



Building Automation

For the KNX, EnOcean, RS485 and Modbus
Bus Systems and for Conventional Applications

elsner
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Optimal Ventilation and Shading Right from the Beginning



The automatic control of shading and ventilation has long been standard in public and commercial buildings. However, for energy saving reasons and for the improvement of the optimal interior climate, building automation is becoming increasingly important for residential buildings as well. Thus, it is vital to consider the climate control of living space and offices already in the planning stage.

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Climate control of public and commercial buildings and residential premises

In public and commercial buildings, which are frequented by many people, the automatic control of shading and ventilation provides optimal conditions at any time of the day. In buildings such as offices or local buildings it is not possible to achieve a comfortable indoor climate by operating blinds and ventilation manually.

The primary purpose of building automation in residential buildings is to save energy, e.g. by utilising solar heat and by heating as necessary. Automatic climate control is particularly important for low energy constructions with almost hermetically sealed construction shells in order to avoid negative impacts such as bad ambient air, the generation of condensed water and overheating. Furthermore, building automation allows for the implementation of additional safety and comfort functions such as alarm messages or different kinds of illumination.

Communication by means of data bus

There are basically two options for control networks in buildings: The installation of a central or local bus system

Local bus systems have long proved of value in public and commercial buildings and in industry. Different devices communicate by a mutual grid-type network (the data bus) without a central control being necessary. A local bus system which is frequently deployed in residential premises as well as in public and commercial buildings is KNX.

Building automation with KNX

Presently, KNX as European standard EN 50090 is globally the only open standard for system technology in residential premises and buildings. Shading, heating, alarm systems, ventilation, illumination or appliances for entertainment electronics are only some examples of the various sectors in buildings and households which may be monitored and controlled by means of KNX.

As every sensor (e.g. light sensor) and actuator (e.g. lamp, awning) is linked via the data bus, the system is extremely versatile and expandable. It is possible to make software

configurations to influence the reaction of sensors and actuators to each other (e.g. which indoor temperature and which light value is relevant for an awning). This configuration may be adjusted any time. Expansions and additions are possible without any problems.

The huge range of application offers unique advantages, not only for the user and house owner but already during planning and installation. The common standard provides new network options; all KNX-certified products are compatible with each other.

The homepage of the KNX Association, for example, offers detailed information on KNX for building owners as well as for planners and architects at www.knx.org.

Central systems as cost-effective solution

Although the local bus systems such as KNX offer all options, they incorporate a higher initial investment. Therefore, centrally installed solutions may be more practical for certain applications. In this case, a central control system provides the automation of different tasks such as shading and ventilation. With centrally installed bus systems, it is possible to automate private dwellings as well as larger public and commercial buildings in a cost-saving way. By means of standardised interfaces, a high degree of flexibility is also maintained with central control systems. It is important in any case to consider future expansions already in the planning stage

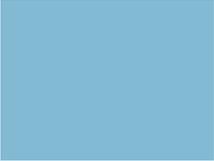
Radio technology

Communication via radio signals offers new possibilities especially for renovation and rehabilitation. Many Elsner Elektronik control systems can be completed with special wireless motor control units, relays, button interfaces etc. Thus the systems are flexible when the use of the building or the demands of the residents change.

The EnOcean system has its own radio standard. The control system is completely composed of wireless technology and uses energy-saving technology to transmit the signals. For more information about EnOcean, please have a look at www.enocean.com.



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KNX Weather Sensors

The weather stations and sensors provide the current meteorological data for KNX networks. The sensors, the evaluation electronics and the bus coupler are mounted in a compact housing with an integrated combined fixture for wall/pole mounting. An additional hinge arm mounting is available as an option (e.g. for beam mounting). The devices are configured by means of the ETS.

The **brightness sensor** not only recognises sunlight, but also twilight. For this, filters simulate the spectral sensitivity of the human eye. The electronic **wind sensor** works noiselessly and reliably, even during hail, snow and sub-zero temperatures. Even turbulent air and

anabatic winds in the vicinity of the weather station are recorded.

The surface of the **precipitation sensor** is heated so that only drops and flakes are recognised as precipitation but not fog or dew. If it stops raining or snowing, the sensor dries quickly and the precipitation message ends.

The **temperature sensor** transfers the outdoor temperature exactly and reliably to the KNX system.

The **DCF77 receiver** delivers date and time, the **GPS receiver** the international time signal (UTC) and the position. The devices equipped like that can **calculate the position of the sun** and handle time functions (calendar/week time switch).



Weather Station **suntracer**® KNX-GPS

- Temperature sensor (-30...+50°C)
- 1 Brightness sensor (0...150 000 lx)
- Wind speed sensor
- Precipitation sensor with 1.2 watt heating
- GPS receiver
- Calculation of the position of the sun (azimuth/elevation) e. g. for tracking of shading elements and photovoltaic modules
- Calendar time switch (3 annual terms with 2 daily periods)
- Week time switch (4 daily periods)
- Shading control for 6 fronts with tracking of the slats and shadow edge
- Switching outputs (with limit values)
- 8 AND and 8 OR logic gates (4 inputs each, each output 1 bit or 2x8 bits)
- Housing for surface mounting, protection category IP 44, white/translucent
- Dimensions approx. 96 x 77 x 118 (W x H x D, mm)
- Operating voltage: 12-40 V DC (12-28 V AC)



Weather Station **suntracer**® KNX-GPS light

- Temperature sensor (-30...+50°C)
- 1 Brightness sensor (0...150 000 lx)
- Wind speed sensor
- Precipitation sensor with 1.2 watt heating
- GPS receiver
- Calculation of the position of the sun (azimuth/elevation) e. g. for tracking of shading elements and photovoltaic modules
- Calendar time switch (3 annual terms with 2 daily periods)
- Week time switch (4 daily periods)
- Switching outputs (with limit values)
- 8 AND and 8 OR logic gates (4 inputs each, each output 1 bit or 2x8 bits)
- Housing for surface mounting, protection category IP 44, white/translucent
- Dimensions approx. 96 x 77 x 118 (W x H x D, mm)
- Operating voltage: 12-40 V DC (12-28 V AC)

Weather Station **sontracer**® KNX

- Temperature sensor (-30...+50°C)
- 1 Brightness sensor (0...150 000 lx)
- Wind speed sensor
- Precipitation sensor with 1.2 watt heating
- DCF77 receiver for time (entry of the position via ETS)
- Calculation of the position of the sun (azimuth/elevation) e. g. for tracking of shading elements and photovoltaic modules
- Calendar time switch (3 annual terms with 2 daily periods)
- Week time switch (4 daily periods)
- Switching outputs (with limit values)
- 8 AND and 8 OR logic gates (4 inputs each, each output 1 bit or 2x8 bits)
- Housing for surface mounting, protection category IP 44, white/translucent
- Dimensions approx. 96 x 77 x 118 (W x H x D, mm)
- Operating voltage: Available for 230 V AC or for 24 V DC (20 V AC)



Weather Station **sontracer**® KNX basic

- Temperature sensor (-30...+50°C)
- 1 Brightness sensor (0...150 000 lx)
- Wind speed sensor
- Precipitation sensor with 1.2 watt heating
- Switching outputs (with limit values)
- 8 AND and 8 OR logic gates (4 inputs each, each output 1 bit or 2x8 bits)
- Housing for surface mounting, protection category IP 44, white/translucent
- Dimensions approx. 96 x 77 x 118 (W x H x D, mm)
- Operating voltage: Available for 230 V AC or for 24 V DC (20 V AC)



Wind Sensor KNX W

- Wind speed sensor
- 3 Switching outputs (with limit values)
- 8 AND and 8 OR logic gates (4 inputs each, each output 1 bit or 2x8 bits)
- Housing for surface mounting, protection category IP 44, white/translucent
- Dimensions approx. 96 x 77 x 118 (W x H x D, mm)
- Operating voltage: Available for 230 V AC or for 24 V DC (20 V AC)



Rain Sensor KNX R

- Precipitation sensor with 1.2 watt heating
- 1 Switching output
- 4 AND and 4 OR logic gates (4 inputs each, each output 1 bit or 2x8 bits)
- Housing for surface mounting, protection category IP 44, white/translucent
- Dimensions approx. 96 x 77 x 118 (W x H x D, mm)
- Operating voltage: Available for 230 V AC or for 24 V DC (20 V AC)



Rain/Wind Sensor KNX RW

- Wind speed sensor
- Precipitation sensor with 1.2 watt heating
- 4 Switching outputs, 3 adjustable limit values
- 8 AND and 8 OR logic gates (4 inputs each, each output 1 bit or 2x8 bits)
- Housing for surface mounting, protection category IP 44, white/translucent
- Dimensions approx. 96 x 77 x 118 (W x H x D, mm)
- Operating voltage: Available for 230 V AC or for 24 V DC (20 V AC)



Brightness/Wind Sensor KNX LW

- 1 Brightness sensor (0...150 000 lx)
- Wind speed sensor
- 9 Switching outputs (with limit values)
- 8 AND and 8 OR logic gates (4 inputs each, each output 1 bit or 2x8 bits)
- Housing for surface mounting, protection category IP 44, white/translucent
- Dimensions approx. 96 x 77 x 118 (W x H x D, mm)
- Operating voltage: Available for 230 V AC or for 24 V DC (20 V AC)





N° 70119

Brightness Sensor KNX L

- 1 Brightness sensor (0...150 000 lx)
- 3 Switching outputs for day, 3 switching outputs for twilight/night, with adjustable limit values
- 8 AND and 8 OR logic gates (4 inputs each, each output 1 bit or 2x8 bits)
- Housing for surface mounting, protection category IP 44, white/translucent
- Dimensions approx. 96 x 77 x 118 (W x H x D, mm)
- Operating voltage: bus voltage



N° 70157

Global Irradiance Sensor KNX PY

- Global irradiance sensor (Pyranometer)
- Output of radiation intensity in watts per squaremetre (0...2500 W/m²) or kilowatt hours per squaremetre (0...2196 kWh/m²)
- 4 Switching outputs (with limit values)
- 2 AND and 2 OR logic gates (4 inputs each, each output 1 bit or 2x8 bits)
- Housing for surface mounting, protection category IP 44, white/transparent
- Dimensions approx. 96 x 77 x 118 (W x H x D, mm)
- Operating voltage: bus voltage



KNX Sensors for Indoor and Outdoor Measurement

The indoor sensors monitor the ambient climate. Some devices are also suitable for outdoor applications and measure the temperature and the air humidity there.

The sensors can process mixed values (e. g. room average). For this purpose values of other sensors are received via the bus and mixed with the own measured values (percentage can be adjusted). All devices have integrated PI controllers for one- or two-stage control and are configured by means of the ETS.

The **temperature sensor** measures temperature. The **humidity sensor** outputs the relative or absolute air humidity. The thermohygrometers additionally calculate the **dew point** and recognise, whether the measured values conform to the comfort field (DIN 1946). The **CO₂ sensor** detects the concentration of carbon dioxide in the air (no measurement of mixed gas).



N° 70220

Temperature Sensor KNX T-UN

- Temperature sensor (-30...+130°C)
- Extremely small sensor tip for use as a contact or feed probe for in- and outdoor applications, separate evaluation unit
- Calculation of mixed values
- PI controller for heating/cooling
- 4 Switching outputs (with limit values)
- 4 AND and 4 OR logic gates (4 inputs each, each output 1 bit or 2x8 bits)
- Protection category of the measuring sensor: IP 68
- Length of sensor sleeve approx. 20 mm, Ø approx. 6 mm, cable length approx. 300 cm. Dimensions evaluation electronics approx. 38 x 47 x 24 (W x H x D, mm)
- Operating voltage: bus voltage



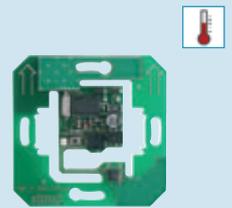
N° 70121

Temperature Sensor KNX T-AP

- Temperature sensor (-25...+80°C)
- For indoor and outdoor application
- Calculation of mixed values
- PI controller for heating/cooling
- 4 Switching outputs (with limit values)
- 4 AND and 4 OR logic gates (4 inputs each, each output 1 bit or 2x8 bits)
- Housing for surface mounting, protection category IP 65, grey
- Dimensions approx. 65 x 93 x 38 (W x H x D, mm)
- Operating voltage: bus voltage

Temperature Sensor KNX T-Object-UP

- Temperature sensor (-20...+70°C)
- For interior spaces
- Calculation of mixed values
- PI controller for heating/cooling
- 4 Switching outputs (with limit values)
- 4 AND and 4 OR logic gates (4 inputs each, each output 1 bit or 2x8 bits)
- For wall mounting in a socket
- Completion with frame/cover of the switching series used in the building (not included in scope of delivery)
- Dimensions mounting plate/sensor board approx. 70 x 70 (W x H, mm)
- Operating voltage: bus voltage



N° 70178

Temperature Sensor KNX T-UP basic

- Temperature sensor (-20...+70°C)
- For interior spaces
- Calculation of mixed values
- PI controller for heating/cooling
- 4 Switching outputs (with limit values)
- 4 AND and 4 OR logic gates (4 inputs each, each output 1 bit or 2x8 bits)
- For wall mounting in a socket
- Housing plastic white (glossy), aluminium, anthracite or stainless steel (painted, matt)
- Completion with frame of the switching series used in the building (not included in scope of delivery)
- Dimensions of housing approx. 55 x 55 (W x H, mm), mounting depth 15 mm
- Operating voltage: bus voltage



N° 70172 (White)



N° 70174 (Alu)
N° 70176 (Anthracite)
N° 70182 (Stainless steel)

Temperature Sensor KNX T-UP

- Temperature sensor (-10...+50°C)
- For interior spaces
- Display for measured values and bus data (e. g. date, time)
- Calculation of mixed values
- PI controller for heating/cooling
- 4 Switching outputs (with limit values)
- 4 AND and 4 OR logic gates (4 inputs each, each output 1 bit or 2x8 bits)
- For wall mounting in a socket
- Housing plastic white (glossy), aluminium, anthracite or stainless steel (painted, matt)
- Completion with frame of the switching series used in the building (not included in scope of delivery)
- Dimensions of housing approx. 55 x 55 (W x H, mm), mounting depth 15 mm
- Operating voltage: bus voltage



N° 70166 (White)



N° 70168 (Alu)
N° 70170 (Anthracite)
N° 70180 (Stainless steel)

Temperature Sensor KNX T-B-UP

- Temperature sensor (-10...+50°C)
- For interior spaces
- Display for measured values and bus data (e. g. date, time)
- Push buttons for changing the ambient temperature (target value) at the device
- Calculation of mixed values
- PI controller for heating/cooling
- 4 Switching outputs (with limit values)
- 4 AND and 4 OR logic gates (4 inputs each, each output 1 bit or 2x8 bits)
- For wall mounting in a socket
- Housing plastic white (glossy), aluminium, anthracite or stainless steel (painted, matt)
- Completion with frame of the switching series used in the building (not included in scope of delivery)
- Dimensions of housing approx. 55 x 55 (W x H, mm), mounting depth 15 mm
- Operating voltage: bus voltage



N° 70210 (White)



N° 70211 (Alu)
N° 70212 (Anthracite)
N° 70213 (Stainless steel)

Temperature/Humidity Sensor KNX TH65-AP

- Temperature sensor (-25...+85°C)
- Humidity sensor (0...100%RH)
- For indoor and outdoor application
- Calculation of mixed values
- Monitoring of the comfort field (DIN 1946)
- PI controller for heating/cooling (temperature)
- PI controller for ventilation (humidity)
- 7 Switching outputs (with limit values)
- 4 AND and 4 OR logic gates (4 inputs each, each output 1 bit or 2x8 bits)
- Housing for surface mounting, protection category IP 65, grey
- Dimensions approx. 65 x 93 x 38 (W x H x D, mm)
- Operating voltage: bus voltage



N° 70184



N° 70120

Temperature/Humidity Sensor KNX TH-AP

- Temperature sensor (-20...+70°C)
- Humidity sensor (0...100%RH)
- For interior spaces
- Calculation of mixed values
- Monitoring of the comfort field (DIN 1946)
- PI controller for heating/cooling (temperature)
- PI controller for ventilation (humidity)
- 7 Switching outputs (with limit values)
- 4 AND and 4 OR logic gates (4 inputs each, each output 1 bit or 2x8 bits)
- Housing for surface mounting, white
- Dimensions approx. 85 x 51 x 35 (W x H x D, mm)
- Operating voltage: bus voltage



N° 70173 (White)



N° 70175 (Alu)
N° 70177 (Anthracite)
N° 70183 (Stainless steel)

Temperature/Humidity Sensor KNX TH-UP basic

- Temperature sensor (-20...+70°C)
- Humidity sensor (0...100%RH)
- For interior spaces
- Calculation of mixed values
- Monitoring of the comfort field (DIN 1946)
- PI controller for heating/cooling (temperature)
- PI controller for ventilation (humidity)
- 7 Switching outputs (with limit values)
- 4 AND and 4 OR logic gates (4 inputs each, each output 1 bit or 2x8 bits)
- For wall mounting in a socket
- Housing plastic white (glossy), aluminium, anthracite or stainless steel (painted, matt)
- Completion with frame of the switching series used in the building (not included in scope of delivery)
- Dimensions of housing approx. 55 x 55 (W x H, mm), mounting depth 15 mm
- Operating voltage: bus voltage



N° 70167 (White)



N° 70169 (Alu)
N° 70171 (Anthracite)
N° 70181 (Stainless steel)

Temperature/Humidity Sensor KNX TH-UP

- Temperature sensor (-10...+50°C)
- Humidity sensor (0...100%RH)
- For interior spaces
- Display for measured values and bus data (e. g. date, time)
- Calculation of mixed values
- Monitoring of the comfort field (DIN 1946)
- PI controller for heating/cooling (temperature)
- PI controller for ventilation (humidity)
- 7 Switching outputs (with limit values)
- 4 AND and 4 OR logic gates (4 inputs each, each output 1 bit or 2x8 bits)
- For wall mounting in a socket
- Housing plastic white (glossy), aluminium, anthracite or stainless steel (painted, matt)
- Completion with frame of the switching series used in the building (not included in scope of delivery)
- Dimensions of housing approx. 55 x 55 (W x H, mm), mounting depth 15 mm
- Operating voltage: bus voltage



N° 70215 (White)



N° 70216 (Alu)
N° 70217 (Anthracite)
N° 70218 (Stainless steel)

Temperature/Humidity Sensor KNX TH-B-UP

- Temperature sensor (-10...+50°C)
- Humidity sensor (0...100%RH)
- For interior spaces
- Display for measured values and bus data (e. g. date, time)
- Push buttons for changing the ambient temperature (target value) at the device
- Calculation of mixed values
- Monitoring of the comfort field (DIN 1946)
- PI controller for heating/cooling (temperature)
- PI controller for ventilation (humidity)
- 7 Switching outputs (with limit values)
- 4 AND and 4 OR logic gates (4 inputs each, each output 1 bit or 2x8 bits)
- For wall mounting in a socket
- Housing plastic white (glossy), aluminium, anthracite or stainless steel (painted, matt)
- Completion with frame of the switching series used in the building (not included in scope of delivery)
- Dimensions of housing approx. 55 x 55 (W x H, mm), mounting depth 15 mm
- Operating voltage: bus voltage

Air Quality Sensor KNX AQS

- CO₂ sensor (0...5000 ppm)
- For interior spaces
- Calculation of mixed values
- PI controller for ventilation
- 4 Switching outputs (with limit values)
- 2 AND and 2 OR logic gates (4 inputs each, each output 1 bit or 2x8 bits)

- For wall mounting in a junction box
- Housing plastic white (matt)
- Dimensions cover approx. 94 x 94 (W x H, mm), mounting depth 8 mm
- Operating voltage: bus voltage



N° 70163

Air Quality Sensor KNX AQS-UP basic

- CO₂ sensor (0...5000 ppm)
- For interior spaces
- Calculation of mixed values
- PI controller for ventilation
- 4 Switching outputs (with limit values)
- 2 AND and 2 OR logic gates (4 inputs each, each output 1 bit or 2x8 bits)
- For wall mounting in a socket

- Housing plastic white (glossy), aluminium, anthracite or stainless steel (painted, matt)
- Completion with frame of the switching series used in the building (not included in scope of delivery)
- Dimensions of housing approx. 55 x 55 (W x H, mm), mounting depth 15 mm
- Operating voltage: bus voltage



N° 70224 (White)



N° 70225 (Alu)
N° 70226 (Anthracite)
N° 70227 (Stainless steel)

Air Quality Sensor KNX AQS-B-UP

- CO₂ sensor (0...5000 ppm)
- For interior spaces
- Display for measured values and bus data (e. g. date, time)
- Push buttons (bus buttons) at the device
- Calculation of mixed values
- PI controller for ventilation
- 4 Switching outputs (with limit values)
- 2 AND and 2 OR logic gates (4 inputs each, each output 1 bit or 2x8 bits)

- For wall mounting in a socket
- Housing plastic white (glossy), aluminium, anthracite or stainless steel (painted, matt)
- Completion with frame of the switching series used in the building (not included in scope of delivery)
- Dimensions of housing approx. 55 x 55 (W x H, mm), mounting depth 15 mm
- Operating voltage: bus voltage



N° 70229 (White)



N° 70230 (Alu)
N° 70231 (Anthracite)
N° 70232 (Stainless steel)

Combined Indoor Sensor KNX AQS/TH

- CO₂ sensor (0...5000 ppm)
- Temperature sensor (-10...+50°C)
- Humidity sensor (0...100%RH)
- For interior spaces
- Calculation of mixed values
- Monitoring of the comfort field (DIN 1946)
- PI controller for heating/cooling (temperature)
- PI controller for ventilation (CO₂, humidity)

- 2 Actuating variable comparators
- 11 Switching outputs (with limit values)
- 8 AND and 8 OR logic gates (4 inputs each, each output 1 bit or 2x8 bits)
- For wall mounting in a junction box
- Housing plastic white (matt)
- Dimensions cover approx. 94 x 94 (W x H, mm), mounting depth 8 mm
- Operating voltage: bus voltage



N° 70161

Combined Indoor Sensor KNX AQS/TH-UP basic

- CO₂ sensor (0...5000 ppm)
- Temperature sensor (-10...+50°C)
- Humidity sensor (0...100%RH)
- For interior spaces
- Calculation of mixed values
- Monitoring of the comfort field (DIN 1946)
- PI controller for heating/cooling (temperature)
- PI controller for ventilation (CO₂, humidity)
- 2 Actuating variable comparators
- 11 Switching outputs (with limit values)

- 8 AND and 8 OR logic gates (4 inputs each, each output 1 bit or 2x8 bits)
- For wall mounting in a socket
- Housing plastic white (glossy), aluminium, anthracite or stainless steel (painted, matt)
- Completion with frame of the switching series used in the building (not included in scope of delivery)
- Dimensions of housing approx. 55 x 55 (W x H, mm), mounting depth 15 mm
- Operating voltage: bus voltage



N° 70234 (White)



N° 70235 (Alu)
N° 70236 (Anthracite)
N° 70237 (Stainless steel)

NEW

N° 70239 (White)

N° 70240 (Alu)
N° 70241 (Anthracite)
N° 70242 (Stainless steel)

Combined Indoor Sensor KNX AQS/TH-B-UP

- CO₂ sensor (0...5000 ppm)
- Temperature sensor (-10...+50°C)
- Humidity sensor (0...100%RH)
- For interior spaces
- Display for measured values and bus data (e. g. date, time)
- Push buttons for changing the ambient temperature (target value) at the device or as bus buttons
- Calculation of mixed values
- Monitoring of the comfort field (DIN 1946)
- PI controller for heating/cooling (temperature)
- PI controller for ventilation (CO₂, humidity)
- 2 Actuating variable comparators
- 11 Switching outputs (with limit values)
- 8 AND and 8 OR logic gates (4 inputs each, each output 1 bit or 2x8 bits)
- For wall mounting in a socket
- Housing plastic white (glossy), aluminium, anthracite or stainless steel (painted, matt)
- Completion with frame of the switching series used in the building (not included in scope of delivery)
- Dimensions of housing approx. 55 x 55 (W x H, mm), mounting depth 15 mm
- Operating voltage: bus voltage



Monitoring of Tanks and Distance Measurement

An ultrasonic probe is used for measuring the capacity of tanks and for distances. The fill level/distance can be directly read from the display. Settings like the tank geometry and

capacity are accomplished by means of the ETS. Additional output relays can be programmed directly via the keypad.

N° 70151

Tank Sensor KNX S0250

- Measurement of filling height or distance (12...250 cm)
- 5 Switching outputs (with limit values), data output via KNX bus plug terminal
- 2 additional output relays (setting via keypad)
- Evaluation unit with display and keypad
- Modular device 7 width units, white, dimensions approx. 123 x 89 x 61 (W x H x D, mm)
- Ultrasonic measuring sensor, black, Ø approx. 60 mm, height approx. 45 mm, thread 1½ inches
- Liquid resistance for water and fuel
- 10 m connection cable
- Operating voltage: 230 V AC



KNX Actuators

Actuators control blinds, awnings, roller shutters, windows or doors in the KNX system. The automatic may be provided externally or internally in this case. The internal automatic of the actuators of the KNX S series offers numerous options for blocking, locking (e.g. master –

slave) and priority settings (e.g. manual – automatic). Movement positions and sequences may be stored and recalled via the bus.

The slats of blinds can be tracked according to the position of the sun. The setting is accomplished by means of the ETS.

N° 70134 (24 VDC)
N° 70135 (230 VAC)

Actuators for Shadings/Windows KNX S-UP

- 1 Drive output for shading or window
- Internal automatic functions
- 8 Channel scene control
- Flush mounting in a socket
- Dimensions approx. 50 x 51 x 41 (W x H x D, mm)
- Operating voltage: Available for 230 V AC or for 24 V DC
- 230 V model protected with T6,3 A

Actuators for Shadings/Windows KNX S-B2-UP

- 1 Drive output for shading or window
- 2 Binary inputs (for direct operation or as a bus push button)
- Internal automatic functions
- 8 Channel scene control
- Flush mounting in a socket
- Dimensions approx. 50 x 51 x 41 (W x H x D, mm)
- Operating voltage: Available for 230 V AC or for 24 V DC
- 230 V model protected with T6,3 A



Actuators for Shadings/Windows KNX S-B4T-UP

- 1 Drive output for shading or window
- 4 Binary inputs (for direct operation or as a bus push button)
- 1 Temperature sensor input
- Internal automatic functions
- 8 Channel scene control
- Flush mounting in a socket
- Dimensions approx. 50 x 51 x 41 (W x H x D, mm)
- Operating voltage: Available for 230 V AC or for 24 V DC
- 230 V model protected with T6,3 A



Multifunctional Actuator KNX S4-B10

- 4 Outputs. Each output controls one drive (up/down) or two switchable devices (on/off)
- Integrated shading control for each output (with tracking of the slats)
- 16 Channel scene control
- 10 Binary inputs (for direct operation or as a bus push button)
- 4 Pairs of push buttons and control LEDs for direct operation at the device
- Modular device 6 width units, white, dimensions approx. 107 x 88 x 60 (W x H x D, mm)
- Operating voltage: 230 V AC



Control Module for Door Drives KNX A2-B2

- 2 Outputs for control of a door
- 2 Binary inputs (for status query or as a bus push button)
- Dimensions approx. 38 x 47 x 29 (W x H x D, mm)
- Operating voltage: bus voltage



KNX Interfaces

Push Button Interface KNX B4-UP

- 4 Binary inputs for conventional push buttons or auxiliary contacts
- Dimensions approx. 38 x 47 x 29 (W x H x D, mm)
- Connection lead 300 mm, can be extended up to 10 m
- Operating voltage: bus voltage



KNX Interface for WS1000 Color

- Use of the data of WS1000 Color Control System in the KNX system (e. g. weather data)
- The automatic functions of the WS1000 Color can control drives in the KNX system and request sensor data from the bus
- KNX plug connector for data transfer (+/- KNX plug terminal)
- Interface and KNX plug connector are plugged onto the board of the control system
- Dimensions of board approx. 53 x 7 x 30 (W x H x D, mm)
- For WS1000 Color as of version 1.45





Control and Operating Panels for KNX

The control centres establish the interface between building technology and the user. Operation of the building equipment takes place via touch-sensitive screens. The devices offer inte-

grated automatic control functions that can be set directly on the display, too. The basic set-up is accomplished by the installer in the ETS.



N° 70195 (White)
N° 70196 (Alu)

Touch Panel for Room Automation

- Free configurable display and operation elements
- Internal automatic functions for shading (sun protection/screen)
- Internal automatic functions for control of room conditions (heating, cooling, ventilation)
- Internal control of illumination
- Bus functions for time and scene control
- Integrated indoor sensor (temperature, humidity)
- 4 Binary inputs (e. g. for push buttons)
- KNX plug connector for data transfer (plug terminal)
- Colour touch display 5.7 inches
- Housing plastic white/grey or alu/graphite (partly painted)
- Housing for surface mounting, feeding of cables via a socket
- Dimensions approx. 164 x 121 x 29 (W x H x D, mm)
- Operating voltage: 12...28 V AC (12...40 V DC)

Accessories: (not included in delivery)

- Radio Remote Control Remo 8, p. 33



N° 70191 (White)
N° 70192 (Alu)

Control System KNX WS1000 Color

- Internal automatic functions for shading (awning, blind, roller shutter)
- Internal automatic functions for ventilation (window or ventilation unit)
- Internal control of illumination
- Time switch
- KNX plug connector for data transfer (+/- KNX plug terminal)
- 32 Radios channels for special wireless relays and motor control units, ventilation units, temperature and humidity sensors and for remote control
- Supply of weather data via KNX or by direct connection of a weather station
- Colour touch display 8,4 inches with display of weather data
- Housing plastic white/grey or alu/graphite (partly painted)
- For wall or cavity wall mounting
- Dimensions approx. 250 x 182 x 43, concealed box approx. 235 x 169 x 62 (W x H x D, mm)
- Operating voltage: 230 V AC

Accessories: (not included in delivery)

- Weather Station P03i-GPS
- Interface for 2 video cameras, p. 21
- Radio Relays RF Relay and Motor Control Units RF-MSG, p. 20
- Radio Ventilation Units WFL, WL305, WL610
- Radio Temperature Sensor WGT and Thermo/Hygrometer WGTH-UP, p. 20
- Radio Remote Control Remo 8, p. 33



N° 30114

Weather Station P03i-GPS for KNX WS1000 Color

- For direct connection to KNX WS1000 Color control system
- Temperature sensor
- 1 Brightness sensor
- Wind speed sensor
- Precipitation sensor with 1.2 watt heating
- GPS receiver
- Housing for surface mounting, protection category IP 44, white/translucent
- Dimensions approx. 96 x 77 x 118 (W x H x D, mm)
- Operating voltage: 24 V DC

KNX Power Supply Units

The power supply units deliver a 29V bus voltage (reduced) and 24VDC supply voltage for 24V devices (not reduced). Special operating conditions such as short circuit, electrical surge, overcharge or excess temperature are recorded and may be read off on the display. The present power discharge is displayed as well. It is possible to reset the bus devices by means of the key pad.

ded and may be read off on the display. The present power discharge is displayed as well. It is possible to reset the bus devices by means of the key pad.



Power Supply Unit KNX PS640

- 1 Output for KNX bus voltage, output current of max. 640 mA, short-circuit proof
- 1 Output for 24 VDC, output current of max. 150 mA

- Modular device 7 width units, white, dimensions approx. 123 x 89 x 61 (W x H x D, mm)
- Operating voltage: 230 V AC



N° 70140

Power Supply Unit KNX PS640+

- 1 Output for KNX bus voltage, output current of max. 640 mA, short-circuit proof
- 1 Output for 24 VDC, output current of max. 150 mA
- Bus connector for data transfer to line/main line/area

- Bus functions: transfer of malfunction messages and operating data, time/period reset, storage of malfunction messages
- Modular device 7 width units, white, dimensions approx. 123 x 89 x 61 (W x H x D, mm)
- Operating voltage: 230 V AC



N° 70141

Router with Power Supply Unit KNX PS640-IP

- 1 Output for KNX bus voltage, output current of max. 640 mA, short-circuit proof
- 1 Output for 24 VDC, output current of max. 150 mA
- Ethernet connection by RJ45 connector
- Routing (Ethernet as fast backbone for KNX data)

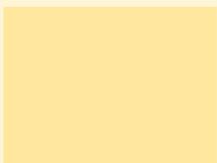
- Application as KNX line coupler
- Tunnelling (bus access via IP, remote maintenance via LAN)
- Modular device 7 width units, white, dimensions approx. 123 x 89 x 61 (W x H x D, mm)
- Operating voltage: 230 V AC



N° 70142



Control Systems for Buildings and Conservatories	18
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Control Systems for Buildings and Conservatories

WS1000 Color and WS1 Color are operating and control units for building technology in conservatories, private homes and smaller commercial buildings. The automatic control ensures optimal room conditions and provides safety and comfort functions. Due to their flexible connection and set-up options the controls even meets sophisticated requirements.

The key element is the colour display with touch functionality. It provides operation of the connected devices and adjustment of settings. The user interface was designed according to evolutionary-biological findings and easily guides through the set-up steps.

If no operation is made the display shows the current weather information, the course of the sun or rain and snow fall. If the ambient brightness is low the display may automatically darken in order to save energy.

Drives and devices are connected to the controls directly. In addition, radio channels for wireless connection are available. Thus motors of shadings and windows can be controlled via Radio Motor Control Units RF MSG. Systems like heating or illumination can be switched via RF Relays. Ventilation Units of Elsner Elektronik communicate wirelessly with the controls, without the need of an additional module.

The main **automatic functions** of the controls are sun protection and ventilation. Awnings, blinds and shutters are controlled according to brightness and also according to the direction and height of the sun. The slat angle of blinds can be tracked according to the position of the sun. This helps to avoid direct solar irradiation while simultaneously enabling natural daylight illumination of the room to the

largest possible extent. Furthermore, the shading elements are not lowered until the required room temperature is reached helping to utilise solar heat.

Irrespective of this, the control protects the connected shading elements against damages due to wind or rain. The integrated time switch allows realisation of comfort functions such as closing of shutters as visual protection.

The automatic **ventilation** depends on temperature and air humidity. For example, in the summer, the windows are opened during night time for cooling purpose until the required indoor temperature is reached. A rain alarm function prevents damages due to humidity.

Also **heaters, motor-driven ventilation units, and air conditioning systems** are regulated by the controls WS1000 Color and WS1 Color ensuring that the required room conditions are maintained. In areas with frequent snowfall a roof gutter heating ensures unobstructed outlet of snowmelt.

Safety inside the building is improved by connection of smoke and motion detectors. Smoke alarm starts ventilation (smoke extraction) and clears escape routes by retracting shading elements. Alarm from a motion detector closes windows and can be transferred e. g. to an alarm system or light.

The controls can display pictures of video cameras, e. g. for monitoring the entrance. Also individual requirements, such as timer-based control of a pond pump or atmospheric illumination of garden and house are realised by the Building Control Systems WS1000 Color and WS1000 Color.

Accessories for Building Control Systems WS1000 Color and WS1 Color:

(not included in delivery)

- Interface for 2 video cameras, p. 21
- Radio Relays RF Relay and Motor Control Units RF-MSG, p. 20
- Radio Ventilation Units WFL, WL305, WL610
- Radio Temperature Sensor WGT and Thermo/Hygrometer WGTH-UP, p. 20
- Radio Remote Control Remo 8, p. 33
- Hinge arm mounting for weather station, p. 32

Building Control System WS1000® Color

- Scope of delivery: central unit, indoor sensor and weather station

Central Unit WS1000 Color:

- 4, 6, 8 or 10 Drive outputs, either non-floating or potential-free (version PF). For shadings, windows or sliding doors
- 4 Multifunctional outputs for heating, cooling, ventilation, alarm system, light, dimmer or gutter heating
- 4 Multifunctional inputs for motion and smoke detectors, closed contact (sliding door), signal of a heating/cooling, of a camera or for reset
- 32 Radio channels for special radio relays, motor control units, ventilation units, temperature and humidity sensors and for remote control
- Connection for 10 external push buttons
- Embedding in the KNX bus system via optional interface (p. 21)
- Colour touch display 8.4 inches
- Display of pictures/slideshow on screen (via SD card)
- Settings can be saved on SD card
- Housing plastic white/grey or alu/graphite (partly painted)
- Dimensions approx. 250 x 182 x 43, concealed box approx. 235 x 169 x 62 (W x H x D, mm)

- For wall or cavity wall mounting
- Operating voltage: 230 V AC

Indoor Sensor WGTH-UP:

- Measurement of temperature, air humidity
- Radiocommunication with the central unit
- For wall mounting in a socket
- Housing plastic white (glossy) or alu (painted, matt)
- Includes basic frame, a frame of the switching series installed in the building may be used alternatively
- Dimensions of housing approx. 55 x 55 (B x H, mm), mounting depth 15 mm
- Operating voltage: 7...30 V DC

Weather Station P03i-GPS:

- Temperature sensor
- 1 Brightness sensor (calculation of the position of the sun by the control)
- Wind speed sensor
- Precipitation sensor with 1.2 watt heating
- GPS receiver (time, position)
- Integrated combined mounting bracket for wall or pole mounting
- Housing for surface mounting, protection category IP 44, white/translucent
- Dimensions approx. 96 x 77 x 118 (W x H x D, mm)
- Operating voltage: 24 V DC

Building Control System WS1® Color

- Scope of delivery: central unit with integrated indoor sensor and weather station

Central Unit WS1 Color:

- 1, 2, 3 or 4 Drive outputs, either non-floating or potential-free (version PF). For shadings, windows or sliding doors. Also available without drive outputs
- 2 Multifunctional outputs for heating, cooling, ventilation, alarm systems, light, dimmer or gutter heating
- 2 Multifunctional inputs for motion and smoke detectors, closed contact (sliding door), signal of a heating/cooling, of a camera or for reset
- 32 Radio channels for special radio relays, motor control units, ventilation units, temperature and humidity sensors and for remote control
- Connection for 4 external push buttons
- Integrated indoor sensor (temperature, air humidity)

- Colour touch display 5.7 inches
- Housing plastic white/grey or alu/graphite (partly painted)
- Dimensions approx. 164 x 121 x 29, concealed box approx. 152 x 92 x 62 (W x H x D, mm)
- For wall or cavity wall mounting
- Operating voltage: 230 V AC

Weather Station P03i-GPS:

- Temperature sensor
- 1 Brightness sensor (calculation of the position of the sun by the control)
- Wind speed sensor
- Precipitation sensor with 1.2 watt heating
- GPS receiver (time, position)
- Integrated combined mounting bracket for wall or pole mounting
- Housing for surface mounting, protection category IP 44, white/translucent
- Dimensions approx. 96 x 77 x 118 (W x H x D, mm)
- Operating voltage: 24 V DC



Central unit, sensor white/grey

Central unit, sensor alu/graphite

Weather station

Colour white/grey:	
WS1000 Color-4	N° 60121
WS1000 Color-6	N° 60122
WS1000 Color-8	N° 60123
WS1000 Color-10	N° 60124
WS1000 Color-4 PF	N° 60161
WS1000 Color-6 PF	N° 60162
WS1000 Color-8 PF	N° 60163
WS1000 Color-10 PF	N° 60164
Colour alu/graphite:	
WS1000 Color-4	N° 60125
WS1000 Color-6	N° 60126
WS1000 Color-8	N° 60127
WS1000 Color-10	N° 60128
WS1000 Color-4 PF	N° 60165
WS1000 Color-6 PF	N° 60166
WS1000 Color-8 PF	N° 60167
WS1000 Color-10 PF	N° 60168



Central unit white/grey

Central unit alu/graphite

Weather station

Colour white/grey:	
WS1 Color-0	N° 60145
WS1 Color-1	N° 60135
WS1 Color-2	N° 60136
WS1 Color-3	N° 60137
WS1 Color-4	N° 60138
WS1 Color-1 PF	N° 60171
WS1 Color-2 PF	N° 60172
WS1 Color-3 PF	N° 60173
WS1 Color-4 PF	N° 60174
Colour alu/graphite:	
WS1 Color-0	N° 60146
WS1 Color-1	N° 60139
WS1 Color-2	N° 60140
WS1 Color-3	N° 60141
WS1 Color-4	N° 60142
WS1 Color-1 PF	N° 60175
WS1 Color-2 PF	N° 60176
WS1 Color-3 PF	N° 60177
WS1 Color-4 PF	N° 60178

Wireless Accessories for WS1 Color and WS1000 Color

Wireless Equipment for enhancement of the control systems WS1 Color, WS1000 Color and

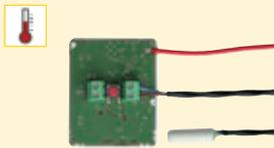
KNX WS1000 Color. Communication takes place on the radio frequency 868,2 MHz.



N° 20550 (White)
N° 20551 (Alu)

Indoor Sensor WGTH-UP

- Measurement of temperature and air humidity
- For wall mounting in a socket
- Housing plastic white (glossy) or alu (painted, matt)
- Includes basic frame, a frame of the switching series installed in the building may be used alternatively
- Dimensions of housing approx. 55 x 55 (W x H, mm), mounting depth 15 mm
- Operating voltage: 7...30 V DC
- For controls as of version 1.0



N° 20552

Temperature Sensor WGT

- Temperature sensor (-30...+130°C) with separate evaluation unit
- Extremely small sensor tip for use as a contact or feed probe
- Protection category of the measuring sensor: IP 68
- Length of sensor sleeve approx. 20 mm, Ø approx. 6 mm, cable length approx. 300 cm. Dimensions evaluation electronics approx. 38 x 47 x 24 (W x H x D, mm)
- Operating voltage: 7...30 V DC
- For controls as of version 1.51



N° 60511 (White)
N° 60512 (Alu)

Remote Control Remo® 8

- Radio hand-held transmitter with 8 channels
- Button functions: up/down/stop, on/off, dimming (depending on the device to control)
- With magnetic wall-mounting
- Housing plastic white/grey or alu/graphite (partly painted)
- Dimensions hand-held transmitter approx. 41 x 140 x 21, mounting approx. 54 x 150 x 11 (W x H x D, mm)
- Power supply: 3 V battery type CR2032

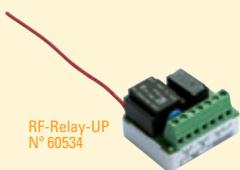
NEW



N° 60540

Radio Push Button Interface RF-B2-UP

- Radio Interface for 2 normal double switches
- Power supply: 3 V battery type CR2032
- Dimensions approx. 38 x 47 x 29 (W x H x D, mm)
- Connection lead 300 mm, can be extended up to 10 m
- For controls as of version 1.597



RF-Relay-UP
N° 60534

Radio Relays RF-Relay-UP

- For 1 consumer load
- Potential-free NO contact, max. 4 A
- Direct control (manual operation without additional device) with Remote Control Remo 8 possible (p. 33)
- Built-in type for assembly in junction box
- Dimensions approx. 38 x 47 x 29 (W x H x D, mm, plus flexible antenna)
- Operating voltage: 230 VAC
- For controls as of version 1.03

Radio Motor Control Unit RF-MSG

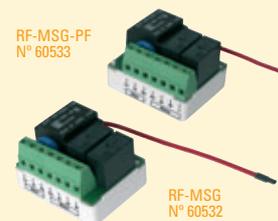
- For 1 drive (230 V AC/4 A, up/down clamps)
- Direct control (manual operation without additional device) with Remote Control Remo 8 possible (p. 33)
- Built-in type for assembly in junction box
- Dimensions approx. 38 x 47 x 29 (W x H x D, mm, plus flexible antenna)
- Operating voltage: 230 VAC, 50 Hz
- For controls as of version 1.20

RF-MSG:

- Non-floating drive output

RF-MSG-PF:

- Potential-free drive output



Radio Ventilation Module RF-VM

- For an air supply/exhaust device or a fresh air/heating combination (products of other manufacturers)
- 8 Speed levels
- Direct control (manual operation) with Remote Control Remo 8 possible (p. 33)
- For flush mounting
- Operating voltage: 230 VAC, 50 Hz
- Dimensions cover approx. 220 x 140 (mm), mounting depth approx. 3 mm. Concealed box approx. 200 x 120 x 64 (W x H x D, mm)
- For controls as of version 1.597

You can find the Elsner Elektronik radio ventilators, which work together with the controls *without additional module*, in the brochure "Wintergartensteuerungen/-lüftung"



N° 60537

NEW

Additional Antenna

- Improves reception/transmission intensity
- Connection at the display board
- Total length of antenna with cable approx. 565 mm

N° 60131

NEW

Interfaces for WS1 Color and WS1000 Color

Camera Interfaces for WS1000 Color and for WS1 Color

- For Control Systems (KNX) WS1000 Color and WS1 Color (as of version 1.492)
- Display of the images on screen
- 2 Camera connections (Cinch, CCIR/PAL)
- Interface is screwed on the board of the control system
- For WS1000 Color: dimensions approx. 70 x 23 x 27 (W x H x D, mm)
- For WS1 Color: dimensions approx. 42 x 16 x 40 (W x H x D, mm)



For (KNX) WS1000 Color N° 60132

For WS1 Color N° 60133

KNX Interface for WS1000 Color

- Use of the data of WS1000 Color Control in the KNX system (e. g. weather data)
- The automatic functions of the WS1000 Color can control drives in the KNX system and request sensor data from the bus
- KNX plug connector for data transfer
- Interface and KNX plug connector are plugged onto the board of the control system
- Dimensions of board approx. 53 x 7 x 30 (W x H x D, mm)
- For WS1000 Color as of version 1.45



N° 70190

Enocean Interface for WS1000 Color

- Reception of data as Enocean protocol
- Use of Enocean sensor data by the automatic functions of the control
- Operation of drives and devices with Enocean push buttons
- The interface is plugged onto the board of the control system
- Dimensions of board approx. 53 x 7 x 30 (W x H x D, mm)
- For WS1000 Color as of version 1.6



N° 71000

NEW

Adapter Plug for Display of WS1000 Color

- For Control Systems (KNX) WS1000 Color
- Allow for the separate mounting of display and power electronics
- Connection with 8-wire/12-wire cable (12-wire when using the KNX interface), e. g. J-Y(St) 6x2x0.8, max. length 10 m



N° 60130

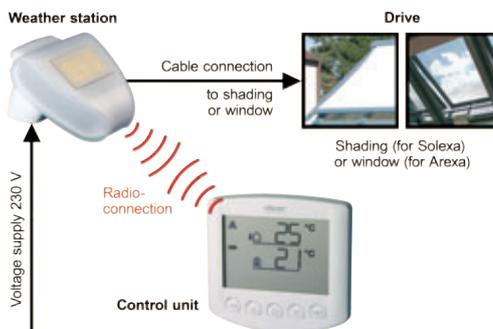


Single-Channel Control Systems

Shading Control Solexa and Window Control Arexa consist of control unit and weather station. The drive mechanism of the sun screen/window is connected directly to the weather station. Several drives can be controlled simultaneously as a group at one single control by using an additional group control relay (e. g. for a number of roof windows at one Arexa).

The control unit has a display which shows the current weather information, mode and alarm messages. An indoor sensor is integrated, too. The drives are operated manually and the automatic functions are set with the keys.

Control unit and weather station communicate wirelessly so that the control unit can be placed freely in the room. As there is no cabling required inside the building, the control systems are an ideal option for retrofitting.



Weather Station



Control unit
N° 10110 (White)
N° 10130 (Alu)
N° 10131 (Pearl dark grey)

Shading Control Solexa® 230 V

- For an awning or a blind (also as a group), connection 230 V motor at weather station
- Complete system: control unit (with indoor temperature sensor) and weather station
- Automatic shading functions depending on brightness and indoor temperature
- Rain, wind and frost protection (may be switched off)
- Storage of a shading position for automatic mode, for blinds also opening angle of slats

Control Unit:

- Housing plastic white, aluminium coloured brush finished or pearl dark grey brush finished (partly painted)
- For wall mounting
- Dimensions approx. 103 x 98 x 28 (W x H x D, mm)

- Operating voltage: 2 x 1.5 V (batteries AA) or 1.2 V (storage batteries AA)

Weather Station:

- Temperature sensor
- 1 Brightness sensor
- Wind speed sensor
- Precipitation sensor with 1.2 watt heating
- Mounting bracket for wall/pole mounting
- Housing for surface mounting, IP 44, white
- Dimensions approx. 96 x 77 x 118 (mm)
- Operating voltage: 230 V AC, 50 Hz

Accessories: (not included in delivery)

- Radio Remote Control Remo 8, p. 33
- Group Control Relays WGGS, p. 31
- MC Units IMMSG-UC and IMMSG 230, p. 30
- Radiocommunication System XS, p. 24
- Hinge arm mounting weather station, p. 32



Weather Station



Control unit
N° 10115 (White)
N° 10133 (Alu)
N° 10134 (Pearl dark grey)

Window Control Arexa® 230 V

- For a window (also as a group), connection of 230 V motor at the weather station
- Complete system: control unit (with indoor temperature sensor) and weather station
- Automatic ventilation functions depending on indoor and outdoor temperature
- Rain and wind protection (may be switched off)
- Storage of an opening position for automatic mode

Control Unit:

- Housing plastic white, aluminium coloured brush finished or pearl dark grey brush finished (partly painted)
- For wall mounting
- Dimensions approx. 103 x 98 x 28 (mm)

- Operating voltage: 2 x 1.5 V (batteries AA) or 1.2 V (storage batteries AA)

Weather Station:

- Temperature sensor
- 1 Brightness sensor
- Wind speed sensor
- Precipitation sensor with 1.2 watt heating
- Mounting bracket for wall/pole mounting
- Housing for surface mounting, IP 44, white
- Dimensions approx. 96 x 77 x 118 (mm)
- Operating voltage: 230 V AC, 50 Hz

Accessories: (not included in delivery)

- Radio Remote Control Remo 8, p. 33
- Group Control Relays WGGS, p. 31
- MC Units IMMSG-UC and IMMSG 230, p. 30
- Radiocommunication System XS, p. 24
- Hinge arm mounting weather station, p. 32

Window Control Arexa® 24 V

- Central control for windows at motor control units, central output at the weather station
- Complete system: control unit (with indoor temperature sensor) and weather station
- Automatic ventilation functions depending on indoor and outdoor temperature
- Rain and wind protection (may be switched off)
- Storage of an opening position for automatic mode

Control Unit:

- Housing plastic white, aluminium coloured brush finished or pearl dark grey brush finished (partly painted)
- For wall mounting
- Dimensions approx. 103 x 98 x 28 (mm)

- Operating voltage: 2 x 1.5 V (batteries AA) or 1.2 V (storage batteries AA)

Weather Station:

- Temperature sensor
- 1 Brightness sensor
- Wind speed sensor
- Precipitation sensor with 1.2 watt heating
- Mounting bracket for wall/pole mounting
- Housing for surface mounting, IP 44, white
- Dimensions approx. 96 x 77 x 118 (mm)
- Operating voltage: 13...24 V DC, 12...30 V AC

Accessories: (not included in delivery)

- Radio Remote Control Remo 8, p. 33
- MC Units IMSG-UC and IMSG 230, p.30
- Hinge arm mounting weather station, p. 32



Operation of Sun Screen and Illumination

An awning and a light are the ideal combination for patios. The shading is essential on sunny days, especially when the patio is protected by a glass roof. And anyone who often sits outside in the evening, wishes for smooth light at dawn. The Patio Roof Control Lixa helps to find the adequate lighting atmosphere at any time.

By means of the hand-held transmitter Remo 8, the sun screen is extended and retracted as the need arises, and so heat and bright sunlight are excluded. In the evening, the same remote control is used to switch on the lights. The illumination can be dimmed in fine steps so that the summer day finishes in a relaxed atmosphere.



Patio Roof Control Lixa

- For an awning and a lighting
- Remote control and power unit in package
- Radio frequency 868.2 MHz

Power unit Lixa:

- 1 connection for awning (230 V motor), several drives as a group via group control relay
- 1 connection for light (25-300 W) with integrated dimmer, automatic load recognition
- Housing for surface mounting, grey
- Dimensions approx. 160 x 80 x 57 (W x H x D, mm)
- Operating voltage: 230 V AC, 50 Hz

Remote control Remo 8:

- Radio hand-held transmitter
- Button functions: up/down/stop, on/off, dimming

- 8 Channels, thus expandable (awning and light of Lixa reserve 2 channels)
- With magnetic wall-mounting
- Housing plastic white/grey or alu/graphite (partly painted)
- Dimensions hand-held transmitter approx. 41 x 140 x 21, mounting approx. 54 x 150 x 11 (W x H x D, mm)
- Power supply: 3 V battery type CR2032

Additional possibilities:

- Operation of further devices with the hand-held transmitter Remo 8
- Automatic control of the awning through combination of Lixa and Solexa (sun automatic, wind and rain protection)





Radiocommunication System XS

The Radiocommunication System XS automatically controls shadings and windows with regard to sun, temperature, intensity of wind and precipitation. Therefore a **Shading Control Solexa** or a **Window Control Arexa** is used as a basis. The control system is completed with one or more motor control units and the individually appropriate control units of the System XS. The flexible possibilities of combination of the devices of the System XS allow for the realisation of the most different requirements, ranging from the simple central control to the independent control of different drives. The use of the motor control unit with the Control Unit XS 2B or the Remote Control Remo 8 is also a good choice: this allows for comfortable manual movement of the drives without

weather automatic systems (no control Solexa or Arexa is used in this case).

The System XS can be installed easily and with little dirt and time needed: no cables are laid in the building, since the control units work with batteries. Shadings and windows are moved by means of wired motors which are directly connected to the XS motor control units.

The System XS consists of:

- Controls Solexa and Arexa (as of version 3.0)
- Motor Control Unit XS MSG2-AP
- Double Control Unit XS 2B
- Control Unit XS 1B-D
- Radio Remote Control Remo 8



N° 10120

Motor Control Unit XS MSG2-AP

- For 2 wired drives (shadings or windows)
- Several drives as a group at one connection with group control relay
- Manual operation with double radio control units (up to two XS 2B per motor control unit) or with radio hand-held transmitter Remo 8 (p. 33)
- Evaluation of weather and automation data of a Solexa/Arexa (radio reception)
- Individual set-up of the automatic functions and operation with radio control units (up to two XS 1B-D per motor control unit)
- Several motor control units can be taught-in to a Solexa/Arexa weather station
- Housing for wall mounting, grey
- Dimensions approx. 160 x 80 x 57 (W x H x D, mm)
- Operating voltage: 230 V AC, 50 Hz



N° 10117 (White)
N° 10136 (Alu)
N° 10137 (Pearl dark grey)

Control Unit XS 1B-D

- For setting of the individual automatic control and for manual operation of drives at a Motor Control Unit XS MSG2-AP
- Individual control: Setting of the automatic functions with two separate Control Units XS 1B-D
- Parallel control: Setting of the automatic functions with one common XS1B-D
- Display shows the current weather information, alarm status and mode
- Housing plastic white, aluminium coloured brush finished or pearl dark grey brush finished (partly painted)
- For wall mounting
- Dimensions approx. 103 x 98 x 28 (W x H x D, mm)
- Operating voltage: 2 x 1.5 V (batteries AA) or 1.2 V (storage batteries AA)



N° 10118 (White)
N° 10139 (Alu)
N° 10140 (Pearl dark grey)

Control Unit XS 2B

- For separate operation of drives at a Motor Control Unit XS MSG2-AP
- Use as single control unit (central control or manual operation only)
- Use in addition to control units with display (facilitates the handling from another position in the room)
- Housing plastic white, aluminium coloured brush finished or pearl dark grey brush finished (partly painted)
- For wall mounting
- Dimensions approx. 103 x 48 x 33 (W x H x D, mm)
- Operating voltage: 2 x 1.5 V (batteries AA) or 1.2 V (storage batteries AA)

The XS system allows for easy combination of different control options in one building. The illustration shows the examples from the text below:

At the south-east side a motor control unit with two blinds just runs with one blind at the Solexa weather station (1) (central control).

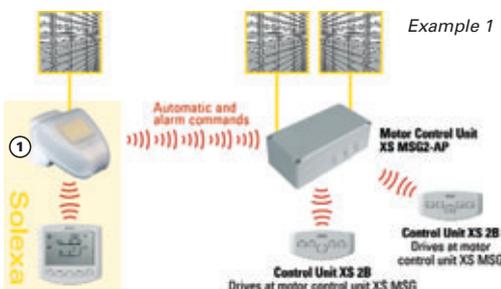
At the south-west side a window group at the Arexa weather station (2) as well as an awning and a blind at a motor control unit respectively run with different, own automatic parameters. At another motor control unit there are two roller shutters for roof windows running parallel, following one automatic system. The weather data for this are also obtained from the Arexa weather station (2).



Example 1 for System XS: Central automatic control

In order to automate drives, a Control Solexa or Arexa is extended by XS MSG2-AP Motor Control Units. In the case of the central automatic control, the drives at the motor control unit follow the settings of the Solexa/Arexa. This central kind of control will for instance be appropriate if more blinds are to execute the same commands (shading at the same level of lightness etc.).

However, it is still possible to operate the drives separately by hand in the System XS: up to two XS 2B Double Control Units can be taught in per motor control unit for this purpose. Furthermore, from the control unit of the Solexa/Arexa all drives can be driven centrally at the same time.



Example 2 for System XS: Individual automatic control

In the case of automation of different drives (e.g. awnings, blinds and windows) the control system will be set up independently. In this

case, the drives are also integrated into the System XS via the XS MSG2-AP Motor Control Units. The Solexa or Arexa provides for the current weather data. The automatic system of every single drive is set via an own XS 1B-D Control Unit. Here the room temperature can also be considered thanks to an integrated thermometer. Additional XS 2B Double Control Units facilitate the manual operation from another position in the room.



In the case of two drives at one motor control unit running parallel (e.g. two roller shutters), the XS MSG2-AP can also work as a group control relay and can be set and operated with one XS 1B-D Control Unit only.

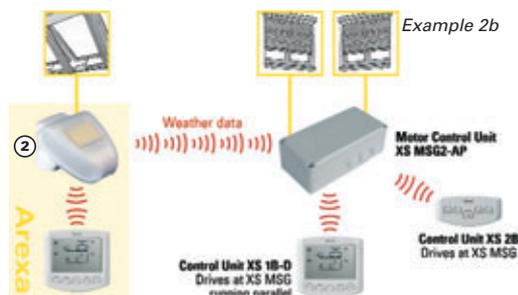
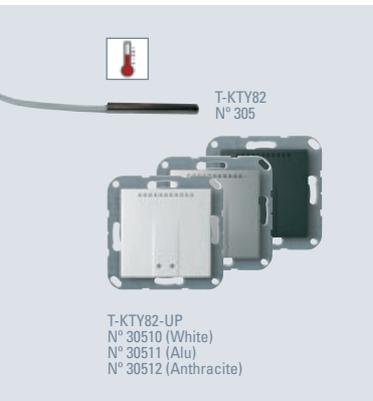




Photo: La Casa, Tübingen
Dipl.-Ing. Claudia Leuze, Freie Architektur, Tübingen

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Conventional Sensors



Temperature Sensors T-KTY82

- Temperature sensors
- Application examples: Actuators
KNX S-B4T-UP, Intelligent Motor Control
Units IMSG

T-KTY82:

- For indoor and outdoor applications
- Length of sensor sleeve approx. 45 mm,
Ø approx. 6 mm, cable length approx.
187 mm

T-KTY82-UP:

- For interior spaces
- For wall mounting in a socket
- Housing plastic white (glossy), aluminium,
anthracite or stainless steel (painted, matt)
- Completion with frame of the switching
series used in the building (not included in
scope of delivery)
- Dimensions of housing approx. 55 x 55
(W x H, mm), mounting depth 15 mm



Rain/Wind Sensor RW-PF

- Wind speed sensor
- Precipitation sensor with 1.2 watt heating
- Potential-free outputs for wind and rain
alarm
- Setting of the wind threshold value via DIP
switches inside the device

- LEDs show wind/rain alarm inside the
device
- Housing for surface mounting,
protection category IP 44, white/translucent
- Dimensions approx. 96 x 77 x 118
(W x H x D, mm)
- Operating voltage: 12-40 V DC (12-28 V AC)

RS485 Weather Sensors and Modbus Weather Sensors



The weather stations and sensors provide the current meteorological data as RS485 protocol. The sensors, the evaluation electronics and the bus coupler are mounted in a compact housing with an integrated combined fixture for wall/pole mounting. An additional hinge arm mounting is available as an option (e.g. for beam mounting).

The **brightness sensor** not only recognises sunlight, but also twilight. For this, filters simulate the spectral sensitivity of the human eye. The electronic **wind sensor** works noiselessly and reliably, even during hail, snow and sub-

zero temperatures. Even turbulent air and anabatic winds in the vicinity of the weather station are recorded.

The surface of the **precipitation sensor** is heated so that only drops and flakes are recognised as precipitation but not fog or dew. If it stops raining or snowing, the sensor dries quickly and the precipitation message ends.

The **temperature sensor** transfers the outdoor temperature exactly and reliably.

The **DCF77 receiver** delivers date and time, the **GPS receiver** the international time signal (UTC) and the position.

Weather Stations P03/1-RS485 and P03/3-RS485



- RS485 data output
- Temperature sensor (-30...+50°C)
- Brightness sensors (0...150 000 lx)
- Wind speed sensor
- Precipitation sensor with 1.2 watt heating
- DCF77 receiver
- Housing for surface mounting,
protection category IP 44, white/translucent

- Dimensions approx. 96 x 77 x 118
(W x H x D, mm)
- Operating voltage: 24 V DC

P03/1-RS485:

- 1 Brightness sensor

P03/3-RS485:

- 3 Brightness sensors (east, south, west)
- Also available for the WAGO I/O System
(with adapted data sending cycle)

Weather Stations P03/3-RS485-GPS and P03/3-RS485-CET

- RS485 data output
 - Temperature sensor (-30...+50°C)
 - 3 Brightness sensors (east, south, west, 0...150 000 lx)
 - Wind speed sensor
 - Precipitation sensor with 1.2 watt heating
 - GPS receiver
 - Calculation of the position of the sun (azimuth/elevation)
 - Housing for surface mounting, protection category IP 44, white/translucent
 - Dimensions approx. 96 x 77 x 118 (W x H x D, mm)
 - Operating voltage: 24 V DC
- P03/3-RS485-GPS:**
- Output of the international time signal UTC
- P03/3-RS485-CET:**
- Output of the central european time CET, automatic summer/winter time switchover according to the specifications for central europe



Wind Sensor W-RS485

- RS485 data output
- Wind speed sensor
- Housing for surface mounting, protection category IP 44, white/translucent
- Dimensions approx. 96 x 77 x 118 (W x H x D, mm)
- Operating voltage: 24 V DC



Rain Sensor R-RS485

- RS485 data output
- Precipitation sensor with 1.2 watt heating
- Housing for surface mounting, protection category IP 44, white/translucent
- Dimensions approx. 96 x 77 x 118 (W x H x D, mm)
- Operating voltage: 24 V DC



Rain/Wind Sensor RW-RS485

- RS485 data output
- Wind speed sensor
- Precipitation sensor with 1.2 watt heating
- Housing for surface mounting, protection category IP 44, white/translucent
- Dimensions approx. 96 x 77 x 118 (W x H x D, mm)
- Operating voltage: 24 V DC



Brightness/Wind Sensor LW-RS485

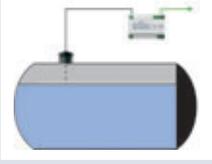
- RS485 data output
- 1 Brightness sensor (0...150 000 lx)
- Wind speed sensor
- Housing for surface mounting, protection category IP 44, white/translucent
- Dimensions approx. 96 x 77 x 118 (W x H x D, mm)
- Operating voltage: 24 V DC



Weather Stations P03/3-Modbus

- Modbus data output (Modbus RTU)
 - Temperature sensor (-30...+50°C)
 - 3 Brightness sensors (east, south, west, 0...150 000 lx)
 - Wind speed sensor
 - Precipitation sensor with 1.2 watt heating
 - Housing for surface mounting, protection category IP 44, white/translucent
 - Dimensions approx. 96 x 77 x 118 (W x H x D, mm)
 - Operating voltage: 12...40 V DC (12...28 V AC)
- P03/3-Modbus:**
- No time signal
- P03/3-Modbus-GPS:**
- GPS receiver
 - Calculation of the position of the sun (azimuth/elevation)





Monitoring of Tanks and Distance Measurement (Modbus)

An ultrasonic probe is used for measuring the capacity of tanks and for distances. The fill level/distance can be directly read from the display. Settings like the measurement cycle or

the tank geometry are accomplished by means of the key pad. Different interfaces/outputs allow for the transfer of the data of the tank sensor to other devices.



N° 70152



Tank Sensor SO250-UI

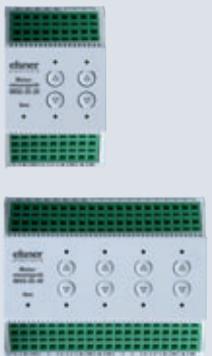
- Measurement of filling height or distance (12...250 cm)
- Modbus interface for data output
- 2 additional output relays
- Voltage interface 0...10 V
- Current interface 0...20 mA
- Evaluation unit with display and keypad
- Modular device 7 width units, white
- Dimensions evaluation unit approx. 123 x 89 x 61 (W x H x D, mm)
- Ultrasonic measuring sensor, black, Ø approx. 60 mm, height approx. 45 mm, thread 1½ inches
- Liquid resistance for water and fuel
- 10 m connection cable
- Operating voltage: 230 V AC



Motor Control Units

Motor control units take over numerous tasks in the field of building automation: They transmit commands of control systems to motors

and allow for the creation of groups. Devices with inputs for push buttons facilitate local manual operation.



IMSG-UC-2H N° 70455
IMSG-UC-4H N° 70456

Motor Control Units IMSG-UC

- With keypad (manual operation) and status LEDs
- Central and extension inputs with variable voltage (6...80 V DC, 6...240 V AC)
- Setting the central control to "Deadman" or "Latch"
- Local manual operation with unlocked buttons (setting to Standard or Comfort mode)
- Storing one movement position per drive
- Connect through clamps
- Potential-free relays
- Auxiliary voltage: 230 V AC

IMSG-UC-2H:

- For 2 drives (230 V)
- Connection for 2 up/down push buttons
- Modular device 3 width units, white, dimensions approx. 53 x 88 x 60 (W x H x D, mm)

IMSG-UC-4H:

- For 4 drives (230 V)
- Connection for 4 up/down push buttons
- Modular device 6 width units, white, dimensions approx. 107 x 88 x 60 (W x H x D, mm)



N° 70446

Intelligent Motor Control Unit IMSG 230

- For 1 drive, 230 V AC/4 A, up/down clamps
- For central and manual control of shading or window
- Central input 230 V AC
- Local manual operation with unlocked buttons (230 V AC)
- Integrated automated time system for buttons: inching function (for exact positioning) and longer keypress (automatic movement to the end position)
- Storing of a movement position
- Built-in type for assembly in junction box
- Dimensions approx. 38 x 47 x 29 (W x H x D, mm)
- Operating voltage: 230 V AC, 50 Hz

Motor Control Unit IMSG 24-NG3

- For 3 drives (24 V DC, each max. 600 mA, up/down clamps)
- For central and manual control
- Central input
- Connect through clamp (central output)
- Local manual operation with unlocked buttons (230 V AC)
- Integrated soft mode for push buttons: Slow movement for exact positioning in the first two seconds
- Housing for surface mounting, grey, protection category IP 54
- Dimensions approx. 200 x 86 x 120 (W x H x D, mm)
- Operating voltage: 230 VAC, 50 Hz



Power Supply Units

Power Supply Units WGDC

- Control input „up/down“: 230 V AC, 50 Hz, short-circuit proof, stabilised
 - Housing for surface mounting, protection category IP 54, grey
 - Dimensions approx. 160 x 80 x 57 (mm)
 - Operating voltage: 230 VAC, 50 Hz
 - “Sort Start” function for control of the slat angle of blinds. Switchover from 12 V to 24 V after approx. 1 s
 - Integrated changeover relay stops the drive faster
- WGDC-2S:**
- 2 outputs, a total of max. 2 A
 - Can be jumpered to 12 V DC, 24 V DC or “Sort Start”
- WGDC-2P5:**
- 1 output 24 V DC, 2 A
 - For motors with a five-pole connection (e. g. window drive mechanisms that are integrated in the front)



20 V AC Power Supply Unit

- For devices with 20 V AC supply voltage
- Input voltage: 230 VAC, 50 Hz
- Output voltage: 20 V AC
- Power: 3.8 VA
- Modular device 3 width units, dimensions approx. 53 x 90 x 50 (W x H x D, mm)



Relays

Group Control Relays WGGSS

- Decoupling relays for operation of drives without integrated group control relay in a group
- Total power of the drives max. 500 W
- Control input (up/down): 230 V AC, 50 Hz
- Operating voltage: 230 V AC, 50 Hz
- **WGGSS-2:**
 - 2 Outputs 230 V AC (up/down clamps)
 - Built-in type for assembly in junction box
 - Dimensions approx. 38 x 47 x 29 (W x H x D, mm)
- **WGGSS-2-APK:**
 - Control input with STAS3 plug
 - 2 Outputs 230 V AC (STAK3 connector)
 - Housing for surface mounting, protection category IP 55, grey
 - Dimensions approx. 89 x 53 x 89 (W x H x D, mm, without fastener)
- **WGGSS-4:**
 - 4 Outputs 230 V AC (up/down clamps)
 - Housing for surface mounting, protection category IP 54, grey
 - Dimensions approx. 160 x 80 x 57 (W x H x D, mm)
- **WGGSS-4-H:**
 - 4 Outputs 230 V AC (up/down clamps)
 - Modular device 5 width units, dimensions approx. 88 x 90 x 50 (W x H x D, mm)



N° 2016



AC/DC Relay RACDC-H

- For two 24 VDC motors
- Control input (up/down): 230 V AC, 50 Hz
- Operating voltage: 24 V DC
- Additional 24 V DC voltage output
- Modular device 3 width units, dimensions approx. 53 x 90 x 50 (W x H x D, mm)

N° 202



Decoupling Relay WG-N-GS

- Decoupling relay for operation of drives without integrated group control relay in a group
- 4 Outputs 230 V AC (up/down clamps) with feeder to the power grid
- Max. power per drive: 600 W, 8 A
- Control input (up/down): 230 V AC, 50 Hz
- Operating voltage: 230 V AC, 50 Hz
- Housing for surface mounting, protection category IP 54, grey
- Dimensions approx. 160 x 80 x 57 (W x H x D, mm)

WG-PF
N° 2019RP-H
N° 2017

Potenzialfreie Relais WG-PF und RP-H

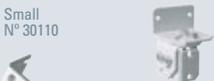
- Decoupling relay for operation of drives without integrated group control relay in a group
- 4 Outputs 230 V AC (up/down clamps) with feeder to the power grid
- Max. power per drive: 600 W, 8 A
- Control input (up/down): 230 V AC, 50 Hz
- Operating voltage: 230 V AC, 50 Hz
- Housing for surface mounting, protection category IP 54, grey
- Dimensions approx. 160 x 80 x 57 (W x H x D, mm)

Additional Accessories

GPS-DCF Converter
N° 30149GPS-DCF Converter UTC ±
N° 30150

GPS-DCF Converter

- Receives the international time signal UTC via GPS and converts the information to a DCF77 protocol (DCF output +24 V / - / out)
 - Connection to a DCF77 signal input (as an alternative to a DCF77 antenna)
 - Summer/winter time switchover has to be carried out externally
 - Housing for surface mounting, IP 54, grey
 - Dimensions approx. 80 x 80 x 55 (W x H x D, mm)
 - Auxiliary voltage: 24 VDC
- GPS-DCF Converter:**
- Conversion of UTC time to local time has to be carried out externally
- GPS-DCF Converter UTC±:**
- UTC offset is set with DIP switches in the device (output of local time)

Small
N° 30110Big
N° 30109 (White)
N° 30111 (Alu blank)

Hinge Arm Mountings for Weather Stations

- For flexible mounting of the weather stations and sensors
- Small Hinge Arm Mounting:**
- Powder-coated RAL 9016 Traffic White
 - 2 Hinges

Big Hinge Arm Mounting::

- For wall, pole or beam mounting
- Available powder-coated RAL 9016 Traffic White or aluminium blank
- 1 Hinge, total length approx. 420 mm

Remote Control Remo® 8

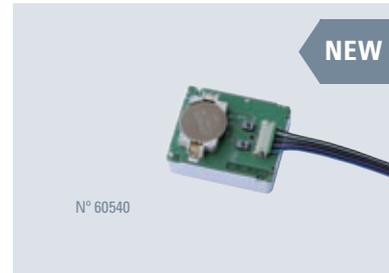
Radio hand-held transmitter for building automation

- Radio hand-held transmitter with 8 channels
- Button functions: up/down/stop, on/off, dimming (depending on the device to control)
- For control of the drives and devices installed at building control systems
- For direct manual control of ventilation units, relays and motor control units
- With magnetic wall-mounting
- Radio frequency 868.2 MHz
- Housing plastic white/grey or alu/graphite (partly painted)
- Dimensions hand-held transmitter approx. 41 x 140 x 21, mounting approx. 54 x 150 x 11 (W x H x D, mm)
- Power supply: 3 V battery type CR2032

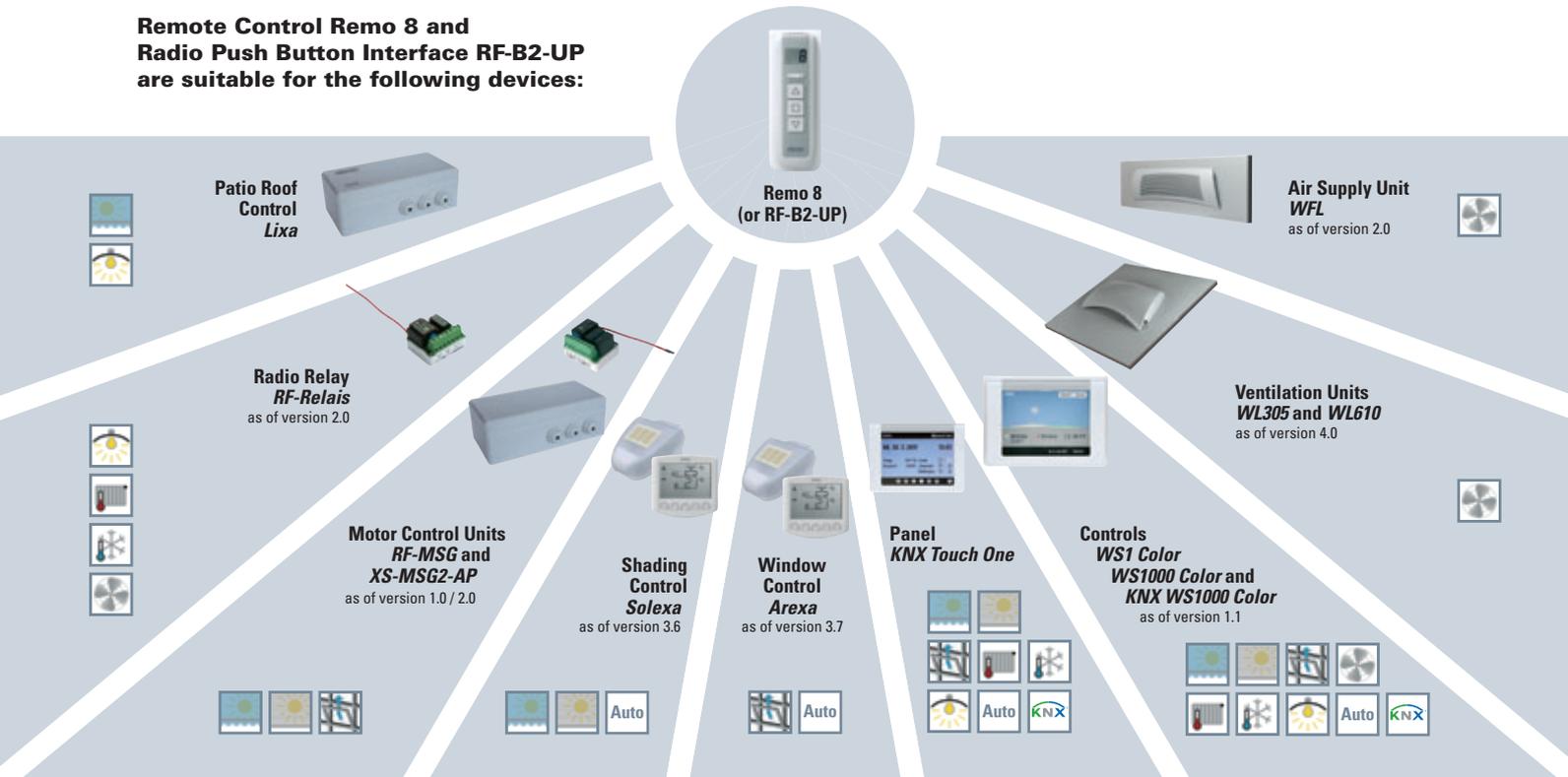


Radio Push Button Interface RF-B2-UP

- Radio Interface for 2 normal double switches
- For control of the drives and devices installed at building control systems
- For direct manual control of ventilation units, relays and motor control units
- Radio frequency 868.2 MHz
- Power supply: 3 V battery type CR2032
- Dimensions approx. 38 x 47 x 29 (W x H x D, mm)
- Connection lead 300 mm, can be extended up to 10 m



Remote Control Remo 8 and Radio Push Button Interface RF-B2-UP are suitable for the following devices:





Enocean Interfaces

The Enocean standard offers various devices for wireless building automation. Basic sensors and push buttons manage without batteries in the Enocean technology, what makes the system very flexible to install.

The interfaces from Elsner Elektronik allow for integration of weather sensors and conventionally wired automation technology into the Enocean system.

NEW



N° 71005 (White)
N° 71006 (Alu)
N° 71007 (Anthracite)
N° 71008 (Stainless steel)

Enocean Module for P03-RS485

- Transmits the weather data of the RS485 weather stations as Enocean protocol
- Connection of the weather station with standard telephone cable
- For wall mounting in a socket (indoors)
- Housing plastic white (glossy), aluminium, anthracite or stainless steel (painted, matt)
- Completion with frame of the switching series used in the building (not included in scope of delivery)

- Dimensions of housing approx. 55 x 55 (W x H, mm), mounting depth 15 mm

Suitable for the following weather stations:

- P03/1-RS485
 - P03/3-RS485
 - P03/3-RS485-GPS
 - P03/3-RS485-CET
- (see page 28 and following)

NEW



N° 71000

Enocean Interface for WS1000 Color

- Reception of data as Enocean protocol
- Use of Enocean sensor data by the automatic functions of the control
- Operation of drives and devices with Enocean push buttons

- The interface is plugged onto the board of the control system
- Dimensions of board approx. 53 x 7 x 30 (W x H x D, mm)
- For WS1000 Color as of version 1.6

Elsner Elektronik GmbH

Control and Automation Engineering

Elsner Elektronik has been standing for intelligent solutions in the sector of **automatic conservatory control systems and building automation** since 1990. All products of Elsner are developed and manufactured at their company headquarters in Gechingen. A highly qualified staff and advanced technology guarantee for a continuously high quality standard.

Elsner Elektronik offers **complete systems** for the control of the ambient climate in buildings as well as **individual components** for different data interfaces (KNX, EnOcean, RS485, Modbus). The central operating devices, the weather and the indoor sensors, the actuators or system devices – All products combine flexible technical solutions, comfortable operation and a forward-looking design.

Elsner Elektronik is an accredited **KNX test laboratory** (certified according to DIN EN ISO/IEC 17025) and thus authorized to carry out KNX interworking and functional tests. The test laboratory works independently from the producer; so any producer of KNX devices can have the products tested here.





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