**Highlights Spring 2020**

News from iNELS & ELKO EP World.

**NEW RELAYS**

**GLASS TOUCH WIRELESS CONTROLLERS**

**IN-GLASS SWITCH WITH DIMMER**
and wireless control

**ENERGY GATEWAY APPLICATION**
Improved app for RFPM-2

**DO YOU PREFER SHARP OR ROUND?**

**RESERVATION SYSTEM**

**THE NEW miniCU**
- world’s smallest central unit

**CONTROL iNELS BY VOICE**
Google Home & Amazon Alexa in iNELS service

**PABLIKO VOTING SYSTEM**
with our controllers for current and new representative rooms

**REFERENCES**
**PRODUCTS PORTFOLIO**

**IMPROVED AND NEW RELAYS**

- Quick overview of timing relays
- CRM-181J - Single function CRM-81 innovation
- Bistable relay
- Innovative staircase switches
- Dimmer for all kind of loads

**GLASS TOUCH WIRELESS CONTROLLERS**

**IN-Glass SWITCH WITH DIMMER AND WIRELESS CONTROL**

- RFIO² - UPGRADED WIRELESS PROTOCOL
- RFPM-2 - ENERGY GATEWAY WITH IMPROVED APPLICATION

**SERVICE KEY RFAF/USB**

**CONTROL iNELS via TV**

**iNELS AIR**

- Our NB-IoT sensors in networks of other operators
- Sensors for precision agriculture

**HOW TO CONTROL A/C BY iNELS?**

**BUILDING MANAGEMENT SYSTEM**

- iDM v.3.3.34 vs. iDM v.3.41
- iNELS in superior software
- Promotic Niagara Framework
- FLOWBOX
- Software overview

**DO YOU PREFER SHARP OR ROUND?**

**RESERVATION AND ACCESS SYSTEM**

**THE NEW miniCU - SMALL, PERFORMANCE AND SAFE**

**iNELS SCOPE**

**YOU CAN ALSO CONTROL iNELS BY VOICE**

**PUBLIKO VOTING SYSTEM**

**REFERENCES**

---

**Improved and new relays**

durable, accurate

... see pages 6-11

---

**Glass touch wireless controllers**

... see page 12

---

**Do you prefer sharp or round?**

New range of round glass GRMS controllers

... see pages 38-39

---

**Control iNELS by voice**

Amazon Alexa and Google Home together with iNELS Cloud

... see pages 46-47

---

**Control iNELS via TV**

App for Samsung Smart TV

... see pages 18-19

---

**Reservation and access system**

for hotel and pension reception

... see pages 40-41

---

**Publiko voting system**

iNELS (RF&BUS) in Municipalities

... see pages 48-49
A wide range of electronic modular devices, which bring new possibilities to home and office control, monitoring and security, as well as to industrial process control. Time relays, installation contactors, staircase automatic switches, time switches clocks, thermostats, power supplies units, etc.

Every household, every object and every machine needs a monitoring relay. There are several reasons why, overvoltage, undervoltage, phase failure, asymmetry, frequency, or power factors.

INELS Air is a response to the dynamically developing network for IoT (Internet of Things). The product group includes sensors and detectors for communication on the Sigfox, LoRa and NB-IoT protocol.

The system uses wireless communication between devices. The installation itself is variable thanks to this communication and can be gradually expanded.

The BUS system offers a unique solution for new installations in family houses, hotels and villas. It offers a wide range of functions for both automation and comfort.

Measuring energy consumption in the home or in larger areas is an increasing trend. Our products provide measurement with three different technologies - using a BUS or wireless system and thanks also with the IoT.

A wide range of electronic modular devices, which bring new possibilities to home and office control, monitoring and security, as well as to industrial process control. Time relays, installation contactors, staircase automatic switches, time switches clocks, thermostats, power supplies units, etc.

Every household, every object and every machine needs a monitoring relay. There are several reasons why, overvoltage, undervoltage, phase failure, asymmetry, frequency, or power factors.

INELS Air is a response to the dynamically developing network for IoT (Internet of Things). The product group includes sensors and detectors for communication on the Sigfox, LoRa and NB-IoT protocol.

The system uses wireless communication between devices. The installation itself is variable thanks to this communication and can be gradually expanded.

The BUS system offers a unique solution for new installations in family houses, hotels and villas. It offers a wide range of functions for both automation and comfort.

Measuring energy consumption in the home or in larger areas is an increasing trend. Our products provide measurement with three different technologies - using a BUS or wireless system and thanks also with the IoT.

Timers /Relays
Protection monitoring relays
INELS Air - IoT devices
Wireless home automation (RF)
Wired home automation (BUS)
Energy management

A wide range of electronic modular devices, which bring new possibilities to home and office control, monitoring and security, as well as to industrial process control. Time relays, installation contactors, staircase automatic switches, time switches clocks, thermostats, power supplies units, etc.

Every household, every object and every machine needs a monitoring relay. There are several reasons why, overvoltage, undervoltage, phase failure, asymmetry, frequency, or power factors.

INELS Air is a response to the dynamically developing network for IoT (Internet of Things). The product group includes sensors and detectors for communication on the Sigfox, LoRa and NB-IoT protocol.

The system uses wireless communication between devices. The installation itself is variable thanks to this communication and can be gradually expanded.

The BUS system offers a unique solution for new installations in family houses, hotels and villas. It offers a wide range of functions for both automation and comfort.

Measuring energy consumption in the home or in larger areas is an increasing trend. Our products provide measurement with three different technologies - using a BUS or wireless system and thanks also with the IoT.

Timers /Relays
Protection monitoring relays
INELS Air - IoT devices
Wireless home automation (RF)
Wired home automation (BUS)
Energy management

A wide range of electronic modular devices, which bring new possibilities to home and office control, monitoring and security, as well as to industrial process control. Time relays, installation contactors, staircase automatic switches, time switches clocks, thermostats, power supplies units, etc.

Every household, every object and every machine needs a monitoring relay. There are several reasons why, overvoltage, undervoltage, phase failure, asymmetry, frequency, or power factors.

INELS Air is a response to the dynamically developing network for IoT (Internet of Things). The product group includes sensors and detectors for communication on the Sigfox, LoRa and NB-IoT protocol.

The system uses wireless communication between devices. The installation itself is variable thanks to this communication and can be gradually expanded.

The BUS system offers a unique solution for new installations in family houses, hotels and villas. It offers a wide range of functions for both automation and comfort.

Measuring energy consumption in the home or in larger areas is an increasing trend. Our products provide measurement with three different technologies - using a BUS or wireless system and thanks also with the IoT.

Timers /Relays
Protection monitoring relays
INELS Air - IoT devices
Wireless home automation (RF)
Wired home automation (BUS)
Energy management

A wide range of electronic modular devices, which bring new possibilities to home and office control, monitoring and security, as well as to industrial process control. Time relays, installation contactors, staircase automatic switches, time switches clocks, thermostats, power supplies units, etc.

Every household, every object and every machine needs a monitoring relay. There are several reasons why, overvoltage, undervoltage, phase failure, asymmetry, frequency, or power factors.

INELS Air is a response to the dynamically developing network for IoT (Internet of Things). The product group includes sensors and detectors for communication on the Sigfox, LoRa and NB-IoT protocol.

The system uses wireless communication between devices. The installation itself is variable thanks to this communication and can be gradually expanded.

The BUS system offers a unique solution for new installations in family houses, hotels and villas. It offers a wide range of functions for both automation and comfort.

Measuring energy consumption in the home or in larger areas is an increasing trend. Our products provide measurement with three different technologies - using a BUS or wireless system and thanks also with the IoT.
## Quick overview of timing relays

### CRM-81J / CRM-83J

**Innovation**

<table>
<thead>
<tr>
<th>Type</th>
<th>Control signal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single-function</td>
<td><strong>2nd + 3rd contact</strong></td>
</tr>
<tr>
<td>Multi-function</td>
<td><strong>Inst. / Delayed</strong></td>
</tr>
<tr>
<td>Multi-function</td>
<td><strong>no</strong></td>
</tr>
<tr>
<td>Multi-function</td>
<td><strong>no</strong></td>
</tr>
<tr>
<td>Multi-function</td>
<td><strong>no</strong></td>
</tr>
<tr>
<td>Multi-function</td>
<td><strong>no</strong></td>
</tr>
<tr>
<td>Multi-function</td>
<td><strong>no</strong></td>
</tr>
<tr>
<td>Multi-function</td>
<td><strong>no</strong></td>
</tr>
<tr>
<td>Multi-function</td>
<td><strong>yes</strong></td>
</tr>
</tbody>
</table>

**Dimension**

- **90 x 17.6 x 64 mm**

**Features**

- **DELAY INHIBIT OPTION**
- **MEMORY LATCH**
- **WATCHDOG**
- **INTERVAL ON/OFF**

**Voltage**

- **AC/DC 12-240V**

**Lifetime**

- **Electrical: 50,000 operations**
- **Mechanical: 10,000,000 operations**

**Weight**

- **61 g (2.15 oz)**
- **72 g (2.57 oz)**

### NEW

**NEW**

<table>
<thead>
<tr>
<th>Type</th>
<th>Control signal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multi-function</td>
<td><strong>2nd + 3rd contact</strong></td>
</tr>
<tr>
<td>Multi-function</td>
<td><strong>Inst. / Delayed</strong></td>
</tr>
<tr>
<td>Multi-function</td>
<td><strong>no</strong></td>
</tr>
<tr>
<td>Multi-function</td>
<td><strong>no</strong></td>
</tr>
<tr>
<td>Multi-function</td>
<td><strong>no</strong></td>
</tr>
<tr>
<td>Multi-function</td>
<td><strong>no</strong></td>
</tr>
<tr>
<td>Multi-function</td>
<td><strong>no</strong></td>
</tr>
<tr>
<td>Multi-function</td>
<td><strong>yes</strong></td>
</tr>
</tbody>
</table>

**Dimension**

- **90 x 17.6 x 64 mm**
- **48 x 48 x 89 mm**

**Features**

- **DELAY INHIBIT OPTION**
- **MEMORY LATCH**
- **WATCHDOG**
- **INTERVAL ON/OFF**

**Voltage**

- **AC/DC 12-240V**

**Lifetime**

- **Electrical: 70,000 operations**
- **Mechanical: 10,000,000 operations**

**Weight**

- **72 g (2.57 oz)**
- **61 g (2.15 oz)**
- **108 g (3.85 oz)**

### Dielectric strength

<table>
<thead>
<tr>
<th>Supply (in, output 1)</th>
<th>6kV AC</th>
<th>6kV AC</th>
<th>6kV AC</th>
<th>6kV AC</th>
<th>6kV AC</th>
<th>6kV AC</th>
<th>6kV AC</th>
<th>6kV AC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply (in, output 2)</td>
<td>6kV AC</td>
<td>6kV AC</td>
<td>6kV AC</td>
<td>6kV AC</td>
<td>6kV AC</td>
<td>6kV AC</td>
<td>6kV AC</td>
<td>6kV AC</td>
</tr>
</tbody>
</table>

---

**Note:** Electrical values for Type CRM-81J, CRM-83J and CRM-93H is 10,000 operations.
Often referred to as "impulse". Bistable relays are used to switch power on/off, send impulse commands and have a wide range of applications from common houses and corridors to warehouses, manufacturing halls, hospitals, etc.

It can be used especially for switching and controlling lighting, heating, ventilation and other devices. All relays can be controlled manually using a lever on the relay panel (I-O), which also serves as an indication of the status of the contacts.

For types BR-220 and BR-232, it is possible to switch off the switch by switching the switch to OFF position. Coil control and relay status can only be changed manually (service, maintenance).

The relay contacts are held in position by mechanical blocking, which leads to a reduction of the thermal load and current consumption.

Faster and clearer installation thanks to an unlimited number of buttons, connected in parallel by two wires, which is a practical replacement for AC and cross switches. Last but not least, it offers savings in the number of wires used and, in the case of the control circuit, the possibility of using a smaller diameter, where the power consumption is minimal compared to the power circuit.

Trouble-free switching of LED sources with surge currents up to 80 A.

Manual control option.

The state of the bistable relay changes with a short control pulse, which results in a zero power consumption of the relay and is noiseless.

In configuration of NO/NC contacts:

<table>
<thead>
<tr>
<th>Maximum load of LED power supplies</th>
</tr>
</thead>
<tbody>
<tr>
<td>BR-216/10/1/20</td>
</tr>
<tr>
<td>max. 2 A per pole</td>
</tr>
</tbody>
</table>

Control input "S".

Time range setting.

Fine time setting.

Time setting: rotary switch and potentiometer.

Supply terminals.

Red LED output indicator.

Possibility to connect load onto controlling input.

Symbol:

ON DELAY with Inhibit

INTERVAL ON with Inhibit

In configuration of NO/NC contacts:
It is said that LED light sources are TOP of the market and are now used in 80% of buildings and homes to save costs. However, it is more difficult to define the load of LED sources on the dimmer with the aim of trouble-free regulation.

Each dimmer has overcurrent protection that reacts at a certain peak current. Each load (bulb, LED, energy saving lamp) has a certain power consumption. This is usually stated on the packaging by the manufacturer. However, the peak current value of this load is usually not stated. This is because each LED or energy saving lamp has electronics inside, peak current values may vary considerably for different products. Generally, it is not possible to determine the number of individual LED bulbs, if we do not know this value; we can only test a specific number of pieces.

The solution to the determination this is by the power factor $\cos \varphi$. The power factor of dimmable LED lamps ranges from: $\cos \varphi = 0.95$ to $0.4$. You can get the approximate max. Load value by multiplying the dimmer load and the power factor of the connected light source.

Our dimmer SMR-M can do it, just as it can dim other light sources.

Universal dimmer SMR-M

Set the minimum brightness to eliminate the flicker of the light source (especially the LED).

New function Pulse relay with delayed return (function for those who forget to switch off when they go out = goes out by itself).

Possibility to connect up to 20 buttons with LED or glow lamp (max x mA).

Integrated electronic thermal fuse. In case of reaction no exchange is necessary.
GLASS TOUCH WIRELESS CONTROLLERS

They are a luxurious alternative to plastic push-button RFWB. In a glass design with a thickness of only 8 mm, these will stand out in any interior. They are available in 2 and 4 button versions, in white and black glass. Capacitive pads are operated by touch, distinguishing between short and long presses. Button illumination during packet sending is realized by red LED. Actuators can adhere anywhere with double-sided tape or screwed onto the surface or installation box with a screw spacing of 60 mm via an auxiliary bracket. Power is provided by replaceable 2x CR 2032 with a lifetime of up to 2 years - depending on frequency of use.

RFGB-20/40 (SHARP)

RFGB-20/W
8595188176781
RFGB-40/B
8595188176804

RFGB-220/240 (ROUND)

RFGB-220/B
8595188176642
RFGB-240/B
8595188176892

IN-Glass Switch With Dimmer

Built-in temperature sensor with 0-55 °C.
White LED backlight.
Luxury glass switch design.
Setting minimum brightness to eliminate flickering of LED lamps.
Touch control by capacitive button.
Input R / L / C / ESL / LED, 160 VA.
When pressed, the button vibrates and turns blue.
Group control function that lets you control more than 10 other elements at the touch of a button.

Installation

1. Two side tape installation.
2. Wall (Box) installation.
3. The flat design with straight base makes it ideal for quick installation.
4. 2x 3 V battery CR 2032 in changeable slot.

Example of usage

The output can be controlled by up to 25 separate buttons (external RF controllers).

RFGB-20/W
8595188176781
RFGB-40/B
8595188176804
RFGB-220/B
8595188176642
RFGB-240/B
8595188176892
RFGB-220/40
8595188176682
RFGB-240/40
8595188176762

The buttons can control an unlimited number of RF devices.

RFGB-20/W
8595188176781
RFGB-40/B
8595188176804
RFGB-220/B
8595188176642
RFGB-240/B
8595188176892
RFGB-220/40
8595188176682
RFGB-240/40
8595188176762
RFGB-20/40
8595188176682
RFGB-220/40
8595188176682
RFGB-240/40
8595188176762

RFDW-71/W
8595188176938
RFDW-71/B
8595188176941
RFDW-271/W
8595188176958
RFDW-271/B
8595188176965

The buttons can control an unlimited number of RF devices.

RFGB-20/40
8595188176682
RFGB-220/40
8595188176682
RFGB-240/40
8595188176762

RFDW-71/W
8595188176938
RFDW-71/B
8595188176941
RFDW-271/W
8595188176958
RFDW-271/B
8595188176965

The buttons can control an unlimited number of RF devices.

RFGB-20/40
8595188176682
RFGB-220/40
8595188176682
RFGB-240/40
8595188176762

RFDW-71/W
8595188176938
RFDW-71/B
8595188176941
RFDW-271/W
8595188176958
RFDW-271/B
8595188176965

The buttons can control an unlimited number of RF devices.
RFIO² - UPGRADED WIRELESS PROTOCOL

Battery Discharge Signalling
When the battery charge level is below 10%, the wireless switch will flash 3 times every minute.

Preventing the possibility of unsuccessful setting / collision of pairing with an unwanted device
It is achieved through programming buttons on the wireless switch.

Communication with central unit CUS-04M

Wireless wall controller RFWB-20

Wireless switch unit RFSA-66M

Universal dimmer RFDEL-71B

4 button controller - keychain RF KEY

Panic button
When the button is pressed, the information is sent to the smartphone via the eLAN-RF-003 smart box.

Labelling of INELS RF elements with RFIO² protocol

The RFAF / USB Service Key is a support tool for system partners and installers to facilitate setup and analyze wireless communication problems. Setting the repeater signal through INELS RF components with the RFIO² protocol, which increases the range of communication by hundreds of meters. The RF communication network analyzer reliably analyzes the communication between the controller (where you plan to place it) and the component in the installation. Shows signal strength / quality as well as frequencies that can interfere with communication. This gives you an overview of interference and weak signal points that you can avoid during installation. You can avoid these situations simply by repositioning the component.

Available frequency for individual territories:

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

The RFAF / USB Service Key

The RFAF / USB Service Key is a support tool for system partners and installers to facilitate setup and analyze wireless communication problems. Setting the repeater signal through INELS RF components with the RFIO² protocol, which increases the range of communication by hundreds of meters. The RF communication network analyzer reliably analyzes the communication between the controller (where you plan to place it) and the component in the installation. Shows signal strength / quality as well as frequencies that can interfere with communication. This gives you an overview of interference and weak signal points that you can avoid during installation. You can avoid these situations simply by repositioning the component.

The RF communication network analyzer reliably analyzes the communication between the controller (where you plan to place it) and the component in the installation. Shows signal strength / quality as well as frequencies that can interfere with communication. This gives you an overview of interference and weak signal points that you can avoid during installation. You can avoid these situations simply by repositioning the component.

Wireless wall controller RFWB-20

Wireless switch unit RFSA-66M

RFDEL-71B

Universal dimmer

4 button controller - keychain

Panic button

When the button is pressed, the information is sent to the smartphone via the eLAN-RF-003 smart box.

Available frequency for individual territories:

- 866 MHz - India
- 868 MHz - Russia
- 868.1 MHz - EU, Ukraine, Middle East
- 868.5 MHz - America, Australia, New Zealand, Israel
- 916 MHz thumbnail
The Energy Gateway RFPM-2 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**
http://217.197.144.56:2130/
Login and password: admin

**STATISTICS**
- Sample overview of electricity consumption (today, yesterday, this week, this month)
- Consumption converted to finance costs
- Graphical visualization of consumption (by hours, 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.
The updated iNELS Home Control application brings a new dimension to the control of households via smart TVs. It is fully compatible with Samsung Smart TV. Thanks to the TV you can control appliances such as lights, air conditioning, heating, garage doors, cameras, outdoor blinds and more. The application is available for download for Samsung Smart TV owners by logging into Samsung account for free.

What can you control?

- Lighting
- Multimdia
- Heating
- Weather station
- Cameras
- Energy management
- Switching
- Intercom
- Blinds, shutters

What can you control?

- room selection
- control of scenes and individual devices in the selected room
- view the weather in a pre-set location
- device, camera, weather, energy metering settings
- view cameras
- display current electricity, water and gas consumption

iNELS Smart Home Control
Lifestyle 1

Download the application by clicking here in the home menu area. If you click Install, you confirm that you agree to grant these permissions to the app.

Install

iNELS Home Control application is used to control INELS RF Control system and BUS system. Allows switching, dimming control, blinds, RGB and there is also implemented communication with Axis cameras.
The mission of the new company iNELS Air, which is a joint venture of ELKO EP Holding SE and ACRiOS Systems, is to continue the development and customization of iNELS Air products and to develop business activities in the Czech Republic and other countries around the world. The newly created company is headed by Radim Malinowski.

OUR NB-IoT SENSORS IN NETWORKS OF OTHER OPERATORS

ELKO EP with iNELS Air products (IoT devices) has tested the operation of its NB-IoT devices with several national and multinational mobile operators as part of testing and pilot projects. NarrowBand becomes dynamically developing IoT network capable of large-sized extending due to existing mobile network infrastructure based on base transceiver stations.

INELS Air was created by the separation of products belonging to the Internet of Things from the ELKO EP portfolio and at the same time by their interconnection with the existing products of ACRiOS Systems. We have created a new business company that will benefit from the experience of both companies. ELKO EP has solved production, has available capacities, development team and process specialists. As a start-up we are more fero-cious, we may have a bigger pull on the door and we are able to technically cover business activities, "says Radim Malinowski.

"INELS Air was created by the separation of products belonging to the Internet of Things from the ELKO EP portfolio and at the same time by their interconnection with the existing products of ACRiOS Systems. We have created a new business company that will benefit from the experience of both companies. ELKO EP has solved production, has available capacities, development team and process specialists. As a start-up we are more fero-cious, we may have a bigger pull on the door and we are able to technically cover business activities, "says Radim Malinowski.

The very rational use of iNELS Air sensors and detectors has been demonstrated in cooperation with Clever Farm.

Clever Farm is a relatively new company that develops and deploys smart solutions for farmers in various fields. These solutions include not only agro-evidence (fertilizers, nitrate compliance), maps linked to satellite imagery (allowing precise farming), land records (for lease and barter contracts), but also links to IoT sensors that provide a constant overview of soil conditions, forests and post-harvest warehouses.

ELKO EP has developed and manufactures customized devices based on iNELS Air sensors. These are connected to the Clever Farm platform via SigFox / LoRA / NB-IoT networks.

The very rational use of iNELS Air sensors and detectors has been demonstrated in cooperation with Clever Farm.

Clever Farm is a relatively new company that develops and deploys smart solutions for farmers in various fields. These solutions include not only agro-evidence (fertilizers, nitrate compliance), maps linked to satellite imagery (allowing precise farming), land records (for lease and barter contracts), but also links to IoT sensors that provide a constant overview of soil conditions, forests and post-harvest warehouses.

ELKO EP has developed and manufactures customized devices based on iNELS Air sensors. These are connected to the Clever Farm platform via SigFox / LoRA / NB-IoT networks.

SENSORS FOR PRECISION AGRICULTURE

The very rational use of iNELS Air sensors and detectors has been demonstrated in cooperation with Clever Farm.

Clever Farm is a relatively new company that develops and deploys smart solutions for farmers in various fields. These solutions include not only agro-evidence (fertilizers, nitrate compliance), maps linked to satellite imagery (allowing precise farming), land records (for lease and barter contracts), but also links to IoT sensors that provide a constant overview of soil conditions, forests and post-harvest warehouses.

ELKO EP has developed and manufactures customized devices based on iNELS Air sensors. These are connected to the Clever Farm platform via SigFox / LoRA / NB-IoT networks.
HOW TO CONTROL A/C BY iNELS?

- Smartphone app view (iHC-MA/MI)
- Tablet app view (iHC-TA/TI)
- iMM Control Center setup screen

**A/C brands**
- Daikin RTD-NET
- LGPI-485
- Mitsubishi MELCOBEMS
- Coolmaster Net
- VRM, VRR, KNX, RSM port
- VRM, VRR port
- Daikin DK-AC-WMP-1
- LG LG-RC-WMP-1
- Samsung SM-ACN-MBS-4
- Intesis Box-WMPI series
- Midea MD-AC-MBS-1

**Smartphone app view (iHC-MA/MI)**
- iPhone
- Android
- iHC-MA
- iHC-MA
- MAIRF
- iHC-MI
- iHC-TI

**Tablet app view (iHC-TA/TI)**
- iPhone
- Android
- iHC-MI
- iHC-TI

**Smartphone app view (iHC-MA/MI)**
- iPhone
- Android
- iHC-MA
- iHC-MA
- MAIRF
- iHC-MI
- iHC-TI

**Tablet app view (iHC-TA/TI)**
- iPhone
- Android
- iHC-MI
- iHC-TI

**Smartphone app view (iHC-MA/MI)**
- iPhone
- Android
- iHC-MA
- iHC-MA
- MAIRF
- iHC-MI
- iHC-TI

**Tablet app view (iHC-TA/TI)**
- iPhone
- Android
- iHC-MI
- iHC-TI

**Smartphone app view (iHC-MA/MI)**
- iPhone
- Android
- iHC-MA
- iHC-MA
- MAIRF
- iHC-MI
- iHC-TI

**Tablet app view (iHC-TA/TI)**
- iPhone
- Android
- iHC-MI
- iHC-TI

**Smartphone app view (iHC-MA/MI)**
- iPhone
- Android
- iHC-MA
- iHC-MA
- MAIRF
- iHC-MI
- iHC-TI

**Tablet app view (iHC-TA/TI)**
- iPhone
- Android
- iHC-MI
- iHC-TI

**Smartphone app view (iHC-MA/MI)**
- iPhone
- Android
- iHC-MA
- iHC-MA
- MAIRF
- iHC-MI
- iHC-TI

**Tablet app view (iHC-TA/TI)**
- iPhone
- Android
- iHC-MI
- iHC-TI

**Smartphone app view (iHC-MA/MI)**
- iPhone
- Android
- iHC-MA
- iHC-MA
- MAIRF
- iHC-MI
- iHC-TI

**Tablet app view (iHC-TA/TI)**
- iPhone
- Android
- iHC-MI
- iHC-TI

**Smartphone app view (iHC-MA/MI)**
- iPhone
- Android
- iHC-MA
- iHC-MA
- MAIRF
- iHC-MI
- iHC-TI

**Tablet app view (iHC-TA/TI)**
- iPhone
- Android
- iHC-MI
- iHC-TI

**Smartphone app view (iHC-MA/MI)**
- iPhone
- Android
- iHC-MA
- iHC-MA
- MAIRF
- iHC-MI
- iHC-TI

**Tablet app view (iHC-TA/TI)**
- iPhone
- Android
- iHC-MI
- iHC-TI

**Smartphone app view (iHC-MA/MI)**
- iPhone
- Android
- iHC-MA
- iHC-MA
- MAIRF
- iHC-MI
- iHC-TI

**Tablet app view (iHC-TA/TI)**
- iPhone
- Android
- iHC-MI
- iHC-TI
The latest autumn update of the iDM setup software brings support for new peripheral units, such as the 22-channel switching actuator SA3-022M and FAN-COIL of the FA3-612M, along with the implementation of new support functions. For example, the more effective filtering of results that allows you better orientation in more complex projects because it works by searching by unit name, note or hexadecimal address. Furthermore, the search for devices on bus, which has an impact on the efficiency of work with the project, where it is necessary to add an element without unnecessary scanning a clean project.

An interesting new feature is the support of proximity sensors in glass wall units, which allows the detection of a passing or approaching person and depending on the action set can, for example, turn on the backlight of the device or trigger various devices (in the form of a scene).

The work with functional blocks was also streamlined, where individual blocks can be shared between individual computers in the form of file import and export. A newly implemented important feature is the ability to move drives and virtual wires, which has a big impact on the time efficiency of programming (the programmer does not have to delete and re-establish connections between devices). In some cases, the order of the virtual wires may also matter, and it is now possible to change the wire positions in the overview by simply dragging the connection up or down.

In 2020, the software was upgraded to a newer version called iDM v.3.41. Compared to the original version contains a lot of new enhancements and improvements, which you can read below.

- Removed “Wait firmware” status after “Factory default” option. If there is no connection from iDM3 to CU3, the central unit will delete the project and it will default to 192.168.1.1.
- Since version 3.4.1, the firmware link to the project has been added to the project, so when the project is first uploaded to CU3, iDM3 checks the firmware inside the units and loads the current version required.
- Added control of internal SD card at CU3 startup.
- Information about used firmware versions for all units and modules has been added to the project structure.
- In the Program settings / other settings menu, added the option “Automatic project return to CU3”.
- „Test connection” function added in Program settings / Connection settings menu.
- „Sunrise-Time” and „Sunset-Time” devices added to Astronomical unit.
- To the Astronomical unit, Athens was added to the time zone.
- Attendance system optimization.
- Added support for sending complete card number to third parties.
- Added error message if cards are not stored in the reader.
- Added error message if SMS are not stored in GSM3.
- Added support for FA3-612M for Fan-Coil control.
It is a solution built on this platform, allowing you to program or configure your installation using the SCADA tool. This includes creating a web-based monitoring environment based on object-oriented JavaScript. The interface created in the PROMOTIC environment allows constant access to all elements without having to stop the system during (re)configuration. The main advantages are:

• Programmable web interface and control logic in JavaScript or VBScript.
• Connectivity to various interfaces and repositories, such as XML, OPC, ActiveX, SQL.
• Possibility to use SVG vector graphics and edit it in the integrated graphics editor to visualize the interface.
• Alarm integration - alert the user to defined events with history logging.
• Possibility to organize graphically and tabular data in the form of so-called Trends.

The system uses the existing Ethernet infrastructure to communicate over TCP / IP protocol and in case of different communication, the serial link (RS232 / RS485) is also used. All commands and feedback are processed by the main node in the infrastructure - server (Microsoft Windows workstation) with a component called Promotic runtime installed. This node communicates with terminal devices through software drivers that transmit data via API (iNELS RF) or ASCII (iNELS BUS).

A guidepost describing the communication interface between iNELS and Promotic can be found here: http://bit.ly/communication_iNELS.

The Promotic runtime component uses the Microsoft Windows environment, so any physical workstation can be used to run applications and services. This solution is also designed to run on a virtual machine (VirtualBox or VMware). More information about licensing an application on a virtual machine can be found here: http://bit.ly/virtual-en.

Operation of the software solution is, of course, a matter of license for a physical machine, where it is necessary to be aware of the number of controlled elements (so-called variables). Individual licenses for Promotic runtime can be found here: http://bit.ly/licence-en.

Various iNELS units can be connected to the Promotic environment due to the presence of software drivers. TCP / IP allows all requests to be transmitted over ASCII (CU3-Dxm) or the JSON API (eLAN-RF-003).


IoT devices from the iNELS Air portfolio can also be indirectly integrated into the Promotic platform via the MQTT broker. More information can be found here: http://bit.ly/communication_iOHN.

All these different communication platforms can eventually be interconnected through a single web interface.

INELS reference

• PROMOTIC provides monitoring and regulation of room heating in the Abito Hotel in Prague. Rooms are located in 2 buildings: the hotel part and the hostel.
• Connection to the HORES hotel system allows real-time heating optimization according to occupancy or room reservation by hotel guests.
• The system reads data in real-time from iNELS controllers, processes them and monitors them. The system also enables manual changes (editing) of heating parameters.
• Thermoregulation RFATV1 is used for the regulation itself.
Various iNELS controllers can be connected to the Niagara Framework through the presence of software drivers. TCP/IP allow all requests to be transmitted over ASCII (CU3-0xM) or indirectly via the JSON API (eLAN-RF-003). The framework also includes the presence of an MQTT driver to establish communication with devices from iNELS Air.

Our company is an exclusive distributor of Tridium hardware and software, including basic technical support for the combination of iNELS and Niagara Framework.
The philosophy of the FlowBox system is to integrate monitoring and control of all systems into one centre, which is able to integrate gas boilers, infrared heaters, heat recovery units, fans, destratifiers, radiators, infrared heaters, electrically controlled skylights, adjustable LED lighting, camera systems, security and more. The whole system can be used in three ways: as a dedicated cloud for closed objects, an intranet solution for large installations, or a public IoT cloud. The platform is based on MASTER => SLAVE, but also MASTER => subMASTER or Gateway or subMASTER => SLAVE.

The architecture of the system is based on so-called realms (platform environment) aggregating all monitored or controllable elements. Access to the system is via mainly modern web browsers supporting HTML5, jQuery and JS Stack, which can work with a responsive design. The system manages to aggregate and distribute data via MONGO or SQL databases, while platform control is based on the multi-paradigmatic RUST language.

There are a number of tools for connecting with third parties via the API using eg HTTPS (which is the case for REST API, ASCII), Modbus (TCP / RTU), DALI, M-BUS, MQTT and others - the system is then truly cross-platform. Programming in the FLOWBOX interface is done using a simple C or PHP-like syntax. This platform is easy to deploy with clear hardware and software requirements. The system must use Linux or Debian OS running on an Intel CPU and can also be run as a virtual machine.

**INELS and Flowbox**

Software implementation between Flowbox and INELS will be completed soon. Interconnection in the form of a software driver will enable customers to safely control and monitor our devices via API (JSON), ASCII or MQTT broker.
FLOWBOX platform support analytical functions where any input and output (sensor, device, binary state etc.) may have enabled own history data record that can lead to the individual graphical reports presented in user dashboards. Alarm events can be just emails, SMS or pushover (instant messaging) alarms or specific FLOWBOX commands that can trigger further external visualized (lighting) or sound based alarm system.

WHAT’S NEW?

FLOWBOX platform support analytical functions where any input and output (sensor, device, binary state etc.) may have enabled own history data record that can lead to the individual graphical reports presented in user dashboards. Alarm events can be just emails, SMS or pushover (instant messaging) alarms or specific FLOWBOX commands that can trigger further external visualized (lighting) or sound based alarm system.

ENVIRONMENT AND WEATHER MONITORING

- Environmental sensors monitoring
- Temperature, humidity, air quality (CO, CO2), flooding, presence, light intensity and many others sensors support

INTUITIVE MULTITENANT USER INTERFACE

- Intuitive application layout, no engineering skills required
- Different rules for various users
- User defined settings of the view, historical records, control rights, panels, etc.

Find out more about the solution

Offical site: http://www.flowbox.com/en

The price list of products and services is not published, but Flowbox prefers to consult each design to create the most efficient and affordable solution.
A solution based on BMS can be covered by four following options. The main difference is amount of available features related to control and supervision.

<table>
<thead>
<tr>
<th>Feature</th>
<th>iNELS IDM</th>
<th>PROMONTIC</th>
<th>Niagara</th>
<th>FLOWZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>programming interface</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>virtual wire amount limitation</td>
<td>✓</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>integration of mathematical or logical functions</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>third-party interconnection (ASCII or software drivers)</td>
<td>✓ –</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>alarm / calls / text / e-mail notifications</td>
<td>✓ –</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>support of ORACLE hospitality solution (Fidelio / Opera)</td>
<td>✗</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>support of multiple CU3-0xM</td>
<td>✗</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>SCADA interface/support</td>
<td>✗</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>iNELS RF interconnection (RFIO or JSON)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>iNELS Air interconnection (MQTT)</td>
<td>✗</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>HTML5 / JavaScript frontend - dashboards and web supervisor</td>
<td>✗</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>multimedia integration (CCTV, audio, video)</td>
<td>✗</td>
<td>✓</td>
<td>✓</td>
<td>✗</td>
</tr>
<tr>
<td>History logging</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>SQL interconnection</td>
<td>✗</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

* basic features implemented only
** partial support: via ASCII or selected drivers only
*** partial support: calls and texts only
**** partial support: CCTV only

After the successful introduction of the iNELS GRMS glass series, we also focused on improving these elements, we proceeded to redesign the shape and some design improvements on the GSB / GTP /... glass panels. The devices of this generation GMRS are designed as a compact solution, so that the base, the mounting platform is not separated from the control part of the device. Everything is in the one solution. First, the mounting frame is attached to the installation box. It then connects the power wires, the bus or the wires to the device. The inputs / outputs and the entire unit snap into the mounting frame, which is mounted on the wall box. This design also improves the fitting of the product to the wall, eliminating any possible unevenness of the wall plaster base, etc. Available in pure white and elegant black.
The controls are equipped with an ambient light intensity sensor.

Based on the information from the sensor, it is possible to light up the orientation blue diodes in the GSB3 buttons or to perform various actions in the iDM3 software, for example to light the light circuits in the corridor, etc.

The advantage over standard buttons / switches is saving space, signalling the status of any system output.

Communication BUS connection with screw less terminals.

The new GBPS-xx design is also compatible with the Vimar plug-in modular system.

They are available in the black and white versions of the LOGUS® design line, just like the others.

Standard Size: 94 x 94 mm (GSB3-40).

The buttons have increased sensitivity for faster system response and response.

Illumination of individual symbols is realized by a more energy-efficient method.

With the possibility to set the mode of automatic backlighting of symbols in response to ambient lighting in any given room environment.

Communication BUS connection with screw less terminals.

The new GBPS-xx design is also compatible with the Vimar plug-in modular system.

On the GCR, we have increased the area for marking, room numbers to the maximum size 18 x 58 mm.

Larger size: 100 x 100 mm (GBS3-220S).
RESERVATION AND ACCESS SYSTEM

For iNELS users in accommodation services, we have prepared the iNELS Hotel reservation and reception system, which is designed to manage small accommodation facilities such as smaller hotels, guest houses, apartments, hostels, cottages and cottages.

The system can be installed on a desktop computer at the reception, as well as on a central or stand-alone server, where the reception is connected as a server terminal.

The system communicates over the LAN directly with the central units CU3 in the room or sub-cabinets. It ensures immediate reaction of the iNELS electrical wiring system to changes in reservations, room access management or, for example, the loss of a card by a guest. Reservation is entered into a pre-prepared form, where, of course, in addition to the standard required information, it is possible to assign multiple cards for the accommodation unit. To assign a card to a room, simply click on the green plus button next to the card number field in the form and place the card on the reader at the Reception. After saving the Reservation into the system, the card numbers are immediately transferred to the CU3 Central Unit, which assigns the card numbers to the specific reader assigned to the reserved room. Reservations created and saved in this way can be monitored or modified (moved, divided reservation) in the Dashboard, which offers both a general overview of accommodation capacities and previews of individual days in the calendar or the occupancy of the room in the month.

It is a simple hotel system that can be used by two basic groups of users of Hotel systems:

**Reception**
- entering and editing hotel room reservations
- view the list of entered reservations
- pairing cards to access rooms
- monitoring the current state of heating or cooling in individual rooms
- Monitoring of recall of cleaning of rooms (MUR) and state of no disturbance (DND)
- possibility to see states of connected central units CU3 for identification of possible defects

**System managers**
- Allowing users to configure the entire system as opposed to receptionists.

You can then use both the assigned physical card and the NFC-enabled smartphone app - iNELS Digital Key (IDK), which is an easy way to open a room without having a physical card with you.

In case of any problems contact us: [support information]
THE NEW miniCU - world’s smallest central unit

SMALL, PERFORMANCE AND SAFE

Thanks to the new compact central unit from the “CU3” family, INELS BUS can now manage not only hotel rooms, but also larger apartments or residencies - with all the advantages that the bus solution (or “wire”) brings: speed, variability, interconnection to superior systems.

The new miniCU central unit together with the PS3-30 / INELS isolator power supply takes up only 4-Modules (70mm) in the rack, but can handle up to 32 units (bus) on the bus. It is possible to connect all elements of INELS BUS system, but most commonly GRMS controllers, switching and dimming actuators.

Built-in MODBUS protocol connected to RS485 terminals enables direct HVAC connection - if the hotel is designed differently or separately (fan coil thermostat).

Thanks to its unique address, it (miniCU) can be scaled to different ranges of master control (CU master, Bacnet, Modbus, Niagara…) and also connected to the PMS (Property Management System) of the hotel, access system (door lock) or Hospitality TV.

Power supply DC 27V 1.5 W consumption only.

Encrypted communication by 256bit key TCP / UDP = high level secure communication.

New

PS3-30/INELS - Power supply with bus separator

• PS3-30/INELS is a switched-mode stabilized power supply 27V DC with total 30 W.
• It is used to supply central units and external masters within the INELS wiring system.
• Part of the power supply is an integrated bus separator BPS3-01M for powering the INELS peripheral unit of one bus.
• It is equipped with electronic protection against short-circuit, overvoltage, power and temperature overload.
• PS3-30/INELS in 5-MODULE version is designed for mounting into a rack on a DIN rail.

Example of the installation

Central unit

Bus

PS3-30/INELS

Power supply

miniCU

Central unit

Room

101

102

103

104

105

106

INELS BUS for 32 units (addresses).

Installation on DIN rail.

Encrypted communication by 256bit key TCP / UDP = high level secure communication.

Wide only 1M (17.5 mm).

... up to 254 CU3 UNITS (= 64 516 rooms)

... up to 254 ROOMS
• Simple wireless transceiver solution.
• Usually it serves as an accessory when extending the wiring or for solving the acute condition (switch behind the cabinet, control where there are no wires...).

• Wireless home automation system solution where iNELS RF Control is used as the primary electrical installation.
• Via the eLAN-RF gateway, the installation can be controlled from devices with applications (phone, tablet, watch, TV) even remotely.

• BUS (wire) solution for flats, apartments and medium-sized houses.
• The world’s smallest central unit.
• The miniCU allows connection of up to 32 peripheral units on the BUS.

• BUS (wire) solution for larger houses, villas, pensions, offices and companies.
• The CU3-01, 02, 03 central units are suitable for this solution - they allow direct connection of 64 units and through extension masters up to 1024 units.
• 3-way control via ASCII protocol: iHC, BMS, PMS applications.

• iNELS offers several options for building management. CU3-03M can control up to 1024 units via an external M3-02M / ETH master with LAN interface.
• CU3-03M: as MASTER it can control up to 252 miniCUs over TCP / IP protocol (iDM free SW).
• Connection Server: can control up to 8x CU3 via ASCII and iDM3 (free) software.
• Niagara: The JACE 8000 can control up to 100 CU3 (ie 57,600 units) or eLAN-RF
With the advent of smart technology in the everyday life of people within Smart Home devices, so-called voice assistants are becoming increasingly available. In the home they find employment in playing music, sending messages or calling friends. As part of our Smart home, we’ve launched Google home and Amazon Alexa apps that can make life easier for you.

Google Home can become a member of your smart home. It communicates seamlessly with smart devices such as iNELS RF. This allows you to control, for example, the temperature setting or the light intensity by voice. The voice assistant is designed to comfortably control RF Control wiring by voice using your mobile phone or smart speaker. As a complement to RF Control, iNELS Smart Home Solution blends in with every modern home.

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. It is designed to comfortably control RF Control wiring by voice using your mobile phone. It is a supplement to the RF Control system and within the iNELS solution.

Functionality of the application is possible only with the device eLAN-RF-003, eLAN-RF-Wi-003 for controlling RF devices. One of these devices must be used in your wireless installation.

GOOGLE HOME

AMAZON ALEXA

YOU CAN ALSO CONTROL iNELS BY VOICE

GOOGLE HOME

AMAZON ALEXA

Application IHC-MAIRF-Cloud / IHC-MIIRF-Cloud:
- Designed for iOS 10+ and Android 5.0+.
- Optimized for devices with 800x480 screen resolution.
- The language of the application changes automatically according to the language set in Android / iOS.
- You can create a cloud account using the Setup Wizard or the login button in the main menu. The recommended minimum speed for connecting eLAN-RF to the Cloud should be in the order of megabytes per second (3G - 1Mbit / s and higher).
ELKO EP not only manufactures, but also supplies its products to companies that strive to make life easier not only for city dwellers but also for state institutions. The same was true in the case of a contract for HD MEDIA, which came to the market with the Konsiliář program, focusing on the preparation and electronisation of materials for the board and the council. It has been developed since 2007 and offers comprehensive solutions with time savings and maximum work efficiency. ELKO EP is the author of two units - wireless voting and wired voting controllers.

All the information in one system

Pabliko’s voting system from HD MEDIA offers the possibility of a comprehensive interconnection of prepared RM / ZM materials, electronically created in the Consumer program, into an environment suitable for their approval (voting). The system aims to provide maximum flexibility with regard to operation and rules of procedure. In the current version, its behaviour can be adjusted by 90 different parameters that control the functionality, behaviour towards the Rules of Procedure and the appearance of the whole system itself.

Benefits of the Pabliko voting system

- The voting system can be supplemented with a conference system with fully automatic discussion, as well as a camera system, again fully automatically controlled at the time of discussion.
- All spoken words can be saved in real time to an MP3 / OGG audio file.
- At the time of the discussion of the materials and discussion, the system supports the projection of the marked appendices from the Consiliarium program.
- The changes made at the time of the discussion do not affect the materials already submitted. These still remain in the form in which the submitter published them.
- After each vote, the system can be set up to print voting protocols that can be printed on a local printer or even virtually in PDF files.
- Wireless voting units are powered by a 3V battery that can be replaced by the user.

Wireless units (iNELS RF)

The wireless variant is suitable for external areas where the voting equipment is connected to the projection unit (usually a projector), where the course of the whole meeting is projected, before the board meeting / board meeting. The whole device is therefore simply portable.

- Wireless units have Pro / Again / Abstain / Discussion / Note / Logout options. Each of the councillors / councillors will obtain at the constituent council a specific unit (unit number) with which it is already authorized. The CR 2032 batteries are supplied with a one-year battery that can be easily replaced by the user. The range of these units is in the open space up to 100 m.

Wireless units (iNELS RF) and Wired units (iNELS BUS)

The surface is made of high-quality tempered glass, with only a gentle touch to control it. The voting unit is offered in an elegant two-colour design. The individual Pro / Again / Abstain / Discussion / Note and Cancel symbols are backlit by coloured light guides for better orientation during the meeting. There is no problem for the unit to set up additional feedback in the form of beeps and vibrations. The units include a contactless chip card reader, with which the emphasis is not on seating order. The units are designed for fixed installation in tables.

 Wired units (iNELS BUS)
REFERENCES

Bhutan National bank
Timphu, Bhutan
- fully equipped with iNELS bus and RF installations
- more than 300 iNELS elements & 2,000 lights under the full control of the iNELS Bus System
- 10” Touch Panels with iNELS Home Control app on each floor

Hermitage Museum
St. Petersburg, Russia
- one of the world’s most famous museums, based in St. Petersburg
- dimming of selected zones with DM-6
- cooperating with wireless RFDAC-71B controller

Magyar State Opera
Budapest, Hungary
- every additional lighting source is controlled by iNELS system
- the devices here are controlled by RF Touch
- for switching the RFSA-11B and RFSA-66M is used

Marriott Marquis
Doha, Qatar
- 5-star hotel in the Doha City center
- lighting control, HVAC control,
- master switch OFF
- 44 floors, 397 rooms, 182 suites, 18 meeting rooms

Hotel Isla Mallorca & Spa
Mallorca, Spain
- 5-star hotel in Palma de Mallorca
- 10 floors, 154 rooms, wellness, bars, restaurant, meeting rooms
- lighting control, HVAC control exit button (switch OFF)

Rocks Hotel & Casino
Kyrenia, Cyprus
- intelligent installation iNELS
- Guest Room Management System with CU3-04M Hotel Bundle
- ready for communication with iNELS BMS
- used iNELS RF Control
- controlling the lighting by RFWB-40 wireless switches and the RFSA-61B multifunction switch units
- iNELS Home Control mobile app

Inter Power Ltd.
Sofia, Bulgaria
- smart RF System controls lighting, heating, security and CCTV
- separate relays for light circuits switch it on, off or dim
- eLAN-IR-003 allow remote control of A/C and presetting of work schedules

Lexus Showroom
Lviv, Ukraine
- INELS BUS – DALI for 120 lighting zones
- switching, dimming and light shades are controlled without single switch
- controlled via sensors

Pet shop
Slusovice, Czech republic
- INELS BUS controls
- temperature, water level, circulation, CO as well as air controlled by INELS Smart Solution
- annual energy cost savings of more than 50%

Radisson Ridzen Hotel
Riga, Latvia
- 7 lighting zones integrated in INELS RF system
- sockets near beds for comfortable staying
- switches with laser-printed icons

Arigone Hotel
Olomouc, Czech republic
- intelligent installation iNELS
- Guest Room Management System with CU3-04M Hotel Bundle
- ready for communication with iNELS BMS

Chauhanji’s Residence
India
- used iNELS RF Control
- controlling the lighting by RFWB-40 wireless switches and the RFSA-61B multifunction switch units
- iNELS Home Control mobile app