

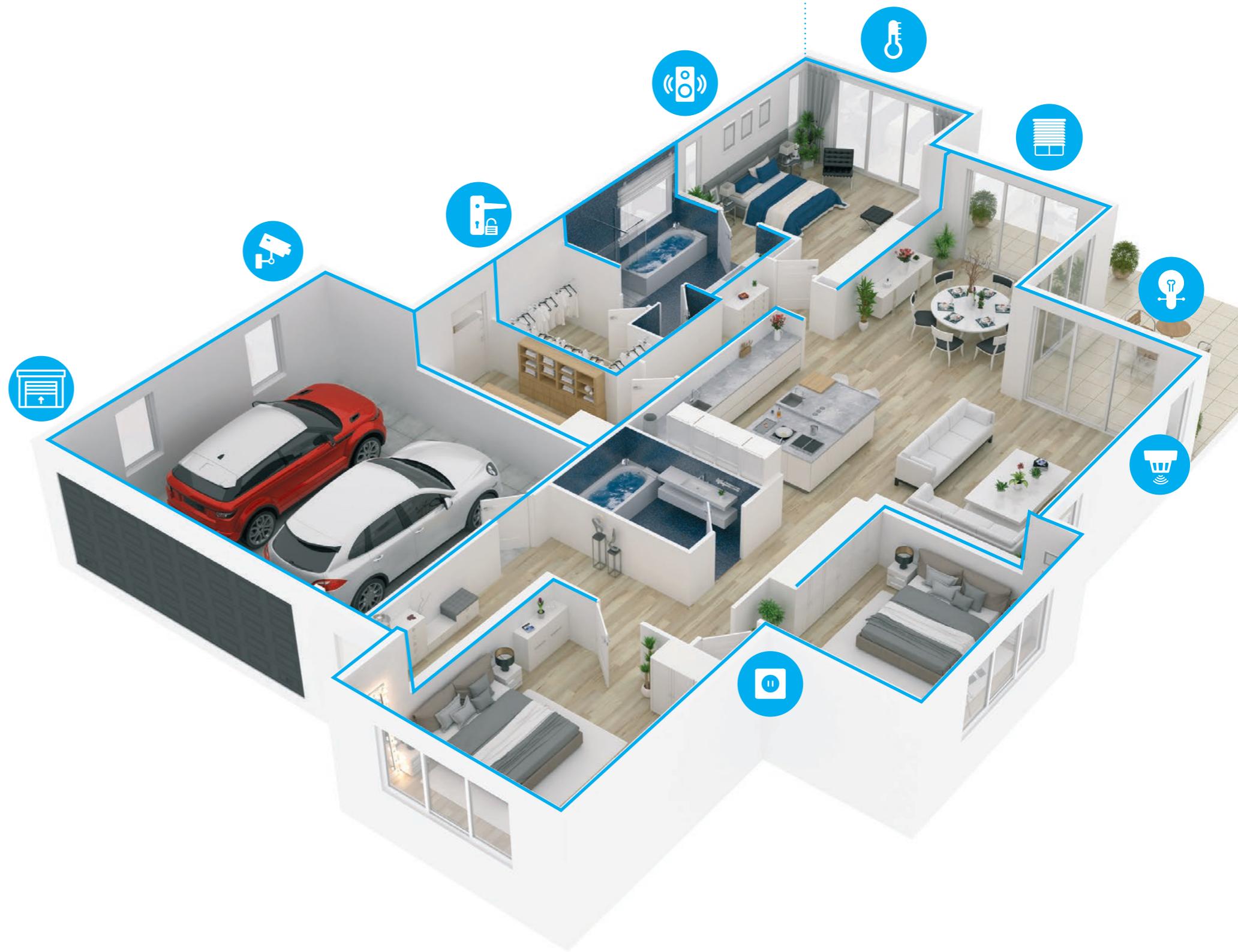


SMART HOME AND BUILDINGS AUTOMATION

**MX**  
**AUTOMATION**



Feel the control.





SADRŽAJ  
/ CONTENT

BUILDING MANAGEMENT

AMBIJENT / AMBIENT

Pametni dom / Smart Home	10
Pametni eksterijer / Smart exterior	12
Pametni ured / Smart office	14

AUTONOMIJA / AUTONOMY

Senzorima definirani događaji / Sensor defined events	16
Posao / Business	18
Udaljena kontrola / Udaljena kontrola	20
Vremenske stanice / Weather stations	22
Sigurnost / Safety	24
Energija / Energy	26

APLIKACIJA / APPLICATION

Karakteristike / Essentials	28
Scene / Scene	30

INSTALACIJE / INSTALLATIONS

Uređivač koda / Code editor	34
Udaljena podrška / Remote servis	36
Lakoća spajanja / Lakoća spajanja	38

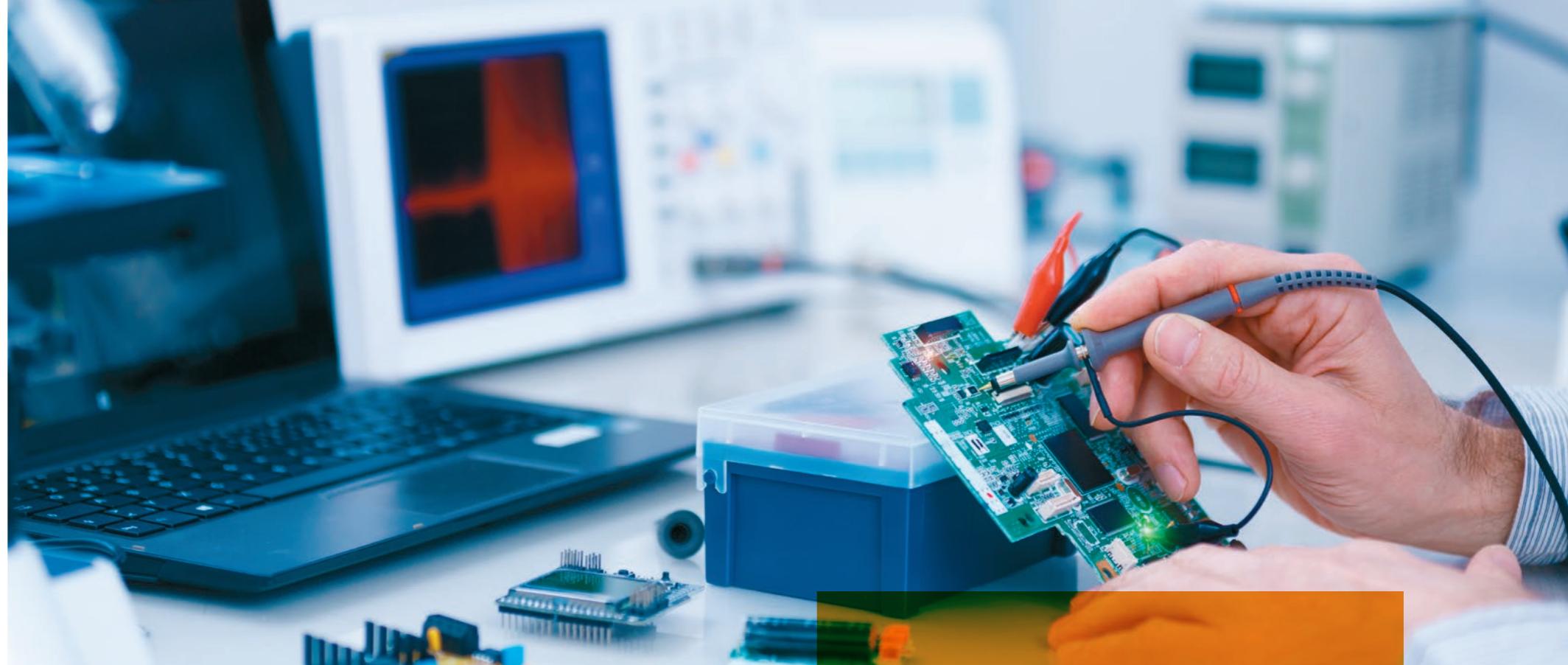
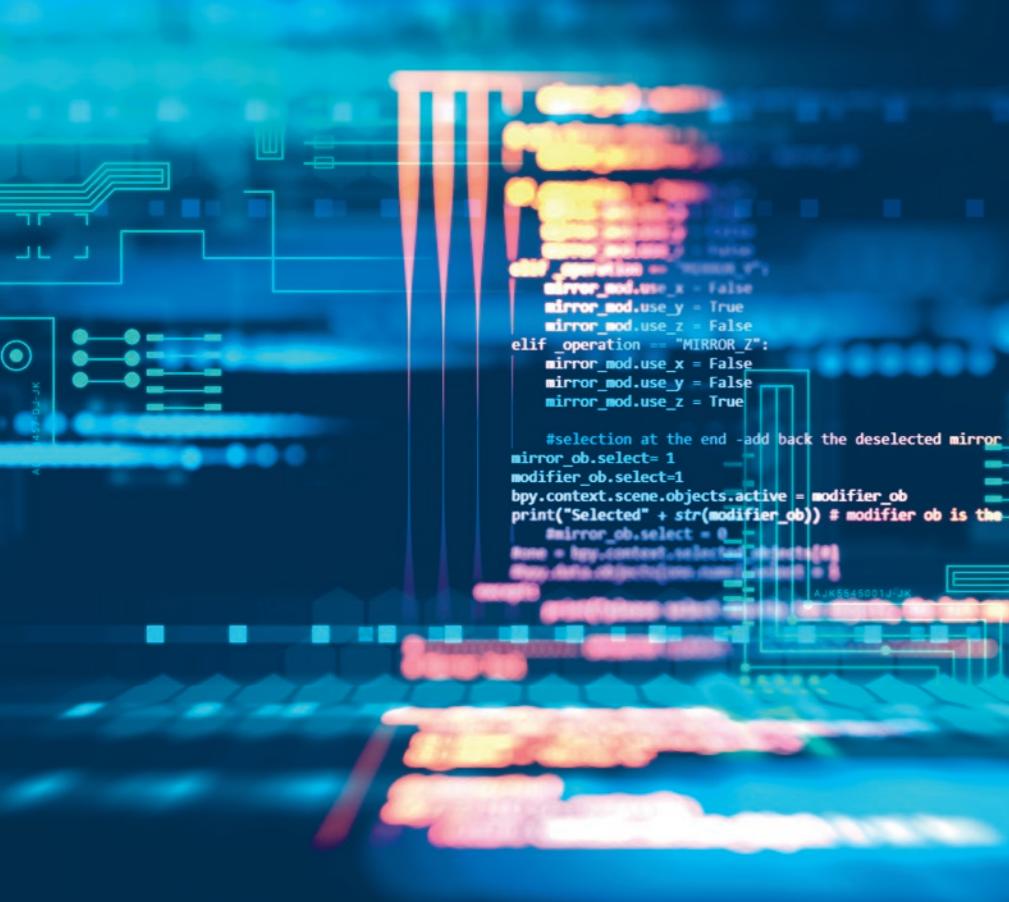
HYBRID SYSTEM

NAJAM I PAMETNI STAN / SMART RENTAL

Dobitna kombinacija / Perfect combination	40
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MX PRODUCTS

Uređaji / Devices	44
MX periferija / MX periphery	48



# PIMATICO

Cijela priča je počela kao Start Up projekt.  
*The whole story started as a Start Up project.*

PIMATICO je danas sestrinska kompanija TEM Mandeksa koja razvija softverska rješenja za automatizaciju kuća i poslovnih objekata.

Today, PIMATICO is the sister company of TEM Mandeks specialized in software solutions for the automation of houses and business facilities.

**In house**  
razvoj hardverskih rješenja za automatizaciju kuća i poslovnih objekata.

**In house**  
development of hardware solutions for home automation and business facilities.



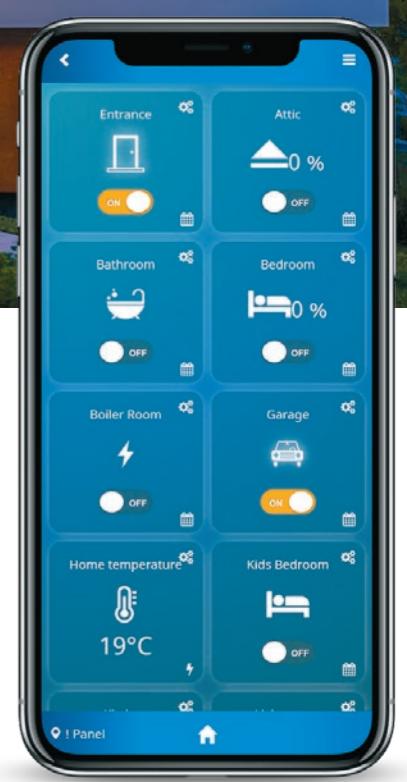
## Pametni dom

MX Smart Home Sistem nudi mogućnost udaljene i pametne kontrole cijelog niza uređaja koji se koriste u mnogim kućanstvima. Kontrola rasvjete, tendi, roleta i sjenila, električnih ventila, grijanja i hlađenja, te praćenje potrošnje električne energije samo su neke od mogućnosti MX sustava. Korisniku se tako na jednostavan i zanimljiv način otvaraju mogućnosti direktnе kontrole uređaja, izrade scenarija, programiranje senzorima uvjetovanih ili vremenski ponovljivih događaja te brojne druge funkcionalnosti.

## Smart home

MX Smart Home System offers remote and smart control of a whole range of devices that are used in many households. Lighting control, tents, blinds, electric valves, heating and cooling, and energy consumption monitoring are just some of the features of the MX system. In a simple and interesting way, a user gets the ability to directly control the device, create scenarios, schedule sensors or time-sensitive events, and many other functionalities.

Neograničena kontrola.  
Unlimited control.



## AMBIJENT / AMBIENT

### Pametni dom / Smart Home

Korisnicima se otvaraju mogućnosti kontrole i praćenja širokog raspona potrošača putem intuitivnog sučelja koje je dostupno na bilo kojem pametnom uređaju. MX Automation uređaji ne isključuju mogućnost ručne kontrole uređaja kao bitnog parametra svakog doma.

**Kontrola Vašeg doma  
bez obzira gdje se  
nalazite.**

*Customers are offered the ability to control and monitor the wide range of devices through the intuitive interface available on any smart device. MX Automation devices do not exclude the ability to manually control the devices as an essential parameter in every home.*

*Controlling your home  
no matter where you are.*



Kontrola temperature kao jedna od najvažnijih karakteristika doma.  
Praćenje, podešavanje i mjerjenje  
temperature u stvarnom vremenu.

- kontrola termostatima
- kontrola aplikacijom

*Temperature control as one of the most important feature of the home. Real-time temperature monitoring, adjustment and measurement.*

- control with thermostats
- control by application



XIR sustav je namjenjen za upravljanje klima uređajima IR tehnologijom.

- ON / OFF funkcija
- podešavanje temperature
- dodatne opcije

*The XIR system is designed to control air conditioners with IR technology.*

- ON / OFF function
- temperature adjustment
- additional options

**Jedna aplikacija,  
brojne mogućnosti.**  
*One application,  
numerous options.*



Kontrola i praćenje rada rasvjetnih tijela. Opcije kontrole su ON / OFF ili prigušivanje.  
*Lighting control and monitoring. Control options are ON / OFF or dimming.*



Kontrola roletni i sjenila.  
Opcije kontrole su spuštanje i dizanje  
te točno pozicioniranje.  
*Control of blinds and shutters. Control options are lowering and lifting and accurate positioning.*



Kontrola i praćenje stanja pojedinih ili skupine utičnica odnosno potrošača koji su spojeni na njih.  
*Control and monitoring of individual or groups of sockets or devices connected to them.*



Kontrola audio signala.  
Uređaj se postavlja između izvora zvuka i pojačala.  
*Control of audio signals. The device is placed between the source sound and the amplifier.*

AMBIJENT / AMBIENT

## Pametni eksterijer / Smart exterior

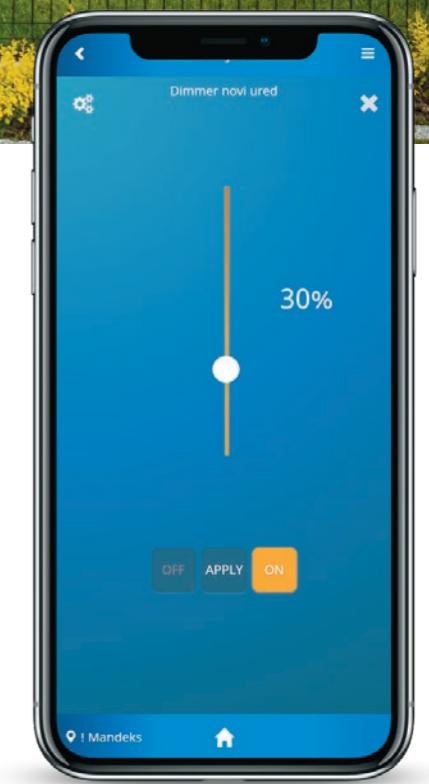
Vaše vrijeme je  
dragocijeno -  
MX radi za vas.

Eksterijer je bitan dio svakog pametnog doma, a posebno u segmentima kontrole i optimizacije. Koristeći MX uređaje i aplikaciju eksterijer dobiva novu dimenziju. Upravljanje, praćenje i sigurnost jedni su od ključnih odlika sustava. Korisnicima se otvaraju široke opcije kontrole bez obzira gdje se nalaze.

*Your time is precious -  
MX works for you.*

Exterior is an essential part of every smart home, especially in the control and optimization segments. Using MX devices and the application, the exterior takes on a new dimension. Management, monitoring and security are one of the key features of the system. Customers are offered wide control options no matter where they are.

Autonomija kao bitna sastavnica modernog doma.  
*Autonomija kao bitna sastavnica modernog doma.*



#### RASVJETA / LIGHTING

- kontrola putem aplikacije s opcijom ručne kontrole
- ostavljanje vremenskih ciklusa rada s ciljem optimizacije
- mogućnost integracije sa senzorima za potpunu autonomiju.
- remote control with manual control option
- setting optimization work cycles
- integration with sensors for complete autonomy

#### KAPIJA / GATE

- udaljena kontrola,
- uvid u trenutno stanje
- autonomno otvaranje/zatvaranje s preciznim vremenskim intervalima
- remote control
- current state insights
- autonomous opening/ closing at precise time intervals

#### PRSKALICE / SPRINKLERS

- udaljena kontrola
- postavljanje preciznih vremenskih ciklusa/režima rada: "dnevni", "noćni" itd.
- integracija sa senzorima za potpunu autonomiju i praćenje
- remote control
- setting precise time cycles/modes: "daytime", "nighttime", etc.
- integration with sensors for complete autonomy and monitoring

#### TENDA / AWNING

- opcija otvaranja/zatvaranja ili postavljanja na željenu poziciju
- postavljanje ciklusa otvaranja/ zatvaranja
- integracija sa senzorima za potpunu autonomiju i sigurnost
- option to open/close or set to the desired position
- ability to set opening/closing cycles
- integration with sensors for complete autonomy and safety

#### GARAŽNA VRATA / GARAGE DOOR

- udaljena kontrola
- uvid u trenutno stanje
- sigurnosno autonomno zatvaranje/ otvaranje u točnim vremenskim ciklusima
- remote control
- current state insights
- security autonomous opening/ closing at precise time intervals

## AMBIJENT / AMBIENT

### Pametni ured / Smart office

Sustav za vrhunsko poslovno okruženje.

MX nudi paket rješenja za poslovne korisnike. Upravljanje uredima s centralizirane lokacije i/ili segmentirano po zasebnim cjelinama opcije su koje u osnovi mogućava MX sustav. Središte poslovnog okruženja su svakako djelatnici kojima se uz određena prava pristupa omogućava upravljanje segmentima radne sredine. Autonomost, s druge strane, kao ključna prednost MX sustava omogućava da se sustav brine za sve bitne parametre poslovnog okruženja pazeći na optimizaciju i ono najbitnije - zadovoljstvo djelatnika.

*Perfect working ambient.*

MX offers a solution package for business users. Managing offices from a centralized location and / or segmented by units are options that are made possible by the MX system. The center of the business environment are certainly the employees who, with certain access rights, are enabled to manage segments of the working environment. Autonomy, on the other hand, as a key advantage of the MX entity, allows the system to take care of all the essential parameters of the business environment, paying attention to optimization and, most importantly, employee satisfaction.

0  
Reception

1  
**Development office**  
**Conference hall**

2  
CEO office  
Marketing office

3  
Kitchen  
Resting room



KONTROLA ZGRADE  
/ BUILDING CONTROL



SENZORI  
/ SENSORS



OPCIJE KONTROLE  
/ CONTROL OPTIONS

RUČNO  
/ MANUAL

APLIKACIJA  
/ APP

Sustav omogućava istovremenu kontrolu više lokacija i pojedinih segmenta na istoj lokaciji korištenjem aplikacije, ali i ručno. Svaki ured ili zajedničku prostoriju moguće je uređiti kao logičku cjelinu te joj pridjeliti mogućnosti kontrole.

The system allows simultaneous control multiple locations, and individual segments on the same location using the application but also manually. Each office or common room can be arranged as a logical unit with assigned control options.

## AUTONOMIJA / AUTONOMY

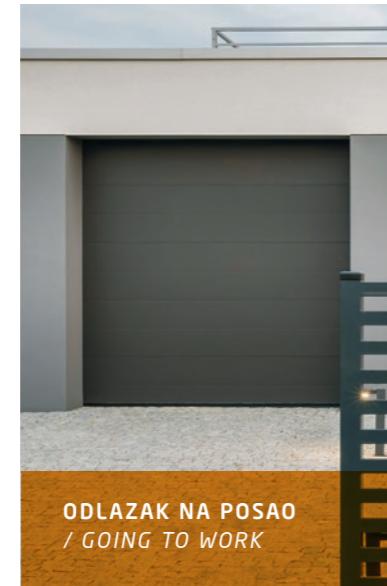
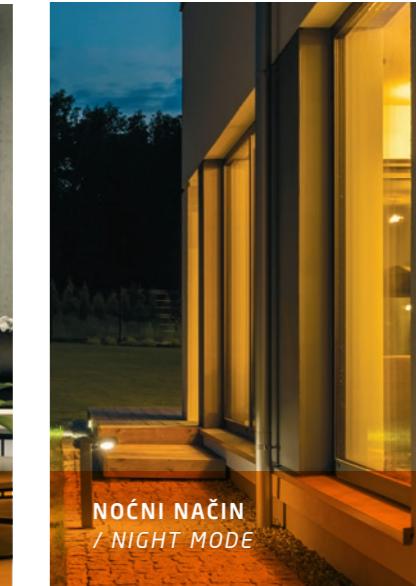
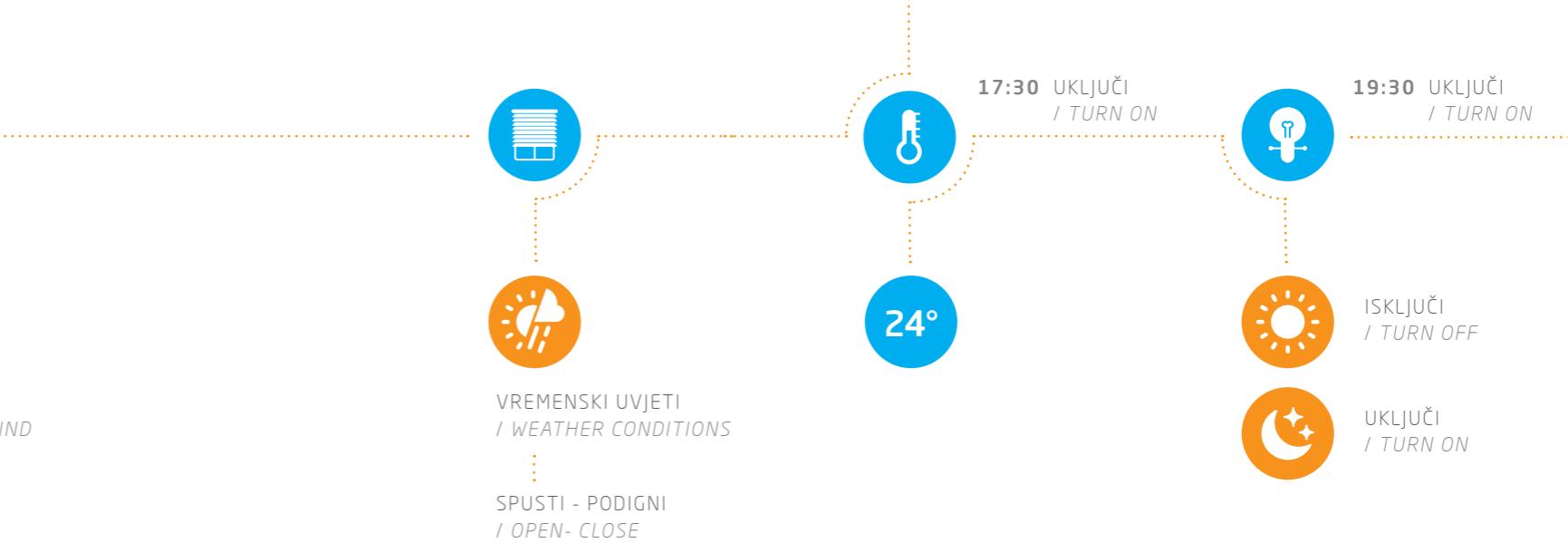
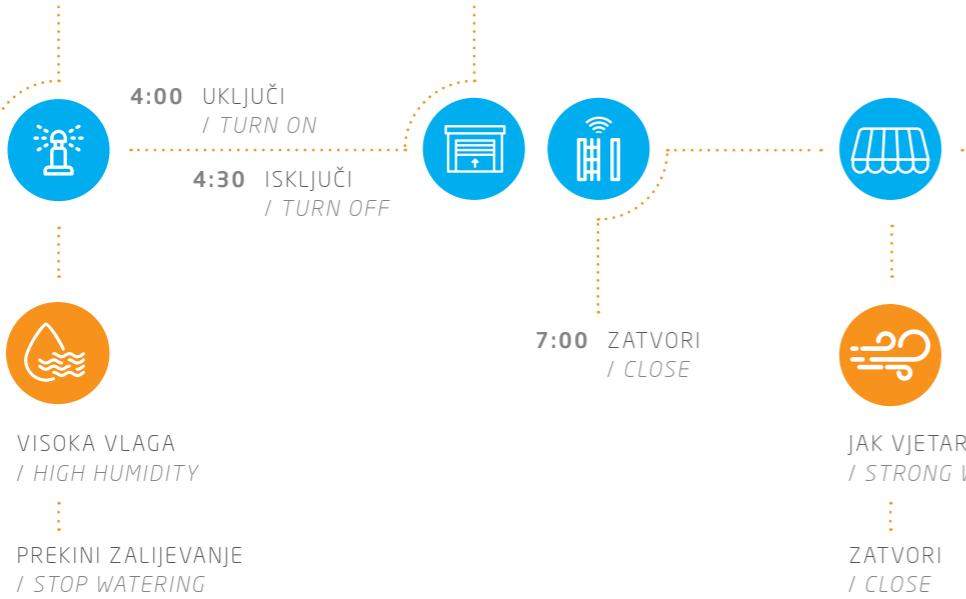
Senzorima definirani događaji  
/ Sensor defined eventsUREDAJI  
/ DEVICESSENZORI  
/ SENSORS

## Potpuna autonomost.

## Complete autonomy.

Prilagodite vaše životno okruženje načinu vašeg života. Autonomnost je moćna funkcionalnost MX sustava koja prateći stanja okoline prilagođava okruženje u kojem živimo. Napredna senzorika uvezana s moćnim hardverom autonomnost daje na novu razinu, a korisniku omogućva da određene događaje bezbjedno prepusti pametnom sustavu.

*Adapt your living environment to your lifestyle. Autonomy is a powerful tool of the MX system which, following the states of outdoor sensors, creates the perfect environment for your living. Advanced sensors coupled with powerful hardware take autonomy to a new level, allowing the user to safely leave certain events to a smart system.*

ZALIJEVANJE  
/ WATERINGODLAZAK NA POSAO  
/ GOING TO WORKAUTONOMAN EKSTERIJER  
/ EXTERIOR AUTONOMYAUTONOMAN INTERIJER  
/ INTERIOR AUTONOMYPOVRATAK KUĆI  
/ HOMECOMINGNOĆNI NAČIN  
/ NIGHT MODE

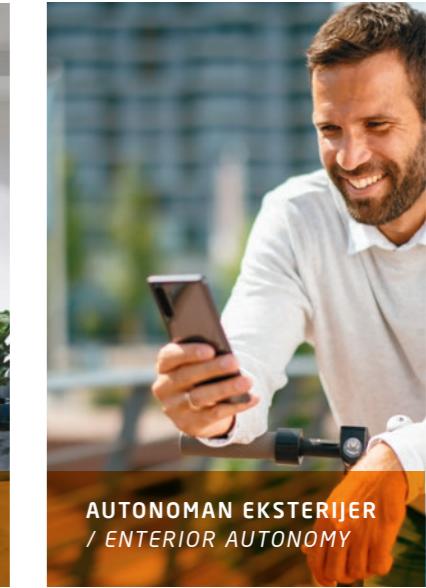
## AUTONOMIJA / AUTONOMY

Posao  
/ BusinessAutonomnost kao  
standard poslovnog  
okruženja 21. stoljeća.

Autonomost poslovnog okruženja dio je standarda modernog radnog okruženja. Sustav nudi mogućnost autonomnog prilagođavanja uredskog ambijenta kada zaposlenik ulazi u zgradu, odnosno kada iz nje izlazi. Za urede otvorenog tipa kao i za zajedničke prostorije omogućeno je sistemsko praćenje i namještanje željenih parametara. Mogućnost upravljanja za korisnike moguća je kroz prenosiće sustava.

Autonomy as a  
standard of the 21st  
century.

*The autonomy of the business environment is part of the standards of the modern work environment. The system offers the possibility of autonomous adjustment of the office environment when the employee enters the building, or when leaving. For open-type offices as well as for common areas, system monitoring and setting of the desired parameters is enabled. The possibility of management for the user is possible through the role permissions of the system.*

AMBIJENT  
/ AMBIENTDOLAZAK NA POSAO  
/ ENTERING THE BUILDINGAUTONOMAN INTERIJER  
/ INTERIOR AUTONOMYAUTONOMAN EKSTERIJER  
/ EXTERIOR AUTONOMY

## AUTONOMIJA / AUTONOMY

Udaljena kontrola  
/ Remote control

Pristup udaljenim lokacijama s ciljem praćenja i upravljanja još je jedna od mogućnosti koje MX sustav omogućava. Ovo je funkcionalnost koja se lako implementira u sustavima gdje je potreban konstanat nadzor i upravljanje. Neki od primjera su plantaze i plastenici. Sustav je također idealan za upravljanje kućama za odmor i vikendicama.

*Locations remote access for tracking and management is another feature that the MX system provides. This is a functionality that is easily implemented in systems where constant monitoring and management is required. Some examples are plantations and greenhouses. The system is also ideal for managing holiday homes and cottages.*

PLASTENICI  
/ GREENHOUSEPLANTAŽE  
/ PLANTATION

MX sustav otvara mogućnosti kontrole i praćenja udaljenih lokacija.

*MX system allows remote control and monitoring of various systems.*

KUĆE ZA ODMOR  
/ VACATION HOME

Praćenje i kontrola cijelog niza parametara koji su ključni u sustavima plastenika. Tako na osnovu mjerjenja vanjskih i unutarnjih čimbenika (temperatura, vlaga, brzina itd) sustav prilagođava temperaturu, ventilaciju, zalijanje itd.

*Monitoring and control of a whole range of parameters that are crucial in greenhouse systems. Thus, based on the measurement of external and internal factors (temperature, humidity, wind speed etc.), the system adjusts temperature, ventilation, watering, etc.*

KONTROLA  
/ CONTROL

- KONTROLA VODA
- KONTROLA VENTILACIJE
- KONTROLA VENTILATORA
- KONTROLA VALVULE

PRAĆENJE  
/ MONITORING

- PRAĆENJE VODA
- PRAĆENJE VLAGE
- PRAĆENJE TEMPERATURE
- PRAĆENJE SVETLOSTI

Praćenje i kontrola cijelog niza parametara koji su ključni u sustavima plantaža. Tako na osnovu mjerjenja vanjskih čimbenika (temperatura, vlaga, brzina i smjer vjetra) sustav kontrolira procese zalijanja, odmrzavanja itd.

*Monitoring and control of a whole range of parameters that are crucial in plantation systems. Thus, based on the measurement of external factors (temperature, humidity, wind speed and direction), the system controls the processes of watering, thawing, etc.*

KONTROLA  
/ CONTROL

- KONTROLA VODA
- KONTROLA TEMPERATURE
- KONTROLA SATELLITNE MREŽE
- KONTROLA VALVULE

PRAĆENJE  
/ MONITORING

- PRAĆENJE VODA
- PRAĆENJE TEMPERATURE
- PRAĆENJE VETRA

Pripremite idealan ambijent za vašu omiljenu kuću za odmor prije dolaska. Sustav omogućava kontrolu i mjerjenje cijelog niza parametara, imitiranje prisustva, zaštitu od smrzavanja i poplave itd.

*Prepare the ideal ambience for your favorite vacation home before you arrive. The system enables control and measurement of a whole range of parameters, imitation of presence, protection against freezing and flooding, etc.*

KONTROLA  
/ CONTROL

- KONTROLA VENTILACIJE
- KONTROLA SVETLA
- KONTROLA TEMPERATURE
- KONTROLA VALVULE

PRAĆENJE  
/ MONITORING

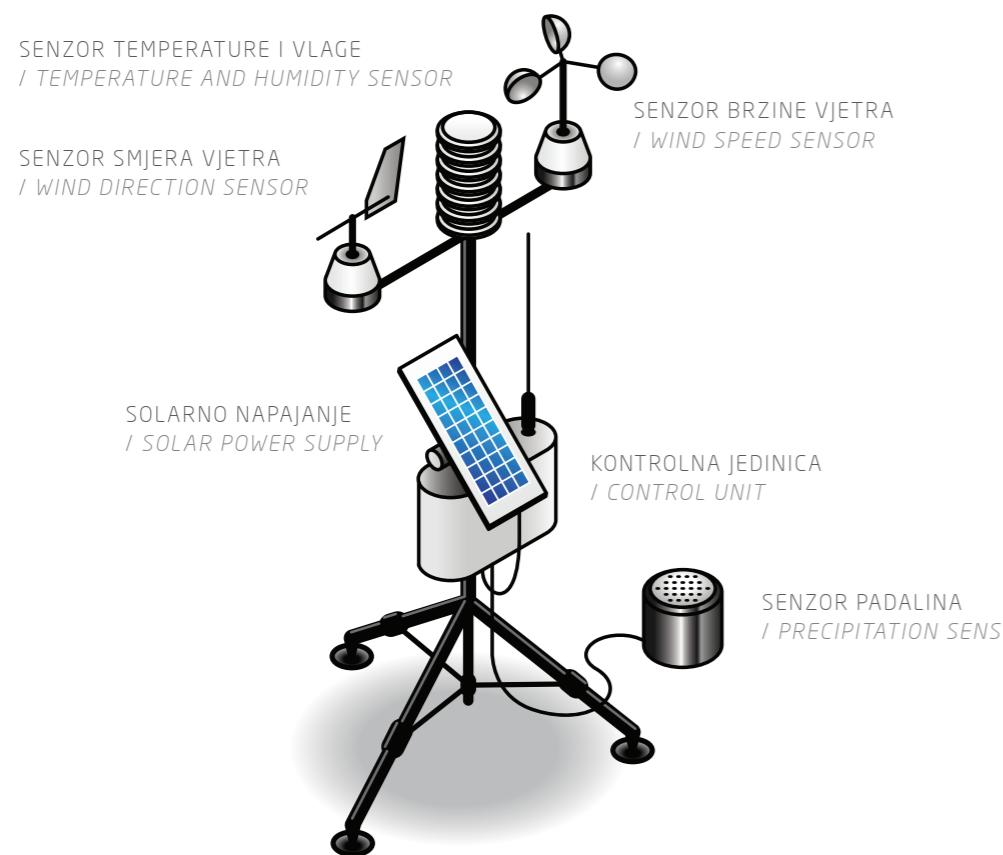
- PRAĆENJE TEMPERATURE
- PRAĆENJE PRISUSTVA
- PRAĆENJE VODA
- PRAĆENJE VETRA

## AUTONOMIJA / AUTONOMY

## Vremenske stanice / Weather stations

Praćenje vremenskih uvjeta sa širokim rasponom mjernih opcija dio je MX vremenskih stanica. Prednost MX vremenskih stanica je u kombiniranom pristupu koji uz praćenje i mjerjenje omogućava i automatizaciju događaja. Ovakvim pristupom sustav je lako implementiran u sustavima plantaža, plastenika, voćnjaka i sl. Opcije montaže su prilagodljive ovisno o tipu instalacije.

*Monitoring weather conditions with a wide range of measurement options is part of MX Weather Stations. The advantage of MX weather stations is in the combined approach which, in addition to monitoring and measuring, also enables the automation of events. With this approach, the system is easily implemented in systems of plantations, greenhouses, orchards, etc. Mounting options are customizable depending on the type of installation.*



### Neki od parametara mjerena Some of the measuring parameters

**BRZINA VJETRA**  
Raspon mjerena: 0~70 m/s  
Prezicnost:  $\pm 0.3 \text{ m/s}$  (3%)  
Rezolucija: 0.1 m/s

**WIND SPEED**  
Measuring range: 0~70 m/s  
Accuracy:  $\pm 0.3 \text{ m/s}$  (3%)  
Resolution 0.1 m/s

**SMJER VJETRA**  
Raspon mjerena: 0~360°  
Prezicnost:  $\pm 3^\circ$   
Rezolucija: 1°

**WIND DIRECTION**  
Measuring range: 0~360°  
Accuracy:  $\pm 3^\circ$   
Resolution: 1°

**TEMPERATURA**  
Raspon mjerena: -50°– 85°  
Prezicnost:  $\pm 0.2 \text{ }^\circ\text{C}$   
Rezolucija: 0.1 °C

**TEMPERATURE**  
Measuring range: -50°– 85°  
Accuracy:  $\pm 0.2 \text{ }^\circ\text{C}$   
Resolution: 0.1 °C

**VLAŽNOST**  
Raspon mjerena: 0 to 100% RH  
Prezicnost:  $\pm 2\%$  RH  
Rezolucija: 1% RH

**HUMIDITY**  
Measuring range: 0 to 100% RH  
Accuracy:  $\pm 2\%$  RH  
Resolution: 1% RH

## AUTONOMIJA / AUTONOMY

## Sigurnost / Security

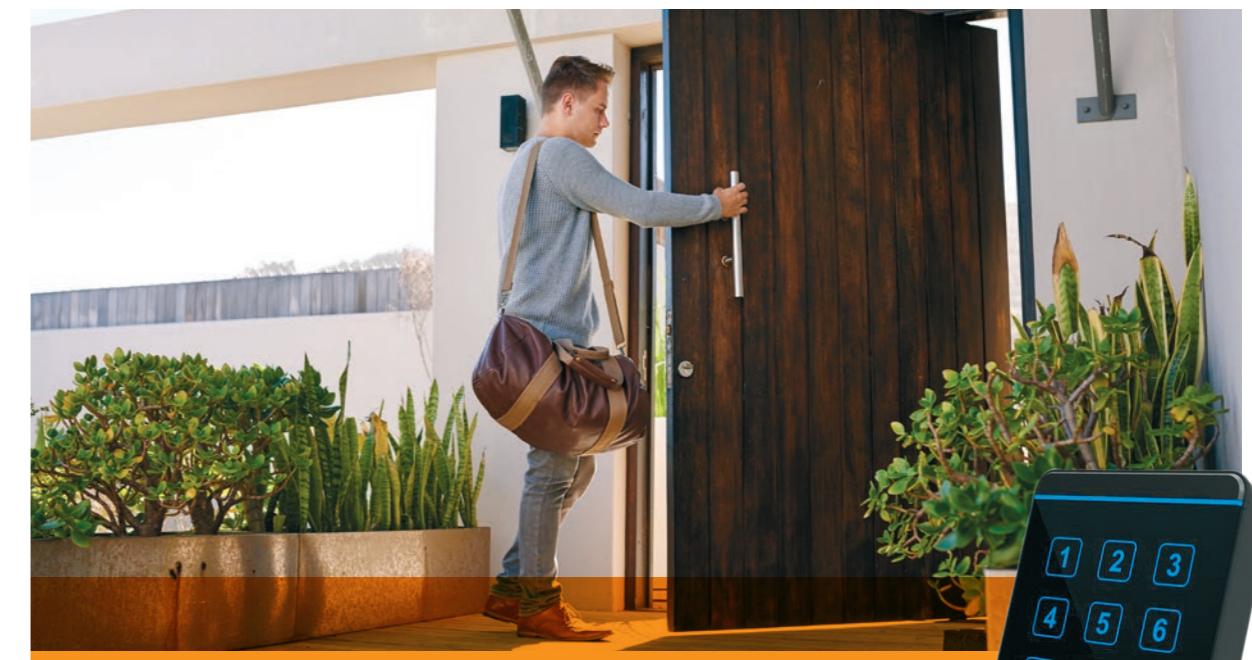


### Mogućnosti

MX Automation Security značajka je sustava koja omogućava integraciju cijelog niza sigurnosnih uređaja u samu aplikaciju. Aplikacijom je omogućeno primanje obavijesti o određenim alarmima te kontrola pristupa domu. Na jednostavan način u preciznim vremenskim ciklusima omogućeno je aktiviranje cjelokupne zaštite ili samo određenih dijelova. U slučaju određenog alarma brzo možete reagirati i pozvati pomoći. Kontrola pristupa omogućena je RFID tehnologijom. Aplikacija omogućava dodavanje novih RFID kartica ili kodova za pristup domu.

### Possibilities

The MX Automation Security is a system feature that integrates a whole range of security devices into the application itself. The application provides direct receiving alarm alert information and home lock control. In a simple way, in precise time cycles, it is possible to activate the entire protection or only certain parts. In case of a certain alarm, you can react quickly and call for help. RFID technology is used to control access. It is possible to add new RFID cards or home access codes through the application.



RFID kontrola pristupa - Jednostavno je najbolje.  
RFID Access control - Simple is the best.

## AUTONOMIJA / AUTONOMY

## Energija / Energy



### MX kontrola potrošnje

Kontrola i nadzor nad utrškom električne energije cijelokupnog ili zasebnih segmenata vašeg doma ili poslovnog okruženja opcija je koju MX sustav nudi. Sustav ima mogućnost praćenja utroška električne energije u realnom vremenu, a na osnovu prikupljenih podataka korisnik lako dolazi do potrebnih informacija. Autonomost ovog sustava je također omogućena. Na jednostavan način, u slučaju određenog prekoračenja, lako možete isključiti određenog potrošača iz mreže.

### MX power management

*Control and supervision over the power supply of the entire or separate segment of your home or business environment is an option that the MX system offers. The system has the ability to monitor the real-time electricity bill, and on the basis of the collected data the user can easily get the information needed. The autonomy of this system is also enabled. In a simple way, in case of a certain overdraft, you can easily exclude a certain consumer from the network.*

#### Parametri Parameters

V	Napon Voltage
A	Struja Current
Hz	Frekvencija Frequency
PF	Faktor Snage Power Factor
kW	Aktivna Snaga Active Power
kVA	Vidljiva Snaga Apparent Power
kVAr	Reaktivna Snaga Reactive Power
kWh	Ukupna Aktivna Energija Total Active Energy
MD kW	Maks. Isporučena Snaga Power Max Demand
kVArh	Ukupna Reaktivna Energija Total Reactive Energy

#### MOGUĆNOSTI

- Grafički prikaz:  
po danima,  
po tjednima,  
po godinama,
- Izračun potrošnje:  
u valutama,
- Odabir tarifa,
- Baza podataka,
- Izvoz podataka.

#### UPRAVLJANJE ENERGIJOM

- Potrošnja električne energije,
- Kontrola kritičnih potrošača,
- Kontrola vršne potrošnje,
- Integracija automatizacije.

#### POSSIBILITIES

- Graphical representation:  
per days,  
per weeks,  
per years,
- Consumption calculation:  
in valutes,
- Tariff selection,
- Data base,
- Export data.

#### ENERGY MANAGEMENT

- Electricity consumption,
- Monitoring Critical Equipment,
- Peak consumption control,
- Automation integration.



Pratite sve bitne parametre i značajke potrošnje električne energije iz udobnosti vašeg doma ili poslovног okruženja.

Keep track of all the essential parameters and features of your power consumption from the comfort of your home or business.



## APLIKACIJA / APPLICATION Karakteristike / Essentials

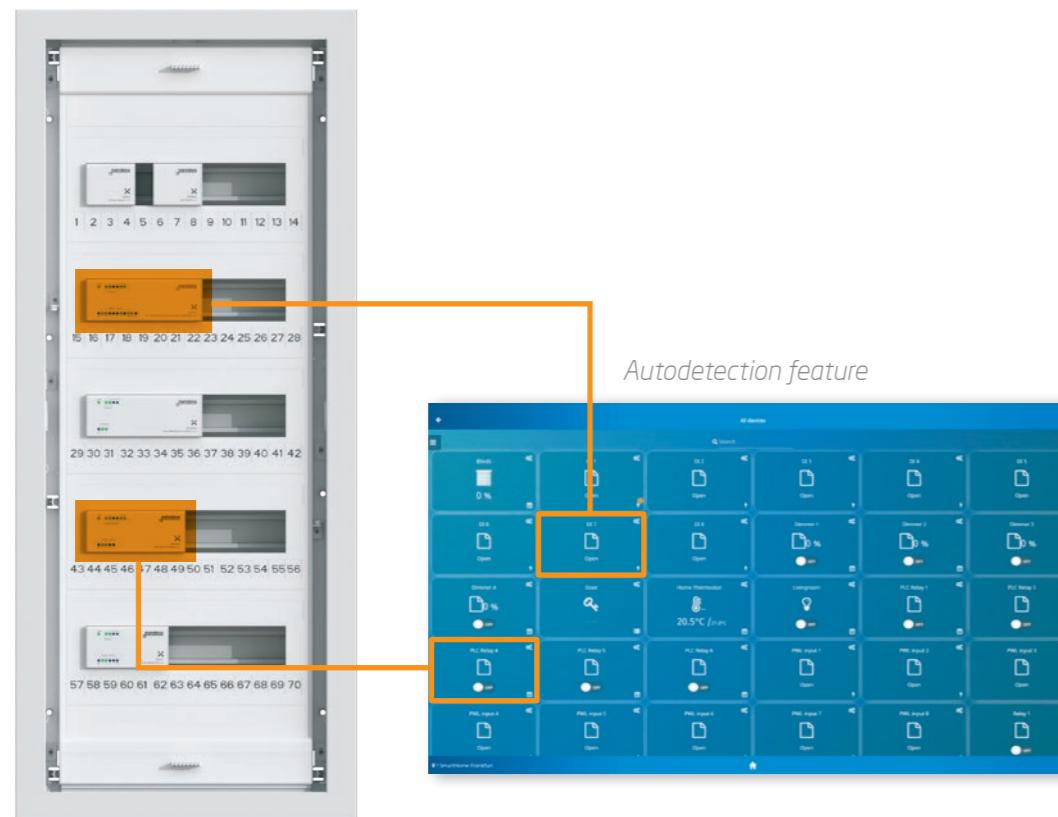
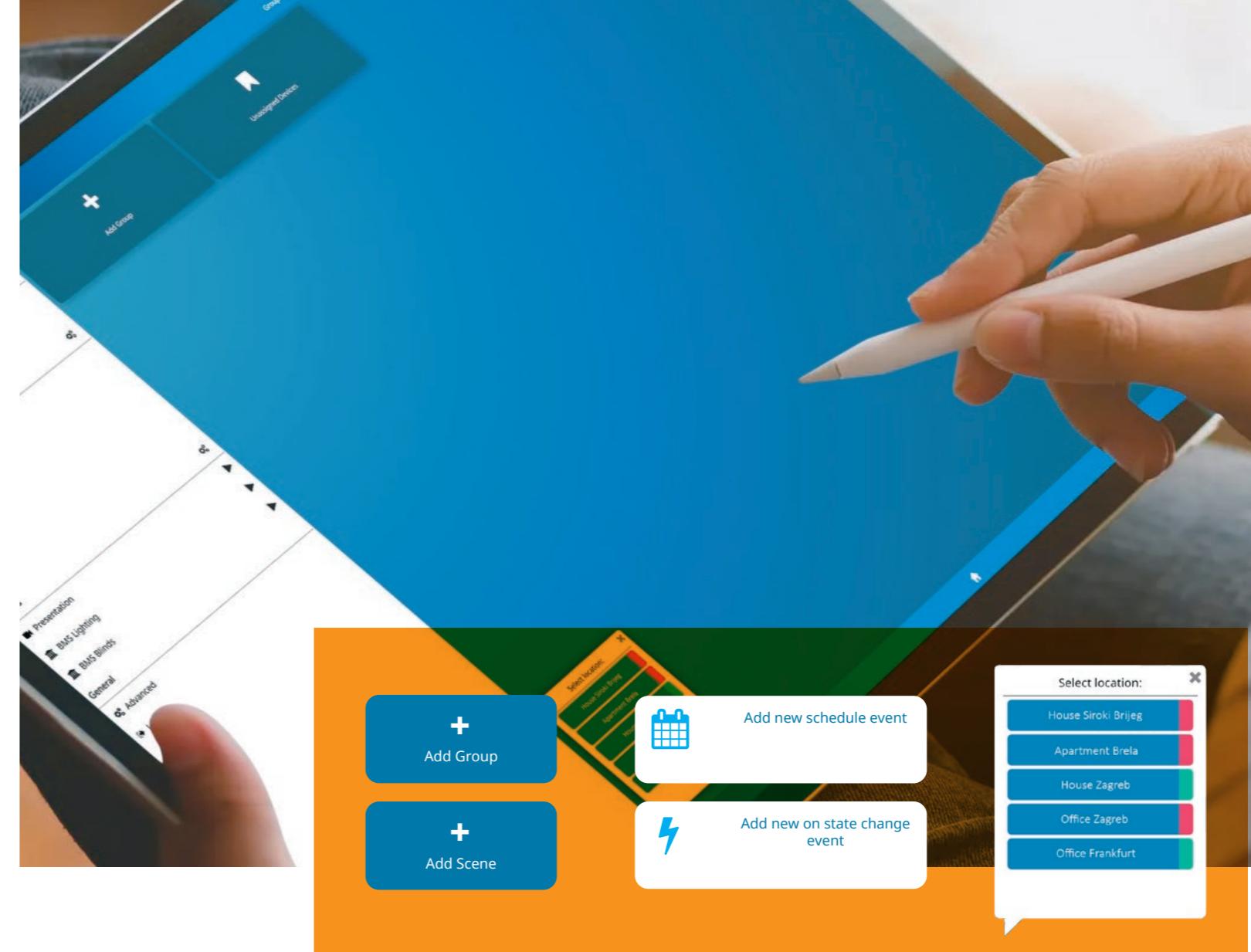
### MX aplikacija / MX application

MX aplikacija omogućuje potpunu kontrolu vašeg doma ili poslovnog okruženja. Interaktivno sučelje omogućava direktni pristup željenom uređaju ili unaprijed definiranom scenariju. Grupiranje uređaja, pridjeljivanje simbola i naziva, postavljanje uvjetovanih i vremenskih događaja, postavljanje scena samo su neke od brojnih mogućnosti MX aplikacije. Kontrola je u potpunosti u vašim rukama.

Potpuno dostupna web based aplikacija.

*The MX application provides complete control of your home or business environment. Interactive interface provides direct access to the connected device or predefined scenario. Grouping devices, setting symbols and names, defining conditioned or time-sensitive events are just some of the many features in MX application. Control is completely in your hands.*

*Completely available web based application.*



Autodetection feature

#### ORGANIZACIJA GRUPA I SCENA / GROUP AND SCENE ORGANIZATION

Aplikacija omogućava jednostavnu organizaciju uređaja kojima se upravlja koristeći opciju dodavanja grupa i scena. Organizacijom uređaja unutar privatnog ili poslovnog okruženja na ovaj način pruža se brzo i jasno snalaženje u aplikaciji. Dodavanje scena funkcija je koja omogućava postavljanje željenog ambijenta u jednom kliku.

*The application allows easy organization of the device which users manage using the group and scenes add option. Organizing devices within a private or business environment, provides quick and clear navigation in the application. Users can select the devices which want to include in the scene and set it up autonomous actions for the desired event.*

#### VREMENSKI DOGAĐAJI / TIME EVENTS

Postavljanje vremenskih i uvjetovanih događaja za sve one radnje za koje korisnici žele autonomost. S ovom opcijom korinici sve one učestale radnje mogu prepustiti sustavu te maksimalno uživati u svom domu ili poslovnom okruženju.

*Setting timing events for all those actions for which users want autonomy. With this option, users can leave all those frequent actions to the system and enjoy their home or business environment.*

#### MULTILOKACIJE / MULTILocations

Kuća, apartman, vikendica, voćnjak. Upravljajte svim instalcijama putem jedne aplikacije. MX aplikacija korisnicima omogućava brzi pristup i vezu između multilokacija koje koriste.

*House, apartment, cottage, orchard. Manage all installations through a single application. The MX application allows users to quickly access and connect between the multilocations they use.*

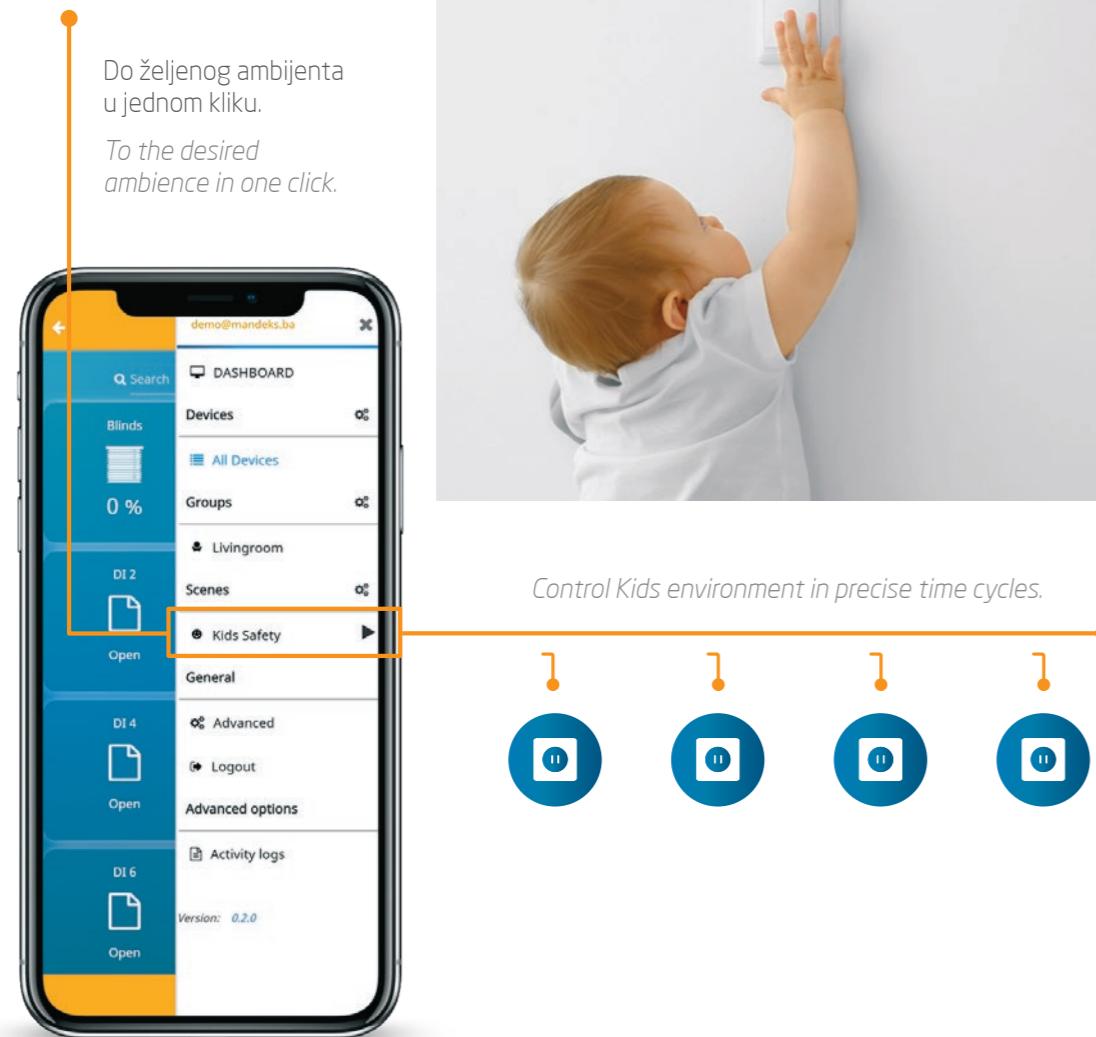


## APLIKACIJA / APPLICATION

## Scene / Scene

Organizacija doma ili poslovnog okruženja sa scenama ubrzava mnoge procese, te dodaje komponentu sigurnosti u svako okruženje. Korisnicima je putem aplikacije omogućeno dodavanje scena te postavljanje uvjetovanih događaja nad scenama. Zaboravite na radnje koje učestalo ponavljate i prepustite MX sustavu da radi za vas.

*Organizing a home or business environment with scenes speeds up many processes, and adds a security component to any environment. Users can add scenes and set conditional events over scenes via the app. Forget the actions you repeat often and let the MX system work for you.*

Sigurnost djece  
/ Kids safety

1

Dodajte novu scenu.  
*Add a new scene.*

2

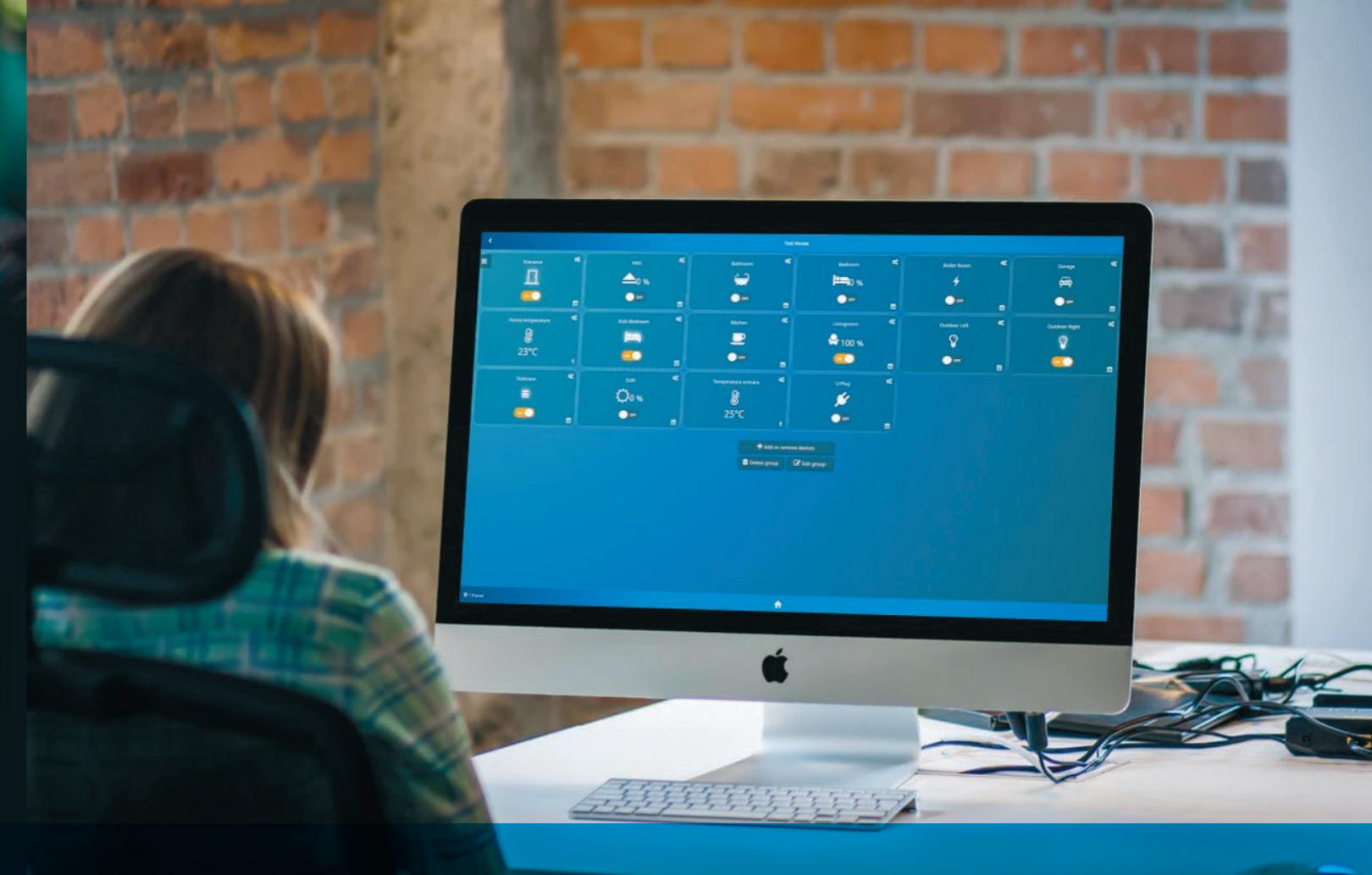
Odaberite uređaje.  
*Select devices.*

3

Uživajte!  
*Enjoy!*



Kreirajte scenarije i vremenski uvjetovane događaje.  
*Create scenarios and timing events.*



Bilo gdje.

Anywhere.



## INSTALACIJE / INSTALLATIONS

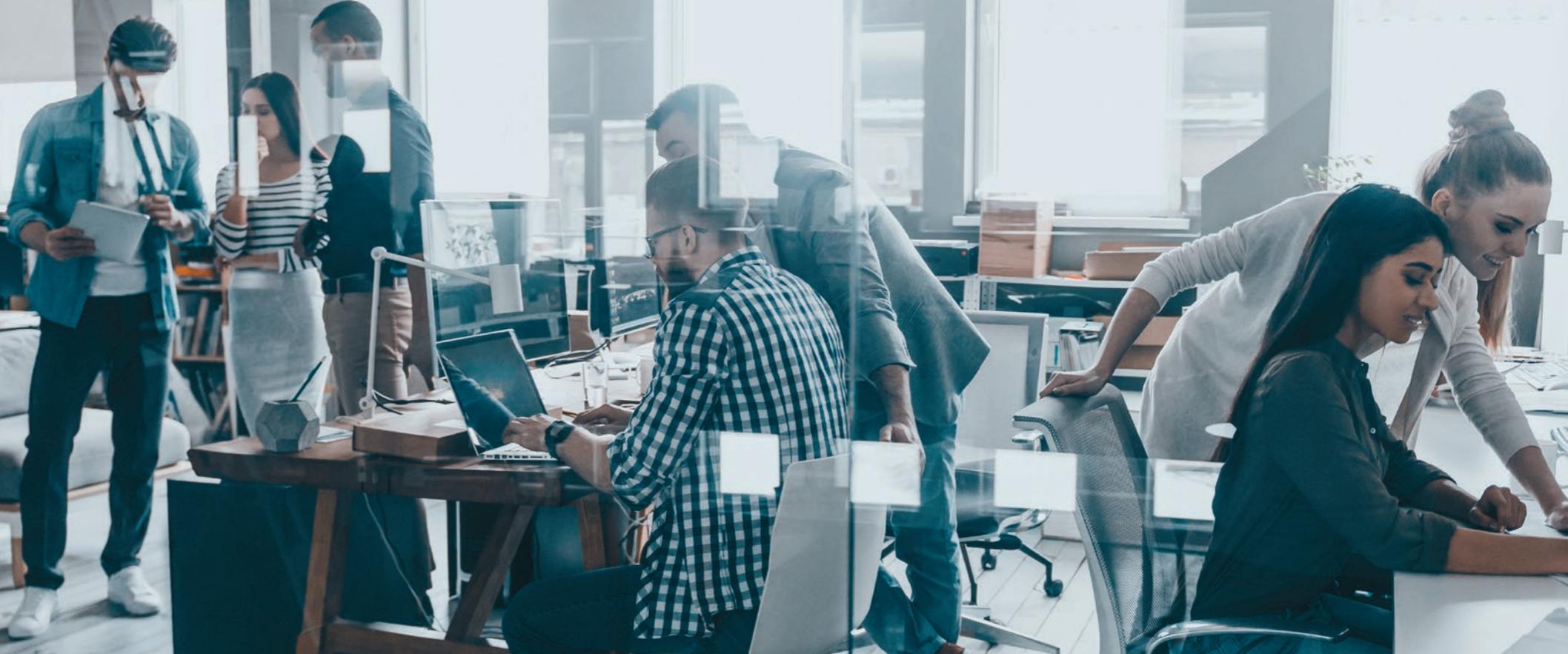
### Uređivač koda / Code editor

MX aplikacija otvara mogućnost upravljanja segmentima doma ili poslovнog okruženja direktno putem uređivača koda. Riječ je o karakteristici aplikacije namijenjenoj profesionalnim korisnicima i entuzijastima putem koje se otvaraju mogućnosti direktnije automatizacije doma ili poslovнog okruženja.

Uređivač koda prepozna komponente spojenih uređaja s imenima koje je zadao korisnik.

Ovom funkcionalnošću korisnicima je uvelike olakšano slaganje koda.

*The MX application opens the way for managing home or business environment segments directly through the code editor. This is an application feature that is intended for professional users and enthusiasts. With this functionality, there are open possibilities for more direct automation of the home or business environment. The code editor recognizes the components of the connected devices with the names assigned by the user. This functionality makes it easier to stack and track your code.*



#### ZAŠTO UREĐIVAČ KODA?

Svaki proces automatizacije sadrži nepredviđene situacije u kojima uključujemo funkciju direktnog kodiranja. Ovakav pristup omogućava rješavanje kompleksnih zahtjeva gdje jedini čimbenik nije MX aplikacija i hardver.

#### WHY A CODE EDITOR?

*Each automation process contains unforeseen situations in which we turn on the direct coding function. This approach allows solving complex requirements where the only factor is not MX applications and hardware.*



Mogućnost programiranja  
Programming capability



Integrirano rješenje  
Integrated solution



Za profesionalne korisnike i entuzijaste  
For professional users and enthusiasts

## INSTALACIJE / INSTALLATIONS

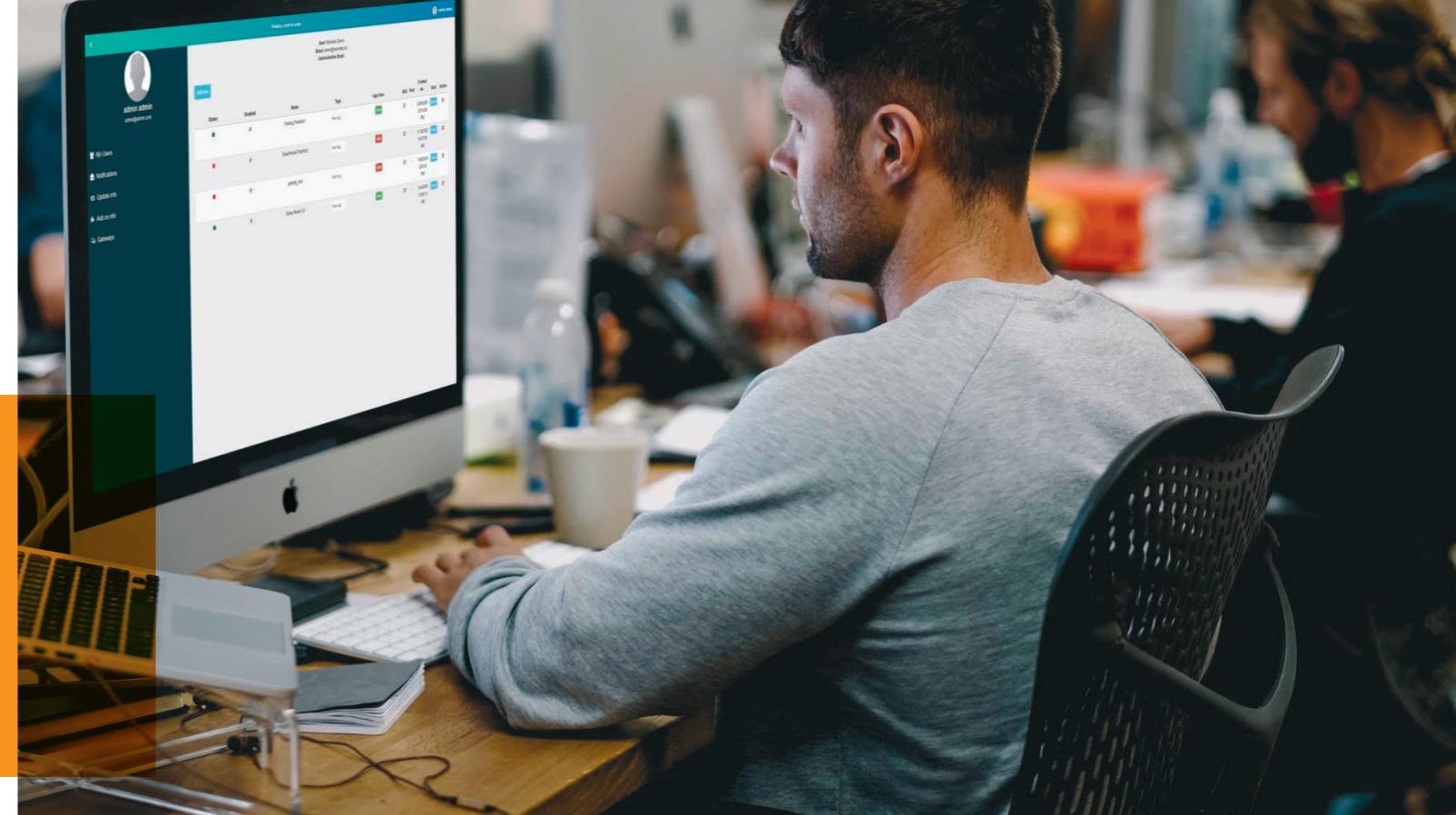
### Udaljena podrška / Remote servis

MX Automation u segmentima tehničke podrške pruža mogućnost udaljenog spajanja na instalacije korisnika s ciljem brzo i efikasnog uklanjanja problema. Ova značajka svakako je bitna za System integratore koji svojim klijentima žele pružiti brzu podršku bez gubitka mnogo vremena. S ciljem sigurnosti, aplikacija omogućava napredno i osnovno postavljanje prava pristupa za vlasnike instalacija i njihove podkorisnike.

*MX Automation in the technical support segment provides the ability to remotely connect to customer installations with quick and efficient troubleshooting. This feature is certainly essential for System integrators who want to provide fast support to their clients without wasting much time. For security purposes, the app provides advanced and basic setting access rights for installation owners and their sub-users.*

Zaboravite kompleksno programiranje kako bi postavili aplikaciju.

*Forget about complex installation and programming.*



## SISTEMSKA PRAVA PRISTUPA / SYSTEM ROLES AND PRIVILAGES

### Administrator

Sistem podrška i razvojni tim.  
*System support and development team.*

### System Integrator

Kompanije licencirane za instalaciju i održavanje MX sustava.  
*Companies that have a license to install and maintain MX systems.*

### Advanced User

Vlasnik instalacije s višom razine prava pristupa aplikaciji.  
*The owner of the installation with a higher level of access rights within the application.*

### Regular Users

Korisnici kojima vlasnik instalacije omogući pristup aplikaciji.  
*Users to whom the installation owner allows access to the application.*

Pretraga korisnika  
User search

Odabir korisnika  
User selection

Odobrenje od korisnika  
User approval

Udaljena podrška  
Remote support

Mogućnost udaljenog spajanja za brzu korisničku podršku.

*Possibility of remote connection for fast customer support.*

36

37

## INSTALACIJE / INSTALLATIONS

### Lakoća spajanja / Lakoća spajanja

U središtu MX sustava nalazi se Gateway koji putem modema ostvaruje komunikaciju s ostalim uređajima.

Uređaji podržavaju rad putem:

- 2 Wire komunikacije,
- RS485 komunikacije,
- Power Line komunikacije.

Širok komunikacijski pristup omogućava izvedbu sustava u raznim uvjetima, a jednostavnost spajanja olakšava postavljanje i održavanje sustava.

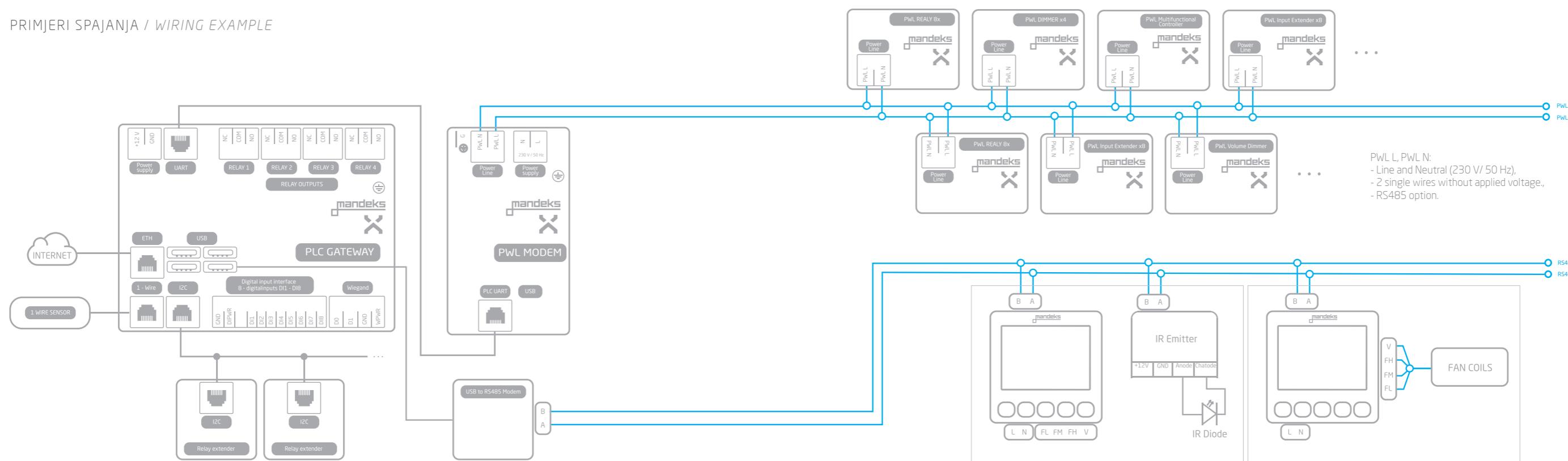
*At the center of the MX system is the Gateway which use the modem communicates with other devices. Devices support operation through:*

- 2 Wire communications,
- RS485 communications,
- Power Line communications.

*The wide communication approach enables the performance of the system in various conditions, and the ease of connection facilitates the installation and maintenance of the system.*



#### PRIMJERI SPAJANJA / WIRING EXAMPLE



## NAJAM I PAMETNI STAN / SMART RENTAL Dobitna kombinacija / Perfect combination

MX rental predstavlja hibridni sustav pametnog doma s kojim korisnici, uz sve pametne značajke sustava, dobivaju i hotelski sustav u segmentima najmova.

Ovakvim pristupom pametni apartman dobiva hotelsku značajku, a vlasnicima je omogućen udaljeno upravljanje smještajnim jedinicama.

*MX rental is a hybrid smart home system with which users, in addition to all the smart features of the system, also get a hotel system in the rental segments.*

*With this approach, the smart apartment gets a hotel feature, and the owners are enabled to remotely manage the accommodation units.*

Napredni smart home sustav s funkcijama hotelskog okruženja.

*Advanced smart home system with additional hotel rooms control functionality.*



- dodjela RFID ključeva
- kontrola grijanja/hlađenja
- kontrola svjetala
- kontrola roleti
- kontrola utičnica
- senzori poplave
- senzori dima
- + ostale mogućnosti

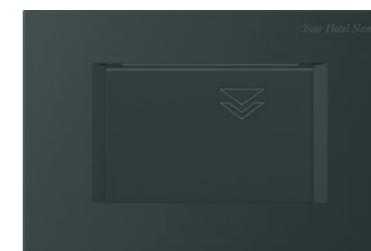
- assignment of RFID keys
- heating / cooling control
- light control
- shutter control
- socket control
- flood sensors
- smoke sensors
- + other options

Savršeno rješenje za poslovne korisnike - za potrebe najma vašeg stana!

*The perfect solution for business users - for renting your apartment!*



PAMETNI APARTMAN PLUS  
SUSTAV ZA OBavljanje NAJMA.  
/ SMART HOME PLUS RENTAL SYSTEM.





Više ne možete  
zaboraviti zaključati.

*You can't anymore  
forget to lock.*

Potpuna kontrola doma.  
*Complete home control.*

Pripremite ambijent  
za omiljeni film.

*Prepare the ambience  
for a favorite movie.*

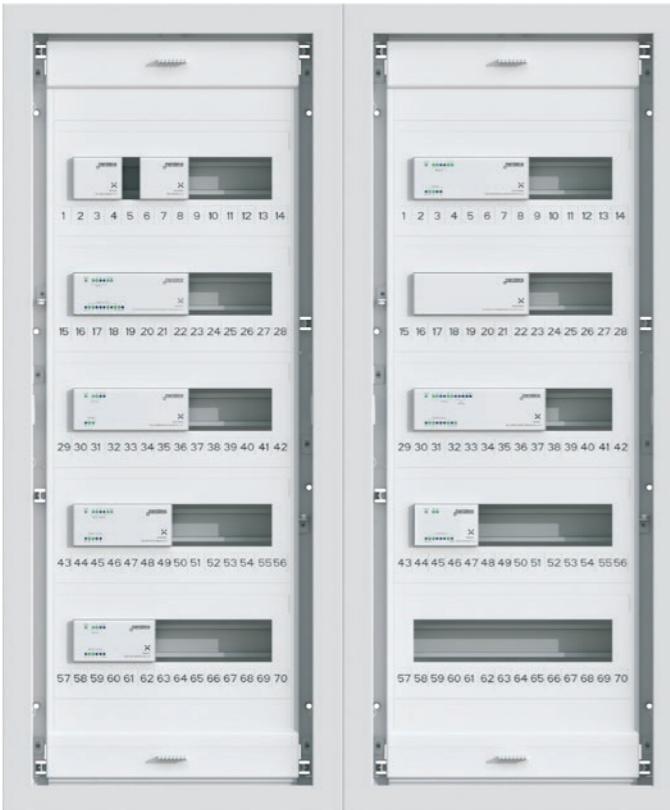
Prigušite svjetla  
ili glazbu po želji.

*Tune the lights or  
music like you wish.*

I mnoge druge  
mogućnosti.  
*And many other  
possibilities.*

# UREĐAJI / DEVICES

## Uredaji / Devices



<b>MXH</b>	<b>5</b>	<b>SAC</b>	<b>4(DI)</b>	<b>2(DO)</b>	<b>RS</b>
					tip komunikacije type of communication
					broj digitalnih/analognih izlaza number of digital/analogue outputs
					broj digitalnih ulaza number of digital inputs
					tip proizvoda product type
					broj modula u ormaru number of modules in the enclosure
oznaka grupe group label					



### PLC GATEWAY v 1.0

- središnja jedinica,
- spojen na internet putem Ethernet porta,
- kontroliran putem web / mobilne aplikacije,
- sastoji se od 8 digitalnih ulaza za senzore, 4 izlaza za releje, UART, I2C, 1-Wire RJ45 konektora i Wiegand konektora za čitače RFID kartica

### PLC GATEWAY v 1.0

- central unit,
- connected to internet by Ethernet port,
- controlled by web/mobile application,
- consisted from 8 digital inputs for sensors, 4 exits for relays, UART, I2C, 1-Wire RJ45 extension slots and Wiegand connectors for RFID card readers.

### PWL MODEM v 1.0

- jedinica za komunikaciju s prigušivačima i relejima,
- spojen s PLC Gatewayom priključkom RJ45 (UTP CAT 5E kabel),
- omogućuje komunikaciju između PLC Gateway i uređaja s PWL prefiksom (PWL Dimmer itd.).

### PWL MODEM v 1.0

- unit for communication with dimmers and relays,
- connected with PLC Gateway by RJ45 port (UTP CAT 5E cable),
- enables communication between PLC Gateway and all devices with PWL prefix (PWL Dimmer etc.).

### PWL RELAY MODUL

#### 8 IZLAZA v 1.0

- jedinica s 8 releja,
- komunicira s PLC Gateway-om preko postojećih instalacija žica/energetskih kabela 230 V / 50 Hz ili dvožičnom komunikacijom.

### PWL RELAY MODUL

#### 8 OUTPUTS v 1.0

- unit with 8 relays,
- communicate with PLC Gateway through existing installations wires/ power cables 230 V/50 Hz or by two wire communication.

### RELAY EXTENDER 8 IZLAZA v 1.0

- jedinica s dodatnih 8 relejnih izlaza,
- povezan s PLC Gateway-om putem RJ45 priključka rezerviranog za I2C proširenja (UTP CAT 5E kabel),
- podržava do 8 spojenih uređaja spojenih u lanac.

### RELAY EXTENDER 8 OUTPUTS v 1.0

- unit with additional 8 relay outputs,
- connected with PLC Gateway by RJ45 port reserved for I2C extensions (UTP CAT 5E cable),
- support up to 8 devices connected via "daisy chain" style.

### PWL DIMMER 4 IZLAZA v 1.0

- trailing edge prigušivač,
- ukupno 4 prigušivača svjetla u jednom uređaju,
- komunicira s PLC Gateway-om putem postojećih instalacija žice / naponski kabeli 230 V / 50 Hz ili dvožičnom komunikacijom.

### PWL DIMMER 4 OUTPUTS v 1.0

- trailing edge dimmer,
- totally 4 dimmers for illumination / lights in one device,
- communicate with PLC Gateway through existing installations wires / power cables 230 V / 50 Hz or by two-wire communication.

### PWL MODUL/EXTENDER 8 ULAZA v 1.0

- uređaj s 8 digitalnih ulaza,
- komunicira s PLC Gatewayom putem postojećim instalacijama žice / naponski kabeli 230 V / 50 Hz ili dvosmjernom komunikacijom ili se koristi kao proširenje PLC Gatewaya preko I2C priključka.

### PWL INPUT MODUL/EXTENDER 8 INPUTS v 1.0

- device with 8 digital inputs,
- communicate with PLC Gateway through existing installations wires/ power cables 230 V / 50 Hz or by two wire communication or used for extension of PLC Gateway via I2C port extension.

**MXH3SA4DI****MXH5SAC4DI2DO  
MXH5SAC42RS****MXH8SRC8DI7DO  
MXH8SRC87RS  
MXH8SRC54RS****MXH4VD****MXH7CU****AC SENSOR ADAPTER v 1.0**

- uređaj koji služi kao most između standardnog 230 V / 50 Hz AC senzora (primjer: senzor pokreta) i digitalnih ulaza na PLC Gateway-u ili PWL MODUL/EXTENDER-a (koji radi na 12 V DC).

**AC SENSOR ADAPTER v 1.0**

- bridge device between standard 220V/50Hz AC sensors (in example: movement sensor) and digital inputs on PLC Gateway or PWL INPUT MODUL/EXTENDER (which works in 12 V DC).

**MULTIFUNKCIONALNI KONTROLER v 1.0**

- multifunkcionalni upravljački uređaj s mogućnošću postavljanja Wiegand jedinica u svrhu kontrole pristupa,
- komunikacija putem postojećih instalacija žice / naponski kabeli 230 V / 50Hz,
- dvožičnom komunikacijom, RS485 (Modbus) - 4 digitalna ulaza,
- 2 relaja za komunikaciju s motorom,
- priključak za spajanje vanjskog gumba koji mogu ručno i nezavisno kontrolirati motor.

**MULTIFUNCTIONAL CONTROLLER v 1.0**

- multifunction control unit with the option of setting Wiegand units for the access control purposes,
- communicates through existing installations wires / power cables 230 V / 50 Hz,
- two wire communication, RS485 (Modbus) - 4 digital inputs,
- 2 relays for communication with tubular engine,
- connector for connecting external push button which may manually control tubular engine independently.

**PWL SMART ROOM CONTROLLER v 1.0**

- poluautomatski uređaj,
- dva načina rada,
- unaprijed programiran,
- komunicira s PLC Gateway-om dvožičnom komunikacijom.
- 7 unaprijed definiranih relejskih izlaza,
- 2 ulaza za AC senzore,
- 6 digitalnih DC ulaza,
- Wiegand ulaz,
- konektori za periferne uređaje.

**PWL SMART ROOM CONTROLLER v 1.0**

- semi automatic device,
- two working modules:
- pre-programmed,
- in communication with PLC Gateway two-wire communication.
- 7 predefined relay exits,
- 2 AC sensor inputs,
- 6 digital DC inputs,
- Wiegand input,
- connectors for peripheral devices.

**PWL PRIGUŠIVAČ ZVUKA v 1.0**

- prigušivač zvuka,
- uređaj za kontrolu stereo zvuka,
- 2 ženska stereo audio priključka 3.5 mm (stereo ulaz i stereo izlaz),
- most između izvora zvuka (na primjer audio konektori na PC-u) i pojačala,
- komunicira s PLC Gateway putem postojećim instalacijama žice / naponski kabeli 230 V / 50 Hz ili dvožičnom komunikacijom.

**PWL VOLUME DIMMER v 1.0**

- preamplifier volume controller (attenuator),
- device for control of stereo sound,
- 2 female stereo audio connectors 3.5 mm (stereo input and stereo output),
- bridge between sound source (in example audio connectors in PC) and amplifier, communicates with PLC Gateway through existing installations wires/power cables 230 V / 50 Hz or by two wire communication

**KONTROLNA JEDINICA 7" v 1.0**

- kontrolna jedinica s predinstaliranim aplikacijom,
- 800 x 480 RGB LCD zaslon,
- Industrijska kvaliteta, horizontalni kut gledanja 140°, vertikalni 130°
- 10-točkasti zaslon osjetljiv na dodir,
- napajanje DC 5 V 2.5 A

**CONTROL UNIT 7" v 1.0**

- control unit with preinstalled application,
- 800 x 480 RGB LCD display,
- Industrial quality, 140° viewing angle horizontal, 130° vertical,
- 10 point multi-touch touchscreen,
- power supply DC 5 V 2.5 A

**MXH3CTU3B**  
 **MXH3CTU3**



**MXH3CTU1B**  
 **MXH3CT13**

**DIGITALNI TERMOSTAT**

- Napajanje: 230 V AC, 50/60 Hz
- Vanjsko opterećenje: 3600 W / 16 A
- Pozadinsko osvjetljenje: bijelo/plavo
- Kućište: Vatrootporno ABS
- Tip instalacije: EU flush mounting
- Certifikat: CE (EMC & LVD) certifikacija
- Dimenzije: 86 x 86 x 15 mm
- Težina: 280 g

**DIGITAL THERMOSTAT**

- Power Supply: 230 V AC, 50/60 Hz
- Output Load: 3600 W / 16 A
- Backlight: white/blue
- Housing Case: Fire-Proof ABS
- Installation type: EU flush mounting
- Approval: CE (EMC & LVD) certification
- Unit dimension: 86 x 86 x 15 mm
- Unit weight: 280 g

**HOTEL TEHRMOSTAT WITH RECEPTION COMMUNICATION MODULE**

- Napajanje: 230 V AC, 50/60 Hz
- Vanjsko opterećenje: 3600 W / 16 A
- Pozadinsko osvjetljenje: bijelo/plavo
- Kućište: Vatrootporno ABS
- Tip instalacije: EU flush mounting
- Certifikat: CE (EMC & LVD) certifikacija
- Dimenzije: 86 x 86 x 15 mm
- Težina: 280 g

## UREĐAJI / DEVICES

## MX periferija / MX periphery



MXHAC20 SB-WH


## RFID ČITAČ KARTICA 2M

- Komunikacijsko sučelje: Wiegand 26 bit-a (W1) ili 34 bit-a (W2)
- Radna frekvencija: 13.56 MHz
- Tip kartice: EM ili Mifare kartica
- Daljina prijenosa: WG ≤ 100 m
- Raspon blizine čitanja: 3-10 cm
- Napajanje: DC 12 V
- Temperatura: -25 °C do 75 °C
- Relativna vlažnost: 10% - 90%
- Buzzer: Ugrađen glasan zvučnik

MXHAC20 NB




## RFID CARD READER 2M

- Output Interface: Wiegand 26 bit (W1) or 34 bit (W2)
- Operating Frequency: 13.56 MHz
- Reader Card: EM or Mifare Card
- Transmitting Distance: WG ≤ 100 m
- Proximity Range: 3-10 cm
- Power Supply: DC 9~12 V
- Temperature: -25 °C to 75 °C
- Relative Humidity: 10% - 90%
- Buzzer: Built-in Loud Speaker

**MXHAC21W1F1**  
**MXHAC21W1F2**  
**MXHAC21W2F1**  
**MXHAC21W2F2**

RFID ČITAČ KARTICA  
S TOUCH TIPKOVNICOM

- Komunikacijsko sučelje: Wiegand 26 bit-a (W1) ili 34 bit-a (W2)
- Radna frekvencija: 125 kHz (F1) ili 13.56 MHz (F2)
- Tip kartice: EM ili Mifare kartica, kartica, PIN
- Daljina prijenosa: WG ≤ 100 m
- Raspon blizine čitanja: 3-10 cm
- Napajanje: DC 9~12 V
- Temperatura: -25 °C do 75 °C
- Relativna vlažnost: 10% - 90%
- Brzina prepoznavanja: <= 5 s
- LED: Ugrađen LED (LED s dvije boje)
- Buzzer: Ugrađen glasan zvučnik
- Boja: Crna
- Materijal: PVC materijal (crna smola za vodootpornu funkciju)
- Dimenzije: 112 x 75 x 21 mm

- RFID CARD READER WITH TOUCH KEYPAD**
- Output Interface: Wiegand 26 bit (W1) or 34 bit (W2)
  - Operating Frequency: 125 kHz (F1) or 13.56 MHz (F2)
  - Reader Card: EM or Mifare Card, Card or PIN
  - Transmitting Distance: WG ≤ 100 m
  - Proximity Range: 3-10 cm
  - Power Supply: DC 9~12 V
  - Temperature: -25 °C to 75 °C
  - Relative Humidity: 10% - 90%
  - Recognition Speed: <= 5 s
  - LED: Built-in LED (Double Color LED)
  - Buzzer: Built-in Loud Speaker
  - Color: Black
  - Material: PVC Case Material (black resin for water-proof function)
  - Dimension: 112 x 75 x 21 mm

**MXHAC20W1F1**  
**MXHAC20W1F2**  
**MXHAC20W2F1**  
**MXHAC20W2F2**



## RFID ČITAČ KARTICA

- Vanjsko sučelje: Wiegand 26 bit-a (W1) ili 34 bit-a (W2)
- Radna frekvencija: 125 kHz (F1) ili 13.56 MHz (F2)
- Tip kartice: EM ili Mifare kartica
- Daljina prijenosa: WG ≤ 100 m
- Raspon blizine čitanja: 3-10 cm
- Napajanje: DC 9~12 V
- Temperatura: -25 °C to 75 °C
- Relativna vlažnost: 10% - 90%
- Brzina prepoznavanja: <= 5 s
- LED: Ugrađen LED (LED s dvije boje)
- Zvučnik: Ugrađen zvučnik
- Boja: Crna
- Materijal: PVC materijal (crna smola za vodootpornu funkciju)
- Dimenzije: 112 x 75 x 21 mm

- RFID CARD READER**
- Output Interface: Wiegand 26 bit (W1) or 34 bit (W2)
  - Operating Frequency: 125 kHz (F1) or 13.56 MHz (F2)
  - Reader Card: EM or Mifare Card
  - Transmitting Distance: WG ≤ 100 m
  - Proximity Range: 3-10 cm
  - Power Supply: DC 9~12 V
  - Temperature: -25° C to 75° C
  - Relative Humidity: 10% - 90%
  - Recognition Speed: <= 5 s
  - LED: Built-in LED (Double Color LED)
  - Buzzer: Built-in Loudspeaker
  - Color: Black
  - Material: PVC Case Material (black resin for water-proof function)
  - Dimension: 112 x 75 x 21 mm

**MXHAC22**RFID ČITAČ KARTICA S METALnim  
KUĆIŠTEM I TIPKOVNICOM

- Vanjsko sučelje: Standardno Wiegand 26 bit-a ili 34 bit-a
- Radna frekvencija: 125 KHz ili 13.56 MHz
- Čitač kartica: EM ili Mifare kartica, kartica ili otvaranje vrata PIN-om.
- Daljina prijenosa: WG ≤ 100 m
- Raspon blizine: 3-10 cm
- Napajanje: DC 9~12 V
- Temperatura: -25 °C do 75 °C
- Relativna vlažnost: 10% - 90%
- Brzina prepoznavanja: <= 5 s
- LED: Ugrađen LED (LED s dvije boje)
- Buzzer: Ugrađen glasan zvučnik
- Boja: Crna ili bijela
- Materijal: PVC materijal (crna smola za vodootprunu funkciju)
- Dimenzije: 120 x 60 x 21 mm

METAL CASE RFID READER  
WITH KEYPAD

- Output Interface: Standard Wiegand 26 bit or 34 bit
- Operating Frequency: 125 KHz or 13.56 MHz
- Reader Card: EM or Mifare Card, Card or PIN Opening Door Mode.
- Transmitting Distance: WG ≤ 100 m
- Proximity Range: 3-10 cm
- Power Supply: DC 9~12 V
- Temperature: -25 °C to 75°C
- Relative Humidity: 10% - 90%
- Recognition Speed: <= 5 s
- LED: Built-in LED (Double Color LED)
- Buzzer: Built-in Loud Speaker
- Color: Black or White
- Material: PVC Case Material (Black Resin for Water-Proof Function)
- Dimension: 120 x 60 x 21 mm



MXHDP12 NB

- NB
- SG
- ES



MXHDP14 NB

- NB
- SG
- ES



MXHDP20 SB-WH

<span style="background-color: black; width: 10px; height: 10px; display: inline-block;"></span> NB-RG	<span style="background-color: red; width: 10px; height: 10px; display: inline-block;"></span> NB-RD	<span style="background-color: green; width: 10px; height: 10px; display: inline-block;"></span> NB-GR	<span style="background-color: white; width: 10px; height: 10px; display: inline-block;"></span> NB-WH
<span style="background-color: black; width: 10px; height: 10px; display: inline-block;"></span> SB-RG	<span style="background-color: red; width: 10px; height: 10px; display: inline-block;"></span> SB-RD	<span style="background-color: green; width: 10px; height: 10px; display: inline-block;"></span> SB-GR	<span style="background-color: white; width: 10px; height: 10px; display: inline-block;"></span> SB-WH
<span style="background-color: black; width: 10px; height: 10px; display: inline-block;"></span> AT-RG	<span style="background-color: red; width: 10px; height: 10px; display: inline-block;"></span> AT-RD	<span style="background-color: green; width: 10px; height: 10px; display: inline-block;"></span> AT-GR	<span style="background-color: white; width: 10px; height: 10px; display: inline-block;"></span> AT-WH
<span style="background-color: black; width: 10px; height: 10px; display: inline-block;"></span> ES-RG	<span style="background-color: red; width: 10px; height: 10px; display: inline-block;"></span> ES-RD	<span style="background-color: green; width: 10px; height: 10px; display: inline-block;"></span> ES-GR	<span style="background-color: white; width: 10px; height: 10px; display: inline-block;"></span> ES-WH

boja blende / blind colour  
boja svjetla / light colour

**DEKORATIVNI PANEL 2M**

- dekorativni panel montira se na 2M TEM nosač
- uporaba za indikaciju broja sobe te određenih simbola

**DECORATIVE PANEL 2M**

- decorative panel is mounted on a 2M TEM bracket
- use to indicate the room number and certain symbols

MXHAC25

**RFID USB PROGRAMATOR**

- Sučelje: (EM-ID 125 KHz) kartica ili 13.56 Mhz Mifare kartica
- Čitač kartica: EM ili Mifare kartica
- Raspon blizine čitanja: 5 - 10 cm
- Napajanje: 5 V DC na USB-u
- Temperatura: -10 °C do 70 °C
- Boja: Crna
- Dimenzije: 108 x 78 x 28 mm

**RFID USB PROGRAMMING UNIT**

- Interface: (EM-ID 125 KHz) Card or 13.56 Mhz Mifare card
- Reader Card: EM or Mifare Card
- Proximity Reading Range: 5-10 cm
- Power Supply: 5 V DC on USB
- Temperature: -10 °C to 70 °C
- Color: Black
- Dimension: 108 x 78 x 28 mm

MXHSE40

**STROPNI SENZOR POKRETA**

- Radni napon: DC 9 ~ 16 V
- Struja potrošnje: ≤ 18 mA (DC 12 V)
- Daljina detekcije: 6-8 m
- Kut detekcije: 360°
- Temperatura: -10~50 °C
- Izlaz alarma: N.C./N.O (opcionalno)
- Dimenzije: 88 x 22 mm

**CEILING PIR MOTION SENSOR**

- Working Voltage: DC 9~16 V
- Consumption Current: ≤ 18 mA (DC 12 V)
- Detecting Distance: 6-8 m
- Detecting Angle: 360°
- Temperature: -10~50°C
- Alarm output: N.C./N.O (optional)
- Dimension: 88 x 22 mm

MXHSE30

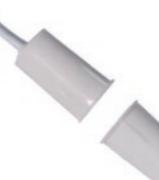
**MAGNETNI SENZOR**

- Protupožarni ABS štit
- Nazivni napon: 200 V DC
- Nazivna struja: 300 mA
- Nazivna snaga: 3 W
- Način spajanja: N.C./N.O
- Radna udaljenost: više od 15 mm, manje od 20 mm

**MAGNET SENSOR**

- Anti-fire ABS shield
- Rated Voltage: 200 V DC
- Rated Current: 300 mA
- Rated Power: 3 W
- Connecting Mode: N.C./N.O
- Operating Distance: more than 15 mm, less than 20 mm

MXHSE31

**MAGNETNI SENZOR UGRADBENI**

- Protupožarni ABS štit
- Nazivni napon: 200 V DC
- Nazivna struja: 100 mA
- Nazivna snaga: 2 W
- Način spajanja: N.C./N.O
- Radna udaljenost: više od 15 mm, manje od 20 mm

**MAGNET SENSOR BUILT-IN**

- Anti-fire ABS shield
- Rated Voltage: 200 V DC
- Rated Current: 100 mA
- Rated Power: 2 W
- Connecting Mode: N.C./N.O
- Operating Distance: more than 15 mm, less than 20 mm

MXHRS485C

**USB-RS485 PRETVARAČ**

- Protupožarni ABS štit
- Nazivni napon: 200 V DC
- Nazivna struja: 100 mA
- Nazivna snaga: 2W
- Način spajanja: N.C./N.O
- Radna udaljenost: više od 15 mm, manje od 20 mm

**MAGNET SENSOR BUILT-IN**

- Anti-fire ABS shield
- Rated Voltage: 200 V DC
- Rated Current: 100 mA
- Rated Power: 2 W
- Connecting Mode: N.C./N.O
- Operating Distance: more than 15 mm, less than 20 mm

MXHSE13

**METEO SENZOR TEMPERATURE I VLAŽNOSTI**

- Raspon mjerena: -40~80 °C; 0%-100% RH
- Preciznost: ±0.5 °C (25°C); ± 3% RH (5% RH-95RH, 25°C)
- Izlazni signal: RS485 (Modbus protokol)
- Zaštita: IP65

**METEO TEMPERATURE & HUMIDITY SENSOR**

- Measuring range: -40~80 °C; 0%-100% RH
- Accuracy: ±0.5 °C (25 °C); ±3% RH (5% RH-95 RH, 25 °C)
- Output signal: RS485 (Modbus protocol)
- Ingress Protection: IP65

\* Proizvod je modularan. Za funkcionalnost RFID čitača, potrebno je dodatno odabrati opciju RFID modula MXHDP11 s LED svjetlom. Opcije boja LED svjetla su WH, RD, GR i RG. Za funkcionalnost LED vizualizacije, potrebno je dodatno odabrati opciju LED modula MXHDP10. Opcije boja LED svjetla su WH, RD i GR. / Product is modular. For RFID reader functionality, it is necessary to select MXHDP11 RFID module with LED light. LED light color options are WH, RD, GR and RG. For LED visualization functionality, it is necessary to select MXHDP10 LED module. LED light color options are WH, RD, GR.

\*\* Proizvod je modularan. Za potpunu funkcionalnost, potrebno je dodatno odabrati RFID (MXHDP11) i LED module u crveno-zelenoj izvedbi (MXHDP10RG). RFID module dolazi u opcijama boje WH, GR i RD. / Product is modular. For full functionality it is necessary to additionally select RFID reader (MXHDP11) and LED module in red-green option (MXHDP10RG). RFID module LED light options are WH, GR and RD.

**MXHSE22****SENZOR SMJERA VJETRA**

- Raspon mjerena: 0~45 m/s; 0~70 m/s
- Preciznost:  $\pm (0.3 + 0.03 V)$  m/s ( $V$ : stvarna brzina vjetra)
- Rezolucija: 0.1 m/s
- Napajanje: DC 5 V; DC 9~30 V
- Izlazni signal: Puls; Struja; Napon; RS485/RS232;
- Početna brzina vjetra:  $\leq 0.5$  m/s
- Radna okolina: -35 °C ~ 60 °C;  $\leq 100\%$  RH, nekondenzirano
- Materijal: Karbonska vlakna

**WIND SPEED AND DIRECTION SENSOR**

- Measuring Range: 0~45 m/s; 0~70 m/s
- Accuracy:  $\pm (0.3 + 0.03 V)$  m/s ( $V$ : real-time wind speed)
- Resolution: 0.1 m/s
- Power supply: DC 5 V; DC9 ~30 V
- Output signal: Pulse; Current; Voltage; RS485/RS232;
- Start wind speed:  $\leq 0.5$  m/s
- Working environment: -35 °C ~ 60 °C;  $\leq 100\%$  RH, No condensation
- Material: Carbon fiber

- |           |               |
|-----------|---------------|
| <b>NB</b> | / night black |
| <b>SB</b> | / soft black  |
| <b>AT</b> | / anthracite  |
| <b>ES</b> | / elox silver |
| <b>SG</b> | / sand gold   |
| <b>IW</b> | / ivory white |
| <b>PW</b> | / polar white |

**MXHSE23****SENZOR PADALINA**

- Napajanje: 10-30 V DC
- Izlazni signal: Relaj (NO/NC); RS485
- IP razred: IP68
- Normalna radna snaga: 0.4 W
- Radna snaga tijekom grijanja: 2.4 W
- Uvjeti skladištenja: -40 °C ~ +80 °C
- Dimenzije: 89 x 60 x 38 mm

**RAIN AND SNOW SENSOR**

- Power supply: 10-30 V DC
- Output signal: Relay (NO/NC); RS485
- IP Grade: IP68
- Normal working power: 0.4 W
- Operating power during heating: 2.4 W
- Storage Condition: -40 °C ~ +80 °C
- Dimension: 89 x 60 x 38 mm

**MXHSE24****SENZOR VLAŽNOSTI TEMPERATURE TLA**

- Raspon mjerena: 0~100%; -30~70 °C
- Preciznost:  $\pm 3\%$ ;  $\pm 0.2$  °C
- Radni napon: 7~24 V
- Radna struja: < 3 mA
- Izlazni signal: RS485
- Klasa zaštite: IP68

**SOIL HUMIDITY AND TEMPERATURE SENSOR**

- Measuring Range: 0~100%; -30~70 °C
- Accuracy:  $\pm 3\%$ ;  $\pm 0.2$  °C
- Working voltage: 7~24 V
- Working current: < 3 mA
- Output signal: RS485
- Protection class: IP68

**MXHSE11****TEMPERATURNA SONDA**

- Raspon napona napajanja: 3.0 V do 5.5 V (DC)
- Raspon radne temperature: -55 °C do +125 °C
- Raspon temperature skladištenja: -55 °C do +125 °C
- Preciznost u rasponu od -10 °C do +85 °C:  $\pm 0.5$  °C
- Vanjski izvodi: Žuto (VCC), Crveno (DATA), Crno (GND)

**TEMPERATURE PROBE**

- Power supply range: 3.0 V to 5.5 V (DC)
- Operating temperature range: -55 °C to +125 °C
- Storage temperature range: -55 °C to +125 °C
- Accuracy over the range of -10 °C to +85 °C:  $\pm 0.5$  °C
- Output leads: Yellow (VCC), Red (DATA), Black (GND)

**MXHSE42****SENZOR POPLAVE**

- napajanje: 12 V DC
- Raspon radne temperature: 0 °C - 50 °C
- Relajni izlazi: NC / NO optional
- Radna snaga: < 0.3 W
- Radna snaga za vrijeme alarma: 0.5 W
- Operativni raspon vlažnosti: 20% RH - 100% RH
- Material: Metal
- Težina: 200 g

**WATER LEAK SENSOR**

- Working voltage: 12 V DC
- Operating temperature: 0 °C - 50 °C
- Relay output: NC / NO optional
- Normal working power: < 0.3 W
- Power during alarm: 0.5 W
- Operating humidity: 20% RH -100% RH
- Material: Metal
- Weight: 200 g



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