA



KNX Power Supply with integrated choke. Usable worldwide due to wide range input 100 – 240 V AC. LED indicator for power, overload and reset. Push button for automatic reset on the KNX line. Additional auxiliary voltage output with 30 V DC. Nominal current on the short-circuit protected outputs is 320 mA.

#### Product benefits

- Wide range input 100 to 240 V AC / 50–60 Hz.
- Integrated KNX choke.
- Integrated KNX reset function for choked output.
- Short-circuit protection.
- Status LEDs for power, overload and reset.

Dimensions (w × h × d):	71 × 91 × 62 mm (4 SU)
Degree of protection:	IP 20
Protection class:	III
Operating temperature:	- 5° C to + 50° C
Supply voltage:	100 – 240 V AC / 50 – 60 Hz
Output voltage:	30 V DC (28 – 31 V DC according to KNX specification)
Output voltage not choked:	30 V DC
Nominal current:	320 mA

**KNX Power Supply 320 mA** **Ref. 9 018 244**

For DIN-rail installation.

## System accessories

### KNX Power Supply 640 mA



KNX Power Supply with integrated choke. Usable worldwide due to wide range input 100 – 240 V AC. LED indicator for power, overload and reset. Push button for automatic reset on the KNX line.

Additional auxiliary voltage output with 30 V DC. Nominal current on the short-circuit protected outputs is 640 mA.

#### Product benefits

- Wide range input 100 to 240 V AC / 50–60 Hz.
- Integrated KNX choke.
- Integrated KNX reset function for choked output.
- Short-circuit protection.
- Status LEDs for power, overload and reset.

Dimensions (w × h × d):	107 × 91 × 62 mm (6 SU)
Degree of protection:	IP 20
Protection class:	III
Operating temperature:	– 5° C to + 50° C
Supply voltage:	100 – 240 V AC / 50 – 60 Hz
Output voltage:	30 V DC (28 – 31 V DC according to KNX specification)
Output voltage not choked:	30 V DC
Nominal current:	640 mA

**KNX Power Supply 320 mA** **Ref. 9 018 245**

For DIN-rail installation.

### KNX Line / backbone coupler



Provides a data connection between separate KNX bus lines and also insulates the bus lines from each other in order to limit bus line interference.

Dimensions (w × h × d):	72 × 90 × 56 mm (2 SU) (2 SUs; 1 SU = 18 mm)
Degree of protection:	IP 20
Protection class:	III

**KNX Line / backbone coupler** **Ref. 9 706 007**

For DIN-rail mounting.

### KNX USB Interface



This interface is to establish a bidirectional connection between a PC and the KNX installation bus.

The USB connector has a galvanic separation from the KNX bus. Both ETS (Engineering Tool Software) versions ETS3 or later and some Visualisation tools support this interface.

Dimensions (w × h × d):	18 × 90 × 56 mm (1 SU)
Degree of protection:	IP 20
Protection class:	III
Operating temperature:	– 5° C to + 45° C
Supply voltage:	Power for communication via USB is supplied by the connected PC / laptop, correct operation is signalled by the corresponding LED. Power consumption: < 200 mW Power for communication via KNX is supplied by KNX bus.
Power consumption:	< 100 mW

**KNX USB Interface** **Ref. 9 018 243**

### KNX IP Line Master

The KNX Line Master combines the essential functions of a KNX bus line: power supply with choke, IP router and IP Interface.

In addition to the bus voltage the power supply offers an auxiliary voltage of 24 V. The IP router in the Line Master enables telegrams to be forwarded between different lines through a LAN (IP) as a fast backbone.

Using the embedded IP interface, the KNX line can be connected directly for PC (e.g. by ETS).

Dimensions (w × h × d):	122 × 90 × 56 mm
Degree of protection:	IP 20
Protection class:	III
Operating temperature:	– 5° C to + 45° C
Supply voltage:	Mains voltage 230 V AC / 50 Hz
Power consumption:	< 4 W (idle) < 28 W (full load)

**KNX IP Line Master** **Ref. 9 018 249**

## System accessories

### KNX USB Interface Stick



This interface is for establishing a bi-directional connection between a PC and the KNX installation bus.

The USB connector has a galvanic separation from the KNX bus. Both ETS (Engineering Tool Software) versions ETS3 or later and some visualisation tools support this interface.

Dimensions (w × h × d):	21 × 90 × 12 mm (1 SU)
Degree of protection:	IP 20
Protection class:	III
Operating temperature:	- 5° C to + 45° C
Supply voltage:	Power for communication via USB is supplied by the connected PC / laptop, correct operation is signalled by the corresponding LED. Power consumption: < 200 mW Power for communication via KNX is supplied by KNX bus.
Power consumption:	< 100 mW

**KNX USB Interface stick**

**Ref. 9 018 349**

### KNX IP Interface



The KNXnet/IP-Interface is used to connect a PC to the KNX network. The connection is made through LAN (IP).

The IP address can be obtained by a DHCP server or by manual configuration (ETS) respectively.

Dimensions (w × h × d):	36 × 90 × 56 mm (2 SU)
Degree of protection:	IP 20
Protection class:	III
Operating temperature:	- 5° C to + 45° C
Supply voltage:	External supply 12 – 24 V AC / 12 – 30 V DC Alternative: power – over Ethernet
Power consumption:	< 800 mW

**KNX IP Interface**

**Ref. 9 018 246**

### KNX IP Interface 740 wireless



Wireless KNX P interface.

Dimensions (w × h × d):	125 × 67 × 31 mm
Degree of protection:	IP 20
Protection class:	III
Operating temperature:	- 5° C to + 45° C
Supply voltage:	Via enclosed wall power supply (primary: 230 V ~ / 50 Hz, secondary: 9V)
Power consumption:	< 2.5 W (secondary, at 9 V)

**KNX IP Interface wireless**

**Ref. 9 018 247**

### KNX IP Router



The KNXnet/IP router enables telegrams to be forwarded between different lines through a LAN (IP) as a fast backbone.

In addition, this device is suited to connect a PC to the KNX network e.g. for ETS programming.

The IP address can be obtained by a DHCP server or by manual configuration (ETS) respectively.

Dimensions (w × h × d):	36 × 90 × 56 mm (2 SU)
Degree of protection:	IP 20
Protection class:	III
Operating temperature:	- 5° C to + 45° C
Supply voltage:	External supply 12 – 24 V Alternative: Power – over – Ethernet
Power consumption:	< 800 mW

**KNX IP Router**

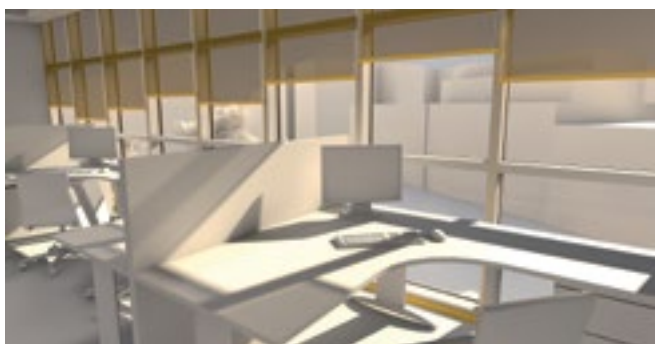
**Ref. 9 018 248**



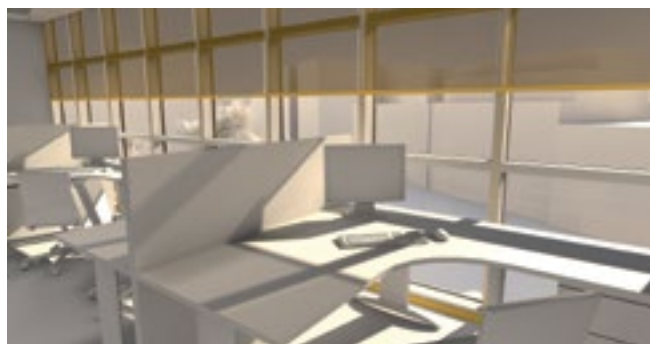
## Excellent blind control

### KNX/RS485 Motor Controller

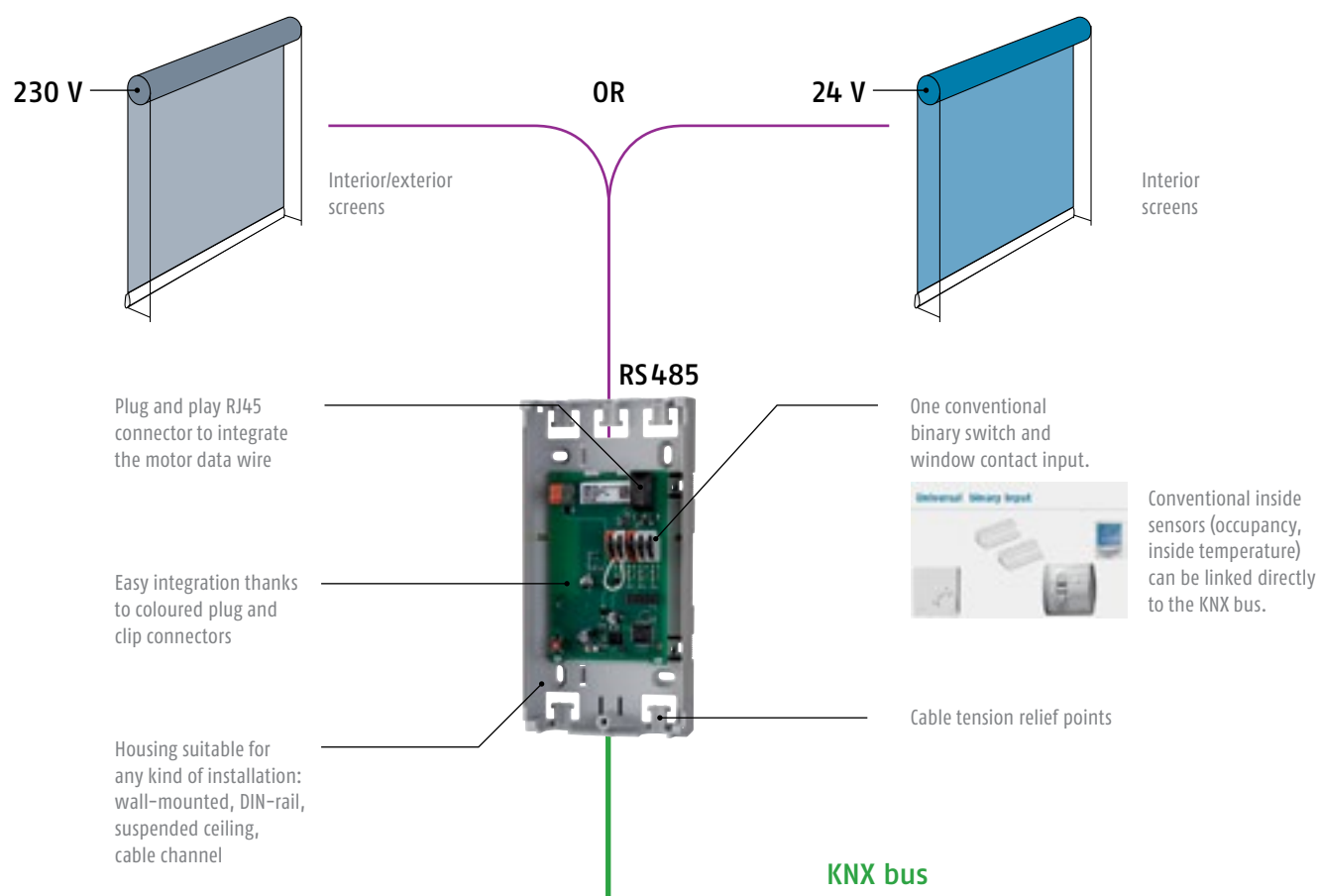
- » Perfect alignment
- » Numerous intermediate positions
- » Precise motor position feedback
- » Precise façade design



With standard motor



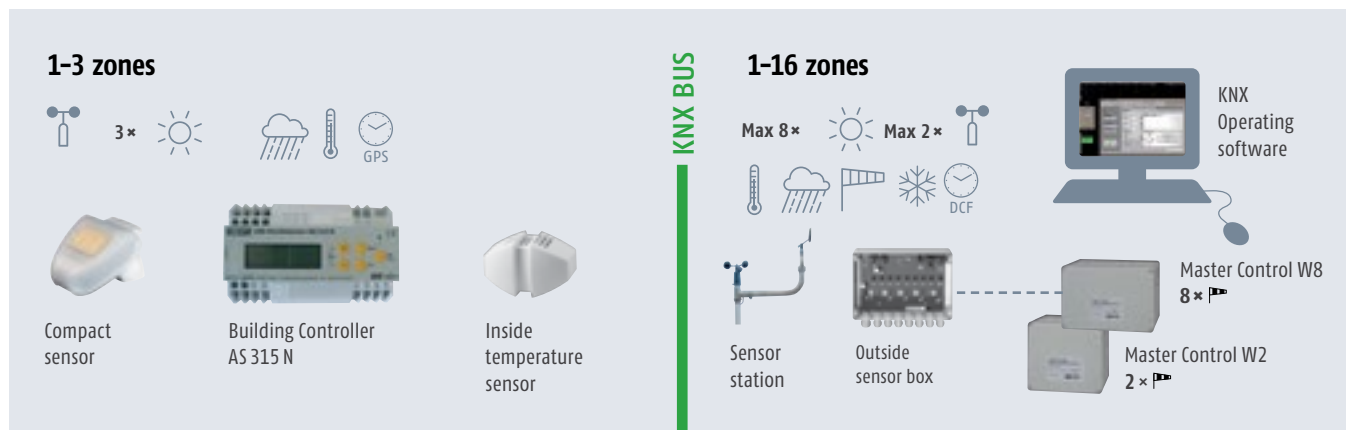
With the digital RS485 motor



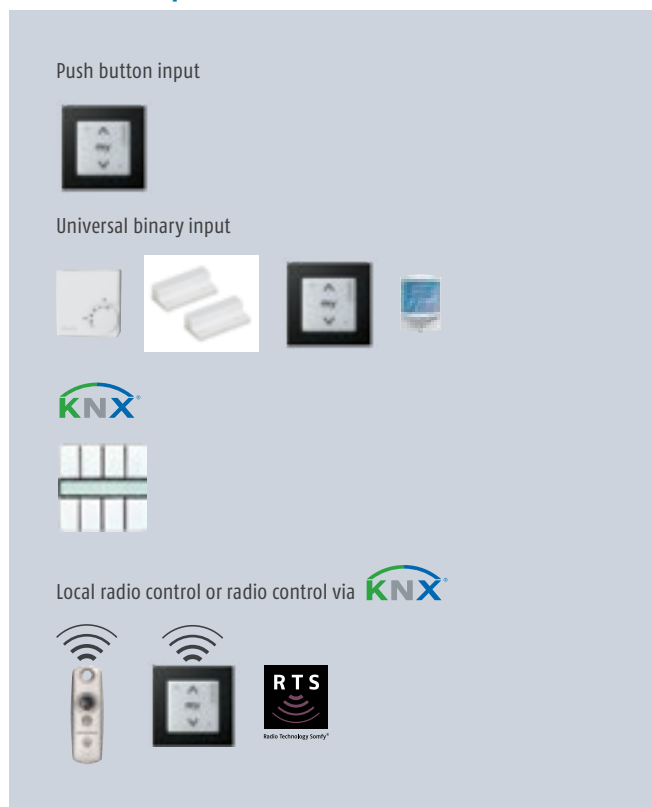
## System topology

Adaptable façade management system compatible with KNX standards. No zone limitation.

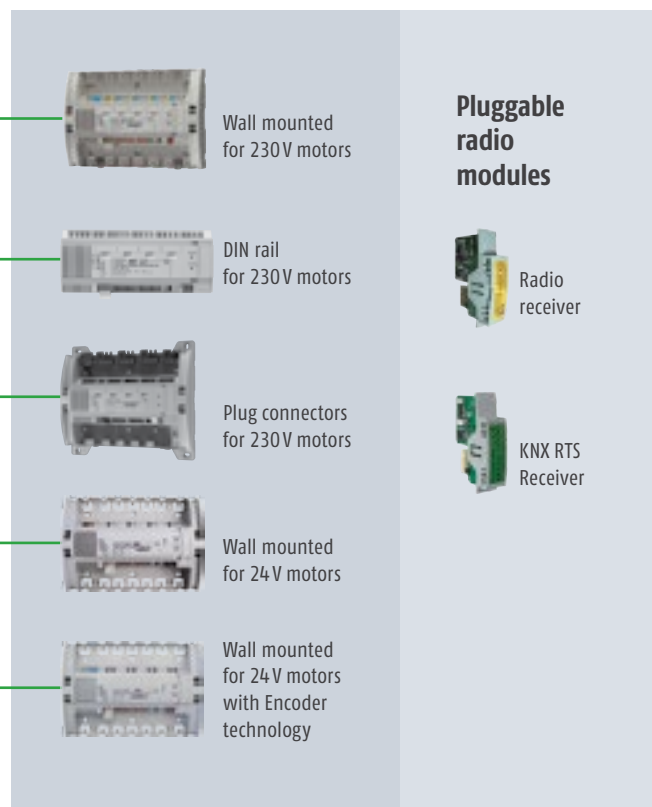
### Central KNX control



### Local control options



### Motor Controllers



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