

Highlights 2018



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www.elkoep.com

iNELS® iNELS SMART
SYSTEM GROUP

NEWS



WIRELESS
electroinstallation (RF)



WIRED
electroinstallation (BUS)



HOSPITALITY
Hotel (GRMS)



HOTEL wireless
Retrofit (HRESK)



BUILDING
management system



iNELS Air
- IoT devices



LIGHTING
control



ENERGY
management

- New product groups

- iNELS Air
Internet of Things

- Smart City
Easier parking
Smart Street Lighting

- Building
Management System

- iTP - iNELS Touch Panel

- Future Office

- Hospitality system
Existing hotel room - HRESK
NEW hotel room - GRMS
Hospitality TV

- App for all...

- Energy Management

www.inels.com

Highlights 2018



Extended product groups - iNELS Air

The iNELS Air line delivers brand new products for the Internet of Things. These include a variety of security features that reliably protect your health and property. A motion detector, flood detector, or smoke detector which are the right choice for your property.

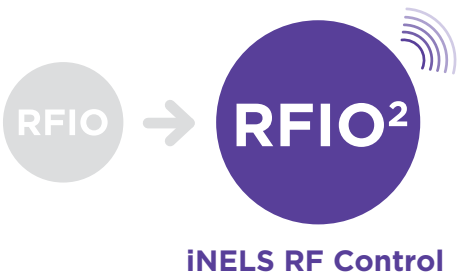
... see page 6



Hotel Room control via Hospitality TV

TV programs, movies on demand, temperature level, lighting control, hotel bill, hotel activity offers – all these and more features can be controlled by you via hotel room TV.

... see page 16



Upgraded wireless protocol

RFIO² is an extension of the RFIO protocol and allows users to use newly introduced features, such as unit signals (repeater), for selected features. This protocol is fully compatible with the previous version of the protocol (RFIO).

Connect to iNELS Cloud without public IP address

With this new feature, you no longer have to deal with purchasing an expensive static IP address from your ISP. To remotely control your household using an RF application, a one-time purchase of the authorisation code is enough, insert it into the application, and it is paid forever.



Hotel Guest Room Bundle

The CU3-04M central unit is a unit that has the necessary amount of inputs and outputs to control the entire hotel room. The control unit uses BUS, which can be connected to the GRMS and iNELS BUS units...

... see page 15



iTP - iNELS touch panel

New from ELKO EP is the offer of a 10.1" touch panel which is designed to control iNELS through the iNELS Home Control application or Future of-fice application.

... see page 12



Parking sensor

An invaluable helper, which simplifies parking in the city, saving your nerves and a lot of time. You will no longer have to drive around the city, desperately searching for a vacant parking space in congested traffic.

... see page 8



Smart Street Lighting control

In every big city today we have thousands, sometimes even tens of thousands of public light masts. We can use this dense network to install sensors or security cameras to increase the safety of the population...

... see page 9



New design product groups



Timers/Relays



Protection/Monitoring relays



iNELS Air - IoT devices



Wireless electroinstallation
(RF)



Wired electroinstallation
(BUS)



Energy management



Wireless Retrofit Hotel
(HRESK)



Hospitality Hotel
(GRMS)



Building management
system (BMS)



Lighting control



Multimedia



Lighting sources

Description product groups

Timers/Relays

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.

Protection/Monitoring relays

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

iNELS Air-IoT devices

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.

Wireless electroinstallation

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

Wired electroinstallation

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

Energy management

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.

Wireless Retrofit Hotel

Hotel Room Energy Saving Kit - Solutions for hotel rooms based on wireless technology is designed to function in existing hotels. It is possible to simply elevate the existing electrical installation to a higher level without long-lasting construction modifications.

Hospitality Hotel

Guest Room Management System - The BUS system is designed mainly for hotels and offers comfortable and easy control of hotel rooms, reception and restaurant.

Building management system

Building Management System is a comprehensive solution for monitoring, and controlling even the most complex of building systems. You can monitor everything on your computer monitor or tablet in the comfort of reception or office.

Lighting control

A sector that offers complete control over all lighting devices. From switching, dimming to controlling your favourite DALI luminaires. Everything can be controlled with a connection to iNELS wired or wireless technology.

Multimedia

Here you can find extensions for our iNELS system and not just for it. Lara Music Players, Intercoms and Door Communicators, Application Communication Servers and 3rd party applications.

Lighting sources

Are you looking for a bulb in your chandelier? In this section you will find among the most common types of bulbs also LED strips and other LED sources, power transformers and installation accessories such as ALU profiles, diffusers ...

iNELS Air

iNELS Air was designed in response to the dynamically developing network for IoT (Internet of Things). The IoT wireless communications category describes the Low Power Wide Area (LPWA). This technology is designed to provide full coverage even inside buildings, with energy-saving and low-cost operation of individual devices.

The product group includes sensors for communication on the Sigfox, LoRa and NB-IoT protocol. Linking sensors with ELKO Cloud and IFTTT (If This Then That) is ideal for a wide range of applications.



LoRa Gateway
LoRa Gateway

The Gateway serves as a tool to create your own LoRa local network.

- Gateway (or BTS-Based Transceiver Station) collects requests from end devices and passes them to a predetermined Server.
- It can be paired with thousands of IoT terminal devices communicating on this network.
- Pairing of end devices is done via a web portal, which then records all requirements from the sensors.
- The antenna provides radiation to all sides.
- The gateway is also designed for outdoor use.

Communication protocol



The network supports bidirectional communication with a limited number of feedbacks.



A bidirectional network using the free band of 868 MHz for its communications.



NB-IoT
Narrow band - IoT

The network is the only one that uses the LTE licensed band for its two-way communication.



	Universal module AirIM-100	 AirIM-100S	 AirIM-100L	 AirIM-100Nb
	Universal module AirIM-100/M	 AirIM-100S/M	 AirIM-100L/M	 AirIM-100Nb/M
	Flood detector AirSF-100	 AirSF-100S	 AirSF-100L	 AirSF-100Nb
	Magnetic detector AirWD-100	 AirWD-100S	 AirWD-100L	 AirWD-100Nb
	Motion detector AirMD-100	 AirMD-100S	 AirMD-100L	 AirMD-100Nb
	Smoke detector AirSD-100	 AirSD-100S	 AirSD-100L	 AirSD-100Nb
	Air quality sensor (CO ₂) AirQS-100	 AirQS-100S	 AirQS-100L	 AirQS-100Nb
	Air quality sensor (CO) AirQS-101	 AirQS-101S	 AirQS-101L	 AirQS-101Nb
	Wireless pulse converter AirTM-100	 AirTM-100S	 AirTM-100L	 AirTM-100Nb
	Control device AirDAC-100	-	 AirDAC-100L	 AirDAC-100Nb
	Monitoring component AirSLC-100	-	 AirSLC-100L	 AirSLC-100Nb
	Parking sensor AirPS-100	 AirPS-100S	 AirPS-100L	 AirPS-100Nb
	Light dimming sensor AirSOU-100	 AirSOU-100S	 AirSOU-100L	-

More information on:
www.elkoep.com/iot-products

SMART CITY



The world around us has entered a new era. The IoT era. Not only are phones and computers connected to the internet but in the streets you may encounter cars, which it manages themselves and the same streets are guarded by security cameras which can recognize wanted persons and stolen cars.

Parking sensors recognize the availability of public parking spaces, and direct drivers to the nearest available parking space, the information can include parking fees. Traffic control adjusts the amount of traffic and can divert traffic given the actual conditions on the streets.

Smart Parking

A total of 20% of drivers in urban traffic are just looking for a place to park. However, their cars cannot easily reach free spaces. The solution is to install parking sensors that use state-of-the-art technology. In conjunction with the service application, you have a solution that will free the streets of your city. Sensors located on individual parking spaces detect

Smart Street Lighting by iNELS

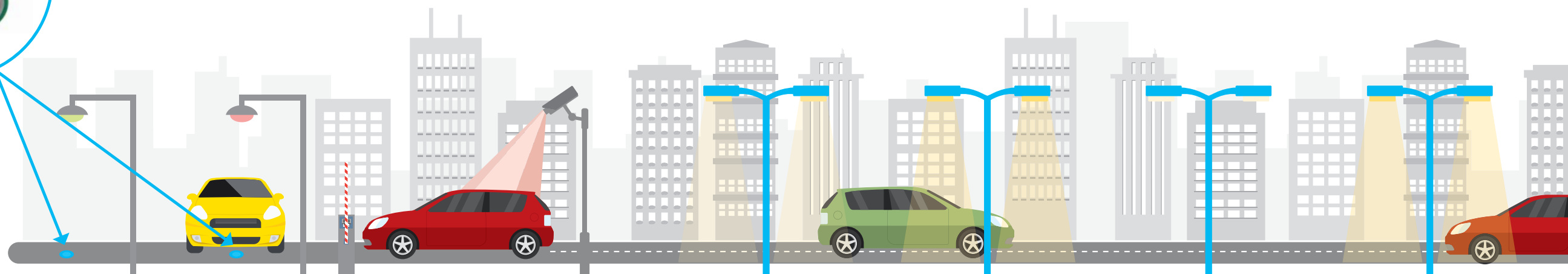
WATCH THE VIDEO:

occupancy; the application navigates cars to vacancies, and in the case of charging customers can also pay parking fees. The installation of sensors is simple; it takes about 20 minutes with the necessary equipment. Our parking sensors can be used in corporate parking lots, car parks at department stores or administrative complexes.



Parking sensor
AirPS-100S

Detects a free or occupied parking space utilising the magnetic principle. Communication is provided by the Sigfox network. Battery power with a lifetime of about 10 years. Enhanced IP67 protection.



Brochure Smart Street Lighting: elkoep.com/download



Smart Street Lighting

In every big city today there are thousands, sometimes even tens of thousands of public light masts. We can use this dense network to install sensors or security cameras, and thus increase security for the population. We gain information about the number of people or vehicles, we can evaluate the air quality or

the noise level, and we can inform the inhabitants about the status of transport and parking. Masts can also serve as Wi-Fi signal transmitters or recharging stations. So we have absolutely unlimited possibilities to work with smart lighting, it is up to the investor, as such features improve the quality of life in the city.



Outdoor receiver
AirSLC-100

A component for switching public lighting in a city, area, car park. For existing lamps - retrofit.

Outdoor receiver
AirSLC-100L/Plug/EU (US)

A standard that is common today especially in English speaking countries IP65 - plugged in.

Built-in board
LoRAWAN Modul OEM

Connection: soldering pins. The module is directly built into the lamp.

- Pay terminal
- Information panel
- Motion detector
- SOS button
- Power charger
- Weather station
- Air quality
- Humidity
- Intercom
- Wi-Fi
- Camera

BUILDING MANAGEMENT SYSTEM



Buildings today are equipped with an array of systems to control HVAC (heating, ventilation and air conditioning), lighting, security, energy management, etc. Effective integration and communication among the various systems in the building is critical to creating a comfortable environment for all users, to reduce building operation costs and reduce carbon dioxide emissions required for the operation of buildings.

iNELS is fully compatible with BMS (Building Management System) Niagara platform, which provides a convenient and efficient user interface. There are controllers for the actual control of all processes in the building. Supervisor licenses for the deployment on the operator's computer are used to supervise the operation of the system, receiving alarms and notifications and evaluation of historical data and graphs.

Core features

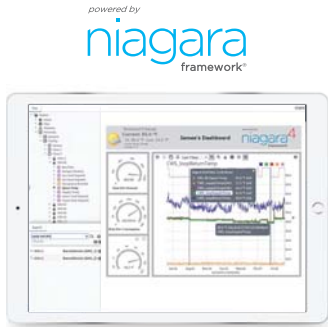
- ✓ a wide range of logical function blocks
- ✓ supports virtually all universal protocols
- ✓ support for HTML5
- ✓ advanced visualization
- ✓ creating graphs/trends
- ✓ customizable dashboards
- ✓ management of alarms and notifications
- ✓ energy analysis
- ✓ archive logs and historical data
- ✓ encrypted communication
- ✓ wide range of access for rights management
- ✓ efficient navigation through the use of tags

Catalogue Intelligent electro-installation:
elkoep.com/download



BMS Building management system

OBIX OPC XML



sigfox
 LoRa
 NB-IoT



Many protocols

powered by
niagara
 framework®

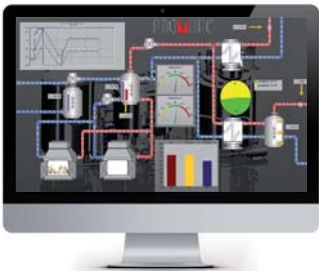
Niagara provide a bridge

Honeywell **BACnet**

FIDELIO **Modbus**

LONWORKS **KNX** **M-Bus**

More information can be found on www.tridium.com.



PROMOTIC

The PROMOTIC SCADA system has a very wide range of communication options. Built-in communications drivers, standardized interfaces, database access and web server - all offer users almost unlimited possibilities to integrate PROMOTIC into their technologies and projects. Learn more about how to communicate and share data.

The iNELS BUS central unit passes information through the ASCII protocol - Promotic uses the software driver "PmCHAR" (assembly with data and image) that is part of the installation. You can not only monitor the states, temperatures, etc. from the iNELS BUS system, but also change the values and control the system. It is also possible to communicate with third parties, monitor and set up more complex projects, such as boiler rooms.



iRidium
 mobile

iRidium software solution enables controlling of the iNELS home automation system as well as other 3rd parties devices (audio/video devices, media servers with full two-way communication). iRidium offers a set of tools, scripts and customizable interfaces which enables to the end user to create their own unique face of the application which is able to send and receive variable status data via EPSNET protocol. It is possible control and monitor the status of individual luminaires, blinds, heating, etc. on devices such as iPad, iPhone, Mac, Android or Windows.

Your end customer gets a complete solution for controlling all devices in one application.

iTP - iNELS TOUCH PANEL



iTP in Future Office

The system controlling entry to the building and to the individual zones is a key factor that affects the safety of people, property and information. Automated control technologies, such as lighting, HVAC and shading again provide the optimum working environment while efficiently using energy.

Installing RFID card readers, in elegant glass design, can ensure that only authorized persons entry into each zone. This event may also be associated with performing certain scenarios within the work place of the person, e.g. during morning arrival. A major theme is the automation of the various reservations of meeting rooms and the scenes in them for certain activities, such as, business meetings, lectures, videos, etc.).

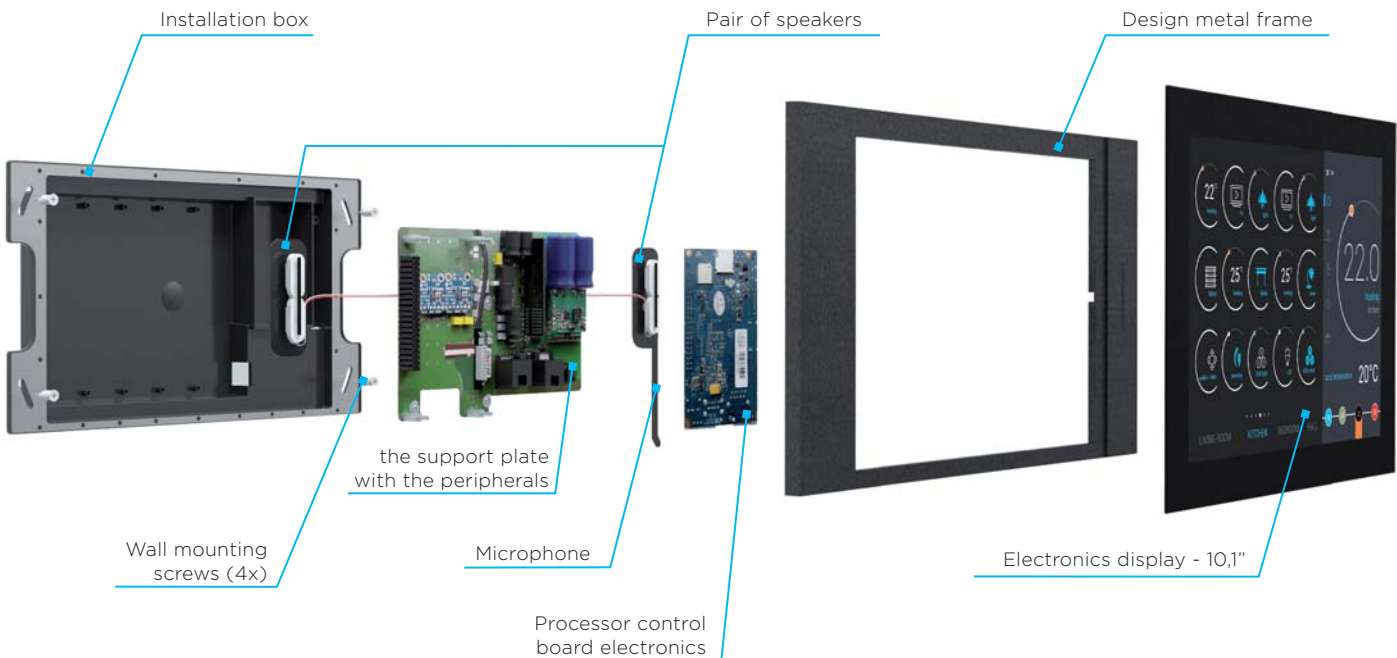


10.1" iTP touch panel designed to control iNELS through the iNELS Home Control application or Future office application. The black-lacquered chassis in combination with glass is an attractive feature for any representative space, and thanks to the integrated speakers and microphone, it also offers an intercom function that can be used in combination with LARA Intercom. The panel is ready for installation into the building structure, and the panel is a cover that serves as a mounting frame.

What can the iTP offer you?

- Connection to the local area network is possible with Ethernet connection with PoE power supply.
- Active PoE power (IEEE 802.3af).
- Update applications over the Internet.
- The panel also includes a cover that also serves as a mounting frame.

What is the iTP composed of?



Future office - how does iNELS see it?



WATCH THE VIDEO:



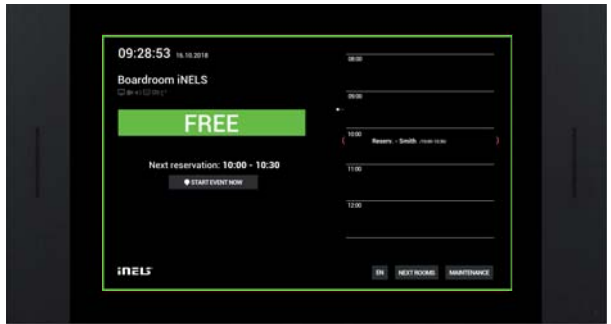
Smart Office cares about:

- ✓ the easiest user experience;
- ✓ unified management interface through sharing the workspaces;
- ✓ full integration of A/V techniques and environment management;
- ✓ audio and video available in every space.

What's important for tomorrow's office space?

- | | |
|-----------------------------------|---------------------|
| ✓ Platform for user | ✓ Cloud services |
| ✓ Internet of things | ✓ Financial savings |
| ✓ Application development by user | ✓ Shared data |
| ✓ Conferences and cooperation | ✓ Security |

Reservation system - application for iTP





EXISTING hotel room – HRESK

Let yourself be inspired by how to improve many of the standard hotel rooms. Our hotel solution reduces operating costs, increases the comfort of guests.



NEW hotel room – GRMS

The hotel room always welcomes guests with a pleasant temperature and the controls offer a very simple to use option for creating the atmosphere currently wished for.



Lighting control



Intercom



Multimedia



App



Lighting control



Intercom



Multimedia



App



Detector



Navigation guests



Door lock



BMS integration



Detector



Navigation guests



Door lock



BMS integration

It works without excavation.
We know how to do it!



WATCH THE VIDEO:



Do you want to manage your
new hotel easily? Leave it to us!



WATCH THE VIDEO:



NEW PRODUCTS - iNELS BUS



Central Unit
CU3-03M

Basic element of the system.



Hotel Guest Room Bundle
CU3-04M (CU3-03M & EA3-022M)

Manages DND/MUR, lighting, HVAC and shading in the guest room.
EA3-022M: not sold separately.



Fan-coils actuator
FA3-66M

Analog inputs for temperature, voltage or current measurement.



9x shutters actuator
JA3-09M

Controls shutters, blinds, awnings etc.



6x 150VA/R-L-C-LED
DA3-06M

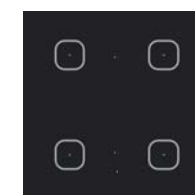
Load type - LED, ESL, resistive, inductive, capacitive.



22x Channels/DIN
SA3-022M

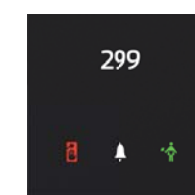
Equipped with 22 relay outputs. Switching lighting and socket circuits.

NEW PRODUCTS - iNELS RF CONTROL



Wireless dimmer switch
RFDW-71

Wireless glass designed switch with integrated dimming component which serves to regulate light sources.



Multifunctional in front of Controller
RFGCR-31/B glass/black

Multifunctional in front of controller included: RFID card reader, bell button, "Do Not Disturb" and "Make Up Room" signalling.



Smart Card Holder
RFGCH-31/B glass/black

Card holder with RFID reader. "Do Not Disturb", "Make Up Room" signalling "Master OFF" button.



Fan-coil controller
RFSA-166M

Motor control in 3 speeds. Master on/off in combination with door/window detectors.



Temperature controller
RFTC-150/G

Heating/cooling mode switch. In build preset combination with RFSA-166M.



Motion detector
RFMD-100

Detection angle 120°.

HOSPITALITY SOLUTION



HOTEL ROOM CONTROL VIA HOSPITALITY TV



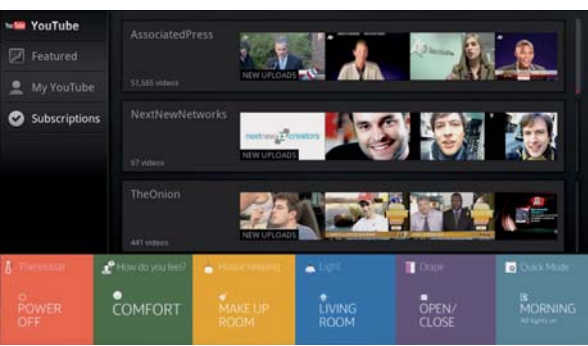
Samsung Hospitality TV

You can make your own song playlists, play radios or favorite movies. Via TV menu it is possible to control audiozones and the LARA music player.



Room Control

Hotel managers can easily manage and arrange the channel mix for both analogue and digital channels without the need to adjust and edit channel lists by different TV systems. Channels can be reordered and renamed to the hotel's preference with channel mapping.



My Channel/Multimedia

Enable guests to easily find and enjoy the programming of their choice without having to manually scroll through hundreds of TV channels. My Channel's quick search function allows guests to find channels suited to their tastes, by country and genre.

APPS FOR ALL... iNELS Home Control

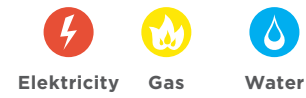
		iNELS BUS System (bus electro installation)					iNELS RF Control (wireless electro installation)			
		Android		iOS		TIZEN [®]	Android		iOS	TIZEN [®]
		Tablet	Phone	iPad	iPhone	Samsung Hospitality TV	Phone	iPhone	Smart TV	Smart watch
		iHC-TA	iHC-MA	iHC-TI	iHC-MI	TIZEN 3.0	iHC-MAIRF	iHC-MIIRF	eLAN-RF	iHC-WTRF
BUS & RF	Lighting	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Blinds	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Socket	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Garage doors, gates	✓	✓	✓	✓	✓	✓	✓	✓	✓
	RGB bulbs, LED strips	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Scenes	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Heating	✓	✓	✓	✓	✓	✓	✓	✗	✗
Third Parties Integration	Multimedia	✓	✓	✓	✓	✓	✗	✗	✗	✗
	Cameras	✓	✓	✓	✓	✓	✓	✓	✓	✗
	Air-conditioning	✓	✓	✓	✓	✓	✓	✓	✗	✗
	Recuperation	✓	✓	✓	✓	✓	✗	✗	✗	✗
	Home appliances (MIELE)	✓	✓	✓	✓	✓	✗	✗	✗	✗
	Weather station	✓	✓	✓	✓	✓	✓	✓	✗	✗
	Measurement and visualization of energy	✓	✓	✓	✓	✓	○	○	✗	✗
	Door communicator and Intercom	✓	✓	✓	✓	✓	✓	✓	✗	✗
	A/V appliances	✓	✓	✓	✓	✓	✓	✓	✗	✗

✓ Supported ○ Coming soon ✗ Not supported

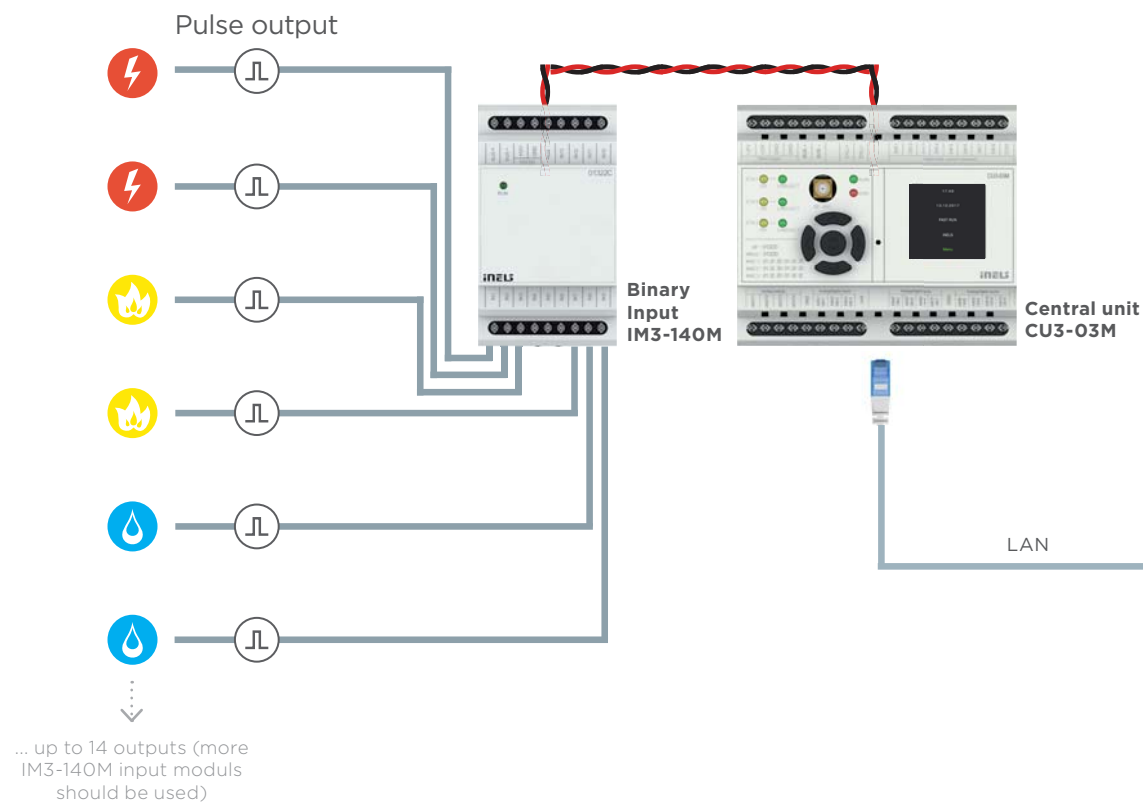
iNELS Home Control applications are FREE to download at or and are supported by Android OS 2.3 or later and iOS.

www.inels.com

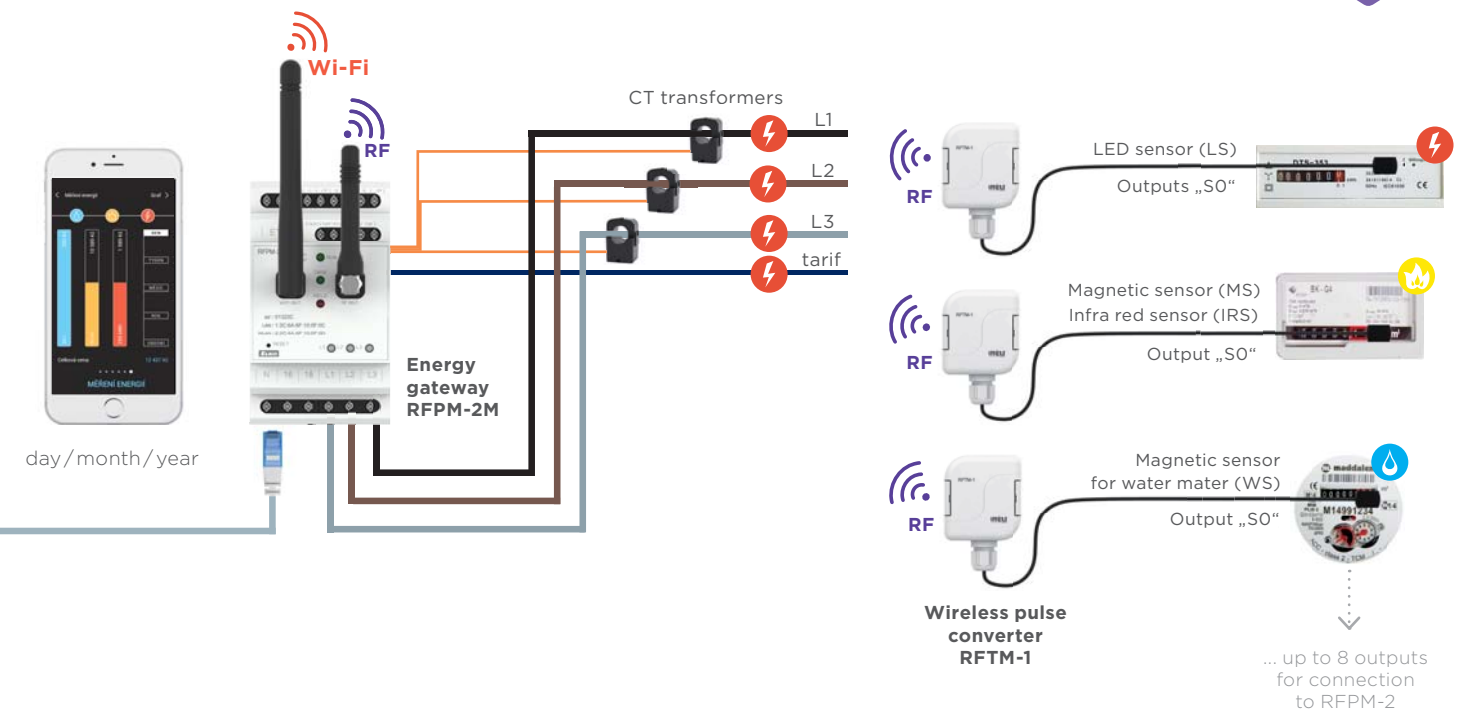
ENERGY MANAGEMENT



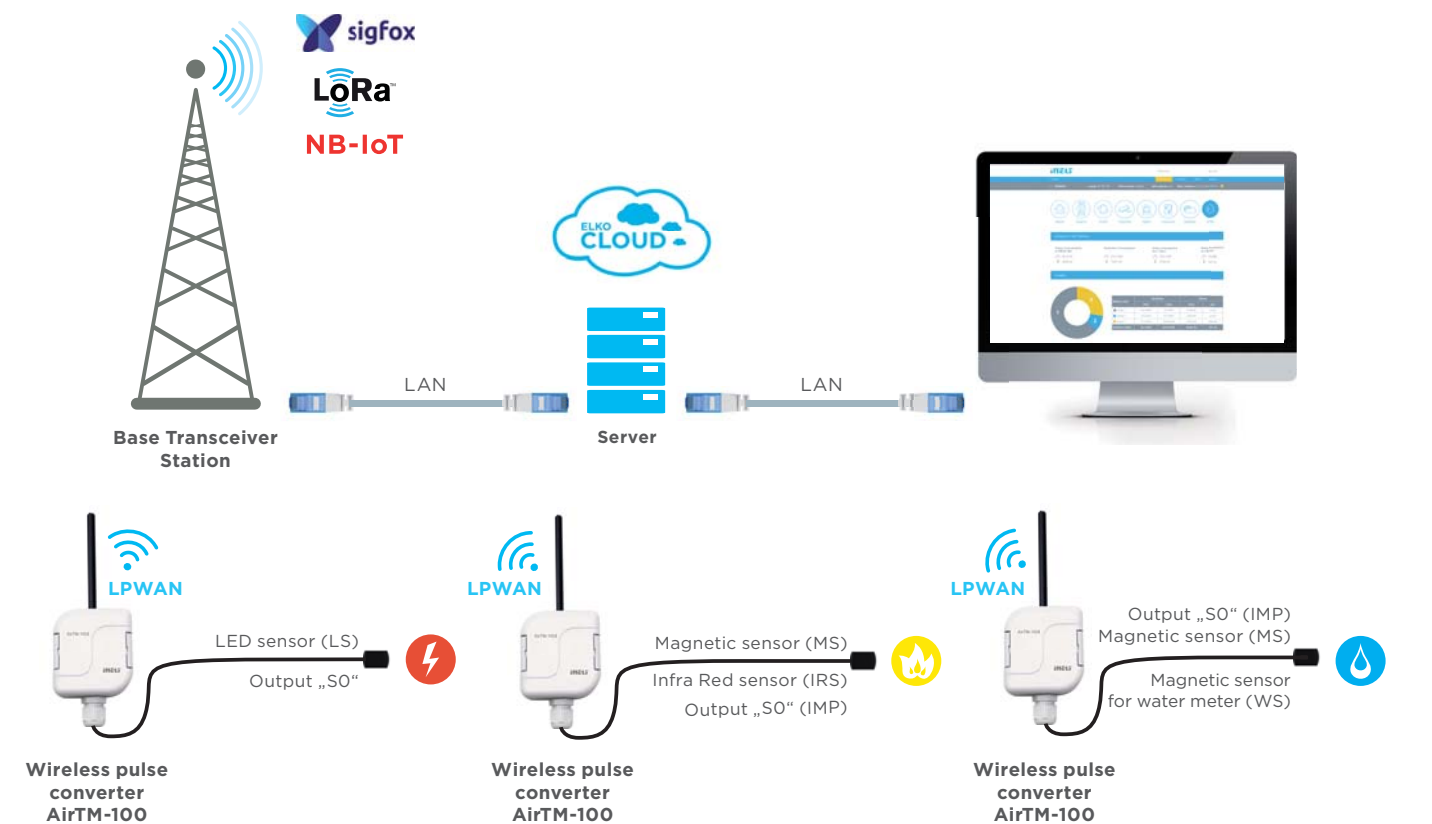
Wired solution (iNELS BUS) for larger buildings



Wireless solution (iNELS RF Control) for existing apartments and houses



Wireless solution (iNELS Air - Platform for IoT) for existing apartments and houses



REFERENCES

Brochure Selection of References:
elkoep.com/download



Kempinski Hotel

Almaty / Kazakhstan

- 5-star hotel in Almaty Kazakhstan
- lighting control in public areas
- more than 15 000 lighting are control through the DALI protocol
- setup scenes



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



Jamie's Italian Restaurant

Budapest / Hungary

- iNELS BUS System is controlling lighting and terrace-cooling/heating in the restaurant
- additional switched lighting circuits are controlled by 5 piece of actuator



Meydan

Dubai / UAE

- lighting control
- crystal chandelier
- starry night sky control
- audio/video system



Alexandrovskiy

Odessa / Ukraine

- 25 rooms with fully automation and dispatching
- integration with Samsung central conditioning



Building XENEX

Žilina / Slovakia

- lighting control
- heating control, HVAC
- access control system, cameras, alarm



Best Western Premier

Brno / Czech Republic

- 4-star Hotel Internacional in Brno
- lighting scenes in the restaurant, reception, wine shop and exterior
- app available for any guest



Three sons and daughter

Skhidnicya / Ukraine

- 5-star hotel
- 179 fully automated rooms powered on iNELS
- automation of lighting, heating, cardreaders
- in every room there is SA3-012M, IM3-140M, WSB3-40



Living Showroom

Prague / Czech Republic

- designed residential showroom about 36 m²
- control units are part of the interior
- stage connection with projection and visitor needs



Magyar State Opera

Budapest / Hungary

- Every additional lighting source is also controlled by iNELS system. The devices here are controlled by RF Touch.
- For switching the RFSA-11B and RFSA-66M is used.



Rocks Hotel & Casino

Kyrenia / Cyprus

- 5-star hotel
- located close to historical city Kyrenia
- the lights are controlled in iNELS system via light panel, USB socket, glass thermostats



Lord's Palace

Kyrenia / Cyprus

- 5-star hotel
- lighting control in the restaurant, conference hall, parking, wellness and corridors

OUR DISPLAYBOARDS & CASES



Smart flat (RF) Smart home (BUS) Hospitality (GRMS) Hotel Retrofit

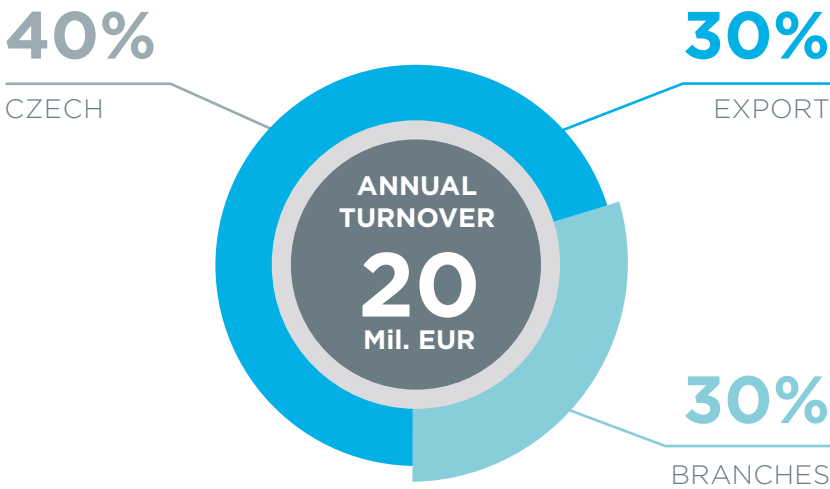


Future Office BMS Industry Smart City



GRMS HRESK iNELS BUS Smart City

FACTS AND STATS & ELKO EP Holding



16
BRANCHES
OVER THE WORLD

70
EXPORTING
COUNTRIES

240
EMPLOYEES

5 000
iNELS INSTALLATION

12 000 000
MANUFACTURED PRODUCTS



NOTES



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