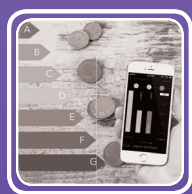


# SMART WIRELESS ELECTRO-INSTALLATION



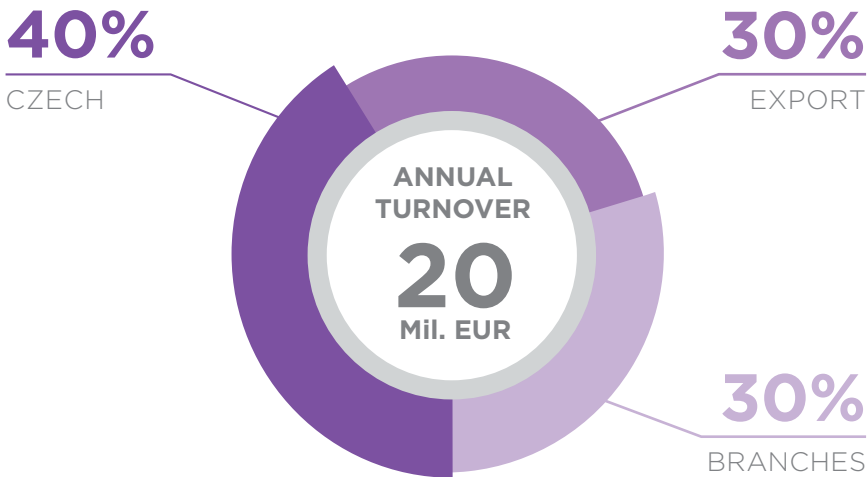
# ELKO EP, Holding

The company ELKO EP has been one of the leading European players in the field of residential and industrial electrical devices for more than 23 years. Since 2007, the company has been developing and producing its own system of Smart Home & Building Solutions called iNELS.

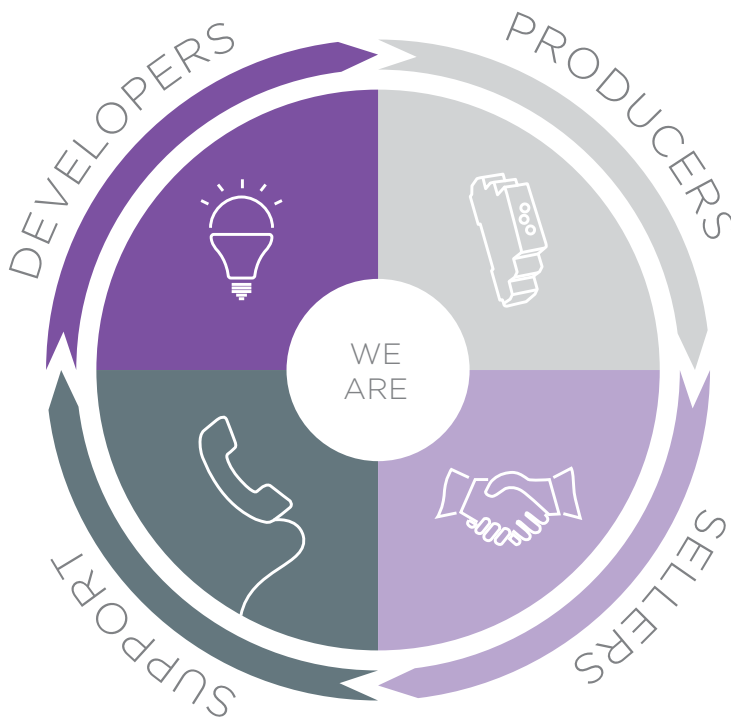
At present, ELKO EP employs nearly 300 people, exports to 70 countries around the world and already has 10 foreign branches. The company is justly proud to produce its own components, and to have its own development and innovation of new products. It is also able to offer its customers instantaneous distribution and rapid, flawless service. The company became the Company of the Year in 2012 and earned its place as one of the TOP 100 Czech companies.



# Facts and Stats



**3<sup>rd</sup> position**  
in Europe



**10**  
BRANCHES  
OVER THE WORLD

**70**  
EXPORTING  
COUNTRIES

**300**  
EMPLOYEES

**5 000**  
INELS INSTALLATION

**12 000 000**  
MANUFACTURED PRODUCTS

# Wireless electro-installation

## What are the benefits of using wireless control?

- Remotely switching of home appliances or electrical devices
- Light dimming, light scenes
- Controlling shutters, blinds and internal window blinds
- Controlling the entrance gate and garage door
- Manual or automatic control - according to a pre-set program
- Switching on/off home appliances depending on the response of sensors
- Response to (undesired) opening a window or a door
- Response to the movement of people (authorized and unauthorized)
- Saving energy thanks to lighting and heating regulation



RF Control - Wireless RF system is a unique solution of intelligent electrical installation especially for reconstructions of houses, apartments or wiring extensions. Installation can be performed easily without breaking or cutting into the walls. Units (actuators) can be installed directly into suitable wall boxes, lighting covers, switchboards and wherever installation allows you to do so.

Flexible location: ideal for installing in existing buildings, as well as for refurbished and new buildings: thanks to RF Control, you are not limited by the location of a switch, for instance when moving furniture. The wireless wall switch button may be glued to glass, mounted on a beam or just placed on a night table and easily moved elsewhere at anytime.

Controlling lights from your terrace or opening your garage? You will have the keychain - your portable controller - always ready!

The universal transmitter module converts up to 4 potential-free external inputs (buttons) to RF signal, facilitating the connection of the following devices to the system: door switches or buttons, electronic alarm sensors (fire, smoke, door detector...), bells, etc. Property protection and safety. A flood, temperature, fire or gas leakage sensor sends a signal to the actuator, which closes the water or gas supply, switches on ventilation, etc.

Receivers (actuators) may be mounted in an installation box, under the existing switch, light covers or ceiling, or on a DIN rail inside the switchboard.

A smart design of wireless wall switch buttons with plastic, glass, wood, metal or granite finish.



Switching el. appliances



Light dimming



Heating regulation



Air conditioning control



Roller blind control



Detector control

## SMART BOX FOR CONTROLLING YOUR ELECTRICAL INSTALLATION WITH YOUR SMART PHONE

It's used for controlling the electro-installation with your smart phone or tablet. Control options are through the Web browser or iHC application (Android).



## THE TOUCHING CONTROL UNIT „RF TOUCH“

RF Touch offers you complete control over the electro-installation. All these with the possibility of setting a weekly program, all automatically and wirelessly.



## REMOTE CONTROL „RF PILOT“ WITH OLED DISPLAY

With an excellent complement to the RF Control system, the remote control comes with an elegant design and an OLED display. Thanks to RF Pilot you have a comfortable control over the home devices and appliances.



# Energy management

Due to ever-rising energy costs, monitoring energy consumption is one of the most important aspects of a smart home.

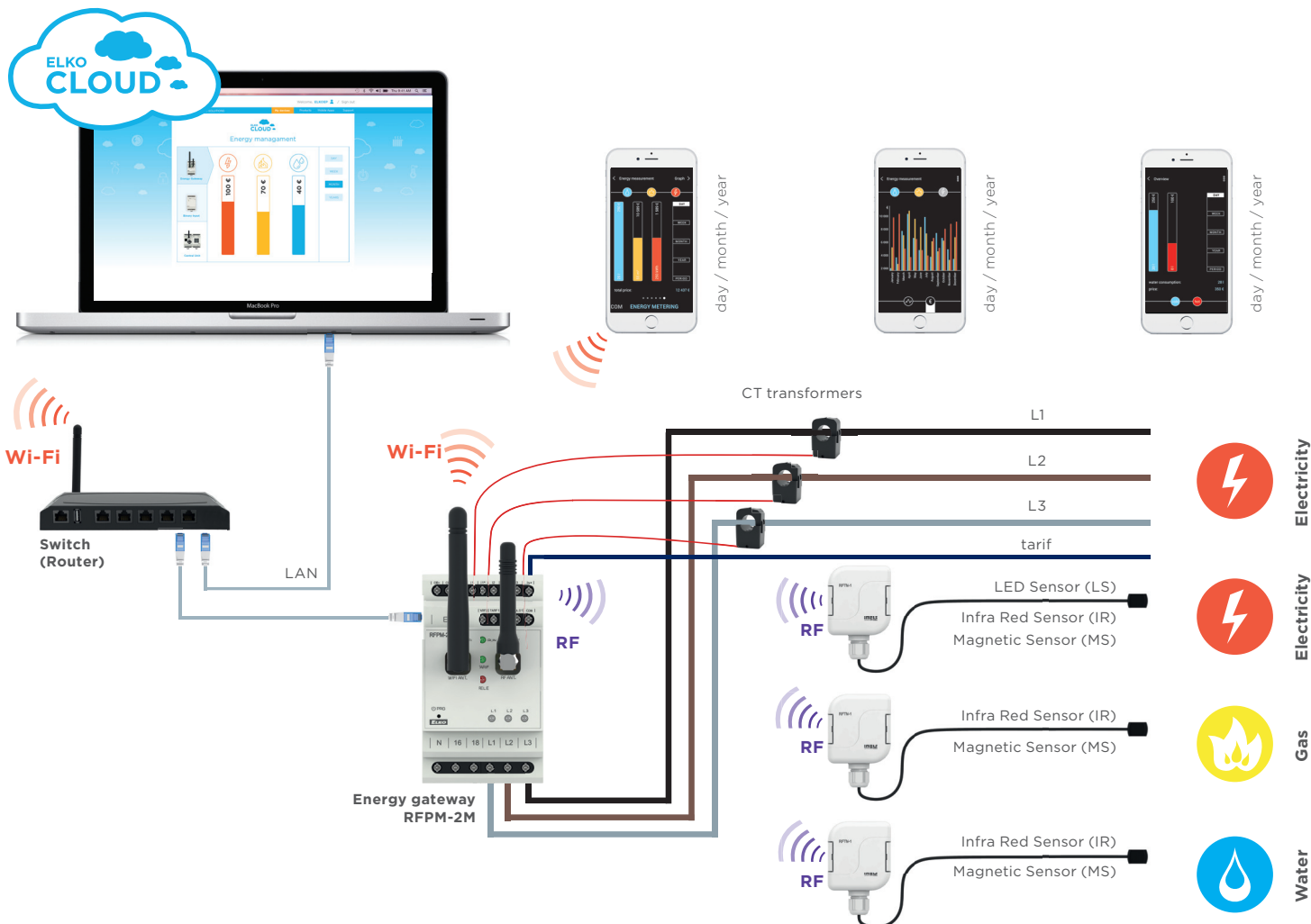
Wireless sensors are installed directly to the water meter or gas meter and by means of a concentrator at the electric meter, and information is sent to the Cloud for further processing. Data may be browsed through various filters in the Apps or Web browser.

It is also possible to set up notifications when critical parameter settings are exceeded and to switch on/off a certain device. Connecting to Smart Grid intelligent networks enables efficient electricity usage at optimal times.

## ELKO CLOUD

Your virtual data storage that you can use within the iNELS system for free, bringing you:

- storage for your system settings (settings of the RF smart box)
- data storage (consumed energy)
- remote control by smart phone without needing a public IP address.



Outdoor PTZ camera



# iNELS Wireless System



RF - radiofrequency protocol



Wi-Fi

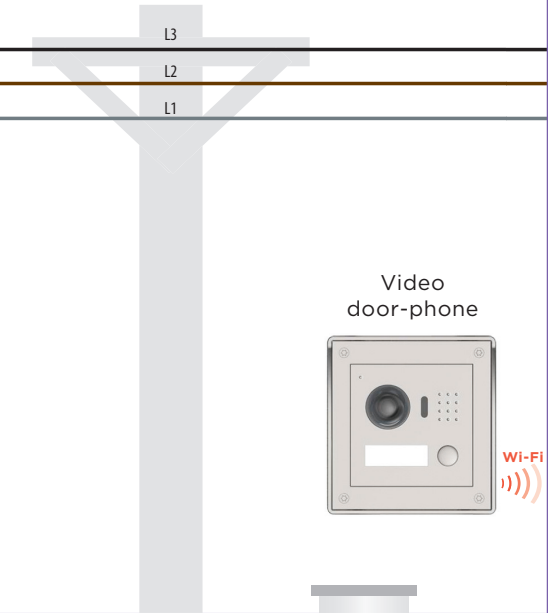
Indoor PTZ camera



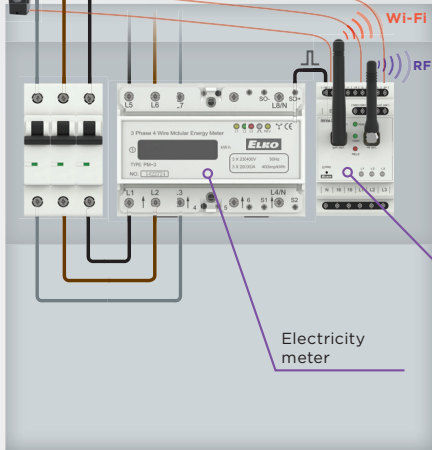
Indoor camera



Electricity panel meter



Video door-phone



Electricity meter

Energy gateway

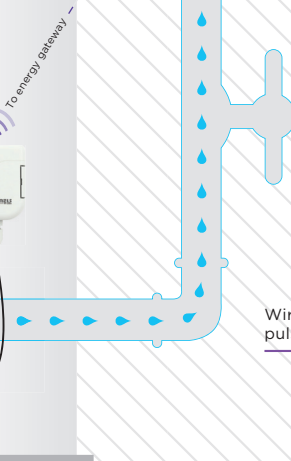


Wi-Fi Router



Water meter

Wireless pulse converter



To energy gateway



Gas meter

Wireless pulse converter

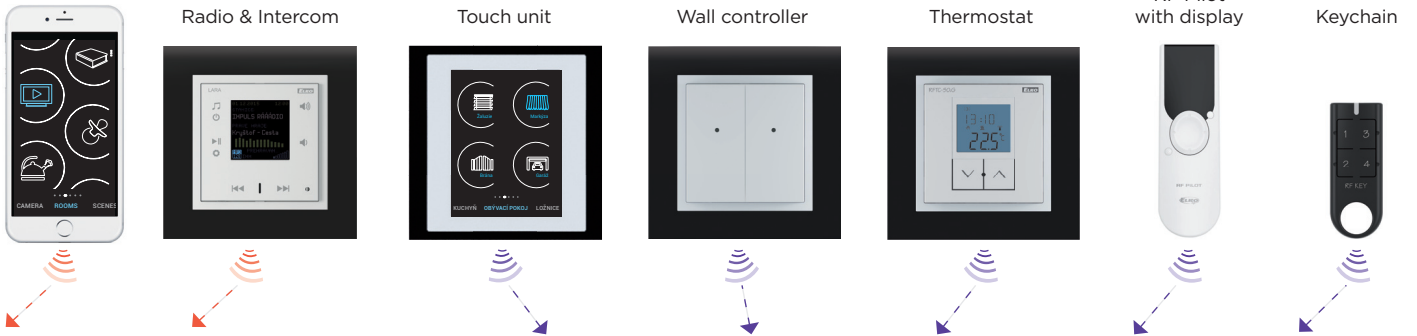


To energy gateway



**Controllers:**

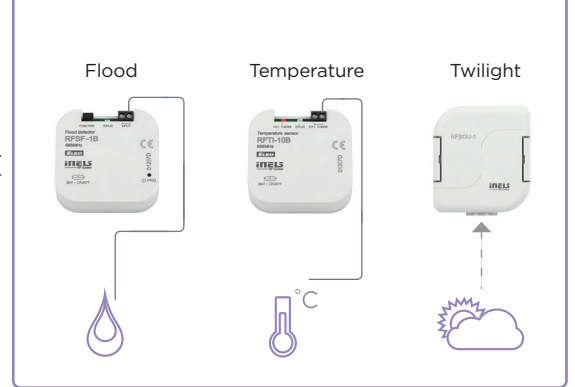
Application for the smart phone



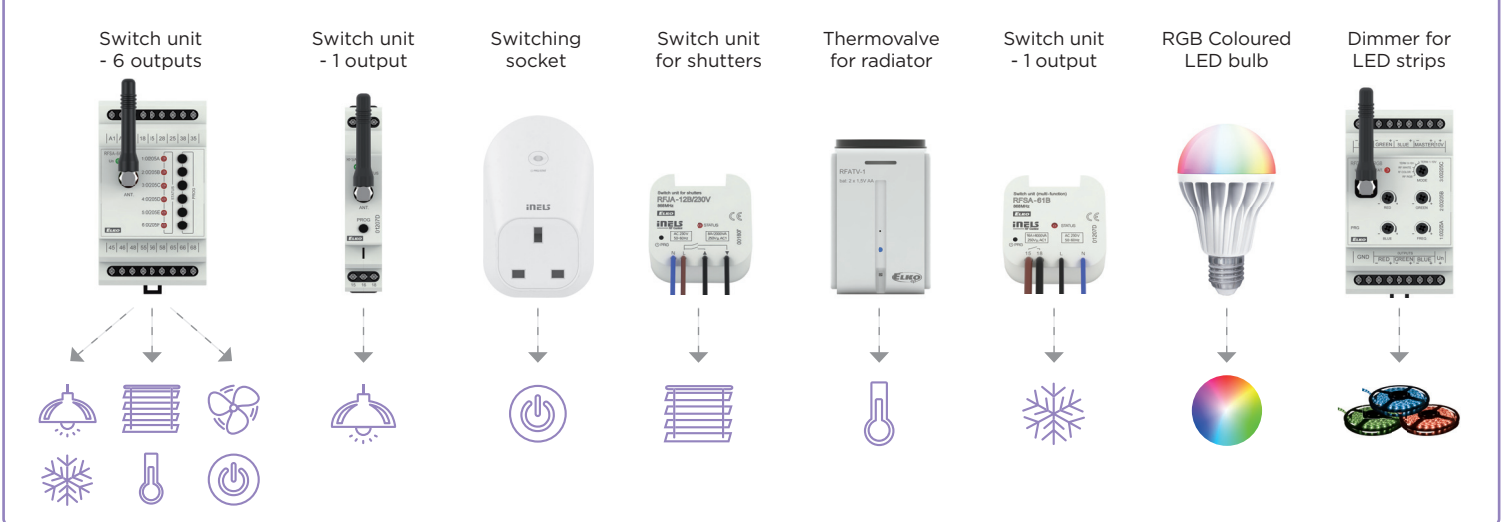
**Detectors:**



**Sensors:**

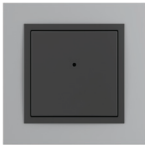


**Actuators:**

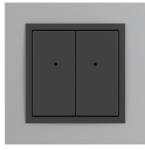


# Overview of wireless system units

## Controllers



**RFWB-20/G, RFWB-40/G**  
Wireless wall controller  
- 2 button      - 4 button



**RF Key**  
4 button controller  
- keychain



**RF Pilot**  
Wireless remote  
controller with display



**RFIM-20B**  
Wireless contact  
converter - 2 inputs



**RFIM-40B**  
Wireless contact  
converter - 4 inputs



**RFSG-1M**  
Wireless contact  
converter

## System units



**RF Touch-B**  
Wireless touch unit  
- flush mounted



**RF Touch-W**  
Wireless touch unit  
- surface mounted



**eLAN-RF-003**  
Smart RF box



**eLAN-RF-Wi-003**  
Smart RF box with Wi-Fi



**RFGSM-220M**  
Multifunctional GSM  
communicator



**RFRP-20**  
Repeater to extend  
the range



**RFPM-2M**  
Energy gateway

## Switches



**RFSA-11B**  
Wireless switch unit  
(single-function)  
- 1 output



**RFSA-61B**  
Wireless switch unit  
(multi-function)  
- 1 output



**RFSA-62B**  
Wireless switch unit  
(flush mounted)  
- 2 outputs



**RFSAI-61B**  
Wireless switch unit  
with the input  
(for a pushbutton)



**RFSA-61M**  
Wireless switch unit  
- 1 output



**RFSA-66M**  
Wireless switch unit  
- 6 outputs



**RFSC-61**  
Switching socket  
(multi-function)



**RFUS-61**  
Switch unit for outdoor  
use (multi-function)



**RFJA-12B/230V**  
Switch unit for shutters



**RFJA-12B/24V DC**  
Switch unit for shutters

## Dimmers



**RFDA-73M/RGB**  
Dimmer for coloured  
(RGB) LED strips



**RFDSC-71**  
Dimming socket  
(multi-function)



**RFDAC-71B**  
Analog controller  
0(1)-10V



**RFDEL-71B**  
Universal dimmer  
(flush mounted)



**RFDEL-71M**  
Universal dimmer  
(DIN rail mounted)



# Overview of wireless system units

## Lighting



**RFSOU-1**  
Wireless twilight switch



**RF-RGB-LED-550**  
Wireless coloured bulb



**RF-White-LED-675**  
Wireless white bulb

## Temperature control



**RFATV-1**  
Wireless thermo-valve



**RFSTI-11B**  
Switch unit with a temperature sensor (flush mounted)



**RFSTI-11/G**  
Switch unit with a temperature sensor



**RFTI-10B**  
Wireless temperature sensor



**RFTC-10/G**  
Simple wireless temperature controller



**RFTC-50/G**  
Wireless temperature controllers



**RFTC-100/G**  
Wireless temperature controllers

## Monitoring units



**RFSF-1B**  
Wireless flood detector



**RFTM-1**  
Wireless pulse converter

## Cameras



**iNELS Cam**  
IP camera



Supported video cameras

## Detectors



**RFSF-100 / SD-100**  
Smoke detector wireless / wireless



**RFMD-100 / MD-100**  
Motion detector wireless / wireless



**RFWD-100 / WD-100**  
Window / Door detector wireless / wireless

## Accessories



**FP-1**  
Flood probe



**TC TZ**  
Temperature sensors



**AN-I**  
Internal antenna



**AN-E**  
External antenna



**Telva**  
Thermodrive



**CT50**  
Current transformer



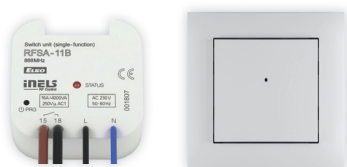
**LS, MS, IRS**  
LED sensor  
Magnetic sensor  
Infra Red sensor

# RF sets - combination of controllers and units

## Basic sets

### RFSET-SW2-Z1

- 1x Wireless switch unit RFS-A-11B
- 1x Wireless wall controller RFWB-20/G - white



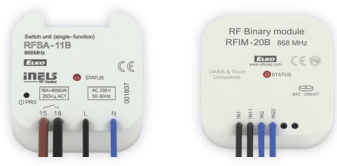
### RFSET-SK-Z1

- 1x Wireless switch unit RFS-A-11B
- 1x Keychan RF Key/B - black



### RFSET-SIM2-Z1

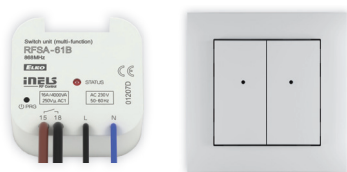
- 1x Wireless switch unit RFS-A-11B
- 1x Wireless contact converter RFIM-20B



## Multifunction sets

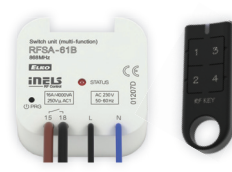
### RFSET-SW-F1

- 1x Wireless switch unit RFS-A-61B
- 1x Wireless wall controller RFWB-40/G - white



### RFSET-SK-F1

- 1x Wireless switch unit RFS-A-61B
- 1x Keychan RF Key/B - black



### RFSET-SMK-F1

- 1x Wireless switch unit RFS-A-61M with added antenna A-NI
- 1x Keychan RF Key/B - black



### RFSET-RGB-RFKEY

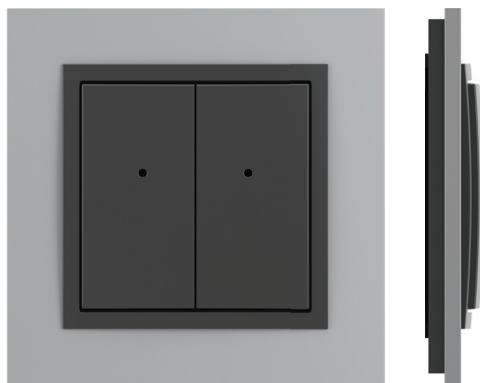
- 1x Wireless coloured bulb RF-RGB-LED-550
- 1x Keychan RF Key/B - black



# Catalogue content

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RFWB-40/G

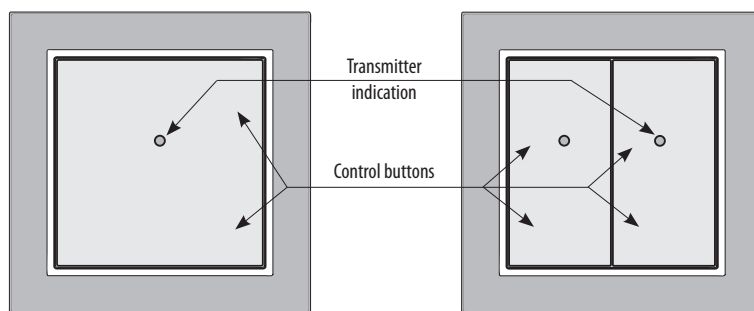
- The wireless controller is used to control switches and dimmers (lights, gate, garage door, blinds, etc.).
- **RFWB-20/G**: two buttons enable control of two units independently.
- **RFWB-40/G**: four buttons enable control of four units independently.
- The flat design with level base makes it ideal for fast installation on any surface (fixation with adhesive or screws in the installation box).
- When pressing the button, it sends a set signal (ON/OFF, dimming, time switching OFF / ON, blinds up/down).
- Sending a command is indicated by a red LED.
- In LOGUS<sup>90</sup> switch frame design (plastic, glass, wood, metal, stone).
- Option of setting light scenes, where with a single press, you can control units of iNELS RF Control.
- Battery power supply (3V/CR2032 - included in the supply) with battery life of around 5 years based on frequency of use.
- Range up to 200 m (in open space), if the signal is insufficient between the controller and unit, use the signal repeater RFRP-20.
- Communication frequency with bidirectional protocol iNELS RF Control.

Technical parameters	RFWB-20/G	RFWB-40/G
Supply voltage:	3V CR 2032 battery	
Transmission indication:	red LED	
Number of buttons:	2	4
Transmitter frequency:	868 MHz, 915 MHz, 916 MHz	
Signal transmission method:	unidirectionally addressed message	
Range in free space:	up to 200 m	
<b>Other data</b>		
Operating temperature:	-10 to +50 °C	
Operating position:	any	
Mounting:	glue / screws	
Protection:	IP 20	
Contamination degree:	2	
<b>LOGUS<sup>90</sup> - Dimensions:</b>		
Frame - plastic:	85 x 85 x 16 mm	
Frame - metal, glass, wood, granite:	94 x 94 x 16 mm	
Weight*:	38g	39g
Related standards:	EN 60669, EN 300 220, EN 301 489 R&TTE Directive, Order. No 426/2000 Coll. (Directive 1999/EC)	

**Device description**

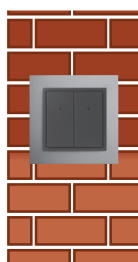
RFWB-20/G

RFWB-40/G

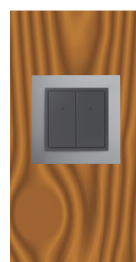


**Examples of placement**

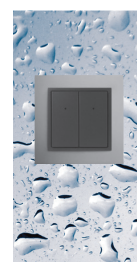
On wall



On wood



On glass



\*Comes with plastic frame. No installation into multi-frames.

**Choose your own style**

Flat wireless switches that can be mounted on glass, tile, furniture ...

Such a quick change of location when you're moving.



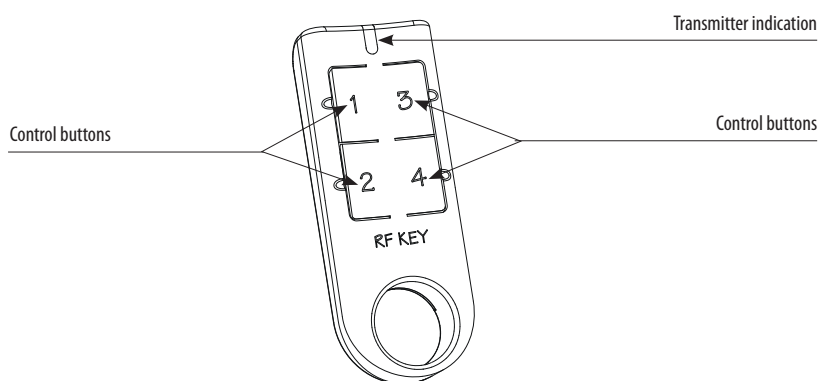
**LOGUS<sup>90</sup>**



- The key alarm is used to control switches and dimmers (lights, gate, garage door, blinds, etc.).
- When pressing the button, it sends a set signal (ON/OFF, dimming, time switching OFF / ON, blinds up/down).
- Sending a command is indicated by a red LED.
- Designed in black and white with laser printing.
- Four buttons enable control of four units independently.
- Option of setting light scenes, where with a single press, you can control units of iNELS RF Control.
- Battery power supply (3V/CR2032 - included in the supply) with battery life of around 5 years based on frequency of use.
- Range up to 200 m (in open space), if the signal is insufficient between the controller and unit, use the signal repeater RFRP-20.
- Communication frequency with bidirectional protocol iNELS RF Control.

Technical parameters	RF KEY/W	RF KEY/B
Supply voltage:	3V CR 2032 battery	
Transmission indication:	red LED	
Number of buttons:	4	
Transmitter frequency:	868 MHz, 915 MHz, 916 MHz	
Signal transmission method:	unidirectionally addressed message	
Range in free space:	up to 200 m	
<b>Other data</b>		
Operating temperature:	-10 to +50 °C	
Operating position:	any	
Color design:	white	black
Protection:	IP 20	
Contamination degree:	2	
Dimensions:	64 x 25 x 10 mm	
Weight:	16 g	
Related standards:	EN 60669, EN 300 220, EN 301 489 R&TTE Directive, Order. No 426/2000 Coll. (Directive 1999/EC)	

**Device description**





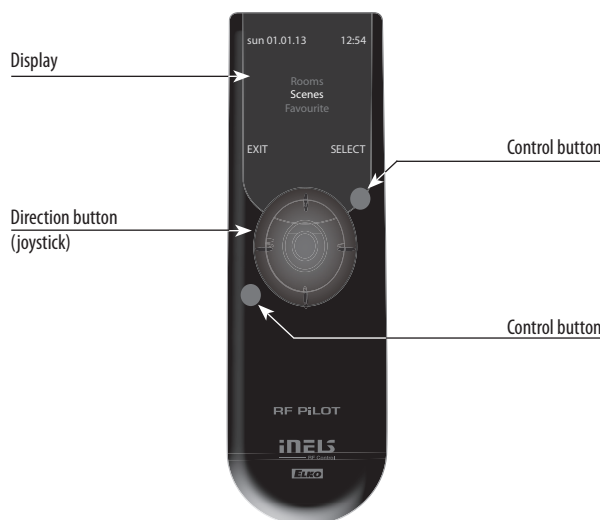
Combine the RF Pilot remote controller with the RF Touch control unit for maximum utilization of the RF Control system features.



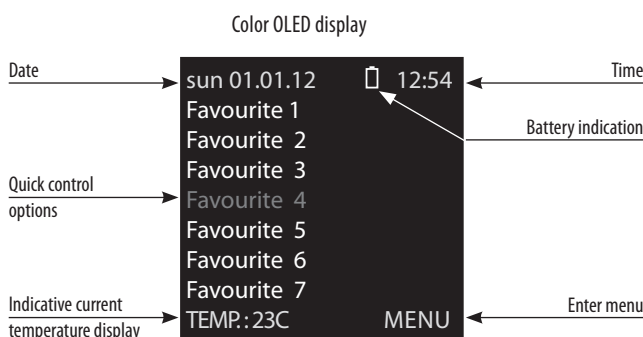
- The RF Pilot remote control is a central controller for switching electrical appliances and equipment, dimming lights, controlling blinds, etc.
- When pressing the button, it sends a set signal (ON/OFF, dimming, time switching OFF / ON, blinds up/down).
- Option of setting light scenes, where with a single press, you can control up to 10 units at once.
- The Favorites mode lets you preset the most frequently used devices on the home screen.
- Option of grouping dimmers (RFDA-73M/RGB), where you can place up to 10 units under a single control panel = control of over 100 m of colored LED strip.
- Designed in white and anthracite with color OLED display.
- Display of room temperature, battery status, date and time directly on display.
- Bidirectional communication, transmits and receives commands and displays the status of units.
- Thanks to the function of measuring the signal between the controller and unit, you can use it for testing the range and signal quality.
- It is possible to combine up to 40 units of iNELS RF Control (you can gradually expand the installation from 1 unit).
- Battery power (1.5V 2 x AAA - included in supply) with battery life of around 3 years based on frequency of use and type of batteries.
- Range up to 200 m (in open space), if the signal is insufficient between the controller and unit, use the signal repeater RFRP-20.
- Communication frequency with bidirectional protocol iNELS RF Control.

Technical parameters	RF Pilot/W	RF Pilot/A
<b>Display</b>		
Type:	color OLED	
Resolution:	128 x 128 pixels	
Side ratio:	1:1	
Visible surface:	26 x 26 mm	
Backlighting:	self-illuminating text	
Diagonal:	1.5"	
Control:	direction button, control buttons	
<b>Power supply</b>		
Power supply:	2 x 1.5V AAA batteries / R03	
Battery life:	approx. 3 years, according to the frequency of use and battery type	
<b>Control</b>		
Range in free space:	up to 200 m	
Frequency:	868 MHz, 915 MHz, 916 MHz	
<b>Other data</b>		
Operating temperature:	0 to +55 °C	
Storage temperature:	-20 to +70 °C	
Color design:	white	anthracite
Protection:	IP20	
Operating position:	any	
Dimensions:	130 x 41 x 18 mm	
Weight:	61 g	
Related standards:	EN 60730-1	

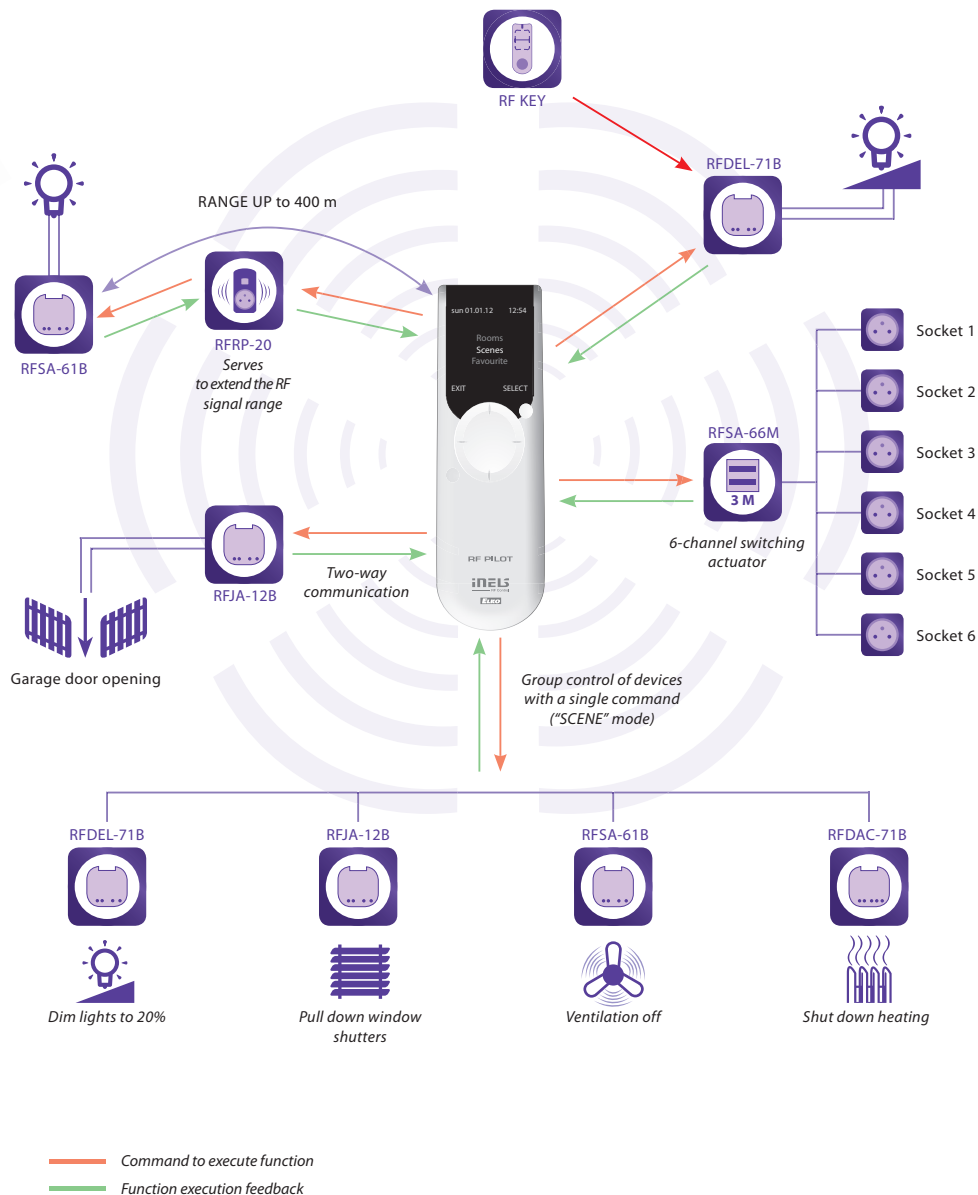
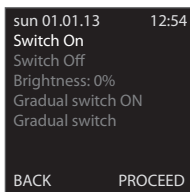
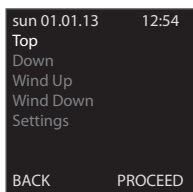
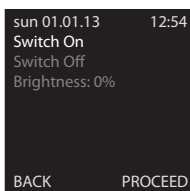
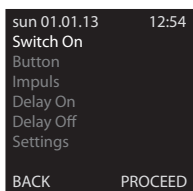
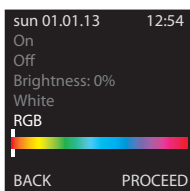
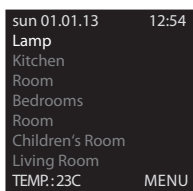
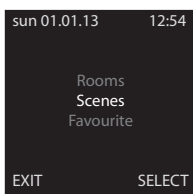
### Device description



### Display description



## RF Pilot



### SCENES

- serves to control actuators as a group with a single touch
- possibility to set up scenes; on activation, for example, window shutters are pulled down and the light will adjust to the required brightness

### WINDOW SHUTTERS

- controlling window shutters, blinds, garage door, etc.
- window shutters are controlled separately or as a group
- the window shutter receivers are powered by either 230V or 24V DC (shutters between windows)

### FAVOURITE

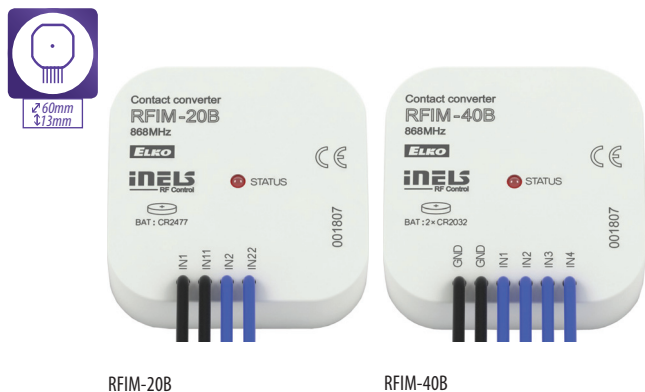
- serves to select the most frequently used devices
- on display activation, the "Favourite" menu pops up automatically to provide you with a quick access to controlling devices

### SWITCHING

- this function serves to switch on/off lights, sockets, electrical appliances and devices
- intuitive control thanks to customized name options
- switching actuator function selections: switch on/off, impulse relay, button, delayed ON/OFF (time of delay from 2 seconds to 60 minutes)

### DIMMING

- the regulation of light intensity (light bulbs, LED strips, halogen lights with electrical or coil transformer, fluorescent tubes with dimmable ballast 1-10V)
- customizable names of individual dimmed circuits (such as "lights" or "living room")
- "sunrise/sunset" imitation - light gradually goes on or off during the preset period between 2 seconds and 30 minutes



RFIM-20B

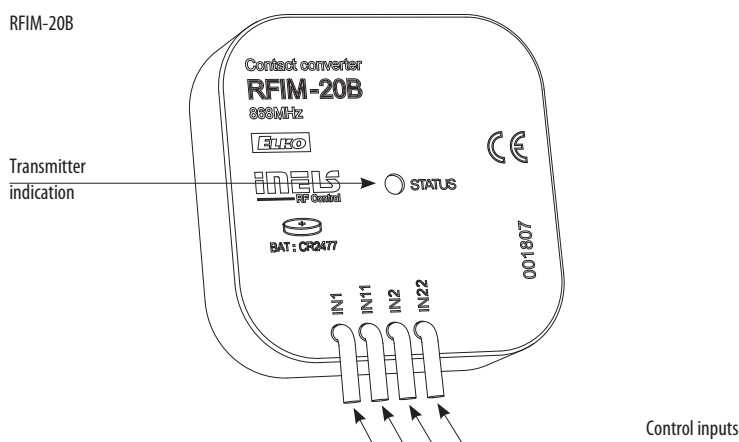
RFIM-40B

- **RFIM-20B:** the wireless contact converter changes your existing button / switch to a wireless one.
  - two inputs enable control of two units independent.
  - battery power supply (3V/CR2477 - included in the supply) with battery life of around 5 years based on frequency of use.
- **RFIM-40B:** the wireless contact converter changes your existing button to a wireless one.
  - four inputs enable control of four units independently.
  - battery power supply (2 x 3V / CR2032) with battery life of around 5 years based on frequency of use (included in the supply).
- It can be used to transmit information on switching on the contact (detector, button, technology, logic output).
- The BOX design lets you mount it right in an installation box under the button or switch.
- When pressing the button, it sends a set signal (ON/OFF, dimming, time switching OFF / ON, blinds up/down).
- Sending a command is indicated by a red LED.
- Option of setting light scenes, where with a single press, you can control multiple units of iNELS RF Control.
- Range up to 200 m (in open space), if the signal is insufficient between the controller and unit, use the signal repeater RFRP-20.
- Communication frequency with bidirectional protocol iNELS RF Control.

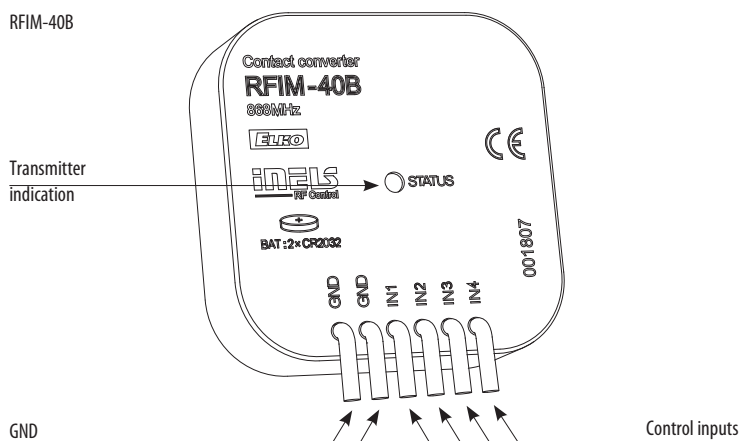
Technical parameters	RFIM-20B	RFIM-40B
Supply voltage:	1 x 3V batterie CR 2477	2 x 3V batterie CR 2032
Battery life:	5 years	
Transmission indication / function:	orange LED	red LED
Number of inputs:	2	4
Transmitter frequency:	868 MHz, 915 MHz, 916 MHz	
Signal transmission method:	unidirectionally addressed message	
Range in free space:	up to 200 m	
<b>Other data</b>		
Operating temperature:	-10 to +50 °C	
Operating position:	any	
Terminals (CV wire, cross-section):	4 x 0.75 mm <sup>2</sup>	6 x 0.75 mm <sup>2</sup>
Length of terminals:	90 mm	
Resist. of connection between terminals		
- for switched on button:	< 300 Ω	
- for disconnected contact:	> 10 kΩ	
Mounting:	free at lead-in wires	
Protection:	IP30	
Contamination degree:	2	
Dimensions:	49 x 49 x 13 mm	
Weight:	45 g	50 g
Open contact voltage:	pulse 12 V	3 V
Length of cable to contact:	max. 100 m of parallel lines	max. 5 m
Related standards:	EN 60669, EN 300 220, EN 301 489 R&TTE Directive, Order. No 426/2000 Coll. (Directive 1999/EC)	

**Device description**

RFIM-20B

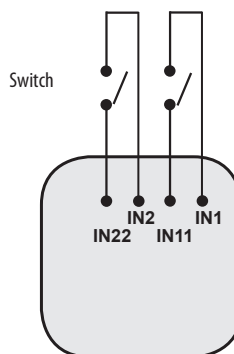


RFIM-40B

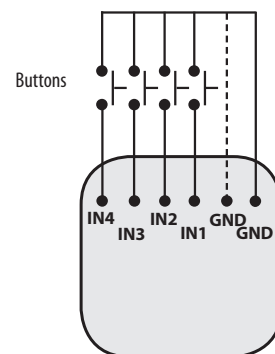


**Connection**

RFIM-20B



RFIM-40B





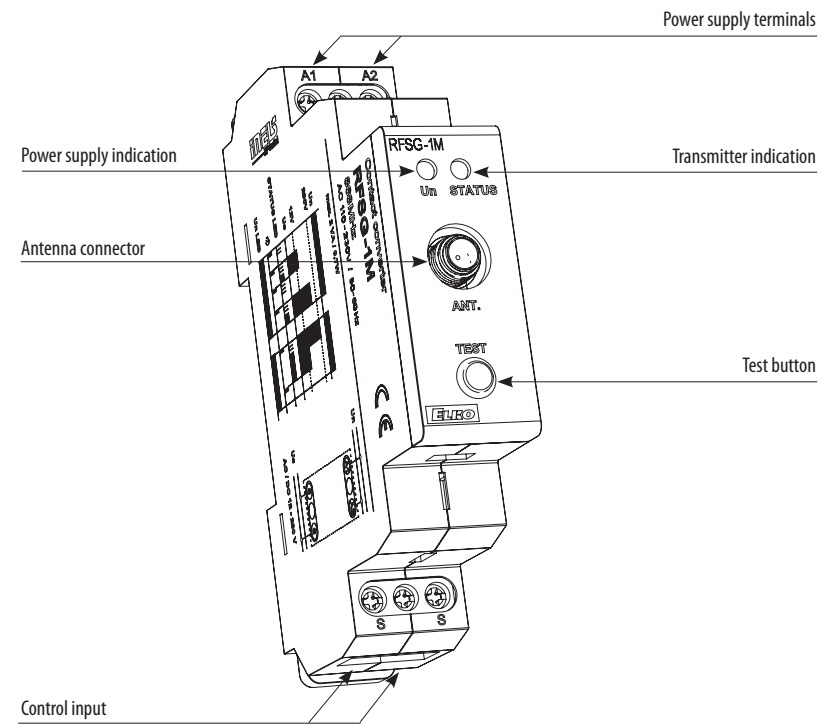


- This wireless contact converter is especially appropriate for wireless transmission of information on switching HDO.
- Thanks to the network supply, it can also be used for partial transmission of information for control of an appliance or device.
- One-module design of the unit with mounting into switchboard.
- After leading in power to the "S" terminals, it periodically transmits the command *switch on* in an interval of 10 min. When disconnecting the power supply, immediately *switch off*.
- The button TEST on the controller is used to assign to a switching unit.
- Option of setting light scenes, where with a single press, you can control multiple units of iNELS RF Control.
- The package includes an internal antenna AN-I, in case of locating the converter in a metal switchboard, you can use the external antenna AN-E for better signal reception.
- Range up to 160 m (in open space), if the signal is insufficient between the controller and unit, use the signal repeater RFRP-20.
- Communication frequency with bidirectional protocol iNELS RF Control.

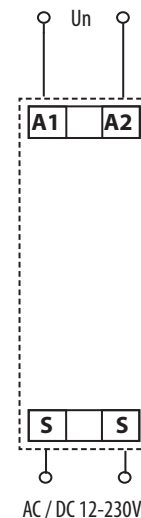
Technical parameters	RFSG-1M/230V	RFSG-1M/24V
Supply voltage:	110-230 V AC / 50-60 Hz	12-24 V AC/DC / 50-60 Hz
Apparent input:	2 VA	-
Dissipated power:	0.2 W	0.5 W
Supply voltage tolerance:	+10 % / -25 %	
Power supply indication:	green LED	
<b>Input</b>		
Control voltage:	AC 12-230V / DC 12-230V	
Control input power:	AC 0.025VA / DC 0.1W	
Control terminals:	S - S	
The length of control impulse:	min. 25ms (max. unlimited)	
Transmission indication / function:	red LED	
Transmitter frequency:	868 MHz, 915 MHz, 916 MHz	
Signal transmission method:	unidirectionally addressed message	
Range in free space:	up to 160 m	
Minimum control distance:	20 mm	
Output for antenna:	SMA connector*	
<b>Other data</b>		
Operating temperature:	-15 to + 50 °C	
Operating position:	any	
Mounting:	DIN rail support EN 60715	
Protection:	IP20 from the front panel	
Overvoltage category:	III.	
Contamination degree:	2	
Connecting conductor cross-section: (mm <sup>2</sup> ):	max. 1x2.5, max. 2x1.5 / with a hollow max. 1x2.5	
Dimensions:	90 x 17.6 x 64 mm	
Weight:	62 g	
Related standards:	EN 60669, EN 300 220, EN 301 489 R&TTE Directive, Order. No 426/2000 Coll. (Directive 1999/EC)	

\* Max Tightening Torque for antenna connector is 0.56 Nm.

**Device description**



**Connection**





RF Touch-B  
for mounting into an installation box

RF Touch-W  
unit for mounting on surfaces

Technical parameters	RF Touch-B	RF Touch-W
<b>Display</b>	color TFT LCD	
Type:	color TFT LCD	
Resolution:	320 x 240 pixels / 262,144 colors	
Side proportion :	3:4	
Visible surface:	52,5 x 70 mm	
Backlighting:	active (white LED)	
Touch area:	resistive 4-conductor	
Diagonal:	3.5"	
Control:	touch	
<b>Power supply</b>		
Supply voltage/rated current:	100 - 230 V AC	from the back 100 – 230 V AC, from the side 12 V DC*
Input power:	max. 5W	
Power supply terminals:	A1 - A2	
<b>Control</b>		
Range:	100 m	
Min. distance RF Touch - Actuator:	1m	
Frequency:	868 MHz, 915 MHz, 916 MHz	
<b>Connection</b>		
Connection:	terminal box	no-screw push-in terminal box or jack Ø 2.1 mm jack connector
Cross-section of connecting wires:	max. 2.5 mm <sup>2</sup> /1.5 mm <sup>2</sup> with a hollow	
<b>Operating conditions</b>		
Operating temperature:	0 to +50°C	
Storage temperature:	- 20 to +70°C	
Protection:	IP 20	
Overvoltage category:	III.	
Contamination degree:	2	
Operating position:	any	
Installation:	an installation box	anywhere indoor
Dimensions:	94 x 94 x 36 mm	94 x 94 x 24 mm
Weight:**	127 g	175 g
Related standards:	EN 60730-1	

\* Adapter is included in the RF Touch-W unit package.

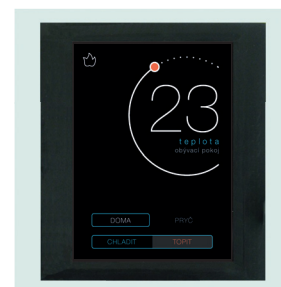
\*\* Weight includes the plastic frame and the intermediate frame.

- The wireless touch unit RF Touch is a central controller for heating, switching electrical appliances and equipment, dimming lights, controlling blinds, etc.
- It transmits and receives commands from units and processes set programs for automatic control.
- Thanks to bi-directional communication, it visualizes the current status of individual units.
- Automatic control based on weekly program.
- Touch 3.5" color display.
- It is possible to combine up to 40 units of iNELS RF Control + 30 Oasis detectors (you can gradually expand the installation from 1 unit).
- Power to the touch unit is in the range 100 - 230V AC, (RF Touch/W also supplied via adapter 12V DC (included in the supply)).
- **RF Touch/W:** wall mounting, secured in an installation box or glued to glass, wood, dry wall, etc.
- **RF Touch/B:** mounting of unit in installation box.
- Range up to 100 m (in open space), if the signal is insufficient between the RF Touch and unit, use the signal repeater RFRP-20.
- Communication frequency with bidirectional protocol iNELS RF Control .
- Color design of RF Touch:
  - frames: in basic plastic design (white, black, red) or in the luxury design LOGUS<sup>90</sup> - glass, metal (aluminum, nickel, titanium).
  - intermediate frames: in basic white and dark gray with metallic coat - aluminum, pearl, ice and gray.
  - rear cover: in white, ivory, light gray and dark gray
- You can choose your own color combination at e-shop ELKO EP.

In 2011, the RF Touch wireless unit won the prize GOLDEN AMP.



white / pearly



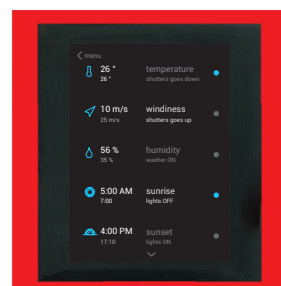
white / dark grey



glass / grey



aluminum / dark grey



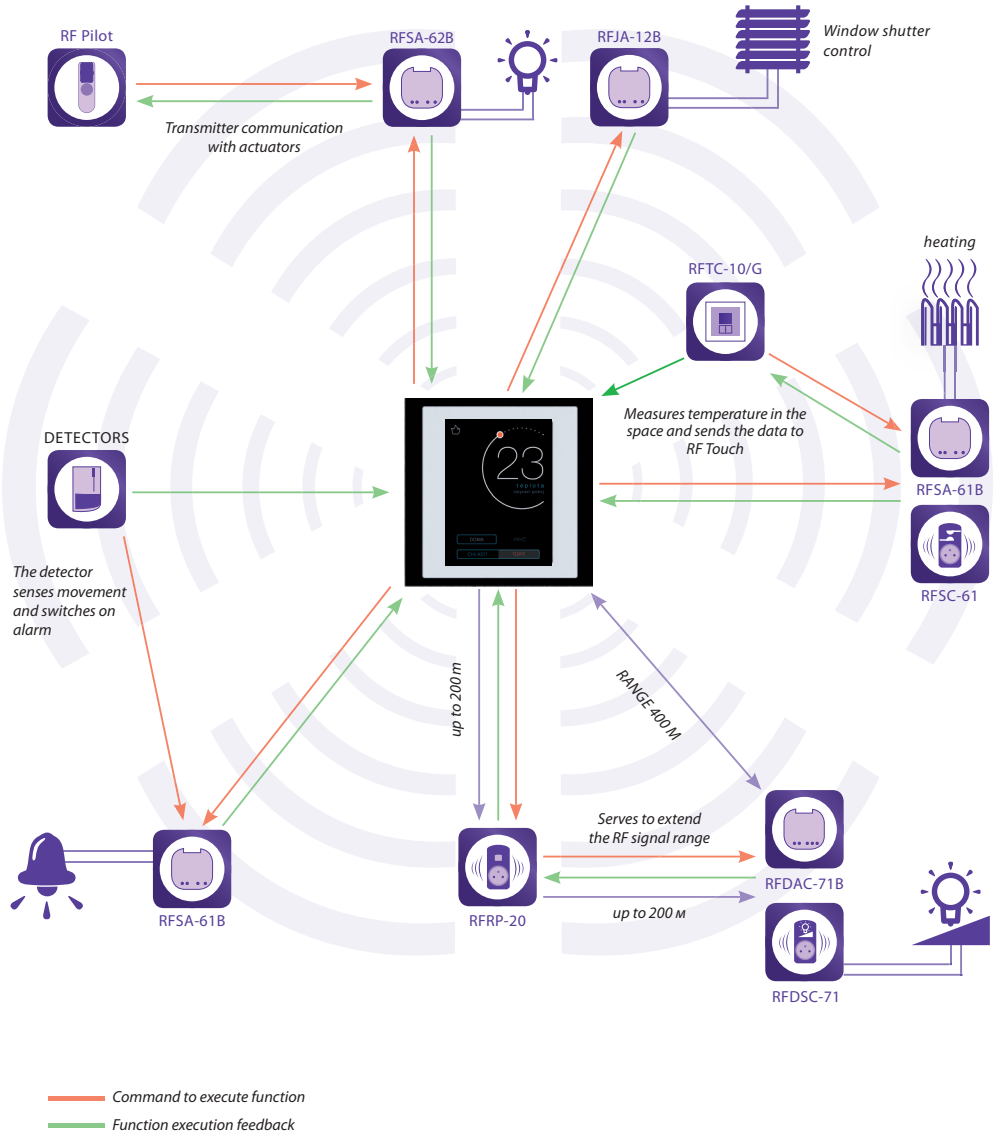
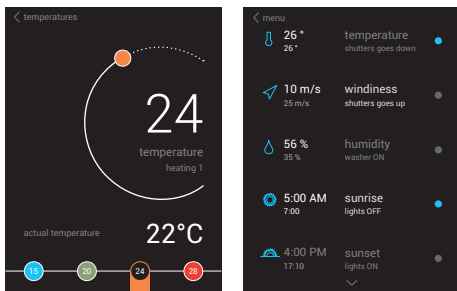
red / aluminum



titanium / ice

LOGUS<sup>90</sup>

## RF TOUCH



### HEATING

- control of heating devices (boilers, thermo valve 0–10V...)
- temperature regulation in the entire house or in individual rooms
- information about outdoor temperature (wireless temperature sensor) - terraces
- possibility to set your own heating program for the whole week
- holiday mode will interrupt the heating program when you are on holiday
- room temperature correction (during the heating program) is performed with a digital thermal regulator command

### DIMMING

- the regulation of light intensity (light bulbs, LED bulbs, LED strips, halogen lights with electrical or coil transformer, fluorescent tubes with dimmable control gear 1–10V)
- customizable names of individual dimmed circuits (such as “living room lights”)
- “sunrise/sunset” imitation - light gradually goes on or off during the preset period between 2 seconds and 30 minutes

### DETECTORS

- RF Touch communicates with detectors - window, door, movement...
- possible to combine with switching actuators
- clear control over the entire house

### SWITCHING

- this function serves to switch on/off lights, sockets, electrical appliances and devices
- intuitive control thanks to customized name options
- switch clock enabling you to switch appliances in real time, even during your absence (simulation of the presence of persons, etc.)
- switching actuator function selections: switch on/off, impulse relay, button, delayed ON/OFF (time of delay from 2 seconds to 60 minutes)

### WINDOW SHUTTERS

- controlling window shutters, sunblinds, blinds, garage door, etc.
- window shutters are controlled separately or as a group
- setting an independent time schedule for pulling up/down
- the window shutter receivers are powered by either 230V or 24V DC (shutters between windows, etc.)

### QUICK CONTROL

- serves to control group of actuators with a single touch
- possibility to set up scenes; on activation, for example, window shutters are pulled down and lights are adjusted to required intensity



- The smart RF box enables you to control your electrical installation by smartphone, tablet or SMART TV.
- It transmits and receives commands of up to 40 units, and it processes set programs for automatic control, (you can gradually expand installation from 1 unit iNELS RF Control).
- Thanks to bi-directional communication, it visualizes the current status of individual units.
- The smart RF box eLAN-RF-003 is connected by network cable LAN to the home network (router) and communicates with your smart phone.
- The smart RF box eLAN-RF-Wi-003 is connected to the home network (router) via the Wi-Fi network and communicates with your smart phone. Connection to the home network is also possible via network LAN cable.
- The intuitive application environment offers central control from one place.
- Function of application iHC-MARF / iHC-MIRF:
  - control of hot water or electric underfloor heating
  - measuring temperature by wireless sensors
  - switching appliances (garage door, blinds, fan, sprinklers, sockets, etc.)
  - dimming lights (LED, energy-saving, halogen or classic lamps)
  - time switching (delayed switching off of light when leaving room)
  - video camera integration
  - light scenes (make multiple commands at once with a single press).
- If you don't have a fixed IP address, the Smart RF box will obtain it from DHCP server automatically.
- Power is supplied to the Smart RF box via adapter 10-27V DC (included in the supply) or PoE by power source (router) 24V DC.
- By connecting two Smart RF boxes by LAN cable, you avoid the problem of lack of signal range.
- Option of setting via web interface or directly in the application iHC-MARF (Android) / iHC-MIRF (iPhone).
- The package includes an internal antenna AN-I , in case the Smart RF box is located in a metal switchboard, you can use the external antenna AN-E for better signal reception.
- Range up to 100 m (in open space), if the signal is insufficient between the Smart RF box and unit, use the signal repeater RFRP-20.
- Communication frequency with bidirectional protocol iNELS RF Control.

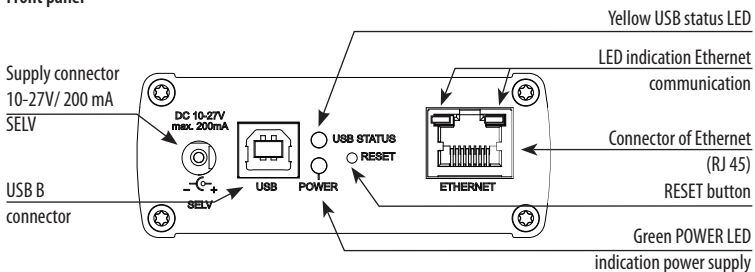
Technical parameters	eLAN-RF-003	eLAN-RF-Wi-003
<b>Interface RF Control</b>		
Communication protocol:	RF Touch Compatible	
Broadcasting frequency	868 MHz, 915 MHz, 916 MHz	
Signal transfer method:	two-way addressed message	
Output for antenna:	SMA connector*	
Antenna RF:	1 dB (part of supply)	
Indications RF communications:	1 x red RF status LED	1 x green RF status LED
Range in free space:	up to 100 m	
<b>Interface Ethernet</b>		
ETH operating status indicator:	green LED	
ETH communication indicator:	yellow LED	
Communications interface:	100 Mbps (RJ45)	
Preset IP address:	192.168.1.1	
<b>Interface Wi-Fi</b>		
Standard:	x	IEEE 802.11 b/g/n / 2.4 GHz
Wi-Fi Security:	x	WEP, WPA-PSK, WPA2-PSK
Frequency range Wi-Fi:	x	R-SMA
Antenna Wi-Fi:	x	1 dB (part of supply)
Indications Wi-Fi communication:	x	1 x red Wi-Fi status LED
Range:	x	in to 200 m
Supply voltage/current:	10-27 V DC / 200 mA SELV	10-27 V DC / 300 mA SELV
Power:	adapter with connector Jack Ø 2.1 mm (part of supply) or connector USB-B	
Supply voltage indication:	green LED POWER	
Button RESET:	settings to their defaults	
Power source:	230 VAC / 12 V DC part of supply of device	
Operating temperature:	-20 to +50 °C	
Storage temperature:	-25 to +70 °C	
Protection:	IP20	
Contamination degree:	2	
Working position:	any	
Dimensions:	90 x 52 x 65 mm	
Weight:	136 g	145 g

\* Max Tightening Torque for antenna connector is 0.56 Nm.

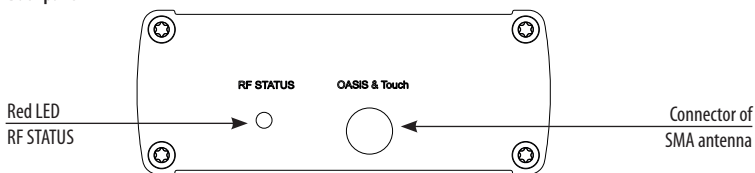
**Device description**

**eLAN-RF-003**

**Front panel**

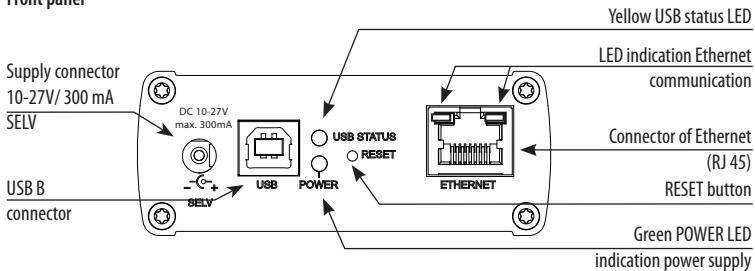


**Back panel**

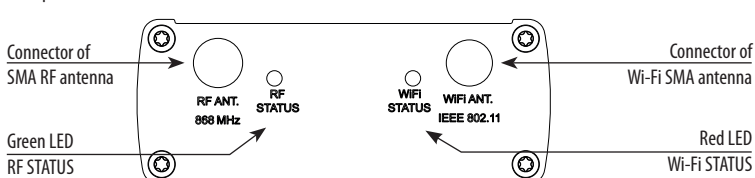


**eLAN-RF-Wi-003**

**Front panel**



**Back panel**





Control application for smart phones with Android operating system - iHC-MARF and for smart phones iPhone - iHC-MIRF

- The application **iHC-MARF / iHC-MIRF** allows you to control your home easily by smartphone.
- The user-friendly and intuitive application environment offers central control from one place.
- iHC-MARF / iHC-MIRF enables control of RF units by smart phone via a smart RF box, which is connected to the home Internet network.
- The smart RF box controls up to 40 units of iNELS RF Control, (you can gradually expand control from 1 unit of iNELS RF Control).
- If you don't have a permanently set IP address, the application supports its automatic obtaining from the DHCP server.
- Functions of the application iHC-MARF / iHC-MIRF:
  - regulation of hot water or electric underfloor heating (setting a weekly program)
  - measuring temperature (e.g. by wireless sensors)
  - switching appliances (garage door, blinds, fans, sprinklers, sockets, etc.)
  - dimming lights (LED, energy-saving, halogen lamps or classic light bulbs)
  - time switching (delayed switching off of light when leaving room)
  - integration of video cameras
  - light scenes (one press to perform multiple commands simultaneously)
  - remote control (switch on heating before returning from vacation).
- The application iHC-MARF supports Android versions from 2.3 in your smartphone.

Technical parameters	
iHC-MARF iHC-MIRF	optimized for devices with a display resolution of 800x480
Application language of iHC:	based on language set in mobile device, tablet or smart phone, and settings in OS Android or iOS

# Overview of functions



iHC-MIRF

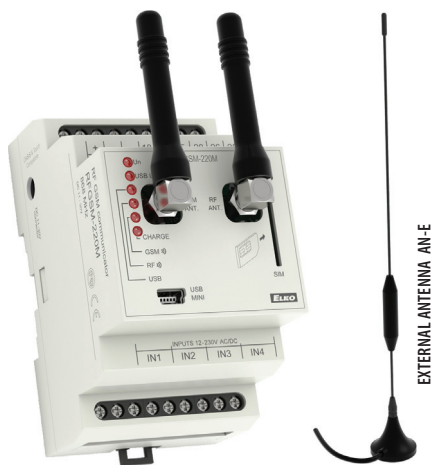


iHC-MARF



- Temperature regulation
- Cameras
- Appliances control
- Lighting control
- Blinds / Shutters
- Sockets
- Garage doors / gates
- Scenes
- Video door-phone
- Energy control

- |   |   |
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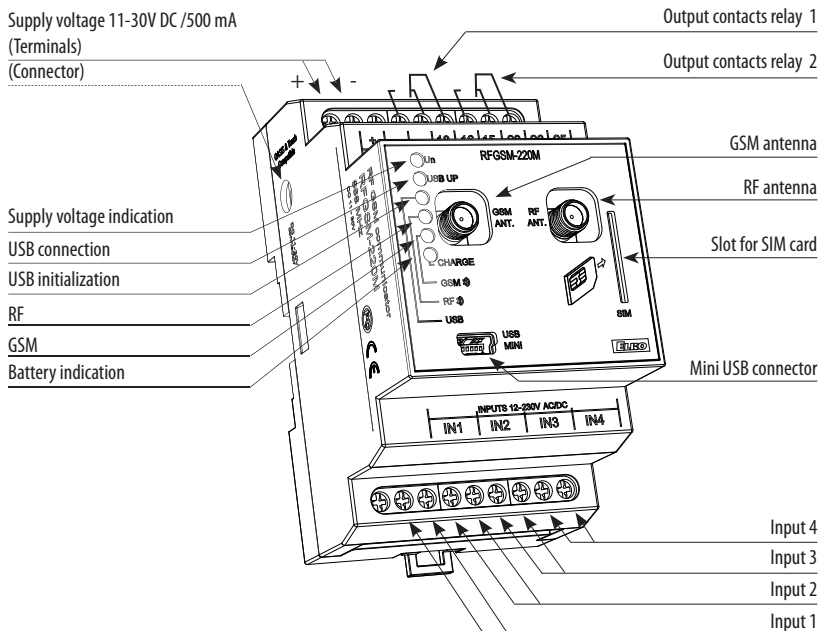
- The multi-function GSM communicator is used for remote switching of heating, lights, gate, garage door, etc.
- GSM communicator can be used in several ways, which can be combined:
  - a) control by telephone, where a sent SMS or ringing through once switches an internal relay.
  - b) reacts to 1 of 4 potential free wired inputs (detectors, switches), where it is possible to set a consequent reaction.
  - c) offers the option of ascertaining the status of units iNELS RF Control (ON/OFF, temperature).
  - d) control by telephone, where a sent SMS or ringing through once transmits an RF command to the switching unit within range, which then switches something (e.g. heating).
  - e) security function (switching on the ALARM) in combination with wireless detectors OASIS, where activation / deactivation takes place by ringing through once or by key alarm.
- The three-module design of the unit into a switchboard enables connection of a switched load 2x 8A (2x 2000W).
- Settings are performed by SW Connect 1 via mini USB connector
- Li-Ion battery for 30 minute function backup
- The GSM communicator is powered by an adapter in the range 11-30V DC.
- The package includes an internal antenna AN-I, in case of locating the communicator in a metal switchboard, you can use the external antenna AN-E for better signal reception.
- Range up to 150 m (in open space).
- Communication frequency with bidirectional protocol iNELS RF Control.
- Package includes: 2x internal antenna AN-I, mini USB connector, SW Connect 1, adapter 12V 6W.

**Technical parameters RFGSM-220M**

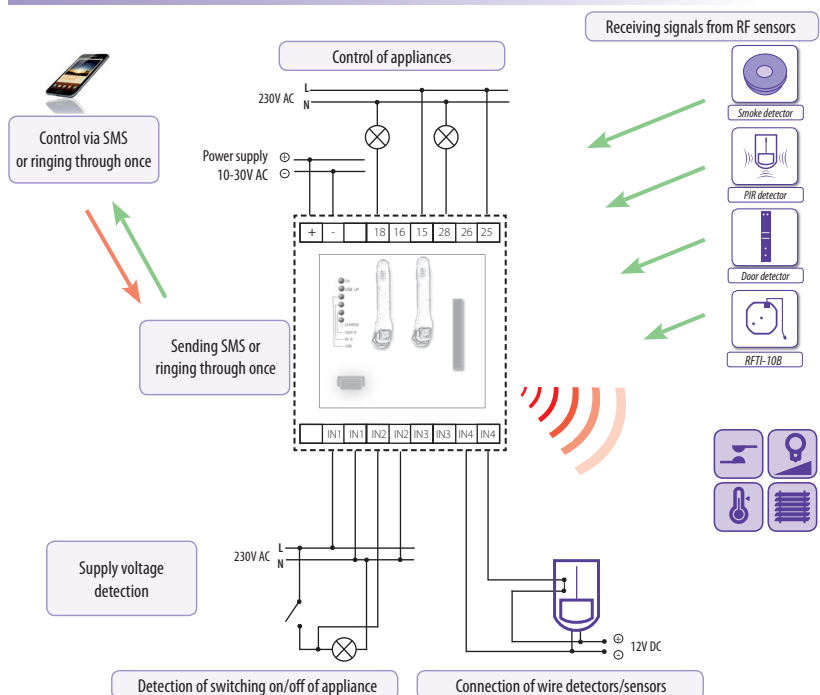
<b>Power</b>	
Supply voltage:	11-30V DC; backup power supply LI-ION batteries
Maximum power consumption:	1W in standby mode / power supply and communication max. 18W
Current consumption:	90 mA at 12 V DC
Consumption during communication:	max. 1.5 A at 12 V DC
Working band of GSM module:	850/900/1800/1900 MHz
Transmitter output power:	2W for GSM 900, 1W for GSM 1800
<b>Inputs IN1, IN2, IN3, IN4</b>	
Control voltage:	AC 12-230V or DC 12-230V (separated optocoupler)
Control input power:	AC 0.025 VA/ DC 0.1W
Length of control impulse:	min. 50 ms/ max. unlimited
Inputs RF:	one-/two-way addressed message 868 MHz, 915 MHz, 916 MHz
<b>Outputs</b>	
Number of contacts:	2x Switches (AgSnO <sub>2</sub> )
Rated current:	8 A / AC1
Switching power:	2500VA, 240 W
Min. switching power DC:	500 mW
Mechanical service life (AC1):	1x10 <sup>7</sup>
Electrical service life:	1x10 <sup>5</sup>
RF outputs:	two-way addressed message 868 MHz, 915 MHz, 916 MHz
<b>Other data</b>	
Operating system PC:	MS Windows XP and higher
Range of RF module:	up to 150 m
Output for antenna:	SMA connector*
Operating temperature:	- 15 up to + 50°C
Operating position:	any
Mounting:	DIN rail EN 60715
Protection:	IP 20 from front panel
Overvoltage category:	II.
Contamination degree:	2
Cross-section of connecting wires (mm <sup>2</sup> ):	max. 1x2.5; max.2x1.5/ with a hollow max 1x2.5
Dimensions:	90 x 52 x 65 mm
Weight:	198 g
Related standards:	EN 60730-1

\* Max Tightening Torque for antenna connector is 0.56 Nm.

**Device description**

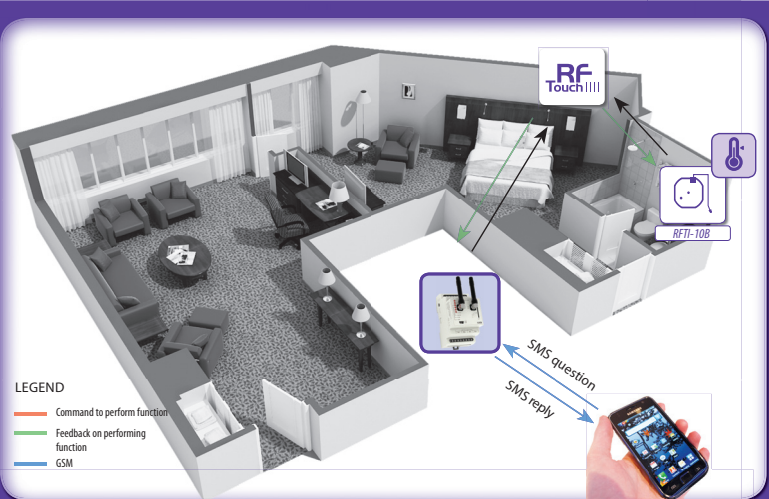


**Connection**



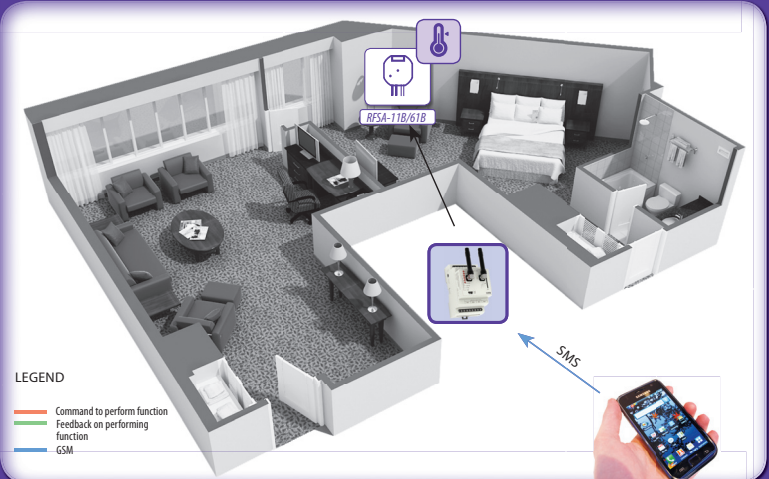
**A**

Thanks to the GSM communicator, you immediately know what the temperature is at home right now. Just send an SMS or ring the communicator once, the RF signal transfers this command to RF Touch and from RF Touch an SMS text message reply is sent back to your phone with the current temperature. You can then switch the heating on or off.



**B**

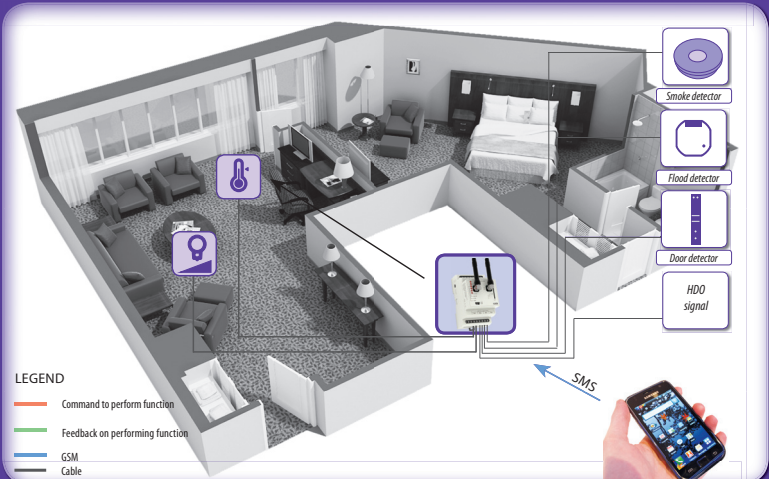
By sending an SMS or ringing once, you activate the GSM communicator, which sends an RF command to the temperature actuator, which then switches the heating (cable connection applied between the actuator and heater).



**C**

GSM communicator enables you to directly switch on up to 4 appliances. Its usefulness thus expands from simply switching into the area of detectors.

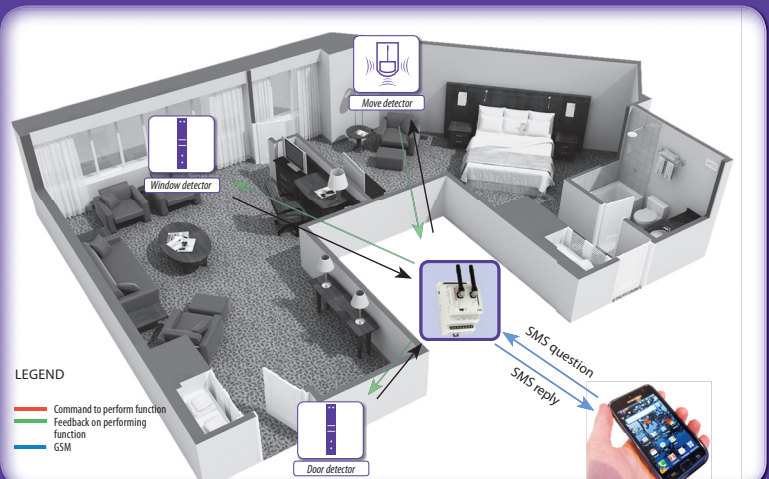
One of 4 inputs receives information from the detector and sends it by SMS to the given telephone number.



**D**

GSM communicator features a simple and secure function via dialing or key chain to activate the ARM / DISARM for guarding property.

ARM function = guarding  
In the case of detection or changes in the detector, the gateway sends a command to switch the siren, and can send an SMS to the set-up number.





- Radio frequency signal repeater
- This signal repeater is used to extend the range between the controller and unit by up to 200 meters.
- It is designed to transmit a signal to up to 20 units.
- Thanks to the socket design, installation is simple by direct insertion into the existing socket, the through-socket function remains unchanged.
- Indication:
  - green LED - supply voltage
  - red LED - active status (receiving and transmitting an RF signal)
- Programming is performed by a button.
- Communication frequency with bidirectional protocol iNELS RF Control.

- Produced in 4 designs of sockets and plugs:

Technical parameters	RFRP-20/230V	RFRP-20/120V
Supply voltage:	230 - 250V / 50-60Hz	120V AC / 60Hz
Apparent input:	6 VA	
Dissipated power:	0.7W	
Transmitter frequency:	868 MHz, 915 MHz, 916 MHz	
Range in free space:	up to 200 m	
Minimum control distance:	20 mm	
Programming:	button green LED / red LED	
<b>Other data</b>		
Operating temperature:	-20 to +55 °C	
Storage temperature:	-30 to +70°C	
Mounting:	plug into a socket	
Protection:	IP20 Device	
Dimensions:	62 x 58 x 102 mm	
Weight:	181 g	
Related standards:	EN 607 30-1 ED.2	



French  
CZ, SK, PL, FR



Schuko  
HU, DE, RU, AT, RO, ES

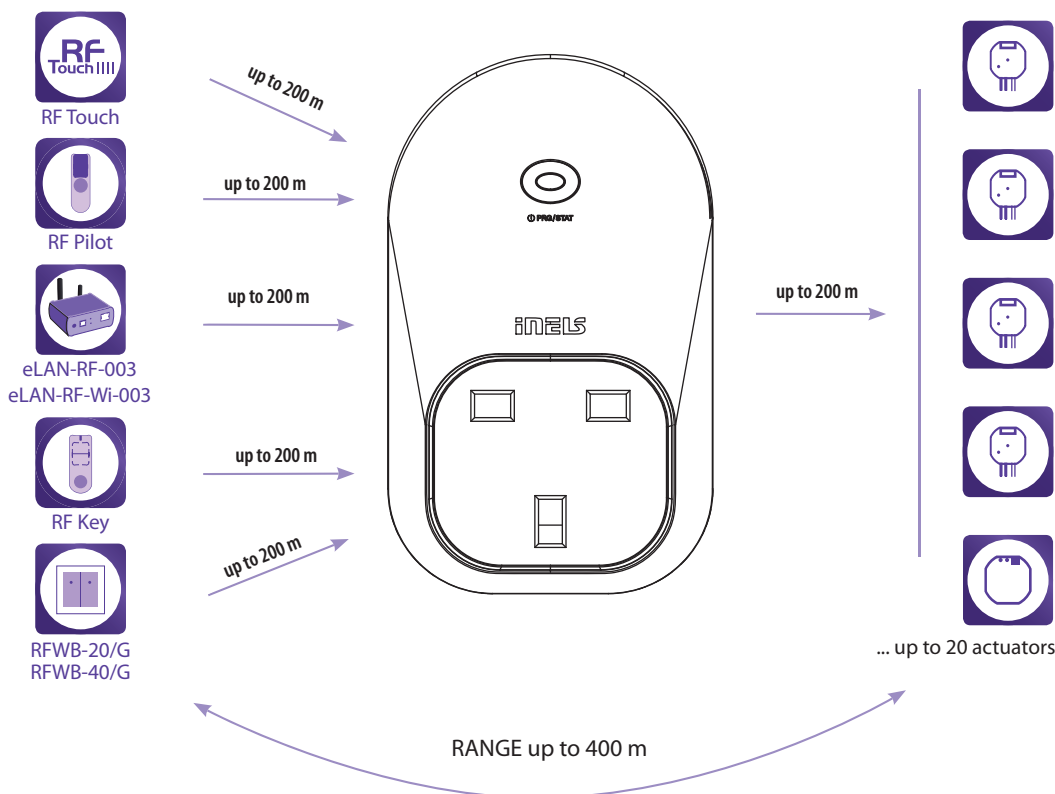


British  
GB

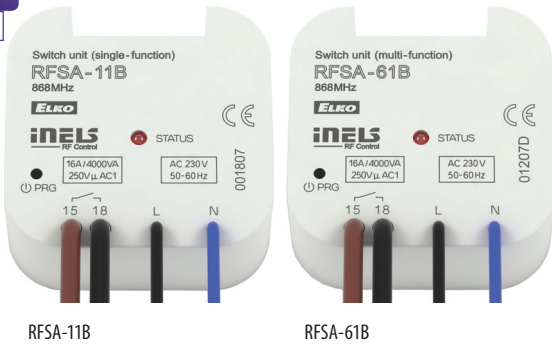


US  
USA

### Controlling up to 20 actuators







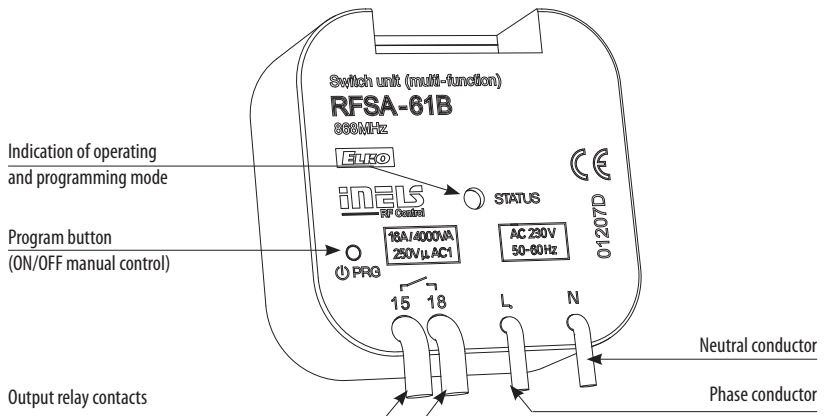
- The switching unit with 1 output channel is used to control appliances, lights (easy to integrate it to control garage doors or gates).
- It can be combined with Control or System units INELS RF Control.
- The BOX design lets you mount it right in an installation box, a ceiling or controlled appliance cover.
- It enables connection of the switched load up to 16A (4.000 W).
- **RFSA-11B:** single-function design - switch on / off
- **RFSA-61B:** multi-function design – button, impulse relay and time function of delayed ON or OFF with time setting of 2s-60 min.
- The switching unit may be controlled by up to 32 channels (1 channel represents 1 button on the controller).
- The programming button on the unit is also used for manual control of the output.
- Range up to 200 m (in open space), if the signal is insufficient between the controller and unit, use the signal repeater RFRP-20.
- Communication frequency with bidirectional protocol INELS RF Control.

Technical parameters	RFSA-11B/230V RFSA-61B/230V	RFSA-11B/120V RFSA-61B/120V	RFSA-61B/24V
Supply voltage:	230 V AC / 50-60 Hz	120 V AC / 60Hz	12-24V AC/DC 50-60Hz
Apparent input:	7 VA / cos φ = 0.1	7 VA / cos φ = 0.1	-
Dissipated power:	0.7 W	0.7 W	0.7 W
Supply voltage tolerance:	+10 %; -15 %		
<b>Output</b>			
Number of contacts:	1x switching (AgSnO <sub>2</sub> )		
Rated current:	16 A / AC1		
Switching power:	4000 VA / AC1, 384 W / DC		
Peak current:	30 A / <3 s		
Switching voltage:	250 V AC1 / 24 V DC		
Min. DC switching power:	500 mW		
Mechanical service life:	3x10 <sup>7</sup>		
Electrical service life (AC1):	0.7x10 <sup>5</sup>		
<b>Control</b>			
RF, by command from transmitter:	868 MHz, 915 MHz, 916 MHz		
Manual control:	PROG (ON/OFF) button		
Range in free space:	up to 200 m		
<b>Other data</b>			
Operating temperature:	-15 to + 50 °C		
Operating position:	any		
Mounting:	free at lead-in wires		
Protection:	IP 30		
Overvoltage category:	III.		
Contamination degree:	2		
Terminals (CY wire, cross-section):	2x 0.75 mm <sup>2</sup> , 2x 2.5 mm <sup>2</sup>		
Length of terminals:	90 mm		
Dimensions:	49 x 49 x 21 mm		
Weight:	46 g		
Related standards:	EN 60669, EN 300 220, EN 301 489 R&TTE Directive, Order. No 426/2000 Coll. (Directive 1999/EC)		

**Function**

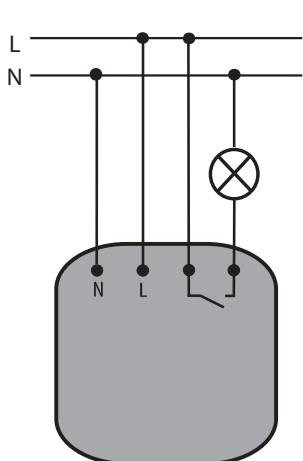
For more information, see p. 56

**Device description**

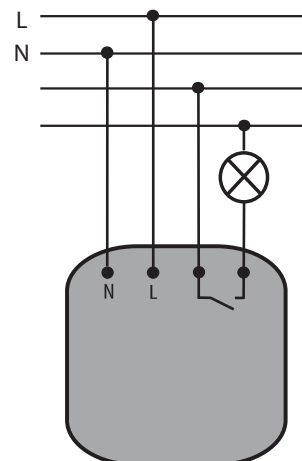


**Connection**

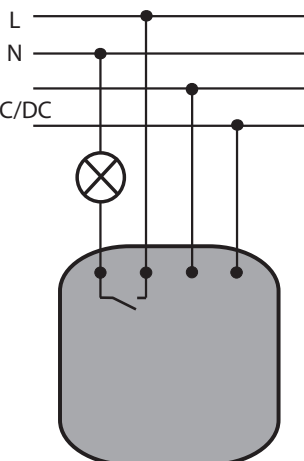
RFSA-11B/230V  
RFSA-11B/120V  
  
RFSA-61B/230V  
RFSA-61B/120V



RFSA-11B/230V  
RFSA-11B/120V  
  
RFSA-61B/230V  
RFSA-61B/120V



RFSA-61B/24V  
  
12-24 AC/DC





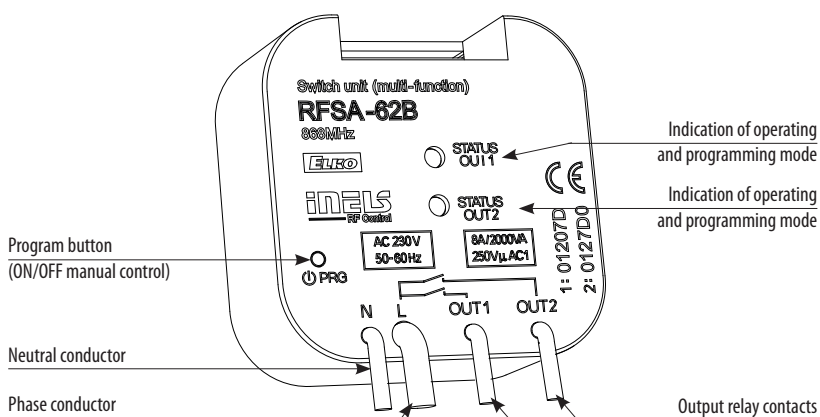
- The switching unit with 2 output channels is used for controlling appliances and light circuits.
- It can be combined with Control or System units iNELS RF Control.
- The BOX design lets you mount it right in an installation box, a ceiling or controlled appliance cover.
- It enables connection of switched load 2 x 8A (2 x 2.000 W).
- Function: button, impulse relay and time function of delayed start and return with time setting range of 2s-60 min. It is possible to assign any function to each output relay.
- Each of the channels may be controlled by up to 32 channels (1 channel represents 1 button on the controller).
- The programming button on the unit is also used for manual control of the output.
- Range up to 100 m (in open space), if the signal is insufficient between the controller and unit, use the signal repeater RFRP-20.
- Communication frequency with bidirectional protocol iNELS RF Control.

Technical parameters	RFSA-62B/230V	RFSA-62B/120V	RFSA-62B/24V
Supply voltage:	230 V AC / 50-60 Hz	120 V AC / 60Hz	12-24V AC/DC 50-60Hz
Apparent input:	7 VA / cos φ = 0.1	7 VA / cos φ = 0.1	-
Dissipated power:	0.7 W	0.7 W	0.7 W
Supply voltage tolerance:	+10 %; -15 %		
<b>Output</b>			
Number of contacts:	2 x switching (AgSnO <sub>2</sub> )		
Rated current:	8 A / AC1		
Switching power:	2000 VA / AC1		
Peak current:	10 A / <3 s		
Switching voltage:	250 V AC1		
Min. DC switching power:	500 mW		
Mechanical service life:	1x10 <sup>7</sup>		
Electrical service life (AC1):	1x10 <sup>5</sup>		
<b>Control</b>			
RF, by command from transmitter:	868 MHz, 915 MHz, 916 MHz		
Manual control:	PROG (ON/OFF) button		
Range in free space:	up to 100 m		
<b>Other data</b>			
Operating temperature:	-15 to + 50 °C		
Operating position:	any		
Mounting:	free at lead-in wires		
Protection:	IP30		
Overvoltage category:	III.		
Contamination degree:	2		
Terminals (CY wire, cross-section):	1 x 2.5 mm <sup>2</sup> , 3 x 0.75 mm <sup>2</sup>	1 x 2.5, 4 x 0.75 mm <sup>2</sup>	
Length of terminals:	90 mm		
Dimensions:	49 x 49 x 21 mm		
Weight:	46 g		
Related standards:	EN 60669, EN 300 220, EN 301 489 R&TTE Directive, Order. No 426/2000 Coll. (Directive 1999/EC)		

### Function

For more information, see p. 56.

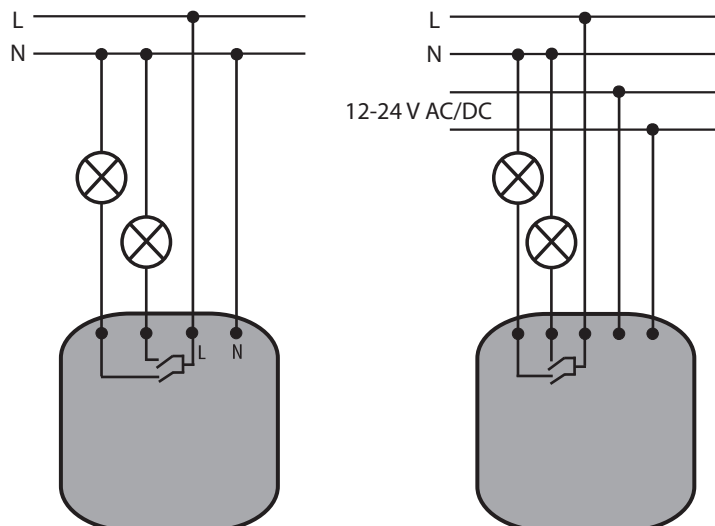
### Device description



### Connection

RFSA-62B/230V  
RFSA-62B/120V

RFSA-62B/24V





- The switching unit with 1 output channel is used for controlling appliances and lights. It is possible to connect the existing button to the internal terminal in the wiring.
- It can be combined with Control or System units INELS RF Control.
- The BOX design lets you mount it right in an installation box, a ceiling or controlled appliance cover.
- It enables connection of the switched load up to 16A (4.000 W).
- Function: button, impulse relay and time function of delayed start or return with time setting range of 2s-60min.
- External button is programmed as a wireless button.
- Input is not galvanic isolated.
- The switching unit may be controlled by up to 32 channels (1 channel represents 1 button on the controller).
- The programming button on the unit is also used for manual control of the output.
- Range up to 200 m (in open space), if the signal is insufficient between the controller and unit, use the signal repeater RFRP-20.
- Communication frequency with bidirectional protocol INELS RF Control.

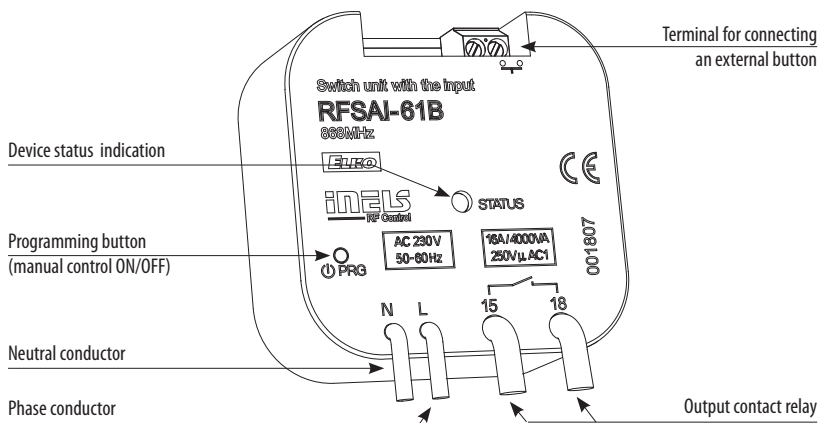
Technical parameters	RFSAI-61B/230V	RFSAI-61B/120V	RFSAI-61B/24V
Supply voltage:	230 V AC / 50 - 60 Hz	120 V AC / 60Hz	12-24V AC/DC 50-60Hz
Apparent power:	7 VA / cos φ = 0.1	7 VA / cos φ = 0.1	-
Dissipated power:	0.7 W	0.7 W	0.7 W
Supply voltage tolerance:	+10 %; -15 %		
<b>Output</b>			
Number of contacts:	1x switching (AgSnO <sub>2</sub> )		
Rated current:	16 A / AC1		
Switching power:	4000 VA / AC1, 384 W / DC		
Peak current:	30 A / <3 s		
Switching voltage:	250 V AC1 / 24 V DC		
Min. switching power DC:	500 mW		
Mechanical service life:	3x10 <sup>7</sup>		
Electrical service life (AC1):	0.7x10 <sup>9</sup>		
<b>Controlling</b>			
RF command from the transmitter:	868 MHz, 915 MHz, 916 MHz		
Manual control:	button PROG (ON/OFF)		
External button:	max. 12 m cable *		
Range in open space:	up to 200 m		
<b>Other data</b>			
Voltage of open contact:	3V		
Resist. of connection for closed contact:	<1 kΩ		
Resist. of connection for open contact:	>10 kΩ		
Galvanic isolation of input:	No ⚠		
Operating temperature:	-15 up to + 50 °C		
Working position:	any		
Mounting:	free at lead-in wires		
Protection:	IP 30		
Overvoltage category:	III.		
Contamination degree:	2		
Terminals (CY wire, Cross-section):	2x 0.75 mm <sup>2</sup> , 2x 2.5 mm <sup>2</sup>		
Terminal length:	90 mm		
Dimensions:	49 x 49 x 21 mm		
Weight:	46 g		
Related standards:	EN 60669, EN 300 220, EN 301 489 R&TTE Directive, Order. No 426/2000 Coll. (Directive 1999/EC)		

\* Control button input is at the supply voltage potential.

### Function

For more information, see p. 56.

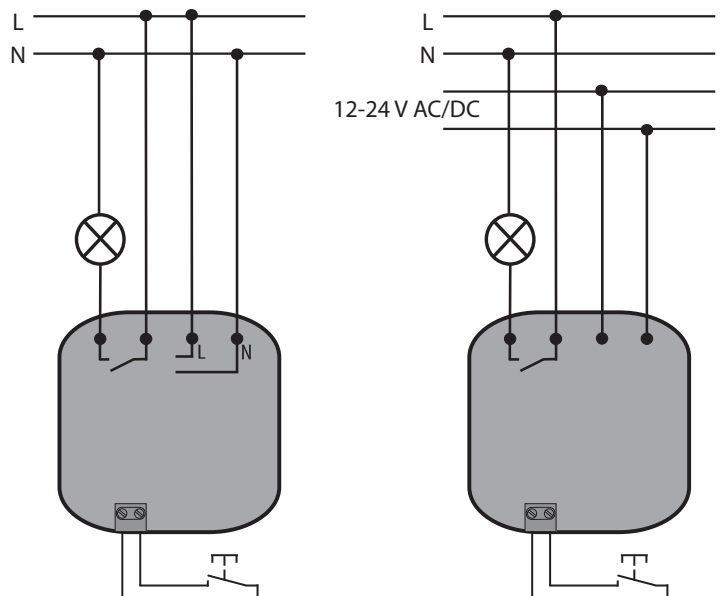
### Device description



### Connection

RFSAI-61B/230V  
RFSAI-61B/120V

RFSAI-61B/24V





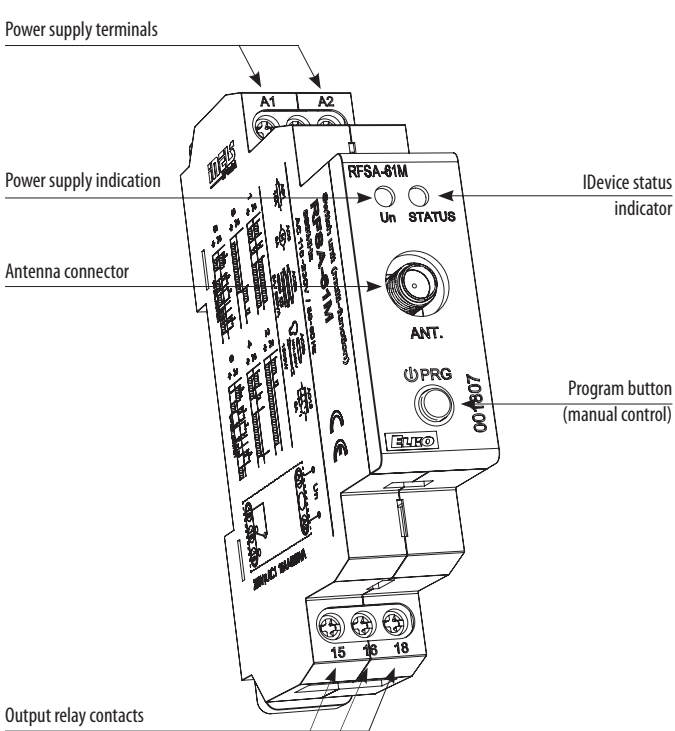
- **RFSA-61M:** the switching unit with 1 output channel is used for controlling appliances, sockets or lights.
  - the one-module design of the unit into a switchboard enables connection of a switched load up to 16A (4.000 W).
  - the switching unit may be controlled by up to 32 channels (1 channel represents 1 button on the controller).
- **RFSA-66M:** the switching unit with 6 output channels is used for independent control of up to 6 appliances, sockets or lights. It is possible to assign any function to each output relay.
  - the three-module design of the unit into a switchboard enables connection of a switched load 6 x 8A (6 x 2000W).
  - it is just right for creating scenes, where with one push of the controller, you can switch on or off all 6 channels simultaneously.
  - each of the channels may be controlled by up to 32 channels (1 channel represents one button on the controller).
- It can be combined with Control or System units iNELS RF Control.
- The integrated switching contact enables connection, where the controlled appliance may be switched on or off by command.
- Function: button, impulse relay and time function of delayed start or return with time setting range of 2s-60 min.
- The programming button on the unit is also used for manual control of the output.
- The package includes an internal antenna AN-I, in case of locating the element in a metal switchboard, you can use the external antenna AN-E for better signal reception.
- Range up to 200 m (in open space), if the signal is insufficient between the controller and unit, use the signal repeater RFRP-20.
- Communication frequency with bidirectional protocol iNELS RF Control.

Technical parameters	RFSA-61M/230V	RFSA-61M/24V	RFSA-66M/230V	RFSA-66M/24V
Supply voltage:	110-230VAC/50-60Hz	12-24 V AC/DC SELV	110-230VAC/50-60Hz	12-24 V AC/DC SELV
Apparent input:	2.7 VA / cos φ = 0.6	-	min. 2VA / max. 5VA	-
Dissipated power:	1.62 W	0.8 W	min.0.5W/max.2.5W	max. 1.8 W
Supply voltage tolerance:	+10% / -25 %			
<b>Output</b>				
Number of contacts:	1x switching (AgSnO <sub>2</sub> )		3x switching (AgSnO <sub>2</sub> )	
Rated current:	16 A / AC1		8 A / AC1	
Switching power:	4000 VA / AC1, 384 W / DC		2000 VA / AC1	
Peak current:	30 A / <3 s		10 A / <3 s	
Switching voltage:	250 V AC1 / 24 V DC		250 V AC1	
Min. DC switching power:	500 mW		500 mW	
Mechanical service life:	3x10 <sup>7</sup>		1x10 <sup>7</sup>	
Electrical service life (AC1):	0.7x10 <sup>5</sup>		1x10 <sup>5</sup>	
<b>Control</b>				
RF, by command from transmitter:	868 MHz, 915 MHz, 916 MHz			
Manual control:	PROG (ON/OFF) button			
Range in free space:	up to 200 m			
Output for antenna:	SMA connector*			
<b>Other data</b>				
Operating temperature:	-15 °C to + 50 °C			
Operating position:	any			
Mounting:	DIN rail EN 60715			
Protection:	IP20 from the front panel			
Overtoltage category:	III.			
Contamination degree:	2			
Connecting conductor cross-section (mm <sup>2</sup> ):	max. 1x2.5, max. 2x1.5 / with a hollow max. 1x2.5			
Dimensions:	90 x 17.6 x 64 mm		90 x 52 x 65 mm	
Weight:	74 g	137 g	264 g	310 g
Related standards:	EN 60669, EN 300 220, EN 301 489 R&TTE Directive, Order. No 426/2000 Coll. (Directive 1999/EC)			

**Function**

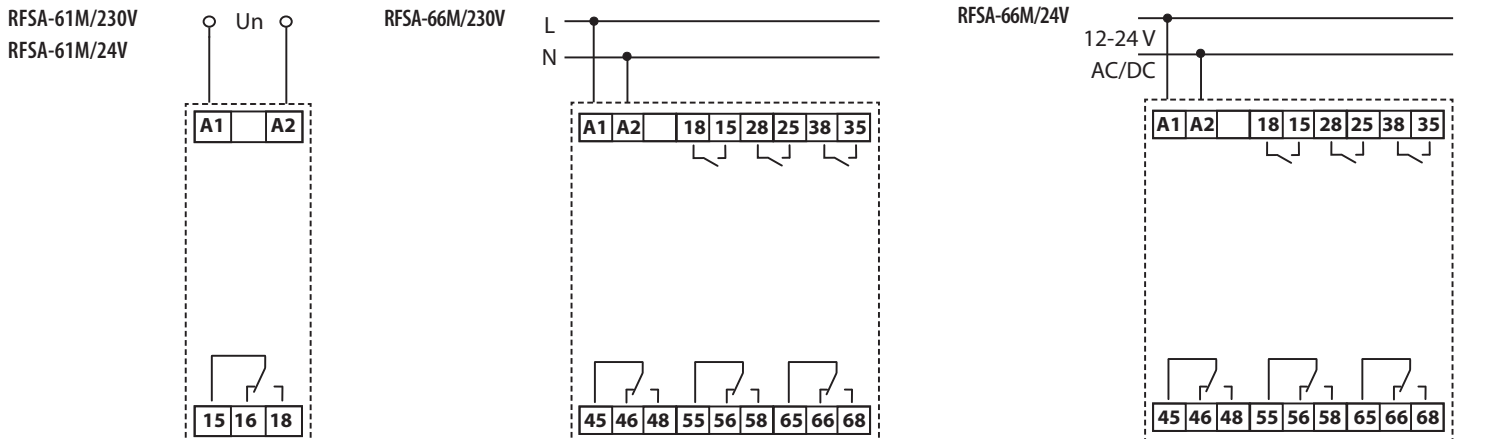
For more information, see p. 56.

**Device description**



\* Max Tightening Torque for antenna connector is 0.56 Nm.

**Connection**





- The switched socket with 1 output channel is used to control fans, lamps, heaters and appliances, which are connected by a power cord.
- They can be combined with either Control or System units iNELS RF Control.
- Thanks to the socket design, installation is simple by direct insertion into the existing socket.
- It enables connection of the switched load up to 16A (4.000 W).
- **RFSC-61**: multi-function design – button, impulse relay and time function of delayed ON or OFF with time setting of 2s-60 min.
- The switched socket may be controlled by up to 32 channels (1 channel represents 1 button on the controller).
- The programming button on the socket is also used for manual control of the output.
- Range up to 200 m (in open space), if the signal is insufficient between the controller and unit, use the signal repeater RFRP-20.
- Communication frequency with bidirectional protocol iNELS RF Control.

• Produced in 4 designs of sockets and plugs:

Technical parameters	RFSC-61/230V	RFSC-61/120V
Supply voltage:	230 - 250V / 50-60Hz	120 V AC / 60Hz
Apparent power:	6 VA	
Dissipated power:	0.7 W	
Supply voltage tolerance:	+10 %; -15 %	
<b>Output</b>		
Number of contacts:	1x switching (AgSnO <sub>2</sub> )	
Rated current:	16 A / AC1	
Switching power:	4000 VA / AC1, 384 W / DC	
Peak current:	30 A / <3 s	
Switching voltage:	250 V AC1 / 24 V DC	
Min. switching power DC:	500 mW	
Mechanical service life:	3x10 <sup>7</sup>	
Electrical service life (AC1):	0.7x10 <sup>5</sup>	
<b>Control</b>		
RF command from the transmitter:	868 MHz, 915 MHz, 916 MHz	
Manual control:	button PROG (ON/OFF)	
Range in open space:	up to 200 m	
<b>Other data</b>		
Operating temperature:	-15 up to + 50 °C	
Working position:	any	
Mounting:	plug into a socket	
Protection:	IP 30	
Overvoltage category:	III.	
Contamination degree:	2	
Dimensions:	62 x 58 x 102 mm	
Weight:	151 g	
Related standards:	EN 60669, EN 300 220, EN 301 489 R&TTE Directive, Order. No 426/2000 Coll. (Directive 1999/EC)	



French  
CZ, SK, PL, FR



Schuko  
HU, DE, RU, AT, RO, ES



British  
GB

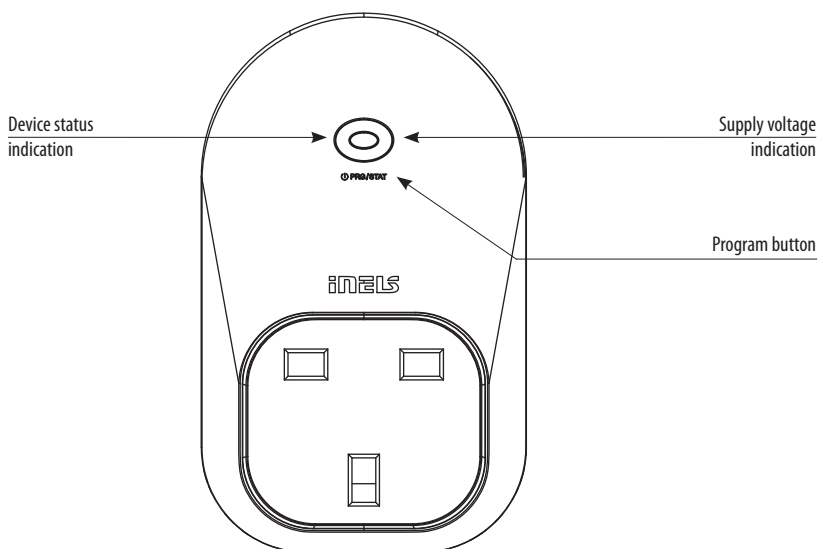


US  
USA

### Function

For more information, see p. 56.

### Device description





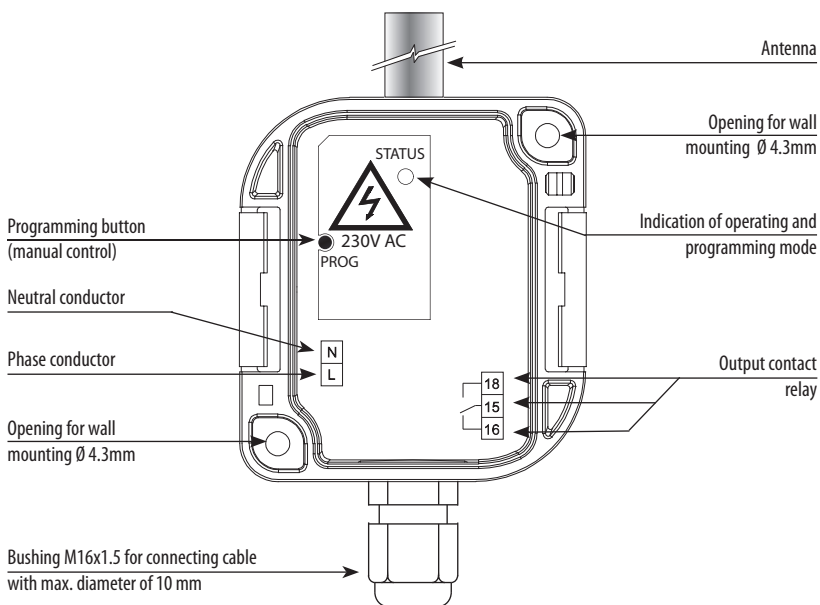
- The switching unit with 1 output channel is used for controlling appliances, sockets or lights.
- It can be combined with Control or System units iNELS RF Control.
- The increased IP 65 protection is suited to mounting on the wall or in harsh environments such as the cellar, garage or bathrooms.
- It enables connection of the switched load up to 12A (3.000 W).
- **RFUS-61**: multi-function design – button, impulse relay and time function of delayed ON or OFF with time setting of 2s-60 min.
- The switching unit may be controlled by up to 32 channels (1 channel represents 1 button on the controller).
- The programming button on the unit is also used for manual control of the output.
- Range up to 200 m (in open space), if the signal is insufficient between the controller and unit, use the signal repeater RFRP-20.
- Communication frequency of with bidirectional protocol iNELS RF Control.

Technical parameters	RFUS-61/230V	RFUS-61/120V	RFUS-61/24V
Supply voltage:	230 V AC / 50 - 60 Hz	120 V AC / 60Hz	12-24V AC/DC 50-60Hz
Apparent power:	5 VA / $\cos \varphi = 0.1$	5 VA / $\cos \varphi = 0.1$	-
Dissipated power:	0.6 W	0.6 W	0.7 W
Supply voltage tolerance:	+10 %; -15 %		
<b>Output</b>			
Rated current:	1 x switching (AgSnO <sub>2</sub> )		
Number of contacts:	12 A / AC1		
Switching power:	3000 VA / AC1, 384 W / DC		
Peak current:	30 A / <3 s		
Peak current:	250 V AC1 / 24 V DC		
Min. switching power DC:	500 mW		
Mechanical service life:	3x10 <sup>7</sup>		
Electrical service life (AC1):	0.7x10 <sup>5</sup>		
<b>Control</b>			
RF command from the transmitter:	868 MHz, 915 MHz, 916 MHz		
Manual control:	button PROG (ON/OFF)		
Range in open space:	up to 200 m		
<b>Other data</b>			
Operating temperature:	-15 up to +50 °C		
Operating position:	any		
Mounting:	screws		
Protection:	IP 65		
Overvoltage category:	III.		
Contamination degree:	2		
Cross-section of connecting wires (mm <sup>2</sup> ):	max. 1x2.5, max. 2x1.5 / with a hollow max. 1x2.5		
Recommended power cord:	CYKY 3x1.5 (CYKY 4x1.5)		
Dimensions:	136 x 62 x 34 mm		
Weight:	146 g		
Related standards:	EN 60669, EN 300 220, EN 301 489 R&TTE Directive, Order. No 426/2000 Coll. (Directive 1999/EC)		

### Function

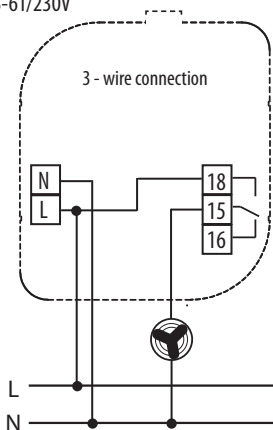
For more information, see p. 56.

### Device description

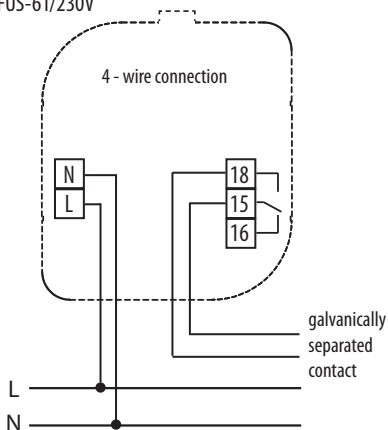


### Connection

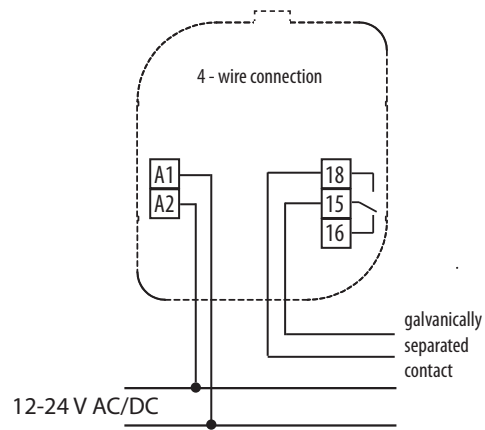
RFUS-61/120V  
RFUS-61/230V

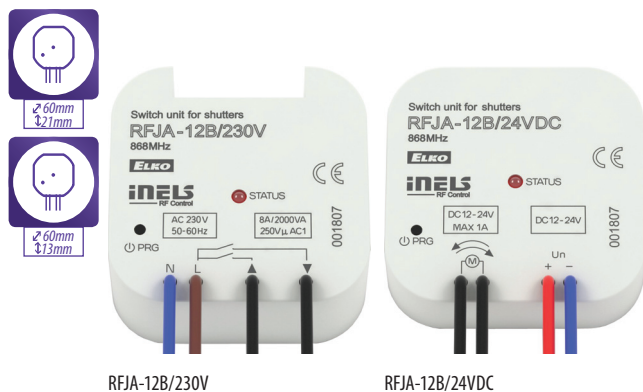


RFUS-61/120V  
RFUS-61/230V



RFUS-61/24V





- The switching unit for blinds has 2 output channels used to control garage doors, gates, blinds, awnings, etc.
- It can be combined with Control or System units iNELS RF Control.
- The BOX design lets you mount it right in an installation box, a ceiling or motor drive cover.
- **RFJA-12B/230V**: connection of switched load 2 x 8A (2 x 2.000 W).
- **RFJA-12B/24VDC**: contactless quiet switching.
- Short presses of the controller enable tilting of lamellas, and a long press enables you to draw the blinds up or down to the end position.
- Each of the units may be controlled by up to 32 channels (1 channel represents 1 button on the controller).
- The programming button on the unit is also used for manual control of the output.
- Range up to 100 m (in open space), if the signal is insufficient between the controller and unit, use the signal repeater RFRP-20.
- Communication frequency with bidirectional protocol iNELS RF Control.

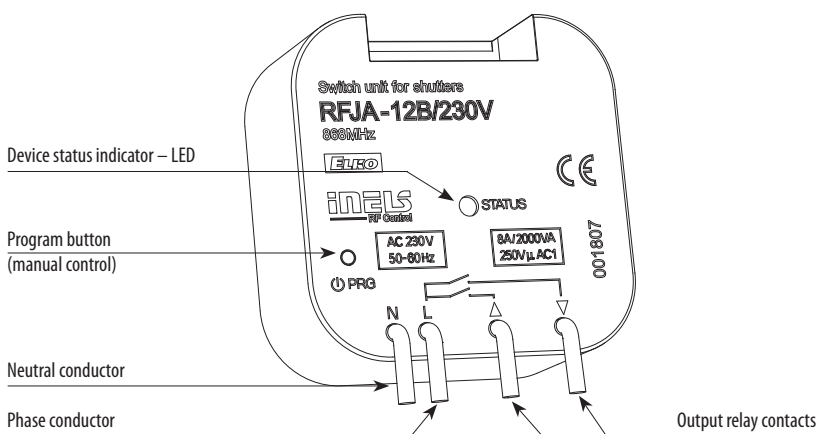
Technical parameters	RFJA-12B/230V	RFJA-12B/120V	RFJA-12B/24V
Supply voltage:	230 V AC / 50 - 60 Hz	120 V AC / 60 Hz	12-24 V DC
Apparent input:	7 VA / $\cos \varphi = 0.1$	7 VA / $\cos \varphi = 0.1$	x
Dissipated power:	0.7 W	0.7 W	x
Power without load:	x	x	0.5 W
Power under load:	x	x	25 W
Supply voltage tolerance:	+10 -15 %		
<b>Output</b>			
Number of contacts:	2 x switching (AgSnO <sub>2</sub> )		x
Rated current:	8 A / AC1		x
Permanent current:	x		1 A
Switching power:	2000 VA / AC1		x
Peak current:	10 A / <3 s		1.5 A
Switching voltage:	250 V AC1		x
Switching output voltage*:	x		12-24 V DC*
Mechanical service life:	1x10 <sup>7</sup>		x
Electrical service life (AC1):	1x10 <sup>5</sup>		x
<b>Control</b>			
RF, by command from transmitter:	868 MHz, 915 MHz, 916 MHz		
Manual control:	PROG (STOP, ▲, STOP, ▼)		
Range in free space:	up to 100 m		
<b>Other data</b>			
Operating temperature:	-15 to + 50 °C		
Operating position:	any		
Mounting:	free at lead-in wires		
Protection:	IP 30		
Overvoltage category:	III.		
Contamination degree:	2		
Terminals (CY wire, cross section):	4 x 0.75 mm <sup>2</sup>		
Length of terminals:	90 mm		
Dimensions:	49 x 49 x 21 mm	49 x 49 x 13 mm	
Weight:	46 g	22 g	
Related standards:	EN 60669, EN 300 220, EN 301 489 R&TTE Directive, Order. No 426/2000 Coll. (Directive 1999/EC)		

\* Identical with supply voltage

### Function description

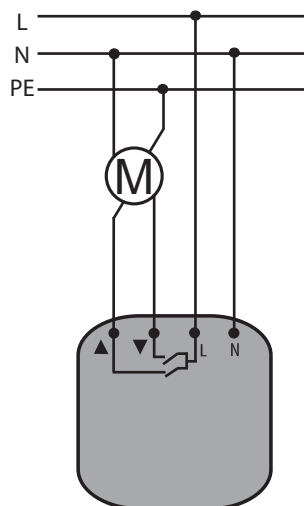
1. When the control button is pressed for less than 2 seconds, shutters move up (▲) or down (▼).
2. When the control button is pressed for more than 2 seconds, shutters move up (▲) or down (▼) until reaching the final position.

### Device description

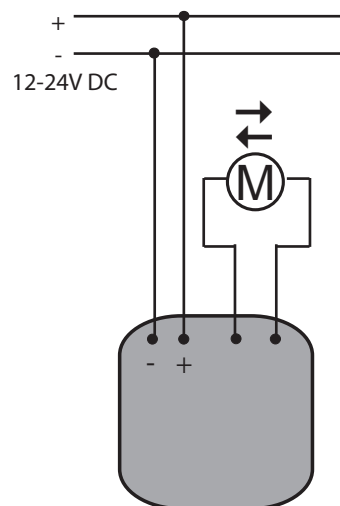


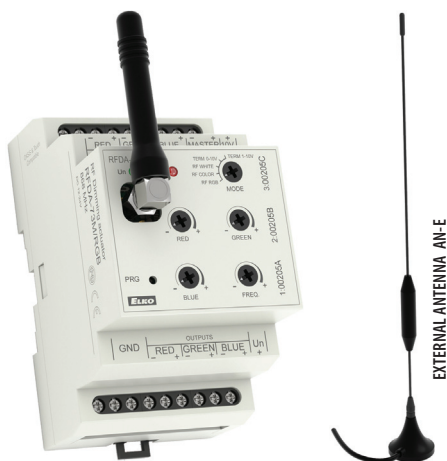
### Connection

RFJA-12B/230V



RFJA-12B/24VDC



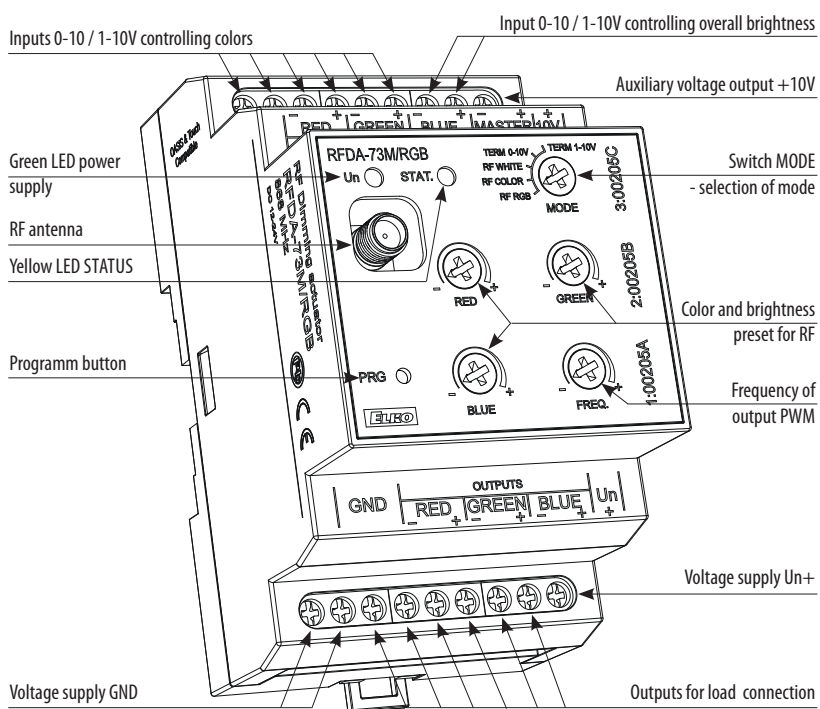


- The dimmer for LED strips is used for independent control of 3 single-color LED strips or one RGB LED strip.
- The expanded selection of control modes enables it to be combined with:
  - a) Controllers and System units iNELS RF Control
  - b) control signal 0(1)-10V
  - c) connecting to iNELS BUS using DAC converters.
- The unit's three-module design with switchboard mounting enables connection of dimmed load 3 x 5A, which represents:
  - a) single-color LED strip 7.2W (ELKO Lighting) – 3 x 8 m
  - b) RGB LED strip 14.2W (ELKO Lighting) – 10 m.
- 6 light functions - smooth increase or decrease with time setting 2s-30 min.
- When switched off, the set level is stored in the memory, and when switched back on, it returns to the most recently set value.
- The dimmer may be controlled by up to 32 channels (1 channel represents 1 button on the controller).
- The power supply of the unit is in the range of 12-24V DC, and is indicated by a green LED.
- The package includes an internal antenna AN-I, in case of locating the unit in a metal switchboard, you can use the external antenna AN-E for better signal reception.
- Range up to 160 m (in open space), if the signal is insufficient between the controller and unit, use the signal repeater RFRP-20.
- Communication frequency with bidirectional protocol iNELS RF Control.

Technical parameters		RFDA-73M/RGB
Supply terminals:		Un+, GND
Supply voltage:		12-24 V DC stabilized
Maximum power without load:		0.8 W
<b>Output</b>		
Dimmed load:		LED strip 12V,24V with common anode RGB LED strips 12V, 24V with common anode
Number of channels:		3
Rated current:		3x5 A
Peak current:		3x10 A
Switching voltage:		Un
<b>Control</b>		
RF by command from the transmitter:		868 MHz, 915 MHz, 916 MHz
Ext. signal:		0-10 V, 1-10V
Range in open space:		up to 160 m
Load capacity of output +10V:		10 mA
Output for antenna:		SMA connector*
<b>Other data</b>		
Operating temperature:		-20 up to + 50 °C
Storage temperature:		-30 up to + 70 °C
Working position:		any
Mounting:		DIN rail EN 60715
Protection:		IP 20 from front panel
Contamination degree:		2
Cross-section of connecting wires (mm <sup>2</sup> ):		max 1x2.5, max 2x1.5/ with a hollow max. 1x2.5
Dimensions:		90 x 52 x 65 mm
Weight:		130 g
Related standards:		EN 60730-1; EN 60730-2-11

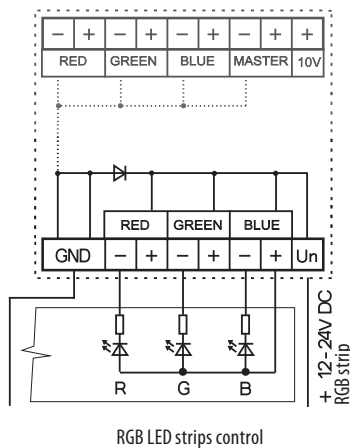
\* Max Tightening Torque for antenna connector is 0.56 Nm.

**Device description**

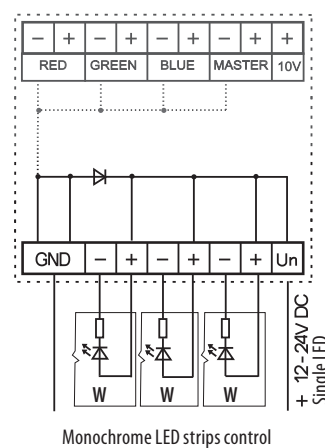


**Output variations**

**RF RGB /RF COLOR**



**RF WHITE**



**Function**

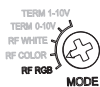
For more information, see p. 57.



**Control modes**

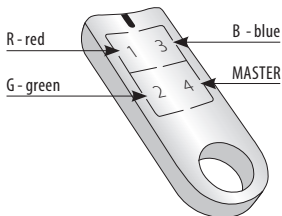
**RF RGB**

Switch settings in MODE:



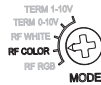
RF RGB mode for controlling RGB LED strips. In the RF RGB programming mode, colors are automatically assigned to individual transmitter buttons.

Note: The mode can be controlled by RF Touch, RF Pilot, RFWB-40/G, RF KEY, RFIM-40B, eLAN-RF-003 and eLAN-RF-Wi-003.



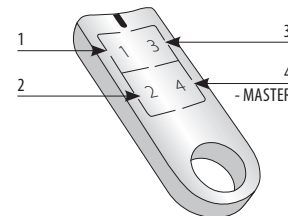
**RF COLOR**

Switch settings in MODE:



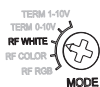
RF COLOR mode for controlling RGB LED strips, where you can choose the color for individual transmitter buttons. A long press of the button starts the color search mode. After releasing the button, the current color is set for the given button.

Note: The mode can be controlled by RF Touch, RF Pilot, RFWB-40/G, RF KEY RFIM-40B, eLAN-RF-003 and eLAN-RF-Wi-003.



**RF WHITE**

Switch settings in MODE:

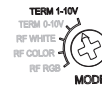
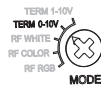


This works in a mode where it acts like three independent dimmers for 12-24V. Each channel can be programmed independently of one another and has its own address. For more information, see p. 57.

Note: The mode can be controlled by RF Touch, RF Pilot, RFWB-20/G, RFWB-40/G, RF KEY, RFIM-20B, RFIM-40B, eLAN-RF-003 and eLAN-RF-Wi-003.

**TERM 0-10V and TERM 1-10V**

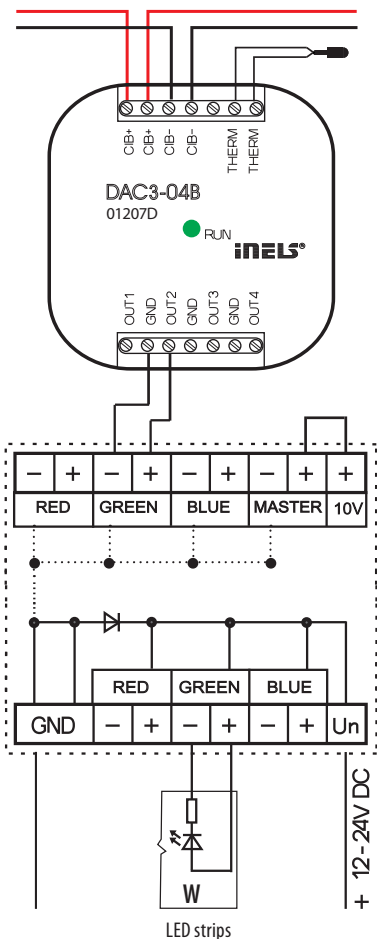
Switch settings in MODE:



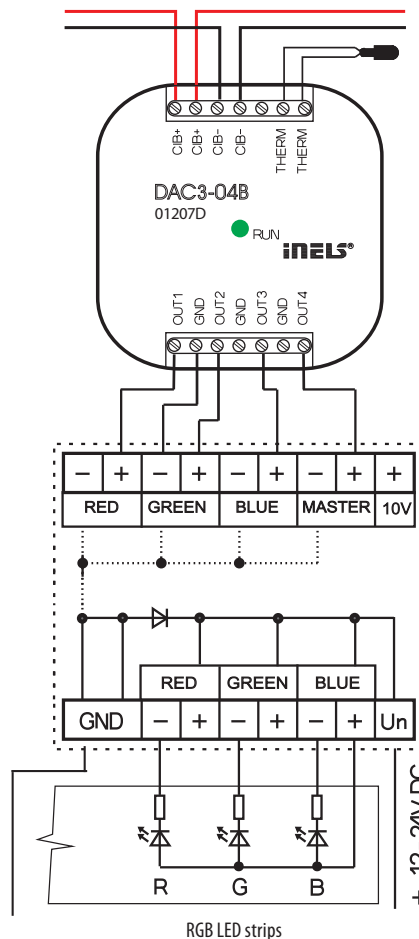
Modes TERM 0-10V and TERM 1-10V. Inputs 0-10V and 1-10V used to control one RGB LED strip or three independent single-color LED strips (see modes above) from the iNELS BUS System. For controlling, you can use ballasts DAC3-04M or DAC3-04B. For controlling, it is appropriate to use the wall touch unit EST3, the controller WSB3-40, the glass touch controller GSB3-40, the application iMM on the TV screen or the application iHC for smartphones and tablets.

**Control options**

TERM 0(1)-10V DC - monochrome LED strips



TERM 0(1)-10V DC - RGB LED strips





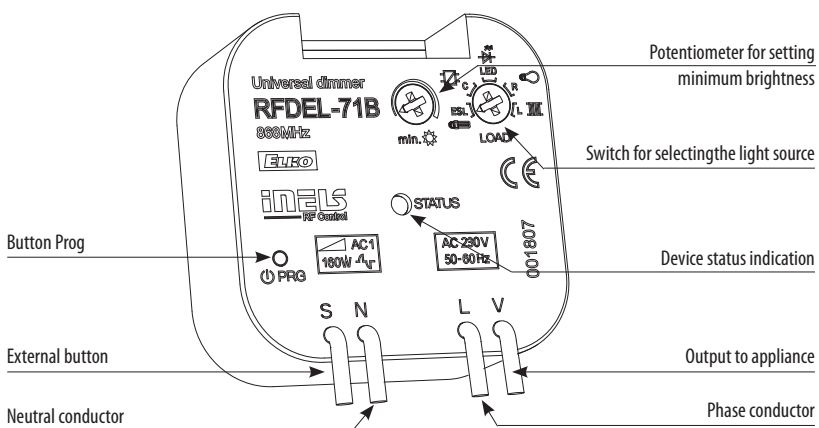
- The universal built-in dimmer is used to regulate light sources:
  - R – classic lamps
  - L – halogen lamps with wound transformer
  - C – halogen lamps with electronic transformer
  - ESL – dimmable energy-efficient fluorescent lamps
  - LED – LED light sources (230V).
- It can be combined with Controllers or System units iNELS RF Control.
- The BOX design lets you mount it right in an installation box, a ceiling or light cover.
- 6 light functions - smooth increase or decrease with time setting 2s-30 min.
- When switched off, the set level is stored in the memory, and when switched back on, it returns to the most recently set value.
- Thanks to setting the min. brightness by potentiometer, you will eliminate flashing of the LED and ESL light sources.
- The universal dimmer may be controlled by up to 32 channels (1 channel represents 1 button on the controller).
- Connection of the existing button on the control input, „S“ enables combination of wireless control with classic (wired) control.
- The programming button on the controller is also used for manual control of the output.
- Range up to 160 m (in open space), if the signal is insufficient between the controller and unit, use the signal repeater RFRP-20.
- Communication frequency with bidirectional protocol iNELS RF Control.

Technical parameters	RFDEL-71B/230V	RFDEL-71B/120V
Supply voltage:	230 V AC / 50 Hz	120 V AC / 60 Hz
Apparent power:	1.1 VA	1.1 VA
Dissipated power:	0.8 W	0.8 W
Supply voltage tolerance:	+10/-15 %	
Connection:	4-wire, with "NEUTRAL"	
Dimmed load:	R,L,C, LED, ESL	
Output		
Contactless:	2 x MOSFET	
Load capacity:	160 W*	80 W*
Control		
RF command from the transmitter:	868 MHz, 915 MHz, 916 MHz	
Range in open space:	up to 160 m	
Manual control:	button PROG (ON/OFF), external button	
Glow lamp connection:	No	
Other data		
Operating temperature:	-20 up to + 35°C	
Storage temperature:	-30 up to +70°C	
Operating position:	any	
Mounting:	free at lead-in wires	
Protection:	IP 30 under normal conditions	
Overvoltage category:	III.	
Contamination degree:	2	
Terminals (CY wire, Cross-section):	4 x 0.75 mm <sup>2</sup>	
Terminal length:	90 mm	
Dimensions:	49 x 49 x 21 mm	
Weight:	40 g	
Related standards:	EN 607 30-1 ED.2	

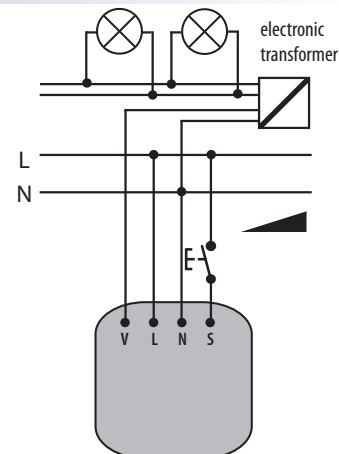
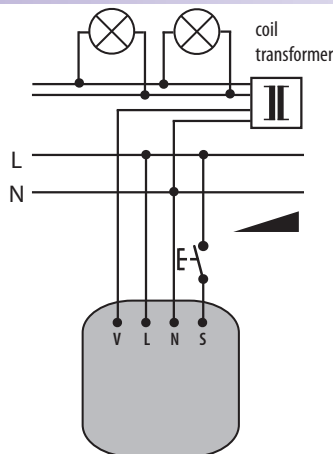
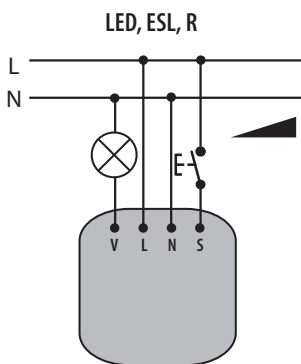
### Function

For more information, see p. 57.

### Device description



### Connection



\* Capacity for power factor  $\cos \varphi = 1$ .

The power factor of dimmable LEDs and ESL bulbs ranges from  $\cos \varphi = 0.95$  up to 0.4.

An approximate value of maximum load may be obtained by multiplying the load capacity of the dimmer by the power factor of the connected light source.

You can find the list of dimmable light sources here [www.elkoep.com/Solutions](http://www.elkoep.com/Solutions)



Technical parameters	RFDEL-71M/230V	RFDEL-71M/120V
Supply voltage:	230 V AC / 50 Hz	120 V AC / 60 Hz
Apparent power:	2.5 VA	1.1 VA
Dissipated power:	0.8 W	0.6 W
Supply voltage tolerance:	+10/ -15 %	
Dimmed load:	R,L,C, LED, ESL	
<b>Output</b>		
Contactless:	2 x MOSFET	
Load capacity:	600 W*	300 W*
<b>Controlling</b>		
By RF command from the transmitter:	868 MHz, 915 MHz, 916 MHz	
Range in open space:	up to 160 m	
Output for antenna:	SMA connector**	
Manual control:	SW (ON/OFF) button, external button, potentiometer	
Glow lamps connection:	No	
Analog control:	0 (1) - 10V	
<b>Other data</b>		
Operating temperature:	-20 up to + 35 °C	
Storage temperature:	-30 up to +70°C	
Operating position:	vertical	
Mounting:	DIN rail EN 60715	
Protection:	IP 20 under normal conditions	
Overvoltage category:	II.	
Contamination degree:	2	
Cross-section of connecting wires:	max 1x2.5, max 2x1.5 / with a hollow max. 1x2.5	
Dimension:	90 x 52 x 65 mm	
Weight:	125g	
Related standards:	EN 60730-1 ed.2	

\* Due to the huge amount of type of light sources, the maximum load depends on internal construction of dimmable LED and ESL bulbs and their power factor  $\cos \varphi$ , capacity for power factor  $\cos \varphi=1$ . The power factor of dimmable LEDs and ESL bulbs ranges from  $\cos \varphi = 0.95$  up to 0.4. An approximate value of maximum load may be obtained by multiplying the load capacity of the dimmer by the power factor of the connected light source. You can find the list of dimmable light sources here [www.elkoep.com/Solutions](http://www.elkoep.com/Solutions).

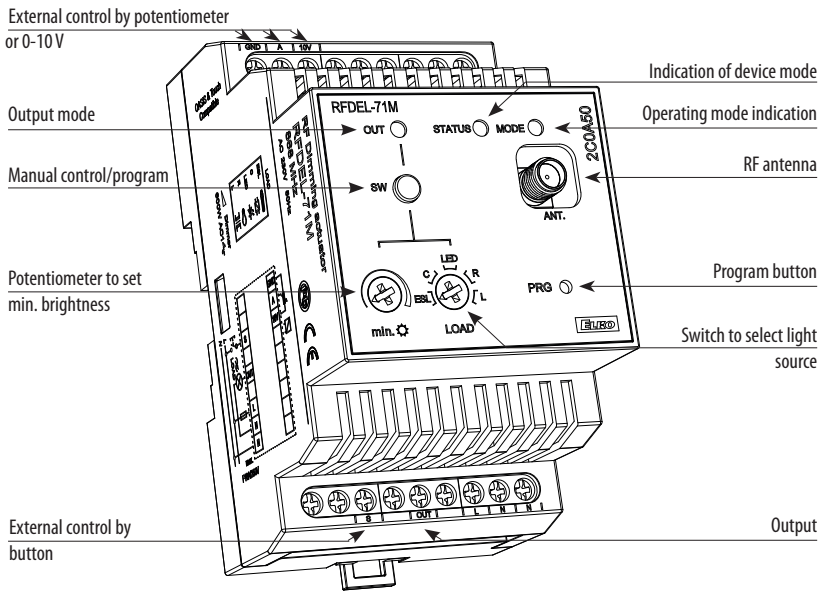
\*\* Max Tightening Torque for antenna connector is 0.56 Nm.

- The universal modular dimmer is used to regulate light sources:
  - R – classic lamps
  - L – halogen lamps with wound transformer
  - C – halogen lamps with electronic transformer
  - ESL – dimmable energy-efficient fluorescent lamps
  - LED – LED light sources (230V).
- Control can be performed by:
  - a) Controllers and System units iNELS RF Control
  - b) by control signal 0(1)-10V
  - c) potentiometer
  - d) existing button in the installation.
- The unit's three-module design with switchboard mounting enables connection of a dimmed load of up to 600 W.
- 6 light functions - smooth increase or decrease with time setting 2s-30 min.
- When switched off, the set level is stored in the memory, and when switched back on, it returns to the most recently set value.
- Thanks to setting the min. brightness by potentiometer, you will eliminate flashing of the LED and ESL light sources.
- The universal dimmer may be controlled by up to 32 channels (1 channel represents 1 button on the controller).
- The programming button on the controller is also used for manual control of the output.
- The package includes an internal antenna AN-I, in case of locating the unit in a metal switchboard, you can use the external antenna AN-E for better signal reception.
- Range up to 160 m (in open space), if the signal is insufficient between the controller and unit, use the signal repeater RFRP-20.
- Communication frequency with bidirectional protocol iNELS RF Control.

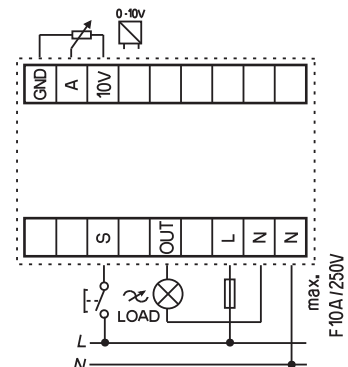
### Function

For more information, see p. 57.

### Device description



### Connection





Technical parameters	RFDSC-71/230V	RFDSC-71/120V
Supply voltage:	230 - 250V / 50-60Hz	120 V AC / 60Hz
Apparent power:	1.1 VA	
Dissipated power:	0.8 W	
Supply voltage tolerance:	+10/ -15 %	
Dimming load:	R,L,C, LED, ESL	
<b>Output</b>		
Contactless:	2 x MOSFET	
Load capacity:	300 W*	150 W*
<b>Control</b>		
RF command from the transmitter:	868 MHz, 915 MHz, 916 MHz	
Range in open space:	up to 160 m (more on range on p. 53)	
Manual control:	button PROG (ON/OFF)	
<b>Other data</b>		
Operating temperature:	-20 up to + 35 °C	
Storage temperature:	-30 up to +70°C	
Working position:	any	
Mounting:	plug into a socket	
Protection:	IP 30	
Overvoltage category:	III.	
Contamination degree:	2	
Dimensions:	62 x 58 x 102 mm	
Weight:	129 g	
Related standards:	EN 60669, EN 300 220, EN 301 489 R&TTE Directive, Order. No 426/2000 Coll. (Directive 1999/EC)	

\* Capacity for power factor  $\cos \varphi=1$ .

The power factor of dimmable LEDs and ESL bulbs ranges from  $\cos \varphi = 0.95$  up to 0.4. An approximate value of maximum load may be obtained by multiplying the load capacity of the dimmer by the power factor of the connected light source.

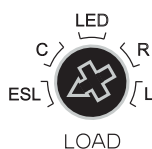
A list of test light sources can be found here : [www.elkoep.com/solutions](http://www.elkoep.com/solutions)

### Settings

Potentiometer for setting minimum brightness



Switch for light source selection



- The dimmed socket is used to control light sources that are connected by power cord - especially lamps:
  - R – classic lamps
  - L – halogen lamps with wound transformer
  - C – halogen lamps with electronic transformer
  - ESL – dimmable energy-efficient fluorescent lamps
  - LED – LED light sources (230V),
- It can be combined with Controllers or System units iNELS RF Control.
- Thanks to the socket design, installation is simple by direct insertion into the existing socket.
- Output load 300W.
- RFDSC-71: multi-function 6 light functions - smooth increase or decrease with time setting 2s-30 min.
- When switched off, the set level is stored in the memory, and when switched back on, it returns to the most recently set value.
- Thanks to setting the min. brightness by potentiometer, you will eliminate flashing of the LED and ESL light sources.
- The universal dimmer may be controlled by up to 32 channels (1 channel represents 1 button on the controller).
- The programming button on the socket is also used for manual control of the output.
- Range up to 160 m (in open space), if the signal is insufficient between the controller and unit, use the signal repeater RFRP-20.
- Communication frequency with bidirectional protocol iNELS RF Control.
- Produced in 4 designs of sockets and plugs:



French  
CZ, SK, PL, FR



Schuko  
HU, DE, RU, AT, RO



British  
GB

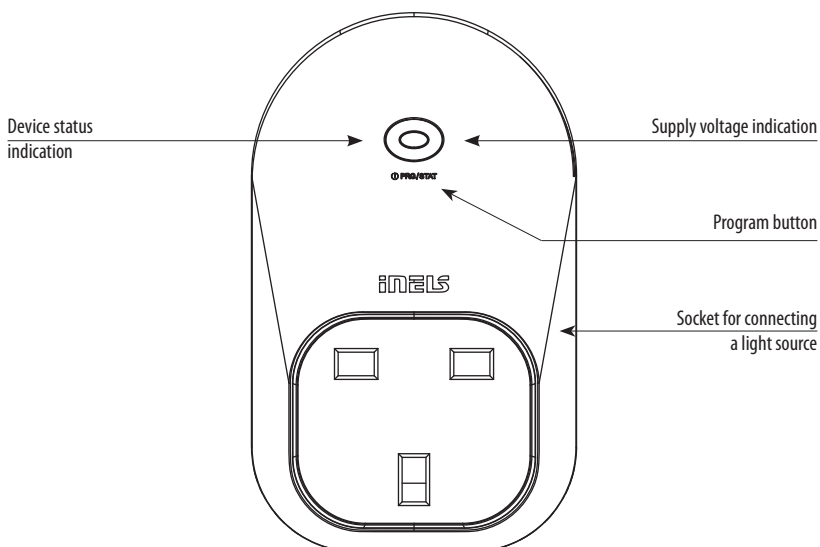


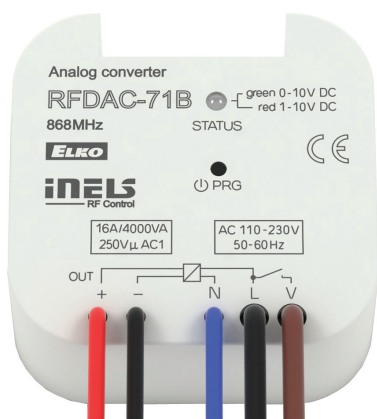
US  
USA

### Function

For more information, see p. 57.

### Device description





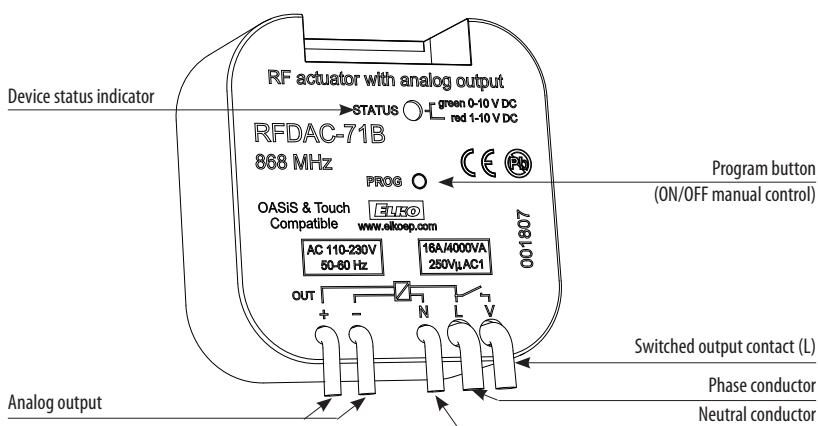
- The analog controller with output 0(1)-10V is used for:
  - a) dimming fluorescent lamps (using a dimmable ballast).
  - b) dimming LED panels (when using a suitable dimmed source up to 50 units LP-6060-3K/6K).
  - c) Control of thermal actuators (TELVA).
  - d) control of other controllers (e.g. performance dimmers DIM-6).
- It can be combined with Controllers or System units iNELS RF Control.
- The BOX design lets you mount it right in an installation box, a ceiling or light cover.
- Potential free analog output 10 mA, contact relay 16A.
- 6 light functions - smooth increase or decrease with time setting 2s-30 min.
- When switched off, the set level is stored in the memory, and when switched back on, it returns to the most recently set value.
- The analog controller may be controlled by up to 32 channels (1 channel represents 1 button on the controller).
- The programming button on the controller is also used for manual control of the output.
- The unit power supply is in the range 110-230V AC.
- Range up to 200 m (in open space), if the signal is insufficient between the controller and unit, use the signal repeater RFRP-20.
- Communication frequency with bidirectional protocol iNELS RF Control.

Technical parameters	RFDAC-71B
Supply voltage:	110 - 230 V AC / 50 - 60 Hz
Apparent input:	3 VA
Dissipated power:	1.2 W
Supply voltage tolerance:	+10 /-15 %
Potential-free analog output/max. current:	0(1)-10 V / 10 mA
<b>Control</b>	
RF, by command from transmitter:	868 MHz, 915 MHz, 916 MHz
Manual control:	PROG (ON/OFF) button
Range in free space:	up to 200 m
Minimum control distance:	20 mm
Contact relay:	1x AgSnO <sub>2</sub> , switches the phase conductor
Rated current:	16A / AC1
Switching power:	4000VA / AC1
Switching voltage:	250V AC1
Mechanical service life:	3x10 <sup>7</sup>
Electrical service life:	0.7x10 <sup>5</sup>
Indication:	red LED / green LED
Output selection:	0(1)-10V / PROG button
<b>Other data</b>	
Operating temperature:	-15 to + 50 °C
Operating position:	any
Mounting:	free at lead-in wires
Protection:	IP 30
Overvoltage category:	III.
Contamination degree:	2
Terminals (CY wire, cross-section):	3 x 0.75 mm <sup>2</sup> , 2 x 2.5 mm <sup>2</sup>
Length of terminals:	90 mm
Dimensions:	49 x 49 x 21 mm
Weight:	52 g
Related standards:	EN 60669, EN 300 220, EN 301 489 R&TTE Directive, Order. No 426/2000 Coll. (Directive 1999/EC)

### Function

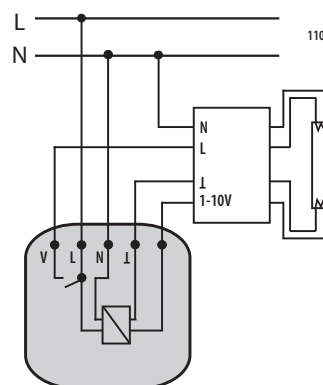
For more information, see p. 57.

### Device description

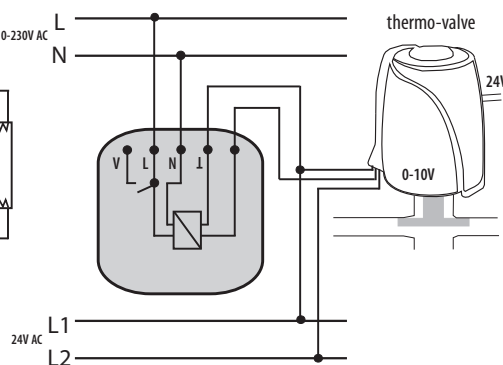


### Connection

Connection example: dimming of fluorescent tubes with dimmable ballast



Connection example: with thermo valve





Technical parameters	RF-RGB-LED-550	RF-White-LED-675
Supply voltage:	100-240V AC 50/60 Hz	
Maximum power :	9 W	10 W
Power factor:	<0.6	
<b>Output</b>		
Lighting power:	6 W	8 W
Luminous flux:	550Lm	675 Lm
Color temperature:	RGB	2600, 5000
Brightness regulation:	0-100%	
Durability:	30, 000 hours	
<b>Controlling</b>		
By RF command from transmitter:	868 MHz, 915 MHz, 916 MHz	
Free space range:	up to 20 m	
<b>Other data</b>		
Operating temperature:	0 up to + 50 °C	
Storage temperature:	-30 up to + 70 °C	
Connection:	socket E27	
Operating position:	any	
Dimension:	65 x 115 mm	
Weight:	150 g	

#### RF-RGB-LED-550

- The colored lamp with RF module enables you to create an atmosphere for reading, watching a movie, hosting a party with friends, etc.
- The lamp has an implemented wireless unit, which receives commands from system units of iNELS RF Control (link) and sends a signal for visualization of the current status ON/OFF, brightness.
- Luminous flux up to 550Lm, with power 9W and life of 30,000 hours.
- RGB lamp function:
  - colored light scenes
  - option of setting brightness in a range of 0-100%
  - circus mode, used for automatic blending of colors

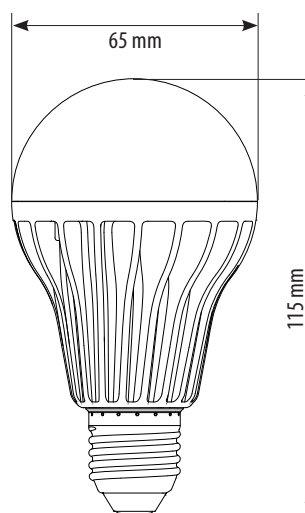
#### RF-White-LED-675

- The white wireless lamp with RF module is used for everyday illumination.
- The lamp has an implemented wireless unit, which receives commands from system units of iNELS RF Control (link) and sends a signal for visualization of the current status ON/OFF, brightness.
- Luminous flux up to 675Lm, with power 10W and life of 30,000 hours.
- White wireless lamp functions:
  - option of setting brightness in a range of 0-100%
  - setting color warm white / cold white
- When switched off, the set level is stored in the memory, and when switched back on, it returns to the most recently set value.
- Assembly directly in your existing light with base E27.
- The power supply of the lamp is in the range 100 – 240V AC.
- Range up to 20 m (in open space); if the signal is insufficient between the controller and unit, use the signal repeater RFRP-20.
- Communication frequency with bidirectional protocol iNELS RF Control.

#### Description of functions

RGB LED and White bulbs can be controlled through transmitters RF KEY, RFWB, RF Pilot and RF Touch. Using buttons or touch panel, it is possible to choose the desired color from the RGB spectrum or desired brightness.

#### Dimension

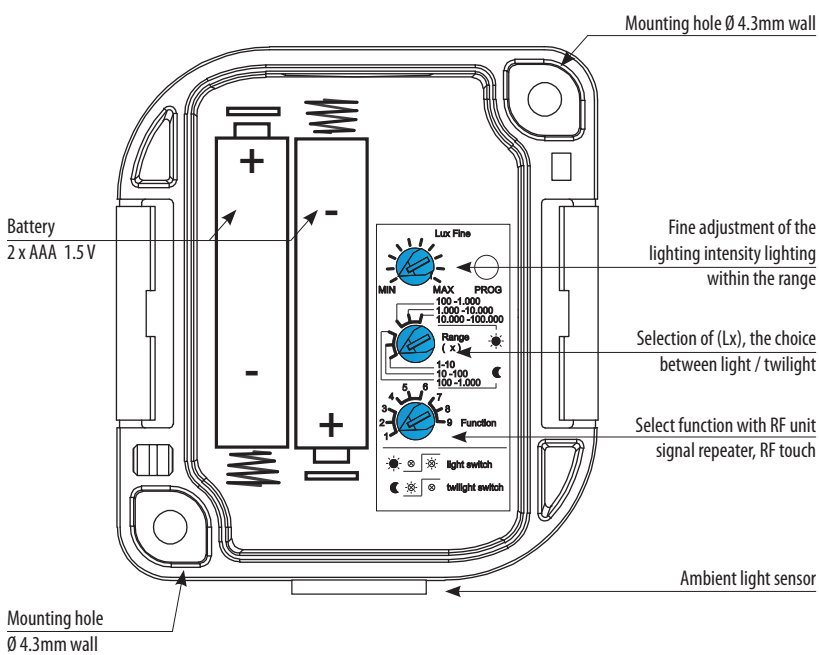




- The wireless twilight dimmer measures the light intensity and based on a set value, it sends the command to switch on the lights or pull the blinds up or down.
- It can be combined with multifunctional switching units and blind switches.
- The increased IP 65 protection is suited to mounting on the wall or in harsh environments.
- Integrated sensor for measuring illumination, settable in 3 ranges 1 – 100,000 lx.
- Selection of function:
  - a) twilight switch – automatically switches on upon a decrease in ambient light intensity, switches off upon an increase (appropriate for garden lights, advertisements, public lighting, etc.)
  - b) light switch – automatically switches on upon an increase in ambient light intensity, switches off upon a decrease (appropriate for offices, restaurants, rooms, etc.)
- Settable delay up to 2 minutes to eliminate unwanted switching caused by surrounding influences.
- The twilight switch may control up to 32 units in the installation.
- The programming button on the regulator is used for:
  - a) setting a function with a switching or blind unit
  - b) ascertaining battery status
  - c) ascertaining signal quality between the unit and dimmer.
- Battery power (1.5V / 2 x AAA - included in supply) with battery life of around 2 years based on the number of controlled units.
- Range up to 160 m (in open space), if the signal is insufficient between the controller and unit, use the signal repeater RFRP-20.
- Communication frequency with bidirectional protocol iNELS RF Control.

Technical parameters	RFSOU-1
Power supply	2 x 1.5 battery AAA
Battery Life:	Appr. 2 years, according to the number of controlled units
<b>Setting the range of light levels</b>	
Function ☾ (twilight switch)	
- Range 1:	1 ... 10 lx
- Range 2:	10 ... 100 lx
- Range 3:	100 ... 1.000 lx
Function ☀ (light switch)	
- Range 1:	100 ... 1.000 lx
- Range 2:	1.000 ... 10.000 lx
- Range 3:	10.000 ... 100.000 lx
Function setting:	rotary switch
The level of lighting gently:	0.1 ... 1 x range
Fine adjustment of lighting levels:	potentiometer
The time delay t:	0 / 1 min. / 2 min.
Setting the delay time t:	rotary switch
<b>Output</b>	
Sending RF communication packet:	868 MHz, 915 MHz, 916 MHz
Range in free space:	up to 160 m
<b>Other data</b>	
Working temperature:	-20 to +50°C*
Storage temperature:	-30 to +70°C
Operating position:	sensor side down
Protection:	IP65
Degree of pollution:	2
Dimension:	72 x 62 x 34 mm
Weight:	104 g
Standards:	EN 60730-1, EN 300 220, EN 301 489 R&TTE Directive, Order. No 426/2000 Coll. (Directive 1999/EC)

**Device description**



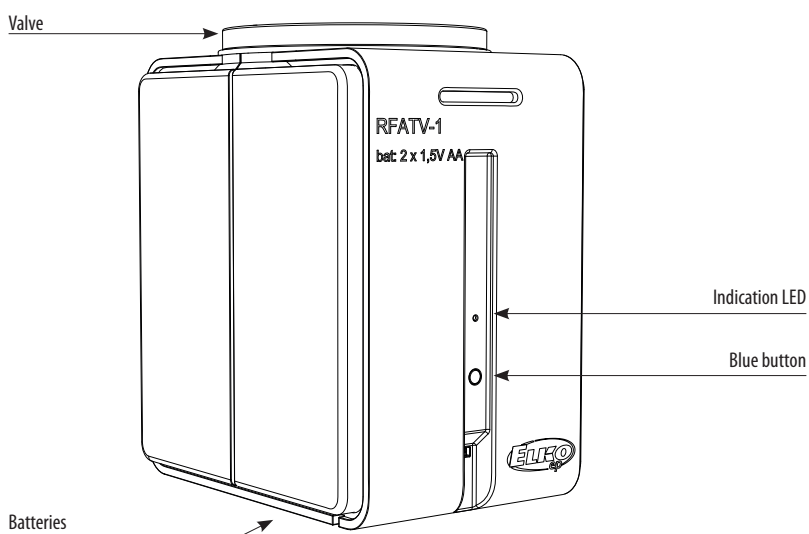
\*Note: pay attention to the operating temperature of batteries.



- The wireless thermostat measures room temperature by internal sensor; based on a set program in the system unit, it opens / closes the radiator valve.
- It can be combined with one of three system units: smart RF box eLAN-RF, wireless controller RFTC-100/G or touch unit RF Touch.
- It measures temperature in a range of 0 .. +32°C and sends it to the system unit in regular 5-min. intervals.
- Monitoring function Open window, where upon a sudden change in temperature, it shuts the valve for a preset period.
- Setting the hysteresis and offset is performed in the system unit or application.
- Low battery indicator on the display of the system unit or in the application.
- Mounting directly on the valve of the heater (radiator).
- Battery power (1.5V / 2 x AA - included in supply) with battery life of around 1 year based on frequency of use.
- Range up to 100 m (in open space), if the signal is insufficient between the controller and unit, use the signal repeater RFRP-20.
- Communication frequency with bidirectional protocol iNELS RF Control.
- Package includes: adapters Danfoss RAV, RA, RAVL; 2x batteries AA 1.5V; key.

Technical parameters	RFATV-1
Supply voltage:	2 x 1.5 V batteries AA
Battery life:	1 year
<b>Control</b>	
Broadcasting frequency:	868 MHz, 915 MHz, 916 MHz
RF command from the transmitter:	RF Touch, eLAN-RF, RFTC-100/G
Range in open space:	up to 100 m
<b>Other data</b>	
Operating temperature:	0 up to +50 °C
Working position:	any
Protection:	IP 40
Dimensions:	65 x 65 x 48 mm
Thermostat end:	M 30 x 1.5
Piston stroke:	max. 4 mm
Controlling force:	max. 100 N
Related standards:	EN 60730

**Device description**



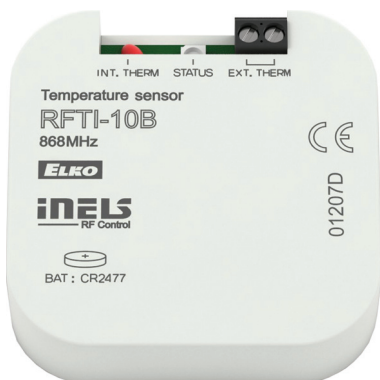
**Package contents**

Thermo-valve	
Key	
2x battery AA1.5V	
Adaptors	
Manual	

**Adaptors**

Type of valve	Type of adapter
Danfoss RAV (the valve plunger must be fitted with the enclosed pin)	
Danfoss RA	
Danfoss RAVL	





- The temperature sensor measures the temperature by internal sensor, which it sends in regular intervals to the system unit. Option of connecting an external sensor to the terminals THERM.
- The temperature sensor can be used in one of two ways:
  - For displaying the measured temperature (from a garage, balcony, cellar, garden) on the display of the system unit or in the application.
  - For measuring temperature, which it sends to the system unit, which may control the heating circuit based on the set temperature program (electric underfloor heating, air conditioning, boiler, etc.).
- It measures temperature in a range of -20 - 50 °C and sends it to the system unit in regular 5-min. intervals. It sends a signal upon sudden temperature change within 1 min.
- Battery power (3V / 1 x CR 2477 - included in supply) with battery life of around 1 year based on frequency of use.
- The temperature sensor can be placed anywhere thanks to battery power.
- Range up to 160 m (in open space), if the signal is insufficient between the controller and unit, use the signal repeater RFRP-20.
- Communication frequency 868 MHz with bidirectional protocol iNELS RF Control.
- External sensor TC (0 ..+70 °C) or TZ (-40 ..+125 °C) for length of 0.11 m, 3 m, 6 m, 12 m.

Technical parameters	RFTI-10B
Supply voltage:	1 x 3V CR 2477 battery
Battery life:	1 year
Transmission indication / function:	red LED
Temperature measurement	1x internal NTC thermistor 1x external TZ/TC temperature sensor input
Temp. measurement range and accuracy:	-20 to +50°C; 0.5 °C in the range
Transmitter frequency:	868 MHz, 915 MHz, 916 MHz
Signal transmission method:	unidirectionally addressed message
Range in free space:	up to 160 m
<b>Other data</b>	
Operating temperature:	-10 to +50 °C
Operating position:	any
Mounting:	glued / free-standing
Protection:	IP30
Contamination degree:	2
Dimensions:	49 x 49 x 13 mm
Weight:	45 g
Related standards:	EN 60669, EN 300 220, EN 301 489 R&TTE Directive, Order. No 426/2000 Coll. (Directive 1999/EC)

### Device description

### Recommended external sensors

see p. 54

## Sensor location

on a wall



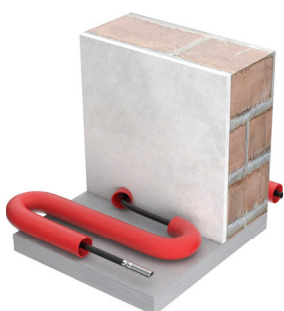
in a box



in a panel

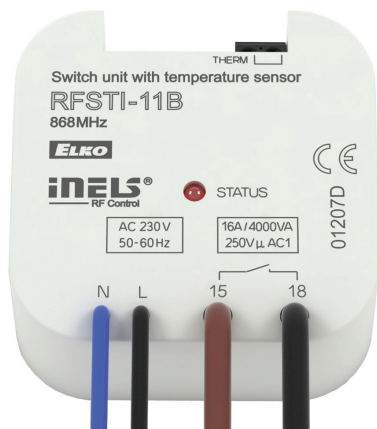


in a pipe



in a tank





- The temperature unit measures the temperature by external sensor, and controls the heating circuit (electric underfloor heating, air conditioning, boiler, etc.).
- These can be combined with system units: smart RF box eLAN-RF, wireless controller RFCT-50/G or touch unit RF Touch.
- It measures temperature in a range of -20 - 50 °C and sends it to the system unit in regular 5-min. intervals. It sends a signal upon sudden temperature change.
- Setting the heat/cool function, hysteresis and offset is performed in the system unit or application.
- The BOX design lets you mount it right in an installation box, a ceiling or controlled appliance cover.
- It enables connection of the switched load up to 16A (4,000 W).
- Range up to 160 m (in open space), if the signal is insufficient between the controller and unit, use the signal repeater RFRP-20.
- Communication frequency with bidirectional protocol iNELS RF Control.
- External sensor TC (0 ..+70 °C) or TZ (-40 ..+125 °C) for length of 0.11 m, 3 m, 6 m, 12 m.

**Technical parameters**

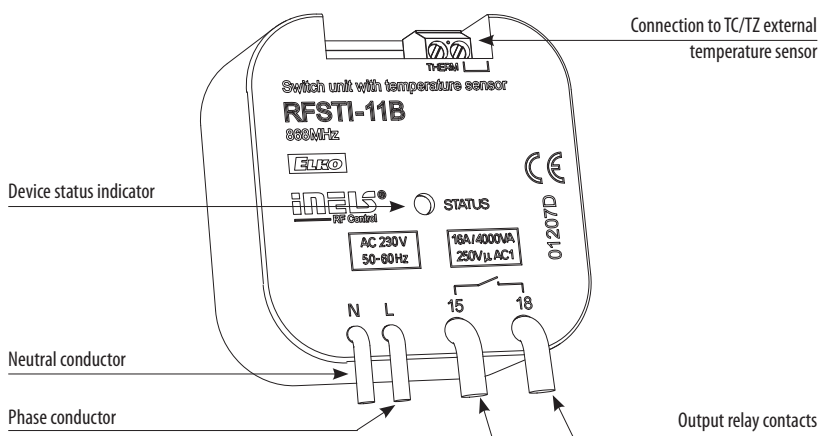
	RFSTI-11B/230V	RFSTI-11B/120V	RFSTI-11B/24V
Supply voltage:	230 V AC / 50-60 Hz	120 V AC / 60Hz	12-24V AC/DC/50-60Hz
Apparent input:	7 VA / cos φ = 0.1	7 VA / cos φ = 0.1	-
Dissipated power:	0.7 W	0.7 W	0.7 W
Supply voltage tolerance:	+10 %; -15 %		
Temperature measurement input:	1x external TZ/TC temperature sensor input *		
Temp. measurement range and accuracy:	-20 to +50 °C; 0.5 °C of the range		
<b>Output</b>			
Number of contacts:	1x switching (AgSnO <sub>2</sub> )		
Rated current:	16 A / AC1		
Switching power:	4000 VA / AC1, 384 W / DC		
Peak current:	30 A / <3 s		
Switching voltage:	250 V AC1 / 24 V DC		
Min. DC switching power:	500 mW		
Mechanical service life:	3x10 <sup>7</sup>		
Electrical service life (AC1):	0.7x10 <sup>5</sup>		
<b>Control</b>			
RF, by command from transmitter:	868 MHz, 915 MHz, 916 MHz		
Range:	up to 160 m		
<b>Other data</b>			
Operating temperature:	-15 to + 50 °C		
Status indication:	red LED		
Operating position:	any		
Mounting:	free at lead-in wires		
Protection:	IP 30		
Overtoltage category:	III.		
Contamination degree:	2		
Outlets (CY wire, cross-section, length):	2x 0.75mm <sup>2</sup> , 2x 2.5mm <sup>2</sup> , 90 mm		
Dimensions:	49 x 49 x 21 mm		
Weight:	46 g		
Related standards:	EN 60669, EN 300 220, EN 301 489 R&TTE Directive, Order. No 426/2000 Coll. (Directive 1999/EC)		

\* Temperature sensor input is at the supply voltage potential.

**Recommended external sensors**

see p. 54

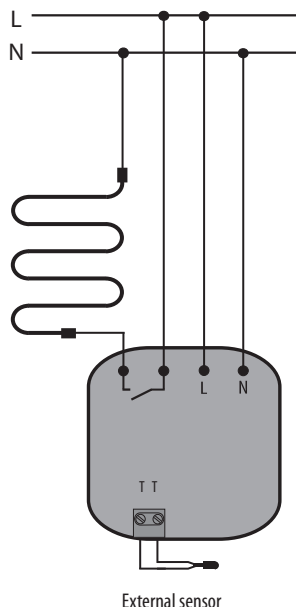
**Device description**



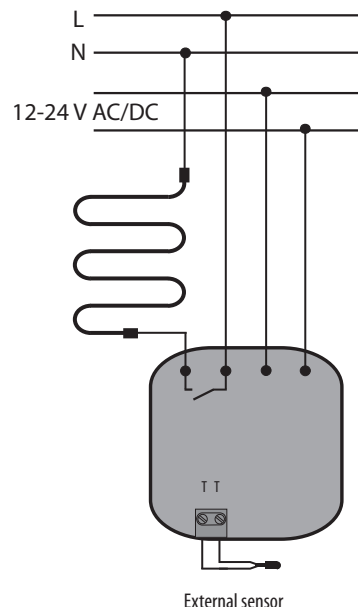
**Connection**

RFSTI-11B/230V  
RFSTI-11B/120V

RFSTI-11B/24V



External sensor



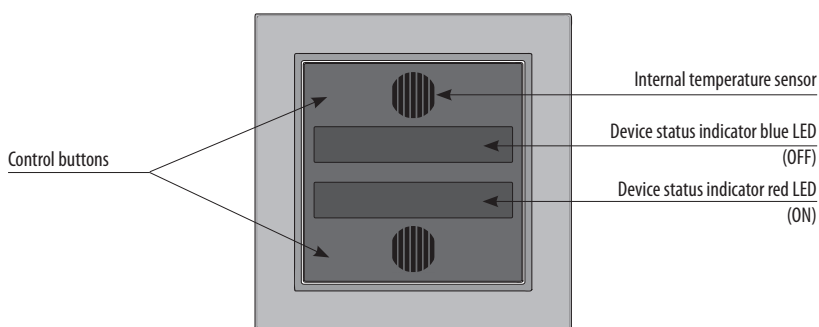
External sensor



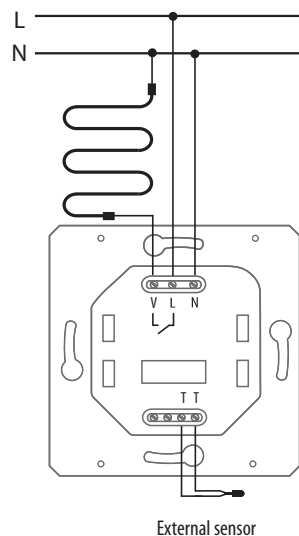
- The thermo-regulation drive measures the (internal/external) temperature by external sensor, and controls the heating circuit (electric underfloor heating, air conditioning, boiler, etc.).
- Function:
  - Internal – measures temperature by internal sensor and sends it to the system unit.
  - External – measures temperature by external sensor and sends it to the system unit.
  - Combo – measure room temperature by internal sensor and monitors critical floor temperature by external sensor.
- These can be combined with system units: smart RF box eLAN-RF or touch unit RF Touch.
- Manual control of temperature directly using buttons on the unit, where by pressing the upper button, a command is sent for automatic switching to the mode Party (preset temperature), and a press of the lower button sends a signal for switching to energy-saving mode (the change in temperature applies until the next set change of the heating program).
- Indication of status switched ON/OFF is provided by (red/blue) LED, which is found under the transparent cover of the temperature unit.
- It measures temperature in a range of -20 - 50 °C and sends it to the system unit in regular 5-min. intervals. It sends a signal upon sudden temperature change within 1 min.
- Setting the heat/cool function, hysteresis and offset is performed in the system unit or application.
- Switch design (design LOGUS<sup>90</sup>) offers mounting in an installation box.
- It enables connection of the switched load up to 8A (2.000 W).
- The unit power supply is 110-230V AC.
- Range up to 160 m (in open space), if the signal is insufficient between the controller and unit, use the signal repeater RFRP-20.
- Communication frequency with bidirectional protocol iNELS RF Control.
- Color combination of heating unit in design of frames LOGUS<sup>90</sup> (plastic, glass, wood, metal, stone).
- External sensor TC (0 ..+70 °C) or TZ (-40 ..+125 °C) for length of 0.11 m, 3 m, 6 m, 12 m.

Technical parameters	RFSTI-11/G
Supply voltage:	110-230 V AC / 50 - 60 Hz
Apparent input:	7 VA / $\cos \varphi = 0.1$
Dissipated power:	0.7 W
Supply voltage tolerance:	+10 %; -15 %
Temperature measurement input:	1x internal NTC thermistor; 1x external TZ/TC temperature sensor input
Temp. measurement range and accuracy:	-20 to +50 °C; 0.5 °C of the range
<b>Output</b>	
Number of contacts:	1x switching (AgSnO <sub>2</sub> )
Rated current:	8A / AC1
Switching power:	2000VA / AC1; 240W / DC1
Peak current:	30 A / <3 s
Switching voltage:	250 V AC1 / 24 V DC
Min. DC switching power:	500 mW
Mechanical service life:	3x10 <sup>7</sup>
Electrical service life (AC1):	0.7x10 <sup>5</sup>
<b>Control</b>	
RF, by command from transmitter:	868 MHz, 915 MHz, 916 MHz
Manual control:	buttons
Range:	up to 160 m
<b>Other data</b>	
Operating temperature:	-15 to + 50 °C
Status indication:	blue, red LED
Operating position:	vertical
Mounting:	in an installation box
Protection:	IP 20
Overvoltage category:	III.
Contamination degree:	2
Cross-section of connecting cables:	max. 1x2.5 mm <sup>2</sup> , max. 2x1.5 mm <sup>2</sup> / with a hollow max. 1x2.5 mm <sup>2</sup>
Dimensions:	84 x 89 x 42 mm
Weight:	68 g
Related standards:	EN 60669, EN 300 220, EN 301 489 R&TTE Directive, Order. No 426/2000 Coll. (Directive 1999/EC)

### Device description



### Connection



### Recommended external sensors

see p. 54

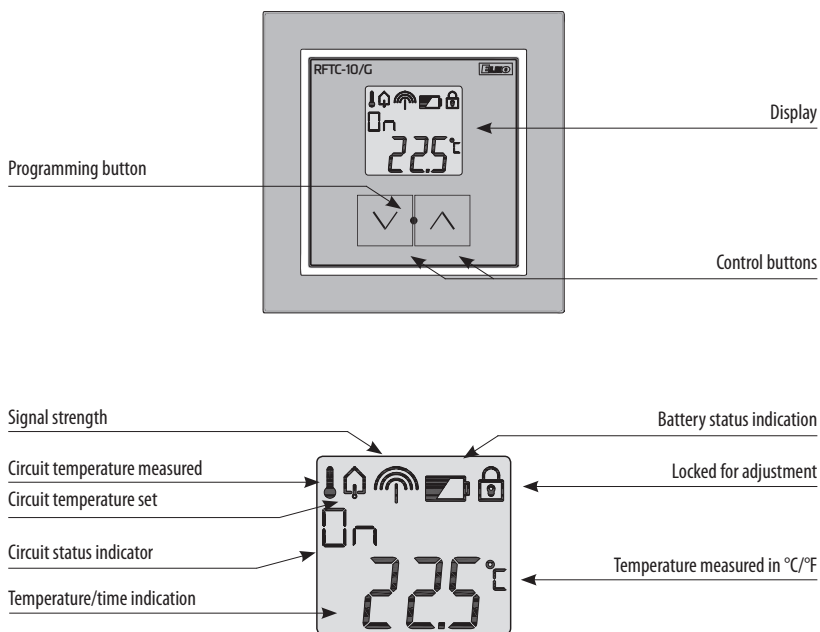


Flat design - the depth of the device is only 20 mm!

- The simple controller in design LOGUS<sup>90</sup> measures the room temperature by internal sensor, and based on the set temperature, it sends a command to control heating.
- The temperature controller can be used in one of two ways:
  - For controlling an additional heat source (heater, oil radiator, radiant panel) with multi-function switching units RFSA-6x, RFUS-61 or RFSC-61.
  - For sufficient temperature correction ( +/- 10 °C ) over the course of the program set in the system unit (change in temperature applies until the following set change of the heating program in the system unit).
- Manual control by buttons on the unit.
- Range of measured temperature 0 - 55 °C.
- The backlit LCD display displays the current and set temperature, status (ON/OFF), battery status, etc.
- Battery power (1.5V / 2 x AAA - included in supply) with battery life of around 1 year based on frequency of use.
- The flat rear side of the device enables its placement anywhere in the room where you wish to measure temperature.
- Range up to 100 m (in open space), if the signal is insufficient between the controller and unit, use the signal repeater RFRP-20.
- Communication frequency with bidirectional protocol iNELS RF Control
- Color combination of heating unit in design of frames LOGUS<sup>90</sup> (plastic, glass, wood, metal, stone).

Technical parameters		RFTC-10/G
Supply voltage:		2 x 1.5V AAA battery
Battery life:		1 year
Temperature offset:		2 buttons ∇ / ▲
Offset:		± 5 °C
Display:		LCD, characters / see Display description
Backlighting:		YES / active – blue
Transmission indication / function:		symbols
Temperature measurement input:		1x internal sensor
Temp. measurement range and accuracy:		0 to +55 °C; 0.3 °C of the range
Transmitter frequency:		868 MHz, 915 MHz, 916 MHz
Signal transmission method:		bidirectionally addressed message
Range in free space:		up to 100 m
Minimum control distance:		20 mm
<b>Other data</b>		
Max. number of control. RFSA-6x:		1
Program:		x
Operating temperature:		0 to +55 °C
Operating position:		wall-mounted
Mounting:		glue / screws
Protection:		IP20
Contamination degree:		2
Dimensions: frame - plastic		85 x 85 x 20 mm
Frame - metal, glass, wood, granite		94 x 94 x 20 mm
Weight:		66 g (without batteries)
Related standards:		EN 60669, EN 300 220, EN 301 489 R&TTE Directive, Order. No 426/2000 Coll. (Directive 1999/EC)

**Device description**



Type	Supply	Weekly program	Compatibility				
			RF Touch	eLAN	RFSA-6x	RFSTI-11B	RFATV-1
RFTC-10/G	battery	-	✓	✓	✓	-	-
RFTC-50/G	battery	✓	-	-	✓	✓	-
RFTC-100/G	AC 230V	✓	-	-	✓	✓	✓

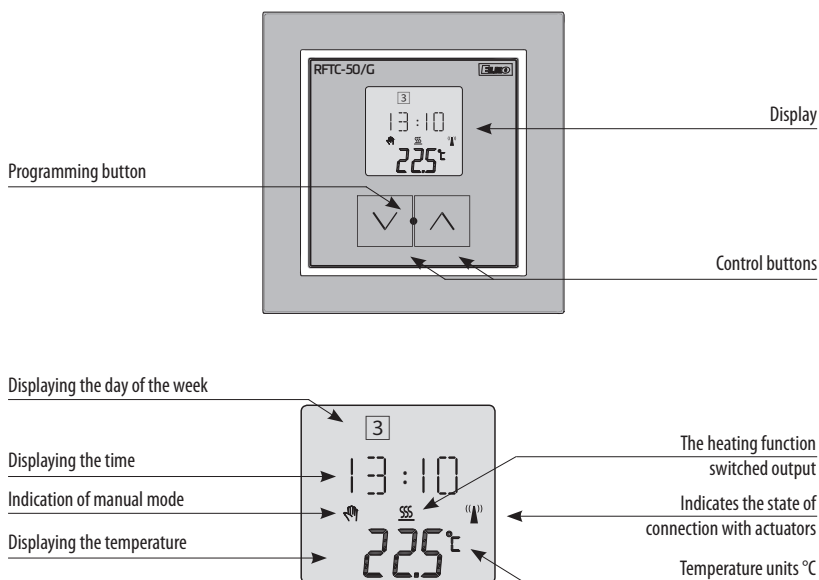


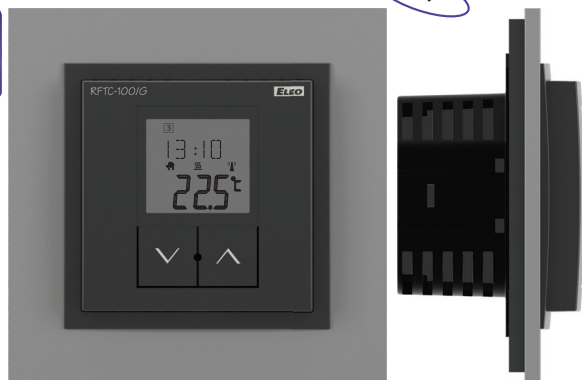
Flat design - the depth of the device is only 20 mm!

- The wireless controller in design LOGUS<sup>90</sup> measures the room temperature by internal sensor, and based on the set temperature, it sends a command for heating / cooling.
- Option of setting a daily/weekly automatic control program.
- The temperature controller can be used in one of two ways:
  - For controlling an additional heat source (heater, oil radiator, radiant panel) with multi-function switching units RFSA-6x, RFUS-61 or RFSC-61.
  - For control of floor heating, when the internal sensor scans the room temperature, and based on the value, controls the heating unit RFSTI-11B, which monitors the critical floor value by external sensor.
- Manual control by buttons on the unit.
- Range of measured temperature 0 - 55 °C.
- The backlit LCD display displays the current and set temperature, status (ON/OFF), battery status, day of the week, current time, etc.
- Battery power (1.5V / 2 x AAA - included in supply) with battery life of around 1 year based on frequency of use.
- The flat rear side of the device enables its placement anywhere in the room where you wish to measure temperature.
- Range up to 100 m (in open space), if the signal is insufficient between the controller and unit, use the signal repeater RFRP-20.
- Communication frequency with bidirectional protocol iNELS RF Control.
- Color combination of temperature unit in design of frames LOGUS<sup>90</sup> (plastic, glass, wood, metal, stone).

Technical parameters	RFTC-50/G
Supply voltage:	2 x 1.5V AAA battery
Battery life:	up to 1 year according to the number of controlling actuators
Temperature offset:	2 buttons ∇ / ▲
Offset:	± 5 °C
Display:	LCD, characters / see Display description
Backlighting:	YES / active - blue
Transmission indication / function:	symbols
Temperature measurement input:	1x internal sensor
Temp. measurement range and accuracy:	0 to +55 °C; 0.3 °C of the range
Transmitter frequency:	868 MHz, 915 MHz, 916 MHz
Signal transmission method:	bidirectionally addressed message
Range in free space:	up to 100 m
Minimum control distance:	20 mm
<b>Other data</b>	
Max. number of controlling actuators:	4
Program	Weekly
Operating temperature:	0 to + 55 °C
Operating position:	on the wall
Mounting:	by gluing / screwing
Protection:	IP20
Contamination degree:	2
Dimensions: frame - plastic	85 x 85 x 20 mm
Frame - metal, glass, wood, granite	94 x 94 x 20 mm
Weight:	66 g (without batteries)
Related standards:	EN 60669, EN 300 220, EN 301 489 directive R&TTE Directive, Order. No 426/2000 Coll. (Directive 1999/EC)

### Device description

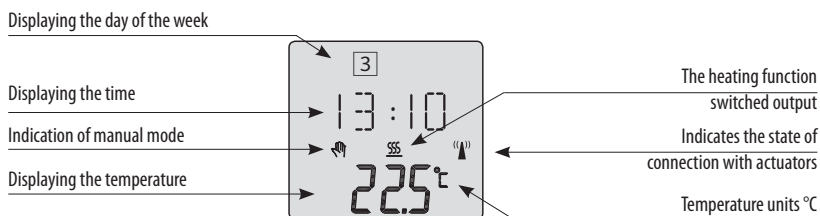
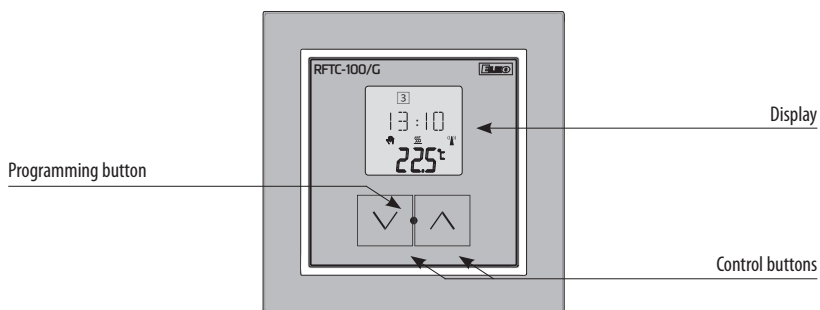




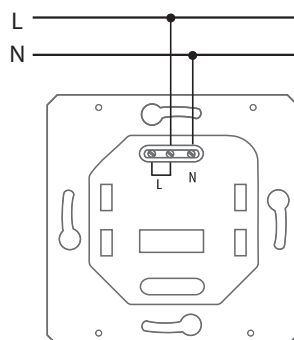
- The wireless controller in design LOGUS<sup>90</sup> measures the room temperature by internal sensor, and based on the set temperature, it sends a command for heating / cooling.
- Option of setting a daily/weekly automatic control program.
- The temperature controller can be used in one of two ways:
  - For controlling an additional heat source (heater, oil radiator, radiant panel) with multi-function switching units RFSA-6x, RFUS-61 or RFSC-61.
  - For control of floor heating, when the internal sensor scans the room temperature, and based on the value, controls the heating unit RFSTI-11B, which monitors the critical floor value by external sensor.
- Manual control by buttons on the unit.
- Range of measured temperature 0 - 55 °C.
- The backlit LCD display displays the current and set temperature, status (ON/OFF), battery status, day of the week, current time, etc.
- The unit power supply is 100-230V AC.
- Range up to 100 m (in open space), if the signal is insufficient between the controller and unit, use the signal repeater RFRP-20.
- Communication frequency with bidirectional protocol iNELS RF Control.
- Color combination of temperature unit in design of frames LOGUS<sup>90</sup> (plastic, glass, wood, metal, stone).

Technical parameters	RFTC-100/G
Supply voltage:	100-230 V AC / 50 - 60 Hz
Apparent input:	3 VA / cos φ = 0.1
Dissipated power:	0.3 W
Supply voltage tolerance:	+10 %; -15 %
Temperature offset:	2 buttons ∇ / ▲
Offset:	± 5 °C
Display:	LCD, characters / see Display description
Backlighting:	YES / active – blue
Transmission indication / function:	symbols
Temperature measurement input:	1x internal sensor
Temp. measurement range and accuracy:	0 to +55 °C; 0.3 °C of the range
Transmitter frequency:	868 MHz, 915 MHz, 916 MHz
Signal transmission method:	bidirectionally addressed message
Range in free space:	up to 100 m
Minimum control distance:	20 mm
<b>Other data</b>	
Max. number of controlling actuators:	4
Program	Weekly
Operating temperature:	0 to + 55 °C
Operating position:	vertical
Mounting:	in an installation box
Protection:	IP20
Contamination degree:	2
Cross-section of connecting cables:	max. 1x2.5, max. 2x1.5 / with a hollow max. 1x2.5
Dimensions: Frame - plastic	85 x 85 x 46 mm
Frame - metal, glass, wood, granite	94 x 94 x 46 mm
Weight:*	172 g
Related standards:	EN 60669, EN 300 220, EN 301 489 directive R&TTE Directive, Order. No 426/2000 Coll. (Directive 1999/EC)

**Device description**



**Connection**



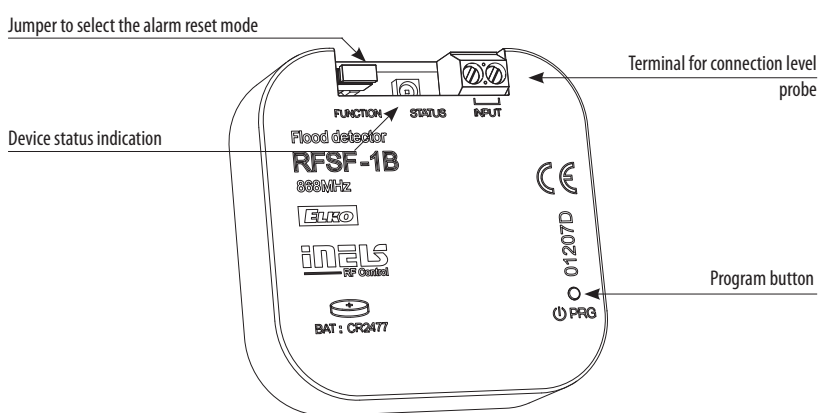
\*Comes with plastic frame. No installation into multi-frames.



- Monitors areas (e.g. bathrooms, basements, shafts or tanks) to provide flood warning.
- Upon detecting water, the flood detector immediately sends a signal to the switched unit, which further switches on a pump, GSM gate (link to RFGSM-220M) or closes a pipe valve. (Link to valve in accessories).
- Option of connecting an external probe FP-1 (not included in supply - max. wire length 30m).
- The programming button on the detector is used to:
  - a) setting the function with switching unit
  - b) ascertaining battery status
  - c) ascertaining signal quality between the unit and detector.
- Battery power supply (1.5V/CR2477 - included in the supply) with battery life of around 1 year based on frequency of use.
- The detector can be placed anywhere thanks to battery power.
- Range up to 160 m (in open space); if the signal is insufficient between the controller and unit, use the signal repeater RFRP-20.
- Communication frequency with bidirectional protocol INELS RF Control.

Technical parameters	RFSF-1B
Supply voltage:	1 x 3V battery CR 2477
Battery life:	1 year
Indications / transfer function:	red LED
Reset after flooding:	JUMPER - Manual/Automatic
Programming:	with Prog button/ based batteries
Measuring input:	terminal 0.5-1mm <sup>2</sup>
Voltage measuring input:	3 V
Resistance measuring input for detecting flooding:	≤20 kΩ
Resistance measuring input for flushing detection:	≥40kΩ
Probe cable length:	max. 30 m
Frequency:	868 MHz, 915 MHz, 916 MHz
Signal transmission method:	two-way addressed message
Range in free space:	up to 160 m
More information	
Working temperature:	-10 to +50 °C
Operating position:	any
Mounting:	glue / freely
Protection:	IP30
Degree of pollution:	2
Dimensions:	49 x 49 x 13 mm
Weight:	45 g
Standards:	EN 60730-1, EN 300 220, EN 301 489 directive R&TTE Directive, Order. No 426/2000 Coll. (Directive 1999/EC)

### Device description



### Location of the detector and probe



### Flood probe FP-1

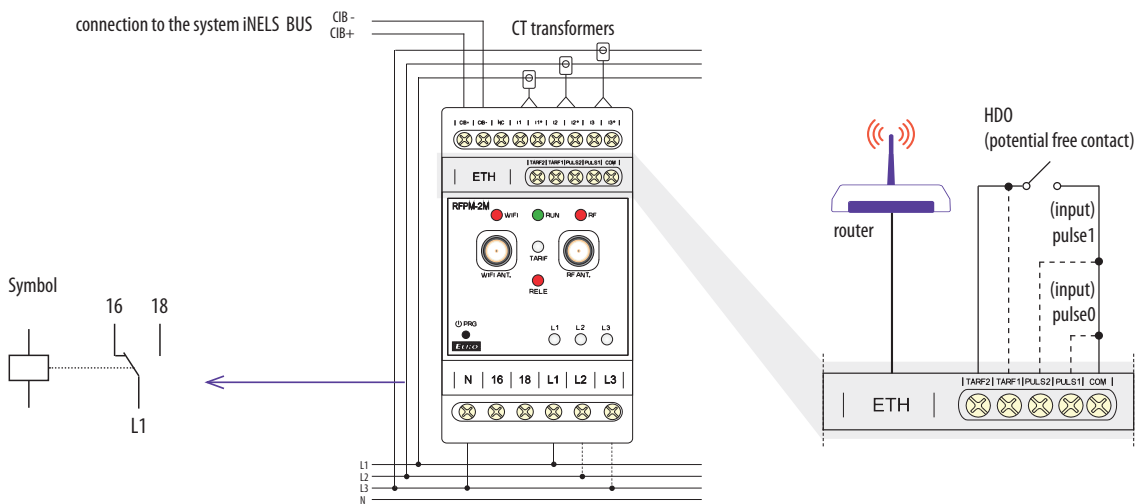
see p. 54



- The energy gateway is a central device for assessing energy consumption (electricity, water, gas).
- It acts as an interface between the pulse converter RFTM-1 and your smartphone.
- Connection to the data network is made by means of LAN Ethernet connector or wirelessly via a Wi-Fi network.
- Monitored data is stored on internal memory storage.
- By means of the application iHC and cloud connection, it is possible to maintain online access to data and monitoring history.
- Up to 4 tariff meter readings of electricity consumption, which can be displayed in the form of kWh or financial costs.
- Option of setting reaction to specific consumption to switch the output on or off (RFSa-6x and CU3).
- The unit enables connecting up to three current transformers CT50 to each other for measuring electricity.
- Direct connection to iNELS BUS using integrated CIB terminals.
- 3-module design, mounted on a DIN rail into the switchboard.
- The supply includes an internal antenna AN-I, if the unit is installed in a metal switchboard, you can use the external antenna AN-E to enhance the signal.
- The device supply voltage is provided from monitored phases.
- Range up to 100m (in open space), if the signal between the controller and the user is weak, use the signal repeater RFRP-20.
- Communication frequency with bidirectional protocol iNELS RF Control.

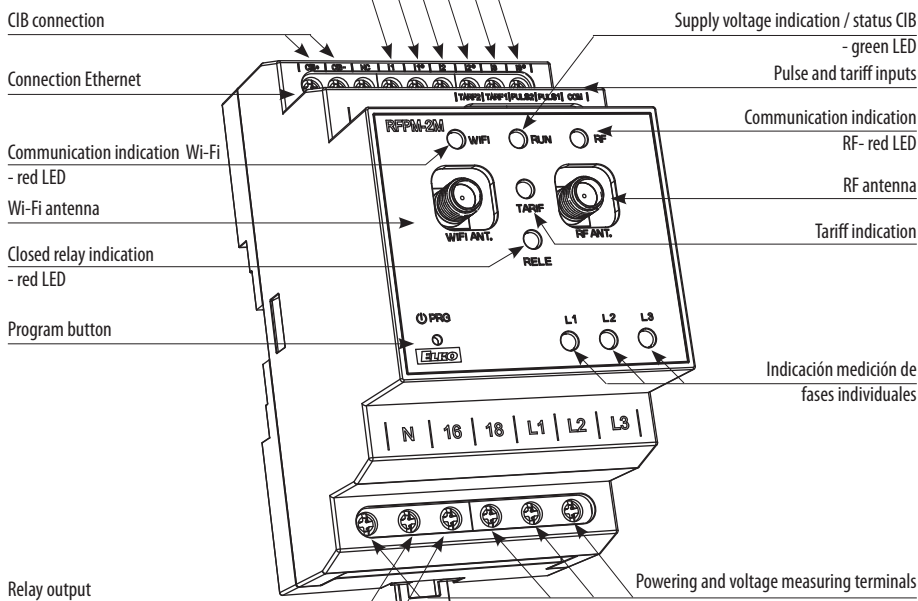
NEW

Connection



Device description

Terminals for connecting current measuring probes



Tariff indication - RGB LED	
TARIF 1:	red
TARIF 2:	green
TARIF 3:	blue
TARIF 4:	yellow

Phase status indicator L1, L2, L3 - R/G LED	
failure (outage):	red
active phase:	green



Technical parameters	RFPM-2M
Supply voltage:	230 V AC / 50-60Hz
Supply voltage tolerance:	+15/-20%
Closed relay power input:	5 VA
<b>Measuring interval</b>	
Grid:	1f-3f
Frequency:	50-60 Hz /±10%
Measuring accuracy:	Class 1.0
Current measuring coil:	max. 50 A
Wire diameter:	max. 16 mm
<b>Output RELE:</b>	
Number of contacts:	1NO/NC switches L1
Max. current:	16 A / AC1
Switching power:	4000 VA (AC1)
Mechanical service life:	3 x 10 <sup>7</sup>
Electrical service life:	0.7 x 10 <sup>5</sup>
Relay reaction:	programmable settings, see instruction manual
<b>Interface RF Control</b>	
Communication protocol:	RF Touch Compatible
Broadcasting frequency	868 MHz, 915 MHz, 916 MHz
Signal transfer method:	two-way addressed message
Output for antenna:	SMA - FEMALE**
Antenna RF:	1 dB (part of suply)
Range in open space:	up to 100 m
<b>Controlling</b>	
Settings:	Ethernet, Wi-Fi, CIB
Ethernet:	iNELS3 - iDM3 / WEB (cloud)
Wi-Fi:	WEB / mobile application
CIB:	CU3 - iDM3
<b>Interface Wi-Fi</b>	
Wi-Fi mode:	AP / Client
Standard:	IEEE 802.11 b/g/n / 2.4 GHz
Wi-Fi Security:	WEP, WPA-PSK, WPA2-PSK
Frequency range Wi-Fi:	RP - SMA - FEMALE**
Antenna Wi-Fi:	1 dB (part of suply)
Range:	up to 20 m
<b>Interface Ethernet</b>	
Connection:	LAN (static IP / DHCP Client)
Transfer speed:	10 / 100 Mbit / s
Connector:	RJ45
Preset IP address:	192.168.1.1
<b>CIB interface</b>	
Compatible with:	iNELS3
Consumption:	<10mA
<b>Measuring</b>	
Pulse inputs:	PULS1, PULS2 - max. 1 kHz
Tariff inputs:	TARF1, TARF2 -- binary combination
Option of switching inputs:	switching by contact / opening by collector
Separation by isolation of power and control circuits:	reinforced Insulation
Probes measuring current:	3 x SCT-T16 isolation 3kV / 50/60Hz
Wireless consumption sensor:	RFTM-1
<b>Other data</b>	
Working temperature:	-20 up to + 35°C
Storage temperature:	-30 up to +70°C
Operating position:	vertical
Mounting:	DIN rail EN60715
Protection:	IP20 from front panel / IP40 in cover
Overvoltage category:	II.
Degree of pollution:	2
Cross-section of connecting wires (mm <sup>2</sup> ):	max. 1x2.5, max 2x1.5/ with a hollow max. 1.5
Dimension:	90 x 52 x 65 mm
Weight:	125 g

\* Pulse and tariff inputs have a common contact COM (-).

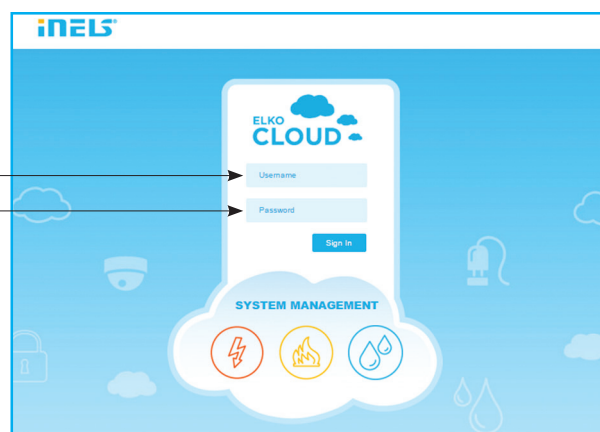
\*\* Max Tightening Torque for antenna connector is 0.56 Nm.

### ELKO Cloud

Login:

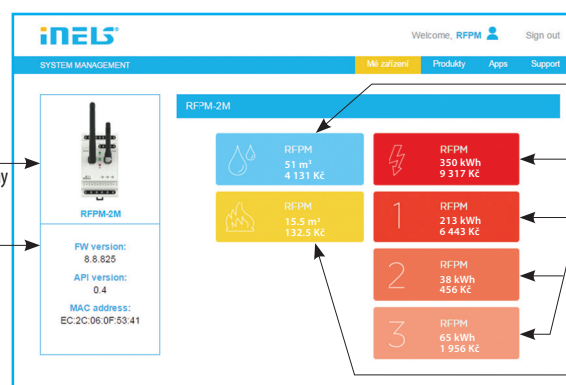
username

password



selection of energy gateway

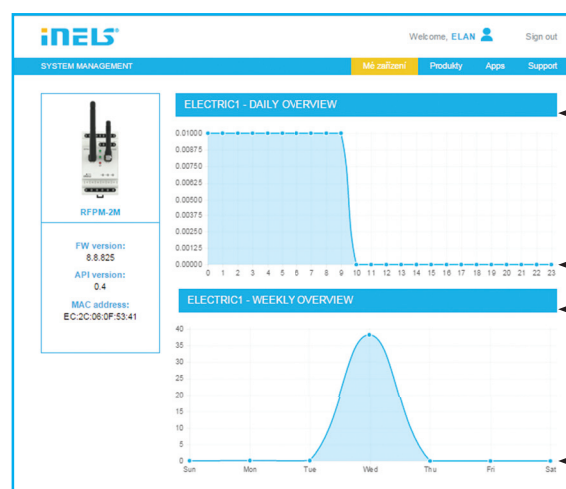
FW



current water

current electricity - up to four tariffs

current gas



daily overview

diagram

weekly overview

diagram

### Current transformer CT50

The package includes the current transformer CT50.

See p. 55.



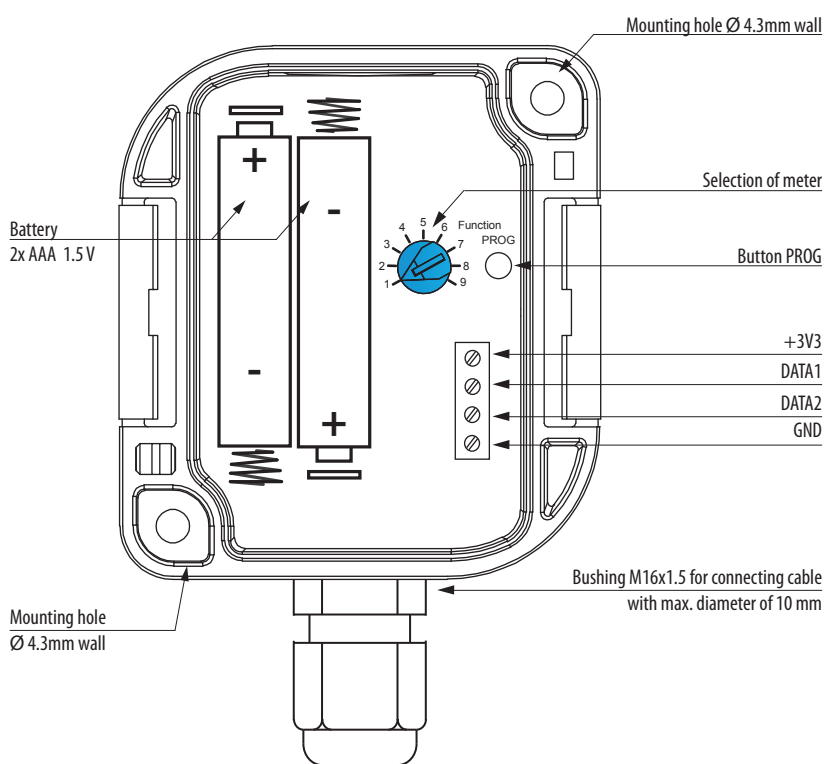
- The wireless pulse converter detects home energy meters (electric, water, gas) by means of sensors, and sends them to the wireless unit RFPM-2M.
- The energy gateway RFPM-2M acts as an interface between the meter and a smartphone.
- Measured values are displayed in the application iHC-MARF/MIRF, in daily, weekly or monthly overview in graphs.
- The sensor is designed for use on existing meters and even without the impulse output "SO".
- RFTM-1 transfers consumption from meters using sensors - LS (LED sensor), MS (Magnetic sensor), IRS (IR sensor) or by impulse output.
- For each consumption meter, it is necessary to have one pulse converter RFTM-1.
- The increased IP 65 protection is appropriate for mounting in risers, switchboards and other demanding environments.
- Battery power (1.5V / 2 x AAA - included in package) with average battery life of around 2 years (based on amount of transmitted information - pulses).
- Range up to 160 m (in open space), if the signal between the controller and the user is weak, use the signal repeater RFRP-20.
- Communication frequency with bidirectional protocol iNELS RF Control.

Technical parameters	RFTM-1
Power supply	2x1.5 battery AAA
Battery Life:	Appr. 2 years, according to the number of controlled units
Indication:	
SENSOR STATUS	red LED - flashes during impulse registration by the sensor
RF STATUS	green LED - flashes when sending an RF signal
Functions settings (of the sensor):	rotary switch
Connection of the sensor:	terminals, wires 0.5 - 1 mm <sup>2</sup>
Supported sensors*:	LS (LED sensor) MS (magnetic sensor) IRS (IR sensor)
Output	
Sending RF communication packet:	868 MHz, 915 MHz, 916 MHz
Protocol:	iNELS RF Control
Range in free space:	up to 160 m
Other data	
Working temperature:	-20.. +50°C**
Storage temperature:	-30 .. +70°C
Operating position:	any
Protection:	IP65
Degree of pollution:	2
Dimension:	72 x 62 x 34 mm
Weight:	104 g

\* not included in the supply.

\*\* Note: pay attention to the operating temperature of batteries.

### Device description



# Methods of sensing meters



Electricity

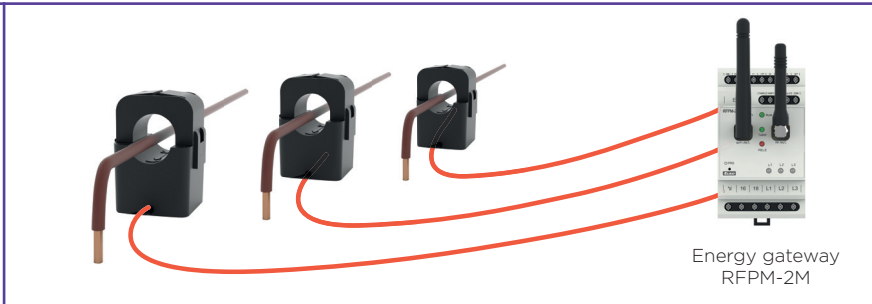


Gas

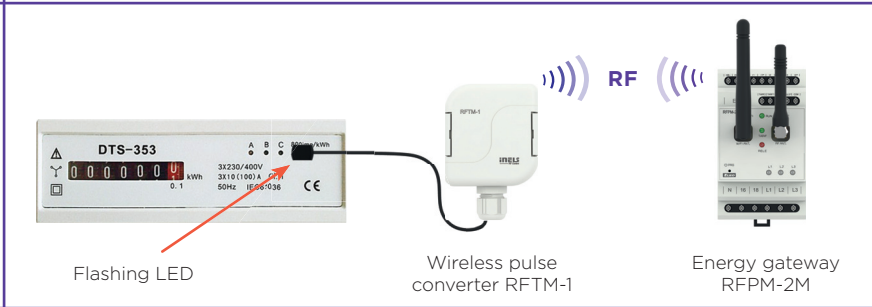


Water

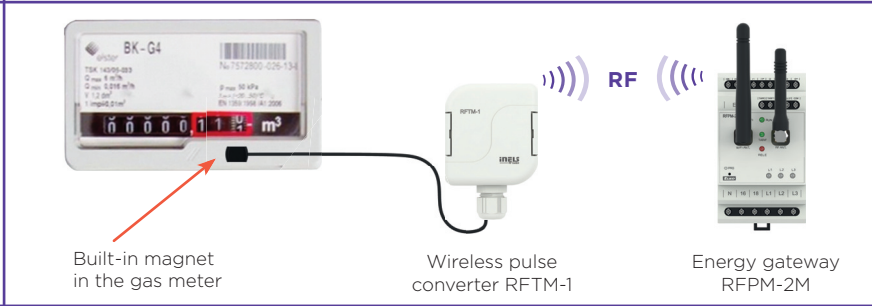
**CT (Current transformer)**  
Opening pliers open/close on the existing wire of the measured circuit, most frequently at the main supply at the electricity meter.



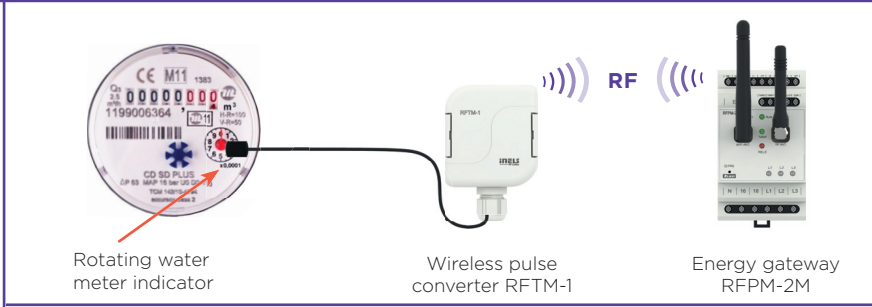
**LS (LED sensor)**  
The LED sensor scans LED impulses on the meter, which indicates consumption by flashing.



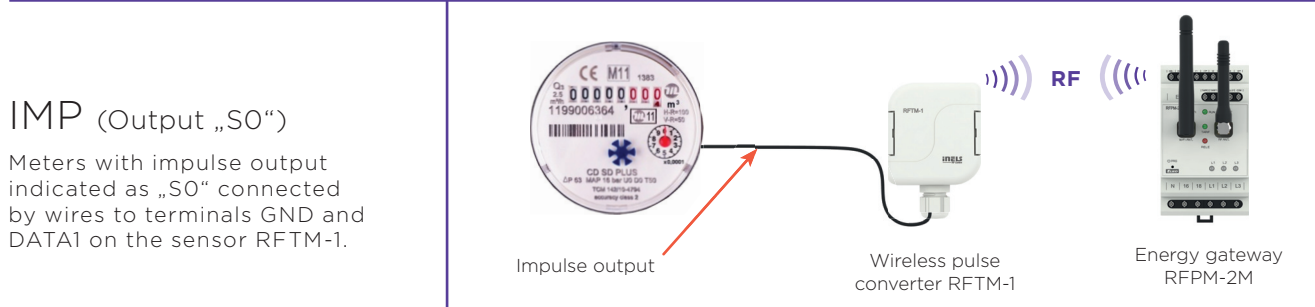
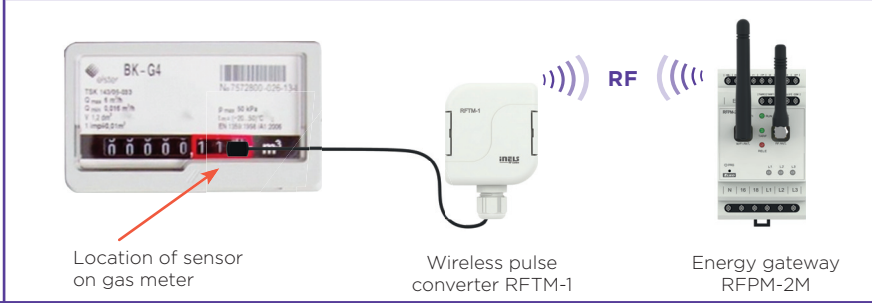
**MS (Magnetic sensor)**  
The magnetic sensor scans movement of the numeral, upon which a permanent magnet is placed.



**IRS (Infra Red sensor)**  
The IR sensor senses the reflective curtain placed on the moving number of the meter or senses the rotating indicator (mainly on water meters).



**IMP (Output „S0“)**  
Meters with impulse output indicated as „S0“ connected by wires to terminals GND and DATA1 on the sensor RFTM-1.



## RFSD-100 SD-100



Technical parameters	RFSD-100	SD-100
Power supply:	battery 2 x 1.5V AAA	9 - 24 V DC
Drained battery indicator:	yes	x
Transmission frequency:	868 MHz, 915 MHz, 916 MHz	
Detection area:	max. 40m <sup>2</sup>	
Optical indication:	red LED	
Assembly height:	max. 7m	
Storage temperature:	-10.. +50°C	
Protection:	IP20	
Color:	white	
Dimension:	Ø 125 x 34 mm	

### Smoke detector

- The smoke detector is used for timely warning against a fire started in residential and commercial buildings.
- The detector uses a scanning method by means of an optical chamber having a more sensitive reaction to detection of smoke.
- Use:
  - autonomous fire detector with internal siren
  - in combination with a switching unit for external signaling (light, appliance, siren)
  - by means of the Smart RF box, detection can be displayed on your smart phone, in the form of a notification; alarms are stored in the history, which is visualized in the application iHC.
- The autotest function notifies of a fault with the detector, thereby eliminating its lack of function in case of fire.
- Anti-tamper function: an alarm is triggered if there is an unauthorized interference to detector (disassembly, power outage, ...)
- Power supply:
  - RFSD-100: battery 2 x 1.5V AAA, the battery life is around 1 year, ... thanks to the ability to turn off the LED indicator it is possible to extend up to 3 years.
  - SD-100: 9 - 24 V DC.
- Communication frequency with bidirectional protocol iNELS RF Control.
- "Low Battery" Alerts by double LED flashing or on iHC App.

## RFMD-100 MD-100

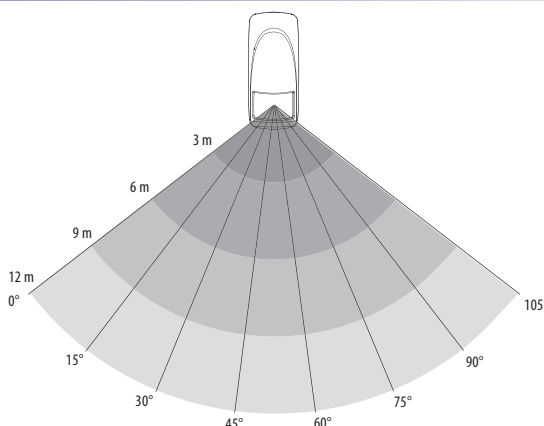


Technical parameters	RFMD-100	MD-100
Power supply:	battery 2 x 1.5V AA	9 - 24 V DC
Loading outputs TAMPER, ALARM:	x	100 mA at max. 60V
Drained battery indicator:	yes	x
Transmission frequency:	868 MHz, 915 MHz, 916 MHz	
Detection angle:	105°	
Detection distance:	max. 12 m	
Recommended working height:	max. 2.2 m	
Working temperature:	-10.. +50°C	
Cross-section of connecting wires:	0.2 - 0.75 mm <sup>2</sup> (24-18 AWG)	
Protection:	IP20	
Color:	white	
Dimension:	105 x 46 x 42 mm	

### Motion detector

- The motion detector PIR is used to detect persons moving inside the building interior.
- Use:
  - in combination with a switching unit for automatic control of lighting or triggering an alarm.
  - by means of the Smart RF box, detection can be displayed on your smart phone in the form of a notification; alarms are stored in the history, which is visualized in the application iHC.
- Sensitivity settings of the PIR detector for eliminating unwanted triggering.
- Integrated lighting sensor, thanks to which you can set the detector's reaction time.
- Option of activation / deactivation of the LED indicator on the detector cover.
- Anti-tamper function: an alarm is triggered if there is an unauthorized interference to detector (disassembly, power outage, ...)
- Power supply:
  - RFMD-100: battery 2 x 1.5V AA, the battery life is around 1 year, ... thanks to the ability to turn off the LED indicator it is possible to extend up to 3 years.
  - MD-100: 9 - 24 V DC.
- Communication frequency with bidirectional protocol iNELS RF Control.
- "Low Battery" Alerts by double LED flashing or on iHC App.

### Detection field



## RFWD-100 WD-100

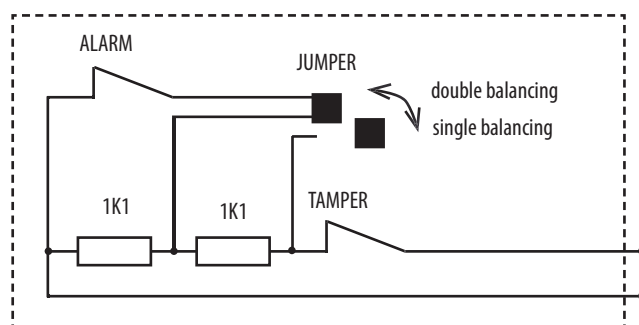


Technical parameters	RFWD-100	WD-100
Power supply:	battery 1 x 3 V CR2032	9 - 24 V DC
Drained battery indicator:	yes	x
Transmission frequency:	868 MHz, 915 MHz, 916 MHz	
Working temperature:	-10.. +50°C	
Cross-section of connecting wires:	0.2 - 0.75 mm <sup>2</sup> (24-18 AWG)	
Protection:	IP20	
Color:	white	
Dimension:	25 x 66 x 18 mm	

### Window / Door detector

- The window / door detector is used to detect opening where activation occurs when the magnet and the sensor become separated.
- Use:
  - in combination with the switching unit for automatic light control (cellar, garage, etc.), or switching on a GSM gate
  - by means of the Smart RF box, detection can be displayed on your smart phone in the form of a notification; alarms are stored in the history, which is visualized in the application iHC.
- Anti-tamper function: an alarm is triggered if there is an unauthorized interference to detector (disassembly, power outage, ...)
- Power supply:
  - RFWD-100: battery 3V / CR2032, the battery life is around 1 year, ... thanks to the ability to turn off the LED indicator it is possible to extend up to 3 years.
  - WD-100: 9 - 24 V DC.
- Communication frequency with bidirectional protocol iNELS RF Control.
- "Low Battery" Alerts on Your iHC App.

### Connection



## iNELS Cam



Technical parameters	iNELS Cam
Power supply:	5 V DC adapter
Resolution:	640 x 480 px
Night light:	yes
Max. cameras in app:	up to 10

### IP camera

- The cloud video camera DCS-933L, capable of scanning both day and night, is a universal monitoring solution for your home or office.
- As opposed to a standard web camera, D-Link is an independent system, which can transmit high quality images without the need for a computer connection.
- It is equipped with a motion detector, and features the function of a Wi-Fi extender/repeater, enabling improvement in range and coverage of your existing home or office wireless network.

Supported video cameras: Axis, D-link.



**AN-I**



EAN code  
Internal antenna AN-I: 8595188161862

**AN-E**



EAN code  
External antenna AN-E: 8595188190121

**Internal antenna AN-I**

- for RFGSM-220M, eLAN-RF-003, eLAN-RF-Wi-003, RFDA-73/RGB, RFSA-61M, RFSA-66M, RFDEL-71M and RFSG-1M
- into plastic switchboard
- rod angle, without cable
- sensitivity 1 dB
- the internal antenna is included in the standard package

**External antenna AN-E**

- for RFGSM-220M, eLAN-RF-003, eLAN-RF-Wi-003, RFDA-73/RGB, RFSA-61M, RFSA-66M, RFDEL-71M and RFSG-1M
- for mounting into metal switchboard
- cable length 3m
- sensitivity 5 dB
- the external antenna AN-E is supplied on request only

**FP-1**



**Flood probe FP-1**

Technical parameters	FP-1
Working temperature:	-10 to +40 °C
Mounting:	glue / screws
Length of cable:	3 m
Dimensions:	60 x 30 x 8 mm
Related standards	EN 50130-4, EN 55022

**TC**



EAN code  
TC-0: 8595188110075  
TC-3: 8595188110617  
TC-6: 8595188110082  
TC-12: 8595188110099

**Temperature sensors**

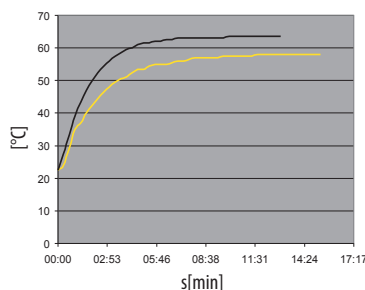
- The temperature sensors contain a NTC thermistor filled in a metal hollow with a heat-conducting putty (TZ) or inside a PVC terminal (TC), high electric strength meeting which meets the double insulation requirements.
- **TC sensor** - supply cable to the TC sensor is made of a 2Dx0.5 mm CYSY conductor .
- **TZ sensor** - 2Dx0.5 mm V03SS-F cable with silicone isolation.  
- suitable particularly for use under extreme temperatures.

**TZ**



EAN code  
TZ-0: 8595188140591  
TZ-3: 8595188110600  
TZ-6: 8595188110594  
TZ-12: 8595188110587

**NTC sensor warming up - by air**



PVC  
- response to air temperature increase from 22.5 °C to 58 °C

Silicone  
- response to air temperature increase from 22.5 °C to 63.5 °C

Technical parameters	TC	TZ
Range:	0..+70 °C	-40..+125 °C
Sensor:	NTC 12K 5 %	NTC 12K 5 %
In air / water:	(τ65) 92 s / 23 s	(τ65) 62 s / 8 s
In air / water:	(τ95) 306 s / 56 s	(τ95) 216 s / 23 s
Cable material:	Heat-resistant PVC	silicone
Terminal material:	Heat-resistant PVC	nickel-plated copper
Terminal:	IP 67	IP 67

τ65 (95): is the time when the sensor is heated to 65 (95)% of the temperature environment in which the sensor is placed.

Types of temp. sensors for range from 0 till +70 °C; Types of temp. sensors for range from -40 till + 125°C; connectible directly in the terminal block connectible directly in the terminal block

TC-0 - length 110 mm, weight 5 g	TZ-0 - length 110 mm, weight 4.5 g
TC-3 - length 3 m, weight 108 g	TZ-3 - length 3 m, weight 106 g
TC-6 - length 6 m, weight 213 g	TZ-6 - length 6 m, weight 216 g
TC-12 - length 12 m, weight 466 g	TZ-12 - length 12 m, weight 418 g

**Resistive values of sensors in depending on temperature**

Temperature ( °C )	Sensor NTC (kΩ)	Sensor PT100 (Ω)
20	14.7	107.8
30	9.8	111.7
40	6.6	115.5
50	4.6	119.4
60	3.2	123.2
70	2.3	127.1

NTC 12 kΩ tolerance is ± 5% at 25 °C

Long-term stability of the sensor resistance PT100 is 0.05% (10.000 Hrs).

**Telva 230 V**  
**Telva 24 V**



**EAN code**  
TELVA 230V, NC: 8595188166010  
TELVA 230V, NO: 8595188166027  
TELVA 24V, NC: 8595188166034  
TELVA 24V, NO: 8595188166041

**Thermodrive**

Technical parameters	Telva 230 V	Telva 24 V
Operating voltage:	230 V, 50/60 Hz	24 V AC, 50/60 Hz
Operating input:	1.8 W / 300 mA for max 2 min	1.8 W / 250 mA for max 2 min
Settings:	4 mm	
Protection:	IP54/II	
Conductor:	2 x 0.75 mm <sup>2</sup>	
Stopping force:	100 N ±5 %	
Cable length:	1 m	
Color:	white RAL 9003	
Dimensions h/w/l:	55+5 x 44 x 61 mm	

- The thermo-regulation drive TELVA is used to control underfloor and radiator hot-water heating.
- It is known for its quiet operation. It has a built-in valve position indicator.
- By mounting using the VA valve adapter, the thermo-regulation drive TELVA is applicable for a wide range of thermostatic valves available on the market.
- Design:
  - without voltage open (NO)
  - without voltage closed (NC)
- Type of use:  
Underfloor heating - wireless controller RFTC-50/G measures the room temperature, and based on the set program, sends a command to the switching unit RFSA-66M to open / close the thermo-regulation drive TELVA at the distribution.

**CT50**



**Current transformer**

Technical parameters	CT50
Current:	50 A
Output:	0.333 V
Accuracy:	1.0
Frequency:	50/60 Hz
Insulation accuracy:	3 KV
Working temperature:	-15 .. 60 °C
Dimension:	31 x 46 x 32 mm

**LS**  
**MS**  
**IRS**



Technical parameters	LS
Working temperature:	-20.. +50°C
Cross-section of connecting wires:	max. 3.5 mm <sup>2</sup>
Wire length:	1.5 m*
Protection:	IP65

**LS (LED sensor)**

- The LED sensor scans LED impulses on the meter, which indicates consumption by flashing.
- The sensor's scanner is affixed with glue above the LED diode of the meter signaling indication of consumption.
- The sensor is affixed on the terminal inside the converter RFTM-1.

Technical parameters	MS
Working temperature:	-20.. +50°C
Cross-section of connecting wires:	max. 3.5 mm <sup>2</sup>
Wire length:	1.5 m*
Protection:	IP65

**MS (Magnetic sensor)**

- The magnetic sensor scans movement of the numeral, upon which a permanent magnet is placed.
- The sensor's scanner is affixed with glue above the unit dial of the meter.
- The sensor is affixed on the terminal inside the converter RFTM-1.

Technical parameters	IRS
Working temperature:	-20.. +50°C
Cross-section of connecting wires:	max. 3.5 mm <sup>2</sup>
Wire length:	1.5 m*
Protection:	IP65

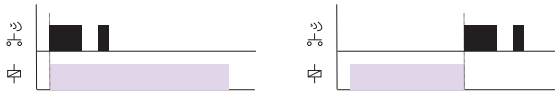
**IRS (Infra Red sensor)**

- The IR sensor senses the reflective curtain placed on the moving number of the meter or senses the rotating indicator (mainly on water meters).
- The sensor's scanner is affixed with glue above the dial or the meter's rotating indicator.
- The sensor is affixed on the terminal inside the converter RFTM-1.

\*the standard supplied length of 1.5m can be custom ordered in an extended version of up to 5 m.

Single function RFSA-11B

Function button ON/OFF



The output contact closes by pressing one button position, and opens by pressing the other button position.

Multi function RFSA-61B, RFSA-62B, RFSA-61M, RFSA-66M, RFSAI-61B, RFSC-61, RFUS-61

<p><b>Function 1 - button</b></p> <p>The output contact will be closed by pressing the button and opened by releasing the button.</p>	<p><b>Function 2 - switch on</b></p> <p>The output contact will be closed by pressing the button.</p>	<p><b>Function 3 - switch off</b></p> <p>The output contact will be opened by pressing the button.</p>
<p><b>Function 4 - impulse relay</b></p> <p>The output contact will be switched to the opposite position by each press of the button. If the contact was closed, it will be opened and vice versa.</p>	<p><b>Function 5 - delayed off</b></p> <p>The output contact will be closed by pressing the button and opened after the set time interval has elapsed. t = 2s...60min.</p>	<p><b>Function 6 - delayed on</b></p> <p>The output contact will be opened by pressing the button and closed after the set time interval has elapsed. t = 2s...60min.</p>

Loadability products

RFJA-12B; RFSA-62B; RFSA-66M; RFSTI-11/G; RFGSM-220M									
Load type	AC1	AC2	AC3	AC5a without compensation	AC5a with compensation	AC5b	AC6a	AC7b	AC12
Contact material AgSnO <sub>2</sub> Contact 8A	250V / 8A	250V / 5A	250V / 4A	x	x	250W	250V / 4A	250V / 1A	250V / 1A
Load type	AC13	AC14	AC15	DC1	DC3	DC5	DC12	DC13	DC14
Contact material AgSnO <sub>2</sub> Contact 8A	x	250V / 4A	250V / 3A	30V / 8A	24V / 3A	30V / 2A	30V / 8A	30V / 2A	x

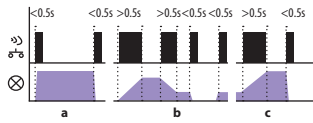
RFUS-61									
Load type	AC1	AC2	AC3	AC5a without compensation	AC5a with compensation	AC5b	AC6a	AC7b	AC12
Contact material AgSnO <sub>2</sub> Contact 14A	250V / 14A	250V / 5A	250V / 3A	230V / 3A (690VA)	230V / 3A (690VA) up to max input C=14uF	1000W	x	250V / 3A	x
Load type	AC13	AC14	AC15	DC1	DC3	DC5	DC12	DC13	DC14
Contact material AgSnO <sub>2</sub> Contact 14A	x	250V / 6A	250V / 6A	24V / 10A	24V / 3A	24V / 2A	24V / 6A	24V / 2A	x

RFSA-11B; RFSA-61B; RFSA-61M; RFSTI-11B; RFDAC-71B, RFSC-61, RFSAI-61B									
Load type	AC1	AC2	AC3	AC5a without compensation	AC5a with compensation	AC5b	AC6a	AC7b	AC12
Contact material AgSnO <sub>2</sub> Contact 16A	250V / 16A	250V / 5A	250V / 3A	230V / 3A (690VA)	230V / 3A (690VA) up to max input C=14uF	1000W	x	250V / 3A	250V / 10A
Load type	AC13	AC14	AC15	DC1	DC3	DC5	DC12	DC13	DC14
Contact material AgSnO <sub>2</sub> Contact 16A	x	250V / 6A	250V / 6A	24V / 10A	24V / 3A	24V / 2A	24V / 6A	24V / 2A	x



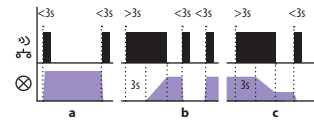
Multi function RFDA-73M/RGB, RFDEL-71B, RFDEL-71M, RFDSC-71, RFDAC-71B

Light scene function 1



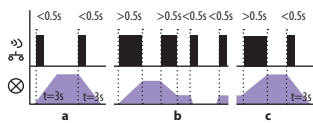
- a) By pressing the programmed button for less than 0.5 s, the light illuminates; it goes out by pressing again.
- b) By pressing the programmed button for more than 0.5 s, fluid brightness regulation will occur. After releasing the button, the brightness level is saved in the memory, and pressing the button shortly later will switch the light on/off to this intensity.
- c) It is possible to readjust the change in intensity at any time by a long press of the programmed button. The actuator remembers the adjusted value even after disconnecting from the power supply.

Light scene function 2



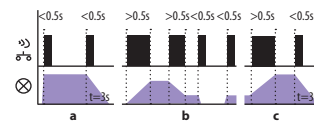
- a) By pressing the programmed button for less than 3 s, the light illuminates; it goes out by pressing again.
- b) In order to limit undesirable control of brightness, fluid brightness control occurs only by pressing a programmed button for over 3 s. After releasing the button, the brightness level is saved in the memory, and pressing the button shortly later will switch the light on/off to this intensity.
- c) It is possible to readjust the change in intensity at any time by pressing the programmed button for over 3 s. The actuator remembers the adjusted value even after disconnecting from the power supply.

Light scene function 3



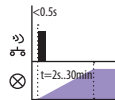
- a) By pressing the programmed button for less than 0.5 s, the light fluidly illuminates for a period of 3 s (at 100% brightness). By pressing the button shortly again, the light will continuously switch off for 3 seconds.
- b) By pressing the programmed button for more than 0.5 s, fluid brightness regulation will occur. After releasing the button, the brightness level is saved in the memory, and pressing the button shortly later will switch the light on/off to this intensity.
- c) It is possible to readjust the change in intensity at any time by a long press of the programmed button. The actuator remembers the adjusted value even after disconnecting from the power supply.

Light scene function 4



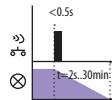
- a) By pressing the programmed button for less than 0.5 s, the light illuminates. By pressing the button shortly again, the light will continuously switch off for 3 seconds (at 100% brightness).
- b) By pressing the programmed button for more than 0.5 s, fluid brightness regulation will occur. After releasing the button, the brightness level is saved in the memory, and pressing the button shortly later will switch the light on/off to this intensity.
- c) It is possible to readjust the change in intensity at any time by a long press of the programmed button. The actuator remembers the adjusted value even after disconnecting from the power supply.

Function sunrise



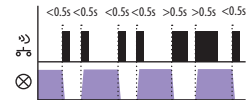
After pressing the programmed button, the light begins to illuminate in the programmed time interval in a range of 2 seconds to 30 minutes.

Function sunset



After pressing the programmed button, the light begins to dim in the programmed time interval in a range of 2 seconds to 30 minutes

Function ON/OFF



If the light is switched off, pressing the programmed button will switch it on. If the light is switched on, pressing the programmed button will switch it off.

Rating of the light source ELKO lighting on dimmers ELKO EP

	LED bulb		LED spot lights			LED panels		LED / RGB strip					
	DLB-E27-806-2K7	DLB-E27-806-5K	DLSL-GU10-350-3K	LSL-GU10-350-3K	LSL-GU10-350-5K	LP-6060-3K	LP-6060-6K	LED strip 7.2W	LED strip 14.4W	LED strip 19.2W	LED strip 28.8W	RGB strip 7.2W	RGB strip 14.4W
	number	number	number	number	number	number	number	number	number	number	number	number	number
RFDSC-71	✓ 21	✓ 21	✓ 45	✓ 25	✓ -	-	-	-	-	-	-	-	-
RFDEL-71B	✓ 11	✓ 11	✓ 25	✓ 13	✓ 13	-	-	-	-	-	-	-	-
RFDA-73M/RGB	-	-	-	-	-	-	-	✓ 3x8m	✓ 3x4m	✓ 3x5m	✓ 3x4m	✓ 20m	✓ 10m
RFDAC-71B	-	-	-	-	-	✓ 50	✓ 50	-	-	-	-	-	-

WARNING!

May lead to different results based on the state of network cable length and other factors.

This table contains the results of tests that were conducted internally and therefore is ONLY for customers only informative.

The products were tested in test laboratories ELKO EP, and therefore the company assumes no responsibility for any imitation test environment.

Inductive and capacitive loads must not be connected simultaneously!

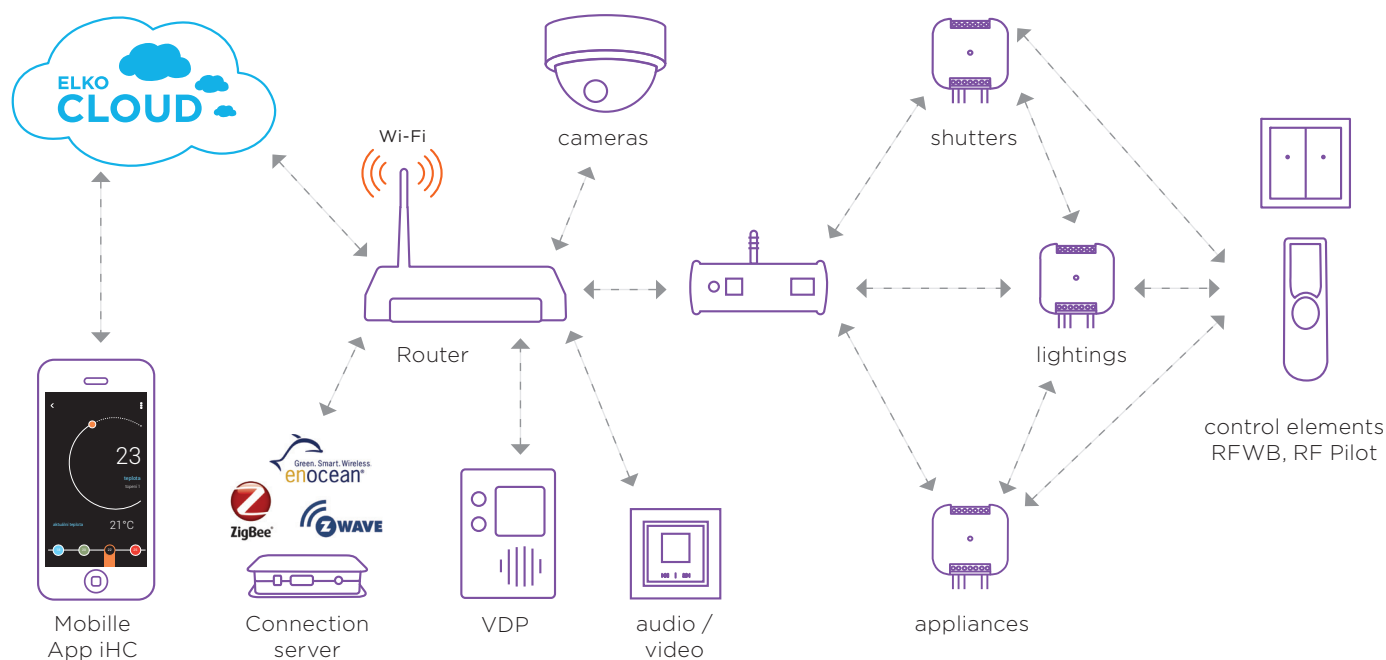
Communication between units (transmitters and receivers) takes place wirelessly on a frequency of 868 - 916 MHz based on standards in the given country on an entirely unique protocol RF IO. RF IO is a proprietary wireless protocol of ELKO EP, which is unique for its structure. In the USA, there is also available a variety of units with the protocol Z-Wave (915 MHz), which is compatible also with other producers of similar devices on the same protocol.

**Available frequency for individual territories:**

868.3 MHz	EU and rest of the world	915 MHz	USA
868.1 MHz	Ukraine, Russia, Belarus, Kazakhstan	915 MHz/Z-Wave	USA
		916 MHz	Australia, New Zealand

**Advantages of the RFIO protocol:**

- Reliable transfer of small data packets with transfer speed of up to 100 kbit/s
- No fees or licenses required
- Used frequencies do not collide with Wi-Fi /Bluetooth devices and wireless units at 2.4 GHz (ZigBee)
- It does not needlessly overwhelm communications space with unaddressed commands
- Low power radio
- Routing - Data transfer between wireless units takes place by a system where other receivers within range help transfer information (packets) to the distant receiver, which itself would be out of range. It is thus possible to cover larger buildings and increase reliability of transmission for more complex buildings.





Radio frequency signal penetration through various construction materials

<p>60-90%</p>	<p>80-95%</p>	<p>20-60%</p>	<p>0-10%</p>	<p>80-95%</p>
brick walls	wooden structures with plaster boards	reinforced concrete	metal partitions	common glass

Instructions for use

For correct and faultless functioning and safe operation of the product, it is necessary to observe the following principles:

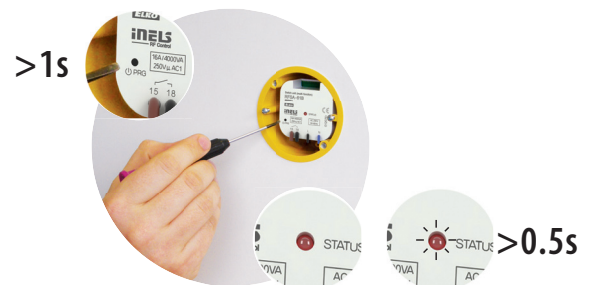
- Do not install in outdoor or wet spaces
- During maximum load, sufficient cooling must be ensured for RFDEL-71M and RFDEL-71B
- Do not install RF components into metal switchboard and steel lighting panels (the metal is an obstacle to the RF signal)
- Keep in mind that the radio signal range for RF installations depends on the building structure, materials used and the manner of unit location in the area.
- Actuators protection: Actuators are equipped with thermal protection, which disconnects output when the temperature inside the device exceeds a certain level.

Programming the controller and unit

**1** Insert the batteries into the controller. Installation of unit based on requirement and unit design (in an installation box, switchboard, appliance cover, etc.). Abide by the principles of correct installation location.



**2** By pressing the programming button using a suitable tool (no sharp point) on the unit for longer than 1 second, the unit enters programming mode. The LED on the unit starts to flash at half-second intervals. This flashing indicates that the unit is ready to receive a signal of any button of the RF controller.



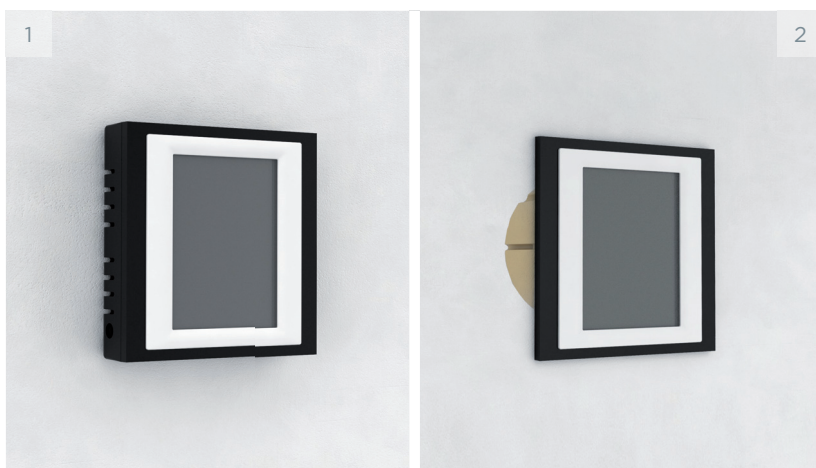
**3** The number of presses of the chosen controller button assigns the required function. Sending the signal is indicated by the flashing LED on the controller. The programming unit confirms receipt of the command by the LED going out briefly. It is then possible to repeat step 3 for programming the other buttons on the controller or even other controllers. The program function can be set as you wish to any controller position. One unit can be controlled by up to 32 channels (1 channel represents 1 button on a controller). The controller need not be bound only to one unit, but can control an unlimited number of elements that are within range of the RF signal by functions to which it is programmed.

Actuator program selection	Number of pressing the transmitter button	Multifunction receivers	
		Switch	Dimmer
	1x press	button	scene 1
	2x press	switch on	scene 2
	3x press	switch off	scene 3
	4x press	impulse relay	scene 4
	5x press	delayed off	sunrise
	6x press	delayed on	sunset
	7x press	-	ON/OFF

**4** Pressing the programming button on the unit for shorter than 1 second closes the programming mode. The LED goes out.



More detailed information is available in the user manuals of individual products.



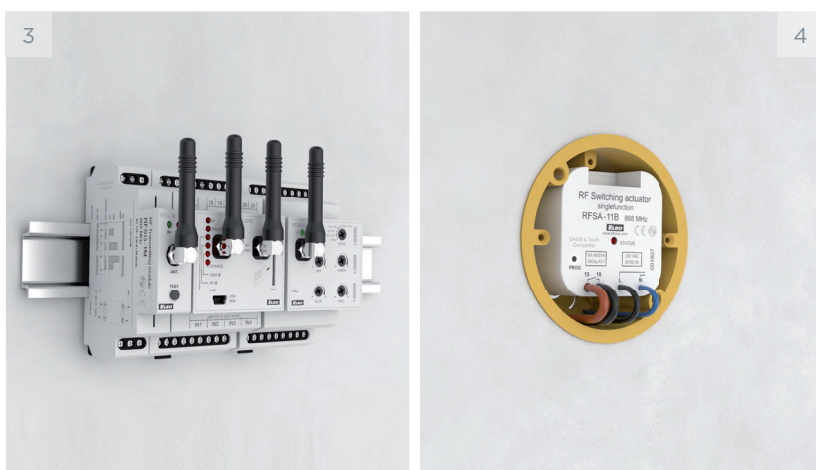
**1) Surface mounted**

Wall mounted or in an installation box with spacing of 65 mm.

RF Touch-W	RFTC-50/G
RFWB-20/G	RFSD-100
RFWB-40/G	RFMD-100
RFTC-10/G	RFWD-100

**2) Flush mounted**

RF Touch-B	RFTC-100/G
RFSTI-11/G	



**3) DIN Rail mounted**

On DIN rail according to EN60715.

RFSG-1M	RFDEL-71M
RFSGM-220M	RFSA-61M
RFPM-2M	RFSA-66M
RFDA-73M/RGB	

**4) Mounted to or in the installation box**

RFIM-20B	RFSAI-61B
RFIM-40B	RFJA-12B/230V
RFDAC-71B	RFJA-12B/24V
RFDEL-71B	RFSE-1B + FP-1
RFSA-11B	RFSTI-11B
RFSA-61B	RFTI-10B
RFSA-62B	



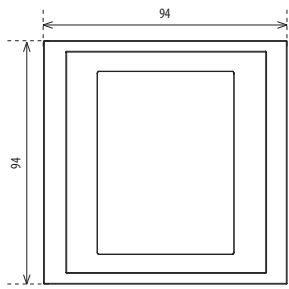
**5) Mounted into the cover of appliance**

RFDAC-71B	RFSA-62B
RFDEL-71B	RFSAI-61B
RFSA-11B	RFJA-12B/230V
RFSA-61B	RFJA-12B/24V

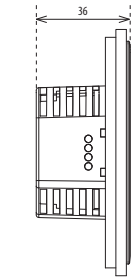
**6) Surface mounted**

RFSOU-1	RFTM-1
RFUS-61	RFSE-1B + FP-1

Frame dimensions are given for metal frames, glass, wood, granite

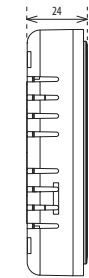


In an installation box



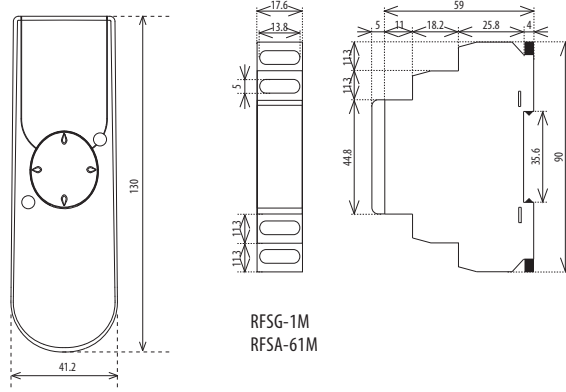
RF Touch-W

Surface-mounted



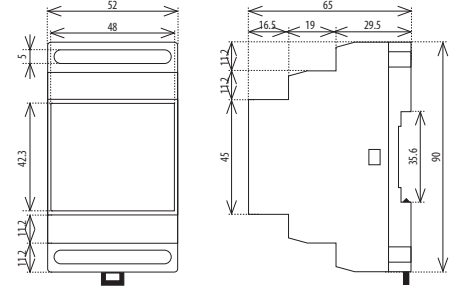
RF Touch-B

1Module



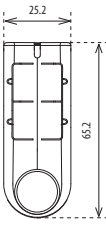
RFSG-1M  
RFSM-61M

3Module



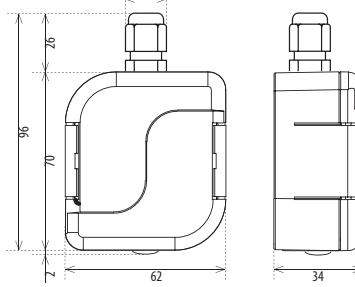
RFGSM-220M RFBM-2M  
RFSM-66M RFD-73M/RGB  
RFDEL-71M

RF Pilot



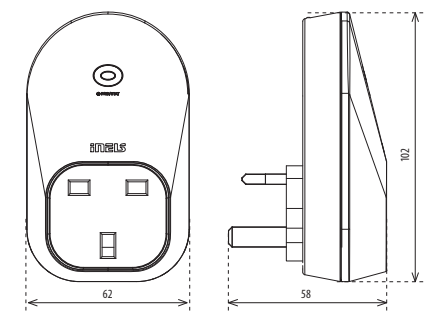
RF Key

IP65

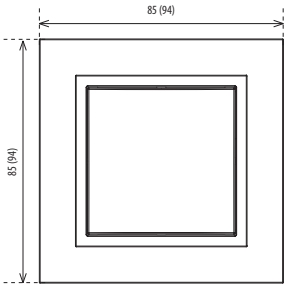


RFSOU-1

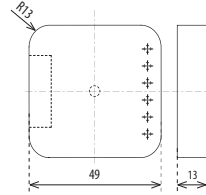
Socket



RFRP-20  
RFSC-61  
RFDSC-71

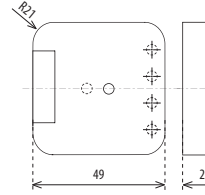


MINI



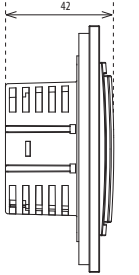
RFIM-20B  
RFIM-40B  
RFTI-10B  
RFSF-1B  
RFJA-12B/24V DC

MINI



RFDEL-71B  
RFSM-11B  
RFSM-61B  
RFSM-62B  
RFSAI-61B  
RFSTI-11B  
RFDAC-71B  
RFJA-12B-230V

In an installation box



RFSTI-11G

Surface-mounted



RFTC-100/G

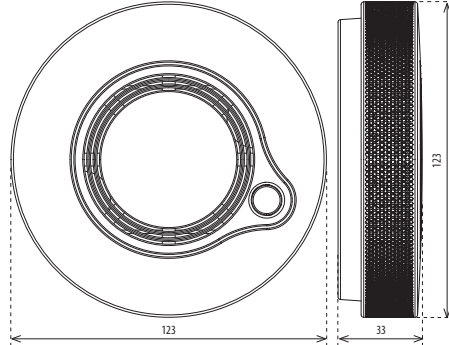


RFWB-20/G  
RFWB-40/G



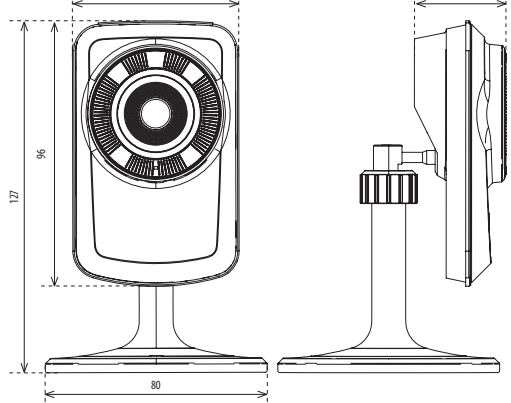
RFTC-10/G  
RFTC-50/G

Detector

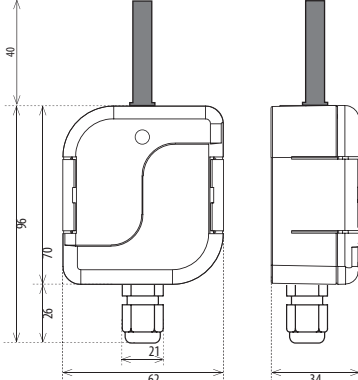


RFSD-100  
SD-100

iNELS Cam

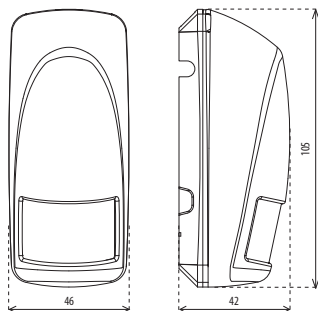


IP65



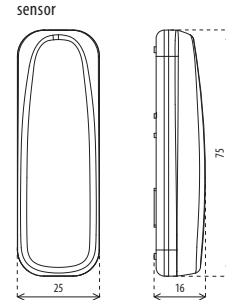
RFUS-61

Detector



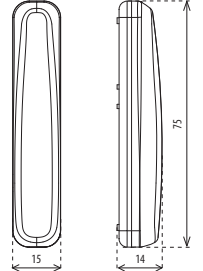
RFMD-100  
MD-100

Detector sensor



RFWD-100  
WD-100

magnet



### THE GAME OF LIGHTS

 1x SMART RF BOX

 3x COLORED WIRELESS BULB



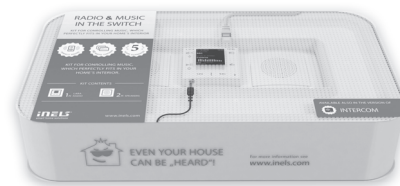
### KIT TO CONTROL LIGHTS VIA SMARTPHONE

It's never been easier to set the appropriate ambience for reading a book or, watching a movie or a party with friends. All you need is wireless bulbs and a smart box, then you can control every device from the comfort of your smartphone, tablet or smart TV. You can't just control colored or white light bulbs, but also other appliances too.

### RADIO & MUSIC IN THE SWITCH

 1x LARA RADIO

 2x SPEAKERS



### KIT FOR CONTROLLING MUSIC, WHICH PERFECTLY FITS IN YOUR HOME'S INTERIOR

LARA is a music and internet radio player. We have registered 40 favorite Czech radios stations as presets stations, however you can easily change it using the configurator. LARA plays the music, which is stored in the NASA storage or in the external source (phone, MP3 player) that is connected through a cable on the front panel of the device. Built-in amplifier that allows direct connection of speakers (in the same LOGUS<sup>90</sup> design) or allows connection of external in-wall or ceiling speakers.

### ONE CONTROLLER FOR ALL

 1x SMART IR BOX

 3x IR TRANSMITTER



### KIT FOR CONTROLLING IR DEVICES VIA A SMARTPHONE

Thanks to the Smart IR box, you can control the home appliances via a Smartphone. Thus you no longer need a bunch of controllers, you do not have to look for them, and you do not need to replace the battery. You always stick your phone in your pocket, always at hand. Moreover, you can control other devices which are placed in another room (e.g. you can turn off the TV in the children room).

### YOUR HOUSE UNDER „THE THUMB“

 1x SMART RF BOX

 1x WIRELESS SWITCHING SOCKET

 2x COLORED WIRELESS BULB

 1x CAMERA



### CONTROL YOUR HOUSE VIA A SMARTPHONE

The kit "House under the thumb" which you're holding in your hands is the basic starter kit for you, which would like to make your home more comfortable. The starter kit consists of 2 colored wireless bulbs, 1 x switching socket and 1 x camera, which allows you to try the basic units of iNELS RF Control – wireless solution. Everything is preset to ensure fast and easy control.

## VIRTUAL KITS

The virtual kit is a set of wireless units that are packed individually (as an individual product), but on the other hand, they are preset together (they are meant to work together) to ensure a simple installation. They are offered at a discounted price and it is not possible to separate any unit from this price.

### UNDERFLOOR HEATING - BY WATER

Any wireless temperature regulator measures the room temperature, it compares with set temperature and time program, then sends a command to switch on the units. Based on the command from the temperature regulator, 6-channels switching unit is able to control up to 6 thermostats corresponding to heating circuits.

#### KIT CONSISTS OF:

Wireless temperature controller RFTC-50/G, wireless switch unit (6 outputs) RFSA-66M, thermodriver TELVA/230V.

### UNDERFLOOR HEATING - BY ELECTRICITY

Temperature and switching unit (two in one) measures the floor temperature via external sensor (built-in). Then it sends data to wireless touch unit RF Touch, which compares it with the temperature set along with the time schedule and then sends a command back to switch on/switch off the heating circuits. It is possible to connect up to 4 temperature/switching units.

*Advice 1) If just one reference temperature is enough for you, so then it can be measured by temperature sensor RFTI-10B and to switch up to 6 independent heating circuits you can use 6-channels switching actuator RFSA-66M.*

*Advice 2) The wireless unit RF Touch can be replaced by Smart RF box and all can be controlled via your smartphone. Both solution can be used together.*

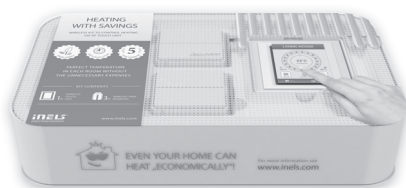
#### KIT CONSISTS OF:

Switching actuator with thermosensor RFSTI-11/G, Wireless touch unit RF Touch.

**HEATING WITH SAVINGS**

 1x WIRELESS CONTROL UNIT RF TOUCH

 3x WIRELESS THERMOVALVES

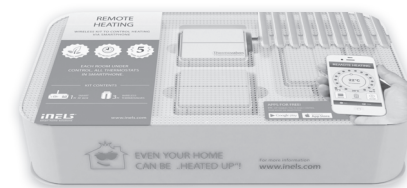
**KIT TO CONTROL HEATING VIA WIRELESS RF TOUCH UNIT**

Includes 3 wireless thermovalves that are installed instead the standard radiator valves. It measures the room temperature and sends it to the RF Touch control unit. RF Touch compares it with the temperature set along with time schedule and sends a command to open or close the valve. You can set heating programs in the weekly schedule, separately for each circuit (room).

**REMOTE HEATING**

 1x SMART RF BOX

 3x WIRELESS THERMOVALVES

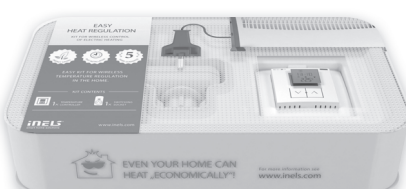
**KIT TO CONTROL HEATING VIA SMARTPHONE**

It includes 3 wireless thermovalves that are installed instead the standard radiator valves. They measures the room temperature and send it to the Smart RF box. The Smart RF box compares it with the temperature set along with the time schedule in the application of your phone and sends a command to open or close the valve. You can always turn on the heating circuit via an app, whether you're at home, or just going to visit your cottage and do not want to come to unheated place.

**EASY HEAT REGULATION**

 1x TEMPERATURE CONTROLLER

 1x SWITCHING SOCKET

**KIT FOR WIRELESS TEMPERATURE REGULATION IN THE HOME**

This kit enables convenient and quick control of heater, oil heater, panel heater or portable air conditioner. Just plug the device into controlled switching sockets and appropriately place your controller RFTC-50/G. The desired temperature is set on the controller, that compares it with the current record and it sends a command to turn the device ON.

**TECH. SUPPORT**

+420 800 100 671

**VIRTUAL KITS****AGAINST THE FLOOD**

A wireless sensor monitors the water leaks or flooding in the critical places (basement, pits, shafts, bathroom, laundry room,...) and sends immediately a command to the switching unit to close the solenoid valve of the main water supply. You can be also informed of that accident through a GSM gateway by sending SMS text messages.

**The KIT CONSISTS OF:**

Switch unit RFUS-61, wireless flood detector RFSF-1B, flood probe FP-1.

*We recommend: solenoid valve: MPW SS 304 - 1/2 (3/4) 230V AC.*

**COLORED RGB LED STRIP**

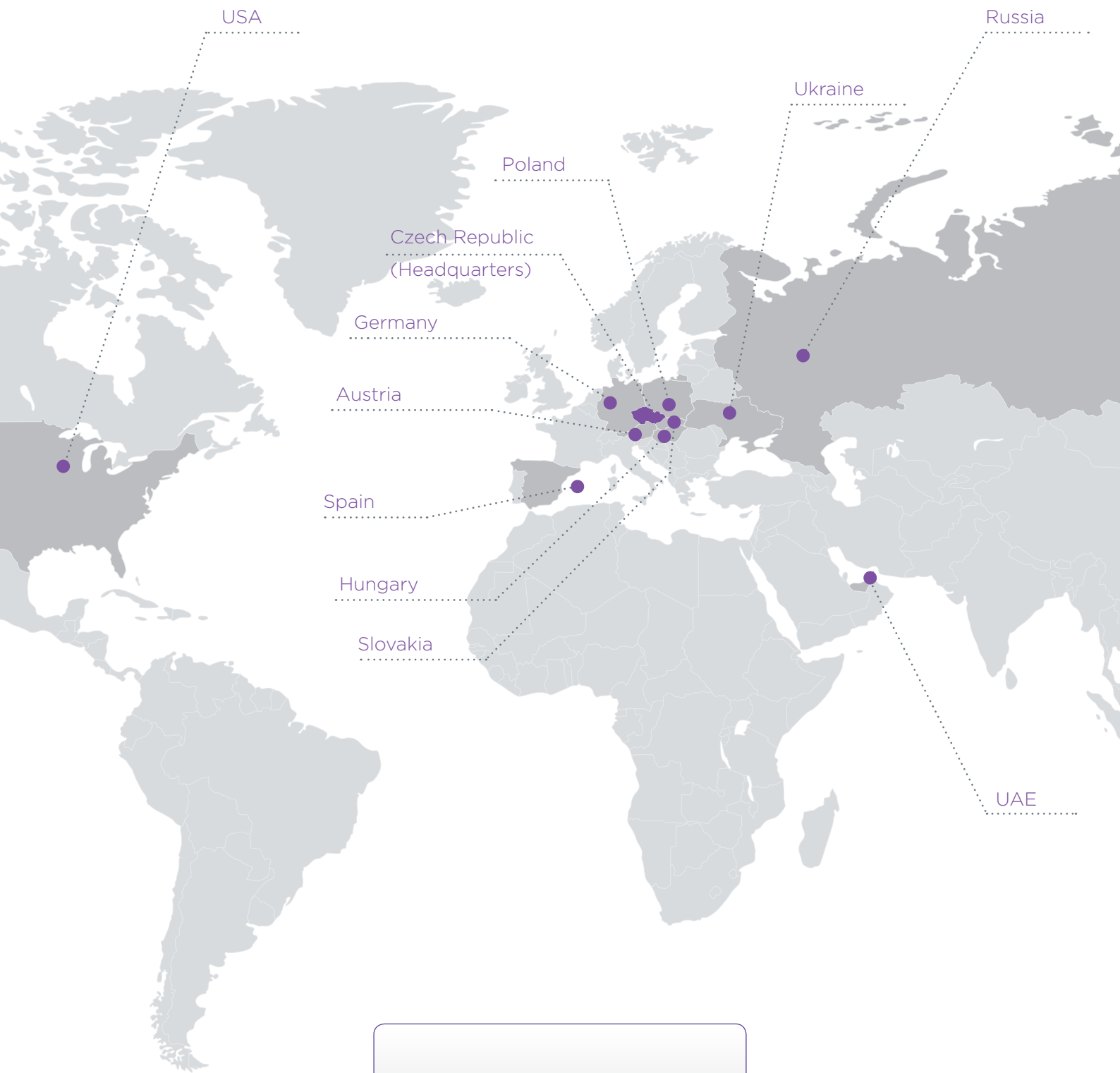
The app in your smartphone can send (through RF smart box) the commands to the dimming unit to which the RGB strip is connected. From your app it is possible to switch ON/OFF, to set the color or to run the scene of automatic color blending.

*Advice 1) The colored RGB strip can be controlled through RF Pilot, by controllers RFWB-20/40, RF Key...*

*Advice 2) If you do not want the colored RGB strip, we can replace it by monochromatic (warm white, cool white, red, ...). Then you can connect 8 m of monochromatic strip (power 7.2W/m) to RFDA-73M/RGB to each output.*

**KIT CONSISTS OF:**

Smart RF box, dimmer RFDA-73M/RGB, 2 x 5m coloured RGB strip 7.2W/m, power supply 230V/12V/100W.



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