Simple, safe and invisible.

Rialto Active, a system
of integratable solutions
for the smart home.
For a green and reliable home
that fits in with your lifestyle.

astrel®

The smart home according to Astrel®: a world of solutions, all allowing integration with one another.

Astrel technology and devices are entirely designed and made in Italy.

We have been involved in the electronics sector for more than thirty years, and always with a single overriding aim: to make the smart home a practical reality, for everyone. The smart systems and IoT applications we offer are installed and configured quickly and easily, and ready for immediate use.

It is our belief that to be genuinely smart, a home must incorporate an ecosystem of devices that can be fully integrated with one another and **managed conveniently by way of a single interface**, able to communicate with more and more things and systems.

Our eyes are fixed on horizons that continue to expand, so we do not want to be concerned only with solving minor everyday problems. This is why we have come up with Rialto Active as a system capable of managing all components in any dwelling.

The advantages of living in a connected home.

A smart home is a future-proof home. A home allowing the occupant to keep energy usage under control and manage all the various devices remotely, simply by way of an App or a voice command. A home that is safer, greener, more comfortable and technological, and adaptable to your particular lifestyle.

Rialto Active is precisely this: a non-invasive, almost invisible ecosystem of smart functionalities that you can shape around your preferred routine; also, a system **that can be integrated seamlessly into any kind of electrical installation, without replacing anything.**

Zigbee, the international communication standard ideally suited to home automation.

Our devices use this **low-power radio technology**, which affords practically limitless scope for building wireless mesh networks and flexible systems characterized by maximum interoperability.

Simple to install, configure and use.

Intuitive interface for easy and immediate use.

Requires no changes to the electrical system.

Compatible with any existing installation.

Self-consumption of solar energy.

Integration with 4-noks® Elios4you, the photovoltaic self-consumption system.

Compatible with things around the home.

Adding our Rialto Active devices, any item in the home can become smart.

Accurate measurement of electrical energy usage.

Controls consumption and pilots load modulation.

Innovative Echoback® function.

Monitors system energy levels, controls effective activation of commands and operation of the system, generating alerts in the event of abnormalities.

Integration with popular voice assistants.

Easily integrated with systems like Amazon Alexa and Google Home.

Complete and integrated energy management.

Monitors energy produced and consumed, and storage systems.

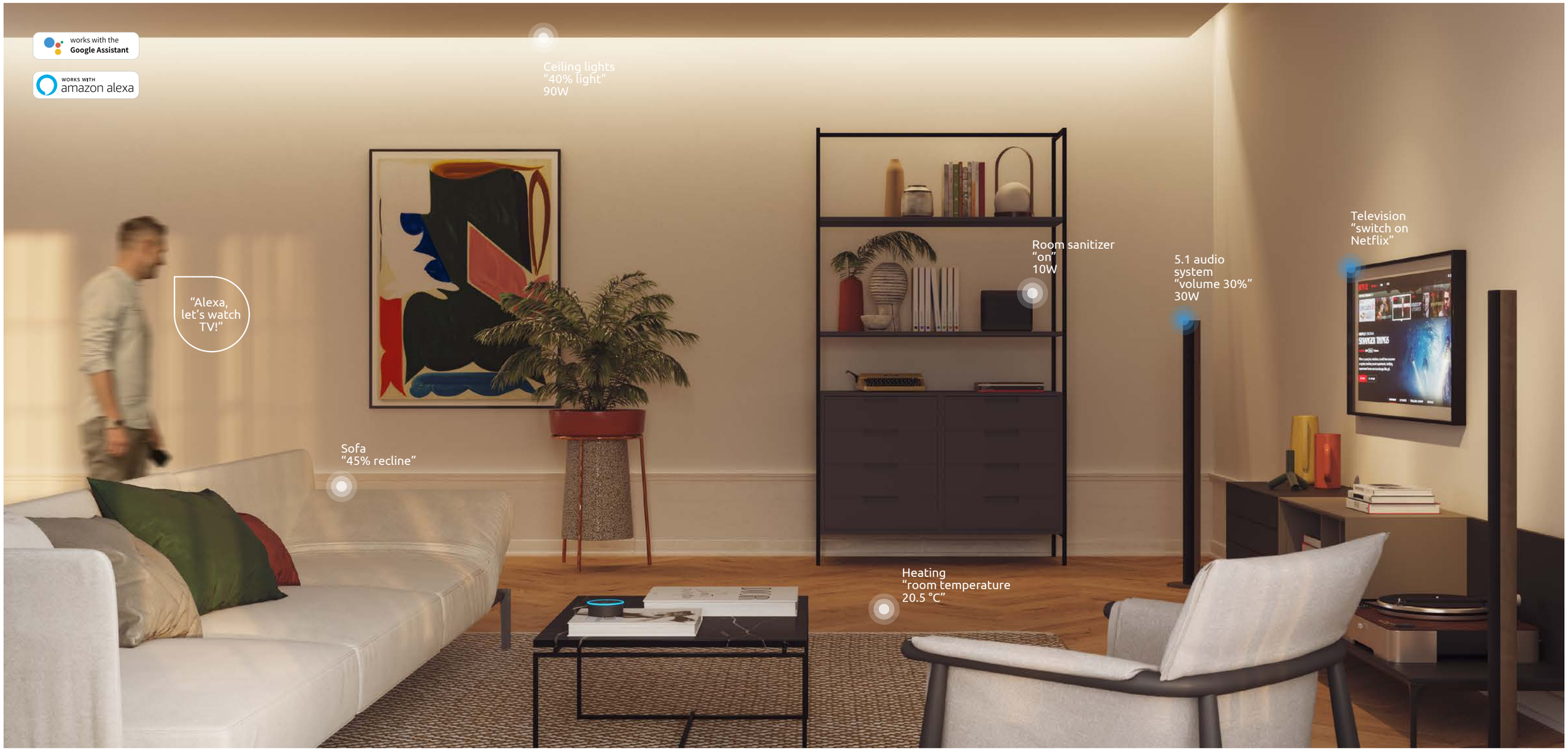
Converts the home, not the electrical system.

Rialto Active is so smart as to invisible.

Our products are **used in conjunction with existing devices to make them smart** and provide more ways of controlling them. The effect is to create a wireless network allowing full cooperation between the various systems of the series that are installed. Lights, blinds, curtains, watering... all under the same control.

works with the **Google Assistant**

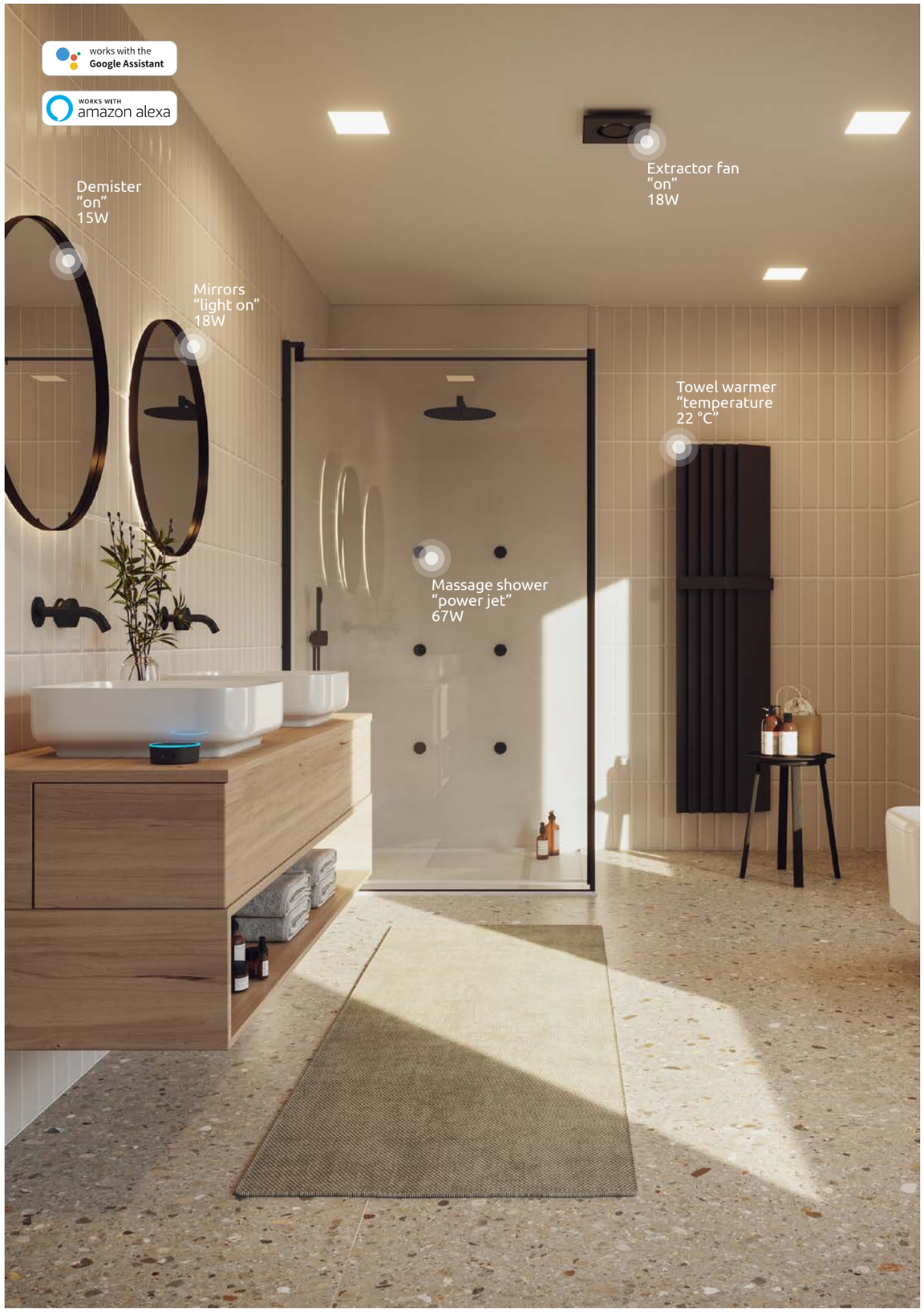
WORKS WITH amazon alexa



From living room to smart room: the intelligent living room.

The living room is the part of the home made for relaxation and lounging on the sofa, or organizing convivial evenings with friends. The lights, the TV, sound system, air purifier and underfloor heating can all be controlled in a matter of seconds from a single platform and using just one voice command.

This is what a smart home is all about: **simplifying everyday activities and improving the quality of life** enjoyed by people.



IoT in that most private of places: the bathroom.

With Rialto Active, even the bathroom can be turned into a smart environment. **Using a simple voice command, you can control** the extractor fan, lighting, towel warmer, whirlpool tub and massage shower, as well as keeping **an eye on the energy they all use.**

If the system is integrated with 4-noks® Elios4you, hot water can be produced by self-consuming energy sourced from your own photovoltaic system. In short, free hot water, lower fuel bills, and an environment-friendly home.

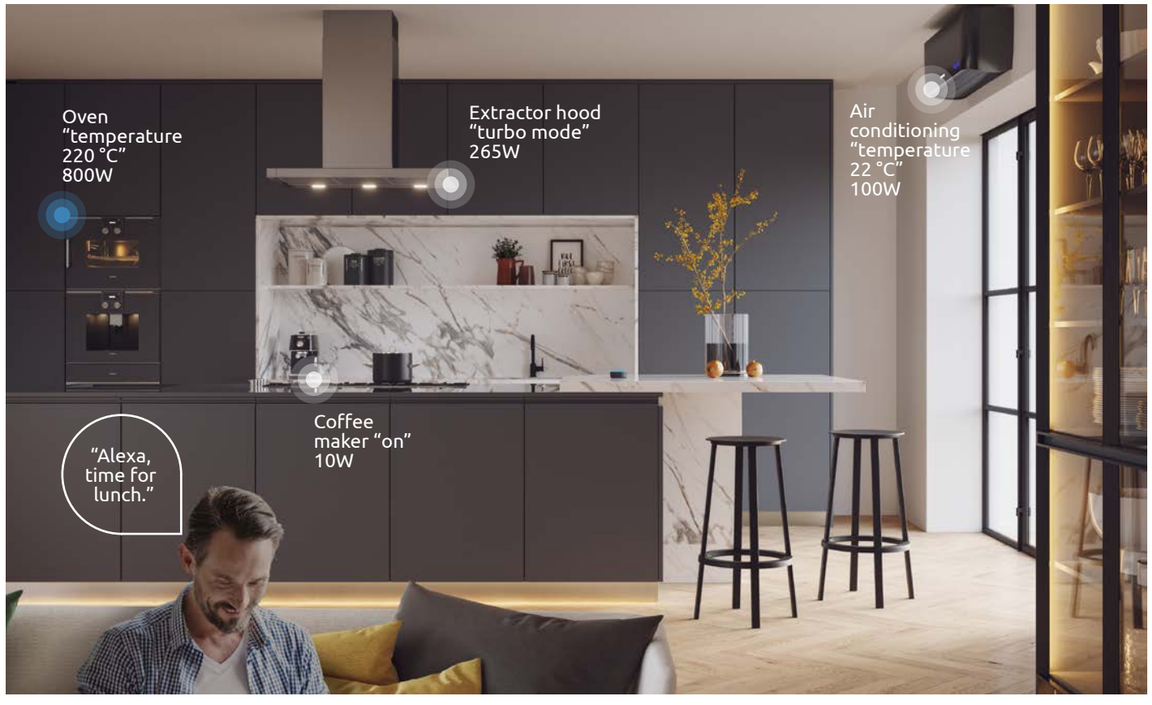
A healthier and greener bathroom

With Rialto Active connected to the **4-noks® Elios4you** system, self-consumption can be exploited to keep the bathroom just as you like it, using exclusively renewable energy.

Heating, sanitizing, dehumidifying and ventilation appliances can be operated automatically and at no cost. And if you have an electric water heater, there will be free hot water too!

A smart kitchen is a functional kitchen.

The kitchen is the heart of the home, where the family comes together. A place we see as practical, comfortable and inviting. **With a simple vocal command, even a complex process can be set** in motion automatically.



Do you want to turn on the extractor hood even though your hands are busy? To find the oven hot when you get home from work? The curtains drawn and the shutters down? To have your coffee ready in the morning? Or turn on the music you like while you’re cooking? **With Rialto Active, all this become easier than ever before.**

From day, you can enjoy sweet dreams: the bedroom has become smart.

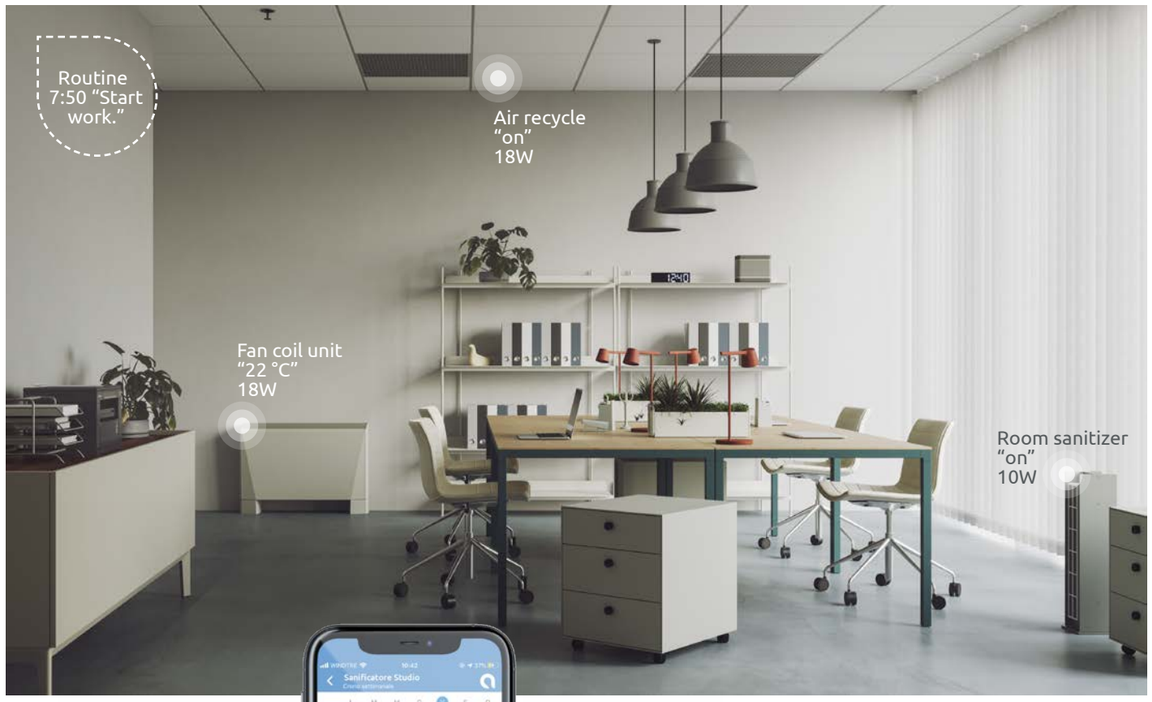
Those daily routines, morning and evening, **are condensed into just a few quick commands.** The window shutters roll up and roll down automatically, in coordination with activation of the air conditioning to freshen up the room.

The bed is motorized to guarantee total comfort and the lights are dimmable, so that the level of brightness in the room can be modulated, and blinds or curtains can be opened and closed whenever it suits, even if you’re out and about.

Our **Rialto Active system adapts to the lifestyle** of people, **helps with management** of the home in real time and remotely, **reduces the environmental impact** of energy usage and increases the potential of a technology available to everyone.

Not only smart home. The ideal system for workplaces too.

The Rialto Active system is also ideal for offices, B&Bs and other small businesses or agencies. A smart system **can make the workplace a safer and more functional environment,** where energy consumption is monitored continuously, fully optimized and geared to the nature of the activity and the number of people involved.



Air handling and HVAC systems, room sanitizer, monitoring of energy usage: everything is brought under smart control, as befits a flexible place of work, adaptable to the needs and preferences of its professionals occupants.

astrel® echoback

Did it really close? No more worries with Echoback®.

With Rialto Active you can rest assured. Our system includes a genuinely unique feature: Echoback®. This special functionality **tells you whether or not a command** given from the App **has in fact been carried out.**

Is the heating actually working? Will the lights really have been switched off? Has the dishwasher started up? With Echoback®, there will be no more doubts of this kind. If the garage door gets stuck, a light bulb burns out or the boiler fails to start up, Rialto Active will warn you without delay, generating a voice alert or a message on your smartphone.

No end of applications

There are two possible approaches to adopt when turning a home into a smart home: **conversion or integration.** In the former instance, modules and devices can be added to things to make them smart. In the latter, on the other hand, by building Astrel technology natively into the system or the device, this will already be integrated with Rialto Active when deployed.

Conversion

Traditional thermostat

Converted to smart by replacing with a Rialto thermostat, with no change to the system

Timer thermostat

Converted to smart by replacing with a Rialto timer thermostat, with no change to the system

Radiator

Converted to smart by adding a wireless thermostatic valve

Towel warmer

Converted to smart by adding a Rialto wireless relay

Fan coil unit

Converted to smart with a Rialto Fandree plus thermostat

Motorized roller blind

Converted to smart with an Ekko Shutter module, retaining the wall mounted pushbutton controls

Conversion

Motorized shutter

Converted to smart with an Ekko Shutter module, retaining the wall mounted pushbutton controls

Lighting

The lights and the brightness level can be managed in smart mode using Ekko wireless modules, retaining the existing switch or other control device

Electric water heater

Converted to smart with a wireless module for programming on/off times and with operation using solar energy

Safety solenoid valve

In the event of leaks or freezing temperatures, increased safety is assured by a smart and remote control that shuts off the water supply

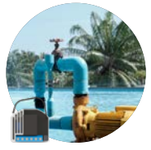
Power socket

Converted to smart by connecting to Ekko module housed internally of the socket itself

Motorized awning

Converted to smart with a wireless Ekko Shutter module, retaining the wall mounted pushbutton controls

Conversion



Pool pump

Filtration becomes programmable in smart mode, ensuring the pool stays permanently clean and at lower cost

Watering

Converted to smart using wireless Ekko modules that will activate solenoid valves and irrigation pumps to best advantage

Electric gate/door lock

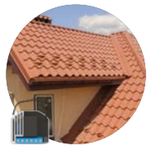
Converted to smart installing an Ekko module in parallel with the wall-mounted pushbutton

Motorized garage door

Converted to smart installing an Ekko module in parallel with the traditional wall-mounted open/close pushbuttons

Electric vehicle battery charger

With the Ekko module and the Elios4you system, an electric car can be recharged using solar energy



Monitoring of leaks and high temperatures

Using easy-to-install smart strip sensors, the building can be monitored round the clock for damp and abnormal temperatures

Integration

Room sanitizer

Using Astrel® technology, your air sanitizer is turned into a smart device and integrated into the Rialto Active system

Recliner

Using Astrel® technology, your reclining armchair is turned into a smart device and integrated into the Rialto Active system

Motorized bed

Using Astrel® technology, your motorized bed frame is turned into a smart device and integrated into the Rialto Active system

Extractor hood

Using Astrel® technology, your kitchen extractor hood is turned into a smart device and integrated into the Rialto Active system

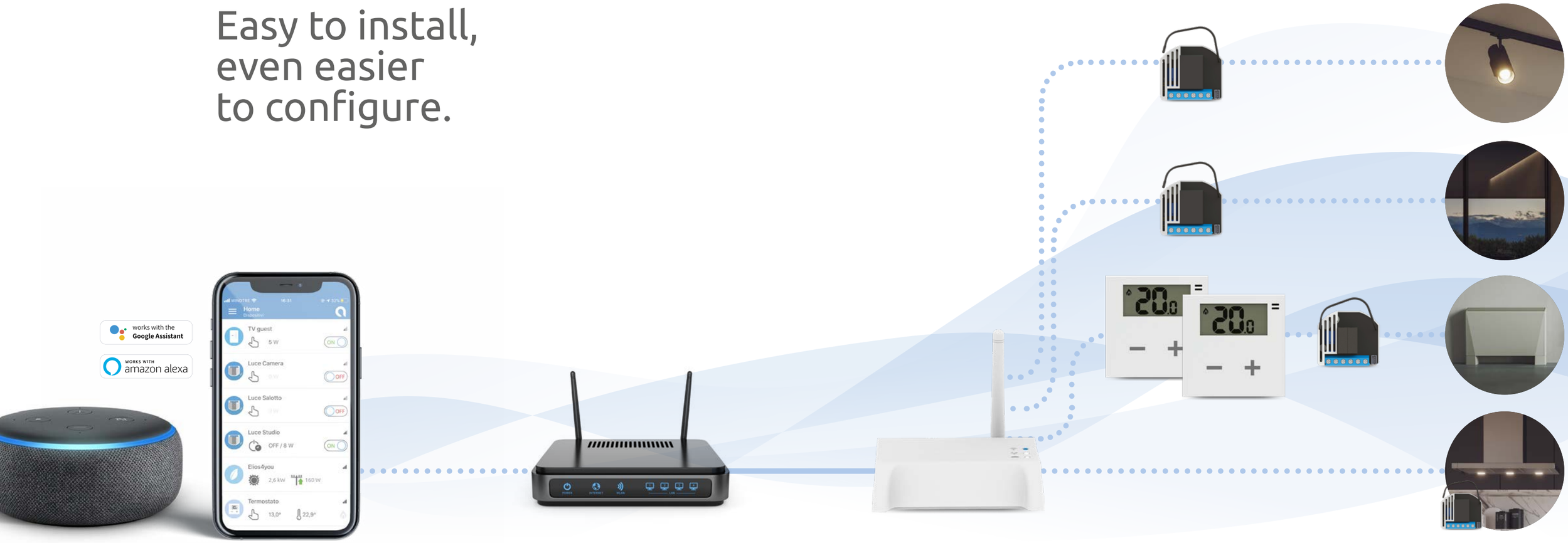
Fans

Using Astrel® technology, your forced air ventilation or extraction system is activated in smart mode and integrated into the Rialto Active system

Mirror

Using Astrel® technology, your mirror with built-in light and demist is turned into a smart device and integrated into the Rialto Active system

Easy to install, even easier to configure.



Just a few simple but powerful connections finally make living in a smart home a reality. The green home that adapts to your lifestyle.

With the Rialto Active system, **installation and configuration procedures are simplicity itself.** Any dwelling can be turned into a true smart home in a matter of minutes, and **anyone can do it.**

Simply connect the Whitebox hub to the router installed in the home, then with the aid of the Rialto Active App or your favourite voice assistant, **you can start living straight away in the smart home of the future** and organize everything just how you want it.

Controlling the lights, room temperature, watering system, household electrical appliances... Now it will all be possible with a tap of the finger or a voice command.

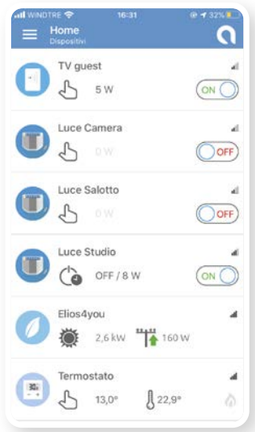
By creating routines, you can make the most of IoT technology and optimize your energy usage: operation of the awning is piloted by the ambient light sensor, the shutters are lowered to limit the impact of direct sunlight, and the thermostat-controlled air-conditioning system runs on energy provided by your solar panels.

"Alexa, cool the living room"

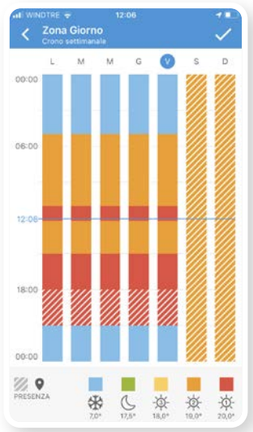
Routine

Thermostat | Shutters | Air conditioning

An App to control everything.



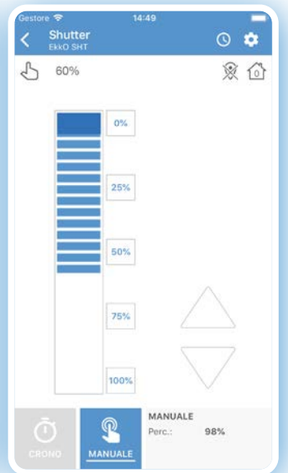
Total control over all smart components of the system, in real time.



Seven day program selectable independently for each single device.

Immediate check on effective outcome of commands, with alert if not successful.

Real time display of energy consumption with meter reading in kWh and €.



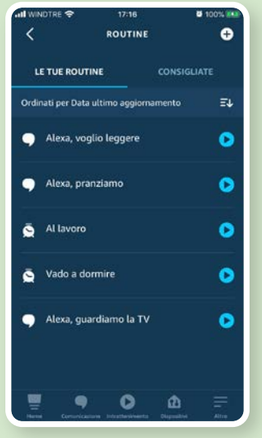
Opening and closing movement of motorized shutters, total or partial, programmable with timer.

With the App, all the rooms and all the things present in the smart home **can be managed easily** and with a few finger-taps. The clean and uncomplicated interface, the creation of customized programs, the tracking of energy usage and the speed of response even when controlled remotely... management of the home could not be simpler.

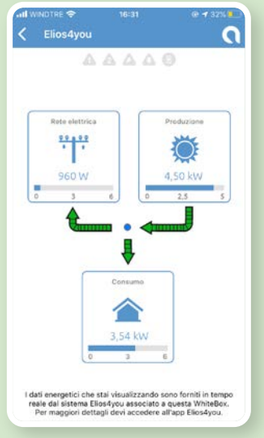
works with the **Google Assistant**

WORKS WITH amazon alexa

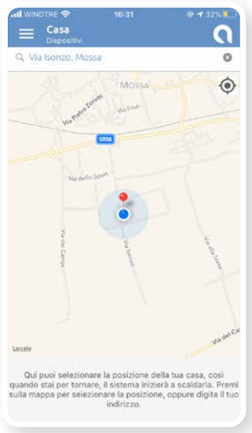
In the case of integration with 4-noks® Elios4you, programs can be organized on the basis of energy put in or drawn from the electricity grid.



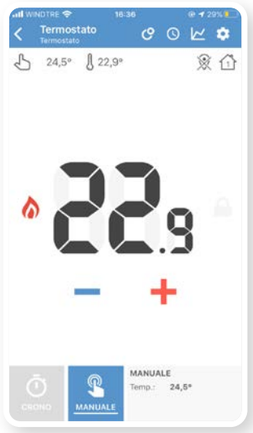
Creation of preset dedicated programs based on habits, routines and everyday activities.



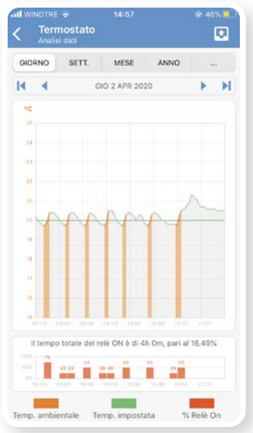
Real time display of PV energy production, energy usage and connection to grid.



Programs can be based on geolocation, so as to optimize energy consumption.



Check on heating/ cooling temperature and programming data.



Control of heating system: on/ off status, set temperature and measured temperature.

Whitebox

Rialto hub

works with the Google Assistant

WORKS WITH amazon alexa

Control unit of the Rialto system, configurable via App, allowing the user to manage multiple ZigBee devices, save settings and store operating data.

Technical data

Code	**ZR-GW-WB-RI**
General specifications	**Ethernet-ZigBee gateway for connection to router**
Power supply	**5 V= 0.4 A, 2 W power adapter, supplied with product**
Connections	**1 x RJ45 Ethernet port; 1 x micro USB for power supply**
Max n° Rialto devices supported	**32**
Status display	**3 x operation diagnostic Led**
Router compatibility requirements	**DHCP server function enabled at router UDP broadcast function enabled at router Active Internet connection**
Radio specifications	**2405 MHz to 2480 MHz**
ZigBee profiles	**Home Automation Profile**
Radio range	**Up to 20 m indoors**

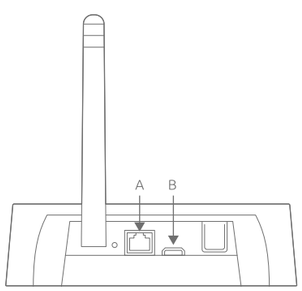
Plus points

- Immediate configuration on local network by virtue of ethernet connection to router
- ZigBee network coordinator with external antenna for high radio range
- Data of connected devices saved to log

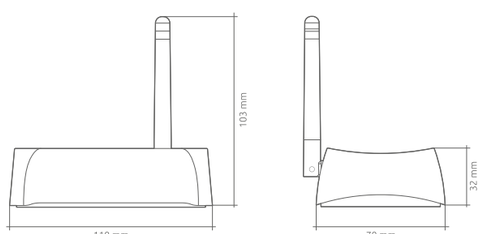
App-controlled functions

- Multibox: facility of controlling multiple hubs from the same App/Account
- Compatible with Amazon Alexa™ and Google Home™ voice assistants
- Compatible with 4-noks® Elios4you

Technical drawings



A ethernet port
B micro USB port



Ekko 1RD

Flush-mounting module with dry contact relay

Flush-mounting wireless module with 1 voltage-free contact, coupled with existing manual controls (conventional or pushbutton switches) to enable smart management of any device with digital input or electrical loads (on/off).

Technical data

Code	**ZR-F-1RD-RI (dry contact relay)**
Power supply	**110 - 240 Vac ±10%, 50/60 Hz, (24-30 Vdc)**
Rated current of a.c./d.c. load (resistive load)*	**1 x 10 A**
Rated power of load (resistive)	**2400 W (240 Vac), 1100 W (110 Vac), 240 W (24Vdc)**
Radio range	**Up to 20 m indoors**
Power consumption:	**0.4 W**
Degree of protection	**IP20**
Radio specifications	**2405 MHz to 2480 MHz**
ZigBee profiles	**Home Automation Profile (HA1.2)**
Rialto network radio repeater function	**Yes**

*) In the case of a non-resistive load, be sure to verify cos φ value and, if necessary, apply a load of less than the nominal rated value.

Plus points

- Compact dimensions: suitable for all back boxes
- Compatible with all types of switches/ pushbuttons, regardless of brand
- Flexibility of application thanks to dry contact relay

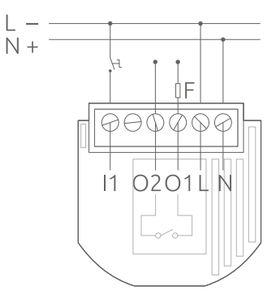
Typical applications

- Remote boiler contact, operation of contactors, contact for digital inputs, integration with third party systems

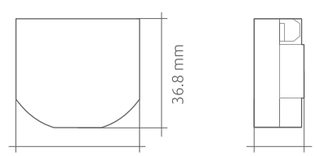
App-controlled functions

- Manual or programmed on/off control
- Programming with photovoltaic self-consumption function (requires installation of 4-noks® Elios4you)
- Programming with geo function
- Configuration of bistable or monostable output (1s – 15min)

Technical drawings



N Neutral (+Vdc)
L Phase (Ø V)
O1 Electrical load power input
O2 Electrical load power output
I1 Input n° 1 connected to wall switch
F Fuse 10 AT/250 V



Ekko 1R / 2R

Flush mounting module with single/dual relay

Flush mounting module with 1 or 2 x wireless relay, coupled with existing manual controls (conventional or pushbutton switches) to enable smart management of electrical loads (on/off).

Technical data

Code	**ZR-F-1R-RI (1 relay version) - ZR-F-2R-RI (2 relay version)**
Supply voltage	**110 - 240 Vac ±10%, 50/60 Hz, (24-30 Vdc)**
Rated current of a.c./d.c. load (resistive load)*	**ZR-F-1R-RI (1 relay version): 1 x 10 A ZR-F-2R-RI (2 relay version): 2 x 4 A**
Rated power of load (resistive) *	**ZR-F-1R-RI (1 relay version): 2300 W (240 Vac), 1100 W (110 Vac), 240 W (24Vdc) ZR-F-2R-RI (2 relay version): 2 x 940 W (240 Vac), 2 x 440 W (110 Vac), 2 x 96 W (24Vdc)**
Power consumption	**0.4 W**
Radio specifications	**2405 MHz to 2480 MHz**
ZigBee profiles	**Home Automation Profile (HA1.2)**
Radio range	**Up to 20 m indoors**
Rialto network radio repeater function	**Yes**

*) In the case of a non-resistive load, be sure to verify cos φ value and, if necessary, apply a load of less than the nominal rated value.

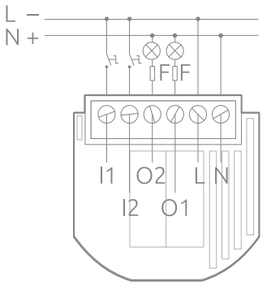
Plus points

- compact dimensions: suitable for all back boxes
- compatible with all types of switches/ pushbuttons, regardless of brand
- built-in precision energy meter

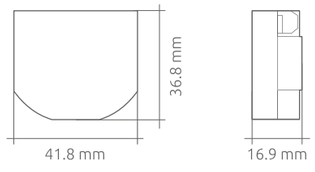
App-controlled functions

- Various control options including manual and/or timer and/or voice assistant
- Display of instantaneous or historical energy consumption
- Energy meter with usage calculation, resettable
- Compatible with Astrel® Echoback® function

Technical drawings



N Neutral (+Vdc)
L Phase (Ø V)
O1 Output connected to electrical load n° 1
O2 Output connected to electrical load n° 2 **(2R version only)**
I2 Input connected to wall switch n° 2 **(2R version only)**
I1 Input connected to wall switch n° 1
F Fuse 4 AT/250V (2R version) - 10 AT / 250V (1R version)



Ekko Shutter

Flush-mounting module for motorized shutters

Flush mounting module for smart management of motorized shutters/blinds, in conjunction with existing interlocked switch or pushbutton controls.

Technical data

Code	**ZR-F-SHT-RI**
Supply voltage	**110 - 240 Vac ±10%, 50/60 Hz, (24-30 Vdc)**
Rated current of a.c./d.c. load (resistive load)*	**2 X 4 A(240 Vac)**
Rated power of load (resistive)*	**2 X 940W (240 Vac)**
Power consumption	**0.4 W**
Radio specifications	**2405 MHz to 2480 MHz**
ZigBee profiles	**Home Automation Profile (HA1.2)**
Radio range	**Up to 20 m indoors**
Rialto network radio repeater function	**Yes**

*) In the case of a non-resistive load, be sure to verify cos φ value and, if necessary, apply a load of less than the nominal rated value.

Plus points

- 2 x 4 A / 230 V relay (resistive load)
- compatible with all back boxes
- Energy meter with usage calculation, resettable
- Compatible with Astrel® Echoback® function

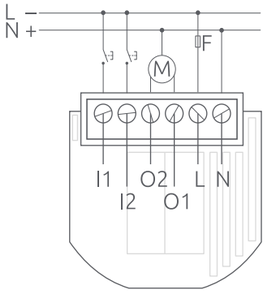
App-controlled functions

- Remote control of tubular electric motors with the two directions of rotation (Up/Down) powered separately

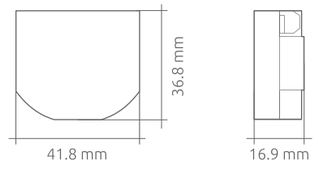
for:

- Shutters
- Folding arm awnings
- Roller blinds
- Projection screens

Technical drawings



N Neutral (+Vdc)
L Phase (Ø V)
O1 UP motor output
O2 DOWN motor output
I1 UP pushbutton input
I2 DOWN pushbutton input
F Fuse 4 AT/250 V



Ekko Dimmer

Flush-mounting dimmer

Wireless flush mounting module used to control lighting with dimmable lamps, allowing smart management of one or two manual pushbuttons.

Technical data

Code	**ZR-F-DIM-RI**
Supply voltage	**110 - 240 Vac ±10%, 50/60 Hz, (24-30 Vdc)**
Rated current of a.c./d.c. load (resistive load)*	**0.6 A/240 Vac, 0.85 A/30 Vdc**
Rated power of load (resistive)	**140 W (240 Vac), 20 W (24Vdc)**
Power consumption	**0.4 W**
Radio specifications	**2405 MHz to 2480 MHz**
ZigBee profiles	**Home Automation Profile (HA1.2)**
Radio range	**Up to 20 m indoors**
Rialto network radio repeater function	**Yes**

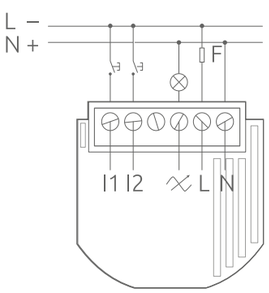
Plus points

- Rated power 140 W / 230V max
- Compatible with dimmable incandescent, halogen and Led lamps
- Retains management using manual pushbutton control
- Suitable for all back boxes

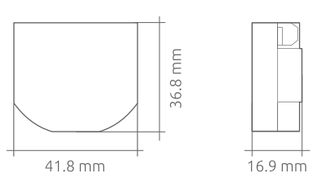
App-controlled functions

- Manual or automatic remote control
- Operation with voice commands using Amazon Alexa™ and Google Assistant™
- Daily and weekly programming via App, with facility of setting different brightness levels
- Display of energy consumption (instantaneous and historical)

Technical drawings



N Neutral (+Vdc)
L Phase (Ø V)
Output connected to electrical device
I2 Wall switch n° 2
I1 Wall switch n° 1
F Fuse 630 mA/250 V



Fandree

Module for fan coil units
3 speeds and 0-10V

Wireless module enabling smart management of fan coil units with no changes made to the existing system. Installation of a Rialto thermostat is required.

Technical data

Code	**ZR-FAN.D-RI**
Supply voltage	**110 - 240 Vac ±10%, 50/60 Hz**
Outputs	**3 x speed relay** **1 x valve logic relay** **1 x 0-10V output**
Maximum rated current of a.c./d.c. load	**4 x 5A @ 240 Vac / 4 x 5A @ 30 Vdc**
Rated power of load (resistive or inductive)	**1385 VA @ 230 Vac power factor 0.4 min / 150 W @ 30 Vdc**
Inputs	**1 x external NTC probe input** **1 x Aux input**
Physical interface	**1 x Service button** **1 x Indicator Led**
Power consumption	**0.8 W**
Radio specifications	**2405 MHz to 2480 MHz**
ZigBee profiles	**Zigbee HA 1.2**
Radio range	**Up to 20 m indoors**
Wireless repeater	**Yes**

Plus points

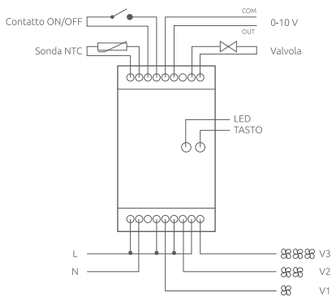
- Provides smart management of traditional fan coil units*
- Control of multiple fan coil units with single thermostat
- Compatible with fan coil units having 3 speeds or 0-10V input
- Auxiliary input

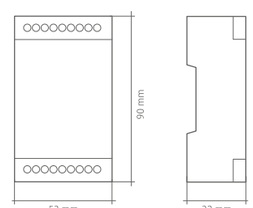
*requires pairing with a Rialto thermostat to enable programming

App-controlled functions*

- Remote control
- Seven-day programming of temperature and speed
- Logical pairing of one or more fan coil modules

Technical drawings





Smart Plug

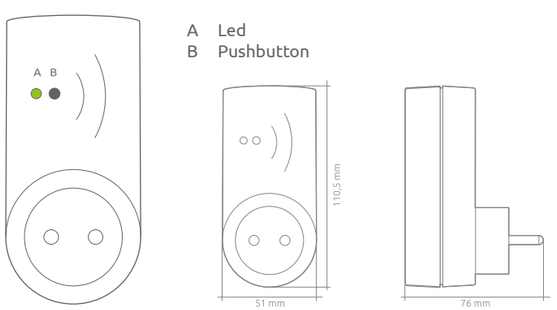
Wireless pass-through socket

The Rialto Smart Plug is a multifunction, compact and easy to use device that enables users to monitor and control household electrical appliances in their homes from any location anywhere. Thanks to the facility of seven-day programming, energy can be saved while people are out at work, or sleeping. In addition, users can easily check on energy consumption or switch the connected device on and off.

Technical data

Code	**ZR-PLUG-EU-RI**
General specifications	**ZigBee wireless pass-through socket, Schuko standard with built-in energy meter**
Power supply	**90/230Vac; 1W; 50/60 Hz**
Measurements	**Power consumption [kWh]; active power [W]**
Control relay	**Contacts 230Vac; max 13A (resistive load)**
Radio specifications	**2.4 GHz**
ZigBee profiles	**Zigbee HA 1.2**
Radio range	**Up to 20 m indoors**
Zigbee network repeater function	**Yes**

Technical drawings



Smart Switch/ Relay

Wall-mounting wireless module with dry/normal relay contact

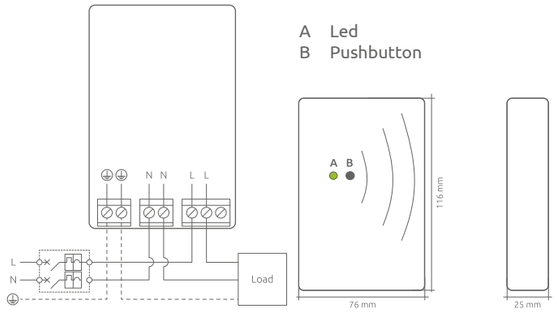
Rialto wall-mounted Smart Relay/Switch devices are equipped respectively with a voltage-free/live output contact and used to control a compatibly configured electrical load/appliance.

Technical data

Code	**ZR-RELAY-RI (voltage free contact) ZR-SWITCH-RI (live contact)**
General specifications	**ZigBee wireless SPST switch, with built-in energy meter***
Power supply	**90/230Vac; 1W; 50/60 Hz**
Measurements	**Power consumption [kWh]*; active power [W]***
Control relay	**Contacts 230Vac; max 13A (resistive load)**
Radio specifications	**2.4 GHz**
ZigBee profiles	**Zigbee HA 1.2**
Radio range	**Up to 20 m indoors**
Zigbee network repeater function	**Yes**

*(ZR-SWITCH-RI only)

Technical drawings



Termostato

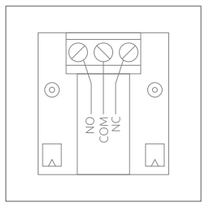
Battery-powered wireless thermostat

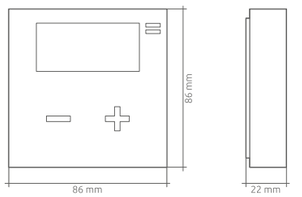
Battery-powered wireless thermostat with dry contact relay and manual controls, allowing lockout of keypad (from App) and summer/winter operating mode.

Technical data

Code	**ZED-TTR2-RI**
General specifications	**Battery-powered wireless thermostat with display and touch technology**
Power supply	**Alkaline battery (2x) AA 1.5V Battery life: >2 years**
Control relay	**NC/COM/NO contacts 250V 5A Cos(Φ)=1 resistive load**
Temperature	**Setting range: +7 – 50 °C Resolution: 0.1 °C, Accuracy: ±0.5 °C**
Radio specifications	**2405 MHz to 2480 MHz**
ZigBee profiles	**Zigbee HA 1.2**
Radio range	**Up to 20 m indoors**
Wireless repeater	**No**

Technical drawings





Plus points

- Battery powered
- NC-C-NO dry contact relay
- Wall mounting
- Summer/winter function
- Keypad lockout function
- Master function allowing activation of 1 or more connected devices (relays and/or thermostatic valves)

App-controlled functions

- Manual control or seven-day programming
- Programming based on geolocation
- Programming with self-consumption function (requires installation of 4-noks® Elios4you)
- Temperature and usage graph (for energy consumption analysis)

Danfoss

Danfoss Ally™

code: ZED-DNF-RI

The Zigbee radiator thermostat

The Zigbee-certified Danfoss Ally™ thermostat for radiators is completely integrated with the Rialto Active system and easily managed. Installation requires a mere 30 seconds!

It can be programmed independently or manually using the hand wheel, button and built-in LCD display, or interlocked to a Rialto thermostat (slave configuration).

The thermostat is powered by batteries which, thanks to low-power Zigbee technology, will last up to two years.

Various adaptors are available on the market to fit thermostatic valves in widespread use.

Energy Meter 1~

Single phase Energy Meter

Wireless power and energy meter for single-phase systems/loads, featuring ease of installation thanks to the split core current transformer utilized.

Technical data

Codes	**ZR-HM.W- RI (wall mounted)** **ZR-HM.D-RI (DIN rail mounted)**
Power supply	**90/230Vac 50/60 Hz; 1W**
Max measurable power	**15 kW**
Reading mode	**Split core Current Transformer (CT - included)**
Active power	**[W]**
Active energy	**[kWh]**
Radio specifications	**2.4 GHz, ZigBee HA 1.2**
Rialto network radio repeater function	**Yes**

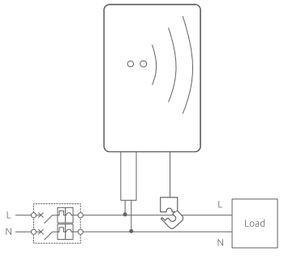
Plus points

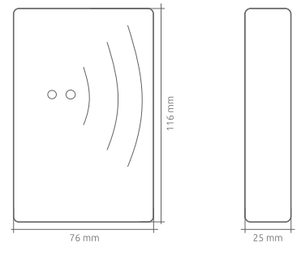
- wireless monitoring of energy usage by way of App
- simple installation with no disruption of system
- split core current transformer (CT)
- power measurement up to 15kW

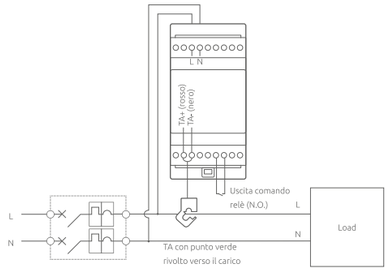
App-controlled functions

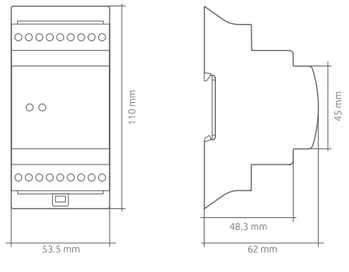
- instantaneous power consumption display
- usage log display
- resettable energy meter providing energy cost estimate expressed in €

Technical drawings









Energy Meter 3~

DIN rail mounted three-phase energy meter

Wireless power and energy meter for three-phase systems/loads, featuring ease of installation thanks to the split core current transformers utilized.

Technical data trifase

Code	**ZR-HM3-100-RI**
Power supply	**230 Vac 1.5 W 50/60 Hz**
Antenna	**external with SMA-RP connector**
Reading mode	**3 x split core Current Transformer (CT - included)**
Max current per phase	**100 A max**
Current transformer (CT)	**Internal diameter Ø15 mm**
Measurements	**Bidirectional active power [W]; Bidirectional energy [Wh]**
Radio specifications	**2405 MHz to 2480 MHz**
ZigBee profiles	**Zigbee HA 1.2**
Radio range	**Up to 20 m indoors**
Wireless repeater	**Yes**

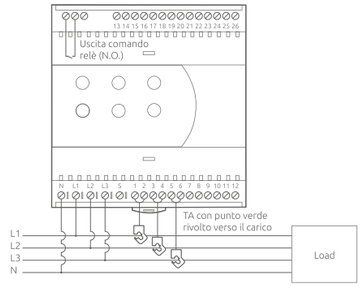
Plus points

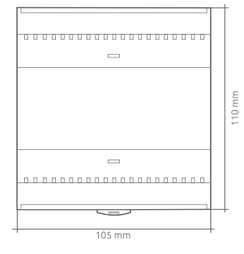
- wireless monitoring of energy usage by way of App
- simple installation with no disruption of system
- split core current transformer (CT)
- power measurement up to 100A per phase

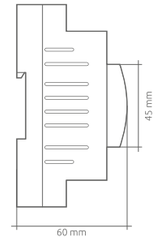
App-controlled functions

- instantaneous power consumption display
- usage log display
- resettable energy meter providing energy cost estimate expressed in €

Technical drawings







4-noks® Elios4you

Photovoltaic
monitoring
and self-consumption

Elios4you and Elios4you Smart are two monitoring and self-consumption devices for photovoltaic systems connected to single phase consumers with 12 kW max grid connection.

Technical data

General specifications	**Control system for single-phase photovoltaic systems with Wi-Fi connection and App for Android/ iOS**
Power supply	**230 Vac (±10%) 50/60 Hz 2 W**
Radio specifications	**Wi-Fi 802.11b/g/n**
Memory	**Data log up to two months, in the event of no connection to tablet, with sampling every 15 min**
Status displays	**8 x Led**
Current measurement	**With split core CT (internal Ø 15 mm max)**
Power measurement	**12kW max**
Antenna	**External, SMA RP screw connector (data transmission via Wi-Fi)**
Outputs	**Relay output (max 10 A @ 230 Vac) Control output 0-10 Vdc**
Inputs	**2 x voltage-free alarm contact (NO)**

NOTE: 4-noks Elios4you is also available in three-phase version for systems up to 100kW.

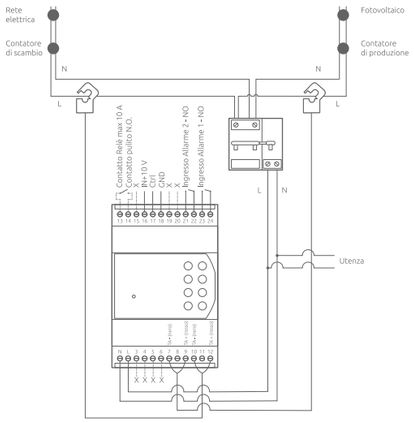
Plus points

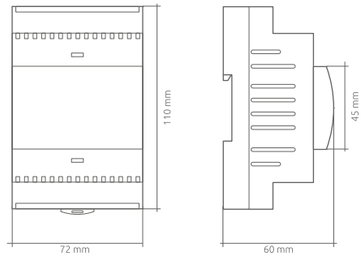
- suitable for all types of inverter
- for single-phase PV systems up to 12kW
- Wi-Fi connection with router
- internal data log memory (2 months)
- compatible with Rialto Active system for optimization of energy usage

App-controlled functions

- display of energy production/usage/ connection to grid
- data log available on cloud portal (optional)

Technical drawings





Notes

Notes

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