



**RADEMACHER**  
**Moves more.**



GARAGE DOORS



EXTERNAL VENETIAN  
BLINDS



ROLLER SHUTTERS



AWNINGS



SECURITY



ELECTRICAL APPLIANCES



HEATING



LIGHTING



  
**HomePilot®**  
**SMART HOME SYSTEM**

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## SMART HOME SYSTEM – COMPATIBLE WITH THE FUTURE!

The HomePilot® smart home system is based on the RADEMACHER bi-directional DuoFern radio system. DuoFern is a complete, stand-alone radio system based on the considerable experience and technical competence, and is "Made in Germany".

With the HomePilot®, you can easily control your building technology via smartphone, tablet or PC: roller shutters, external Venetian blinds, awnings, lighting, heating, garage doors, cameras, etc. At home or, if you wish, in connection with your internet router from anywhere around the world.



## IT'S EASY WITH HOMEPILOT®

The roller shutters open when the first rays of sun come into the bedroom, the bath's already at the right temperature and the radio switches on - many of the functions in a home are carried out automatically with our HomePilot® smart home system and the people living in the house can start their day conveniently or end their day in a relaxed atmosphere.

This is possible thanks to the intelligent networking of different building systems technology components, such as roller shutters and sun shading, heating, lighting and electrical appliances. However, safety and security components, such as smoke alarms and cameras, also find their place in the system.

It is easy to retrofit existing buildings with automation technology - without having to prise open walls and use any complex cabling. It is also always easy to extend the HomePilot® system with additional or new components. The HomePilot® has been implemented via the RADEMACHER DuoFern bi-directional radio system that has been used successfully for 10 years. Every switching command transmitted is confirmed with feedback from the receiver, so that the transmitter always knows whether the command has been transmitted correctly. This allows the seamless integration of RADEMACHER devices into every home.





## WHAT IS THE HOMEPILOT®?

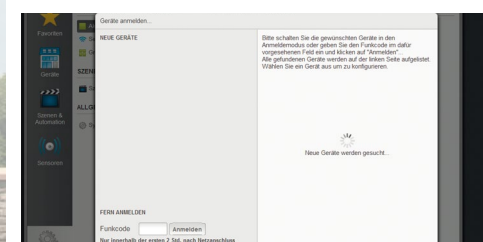
The HomePilot® is a central controller for your home devices equipped with RADEMACHER radio products.

The HomePilot® offers an intuitive user interface, which can be used to control all elements used for lighting, roller shutters, awnings, electrical appliances and much more via a browser or app. The user interface allows you to name and group together individual devices, create scenes and automations, and much more. Additional functions can be found on pages 8-9.

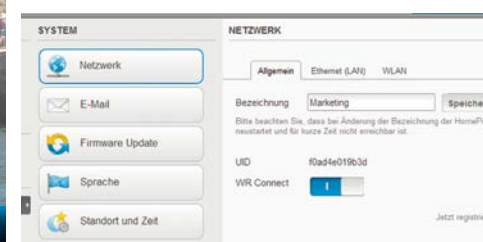
## ...QUICK TO INSTALL...



1. Plug in the DuoFern USB memory stick and connect the HomePilot® to your internet router using the LAN cable supplied. The HomePilot® can now be connected to the mains supply.



2. Next, the user interface of the HomePilot® is accessed via a browser and the radio products can be taught.



3. If desired, activate the WR Connect remote access (see page 7). This will allow you to access your HomePilot® via smartphone, tablet or PC from any location.

## ...AND IF DESIRED, EVEN WHEN YOU ARE OUT AND ABOUT!

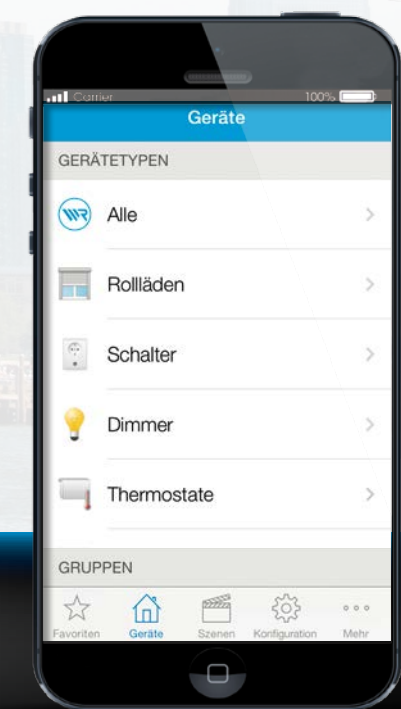
Access your building services thanks to WR Connect.

When connected to a router with internet (via LAN or WLAN), the HomePilot® also offers the option of accessing your radio products whilst you are out.

You can simply activate the WR Connect service in the HomePilot® and register with us for free via your email address.

After registering, you can access your HomePilot® via the login at [www.HomePilot.de](http://www.HomePilot.de), or you can simply enter your data in the HomePilot® app (p.10-11), which will also allow you to access your HomePilot®.

This can be done from anywhere in the world!





## FEATURES

### 1. User interface

The RADEMACHER radio products can be controlled and configured even more quickly and easily with the intuitive user interface.

The user interface presents the appliances in a clear manner, ordered according to the type of appliance, and offers the option of allocating individual names, descriptions and different appliance images.

The appliance images also display the status of the appliances. The appliances can then be easily and directly operated via intuitive switches or slide controls.

### 2. Setting scenes

Scenes give you the option of operating or switching units to a specific state by clicking on an option or via an automation.

For example, if you want to open all roller shutters with just one touch of a button, then determine a scene for this with the desired roller shutters and set the desired target state (0%). All appliances will then move simultaneously by selecting the "execute" button.

In combination with an automation, the whole process becomes even more convenient. With the dawn and dusk automation function for example, your roller shutters will simply operate according to sunrise and sunset.

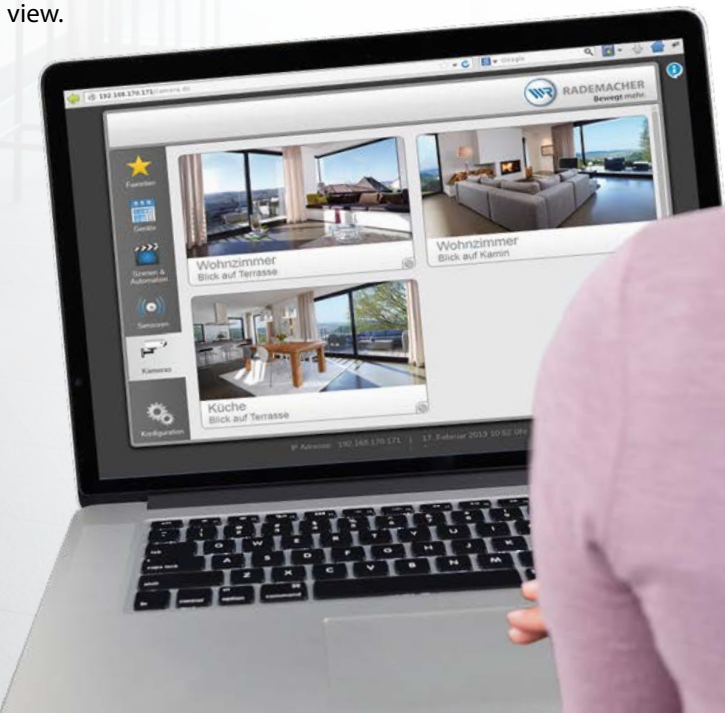
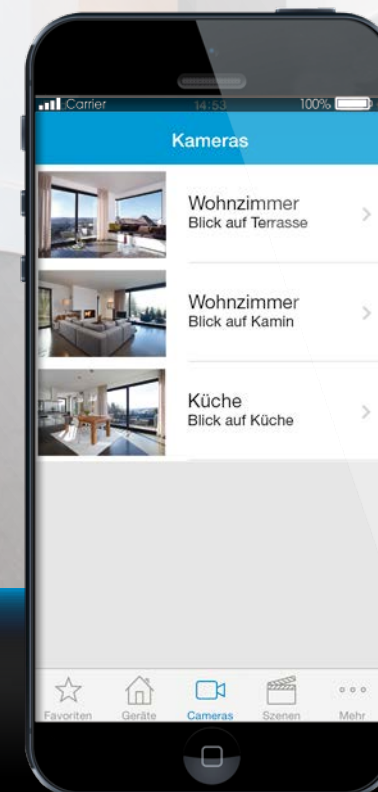
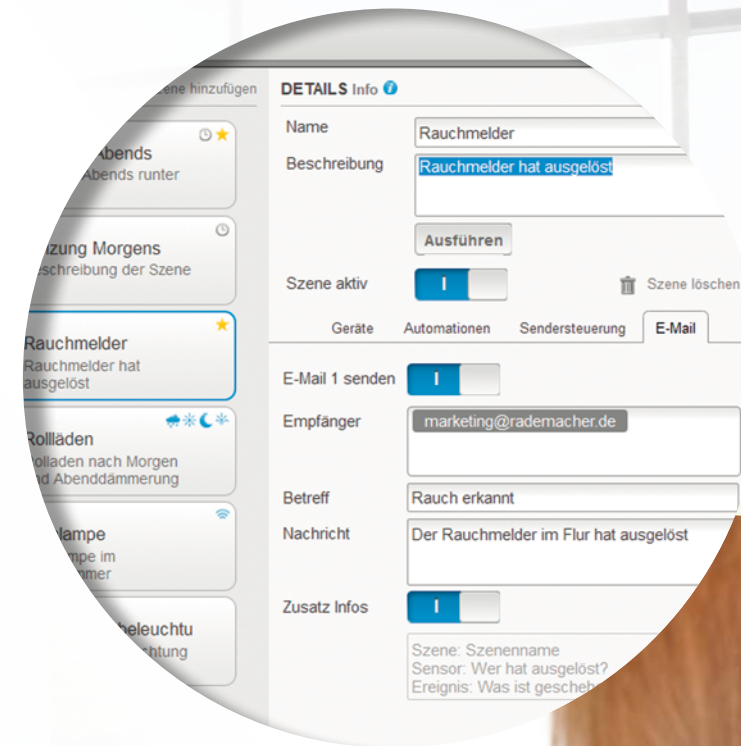
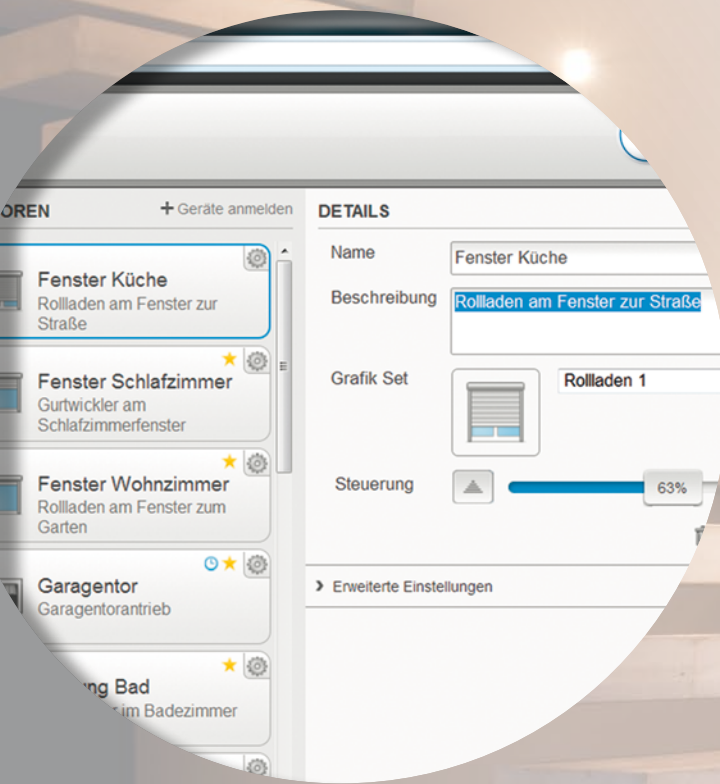
### 3. Email function

With this function, you have the option of sending yourself, or multiple addresses, an email when a scene is triggered. Simply enter the sender and recipient addresses, and activate 'send email' in the scene configuration.

This allows you to be, e.g. immediately informed when the smoke alarm has detected smoke.

### 4. Camera function

With the camera function you can always keep an eye on what is happening in your home! The camera function presents the images of your camera (see p.20) on the user interface as well as in the app, both in full and minimised view.

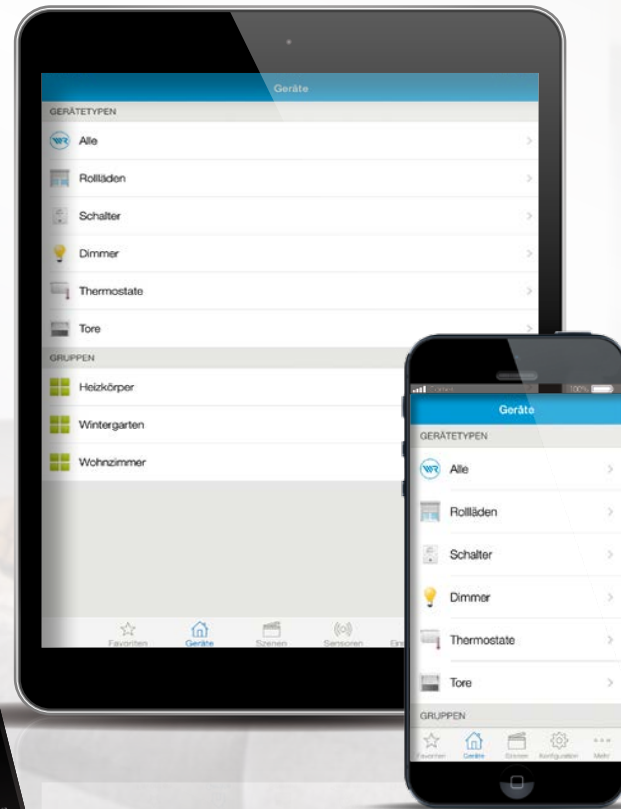




## HomePilot® – THE APP. FOR iOS\* AND ANDROID \*\*

Use the HomePilot® app to access your HomePilot® and simply control your devices via a smartphone or tablet when you are at home or away!

- Quicker and easier access to devices and scenes
- Individual favourites for each user
- Display activated/deactivated automations
- Display of status notifications, e.g. triggered blockage detection
- Direct access to sensor data, such as temperature, direction of the sun, wind velocity, etc.



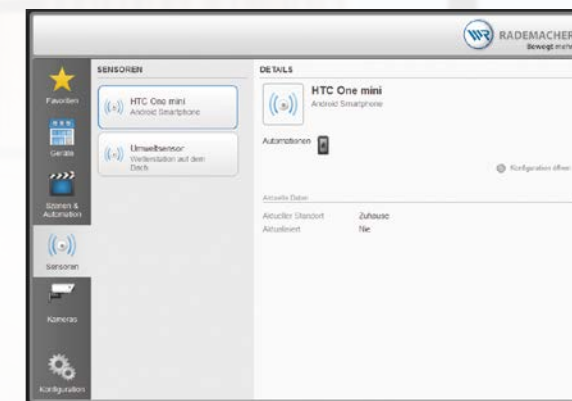
Available on the  
**App Store**



ANDROID APP ON  
**Google play**

DOWNLOAD NOW FREE OF CHARGE

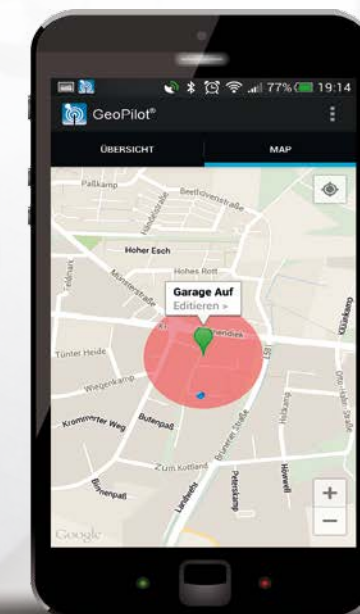
## GeoPilot® – THE APP ... ...THAT LETS YOU TURN YOUR SMART- PHONE INTO A SENSOR!



Register your smartphone on the HomePilot® via GeoPilot® and use your smartphone as a sensor. If all smartphones are at home, a scene will automatically switch the light on and the heating to 21°C.

What if all the smartphones are outside the home? Then the light is switched off and the heating is turned down.

**Use GPS & WLAN  
for automation**



Trigger scenes with the GeoPilot® when entering or leaving globally, individually configurable areas (200m - 10km radius): e.g. when entering the home area, open the garage door and close it again when leaving the area.



Available on the  
**App Store**



ANDROID APP ON  
**Google play**

DOWNLOAD NOW FREE OF CHARGE



## APPLICATION EXAMPLES



### COMFORT

- EVERY DAY.



#### Example of a scene for comfort:

- Coffee machine switched on
- Lighting dimmed
- Radiators pre-heated





### SECURITY

- BETTER QUALITY OF LIFE GUARANTEED.

#### Example of a scene for security:

- Windows closed?
- Awnings retracted?
- No unwelcome guests?





### SAVE ENERGY

- THE EASY WAY.

#### Example of a scene for energy saving:

- Awnings and external Venetian blinds automatically move to their sunshade position





### LUXURY

- SCENES WITH JUST ONE CLICK.

#### Example of a scene for luxury:

- Close roller shutter to 70%
- Pleasantly dim lighting
- Automatically turn on music





### MONITORING

- EVERYTHING UNDER CONTROL.



#### Example of a scene for monitoring:

- Lighting switched off?
- Coffee machine switched off?





### RELAXATION

- JUST THE TWO OF YOU.

#### Example of a scene for relaxation:

- Switch on and dim lighting
- Retract awnings
- Automatically deactivate automatic timer









ROLLER SHUTTERS

**RolloTube I-line DuoFern**

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**DuoFern Belt Winder**  
RolloTron Standard  
RolloTron Comfort  
RolloTron Swivel Winder Standard

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ROLLER SHUTTERS



EXTERNAL VENETIAN BLINDS



AWNINGS

**Troll Comfort DuoFern**

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**Troll Basic DuoFern**

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**DuoFern Tubular Motor Actuator**

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**DuoFern Motor Actuator**

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**DuoFern Connect Actuator**

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AWNINGS

**RolloTube I-line Sun DuoFern**

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LIGHTING

**DuoFern Universal Dimming Actuator**

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**DuoFern 1-10 V Controller**

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LIGHTING



ELECTRICAL APPLIANCES

**DuoFern Universal Actuator 2 channel (max. each 1500 W)**

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**DuoFern Universal Actuator 1 channel (< 3600 W)**

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**DuoFern Switch Adapter Plugs**

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**Repeater with switch function\***

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GARAGE DOORS

**RolloPort SX5 DuoFern**

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HEATING

**Heating Actuator\***

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**DuoFern Room Thermostat**

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TRANSMITTERS

**DuoFern Manual Transmitter Standard**

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**DuoFern Multiple Wall Controller**

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**DuoFern Radio Transmitter**

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SENSORS

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**DuoFern Environmental Sensor Weather Station**

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**DuoFern Smoke Alarm**

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**Window/Door Contact\***

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**DuoFern Motion Detector**

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**HomePilot® HD Camera (Indoor)**

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**HomePilot® HD Camera (Outdoor)**





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\*These items can only be integrated into the HomePilot® via the expansion USB stick (see p.33).





	Item name	Type	Colour	Item number
CENTRAL CONTROL				
	<b>HomePilot® incl. DuoFern USB stick</b> Supply voltage: 5V / 3A (DC) Nominal power: Max. 15 W with USB-powered devices  Min. consumption: Approx. 4.2 W LAN: 1x Gigabit Ethernet WLAN: 802.11 b/g/n Connections: 4x USB 2.0, HDMI type A, 1GB LAN RJ 45 Optical digital audio output, SD card slot  Dimensions: 152 x 152 x 45 mm (L x W x H)	9496-2	Black	3414 08 19
TRANSMITTERS				
	<b>DuoFern Manual Transmitter Standard</b> Red/green status LED for visual confirmation of correct receipt of commands; subsequent adjustment of end points as well as reversal of rotation direction for radio tubular motors  Supply voltage: 3 V Battery type: 1x CR 2450 Battery life: Approx. 2 years with 5 actuations per day  Transmission frequency: 434.5 MHz Transmission power: Max. 10 mW Range: Outdoors approx. 100 m Indoors approx. 30 m (depending on the building structure)  Operating range: +5°C to +40°C Dimensions: 140 x 43 x 18 mm (L x W x H)			
	Manual operation of up to 48 DuoFern receivers in 6 groups; 6 illuminated buttons (can be assigned as a group controller with individual units or multiple units)	9491	Ultra-white	3248 03 66
	Manual operation of up to 48 DuoFern receivers simultaneously	9491-2	Ultra-white	3248 03 61

Item name	Type	Colour	Item number	
<b>DuoFern Multiple Wall Controller BAT</b> Wireless, battery-operated wall-mounted radio wall controller for operating DuoFern devices; screw or glue on (no flush-mounted box required); incl. battery, mounting plate and frame; can be integrated into all standard switches via intermediate frame; labelling space for identification of individual buttons; controls up to 24 DuoFern devices in 3 groups (8 devices per toggle); red/green status LED for visual confirmation of correct receipt of commands; jog mode; reversal of rotation direction  Supply voltage: 3 V Battery type: 1xCR 2430 Battery life: Approx. 2 years with 4 actuations per day  Transmission frequency: 434.5 MHz Transmission power: Max. 10 mW Range: Outdoors approx. 100 m Indoors approx. 30 m (depending on the building structure)  DuoFern devices: Max. 8 per group (3 groups) Operation range: +0°C to +40°C Operating unit dimensions: 50 x 50 x 12 mm (L x W x H)	9494-1	Ultra-white	3250 19 74	 
<b>DuoFern Multiple Wall Controller 230 V</b> Radio wall controller with integrated actuator; ideal for controlling DuoFern devices by radio and/or directly connected electrical appliances; can be integrated into all standard switches via intermediate frame; labelling space for identification of individual buttons; individually adjustable lighting; controls up to 24 DuoFern devices in 3 groups (8 devices per toggle); red/white status LED for visual confirmation of correct receipt of commands; jog mode; reversal of rotation direction  Supply voltage: 230 V / 50 Hz Protection class: II Stand-by consumption: < 0.6 W Transmission frequency: 434.5 MHz Transmission power: Max. 10 mW Protection type: IP30 Switching capacity: Max. 12 A ohmic load Max. 6 A inductive load  External input: 1 Connection diameter: 1.5 mm <sup>2</sup> Range: Outdoors approx. 100 m Indoors approx. 30 m (depending on the building structure)  DuoFern devices: Max. 8 per group (3 groups) Operation range: +0°C to +40°C Operating unit dimensions: 50 x 50 x 12 mm (L x W x H) Installation depth: 32 mm	9494-2	Ultra-white	3250 19 72	 



	Item name	Type	Colour	Item number
TRANSMITTERS				
	<b>DuoFern Radio Transmitter, flush-mounted</b> Battery-operated radio transmitter (optional 12 V connection); simply install behind existing switch / button; manual operation of up to 16 devices in 2 groups; can also be used in combination with HomePilot® as sensor	9497		3200 00 62
	Supply voltage: 3 V (optional 12 V DC connection) Battery type: 1xCR 2032 Battery life: Approx. 3 years, with 5 actuations per day Transmission frequency: 434.5 MHz Transmission power: Max. 10 mW Range: Outdoors approx. 100 m Indoors approx. 30 m (depending on the building structure) Operation range: +5°C to +40°C Dimensions: 50 x 1 mm (ø x D)			
SENSORS				
	<b>DuoFern Motion Detector (Indoor)</b> Ideal for monitoring within a house, room, staircase or corridor; large degree of detection of approx. 170° with a detection range of 10 m; 2 detection levels, horizontal with an angle of 10°; intuitive main controls ON/OFF, Auto/Manu for manual operation; combined operation of multiple motion detectors possible – for example, ideal in staircases; signal of the motion sensor can be used for further smart home system components; incl. external input for push-buttons or switches; various setting options, such as: sensitivity, run-on time, brightness set limit; low energy consumption with < 0.6 W	9484	Ultra-white	3250 17 72
	Supply voltage: 230 V / 50 Hz Protection class: II Protection type: IP20 Stand-by consumption: < 0.6 W Transmission frequency: 434.5 MHz Transmission power: Max. 10 mW External inputs: 1 Connection diameter: Max. 1.5 mm <sup>2</sup> Switching capacity: 12 A ohmic load 6 A inductive load Range: Outdoors approx. 100 m Indoors approx. 30 m (depending on the building structure) DuoFern devices: Max. 20 Operation: From 0 to +40°C Operating unit dimensions: 50 x 50 x 20 mm (L x W x H) Installation depth: 32 mm <b>Setting ranges:</b> Brightness set limit: 5 lux – 700 lux Run-on time: 20 sec – 30 min Sensitivity: 5 settings (min – max) <b>Readings:</b> Degree of detection: Approx. 170° Detection range: Approx. 10 m Detection levels: 2 horizontal levels (upper / lower) Detection zones: Upper level = 26 zones/ Lower level = 32 zones			

Complies with European approval guidelines.




Item name	Type	Colour	Item number	
<b>DuoFern Room Thermostat</b> Radio room thermostat for individual room regulation of radiators and underfloor heating; can be integrated in the HomePilot® system; relay contact for direct connection of valves (potential-free relay contact, also for extra-low voltage valves); with a max. 2300 W switching capacity, also suitable for electric heaters; direct radio connection between room thermostat and a DuoFern actuator (connected to one/multiple valves) enables individual room regulation; additional connection for an external sensing device; up to 6 switching times and 4 individual target temperatures per day; individually adjustable day/week programme; valve protection, frost protection and cooling function; two-step control (on/off) with configurable hysteresis and adjustable minimum switching time; illuminated LCD display; installation wizard; automatic summer/winter changeover; key lock  Supply voltage: 230 V / 50 Hz, 60 Hz Protection class: II Protection type: IP30 Stand-by consumption: ≤ 0.6 W Transmission frequency: 434.5 MHz Transmission power: Max. 10 mW Connector for outside temperature sensor: 1 Connection diameter: Max. 1.5 mm <sup>2</sup> Switching capacity: Max. 10 A ohmic load, Max. 4 A inductive load  Power reserve: 8 h (permanent data storage) Range: Outdoors approx. 100 m Indoors approx. 30 m (depending on the building structure) DuoFern devices: Max. 20 Operation range: 0 to 40°C Dimensions: 50x50x12 mm (LxWxH) Installation depth: 32 mm <b>Setting ranges:</b> SET values: Max. 4 Switching times: Max. 6 Temperature: 4.0°C to 40.0°C <b>Measuring range:</b> Temperature: -40.0°C to 80.0°C	9485	Ultra-white	3250 18 12	
DUOFERN ROOM THERMOSTAT ACCESSORIES				
<b>Remote Sensor for DuoFern Room Thermostat</b> Cable length 3 m	9485-F		7000 01 03	

Complies with European approval guidelines.





	Item name	Type	Colour	Item number
SENSORS				
 Connection box not included in delivery	<b>HomePilot® HD Camera (Outdoor)</b> LAN/WLAN compatible HD camera for transmitting image data to the HomePilot®; sound detection; email notification; sound alarm & snap shot function when motion or sound is detected; image/video recording on FTP server, cloud server or hard drive; CMOS sensor with high resolution 1.0 mega pixel; IR LEDs for night vision of up to 20 metres; recording scheduling; individual detection range; waterproof IP66 housing; incl. flexibly adjustable wall/ceiling bracket	9487	Aluminium	3200 43 29
	Supply voltage: 12V via power supply (included in delivery) Max. current consumption: 1A Protection class: II Protection type: IP66 Consumption: < 4.2 W Frequency: 802.11b/g/n; 2.4 GHz Operation range: -10 to +60°C and 10 - 80% RH Dimensions: Approx. 166x62x65 mm (LxWxH) Resolution: 1080x720 px Night vision: Max 20m			
	<b>HomePilot® HD Camera (Indoor)</b> LAN/WLAN compatible HD camera for transmitting image data to the HomePilot®; integrated passive infra-red sensor for motion detection; panoramic view by means of pan/tilt function (355° horizontal, 120° vertical); sound detection; email notification; sound alarm & snap shot function when motion or sound is detected; image/video recording on micro SD card (thanks to an integrated micro SD card slot), FTP server, cloud server or hard drive; 1.3 mega pixel CMOS sensor; IR LEDs for night vision of up to 8 metres; audio in/out connections; recording scheduling; individual detection range; incl. flexibly adjustable wall/ceiling bracket	9486	Ultra-white	3200 42 19
	<b>Extension cable</b> Power supply extension cable for HomePilot® HD Camera (Outdoor)	9487-V		7000 01 07
	<b>Connection box</b> Connection box for HomePilot® HD Camera (Outdoor)	9487-A		7000 01 06

Complies with European approval guidelines.


Item name	Type	Colour	Item number	
SENSORS				
<b>DuoFern Environmental Sensor (weather station)</b> Thanks to intelligent sunshine position detection, it is possible to assess all cardinal directions with just one sensor; measures brightness, position and height of the sun; wind velocity, temperature, rain; in combination with the HomePilot®, up to five different set limits for sun, wind, temperature, dawn and dusk can be set respectively; integrated DCF radio timer; integrated tubular motor actuator to optionally connect a tubular motor Supply voltage: 230 V / 50 Hz Protection class: I Protection type: IP44 Stand-by consumption: < 3W Transmission frequency: 434.5 MHz Transmission power: Max. 10 mW Connection diameter: Max. 1.5 mm² Range: Outdoors approx. 100 m Indoors approx. 30 m (depending on the building structure)  DuoFern devices: Max. 44 Operating range: -30°C to +60°C Loadable with: Max. 1,000 W (fused with T 6.3 A micro fuse)  Heating rain detector: Approx. 1.2W <b>Readings:</b> Temperature sensor: -30°C to +60°C Sun sensor: 1 to 150 kLux Dusk sensor: 0 to 100 Lux Wind sensor: 0 m/s to 35 m/s Rain sensor: Detected / not detected Dimensions: 96x77x118 mm (WxHxD)	9475	Ultra-white	3200 00 64	
<b>DuoFern Sun Sensor</b> Radio-capable sensor for sun shading control; brightness-dependent control: when the individually set limit is exceeded, the sensor transmits a radio command to all of the receivers (max. 5) logged-in within the range, to lower the roller shutter to the pre-set sunshine position; fasten to window pane with suction cup Supply voltage: Solar cell and internal battery Transmission frequency: 434.5 MHz; Transmission power: Max. 10 mW Range: Approx. 10 m Operation range: +5°C to +40°C DuoFern devices: Max. 5 Dimensions: 75x26.5 mm (øxH)	9478		3200 00 69	
<b>DuoFern Smoke Alarm</b> Radio-capable fire protection sensor from the ESYLUX PROTECTOR K 9 V series with integrated DuoFern radio module; power supply for the DuoFern radio module is effected via the smoke alarm battery; reacts to the alarm signals of the smoke alarm and transmits these to a registered HomePilot® or up to 10 DuoFern devices Supply voltage: 9 V Battery: Type 9 V lithium monobloc battery Battery life: approx. 8 years (recommended interval to change battery)  Transmission frequency: 434.5 MHz Transmission power: Max. 10 mW Range: Indoors approx. 30 m Operation range: -5°C to +40°C DuoFern devices: Max. 10 Dimensions: 106x65 mm (øxH)	9481		3200 16 64	

Complies with European approval guidelines.




	Item name	Type	Colour	Item number
ROLLER SHUTTER DRIVES				
	<b>RolloTube I-line DuoFern small (35 mm)</b> Self-learning DuoFern radio tubular motor with integrated interface for easy and quick integration into the DuoFern radio system; fully automatic end point setting and assignment of direction of rotation; precise positioning and torque monitoring; blockage and obstacle detection incl. reversing; obstacle detection can be set flexibly; automatic shutter length compensation; operation via DuoFern transmitter; extensive automated functions in combinations with, e.g., HomePilot® (e.g. Astro/day/week programme, random function, ventilation/sunshine position); universal RT ConfigTool for individual adjustment of the motor parameters; connection options of the sensors, can be connected in parallel  Supply voltage: 230 V / 50 Hz Protection type: IP 44 Transient operation: 4 min Cable length: 3.0 m Operation range: -10°C to +50°C Transmission power: Max. 10mW Including accessories: Adapter 9440 15 00 Bearing 9440 15 05 Adapted for: SW40 octagonal steel shaft			
	Torque 6 Nm; speed 28 rpm; overall length 485 mm; nominal power 121 W; current consumption 0.53 A	ILFS 06/28Z		2740 06 65
	Torque 10 Nm; speed 16 rpm; overall length 485 mm; nominal power 121 W; current consumption 0.53 A	ILFS 10/16Z		2740 10 65
	<b>RolloTube I-line DuoFern medium (45 mm)</b> The same as RolloTube I-line DuoFern small; except: Including accessories: Bearing 9440 15 04 Adapted for: SW60 octagonal steel shaft			
	Torque 15 Nm; speed 16 rpm; overall length 487 mm; nominal power 145 W; current consumption 0.64 A	ILFM 15/16Z		2760 15 65
	Torque 25 Nm; speed 16 rpm; overall length 546 mm; nominal power 191 W; current consumption 0.83 A	ILFM 25/16Z		2760 25 65
	Torque 35 Nm; speed 16 rpm; overall length 546 mm; nominal power 198 W; current consumption 0.86 A	ILFM 35/16Z		2760 35 65
	Torque 45 Nm; speed 12 rpm; overall length 546 mm; nominal power 205 W; current consumption 0.89 A	ILFM 45/12Z		2760 45 65


Complies with European approval guidelines.

Item name	Type	Colour	Item number	
ROLLER SHUTTER DRIVES				
<b>RolloTron Comfort DuoFern</b> Radio belt winder; can be used as a central control for automated commands of registered DuoFern receivers; can be remotely controlled via the DuoFern transmitter; installation wizard; extensive automated functions: random function, day/week/ weekend/Astro programme; ventilation and sunshine position can be individually set; sunlight/dusk control available with S/D sensor; easy movement to intermediate positions; automatic Summer/Winter changeover; illuminated large display with contrast adjustment, key lock; permanent data detention, even in the event of power failure; individually adjustable motor speed (e.g. for noise reduction)  Supply voltage: 230 V / 50 Hz, 60 Hz Protection class: II Protection type: IP20 (in dry rooms only) Nominal power: Approx. 70 W Stand-by consumption: < 0.6 W Nominal torque: Approx. 10 Nm Transient operation: 4 min Return path: < 0.4 rev. Max. switching times: 16 Power reserve (in the event of power failure): Approx. 8 h Transmission frequency: 434.5 MHz Transmission power: Max. 10 mW Range: Indoors approx. 10-15m (depending on the building structure)  Operation range: 0°C to +40°C DuoFern devices: Max. 20 Max. tractive output: 45 kg Belt width: 23 mm Winding capacity: 7.6 m (6.2 m) with 1.0 mm (1.3 mm) belt thickness  Permissible roller shutter area: Approx. 6 m² with 4 kg/m² and approx. 3 m² with 7 kg/m² Cable length 1.5 m	1800-UW	Ultra-white	1623 45 11	
<b>RolloTron Comfort DuoFern Mini-belt</b> The same as RolloTron Comfort DuoFern; except:  Belt width: 15 mm Winding capacity: 7.6 m with 1.0 mm belt thickness	1840-UW	Ultra-white	1615 45 11	
<b>RolloTron Comfort DuoFern Plus</b> The same as RolloTron Comfort DuoFern; except:  Nominal torque: Approx. 14 Nm Max. tractive output: 60 kg Winding capacity: 15 m (12 m) with 1.0 mm (1.3 mm) belt thickness  Permissible roller shutter area: Approx. 10 m² with 4 kg/m² and approx. 6 m² with 7 kg/m²	1805-UW	Ultra-white	1623 60 11	


Complies with European approval guidelines.







	Item name	Type	Colour	Item number
ROLLER SHUTTER DRIVES				
	<b>RolloTron Standard DuoFern</b> Radio belt winder; can be remotely controlled via DuoFern transmitter; comprehensive automatic functions in combination with the HomePilot®, DuoFern manual central operating unit or RolloTron Comfort DuoFern: Random function, automatic timer/sun/dawn and dusk functions can be controlled via radio, day/week/weekend and Astro programmes; ventilation and sunshine position can be individually set; clear overview of the automations through LED icons; easy auto/manual switchover at the touch of a button; individually adjustable motor speed (e.g. for noise reduction)  Supply voltage: 230 V / 50 Hz, 60 Hz Protection class: II Protection type: IP20 (in dry rooms only) Nominal power: Approx. 70 W Stand-by consumption: < 0.6 W Nominal torque: Approx. 10 Nm Transient operation: 4 min Return path: < 0.4 rev. Transmission frequency: 434.5 MHz Transmission power: Max. 10 mW Range: Indoors approx. 10 – 15 m (depending on the building structure)  Operation range: 0°C to +40°C DuoFern devices: Max. 20 Max. tractive output: 45 kg Belt width: 23 mm Winding capacity: 7.6 m (6.2 m) with 1.0 mm (1.3 mm) belt thickness  Permissible roller shutter area: Approx. 6 m² with 4 kg/m² and approx. 3 m² with 7 kg/m² Connecting cable: Cable length 1.5 m	1400-UW	Ultra-white	1423 45 11
	<b>RolloTron Standard DuoFern Mini-belt</b> The same as RolloTron Standard DuoFern; except:  Belt width: 15 mm Winding capacity: 7.6 m with 1.0 mm belt thickness	1440-UW	Ultra-white	1415 45 11
	<b>RolloTron Standard DuoFern Plus</b> The same as RolloTron Standard DuoFern; except:  Nominal torque: Approx. 14 Nm Max. tractive output: 60 kg Winding capacity: 15 m (12 m) with 1.0 mm (1.3 mm) belt thickness  Permissible roller shutter area: Approx. 10 m² with 4 kg/m² and approx. 6 m² with 7 kg/m²	1405-UW	Ultra-white	1423 60 11

Item name	Type	Colour	Item number	
<b>RolloTron Swivel Winder Standard DuoFern</b> Can be remotely controlled via the DuoFern transmitter; extra large control buttons for clear manual operation; ideal where space is restricted; extensive automated functions in combination with e.g. HomePilot®, HomeTimer, DuoFern manual central operating unit or RolloTron® Comfort DuoFern: day/week/weekend/Astro programme; random function, sunshine position and ventilation position freely selectable; easy auto/manual switchover via push-button  Supply voltage: 230 V / 50 Hz Protection class: II Protection type: IP20 (in dry rooms only) Nominal power: Approx. 70 W Stand-by consumption: < 0.7 W Nominal torque: Approx. 8 Nm Transient operation: 4 min Return path: < 0.4 rev. Transmission frequency: 434.5 MHz Transmission power: Max. 10 mW Range: Outdoors approx. 100 m Indoors approx. 30 m (depending on the building structure)  Operation range: 0°C to +40°C DuoFern devices: Max. 20 Max. tractive output: 30 kg Belt width: 23 mm Winding capacity: 5 m (4 m) with 1.0 mm (1.3 mm) belt thickness  Permissible roller shutter area: Approx. 5 m² with 4.5 kg/m² and approx. 2.5 m² with 10 kg/m² Connecting cable: Cable length 2 m	2510-UW	Ultra-white	1423 30 11	
<b>RolloTron Standard DuoFern Mini-belt</b> The same as RolloTron Standard DuoFern; except:  Belt width: 15 mm Winding capacity: 5 m with 1.0 mm belt thickness	2550-UW	Ultra-white	1415 30 11	



	Item name	Type	Colour	Item number
AWNING MOTORS				
	<b>RolloTube I-line Sun DuoFern medium (45mm)</b> Semi-automatic tubular motors for awnings; suitable for all common awning models; fully customisable according to the requirements of the carrier product; semi-automatic end point setting and assignment of direction of rotation; soft stop and relief of load on fabric; automatic fabric tensioning and tensioning impulse; precise positioning and torque monitoring; blockage detection incl. reversing; can be connected in parallel; convenient DuoFern radio retrofit solution; carries out manual switch commands; automated time/random/darkness/weather system; single and group control Supply voltage: 230 V / 50 Hz Protection type: IP 44 Transient operation: 4 min Cable length: 3.0 m Operation range: -10°C to +50°C Transmission power: Max. 10mW Including accessories: Bearing 9440 15 09 Adapted for: Round shaft D78F/D78R			
	Torque 15 Nm; speed 16 rpm; overall length 487 mm; nominal power 145 W; current consumption 0.64 A	ILSFM 15/16Z		2978 15 65
	Torque 25 Nm; speed 16 rpm; overall length 546 mm; nominal power 191 W; current consumption 0.83 A	ILSFM 25/16Z		2978 25 65
	Torque 35 Nm; speed 16 rpm; overall length 546 mm; nominal power 198 W; current consumption 0.86 A	ILSFM 35/16Z		2978 35 65
	Torque 45 Nm; speed 12 rpm; overall length 546 mm; nominal power 205 W; current consumption 0.89 A	ILSFM 45/12Z		2978 45 65

Complies with European approval guidelines.

Item name	Type	Colour	Item number	
CONTROLLERS AND ACTUATORS FOR ROLLER SHUTTERS, AWNINGS AND EXTERNAL VENETIAN BLINDS				
<b>Troll Comfort DuoFern (incl. frame)</b> Radio-capable controller for tubular motors; remotely controllable via DuoFern central controls as well as the DuoFern transmitter; installation wizard; automatic functions: day/week/Astro programme, random function can be individually programmed; external Venetian blinds function (tipping mode, automatic slat adjustment and motor running time); sunlight/dusk control with S/D sensor available; intermediate positions; blockage detection integrated for mechanical tubular motors; display of the environmental sensor's weather data; end point setting for electronic RolloTube tubular motors; automatic Summer/Winter changeover; illuminated large display with contrast adjustment; key lock; ventilation position freely selectable Supply voltage: 230 V / 50 Hz, 60 Hz Protection class: II Protection type: IP30 Stand-by consumption: ≤ 0.4 W Transmission frequency: 434.5 MHz Transmission power: Max. 10 mW External inputs: 2 Connection diameter: Max. 1.5 mm² Switching capacity: Max. 8 A ohmic load, Max. 4 A inductive load Power reserve: 8 h (permanent data storage) Range: Outdoors approx. 100 m Indoors approx. 30 m (depending on the building structure) DuoFern devices: Max. 20 Operation range: 0 to 40°C Dimensions: 50x50x12 mm (LxWxH) Installation depth: 32 mm	5665-UW	Ultra-white	3650 05 72	
	5665-AL	Aluminium	3650 05 82	
<b>Troll Basis DuoFern (incl. frame)</b> Any tubular motor can be integrated into the DuoFern radio system and be controlled via radio; operated via the DuoFern transmitter; manual operation via push buttons (automatic operation can be deactivated); extensive automatic functions in combinations with, e.g. the HomePilot®: Astro/day/week programme, random function, ventilation/sunshine position Supply voltage: 230 V / 50 Hz, 60 Hz Protection class: II Protection type: IP30 Stand-by consumption: < 0.4 W Transmission frequency: 434.5 MHz Transmission power: Max. 10 mW External inputs: 2 Connection diameter: Max. 1.5 mm² Switching capacity: Max. 8 A ohmic load, Max. 4 A inductive load Range: Outdoors approx. 100 m Indoors approx. 30 m (depending on the building structure) DuoFern devices: Max. 20 Operation range: 0 to 40°C Dimensions: 50x50x12 mm (LxWxH) Installation depth: 32 mm	5615-UW	Ultra-white	3650 01 72	
	5615-AL	Aluminium	3650 01 82	

Complies with European approval guidelines.



	Item name	Type	Colour	Item number
CONTROLLERS AND ACTUATORS FOR ROLLER SHUTTERS, AWNINGS AND EXTERNAL VENETIAN BLINDS				
	<b>DuoFern Tubular Motor Actuator</b> Radio-capable flush-mounted actuator for tubular motors; <b>blockage detection for mechanical tubular motors (can be set via HomePilot®)</b> ; new compact small design for installation into commercially available flush-mounted boxes or into electronic sockets; all tubular motors can be integrated into the DuoFern radio system and be controlled via radio; tubular motor mode or external Venetian blinds mode can be selected; automatic slat adjustment; tipping mode (in combination with the corresponding manual transmitters); operation via DuoFern transmitter, connection option for roller shutter switches or push button switches for manual operation of the tubular motor; functions in combination with, e.g., the HomePilot®: Astro/day/week programme, random function, ventilation/sunshine position; end point setting with electronic RolloTube tubular motors via radio; separate run time setting, reversal of rotation direction  Supply voltage: 230 V / 50 Hz Protection class: 0 Protection type: IP 00 Stand-by consumption: ≤ 0.5 W Transmission frequency: 434.5 MHz Transmission power: Max. 10 mW External inputs: 2 Connection diameter: Max. 1.5 mm² Switching capacity: Max. 550 W Range: Outdoors approx. 100 m Indoors approx. 30 m (depending on the building structure)  DuoFern devices: Max. 20 Operation range: -20 to +55°C Dimensions: 48x20 mm (øxH)	9471-1		3514 06 62
	<b>DuoFern Motor Actuator (potential-free)</b> Radio-capable, universal, flush-mounted actuator with potential-free switching contacts for motors; new compact small design for installation into commercially available flush-mounted boxes or into electronic sockets; thanks to the potential-free switching contacts, it is possible to e.g. integrate DC motors with extra-low voltage into the DuoFern radio system and control them via radio; operation via DuoFern transmitter, connection option for roller shutter switches or push button switches for manual operation of the tubular motor; functions in combination with, e.g. the HomePilot®: Astro/day/week programme, random function, ventilation/sun position; separate run time setting, reversal of rotation direction  For 230 V tubular motors, we recommend type 9471-1.  Supply voltage: 230 V / 50 Hz Protection class: 0 Protection type: IP00 Stand-by consumption: < 0.5 W Transmission frequency: 434.5 MHz Transmission power: Max. 10 mW External inputs: 2 Connection diameter: Max. 1.5 mm² Switching capacity DC: Ohmic load up to 30 V: 6.5 A to 48 V: 1.5 A to 100 V: 0.5 A to 200 V: 0.3 A to 300 V: 0.2 A inductive load  (DC 13 categories): Max. 1 A at 24 V Range: Outdoors approx. 100 m Indoors approx. 30 m (depending on the building structure)  DuoFern devices: Max. 20 Operation range: -20 to +55°C Dimensions: 48x20 mm (øxH)	9471-2		3514 06 63



Complies with European approval guidelines.

Item name	Type	Colour	Item number	
<b>DuoFern Connect Actuator</b> Radio receiver for retrofitting existing mechanical or electric external Venetian blinds, awnings or roller shutters on the DuoFern radio; tubular motor mode or external Venetian blinds mode can be selected; automatic slat adjustment; tipping mode (in combination with the corresponding manual transmitters); standard plug connection as switch adapter plug compatible with 3(4) pole Hirschmann STAS3 / STAK3 plug system *Configuration via HomePilot® or DuoFern central operating unit with WR ConfigTool  Supply voltage: 230 V / 50 Hz Protection class: II Protection type: IP54 Stand-by consumption: < 0.5 W Transmission frequency: 434.5 MHz Transmission power: Max. 10mW Switching capacity: Max. 5A ohmic load Max. 2A inductive load Range: Outdoors approx. 100 m Indoors approx. 30 m (depending on the building structure)  DuoFern devices: Max. 20 Operation range: -25°C to +55°C Dimensions: 123.5x33.5x26.5 mm (LxWxH)	9477		3500 08 64	
DUOFERN CONNECT ACTUATOR ACCESSORIES				
<b>Coupling STAK3 N (black)</b>	STAK3 N		7000 00 83	
<b>Plug STAS3 N (black)</b>	STAS3 N		7000 00 84	
<b>Safety clip STASI 3</b>	STASI 3		7000 00 85	
ACTUATORS FOR LIGHTING AND ELECTRICAL APPLIANCES				
<b>DuoFern Universal Actuator 2 channel (max. each 1500 W)</b> Radio-capable, 2 channel, flush-mounted actuator for electrical appliances; independent switching of any two appliances up to 1500 W; potential-free outputs; new compact small design for installation into commercially available flush-mounted boxes or into electronic sockets; operation via DuoFern transmitter; connection option for switches or push button switches for manual operation; stairway function with switch-off advance warning adjustable via HomePilot®  Supply voltage: 230 V / 50 Hz Protection class: 0 Protection type: IP00 Stand-by consumption: ≤ 0.5 W Transmission frequency: 434.5 MHz; Transmission power: Max. 10 mW External inputs: 2 Connection diameter: Max. 1.5 mm² Switching capacity: Max. 6.5 A ohmic load Max. 5A inductive load Range: Outdoors approx. 100 m Indoors approx. 30 m (depending on the building structure)  DuoFern devices: Max. 20 Operation range: -20°C to +55°C Dimensions: 48x20 mm (øxH)	9470-2		3514 02 62	

Complies with European approval guidelines.





	Item name	Type	Colour	Item number
ACTUATORS FOR LIGHTING AND ELECTRICAL APPLIANCES				
	<p><b>DuoFern Universal Actuator 1 channel (&lt; 3600 W)</b></p> <p>Radio-capable, 1 channel, flush-mounted actuator for electrical appliances; switching of appliances up to 3600 W; new compact small design for installation into commercially available flush-mounted boxes or into electronic sockets; operation via DuoFern transmitter; connection option for a switch or push button switch for manual operation; potential-free output; stairway function with switch-off advance warning adjustable via HomePilot®</p> <p>Supply voltage: 230 V / 50 Hz Protection class: 0 Protection type: IP00 Stand-by consumption: ≤ 0.5 W Transmission frequency: 434.5 MHz Transmission power: Max. 10 mW External inputs: 1 Connection diameter: Max. 1.5 mm<sup>2</sup> Max. 16A ohmic load Max. 8A inductive load Switching capacity: Range: Outdoors approx. 100 m Indoors approx. 30 m (depending on the building structure) DuoFern devices: Max. 20 Operation range: -20°C to +55°C Dimensions: 48x20 mm (øxH)</p>	9470-1		3514 02 61
	<p><b>DuoFern 1 - 10 V Controller</b></p> <p>Radio-capable 1-10 V controller for electronic control gear, e.g. for professional light control (LEDs, fluorescent lamps); new compact small design for installation into commercially available flush-mounted boxes or into electronic sockets; other application options e.g. for ventilation or pump control; adjustable dimming speed (soft-start / soft-stop); intermediate value function; stairwell function, automatic switch off; switching output for electronic control gear up to 1500 W; operation via DuoFern transmitter; connection option for a push button switch for manual operation</p> <p>Supply voltage: 230 V / 50-60 Hz Protection class: 0 Protection type: IP00 Stand-by consumption: ≤ 0.5W Transmission frequency: 434.5MHz Transmission power: Max. 10mW External inputs: 1 Connection diameter: Max. 1.5 mm<sup>2</sup> Max. 6.5 A ohmic load Max. 5A inductive load Switching capacity: Range: Outdoors approx. 100 m Indoors approx. 30 m (depending on the building structure) DuoFern devices: Max. 20 Operation range: 0°C to +40°C Dimensions: 48x20 mm (øxH) Control current: 1-10 V max. 60 mA</p>	9482		3500 12 62

Item description	Type	Colour	Item number	
<p><b>DuoFern Switch Adapter Plug</b></p> <p>Radio-capable adapter plug for electric appliances, independent switching of random users; operated via the DuoFern transmitter; manual operation via push button on the unit; functions in combinations with, e.g. the HomePilot®: Astro/week/day programme and random function; unit / light mode can be switched; stairway function with switch-off advance warning adjustable via HomePilot®</p> <p>Supply voltage: 230 V / 50 Hz Protection class: II Protection type: IP20 (for use in dry rooms only) Stand-by consumption: ≤ 0.5 W Transmission frequency: 434.5 MHz Transmission power: Max. 10 mW Switching capacity: Max. 1300 W Range: Outdoors approx. 100 m Indoors approx. 30 m (depending on the building structure) DuoFern devices: Max. 20 devices Operation range: 0°C to +40°C Dimensions (without plug): 64x106x41 mm (WxHxD)</p>	9472		3500 11 64	
<p><b>DuoFern Universal Dimming Actuator, flush-mounted</b></p> <p>Radio-capable dimmer; automatic load detection; hum-free; two-wire technology; soft-fade ON/OFF (manual/automatic dimming); dimming of ohmic loads (conventional bulbs and lamp transformers with leading-edge/trailing-edge phase control)*; overvoltage &amp; short-circuit protection; connection point for a push-button and/or operation via the HomePilot® or DuoFern transmitter; stairway function with switch-off advance warning adjustable via HomePilot®</p> <p>* Not suitable for dimming LEDs</p> <p>Supply voltage: 230 V / 50 Hz Stand-by consumption: &lt; 0.5 W Transmission frequency: 434.5 MHz Transmission power: 10 mW External inputs: 1 Minimum load: 25 VA Maximum load: 250 W Range: Outdoors approx. 100 m Indoors approx. 30 m (depending on the building structure) DuoFern devices: Max. 20 Dimensions: 48x24 (øxH) mm</p>	9476		3500 04 62	

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	Item name	Type	Colour	Item number
DOOR DRIVES				
	<b>RolloPort SX5 DuoFern</b> Garage door drive with an integrated DuoFern receiver for integration into the HomePilot® system, flexible installation options due to the 90° rotatable drive unit; belt drive with quiet and secure power transmission; commissioning via electronic limit switches and automatic tractive force learning; automatic door closure; automatic safety reversing when closing on an obstacle; internal emergency release for manual operation in the event of power failure; back-jump function for system relief and easier emergency release can be activated; status and error diagnostics visible on the display; connection of external sensors possible; comprehensive range of accessories	RP-SX5DF-900N-3	Black (housing)	4505 90 71
	Supply voltage: 220-240 V / 50, 60 Hz Type of motor: 24 V (DC) direct current Tractive force: Max. 900 N / 90 kg Speed of door operation: OPEN 11 / 15 / 19 cm/s + DOWN 11 cm/s  Protection class: II Operation range: -10 to +40°C Overall length: 3,475 mm (3,335 mm with drive head mounted at 90°)  Max. lift: 2,550 mm Max. door size: 12.5 m² Minimum lintel height: 5 cm Max. door height*: 2400 mm Transmission frequency Manual transmitter: 433 MHz rolling code Transmission frequency unit: 434.5 MHz Transmission power: Max. 10 mW Max. number of DuoFern units: 20 Radio range: Outdoors approx. 50 m Indoors approx. 30 m (depending on the building structure)			
ROLLOPORT SX5 DUOFERN ACCESSORIES				
	<b>Light barrier</b> The RolloPort SX5 DuoFern door drive should never be operated out of sight without additional safety equipment (e.g. light barrier).	4597	Black	8000 00 51
	Supply voltage: 12 to 24 V AC / DC AC = (50/60 Hz) Transmission frequency: 2.5 kHz Transmission range: 12 m to 20 m Protection type: II Permissible ambient temperature: -20°C to +70°C Dimensions: 108x 7.5x36 mm (HxWxD)			

Item description	Type	Colour	Item number	
HOMEPILOT UPGRADES BASED ON Z-WAVE TECHNOLOGY				
<b>Expansion USB stick</b> For integrating the following products into the HomePilot® System Transmission frequency: 868.4 MHz Transmission power: Max. 10 mW Outdoors range: Up to 100 m Permissible ambient temperature: 0°C to + 40°C Dimensions (L x W x H): 35x17x8 mm  <i>NOTE: Prerequisite for the products displayed here</i>	8430-1	Anthracite	3200 20 39	
<b>Window/Door Contact</b> For detecting whether windows or doors are open or closed and for triggering a scene depending on this (e.g. patio door OPEN --> roller shutters may not close)  Supply voltage: 3 V Battery type: 2x AAA 1.5 V Range: Up to 30 m Transmission power: Max. 10 mW Transmission frequency: 868.42 Mhz Operation range: 0 - 50°C	8431	White	3200 21 19	
<b>Radiator Actuator</b> Electronic radiator thermostat that exchanges information on the target and actual temperature with the HomePilot® via radio and which can be regulated via this; manual operation via push buttons on the device  Setting range: 4 - 28°C Supply voltage: 3 V Battery type: 2x AA 1.5 V Range: Up to 30 m Transmission power: Max. 10 mW Transmission frequency: 868.42 MHz Protection type: IP20	8433	White	3500 23 19	
<b>Repeater with switch function</b> Repeater for bridging further distances; independent switching of devices up to max. 3000 W; manual operation via push buttons on the device  Supply voltage: 230 V / 50 Hz Range: Up to 70 m Transmission power: Max. 10 mW Transmission frequency: 868.42 MHz Dimensions: 125x62x50 mm (LxWxH)	8434	White	3500 24 14	



SMART HOME - THE EASY WAY

# HomePilot® SMART HOME SYSTEM



# HOMEPILOT® SERVICE

## Our special service for you: The RADEMACHER on-site service

The simple and convenient way to arrange technical support on site!

The comprehensive guide can be found under:

[https://rademacher.de/checkliste\\_inbetriebnahme\\_homepilot/](https://rademacher.de/checkliste_inbetriebnahme_homepilot/)

For further information, please contact your responsible external or internal sales and distribution partner.

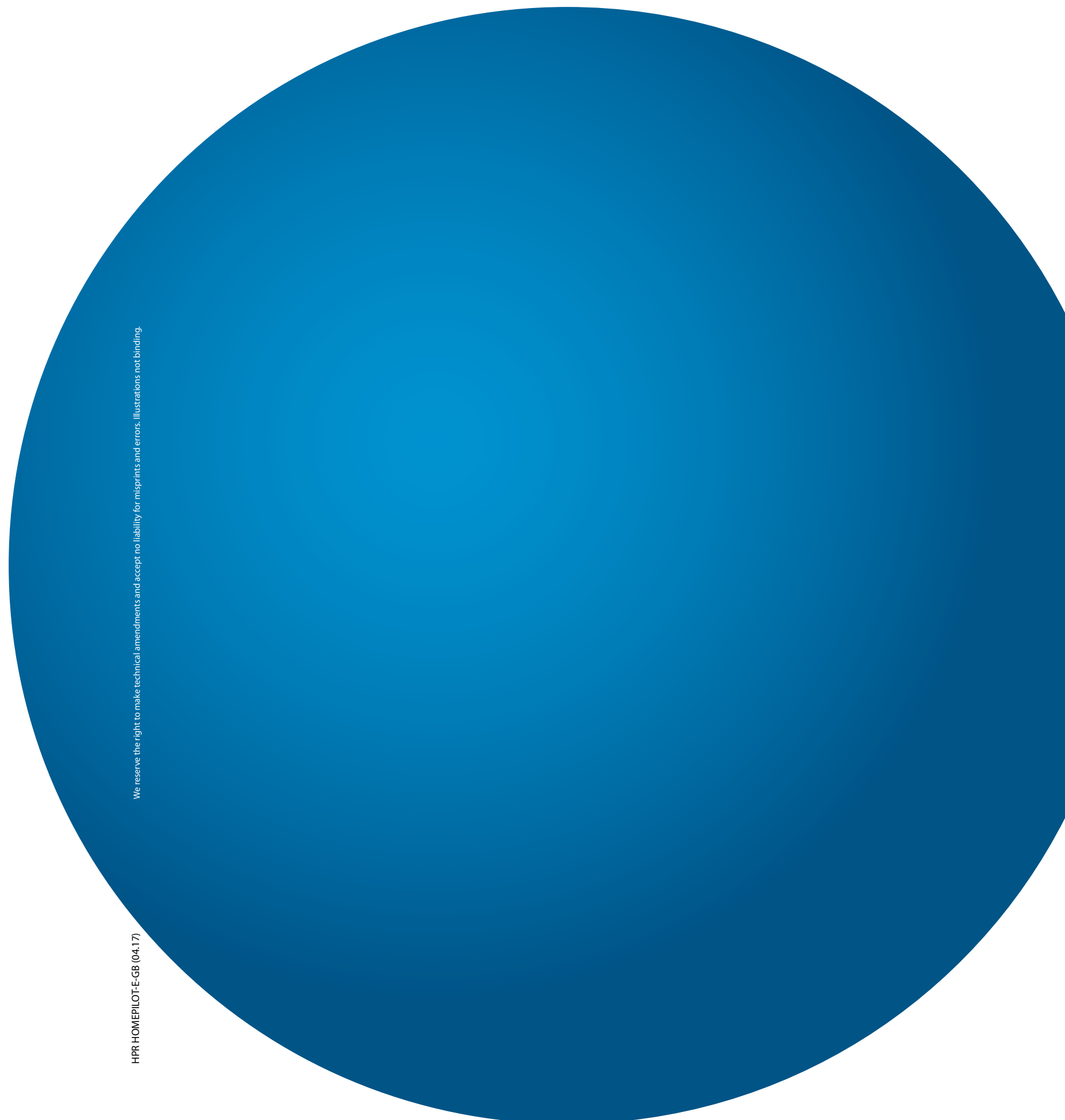






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**RADEMACHER**

Geräte-Elektronik GmbH

Buschkamp 7  
46414 Rhede  
Germany  
Telephone +49 (0) 2872 933-0

Internal Sales  
Fax +49 (0) 2872 933-251  
vertrieb@rademacher.de

[www.rademacher.de](http://www.rademacher.de)