RF

Wireless electro-installation

RF Control

www.elkoep.com/rf

ELKO EP

We have been your partner in the field for 30 years, manufacturing and developing the highest quality electrical devices..

ELKO EP employs 330 people across 15 foreign branches that exports its products to more than seventy countries. Company of the Year of the Zlín Region, Visionary of the Year and Global Exporter of the Year are just some of the awards we have received throughout the years as we consistently strive to move forward in the field of innovation and development.

Millions of relays, hundreds of smart homes and thousands of satisfied customers. This is ELKO EP; a traditional company based in the center of Europe, where development, production, logistics, and service are at the forefront of our focus. Building automation systems, smart city facilities and the Internet of Things (IoT) devices are solutions we can offer.

Facts and stats

30 % Czech

40 % Export

30 % Branches

330 Employees

16 500 iNELS installation

13 000 000 Manufactured products

10 Branches

6 Franchises

70 Exporting countries

World leader
in production of relays

WE ARE

DEVELOPERS
In the new R&D centre, more than 30 engineers develop new products and extend the functionality of existing product.

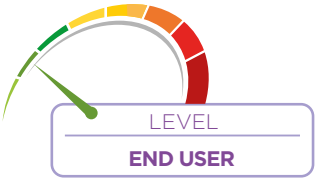
PRODUCERS
Modern antistatic spaces, 2 × fully automated SMD production lines with 2 shift operations.

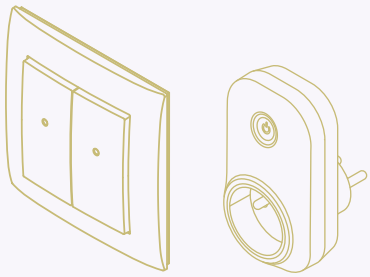
SUPPORT
24 hours / 7 days / 360 days we not only provide technical support but also logistics.

SELLERS
Personal access to more than 70 sales representatives in ELKO EP Holding providing impeccable services and superior products at an affordable price.

POINT TO POINT

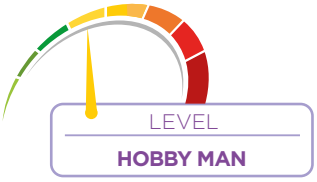
Individual elements of the iNELS system for personalised installation.

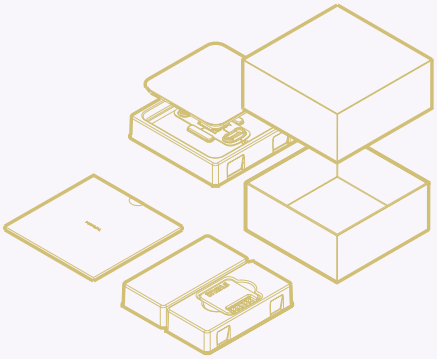


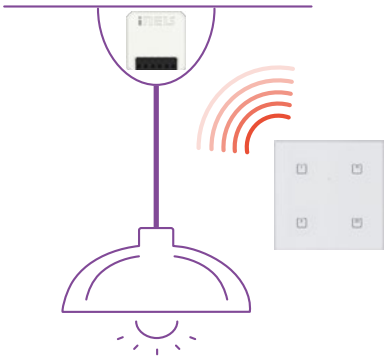


KITS

Pre-Set elements for everyday applications.

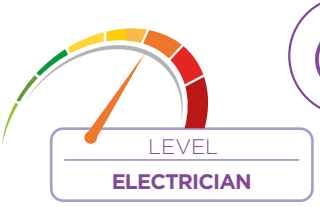






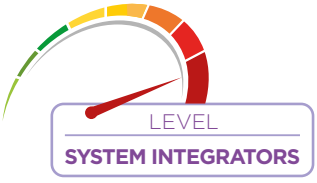
CONNECTED HOME

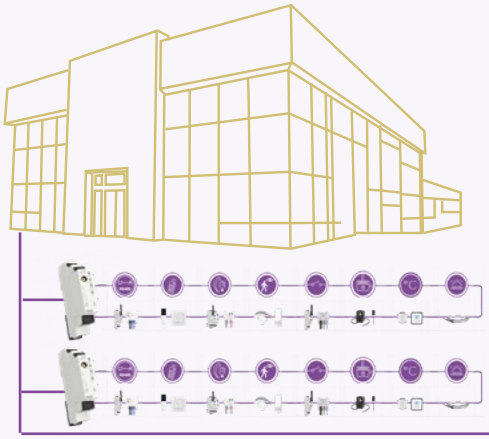
A simple solution to turn your house into a smart home, without any structural intervention.

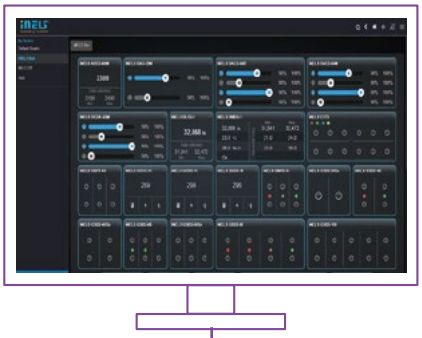


SMART BUILDING

When using wireless elements is faster and cheaper.







It does not matter what you control, but how easily you control it. With us you can control the devices and appliances in many ways, one at a time or combine them at will.

For those conservatives amongst us, there are buttons in the form of switches exactly as we know and are used to them, for those of us who often move around the house In the garden, the RF Pilot remote control in your pocket will surely be appreciated. Touch unit is again designed for those who like everything in one place with a – 3.5 „display securely holding all the necessary buttons within the frame. An interesting and often preferred option is the driver's smartphone – which most of us already have in our pocket.

YOU CAN CONTROL iNELS WITH:

Wireless wall controller

- 2 or 4 buttons
- simple installation – can be attached or fixed anywhere
- in LOGUS^{90} design (natural materials and colour combinations)

Touch glass controller

- wall controller in elegant glass design
- 2 or 4 buttons
- two side tape installation or wall box installation
- in black or white glass and designs with sharp or rounded corners

Wireless touch unit RF Touch

- wireless touch unit for wall box installation
- it will become a central, wireless intuitively controlled home
- coloured 3,5" TFT display

Keychain

- 4 button controller
- pocket controller for every day
- in colour white or black

Remote controller with display

- here marks the start of home automation
- the remote controller with OLED colour display offers control of up to 40 household appliances
- lights, sockets, garage doors, sprinklers, blinds, awnings, etc.

Smartphone

- the only controller that comes free
- your home under control thanks to Android application
- you no longer have to worry about unpleasant surprises after downloading the Android or iOS application for free

Smart watch

- the only controller that comes free
- your home under control thanks to Android application
- you no longer have to worry about unpleasant surprises after downloading the Samsung Gear app

Smart TV

SAMSUNG

- first application in the world for controlling iNELS in Samsung TV
- free download on Samsung Hub
- comfortably control not only the elements in individual rooms, but also outdoor cameras

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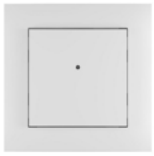
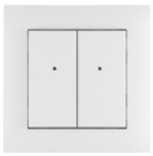
Units overview

Controllers



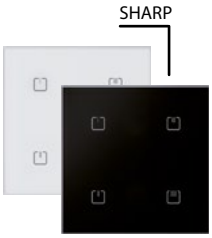
RFWB-20/G
On-wall button controller
- 2 buttons



RFWB-40/G
On-wall button controller
– 4 buttons

RFOWB-20
Outdoor controller
– 2 buttons

RFGB-20/W - white glass
RFGB-20/B - black glass
Glass touch controller, SHARP
– 2 buttons



RFGB-40/W - white glass
RFGB-40/B - black glass
Glass touch controller, SHARP
– 4 buttons

RF Pilot/W - white
RF Pilot/A - anthracite
Remote RF controller with display

Switches

RFSA-61B
Switching unit, 1-channel
– 1× 16 A, multifunction

RFSAI-11B-SL
Switching unit with inputs for external buttons
– 1× 8 A, singlefunction

RFSAI-61B-SL
Switching unit with inputs for external buttons
– 1× 8A, multifunction

RFSAI-62B-SL
Switching unit with inputs for external buttons
2-channels, 1× 8A, multifunction

RFJA-32B-SL
Switch unit for shutters
– 2× 8 A

Dimmers

RFDAC-71B
Analog controller,
0(1)-10 V
– multifunction

RFDALI-32B-SL
DALI converter,
controls 32 units

RFDEL-71B-SL
Universal dimmer
1-channel – 1x 300 VA
– R, L, C, LED, ESL

RFDEL-71M
Universal dimmer,
1-channel – 1x 600 VA
– R, L, C, LED, ESL

RFDEL-76M
Universal dimmer,
6-channels
– 6 x 150 VA

Temperature control

RFTC-10/G
System temperature controller

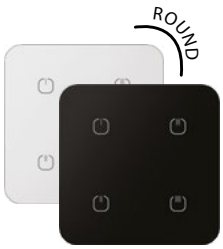
RFTC-50/G
Autonomous temperature controller

RFSTI-11B-SL
Switching unit
with external
temperature sensor

RFTI-10B
Temperature sensor
(internal + external)

TC TZ
Temperature sensors

RFGB-220/W - white glass
RFGB-220/B - black glass
Glass touch controller, ROUND
– 2 buttons



RFGB-240/W - white glass
RFGB-240/B - black glass
Glass touch controller, ROUND
– 4 buttons

RF KEY-40/W - white
RF KEY-40/B - black
Controller – key fob
–4 buttons

RF KEY-60/W - white
RF KEY-60/B - black
Controller – key fob
– 6 buttons

RFSA-61M **RFSA-61MI**
Switching units, 1-channel
– multifunction, 1× 16 A

RFSA-66M **RFSA-66MI**
Switching units, 6-channels
– multifunction, 6× 8 A

RFUS-61
Switch unit with
increased protection,
1× 12 A, multifunction

RFSC-61N
Switching socket-plug,
– 1× 16 A, multifunction

RFDA-73M/RGB
Dimming actuator
for LED (RGB) strips,
3-channels

RFDSC-71N
Dimming socket-plug

RFDW-71/W - white glass
RFDW-71/B - black glass
Glass touch controller
with dimmer, SHARP

RFATV-2
Wireless
thermovalve

Units overview

Converters

Replacement

RFIM-20B
2 input contacts converter
permanent contacts

RFIM-40B
4 input contacts converter
instantaneous contacts

RFIM-40B-BP-SL
4 input contacts converter
battery powered

RFIM-40B-230-SL
4 input contacts converter
AC 230 power supply

RFSG-1M
Input contact converter
–1x permanent contact

RFTM-1
Puls converter

Detectors

RFSF-1B
Level switch

FP-1
Liquid probe

RFSF-100
Flood detector

RFSOU-1
Twilight switch

RFWD-100
Window/Door detector

System units

eLAN-RF-103
Smart RF gateway
with LAN

eLAN-RF-Wi-103
Smart RF gateway
with LAN & WiFi

RFRP-20N
Repeater to extend
the range

RF Touch-W
Wireless touch unit
– on the wall

Hotel Room Energy Saving Kit

RFTC-150/G
Temperature
controller

RFSAI-161B
Lighting control unit
with pair detectors
and external button input

RFSTI-111B
Overheating/overcooling
switch unit with advanced
functions

RFSA-166M
Switch unit for fancoil,
6-channels

Accessories

RFAF/USB
Service Key

AN-I
Internal antenna
Gain: 2.1 dBi

AN-E
External antenna
Gain: 5 dBi

AN-E3
External antenna
Gain: 3 dBi, IP67

Extension cable for
external antenna
10 m

RFMD-100
Motion detector

Replacement

RF Touch-B
Wireless touch unit
– flush mounted

RF Touch-2/B
Wireless touch unit
– flush mounted

new display

	NEW (RF Touch-2/B)	CURRENT (RF Touch-B)
Display type	capacitive	resistive
Touch point	multitouch	single touch
Resolution	480 × 480 px	320 × 240 px
Diagonal	4″	3.5″
Display colors	64 million	262.000

new construction

	NEW (RF Touch-2/B)	CURRENT (RF Touch-B)
Smaller frontside outlines	86 × 86 mm	94 × 94 mm
Smaller backside outlines	43 × 46 mm	50 × 50 mm
Easier installation	separate metal wall holder + display to snap-in to holder	base flushed mounted + display with pins to fit to holes
Power connections	USB-C & terminals & PoE	terminals only
Consumption	3W	5W

new functionalities

iNELS Cloud
amazon alexa
Google Home
INELS radio
Wi-Fi
LAN

	NEW (RF Touch-2/B)	CURRENT (RF Touch-B)
Communications	Radio + Wifi + LAN	Radio
Sensors	temp + humidity + ambient + proximity	temperature
Gateway (eLAN-RF)	included	-
Connection to Cloud	yes	no
UX/UI	variable	fix
Setup possibility	free, via the iNELS Cloud	fix

iNELS® RF Control

RFIO2 - radiofrequency protocol bidirectional

Wi-Fi

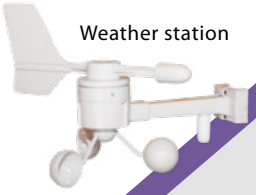
LAN

Outdoor camera

Indoor camera

Wi-Fi

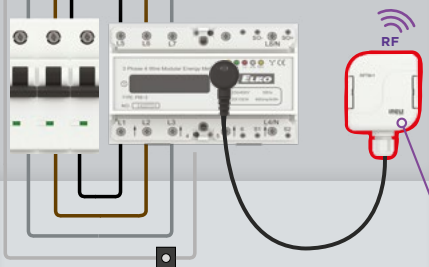
Weather station



Wi-Fi

Router
Switch

L3
L2
L1
PEN



Wireless
pulse converter

Electricity
panel meter

Video
door-phone

Smart IR gateway
eLAN-IR

IR IR IR

Audio/Video

Home appliances

Air-conditioning

Water
meter

To the gate

RF

Wireless
pulse converter

To the gate

RF

Wireless
pulse converter

Gas meter

SW/APP

App

iNELS cloud

Smart TV application

Voice assistants

Smart watch

Controllers:

Radio & Intercom

Touch unit

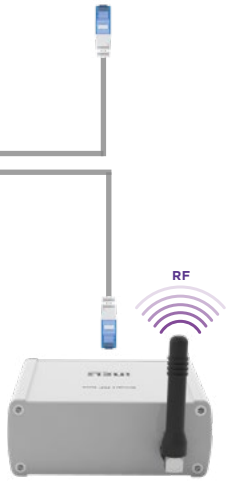
Wall controller

Glass controller

Thermostat

Wireless dimmer switch

RF Pilot / Keychain



Smart RF gateway
eLAN-RF-103

Detectors:

Door/window

Motion

Flood

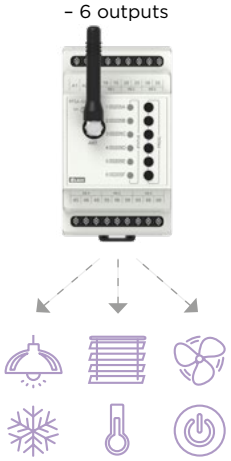
Sensors:

Temperature

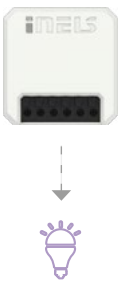
Twilight

Units:

Switch unit – 6 outputs



Switch unit to installation box

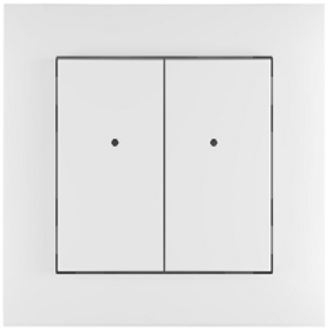


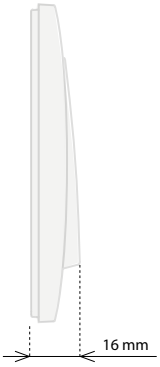
Switching socket

Switch unit for shutters

Switch unit – 1-channel

Dimmer for LED strips



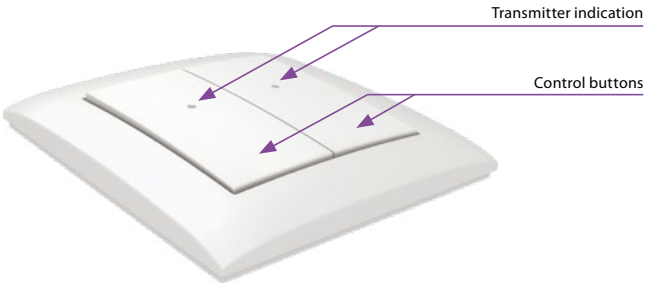


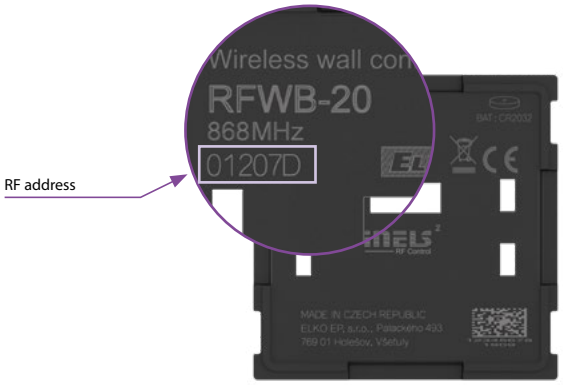
EAN code:
RFWB-20/G: 8595188140379
RFWB-40/G: 8595188140607

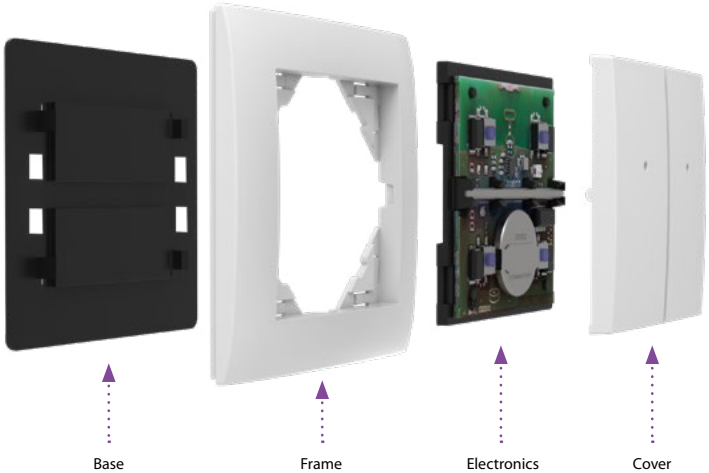
Technical parameters	RFWB-20/G	RFWB-40/G
Supply voltage:	3 V CR 2032 battery	
Battery life:	around 5 years based on frequency of use	
Transmission indication:	red LED	
Number of buttons:	2	4
Communication protocol:	RFIO2	
Frequency:	866–922 MHz (for more information see p. 74)	
Signal transmission method:	unidirectionally addressed message	
Range:	in open space up to 200 m	
Other data		
Operating temperature:	-10 to +50 °C	
Operating position:	any	
Mounting:	glue/screws	
Protection:	IP20	
Contamination degree:	2	
Dimensions frame		
- plastic:	85 x 85 x 16 mm	
- metal, glass, wood, granite:	94 x 94 x 16 mm	
Weight (plastic):*	38 g	39 g
Related standards:	EN 60669, EN 300 220, EN 301 489 R&TTE Directive, Order. No 426/2000 Coll. (Directive 1999/EC)	

- On-wall button 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^{90} 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 (3 V CR 2032 battery - 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 or protocol component RFIO2 that support this feature.
- Communication frequency with bidirectional protocol RFIO2.
- RFWB enables communication (RFIO2) and can thus communicate with the CU3-02M.

Device description







LOGUS^{90}

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.

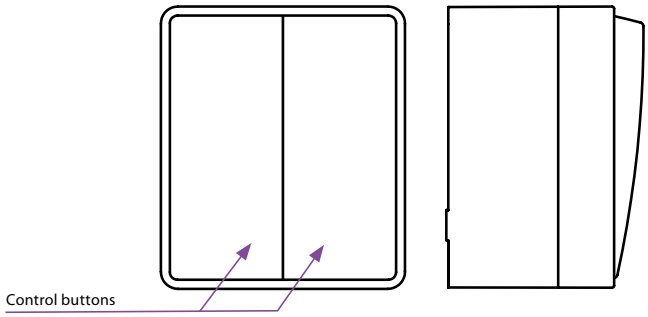
RFOWB-20 | Outdoor controller, 2 buttons

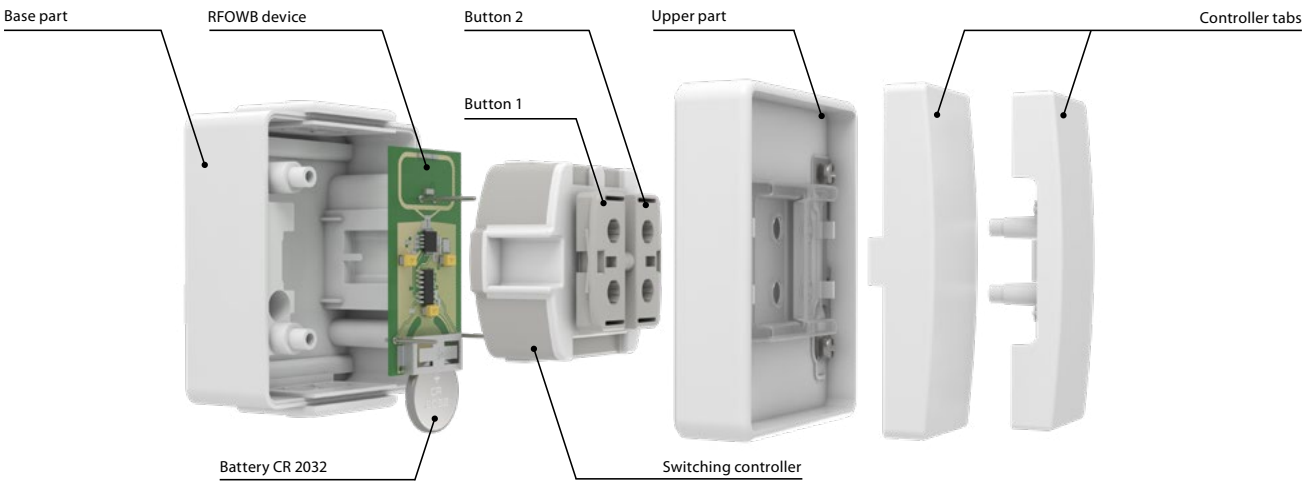
EAN code:
RFOWB-20: 8595188181471

- The wireless push-button controller with IP65 protection is used to control iNELS RF components and protect them from the outdoor environment.
- 2 buttons allow (independently of each other) control of an unlimited number of components (actuators).
- The controller is suitable for control from the pool, garden, terrace, and pergola. It can be used as an uncovered bell button.
- Fastening with screws or double-sided tape.
- Battery power supply (3 V CR 2032 battery - included in the supply) with battery life of around 5 years based on frequency of use.

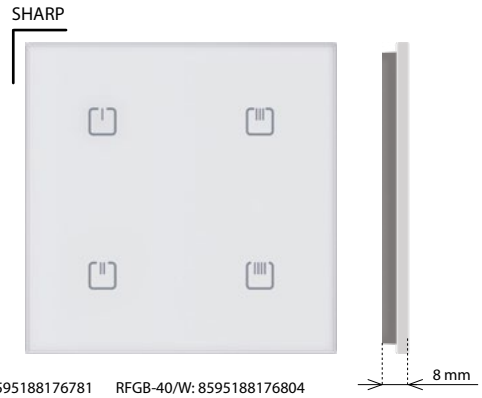
Technical parameters	RFOWB-20
Supply voltage:	3 V CR 2032 battery
Battery life:	around 5 years based on frequency of use
Transmission indication:	Integrated red LED
Number of buttons:	2
Communication protocol:	RFIO2
Frequency:	866–922 MHz (for more information see p. 74)
Signal transmission method:	unidirectionally addressed message
Range:	in open space up to 200 m
Other data	
Operating temperature:	-10 to +50 °C
Mounting:	screws/double sided tape
Colour design:	white (RAL 9003)
Protection:	IP65
Contamination degree:	2
Dimensions frame:	64 x 74 x 44 mm
Weight:	112 g
Related standards:	EN 60669, EN 300 220, EN 301 489 R&TTE Directive, Order. No 426/2000 Coll. (Directive 1999/EC)

Device description





RFGB-20/W, RFGB-20/B, RFGB-40/W, RFGB-40/B | Glass touch controllers, SHARP

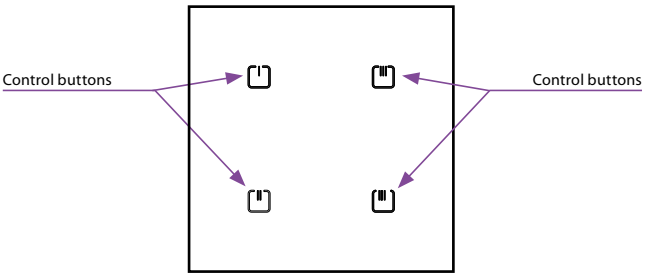


EAN code:
RFGB-20/W: 8595188176781 RFGB-40/W: 8595188176804
RFGB-20/B: 8595188176798 RFGB-40/B: 8595188176811

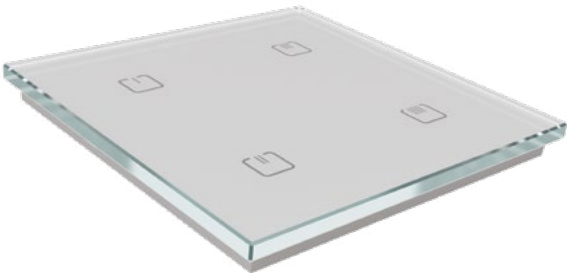
Technical parameters	RFGB-20	RFGB-40
Supply voltage:	2x 3 V CR 2032 batteries	
Battery life:	around 2 years based on frequency of use	
Transmission indication:	red LED	
Number of capacitive buttons:	2	4
Communication protocol:	RFIO	
Frequency:	866–922 MHz (for more information see p. 74)	
Signal transmission method:	unidirectionally addressed message	
Range:	in open space up to 200 m	
Other data		
Operating temperature:	-10 to +50 °C	
Operating position:	any	
Mounting:	glue/screws	
Protection:	IP20	
Contamination degree:	2	
Dimensions:	94 x 94 x 8 mm	
Weight:	107 g	107 g
Related standards:	EN 60669, EN 300 220, EN 301 489 R&TTE Directive, Order. No 426/2000 Coll. (Directive 1999/EC)	

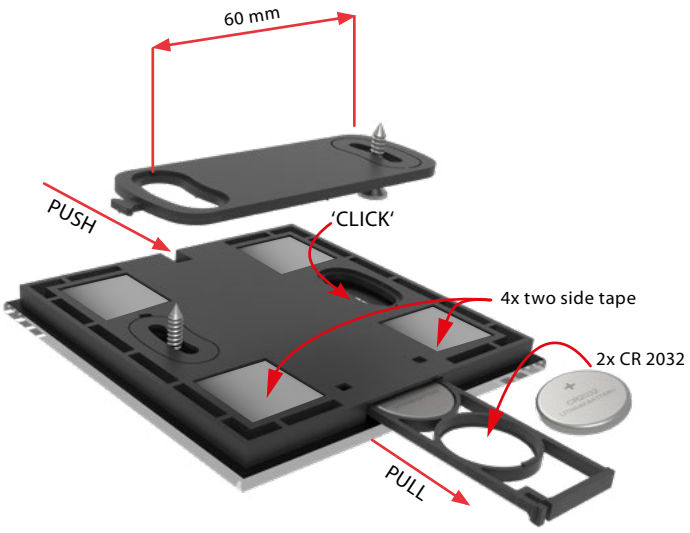
- The glass touch controller is a design RF (wireless) Control unit and is available in elegant black and white variants.
- Only 8 mm thick.
- **RFGB-20:** 2 capacitive buttons allows to control 2 devices.
- **RFGB-40:** 4 capacitive buttons allows to control 4 devices.
- When pressing the button, it 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 units of iNELS RF Control.
- The rear base allows to be attached to installation using screws, double-sided tape or keeping controller on the table.
- Battery power supply (2x 3 V CR 2032 batteries - included in the supply) with battery life of around 2 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 or protocol component RFIO2 that support this feature.
- Communication frequency with bidirectional protocol RFIO.

Device description



RFGB-40/W





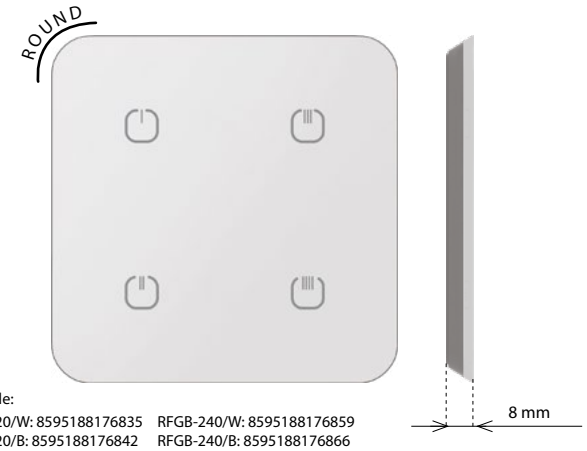
Variants

RFGB-20/W

RFGB-40/W

RFGB-20/B

RFGB-40/B



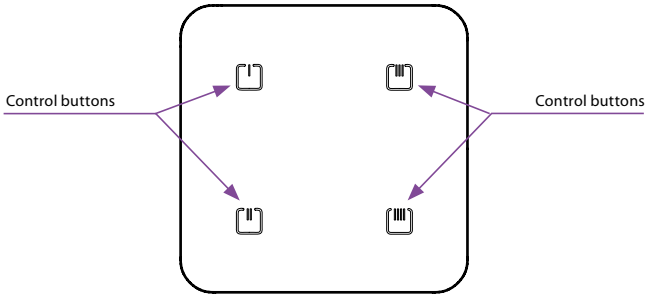
EAN code:

RFGB-220/W: 8595188176835 RFGB-240/W: 8595188176859
RFGB-220/B: 8595188176842 RFGB-240/B: 8595188176866

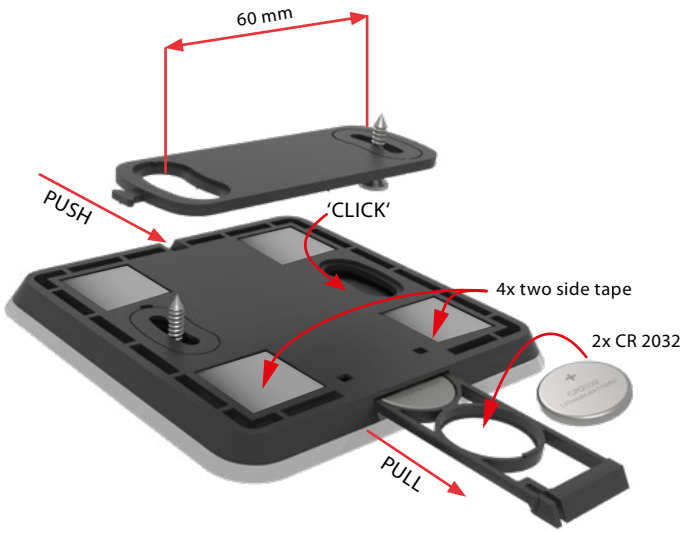
Technical parameters	RFGB-220	RFGB-240
Supply voltage:	2x 3 V CR 2032 batteries	
Battery life:	around 2 years based on frequency of use	
Transmission indication:	red LED	
Number of capacitive buttons:	2	4
Communication protocol:	RFIO	
Frequency:	866–922 MHz (for more information see p. 74)	
Signal transmission method:	unidirectionally addressed message	
Range:	in open space up to 200 m	
Other data		
Operating temperature:	-10 to +50 °C	
Operating position:	any	
Mounting:	glue/screws	
Protection:	IP20	
Contamination degree:	2	
Dimensions:	100 x 100 x 8 mm	
Weight:	108 g	108 g
Related standards:	EN 60669, EN 300 220, EN 301 489 R&TTE Directive, Order. No 426/2000 Coll. (Directive 1999/EC)	

- The glass touch controller is a design RF (wireless) Control unit and is available in elegant black and white variants.
- Only 8 mm thick.
- **RFGB-220:** 2 capacitive buttons allows to control 2 devices.
- **RFGB-240:** 4 capacitive buttons allows to control 4 devices.
- 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 units of iNELS RF Control.
- The rear base allows to be attached to installation using screws, double-sided tape or keeping controller on the table.
- Battery power supply (2x 3 V CR 2032 batteries - included in the supply) with battery life of around 2 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 or protocol component RFIO2 that support this feature.
- Communication frequency with bidirectional protocol RFIO.

Device description



RFGB-240/W



Variants

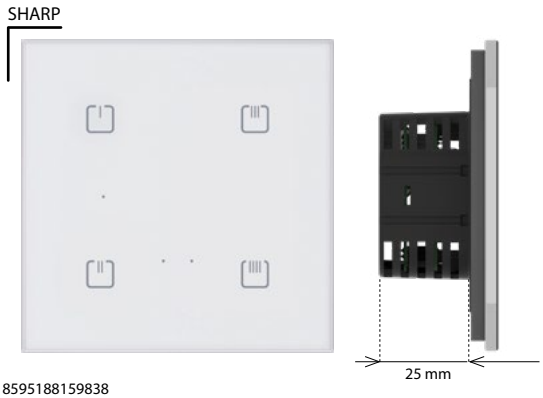
RFGB-220/W

RFGB-240/W

RFGB-220/B

RFGB-240/B

RFDW-71/W, RFDW-71/B | Glass touch controller with dimmer, SHARP



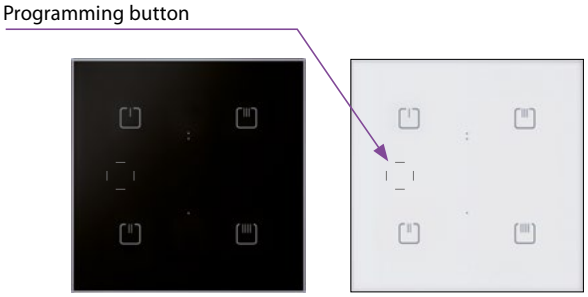
EAN code:
RFDW-71/W: 8595188159838
RFDW-71/B: 8595188141789

Technical parameters	RFDW-71/230V
Supply voltage:	230 V AC / 50-60 Hz
Apparent power:	1.1 VA
Dissipated power:	0.8 W
Supply voltage tolerance:	±10 %
Dimmed load:	R,L,C, LED, ESL
Output	
Contactless:	2 x MOSFET
Load capacity:*	max. 160 W
Control	
Wireless:	up to 25-channels (buttons)
Communication protocol:	RFIO2
Frequency:	866–922 MHz (for more information see p. 74)
Repeater function:	yes
Manual control:	4 touch keys, button PROG
Button backlight:	white LED with intensity change
Indications PROG:	red/green LED
Range:	in open space up to 160 m
Connection	
Terminals:	0.5 - 1 mm²
Other data	
Operating temperature:	-10 to +35 °C
Storing temperature:	-30 to +70 °C
Protection degree:	IP20
Overvoltage category:	II.
Pollution degree:	2
Operation position:	any
Installation:	into installation box
Dimensions:	94 x 94 x 36 mm
Weight:	155 g

* See page 73 for the load chart for each light source.

- The glass design controller with dimmer and touch buttons is used to control light sources:
  R – classic lamps (resistive load)
  L – halogen lamps with wound transformer (inductive load)
  C – halogen lamps with electronic transformer (capacity load)
  ESL – dimmable energy-efficient fluorescent lamps
  LED – LED light sources (230 V) equipped with LED.
- The touch buttons on the circuit breaker allow you to directly control the integrated dimmer as well as other components of the installation.
- The backlight intensity (white LED) of the buttons is automatically adjusted depending on the ambient lighting.
- They can be combined with detectors, controllers, iNELS RF Control or system components.
- 7 light functions – smooth increase or decrease with time setting 2 s – 30 min. Function description can be found on page 73.
- 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 25-channels.
- The programming button on the controller also serves as a manual output control.
- Possibility to set the memory status in case of power failure.
- Range up to 160 m (in open space), if the signal is insufficient between the controller and unit, use the signal repeater RFRP-20 or protocol component RFIO2 that support this feature.
- Communication frequency with bidirectional protocol RFIO2.

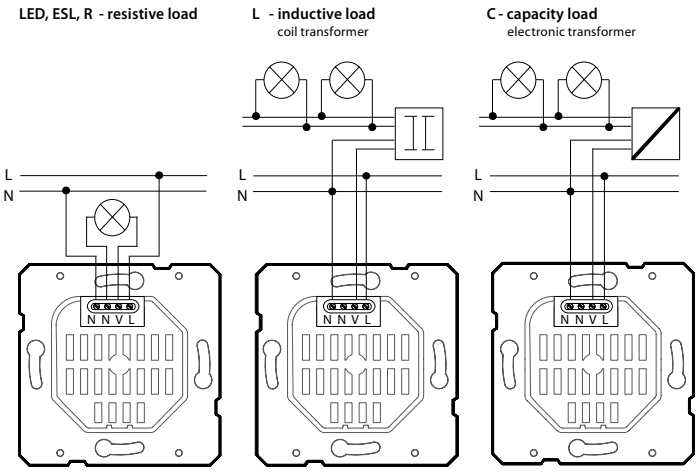
Colour variants

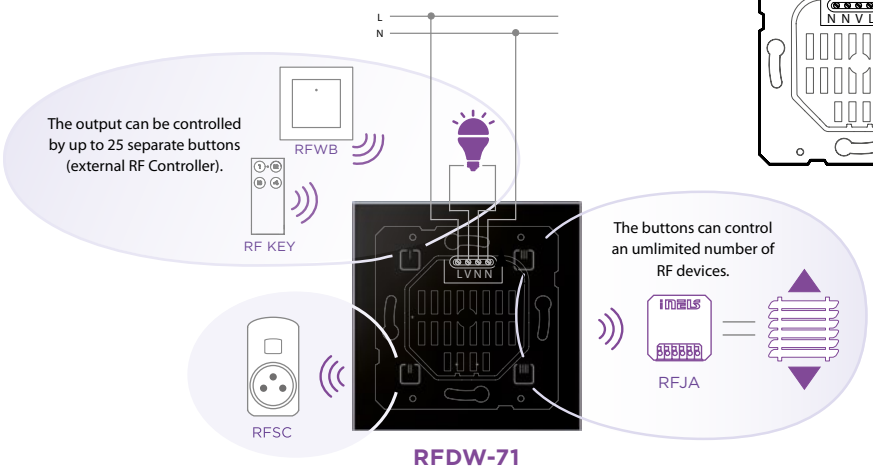


RFDW-71/B
(Black glass, sharp edges)

RFDW-71/W
(White glass, sharp edges)

Connection





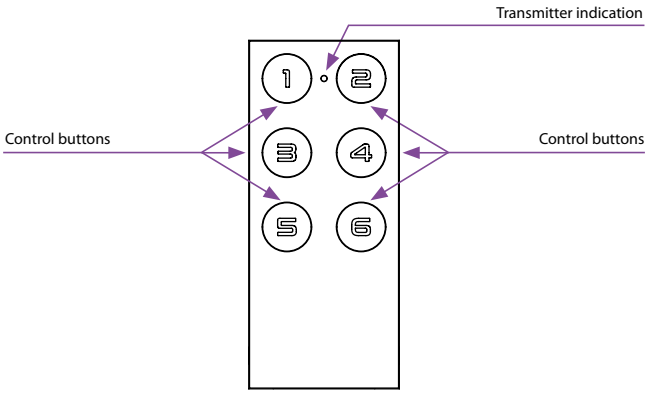
EAN code:

RF KEY-40/W: 8595188180740 RF KEY-60/W: 8595188180764
RF KEY-40/B: 8595188180757 RF KEY-60/B: 8595188180771

- Key fob – sized remote control, available in black and white.
- When pressing the button, it sends a set signal (ON/OFF, dimming, time switching OFF/ON, blinds up/down).
- **RF KEY-40:** four buttons enable control of four units independently.
- **RF KEY-60:** six buttons enable control of four units independently.
- Battery power supply (3 V CR 2032 battery - included in the supply) with battery life of around 5 years based on frequency of use.

Technical parameters	RF KEY-40	RF KEY-60
Supply voltage:	3 V CR 2032 battery	
Battery life:	around 5 years based on frequency of use	
Transmission indication:	red LED	
Number of buttons:	4	6
Communication protocol:	RFIO2	
Transmitter frequency:	866–922 MHz (for more information see p. 74)	
Signal transmission method:	unidirectionally addressed message	
Range:	in open space up to 200 m	
Other data		
Operating temperature:	-10 to +50 °C	
Operating position:	any	
Colour design:	white, black	
Protection:	IP20	
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



Variants

RF KEY-40/W

RF KEY-60/W

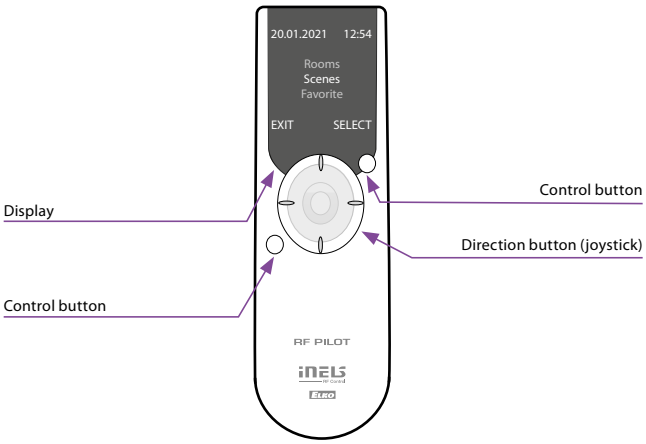
RF KEY-40/B

RF KEY-60/B

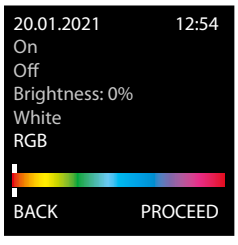
- The Remote RF controller with display is a central controller for switching electrical appliances and equipment, dimming lights, controlling blinds, etc.
- Designed in white and anthracite with colour OLED display.
- 4 directional joystick + 2 buttons for intuitive operation.
- Option of setting light scenes, where with a single press, you can control up to 40 units at once.
- Display of room temperature, battery status, date and time directly on display.
- The Favorites mode lets you preset the most frequently used devices on the home screen.
- 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.
- Battery power (2x 1.5 V AAA batteries - 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 or protocol component RFIO2 that support this feature.
- Communication frequency with bidirectional protocol RFIO.

Technical parameters	RF Pilot/W	RF Pilot/A
Display		
Type:	colour 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	
Power supply		
Power supply:	2 x 1.5 V AAA batteries/R03	
Battery life:	approx. 3 years, according to the frequency of use and battery type	
Control		
Range:	in open space up to 200 m	
Communication protocol:	RFIO	
Frequency:	866–922 MHz (for more information see p. 74)	
Other data		
Operating temperature:	0 to +55 °C	
Storage temperature:	-20 to +70 °C	
Colour 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

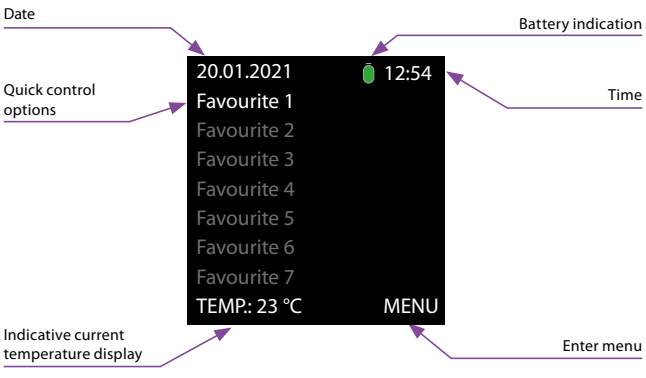


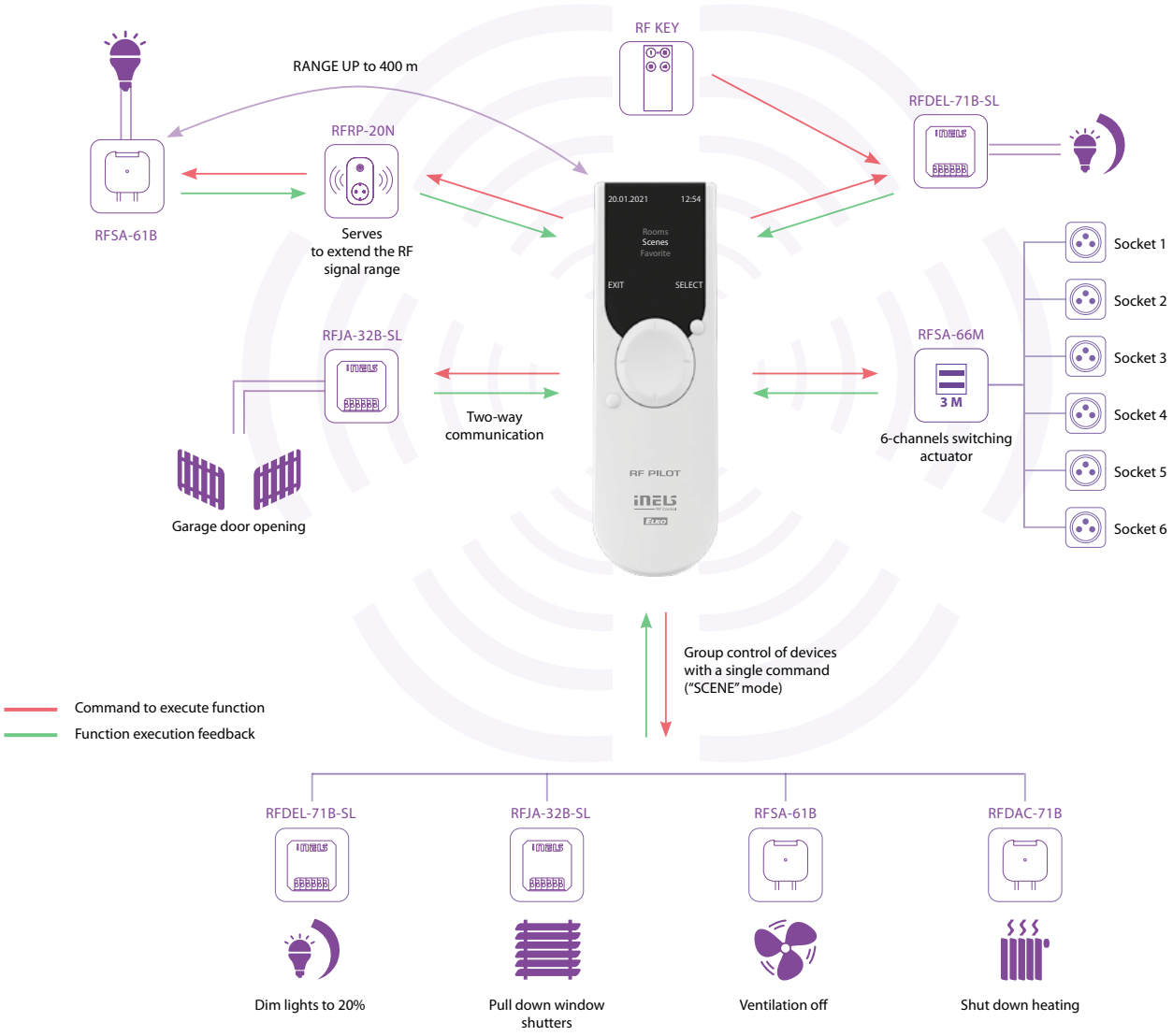
RF Pilot



Display description

Colour LED display





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

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)

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 230 V or 24 V DC (shutters between windows)

DIMMING

- the regulation of light intensity (light bulbs, LED strips, halogen lights with electrical or coil transformer, fluorescent tubes with dimmable ballast 1–10 V)
- 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

FAVOURITE

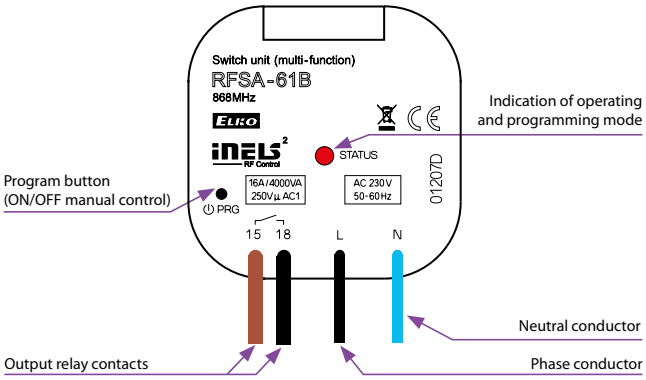
- serves to select the most frequently used devices
- on display activation, the "Favourite" menu pops up automatically to provide you with a quick access to controlling devices

EAN code:
RFSA-61B: 8595188136242

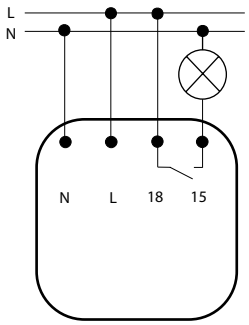
Technical parameters	RFSA-61B/230V
Supply voltage:	230 V AC
Supply voltage frequency:	50–60 Hz
Apparent input:	7 VA/cos φ= 0.1
Dissipated power:	0.7 W
Supply voltage tolerance:	+10 %; -15 %
Output	
Number of contacts:	1x switching ($AgSnO_2$)
Rated current:	16 A/AC1
Switching power:	4000 VA/AC1, 384 W/DC
Peak current:	30 A/<3 s
Switching voltage:	250 V AC1/24 V DC
Max. DC switching power:	500 mW
Mechanical service life:	3x 10^7
Electrical service life (AC1):	0.7x 10^5
Control	
Wireless:	up to 25-channels (buttons)
Communication protocol:	RFIO2
Frequency:	866–922 MHz (for more information see p. 74)
Repeater function:	yes
Manual control:	button PROG (ON/OFF)
Range:	in open space up to 200 m
Other data	
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):	2x 0.75 mm^2, 2x 2.5 mm^2
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)

- The switching unit with 1 output channel 16 A is used to control appliances, lights (easy to integrate it to control garage doors or gates).
- They can be combined with detectors, controllers, iNELS RF Control or system components.
- **RFSA-61B:** multifunction design – button, impulse relay and time function of delayed ON or OFF with time setting of 2 s – 60 min. Function description can be found on page 72.
- The switching unit may be controlled by up to 25-channels.
- The programming button on the unit is also used for manual control of the output.
- Memory status can be pre-set in the event of a power failure.
- Range up to 200 m (in open space), if the signal is insufficient between the controller and unit, use the signal repeater RFRP-20 or protocol component RFIO2 that support this feature.
- Communication frequency with bidirectional protocol RFIO2.
- The BOX design lets you mount it right in an installation box, a ceiling or controlled appliance cover.

Device description



Connection



Single-function 1 output | **Multi-function 1 output** | **Multi-function 2 outputs**

EAN code:

RFSAI-11B-SL: 8595188183758 | RFSAI-61B-SL: 8595188182041 | RFSAI-62B-SL: 8595188182010

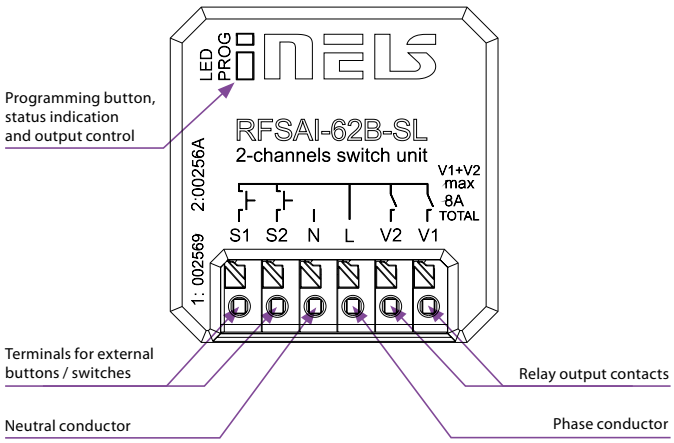
Technical parameters	RFSAI-11B-SL	RFSAI-61B-SL	RFSAI-62B-SL
Supply voltage:	230 V AC		
Supply voltage frequency:	50-60 Hz		
Apparent input:	7 VA / cos φ = 0.1		
Dissipated power:	0.7 W		
Supply voltage tolerance:	+10 %; -15 %		
Output			
Number of contacts:	1x switching		2xswitching
Rated current:	8 A / AC1		
Switching power:	2000 VA / AC1		
Peak current:	10 A / <3 s		
Switching voltage:	250 V AC1		
Mechanical service life:	$1x10^7$		
Electrical service life (AC1):	$1x10^5$		
Control			
Wireless:	25-channels		2 x 12-channels
Number of functions:	1	6	6
Communication protocol:	RFIO2		
Frequency:	866–922 MHz (for more information see p. 74)		
Repeater function:	yes		
Manual control:	button PROG (ON/OFF)		
External button / switch:	yes		
Range:	in open space up to 200 m		
Other data			
Operating temperature:	-15 to + 50 °C		
Operating position:	any		
Mounting:	free at lead-in wires		
Protection:	IP40		
Overvoltage category:	III.		
Contamination degree:	2		
Connection:	screwless terminals		
Connecting conductor:	0.2-1.5 mm^2 solid/flexible		
Dimensions:	43 x 44 x 22 mm		
Weight:	31g		45 g
Related standards:	EN 60730, EN 63044, EN 300 220, EN 301 489		

Function description

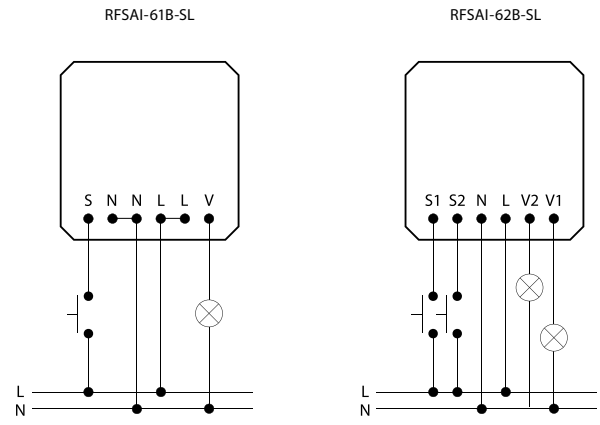
1. Button, impulse relay and time functions of delayed start or return with time setting 2 s-60 min. Any function can be assigned to each output relay.
2. The programming button on the element also serves as a manual input control.

- The switching component with one/two output relays is used to control appliances and lights. Switches/buttons connected to the wiring can be used for control.
- They can be combined with Detectors, Controllers or iNELS RF Control System Components.
- The BOX version offers installation directly in the installation box, ceiling or cover of the controlled appliance. Easy installation thanks to screwless terminals.
- It allows the connection of switched loads with a total sum of 8 A (2,000 W).
- Functions: for RFSAI 61B-SL and RFSAI 62B-SL - pushbutton, impulse relay and time functions of delayed start or return with time setting 2 s-60 min. Any function can be assigned to each output relay. For RFSAI-11B-SL, the button has a fixed function - ON / OFF.
- The external button is assigned in the same way as the wireless one.
- Each of the outputs can be controlled by up to 12/12 channels (1-channel represents one button on the controller). Up to 25 channels for RFSAI-61B-SL and RFSAI-11B-SL.
- The programming button on the component also serves as a manual output control.
- Possibility to set the output status memory in case of failure and subsequent power recovery.
- The elements of the repeater can be set for the components via the RFAF / USB service device, PC, application.
- Range up to 200 m (outdoors), in case of insufficient signal between the controller and the device, use the RFRP-20 signal repeater or component with the RFIO2 protocol that support this function.
- Communication with bidirectional RFIO2 protocol.
- The contact material of the $AgSnO_2$ relay enables switching of light ballasts.

Device description



Connection

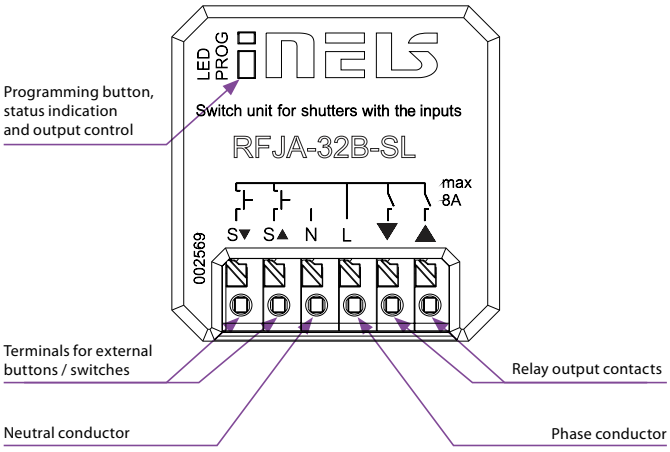


EAN code:
RFJA-32B-SL: 8595188182546

Technical parameters	RFSAI-32B-SL
Supply voltage:	230 V AC
Supply voltage frequency:	50-60 Hz
Apparent input:	7 VA / cos φ = 0.1
Dissipated power:	0.7 W
Supply voltage tolerance:	+10 %; -15 %
Output	
Number of contacts:	2x switching
Rated current:	8 A / AC1
Switching power:	2000 VA / AC1
Peak current:	10 A / <3 s
Switching voltage:	250 V AC1
Mechanical service life:	$1x10^7$
Electrical service life (AC1):	$1x10^5$
Control	
Wireless:	25-channels
Communication protocol:	RFIO2
Frequency:	866–922 MHz (for more information see p. 74)
Repeater function:	yes
Manual control:	PROG (ON/OFF) button
External button / switch:	max. 100 m cable
Range:	in open space up to 200 m
Other data	
Operating temperature:	-15 to + 50 °C
Operating position:	any
Mounting:	free at lead-in wires
Protection:	IP30
Overvoltage category:	III.
Contamination degree:	2
Connecting conductor	0.2 - 1.5 mm^2
cross-section (mm^2):	solid / flexible
Dimensions:	43 x 44 x 22 mm
Weight:	45 g
Related standards:	EN 60730, EN 63044, EN 300 220, EN 301 489

- The switching unit for shutters has 2 output channels used to control garage doors, gates, blinds, awnings…
- They can be combined with Controllers or iNELS RF Control System Components.
- The BOX version offers mounting directly in the installation box, ceiling or motor drive cover.
- RFJA-32B / 230V: connection of switched load 2x 8 A (2x 2000 W), with the possibility of connecting existing wire buttons.
- Short presses of the controller allow tilting of the slats, long pressing of the raise / lower moves the blinds to the end position.
- Each component can be controlled by up to 25 channels (1 channel represents one assigned controller).
- The programming button on the device also serves as a manual output control.
- For components, the repeater function can be set via the RFAF / USB service device.
- Range up to 200 m (outdoors), in case of insufficient signal between the controller and the device, use the RFRP-20 signal repeater or components with the RFIO2 protocol that support this function.
- Communication frequency with bidirectional protocol iNELS RF Control2 (RFIO2).
- The contact material of the $AgSnO_2$.

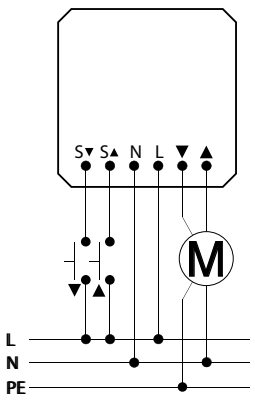
Device description



Function description

1. As long as the button on the remote control is pressed for <2 s, the blinds move upwards (▲) or downwards (▼).
2. When the button is pressed for> 2 s, the blinds move upwards (▲) or downwards (▼) to the end position.

Connection



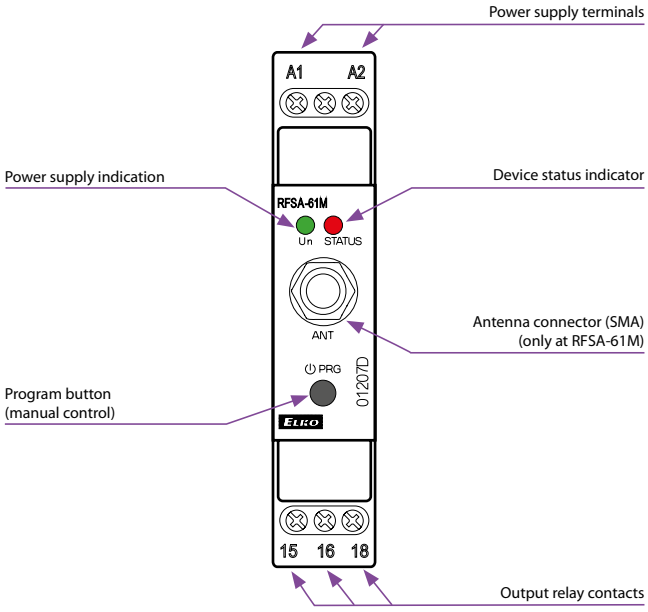
EAN code:
RFSA-61MI: 8595188181549
RFSA-61M: 8595188137003

Technical parameters	RFSA-61MI/230V	RFSA-61M/230V
Supply voltage:	110–230 V AC	
Supply voltage frequency:	50–60 Hz	
Apparent input:	2.7 VA cos φ= 0.6	
Dissipated power:	1.62 W	
Supply voltage tolerance:	+10%/-25 %	
Output		
Number of contacts:	1x changeover	
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	
Contact material:	$AgSnO_2$	
Mechanical service life:	$3x10^7$	
Electrical service life (AC1):	$0.7x10^5$	
Control		
Wireless:	up to 25-channels (buttons)	
Communication protocol:	RFIO2	
Frequency:	866–922 MHz (for more information see p. 74)	
Repeater function:	yes	
Manual control:	PROG (ON/OFF) button	
Range:	in open space up to 200 m	
RF Antenna:	integrated	external *
Other data		
Operating temperature:	-15 °C to +50 °C	
Operating position:	any	
Mounting:	DIN rail EN 60715	
Protection:	IP20 from the front panel	
Overvoltage category:	III.	
Contamination degree:	2	
Connecting conductor cross-section (mm^2):	max. 1x 2.5, max. 2x 1.5/ with a hollow max. 1x 2.5	
Dimensions:	90 x 17.6 x 64 mm	
Weight:	69 g	75 g
Related standards:	EN 60669, EN 300 220, EN 301 489 R&TTE Directive, Order. No 426/2000 Coll. (Directive 1999/EC)	

* AN-I antenna (with SMA connector) is part of packaging.
Other antennas with cable are available on the page 69.
Max tightening torque for antenna´s connector is 0.56 Nm.

- **RFSA-61M:** the switching unit with 1 output channel 16 A is used for controlling appliances, sockets or lights.
  - the 1-MODULE design of the unit into a switchboard.
  - the switching unit may be controlled by up to 25-channels.
  - 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, see accessories on page 69.
- **RFSA-61MI:** same design and function as RFSA-61M, but with integrated antenna. It is suitable for placement in cabinets with plastic doors.
- 6 function: button, impulse relay and time function of delayed start or return with time setting range of 2 s – 60 min. Function description can be found on page 72.
- The programming button on the unit is also used for manual control of the output.
- Memory status can be pre-set in the event of a power failure.

Device description



Connection

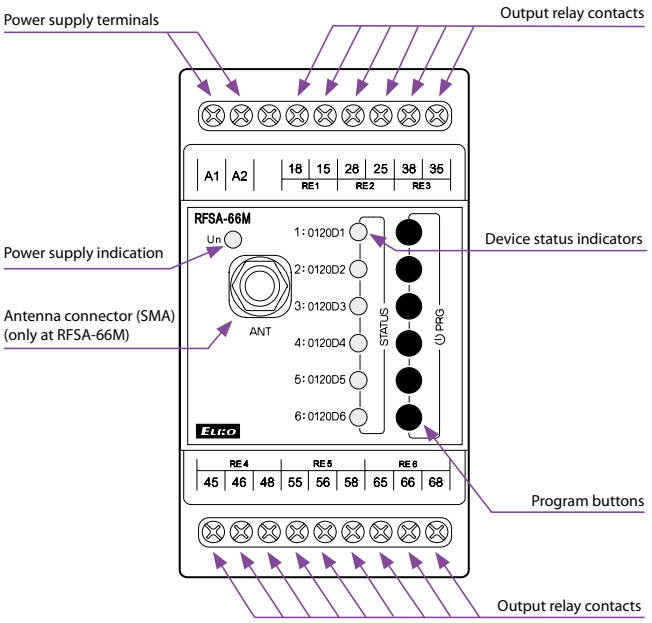
EAN code:
RFSA-66MI/230V: 8595188181556 RFSA-66M/230V: 8595188137003
RFSA-66MI/24V: 8595188181563 RFSA-66M/24V: 8595188152914

Technical parameters	RFSA-66MI/ 230V	RFSA-66MI/ 24V	RFSA-66M/ 230V	RFSA-66M/ 24V
Supply voltage:	110–230 V AC	12–24 V AC/DC	110–230 V AC	12–24 V AC/DC
SELV:	no	yes	no	yes
Supply voltage frequency:	AC 50–60 Hz			
Apparent input:	min. 2 VA/ max. 5 VA	-	min. 2 VA/ max. 5 VA	-
Dissipated power:	min. 0.5W/ max. 2.5W	max. 1.8 W	min. 0.5W/ max. 2.5W	max. 1.8 W
Supply voltage tolerance:	+10%/-25 %			
Output				
Number of contacts:	3x changeover, 3x switching			
Rated current:	8 A/AC1			
Switching power:	2000 VA/AC1			
Peak current:	10 A/<3 s			
Switching voltage:	250 V AC1			
Contact material:	$AgSnO_2$			
Mechanical service life:	$1x10^7$			
Electrical service life (AC1):	$1x10^5$			
Control				
Wireless:	up to 25-channels (buttons)			
Communication protocol:	RFIO2			
Frequency:	866–922 MHz (for more information see p. 74)			
Repeater function:	yes			
Manual control:	PROG (ON/OFF) button			
Range:	in open space up to 200 m			
RF Antenna:	integrated	external *	integrated	external *
Other data				
Operating temperature:	-15 °C to +50 °C			
Operating position:	any			
Mounting:	DIN rail EN 60715			
Protection:	IP20 from the front panel			
Overvoltage category:	III.			
Contamination degree:	2			
Connecting conductor cross-section (mm^2):	max. 1x 2.5, max. 2x 1.5/ with a hollow max. 1x 2.5			
Dimensions:	90 x 52 x 65 mm			
Weight:	171 g		179 g	
Related standards:	EN 60669, EN 300 220, EN 301 489 R&TTE Directive, Order. No 426/2000 Coll. (Directive 1999/EC)			

* AN-I antenna (with SMA connector) is part of packaging.
Other antennas with cable are available on the page 69.
Max tightening torque for antenna´s connector is 0.56 Nm.

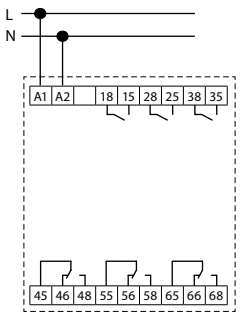
- **RFSA-66M:** the switching unit with 6 output channels 8 A is used for independent control of up to 6 appliances, sockets or lights.
  - the 3-MODULE design of the unit into a switchboard.
  - each of the channels may be controlled by up to 25-channels.
  - the package includes an internal antenna AN-I, in case of locating the element in a metal switchboard, you can use the external antenna AN-E for better signal reception, see accessories on page 66.
- **RFSA-66MI:** same design and function as RFSA-66M, but with integrated antenna. It is suitable for placement in cabinets with plastic doors.
- 6 function: button, impulse relay and time function of delayed start or return with time setting range of 2 s – 60 min. Function description can be found on page 72.
- The programming button on the unit is also used for manual control of the output.
- Memory status can be pre-set in the event of a power failure.

Device description

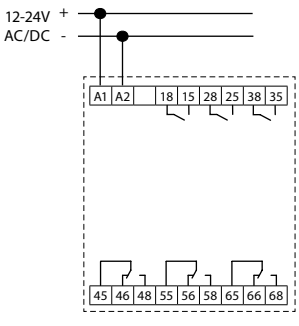


Connection

RFSA-66MI/230V
RFSA-66M/230V



RFSA-66MI/24V
RFSA-66M/24V

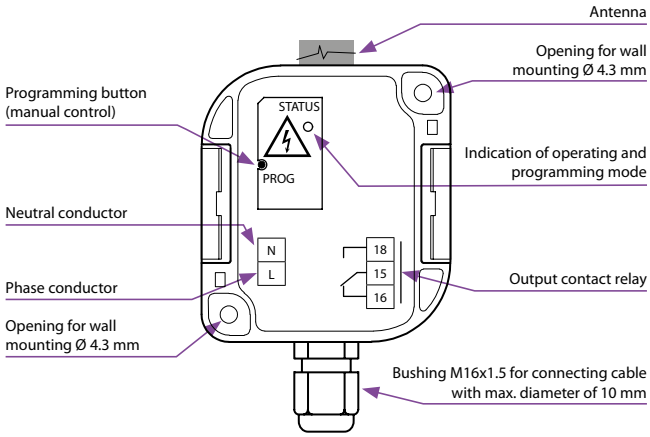


EAN code:
RFUS-61/230V: 8595188145268
RFUS-61/120V: 8595188152570

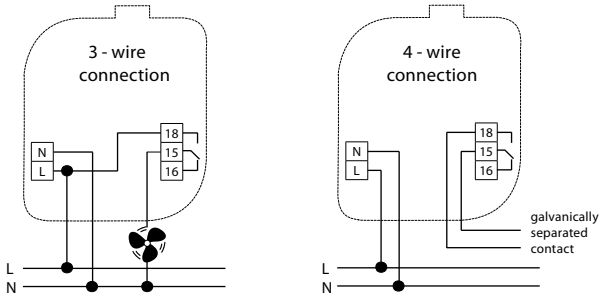
Technical parameters	RFUS-61/230V
Supply voltage:	230 V AC
Supply voltage frequency:	50–60 Hz
Apparent power:	5 VA/cos φ= 0.1
Dissipated power:	0.6 W
Supply voltage tolerance:	+10 %; -15 %
Output	
Rated current:	1x switching ($AgSnO_2$)
Number of contacts:	12 A/AC1
Switching power:	3000 VA/AC1, 384 W/DC
Peak current:	30 A/<3 s
Switching voltage:	250 V AC1/24 V DC
Min. switching power DC:	500 mW
Mechanical service life:	$3x10^7$
Electrical service life (AC1):	$0.7x10^5$
Control	
Wireless:	up to 25-channels (buttons)
Communication protocol:	RFIO2
Frequency:	866–922 MHz (for more information see p. 74)
Repeater function:	yes
Manual control:	PROG (ON/OFF) button
Range:	in open space up to 200 m
Other data	
Operating temperature:	-15 to +50 °C
Operating position:	any
Mounting:	screws
Protection:	IP65
Overvoltage category:	III.
Contamination degree:	2
Cross-section of connecting wires (mm^2):	max. 1x 2.5, max. 2x 1.5/ with a hollow max. 1x 2.5
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)

- The switching unit with 1x 12 A output channel is used for controlling appliances, sockets or lights.
- They can be combined with detectors, controllers, iNELS RF Control or system components.
- Multi-function design – button, impulse relay and time function of delayed ON or OFF with time setting of 2 s – 60 min. Function description can be found on page 72.
- The switching unit may be controlled by up to 25-channels.
- 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 RFRP20 or protocol component RFIO2 that support this feature.
- Communication frequency with bidirectional protocol RFIO2.
- The increased IP 65 protection is suited to mounting on the wall or in harsh environments such as the cellar, garage or bathrooms.

Device description



Connection



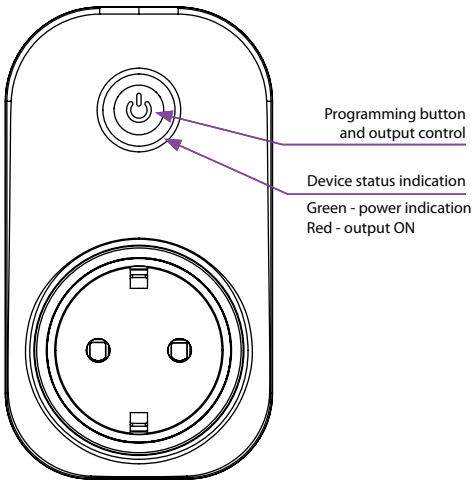
EAN code:
RFSC-61N/Schuko: 8595188182508 RFSC-61N/British: 8595188182522
RFSC-61N/French: 8595188182515

Technical parameters	RFSC-61N/230V
Supply voltage:	230 V AC
Supply voltage frequency:	50-60 Hz
Apparent power:	7 VA / cos φ = 0.1
Dissipated power:	0.7 W
Supply voltage tolerance:	+10 %; -15 %
Output	
Number of contacts:	1x switching
Rated current:	16 A / AC1
Switching power:	4000 VA / AC1
Peak current:	30 A / <3 s
Switching voltage:	250 V AC1
Min. switching power DC:	500 mW
Mechanical service life:	$10x10^6$
Electrical service life (AC1):	$0.7x10^5$
Control	
Wireless:	up to 32-channels (buttons)
Communication protocol:	bidirectional RFIO2
Frequency:	866–922 MHz (for more information see p. 74)
Repeater function:	no
Manual control:	button PROG (ON/OFF)
Range:	in open space up to 200 m
Other data	
Operating temperature:	-15 to + 50 °C
Working position:	any
Mounting:	plug into a socket
Protection:	IP30
Overvoltage category:	III.
Contamination degree:	2
Dimensions:	63 x 110 x 74 mm
Weight:	129 g
Related standards:	EN 60730, EN 63044, EN 300 220, EN 301 489

- The switched socket is used to control fans, lamps, direct heaters and appliances, which are connected by a power cord with a plug up to 16 A.
- They can be combined with detectors, controllers or iNELS RF Control system components.
- Multifunctional design - button, impulse relay and time functions of delayed start or return with time setting 2 s - 60 min. (see page 72)
- The switched socket can be controlled by up to 32 channels.
- The programming button on the socket also serves as a manual output control with indication.
- Possibility to set the output status memory in case of failure and subsequent power recovery.
- Range up to 200 m (outdoors) (in case of insufficient signal between the controller and the device, use the RFRP-20 signal repeater) or components with the RFIO2 protocol that support this function.
- Communication with bidirectional RFIO2 protocol.
- Thanks to the socket design, installation is simple and straightforward by plugging it into an existing socket.
- The contact material of the AgSnO2 relay enables switching of light ballasts.

Produced in 3 designs of sockets/plugs:

Device description

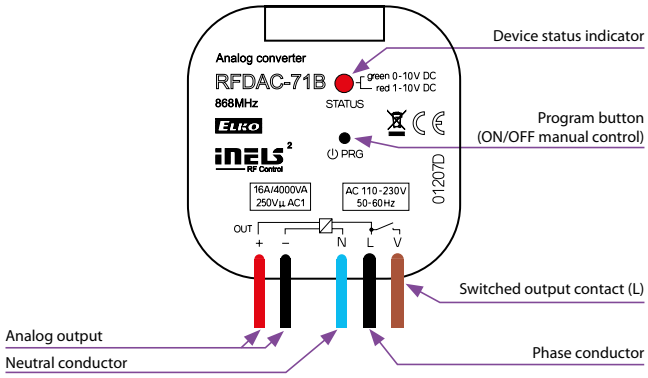


EAN code:
RFDAC-71B: 8595188142809

Technical parameters	RFDAC-71B
Supply voltage:	110–230 V AC
Supply voltage frequency:	50–60 Hz
Apparent input:	3 VA
Dissipated power:	1.2 W
Supply voltage tolerance:	+10/-15 %
Control	
Potential-free analog output/max. current:	0(1)–10 V/10 mA
Rated current:	1x $AgSnO_2$, switches the phase conductor
Rated current:	16 A/AC1
Switching power:	4000 VA/AC1
Switching voltage:	250 V AC1
Mechanical service life:	$3x10^7$
Electrical service life:	$0.7x10^5$
Indication:	red LED/green LED
Output selection:	0(1)–10V/PROG button
Control	
Wireless:	up to 25-channels (buttons)
Communication protocol:	RFIO2
Frequency:	866–922 MHz (for more information see p. 74)
Repeater function:	yes
Manual control:	button PROG (ON/OFF)
Range:	in open space up to 200 m
Minimal control distance:	20 mm
Other data	
Operating temperature:	-15 to + 50 °C
Operating position:	any
Mounting:	plug into a socket
Protection:	IP30
Overvoltage category:	III.
Contamination degree:	2
Terminals (CY wire, cross-section):	3 x 0.75 mm^2, 2 x 2.5 mm^2
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)

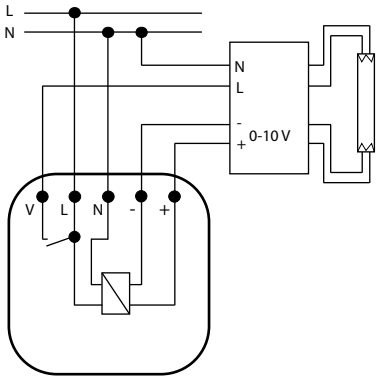
- The device with analog output 0(1)–10 V is used to control devices, luminaires, thermal actuators and thermal heads – which are equipped with such an input.
- They can be combined with detectors, controllers, iNELS RF Control or system components.
- Potential free analog output 0(1)–10 V, contact relay 16 A.
- 6 light functions – smooth increase or decrease with time setting 2 s–30 min. Function description can be found on page 73.
- The analog controller may be controlled by up to 25-channels.
- The programming button on the controller is also used for manual control of the output.
- Memory status can be pre-set in the event of a power failure.
- Range up to 200 m (in open space), if the signal is insufficient between the controller and unit, use the signal repeater RFRP-20 or protocol component RFIO2 that support this feature.
- Communication frequency with bidirectional protocol RFIO2.
- The BOX design lets you mount it right in an installation box, a ceiling or light cover.

Device description

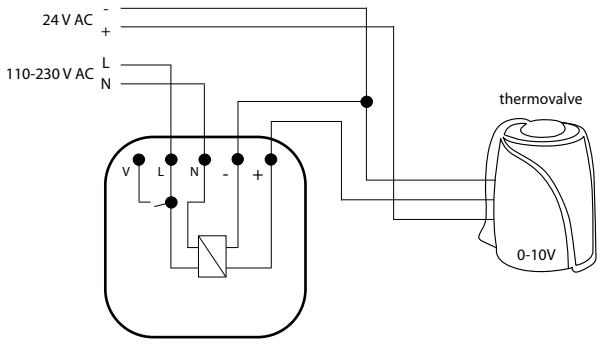


Connection

Connection example: dimming of fluorescent tubes with dimmable ballast



Connection example: with thermo valve

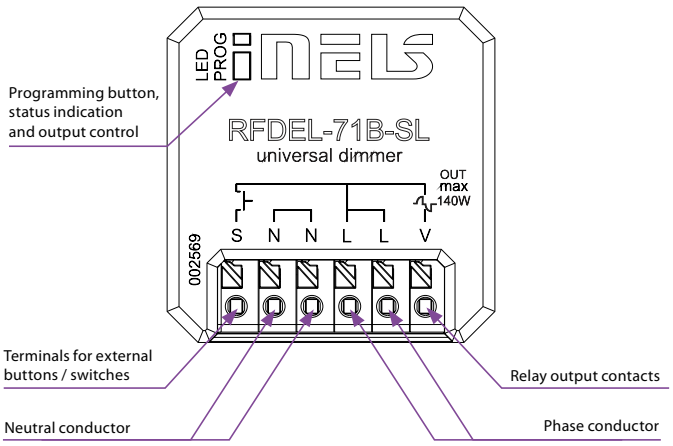


EAN code:
RFDEL-71B-SL: 8595188183611

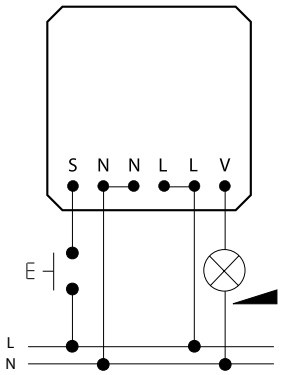
Technical parameters	RFDEL-71B-SL/230V
Supply voltage:	230 V AC / 50 Hz
Supply voltage frequency:	50-60 Hz
Apparent power:	5 VA / cos φ = 0.1
Dissipated power:	0.5 W
Supply voltage tolerance:	+10/ -15 %
Connection:	4-wire, with "NEUTRAL"
Output	
Dimmed load:	R, L, C, LED, ESL
Contactless:	2 x MOSFET
Load capacity:*	max. 300 W*
Control	
Wireless:	up to 25-channels (buttons)
Communication protocol:	RFIO2
Frequency:	866-922 MHz (for more information see p. 74)
Repeater function:	yes
Range:	up to 200 m
Manual control:	tlačítko PROG (ON/OFF)
External button / switch:	yes
Other data	
Operating temperature:	-15 to + 50 °C
Working position:	any
Mounting:	free at lead-in wires
Protection:	IP40
Overvoltage category:	III.
Contamination degree:	2
Connection:	screwless terminals
Connecting conductor:	0.2-1.5 mm² solid/flexible
Dimensions:	43 x 44 x 22 mm
Weight:	30 g
Related standards:	EN 60730, EN 63044, EN 300 220, EN 301 489

- Universal built-in dimmer is used to regulate light sources:
  R – classic light bulbs,
  L – halogen bulbs with wound transformer,
  C – halogen bulbs with electronic transformer,
  ESL – dimmable energy saving lamps,
  LED – LED light sources (230 V).
- They can be combined with Detectors, Controllers or iNELS RF Control System Elements.
- 6 light functions - smooth start or stop with time setting 2 s-30 min.
- Min. brightness eliminates flickering LED and ESL light sources.
- The universal dimmer can be controlled by up to 25 channels
- Control input "S" for connecting an existing wired button.
- The programming button on the device also serves as a manual output control.
- Possibility to set memory status in case of power failure.
- The repeater function of the components can be set via the RFAF / USB service device.
- Range up to 200 m (outdoors), in case of insufficient signal between the controller and the component, use the RFRP-20 signal repeater or components with the RFIO2 protocol that support this function.
- The BOX version offers mounting directly in the installation box, ceiling or luminaire cover.
- Communication with bidirectional protocol iNELS RF Control² (RFIO2).

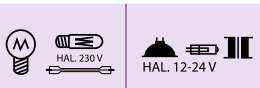
Device description



Connection



Types of connectable loads



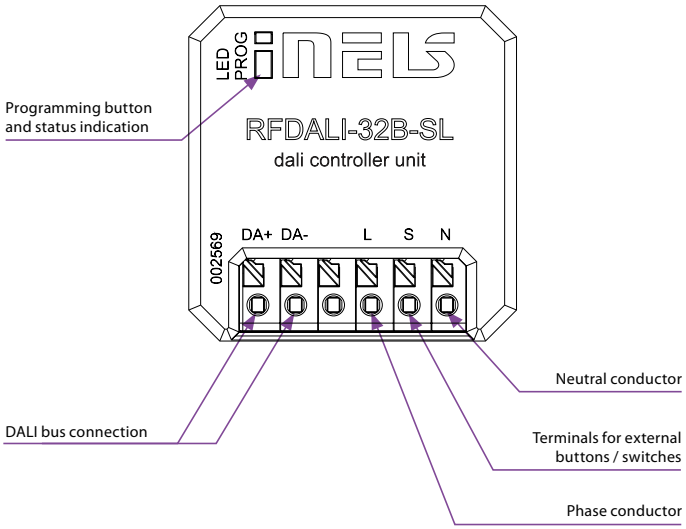
R	L	C	LED	ESL
resistive	inductive	capacitive	light	saving

EAN code:
RFDALI-32B-SL: 8595188184342

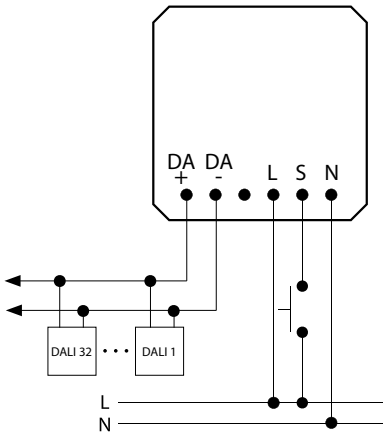
Technical parameters	RFDALI-32B-SL
Supply voltage:	100-230 V AC / 50 Hz
Supply voltage frequency:	50/60 Hz
Apparent power:	5 VA / cos φ = 0.1
Dissipated power:	3 W
Supply voltage tolerance:	+10/ -15 %
Connection:	4-wire, L, N, DA+,DA-
Output DALI	
Number of units:	max. 32
Power supply:	16V/100 mA
Control	
Wireless:	128-channels
KCommunication protocol:	RFIO2
Frequency:	866-922 MHz (for more information see p. 74)
Repeater function:	yes
Range:	up to 200 m
Manual control:	button PROG (ON/OFF)
External button / switch:	yes
Configuration:	Application via Bluetooth 5.0
Other data	
Operating temperature:	-15 to + 50 °C
Working position:	any
Mounting:	free at lead-in wires
Protection:	IP40
Overvoltage category:	III.
Contamination degree:	2
Connection:	screwless terminals
Connecting conductor:	0.2-1.5 mm² solid/flexible
Dimensions:	43 x 44 x 22 mm
Weight:	52g
Related standards:	EN 60730, EN 63044, EN 300 220, EN 301 489

- The RFDALI-32B-SL converter is designed to control devices with a DALI interface, such as dimmers, electronic ballasts, LED converters and more.
- The control is performed by components from the iNELS RF Control system, detectors, controllers or system devices.
- Assignment and configuration of DALI devices is performed via the application via the Bluetooth interface.
- The DALI bus is powered by the controller.
- Control input "S" for connection and control of wired buttons.
- The programming button on the transmitter also serves as a manual output control.
- Possibility to set memory status in case of power failure.
- The repeater function of the components can be set via the RFAF / USB service device.
- Range up to 200 m (outdoors), in case of insufficient signal between the controller and the device, use the RFRP-20 signal repeater or components with the RFIO2 protocol that support this function.
- The BOX version offers mounting directly in the installation box, ceiling or luminaire cover, screwless terminals for connection.
- • Communication with bidirectional protocol iNELS RF Control² (RFIO2).

Device description



Connection



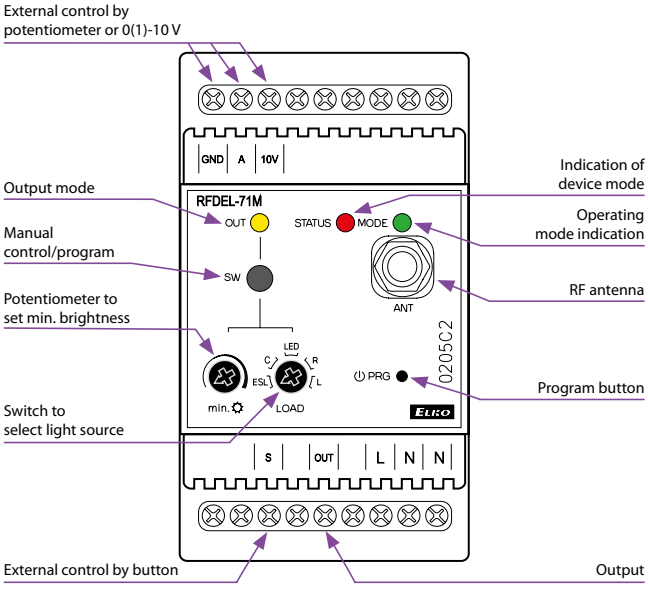
EAN code:
RFDEL-71M: 8595188148979

Technical parameters	RFDEL-71M/230V	RFDEL-71M/120V
Supply voltage:	230 V AC	120 V AC
Supply voltage frequency:	50 Hz	60 Hz
Apparent power:	2.5 VA	1.1 VA
Dissipated power:	0.8 W	0.6 W
Supply voltage tolerance:	+10/-15 %	
Output		
Dimmed load:	R,L,C, LED, ESL	
Contactless:	2 x MOSFET	
Load capacity:*	max. 600 W	max. 300 W*
Control		
Wireless:	up to 32 channels (buttons)	
Communication protocol:	RFIO2	
Frequency:	866–922 MHz (for more information see p. 74)	
Repeater function:	yes	
Range:	in open space up to 160 m	
Manual control:	SW (ON/OFF) button	
External button:	max. 50 m cable	
Glow lamps connection:	no	
Analog control:	potentiometer or 0 (1)–10 V	
RF Antenna:	AN-I included (SMA connector**)	
Other data		
Operating temperature:	-20 to +35 °C	
Storage temperature:	-30 to +70 °C	
Operating position:	vertical	
Mounting:	DIN rail EN 60715	
Protection:	IP20 under normal conditions	
Overvoltage category:	II.	
Contamination degree:	2	
Cross-section of connecting wires:	max. 1x 2.5, max. 2x 1.5/with a hollow max. 1x 2.5	
Dimensions:	90 x 52 x 65 mm	
Weight:	125 g	
Related standards:	EN 607 30-1 ed.2	

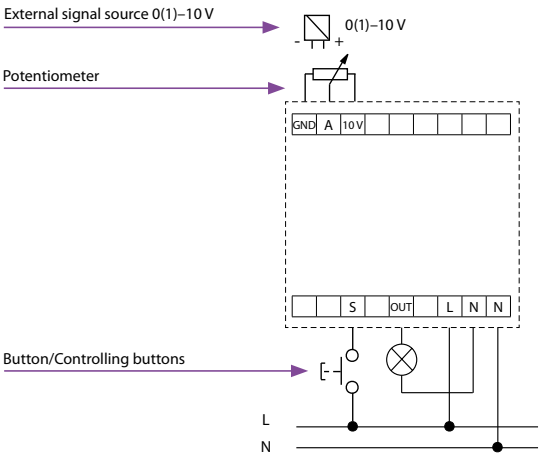
* See page 73 for the load chart for each light source.
** Max. Tightening Torque for antenna connector is 0.56 Nm.

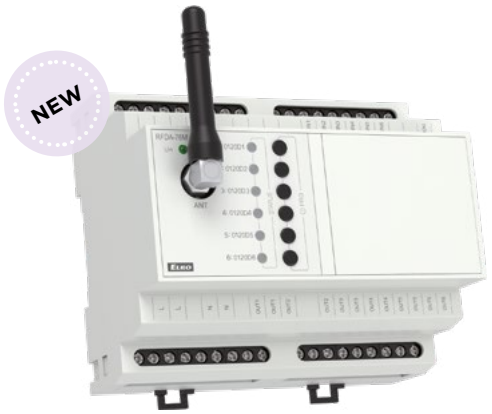
- The universal modular dimmer is used to regulate light sources:
  R – classic lamps (resistive load)
  L – halogen lamps with wound transformer (inductive load)
  C – halogen lamps with electronic transformer (capacity load)
  ESL – dimmable energy-efficient fluorescent lamps
  LED – LED light sources equiped with LED.
- Control can be performed by:
  a) detectors, Controllers and System units iNELS RF Control
  b) by control signal 0(1)–10 V
  c) potentiometer
  d) existing button in the installation.
- 6 light functions – smooth increase or decrease with time setting 2 s–30 min. Function description can be found on page 73.
- 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.
- 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, see accessories on page 69.
- Memory status can be pre-set in the event of a power failure.
- Range up to 160 m (in open space), if the signal is insufficient between the controller and unit, use the signal repeater RFRP-20 or protocol component RFIO2 that support this feature.
- Communication frequency with bidirectional protocol RFIO2.
- The unit's 3-MODULE design with switchboard mounting.

Device description



Connection and external control options





EAN code:
RFDEL-76M: 8595188182058

Technical parameters	RFDEL-76M/230V	RFDEL-76M/120V
Supply voltage:	230 V AC	120 V AC
Supply voltage frequency:	50 Hz	60 Hz
Power supply indication:	green LED Un	
Supply voltage tolerance:	+10/-15 %	
Output		
Output:	12x MOSFET transistor	
Load type *:	R - resistive, L - inductive, C - capacitive, ESL - economical, LED	
Minimum output power:	10 VA	
Max. output power/channel:	150 VA	75 VA
Possible to connect outputs:	yes	
Maximum power when connecting all outputs:	max. 900 VA	max. 450 VA
Output protection:	thermal/short-term overload/longterm overload/short circuit	
Output indication:	red LED STATUS	
Control		
Wired buttons:	potential "L" or external voltage AC 20–230 V (50–60 Hz)/DC 20–230 V	
Wireless	up to 32-channels (with iNELS RF buttons)	
Communication protocol:	RFIO2	
Function repeater:	yes	
Range:	in the open up to 160 m (524.11 ft)	
RF antenna:	AN-I included (SMA connector)	
Other information		
Operating temperature:	-20 to + 50 °C (-4 to 122 °F)	
Storage temperature:	-30 to +70 °C (-22 to 158 °F)	
Ingress protection:	IP20 under normal conditions	
Overvoltage category:	II.	
Contamination degree:	2	
Connecting conductor:	max. 2.5 mm²/1.5 mm² with sleeve	
Operating position:	vertical	
Installation:	in the switchboard on DIN rail EN 60715	
Design:	6-MODULE	
Dimensions:	90 x 105 x 65 mm (3.5˝ x 4.1˝ x 2.6˝)	
Weight	320 g (11 oz.)	

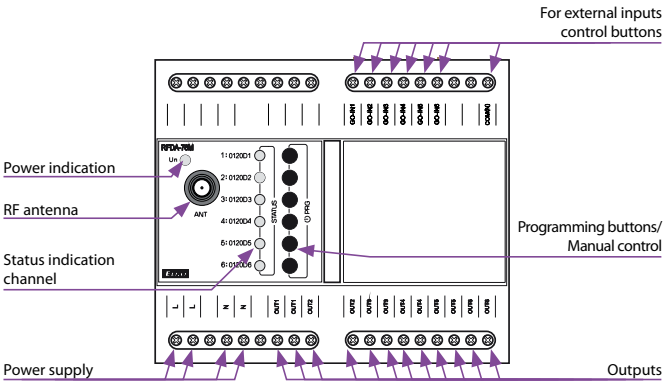
*Warning: it is not allowed to simultaneously connect loads of inductive and capacitive type in the same channel.

Types of connectable loads

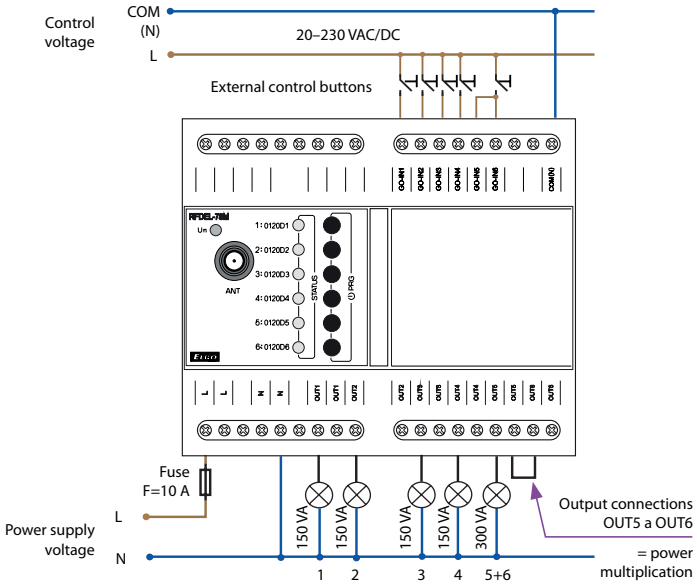
HAL. 230 V	HAL. 12-24 V			
R resistive	L inductive	C capacitive	LED light	ESL saving

- RFDEL-76M is a universal 6-channels actuator, which is used to control the brightness intensity of dimmable sources R - L - C - LED - ESL.
- The maximum possible load is 150 VA for 230 V and 75 VA for 120 V for each channel.
- The individual channels of the dimmer can be connected in parallel and thus increase the maximum output load at the expense of the number of outputs.
- Each of the output channels is individually controllable and addressable.
- By setting the min. brightness eliminates flickering of different types of light sources, setting min. brightness and type of load is done using the PROG buttons.
- Electronic overcurrent, thermal and short-circuit protection, which switches off the output.
- 6 galvanically isolated inputs for wired buttons, which can be used to control the outputs independently of the RF.
- Communication with bidirectional RFIO2 protocol. The package includes an internal AN-I antenna, in case of placement of a sheet metal distribution element, you can use an external AN-E antenna to improve the signal.

Description



Connection



The stated outputs apply to the supply voltage AC 230 V

RFDA-73M/RGB | Dimming actuator for LED (RGB) strips, 3-channels

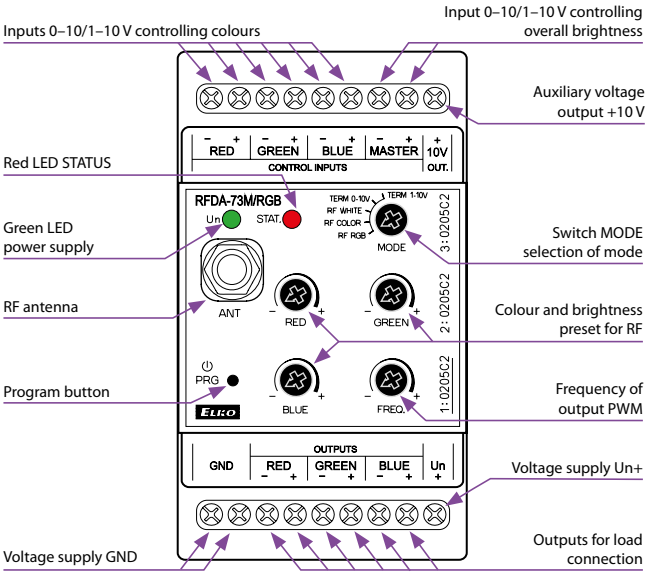
EAN code:
RFDA-73M/RGB: 8595188146814

Technical parameters	RFDA-73M/RGB
Supply terminals:	Un+, GND
Supply voltage:	12–24 V DC stabilized
Maximum power without load:	0.8 W
Output	
Dimmed load:	LED strip 12 V, 24 V with common anode RGB LED strips 12 V, 24 V with common anode
Number of channels:	3
Rated current:	3x5 A
Peak current:	3x10 A
Switching voltage:	Un
Control	
Wireless:	up to 32-channels (buttons)
Communication protocol:	RFIO2
Frequency:	866–922 MHz (for more information see p. 74)
Repeater function:	yes
Load capacity of output +10 V:	10 mA
Ext. signal:	0–10 V, 1–10 V
Range:	in open space up to 160 m
RF Antenna:	AN-I included (SMA connector*)
Other data	
Operating temperature:	-20 to +50 °C
Storage temperature:	-30 to +70 °C
Working position:	any
Mounting:	DIN rail EN 60715
Protection:	IP20 from front panel
Contamination degree:	2
Cross-section of connecting wires (mm²):	max. 1x 2.5, max. 2x 1.5/ with a hollow max. 1x 2.5
Dimensions:	90 x 52 x 65 mm
Weight:	130 g
Related standards:	EN 60730-1; EN 60730-2-11

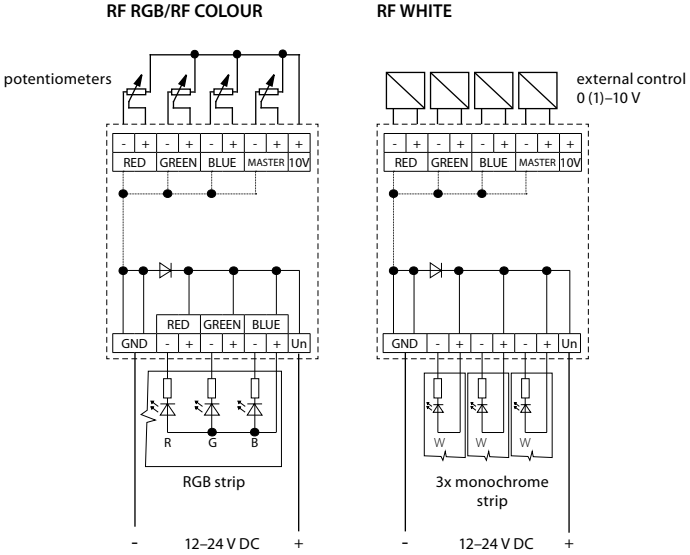
* Max Tightening Torque for antenna connector is 0.56 Nm.

- The dimmer for LED strips is used for independent control of 3 single-colour LED strips or one RGB LED strip.
- The expanded selection of control modes enables it to be combined with:
  a) detectors, controllers and system units iNELS RF Control
  b) device with output signal 0 (1)–10 V
  c) potentiometer.
- The unit's 3-MODULE design with switchboard mounting enables connection of dimmed load 3x 5 A, which represents:
  a) single-colour LED strip 7.2 W – 3x 8 m
  b) RGB LED strip 14.2 W–10 m.
- 6 light functions – smooth increase or decrease with time setting 2 s – 30 min. Function description can be found on page 73.
- The dimmer may be controlled by up to 32-channels.
- The power supply of the unit is in the range of 12–24 V 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, see accessories on page 69.
- Memory status can be pre-set in the event of a power failure.
- Range up to 160 m (in open space), if the signal is insufficient between the controller and unit, use the signal repeater RFRP-20 or protocol component RFIO2 that support this feature.
- Communication frequency with bidirectional protocol RFIO2.

Device description



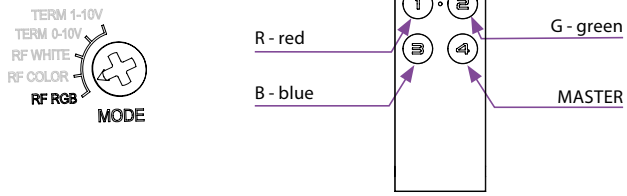
Output variations and external control options



Control modes

RF RGB

Switch settings in MODE:

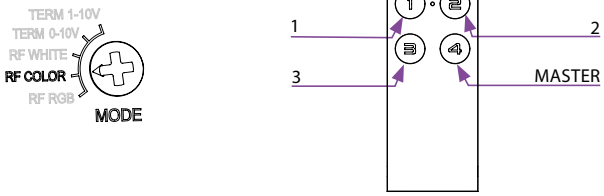


RF RGB mode for controlling RGB LED strips. In the RF RGB programming mode, colours are automatically assigned to individual transmitter buttons.

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

RF Color

Switch settings in MODE:

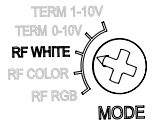


RF COLOUR mode for controling RBG LED strips, where you can choose the colour for individual transmitter buttons. A long press of the button starts the colour search mode. After releasing the button, the current colour is set for the given button.

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

RF WHITE

Switch settings in MODE:



This works in a mode where it acts like three independent dimmers for 12–24 V. Each channel can be programmed independently of one another and has its own address.

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

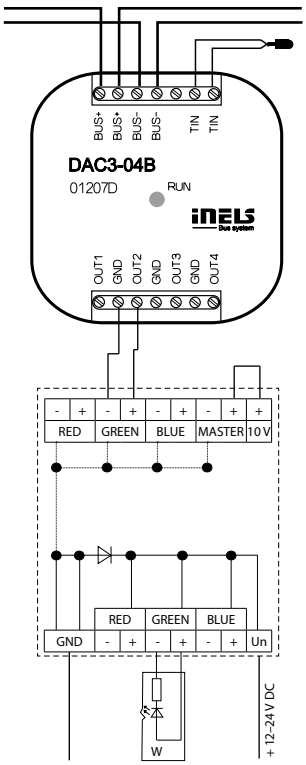
TERM 0–10 V and TERM 1–10 V

Switch settings in MODE:

Modes TERM 0–10 V and TERM 1–10 V.
Inputs 0–10 V and 1–10 V used to control one RGB LED strip or three independent single-colour LED strips (see modes above) from the iNELS BUS System. For controlling, you can use the application iHC for smartphones and tablets.

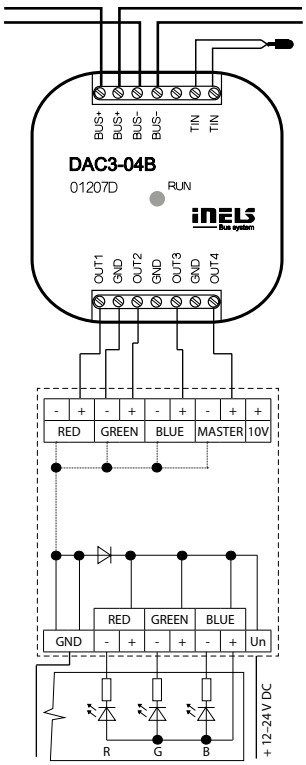
Control options

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



LED strips

TERM 0(1)–10 V DC
- RGB LED strips



RGB LED strips

RFDSC-71N | Dimming socket-plug

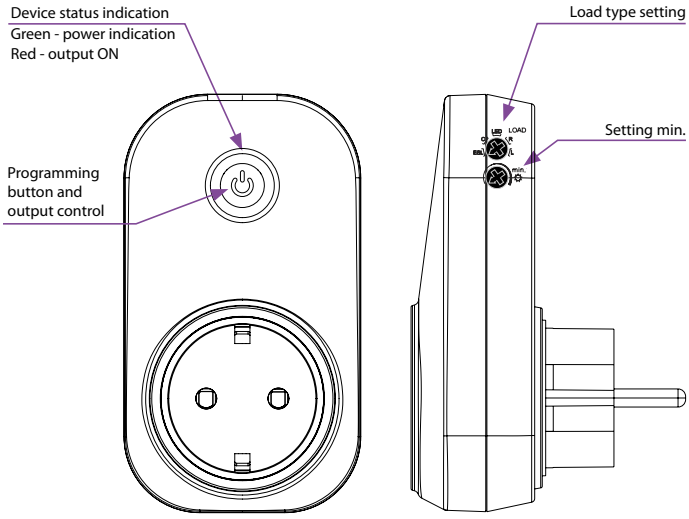
EAN code:
RFDSC-71N/Schuko: 8595188183604 RFDSC-71N/British: 8595188183581
RFDSC-71N/French: 8595188183598

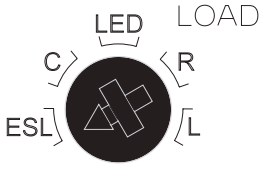
Technical parameters	RFDSC-71N/230V
Supply voltage:	230 V
Supply voltage frequency:	50-60 Hz
Apparent power:	1.1 VA
Dissipated power:	0.8 W
Supply voltage tolerance:	+10/-15 %
Output	
Contactless:	2 x MOSFET
Load capacity:*	max. 200 W
Dimming load:	R, L, C, LED, ESL
Control	
Wireless:	up to 32-channels (buttons)
Communication protocol:	bidirectional RFIO2
Frequency:	866–922 MHz (for more information see p. 74)
Repeater function:	no
Range:	in open space up to 160 m
Manual control:	button PROG (ON/OFF)
Other data	
Operating temperature:	-20 to + 35 °C
Storage temperature:	-30 to +70°C
Working position:	any
Mounting:	plug into a socket
Protection:	IP30
Overvoltage category:	III.
Contamination degree:	2
Dimensions:	63 x 110 x 74 mm
Weight:	118 g
Related standards:	EN 60730, EN63044, EN 300 220, EN 301 489

- The dimmable socket is used to regulate the brightness of the luminaires, which are connected by a power cord with a plug:
  R - classic light bulbs (resistive load)
  L - halogen bulbs with wound transformer (inductive load)
  C - halogen bulbs with electronic transformer (capacitive load)
  ESL - dimmable energy saving lamps
  LED - light sources equipped with LED
- Multifunction - 6 light functions - smooth start or stop with time setting 2 s - 30 min. Description of functions on page 73.
- Min. brightness potentiometer eliminates flickering of LED and ESL light sources.
- The universal dimmer can be controlled by up to 32 channels.
- The programming button on the socket also serves as a manual output control.
- Possibility to set the output status memory in case of failure and subsequent power recovery.
- Range up to 160 m (outdoors), in case of insufficient signal between the controller and the device, use the RFRP-20 signal repeater or components with the RFIO2 protocol that support this function.
- Communication with bidirectional RFIO2 protocol.

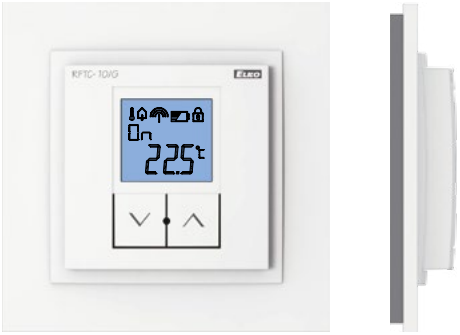
Produced in 3 designs of sockets/plugs:

Device description





Types of loads	
ESL	dimmable energy saving lamps
C	halogen bulbs with electronic transformer (capacitive load)
LED	LED light sources
R	classic light bulbs (resistive load)
L	halogen bulbs with wound transformer (inductive load)



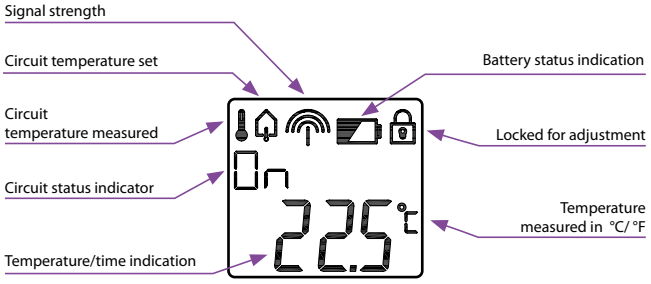
EAN code:
RFTC-10/G: 8595188145329

- RFTC-10/G is used for temperature measurement (in the range of 0 to 55 °C) and correction of the pre-set temperature in RF Touch or eLAN-RF system devices in the range of ± 5 °C. The temperature correction is valid until the next program change in the given system device.
- The backlit LCD display displays the current and set temperature, status (ON/OFF), battery status, etc.
- Range up to 100 m (in open space), if the signal is insufficient between the controller and unit, use the signal repeater RFRP-20 or protocol component RFIO2 that support this feature.
- Communication frequency with bidirectional protocol RFIO.
- Colour combination of heating unit in design of frames LOGUS^{90} (plastic, glass, wood, metal, stone).

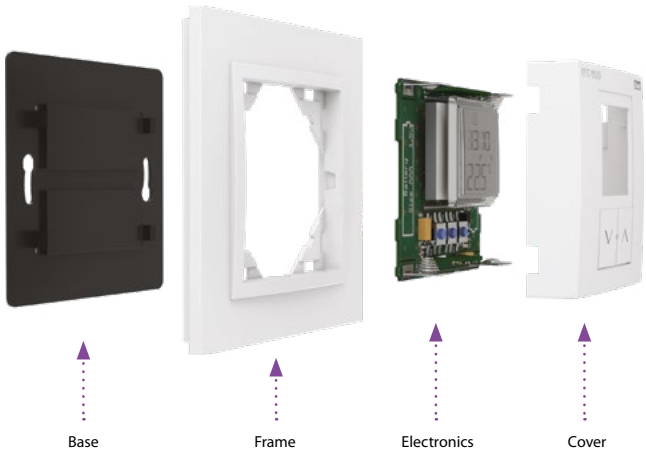
Technical parameters	RFTC-10/G
Supply voltage:	2 x 1.5 V AAA batteries
Battery life:	1 year based on frequency of use
Temperature correction:	2 buttons ∨/∧
Temperature offset:	± 5 °C
Display:	LCD, characters/see Display description
Backlighting:	active 10 s after pressing
Transmission indication/function:	symbols
Temperature measurement:	1x internal sensor
Temp. measurement range and accuracy:	0 to +55 °C; 0.3 °C of the range
Control	
Communication protocol:	RFIO
Frequency:	866–922 MHz (for more information see p. 74)
Repeater function:	no
Signal transmission method:	bidirectionally addressed message
Range:	in open space up to 100 m
Minimum control distance:	20 mm
Other data	
Max. number of control. RFSA-6x:	1
Program:	x
Operating temperature:	0 to +55 °C
Operating position:	wall-mounted
Mounting:	glue/screws
Protection:	IP30
Contamination degree:	2
Dimensions frame - plastic:	85 x 85 x 20 mm
- 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)

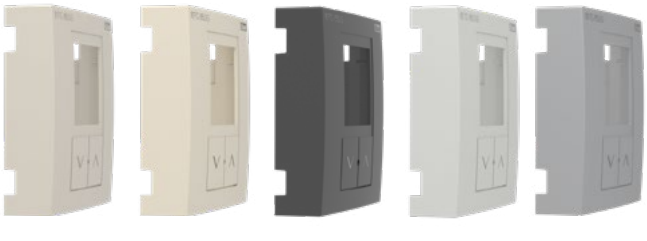
Compatibility				
RF Touch	eLAN-RF	RFSA-6 x	RFSTI-11B-SL	RFATV-1
✓	✓	✓	–	–

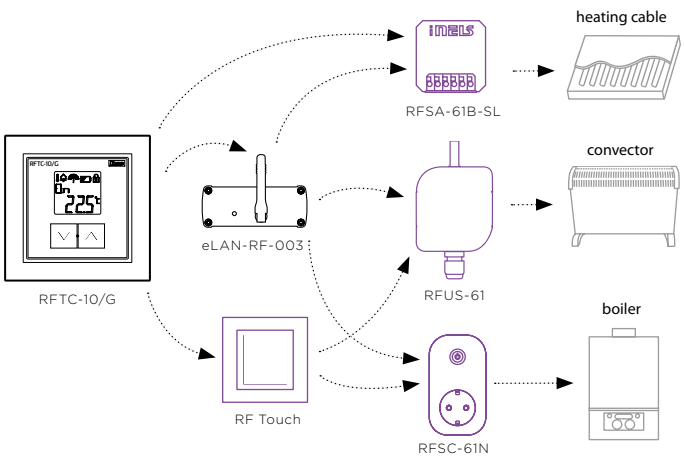
Display description



Device description







RFTC-50/G | Autonomous temperature controller

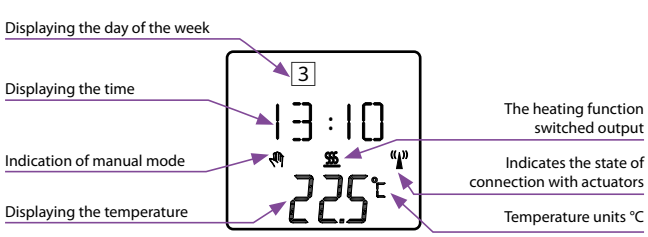
EAN code:
RFTC-50/G: 8595188148641

- RFTC-50/G is a separate thermostat that allows wireless control of up to 4 multifunctional switching components, e.g. RFSA-6x, RFUS-61, RFSTI-11B.
- Temperature measurement with built-in sensor in the range of 0.55 °C, temperature setting in the range of 0 to +55 °C in the weekly program.
- The backlit LCD display displays the current and set temperature, status (ON/OFF), battery status, day of the week, current time, etc.
- Battery power (2x 1.5 V AAA batteries - 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 or protocol component RFIO2 that support this feature.
- Communication frequency with bidirectional protocol RFIO.
- Colour combination of temperature unit in design of frames LOGUS^{90} (plastic, glass, wood, metal, stone).

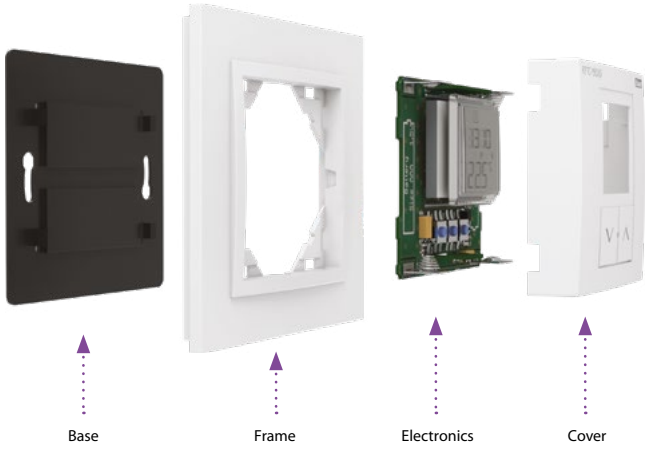
Technical parameters	RFTC-50/G
Supply voltage:	2x 1.5 V AAA batteries
Battery life:	1 year based on frequency of use according to the number of controlling actuators
Temperature correction:	2 buttons ∨ / ∧
Temperature offset:	± 5 °C
Display:	LCD, characters/see Display description
Backlighting:	active 10 s after pressing
Transmission indication/function:	symbols
Temperature measurement:	1x internal sensor
Temp. measurement range and accuracy:	0 to +55 °C; 0.3 °C of the range
Control	
Communication protocol:	RFIO
Frequency:	866–922 MHz (for more information see p. 74)
Repeater function:	no
Signal transmission method:	bidirectionally addressed message
Range:	in open space up to 100 m
Minimum control distance:	20 mm
Other data	
Max. number of control. RFSA-6x:	4
Program:	Weekly
Operating temperature:	0 to + 55 °C
Operating position:	on the wall
Mounting:	by gluing/screwing
Protection:	IP30
Contamination degree:	2
Dimensions frame - plastic:	85 x 85 x 20 mm
- 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)

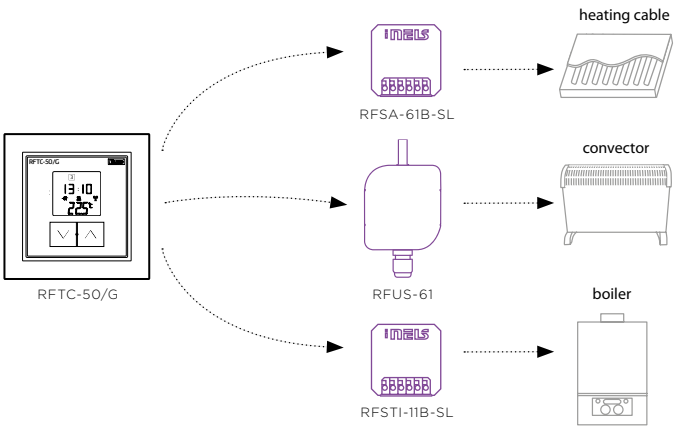
Compatibility				
RF Touch	eLAN-RF	RFSA-6 x	RFSTI-11B-SL	RFATV-1
-	-	✓	✓	-

Display description



Device description



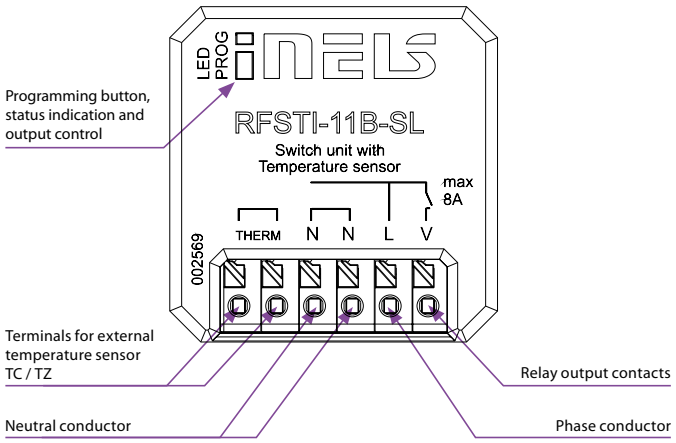


EAN code:
RFSTI-11B-SL: 8595188184045

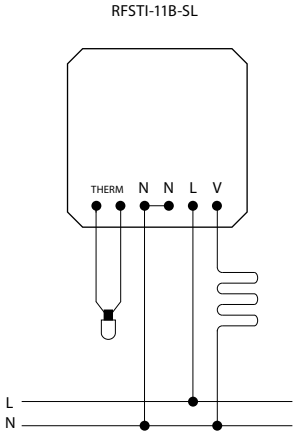
Technical parameters	RFSTI-11B-SL
Supply voltage:	230 V AC
Supply voltage frequency:	50-60 Hz
Apparent input:	7 VA / cos φ = 0.1
Dissipated power:	0.7 W
Supply voltage tolerance:	+10 %; -15 %
Temp. measurement range and accuracy:	-20 to +50 °C 0.5 °C of the range
Output	
Number of contacts:	1x switching
Rated current:	8 A / AC1
Switching power:	2000 VA / AC1
Peak current:	10 A / <3 s
Switching voltage:	250 V AC1
Mechanical service life:	$1x10^7$
Electrical service life (AC1):	$1x10^5$
Control	
Wireless:	25-channels
Communication protocol:	RFIO2
Frequency:	866–922 MHz (for more information see p. 74)
Repeater function:	yes
Manual control:	button PROG (ON/OFF)
External button/switch:	yes
Range:	in open space up to 200 m
Other data	
Operating temperature:	-15 to + 50 °C
Operating position:	any
Mounting:	free at lead-in wires
Protection:	IP40
Overvoltage category:	III.
Contamination degree:	2
Connection:	screwless terminals
Connecting conductor:	0.2-1.5 mm^2 solid/flexible
Dimensions:	43 x 44 x 22 mm
Weight:	31g
Related standards:	EN 60730, EN 63044, EN 300 220, EN 301 489

- The temperature element measures the temperature with an external sensor and at the same time controls the heating circuit (electric underfloor heating, air conditioning, boiler…).
- They can be combined with Detectors, Controllers or iNELS RF Control system components.
- It measures the temperature in the range -20 to +50 °C and sends it to the system component in a regular 5 min. intervals. It sends a signal when the temperature changes suddenly.
- The heating/cooling, hysteresis and off set functions are set in the system component or application.
- It allows the connection of a switched load up to 8 A (2,000 W).
- Range up to 200 m (outdoors), in case of insufficient signal between the controller and the device, use the RFRP-20 signal repeater or component with the RFIO2 protocol that support this function.
- Communication with bidirectional RFIO2 protocol.
- The BOX version offers installation directly in the installation box, ceiling or cover of the controlled appliance. Easy installation thanks to screwless terminals.
- External sensor TC (-20 to +80 °C) or TZ (-40 to +125 °C) with a length of 3 m, 6 m, 12 m. See „Accessories“ on page 41.

Device description



Connection

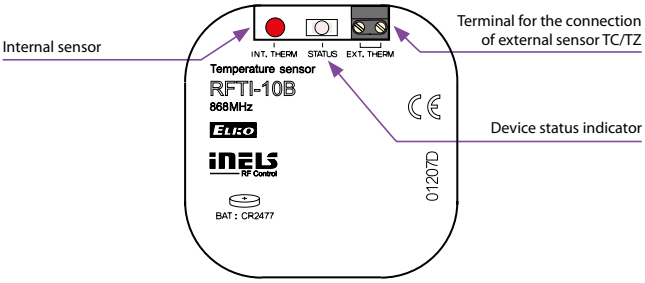


- It measures temperature in a range of -20 to 50 °C with internal or external sensor and sends it to the system unit (eLAN-RF, RF-Touch) in regular 5 min. intervals.
- It sends a signal upon sudden temperature change within 1 min.
- Option of connecting an external sensor to the terminals THERM.
- Battery power (1x 3 V CR 2477 battery - included in supply) with battery life of around 1 year based on frequency of use.
- Range up to 160 m (in open space), if the signal is insufficient between the controller and unit, use the signal repeater RFRP-20 or protocol component RFIO2 that support this feature.
- Communication frequency 868 MHz with bidirectional protocol RFIO.
- External sensor TC (-20 to +80 °C) or TZ (-40 to +125 °C) for length of 3 m, 6 m, 12 m. For more information see „Accessories“ on page 41.

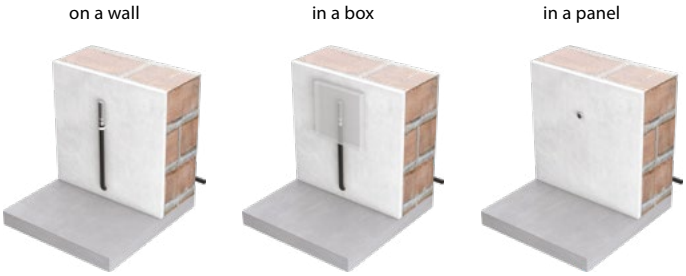
EAN code:
RFTI-10B: 8595188131759

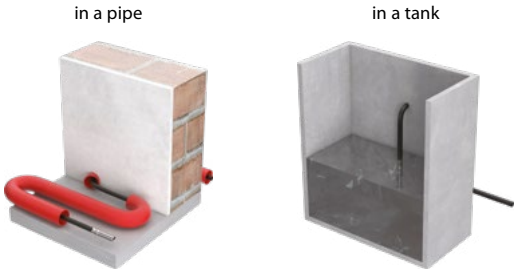
Technical parameters	RFTI-10B
Supply voltage:	1x 3 V CR 2477 battery
Battery life:	1 year based on frequency of use
Transmission indication/function:	red LED
Temperature measurement:	1x internal NTC thermistor 1x external TZ/TC temperature sensor input
Temp. measurement range and accuracy:	-20 to +50 °C; 0.5 °C in the range
Output	
Communication protocol:	RFIO
Frequency:	866–922 MHz (for more information see p. 74)
Repeater function:	no
Signal transmission method:	unidirectionally addressed message
Range:	in open space up to 160 m
Other data	
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



Sensor location





TC, TZ | Temperature sensors

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

- Thermister temperature sensors are made of Negative Temperature Coefficient (NTC) embedded in a PVC or metal sleeve with a thermally-conductive sealer.
- **Sensor TC**
  - lead-in cable to sensor TC is made of wire CYSY 2D x 0.5 mm/0.02".
- **Sensor TZ**
  - cable VO3SS-F 2D x 0.5 mm/0.02" with silicone insulation for use in high temperature applications.
  - silicone insulation for use in high temperature applications.
- Temperature sensors can be connected directly to the terminal block
- Cable lengths can not be changed, connected or modified.

Technical parameters	TC	TZ
Range:	-20 to +80 °C (-4 to 176 °F)	-40 to +125 °C (-40 to 257 °F)
Scanning element:	NTC 12K	NTC 12K
Tolerance:	±(0.15 °C + 0.002|t|)	±(0.15 °C + 0.002|t|)
In air/in water:	(τ0.5) ≤ 18 s	(τ65) 62 s/8 s
In air/in water:	(τ0.9) ≤ 48 s	(τ95) 216 s/23 s
Cable material:	PVC unshielded, 2x 0.25 mm²	silicon VO3SS-F 2D x 0.5 mm²
Terminal material:	polyamide	stainless steel
Protection degree:	IP67	IP67
Electrical strength:	2500 VAC	2500 VAC
Insulation resistance:	> 200 MΩ at 500 VDC	> 200 MΩ at 500 VDC
Types of temperature sensors:		
	TC-0	**TZ-0**
- length:	100 mm	110 mm
- weight:	5 g	4.5 g
	TC-3	**TZ-3**
- length:	3 m	3 m
- weight:	70 g	106 g
	TC-6	**TZ-6**
- length:	6 m	6 m
- weight:	130 g	216 g
	TC-12	**TZ-12**
- length:	12 m	12 m
- weight:	250 g	418 g

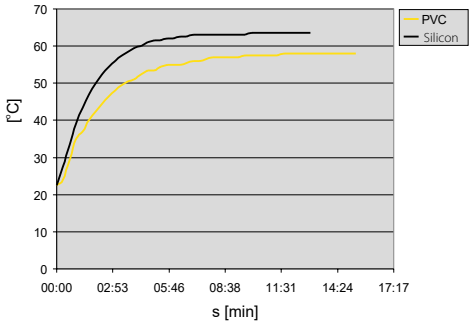
τ65 (95): time, which sensor needs to heat up on 65 (95) % of ambient temperature of environment, in which is located.

Resistive values of sensors in dependance on temperature

Temperature (°C)	Sensor NTC (kΩ)
20	14.7
30	9.8
40	6.6
50	4.6
60	3.2
70	2.3

Tolerance of sensor NTC 12 kΩ is ± 5% by 25 °C/77 °F.

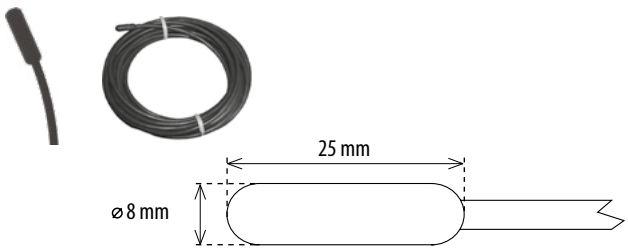
Diagramm of sensor warm up via air



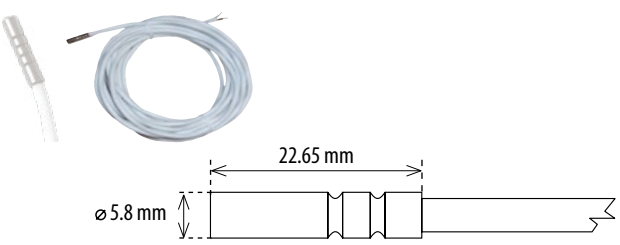
PVC -reaction to water temperature from 22.5 °C to 58 °C.
Silicone - reaction to water temperature from 22.5 °C to 63.5 °C.

Design and dimensions

TC



TZ



RFATV-2 | Wireless thermovalve

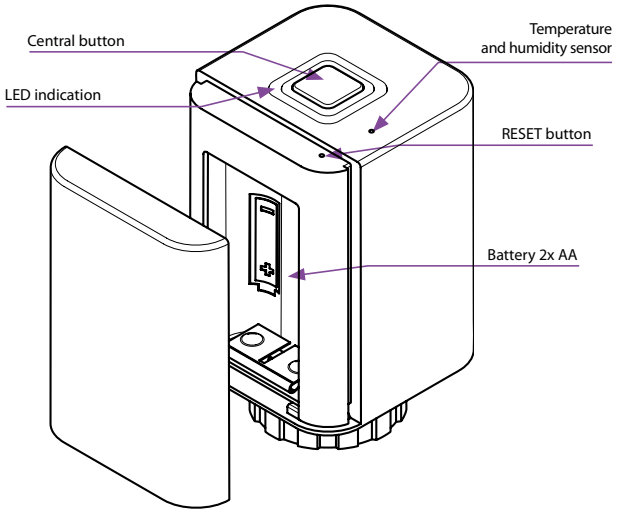
EAN code:
RFATV-2: 8595188182591

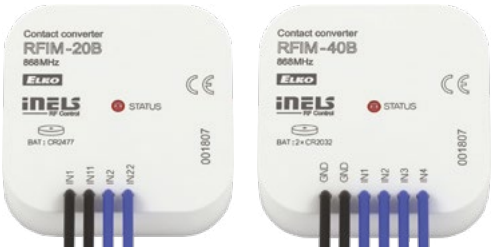
Technical parameters	RFATV-2
Supply voltage:	2x 1.5 V battery AA
Battery life:	1 year based of frequency use
Control	
Communication protocol:	RFIO2
Frequency:	866–922 MHz (for more information see p. 74)
RF command from controller:	eLAN-RF-103, RF-Touch-2
Range:	in open space up to 100 m
Other data	
Operating temperature:	0 to +50 °C
Operating position:	any
Protection:	IP40
Dimension:	52 x 52 x 70 mm
Thermo-valve nuts:	M 30 x 1.5
Related standards:	EN 60730

Accessories (not included)	
RE-C Redukce Coterm	
RE-DRTD Redukce Danfoss RTD	
RE-D Redukce Danfoss	
RE-G Redukce Giacomini	
RE-M Redukce Myjava	
RE-H Redukce Herz	

- The wireless thermal head measures the room temperature and humidity with an internal sensor, and opens / closes the radiator valve based on the set program in the system component.
- It can be combined with the eLAN-RF, RF smart box or RF-Touch
- It measures temperature in the range 0 to +50 ° C and humidity 5-95% and sends it to the system component at regular 2 min. intervals.
- „Open window" detection, when the temperature suddenly closes the valve for a pre-set time.
- Hysteresis and offset settings are made in the system component or application.
- Low battery indication on the system component, display or in the application.
- Mounted directly on the radiator valve (radiator).
- Battery supply (2x 1.5 V AA batteries - included) with a lifespan of approx. 1 year according to frequency of use.
- Range up to 100 m (outdoors), in case of insufficient signal between the controller and the component, use the RFRP-20 signal repeater or components with the RFIO2 protocol that support this function.
- Communication frequency with bidirectional RFIO2 protocol.
- Included in the package: 2x AA 1.5 V batteries
- AiO control available on Google Play and the App store.

Device description





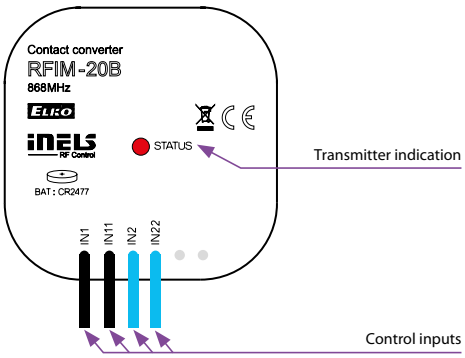
EAN code:
RFIM-20B: 8595188139274
RFIM-40B: 8595188137188

Technical parameters	RFIM-20B	RFIM-40B
Supply voltage:	1x 3 V CR 2477 battery	2x 3 V CR 2032 batteries
Battery life:	5 years based of frequency use	
Transmission indication / function:	orange LED	red LED
Number of inputs:	2	4
Input switching time:	Permanent input connection (contact)	Short-tem input connection (button)
Control		
Communication protocol:	RFIO	
Frequency:	866–922 MHz (for more information see p. 74)	
Repeater function:	no	
Signal transmission method:	unidirectionally addressed message	
Range:	in open space up to 200 m	
Other data		
Operating temperature:	-10 to +50 °C	
Operating position:	any	
Terminals (CY wire, cross-section):	4 x 0.75 mm²	6 x 0.75 mm²
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)	

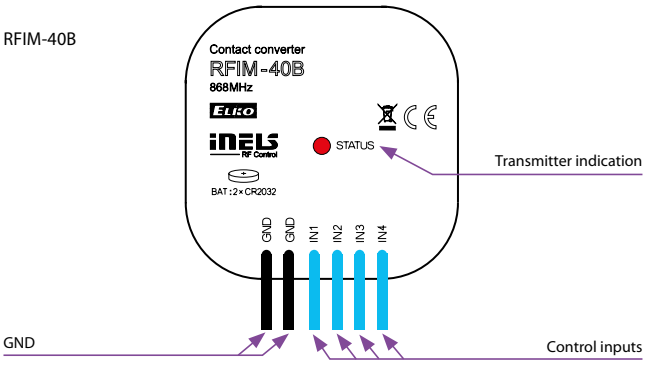
- **RFIM-20B:** the wireless contact converter changes your existing wired button/switch to a wireless one.
  - two inputs enable control of two units independent,
  - battery power supply (1x 3 V CR 2477 battery - included in the supply) with battery life of around 5 years based on frequency of use,
  - contact can be permanently closed (does not drain on the battery).
- **RFIM-40B:** the wireless contact converter changes your existing wired button to a wireless one.
  - four inputs enable control of four units independently,
  - battery power supply (2x 3 V CR 2032 batteries) with battery life of around 5 years based on frequency of use (included in the supply),
  - button control (input must not be permanently closed).
- It can be used to transmit information on switching on the contact (detector, button, technology, logic output).
- 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 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 or protocol component RFIO2 that support this feature.
- Communication frequency with bidirectional protocol RFIO.
- The BOX design lets you mount it right in an installation box under the button or switch.

Device description

RFIM-20B

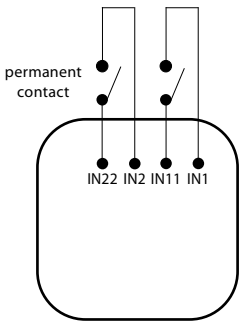


RFIM-40B

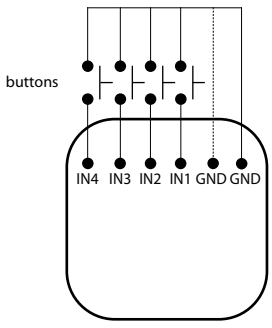


Connection

RFIM-20B



RFIM-40B



RFIM-40B/BP-SL, RFIM-40B/230-SL | Input contact converter

EAN code:
RFIM-40B/BP-SL: 8595188184069

RFIM-40B/230-SL: 8595188184076

Technical parameters	RFIM-40B/BP-SL	RFIM-40B/230-SL
Supply voltage:	1x 3 V battery CR 123A	230 V AC
Battery life:	8 years based of frequency use	
Indications/transfer function:	red LED	
Number of inputs:	4	4
Supply voltage tolerance:		+10 %; -15 %
Control		
Communication protocol:	RFIO2	
Frequency:	866–922 MHz (for more information see p. 74)	
Repeater function:	no	
Signal transmission method:	unidirectionally addressed message	
Range:	in open space up to 200 m	
Other data		
Operating temperature:	-10 až +50 °C	
Operating position:	any	
Line resistance between terminals		
- for closed button:	< 300 Ω	
- for open contact:	> 10 kΩ	
Mounting:	free at lead-in wires	
Protection:	IP40	
Surge category:	III.	
Contamination degree:	2	
Connection:	screwless terminals	
Dimensions:	43 x 44 x 22 mm	
Weight:	37 g	25 g
Contact voltage:	3 V	230 VA
Length of cable to contact:	max. 5 m	max. 100 m
		of parallel lines
Related standards:	EN 60730, EN 63044, EN 300 220, EN 301 489	

- **RFIM-40B / BP-SL:** the wireless contact converter changes the wired button / switch to wireless.

- 4 inputs allow to control 4 devices independently,

- battery supply (3 V battery CR123A - included in the package) with a lifespan of about 8 years according to the frequency of use,

- the contact can be permanently closed.

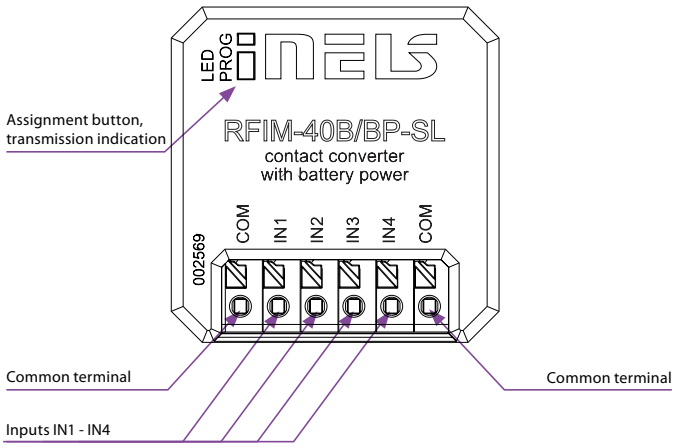
- **RFIM-40B / 230-SL:** the contact converter changes the button / switch with local mains supply to wireless.

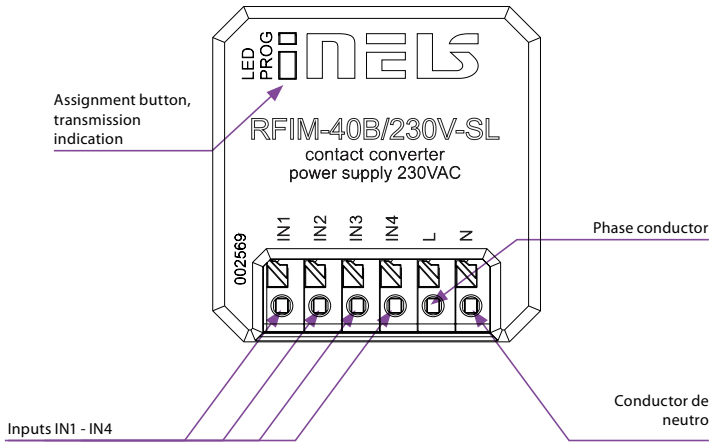
- 4 inputs allow to control 4 devices independently,

- mains supply, the inputs respond to the supply of mains supply

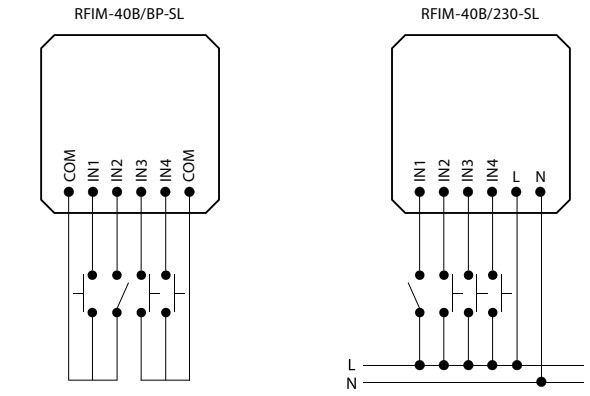
- It can be used to transmit contact closing information (detector, buttons, technology, logic output).
- When the button is pressed, it sends the set command (ON / OFF, dimming, time off / on, pull / pull).
- Ability to set scenes where you control multiple iNELS RF Control components with a single press.
- Range up to 200 m (outdoors), in case of insufficient signal between the controller and the component, use the RFRP-20 signal repeater or elements with the RFIO2 protocol that support this function.
- Communication frequency with bidirectional RFIO protocol.
- The BOX version offers mounting directly in the installation box under the button / switch.

Device description





Connection



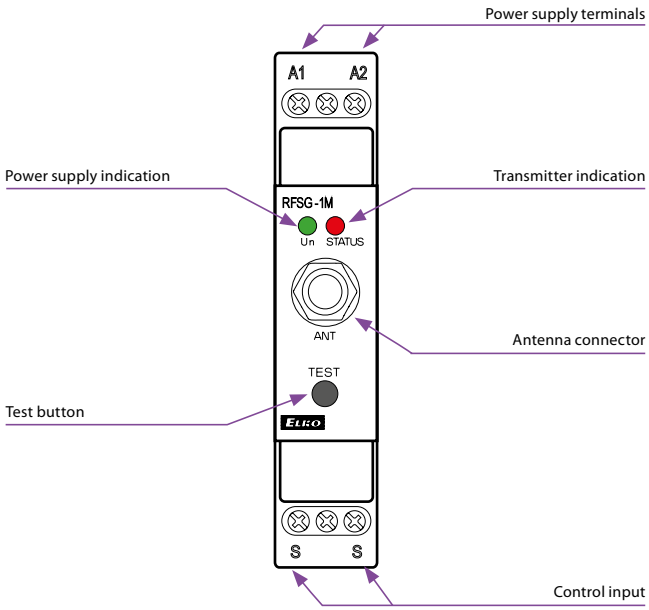
EAN code:
RFSG-1M: 8595188142847

Technical parameters	RFSG-1M
Supply voltage:	110–230 V AC
Supply voltage frequency:	50–60 Hz
Apparent input:	2 VA
Dissipated power:	0.2 W
Supply voltage tolerance:	+10 %/-25 %
Power supply indication:	green LED
Input	
Control voltage:	AC 12–230 V/DC 12–230 V
Control input power:	AC 0.025 VA/DC 0.1 W
Control terminals:	S–S
The length of control impulse:	min. 25 ms (max. unlimited)
Transmission indication/function:	red LED
Control	
Communication protocol:	RFIO
Frequency:	866–922 MHz (for more information see p. 74)
Repeater function:	no
Signal transmission method:	unidirectionally addressed message
Range:	in open space up to 160 m
Minimum control distance:	20 mm
RF antenna:	AN-I included (SMA connector)*
Other data	
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: (mm²):	max. 1x 2.5, max. 2x 1.5/ with a hollow max. 1x 2.5
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)

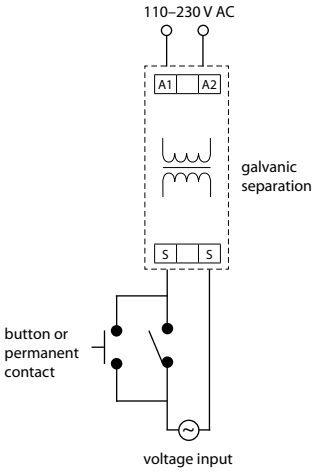
* Max Tightening Torque for antenna connector is 0.56 Nm.

- This wireless contact converter is especially appropriate for wireless transmission of information on switching HDO.
- Thanks to the permanent power supply, it can also be used for partial transmission of information for control of an appliance or device.
- 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.
- 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, see accessories on page 66.
- 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 RFIO.
- 1-MODULE design of the unit with mounting into switchboard.

Device description



Connection

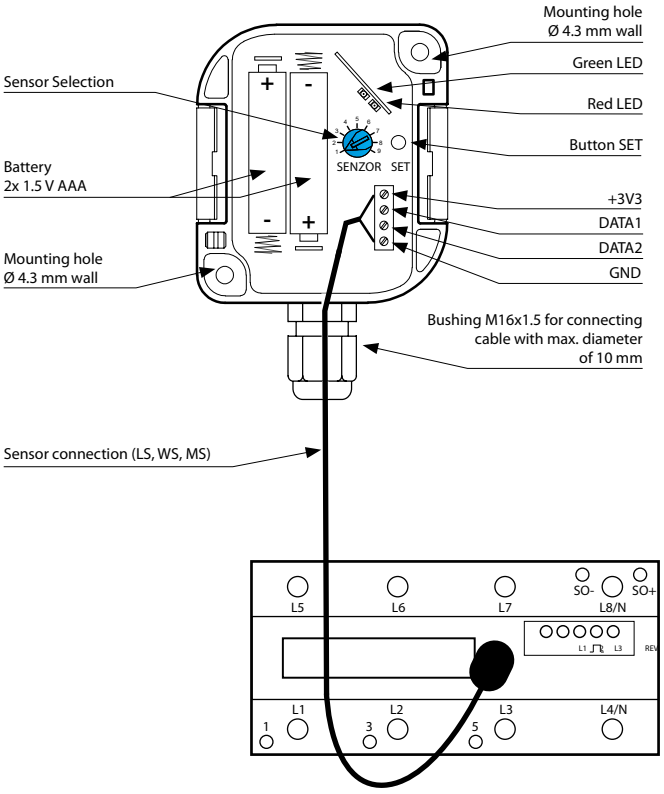


Technical parameters	RFTM-1
Power supply:	2x 1.5 AAA batteries
Battery Life:	Appr. 2 years, (depending on the type of sensor, frequency of transmissions and pulses)
Indication	
Setting mode:	Green LED flashes - active Red LED - flashes during impulse sensor registration
Communications Test - RF STATUS:	Green LED - communication OK Red LED - communication ERR
Normal operation:	no indication
Control	
Manual control:	button SET
Sensor Selection:	rotary potentiometer
Supported sensors (not included in the package):	LS (LED sensor) MS, WS (magnetic sensor) S0 (Contact, open collector, reed magnetic contacts)
Output	
Communication protocol:	RFIO
Frequency	866–922 MHz (for more information see p. 74)
Range:	in open space up to 100 m
Other data	
Working temperature:	-20 to +50 °C *
Storage temperature:	-30 to +70°C
Operating position:	any
Protection:	IP65
Cross-section of connecting wires:	max. 0.5 - 1 mm^2
Dimension:	72 x 62 x 34 mm
Weight:	104 g

* Pay attention to the operating temperature of batteries.

- 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-MAIRF/iHC-MIIRF, in daily, weekly or monthly overview in graphs.
- The sensor is designed for use on existing meters and even without the impulse output "S0" (The gauge must support scan).
- RFTM-1 transfers consumption from meters using sensors - LS (LED sensor), WS (Magnetic sensor for meter), MS (Magnetic sensor) or by impulse output („S0").
- For each consumption meter, it is necessary to have one pulse converter RFTM-1.
- Battery power (2x 1.5 V AAA batteries - included in package) with average battery life of around 2 years (according to the type of scan, frequency of transmissions and pulses).
- Range up to 100 m (in open space), if the signal between the controller and the user is weak, use the signal repeater RFRP-20 or protocol component RFIO2 that support this feature.
- Communication frequency with bidirectional protocol RFIO.
- The increased IP65 protection is appropriate for mounting in risers, switchboards and other demanding environments.

Device description



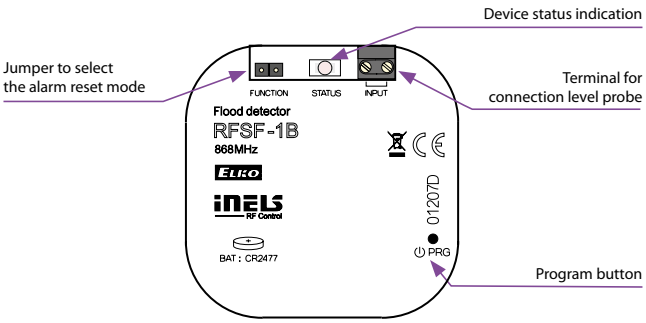
RFSF-1B | Level switch

EAN code:
RFSF-1B: 8595188148603

Technical parameters	RFSF-1B
Supply voltage:	1x 3 V CR 2477 battery
Battery life:	1 year based on frequency use
Indications/transfer function:	red LED
Reset after flooding:	JUMPER - Manual/Automatic
Programming:	with Prog button/based batteries
Measuring input:	terminal 0.5–1mm²
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
Control	
Communication protocol:	RFIO
Frequency:	866–922 MHz (for more information see p. 74)
Repeater function:	no
Signal transmission method:	two-way addressed message
Range:	in open space up to 160 m
Other data	
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)

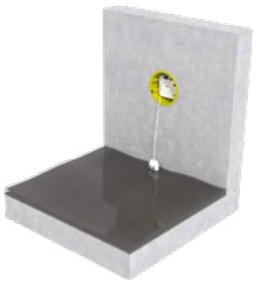
- Monitors areas (e.g. bathrooms, basements, shafts or tanks) to provide flood warning.
- Upon detecting water, the flood detector immediately sends a signal to the switched unit, which further switches on a pump or closes a pipe valve.
- The programming button on the detector is used to:
  a) setting the function with switching unit
  b) ascertaining battery status
  c) ascertaining signal quality between the unit and detector.
- Battery power supply (1x 3 V CR 2477 battery - 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 or protocol component RFIO2, that support this feature.
- Communication frequency with bidirectional protocol RFIO.
- Option of connecting an external probe FP-1, max. wire length 30 m.

Device description



Location of the detector and probe

In an installation box



On the wall

Freely

FP-1 | Liquid probe

Technical parameters	FP-1
Working temperature:	-10 to +40 °C
Mounting:	glue/screws
Length of cable:	1 m
Dimensions:	18 x 8 x 26 mm

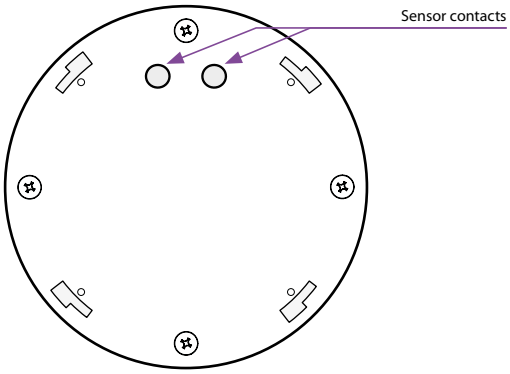
RFSF-100 | Flood detector

EAN code:
RFSF-100: 8595188176828

- The flood detector is used to detect water leakage - the activation occurs the moment the flooding of the contacts located on the underside of the detector occurs.
- Upon detecting water, the flood detector immediately sends a signal to the switched unit, which further switches on a pump or closes a pipe valve.
- Flood detection is signalled by optical and acoustic signalling.
- Range up to 160 m (in open space); if the signal is insufficient between the controller and unit, use the signal repeater RFRP-20 or protocol component RFIO2 that support this feature.

Technical parameters	RFSF-100
Power supply	
Battery power:	2x 1.5 V AAA batteries
Battery life by frequency 1x 12 hours:	3 years
Setting	
Alarm Detection:	optical and audible alarm
Battery status view:	low battery is indicated by 5 flashes every 15 minutes or by display in the system element
Acoustic signal:	greater than 45 dB/1m
Detection	
Sensor:	contacts for flooding
Detection principle:	contact between the sensor sensed liquid
Response Time:	2 s after connecting the scanning contacts
Measurement accuracy:	99.8 %
Sensitivity:	in the range 0–170 kΩ
Control	
Communication protocol:	RFIO
Frequency:	866–922 MHz (for more information see p. 74)
Repeater function:	no
Signal transmission method:	unidirectionally addressed message
Range:	in open space up to 160 m
Other parameters	
Working temperature:	0 to +50 °C (Pay attention to the operating temperature of batteries)
Storage temperature:	-20 to +60 °C
Operation position:	capture contacts for flooding downwards
Mounting:	loose
Protection degree:	IP62
Dimension:	Ø 89 x 23 mm
Weight:	92 g

Descritption



Function

When the scanning contact is connected, the detector sends the message and starts alarm.

Conductivity of liquids

Liquids suitable for detection

Type of liquid	Resistivity [Ωcm]*
Drinking water	5–10 kΩ
Well water	2–5 kΩ
River water	2–15 kΩ
Rain water	15–25 kΩ
Waste water	0.5–2 kΩ
Seawater	~0.03 kΩ
Salt water	~2.2 kΩ
Natural/hard water	~5 kΩ
Chlorinated water	~5 kΩ
Condensed water	~18 kΩ
Milk	~1 kΩ
Milk serum	~1 kΩ
Fruit juices	~1 kΩ
Vegetable Juices	~1 kΩ
Broths	~1 kΩ
Wine	~2.2 kΩ
Beer	~2.2 kΩ
Coffee	~2.2 kΩ
Soap toam	~18 kΩ

Inadmissible liquids

Demineralised water
Deionised water
Bourbon
Gasoline
Oil
Liquid gases
Paraffin
Ethylene glycol
Paints
High alcohol-content liquids

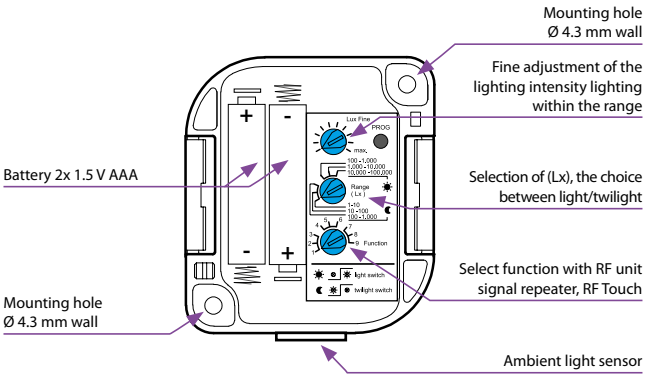
* Resistivity characterizes the resistive properties of materials which conduct electric current.

EAN code:
RFSOU-1: 8595188147071

Technical parameters	RFSOU-1
Power supply:	2 x 1.5 AAA batteries
Battery Life:	Appr. 2 years, according to the number of controlled units
Setting the range of light levels	
Function ☾ (twilight switch)	
- Range 1:	1 to 10 lx
- Range 2:	10 to 100 lx
- Range 3:	100 to 1.000 lx
Function ☼ (light switch)	
- Range 1:	100 to 1 000 lx
- Range 2:	1 000 to 10 000 lx
- Range 3:	10 000 to 100 000 lx
Function setting:	rotary switch
The level of lighting gently:	0.1 to 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
Control	
Communication protocol:	RFIO
Frequency:	866–922 MHz (for more information see p. 74)
Repeater function:	no
Range:	in open space up to 160 m
Other data	
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)

- The twilight switch 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.
- 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 (2x 1.5 V AAA batteries - 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 or protocol component RFIO2 that support this feature.
- Communication frequency with bidirectional protocol RFIO.
- The increased IP65 protection is suited to mounting on the wall or into the rural environment.

Device description

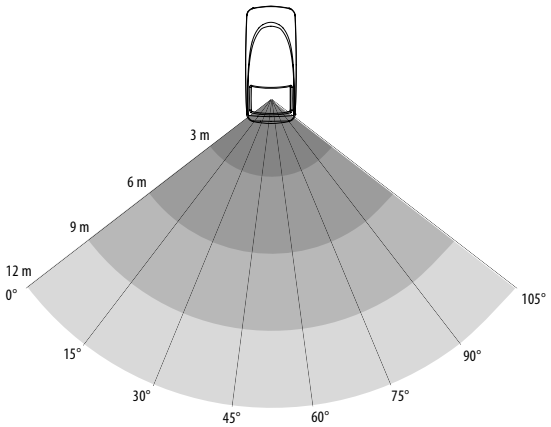


EAN code:
RFMD-100: 8595188150293

Technical parameters	RFMD-100
Power supply:	2x 1.5 V AA batteries
Battery life:	up to 1 year, according to the number of activations
Drained battery indicator:	yes
Control	
Communication protocol:	RFIO
Frequency:	866–922 MHz (for more information see p. 74)
Repeater function:	no
Detection angle:	105°
Detection distance:	max. 12 m
Recommended working height:	max. 2.4 m
Other data	
Working temperature:	-10 to +50 °C
Protection:	IP20
Colour:	white
Dimension:	46 x 105 x 43 mm
Weight:	57 g

- 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.
- Power supply: 2x 1.5 V AA batteries, the battery life is around 1 year.
- "Low Battery" Alerts by double LED flashing or on iHC App.
- The detectors are compatible with switching components marked with the RFIO2 communication protocol and the eLAN-RF system components.
- Communication frequency with bidirectional protocol RFIO.

Detection field



EAN code:
RFWD-100: 8595188150279

Technical parameters	RFWD-100
Power supply:	1x 3 V CR 2032 battery
Drained battery indicator:	yes
Control	
Communication protocol:	RFIO
Frequency:	866–922 MHz (for more information see p. 74)
Repeater function:	no
Other data	
Working temperature:	-10 to +50 °C
Protection:	IP20
Colour:	white
Dimension:	25 x 75 x 16 mm
Magnet dimension:	15 x 75 x 14 mm

- 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.).
  - by means of the Smart RF box, detection can be displayed on your smart phone in the form of a notifi cation; 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.
- Power supply: 1x 3 V CR 2032 battery, 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.
- "Low Battery" Alerts on Your iHC App.
- The detectors are compatible with switching components marked with the RFIO2 communication protocol and the eLAN-RF system components.
- Communication frequency with bidirectional protocol RFIO.

RF Touch- B

RF Touch-W

EAN code:
RF Touch-B: 8595188143738
RF Touch-W: 8595188131711

Technical parameters	RF Touch-B	RF Touch-W
Display		
Type:	colour TFT LCD	
Resolution:	320 x 240 pixels/262,144 colours	
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	
Power supply		
Supply voltage:	100–230 V AC	from the back 100–230 V AC, from the side 12 V DC
Input power:	max. 5 W	
Power supply terminals:	A1–A2	
Control		
Communication protocol:	RFIO2	
Frequency:	866–922 MHz (for more information see p. 74)	
Range:	in open space up to 100 m	
Min. distance RF Touch Actuator:	1 m	
Connection		
Connection:	terminal box	no-screw push-in terminal box or jack ⌀ 2.1 mm jack connector
Cross-section of connecting wires:	max. 2.5 mm²/1.5 mm² with a hollow	
Other data		
Operating temperature:	0 to +50 °C	
Storage temperature:	- 20 to +70 °C	
Protection:	IP20	
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 (plastic):	127 g	175 g
Related standards:	EN 60730-1	

- 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 bidirectional communication, it visualizes the current status of individual units.
- Automatic control based on weekly program.
- 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 100–230 V AC, (RF Touch/W also supplied via adapter 12 V DC included in the supply).
- 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 or protocol component RFIO2 that support this feature.
- Communication frequency with bidirectional protocol RFIO.

Power supply

RF Touch-B

RF Touch-W

Adapter, 12 V DC
(adapter is part of the RF Touch-W unit package)

Colour combinations

black/white

chrome/grey

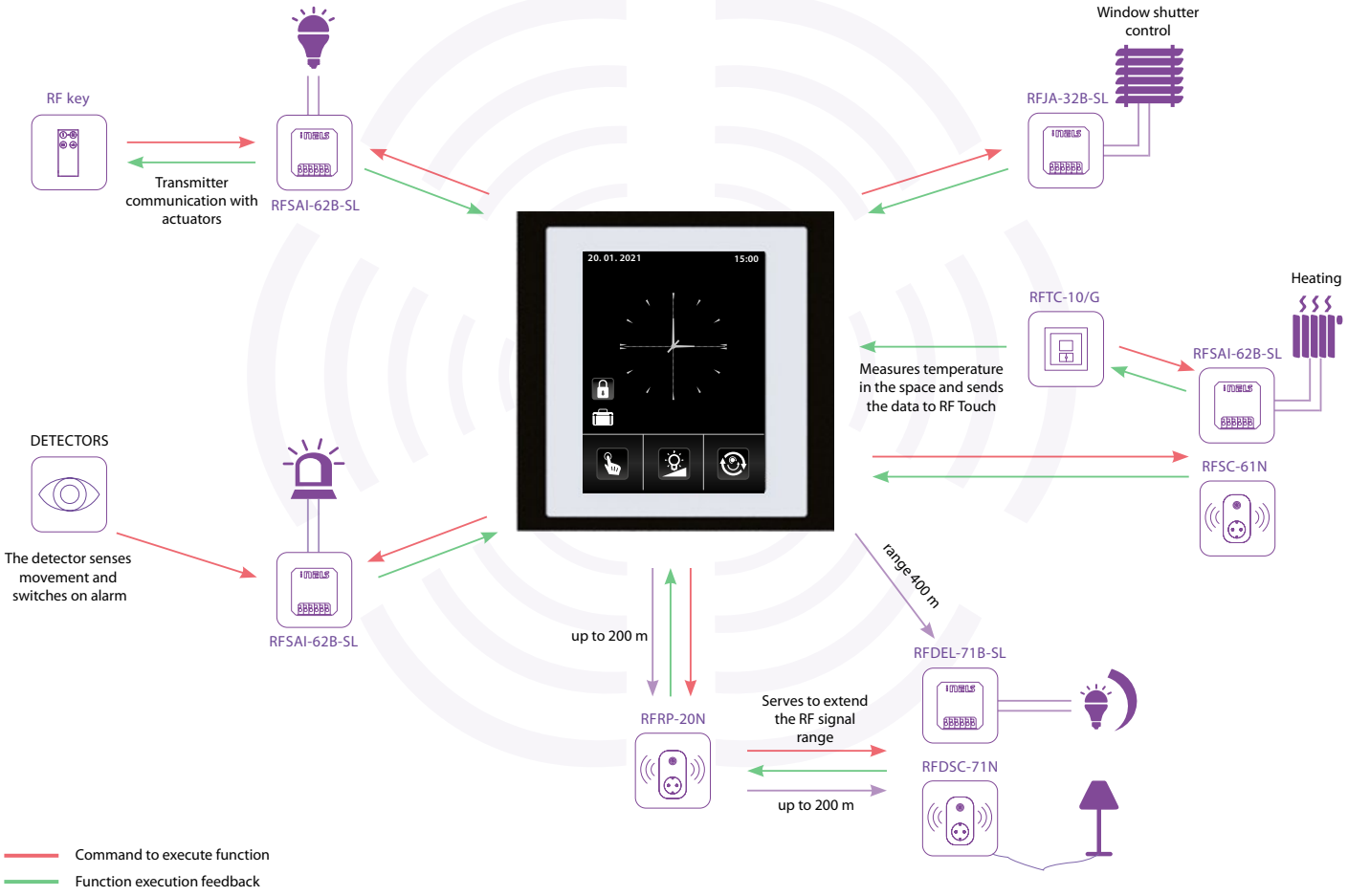
white/pearly

glass/grey

red/aluminum

aluminum/dark grey

titanium/ice



HEATING

- control of heating devices (boilers, thermo valve 0–10 V...)
- 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

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 s to 60 min)

DIMMING

- the regulation of light intensity
- 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 s and 30 min

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 230 V or 24 V DC (shutters between windows, etc.)

DETECTORS

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

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

RF Touch-2/B | Wireless touch unit

EAN code:
RF TOUCH-2: 8595188182669

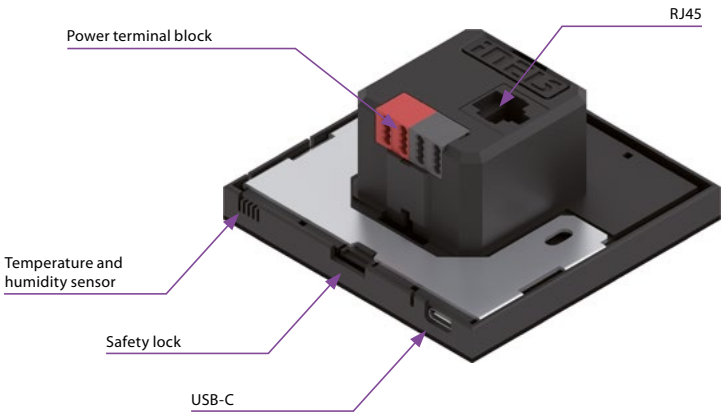
Technical parameters	RF Touch-2/B
Display	
Type:	color TFT LCD
Distinction:	4" / capacitive / 480 x 480 pixels
Aspect Ratio:	72 x 72 mm
Visible area:	active (white LED)
Backlight:	capacitive
Power supply	
3 power description:	USB-C (5V) Poe - IEE 802.3AF Power terminal block (20-30V DC)
Power consumption:	max. 5 W
Communication	
Radio	
Communication protocol:	RFIO2
Frequency:	866–922 MHz (for more information see p. 74)
Range:	open space up to 200 m
Min. distance RF Touch component:	1 m
WiFi	
Protocols:	802.11 b/g/n (802.11n to 150 Mbps) A-MPDU and A-MSDU
Frequency:	2.4 GHz
LAN	
Ethernet:	10-100 Mbit/s
Sensors and notifications	
Temperature sensor	0-50 ° C; 0.2 ° C out of range
Humidity sensor	0-100%; 2% of range (RH)
Proximity sensor	15cm
Notification LED	RGB
Operating conditions	
Operating temperature:	0 to +50 °C
Storage temperature:	- 20 to +70 °C
Cover:	IP20
Surge category:	III.
Degree of pollution:	2
Working position:	any
Installation:	into the installation box
Dimensions:	86 x 86 x 10 (37)
Weight (plastic):	120 g
Related standards:	EN 60730-1

- RF Touch- 2 is central unit with 4" capacitive display.
- It works as a switch for most appliences and also controles heating, lights and shades. It can control your smarthome from one place
- User interface comes from new intuitive app iNELS.
- In order to work as thermostat it is equipped with humidity sensor. it has option for weekly program heating/cooling.
- For higher comfort and energy saving it has new motion sensor thanks to which the display lights up by waving your hand.
- This unit can control up to 40 units of iNELS RF Control + 30 detectors
- It has 3 options of charging by using:
  - Screwless terminals
  - Active POE
  - USB-C.
- Simple instalation to the assembly box thanks to innovative construction

NEW

- new options for connecting to a mobile phone via Wi-Fi or cloud
- temperature and humidity sensor
- 4" capacitive display

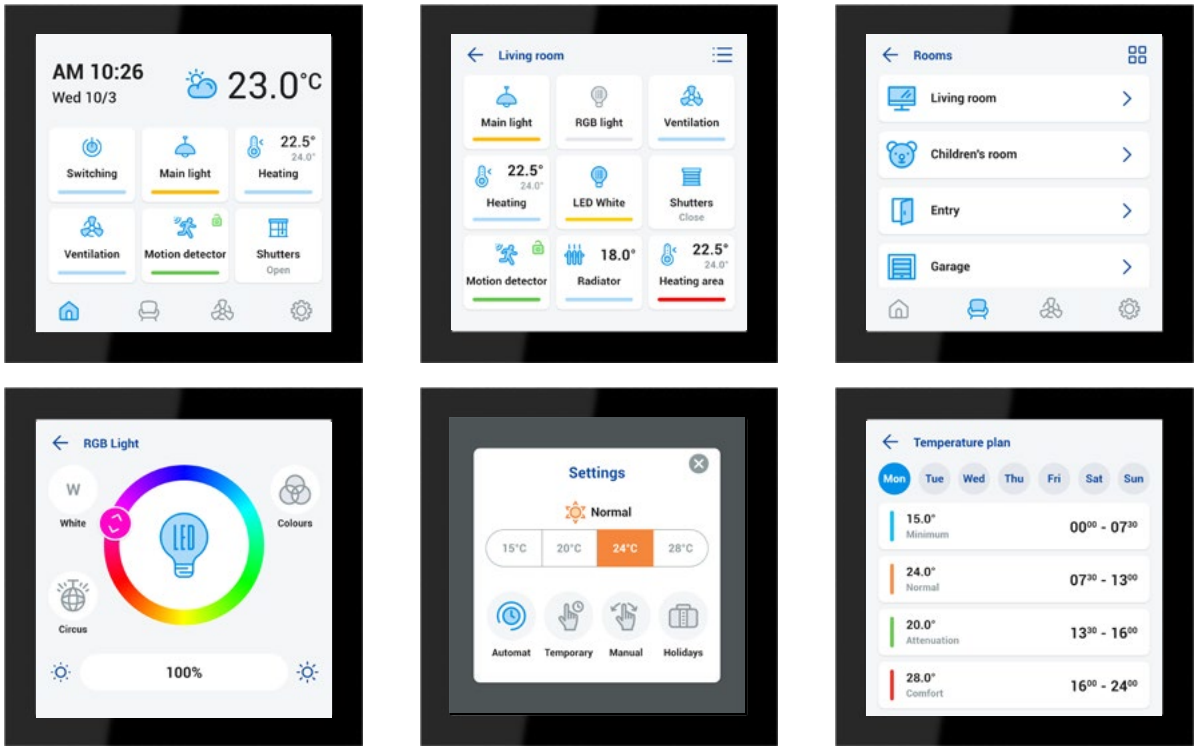
Device description



Communication diagram

Communication with RF Touch-2/B can be direct (fixed IP) or indirect (via iNELS cloud).

Screen preview



RFRP-20N | Repeater to extend the range

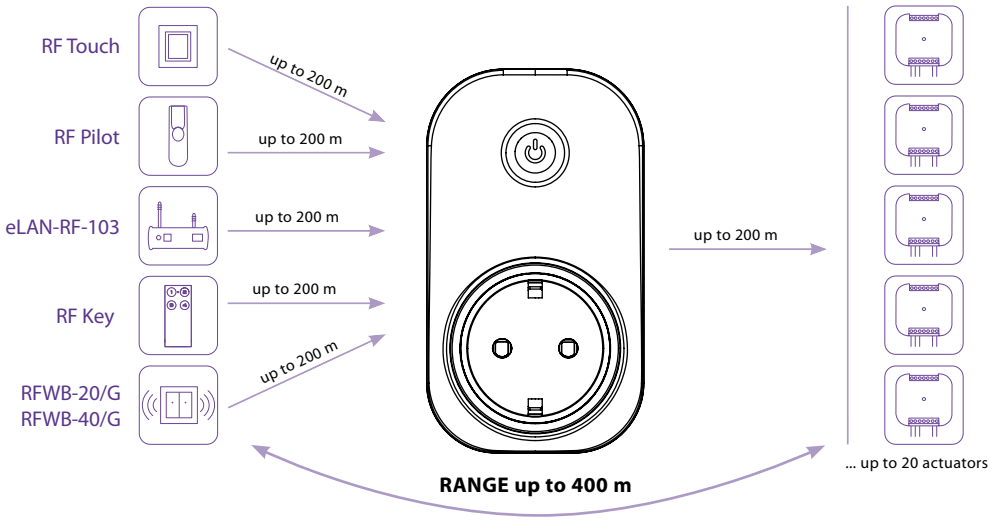
EAN code:
RFRP-20N/Schuko: 8595188145473 RFRP-20N/British: 8595188145480
RFRP-20N/French: 8595188145107

- The signal repeater is used to increase the range between the controller and the device by up to 200 meters.
- It is designed for signal transmission up to 20 components.
- Indications:
- green LED - supply voltage,
- red LED - active status (receiving and transmitting RF signal).
- Programming is done with the key.
- Communication frequency with bidirectional RFIO protocol.
- Thanks to the socket design, installation is simple by plugging it directly into the existing socket, the function of the through socket will be retained.

Technical parameters	RFRP-20N/230V
Supply voltage:	230-250 V
Supply voltage frequency:	50-60 Hz
Apparent input:	7 VA / cos φ = 0.1
Dissipated power:	0.7 W
Supply voltage tolerance:	+10%/-15%
Control	
Communication protocol:	RFIO2
Frequency:	866–922 MHz (for more information see p. 74)
Range:	in open space up to 200 m
Minimum control distance:	20 mm
Programming:	button - green LED/red LED
Other data	
Operating temperature:	-20 to +55 °C
Storage temperature:	-30 to +70 °C
Mounting:	plug into a socket
Protection:	IP20 Device
Dimensions:	63 x 110 x 74 mm
Weight:	115 g
Related standards:	EN 607 30-1 ED.2

Produced in 3 designs of sockets/plugs:

Signal transmission and extension for up to 20 components.



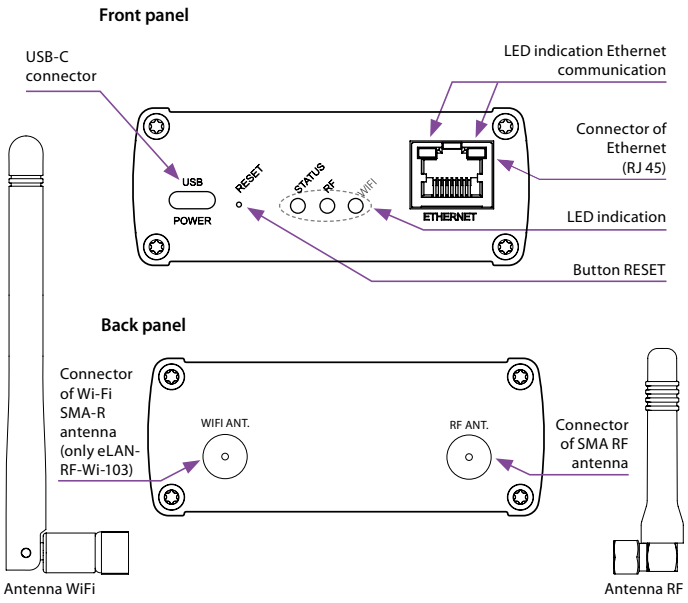
EAN code:
eLAN-RF-103: 8595188180443
eLAN-RF-Wi-103: 8595188180849

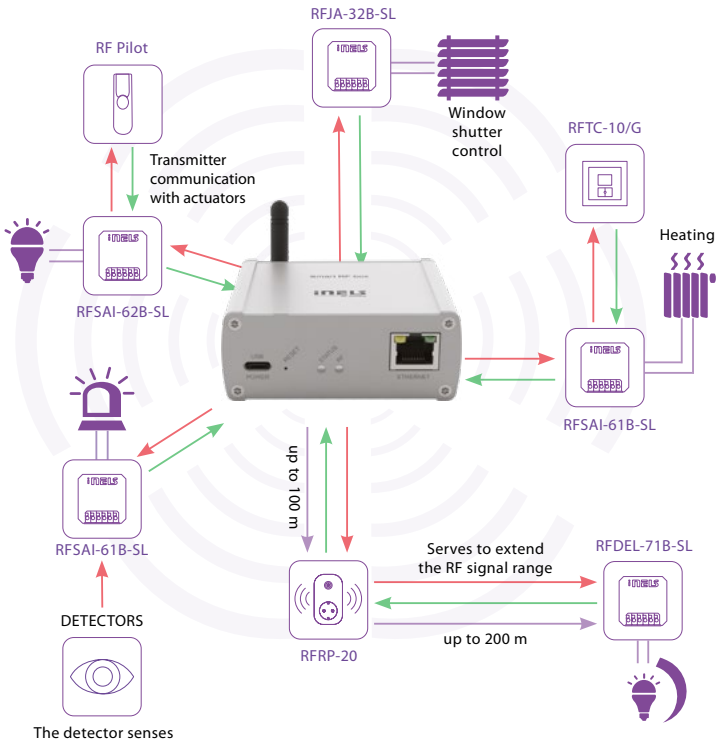
Technical parameters	eLAN-RF-103	eLAN-RF-Wi-103
Interface RF Control		
Communication protocol:	RFIO2	
Broadcasting frequency:	866–922 MHz (for more information see p. 74)	
Signal transfer method:	two-way addressed message	
Output for antenna:	SMA connector*	
Antenna RF:	AN-I 1 dB	
Indications RF communications:	1x green RF LED	
Range:	in open space up to 100 m	
Interface Ethernet		
ETH operating status indicator:	green LED	
ETH communication indicator:	yellow LED	
Communications interface:	100 Mbps (RJ45)	
Preset IP address:	DHCP	
Interface Wi-Fi		
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 connector*
Antenna Wi-Fi:	x	WiFi 2.4 GHz 1 dB
Indications Wi-Fi communication:	x	1x green LED Wi-Fi
Range:	x	up to 20 m
Wi-Fi network mode:	x	SOFT-AP/Client
Power supply		
Supply voltage/current:	5 V DC/0.5 A	5 V DC/1 A
Power source:	110–230 V AC/5 V DC–2 A (connector USB-C)	
Button RESET		
- short press:	restart the device	
- press> 5 s	reset network settings	
- press> 10 s:	reset to factory settings	
Indication LED STATUS		
- green:	normal mode	
- red:	error condition	
- orange:	initialization/start	
Other data		
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	146 g

* Max Tightening Torque for antenna connector is 0.56 Nm.

- The Smart RF Box is a gateway between iNELS RF elements and applications for smartphones, tablets, watches, televisions, voice assistants (Google Home & Alexa) and other third-party devices.
- It is produced in two versions:
  a) eLAN-RF-103: LAN communication
  b) eLAN-RF-Wi-103: LAN communication with WiFi in AP (Access Point) mode with direct connection of the smartphone to eLAN-RF-Wi-103 or in Client mode (connection to the home WiFi network by connecting the smartphone via home wireless router).
- It communicates from up to 70 iNELS RF elements, processes set programs for automatic control.
- Thanks to two-way communication, it displays the current status of individual elements.
- Powered by 5 V DC/2 A adapter, USB-C connector (included).
- Configuration is done via the iHC application.
- 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, see accessories on page 69. For the eLAN-RF-Wi-103 version, a WiFi antenna is included in the package.

Device description





Command to execute function
Function execution feedback

Hotel Retrofit (HRESK)

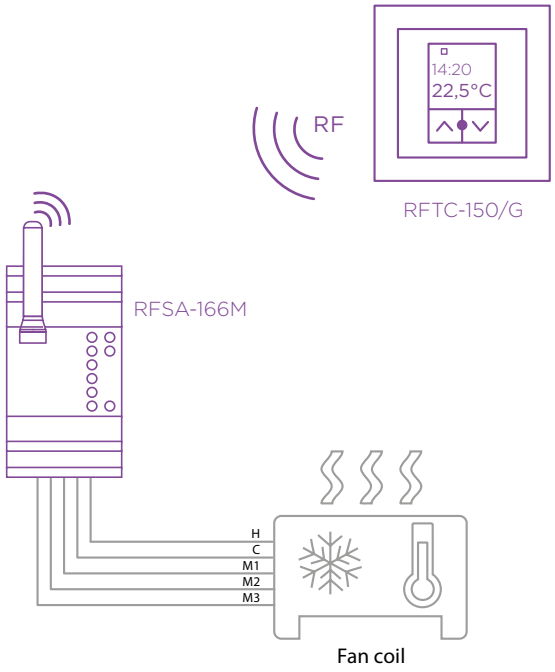
Cost savings, increased comfort,
introduction of automation into a hotel room

EAN code:
RFTC-150/G: 8595188134576

Technical parameters	RFTC-150/G
Supply voltage:	2x 1.5 V AAA batteries
Battery life:	up to 1 year
Temperature correction:	2 buttons ∨/∧
Temperature offset:	± 5 °C
Display:	LCD, characters
Backlighting:	active 10 s after pressing
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
Control	
Communication protocol:	RFIO
Frequency:	866–922 MHz (for more information see p. 74)
Repeater function:	no
Signal transmission method:	bidirectionally addressed message
Range:	in open space up to 100 m
Minimum control distance:	20 mm
Other data	
Max. number of controlling actuators RFSA-166M:	1
Program:	weekly
Operating temperature:	0 to +55 °C
Operating position:	on the wall
Mounting:	by gluing/screwing
Protection:	IP30
Contamination degree:	2
Dimensions - plastic: - metal, glass, wood, granite:	 85 x 85 x 20 mm 94 x 94 x 20 mm
Weight:	66 g (without batteries)
Related standards:	EN 60669, EN 300 220, EN 301 489 directive RTTE Directive, Order. No 426/2000 Coll. (Directive 1999/EC)

- The wireless controller RFTC-150/G measures the room temperature by internal sensor. On the basis of a set program it sends commands to the switching component RFSA-166M Switching fan coil.
- It is possible to set automatic or manual mode.
- Range of measured temperature 0 to 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 (2x 1.5 V AAA batteries - 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.
- Components support communication with RF detectors.
- Range up to 100 m (in open space), if the signal is insufficient between the controller and unit, use the signal repeater RFRP-20 or protocol component RFIO2 that support this feature.
- Communication frequency with bidirectional protocol RFIO.
- Colour combination of temperature unit in design of frames LOGUS^{90} (plastic, glass, wood, metal, stone).

Connection



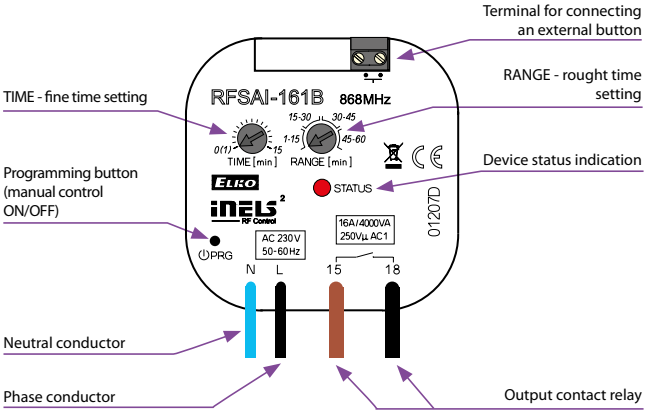
EAN code:
RFSAI-161B: 8595188149341

Technical parameters	RFSAI-161B/230V	RFSAI-161B/120V
Supply voltage:	230 V AC	120 V AC
Supply voltage frequency:	50–60 Hz	60 Hz
Apparent power:	9 VA	9 VA
Dissipated power:	0.7 W	
Supply voltage tolerance:	+10 %; -15 %	
Output		
Number of contacts:	1x switching ($AgSnO_2$)	
Rated current:	12 A/AC1	
Switching power:	3000 VA/AC1, 288 W/DC	
Peak current:	30 A, max. 4 s at 10%	
Switching voltage:	250 V AC1/24 V DC	
Min. switching power DC:	100 mA/10 V	
Insulation voltage between outputs and internal circuits:	basic Insulation (Cat. III surges by EN 60664-1)	
Isolation voltage open contact:	1 kV	
Mechanical service life:	$3x10^7$	
Electrical service life (AC1):	$5x10^4$	
Indication of relay switch:	red LED	
Control		
Communication protocol:	RFIO2	
Frequency:	866–922 MHz (for more information see p. 74)	
Repeater button:	yes	
Manual control:	button PROG (ON/OFF)	
External button:	cable length max. 12 m ⚠*	
Range:	in open space up to 160 m	
Other data		
Open contact voltage external switch:	3 V	
Resistor for the management of external switch:	<1 kΩ	
Resist. of connection for open contact:	>10 kΩ	
Galvanic isolation of input:	no	
Operating temperature:	-15 to +50 °C	
Storage temperature:	-30 to +70 °C	
Working position:	any	
Mounting:	free at lead-in wires	
Protection:	IP30	
Overvoltage category:	III.	
Contamination degree:	2	
Terminals:	0.5–1 mm^2	
Terminals (CY wire, Cross-section):	2x 0.75 mm^2, 2x 2.5 mm^2	
Terminal length:	90 mm	
Dimensions:	49 x 49 x 21 mm	
Weight:	50 g	

* We recommend using a twisted pair cable for this distance.
⚠ Control button input is at the supply voltage potential.

- Switch component with one output channel which is used in combination with detectors for automatic lighting control.
- RFSAI-161B has a pre-set control algorithm (scene) adapted to the requirements of hotel room control, see wiring.
- Each RFSAI-161B can be programmed with 1x RFMD-100, 1x RFWD-100 and 1x wireless controller (RFWB-40/G or RF KEY).
- The terminals on the component give you the opportunity to connect a wired detector or an existing key installation.
- It enables connection of the switched load up to 1x 12 A (3000 VA).
- The programming button on the unit 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 or protocol component RFIO2 that support this feature.
- Communication frequency with bidirectional protocol RFIO2.

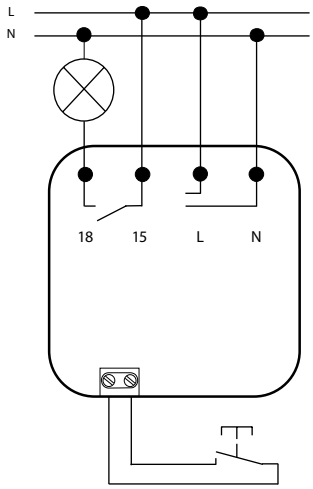
Device description



Compatible wireless detectors:
Movement: RFMD-100
Door/Window: RFWD-100

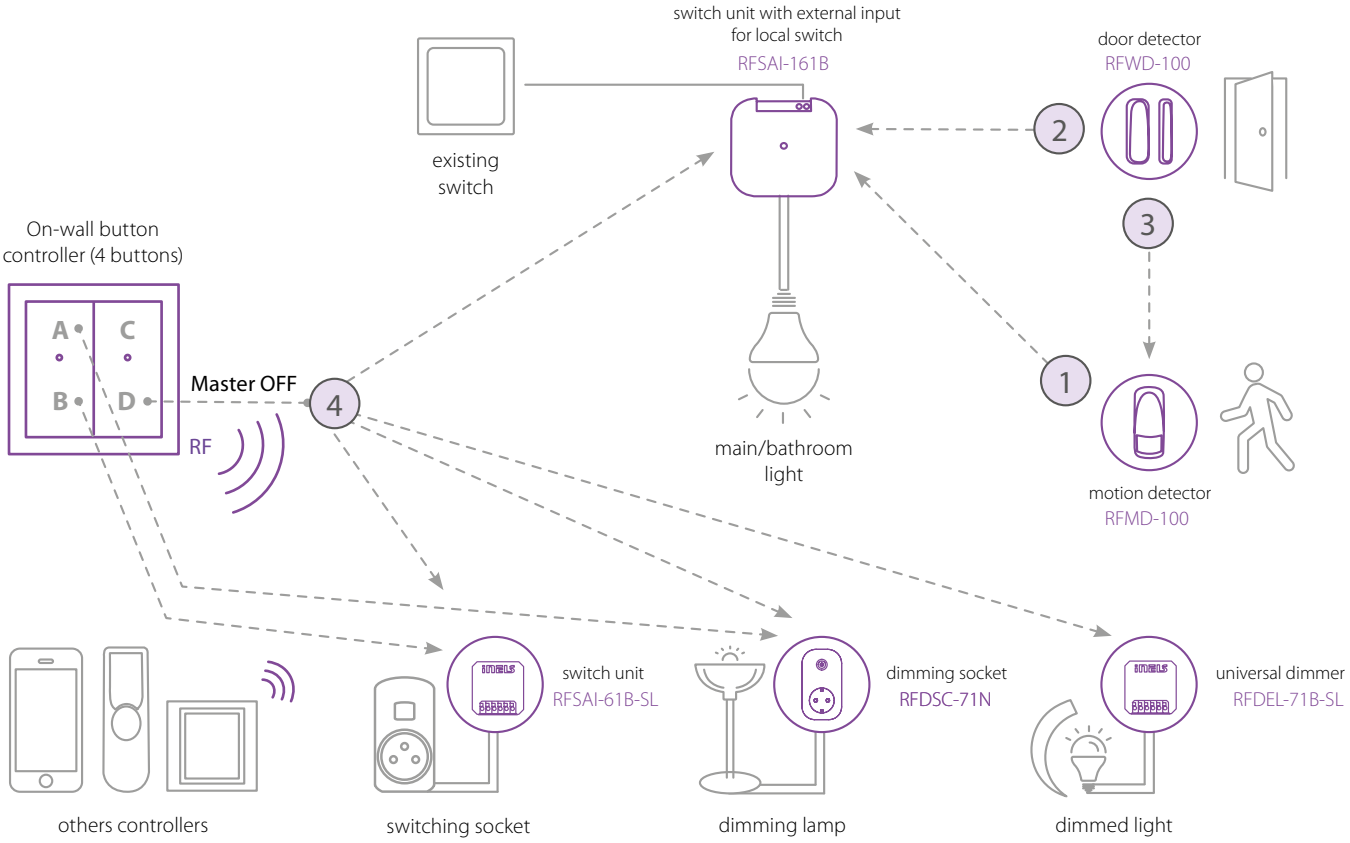
Connection

RFSAI-161B/230V
RFSAI-161B/120V



RFSAI-161B | Ligting control unit with pair detectors and external button input

Example



Function

1. When RFMD-100 motion detector captures the movement of the guest, the light ON command is sent.
2. The functionality of RFWD-100 door detector is delayed OFF= after the guest (or cleaner) close the door than the timer starts running (which you can set) and the light will turn OFF.
3. If there is movement the command from RFWD-100 door detector (delay off) will be cancelled by the motion detector RFMD-100 command.
4. Pressing the button at position D of RFWB-40 On-wall button controller sends an OFF command to all components that are controlled from that button while blocking the response to RFMD-100 motion detector.
5. You are able to control other units with other channels (A, B, C) on RFWB-40 On-wall button controller.
6. When guest wakes up and presses any RFWB-40 button, then pressing on button makes all units working again after previous pressing button on position D and it also re-enable RFMD-100 motion detector primary function.

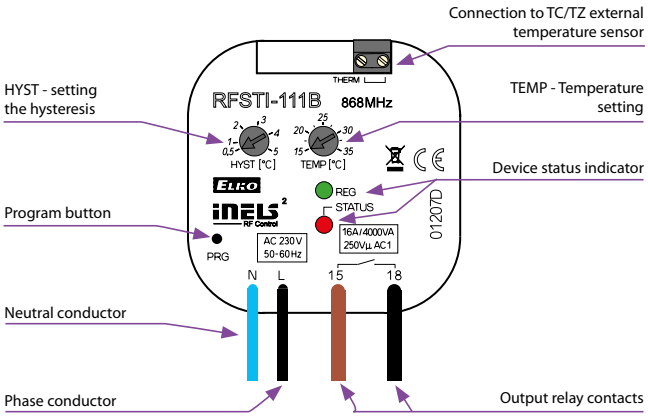
EAN code:
RFSTI-111B: 8595188149150

Technical parameters	RFSTI-111B/230V	RFSTI-111B/120V
Supply voltage:	230 V AC	120 V AC
Supply voltage frequency:	50–60 Hz	60 Hz
Apparent input:	9 VA/cos φ= 0.1	9 VA/cos φ= 0.1.
Dissipated power:	0.7 W	
Supply voltage tolerance:	+10 %; -15 %	
Temperature measurement input:	1x external TZ/TC temperature sensor input ⚠4	
Temp. measurement range and accuracy:	+15 to +35 °C; 0.5 °C of the range	
Output		
Number of contacts:	1x switching (AgSnO²)	
Rated current:	12 A/AC1	
Switching power:	3000 VA/AC1, 288 W/DC	
Peak current:	30 A/max. 4 s at 10%	
Switching voltage:	250 V AC1/24 V DC	
Min. switching power:	100 mA/10 V	
Insulation voltage between relay outputs and internal circuits:	basic Insulation (Cat. III surges by EN 60664-1)	
Isolates. voltage open relay contact:	1 kV	
Mechanical service life:	3x10⁷	
Electrical service life (AC1):	5x10⁴	
Control		
Communication protocol:	RFIO2	
Frequency:	866–922 MHz (for more information see p. 74)	
Repeater function:	yes	
Range:	in open space up to 160 m	
Other data		
Operating temperature:	-15 to +50 °C	
Storage temperature:	-30 to +70 °C	
Indication of relay switch:	red LED	
Indication regulation:	green LED	
Operating position:	any	
Mounting:	free at lead-in wires	
Protection:	IP30	
Overvoltage category:	III.	
Contamination degree:	2	
Outlets (CY wire, cross-section, length):	2 x 0.75 mm², 2 x 2.5 mm², 90 mm	
Dimensions:	49 x 49 x 21 mm	
Weight:	50 g	

⚠4 Temperature sensor input is at the supply voltage potential.

- The component measures temperature in the range of 15 to 35 °C with external sensor and on the basis of the set temperature switches air conditioning.
- It is particularly suitable for hotel rooms.
- With the Window/Door sensor programmed, when the window/door is opened, the device relay contact is automatically disconnected, there by saving unnecessary energy consumed for cooling when the window/door is open.
- It enables connection of the switched load up to 12 A (3000 VA).
- Up to 4 RFWD-100 detectors can be connected to one RFSTI-111B device.
- Range up to 160 m (in open space), if the signal is insufficient between the controller and unit, use the signal repeater RFRP-20 or protocol component RFIO2 that support this feature.
- Communication frequency with protocol RFIO2.
- The BOX design lets you mount it right in an installation box, a ceiling or controlled appliance cover.
- External sensor TC (-20 to +80 °C) or TZ (-40 to +125 °C) for length of 3 m, 6 m, 12 m. For more information see „Accessories“ on page 41.

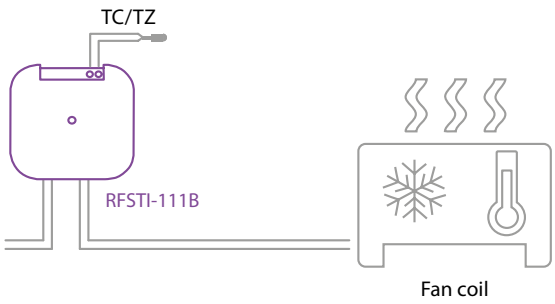
Device description



Function

The external sensor senses the temperature of the room, turns the air conditioner on and off according to the set temperature. Responds to commands from the detector - when you open the window, turn off air conditioning.

Connection



RFSA-166M | Switch unit for fancoil, 6-channels

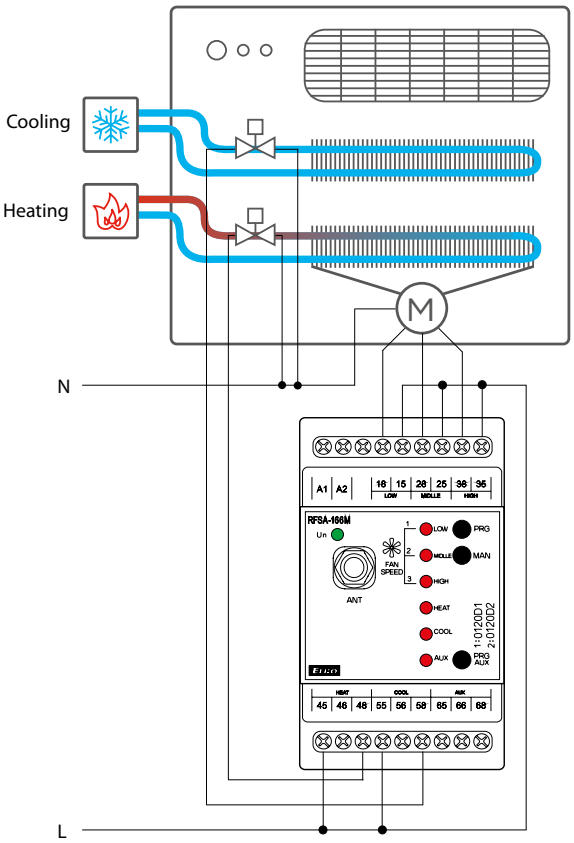
EAN code:
RFSA-166M: 8595188134323

Technical parameters	RFSA-166M/230V
Supply voltage:	110–230 V AC
Supply voltage frequency:	50–60 Hz
Apparent input:	min. 2 VA/max. 5 VA
Dissipated power:	min. 0.5W/max. 2.5W
Supply voltage tolerance:	+10%/-25 %
Output	
Number of contacts:	3x changeover ($AgSnO_2$); 3x switching ($AgSnO_2$)
Rated current:	8 A/AC1
Switching power:	2000 VA/AC1
Peak current:	10 A/<3 s
Switching voltage:	250 V AC1
Max. DC switching power:	500 mW
Mechanical service life:	$1x10^7$
Electrical service life (AC1):	$1x10^5$
Control	
Wireless:	on output RE6 up to 25-channels/buttons
Communication protocol:	RFIO2
Frequency:	866–922 MHz (for more information see p. 74)
Repeater button:	yes
Manual control:	MAN button
Range:	in open space up to 100 m
RF antenna:	AN-I included (SMA connector)*
Other data	
Operating temperature:	-15 °C to +50 °C
Operating position:	any
Mounting:	DIN rail EN 60715
Protection:	IP20 from the front panel
Overvoltage category:	III.
Contamination degree:	2
Connecting conductor cross-section (mm^2):	max. 1x 2.5, max. 2x 1.5/ with a hollow max. 1x 2.5
Dimensions:	90 x 52 x 65 mm
Weight:	264 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.

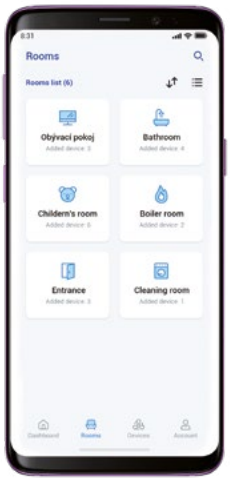
- Thanks to the 6-channels design of the switching component it can control the heating/cooling mode and with 3 speeds, the AUX output channel can be used to control appliances, sockets or lights.
- The RFSA-166M wireless switching component can be combined with the RFTC-150/G.
- Up to 25 detectors RFWD-100 can be assigned to the switching component.
- The RFWD-100 can be assigned to the RFSA-166M using the PRG button.
- Output Channel AUX:
  - up to 25-channels can be controlled,
  - can be combined with detectors, controllers or system components of iNELS RF Control,
  - function: button, pulse relay and delayed start or return time functions with 2 s – 60 min time setting. Function description can be found on page 72,
  - memory status is retained in the event of a power failure,
  - the AUX programming button on the component also serves as manual control of the AUX 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, see accessories on page 69.
- Range up to 100 m (in open space), if the signal is insufficient, use the signal repeater RFRP-20 or protocol component RFIO2 that support this feature.
- Communication frequency with bidirectional protocol RFIO2.

Connection for fancoil control



Applications

Smartphones

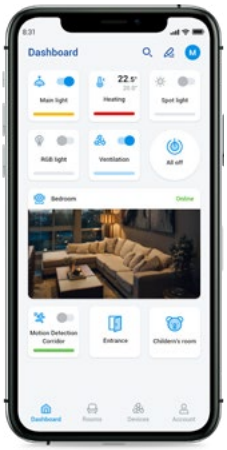


GET IT ON Google Play

Download on the App Store

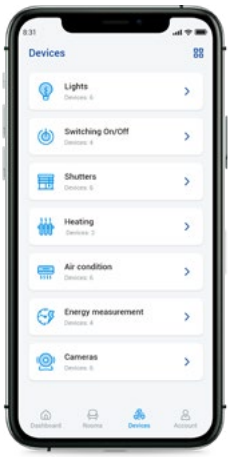
- Control application for smartphones and tablets with Android and iPhone operating systems - iHC-AiO. It allows you to easily control your house.
- The user-friendly and intuitive application environment offers central control from one place.
- The application enables control of the complete iNELS RF and BUS solution via the RF Smart box, Connection server, Central unit and other supported third-party devices that are connected to the home Internet network.
- The application allows free remote control.
- IHC-AiO features:
  - unification of all iNELS devices under one application. Specifically, eLAN RF 003, eLAN RF 103, eLAN IR, CU3, CS and LARA
  - within BUS it is now possible to configure rooms without the need for a public server or CS
  - user management - in the application it will be possible to set rights for all users who will use one system
  - automation - creation of conditions within RF, BUS systems or in both systems
  - low battery notification, alarms, actuator status
  - history of states of individual actors
  - display of all added devices in a clear menu and the possibility of configuring your own dashboard.

Manual:



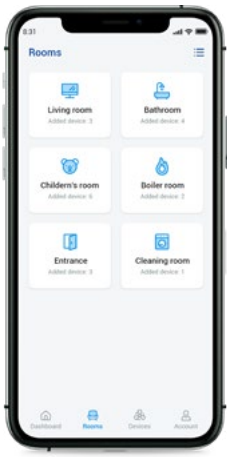
Overview

Absolute control over the state of all technologies.



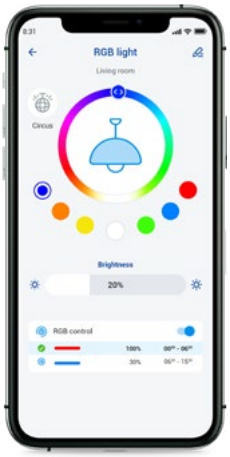
Device list

Control the device from anywhere.



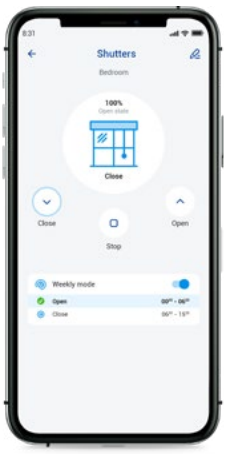
Rooms management

Settings according to individual rooms.



Colour setting

Easy adjustment of the light scene with one touch - switching, dimming, colour.



Shutters/Blinds

Possibility of individual or joint control of shading technology.

Temperature

You can set the temperature in each room exactly as you like.

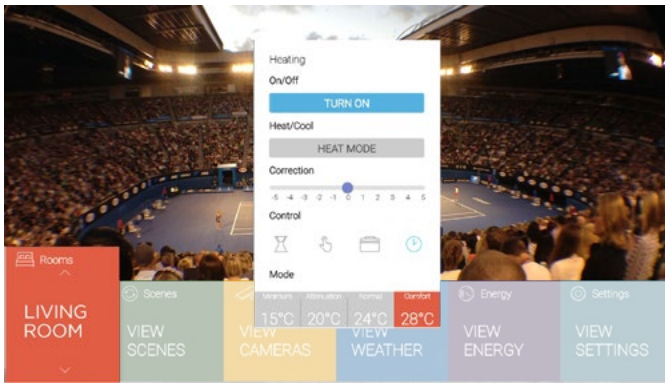
Applications

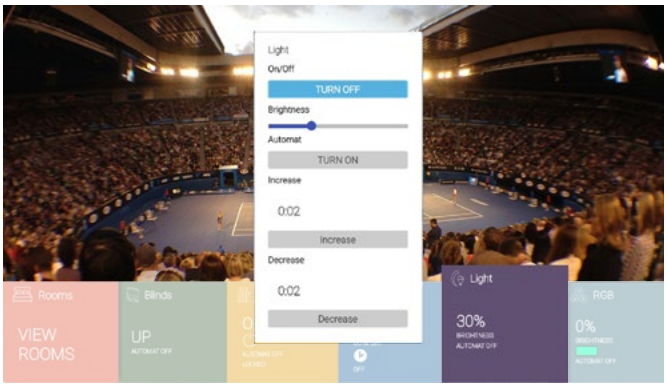
Smart TV

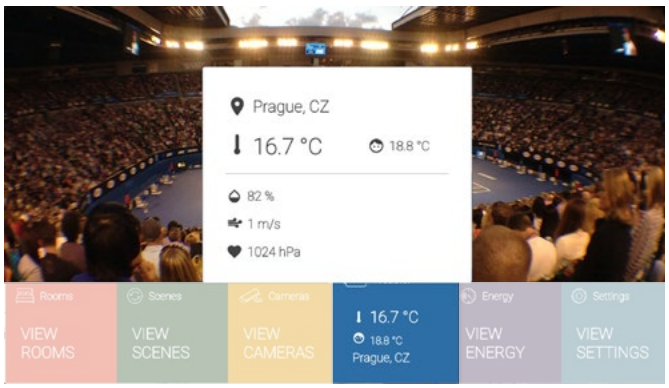
- Device control via Smart TV is possible not only in the wireless installation of iNELS RF Control using the smart box eLAN-RF, but also in the case of wired option iNELS BUS using the Connection server. The iHC--SMTV app is free to download from the app store on your Smart TV.
- The control of app works with a classic TV remote control.
- Every Smart TV that has been manufactured since 2015 and supports OS Tizen is compatible.
- Functionality:
  - ON/OFF switching, with the possibility of time schedules
  - dimming ON/OFF, smooth brightening/dimming, color change
  - scenes
  - heating (temperature correction, heating mode change, cooling/heating mode)
  - cameras (image, or live stream if supported by web browser on Smart TV).
- iHC-SMTV (Smart TV App) is free and is not licensed in any way.
- Here you will find a link to the application:

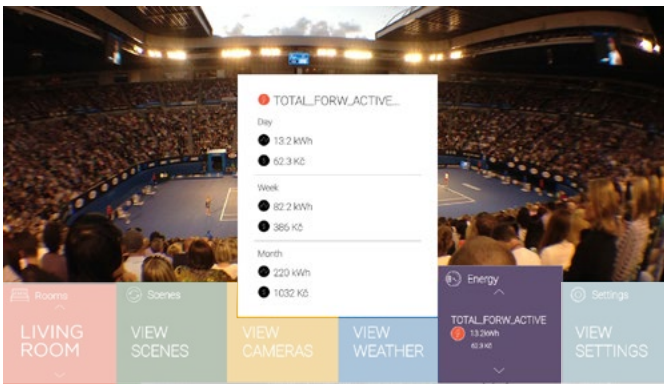
Download:

Lighting | Multimedia | Heating | Weather station | Cameras | Energy management | Switching | Intercom | Blinds, shutters









Amazon Alexa

amazon alexa

- With Alexa Artificial Intelligence, you can simplify your daily life by setting an alarm, notifications, creating new items, or reminders in your calendar.
- The voice assistant can answer questions and control individual devices and smart homes.
- It is available on mobile phones, TVs, smart speakers and other devices.
- The voice assistant is designed to comfortably control the RF Control wiring by voice using your mobile phone or smart speaker.
- As a complement to RF Control, iNELS Smart Home Solution blends in with every modern home.
- Here you will find a link to the manual:

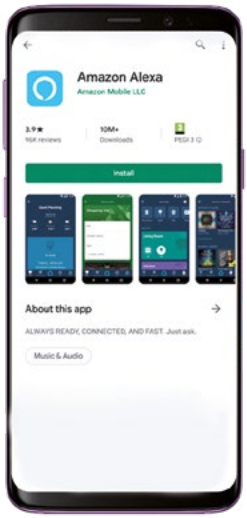
EN

Google Home

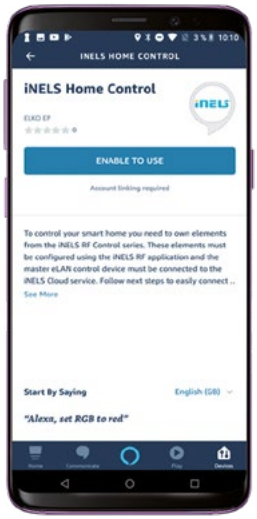
Google Home

- Google Home can become a member of your smart home family.
- It communicates with the smart eLAN-RF box via the Cloud connection.
- This allows you to control, for example, the temperature setting or the light intensity by voice.
- The voice assistant is designed to conveniently control the RF Controlled electro-installations by voice using your mobile phone or smart speaker.
- As a complement to RF Control, iNELS Smart Home Solution blends in with every modern home.
- Here you will find a link to the manual:

EN

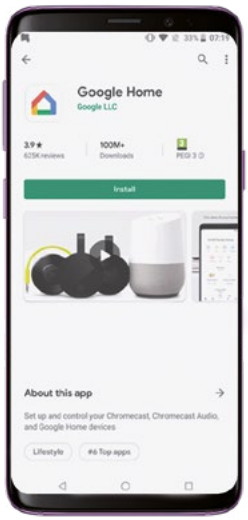


Register to the Cloud via email and set a password.



Preview the Amazon Alexa app on Google Play.

Preview the Amazon Alexa app on Google Play.



Setting up products in iNELS Home Control.

Application iHC-MAIRF-Cloud/iHC-MIIRF-Cloud:

- Designed for iOS 10+ and Android 5.0+.
- Optimized for devices with 800x480 screen resolution.
- The language of the application changes automatically according to the language set in Android/iOS.
- You can create a cloud account using the Setup Wizard or the login button in the main menu. The recommended minimum speed for connecting the eLAN-RF to the Cloud should be in the order of megabytes per second (3G - 1Mbit/s and higher).

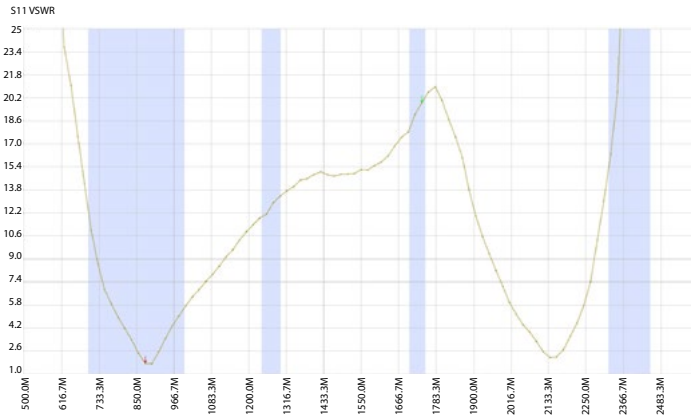
AN-I | Internal antenna

EAN code:
AN-I: 8595188161862

Technical parameters	AN-I
Polarization:	vertical
Gain:	2.1 dBi
Dimensions:	17 x 44 x 8.5 mm
Impedance:	50 Ω
Colour:	black

The rod antenna with SMA connector is supplied as standard with the product.

AN-I antenna measurement graph



- The internal antenna is included in the standard package.

Extension cable for external antenna

10 m

Technical parameters	
Connector Type:	SMA (male/female)
Colour:	white
Cable Length:	10 m

Measured range between controllers and RFSA-66M

	RFGB	RFWB	RF KEY
AN-I	305 m	290 m	190 m
AN-E	300 m	290 m	200 m
AN-E3	275 m	260 m	180 m

The range is measured with direct visibility between the RFGB-x, RFWB-x, RF KEY and RFSA-66M actuators.

Connecting the antenna extension cable does not affect the range.

RFAF/USB | Service Key

Technical parameters	RFAF/USB
Power:	max. 1 W
Interface:	USB 1.1 and higher, plug. „A“
Range:	100 m
Min. distance of RF Touch-Actuator:	1 m
Communication protocol:	RFIO2
Frequency:	866–922 MHz (for more information see p. 74)
Power supply indication:	green LED
RF communication indication:	red LED
Other data	
Operating temperature:	0 to +55 °C
Storage temperature:	- 20 to +70 °C
Protection:	IP30
Contamination degree:	2
Work space:	any
Installation:	any
Dimensions:	22 x 85 x 15 mm
Weight:	20 g
Related standards:	EN 60950-1

EAN code:
RFAF/USB: 8595188145039

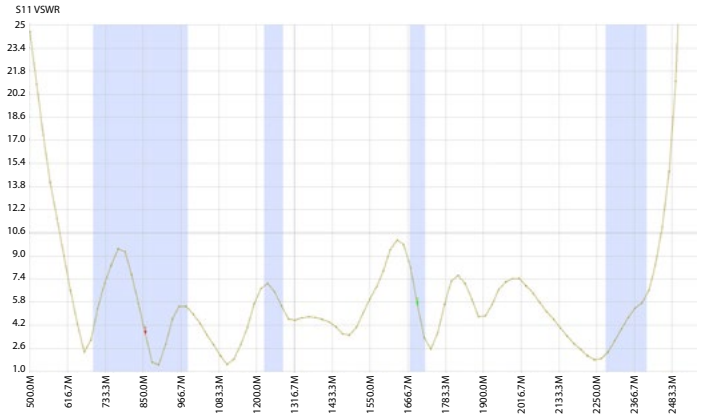
- The RFAF/USB Service Key (in conjunction with the RF_analyzer) is designed for iNELS RF Control system partners and serves for:
  - Setting the repeater (signal amplifier) through the iNELS RF Control elements labeled as RFIO2. This option allows you to communicate over longer distances (in the order of 50 m) via existing iNELS RF Control elements in the installation (eliminating the use of the RFRP-20 repeater).
  - upgrade of firmware in the iNELS RF Control elements (labeled RFIO2), in the case of new firmware versions that improve the functionality of the elements on which we are constantly working.
  - The RF Network Analyzer will reliably analyze the communication between the controller (where you plan to place it) and the component in the installation. Indicates signal strength/quatty as well as possible frequencies that can interfere with communication.
  - SW RF analyzer can be found at inels.com/partners in section SW/FW RF Control

AN-E1 | External antenna

EAN code:
AN-E1: 8595188190121

Technical parameters	AN-E1
Mounting:	Magnetic Mount
Cable Length:	3 m
Polarization:	vertical
Gain:	5 dBi
Impedance:	50 Ω
Colour:	black
Dimensions:	Ø 30 x 280 mm

AN-E antenna measurement graph



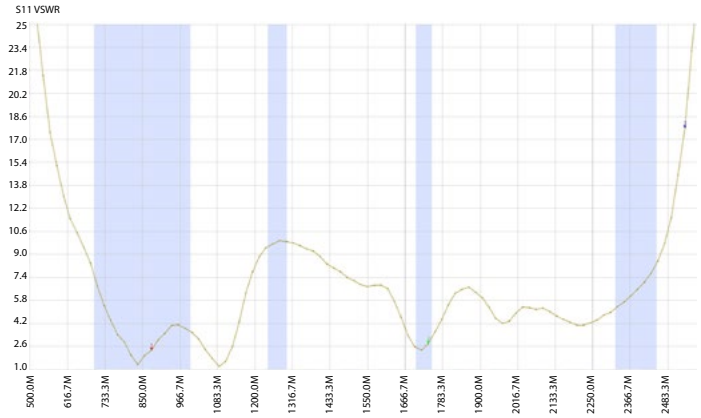
AN-E3 | External antenna

3 m

EAN code:
AN-E3: 8595188190121

Technical parameters	AN-E3
Cable Length:	3 m
Polarization:	vertical
Gain:	3 dBi
Impedance:	50 Ω
Colour:	black
Dimensions:	Ø 50 x 88 mm

AN-E3 antenna measurement graph



- The external antenna is intended for outdoor use.

MS | Magnetic sensor

- The LED sensor scans LED impulses on the meter, which indicates consumption by flashing.
- The LED sensor is particularly suitable for power meters that support LED pulse sensing (the LED on the meter is marked “imp”).
- The sensor’s scanner is affixed with glue above the LED diode of the meter signaling indication of consumption.
- The sensor is connected to the internal terminal of the RFTM-1 converter.

Technical parameters	MS
Voltage range:	1.6 to 3.6 V
Consumption	7uA *
Output load:	max. 3mA
Scanning period:	100ms
Switch sensing sensitivity (output L):	±(2.3 to 4.7)mT
Opening detectioning sensitivity (output->H):	±(0.9 to 3.8)mT
Hysteresis:	1mT
Working temperature:	-40 to 80 °C
Other data	
Cross-section of connecting wires:	max. 3.5 mm
Wire length:	1.5 m
Protection:	IP20

LS | LED sensor

- The LED sensor scans LED impulses on the meter, which indicates consumption by flashing.
- The LED sensor is particularly suitable for power meters that support LED pulse sensing (the LED on the meter is marked “imp”).
- he sensor’s scanner is affixed with glue above the LED diode of the meter signaling indication of consumption.
- The sensor is connected to the internal terminal of the RFTM-1 converter.

Technical parameters	LS
Voltage range:	2.5 to 3.7V
Minimum consumption (idle mode):	0.5uA *
Maximum power consumption (pulses 100Hz):	max. 2uA *
Working temperature:	-20 to 50 °C
Other data	
Cross-section of connecting wires:	max. 3.5 mm
Wire length:	1.5 m
Protection:	IP20

Sensor LS responds only to light pulses, i.e. it does not detect static state LEDs.

WS | Magnetic sensor for water meter

- A magnetic sensor that detects the pulse that is created by each rotation of the magnet placed on the unit dial meter.
- The WS sensor is especially suitable for water meters that support magnetic sensing.
- The sensing sensor is glued over the circular unit face of the gauge (the scanning dial is different from the other indicators, e.g. the white arrow wheel).
- The sensor is connected to the internal terminal of the RFTM-1 converter.

Technical parameters	WS
Voltage range:	1.65 to 5.5V
Consumption:	1.5uA *
Output load:	max. 150uA
Switch sensing sensitivity:	±(0.3 to 1.1)mT
Opening detection sensitivity:	±(0.2 to 0.9)mT
Hysteresis:	0.2mT
Working temperature:	-40 to 80 °C
Other data	
Cross-section of connecting wires:	max. 3.5 mm
Wire length:	1.5 m
Protection:	IP20

* Measured at 3V, no load output.

Problematic choice of suitable relay contact for a particular load switched with a product is described below. Mostly we experience problems with incorrect choice of load (meaning incorrect relay for a particular load) which results in permanent switching of contact (sealing) or damage on relay contact – which then results in malfunction.
What load can you use? Detailed types of load according to standard EN 60947 are described in charts below – categories of use.

Category of use	Typical use	EN
AC current, cosφ = P/S (-)		
AC-1	Non-inductive or slightly inductive load, resistance furnace Includes all appliances supplied by AC current with power factor (cos φ) ≥ 0.95 Examples of usage: resistance furnace, industrial loads	60947-4
AC-2	Motors with slip-ring armature, switching off	60947
AC-3	Motors with short-circuit armature, motor switching when in operation This category applies to switching off motors with short-circuit armature while in operation. While switching, contactor switches current which is 5 up to 7 times rated current of motor.	60947-4
AC-4	Electro-motors with short-circuit armature: start up, braking by backset, changeover	60947
AC-5a	Switching of electrical gas-filled lights, fluorescent lights	60947-4
AC-5b	El. bulb switching Enables low contact loading due to resistance of cold fiber is many times smaller that the one of hot fiber.	60947-4
AC-6a	Switching of transformers	60947-4
AC-6b	Switching of capacitors	60947-4
AC-7a	Switching low inductive loads of home appliances and similar applications	60947
AC-7b	Load of motors for home appliances	60947
AC-8a	Switching of hermetically sealed motors of cooling compressors with manual reset switches against overload Hermetically sealed cooling compressors have to be placed in one box without external shaft or shaft padding and motor must operate with cooling liquid	60947
AC-8b	Switching of hermetically sealed motors of cooling compressors with manual reset switches against overload Hermetically sealed cooling compressors have to be placed in one box without external shaft or shaft padding and motor must operate with cooling liquid	60947
AC-12	Switching of semiconductor loads with separation transformers	60947-5
AC-13	Switching of semiconductor loads with separation transformers	60947-5-1
AC-14	Switching of low electro-magnetic loads (max.72 VA)	60947-5-1
AC-15	Management of alternating electro-magnetic loads This category applies to switching inductive loads with input for closed electro-magnetic circuit higher than 72 VA Use: switching coils of contactors	60947-5
AC-20	Connecting and disconnecting in unloaded states	60947-3
AC-21	Switching resistive loads, including low loading	60947-3
AC-22	Switching of mixed resistive and inductive loads, including low overloading	60947-3
AC-23	Switching of motor loads or other high inductive loads	60947-3
AC-53a	Switching of motors with short-circuit armature with semiconductor contactors	60947

Note: Category AC 15 replaces formerly used category AC 11

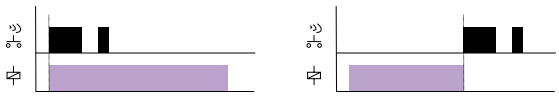
DC current, t = L/R (s)		
DC-1	Non-inductive or low inductive load, resistive furnaces	60947-4
DC-3	Shunt motors: start-up, braking by backset, reversion, resistive braking	60947-4-1
DC-5	Series motor: start-up, braking by backset, reversion, resistive braking	60947-4-1
DC-6	Non-inductive or low inductive loads, resistive furnaces – el. bulbs	60947-4-1
DC-12	Management of resistive loads and fixed loads with insulation by opto-electric element	60947-5-1
DC-13	Switching of electromagnets	60947-5-1
DC-14	Switching of electromagnetic loads in circuits with limiting resistor	60947-5-1
DC-20a(b)	Switching and breaking without load(a: frequent switching ,b: occasional switching)	60947-3
DC-21a(b)	Switching ohmic loads including limiting overloading (a: frequent switching ,b: occasional switching)	60947-3
DC-22a(b)	Switching of compound ohmic and inductive loads including limited overloads (e.g. shunt motors) (a: frequent switching, b: random switching)	60947-3
DC-23	Switching of highly inductive loads (e.g. series motors)	60947-3

How can you distinguish for which load is our product (relay) designated?
Our company record this information on a products and also in our catalogue, instruction manual and other promotional and technical material (website etc.).
It is important to realize that it is not always possible to point out load because of lack of information about the device (user cannot measure cos) or it is not possible because of inconstancy of parameters of switched device. Manufacturer of relays records always guaranteed parameters in ideal conditions which are done by a norm (temperature, pressure, humidity, etc.) and reality can be in a lot of cases different. Category of use (classification) of a particular relay is done by material of output contacts.
Basic types of materials which are used for production of contacts for high-performance relay are:

a) AgCd – suitable for switching ohmic loads. Before of harmfulness of Cd, this type of contact is remitted.
b) AgNi –designated for switching resistive loads, good quality switching and conducting (contact doesn't oxidate) small currents/voltages, it is not designated for surge currents and loads with inductive component.
c) AgSn or $AgSnO_2$ –suitable for switching loads with inductive component, not suitable for switching small currents/voltages, it is more resistive to surge currents, suitable for DC voltage switching, less suitable for switching loads of ohmic type.
d) Wf (wolfram)-special contact designated for switching surge currents with inductive component.
e) with gold (AgNi/Au)- Used for "improving" contacts for low currents/ voltages , prevents oxidation.

Single function - RFSA-11B

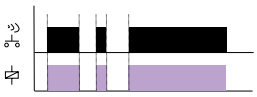
Function button ON/OFF



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, RFSAI-62B, RFSC-61, RFUS-61

Function 1 - button



The output contact will be closed by pressing the button and opened by releasing the button.

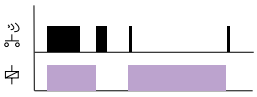
Function 2 - switch on

The output contact will be closed by pressing the button.

Function 3 - switch off

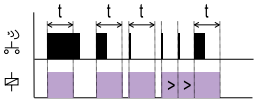
The output contact will be opened by pressing the button.

Function 4 - impulse relay



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.

Function 5 - delayed off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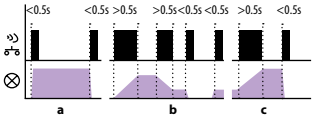
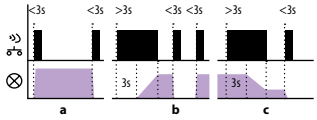
Multi function RFDA-73M/RGB, RFDEL-71B, RFDEL-71M, RFDSC-71, RFDAC-71B, RFDW-71

Light scene function 1



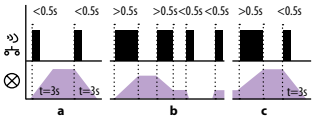
a) By pressing the programmed button for less than 0.5 s, the light illuminates; it goes out by pressing again.
b) By pressing the programmed button for more than 0.5 s, fluid brightness regulation will occur. After releasing the button, the brightness level is saved in the memory, and pressing the button 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



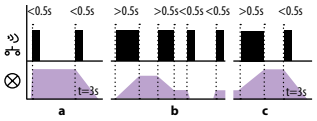
a) By pressing the programmed button for less than 3 s, the light illuminates; it goes out by pressing again.
b) In order to limit undesirable control of brightness, fluid brightness control occurs only by pressing a programmed button for over 3 s. After releasing the button, the brightness level is 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



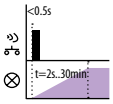
a) By pressing the programmed button for less than 0.5 s, the light fluidly illuminates for a period of 3 s (at 100% brightness). By pressing the button shortly again, the light will continuously switch off for 3 seconds.
b) By pressing the programmed button for more than 0.5 s, fluid brightness regulation 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



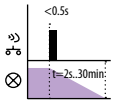
a) By pressing the programmed button for less than 0.5 s, the light illuminates. By pressing the button shortly again, the light will continuously switch off for 3 seconds (at 100% brightness).
b) By pressing the programmed button for more than 0.5 s, fluid brightness regulation will occur. After releasing 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



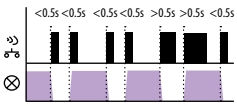
After pressing the programmed button, the light begins to illuminate in the programmed time interval in a range of 2 seconds to 30 minutes.

Function sunset



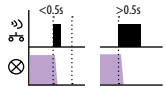
After pressing the programmed button, the light begins to dim in the programmed time interval in a range of 2 seconds to 30 minutes.

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.

Function switch off



The dimmer output switches off by pressing the button.

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-71N	✓	21	✓	21	✓	45	✓	25	✓	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RFDEL-71B-SL	✓	11	✓	11	✓	25	✓	13	✓	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RFDA-73M/RGB	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓	3x8m	✓	3x4m	✓	3x5m	✓	3x4m	✓	20m	✓	10m
RFDALI-32B-SL	-	-	-	-	-	-	-	-	-	-	✓	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!

Load capacity:

* 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 φ, capacity for power factor cos φ=1. The power factor of dimmable LEDs and ESL bulbs ranges from cos φ= 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.

Protocol and compatibility

The communication between the components is wireless at 866–922 MHz (according to country standards/regulations), using the unique RFIO and RFIO2 protocols. Both are proprietary wireless protocols from ELKO EP, which have a completely unique structure. RFIO2 is an extension of the RFIO protocol and allows users to use newly introduced features, such as unit signals (repeater), for selected features. This protocol is fully compatible with the previous version of the protocol (RFIO).

Available frequency for individual territories:

865.15 MHz India
868.1 MHz Russia
868.5 MHz EU, Ukraine, Middle East
916 MHz Australia, New Zealand, America, Israel

Benefits of RFIO:

- Communication is low-energy and reliably transfers small data packets.
- Fees or licenses are not required.
- No overlapping of communication space with unaddressed commands.
- Frequency used does not interfere with Wi-Fi/Bluetooth devices.
- Setting communication between components is not conditional on working with a computer or system.

Benefits of RFIO2:

- Products labeled as “RFIO2” will allow newly set selected components such as unit signals (repeaters).
- For components, you can easily update FW using the RFAF/USB service device.
- Enables communication with RFMD-100 and RFWD-100.
- Data transfer between wireless components takes place in such a way that other receivers within range can help transfer the information (packet) to a remote receiver that is out of reach. It is possible to cover large-scale objects (real estate) and also increase the reliability of transmission in more demanding buildings.
- Backward compatibility with RFIO elements is retained.

1

2

1) Surface mounted

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

RF Touch-W
RFWB-20/G
RFWB-40/G
RFGB-20
RFGB-40
RFTC-10/G
RFTC-50/G
RFTC-150/G
RFGB-220
RFGB-240

2) Flush mounted

RF Touch-2
RFDW-71
RFGCR-31
RFDW-271

3

4

3) DIN Rail mounted

On DIN rail according to EN 60715.

RFSG-1M
RFDA-73M/RGB
RFDEL-71M
RFSA-166M
RFSA-61M
RFSA-66M
RFSA-66MI

4) Flush mounted (BOX)

RFIM-40B-BP-SL
RFIM-40B-230-SL
RFDALI-32B-SL
RFDEL-71B-SL
RFSAI-11B-SL
RFSA-61B
RFSAI-62B-SL
RFJA-32B-SL
RFSF-11B
RFSTI-11B-SL
RFTI-10B
RFSAI-161B
RFSTI-111B

5

6

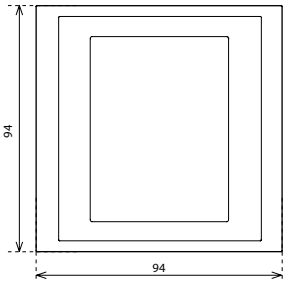
5) Mounted into the cover of appliance

RFDALI-32B-SL
RFDEL-71B-SL
RFSAI-11B-SL
RFSA-61B
RFSAI-62B-SL
RFJA-32B-SL
RFSAI-161B
RFSTI-111B

6) Surface mounted

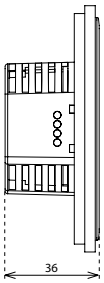
RFSOU-1
RFUS-61
RFTM-100
RFSF-1B
RFMD-100
RFWD-100
RFOWB-20
RFOSC-61
RFWS-100

Product dimension



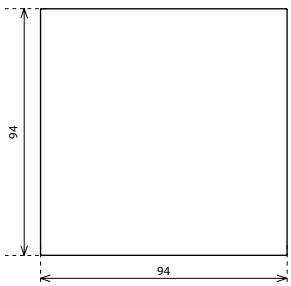
Flush - mounted

Surface -mounted



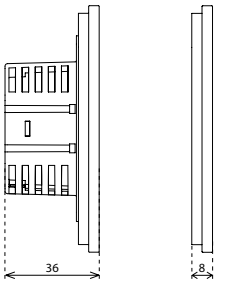
RF Touch-B

RF Touch-W



Flush - mounted

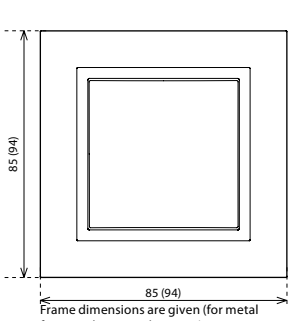
Surface -mounted



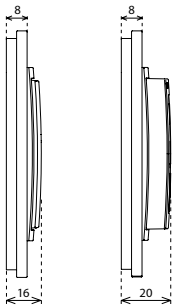
RFDW-71
RFGCR-31

RFGB-20/G
RFGB-40/G

Surface-mounted



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

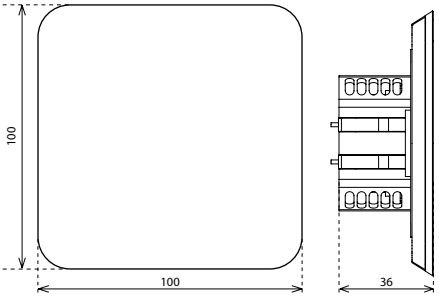


RFWB-20/G
RFWB-40/G

RFTC-10/G
RFTC-50/G
RFTC-150/G

Flush - mounted

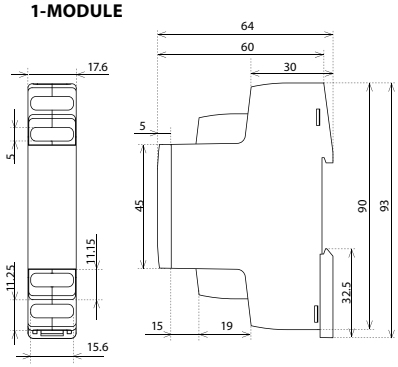
Surface -mounted



RFDW-271

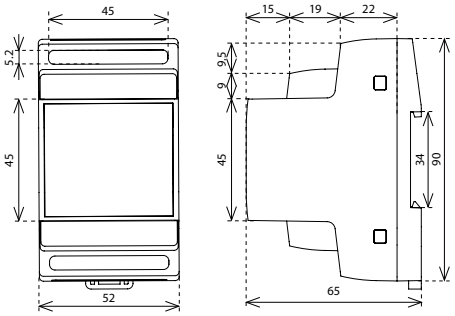
RFGB-220/G
RFGB-240/G

1-MODULE



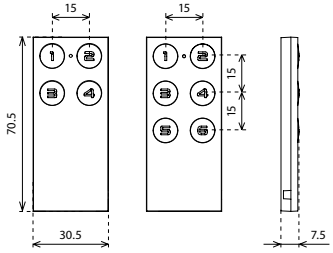
RFSG-1M
RFSA-61M

3-MODULE



RFSA-166M
RFSA-66M

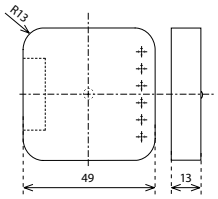
RFDEL-71M
RFDA-73M/RGB



RF KEY-40

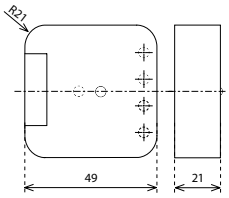
RF KEY-60

BOX

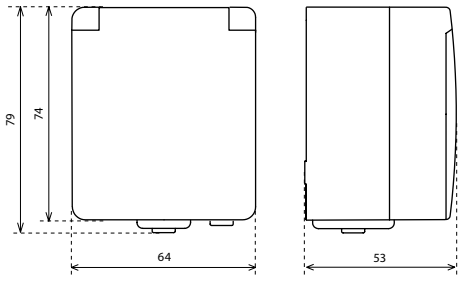


RFTI-10B
RFSF-1B

BOX

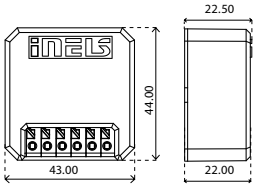


RFSA-61B
RFSAI-62B
RFSA-161B
RFSTI-111B



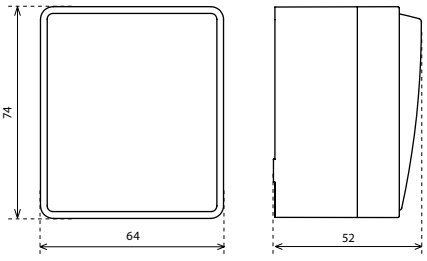
RFOSC-61

BOX



RFIM-40B-230-SL
RFIM-40B-BP-SL
RFDALI-32B-SL
RFSTI-11B-SL

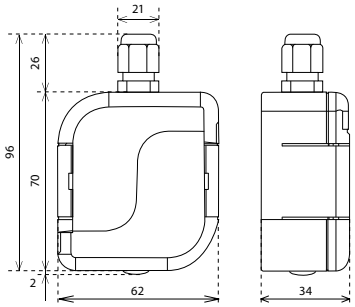
RFSAI-11B-SL
RFDEL-71B-SL
RFJA-32B-SL
RFSAI-62B-SL



RFOWB-20

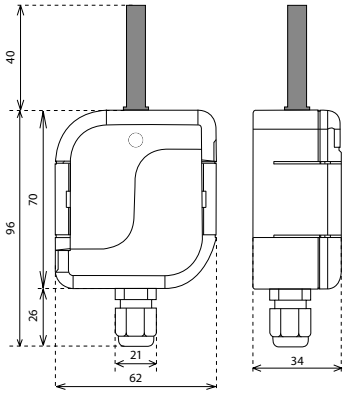
Product dimension

IP65



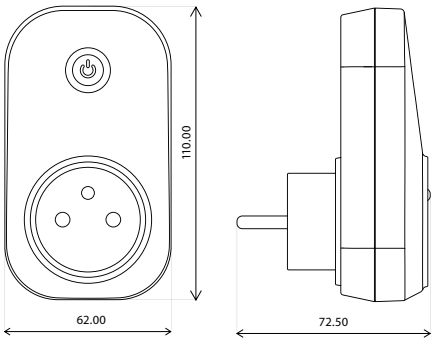
RFSOU-1

IP65



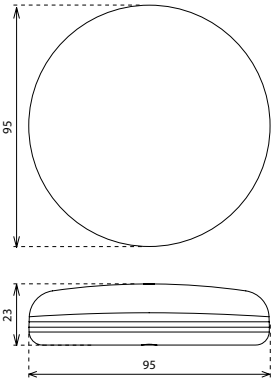
RFUS-61

Socket



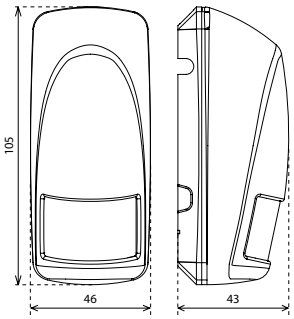
RFRP-20N RFSC-61N
RFDSC-71N

Detector



RFSF-100

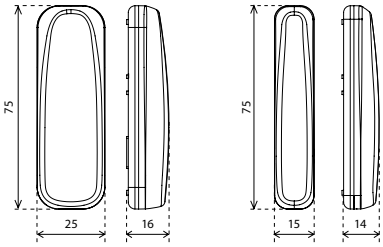
Detector



RFMD-100

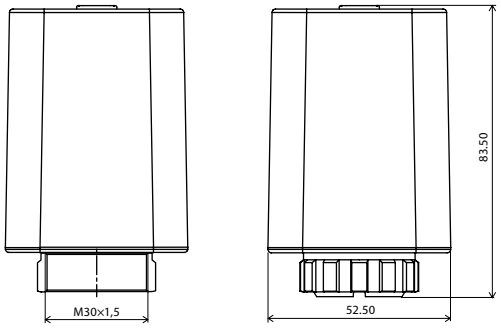
Detector sensor

magnet

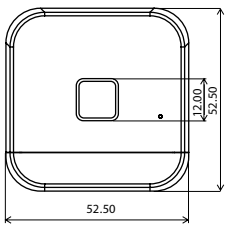


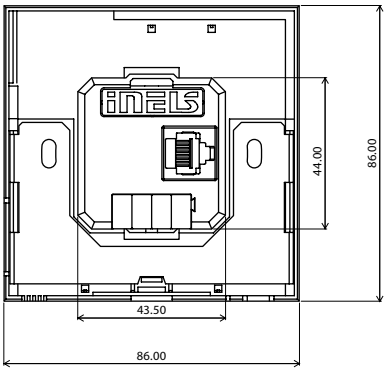
RFWD-100

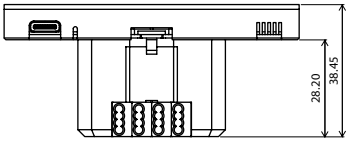
Thermodrive



RFATV

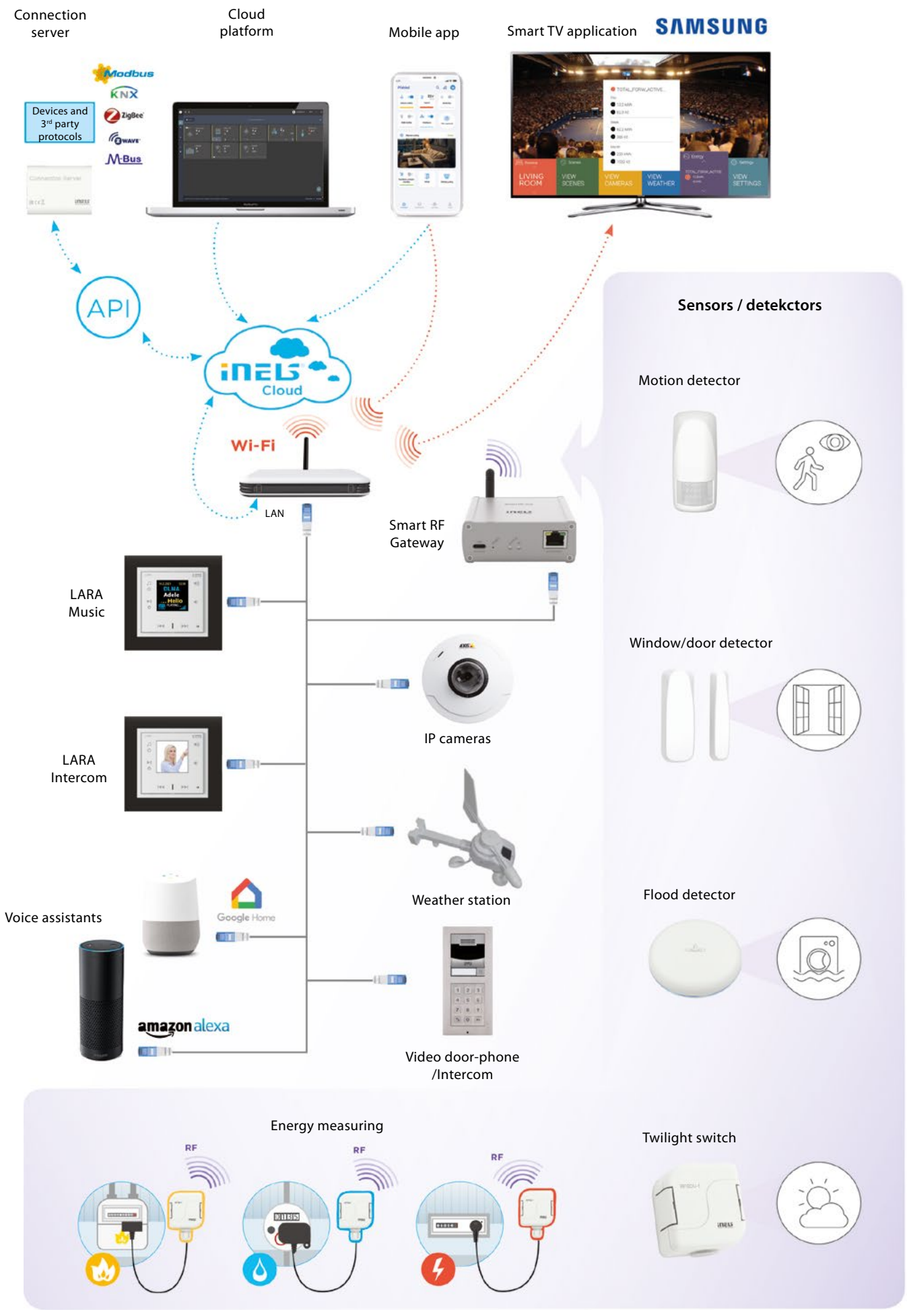






RF Touch 2

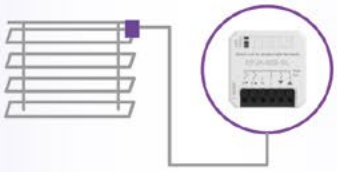
Scope architecture



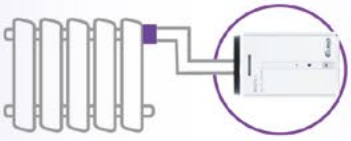
Actuators

Switching socket

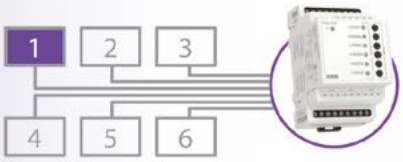
Universal dimmer
R - L - C - LED - ESL



Switch unit for shutters



Thermovalve



Switch unit 6-channels

Analog controller
0(1)-10 V

Switch unit for outdoor use

Controllers

On wall button

Glass touch

Glass touch with dimmer

Key fob

Contact converter

Outdoor 2-buttons controller with increased protection

Wireless touch unit

Temperature controller

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