RF Wireless electro-installation









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 13 000 000

iNELS Manufactured installation 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

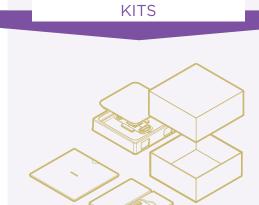
Personal access to more
than 70 sales representatives in
ELKO EP Holding
providing impeccable
services and superior products at an
affordable price.

POINT TO POINT

Individual elements of the iNELS system for personalised installation.



Pre-Set elements for everyday applications.







0



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

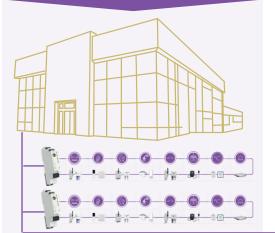


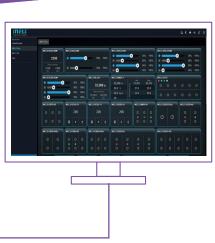


cheaper.









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 LOGUS⁹⁰ 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

- wireless touch unit for wall box installation
- it will become a central, wireless intuitively controlled home
- coloured 4" TFT display



Keychain

- 4 or 6 buttons 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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Controllers



RFWB-20/G

On-wall button controller - 2 buttons



RFGB-20/W - white glass RFGB-20/B - black glass

Glass touch controller, SHARP – 2 buttons



RFWB-40/G

On-wall button controller – 4 buttons



RFGB-40/W - white glass RFGB-40/B - black glass

Glass touch controller, SHARP

– 4 buttons



RFOWB-20

Outdoor controller
– 2 buttons



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

Switches



RFSA-61B

Switch unit, 1 channel – 1× 16 A, multifunction



RFSAI-62B-SL/TH

Switch units with inputs for external buttons Multi-function 2 outputs



RFSAI-11B-SL

Switch unit with inputs for external buttons
- 1 x 8 A, singlefunction



RFSAI-61B-SL

Switch unit with inputs for external buttons
– 1× 8A, multifunction



RFSAI-62B-SL

Switch unit with inputs for external buttons 2-channels, 1× 8A, multifunction

Dimmers



RFDAC-71B

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



RFDALI-32B-SL RFDALI-04B-SL

DALI controller, for 32/4 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

Switch unit with external temperature sensor



TC TZ

Temperature sensors



RFATV-2

Wireless thermovalve



RF KEY-40/W - white RF KEY-40/B - black

Key fob - 4 buttons



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



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

display



RFGB-40W/TH - white glass RFGB-40B/TH - black glass

Glass touch controller, SHARP – 4 buttons





RFJA-32B-SL

Switch unit for shutters - 2×8 A



RFSA-61M RFSA-61MI

Switch unit, 6 channels with integrated antenna - multifunction 1×16 A



RFSA-66M RFSA-66MI

Switch 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 Å, multifunction



RFDA-73M/RGB

Dimmer for LED (RGB) strips, 3-channels



RFDSC-71N

Dimming socket-plug



RFTI-20

Temperature and humidity sensor

Converters



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



Puls converter

Detectors



RFSF-100 Flood detector



RFSOU-1

Twilight switch



RFWD-100

Window/Door detector



RFMD-100

Motion detector



RFSLT-S3

Wireless hydrostatic level sensor

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-2/B Wireless touch unit - flush mounted

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



Internal antenna Gain: 2.1 dBi



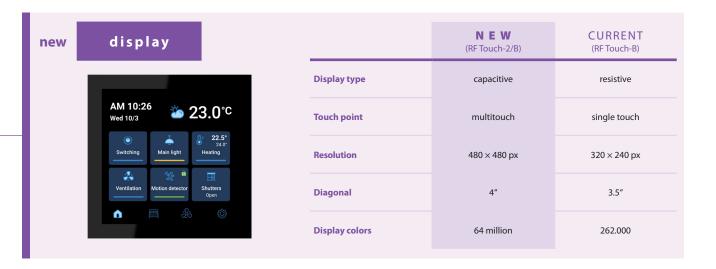
External antenna Gain: 5 dBi



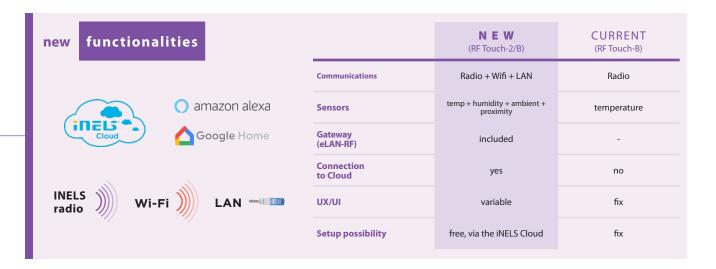
External antenna Gain: 3 dBi, IP67

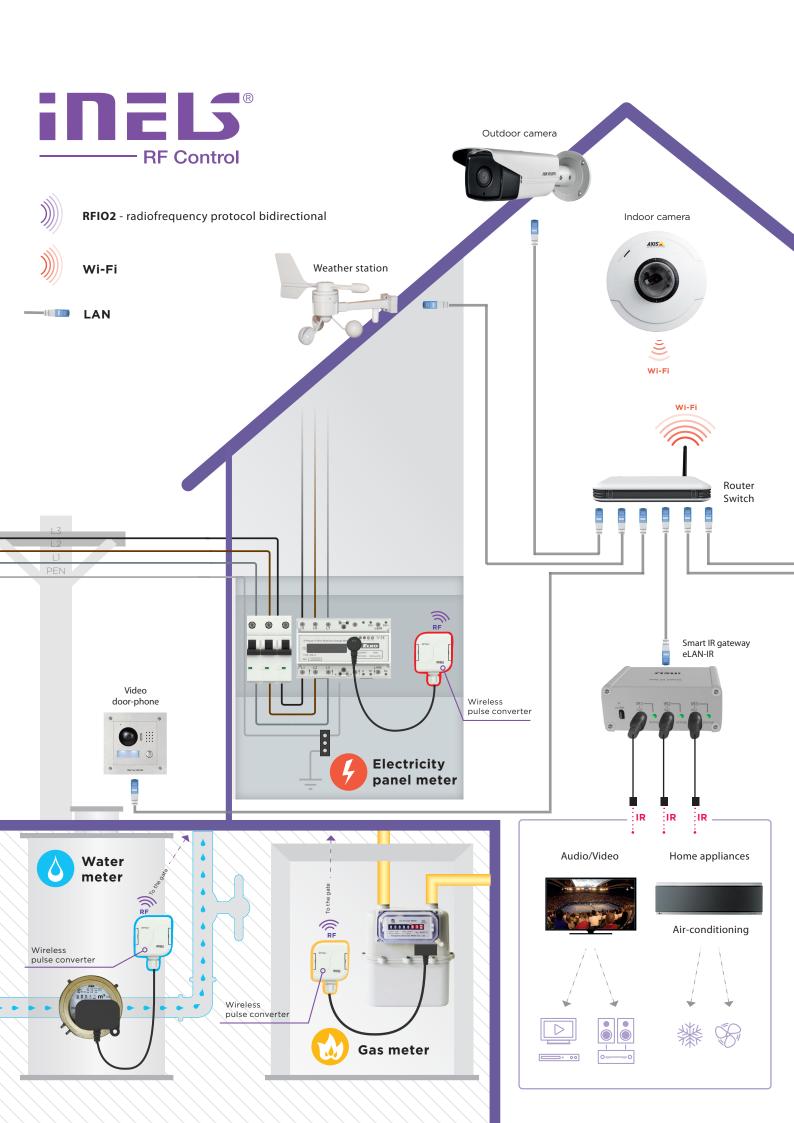


Extension cable for external antenna 10 m









Smart TV application

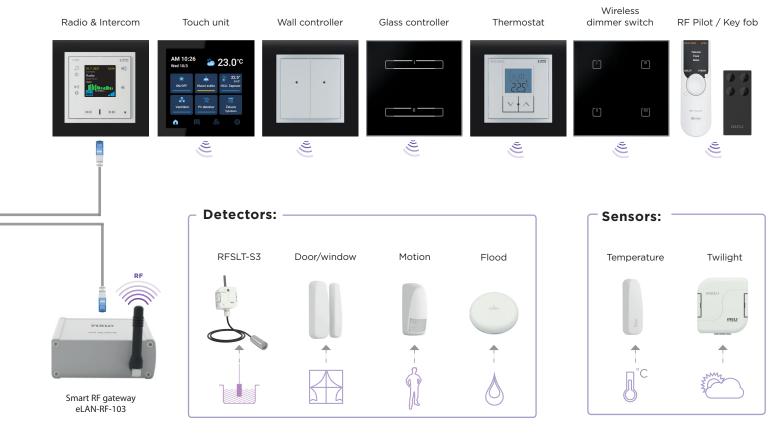
Voice assistants

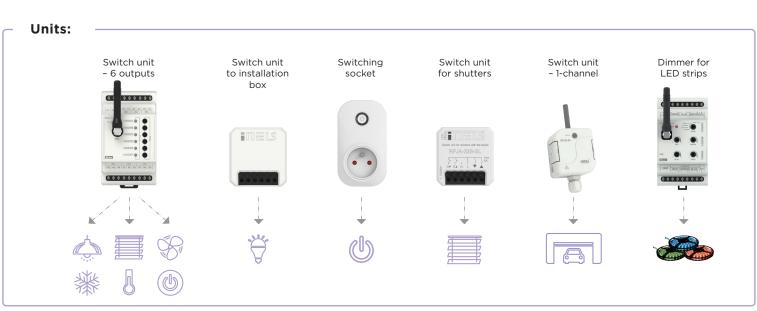
Smart watch

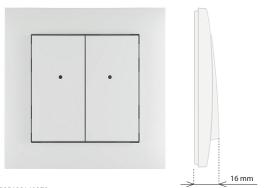
Controllers:

Арр

iNELS.cloud





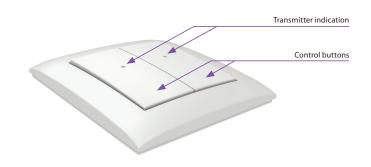


EAN code: RFWB-20/G: 8595188140379 RFWB-40/G: 8595188140607

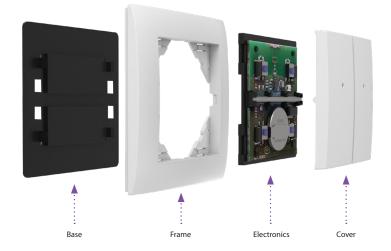
Technical parameters	RFWB-20/G	RFWB-40/G	
Supply voltage:	3 V CR 2032 battery		
Battery life:	around 5 years based	l on frequency of use	
Transmission indication:	red	LED	
Number of buttons:	2	4	
Communication protocol:	RFI	02	
Frequency:	866–922 MHz (for more	e information see p. 70)	
Signal transmission method:	unidirectionally addressed message		
Range:	in open space	e 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 LOGUS⁹⁰ 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



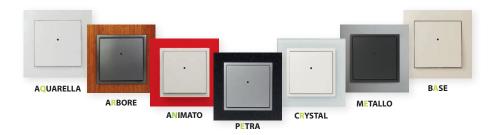






Choose your own style

Flat wireless switches that can be mounted on glass, tile, furniture ...
Such a quick change of location when you're moving.



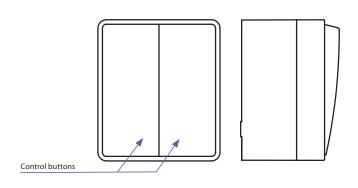


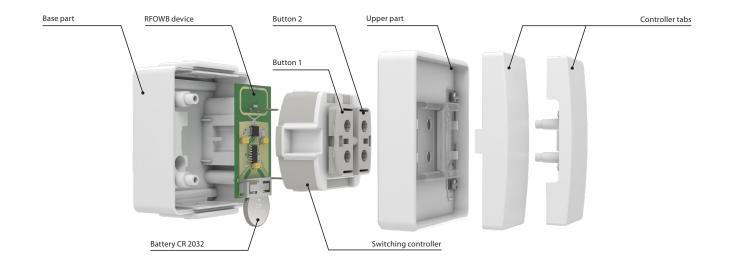
EAN code: RFOWB-20: 8595188181471

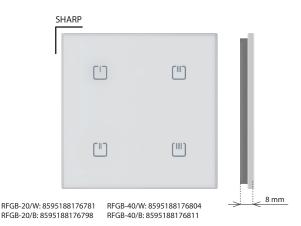
Technical parameters	RFOWB-20		
Supply voltage:	3 V CR 2032 battery		
Battery life:	around 5 years based on frequency of use		
Transmission indication:	Integrated red LED		
Number of buttons:	2		
Communication protocol:	RFIO2		
Frequency:	866–922 MHz (for more information see p. 70)		
Signal transmission 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)		

- 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.

Device description



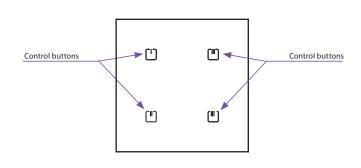




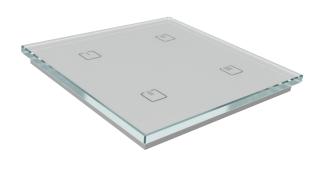
Technical parameters	RFGB-20	RFGB-40		
Supply voltage:	2x 3 V CR 2032 batteries			
Battery life:	around 2 years based	d on frequency of use		
Transmission indication:	red	LED		
Number of capacitive buttons:	2 4			
Communication protocol:	RFIO			
Frequency:	866–922 MHz (for more information see p. 70)			
Signal transmission method:	unidirectionally addressed message			
Range:	in open space up to 200 m			
Other data				
Operating temperature:	-10 to	+50 °C		
Operating position:	a	ny		
Mounting:	glue/screws			
Protection:	IP	20		
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)			

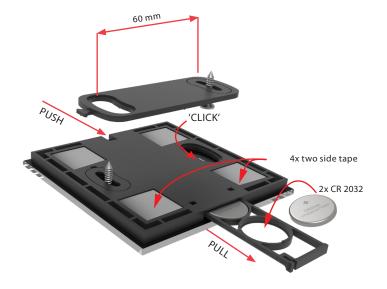
- The glass touch controller is a design RF (wireless) Control unit and is available in elegant black and white variants.
- Only 8 mm thick.
- RFGB-20: 2 capacitive buttons allows to control 2 devices.
- RFGB-40: 4 capacitive buttons allows to control 4 devices.
- When pressing the button, it sends a 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.
- \bullet Communication frequency with bidirectional protocol RFIO.

Device description















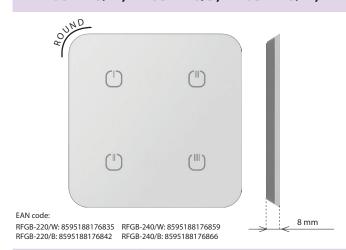


RFGB-20/B

RFGB-40/B

Controllers

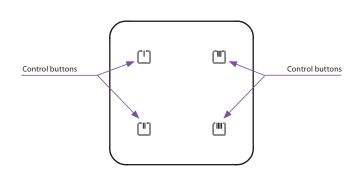
RFGB-220/W, RFGB-220/B, RFGB-240/W, RFGB-240/B | Glass touch controllers, ROUND



Technical parameters	RFGB-220 RFGB-240		
Supply voltage:	2x 3 V CR 2032 batteries		
Battery life:	around 2 years based	d on frequency of use	
Transmission indication:	red	LED	
Number of capacitive buttons:	2	4	
Communication protocol:	RF	·10	
Frequency:	866–922 MHz (for more information see p. 70)		
Signal transmission method:	unidirectionally a	ddressed 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)		

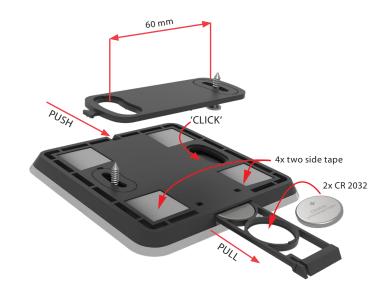
- The glass touch controller is a design RF (wireless) Control unit and is available in elegant black and white variants.
- Only 8 mm thick.
- RFGB-220: 2 capacitive buttons allows to control 2 devices.
- RFGB-240: 4 capacitive buttons allows to control 4 devices.
- When pressing the button, it sends 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-220/B

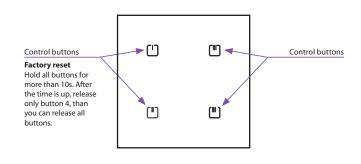
RFGB-240/B



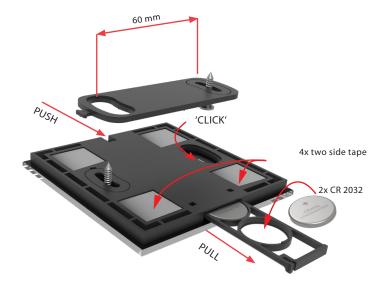
Technical parameters	RFGB-40B/TH	
Supply voltage:	2x 3 V CR 2032 batteries	
Battery life:	around 2 years based on frequency of use	
Transmission indication:	red LED	
Number of capacitive buttons:	4	
Communication protocol:	THREAD/BLE	
Frequency:	2.4 GHz	
Signal transmission method:	MESH	
Range:	in open 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	
Related standards:	EN 60669, EN 300 220, EN 301 489 R&TTE Directive,	
	Order. No 426/2000 Coll. (Directive 1999/EC)	

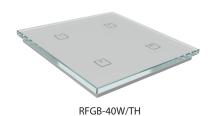
- Glass touch controller in an elegant black or white glass variant with a width of only 8 mm.
- Communicating on the Thread protocol, which guarantees compatibility with other HomeKit-enabled products.
- RFGB-40B/TH: 4 capacitive buttons allow you to control 4 independent devices.
- After pressing the button, it sends the set command (short press, double press, long press). Sending a command is indicated by a red LED.
- The back base allows you to screw it to the installation box, stick it with double-sided tape or just lay it on the table.
- Battery power (2x 3 V batteries CR 2032 part of the package) with a lifespan of approx. 2 years depending on the frequency of use.
- Range up to 200 m (in open space).
- Pairing the controller with the actor is done via the HomePod mini via the Apple Home app (supports only Apple devices).
- Suitable actuators: two-channel switching device RFSAI-62B-SL/TH.
 The portfolio is expanding, more about Thred technology: www.thred. group.org).

Device description















RFGB-40B/TH

RFGB-40B/TH

Controllers

RF KEY-40/W, RF KEY-40/B, RF KEY-60/W, RF KEY-60/B | Key fob



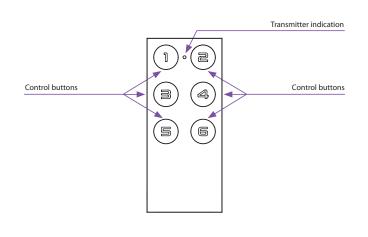
EAN code:

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

Technical parameters	RF KEY-40 RF KEY-6		
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:	RFI	02	
Transmitter frequency:	866–922 MHz (for more	e information see p. 70)	
Signal transmission method:	unidirectionally a	ddressed 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)		

- 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.

Device description







Technical parameters	RF Pilot/W	RF Pilot/A	
Display			
Type:	colour	OLED	
Resolution:	128 x 12	8 pixels	
Side ratio:	1:	1	
Visible surface:	26 x 26	5 mm	
Backlighting:	self-illumin	ating text	
Diagonal:	1.5	;"	
Control:	direction button,	control buttons	
Power supply			
Power supply:	2 x 1.5 V AAA k	oatteries/R03	
Battery life:	approx.	3 years,	
	according to the frequence	y 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. 70)		
Other data			
Operating temperature:	0 to +	55 ℃	
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		

RF Pilot

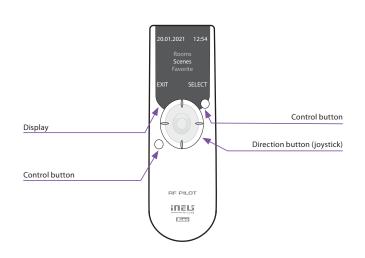






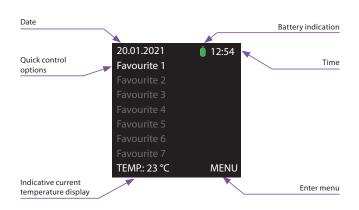
- The Remote RF controller with display is a central controller for switching electrical appliances and equipment, dimming lights, controlling blinds, etc.
- Designed in white and anthracite with colour OLED display.
- 4 directional joystick + 2 buttons for intuitive operation.
- Option of setting light 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.

Device description



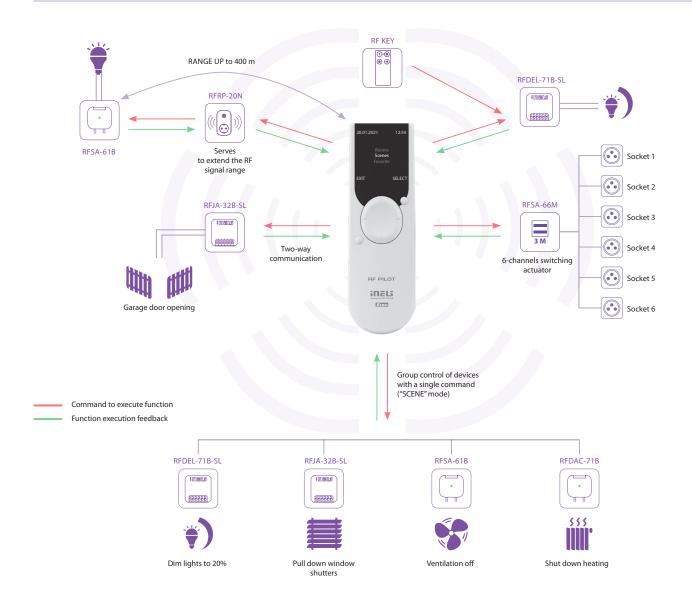
Display description

Colour LED display



Controllers

RF Pilot/W, RF Pilot/A | Remote RF controller with 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



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)



FAVOURITE

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



SWITCHING

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



DIMMING

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

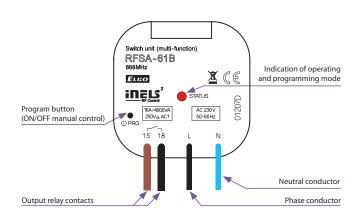


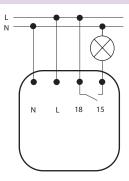
EAN code: RFSA-61B: 8595188136242

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 ^s	
Control		
Wireless:	up to 25-channels (buttons)	
Communication protocol:	RFIO2	
Frequency:	866–922 MHz (for more information see p. 70)	
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 mm², 2x 2.5 mm²	
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 68.
- 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





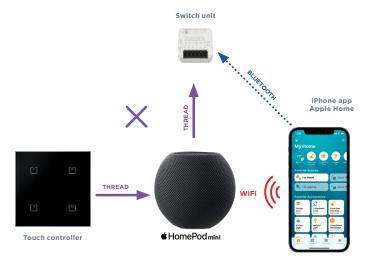






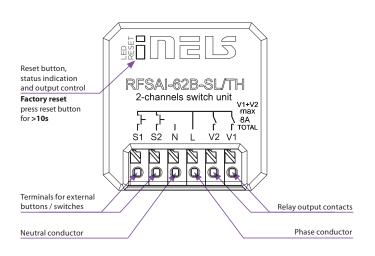
RFSAI-62B-SL/TH: 8595188184755

Technical parameters	RFSAI-62B-SL/TH	
Supply voltage:	230 V AC	
Supply voltage frequency:	50-60 Hz	
Apparent input:	$7 \text{ VA / } \cos \varphi = 0.1$	
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):	1x10⁵	
Ovládání		
Communication protocol:	THREAD/BTLE	
Způsob přenosu signálu	HESH	
Frequency:	2.4 GHz	
Manual control:	button RESET (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:	45 g	
Related standards:	EN 60730, EN 63044, EN 300 220, EN 301 489	

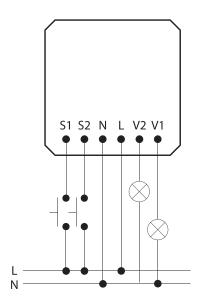


- A switching device with two output relays is used to control appliances and lights.
- The Thread protocol guarantees compatibility with other HomeKit-enabled products.
- Wireless controllers (RFGB-40B/TH) can be used for control as well as existing wired switches/buttons.
- The BOX-SL design offers installation directly in the installation box, suspended ceiling or cover of the controlled appliance. Easy wire connection thanks to screwless terminals.
- Range up to 200 m (in open space).
- Maximum switching power 2000 W (8 A), AgSnO2 + Zero Cross relay contact material predetermines it for switching lighting loads.
- The reset button on the device also serves as a manual input control.
- Pairing the device with the controller is done through the HomePod mini via the Apple Home app (supports only Apple devices).
- The switch device can also be controlled from the phone via the Apple Home app via Bluetooth.

Device description



RFSAI-62B-SL/TH



RFSAI-61B-SL, RFSAI-62B-SL, RFSAI-11B-SL | Switch unit with inputs for external buttons







Single-function 1 output EAN code:

RFSAI-11B-SL: 8595188183758

RFSAI-61B-SL: 8595188182041

Multi-function 2 outputs 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 / $\cos \phi = 0.1$	
Dissipated power:		0.7 W	
Supply voltage tolerance:		+10 %; -15 %	
Output			
Number of contacts:	1x sv	vitching	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):		1x10⁵	
Control			
Wireless:	25-c	hannels	2 x 12-channels
Number of functions:	1	6	6
Communication protocol:		RFIO2	
Frequency:	866–922 MHz (for more information see p. 70)		
Repeater function:		yes	
Manual control:	bı	utton PROG (ON/OF	F)
External button / switch:	yes		
Range:	in o	pen space up to 20	0 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		

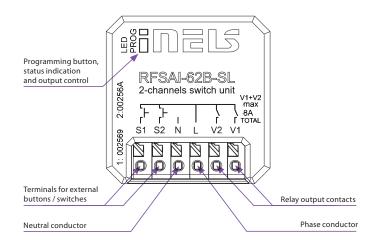
Function description

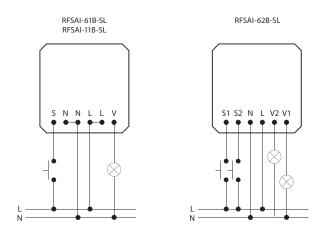
1. Button, impulse relay and time functions of delayed start or return with time setting 2 s-60 min. Any function can be assigned to each output

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-SL 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
- · 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 AgSnO₂ relay enables switching of light ballasts.

Device description





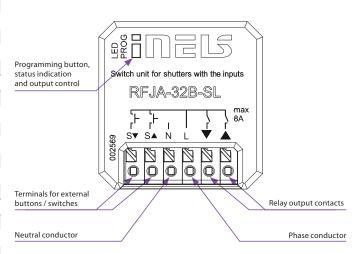


EAN code: RFJA-32B-SL: 8595188182546

Technical parameters	RFSAI-32B-SL	
Supply voltage:	230 V AC	
Supply voltage frequency:	50-60 Hz	
Apparent input:	$7 \text{ VA} / \cos \varphi = 0.1$	
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. 70)	
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 (mm²):	solid / flexible	
Dimensions:	43 x 44 x 22 mm	
Weight:	45 g	
	EN 60730, EN 63044, EN 300 220, EN 301 489	

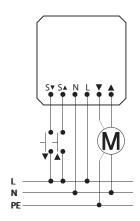
- The switching unit for shutters has 2 output channels used to control garage doors, gates, blinds, awnings...
- They can be combined with Controllers or iNELS RF Control System Components.
- The BOX version offers mounting directly in the installation box, ceiling or motor drive cover.
- RFJA-32B / 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 AgSnO₂.

Device description



Function description

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



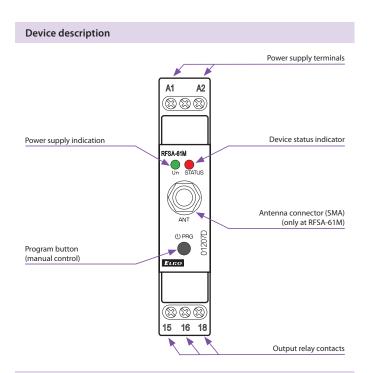


EAN code: RFSA-61MI: 8595188181549 RFSA-61M: 8595188137003

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 co	s φ= 0.6
Dissipated power:	1.62	2 W
Supply voltage tolerance:	+10%/	-25 %
Output		
Number of contacts:	1x chan	geover
Rated current:	16 A	AC1
Switching power:	4000 VA/AC	1, 384 W/DC
Peak current:	30 A/	′<3 s
Switching voltage:	250 V AC1	/24 V DC
Contact material:	AgS	$nO_{_2}$
Mechanical service life:	3x1	07
Electrical service life (AC1):	0.7x	:10 ⁵
Control		
Wireless:	up to 25-chan	nels (buttons)
Communication protocol:	RFI	02
Frequency:	866–922 MHz (for more	information see p. 70)
Repeater function:	ye	es .
Manual control:	PROG (ON/C	OFF) button
Range:	in open space	e up to 200 m
RF Antenna:	integrated	external *
Other data		
Operating temperature:	-15 °C to	+50 °C
Operating position:	ar	у
Mounting:	DIN rail E	N 60715
Protection:	IP20 from the	e front panel
Overvoltage category:	III	l
Contamination degree:	2	
Connecting conductor	max. 1x 2.5, max. 2x 1.5/	
cross-section (mm²):	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 65.
- 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 68.
- 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.







EAN code

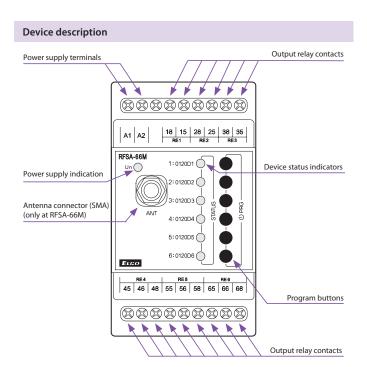
RFSA-66MI/230V: 8595188181556 RFSA-66MI/24V: 8595188181563

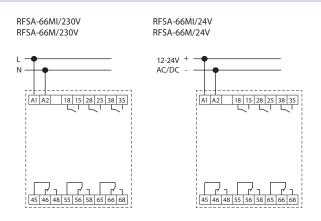
RFSA-66M/230V: 8595188137003 RFSA-66M/24V: 8595188152914

RFSA-66MI/24V: 8595188181563	RFSA-66MI/ RFSA-66MI/ RFSA-66M/ RFSA-66M/			
Technical parameters	230V	24V	230V	24V
Supply voltage:	110-230 V AC	12-24 V AC/DC	110-230 V AC	12-24 V AC/D0
SELV:	no	yes	no	yes
Supply voltage frequency:		AC 50-	-60 Hz	
Apparent input:	min. 2 VA/		min. 2 VA/	
	max. 5 VA	-	max. 5 VA	-
Dissipated power:	min. 0.5W/		min. 0.5W/	
	max. 2.5W	max. 1.8 W	max. 2.5W	max. 1.8 W
Supply voltage tolerance:		+10%/	/-25 %	
Output				
Number of contacts:		3x changeove	r, 3x switching	g
Rated current:		8 A/	AC1	
Switching power:		2000 V	'A/AC1	
Peak current:		10 A	/<3 s	
Switching voltage:		250 \	/ AC1	
Contact material:		AgSnO ₂		
Mechanical service life:		1x	10 ⁷	
Electrical service life (AC1):	1x10 ⁵			
Control				
Wireless:		up to 25-channels (buttons)		
Communication protocol:		RFI	O2	
Frequency:	866-922	MHz (for more	information	see p. 70)
Repeater function:		ye	es	
Manual control:		PROG (ON/O	OFF) button	
Range:		in open spac	e up to 200 m	1
RF Antenna:	integrated	external *	integrated	external *
Other data				
Operating temperature:		-15 °C to	o +50 °C	
Operating position:		ar	ny	
Mounting:		DIN rail E	EN 60715	
Protection:		IP20 from the	e front panel	
Overvoltage category:	III.			
Contamination degree:	2			
Connecting conductor		max. 1x 2.5, max. 2x 1.5/		
cross-section (mm²):		with a hollow	v max. 1x 2.5	
Dimensions:		90 x 52 x	c 65 mm	
Weight:	171 g 179 g		9 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 65.
- 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 68.
- 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.





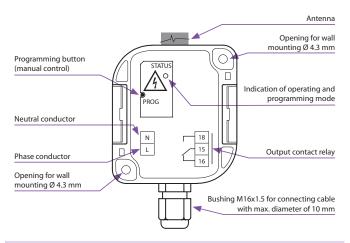


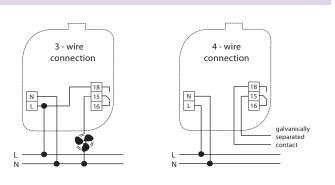
EAN code: RFUS-61/230V: 8595188145268 RFUS-61/120V: 8595188152570

KFUS-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 ^s	
Control		
Wireless:	up to 25-channels (buttons)	
Communication protocol:	RFIO2	
Frequency:	866–922 MHz (for more information see p. 70)	
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	max. 1x 2.5, max. 2x 1.5/	
wires (mm²):	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 68.
- \bullet 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







RFSC-61N/Schuko: 8595188182508 RFSC-61N/French: 8595188182515

Weight:

Related standards:

RFSC-61N/British: 8595188182522

Technical parameters	RFSC-61N/230V
Supply voltage:	230 V AC
Supply voltage frequency:	50-60 Hz
Apparent power:	7 VA $/\cos \phi = 0.1$
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. 70)
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

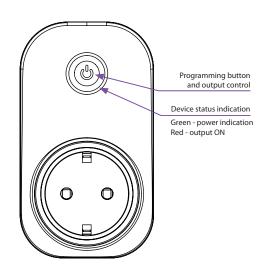
129 g EN 60730, EN 63044, EN 300 220, EN 301 489

- 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 68)
- 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





0.7x10⁵

red LED/green LED

0(1)-10V/PROG button

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		

Control

Indication:

Electrical service life:

Output selection:

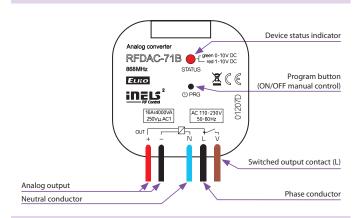
Wireless:	up to 25-channels (buttons)
Communication protocol:	RFIO2
Frequency:	866–922 MHz (for more information see p. 70)
Repeater function:	yes
Manual control:	button PROG (ON/OFF)
Range:	in open space up to 200 m
Minimal control distance:	20 mm

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 mm², 2 x 2.5 mm²	
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)	

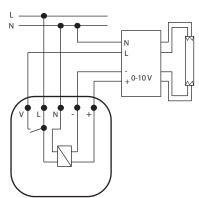
- The device with analog output 0(1)-10 V is used to control devices, luminaires, thermal actuators and thermal heads - which are equipped with such an input.
- They can be combined with detectors, controllers, iNELS RF Control or system components.
- Potential free analog output 0(1)-10 V, contact relay 16 A.
- · 6 light functions smooth increase or decrease with time setting 2 s-30 min. Function description can be found on page 69.
- 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

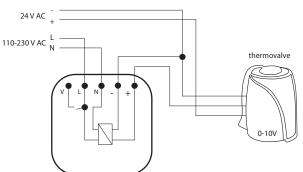


Connection

Connection example: dimming of fluorescent tubes with dimmable ballast



Connection example: with thermo valve





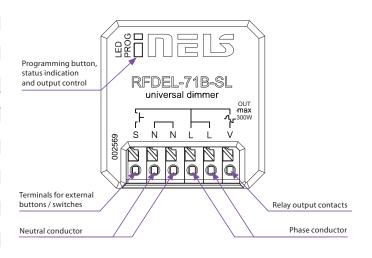
EAN code:

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:	$5 \text{ VA } / \cos \phi = 0.1$	
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. 70)	
Repeater function:	yes	
Range:	up to 200 m	
Manual control:	tlačítko PROG (ON/OFF)	
External button / switch:	yes	
Other data		
Operating temperature:	-15 to + 45 °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 mm ² 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.
- 7 light functions smooth start or stop with time setting 2 s-30 min., function description p. 69
- 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).

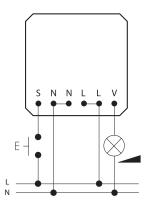
Device description



Connection

Types of connectable loads

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



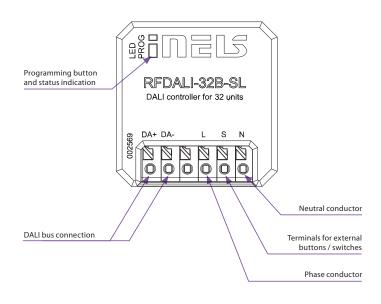


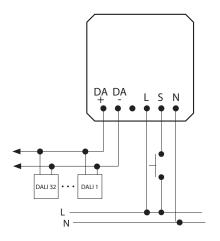
EAN code: RFDALI-04B-SL: 8595188185271 RFDALI-32B-SL: 8595188184342

Technical parameters	RFDALI-04B-SL RFDALI-32B-SL	
Supply voltage:	100-230 V AC / 50 Hz	
Supply voltage frequency:	50/60 Hz	
Apparent power:	$5 \text{ VA } / \cos \phi = 0.1$	
Dissipated power:	3 W	
Supply voltage tolerance:	+10/ -15 %	
Connection:	4-wire, L, N, DA+,DA-	
Output DALI		
Number of units:	max. 4 max. 32	
Power supply:	16V/100 mA	
Control		
Wireless:	128-channels	
KCommunication protocol:	RFIO2	
Frequency:	866-922 MHz (for more information see p. 70)	
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 mm ² 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-04B-SL / 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 web page through browser.
- 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







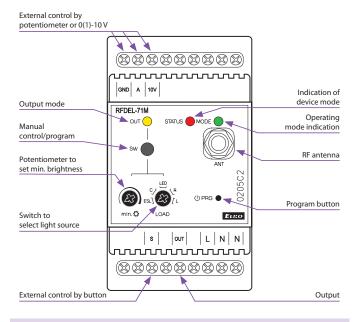
EAN code: RFDEL-71M: 8595188148979

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, L	ED, ESL
Contactless:	2 x M	OSFET
Load capacity:*	max. 600 W	max. 300 W*
Control		
Wireless:	up to 32 chan	nels (buttons)
Communication protocol:	RF	102
Frequency:	866–922 MHz (for more	e information see p. 70)
Repeater function:	y	es
Range:	in open spac	e up to 160 m
Manual control:	SW (ON/OFF) button	
External button:	max. 50	m cable
Glow lamps connection:	n	10
Analog control:	potentiomete	er or 0 (1)–10 V
RF Antenna:	AN-I included (S	MA connector**)
Other data		
Operating temperature:	-20 to	+35 °C
Storage temperature:	-30 to	+70 °C
Operating position:	ver	tical
Mounting:	DIN rail I	EN 60715
Protection:	IP20 under nor	mal conditions
Overvoltage category:	I	l.
Contamination degree:	2 max. 1x 2.5, max. 2x 1.5/with a hollow max. 1 90 x 52 x 65 mm 125 g	
Cross-section of connecting wires:		
Dimensions:		
Weight:		
Related standards:	EN 607 3	30-1 ed.2

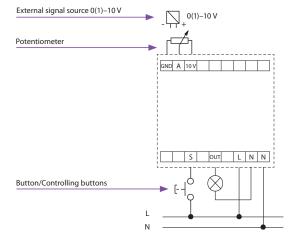
- * See page 69 for the load chart for each light source.
- ** Max. Tightening Torque for antenna connector is 0.56 Nm.

- 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 69.
- 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	max. 900 VA	max. 450 VA		
connecting all outputs:				
Output protection:	thermal/short-term overload/longterm			
	overload/s	hort circuit		
Output indication:	red LED STATUS			
Control				
Wired buttons:	potential "L" or external voltage			
	AC 20-230 V (50-6	0 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 mm ² /1.5 mm ² with sleeve			

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

Types of connectable loads

Operating position:

Installation:

Design: Dimensions:

Weight

HAL. 230 V	₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩	J €∷Z	4	**
R	L	C	LED	ESL
resistive	inductive	capacitive	light	saving

vertical

in the switchboard on DIN rail EN 60715

6-MODULE

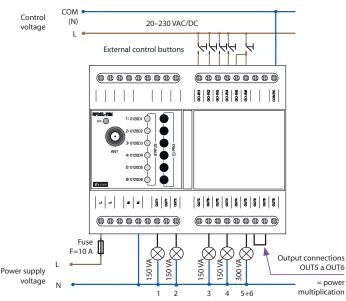
90 x 105 x 65 mm (3.5" x 4.1" x 2.6")

320 g (11 oz.)

- 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

For external inputs control buttons 000000000 114-00 SH-00 Power indication RF antenna Programming buttons/ Manual control Status indication channel | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | @ @ @ @ @ @ @ @ @ 000000000 Power supply Outputs



The stated outputs apply to the supply voltage AC 230 $\rm V$



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. 70)	
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	max. 1x 2.5, max. 2x 1.5/	
wires (mm²):	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	

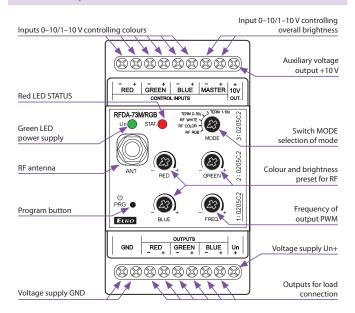
^{*} Max Tightening Torque for antenna connector is 0.56 Nm.

- The dimmer for LED strips is used for independent control of 3 singlecolour 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

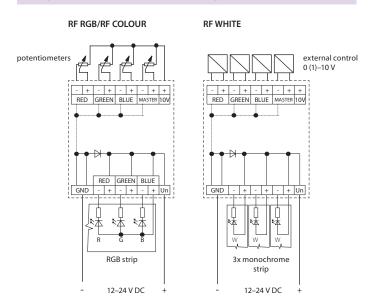
• 6 light functions – smooth increase or decrease with time setting

- a) single-colour LED strip 7.2 W 3x 8 m b) RGB LED strip 14.2 W–10 m.
- 2 s 30 min. Function description can be found on page 69.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

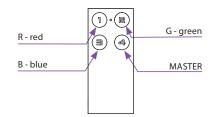


Control modes

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 WHITE

Switch settings in MODE:



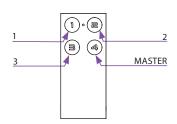
This works in a mode where it acts like three independent dimmers for 12–24 V. Each channel can be programmed independently of one another and has its own address.

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

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.

TERM 0-10 V and TERM 1-10 V

Switch settings in MODE:

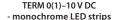


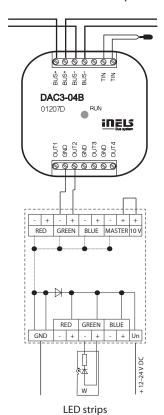


Modes TERM 0-10 V and TERM 1-10 V.

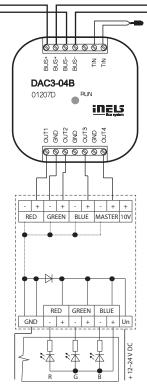
Inputs 0–10 V and 1–10 V used to control one RGB LED strip or three independent single-colour LED strips (see modes above) from the iNELS BUS System. For controlling, you can use the application iHC for smartphones and tablets.

Control options





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



RGB LED strips

Dimmers

RFDSC-71N | Dimming socket-plug



EAN code:

RFDSC-71N/Schuko: 8595188183604 RFDSC-71N/French: 8595188183598

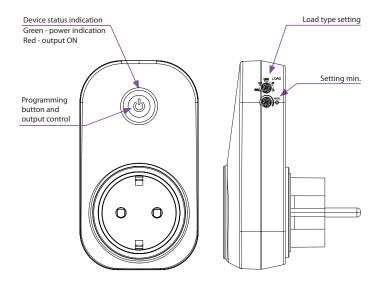
RFDSC-71N/British: 8595188183581

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. 70)	
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 69.
- 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:







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)		



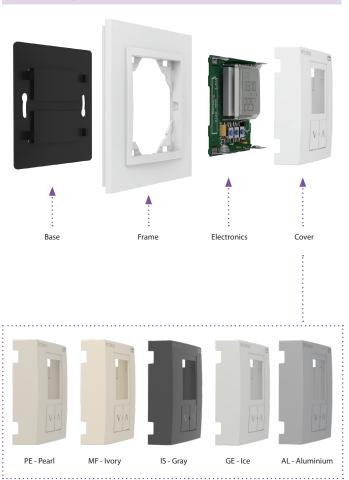
RANCOPORG: 8595188145329

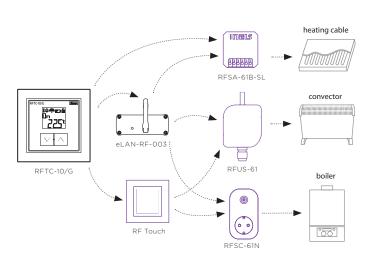
Technical parameters	RFTC-10/G	
Supply voltage:	2 x 1.5 V AAA batteries	
Battery life:	1 year based on frequency of use	
Temperature correction:	2 buttons V/∧	
Temperature offset:	±5°C	
Display:	LCD, characters/see Display description	
Backlighting:	active 10 s after pressing	
Transmission indication/function:	symbols	
Temperature measurement:	1x internal sensor	
Temp. measurement range	0 to +55 °C;	
and accuracy:	0.3 °C of the range	
Control		
Communication protocol:	RFIO	
Frequency:	866–922 MHz (for more information see p. 70)	
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	RF Touch eLAN-RF RFSA-6 x RFSTI-11B-SL RFATV-1				
\checkmark	✓	\checkmark	_	_	

Signal strength Circuit temperature set Battery status indication Circuit status indicator Temperature measured in °C/°F Temperature/time indication

- 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 $\pm\,5$ °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 LOGUS⁹⁰ (plastic, glass, wood, metal, stone).







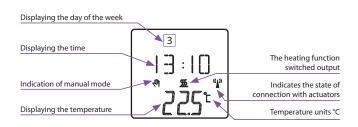
EAN code: RFTC-50/G: 8595188148641

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 V/∧	
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. 70)	
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	

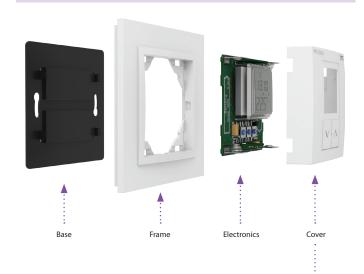
Compatibility				
RF Touch	eLAN-RF	RFSA-6 x	RFSTI-11B-SL	RFATV-1
-	-	√	√	-

Directive, Order. No 426/2000 Coll. (Directive 1999/EC)

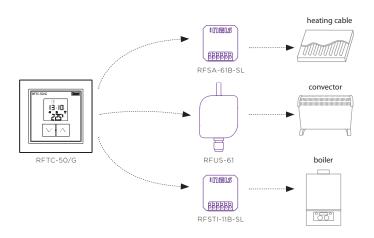
Display description



- 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 LOGUS⁹⁰ (plastic, glass, wood, metal, stone).









EAN code: RFSTI-11B-SL: 8595188184045

Technical parameters	RFSTI-11B-SL
Supply voltage:	230 V AC
Supply voltage frequency:	50-60 Hz
Apparent input:	$7 \text{ VA / } \cos \varphi = 0.1$
Dissipated power:	0.7 W
Supply voltage tolerance:	+10 %; -15 %

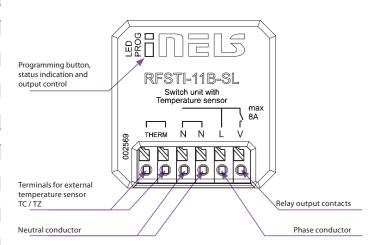
Temp. measurement range	-20 to +50 °C	
and accuracy:	0.5 °C of the range	
Output		
Number of contacts:	1x switching	
Rated current:	8 A / AC1	
Switching power:	2000 VA / AC1	
Peak current:	10 A / <3 s	
Switching voltage:	250 V AC1	
Mechanical service life:	1x10 ⁷	
Electrical service life (AC1):	1x10 ⁵	
Control		
Wireless	25 -h	

Wireless:	25-channels		
Communication protocol:	RFIO2		
Frequency:	866–922 MHz (for more information see p. 70)		
Repeater function:	yes		
Manual control:	button PROG (ON/OFF)		
External button/switch:	yes		
Range:	in open space up to 200 m		
Other data			

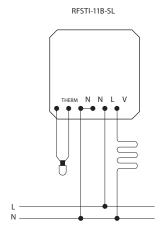
Other data			
Operating temperature:	-15 to + 50 °C		
Operating position:	any		
Mounting:	free at lead-in wires		
Protection:	IP40		
Overvoltage category:	III.		
Contamination degree:	2		
Connection:	screwless terminals		
Connecting conductor:	0.2-1.5 mm ² solid/flexible		
Dimensions:	43 x 44 x 22 mm		
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 $^{\circ}$ 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

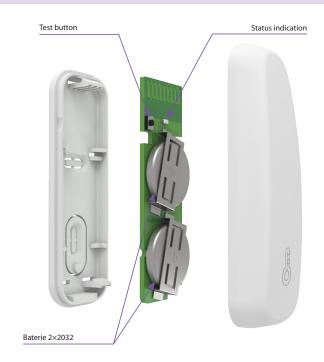




EAN code: RFTI-20: 8595188134019

Technical parameters	RFTI-20	
Supply voltage:	2x 3 V CR 2032 battery	
Battery life:	up to 1 year, according to the number of activations	
Transmission indication/function:	red LED	
Temperature and humidity measurement:	integrated digital sensor	
Temperature measurement	-10 to +50 °C;	
range and accuracy:	0.5 °C of range	
Humidity measurement	0 to 90 %;	
range and accuracy:	±3 % of range	
Output		
Communication protocol:	RFIO	
Frequency:	866–922 MHz (see p. 70)	
Repeater function:	no	
Signal transmission:	unidirectional message	
Range:	in open space up to 160 m	
Other data		
Operating temperature:	-10 to +50 °C	
Working position:	any	
Mounting:	glue/screws/loose	
Protection:	IP30	
Contamination degree:	2	
Dimensions:	75 x 25 x 14 mm	
Weight:	45 g	
Related standards:	EN 60730, EN 63044, EN 300 220, EN 301 489	

- With an integrated digital sensor, it measures temperature and humidity in the range of -10 to +50 $^{\circ}$ C and at regular intervals of 20 min. sends it to the system device (eLAN-RF, RF-Touch).
- In the event of a sudden change in temperature and humidity, it sends a signal within 1 min.
- (2x 3 V batteries CR 2032 included in the package) with a lifetime
- approx. 1 year (according to ambient temperature cycling).
- Range up to 160m (in open space), in case of insufficient signal between the controller and the device, use RFRP-20 signal repeater or devices with RFIO2 protocol that support this function.
- Communication frequency with two-way RFIO protocol.



TC, TZ | Temperature sensors



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,	silicon
	2x 0.25 mm ²	VO3SS-F 2D x 0.5 mm ²
Terminal material:	polyamide	stainless steel
Protection degree:	IP67	IP67
Electrical strength:	2500 VAC	2500 VAC
Insulation resistance:	> 200 MΩ at 500 VDC	$>$ 200 M Ω at 500 VDC
Types of temperature ser	nsors:	
	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

 $\tau65$ (95): time, which sensor needs to heat up on 65 (95) % of ambient temperature of environment, in which is located.

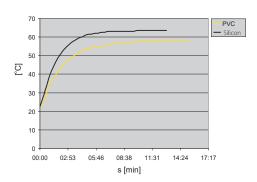
- Thermister temperature sensors are made of Negative Temperature Coefficient (NTC) embedded in a PVC or metal sleeve with a thermallyconductive sealer.
- Sensor TC
- lead-in cable to sensor TC is made of wire CYSY 2D x 0.5 mm/0.02".
- Sensor TZ
 - cable VO3SS-F 2D x 0.5 mm/0.02" with silicone insulation 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.

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

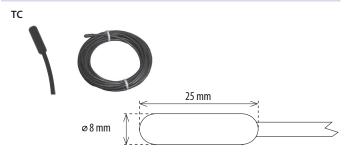
Tolerance of sensor NTC 12 k Ω is \pm 5% by 25 °C/77 °F.

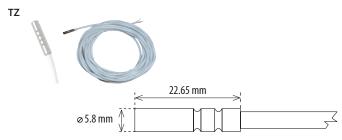
Diagramm of sensor warm up via air



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





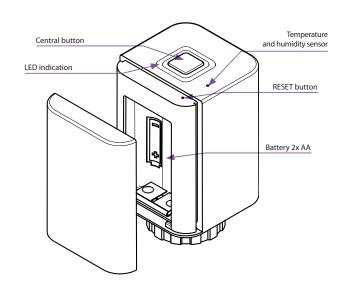


EAN code: RFATV-2: 8595188182591

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. 70)
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

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 $^{\circ}$ 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.
- $\bullet \ \ Communication \ frequency \ with \ bidirectional \ RFIO2 \ protocol.$
- Included in the package: 2x AA 1.5 V batteries
- AiO control available on Google Play and the App store.







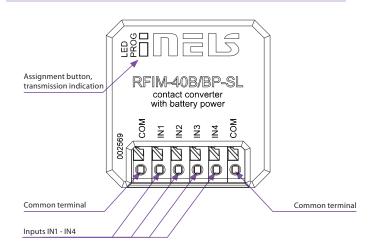


EAN code: RFIM-40B/BP-SL: 8595188184069

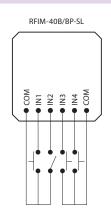
RFIM-40B/230-SL: 8595188184076

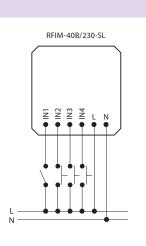
Technical parameters	RFIM-40B/BP-SL	RFIM-40B/230-SL
Supply voltage:	1x 3 V battery CR 123A	230 V AC
Battery life:	8 years based o	of frequency use
Indications/transfer function:	red	LED
Number of inputs:	4	4
Supply voltage tolerance:		+10 %; -15 %
Control		
Communication protocol:	RF	102
Frequency:	866–922 MHz (for mor	e information see p. 70)
Repeater function:	n	0
Signal transmission method:	unidirectionally a	ddressed message
Range:	in open spac	e up to 200 m
Other data		
Operating temperature:	-10 až	+50 °C
Operating position:	a	ny
Line resistance between terminals		
- for closed button:	< 30	00 Ω
- for open contact:	> 10) kΩ
Mounting:	free at lea	d-in wires
Protection:	IP	40
Surge category:	ı	II.
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, E	N 300 220, EN 301 489

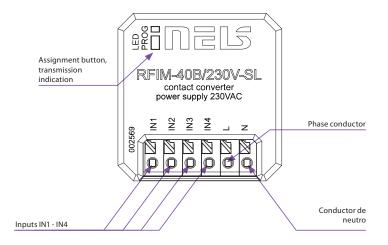
- RFIM-40B / BP-SL: the wireless contact converter changes the wired button / switch to wireless.
- 4 inputs allow to control 4 devices independently,
- battery supply (3 V battery CR123A included in the package) with a lifespan of about 8 years according to the frequency of use,
- the contact can be 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.













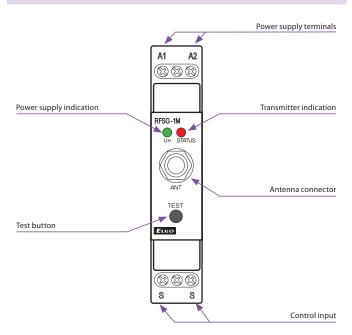
EAN code: RFSG-1M: 8595188142847

Technical parameters	RFSG-1M
Supply voltage:	110-230 V AC
.,,	50–60 Hz
Supply voltage frequency:	
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. 70)
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	max. 1x 2.5, max. 2x 1.5/
cross-section: (mm²):	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)

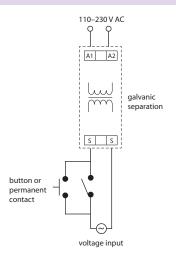
 $^{^{\}ast}$ Max Tightening Torque for antenna connector is 0.56 Nm.

- 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	Green LED - communication OK
- RF STATUS:	Red LED - communication ERR
Normal operation:	no indication
Control	
Manual control:	button SET
Sensor Selection:	rotary potentiometer
Supported sensors	LS (LED sensor)
(not included in the package):	MS, WS (magnetic sensor)
	S0 (Contact, open collector,
	reed magnetic contacts)
Output	
Communication protocol:	RFIO
Frequency	866–922 MHz (for more information see p. 70)
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 "50" (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 ("SO").
- 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 Mounting hole Ø 4.3 mm wall Green LED Sensor Selection Red LED Button SET Battery 2x 1.5 V AAA +3V3 DATA1 DATA2 Mounting hole GND Ø 4.3 mm wall Bushing M16x1.5 for connecting cable with max. diameter of 10 mm Sensor connection (LS, WS, MS) O O SO O L5 O L6 O L7 00000 L1 L4/N

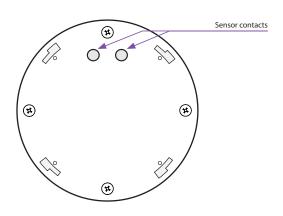


EAN code: RFSF-100: 8595188176828

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 k Ω	
Control		
Communication protocol:	RFIO	
Frequency:	866–922 MHz (for more information see p. 70)	
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	

- 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.

Descritption



Function

Soap toam

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
_	

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

~18 kΩ

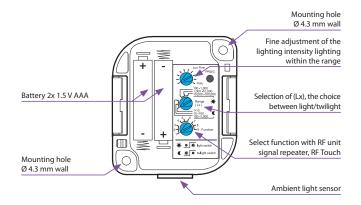
^{*} Resistivity characterizes the resistive properties of materials which conduct electric current.



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. 70)
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 bat-
- tery 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.



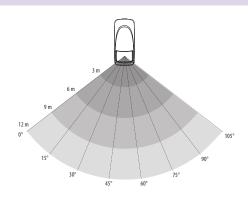


EAN code: RFMD-100: 8595188150293

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. 70)
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



RFWD-100 | Window/Door detector



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. 70)
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 notification; alarms are stored in the history, which is visualized in the application iHC.
- Anti-tamper function: an alarm is triggered if there is an unauthorized interference to detector.
- 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.



EAN code: 8595188183994

Battery (lithium cell, 3V6-AA-LS)
, , , , , ,
Pressure sensor with digital connection
standard 3m or 9m
standard 0-3m H ₂ O (other by agreement)
1x / min

Output

Relay:	up to 6 relays	
Alarm:	wireless relay	
Output update frequency:	1× min (only when changing the level)	
Accuracy:	± 0,5%	
Time response:	≤ 100ms	
long-term stability:	\leq ± 0,2 % span / year under reference conditions	
Mechanical stability:		
vibrations	10g, 25 Hz2 kHz	
shocks	100g / 1ms	

Electrical resistance

Short circuit protection:	permanent
Reverse polarity protection:	approx. 1 year (according to ambient temperature cycling)
Elektromagnetická sloučitelnost:	radiation and immunity to interference according to EN 61326

Control

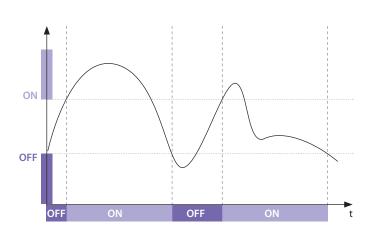
INITIC standard		
INELS standard		
Communication protocol:	RFIO2	
Frequency:	866–922 MHz (for more information see p. 70)	
Repeater function:	no	
Manual control:	application	
Range:	in open space up to 200 m	
Minimum control distance:	20 m	
Bluetooth		
Communication protocol:	Bluetooth Low Energy	
Frequency:	2,4GHz	
Repeater function:	no	
Manual control:	application	
Range:	in open space up to 50 m	

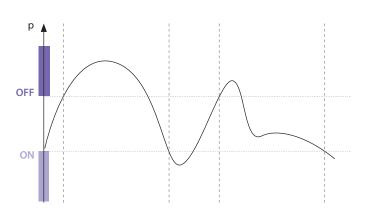
Other data

Other data		
Operating temperature:	-15 to +50 °C	
Working position:	any	
Mounting:	screws	
Protection:	IP65, probe IP68	
Recommended power cable:	The sensor including the cable is included in the package	
Dimension:	136 x 62 x 34 mm	
Weight:	150 g	
Standards:	EN 60730, EN 63044, EN 300 220, EN 301 489, EN 61326	

- It measures the level of liquids based on the principle of hydrostatic pressure measurement.
- It consists of a communication unit in a plastic case with IP65 protection placed above the surface and a stainless steel pressure probe connected by a cable lowered to the bottom of the tank.
- The standard length of the probe cable is 3m or 9m.
- The unit communicates wirelessly via the RFIO2 protocol with the devices of the iNELS RF Control system and is powered by a 3V6 lithium battery. The range of the switching actuators from the unit is determined by the building/location, in open space it is normally 200 meters.
- The unit can also communicate with the eLAN-RF-103 gateway, which conveys level information to the iNELS application.
- In the application, it is possible to manage switching actors, edit notifications, continuously monitor the level, pressure, temperature and battery discharge status in the unit.
- The unit itself is set up via the iSonda application from an Android/iOS smartphone via the Bluetooth interface (LowEnergy, 4.1 and higher).

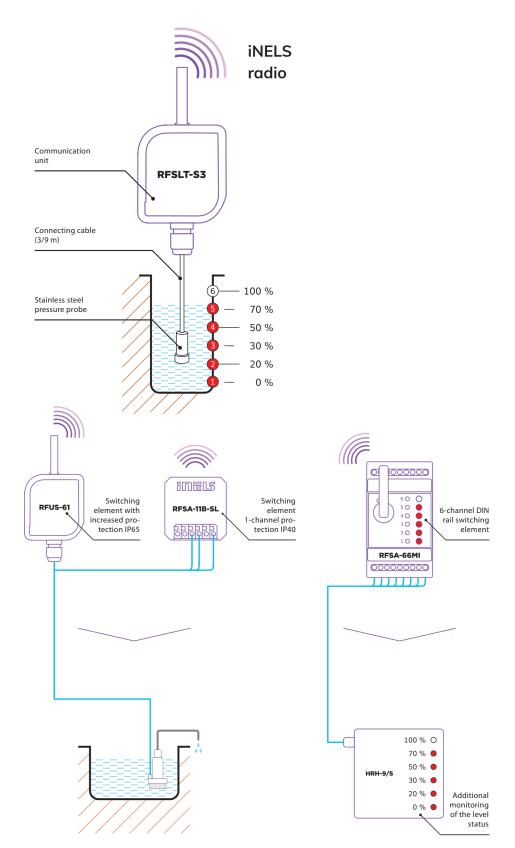
Function

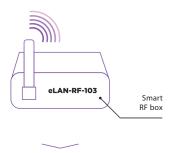




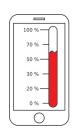
Materials (in contact with the medium)

Housing:	stainless steel 1.4301 (304)	
Seal:	FKM	
Membrane:	stainless steel 1.4435 (316 L)	
Cable jacket:	PUR	









Signaling via the application on the phone

Control of 1 pump: RFSA-11B-SL, RFUS-61 Control of 2 pumps: RFSA-62B-SL

Control/signaling, 6× output (eg: MAX / MIN / CRITICAL MAX / CRITICAL MIN)



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. 70)	
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 ℃	
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 options for connecting to a mobile phone via Wi-Fi or cloud
- temperature and humidity sensor
- 4" capacitive display



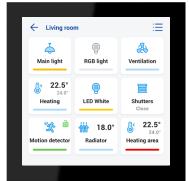






Screen preview













54



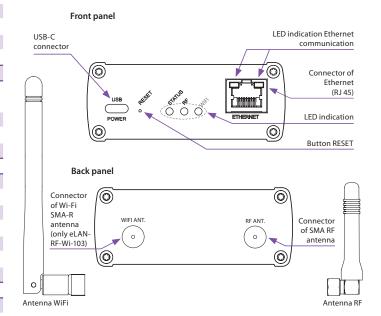
Technical parameters	eLAN-RF-103	eLAN-RF-Wi-103	
Interface RF Control			
Communication protocol:	RF	102	
Broadcasting frequency:	866–922 MHz (for mor	e information see p. 70)	
Signal transfer method:	two-way addr	essed message	
Output for antenna:	SMA cor	nnector*	
Antenna RF:	AN-	I 1 dB	
Indications RF communications:	1x gree	n RF LED	
Range:	in open spac	e up to 100 m	
Interface Ethernet			
ETH operating status			
indicator:	gree	n LED	
ETH communication indicator:	yello	w LED	
Communications interface:	100 Mb	ps (RJ45)	
Preset IP address:	DH	HCP	
Interface Wi-Fi			
Standard:	Х	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:	Х	up to 20 m	
Wi-Fi network mode:	Х	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 ti	he device	
- press> 5 s		ork settings	
- press> 10 s:	reset to fac	tory settings	
Indication LED STATUS			
- green:	norma	al mode	
- red:	error co	ondition	
- 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		
Diffiensions:			

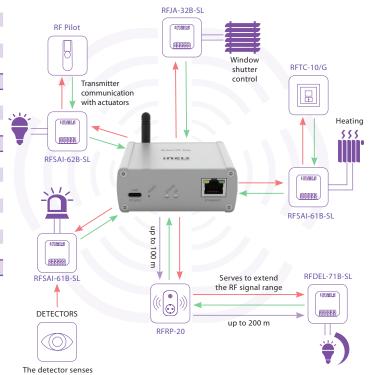
^{*} Max Tightening Torque for antenna connector is 0.56 Nm.

- 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

switches on alarm







EAN code:

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

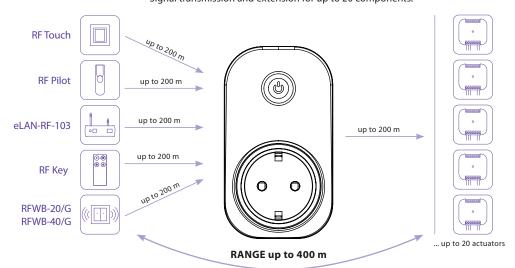
RFRP-20N/230V Technical parameters 230V Supply voltage: 50-60 Hz ¹Supply voltage frequency: Apparent input: 7 VA $/\cos\phi = 0.1$ Dissipated power: 0.7 W +10%/-15% Supply voltage tolerance: Control Communication protocol: RFIO2 866-922 MHz (for more information see p. 70) Frequency: Range: in open space up to 200 m Minimum control distance: 20 mm button - green LED/red LED Programming: Other data -20 to +55 °C Operating temperature: -30 to +70 °C Storage temperature: 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

- 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.
- $\ \, \boldsymbol{\cdot} \, \text{Communication frequency with bidirectional RFIO protocol.} \\$
- 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.

Produced in 3 designs of sockets/plugs:



Signal transmission and extension for up to 20 components.



1

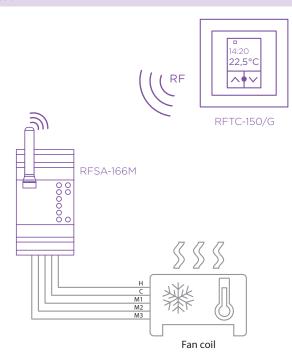


EAN code: RFTC-150/G: 8595188134576

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. 70	
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:	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 RTTE Directiv	
	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 LOGUS⁹⁰ (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 (AgSnO₂) Rated current: 12 A/AC1 3000 VA/AC1, 288 W/DC Switching power: Peak current: 30 A, max. 4 s at 10% Switching voltage: 250 V AC1/24 V DC 100 mA/10 V Min. switching power DC: Insulation voltage between outputs and internal circuits: basic Insulation (Cat. III surges by EN 60664-1) Isolation voltage open contact: 1 kV 3x10⁷ Mechanical service life:

Electrical service life (AC1): 5x10⁴ Indication of relay switch: red LED Control

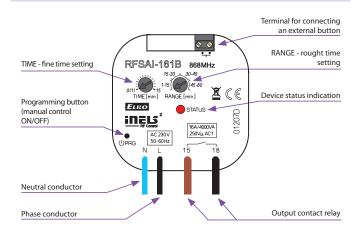
Other data		
Range: in open space up to 160 m		
External button:	cable length max. 12 m 👍 *	
Manual control:	button PROG (ON/OFF)	
Repeater button:	yes	
Frequency:	866–922 MHz (for more information see p. 70)	
Communication protocol:	RFIUZ	

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 mm²	
Terminals (CY wire, Cross-section):	2x 0.75 mm², 2x 2.5 mm²	
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.

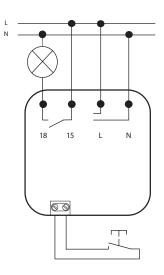
Device description



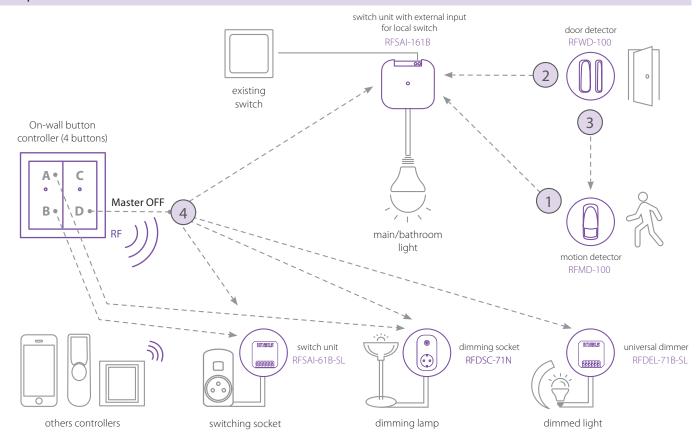
Compatible wireless detectors: Movement: RFMD-100 Door/Window: RFWD-100

Connection

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



Example



Function

- When RFMD-100 motion detector captures the movement of the guest, the light ON command is sent.
- 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.
- If there is movement the command from RFWD-100 door detector (delay off) will be cancelled by the motion detector RFMD-100 command.
- 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.

- You are able to control other units with other channels (A, B, C) on RFWB-40 On-wall button controller.
- 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

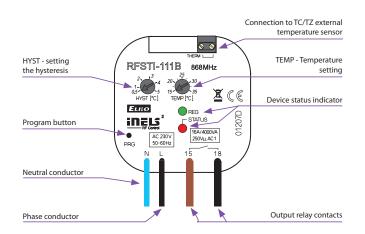
Technical parameters	RFSTI-111B/230V	RFSTI-111B/120V
Supply voltage:	230 V AC	120 V AC
Supply voltage frequency:	50-60 Hz	60 Hz
Apparent input:	9 VA/cos φ= 0.1	9 VA/cos φ= 0.1.
Dissipated power:	0.7	'W
Supply voltage tolerance:	+10 %	; -15 %
Temperature measurement input:	1x external TZ/TC tem	perature sensor input 👍
Temp. measurement range	+15 to	+35 °C;
and accuracy:	0.5 °C of t	the range
Output		
Number of contacts:	1x switchin	g (AgSnO²)
Rated current:	12 A	/AC1
Switching power:	3000 VA/AC	1, 288 W/DC
Peak current:	30 A/max.	4 s at 10%
Switching voltage:	250 V AC	1/24 V DC
Min. switching power:	100 mA/10 V	
Insulation voltage between		
relay outputs and internal	basic In:	sulation
circuits:	(Cat. III surges by EN 60664-1)	
Isolates. voltage open relay		
contact:	1 kV	
Mechanical service life:	3x10 ⁷	
Electrical service life (AC1):	5x	10 ⁴
Control		
Communication protocol:	RFIO2	
Frequency:	866–922 MHz (for more	e information see p. 70)
Repeater function:	ye	es
Range:	in open space	e 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:	greei	n LED
Operating position:	any	
Mounting:	free at lead-in wires	
Protection:	IP:	30
Overvoltage category:	III.	
Contamination degree:	2	
Outlets (CY wire,	2 x 0.75 mm ² , 2 x 2.5 mm ² ,	
cross-section, length):	90 mm	
Dimensions:	49 x 49 x 21 mm	

1 Temperature sensor input is at the supply voltage potential.

Weight:

- 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.

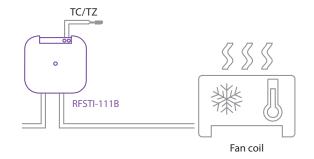
Device description



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





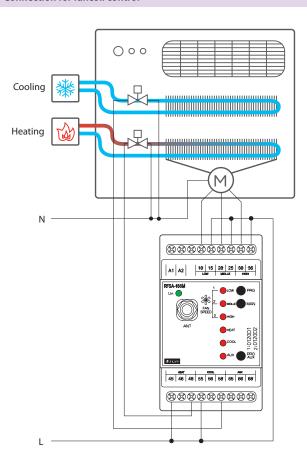
EAN code: RFSA-166M: 8595188134323

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	11070/ 23 70
Number of contacts:	3x changeover (AgSnO ₃);
	3x switching (AgSnO ₃)
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. 70)
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	max. 1x 2.5, max. 2x 1.5/
cross-section (mm²):	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 Directiv
	Order. No 426/2000 Coll. (Directive 1999/EC)

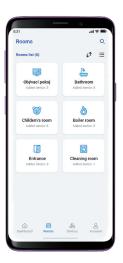
 $^{^{\}ast}$ Max Tightening Torque for antenna connector is 0.56 Nm.

- 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 68,
- 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



Smartphones













- 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.

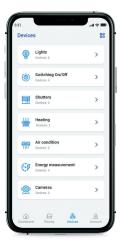
Manual:



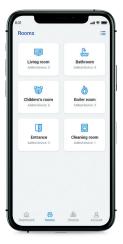


Overview

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.

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
- 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

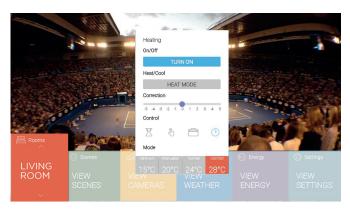
Weather station

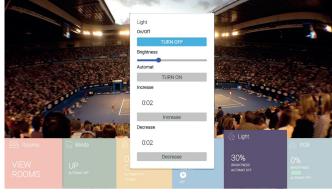
Cameras

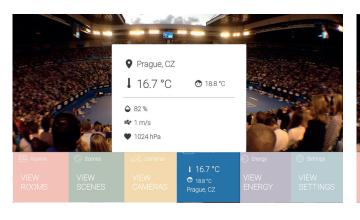
Energy management

Intercom

shutters

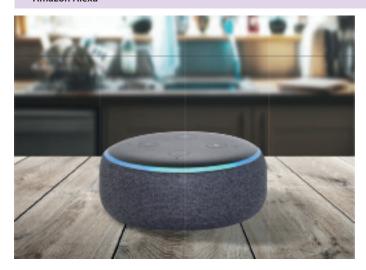








Amazon Alexa





- 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 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



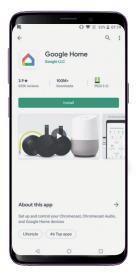
Register to the Cloud via email and set a password.



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

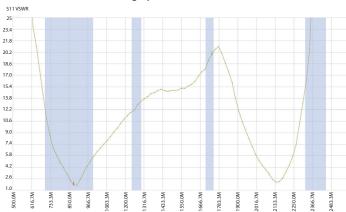
The rod antenna with SMA connector is supplied as standard with the product.

Extension cable for external antenna



10 m

AN-I antenna measurement graph



• The internal antenna is included in the standard package.

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. 70)
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

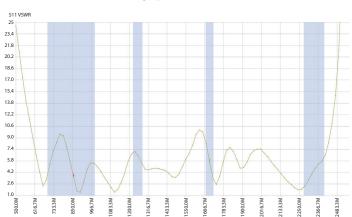


- The RFAF/USB Service Key (in conjunction with the RF_analyzer) is designed for iNELS RF Control system partners and serves for:
 - Setting the repeater (signal amplifier) through the iNELS RF Control elements labeled as RFIO2. This option allows you to communicate over longer distances (in the order 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



AN-E antenna measurement graph



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 v 280 mm

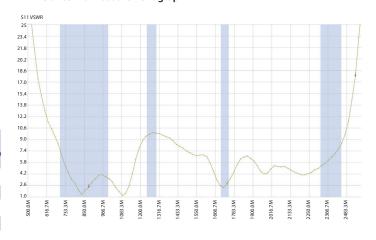
AN-E3 | External antenna



EAN code:
ANLE3: 8505188100121

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, $\cos \varphi = P$	/S (-)	
AC-1	Non-inductive or slightly inductive load, resistance furnace Includes all appliances supplied by AC current with power factor ($\cos \phi$) ≥ 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 AgSnO₂ –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.

Switches

Single function - RFSA-11B, RFSAI-11B-SL

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



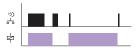
The output contact will be closed by pressing the button.

Function 3 - switch off



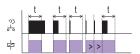
The output contact will be opened by pressing the button.

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.

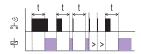
Function 5 - delayed off



The output contact will be closed by pressing the button and opened after the set time interval has elapsed.

t = 2 s to 60 min.

Function 6 - delayed on



The output contact will be opened by pressing the button and closed after the set time interval has elapsed.

t = 2 s to 60 min.

Loadability products

RFJA-32B-SL; RFSA-62B-SL; RFSAI-62B-SL; RFSA-66M; RFSAI-11B-SL

Load type	————————————————————————————————————	-(M)- AC2	-(M)- AC3	AC5a without compensation	AC5a with compensation	HAL.230V CAC5b	AC6a	 AC7b	——— AC12
Contact material AgSnO ₂ , Contact 8 A	250 V/8 A	250 V/5 A	250 V/4 A	X	X	250 W	250 V/4 A	250 V/1 A	250 V/1 A
Load type	3 E *	- 	<u></u> √		-M-	-M-			<u>-</u> ₩
	AC13	AC14	AC15	DC1	DC3	DC5	DC12	DC13	DC14
Contact material AgSnO ₂ , Contact 8 A	х	250 V/4 A	250 V/3 A	30 V/8 A	24 V/3 A	30 V/2 A	30 V/8 A	30 V/2 A	х

RFUS-61

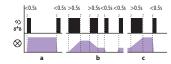
Load type	— cos φ ≥ 0.95	-M-	-M-	=(=		HAL.230V	3		
	AC1	AC2	AC3	AC5a without compensation	AC5a with compensation	AC5b	AC6a	AC7b	AC12
Contact material AgSnO ₂ , Contact 14 A	250 V/12 A	250 V/5 A	250 V/3 A	230 V/3 A (690 VA)	230 V/3 A (690 VA) up to max input C=14uF	1000 W	х	250 V/3 A	х
Load type			<u></u> ————————————————————————————————————		-M-	<u> </u>		<u>-</u>	<u>-</u>
	AC13	AC14	AC15	DC1	DC3	DC5	DC12	DC13	DC14
Contact material AgSnO , Contact 14 A	Х	250 V/6 A	250 V/6 A	24 V/10 A	24 V/3 A	24 V/2 A	24 V/6 A	24 V/2 A	x

RFSA-11B-SL; RFSA-61B; RFSA-61M; RFSC-61N; RFSTI-11B-SL; RFDALI-32B-SL

Load type	 cos φ ≥ 0.95	-(M)-	-(M)-	=======================================		HAL 230V	36	-~~~	
,,	AC1	AC2	AC3	AC5a without compensation	AC5a with compensation	AC5b	AC6a	AC7b	AC12
Contact material AgSnO ₃ , Contact 16 A	250 V/16 A	250 V/5 A	250 V/3 A	230 V/3 A (690 VA)	230 V/3 A (690 VA) up to max input C=14uF	1000 W	х	250 V/3 A	250 V/10 A
Load type	BE#	<u>-</u>	<u></u> √/-		—M—	-(M)-		<u>-</u>	<u>-</u>
	AC13	AC14	AC15	DC1	DC3	DC5	DC12	DC13	DC14
Contact material AgSnO ₃ , Contact 16 A	х	250 V/6 A	250 V/6 A	24 V/10 A	24 V/3 A	24 V/2 A	24 V/6 A	24 V/2 A	х

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

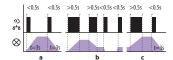
Light scene function 1



- 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 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.

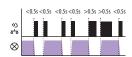
The actuator remembers the adjusted value even after disconnecting from the power supply.

Function sunrise



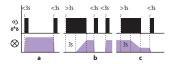
After pressing the programmed button, the light begins to illuminate in the programmed time interval in a range of 2 seconds to 30 minutes.

Function 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.

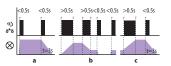
Light scene function 2



- 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 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 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 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- 806-			-E27- 5-5K	DLSL-(GU10- 0-3K	LSL-0		LSL-G 350		LP-60	60-3K	LP-60	60-6K	LED 7.2	strip 2W		strip .4W		strip .2W		strip .8W	RGB 7.2		RGB 14.	
	Y	number	N.	number	1 a			number		number		number		number	213	number	HIJ 8 T	number	Sales Control	number	St. Sec. St.	number		number	MI JOHN	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 $\cos \phi$, capacity for power factor $\cos \phi$ =1. The power factor of dimmable LEDs and ESL bulbs ranges from $\cos \phi$ = 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 **916 MHz** Australia, New Zealand, America, Israel

868.1 MHz Russia

868.5 MHz EU, Ukraine, Middle East

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.





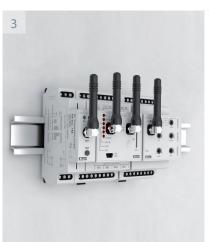
1) Surface mounted

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

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

2) Flush mounted

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





3) DIN Rail mounted

On DIN rail according to EN 60715.

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

4) Flush mounted (BOX)

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



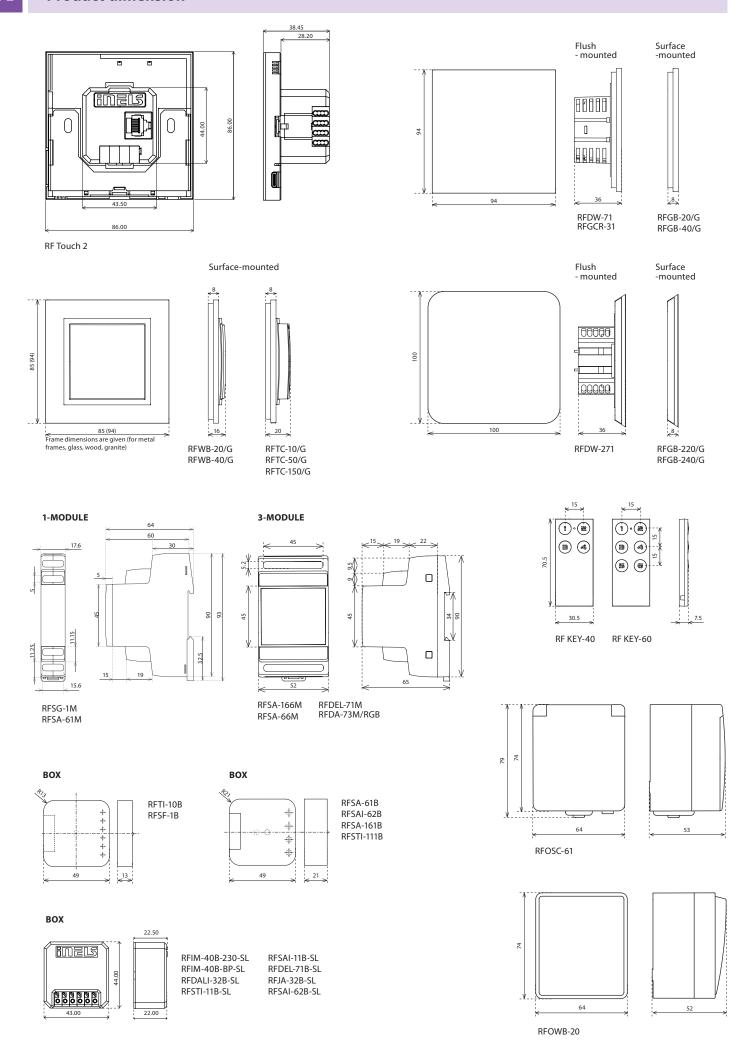


5) Mounted into the cover of appliance

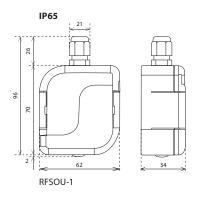
RFDALI-32B-SL	RFJA-32B-S
RFDEL-71B-SL	RFSAI-161B
RFSAI-11B-SL	RFSTI-111B
RFSA-61B	
RESAL-62R-SI	

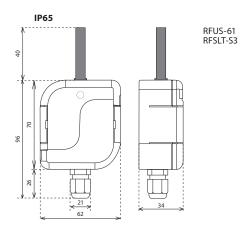
6) Surface mounted

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

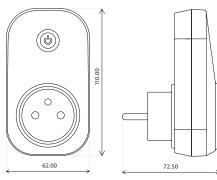


Product dimension

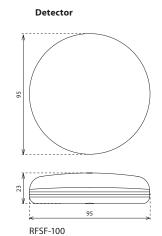


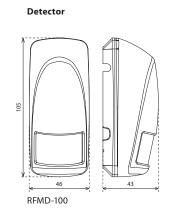


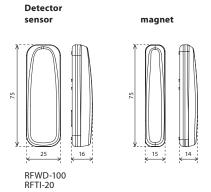


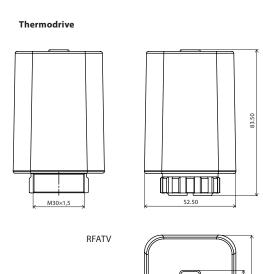




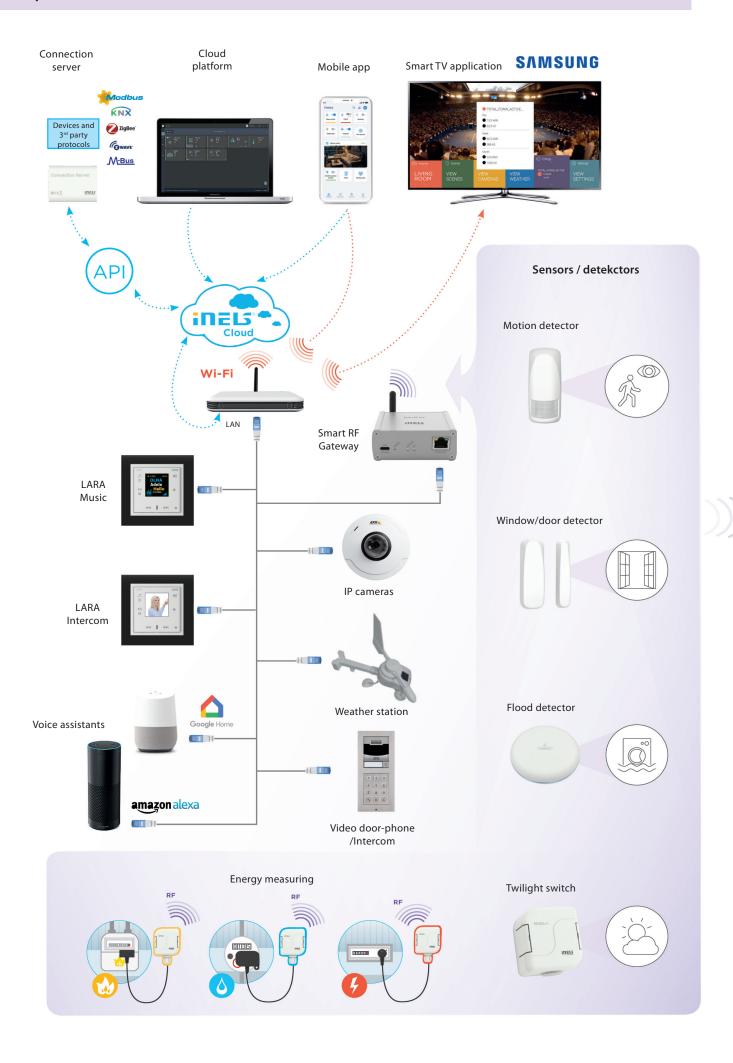




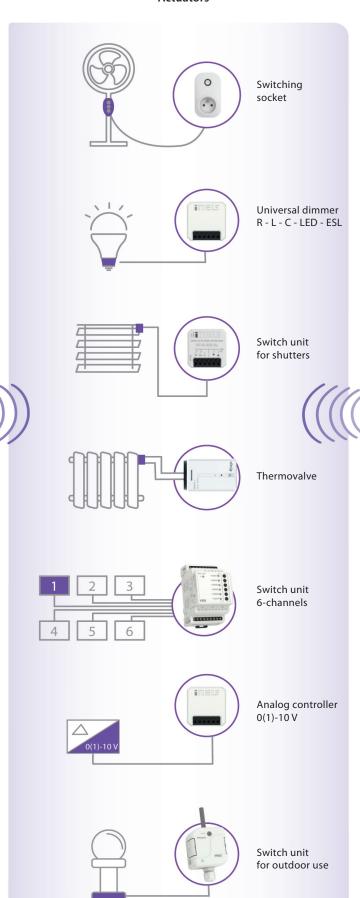




52.50



Actuators



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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