WIRELESS ELECTRO-INSTALLATION

TECHNICAL CATALOGUE

www.elkoep.com
ELKO EP employs about 274 people, exports its products to more than sixty six countries, and has representatives in eleven foreign branches. Company of the Year of the Zlín Region, Visionary of the Year, Global Exporter of the Year, Participation in the Czech TOP 100, these are just some of the awards received. Still, we are not finished. We are constantly striving to move forward in the field of innovation and development. That’s our primary concern.

Millions of relays, thousands of satisfied customers, hundreds of our own employees, twenty seven years of research, development and production, eleven foreign branches, one company. ELKO EP, innovative- a purely Czech company based in Holešov, where development, production, logistics, service and support go hand in hand. We primarily focus on developing and manufacturing systems for building automation in the residential, commercial and industrial sector, a wide range of Smart city facilities and the so-called Internet of Things (IoT).
Wireless control system

CLASSIC ELECTRO-INSTALLATION

Electricity is your everyday guide. In our range you will find electronic modular devices from time relays to thermostats. We build on solid foundations and have been developing and manufacturing for more than 27 years.

Wireless electroinstallation

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

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

YOU CAN CONTROL iNELS WITH:

Wireless wall controller
- 2 or 4 buttons
- simple installation – can be attached or fixed anywhere
- in LOGUS™ design (natural materials and colour combinations)

Glass wall controller
- wall controller in elegant glass design
- 2 or 4 buttons
- two side tape installation or wall box installation
- signal range up to 200 m

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

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

Wireless 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
- 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

WIRELESS ELECTRO-INSTALLATION

An ideal solution for completed houses, when it is no longer possible to intervene in the structure. Communication works wirelessly through the central brain, the RF Touch unit. From this unit you control thermostats and can control up to a range of 200 m.

If you are building a new house, this electrical installation is tailor-made for you. The data wire (bus) is routed in the walls through the entire house. The advantage is the possibility of expansion with a multimedia superstructure or connection of third parties (appliances, cameras, etc.)

Wired electroinstallation

If you are building a new house, this electrical installation is tailor-made for you. The data wire (bus) is routed in the walls through the entire house. The advantage is the possibility of expansion with a multimedia superstructure or connection of third parties (appliances, cameras, etc.)

Price:
Savings:

- controlling appliances
- dimming lights
- controlling blinds
- heating regulation
- wireless controller
- detectors
- smartphone
- smart watch
- touch panel

Price:
Savings:

- controlling household appliances
- door communicator
- weather station
- video cameras (indoor/door)
- audio zone (music playback)
- PC/Laptop
- tablet
- video zone (wall box)

Price:
Savings:

- controlling household appliances
- door communicator
- weather station
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Price:
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- controlling household appliances
- door communicator
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- PC/Laptop
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New!

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**Overview of wireless system units**

### Controllers

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

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

- **RFGB-20/W**
  - Glass touch controller
  - 2 buttons, SHARP

- **RFGB-40/W**
  - Glass touch controller
  - 4 buttons, SHARP

- **RFGB-220/W**
  - Glass touch controller
  - 2 buttons, ROUND

### Switches

- **RFSA-11B**
  - Switch unit
  - 1 x 16 A multi-function

- **RFSA-61B**
  - Switch unit
  - 1 x 16 A multi-function

- **RFSA-62B**
  - Switch unit
  - 2 x 8 A multi-function

- **RFSAI-62B**
  - Switch unit with external inputs
  - 2 x 8 A

- **RFJA-32B**
  - Switch unit for shutters
  - 2 x 8 A

### Dimmers

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

- **RFDEL-71B**
  - Universal dimmer
  - 1 x 160 VA R, L, C, LED, ESL

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

- **RFDA-73M/RGB**
  - Three channel dimmer for LED (RGB) strips

- **RFSC-71**
  - Dimming socket plug
  - 1 x 600 VA R, L, C, LED, ESL

### Temperature control

- **RFTC-10/G**
  - System temperature controller

- **RFTC-50/G**
  - Autonomous temperature controller

- **RESTI-11B**
  - Switch unit with an external temperature sensor

- **RTFI-10B**
  - Temperature sensor
    - internal + external

- **TC TZ**
  - Temperature sensor

### Lighting

- **RFIM-20B**
  - Input contacts converter
  - 2x permanent contacts

- **RFIM-40B**
  - Input contacts converter
  - 4x instantaneous contacts

- **RFSG-1M**
  - Input contact converter
  - 1x permanent or instantaneous contact

- **RFUS-61**
  - Switching socket plug
  - 1 x 16 A, multi-function

- **RFSC-61**
  - Switching socket plug
  - 1 x 16 A, multi-function

- **RFATV-1**
  - Wireless thermostatic valve
  - ON/OFF, 0-10 V

- **Telva**
  - Thermodrive
  - ON/OFF, 0-10 V
Overview of wireless system units

Detectors
- RFSF-1B Level switch
- FP-1 Liquid probe
- RFSF-100 Flood detector
- RFSO-1 Twilight switch
- RFSO-1 Smoke detector

System units
- RF Touch-B Wireless touch unit – an installation box – surface mounted
- RF Touch-W
- eLAN-RF-003 Smart RF box
- RFRP-20 Repeater to extend the range
- RFPM-2M Energy gateway
- RFTM-1 Pulse converter
- CTSO Current transformer
- LS LED sensor for RFMT-1 (pulse converter)
- MS Magnetic sensor for RFMT-1 (pulse converter)
- WS Magnetic sensor water meter for RFMT-1 (pulse converter)

Hotel Room Energy Saving Kit
- RFPCR-31/G Multifunctional card reader
- RFGCR-31/B Multifunctional card reader
- RFGCH-31/B Smart Card Holder
- RFGCH-31/W – white glass – black glass
- RFGCH-31/B – white glass – black glass
- RFSAI-161B Switch unit with external input
- RFCR-31/G Multifunctional card reader
- RFGCR-31/W – white glass – black glass
- RFGCH-31/B Smart Card Reader
- RFGCH-31/W – white glass – black glass
- RFSAI-161B Switch unit with external input

Příslušenství
- RFAF/USB Service Key
- AN-I Internal antenna sensitivity 1 dB
- AN-E External antenna sensitivity 5 dB

Supported video cameras
- Axis
- D-Link
- HK VISION

Supported intercoms
- 2N
- HK VISION
- DAHUA
The wireless iNELS RF system offers you a unique chance to breathe life into your home.

Controlling appliances, dimming lights, creating light scenes, security - we need all these functions in our daily lives. iNELS RF is a building kit that you build just the way you like. The result will be one system that takes complete care of the running of your home. It will become an indispensable part of your family. You can fully adjust iNELS based on what you do or where you are, whether on vacation or at work, with family at home or with friends, or whether you are waking up or going to sleep.

### Technical parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>RFWB-20/G</th>
<th>RFWB-40/G</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply voltage:</td>
<td>3 V CR 2032 battery</td>
<td></td>
</tr>
<tr>
<td>Battery life:</td>
<td>around 5 years based on frequency of use</td>
<td></td>
</tr>
<tr>
<td>Number of buttons:</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Communication protocol</td>
<td>RFID</td>
<td></td>
</tr>
<tr>
<td>Frequency</td>
<td>866–922 MHz (for more information see p. 80)</td>
<td></td>
</tr>
<tr>
<td>Signal transmission method</td>
<td>unidirectionally addressed message</td>
<td></td>
</tr>
<tr>
<td>Range:</td>
<td>in open space up to 200 m</td>
<td></td>
</tr>
<tr>
<td>Operating temperature:</td>
<td>-10 to +50 °C</td>
<td></td>
</tr>
<tr>
<td>Operating position:</td>
<td>any</td>
<td></td>
</tr>
<tr>
<td>Mounting:</td>
<td>glue/screws</td>
<td></td>
</tr>
<tr>
<td>Protection:</td>
<td>IP20</td>
<td></td>
</tr>
<tr>
<td>Contamination degree:</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Dimensions frame:</td>
<td>85 x 85 x 16 mm</td>
<td>94 x 94 x 16 mm</td>
</tr>
<tr>
<td>Weight (plastic)*</td>
<td>38 g</td>
<td>39 g</td>
</tr>
</tbody>
</table>

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

### Device description

- **On-wall button controller is used to control switches and dimmers (lights, gate, garage door, blinds, etc.).**
- **RFWB-20/G**: two buttons enable control of two units independently.
- **RFWB-40/G**: four buttons enable control of four units independently.
- The flat design with level base makes it ideal for fast installation on any surface (fixation with adhesive or screws in the installation box).
- When pressing the button, it sends a set signal (ON/OFF, dimming, time switching OFF/ON, blinds up/down).
- Sending a command is indicated by a red LED.
- In LOGUS® 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 RFIO.

**RFWB-40/G**

- On-wall button controller
- Control buttons
- Base
- Frame
- Electronics
- Cover

**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.
### Technical parameters

<table>
<thead>
<tr>
<th></th>
<th>RFGB-20</th>
<th>RFGB-40</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply voltage</td>
<td>2x 3 V CR 2032 batteries</td>
<td></td>
</tr>
<tr>
<td>Battery life</td>
<td>around 2 years based on frequency of use</td>
<td></td>
</tr>
<tr>
<td>Transmission indication</td>
<td>red LED</td>
<td></td>
</tr>
<tr>
<td>Number of capacitive buttons</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Communication protocol</td>
<td>RFIO</td>
<td></td>
</tr>
<tr>
<td>Frequency</td>
<td>866–922 MHz (for more information see p. 80)</td>
<td></td>
</tr>
<tr>
<td>Signal transmission method</td>
<td>unidirectionally addressed message</td>
<td></td>
</tr>
<tr>
<td>Range</td>
<td>in open space up to 200 m</td>
<td></td>
</tr>
<tr>
<td>Operating temperature</td>
<td>-10 to +50 °C</td>
<td></td>
</tr>
<tr>
<td>Operating position</td>
<td>any</td>
<td></td>
</tr>
<tr>
<td>Mounting</td>
<td>glue/screws</td>
<td></td>
</tr>
<tr>
<td>Protection</td>
<td>IP20</td>
<td></td>
</tr>
<tr>
<td>Contamination degree</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Dimensions</td>
<td>94 x 94 x 8 mm</td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>122 g</td>
<td></td>
</tr>
</tbody>
</table>

### Device description

- **Control buttons**:
  - PULL
  - PUSH
  - 'CLICK'

- **Variants**:
  - RFGB-20/W
  - RFGB-20/B
  - RFGB-40/W
  - RFGB-40/B

- **Related standards**:
RFDW-71/W, RFDW-71/B | Glass touch controller

- Glass touch controller with integrated dimming component which serves 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 (230 V) equipped with LED
- 4 channel switch version allows you to control the integrated dimmer as well as other components of the installation.
- They can be combined with detectors, controllers, iNELS RF Control or system components.
- 6 light functions - smooth increase or decrease with time setting 2 s - 30 min. Function description can be found on page 79.
- When switched off, the set level is stored in the memory, and when switched back on, it returns to the most recently set value.
- Thanks to setting the min. brightness by potentiometer, you will eliminate flashing of the LED and ESL light sources.
- The universal dimmer may be controlled by up to 25 buttons.
- 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 160 m (in open space), if the signal is insufficient between the controller and unit, use the signal repeater RFP-20 or protocol component RFO2 that support this feature.
- Communication frequency with bidirectional protocol RFO2.

**Colour variants**

- RFIO2
- RF devices.

**Technical parameters**

<table>
<thead>
<tr>
<th>RFDW-71/230V</th>
<th>RFDW-71/120V</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply voltage: 230 V AC / 50 Hz</td>
<td>120 V AC / 60 Hz</td>
</tr>
<tr>
<td>Apparent power: 1.1 VA</td>
<td>1.1 VA</td>
</tr>
<tr>
<td>Disipated power: 0.6 W</td>
<td>0.6 W</td>
</tr>
<tr>
<td>Supply voltage tolerance: ±10%</td>
<td>±10%</td>
</tr>
<tr>
<td>Temperature measuring: YES, built-in temperature sensor</td>
<td>YES, built-in temperature sensor</td>
</tr>
<tr>
<td>Scope and accuracy of temp. measurement: 0 ... 55°C, 0.3°C from the range</td>
<td>0 ... 55°C, 0.3°C from the range</td>
</tr>
<tr>
<td>Contactless: 2 x MOSFET</td>
<td>max. 160 W</td>
</tr>
<tr>
<td>Load capacity*: max. 160 W</td>
<td>max. 80 W</td>
</tr>
<tr>
<td>Control: Wireless: up to 25 channels (buttons)</td>
<td>Communication protocol: RFO2</td>
</tr>
<tr>
<td>Frequency: 866–922 MHz (for more information see p. 80)</td>
<td>Repeater function: yes</td>
</tr>
<tr>
<td>Repeater function: yes</td>
<td>Manual control: 4 touch keys, button PROG</td>
</tr>
<tr>
<td>Indications touch keys: red/green LED</td>
<td>Indications PROG: colour adjustable prog. mode</td>
</tr>
<tr>
<td>Colour adjustable prog. mode</td>
<td>Range: in open space up to 160 m</td>
</tr>
<tr>
<td>Connection: Termininals: 0.5 ... 1 mm²</td>
<td>Other data:</td>
</tr>
<tr>
<td>Operating temperature: -20 to + 35°C</td>
<td>Operating temperature: -20 to + 35°C</td>
</tr>
<tr>
<td>Storage temperature: -40 to + 70°C</td>
<td>Storage temperature: -30 to + 70°C</td>
</tr>
<tr>
<td>Protection degree: IP20</td>
<td>Protection degree: IP20</td>
</tr>
<tr>
<td>Overvoltage category: II</td>
<td>Overvoltage category: II</td>
</tr>
<tr>
<td>Pollution degree: 2</td>
<td>Pollution degree: 2</td>
</tr>
<tr>
<td>Operation position: any</td>
<td>Operation position: any</td>
</tr>
<tr>
<td>Installation: into installation box</td>
<td>Dimensions: 94 x 94 x 36 mm</td>
</tr>
<tr>
<td>Weight: 155 g</td>
<td>Weight: 155 g</td>
</tr>
</tbody>
</table>

* See page 79 for the load chart for each light source.

---

RFDW-271/W, RFDW-271/B | Glass touch controller

- Glass touch controller designed which serves to regulate light sources:
  - R – classic lamps (resistive load)
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  - ESL – dimmable energy efficient fluorescent lamps
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**Colour variants**

- RFIO2
- RF devices.

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<td>YES, built-in temperature sensor</td>
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<td>max. 80 W</td>
</tr>
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<td>Control: Wireless: up to 25 channels (buttons)</td>
<td>Communication protocol: RFO2</td>
</tr>
<tr>
<td>Frequency: 866–922 MHz (for more information see p. 80)</td>
<td>Repeater function: yes</td>
</tr>
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</tr>
<tr>
<td>Colour adjustable prog. mode</td>
<td>Range: in open space up to 160 m</td>
</tr>
<tr>
<td>Connection: Termininals: 0.5 ... 1 mm²</td>
<td>Other data:</td>
</tr>
<tr>
<td>Operating temperature: -20 to + 35°C</td>
<td>Operating temperature: -20 to + 35°C</td>
</tr>
<tr>
<td>Storage temperature: -40 to + 70°C</td>
<td>Storage temperature: -30 to + 70°C</td>
</tr>
<tr>
<td>Protection degree: IP20</td>
<td>Protection degree: IP20</td>
</tr>
<tr>
<td>Overvoltage category: II</td>
<td>Overvoltage category: II</td>
</tr>
<tr>
<td>Pollution degree: 2</td>
<td>Pollution degree: 2</td>
</tr>
<tr>
<td>Operation position: any</td>
<td>Operation position: any</td>
</tr>
<tr>
<td>Installation: into installation box</td>
<td>Dimensions: 100 x 100 x 36 mm</td>
</tr>
<tr>
<td>Weight: 155 g</td>
<td>Weight: 155 g</td>
</tr>
</tbody>
</table>

* See page 79 for the load chart for each light source.
**Technical parameters**

<table>
<thead>
<tr>
<th>RF KEY/W</th>
<th>RF KEY/B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply voltage:</td>
<td>3 V CR 2032 battery</td>
</tr>
<tr>
<td>Transmission indicator:</td>
<td>red LED</td>
</tr>
<tr>
<td>Number of buttons:</td>
<td>4</td>
</tr>
<tr>
<td>Transmitter frequency:</td>
<td>866–922 MHz (for more information see p. 80)</td>
</tr>
<tr>
<td>Signal transmission method:</td>
<td>unidirectionally addressed message</td>
</tr>
<tr>
<td>Range:</td>
<td>in open space up to 200 m</td>
</tr>
</tbody>
</table>

**Other data**

<table>
<thead>
<tr>
<th></th>
<th>RF KEY/W</th>
<th>RF KEY/B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating temperature:</td>
<td>-10 to +50 °C</td>
<td></td>
</tr>
<tr>
<td>Operating position:</td>
<td>any</td>
<td></td>
</tr>
<tr>
<td>Colour design:</td>
<td>white</td>
<td>black</td>
</tr>
<tr>
<td>Protection:</td>
<td>IP20</td>
<td></td>
</tr>
<tr>
<td>Contamination degree:</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Dimensions:</td>
<td>64 x 25 x 10 mm</td>
<td></td>
</tr>
<tr>
<td>Weight:</td>
<td>16 g</td>
<td></td>
</tr>
</tbody>
</table>

**Device description**

- The key alarm is used to control switches and dimmers (lights, gate, garage door, blinds, etc.).
- When pressing the button, it sends a set signal (ON/OFF, dimming, time switching OFF/ON, blinds up/down).
- Sending a command is indicated by a red LED.
- Four buttons enable control of four units independently.
- Option of setting light scenes, where with a single press, you can control units of InELS RF Control.
- Battery power supply (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.
- Designed in black and white with laser printing.
RF Pilot/W, RF Pilot/A | Remote RF controller with display

- 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 (2 x 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 RFIO-20 or protocol component RFIO2 that support this feature.
- Communication frequency with bidirectional protocol RFIO.

Technical parameters

<table>
<thead>
<tr>
<th>Technical parameter</th>
<th>RF Pilot/W</th>
<th>RF Pilot/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Display</td>
<td>colour OLED</td>
<td>colour OLED</td>
</tr>
<tr>
<td>Type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resolution</td>
<td>128 x 41 mm</td>
<td>128 x 41 mm</td>
</tr>
<tr>
<td>Side ratio</td>
<td>1:1</td>
<td>1:1</td>
</tr>
<tr>
<td>Visible surface</td>
<td>26 x 26 mm</td>
<td>26 x 26 mm</td>
</tr>
<tr>
<td>Backlighting</td>
<td>self-illuminating test</td>
<td>self-illuminating test</td>
</tr>
<tr>
<td>Diagonal</td>
<td>1.5&quot;</td>
<td>1.5&quot;</td>
</tr>
<tr>
<td>Control</td>
<td>direction button, control buttons</td>
<td>direction button, control buttons</td>
</tr>
<tr>
<td>Power supply</td>
<td>2 x 1.5 V AAA batteries/R03</td>
<td>2 x 1.5 V AAA batteries/R03</td>
</tr>
<tr>
<td>Battery life</td>
<td>approx. 3 years, according to the frequency of use and battery type</td>
<td>approx. 3 years, according to the frequency of use and battery type</td>
</tr>
<tr>
<td>Range</td>
<td>in open space up to 200 m</td>
<td>in open space up to 200 m</td>
</tr>
<tr>
<td>Communication protocol</td>
<td>RFIO</td>
<td>RFIO</td>
</tr>
<tr>
<td>Frequency</td>
<td>866–922 MHz for more information see p. 80</td>
<td>866–922 MHz for more information see p. 80</td>
</tr>
<tr>
<td>Other data</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating temperature</td>
<td>0 to +35 °C</td>
<td>0 to +35 °C</td>
</tr>
<tr>
<td>Storage temperature</td>
<td>-20 to +70 °C</td>
<td>-20 to +70 °C</td>
</tr>
<tr>
<td>Protection</td>
<td>IP20</td>
<td>IP20</td>
</tr>
<tr>
<td>Operating position</td>
<td>any</td>
<td>any</td>
</tr>
<tr>
<td>Dimensions</td>
<td>120 x 41 x 18 mm</td>
<td>120 x 41 x 18 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>61 g</td>
<td>61 g</td>
</tr>
<tr>
<td>Related standards</td>
<td>EN 60730-1</td>
<td>EN 60730-1</td>
</tr>
</tbody>
</table>

Device description

- Colour LED display

Display description

- Colour LED display

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

- **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, buttons, 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
**RFSA-11B, RFSA-61B | Switch unit, 1 channel**

- 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-11B: single-function design – switch on/off.**

**RFSA-61B: multi-function design – button, impulse relay and time function of delayed ON or OFF with time setting of 2 s - 60 min.** Function description can be found on page 78.

- 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 RFBP-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.

---

**Technical parameters**

<table>
<thead>
<tr>
<th>RFSA-11B/230V</th>
<th>RFSA-61B/230V</th>
<th>RFSA-11B/120V</th>
<th>RFSA-61B/120V</th>
<th>RFSA-11B/24V</th>
<th>RFSA-61B/24V</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply voltage:</td>
<td>230 V AC</td>
<td>120 V AC</td>
<td>12-24 V AC / DC</td>
<td>230 V AC</td>
<td>120 V AC</td>
</tr>
<tr>
<td>Supply voltage frequency:</td>
<td>50-60 Hz</td>
<td>60 Hz</td>
<td>50-60 Hz</td>
<td>50-60 Hz</td>
<td>60 Hz</td>
</tr>
<tr>
<td>Apparent input:</td>
<td>7 VA / cos φ = 0.1</td>
<td>7 VA / cos φ = 0.1</td>
<td>-</td>
<td>7 VA / cos φ = 0.1</td>
<td>7 VA / cos φ = 0.1</td>
</tr>
<tr>
<td>Dissipated power:</td>
<td>0.7 W</td>
<td>0.7 W</td>
<td>0.7 W</td>
<td>0.7 W</td>
<td>0.7 W</td>
</tr>
<tr>
<td>Supply voltage tolerance:</td>
<td>±10 %; ±15 %</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**Output**

- Number of contacts: 1x switching (AgSnO2)
- Rated current: 16 A / AC1
- Switching power: 4000 VA / AC1, 384 W / DC
- Peak current: 10 A / 3 s
- Switching voltage: 250 V AC / 24 V DC
- Max. DC switching power: 500 W
- Mechanical service life: 3x 10^6
- Electrical service life (AC1): 5x 10^7
- Control
  - Wireless: up to 25 channels (buttons)
  - Communication protocol: RFIO2
  - Frequency: 866–922 MHz (for more information see p. 80)
  - Repeater function: yes
  - Manual control: button (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: II
- Contamination degree: 2
- Terminal (x, wire, cross-section): 2x 0.75 mm², 2x 2.5 mm²
- Length of terminals: 50 mm
- Dimensions: 49 x 49 x 21 mm
- Weight: 46 g

---

**RFSA-62B | Switch unit, 2 channels**

- The switching unit with 2 output channels 8A used to control two independent appliances.
- They can be combined with detectors, controllers, iNELS RF Control or system components.
- Function button, impulse relay and time function of delayed start and return with time setting range of 2 s - 60 min. Function description can be found on page 78.
- Each of the channels may be controlled by up to 2 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 100 m (in open space), if the signal is insufficient between the controller and unit, use the signal repeater RFBP-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.

---

**Technical parameters**

<table>
<thead>
<tr>
<th>RFSA-62B/320V</th>
<th>RFSA-62B/120V</th>
<th>RFSA-62B/24V</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply voltage:</td>
<td>230 V AC</td>
<td>120 V AC</td>
</tr>
<tr>
<td>Supply voltage frequency:</td>
<td>50-60 Hz</td>
<td>60 Hz</td>
</tr>
<tr>
<td>Apparent input:</td>
<td>7 VA / cos φ = 0.1</td>
<td>7 VA / cos φ = 0.1</td>
</tr>
<tr>
<td>Dissipated power:</td>
<td>0.7 W</td>
<td>0.7 W</td>
</tr>
<tr>
<td>Supply voltage tolerance:</td>
<td>±10 %; ±15 %</td>
<td>-</td>
</tr>
</tbody>
</table>

**Output**

- Number of contacts: 2x switching (AgSnO2)
- Rated current: 8 A / AC1
- Switching power: 2000 VA / AC1
- Peak current: 10 A / 3 s
- Switching voltage: 250 V AC
- Max. DC switching power: 500 W
- Mechanical service life: 1x10^6
- Electrical service life (AC1): 1x10^7
- Control
  - Wireless: each of the outputs up to 12 channels (buttons)
  - Communication protocol: RFIO2
  - Frequency: 866–922 MHz (for more information see p. 80)
  - Repeater function: yes
  - Manual control: button (ON/OFF)
  - Range: in open space up to 100 m

**Other data**

- Operating temperature: -15 to + 50 °C
- Operating position: any
- Mounting: free at lead-in wires
- Protection: IP30
- Overvoltage category: II
- Contamination degree: 2
- Terminal (x, wire, cross-section): 2x 2.5 mm², 3x 0.75 mm²
- Length of terminals: 50 mm
- Dimensions: 49 x 49 x 21 mm
- Weight: 46 g
### Technical parameters

**RFSAI-62B/230V**
- **Supply voltage:** 230 V AC
- **Supply voltage frequency:** 50–60 Hz
- **Apparent power:** 2.5 W
- **Dispersed power:** 0.7 W
- **Supply voltage tolerance:** ±10 %–15 %
- **Output:**
  - Number of contacts: 2 x switching (AgSnO₂)
  - Rated current: 8 A / AC1
  - Switching power: 1000 VA / AC1, 192 W / DC
  - Peak current: 25 A / 1s
  - Min. switching power OC: 500 mW
  - Mechanical service life: 1x10⁷
  - Electrical service life (AC1): 1x10⁵
- **Controlling**
  - Communication protocol: RFIO2
  - Frequency: 866–922 MHz (for more information see p. 80)
  - Repeater function: yes
  - Manual control: button (PN30-SD/ON-OFF)
  - External button: max. 12 m wire
- **Other data**
  - Voltage of open contact: 25 V
  - Resist. of connection for closed contact: <1 kΩ
  - Resist. of connection for open contact: >10 kΩ
  - Galvanic isolation of input: yes
  - Operating temperature: -15 to +50 °C
  - Working position: any
  - Mounting: free at lead-in wires
  - Protection: IP54
  - Contact voltage category: A1
  - Contamination degree: 2
  - Terminal cross-section: 3x0.75 mm², 1x2.5 mm²
  - Terminal cross-section: 4x0.75 mm², 1x2.5 mm²
  - Terminal length: 90 mm
  - Dimensions: 49 x 49 x 21 mm
  - Weight: 46 g
- **Related standards:** EN 60669, EN 300220, EN 301489-18

**RFSAI-62B/120V**
- **Supply voltage:** 120 V AC
- **Supply voltage frequency:** 50–60 Hz
- **Apparent power:** 1.5 W
- **Dispersed power:** 0.7 W
- **Supply voltage tolerance:** ±10 %–15 %
- **Output:**
  - Number of contacts: 2 x switching (AgSnO₂)
  - Rated current: 8 A / AC1
  - Switching power: 800 VA / AC1, 152 W / DC
  - Peak current: 15 A / <3 s
  - Min. switching power OC: 500 mW
  - Mechanical service life: 1x10⁷
  - Electrical service life (AC1): 1x10⁵
- **Controlling**
  - Communication protocol: RFIO2
  - Frequency: 866–922 MHz (for more information see p. 80)
  - Repeater function: yes
  - Manual control: button (PN30-SD/ON-OFF)
  - External button: max. 12 m wire
- **Other data**
  - Voltage of open contact: 25 V
  - Resist. of connection for closed contact: <3 s
  - Resist. of connection for open contact: >10 kΩ
  - Galvanic isolation of input: yes
  - Operating temperature: -15 to +50 °C
  - Working position: any
  - Mounting: free at lead-in wires
  - Protection: IP30
  - Contact voltage category: A1
  - Contamination degree: 2
  - Terminal cross-section: 4x0.75 mm², 1x2.5 mm²
  - Terminal length: 90 mm
  - Dimensions: 49 x 49 x 21 mm
  - Weight: 46 g
- **Related standards:** EN 60669, EN 300220, EN 301489-18

### Function description
1. Short presses (<2 s) of the control allow the slats to be tilted.
2. When the control button is pressed >2 s shutters move up (▲) or down (▼) until reaching the final position. The travel time of the blinds is set with the programming button.

### Switching parameters

**RFSAI-32B/230V, RFSAI-32B/120V**
- **Supply voltage:** 230 V AC
- **Supply voltage frequency:** 50–60 Hz
- **Apparent power:** 1.8 W
- **Dispersed power:** 0.5 W
- **Power under load:** 1 A
- **Supply voltage tolerance:** ±10 %–15 %
- **Output:**
  - Number of contacts: 2 x switching (AgSnO₂)
  - Rated current: 8 A / AC1
  - Switching power: 800 VA / AC1, 152 W / DC
  - Peak current: 15 A / <3 s
  - Min. switching power OC: 500 mW
  - Mechanical service life: 1x10⁷
  - Electrical service life (AC1): 1x10⁵
- **Controlling**
  - Communication protocol: RFIO2
  - Frequency: 866–922 MHz (for more information see p. 80)
  - Repeater function: yes
  - Manual control: button (PN30-SD/ON-OFF)
  - External button: max. 12 m wire
- **Other data**
  - Voltage of open contact: 25 V
  - Resist. of connection for closed contact: <3 s
  - Resist. of connection for open contact: >10 kΩ
  - Galvanic isolation of input: yes
  - Operating temperature: -15 to +50 °C
  - Working position: any
  - Mounting: free at lead-in wires
  - Protection: IP30
  - Contact voltage category: A1
  - Contamination degree: 2
  - Terminal cross-section: 4x0.75 mm², 1x2.5 mm²
  - Terminal length: 90 mm
  - Dimensions: 49 x 49 x 21 mm
  - Weight: 46 g
- **Related standards:** EN 60669, EN 300220, EN 301489-18

*Identical with supply voltage.
**RFSA-61M, RFSA-66M | Switch unit, multi-function**

- **RFSA-61M**: the switching unit with 1 output channel 16 A is used for controlling appliances, sockets or lights.
- **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 three-module design of the unit into a switchboard.
- Each of the channels may be controlled by up to 25 channels.
- They can be combined with detectors, controllers, INELS RF Control or system components.
- **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 78.
- **Communication function** with bidirectional protocol RFIO2.

**Technical parameters**

- **RFSA-61M/230V**
  - Supply voltage: 110-230 V AC
  - Supply voltage frequency: 50-60 Hz
  - Apparent input: 1.62 W
  - Switching power: max. 2.5 W
  - Switching voltage: 250 V AC1 / 24 V DC
  - Switching frequency with bidirectional protocol RFIO2.

**Dimensions**

- 90 x 17.6 x 64 mm
- Weight: 74 g


**RFUS-61 | Switch unit, for outdoor use**

- **The switching unit with 1 x 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 - 60 min. Function description can be found on page 78.
- **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, the use the signal repeater RFRP-20 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.**

**Technical parameters**

- **RFUS-61/230V**
  - Supply voltage: 230 V AC
  - Supply voltage frequency: 50-60 Hz
  - Apparent power: 5 VA / cos φ = 0.9
  - Dissipated power: 0.6 W
  - Output relay contact: +10 %; -15 %

- **RFUS-61/120V**
  - Supply voltage: 120 V AC
  - Supply voltage frequency: 60 Hz
  - Apparent power: 5 VA / cos φ = 0.9
  - Dissipated power: 0.6 W
  - Output relay contact: +10 %; -15 %

**Related standards**


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

**RFSC-61 | Switching socket-plug**

- The switched socket with 16 A output channel is used to control fans, lamps, heaters and appliances, which are connected by a 16 A power cord.
- 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 78.
- The switched socket may be controlled by up to 32 channels.
- Thanks to the socket design, installation is simple by direct insertion into the existing socket.
- The programming button on the socket 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 RFIO.

Produced in 5 designs of sockets/plugs:

---

**Device description**

- Connection:
  - Supply voltage indication
  - Device status indication
  - Program button
  - Supply voltage indication

<table>
<thead>
<tr>
<th>Technical parameters</th>
<th>RFSC-61/230V</th>
<th>RFSC-61/120V</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply voltage</td>
<td>230 - 250 V</td>
<td>120 V AC</td>
</tr>
<tr>
<td>Supply voltage frequency</td>
<td>50-60 Hz</td>
<td>60 Hz</td>
</tr>
<tr>
<td>Apparent power</td>
<td>5 VA</td>
<td></td>
</tr>
<tr>
<td>Dissipated power</td>
<td>0.7 W</td>
<td></td>
</tr>
<tr>
<td>Supply voltage tolerance</td>
<td>+15 % / -15 %</td>
<td></td>
</tr>
<tr>
<td>Output</td>
<td>1x 16 A</td>
<td></td>
</tr>
<tr>
<td>Number of contacts</td>
<td>5x switching (3A/600V)</td>
<td></td>
</tr>
<tr>
<td>Rated current</td>
<td>16 A / AC</td>
<td></td>
</tr>
<tr>
<td>Switching power</td>
<td>4 kW/400 V</td>
<td></td>
</tr>
<tr>
<td>Peak current</td>
<td>10 A / 63 A</td>
<td></td>
</tr>
<tr>
<td>Switching voltage</td>
<td>250 V AC / 24 V DC</td>
<td></td>
</tr>
<tr>
<td>Min. switching power</td>
<td>500 mW</td>
<td></td>
</tr>
<tr>
<td>Mechanical service life</td>
<td>(AC3)</td>
<td>0.7x10^7</td>
</tr>
<tr>
<td>Electrical service life</td>
<td>(AC5)</td>
<td>0.7x10^7</td>
</tr>
</tbody>
</table>

**Control**

- Wireless: up to 32 channels (buttons)
- Communication protocol: RFIO
- Frequency: 866–922 MHz (for more information see p. 80)
- 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
- Working position: any
- Mounting: plug into a socket
- Protection: IP23
- Overvoltage category: II
- Contamination degree: 2
- Dimensions: 60 x 120 x 80 mm
- Weight: 495 g

---

**Technical parameters**

The load chart for each light source can be found on page 79.

- Glow lamp connection:
  - External button
  - Dimmed load:
    - French: max. 160 W
    - Schuko: max. 80 W
    - British: max. 80 W
  - Supply voltage:
    - 230 V AC
  - Apparent power:
    - 0.8 W
  - Dispersed power:
    - 1.1 VA
  - Supply voltage tolerance:
    - ±0.15 %

**Connection**

- Device status indication
- Button Prog
- External button
- Output to appliance
- Neutral conductor
- Load capacity:*
  - CE LV
  - EN 607 30-1 ED.2

---

**RFDEL-71B | Universal dimmer**

- The universal built-in 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 (capacitor load)
  - ESL – dimmable energy-efficient fluorescent lamps
  - LED – LED light sources equipped with LED.
- They can be combined with detectors, controllers, INELS RF Control or system components.
- 6 light functions – smooth increase or decrease with time setting 2 s - 30 min. Function description can be found on page 79.
- Thanks to setting the min. brightness by potentiometer, you will eliminate flashing of the LED and ESL light sources.
- The universal dimmer may be controlled by up to 25 channels.
- Connection of the existing button on the control input “S” enables combination of wireless control with classic (wired) control.
- The programming button on the controller is also used for manual control of the output.
- 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 BOX design lets you mount it right in an installation box, a ceiling or light cover.

**Technical parameters**

- Supply voltage: 230 V AC / 120 V AC
- Supply voltage frequency: 50/60 Hz
- Apparent power: 15 VA / 15 VA
- Dispersed power: 0.8 W / 0.8 W
- Supply voltage tolerance: ± 15 % / ± 15 %
- Connections: 4-wire, with “NEUTRAL”
- Output:
  - Dimmed load: R, L, C, LED, ESL
  - Contactless:
    - max. 160 W
    - max. 80 W

**Control**

- Wireless: up to 25 channels (buttons)
- Communication protocol: RFIO2
- Frequency: 866–922 MHz (for more information see p. 80)
- Repeater function: yes
- Range: in open space up to 160 m
- Manual control:
  - button PROG (ON/OFF)
  - external button
- Glow lamp connection: ND

**Other data**

- Operating temperature: –20 to + 70°C
- Storage temperature: –30 to + 70°C
- Operating position: any
- Mounting: free at all locations
- Protectors: IP30 under normal conditions
- Overvoltage category: II
- Contamination degree: 2
- Terminals (CY wire, Cross-section):
  - max. 250 mm²
- Terminal length: 90 mm
- Dimensions: 40 x 40 x 21 mm
- Weight: 49 g
- Related standards: EN 607 30-1 ED 2

* See page 79 for the load chart for each light source.
**RFDAC-71B** | Analog controller

- 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 - 30 min. Function description can be found on page 79.
- 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 RFDI2 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.

### Technical parameters

<table>
<thead>
<tr>
<th>RFDAC-71B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply voltage:</td>
</tr>
<tr>
<td>Supply voltage frequency:</td>
</tr>
<tr>
<td>Apparent input:</td>
</tr>
<tr>
<td>Dispersed power:</td>
</tr>
<tr>
<td>Supply voltage tolerance:</td>
</tr>
<tr>
<td>Control</td>
</tr>
<tr>
<td>Potential-free analog output / max. current:</td>
</tr>
<tr>
<td>Rated current:</td>
</tr>
<tr>
<td>Switching capacity:</td>
</tr>
<tr>
<td>Switching voltage:</td>
</tr>
<tr>
<td>Mechanical service life:</td>
</tr>
<tr>
<td>Electrical service life:</td>
</tr>
<tr>
<td>Indication:</td>
</tr>
<tr>
<td>Output selection:</td>
</tr>
<tr>
<td>Control</td>
</tr>
<tr>
<td>Wireless:</td>
</tr>
<tr>
<td>Communication protocol:</td>
</tr>
<tr>
<td>Frequency:</td>
</tr>
<tr>
<td>Repeater function:</td>
</tr>
<tr>
<td>Manual control:</td>
</tr>
<tr>
<td>Range:</td>
</tr>
<tr>
<td>Minimal control distance:</td>
</tr>
<tr>
<td>Other data</td>
</tr>
<tr>
<td>Operating temperature:</td>
</tr>
<tr>
<td>Operating position:</td>
</tr>
<tr>
<td>Mounting:</td>
</tr>
<tr>
<td>Protection:</td>
</tr>
<tr>
<td>Overvoltage category:</td>
</tr>
<tr>
<td>Contamination degree:</td>
</tr>
<tr>
<td>Technical X/Y/Z cross sections:</td>
</tr>
<tr>
<td>Length of terminals:</td>
</tr>
<tr>
<td>Dimensions:</td>
</tr>
<tr>
<td>Weight:</td>
</tr>
</tbody>
</table>

**RFDEL-71M** | Universal dimmer

- The universal modular dimmer is used to regulate light sources:
  - R – classic lamps (resistive load)
  - H – 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 equipped with LED.
- Control can be performed by:
  - detectors, Controllers and System units iNELS RF Control
  - by control signal 0(1)-10 V
  - potentiometer
  - dial existing button in the installation.
- 6 light functions - smooth increase or decrease with time setting 2 - 30 min. Function description can be found on page 79.
- 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.
- 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 RFDI2 that support this feature.
- Communication frequency with bidirectional protocol RFIO2.
- The unit’s three-module design with switchboard mounting.

### Technical parameters

<table>
<thead>
<tr>
<th>RFDEL-71M/230V</th>
<th>RFDEL-71M/120V</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply voltage:</td>
<td>230 V AC</td>
</tr>
<tr>
<td>Supply voltage frequency:</td>
<td>50 Hz</td>
</tr>
<tr>
<td>Apparent power:</td>
<td>2.5 VA</td>
</tr>
<tr>
<td>Dispersed power:</td>
<td>0.8 W</td>
</tr>
<tr>
<td>Supply voltage tolerance:</td>
<td>±10 / ±15 %</td>
</tr>
<tr>
<td>Output</td>
<td></td>
</tr>
<tr>
<td>Dimmed load:</td>
<td>RLC, LED, ESL</td>
</tr>
<tr>
<td>Contactors:</td>
<td>2 x MOSFET</td>
</tr>
<tr>
<td>Used capacity:</td>
<td>max. 600 W</td>
</tr>
<tr>
<td>Control</td>
<td></td>
</tr>
<tr>
<td>Wireless:</td>
<td>up to 32 channels (bottoms)</td>
</tr>
<tr>
<td>Communication protocol:</td>
<td>RFDI2</td>
</tr>
<tr>
<td>Frequency:</td>
<td>866–922 MHz (for more information see p. 80)</td>
</tr>
<tr>
<td>Repeater function:</td>
<td>yes</td>
</tr>
<tr>
<td>Range:</td>
<td>in open space up to 160 m</td>
</tr>
<tr>
<td>Manual control:</td>
<td>SW (ON/OFF) button</td>
</tr>
<tr>
<td>External button:</td>
<td>Max. 50 m cable</td>
</tr>
<tr>
<td>Glowing lamps connection:</td>
<td>MO</td>
</tr>
<tr>
<td>Analog control:</td>
<td>potentiometer or 0(1)-10 V</td>
</tr>
<tr>
<td>RF Antenna:</td>
<td>AN-I included (sMA connector***)</td>
</tr>
<tr>
<td>Other data</td>
<td></td>
</tr>
<tr>
<td>Operating temperature:</td>
<td>-20 to + 35 °C</td>
</tr>
<tr>
<td>Storage temperature:</td>
<td>-10 to + 70 °C</td>
</tr>
<tr>
<td>Operating position:</td>
<td>vertical</td>
</tr>
<tr>
<td>Mounting:</td>
<td>DIN-rail EN 60715</td>
</tr>
<tr>
<td>Overvoltage category:</td>
<td>II</td>
</tr>
<tr>
<td>Contamination degree:</td>
<td>2</td>
</tr>
<tr>
<td>Cross-sections of connecting wires:</td>
<td>max. 2x 2.5, max. 2x 1.5 (with a hollow max. 2x 2.5)</td>
</tr>
<tr>
<td>Dimensions:</td>
<td>95 x 52 x 65 mm</td>
</tr>
<tr>
<td>Weight:</td>
<td>125 g</td>
</tr>
<tr>
<td>Related standards:</td>
<td>EN 60715 3-1 ed.2</td>
</tr>
</tbody>
</table>

* See page 79 for the load chart for each light source.
** Max. Tightening Torque for antenna connector is 0.56 Nm.

### Connection

- Connection example: dimming of fluorescent tubes with dimmable ballast.
- Connection example: dimming with thermo valve.

### Device description

- Analog output
- Phase conductor
- Neutral conductor
- Device status indicator
- Program button
- External control by potentiometer or 0(1)-10 V
- Function description can be found on page 79.
- 6 light functions - smooth increase or decrease with time setting 2 - 30 min. Function description can be found on page 79.
- 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.
- 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 RFDI2 that support this feature.
- Communication frequency with bidirectional protocol RFIO2.
- The unit’s three-module design with switchboard mounting.

### Connection and external control options

- External control by potentiometer or 0(1)-10 V
- Manual control program
- Program button
- Switch to select light source
- External signal source ESL (E40)
- Potentiometer

---

![Connection example with thermo valve](image.png)

![Connection example with fluorescent tubes](image.png)
Dimmers

RFDA-73M/RGB | Three channels dimmer for LED (RGB) strips

- The dimmer for LED strips is used for independent control of 3 single-colour LED strips or one RGB LED strip.
- The expanded selection of control modes enables it to be combined with detectors, controllers and system units iNELS RF Control.
- The device with output signal 0 (1) - 10 V
- The units three-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 W
  - b) RGB LED strip 14.2 W – 10 m

Related standards:
- EN 60730-1; EN 60730-2-11
- EN 60715
- IP20 from front panel
- DIN rail
- Working position: any
- Mounting:
- Protection: IP20 from front panel
- Contamination degree:
- Cross-section of connecting wires (mm²):
  - max. 3x 2.5, max. 2x 1.5 / with a hollow max. 1x 2.5
- Dimensions: 90 x 53 x 65 mm
- Weight: 130 g
- Related standards:
  - EN 60720-1, EN 60730-2-11

Technical parameters

<table>
<thead>
<tr>
<th>RFDA-73M/RGB</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply terminals</td>
<td>Un, GND</td>
</tr>
<tr>
<td>Supply voltage</td>
<td>12-24 V DC stabilized</td>
</tr>
<tr>
<td>Maximum power without load</td>
<td>0.8 W</td>
</tr>
</tbody>
</table>

Output

- Dimmed load:
  - LED strip 12 V, 24 V with common anode
  - RGB LED strip 12 V, 24 V with common anode
- Number of channels:
  - 3 x A
- Peak current:
  - 3 x 10 A
- Switching voltage:
  - Un

Device description

- Inputs 0-10 / 1-10 V controlling colours
- Input 0-10 / 1-10 V controlling overall brightness
- Switch MODE
- Colour and brightness power for RF
- Voltage supply GND

Control options

- TERM 0-10 V and TERM 1-10 V
- DJAC-049
- INELS BUS System
- DAC-049
- iHC for smartphones and tablets.

Control modes

RF RGB
- Switch settings in MODE:
  - B - red
  - G - green
  - R - blue
  - MASTER

RF Colour
- Switch settings in MODE:
  - RF COLOUR mode for controlling RGB 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 green button.

Note: The mode can be controlled by RF Touch, RF Pilot, RFPB-30/G, RF KEY, RFIM-30B and iLAN-RF-003.

RF WHITE
- Switch settings in MODE:
  - RF WHITE mode for controlling RGB LED strips.
  - The controller and unit, use the signal repeater RFRP-20 or protocol component RFIO2 that support this feature.

Note: The mode can be controlled by RF Touch, RF Pilot, RFPB-20/G, RF KEY, RFIM-20B, RFPB-40/G and iLAN-RF-003.
### RFSC-71 | Dimming socket-plug

- The dimmed socket is used to control light sources that are connected by power cord - especially lamps:
  - 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 equipped with LED.
- Multi-function 6 light functions - smooth increase or decrease with time setting 2 s – 30 min.
- 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 socket 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 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.

Produced in 5 designs of sockets/plugs:

![French](image1)
![Schuko](image2)
![British](image3)

### Technical parameters

<table>
<thead>
<tr>
<th>RFSC-71/230V</th>
<th>RFSC-71/120V</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply voltage:</td>
<td>230 - 250 V</td>
</tr>
<tr>
<td>Supply voltage frequency:</td>
<td>50–60 Hz</td>
</tr>
<tr>
<td>Apparent power:</td>
<td>1.1 VA</td>
</tr>
<tr>
<td>Dissipated power:</td>
<td>0.8 W</td>
</tr>
<tr>
<td>Supply voltage tolerance:</td>
<td>±10% - 15%</td>
</tr>
<tr>
<td>Dimming load:</td>
<td>R, L, C, ESL</td>
</tr>
<tr>
<td>Control:</td>
<td>wireless</td>
</tr>
<tr>
<td>Communication protocol:</td>
<td>RFIO</td>
</tr>
<tr>
<td>Frequency:</td>
<td>866–922 MHz (for more information see p. 80)</td>
</tr>
<tr>
<td>Repeater function:</td>
<td>yes</td>
</tr>
<tr>
<td>Range:</td>
<td>in open space up to 100 m</td>
</tr>
<tr>
<td>Manual control:</td>
<td>button PROG (ON/OFF)</td>
</tr>
</tbody>
</table>

**Other data**
- Operating temperature: -20 to +35 °C
- Storage temperature: -30 to +70°C
- Distance: 20 mm
- Weight: 60 x 120 x 80 mm
- Weight: 129 g

### Related standards
- EN 60669, EN 300 220, EN 301 489 R&TTE Directive,
- Compatibility

<table>
<thead>
<tr>
<th>RF Touch</th>
<th>eLAN-RF</th>
<th>RFSA-6x</th>
<th>RFSTI-11B</th>
<th>RFATV-1</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

### RFTC-10/G | Simple temperature controller

- RFTC-10/G is used for temperature measurement (in the range of 0 to 55 °C) and correction of the pre-set temperature in RF Touch or eLAN-RF system devices in the range of ± 5 °C. The temperature correction is valid until the next program change in the given system device.
- The backlit LCD display displays the current and set temperature, status (ON/OFF), battery status, etc.
- Range up to 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.
- Colour combination of heating unit in design of frames LOGUS® (plastic, glass, wood, metal, stone).

### Technical parameters

| Supply voltage: | 2 x 1.5 V AAA batteries |
| Battery life: | 1 year based on frequency of use |
| Temperature correction: | ±2 °C |
| Temperature offset: | ±5 °C |
| Display: | LED, characters/see Display description |
| Backlighting: | active 10 s after pressing |
| Temperature measurement: | ±10% |
| Min. temperature range: | 0 to +55 °C |
| Max. temperature range: | 0 to +55 °C |
| Min. control distance: | 20 mm |

**Other data**
- Max. number of control: RFSA-6x:
  - 1

### Device description

- Potentiometer for setting minimum brightness
- Display description:
  - Circuit status indicator
  - Battery status indication
  - Temperature/time indication
  - Temperature measured:
    - -20 to +55 °C
    - ± 5 °C

### Display description

- Temperature measured in °C
- Battery status indication:
- Circuit temperature measured:
- Circuit status indicator:
- Temperature/time indication:
- Battery status indication:
- Temperature measured in °C
- Top: Heating cable
- Bottom: Heat emitting.

* See page 79 for the load chart for each light source.
RFSTI-11B | Switch unit with a external temperature sensor

- The temperature unit measures the temperature by external sensor, and controls the heating circuit (electric underfloor heating, air conditioning, boilers, etc.).
- These can be combined with system units: smart RF box eLAN-RF, wireless controller RFSTI-SGG or touch unit RF Touch.
- It measures temperature in a range of -20..50 °C and sends it to the system unit in regular 5 min. intervals. It sends a signal upon sudden temperature change.
- Setting the heat/cool function, hysteresis and offset is performed in the system unit or appliation.
- It enables connection of the switched load up to 16 A (4000 W).
- Range up to 160 m (in open space), if the signal is insufficient between the controller and unit, use the signal repeater RFRP-20 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.
- 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.

Technical parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply voltage</td>
<td>230 V AC</td>
</tr>
<tr>
<td>Frequency</td>
<td>50-60 Hz</td>
</tr>
<tr>
<td>Dispersed power</td>
<td>0.7 W</td>
</tr>
<tr>
<td>Supply voltage tolerance</td>
<td>±10 %, ±15 %</td>
</tr>
<tr>
<td>Temperature measurement range and accuracy</td>
<td>-20 to +55 °C; 0.5 °C of the range</td>
</tr>
<tr>
<td>Output</td>
<td></td>
</tr>
<tr>
<td>Number of contacts</td>
<td>1x switching (AgSnO2)</td>
</tr>
<tr>
<td>Rated current</td>
<td>16 A / AC1</td>
</tr>
<tr>
<td>Switching power</td>
<td>4000 VA / AC1; 184 W / DC</td>
</tr>
<tr>
<td>Peak current</td>
<td>10 A / &lt; 3 s</td>
</tr>
<tr>
<td>Switching voltage</td>
<td>235 V AC / 24 V DC</td>
</tr>
<tr>
<td>Max. DC switching power</td>
<td>500 mW</td>
</tr>
<tr>
<td>Mechanical service life</td>
<td>5x10⁷</td>
</tr>
<tr>
<td>Electrical service life</td>
<td>4x10⁷</td>
</tr>
<tr>
<td>Control</td>
<td></td>
</tr>
<tr>
<td>Communication protocol</td>
<td>RFIO2</td>
</tr>
<tr>
<td>Frequency</td>
<td>866–922 MHz for more information see p. 8N</td>
</tr>
<tr>
<td>Repeater functions</td>
<td>yes</td>
</tr>
<tr>
<td>Range</td>
<td>in open space up to 160 m</td>
</tr>
</tbody>
</table>

Other data

- The temperature unit measures the temperature by external sensor, and controls the heating circuit (electric underfloor heating, air conditioning, boilers, etc.).
- These can be combined with system units: smart RF box eLAN-RF, wireless controller RFSTI-SGG or touch unit RF Touch.
- It measures temperature in a range of -20..50 °C and sends it to the system unit in regular 5 min. intervals. It sends a signal upon sudden temperature change.
- Setting the heat/cool function, hysteresis and offset is performed in the system unit or appliation.
- It enables connection of the switched load up to 16 A (4000 W).
- Range up to 160 m (in open space), if the signal is insufficient between the controller and unit, use the signal repeater RFRP-20 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.
- 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.

RFSTI-11B/230V

- 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.
Technical parameters

**RFTI-10B**

- **Supply voltage:** 1x 3 V CR 2457 battery
- **Battery life:** 1 year based on frequency of use
- **Temperature measurement:** 1x internal NTC thermometer
- **Temp. measurement range and accuracy:** -20 to +50°C; 0.5 °C in the range

**Output**

- **Communication protocol:** RFIO
- **Frequency:** 866–922 MHz (for more information see p. 80)
- **Repeater function:** NO
- **Signal transmission method:** unidirectionally addressed message
- **Range:** in open space up to 160 m

**Other data**

- **Operating temperature:** -10 to +50 °C
- **Operating position:** any
- **Mounting:** glued/free-standing
- **Protection:** IP 30
- **Contamination degree:** 2
- **Dimensions:** 49 x 49 x 13 mm
- **Weight:** 45 g


**Device description**

- **Terminal for the connection of external sensor TC/TZ**
- **Device status indicator**

**Sensor location**

- on a wall
- in a box
- in a tank

**Sensor**

- TC:
  - Lead-in cable to sensor TC is made of wire CYSY 2D x 0.5 mm/0.02”
  - Temperature sensors can be connected directly to the terminal block
  - Cable lengths cannot be changed, connected or modified.
- 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**

- Thermistor temperature sensors are made of Negative Temperature Coefficient (NTC) embedded in a PVC or metal sleeve with a thermally-conductive sealer.

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

<table>
<thead>
<tr>
<th>Temperature (°C)</th>
<th>Sensor NTC 3(4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>1.47</td>
</tr>
<tr>
<td>30</td>
<td>0.87</td>
</tr>
<tr>
<td>40</td>
<td>0.67</td>
</tr>
<tr>
<td>50</td>
<td>0.46</td>
</tr>
<tr>
<td>60</td>
<td>0.32</td>
</tr>
<tr>
<td>70</td>
<td>0.23</td>
</tr>
</tbody>
</table>

**Diagram of sensor warm up via air**

16.5 (95%) time, which sensor needs to heat up on 65 (95%) % of ambient temperature of environment, in which it is located.
RFATV-1 | Wireless thermostatic valve

- The wireless thermostat measures room temperature by internal sensor, based on a set program in the system unit, it opens/closes the radiator valve.
- It can be combined with Smart RF box eLAN-RF or touch unit RF Touch.
- It measures temperature in a range of 0 to +32°C and sends it to the system unit in regular 5 min. intervals.
- Monitoring function "Open window", where upon a sudden change in temperature, it shuts the valve for a preset period.
- Setting the hysteresis and offset is performed in the system unit or application.
- Low battery indicator on the display of the system unit or in the application.
- Mounting directly on the valve of the heater (radiator).
- Battery power (2x 1.5 V AA 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.

Packaging includes: adapters Danfoss RAV, RA, RAVL; 2x 1.5 AA batteries.

Device description

Technical parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>RFATV-1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply voltage</td>
<td>2,5 V DC</td>
</tr>
<tr>
<td>Battery life</td>
<td>1 year based on frequency of use</td>
</tr>
<tr>
<td>Communication protocol</td>
<td>RFIO</td>
</tr>
<tr>
<td>Frequency</td>
<td>866–922 MHz (for more information see p. 80)</td>
</tr>
<tr>
<td>Repeater function</td>
<td>NO</td>
</tr>
<tr>
<td>RF connection/transmitter</td>
<td>RF Touch, eLAN-RF</td>
</tr>
<tr>
<td>Range</td>
<td>in open space up to 100 m</td>
</tr>
</tbody>
</table>

Other data

- Operating temperature: 0 to +50 °C
- Working position: any
- Protection: IP40
- Dimensions: 65 x 65 x 46 mm
- Thermostat end: M 10 x 1.5
- Piston stroke: max. 4 mm
- Controlling force: max. 100 N
- Related standards: EN 60730

TELVA 230V, TELVA 24V | Thermostatic drive

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

Technical parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>TELVA 230V</th>
<th>TELVA 24V</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating voltage</td>
<td>230 V, 50 / 60 Hz</td>
<td>24 V, 50 / 60 Hz</td>
</tr>
<tr>
<td>Switching current max</td>
<td>300 mA for max. 2 min</td>
<td>250 mA for max. 2 min</td>
</tr>
<tr>
<td>Operating current</td>
<td>8 mA</td>
<td>75 mA</td>
</tr>
<tr>
<td>Closing / opening time</td>
<td>cca 3 min.</td>
<td>cca 3 min.</td>
</tr>
<tr>
<td>Power input</td>
<td>1.8 W</td>
<td>1.8 W</td>
</tr>
<tr>
<td>Protection</td>
<td>IP44</td>
<td>IP44</td>
</tr>
<tr>
<td>Settings</td>
<td>4 mm</td>
<td>4 mm</td>
</tr>
<tr>
<td>Stopping force</td>
<td>100 N ± 5%</td>
<td>100 N ± 5%</td>
</tr>
<tr>
<td>Cable length</td>
<td>1 m</td>
<td>1 m</td>
</tr>
<tr>
<td>Connecting wire</td>
<td>2 x 0.75 mm²</td>
<td>2 x 0.75 mm²</td>
</tr>
<tr>
<td>Media temperature</td>
<td>0 to +100 °C</td>
<td>0 to +100 °C</td>
</tr>
<tr>
<td>Colour</td>
<td>white RAL 9003</td>
<td>white RAL 9003</td>
</tr>
<tr>
<td>Dimensions h/w/d</td>
<td>55 x 55 x 64 x 64 x 61 mm</td>
<td>55 x 55 x 64 x 64 x 61 mm</td>
</tr>
</tbody>
</table>

Adapters (is included)

<table>
<thead>
<tr>
<th>Type of valve</th>
<th>Type of adapter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Danfoss RAV</td>
<td>(the valve plunger must be fitted with the enclosed pin)</td>
</tr>
<tr>
<td>Danfoss RA</td>
<td></td>
</tr>
<tr>
<td>Danfoss RAVL</td>
<td></td>
</tr>
</tbody>
</table>
### Technical parameters

<table>
<thead>
<tr>
<th>RFIM-20B</th>
<th>RFIM-40B</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Supply voltage:</strong></td>
<td>1x 3 V CR 2477 battery</td>
</tr>
<tr>
<td><strong>Battery life:</strong></td>
<td>5 years based on frequency use</td>
</tr>
<tr>
<td><strong>Transmission indication/function:</strong></td>
<td>orange LED</td>
</tr>
<tr>
<td><strong>Number of inputs:</strong></td>
<td>2</td>
</tr>
<tr>
<td><strong>Input switching time:</strong></td>
<td>Permanent input connection (contact)</td>
</tr>
<tr>
<td><strong>Dimensions:</strong></td>
<td>49 x 49 x 13 mm</td>
</tr>
<tr>
<td><strong>Contamination degree:</strong></td>
<td>IP30</td>
</tr>
<tr>
<td><strong>Mounting:</strong></td>
<td>any</td>
</tr>
<tr>
<td><strong>Length of terminals:</strong></td>
<td>90 mm</td>
</tr>
<tr>
<td><strong>Number of contacts:</strong></td>
<td>2</td>
</tr>
<tr>
<td><strong>Mounting:</strong></td>
<td>free at lead-in wires</td>
</tr>
<tr>
<td><strong>Protection:</strong></td>
<td>IP30</td>
</tr>
<tr>
<td><strong>Combinations:</strong></td>
<td>2</td>
</tr>
<tr>
<td><strong>Dimensions:</strong></td>
<td>40 x 49 x 13 mm</td>
</tr>
<tr>
<td><strong>Weight:</strong></td>
<td>45 g</td>
</tr>
<tr>
<td><strong>Open contact voltage:</strong></td>
<td>peak 12 V</td>
</tr>
<tr>
<td><strong>Length of cable to contact:</strong></td>
<td>max. 100 m</td>
</tr>
<tr>
<td><strong>Related standards:</strong></td>
<td>EN 60609, EN 300 220, EN 301 489, EN 300 220, EN 301 489</td>
</tr>
</tbody>
</table>

### Device description

**RFIM-20B:**
- The wireless contact converter changes your existing wired button to a wireless one.
- Two inputs enable control of two units independently.
- Battery power supply (1x 3 V CR 2477 battery included in the supply) with battery life of around 5 years based on frequency of use.
- Contact can be permanently closed (does not drain on the battery).
- The wireless contact converter changes your existing wired button to a wireless one.
- Four inputs enable control of four units independently.
- Battery power supply (2x 3 V CR 2032 batteries) with battery life of around 5 years based on frequency of use (included in the supply).
- Button control (input must not be permanently closed).
- It can be used to transmit information on switching on the contact (detector, button, technology, topic output).
- When pressing the button, it sends a set signal (ON/OFF, dimming, time switching OFF/ON, blinds up/down).
- Option of setting light scenes, where with a single press, you can control multiple units of iNELS RF Control.
- Range up to 200 m (in open space), if the signal is insufficient between the controller and unit, use the signal repeater RFRP-20.
- Four inputs enable control of four units independently.
- Battery power supply (1x 3 V CR 2477 battery - included in the supply) with battery life of around 5 years based on frequency of use (included in the supply).
- Button control (input must not be permanently closed).

**RFIM-40B:**
- Range up to 200 m (in open space), if the signal is insufficient between the controller and unit, use the signal repeater RFRP-20.
- Unidirectionally addressed message.
- The RFIO design lets you mount it right in an installation box under the button or switch.
- The length of control impulses: min. 25 ms (max. unlimited).
- The length of control impulses: min. 25 ms (max. unlimited).
- Transmission indicator: red LED.
- Transmission indicator: green LED.
- Power supply indicator: yellow LED.
- Power supply indicator: green LED.
- Power supply indication: red LED.
- Power supply indication: red LED.
- Power supply tolerance: ± 10 % / ± 5 %.
- Power supply tolerance: ± 10 % / ± 5 %.
- Power supply: AC 12-230 V / DC 12-230 V.
- Power supply: AC 12-230 V / DC 12-230 V.
- Dissipated power: 0.2 W.
- Dissipated power: 0.2 W.
- Input switching time: min. 25 ms (max. unlimited).
- Input switching time: min. 25 ms (max. unlimited).
- Range: in open space up to 200 m.
- Range: in open space up to 200 m.
- Other data:
  - Operating temperature: -10 to + 50 °C
  - Operating temperature: -10 to + 50 °C
  - Operating position: any
  - Operating position: any
  - Nominal current (cross section): 4 x 0.75 mm² / 6 x 0.75 mm²
  - Nominal current (cross section): 4 x 0.75 mm² / 6 x 0.75 mm²
  - Length of terminals: 90 mm
  - Length of terminals: 90 mm
  - Number of connections between terminals:
    - for switched-on button: < 100 Q
    - for disabled contact: > 10 kΩ
  - Number of connections between terminals:
    - for switched-on button: < 100 Q
    - for disabled contact: > 10 kΩ
  - Mounting:
    - free at lead-in wires
    - free at lead-in wires
  - Protection:
    - IP30
    - IP30
  - Combinations:
    - 2
    - 2
  - Dimensions:
    - 40 x 49 x 13 mm
    - 40 x 49 x 13 mm
  - Weight:
    - 45 g
    - 45 g
  - Open contact voltage:
    - peak 12 V
    - peak 12 V
  - Length of cable to contact:
    - max. 100 m
    - max. 100 m
  - Related standards:
    - EN 60609, EN 300 220, EN 301 489, EN 300 220, EN 301 489

### Connection

**RFIM-20B**
- Control inputs
- Transmitter indication
- Ground

**RFIM-40B**
- Control inputs
- Transmitter indication
- Ground

**RFSG-1M**
- Supply voltage: 110-230 V AC
- Supply voltage frequency: 50-60 Hz
- Apparent input: 2 VA
- Dissipated power: 0.2 W
- Supply voltage tolerance: ± 10 % / ± 25 %
- Power supply indication: green LED

### Other data:
- Operating temperature: -15 to + 50 °C
- Operating position: any
- Nominal current (cross section): 4 x 0.75 mm² / 6 x 0.75 mm²
- Nominal current (cross section): 4 x 0.75 mm² / 6 x 0.75 mm²
- Length of terminals: 90 mm
- Length of terminals: 90 mm
- Number of connections between terminals:
  - for switched-on button: < 100 Q
  - for disabled contact: > 10 kΩ
- Number of connections between terminals:
  - for switched-on button: < 100 Q
  - for disabled contact: > 10 kΩ
- Mounting:
  - free at lead-in wires
  - free at lead-in wires
- Protection:
  - IP30
  - IP30
- Combinations:
  - 2
  - 2
- Dimensions:
  - 62 x 17.6 x 64 mm
  - 62 x 17.6 x 64 mm
- Weight:
  - 62 g
  - 62 g
- Related standards:
  - EN 60609, EN 300 220, EN 301 489, EN 300 220, EN 301 489

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

**Technical parameters**

- **RSF-1B | Level switch**
  - **Supply voltage:** 1 x 3 V CR 2477 battery
  - **Battery life:** 1 year based on frequency use
  - **Reset after flooding:** JUMPER - Manual/Automatic
  - **Programming:** with Prog button-based batteries
  - **Measuring input:** terminal 0.5-1 mm²
  - **Voltage measuring input:** 3 V
  - **Resistance measuring input:**
    - for detecting flooding: ≥ 20 kΩ
    - for flushing detection: ≥ 45 kΩ
  - **Probe cable length:** max. 30 m
  - **Dimensions:** 49 x 49 x 13 mm
  - **Protection:** IP62
  - **Mounting:** glue/freely
  - **Operation position:** any
  - **Storage temperature:** -10 to +50 °C
  - **Other data:**
    - **Working temperature:** -10 to +40 °C
    - **Operating position:** any
    - **Mounting:** glue/freely
    - **Protection:** IP62
    - **Degree of pollution:** 2
    - **Dimensions:** 49 x 49 x 13 mm
    - **Weight:** 92 g

- **RSF-100 | Flood detector**
  - **Power supply:** Battery power: 2 x 1.5 V AAA batteries
    - Battery life by frequency:
    - 1 x 12 hours: 3 years
  - **Setting**
    - **Alarm Detection:** vibration, optical and audible alarm
    - **Battery status view:** low battery is indicated by flashing 1x in 3 s or display in the system element
    - **Acoustic signal:** greater than 45 dB / 1 m
    - **Detection**
      - **Sensor:** contacts for flooding
      - **Detection principle:** contact between the sensor sensed liquid
    - **Response Time:** 3 s after connecting the scanning contacts
    - **Measurement accuracy:** 99.8 %
    - **Sensitivity:** in the range 0.05 - 20 kΩ
  - **Control**
    - **Communication protocol:** RFIO
    - **Frequency:** 866–922 MHz (for more information see p. 80)
    - **Repeat function:** NO
    - **Signal transmission method:** two-way addressed message
    - **Range:** in open space up to 160 m
  - **Other parameters**
    - **Working temperature:** +10°C to + 50°C (Pay attention to the operating temperature of batteries)
    - **Operation position:**
    - **Mounting:**
    - **Protection degree:** IP62
    - **Dimensions:** Ø 89 x 23 mm
    - **Weight:** 96 g

**Device description**

- Jumper to select the alarm mode
- Terminal for connection. Indication
- Program button

**Location of the detector and probe**

- On the wall

---

**FP-1 | Liquid probe**

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

---

**Conductivity of liquids**

<table>
<thead>
<tr>
<th>Type of liquid</th>
<th>Resistivity (kΩ)</th>
<th>Inadmissible liquids</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drinking water</td>
<td>~0.03 kΩ</td>
<td>Deionised water</td>
</tr>
<tr>
<td>Well water</td>
<td>~0.03 kΩ</td>
<td>Demineralised water</td>
</tr>
<tr>
<td>River water</td>
<td>~2 kΩ</td>
<td>Bouillon</td>
</tr>
<tr>
<td>Rain water</td>
<td>~1-2 kΩ</td>
<td>Gasoline</td>
</tr>
<tr>
<td>Waste water</td>
<td>0.5-5 kΩ</td>
<td>Oil</td>
</tr>
<tr>
<td>Seawater</td>
<td>~0.03 kΩ</td>
<td>Liquid gases</td>
</tr>
<tr>
<td>Natural / hard water</td>
<td>~1 kΩ</td>
<td>Paraffin</td>
</tr>
<tr>
<td>Chlorinated water</td>
<td>~1 kΩ</td>
<td>Ethylene glycol</td>
</tr>
<tr>
<td>Condensated water</td>
<td>~1 kΩ</td>
<td>Paints</td>
</tr>
<tr>
<td>Milk</td>
<td>~1 kΩ</td>
<td>High alcohol-content liquids</td>
</tr>
<tr>
<td>Milk serum</td>
<td>~1 kΩ</td>
<td></td>
</tr>
<tr>
<td>Fruit juices</td>
<td>~1 kΩ</td>
<td></td>
</tr>
<tr>
<td>Vegetable juices</td>
<td>~1 kΩ</td>
<td></td>
</tr>
<tr>
<td>Broths</td>
<td>~1 kΩ</td>
<td></td>
</tr>
<tr>
<td>Wine</td>
<td>~2.2 kΩ</td>
<td></td>
</tr>
<tr>
<td>Beer</td>
<td>~2.2 kΩ</td>
<td></td>
</tr>
<tr>
<td>Coffee</td>
<td>~2.2 kΩ</td>
<td></td>
</tr>
<tr>
<td>Soap soap</td>
<td>~18 kΩ</td>
<td></td>
</tr>
</tbody>
</table>

* Resistivity characterizes the local conductivity or resistive properties of materials which conduct electric current.
**Detectors**

**Technical parameters**

**RFSOU-1**

<table>
<thead>
<tr>
<th>Function (1)</th>
<th>twilight switch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Function 1:</td>
<td>1 ... 10 lx</td>
</tr>
<tr>
<td>Function 2:</td>
<td>10 ... 100 lx</td>
</tr>
<tr>
<td>Function 3:</td>
<td>100 ... 1 000 lx</td>
</tr>
</tbody>
</table>

- **Function (2) light switch**
  - Function 1: 100 ... 1 000 lx
  - Function 2: 1 000 ... 10 000 lx
  - Function 3: 10 000 ... 100 000 lx

**Function setting**
- rotary switch

**Fine adjustment of lighting levels**
- potentiometer

**The time delay t:**
- 0 / 1 / 2 min.

**Setting the delay time t:**
- rotary switch

**Control**

**Communication protocol:** RFIO

**Frequency:** 866–922 MHz (for more information see p. 80)

**Repeater function:** NO

**Range:** up to 20 m

**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

**Standards:** EN 60730-1, EN 300 220, EN 301 489 R&TTE Directive, Order No 436-2000 Coll. (Directive 1999/95/EC)

---

**Battery Life:**
- up to 2 years

**Power supply:**
- 2x 1.5 V AA batteries

**Detectors**

**Technical parameters**

**RFMD-100**

<table>
<thead>
<tr>
<th>Function</th>
<th>twilight switch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Function 1:</td>
<td>1 ... 10 lx</td>
</tr>
<tr>
<td>Function 2:</td>
<td>10 ... 100 lx</td>
</tr>
<tr>
<td>Function 3:</td>
<td>100 ... 1 000 lx</td>
</tr>
</tbody>
</table>

- **Function (2) light switch**
  - Function 1: 100 ... 1 000 lx
  - Function 2: 1 000 ... 10 000 lx
  - Function 3: 10 000 ... 100 000 lx

**Function setting**
- rotary switch

**Detection field**

- **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

**Standards:** EN 60730-1, EN 300 220, EN 301 489 R&TTE Directive, Order No 436-2000 Coll. (Directive 1999/95/EC)

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**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.**

- **Operating position:** sensor side down

**Standards:** EN 60730-1, EN 300 220, EN 301 489 R&TTE Directive, Order No 436-2000 Coll. (Directive 1999/95/EC)

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**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.

**Other data**

- **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

**Standards:** EN 60730-1, EN 300 220, EN 301 489 R&TTE Directive, Order No 436-2000 Coll. (Directive 1999/95/EC)
Technical parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>RFSD-100</th>
<th>RFSD-101</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power supply</td>
<td>4x 1.5 V AA batteries</td>
<td>4x 1.5 V AA batteries</td>
</tr>
<tr>
<td>Low battery indication</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>Smoke detection</td>
<td>built-in sensor</td>
<td>built-in sensor</td>
</tr>
<tr>
<td>Detectors</td>
<td>smoke from burning</td>
<td>smoke from burning</td>
</tr>
<tr>
<td>Detection principle</td>
<td>optical smoke scanning technology</td>
<td>optical smoke scanning technology</td>
</tr>
<tr>
<td>Response time</td>
<td>a few seconds after contact with the smoke</td>
<td>a few seconds after contact with the smoke</td>
</tr>
<tr>
<td>Temperature measuring</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Humidity measuring</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Accuracy</td>
<td>± 3 °C</td>
<td>± 4%</td>
</tr>
<tr>
<td>Light intensity measurement</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Range</td>
<td>± 70 °C</td>
<td>± 90 % RH</td>
</tr>
<tr>
<td>Low battery indication</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Power supply</td>
<td>4x 1.5 V AA batteries</td>
<td>4x 1.5 V AA batteries</td>
</tr>
<tr>
<td>Battery life</td>
<td>around 1 year</td>
<td>around 1 year</td>
</tr>
<tr>
<td>Anti-tamper function</td>
<td>alarm triggered if there is an unauthorized interference to detector.</td>
<td>alarm triggered if there is an unauthorized interference to detector.</td>
</tr>
<tr>
<td>“Low Battery” Alerts</td>
<td>double LED flashing or on iHC App.</td>
<td>double LED flashing or on iHC App.</td>
</tr>
<tr>
<td>The detectors are compatible with</td>
<td>switching components marked with the RFIO2 communication protocol and the eLAN-RF system components.</td>
<td>switching components marked with the RFIO2 communication protocol and the eLAN-RF system components.</td>
</tr>
<tr>
<td>Communication frequency with bidirectional protocol RFIO.</td>
<td>Communication frequency with bidirectional protocol RFIO.</td>
<td></td>
</tr>
</tbody>
</table>

Funkce

An internal, battery-powered smoke detector combines the timely detection of smouldering and open fires from which smoke escapes. It is equipped with an optical smoke detector for smoke detection. An example of a smouldering fire is a burning cigarette on a couch or bedding, which is a common cause of fires.

Indication and detector states:

After inserting the batteries, the detector sends an introductory message containing the measured temperature, humidity, light intensity, optical smoke sensor status, and firmware version of the device.

- The detector scans for smoke every 10 seconds, the green LED blinks at the same time (the LED signalling can be switched off by the DIP switch).
- Every 10 minutes the detector senses temperature, humidity and light intensity. Displays the measured data report at six hourly intervals. In the case of smoke detection or rapid temperature change it is displayed immediately.
- Alarm - the sensor detects smoke, the red LED blinks within 1 second, the audible alarm is restored after 5 minutes.
- Dead battery - sending a message to the server, every 5x 3 times the red LED lights up on the detector.
- Removed from base - sending a message to the server, every 7 min the detector beeps.
- Removed from base - sending a message to the server, every 7 min the detector beeps.
- Removed from base - sending a message to the server, every 7 min the detector beeps.
- Removed from base - sending a message to the server, every 7 min the detector beeps.
- Removed from base - sending a message to the server, every 7 min the detector beeps.
- Removed from base - sending a message to the server, every 7 min the detector beeps.
- Removed from base - sending a message to the server, every 7 min the detector beeps.

Assembly
• The Window/Door detector is used to detect opening where activation occurs when the magnet and the sensor become separated.
• Use:
  - In combination with the switching unit for automatic light control (cellar, garage, etc.), or switching on a GSM gate
  - By means of the Smart RF box, detection can be displayed on your smart phone in the form of a notification; alarms are stored in the history, which is visualized in the application iHC.
  • Anti-tamper function: an alarm is triggered if there is an unauthorized interference to detector.
• Power supply: 1 x 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 RFIO communication protocol and the eLAN-RF system components.
• Communication frequency with bidirectional protocol RFIO.

### Technical parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Power supply</strong></td>
<td>1 x 3 V CR 2032 battery</td>
</tr>
<tr>
<td><strong>Drained battery indicator</strong></td>
<td>yes</td>
</tr>
<tr>
<td><strong>Communication protocol</strong></td>
<td>RFIO</td>
</tr>
<tr>
<td><strong>Frequency</strong></td>
<td>866–922 MHz (for more information see p. 80)</td>
</tr>
<tr>
<td><strong>Repeater function</strong></td>
<td>NO</td>
</tr>
<tr>
<td><strong>Working temperature</strong></td>
<td>-10 to +50°C</td>
</tr>
<tr>
<td><strong>Protection</strong></td>
<td>IP20</td>
</tr>
<tr>
<td><strong>Colour</strong></td>
<td>white</td>
</tr>
<tr>
<td><strong>Dimensions</strong></td>
<td>25 x 75 x 16 mm</td>
</tr>
<tr>
<td><strong>Magnet dimensions</strong></td>
<td>15 x 75 x 14 mm</td>
</tr>
</tbody>
</table>
RF Touch | Wireless touch unit

- The Wireless touch unit RF Touch is a central controller for heating, switching electrical appliances and equipment, dimming lights, controlling blinds, etc.
- It transmits and receives commands from units and processes set programs for automatic control.
- Thanks to bidirectional communication, it visualizes the current status of individual units.
- Automatic control based on weekly program.
- It is possible to connect up to 40 units of iNELS RF Control + 30 Doin detectors (you can gradually expand the installation from 1 unit).
- Power to the touch unit is in the range 100–230 V AC. (RF Touch/W also supplied via adapter 12 V DC included in the supply).
- Range up to 100 m (in open space), if the signal is insufficient between the RF Touch and unit, use the signal repeater RFIO-20 or protocol component RFID2 that support this feature.
- Communication frequency with bidirectional protocol RFI0.

Technical parameters

<table>
<thead>
<tr>
<th>RF Touch-B</th>
<th>RF Touch-W</th>
</tr>
</thead>
<tbody>
<tr>
<td>Display</td>
<td>colour TFT LCD</td>
</tr>
<tr>
<td>Resolution</td>
<td>320 x 240 pixels / 320,144 colours</td>
</tr>
<tr>
<td>Side proportion</td>
<td>3:4</td>
</tr>
<tr>
<td>Visible surface</td>
<td>53 x 70 mm</td>
</tr>
<tr>
<td>Backlighting</td>
<td>active behind LCD</td>
</tr>
<tr>
<td>Touch area</td>
<td>resistive 4-conductor</td>
</tr>
<tr>
<td>Diagonal</td>
<td>3.5”</td>
</tr>
<tr>
<td>Control</td>
<td>touch</td>
</tr>
</tbody>
</table>

Power supply

- Supply voltage: 100–230 V AC from the wall 1-230V AC, from the side 12 V DC.
- Input power: max. 1 W
- Power supply terminals: A1 - A2
- Control
  - Communication protocol: RFI0
  - Frequency: 866–922 MHz (for more information see p. 80)
  - Range: in open space up to 100 m
  - Min. distance RF Touch - Actuator: 1 m
- Connection
  - Connections: no-screw push-in terminal box or jack
  - Cross-section of connecting wires: max. 2.5 mm²/1.5 mm² with a hollow

Operating conditions

- Operating temperature: 0°C to +50°C
- Storage temperature: -20°C to +70°C
- Protection: IP20
- Overvoltage category: II
- Contamination degree: 2
- Operating position: anywhere
- Installation: an installation box
- Dimensions: 94 x 94 x 30 mm / 94 x 94 x 24 mm
- Weight:** 127 g / 175 g
- Related standards: EN 60730-1

<table>
<thead>
<tr>
<th>Colour combinations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black / white</td>
</tr>
<tr>
<td>white / pearly</td>
</tr>
<tr>
<td>aluminium / dark grey</td>
</tr>
</tbody>
</table>

HEATING

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

DIMMING

- the regulation of light intensity
- customizable names of individual dimmed circuits (such as “living room lights”)
- “sunrise/sunset” imitation – light gradually goes on or off during the preset period between 2 s and 30 min

WINDOW SHUTTERS

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

DETECTORS

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

SWITCHING

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

QUICK CONTROL

- serves to control group of actuators with a single touch
- possibility to set up scenes; on activation, for example, window shutters are pulled down and lights are adjusted to required intensity
**RFRP-20 | Repeater**

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

**Technical parameters**

<table>
<thead>
<tr>
<th>RFRP-20/230V</th>
<th>RFRP-20/120V</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply voltage:</td>
<td>230–250 V</td>
</tr>
<tr>
<td>Supply voltage frequency:</td>
<td>50–60 Hz</td>
</tr>
<tr>
<td>Apparent input:</td>
<td>5 VA</td>
</tr>
<tr>
<td>Dissipated power:</td>
<td>0.7 W</td>
</tr>
</tbody>
</table>

**Control**

- Communication protocol: RFIO
- Frequency: 866–922 MHz (for more information see p. 80)
- Range: in open space up to 200 m
- Maximum control distance: 20 mm
- Programming: button - green LED/red LED

**Other data**

- Operating temperature: -20 to +55 °C
- Storage temperature: -30 to +70 °C
- Mounting: plug into a socket
- Protection: IP20
- Dimensions: 60 x 120 x 80 mm
- Weight: 225 g
- Related standards: EN 60730-1 ED.2

**Produced in 5 designs of sockets/plugs:**

- French
- Schuko
- British

**Signal transmission and extension for up to 20 components.**

---

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

- The smart RF box allows you to connect to a LAN network and then subsequently control the installation of iNELS RF from a smartphone, tablet, watch, Samsung TV, voice assistant (Google Home and Alexa), another device or third-party SW.
- It transmits and receives commands of up to 40 units, and it processes set programs for automatic control.
- Thanks to bidirectional communication, it visualizes the current status of individual units.
- The smart RF box eLAN-RF-003 is connected by network cable LAN to the home network (router).
- Power supply via 10-27 V DC (included) or PoE 24 V DC.
- Option of setting via web interface or directly in the application iHC.
- The package includes an internal antenna AN-I, in case the Smart RF box is located in a metal switchboard, you can use the external antenna AN-E for better signal reception.
- Range up to 100 m (in open space), if the signal is insufficient between the Smart RF box and unit, use the signal repeater RFRP-20 or protocol component RFIO2 that support this feature.
- Communication frequency with bidirectional protocol RFIO2.

**Technical parameters**

<table>
<thead>
<tr>
<th>RFRP-20/230V</th>
<th>RFRP-20/120V</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply voltage:</td>
<td>230–250 V</td>
</tr>
<tr>
<td>Supply voltage frequency:</td>
<td>50–60 Hz</td>
</tr>
<tr>
<td>Apparent input:</td>
<td>5 VA</td>
</tr>
<tr>
<td>Dissipated power:</td>
<td>0.7 W</td>
</tr>
</tbody>
</table>

**Control**

- Communication protocol: RFIO
- Broadcasting frequency: 866–922 MHz (for more information see p. 80)
- Signal transfer method: two-way addressed message
- Output for antenna: SMA connector*
- Antenna RF: 1 dB (part of supply)
- Indication RF communications:
  - green LED
  - red RF status LED
- Range: in open space up to 100 m

**Interface Ethernet**

- ETH operating status indicator: green LED
- ETH communication indicator: yellow LED
- Communications interface: 100 Mbps (RJ45)
- Preset IP address: 192.168.1.1 or DHCP
- Power supply:
  - 10-27 V DC / 200 mA SELV
  - adapter with connector Jack Ø 2.1 mm
  - Poe 24 V DC or connector USB-B
- Power source: 230 VAC / 12 V DC part of supply of device

**Other data**

- Operating temperature: -20 to +50 °C
- Storage temperature: -25 to +70 °C
- Protection: IP20
- Contamination degree: any
- Working position: any
- Dimensions: 90 x 52 x 65 mm
- Weight: 136 g

* Max Tightening Torque for antenna connector is 0.56 Nm.

---

**Device description**

**Front panel**

- Green POWER LED indicator power supply
- Green LED status indicator
- Connector of Ethernet interface

**Back panel**

- LED indicator Ethernet communication
- Power source: 10-27 V DC / 200 mA SELV
- Connector of 3mm antenna
- Connector of Ethernet (RJ45)

**Technical specifications**

- Interface RF Control
  - Communication protocol: RFIO
  - Broadcasting frequency: 866–922 MHz (for more information see p. 80)
  - Signal transfer method: two-way addressed message
  - Output for antenna: SMA connector*
  - Antenna RF: 1 dB (part of supply)
- Indication RF communications:
  - green LED
  - red RF status LED
- Range: in open space up to 100 m

- Interface Ethernet
  - ETH operating status indicator: green LED
  - ETH communication indicator: yellow LED
  - Communications interface: 100 Mbps (RJ45)
  - Preset IP address: 192.168.1.1 or DHCP
- Power supply:
  - 10-27 V DC / 200 mA SELV
  - adapter with connector Jack Ø 2.1 mm
  - Poe 24 V DC or connector USB-B
- Power source: 230 VAC / 12 V DC part of supply of device

**System units**
### Applications

#### Smartphones

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

#### Smart TV

- eLAN-RF allows to control appliances using Smart TV application called iHC-SMTV which can be easily installed to your TV.
- Operation with conventional control of TV.
- Any Smart TV using Tizen OS made in 2015 or earlier is compatible with iNELS Home Control.
- eLAN-RF makes it possible to control any appliances via the Internet.
- The language of the application changes automatically according to the language set in Android / iOS.
- Designed for iOS 10+ and Android 5.0+.

#### Smart watch Samsung GEAR S2 / S3

- Applications to control appliances via smart watches Samsung Gear S2/S3.
- Smart watches are associated with the controlled appliances through RF smart box eLAN-RF.
- Functionality:
  - switching ON/OFF, automatic timing
  - dimming ON/OFF, smooth start/stop, change colour
  - scenes
  - form of heating temperature indication (to make changes directly in the smart phone application)
  - camera (possibility to stream live images if it is supported by a Web browser on the SMART TV)
  - Form control is free and is not licensed.
  - App download

### Voice control

#### 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 setting by voice using your mobile phone.
- As a complement to RF Control, INELS Smart Home Solution blends in with every modern home.

#### Google Home Voicea

- 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.

### Applications 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).
- The setting is done by applying INELS Home Control/iHC-MAIRF directly or via a web interface RF smart box eLAN-RF.
- It is not necessary to carry a smart phone to control, the watch functions independently.
RFPM-2M | Energy gateway

- The energy gateway is a central device for assessing energy consumption (electricity, water, gas, heating).
- The Energy Gateway receives data in the following ways:
  a) Pulse inputs (2 inputs) for direct connection to 50 meter outputs
  b) Wireless RFTM-1 converters (up to 8 pcs), which read pulses from meters, either directly (outputs 50) or by scanning measurement indicators (dial, flashing LED, magnetic tag and wirelessly transmits them to RFPM-2M. Suitable probes (L1, L2, MS) are used, which are part of the RFPM-1 offer.
  c) Through current transformers CT-50 (up to 3 inputs), through which the phase conductors are passed.
  d) Potential-free contact of the tariff (2 inputs = 4 tariffs).
- Connection to the data network is made by means of LAN Ethernet connector or wirelessly via a Wi-Fi network.
- Monitored data is stored on internal memory storage.
- By means of the application iHC and cloud connection, it is possible to maintain online access to data and monitoring history.
- Possibility to set the response to the set level - closes the relay.
- The power supply of the device is provided from the monitored phase L1.
- Possibility to set the response to the set level - opens the relay.
- By means of the application iHC and cloud connection, it is possible to program the device remotely.

RFPM-2M | Energy gateway

Methods of sensing meters

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

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

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

WS (Magnetic sensor for water meter)
The magnetic sensor detects the pulse that is created with each rotation of the magnet placed on the unit dial.

MIF (Output, 50")
Meters with impulse output indicated as "50" connected by wires to terminals GND and DATA1 on the sensor RFTM-1.
**RFTM-1 | Pulse converter**

- The wireless pulse converter detects home energy meters (electric, water, gas) by means of sensors, and sends them to the wireless unit RFTM-2M.
- The energy gateway RFTM-2M acts as an interface between the meter and the smartphone.
- Measured values are displayed in the application iHC MAIRF/iHC MIIRF, in daily, weekly or monthly overview in graphs.
- The sensor is designed for use on existing meters and even without the impulse output “S0” (The gauge must support scan).
- RFTM-1 transfers consumption from meters using sensors - LS (LED sensor), WS (Magnetic sensor for meter), MS (Magnetic sensor) or by impulse output (“S0”).
- For each consumption meter, it is necessary to have one pulse converter RFTM-1.
- Battery power (2x 1.5V 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 RFP-2 - 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.

**Technical parameters RFTM-1**

- **Power supply:** 2x 1.5V AAA batteries
- **Battery Life:** Appr. 2 years (depending on the type of sensor, frequency of transmissions and pulses)
- **Setting mode:**
  - Red LED - flashes during impulse sensor registration
  - Green LED - communication OK
  - Red LED - communication ERR
- **Component:** GREENLED - communication CK
- **Red LED - communication ERR**
- **Manual control:** Button SET
- **Supported sensors:**
  - LS (LED sensor)
  - WS (Magnetic sensor)
  - MS (Magnetic sensor)
- **Output:**
  - Voltage: 1.5V
  - Current: 1mA
- **Operating temperature:** -20 to +50 °C
- **Working temperature:** -20 to 50 °C
- **Other data:**
  - Voltage range: 2.5 to 3.7V
  - Minimum consumption: 0.2μA
  - Maximum power consumption: 10μA
  - Working temperature: -20 to 50 °C

**CT50 | Current transformer**

- Current Transformer - CT50 has open clips, which can be opened and closed. This design allows a current transformer to be placed on the existing measuring circuit wire, usually at the main flow of the meter.

**Technical parameters CT50**

- **Current:** 50 A
- **Conversion ratio:** 3000 : 1
- **Accuracy:** 1%
- **Dielectric strength, Ferrite material:** 2000 V AC / 1 min
- **Frequency:** 50 - 60 Hz
- **Other data:**
  - Operating temperature: -15 to 65 °C
  - Storage temperature: -10 to 90 °C
  - Flammability: UL 94 - V0
  - Max. diameter through the conductors: 16 mm
  - Dimension (D x ø x D): 31 x 46 x 32 mm / cable leads: 1 m
  - Weight: 86 g

**LS | LED sensor**

- The LED sensor scans LED impulses on the meter, which indicates consumption by flashing.
- 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):** 0μA
- **Maximum power consumption:** (pulses 100Hz): max. 2μA
- **Working temperature:** -20 to 50 °C
- **Other data:**
  - Cross-section of connecting wires: max. 3.5 mm
  - Wire length: 1.5 m
  - Protection: IP20

**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 3.6V
- **Consumption:** 7μA
- **Output load:** max. 3mA
- **Operating temperature:** -12.3 to 47.5°C
- **Opening detection sensitivity:** ±0.3 to 3.9 mT
- **Hydrometer:** 1x3
- **Working temperature:** -40 to 80 °C

**WS | Magnetic sensor for water meter**

- The sensor scans the magnetic field of the water meter, which indicates consumption by flashing.
- The sensor’s scanner is affixed with glue above the LED diode of the meter signaling indication of consumption.
- The sensor is connected to the internal terminal of the RFTM-1 converter.

**Technical parameters WS**

- **Voltage range:** 1.05 to 5.5V
- **Consumption:** 1.3μA
- **Output load:** max. 150mA
- **Switching sensitivity:** ±0.3 to 1.3 mT
- **Opening detection sensitivity:** ±0.3 to 1.3 mT
- **Hysteresis:** 0.2 mT
- **Working temperature:** -40 to 80 °C

---

* Measured at 3V, no load output.
The Energy Gateway RFPM-2M web interface now has a completely new and cleaner visualization. This makes displaying and evaluating energy consumption even more convenient and easy.

**DEMO web interface**
Login and password: admin

http://217.197.144.56:2130/

**STATISTICS**
- Sample overview of electricity consumption (today, yesterday, this week, this month)
- Consumption converted to finance costs
- Graphical visualization of consumption (by hour, days, months)

**ONLINE DATA**
The Energy Gateway evaluates the following indicators in the network:
- Phase current/voltage
- Phase overvoltage/undervoltage
- Asymmetry
- Distortion of the sine wave signal
- Distortion of sine wave signal flow

- Frequency
- Active performance
- Reactive power
- Apparent performance
- Power factor
- Phase voltage shift between phases

**SETTINGS**
- Main SETTINGS menu
- Example of “Phase settings” submenu

All basic and advanced settings are made simply, quickly and intuitively. If you have any questions, a telephone/e-mail technical support is available.

Measured data can be displayed not only through the web interface on the PC, but also in iNELS Home Control (iHC). The measured values of all quantities can be monitored, but above all archived and analysed in many selected time periods (daily, weekly, monthly and yearly). Consumption can be quantified in consumed units or directly in financial costs. Another advantage is the possibility of measuring electricity consumption in up to 4 tariffs.

**PROMO APP available**
Login and password: admin

Current consumption can be displayed as a bar graph. You can choose to display the consumption in units. One click to switch to power consumption in your currency. Significant savings can be achieved by analyzing data.
Hotel Room
Energy Saving Kit
Costs saving, Increased comfort

www.inels.com

RFTC-150/G | Temperature controller

- 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 backlight LCD display displays the current and set temperature, status (ON/OFF), battery status, day of the week, current time, etc.
- Battery power (2x 1.5 V AAA batteries - included in supply) with battery life of around 1 year based on frequency of use.
- The flat rear side of the device enables its placement anywhere in the room.
- Components support communication with RF detectors.
- Range up to 100 m in open space, if the signal is insufficient between the controller and unit, use the signal repeater RFRP-20 or protocol component RFIO2 that support this feature.
- Communication frequency with bidirectional protocol RFIO.
- Colour combination of temperature unit in design of frames LOGUS 90 (plastic, glass, wood, metal, stone).

Technical parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>RFTC-150/G</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply voltage</td>
<td>2x 1.5 V AAA batteries</td>
</tr>
<tr>
<td>Battery life</td>
<td>up to 1 year based on frequency of use</td>
</tr>
<tr>
<td>Temperature correction</td>
<td>± 5 °C</td>
</tr>
<tr>
<td>Temperature offset</td>
<td>± 0.3 °C of the range</td>
</tr>
<tr>
<td>Display</td>
<td>LCD, characters</td>
</tr>
<tr>
<td>Backlighting</td>
<td>active 10 s after pressing</td>
</tr>
<tr>
<td>Transmission indication/function</td>
<td>symbols</td>
</tr>
<tr>
<td>Temp. measurement input</td>
<td>current and set temperature, status (ON/OFF), battery status, day of the week, current time, etc</td>
</tr>
</tbody>
</table>

Control

- Communication protocol: RFIO
- Frequency: 868–922 MHz (for more information see p. 80)
- Repeater functions: 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: IP20
- Contamination degree: 2
- Dimension: - plastic: 85 x 85 x 20 mm, 94 x 94 x 20 mm
- Weight: 66 g (without batteries)
**RFPCR-31/G | Multifunctional card reader**

- **RFPCR-31/G** is a wall-mounted card reader that is designed for read contactless media (smart cards, key chains, etc.), which are used for controlling access to buildings or their parts.
- The reader sends a wireless command to switch, signaling, bell, etc.
- It makes this suitable for recreation, where the main benefit is the installation speed.
- **RFPCR-31/G** reader can be used to control the security system (locking/unlocking) access system (opening doors, gates, etc.) or appliances (based on assigned rights).
- **RFPCR-31/G** supports RFID media with the carrier frequency of 13.56 MHz. Supported card types MIFARE Ultralight, DESFire 2K (EV1), DESFire 4K (EV1).
- **RFPCR-31/G** is also equipped with 8 A relay output with changeover contact AgSnO2 by which controlled devices can be switched directly.
- Range up to 160 m (in open space), if the signal is insufficient between the card reader and unit, the user can use the repeater RFPR-20 in protocol RFIO that support this feature.
- **RFPCR-31/G** features communication with bidirectional protocol RFIO.
- Wall card reader RFPCR-31/G is compatible with both types of frames LOGOS® (85.6 x 85.6 or 94 x 94 mm), therefore you can combine them with double and triple frames and classic products of the series.

**Technical parameters RFPCR-31/G**

- **Supply voltage:** 110 - 230 V AC
- **Supply voltage frequency:** 50 - 60 Hz
- **Dissipated power:** max. 2.5 W
- **Apparent input:** max. 5 VA
- **Connection**
  - Frequency: 50 - 60 Hz
  - Rated load: 2000 VA / AC1; 240 W/DC
  - Switching frequency with rated load: 300 min-1
  - Mechanical life: 1x 107
- **Control**
  - Electrical life AC1: 1x 107
- **Electrical life AC1:** 1x 107
- **Mechanical life:** 1x 107
- **Overvoltage category:** III
- **Protection degree:** IP20
- **Storing temperature:** -30 to +70 °C
- **Room status indication**
- **Indication:** coloured illuminated symbol
- **RFID readers**
  - Supported frequencies: 13.56 MHz
  - Card Type: MIFARE Ultralight, DESFire 2K (EV1), DESFire 4K (EV1)
- **Outputs**
  - Signal: Do Not Disturb / Make Up Room
  - Frequency: 110 - 230 V AC
  - Acoustic output: piezo-changer
  - Tactile output: Vibration motor
  - Switching frequency: 230V AC / 100 V DC
  - Switching output: 2000 VA / AC1, 240 W/DC
- **Other data**
  - Dimensions: 94 x 94 x 40 mm
  - Weight: 241 g

**RFPCR-31/W, RFPCR-31/B | Multifunctional card reader**

- **RFPCR-31/W, RFPCR-31/B** is a wall-mounted card reader that is designed for read contactless media (smart cards, key chains, etc.), which are used for controlling access to buildings or their parts.
- The reader sends a wireless command to switch, signaling, bell, etc.
- It makes this suitable for recreation, where the main benefit is the installation speed.
- **RFPCR-31/W, RFPCR-31/B** reader is designed for reading smart cards, which are intended to enter the hotel room or any other part of the building.
- **RFPCR-31/W, RFPCR-31/B** supports RFID media with a carrier frequency of 13.56 MHz. Supported card types MIFARE Ultralight, DESFire 2K (EV1), DESFire 4K (EV).
- **RFPCR-31/W, RFPCR-31/B** is a design component of the system and is available in five elegant black (RFPCR-31/B) and white (RFPCR-31/W) variants.
- Input card reader is the first device of guest room management system, with which the hotel guest comes into contact first and therefore was designed with an emphasis on representative design.
- Printing is possible to customize to the investor requirements. The room number as well as the logo of the hotel can be also printed on each component.
- The controller is also equipped with touch button with function of bell and with two icons to indicate the status of guest requests, e.g. “Do Not Disturb” and “Make Up Room”.
- Individual symbols can be illuminated in one of seven colours - red, green, blue, yellow, pink, turquoise and white.
- **RFPCR-31/W, RFPCR-31/B** is equipped with an 8 A relay output with AgSnO2 contact for door lock control.
- **RFPCR-31/W, RFPCR-31/B** is equipped with a sensor for ambient light intensity. Based on information from the sensor it can e.g. switch the lighting circuits in the corridor.
- Range up to 160 m (in open space), if the signal is insufficient between the card reader and unit, use the repeater RFPR-20 in protocol RFIO that support this feature.
- Communication frequency with bidirectional protocol RFIO.
- All versions are in the size of the module (94x94 mm) from the line of luxury switches and sockets LOGOS® and therefore fully in line with the design of frames for the sockets of this series, where you can just as for the controllers choose white and black glass frames.
- **RFPCR-31/W, RFPCR-31/B** are designed for mounting into an installation box.

**Technical parameters RFPCR-31/W, RFPCR-31/B**

- **Supply voltage:** 110 - 230 V AC
- **Supply voltage frequency:** 50 - 60 Hz
- **Dissipated power:** max. 2.5 W
- **Apparent input:** max. 5 VA
- **Connection**
  - Frequency: 50 - 60 Hz
  - Rated load: 2000 VA / AC1; 240 W/DC
  - Switching frequency with rated load: 300 min-1
  - Mechanical life: 1x 107
- **Control**
  - Electrical life AC1: 1x 107
- **Electrical life AC1:** 1x 107
- **Mechanical life:** 1x 107
- **Overvoltage category:** III
- **Protection degree:** IP20
- **Storing temperature:** -30 to +70 °C
- **Room status indication**
- **Indication:** coloured illuminated symbol
- **RFID readers**
  - Supported frequencies: 13.56 MHz
  - Card Type: MIFARE Ultralight, DESFire 2K (EV1), DESFire 4K (EV1)
- **Outputs**
  - Signal: Do Not Disturb / Make Up Room
  - Frequency: 110 - 230 V AC
  - Acoustic output: piezo-changer
  - Tactile output: Vibration motor
  - Switching frequency: 230V AC / 100 V DC
  - Switching output: 2000 VA / AC1, 240 W/DC
- **Other data**
  - Dimensions: 94 x 94 x 40 mm
  - Weight: 241 g

**Device description**
**RFCH-31/W, RFGCH-31/B**  
Smart Card Holder

- Glass card holder RFCH-31 is part of a comprehensive range of glass control units for guest room management system.
- The smart card holder sends a wireless command to switch on the alarm, bell, etc. This makes it suitable for reconstruction, where the main benefit is the installation speed.
- RFCH-31 serves for inserting the RFID card into the holder, whereby the system acquires the information about whether the hotel guest is present in the room. With this information it is possible to ensure for example Exit function with relation to energy savings in the absence of a guest in the room.
- Glass cardholder is a design component of the system and is available in elegant black (RFCH-31/B) and white (RFCH-31/W) version.
- The RFCH-31 component is equipped with an RFID reader and is thus able to identify the specific hotel card inserted. Power saving function in the absence of a guest cannot be bypassed by simply inserting business cards into the holder.
- RFCH-31 supports RFID media with a carrier frequency of 13.56 MHz. Supported card types are MIFARE Ultralight, DESFire 2K (EV1), DESFire 4K (EV1).
- The unit is also equipped with three touch buttons that can be used for example to set room status “Do Not Disturb” or “Make Up Room”. Card holder printing is possible to customize to the investor requirements. The logo of the hotel can be shown for example. Likewise, it is also possible to adapt the card printing.
- The RFCH-31 unit is equipped with an 10 A relay output and an Ag-SnO2 contact, which switches the phase conductor.
- Individual symbols can be illuminated in one of seven colours - red, green, blue, yellow, pink, turquoise and white. Ranges up to 160 m (in open space), if the signal is insufficient between the holder and unit, use the signal repeater RFRP-20 or protocol component RFIO2 that support this feature.
- Communication function with bidirectional protocol RFIO2. RFCH-31 are designed for mounting into an installation box.

### Technical parameters

#### RFGCH-31/W RFGCH-31/B

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply voltage frequency</td>
<td>110–230 V AC</td>
</tr>
<tr>
<td>Dispersive power</td>
<td>max. 2.5 W</td>
</tr>
<tr>
<td>Apparent input</td>
<td>max. 3 VA</td>
</tr>
<tr>
<td>Input</td>
<td>1 ... 100 000 Ls</td>
</tr>
<tr>
<td>LED</td>
<td>120 g</td>
</tr>
<tr>
<td>Number of control buttons</td>
<td>1</td>
</tr>
<tr>
<td>Type</td>
<td>capacitive</td>
</tr>
<tr>
<td>Colour</td>
<td>green LED</td>
</tr>
<tr>
<td>Temperature sensor</td>
<td>-30 to +70 °C</td>
</tr>
<tr>
<td>Mechanical life</td>
<td>1x 10^5</td>
</tr>
<tr>
<td>Electrical life AC1</td>
<td>1x 10^7</td>
</tr>
<tr>
<td>Communication protocol</td>
<td>RFI2</td>
</tr>
<tr>
<td>Frequency</td>
<td>866–922 MHz</td>
</tr>
<tr>
<td>Number of contacts</td>
<td>1x switching (Ag-SnO2)</td>
</tr>
<tr>
<td>Switching current</td>
<td>10 mA / 10 V</td>
</tr>
<tr>
<td>Switching frequency with load</td>
<td>300 mV</td>
</tr>
<tr>
<td>Switching frequency with rated load</td>
<td>10 mV</td>
</tr>
<tr>
<td>Mechanical life</td>
<td>1x 12</td>
</tr>
<tr>
<td>Electrical life AC1</td>
<td>1x 12</td>
</tr>
<tr>
<td>Control</td>
<td>RFI2</td>
</tr>
<tr>
<td>Frequency</td>
<td>866–922 MHz</td>
</tr>
<tr>
<td>Number of contacts</td>
<td>1x switching (Ag-SnO2)</td>
</tr>
<tr>
<td>Min. switching current</td>
<td>100 mA / 10 V</td>
</tr>
<tr>
<td>Insulation voltage between relay outputs and internal circuits</td>
<td>2500 VA / AC1, 10 A</td>
</tr>
<tr>
<td>Rated current</td>
<td>2500 VA / AC1, 10 A</td>
</tr>
<tr>
<td>Switching current</td>
<td>100 mA / 10 V</td>
</tr>
<tr>
<td>Rated current</td>
<td>10 A / max. 4s at 10%</td>
</tr>
<tr>
<td>Insulation voltage between relay outputs and internal circuits</td>
<td>2500 VA / AC1, 10 A</td>
</tr>
<tr>
<td>Isolation voltage open relay contact</td>
<td>1 kV</td>
</tr>
<tr>
<td>Mechanical service life</td>
<td>3x10^3</td>
</tr>
<tr>
<td>Electrical service life</td>
<td>5x10^3</td>
</tr>
<tr>
<td>Communication protocol</td>
<td>RFI2</td>
</tr>
<tr>
<td>Frequency</td>
<td>866–922 MHz</td>
</tr>
<tr>
<td>Number of contacts</td>
<td>1x switching (Ag-SnO2)</td>
</tr>
<tr>
<td>Min. switching current</td>
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</tr>
<tr>
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</tr>
<tr>
<td>Rated current</td>
<td>10 A / max. 4s at 10%</td>
</tr>
<tr>
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</tr>
<tr>
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<td>1 kV</td>
</tr>
<tr>
<td>Mechanical service life</td>
<td>3x10^3</td>
</tr>
<tr>
<td>Electrical service life</td>
<td>5x10^3</td>
</tr>
<tr>
<td>Communication protocol</td>
<td>RFI2</td>
</tr>
<tr>
<td>Frequency</td>
<td>866–922 MHz</td>
</tr>
<tr>
<td>Number of contacts</td>
<td>1x switching (Ag-SnO2)</td>
</tr>
<tr>
<td>Min. switching current</td>
<td>100 mA / 10 V</td>
</tr>
<tr>
<td>Insulation voltage between relay outputs and internal circuits</td>
<td>2500 VA / AC1, 10 A</td>
</tr>
<tr>
<td>Rated current</td>
<td>10 A / max. 4s at 10%</td>
</tr>
<tr>
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</tr>
<tr>
<td>Isolation voltage open relay contact</td>
<td>1 kV</td>
</tr>
<tr>
<td>Mechanical service life</td>
<td>3x10^3</td>
</tr>
<tr>
<td>Electrical service life</td>
<td>5x10^3</td>
</tr>
<tr>
<td>Communication protocol</td>
<td>RFI2</td>
</tr>
<tr>
<td>Frequency</td>
<td>866–922 MHz</td>
</tr>
<tr>
<td>Number of contacts</td>
<td>1x switching (Ag-SnO2)</td>
</tr>
<tr>
<td>Min. switching current</td>
<td>100 mA / 10 V</td>
</tr>
<tr>
<td>Insulation voltage between relay outputs and internal circuits</td>
<td>2500 VA / AC1, 10 A</td>
</tr>
<tr>
<td>Rated current</td>
<td>10 A / max. 4s at 10%</td>
</tr>
<tr>
<td>Insulation voltage between relay outputs and internal circuits</td>
<td>2500 VA / AC1, 10 A</td>
</tr>
<tr>
<td>Isolation voltage open relay contact</td>
<td>1 kV</td>
</tr>
<tr>
<td>Mechanical service life</td>
<td>3x10^3</td>
</tr>
<tr>
<td>Electrical service life</td>
<td>5x10^3</td>
</tr>
<tr>
<td>Communication protocol</td>
<td>RFI2</td>
</tr>
<tr>
<td>Frequency</td>
<td>866–922 MHz</td>
</tr>
<tr>
<td>Number of contacts</td>
<td>1x switching (Ag-SnO2)</td>
</tr>
<tr>
<td>Min. switching current</td>
<td>100 mA / 10 V</td>
</tr>
<tr>
<td>Insulation voltage between relay outputs and internal circuits</td>
<td>2500 VA / AC1, 10 A</td>
</tr>
<tr>
<td>Rated current</td>
<td>10 A / max. 4s at 10%</td>
</tr>
<tr>
<td>Insulation voltage between relay outputs and internal circuits</td>
<td>2500 VA / AC1, 10 A</td>
</tr>
<tr>
<td>Isolation voltage open relay contact</td>
<td>1 kV</td>
</tr>
<tr>
<td>Mechanical service life</td>
<td>3x10^3</td>
</tr>
<tr>
<td>Electrical service life</td>
<td>5x10^3</td>
</tr>
</tbody>
</table>
### Technical parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>RFSAI-161B /230V</th>
<th>RFSAI-161B /120V</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply voltage:</td>
<td>230 V AC</td>
<td>120 V AC</td>
</tr>
<tr>
<td>Supply voltage frequency:</td>
<td>50-60 Hz</td>
<td>60 Hz</td>
</tr>
<tr>
<td>Apparent power:</td>
<td>2 VA</td>
<td>9 VA</td>
</tr>
<tr>
<td>Dispersed power:</td>
<td>0.7 W</td>
<td></td>
</tr>
<tr>
<td>Supply voltage tolerance:</td>
<td>±10%–15%</td>
<td></td>
</tr>
<tr>
<td>Output</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of contacts:</td>
<td>1x switching</td>
<td></td>
</tr>
<tr>
<td>Rated current:</td>
<td>12 A / AC</td>
<td></td>
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<tr>
<td>Switching power:</td>
<td>3000 VA / AC</td>
<td>288 W / DC</td>
</tr>
<tr>
<td>Peak current:</td>
<td>10 A max. 4 x 10%</td>
<td></td>
</tr>
<tr>
<td>Switching voltage:</td>
<td>250 V AC / 24 V DC</td>
<td></td>
</tr>
<tr>
<td>Min. switching power DC:</td>
<td>100 mA / 10 V</td>
<td></td>
</tr>
<tr>
<td>Insulation voltage between outputs and internal circuits:</td>
<td>basic insulation (Cat. II per EN 60664-1)</td>
<td></td>
</tr>
<tr>
<td>Isolation voltage open contact:</td>
<td>1 kV</td>
<td></td>
</tr>
<tr>
<td>Mechanical service life:</td>
<td>3x10⁴</td>
<td></td>
</tr>
<tr>
<td>Electrical service life (AC1):</td>
<td>5x10⁴</td>
<td></td>
</tr>
<tr>
<td>Indication of relay switch:</td>
<td>red/LED</td>
<td></td>
</tr>
</tbody>
</table>

#### Control

- Communication protocol: RFIO2
- Frequency: 866–922 MHz (for more information see p. 80)
- 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 series
- Protection: IP54
- Overvoltage category: B1
- 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

⚠️ Control button input is at the supply voltage potential.

---

**Device description**

- 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-40G 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 (1000 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.

**Connection**

<table>
<thead>
<tr>
<th>Connection</th>
<th>RFSAI-161B /230V</th>
<th>RFSAI-161B /120V</th>
</tr>
</thead>
</table>

**Example**

1. **Door/Window:** RFWD-100
2. **Movement:** RFMD-100
3. **Compatible wireless detectors:** Movement: RFMD-100

- **Function:**
  - When RFMD-100 motion detector captures the movement of the guest, the light ON command is sent.
  - The functionality of RFMD-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.
  - 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.
  - Presing 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 and 1x wireless controller (RFWB-40G or RF KEY).
  - 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.
RFSA-166M | Six channel switch unit for fancoil

- Thanks to the 6-channel design of the switching component, it can control the heating/cooling mode and with 3 speeds, the RE6 output channel can be used to control appliances, sockets or lights.
- The RFSA-166M wireless switching component can be combined with the RF TC-100G.
- 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 RE6:
  - up to 25 channels can be controlled
  - can be combined with detectors, controllers, or system components of the 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 78.
- Emergency status is retained in the event of a power failure.
- The PRG6 programming button on the component also serves as manual control of the RE6 output.
- The package includes an internal antenna AN-I, in case of locating the element in a metal switchboard, you can use the external antenna AN-E for better signal reception.
- Range up to 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

- Connection for fancoil control
- Communication frequency with bidirectional protocol RFIO2.

**Accessories**

**RFAF/USB | Service Key**

- 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 amplified) 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/quality 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

---

**Technical parameters**

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating position:</td>
<td>EN 60950-1</td>
</tr>
<tr>
<td>Other data:</td>
<td>max. 100</td>
</tr>
<tr>
<td>Interface:</td>
<td>USB 1.1 and higher, plug “A”</td>
</tr>
<tr>
<td>Power supply indication:</td>
<td>green LED</td>
</tr>
<tr>
<td>Communication protocol:</td>
<td>RFIO2</td>
</tr>
<tr>
<td>Frequency:</td>
<td>866–922 MHz (for more information see p. 80)</td>
</tr>
<tr>
<td>Power:</td>
<td>10 A / &lt;3 s</td>
</tr>
<tr>
<td>Communication frequency with bidirectional protocol RFIO2:</td>
<td>100 m</td>
</tr>
<tr>
<td>Actuator:</td>
<td>red LED</td>
</tr>
<tr>
<td>Min. distance of RF Touch-</td>
<td>3m</td>
</tr>
<tr>
<td>Operation:</td>
<td>866–922 MHz</td>
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<tr>
<td>Communication protocol:</td>
<td>RFIO2</td>
</tr>
<tr>
<td>Power supply indication:</td>
<td>green LED</td>
</tr>
<tr>
<td>RF communication indication:</td>
<td>red LED</td>
</tr>
<tr>
<td>Other data:</td>
<td>max. 100</td>
</tr>
<tr>
<td>Interface:</td>
<td>USB 1.1 and higher, plug “A”</td>
</tr>
<tr>
<td>Power supply indication:</td>
<td>green LED</td>
</tr>
<tr>
<td>Communication protocol:</td>
<td>RFIO2</td>
</tr>
<tr>
<td>Frequency:</td>
<td>866–922 MHz (for more information see p. 80)</td>
</tr>
<tr>
<td>Power:</td>
<td>10 A / &lt;3 s</td>
</tr>
<tr>
<td>Communication frequency with bidirectional protocol RFIO2:</td>
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</tr>
<tr>
<td>Actuator:</td>
<td>red LED</td>
</tr>
<tr>
<td>Min. distance of RF Touch-</td>
<td>3m</td>
</tr>
<tr>
<td>Operation:</td>
<td>866–922 MHz</td>
</tr>
<tr>
<td>Communication protocol:</td>
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<tr>
<td>Other data:</td>
<td>max. 100</td>
</tr>
<tr>
<td>Interface:</td>
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</tr>
<tr>
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<td>Frequency:</td>
<td>866–922 MHz (for more information see p. 80)</td>
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</tbody>
</table>
**Supported video cameras**

- Cameras integrated in IHC-MIRF and IHC-MAIRF applications:
  - Axis cameras with PTZ control support.
  - HIK VISION cameras with PTZ control support.
  - D-Link cameras.
  - Other cameras supporting RTSP and MJPEG streams.
- IHC-SMTV supports streaming cameras in JPEG format.

**Supported intercoms**

- The IHC-MIRF/IHC-MIRF applications are integrated as client accounts for the SIP server on the Connection Server (Asterisk) and the SIP server on the Dahua speaker.
- Using CS, it is possible to freely connect applications with LABA intercoms, ZN and HIK VISION voices.

**RF sets | Combination of controllers and units**

<table>
<thead>
<tr>
<th>Basic sets</th>
<th>Multifunction sets</th>
</tr>
</thead>
</table>
| **RFSET-SW-Z1** | 1x Wireless switch unit \( RFSA-11B \)  
1x Wireless wall controller \( RFWB-20G \) - white |
| **RFSET-SK-Z1** | 1x Wireless switch unit \( RFSA-11B \)  
1x Keychain \( RF \) Key/B - black |
| **RFSET-SW-F1** | 1x Wireless switch unit \( RFSA-61B \)  
1x Wireless wall controller \( RFWB-40G \) - white |
| **RFSET-SK-F1** | 1x Wireless switch unit \( RFSA-61B \)  
1x Keychain \( RF \) Key/B - black |
| **RFSET-SMK-F1** | 1x Wireless switch unit \( RFSA-61M \) with external antenna A-NI  
1x Keychain \( RF \) Key/B - black |
**Switches**

Single function - RFSA-11B

Function button ON/OFF

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>


Function 1 - button

Function 2 - switch on

Function 3 - switch off

Function 4 - impulse relay

Function 5 - delayed off

Function 6 - delayed on

**Loadability products**

**RFSA-32B; RFSA-62B; RFSA-62B; RFSA-66M**

<table>
<thead>
<tr>
<th>Load type</th>
<th>AC1</th>
<th>AC2</th>
<th>AC3</th>
<th>AC4</th>
<th>AC5</th>
<th>AC6</th>
<th>AC7</th>
<th>AC8</th>
<th>AC9</th>
<th>AC10</th>
<th>AC11</th>
<th>AC12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact enabled AC12 + AC10</td>
<td>250 V / 8 A</td>
<td>250 V / 5 A</td>
<td>250 V / 4 A</td>
<td>x</td>
<td>x</td>
<td>250 W</td>
<td>250 V / 4 A</td>
<td>250 V / 1 A</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
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<th>AC8</th>
<th>AC9</th>
<th>AC10</th>
<th>AC11</th>
<th>AC12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact enabled AC12 + AC10</td>
<td>250 V / 2 A</td>
<td>250 V / 2 A</td>
<td>250 V / 3 A</td>
<td>30 V / 8 A</td>
<td>24 V / 3 A</td>
<td>30 V / 2 A</td>
<td>30 V / 8 A</td>
<td>30 V / 2 A</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
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</table>

**RFUS-61**

<table>
<thead>
<tr>
<th>Load type</th>
<th>AC1</th>
<th>AC2</th>
<th>AC3</th>
<th>AC4</th>
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<th>AC6</th>
<th>AC7</th>
<th>AC8</th>
<th>AC9</th>
<th>AC10</th>
<th>AC11</th>
<th>AC12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact enabled AC12 + AC10</td>
<td>250 V / 8 A</td>
<td>250 V / 5 A</td>
<td>250 V / 4 A</td>
<td>250 V / 3 A</td>
<td>24 V / 3 A</td>
<td>30 V / 8 A</td>
<td>24 V / 2 A</td>
<td>24 V / 6 A</td>
<td>24 V / 2 A</td>
<td>x</td>
<td></td>
<td></td>
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</tbody>
</table>

**RFSA-11B; RFSA-61B; RFSA-61M; RFSC-61; RFSTI-11B; RFDAC-71B**

<table>
<thead>
<tr>
<th>Load type</th>
<th>AC1</th>
<th>AC2</th>
<th>AC3</th>
<th>AC4</th>
<th>AC5</th>
<th>AC6</th>
<th>AC7</th>
<th>AC8</th>
<th>AC9</th>
<th>AC10</th>
<th>AC11</th>
<th>AC12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact enabled AC12 + AC10</td>
<td>250 V / 2 A</td>
<td>250 V / 2 A</td>
<td>250 V / 3 A</td>
<td>24 V / 3 A</td>
<td>30 V / 8 A</td>
<td>24 V / 2 A</td>
<td>24 V / 6 A</td>
<td>24 V / 2 A</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Dimmers**

Multi-function RFDAC-73/M/RGB, RFDDEL-71B, RFDDEL-71M, RFDSC-71, RFDAC-71B, RFDB-71

**Light scene function 1**

a) By pressing the programmed button for less than 0.5 s, the light illuminates; By pressing the button, the brightness is saved in the memory, and pressing the button shortly later will switch the light on/off to this intensity.

b) By pressing the programmed button for more than 0.5 s, fluid brightness regulation will occur. After releasing the button, the brightness level is saved in the memory, and pressing the button shortly later will switch the light on/off to this intensity.

c) It is possible to readjust the change in intensity at any time by a long press of the programmed button.

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

**Light scene function 2**

a) By pressing the programmed button for less than 0.5 s, the light illuminates; By pressing the button, the brightness is saved in the memory, and pressing the button shortly later will switch the light on/off to this intensity.

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 illuminates; By pressing the button, the brightness is saved in the memory, and pressing the button shortly later will switch the light on/off to this intensity.

b) By pressing the programmed button for more than 0.5 s, fluid brightness regulation will occur. After releasing the button, the brightness level is saved in the memory, and pressing the button shortly later will switch the light on/off to this intensity.

c) It is possible to readjust the change in intensity at any time by a long press of the programmed button.

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

**Light scene function 4**

a) By pressing the programmed button for less than 0.5 s, the light illuminates; By pressing the button, the brightness is saved in the memory, and pressing the button shortly later will switch the light on/off to this intensity.

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.

**Load capacity**

Due to the huge amount of type of light sources, the maximum load depends on internal construction of dimmable LED and E14 bulbs and their power factor cos φ capacity for power factor cos φ 0.9. The power factor of dimmable LEDs and E14 bulbs ranges from cos φ = 0.95 up to 0.4. An approximate value of maximum load may be obtained by multiplying the load capacity of the dimmer by the power factor of the connected light source.

**Inductive and capacitive loads must not be connected simultaneously!**
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 (repeaters), for selected features. This protocol is fully compatible with the previous version of the protocol (RFIO).

Available frequency for individual territories:

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

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

Benefits of RFIO2:
- Products labeled as “RFIO2” will allow newly set selected components such as unit signals (repeaters).
- For components, you can easily update FW using the RFAF/USB service device.
- Enables communication with RFMD-100, RFWD-100 and RFSD-100 / RFSD-101.
- 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.

Installation possibilities

1) Surface mounted
Wall mounted or in an installation box with spacing of 65 mm.
- RF Touch-W
- RFWB-20/G
- RFWB-40/G
- RFGB-20
- RFGB-40
- RFGB-220
- RFGB-240

2) Flush mounted
- RF Touch-B
- RFDW-71
- RFPCR-31/G
- RFDW-271

3) DIN Rail mounted
On DIN rail according to EN 60715.
- RFSG-1M
- RFPM-2M
- RFDA-73M/RGB
- RFSD-100
- RFSD-101
- RFTI-111B
- RFSA-11B
- RFSTI-111B
- RFMD-100
- RFWD-100
- RFSD-100
- RFSD-101
- RFWD-100

4) Mounted to or in the installation box
- RFDAC-71B
- RFDAC-71B
- RFSTI-111B
- RFSD-100
- RFSD-101
- RFSA-11B
- RFSA-62B
- RFSA-161B
- RFSTI-111B

5) Mounted into the cover of appliance
- RFDAC-71B
- RFDAC-71B
- RFSTI-111B
- RFSA-11B
- RFSA-62B
- RFSA-161B

6) Surface mounted
- RFSO-1
- RFUS-61
- RFTM-1
- RFGB-20
- RFGB-40
- RFGB-220
- RFGB-240
Product groups of the Wireless electro-installation

### System units
- EAN codes
- Type
- Supply voltage

<table>
<thead>
<tr>
<th>Frequency</th>
<th>EAN</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>868.5 MHz</td>
<td>8595188145947</td>
<td>RFSDC-71 / French</td>
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<td>868.5 MHz</td>
<td>8595188145954</td>
<td>RFSDC-71 / German</td>
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<tr>
<td>868.5 MHz</td>
<td>8595188145961</td>
<td>RFSDC-71 / Japanese</td>
</tr>
<tr>
<td>868.5 MHz</td>
<td>8595188145966</td>
<td>RFSDC-71 / French</td>
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<tr>
<td>868.5 MHz</td>
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<td>FFSDC-71 / French</td>
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### Hotel Retrofit

<table>
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<th>EAN</th>
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<tr>
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### Accessories

- EAN codes
- Type
- Supply voltage

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- **Controllers**
- **Switching units**
- **Dimmers**
- **Temperature control**
- **Convertors**
- **Detectors**