

# **CONSERVATORY CONTROLS**

Sun protection | Ventilation | Heating | Cooling | Light



# CONTROLS FOR SMARTHOME, CONSERVATORY, ROOF TERRACE





The building control systems from Elsner Elektronik combine the right control units, sensors and power electronics. This makes the devices easy to install and set up as well as convenient to operate. For example, the centralised automatic control system takes care of optimum shading, ventilation and temperature control, but also facilitates the manual operation of awnings or skylights of the dimming of lights, for example.

Some control systems can be expanded using radio interfaces. If required, the systems can be supplemented with special radio motor control units, relays, buttons etc. on a radio basis. This makes the systems flexible if the utilisation of the building on the requirements of , the residents change. Communication via radio signal is also particularly suitable for renovation and returbishment.

With all Elsner, wireless products, the control data remains completely in the hands of the user. Individual settings and sensor values are stored locally in the device hardware. No data is forwarded to external data storage devices of web servers:



# CONTROLS WS1 AND WS1000

WS1000 and WS1 are control and operating units for building technology in private homes, conservatories and smaller office buildings. The automatic control system ensures an optimum indoor climate and offers **safety and comfort functions**. At the same time, the building's **energy balance** is optimised through the perfect interaction of the building technology.

The central element of the control system is the touch-sensitive colour display. This is where the connected devices are operated and settings adjusted. The user interface guides you through the setting steps in a self-explanatory manner. As soon as there is no more operation, the screen shows the current weather data, the course of the sun, rain or snowfall. To save energy, the display can automatically dim or switch off completely when the ambient brightness is low.

Drives and devices are connected directly to the control units. Radio channels are also available for wireless communication. Additional drives and devices can be controlled via radio modules.







# Building control WS1000<sup>®</sup> Connect

### Scope of delivery

• Central unit, indoor sensor WGTH gl (p. 13), Weather station P04i-GPS (p. 7)

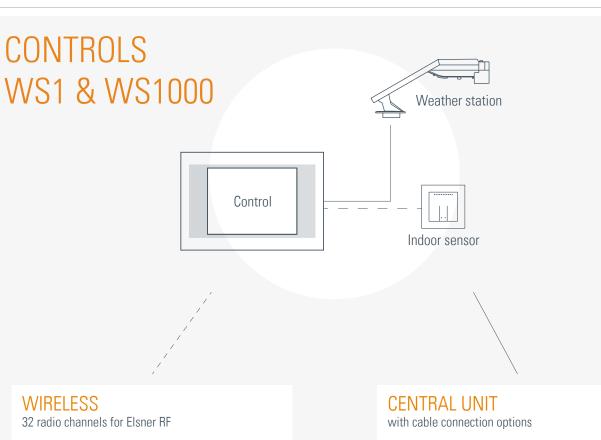
#### Central unit WS1000 Style

- 4, 6, 8 or 10 drive outputs, 230 V AC or potential-free (PF)
- 4 Multi-function outputs
- 4 Multi-function inputs
- Connection for 10 external wall switches
- 32 radio channels for Elsner RF
- Colour touch display 10.1 inches
- Picture show/slide show in the display (SD card)
- Settings savable to SD card
- Plastic/glass central controls casing, black, inner sensor white
- Flush mounting or cavity wall assembly

- Dimensions approx. 279 x 185 (W x H, mm), installation depth approx. 29 mm, flush mounting box approx. 254 x 171 x 85 (W x H x D, mm)
- Operating voltage: 230 V AC

#### Features WS1000 Connect

- Network connection by LAN or WLAN. But data storage exclusively in the device, no cloud!
- Free App for mobile end devices
- Browser for displaying websites
- Remote access via network for necessary system set-up, diagnosis and release by the user
- Integrated loudspeaker (4 tweeters, 1 broadband speaker)
- Delivery with separate indoor sensor WGTH gl



- Modules for drives
- Sensors
- Remote control or conventional switches via a switch interface
- Drive outputs for shades, windows, sliding doors
- Multi-function outputs for heating, cooling, ventilation, alarms, lights, dimmers, gutter heaters
- Multi-function inputs for movement alarms, smoke alarms, door contacts, switch signal for heating/cooling, camera or for reset
- Connection for external wall switches



### SHUTTER CONTROLS

The sunshade controls for shutters take into account the position of the sun and also adjusts the slats accordingly. As a result, daylight reaches the room but direct sunlight is obstructed. The shutter only shades when the desired room temperature is reached. To protect privacy, the shutter is closed at night or at specified times. Wind alarm protects the slats against damage.



### ROLLER SHUTTER CONTROLS

For privacy and darkness, roller shutters are closed at a specific time and at night. In addition, roller shutters can be used for shade. If the controls detect that it is too bright, they wait until the sun has warmed the room to the desired temperature. In winter, this saves energy. The shutters on the sun side are then lowered.



### AWNING CONTROLS

Awnings protect against the sun by being controlled according to the brightness, direction and height of the sun. To use the heat of the sun during winter, awnings only extend when the desired room temperature is reached. The sensitive cloth is automatically protected against damage from wind and rain.



TEMPERATURE CONTROLS Heaters, ventilation and air-conditioners are regulated by the controls such that the desired room climate is kept constant.





### WINDOW CONTROLS

Automatic ventilation via the windows controls the room temperature and humidity. For example, in summer the windows are opened at night for cooling. A rain alarm function protects furniture and equipment against moisture damage. Windows are also closed if the motion detectors are activated.

### LIGHT CONTROLS

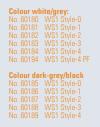
Light cannot only be switched or dimmed conveniently, but also switched automatically depending on the time and brightness.

### SECURITY

Connected smoke and motion detectors ensure safety in the building. Images from the video cameras can be displayed on the control units' displays, e.g. to monitor the entrance area.









<b>Colour wh</b> No. 60121 No. 60122 No. 60123 No. 60124	
No. 60125	minium/graphite WS1000 Color-4 WS1000 Color-6 WS1000 Color-8 WS1000 Color-10

# Building control WS1000<sup>®</sup> Style

### Scope of delivery

- Central unit, indoor sensor WGTH- UP (p. 13), Weather station P04i-GPS (p. 7)
- Central unit WS1000 Style
- 4, 6, 8 or 10 drive outputs, 230 V AC or potential-free (PF)
- 4 Multi-function outputs
- 4 Multi-function inputs
- Connection for 10 external wall switches
- 32 radio channels for Elsner RF
- Colour touch display 8.4 inches
- Picture show/slide show in the display (SD card)

# Building control WS1<sup>®</sup> Style

### Scope of delivery

 Central unit with integrated indoor sensor weather station P04i-GPS (p. 7)

### Central unit WS1 Style

- 1, 2, 3, 4 or no drive outputs, 230 V AC or potential-free (PF)
- 2 Multi-function outputs
- 2 Multi-function inputs
- Connection for 4 external wall switches
- 32 radio channels for Elsner RF
- Colour touch display 5.7 inches
- Picture show/slide show in the display (SD card)

# Building control WS1000<sup>®</sup> Color

### Scope of delivery

• Central unit, indoor sensor WGTH-UP (p. 13), Weather station P04i-GPS (p.7)

### Central unit WS1000 Color

- 4, 6, 8 or 10 drive outputs, 230 V PF)
- 4 Multi-function outputs
- 4 Multi-function inputs
- Connection for 10 external wall switches
- 32 radio channels for Elsner RF
- Colour touch display 8.4 inches
- Picture show/slide show in the display (SD card)

- Settings savable to SD card
- Glass front white/grey (indoor sensor white) or dark-grey/black (indoor sensor aluminium)
- Flush mounting or cavity wall assembly
- Dimensions approx. 270 x 185 (W x H, mm), installation depth approx. 9 mm, flush mounting box approx. 254 x 171 x 85 (W x H x D, mm)
- Operating voltage: 230 V AC

### Features WS1000 Style

- Real glass with display sits directly on the wall
- Delivery with separate indoor sensor WGTH-UP
- Settings savable to SD card
- Integrated temperature/moisture sensor
- Glass front white/grey (indoor sensor white) or dark-grey/black (indoor sensor aluminium)
- Flush mounting or cavity wall assembly (surface-mounted housing available separately)
- Dimensions approx. 181 x 131 (W x H, mm), installation depth approx. 8 mm, flush mounting box approx. 172 x 122 x 81 (W x H x D, mm)
- Operating voltage: 230 V AC

### Features WS1 Style

- Real glass with display sits directly on the wall
- Settings savable to SD card
- Plastic casing, partly painted
- Colour: white/grey (indoor sensor white) or
   aluminium/graphite (indoor sensor aluminium)
- Flush mounting or cavity wall assembly
- Dimensions approx. 250 x 182 x 43, flush mounting box approx. 235 x 169 x 62 (W x H x D, mm)
- Operating voltage: 230 V AC

### Features WS1000 Color

• Delivery with separate indoor sensor WGTH-UP

# Building control WS1<sup>®</sup> Color

### Scope of delivery

• Central unit, indoor sensor WGTH-UP (p. 13), Weather station P04i-GPS (p.7)

### **Central unit WS1 Color**

- 1, 2, 3, 4 or no 230 V AC drive outputs
- 2 Multi-function outputs
- 2 Multi-function inputs
- · Connection for 4 external wall switches
- 32 radio channels for Elsner RF

- Integrated indoor sensor for temperature, moisture
- Colour touch display 5.7 inches
- White/grey or aluminium/graphite plastic casing (partly painted)
- · Flush mounting or cavity wall assembly (surface-mounted housing available separately)
- Dimensions approx. 164 x 121 x 29, flush mounting box approx. 152 x 92 x 62 (W x H x D, mm)



Colour wh	ite/grey
No. 60145	WS 1 Color-0
No. 60135	WS 1 Color-1
No. 60136	WS 1 Color-2
No. 60137	WS 1 Color-3
No. 60138	WS 1 Color-4
Colour alu	minium/graphite WS 1 Color-0
Colour alu No. 60146	minium/graphite
<b>Colour alu</b> No. 60146 No. 60139	minium/graphite WS 1 Color-0
<b>Colour alu</b> No. 60146 No. 60139 No. 60140	WS 1 Color-0 WS 1 Color-1

# ACCESSORIES FOR WS1® AND WS1000®

More accessories, see p. 12 et seq.

# Weather station P04i-GPS

- · Recording of temperature, precipitation, wind speed, brightness
- · Position of the sun calculated by the controls
- GPS receiver (time, position)

### · Combination holder for wall/mast installation

- Surface-mounted housing IP 44, white/translucent
- Dimensions approx. 62 x 71 x 152 (W x H x D, mm)
  - Operating voltage: 24 V DC



# RF router (wireless router)

- Increases the range of the radio signal, for 16 radio participants
- Operating voltage: 230 V AC
- For WS1 and WS1000 Color/Style from Version 1.708

### **RF router UP**

• Built-in device, approx. 38 x 47 x 29 (W x H x D, mm)

### **RF** router N

Adapter plug for protective contact plug/socket CEE 7/4

# Extra antenna

- For WS1 and WS1000 Color/Style
- Improves the receiving/transmitting power
- Connection to the display circuit board
- Full-length antenna with cable, approx. 565 mm

# Adapter plug for display WS1000 Color/Style

- For controls WS1000 Color and WS1000 Style
- · Allows the separate installation of display and power electronics (for Style: Displays installed with flush mounted box)
- · Connection with 8 or 12-core cable (12-core when using KNX interface), e.g. J-Y(St) 6x2x0.8, length max. 10







# WIRELESS CONTROL SYSTEM SOLEXA II

The Solexa II radio control system carries out the shading, window ventilation, lighting and heating controls. Thanks to the modular design, a wide variety of projects can be realised, from awning control on the terrace to room climate control in a residential building. The system is based on the **display and weather station set**, which enables **automatic control** according to time, indoor temperature, outdoor temperature, brightness, wind speed and precipitation. The date, time and installation coordinates are received via GPS and used to calculate the position of the sun for awning, blind and roller shutter control. A **connection for a drive** is already integrated **in the weather station**. Drives, lights (switchable, dimmable) and heating devices are integrated into the control system using various **wireless actuators**. Additional Solexa II displays, Remo remote controls or the Elsner RF push-button interface can be used for **manual operation**. Elsner wireless sensors are used to record additional indoor temperature values for the control system.

It is possible to use the **Solexa II Mobile App** thanks to the SOL interface. The technology can therefore be operated from your own smartphone or tablet.



#### No. 10150 Solexa II-Set, white/aluminium No. 10144 Solexa II-Display single



# Wireless control Solexa II

### Modular design for maximum flexibility: (see p. 9)

- Display and weather station as the base set
- Enhanced with Elsner wireless actuators, sensors and control devices

Easy, time-saving installation as a result of wireless communication. Ideal for retrofitting, for listed buildings etc.

#### **Functions**

 Automatic shading depending on the brightness, indoor temperature; timer

### Display Solexa II

- For use with weather station Solexa II
- Touch surface control panel
- Integrated room temperature sensor

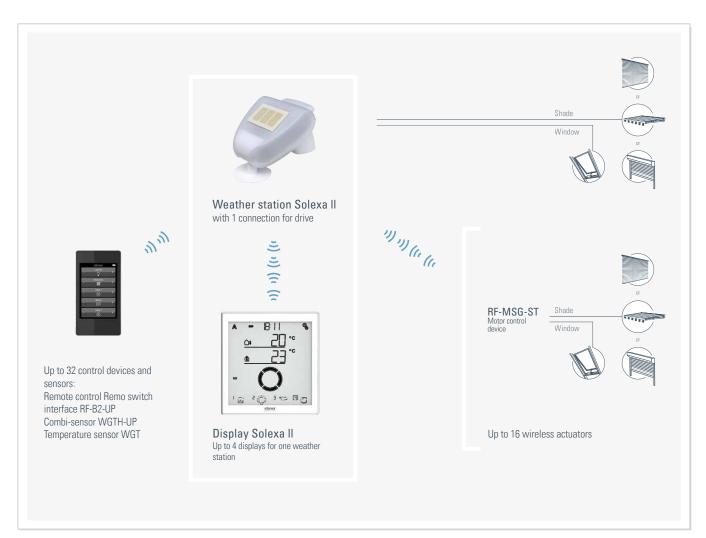
- Automatic roller shutter timer
- Automatic window ventilation depending on the indoor and outdoor temperature, timer
- Rain, wind and frost protection (can be deactivated)
- Drive position saved for automatic mode, for blinds also the slat angle
- Automatic lighting depending on brightness and time
- Automatic heating depending on temperature and time
- Surface-mounted, approx. 107 x 112 x 14 (W x H x D, mm)
- Integrated battery, charging via USB Micro B cable (5 V, e.g. charger no.. 10155)

# Weather station Solexa II

- For use with display Solexa II (up to 4 displays possible)
- Recording of temperature, precipitation, wind speed, brightness (1 sun sensor); GPS receiver
- Connection for 230 V motor (integrated motor controls)
- For up to 16 wireless actuators (all Elsner RF actuators)
- Up to 32 Elsner RF control devices/sensors
- Integration into WLAN (to use App) via optional interface SOL
- Dimensions approx. 96 x 77 x 118 (W x H x D, mm), IP 44, white/translucent, combined holder for wall/mast
- Operating voltage: 230 V AC
- Radio frequency 868.2 MHz, Elsner RF



# OVERVIEW OF THE SOLEXA II WITH WEATHER STATION





# CONTROLS FOR SHADES OR WINDOWS

The Solexa shade controls and Arexa window controls comprise the control unit and weather station. The drive for sun protection and windows is connected directly to the weather station. Multiple drives can be operated as a group (e.g. a row of roof windows connected to an Arexa) via an additional group control relay.

Current weather data, mode and alarm messages are shown on the control panel display. An indoor temperature sensor is integrated. Buttons are used to operate the drives and set the automatic mode. The control panel and weather station communicate by radio, which is why the control panel can be positioned anywhere in the room. As no cables need to be laid in the building, the control units are also ideal for retrofitting.







No. 10130 No. 10131 (Aluminium) (Pearl dark)



# Shade control Solexa<sup>®</sup> 230 V

- For an awning or shutter. Connection 230 V motor to the weather station, multiple drives with group control relay
- Complete system comprising control unit with indoor temperature sensor and weather station
- Automatic shading depending on brightness and indoor temperature
- Rain/wind and frost protection (can be deactivated)
- Shade position saved for automatic mode, for blinds also the opening angle of the slats

### **Control panel**

- Plastic casing, white, brushed aluminium colour or brushed pearl dark grey (partly painted)
- Wall-mounted
- 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 (rechargeable batteries AA)

#### Weather station

- Recording of temperature, precipitation, wind speed, brightness (1 sun sensor)
- Combination holder for wall/mast installation
- Surface-mounted housing IP 44, white/translucent
- Dimensions approx. 96 x 77 x 118 (W x H x D, mm)
- Operating voltage: 230 V AC, 50 Hz

### **Optional accessories**

- Remote control Remo (p. 12)
- Group control relay (p. 18)
- Mounting arm for weather station (p. 16)
- Connection cable set (p. 11)

# Window controls Arexa® 230 V

- For one window. Connection 230 V motor to the weather station, multiple drives with group control relay
- Complete system comprising control unit (with indoor temperature sensor) and weather station
- Automatic ventilation depending on the indoor and outdoor temperature
- Rain and window protection (can be deactivated)
- Opening position saved for automatic mode

### **Control panel**

- Plastic casing, white
- Wall-mounted
- 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 (rechargeable batteries AA)

#### Weather station

- Recording of temperature, precipitation, wind speed, brightness (1 sun sensor)
- Combination holder for wall/mast installation
- Surface-mounted housing, IP 44, white/translucent
- Dimensions approx. 96 x 77 x 118 (W x H x D, mm)
- Operating voltage: 230 V AC, 50 Hz

### **Optional accessories**

- Wireless remote control Remo (p. 12)
- Group control relay (p. 18)
- Mounting arm for weather station (p. 16)
- Connection cable set (see below)

Control pane



Weather station

No. 10115

# Connection cable set for Solexa or Arexa 230 V

- Simplified connection for controls via a power outlet
- Mains cable, length approx. 6 m

• Motor connection cable with STAK3 coupling, length approx. 6 m



# Connection chart Solexa / Arexa





# WIRELESS REMOTE CONTROL, BUTTONS

consumers on Elsner RF modules (see information box "Suitable Devices").

With remote control and wall switches, the technology in the Smart Home and on the terrace can comfortably be operated. The hand-held transmitter here is a small, mobile central unit for all devices, from the lights to the heaters and awning. Switches at important locations in the home are recommended, however, for example next to the terrace door for controlling the shutters. With wireless control these switches are also easy to install – also subsequently. The wireless control devices shown here work with the wireless protocol Elsner RF and therefore are just as ideal for enhancing the building controls as for the direct operation of motors and

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No. 60522



No. 60511 (white) No. 60512 (aluminiur



# Remote control Remo® pro

- Hand-held transmitter with up to 32 channels (number depends on the device being controlled)
- Colour touch display with writeable buttons
- Functions: Up/Down/Stop, On/Off, Dim (per device)
- For controlling the drives and devices on the building controls
- Remote control Remo® 8
- · Wireless hand-held transmitter with 8 channels
- Functions: Up/Down/Stop, On/Off, Dim (per device)
- For controlling the drives and devices on the building controls
- For direct operation of ventilators, relays, dimmers and motor control devices
- With magnetic wall holder

### Wireless switch interface RF-B2-UP

- Wireless interface doer 2 normal double switches
- To operate the drives and devices on the controls WS1, WS1000, Solexa II, Solexa, Arexa
- For direct operation of ventilators, relays and motor control devices

- For direct operation of ventilators, relays, dimmers and motor control devices
- Radio frequency 868.2 MHz, Elsner RF
- Casing plastic/glass, gloss black
- Dimensions approx. 64 x 122 x 14 (W x H x D, mm)
- Integrated rechargeable battery, charging via USB Micro B cable (5 V, e.g. charger no. 10155)
- Radio frequency 868.2 MHz, Elsner RF
- White/grey or aluminium/graphite plastic casing (partly painted)
- Dimensions of hand-held transmitter. 41 x 140 x 21, holder approx. 54 x 150 x 11 (W x H x D, mm)
- Power supply: 3 V-batteries type CR2032
- Power supply: 3 V-batteries type CR2032
- Dimensions approx. 38 x 47 x 29 (W x H x D, mm)
- Connection cable 300 mm, extendible to 10 m
- For controls from Version 1.597 and higher
- Radio frequency 868.2 MHz, Elsner RF

# Remote control Remo and switch interfaces are suitable for the following devices:



Wireless modules



Controls WS1000 Connect, WS1000 Style/WS1 Style WS1000 Color/WS1 Color from Version 1.1



Shade control Solexa from Version 3.6 Remote control Arexa from Version 3.7 Wireless control Solexa II KNX Touch One Style

# WIRELESS SENSORS

The wireless sensors have been developed specifically for communication with the controls WS1, WS1000 (models Color, Style, Connect, KNX) and Solexa II. They record indoor data exactly at the necessary locations and facilitate the set-up of different climate zones in the home or conservatory.

### Indoor sensor WGTH gl

- Extra sensors for WS1/1000 Color/Style/Connect, Solexa II
- Measurement of temperature, humidity
- Wireless communication with central unit
- Plastic casing with glass surface, white

### Indoor sensor WGTH-UP

- Extra sensor for WS1/1000 Color/Style/Connect, Solexa II (included in the scope of delivery WS1000 Color/Style)
- For temperature and humidity
- Wireless communication with central unit
  Plastic casing, white (gloss) or aluminium
- (painted, matt)

- Wall installation in device box, including frame (casing suitable for all 55 mm series frames)
- Operating voltage: 11...28 V DC
- Radio frequency 868.2 MHz, Elsner RF
- Included in the scope of delivery WS1000 Connect
- Wall installation in device box, including frame (casing suitable for all 55 mm series frames)
- Operating voltage: 11...28 V DC
- Radio frequency 868.2 MHz, Elsner RF



WGTH-UP

# Temperature sensor WGT

- Temperature sensor (-30...+130°C) with separate evaluation unit
- Extremely small sensor point as plug/contact sensor
- Sensor: Length approx. 20 mm, Ø approx. 6 mm, cable approx. 300 cm. Evaluation unit approx. 38 x 47 x 24 (W x H x D, mm)
- Protection class of the sensor: IP 68
- Operating voltage: 11...28 V DC
- For controls from Version 1.51 and higher
- Radio frequency 868.2 MHz, Elsner RF

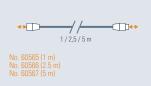




# RADIO CONTROL MODULES, F-CON

Wireless actuators allow the simple connection of motors and consumers with the control systems WS1, WS1000 (Color, Style) and Solexa II. Furthermore, together with a remote control they form a convenient manual operation option for the technology at home and on the terrace.







### Wireless motor control unit RF-MSG-ST FCm

- For 1 drive (230 V AC / 4 A max.)
- Direct manual controls with wireless remote control (p. 14)
- Automatic control via WS1/WS1000 Color/Style (Version 1.20 and higher), WS1000 Connect, Solexa II
- Casing with STAS3 plug and STAK3 coupling
- Operating voltage: 230 V AC, 50 Hz

### Connection cables FConi

• Connection cables for wireless modules with STAK3/ STAS3 connectors and motors • Radio frequency 868.2 MHz, Elsner RF

### RF-MSG-ST IP53

• IP 53, dimensions approx. 147 x 36 x 29 (W x H x D, mm)

### **RF-MSG-ST IP54**

- IP 54, dimensions approx. 147 x 49 x 32 (W x H x D, mm)
- STAS3 to STAK3, with STASI securing bracket
- Available in lengths: 1 m; 2.5 m; 5 m

### Mains connection cable FCon

- Allows the commissioning of wireless modules with STAK3/STAS3 connectors without interfering with the electrical installation
- Permanent connection to the building power network by an electrician can be performed later
- Protective contact plug with STAK3 output and STASI securing bracket
- Length 5 m

# **INSTALLATION ACCESSORIES**

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# **GROUP CONTROL RELAYS**

Group control relays allow multiple drives to be connected to one control output. Drives without integrated isolating relay can also be operated in this way from one output. This drive group then follows a control command (parallel operation).



### Group control relay GS2-DST FConi

- · Isolating relay for operating drives without integrated group control relay in a group
- Cascadable
- Control input with STAS3 plug 230 V AC, up/down
- 2 outputs 230 V AC (STAK3 coupling), total max. 4 A
- Operating voltage: 230 V AC, 50 Hz

- · Casing with STAS3 plug and STAK3 couplings
- Dimensions approx. 135 x 73 x 29 (W x H x D, mm)

# **OTHER ACCESSORIES**



### Charger

• USB Micro B charger

stations and sensors

For model P03/Solexa and P04

• For model P03/Solexa and P04

• Total length approx. 163 mm (no joints)

Powder-coated RAL 9003

For wall installation

High-quality, adjustable ball joints

• Flex S: 1 ball joint, total length approx. 64 mm

• Flex L: 1 ball joint, total length approx. 215 mm

Flex L+: 2 ball joints, total length approx. 267 mm

Flex with ball joints

 For wall installation Powder-coated RAL 9003

•

•

Arm L

•

Mounting Arms/Mounts for weather stations

#### · For flexible installation of the Elsner Elektronik weather Fix

- For model P03/Solexa and P04
- · Available as powder-coated RAL 9003 or aluminium blank
- Total length approx. 425 mm

### Fix P

- For model P03/Solexa and P04
- Powder-coated RAL 9003
- Dimensions approx. 55 x 58 x 30 (W x H x D, mm)

### **Hinge Arm large**

- For model P03/Solexa
- For installation on wall, master or beams
- Available as powder-coated RAL 9016 or aluminium blank
- 1 joint, total length approx. 420 mm



ge Arm large 30109 (white) 30111 (aluminium blank)









• For Solexa II display and Remo pro/KNX RF



# **ELSNER ELEKTRONIK**

### Building automation technology "Made in Ostelsheim"

Elsner Elektronik has been specialised in control systems and sensors for buildings since 1990. All Elsner products are developed and manufactured at the company headquarters in Ostelsheim. 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, RS485, Modbus). Whether control units, weather or indoor sensors, actuators or system devices – Every product combines flexible technical solutions, ease of use and forward-looking design.











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www.elsner-elektronik.de info@elsner-elektronik.de

Sohlengrund 16 75395 Ostelsheim Germany

Tel.: +49 70 33 / 30 945-0 Fax: +49 70 33 / 30 945-20



No. 50311 | as of 03.09.2024 | Technical changes and errors excepted.