

Wireless electro-installations

Smart home & building solutions



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INELS[®]

ELKO EP, Holding

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

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



Facts and Stats



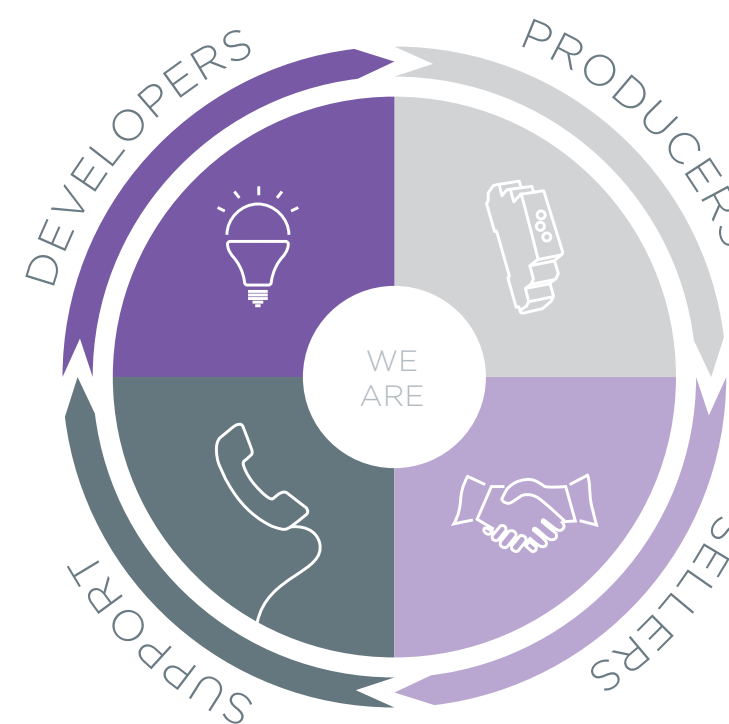
10
BRANCHES
OVER THE WORLD

70
EXPORTING
COUNTRIES

300
EMPLOYEES

5 000
iNELS INSTALLATION

12 000 000
MANUFACTURED PRODUCTS



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Why a Smart Home?

A Smart Home is not a necessity of life, but is becoming a vital requirement. It can do what a classic electrical installation cannot, or can only do with great difficulty.

Each potential customer has different motivations for wanting to set up a smart home. Some are interested in savings, others like combining comfort with safety, but in either case, all the characteristics are an inseparable part of the system, and it is only up to the customer which ones are most important.

The main advantage of iNELS RF is its wireless design. For you this means you do not have to cut into any walls to improve your home wiring scheme.

With iNELS RF, you can do so easily, or create a retrofit and enjoy what never used to be possible. And you can expand or downsize the configuration at any time.



Savings

- by efficient heating or AC regulation, you can attain savings of up to 30%
- dimming lets you save around 15%
- further savings: linking appliances, time switching, weekly mode, detectors

Safety

- the system includes detectors of motion, smoke and open windows
- you can create an alarm to protect your property and loved ones

Comfort

- you can control comfortably from a controller in the pocket or smartphone
- by pressing a single button, you perform several commands at once
- you need not worry about switching things off - they switch automatically or based on fulfilling a condition

Monitoring

- integrated video cameras provide a view of what is happening at a location you are currently away from
- events are recorded onto a log that you can view later
- you can connect from anywhere in the world and monitor your home in real time or from the recording

Automation

- everything is set up to function automatically
- weekly heating mode, blinds at dawn, lights at dusk
- the motion detector is not only for security, but detects the presence of persons for other functions as well

Flexibility

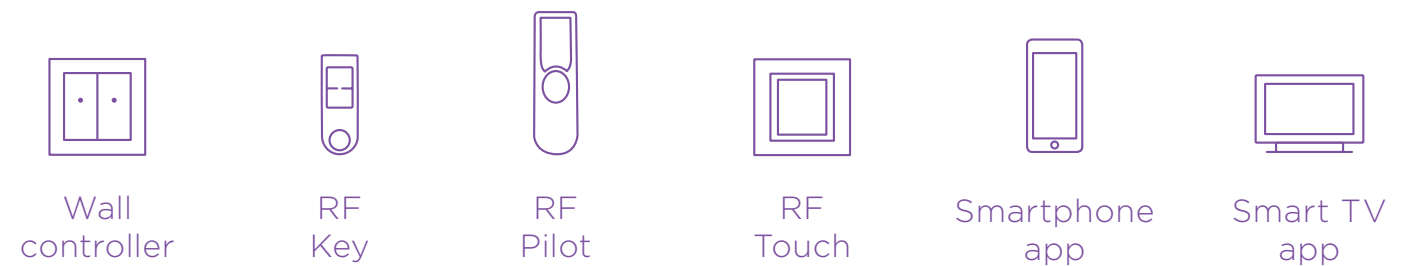
- option of adding more devices
- change in functions by simple readjustment
- settings and management remotely without needing to arrive on site

You can control your devices in various ways

It does not matter what you control but what you control it with. You can control units and appliances in many ways and even combine them.

For those more conservative, buttons take the form of switches as you have always been used to. Those often moving around the home and garden will appreciate having the RF Pilot in their pocket. The touch unit is designed for those who always want to have all buttons in one place - on a 3.5" framed display. For some, a smart phone is an interesting accessory, but for many it is the only controller that does not need to be purchased because they already have one!

You can control iNELS with:



Wall controller

- wireless and in premium design
- the high variability of wireless switches
- benefits of wireless switches include fast installation
- it also offers control of up to any 4 lights



Key chain

- pocket controller for every day
- unique design of the key alarm conceived in the smallest possible design to fit nicely in your pocket and always keep handy
- it can control up to 4 independent devices and switch scenes



RF Pilot

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



RF Touch

- design element with a tinge of luxury fittingly accenting any interior
- it will become a central, wireless intuitively controlled home
- provides energy consumption and door phone function as well
- colored 3.5" TFT display



Smartphone

- the only controller that comes free
- one of the main thoughts behind the iNELS is to keep one's home under control
- after downloading the application, you can control the entire house



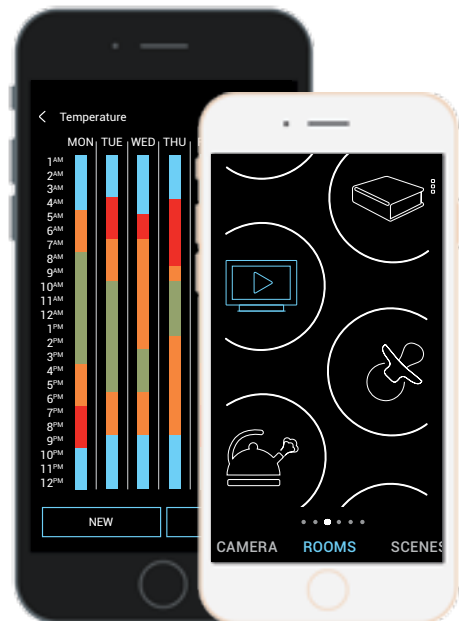
Smart TV

- by Samsung Smart TV from model 2013 iNELS RF via Smart RF Box
- you can add to the app a floorplan of your room and house for easier control
- installing and using the app iNELS Home control from Samsung sites is free

Your home

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.



APPS for your home

Through an application on your smartphone, you can control your home while keeping complete track of all its ongoing processes.





Living room

This is the room where not only family, but friends and guests meet. It is usually the home's largest room, and all technologies and multiple lights are installed here. You also may spend the majority of your time here.

With the press of a single button, iNELS lets you set up a light scene to suit the current situation or mood. The control touch unit puts the entire home virtually under your thumb - switch off all the lights, close the gate, read the outside temperature and set the thermostat in the children's room.



RF Touch

Wireless touch unit for central control of your home wireless system. Besides switching and dimming, it provides a current overview of energy consumption and is a part of the home intercom. The color 4" TFT display enables quick and easy control of appliances.

Kitchen

The kitchen is a room with a large number of appliances. These include the stove, the dishwasher, the hood and the refrigerator. It is therefore natural to protect this area. This is accomplished either by a surge monitor in the distribution box or by detectors.

The smoke detector monitors a sudden fire or flare-up. The flame detector is the foundation of safety in your home. Battery power makes installation easy. The integrated temperature sensor scans for the critical temperature at which materials not producing smoke can ignite. The unique, stylish design is appropriate in every modern interior.



Smoke detector

This detector helps protect persons and property from a fire that has ignited. After detection, it immediately sends this information to your smartphone. The warning can be in the form of notification in the application or by SMS message. It also triggers an audible alarm.





Bedroom

You control the lighting and blinds with a switch on the nightstand.

With a long press, you set the brightness to your desired intensity, and keep one button reserved to light the way to the bathroom at night. With one practical button, you can also switch off all lights, even the forgotten ones (master switch).

The color LED lamp or color LED strip will provide a wonderful bedroom atmosphere to suit your mood.



Button for „ GOOD NIGHT “

- Set romantic light scenes.
- Master switch (All OFF)
- Night light corridor to toilet.
- Gradual dimming off.

Children's room

Ideal when they're playing, being good and safe. The wireless button grows with the children.

For the older and more resourceful kids, the RF Pilot is ready. It can not only play with the colors of the colored LED lamps and strips, but can also control everything else in your home.

In the meantime, a video camera is monitoring the toddler in the crib and a night light chases away bad dreams - a lamp set by a dimmer to minimum brightness.



Camera Preview



Remote Controller / Keychain



What all can be controlled?

Watering
It is possible to predefine a time mode in the system for watering in relation to temperature and moisture. You can control circuits manually from the application as well.



Video cameras
Through the telephone application or CUBE Touch, you can browse through images of up to 9 video IP cameras.



Lighting
Simple switching or dimming of various types of light sources including LEDs and even colored RGB strips.

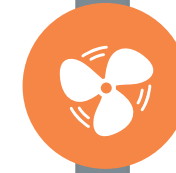


Blinds and roll shutters
Actuators enable control of various types of shading technology. It is possible to set dependent programs in a time mode, light scenes, or to control manually.

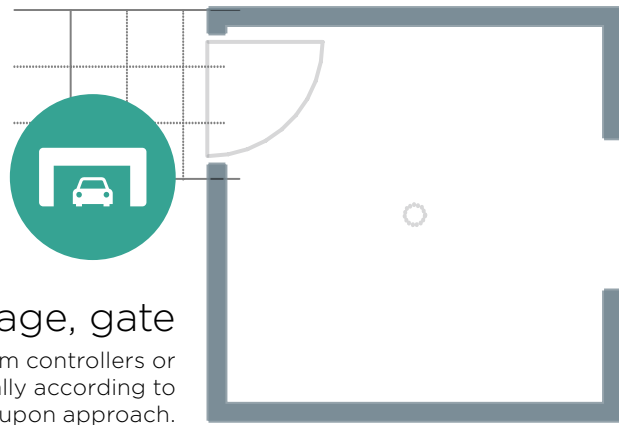
Light scenes
With just one button on the controller, you can simultaneously control multiple devices (light scenes, all off, nighttime hallway, etc.)



Exhaust and ventilation
In relation to presence or according to the time mode or dependence of lights.



Measuring energy
Measured values of consumption of electricity, water, gas and brightness transmitted wirelessly to the Cloud, which in turn provides them to applications or web browsers.



Garage, gate
You can control from controllers or automatically according to position upon approach.

Security
The systems include detectors (motion, window, door, smoke), forming the basis of the home alarm system. The water leakage sensor warns against flooding of the bathroom or an overflowing reservoir.



Macro functions
If the light is on the shutters go down.



Heating and cooling
iNELS enables control of up to 40 independent circuits of heating or HVAC. Setting several ways: RF Touch, application, ...



Appliances
Switching according to set mode or manually from the application or from any system controller.

Door communicator
Verbal and visual communication with a guest by means of the app or the telephone application.



Weather
If it is too windy outside, shutters go down.

Temperature regulation

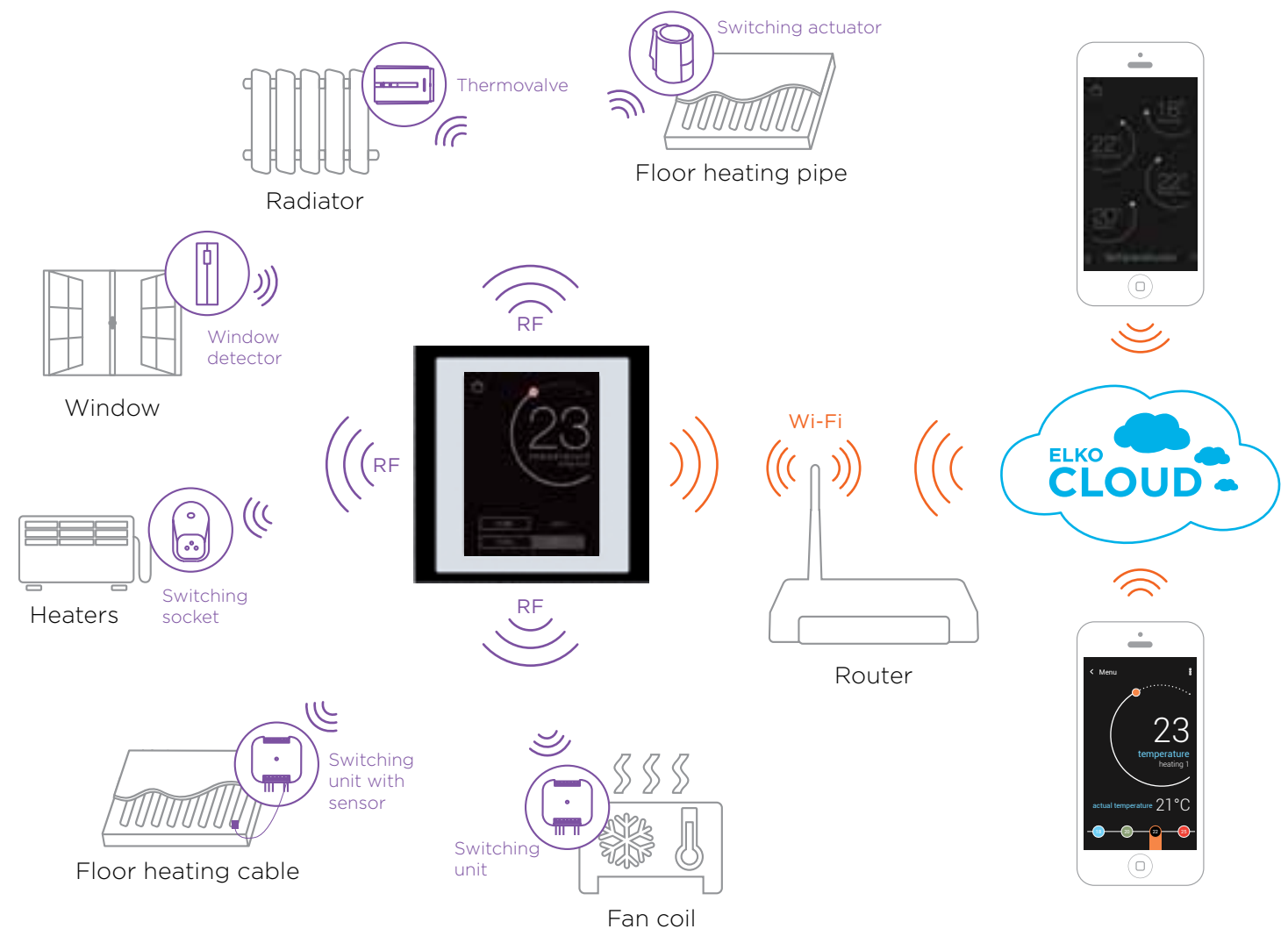
Heat regulation - with RF Touch, you have heating under control throughout the home.

It is not necessary to have a thermostat in each room, and yet you can regulate each room separately. Whether you are controlling a radiator-mounted thermovalve or floor-mounted electrical cable, this element always has a temperature sensor that sends information to RF Touch, which then regulates the home based on the set temperature and according to a time program.



RF Touch

- this is a touch wireless unit with a 3.5" display
- can control up to 40 heating or AC circuits = 40 thermostats in 1 device
- in connection with other wireless units, it can react to an open window or outdoor light intensity
- if the thermostat is connected to the Internet, it sends temperature information via the Cloud, and you can set the temperature from anywhere using a mobile application





Temperature controller

RFTC-50/G

- used for autonomous temperature control for underfloor pipes and auxiliary heating
- the display features information on the current and set temperature and heating parameters
- weekly program

Heating, ventilation & air-conditioning

The iNELS can control various heating sources - water, gas and oil boilers and regulate radiators, spiral heaters, fan coil units or electrical cables.

Using a wireless sensor, it can sense not only the outdoor, but also the indoor or floor temperature. Control is possible from RF Touch, a mobile application or by Temperature controller.



Temperature controller

RFSTI-11B

- the ideal solution for underfloor electrical (hot water) heating, where the external sensor senses the floor temperature, and a unit directly switches the heating mat (cables)
- the automatic program with manual regulation is performed via the unit RF Touch or the application iNELS Home Control



Temperature sensor

RFTI-10B

- measures the indoor (internal) and outdoor (external) temperature
- it sends the measured temperature to RF Touch or to a Smart RF Box
- temperature range -20 to 50 °C (-4 to 122 °F)
- battery power allows placement anywhere, sensors from TC / TZ line



Thermostatic radiator valve

RFATV-1

- measures the ambient temperature that it then compares with the set temperature in RF Touch or in the App
- based on regulation, it controls water valves in radiators and heating ladder
- temperature range 0-32 °C (32-90 °F)

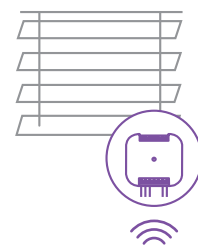
Shading controls, door, gates, jalousies, blinds, roll shutters...

Controlling garage doors, entrance gates, barriers, blinds, roll shutters, awnings - all of these can be controlled from a single controller - either a key alarm, RF Pilot or smartphone app.

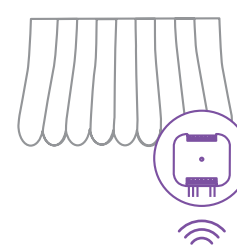
The main advantage of integration with the iNELS system is the option of presetting light scenes. In practice, this could mean closing the blinds at a set time or pulling down roll shutters in the event of bad weather - automatically, based on information from the weather station or manually. Whether you're at home or away. Another advantage to controlling light scenes is grouping multiple blinds together and controlling them with a single button or a single command. The pinnacle of use is rotating the lamellas of the blinds based on outdoor light intensity or sunset/sunrise. Yes, iNELS can do this too.



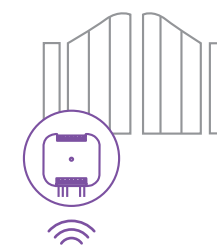
Blinds/Shutters



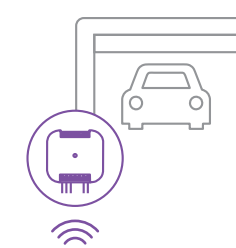
Awning



Access gateway



Garage



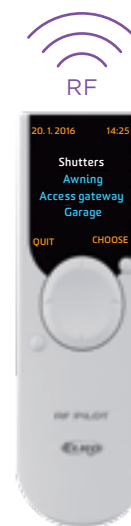
Flush mounted -shutter unit

RFJA-12B

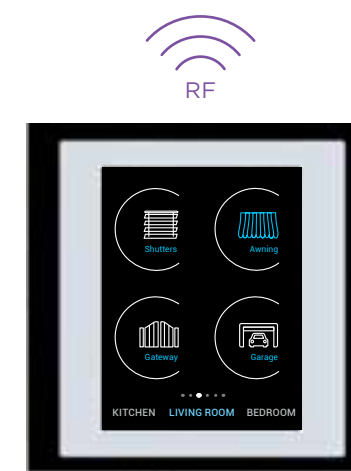
- the shutters unit is used to control garage doors, gates, blinds, awnings, etc.
- load up to 2 x 8 A
- integrated time-functions



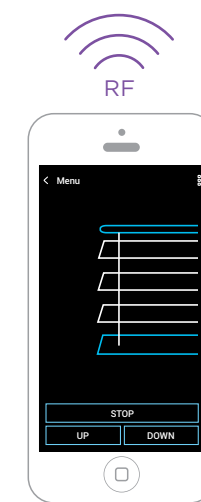
Keychain



RF Pilot



Wireless touch unit
RF Touch



App

Intercom & Video door-phone

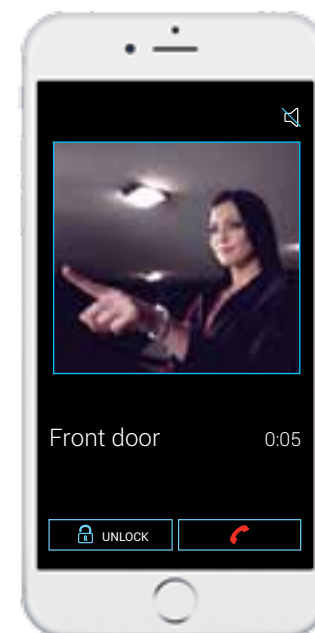
Intercom function allows communication between RF Touch units or intercom calls between these units and smartphones or tablets.

You can also receive audio/video transmission from the front door communicator through the intercom and you can see and speak with visitors even if you are not at home. It is a comfortable replacement of traditional doorbells or door phones. It is a wireless installation allowing a user to open the door or gate.

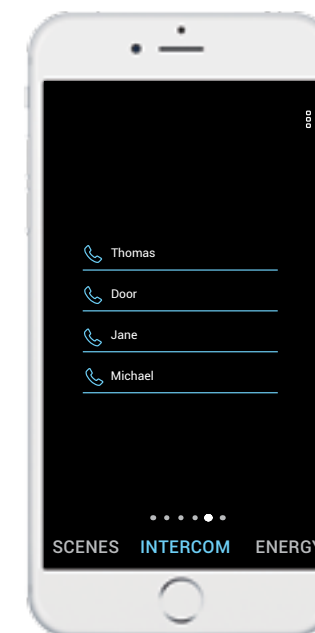


Video door-phone

- this enables communication by voice and image with a device in the building: by means of LARA, a smartphone application, tablet or TV - meanwhile individual devices can be combined
- video door-phone in the basic module has a video camera with speaker and a button
- video door-phone can be expanded to other module (for apartment houses or buildings). It is therefore possible to connect up to 8 Video door-phones or upon use of Connection Server, up to 30.
- sensitive (HD) video camera with 1.3 Mpx resolution, its night illumination and Wi-Fi connection enable sensing even in diminished light conditions, and its built-in relay enables opening the door or gate. Another expansion module may be a keypad (dial pad) for multiple calling and is used to open a lock by entering a code
- it is only connected by LAN cable, by which it is also powered (PoE)
- see technical information on page 51



iNELS enables you to redirect a door bell ringing and consequent video conversation to your phone, even if you are not at home.



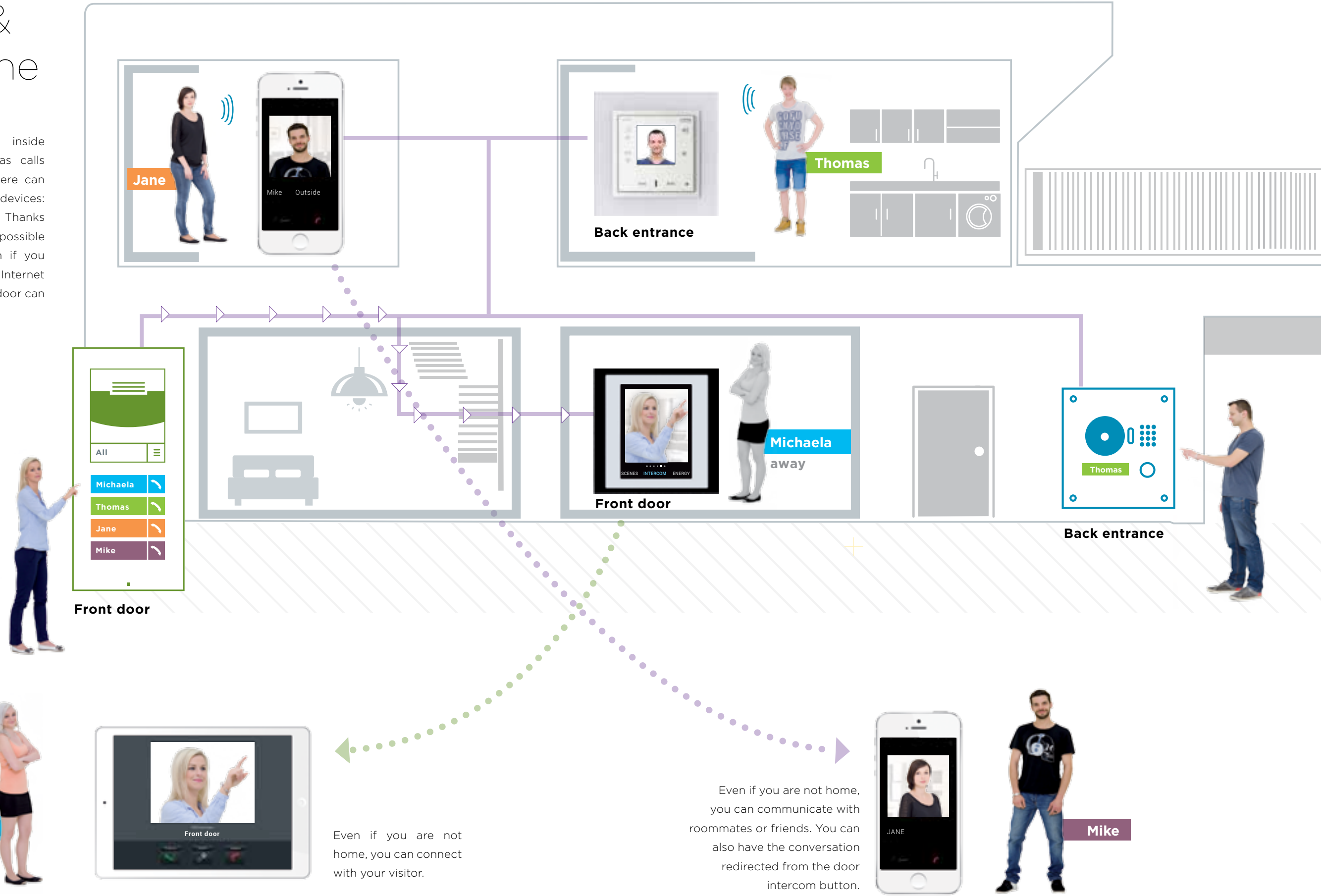
The application enables calls between participants on smartphones, tablets, iMM or LARA device.



Besides playing your music or the radio, the LARA unit can also facilitate a video conversation with the door communicator, the home intercom system or calls to the application in your mobile phone.

Intercom & Door-phone

iNELS enables communication inside the home (Intercom) as well as calls from the Video door-phone. There can be up to 30 users on various devices: LARA, Smartphone, Tablet, TV. Thanks to having its own server, it is possible to communicate (for free) even if you are away from home - a simple Internet connection suffices. A call at the door can also be forwarded.



Michaela

Even if you are not home, you can connect with your visitor.

Even if you are not home, you can communicate with roommates or friends. You can also have the conversation redirected from the door intercom button.

Mike



Smoke detector

RFSD-100

- it detects smoke from a fire
- automatic testing
- integrated temperature sensor
- battery status indicator
- battery power



Motion detector

RFMD-100

- it detects movement of persons and automatically controls lighting
- infrared scanning method to prevent false alarms
- battery power



Window detector

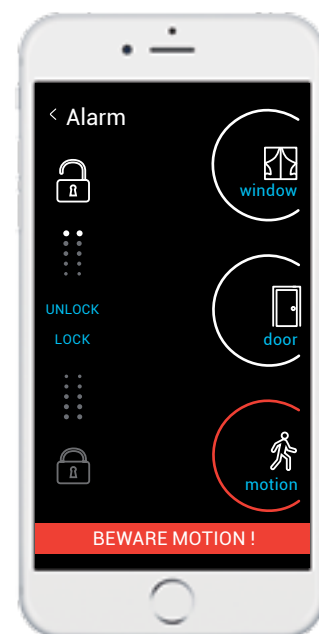
RFWD-100

- it informs you as you are leaving that a window or door is open
- upon activation, it sends information to the unit or Application
- integrated temperature sensor
- battery power

Security & Safety

Security of residents and protection of property are top priorities. For this reason, iNELS provides detectors that sense smoke, motion or open windows or doors.

Thanks to iNELS, you can set up basic security for your home, which, if breached, sends a notification in the application or via SMS. The flood sensor detects and indicates leaking water or an overflowing washing machine; after assessing the problem, you can thaw out a frozen gutter or remove icicles. You can connect some video cameras in the application that monitor internal or exterior movement.



Flood detector

RFSD-1B + FP-1

- it detects flooding or overflowing by means of an external probe FP-1
- when activated, it sends a signal to the app or RF Touch to the switching units for closing the water pipe



iNELS Cam

iNELS Cam

- up to 10 video cameras can be connected in the Application
- LAN or Wi-Fi connection
- 640 x 480 px resolution
- night IR illumination
- power adapter: 5V/1A (part of supply)



Video Cameras

- you can connect any video camera supporting MJPEG2
- in the application, you can zoom in, zoom out and rotate if the video camera allows it

Energy management

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

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

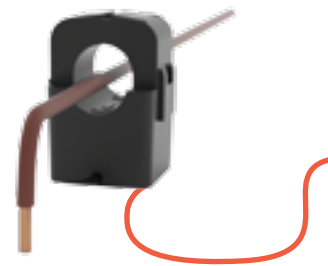
It is also possible to set up notifications when critical parameter settings are exceeded and to switch on/off a certain device. Connecting to Smart Grid intelligent networks enables efficient electricity usage at optimal times.



Energy gateway

RFPM-2M

- the energy gateway is a central device for assessing energy consumption (electricity, water, gas)
- it acts as an interface between the pulse converter RFTM-1 and your smartphone
- connection to the data network is made by means of a LAN Ethernet connector or wirelessly via a Wi-Fi network
- monitored data is stored on internal memory storage
- by means of the application iHC and Cloud connection, it is possible to maintain online access to data and monitoring history
- up to 4 tariff meter readings of electricity consumption



Current Transformer

CT50

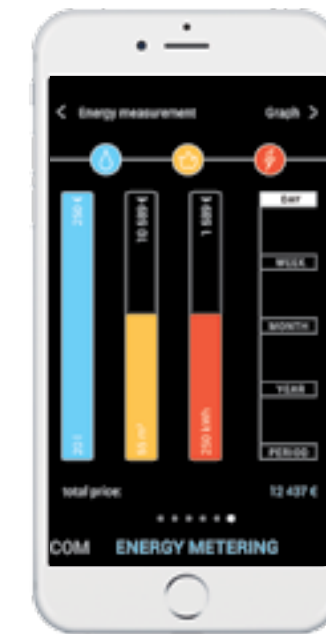
- opening pliers open/close on the existing wire of the measured circuit, most frequently at the main supply at the electricity meter
- it is connected to the energy gateway RFPM-2M (up to 3 CT)



Transmitter Pulses

RFTM-1

- wireless transmitter of pulses from meter-based sensors
- it sends these pulses to the gateway RFPM-2M for further processing
- supported sensors: LS (LED sensor), MS (magnetic sensor), IRS (IR sensor)



Consumption overview

- all energy sources for the selected period
- comparison with previous period
- critical limits from previous values



History in a graph

- possible to display based on units or value
- time restriction: day, week, month or selected period

Dimming & lighting control

Dimming is one of the basic characteristics of a smart home. Dimmers not only render a pleasant atmosphere, but also save on electricity.

iNELS offers dimmers in various designs (box, flush, DIN rail mounted, socket) for all types of light sources including today's popular LEDs.

Color strips and lamps have become a modern trend used not only for decorative illumination, but also more and more for lighting in the workplace. These too are integrated in iNELS.



RGB LED bulb White LED bulb

RF-RGB-LED-550 WHITE-LED-675

- receiver and dimmer enable setting of the brightness and color
- luminance: 550 lm/675 lm, Base: E27
- lamp life: 30,000 hours
- function: brightness 0-100%, RGB lamp: automatic blending of colors. White lamp: setting colors warm/cold white



Dimming socket

RFDSC-71

- wireless socket for dimming lamps with various types of light sources
- time-function up to 10 hours
- settings of the minimum brightness to eliminate flashing
- function of smooth dimming / brightening with timing



Twilight switch (outdoor mounted)

RFSOU-1

- the wireless twilight switch measures outside illumination intensity
- based on a set value, it controls the switching element
- elimination of short-term change of ambient lighting (glare)
- battery power



Dimmer for RGB LED strips

RFDA-73M/RGB

- dimmer for controlling 3 single-color strips or an RGB color strip
- control from the RF Key Alarm, RF Pilot, RF Touch or the Application
- inputs for controlling 0-10 V
- maximum load: 3x 5 A



Universal dimmer (DIN rail mounted)

RFDEL-71M

- designed for dimming various light sources 230 V (600 VA), 120 V (300 VA)
- type of load: R, L, C, ESL, LED
- smooth dimming or brightening
- setting min. brightness for eliminated flashing LED sources



Universal dimmer (flush mounted)

RFDEL-71B

- designed for dimming various light sources 230 V (160 VA), 120 V (80 VA)
- type of load: R, L, C, ESL, LED
- smooth dimming or brightening
- setting min. brightness for eliminated flashing LED sources

Appliance control

It is possible to switch a multitude of electrical devices and appliances.

Whether they are connected to a socket or, installation box or hard-wired, iNELS has the right switch design for them.

Switching actuators are not only used for switching appliances but also allow you to set dependent functions - time-dependent or functions depending on the value of other input - motion detectors, flood sensors, light sensors or door opening detectors.



Switching socket

RFSC-61

- switched socket for controlling fans, lamps, heaters and other devices connectible by cable with plug
- time-functions up to 10 hours



Switch unit

RFSA-61M

- the switching unit is used for controlling appliances, sockets, lights or ventilation
- can be combined with detectors



Switch unit - 6 outputs

RFSA-66M

- the switching unit can switch up to 6 independent circuits (socket, light)
- integrated time-functions for each channel separately.



Switch unit

RFSAI-61B

- the switching unit with 1 output channel is used for controlling appliances and lights
- integrated time-functions up to 60 min.
- terminal for connection existing push button switch



Switch unit - 2 outputs

RFSA-62B

- the switching unit with 2 output channels is used for controlling appliances and light circuits
- integrated time-functions up to 60 min.

How you will control it? It is up to you...

The system can be controlled in a wide variety of ways. These include buttons the size of a classic switch, which control four various devices or functions. A button can be attached, glued or simply placed somewhere.

The wireless key alarm makes for a suitable pocket controller of gates, garage doors or entrance ways.

RF Pilot with its OLED color displays serves as a basis for home automation. It can control up to 40 devices, which can be located in individual rooms.



Wall switch

RFWB-20/G, RFWB-40/G

- controls 2 / 4 appliances independently
- light scenes function
- battery power
- design: plastic, glass, wood, metal, stone, ...
- flat base
- silent operation

We bring you switches, sockets and accessories in standard, plastic or metallic design, but you will be impressed most by enchanting luxury design of purely natural frames: real wood, metal, granite and tempered glass - crystal



RF Touch

RF Touch - W

- system unit, which controls your smart home by means of the Application
- controls up to 40 units
- thanks to bi-directional communication, it displays the status of appliances
- it is connected to the home network by LAN cable or via Wi-Fi



Multi with display

RF Pilot

- controls up to 40 appliances independently
- scenes function
- integrated temperature sensor
- battery power
- colored OLED display



Keychain

RF Key

- controls 4 appliances independently
- light scenes function
- battery power
- design: white, black

Behind the scenes

Smart Boxes are important but invisible elements in the smart home system. They are used to interface with a controlling telephone through its application. They are connected to the network, and if remote control is necessary, also to the Internet.

The Smart Box also acts as a mediator for storing data in the Cloud. Signal repeater - the repeater is used to extend the range where it is necessary to control devices over a greater distance.



Smart RF Box (HUB)

eLAN-RF-003-Wi

- smart RF box is center of your Smart Home and bridge between your smartphone and controlled appliances
- thanks to the two-way communication, it visualizes the current status of individual units/actuators
- controls up to 40 units
- the intuitive app iNELS Home Control provides a centralized control from one place
- you can connect the HUB via LAN or Wi-Fi



Repeater

RFRP-20

- used to increase the range between the unit and controller by up to 200 m (220 yd)
- can read up to 20 units
- the socket function remains unchanged



iNELS Wireless System

 RF - radiofrequency protocol

 WiFi

Outdoor PTZ camera



Indoor PTZ camera



Indoor camera



Controllers:



Radio & Intercom



Touch unit



Wall controller



Thermostat



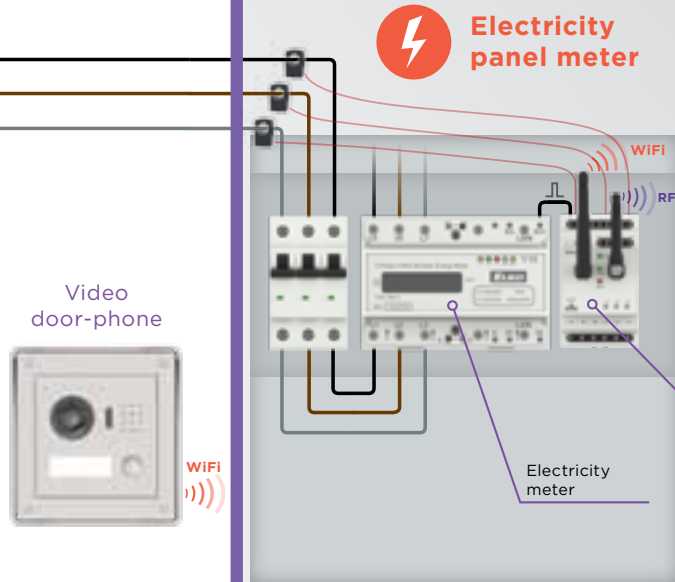
RF Pilot with display



Keychain



 Electricity panel meter



Video door-phone



Electricity meter

Energy gateway



WiFi Router

Detectors:

Smoke



Door / Window



Motion



Smart RF Box Wi-fi

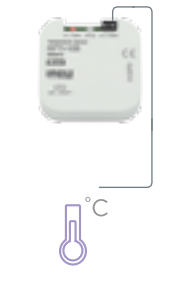


Sensors:

Flood



Temperature

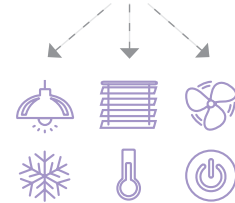


Twilight



Actuators:

Switch unit - 6 outputs



Switch unit - 1 output



Switching socket



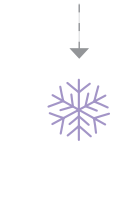
Switch unit for shutters



Therموالve for radiator



Switch unit - 1 output



RGB Coloured LED bulb



Dimmer for LED strips













Apps for all

Using an application that you can download into your smart phone for free, you can control all devices connected to the system. The telephone can control units through the Smart RF Box directly or remotely via the Cloud.

Values and consumption graphs appear in the telephone, as do outputs from video cameras and video door-phone. Even configuration can be performed via the application. The application is for Android smart phones as well as Apple iPhones.

Overview of functions

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

		
iHC-MIRF	iHC-MARF	iNELS Home Control
		

✓	✓	✓
✓	✓	✓
✓	✓	✓
✓	✓	✓
✓	✓	✓
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✓	✓	✓



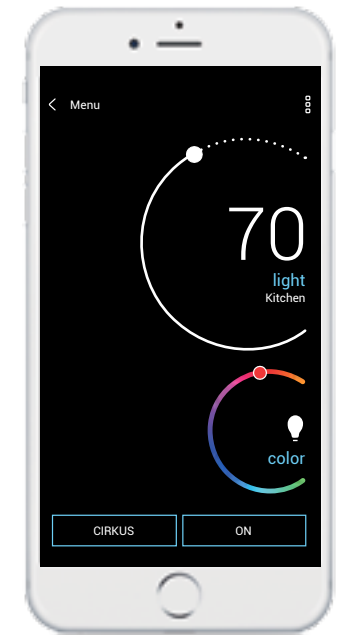
Overview

Absolute control over all appliances.



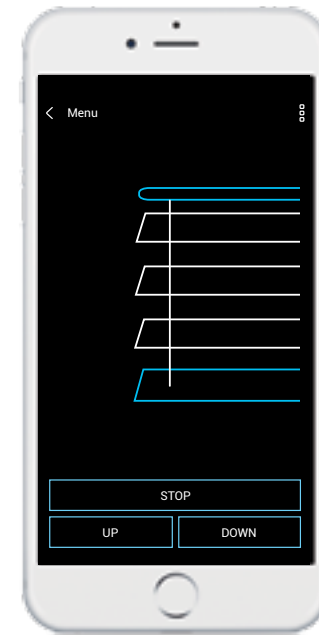
Thermo

You can set the temperature in each room just the way you like.



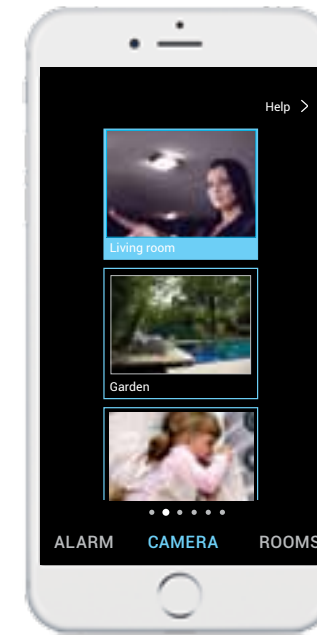
Lighting control

Dim up / down set romantic light scenes with RGB.



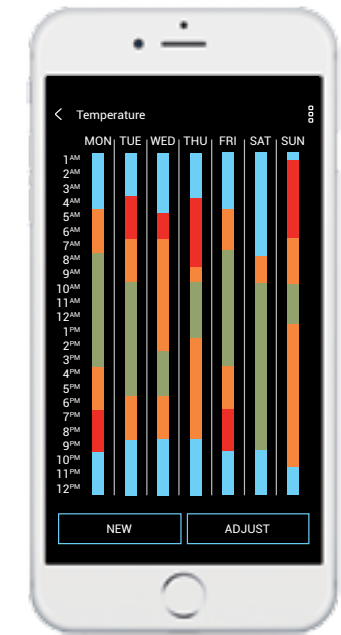
Blinds control

Did you forget to set the shutters in light of the weather? No problem.



Cameras

You can keep an eye on the security of your home from anywhere on earth.



Scheduling

When and what mode of heating in one place for a week-arranged and easier.



Smart Kits

Do Your Smart Home Yourself

It's the revolution in housing. We introduced new product kits to the market (smart and wireless), through which each house can easily become a smart house. The Smart Kit is set as a starter package for Smart Homes. The actual implementation will entertain every playful family!

Usage brings modernization, comfort and significant savings that can in many cases add up to 30% per year. Kits are divided by Theme, for example, remote control of heating, lighting, music player and Internet radio.

We were the first company on the market to provide this type of product in the Czech Republic. It allows each household to take advantage of intelligent wiring through their own simple installation. All at a reasonable price.



Game of lights

Kit for controlling lights via smartphone



Remote heating

Wireless kit to control heating via your smartphone



Heating with saving

Wireless kit to control heating via your smartphone



Easy heat regulation

Wireless kit to control heating via your smartphone



Radio & music in switch

Wireless kit to control heating via your smartphone



One controller for all

Wireless kit to control heating via your smartphone



Your house under the thumb

Wireless kit to control heating via your smartphone



www.inelskits.com

Reference iNELS

Since we began supplying iNELS, we have performed over 3,000 installations. Introducing a selection.

A fully remote-controlled squash center in Hungary, a French restaurant in Prague's Municipal House, a discotheque in Kiev, Ukraine, a summer residence on Mallorca and a myriad, of apartments and houses. You can find our systems installed and implemented in hundreds of locations across the globe.

We can introduce the iNELS system to various projects, whether it concerns the residential sector or commercial space.

Smart Home & Building solutions for



Flat / Apartment



House



Villa



Hotel



Commercial

www.inels.com



Shop Dior

Prague / Czech republic

- hardware: RF Control
- channel multifunction dimming actuator RFDA-71B
- single channel actuator with analog output RFDAC-71B
- RF remote control Pilot



Wellness - Chateau

Petrovice/ Czech republic

- more than 3000 lighting circuits are controlled through the DALI protocol
- another thousand lighting circuits are controlled via DA3-22M units.
- the brain of the whole installation is the central unit - CU3-01M



Showroom Smart Light

Bratislava / Slovakia

- the entire building, including warehouse and exterior spaces, is controlled by iNELS intelligent electro-installation
- iNELS system controls: 15 switching light circuits, 5 dimmable light circuits, 1 LED RGB light circuits, etc.



Sweet-shop Harrer

Sopron / Hungary

- all lights in the building are managed by iNELS system
- the system is controlled by central unit CU2-01M, it was programmed in IDM
- iNELS BUS System: 6 dimming circuits, 20 switching circuits



Hotel Merit Premium

Kyrenia / Cyprus

- all rooms are equipped with smart electro-installation
- this is controlled by RFSA units that switch set modes
- when designing a system, the emphasis was placed on the central function (MASTER switch)



Wyndham Grand

Istanbul / Turkey

- more than 3000 lighting circuits are controlled through the DALI protocol
- another thousand lighting circuits are controlled via DA3-22M units.
- the brain of the whole installation is the central unit - CU3-01M

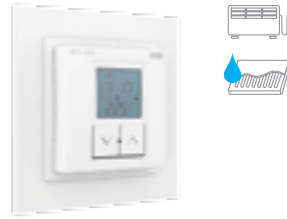
Thermo regulation



Wireless touch unit

RF Touch

- power: 100-230 V AC, from the side 12 V DC
- load: up to 40 units
- Wi-Fi connection
- output: 2x potential free relays (3 A)



Temperature controller

RFTC-10/G

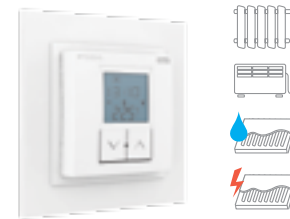
- power: 2x 1,5 V AAA battery
- temperature range: 0 to +55°C (32 - 131°F)
- integrated sensor
- design Logus⁹⁰ (glass, metal, wood, stone)



Temperature controller

RFTC-50/G

- power: 2x 1,5 V AAA battery
- temperature range: 0 to +55°C (32 - 131°F)
- weekly programming
- integrated sensor
- design Logus⁹⁰ (glass, metal, wood, stone)



Temperature controller

RFTC-100G

- power: 100-230 V AC/50-60 Hz
- temperature range: 0 to +55°C (32 - 131°F)
- weekly programming
- integrated sensor
- design Logus⁹⁰ (glass, metal, wood, stone)



Switch unit with sensor

RFSTI-11/G

- power: 110-230 V AC/50-60 Hz
- temperature range: -20 to +50°C (-40 - 122°F)
- load: 8 A
- internal / external sensor
- design Logus⁹⁰
- LED status indication



Thermovalve

RFATV-1

- power: 2x 1,5 V batteries AA
- temperature range: 0 to 32°C (32 - 90°F)
- integrated sensor
- adapters: RAV, RA, RAVL



Temperature sensor

RFTI-10B

- power: 1x 3 V CR 2477 battery
- temperature range: -20 to +50°C (-40 - 122°F)
- internal / External sensor



Switch unit with sensor

RFSTI-11B

- power: 230 V AC/50-60 Hz, 120 V AC/60 Hz, 12-24 V DC
- temperature range: -20 to +50°C (-40 - 122°F)
- load: 16 A

Detectors



Smoke detector

RFSD-100

- power: 2x 1,5 V AAA battery
- smoke detection: optical light scattering
- autotest



Motion detector

RFMD-100

- power: 1x 1,5 V AAA battery
- detection angle 120°
- shot length 12 m (13.12 yd)



Window detector

RFWD-100

- power: 2x 3 V CR2032 battery
- opened window / door detection
- battery status indication



Flood detector

RFSF-1B + FP-1

- power: 1x 3 V battery CR 2477
- terminal for external probe
- operation button: battery status, signal quality

Cameras



IP camera

iNELS Cam

- power: 5 V DC adapter
- resolution: 640 x 480 px
- night light
- up to 10 cameras in app



Video Cameras

- you can connect any video camera supporting MJPEG2
- compatible cameras Axis, D-link, Dahua

Energy management



Energy gateway

RFPM-2M

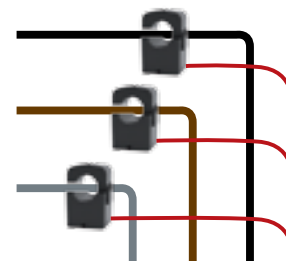
- power: 230 V AC / 50-60Hz
- inputs: PULS1, PULS2, CIB
- tariff inputs: TARG1, TARG2
- current measurement probes 3 x CT50
- output RELAY: 1NO/NC, 16A
- connection: LAN / Wi-Fi



Pulse converter

RFTM-1

- power: 2x 1,5 V battery AAA
- supported sensors: LS (LED sensor), MS (magnetic sensor), IRS (Infra Red sensor)
- IP 65 protection



Current transformer

CT50

- the opening CT are installed on the existing wire of the measured circuit, most frequently at the main input to the electricity meter
- current: 50 A
- frequency: 50/60 Hz
- dimensions: 31 x 46 x 32 mm (1.22 x 1.81 x 1.26 in)



Flashing LED

LED sensor

LS

- the LED sensor scans LED pulses on meters, which indicate consumption by flashing
- cable length: 1.5 m (4.92 ft)



Built-in magnet in the gas meter

Magnetic sensor

MS

- the magnetic sensor scans the pulse, created with every rotation of a magnet located on the unit dial
- cable length: 1.5 m (4.92 ft)



Rotating water meter indicator

Infra Red sensor

IRS

- the Infra Red sensor scans the reflective curtain placed on the moving dial (mainly on water meters)
- cable length: 1.5 m (4.92 ft)

Video Door Phone



Video door-phone

SINGLE

- in basic configuration, the Video door-phone contains 1 button with frame
- 1,3 MP CMOS camera
- supports 120° wide angle lens and angle adjusting
- stainless steel panel for vandal proof, IP54, IK07
- supports night vision



Installation

BOXES

- the video door-phone can be ordered in a set with an installation box for surface mounting or for flush mounting
- installation boxes are produced from highly resistant metal



Video door-phone

MODULE

- the Video door-phone can be ordered without a frame, giving you the opportunity to assemble into 2 or 3 module frame.
- you can choose the method of control into each module: 3-button module, card reader, key pad
- in three-module frame there can be up to 7 buttons.



Video door-phone 3-buttons module



Card reader

Dialpad



Dimming actuators



Wireless colored bulb

RF-RGB-LED-550

- power: 100-240 V AC 50/60 Hz
- luminous flux: 550 lm
- color temperature: RGB
- brightness regulation: 0 - 100%
- compatible base: E27
- durability: 30 000 h.



Wireless white bulb

RF-White-LED-675

- power: 100-240 V AC 50/60 Hz
- luminous flux: 675 lm
- color temperature: 600/5000K
- brightness regulation: 0 - 100%
- compatible base: E27
- durability: 30 000 h.



Dimming socket

RFDSC-71

- power: 230-250 V/50-60 Hz (300 VA), 120 V AC/60 Hz (150 VA)
- type of load: R, L, C, LED, ESL
- light scenes functions
- minimum brightness setting
- operated from 32 channels



Dimmer for (RGB) LED strips

RFDA-73M/RGB

- power: 12-24 V DC stabilized
- load: 3x 5 A
- LED strips:
 - single color 7,2 VA, 3x 8 m (3x 26.25 ft)
 - RGB LED 14,2 VA, 10 m (32.80 ft)
- external control 0-10 V



Universal dimmer

RFDEL-71M

- power (Load): 230 V AC/50 Hz (600 VA), 120 V AC/60 Hz (300 VA)
- type of load: R, L, C, LED, ESL
- external control 0-10 V or potentiometer
- control from external button
- light scenes function
- minimum brightness setting
- operated from 32 channels



Universal dimmer

RFDEL-71B

- power (Load): 230 V AC/50 Hz (160 VA), 120 V AC/60 Hz (80 VA)
- type of load: R, L, C, LED, ESL
- control from external button
- light scenes function
- minimum brightness setting
- overheat protection
- operated from 32 channels



Twilight switch

RFSOU-1

- power: 2x 1,5 battery AAA
- range: 1 - 100 000 lx
- twilight and light switch function
- time delayed setting (0 - 2 min.)
- IP65 protection



Switching actuators



Switching socket

RFSC-61

- power: 230-250 V/50-60 Hz, 120 V AC/60 Hz
- load: 16 A
- time-functions (2 s.- 60 min.)
- operated from 32 channels (of controllers)



Switch unit

RFSA-61M

- power: 110-230 V AC/50-60 Hz, 12-24 V DC
- load: 16 A
- time-functions (2 s.- 60 min.)
- operated from 32 channels (of controllers)
- option of connecting an external antenna



Switch unit - 6 outputs

RFSA-66M

- power: 110-230 V AC/50-60 Hz
- load: 6x 8 A
- 6 independent channels
- time-functions (2 s.- 60 min.)
- operated from 32 channels (of controllers)
- option of connecting an external antenna



Outdoor switch unit

RFUS-61

- power: 230 V AC/50-60 Hz, 120 V AC/60 Hz, 12-24 V DC
- load: 12 A
- time-functions (2 s.- 60 min.)
- operated from 32 channels (of controllers)
- IP65 protection



Switch unit

RFSA-11B

- power: 230 V AC/50-60 Hz, 120 V AC/60 Hz, 24 V DC
- load: 16 A
- function ON/OFF
- operated from 32 channels (of controllers)
- manual control with inbuilt button



Switch unit

RFSAI-61B

- power: 230 V AC/50-60 Hz, 120 V AC/60 Hz, 24 V DC
- load: 16 A
- time-functions (2 s.- 60 min.)
- operated from 32 channels (of controllers)
- terminal for control from existing button



Switch unit - 2 outputs

RFSA-62B

- power: 230 V AC/50-60 Hz, 120 V AC/60 Hz, 24 V DC
- load: 2x 8 A
- 2 independent channels
- time-functions (2 s.- 60 min.)
- operated from 32 channels (of controllers)



Shutter unit

RFJA-12B/230V, RFJA - 12B/24VDC

- power: 230 V AC/50-60 Hz, 120 V AC/60 Hz, 12-24 V DC
- load: 2x 8 A
- operated from 32 channels (of controllers)



Controllers



Wall buttons

RFWB-20/G, RFWB-40/G

- power: 3 V CR 2032 battery
- 2 channels /4 channels
- scenes function
- command LED indication
- switching with a micro-button



RF Touch

Wall (surface), Flush

- power: 100-230 V AC, from the side 12 V DC
- setting with up to 40 units + 30 detectors
- central unit with autocontrol
- status visualization
- colored TFT LCD display, 3.5"



Wireless remote controller

RF Pilot

- power: 2x 1,5 V AAA batteries
- setting with up to 40 units
- inbuilt temperature sensor
- scene function
- status visualization
- color OLED display



4 buttons controller

RF Key

- power: 3 V CR 2032 battery
- scenes function
- command LED indication



Contact converter

RFSG-1M

- cheap/expensive current control
- power: 110-230 V AC/50-60 Hz, 24 V DC (galvanically separated)
- control input 12-230 V AC/DC
- option of connecting an external antenna



Contact converter

RFIM-20B, RFIM-40B

- wireless contact converter changes your existing button to a wireless one
- power: 1x 3 V battery CR 2477, 2x 3 V battery CR 2032
- 2 channels/4 channels



Behind the scenes



Smart RF Box

eLAN-RF-003

- power: 10-27 V DC/200 mA SELV
- setting with up to 40 units
- LAN connection
- HUB does not need the Internet to run
- automatic DHCP connection
- managing accounts/backup of projects via web interface
- routing/repeater function
- iOS and ANDROID compatibility



Smart Wi-Fi RF Box

eLAN-RF-Wi-003

- power: 10-27 V DC/200 mA SELV
- setting with up to 40 units
- LAN or Wi-Fi connection
- HUB does not need the Internet to run
- automatic DHCP connection
- managing accounts/backup of projects via web interface
- routing/repeater function
- iOS and ANDROID compatibility



Repeater

RFRP-20

- power: 230-250 V/50-60 Hz, 120 V AC/60 Hz
- the socket function is retained



GSM communicator

RFGSM-220M

- power: 11-30 V DC, backup power supply Li-Ion batteries
- inputs: 4 wire, 10 wireless RF
- outputs: 2 relay (2x 8 A), 10 wireless (RFS...)
- control via SMS or ringing
- control of up to 30 telephone numbers
- other functions: time delay, alarm, status report

Protocol and compatibility

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

Available frequency for individual territories:

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

Advantages of the RFIO protocol:

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



Accessories



Thermdrive

Telva 230 V

- operating voltage: 230 V, 50/60 Hz
- stopping force: 100 N ±5%
- dimension h/w/l: 55+5 x 44 x 61 mm (2.17+0.2 x 1.73 x 2.40 in)



Thermdrive

Telva 24 V

- operating voltage: 24 V AC, 50/60 Hz
- stopping force: 100 N ±5%
- dimension h/w/l: 55+5 x 44 x 61 mm (2.17+0.2 x 1.73 x 2.40 in)



Flood Probe

FP-1

- working temperature: -10 - 40°C (14 - 104°F)
- mounting: glue / screw
- length of cable: 3 m (3,3 yd)
- dimensions: 60 x 30 x 8 mm (2.4 x 1.2 x 0,3 in)



Temperature sensors

TC

- range: 0 - 70 °C (32 - 158°F)
- sensor: NTC 12 K 5%
- TC-0 - l. 110 mm (4.33 in)
- TC-3 - l. 3 m (1.42 yd)
- TC-6 - l. 6 m (1.75 yd)
- TC-12 - l. 12 m (13.12 yd)



Temperature sensors

TZ

- range: -40 - 125 °C (-40 - 257°F)
- sensor: NTC 12 K 5%
- TZ-0 - l. 110 mm (4.33 in)
- TZ-3 - l. 3 m (1.42 yd)
- TC-6 - l. 6 m (1.75 yd)
- TC-12 - l. 12 m (13.12 yd)



Internal antenna

AN-I

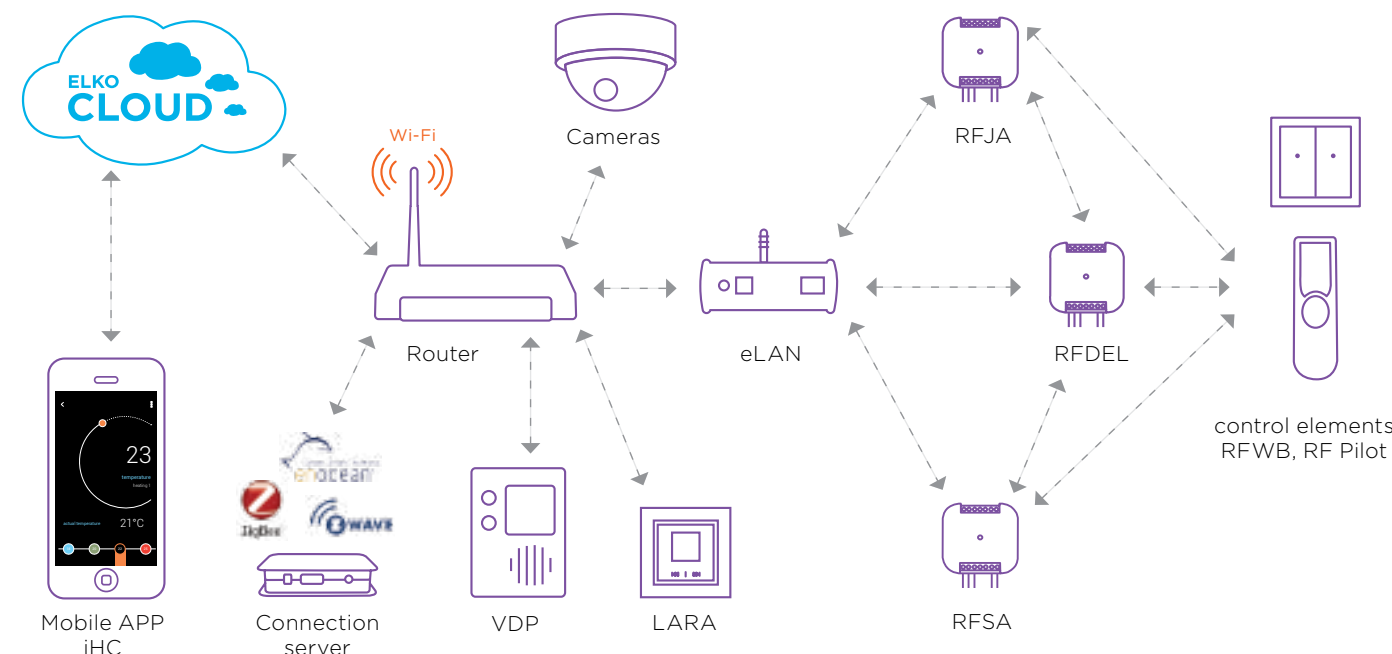
- for GSM-220M, eLAN-RF-003, eLAN-RF-Wi-003, RFDA-73/RGB, RFSA-61M, RFSA-66M, EMDC-64M, RFDEL-71M and transmitter module RFSG-1M into plastic switchboard
- rod angle, without cable
- sensitivity 1dB



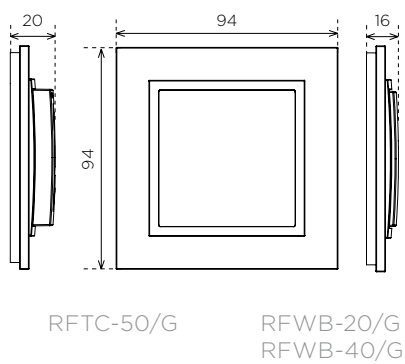
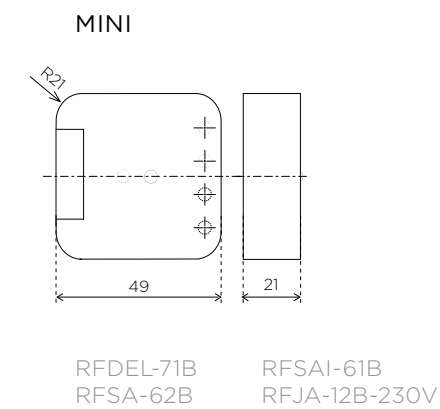
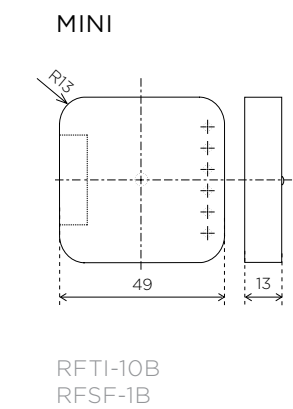
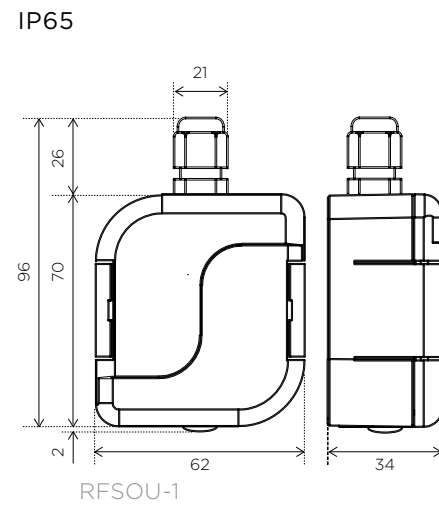
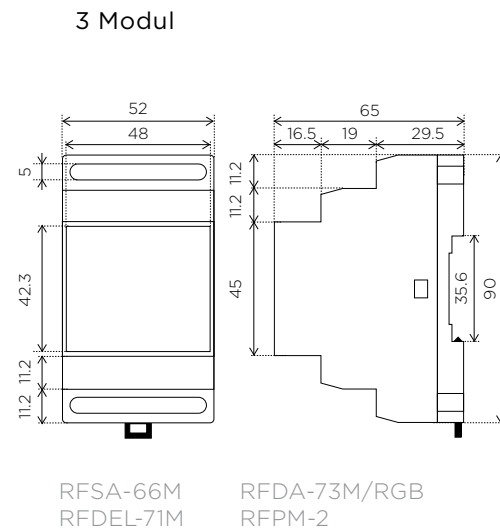
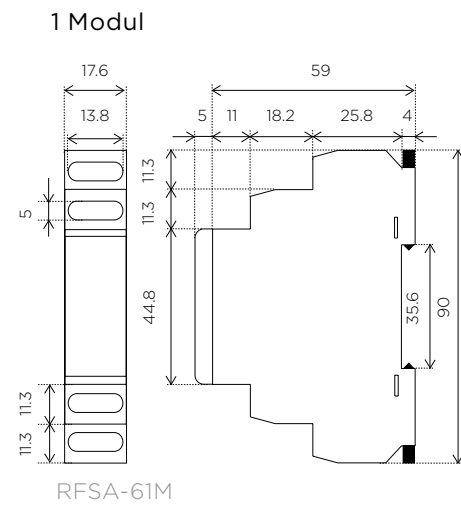
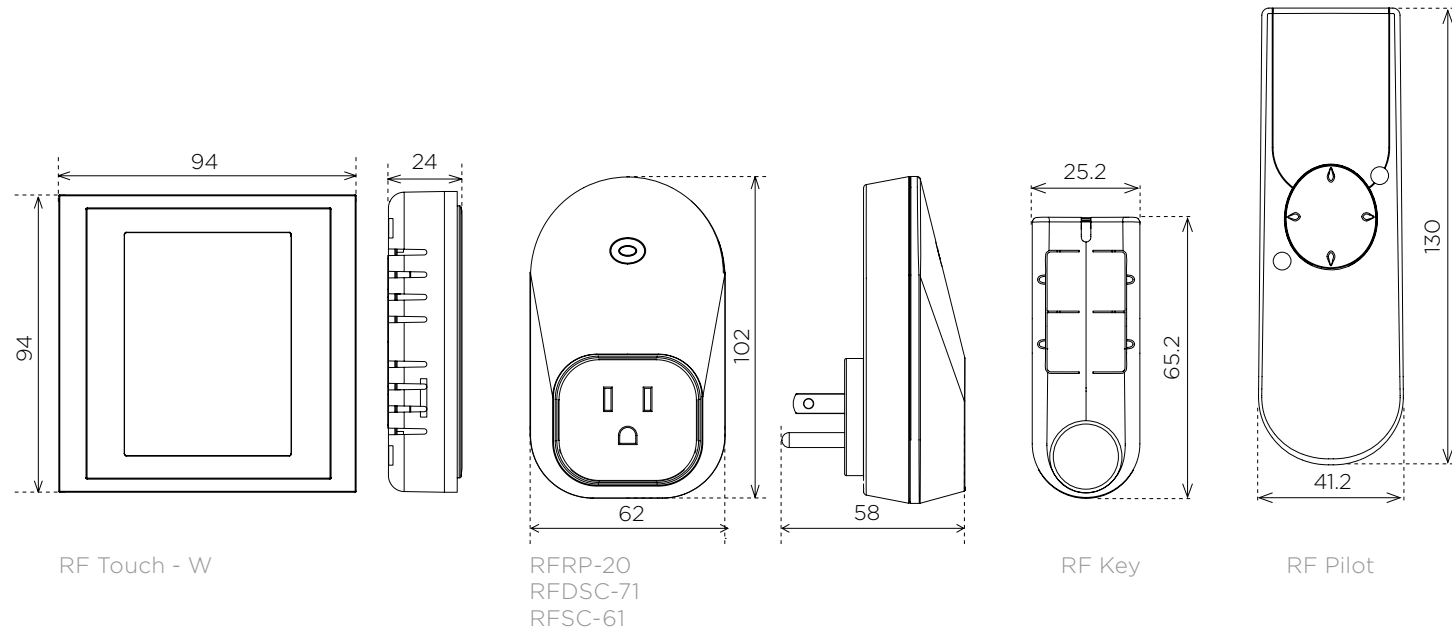
External antenna

AN-E

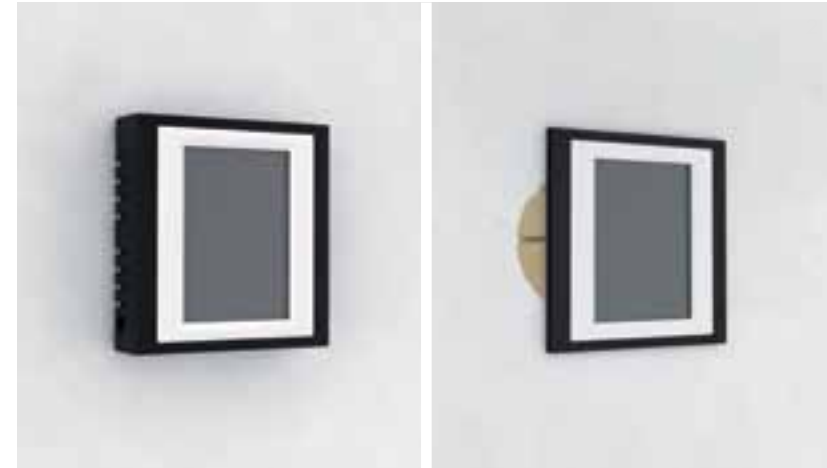
- for RFGSM-220M, eLAN-RF-003, eLAN-RF-Wi-003, RFDA-73/RGB, RFSA-61M, RFSA-66M, EMDC-64M, RFDEL-71M and transmitter module RFSG-1M
- cable length 3 m (3.28 yd)
- sensitivity 5dB



Product dimensions



Installation possibilities



1.) Surface mounted

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

- RFSC-100, RFWB-40/G
- RFMD-100, RFTC-50/G
- RFWD-100, RF Touch
- RFWB-20/G

2.) Flush mounted

RF Touch

3.) DIN Rail mounted

On DIN rail according to EN 615.

- RFPM-2, RFSFA-61M
- RFDA-73M/RGB, RFSFA-66M
- RFDEL-71M, RFSFA-61M



4.) Mounted to or in the installation box

In an installation box or built in to the device.

- RFTI-10B, RFSFA-62B
- RFSF-1B + FP-1, RFSAI-61B
- RFDEL-71B, RFJA-12B/230V



5.) Mounted into the cover of appliance

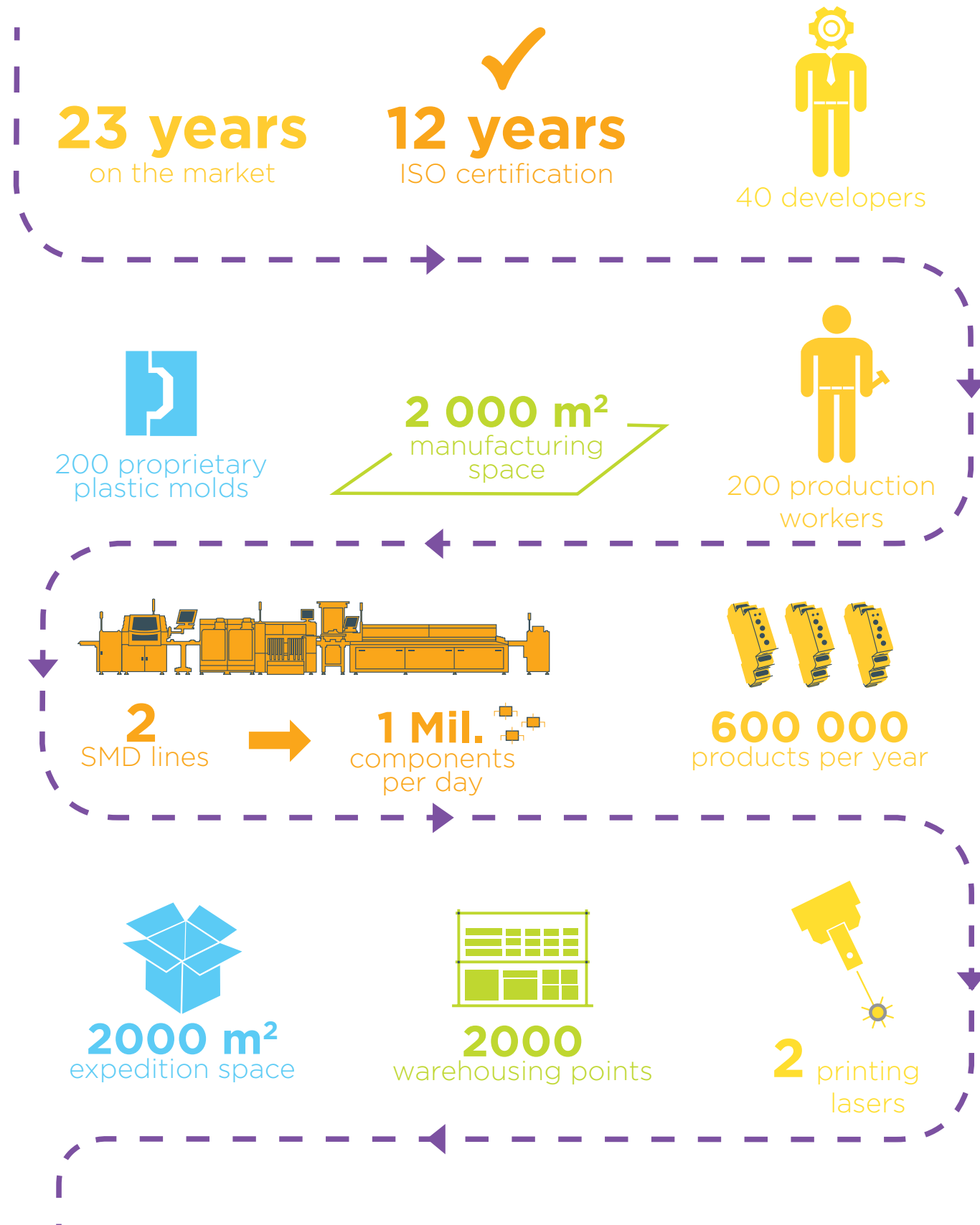
- RFTI-10B, RFSFA-62B
- RFSF-1B + FP-1, RFSAI-61B
- RFDEL-71B, RFJA-12B/230V

6.) Surface mounted

- SOU-1, RFUS-61

Others just resell

HOWEVER, WE DEVELOP AND MANUFACTURE PRODUCTS OURSELVES!



R&D overall view



Internal lab



SMD production line



Chip placing



Production hall



Testing



ELKO EP Holding



www.elkoep.com