KNX IP system devices

USE CASES

MADE IN GERMANY SINCE 1912

CONTENTS


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Digital infrastructure with KNX Secure

Effectively secure your digital infrastructure in buildings and rely on KNX IP Secure for the installation. It encrypts the data communication in the network and ensures encoded transmission of all KNX telegrams. This also ensures secure communication with visualisations.
KNX IP Secure and Data Secure stand for secure data transmission in KNX systems. KNX Data Secure means that selected KNX telegrams are authenticated and encrypted, independently of the medium. In this way, the communication between sensor and actuator cannot be interpreted or manipulated. The rooms are connected to the central visualisation system via an IP backbone using the JUNG KNX IP interface. The KNX IP router can also be used as an area or line coupler.

Product characteristics and advantages

	KNX IP ROUTER IPR 300 SREG	KNX IP INTERFACE IPS 300 SREG	KNX POWER SUPPLY WITH IP INTERFACE 20320 1S IPS R
INPUT VOLTAGE	KNX bus	KNX bus	230 V AC / 110 V AC
DESIGN STYLE	2 rail units	2 rail units	6 rail units
POWER CONSUMPTION	max. 1 W	max. 1 W	max. 12 W
OLED DISPLAY	•	•	
IP TUNNEL CONNECTION	up to 8 possible	up to 8 possible	up to 8 possible
KNX SECURE READY	•	•	•
COMPATIBLE (KNX DATA SECURE)	from ETS 5.7	from ETS 5.7	from ETS 5.7
COMPATIBLE (KNX IP SECURE)	from ETS 5.7	from ETS 5.7	from ETS 5.7
EXTENDED CONFIGURATION VIA TELNET OR ADDITIONAL SOFTWARE	•	•	•
FAILURE REPORTING OF THE KNX SYSTEM TO THE IP SYSTEM	•	•	•
ELECTRICAL ISOLATION BETWEEN KNX AND IP NETWORK	•	•	•
KNX IP ROUTING	•		
REMOTE ACCESS OF THE KNX SYSTEM *		•	
PRESENCE CONTROL WITHOUT ADDITIONAL LOGIC MODULES			•

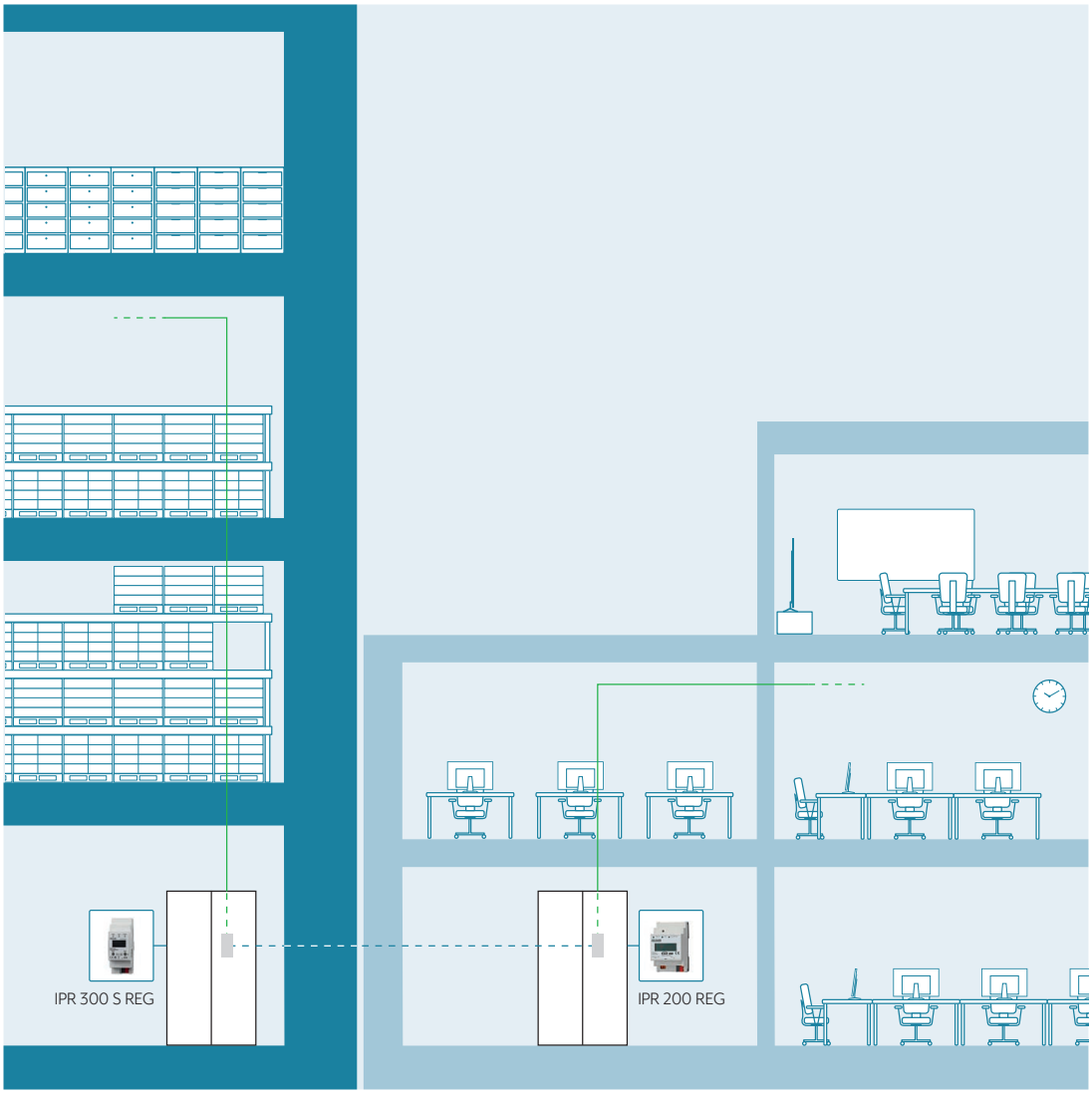
* Additional licence required for an extra fee

Use case

EXPANSION OF AN EXISTING BUSINESS

Expansion of an existing business

A new warehouse fits logistically and architecturally into the arrangement of the existing building. Similarly, there is no need to rethink automation in order to integrate the new warehouse into the existing KNX system.



Use the already used central devices (e.g. weather station, visualisation) of the existing system and enhance them with the devices of the newly created construction phase.

Objective of the project

- Resource and cost saving expansion of an existing system
- Utilisation of synergy effects from the existing system
- Galvanic separation of the construction sections
- Increase of the maximum expansion length

Steps in ETS

- Add new line
  - Add IPR 300 S REG as KNX IP router
- Use IPR 300 S REG in unencrypted mode
  - Activate and put filter tables into operation
- Put all other devices into operation according to the manufacturer specifications

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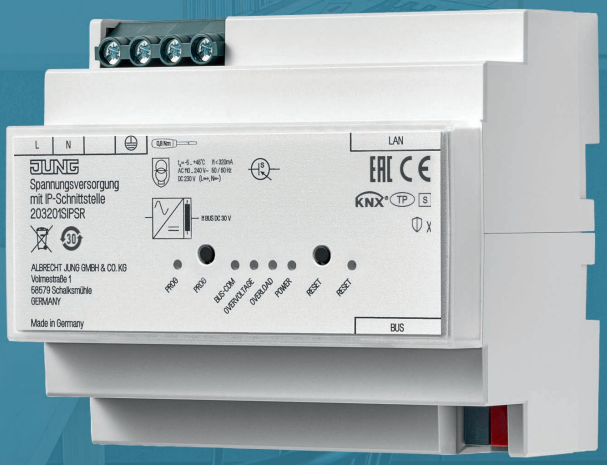
Use case



NEW CONSTRUCTION OF AN APARTMENT

New construction of an apartment

Design your own realm individually. Here, KNX offers many automation possibilities. For a new building, create a new KNX project. To do so, you need a power supply with IP interface and then integrate the required devices.

With the ideal selection of devices, the power consumption is reduced and with it the efficiency increased. If required, a visualisation can be added later without extending the KNX system devices.

Objective of the project

- Resource and cost saving construction of a new installation
- High performance and future-proof installation

Steps in ETS

- Create a new project.
- Add new lines
  - Add 20320 IS IPS R as KNX data interface
- Put all other devices into operation according to the manufacturer specifications

Additional note

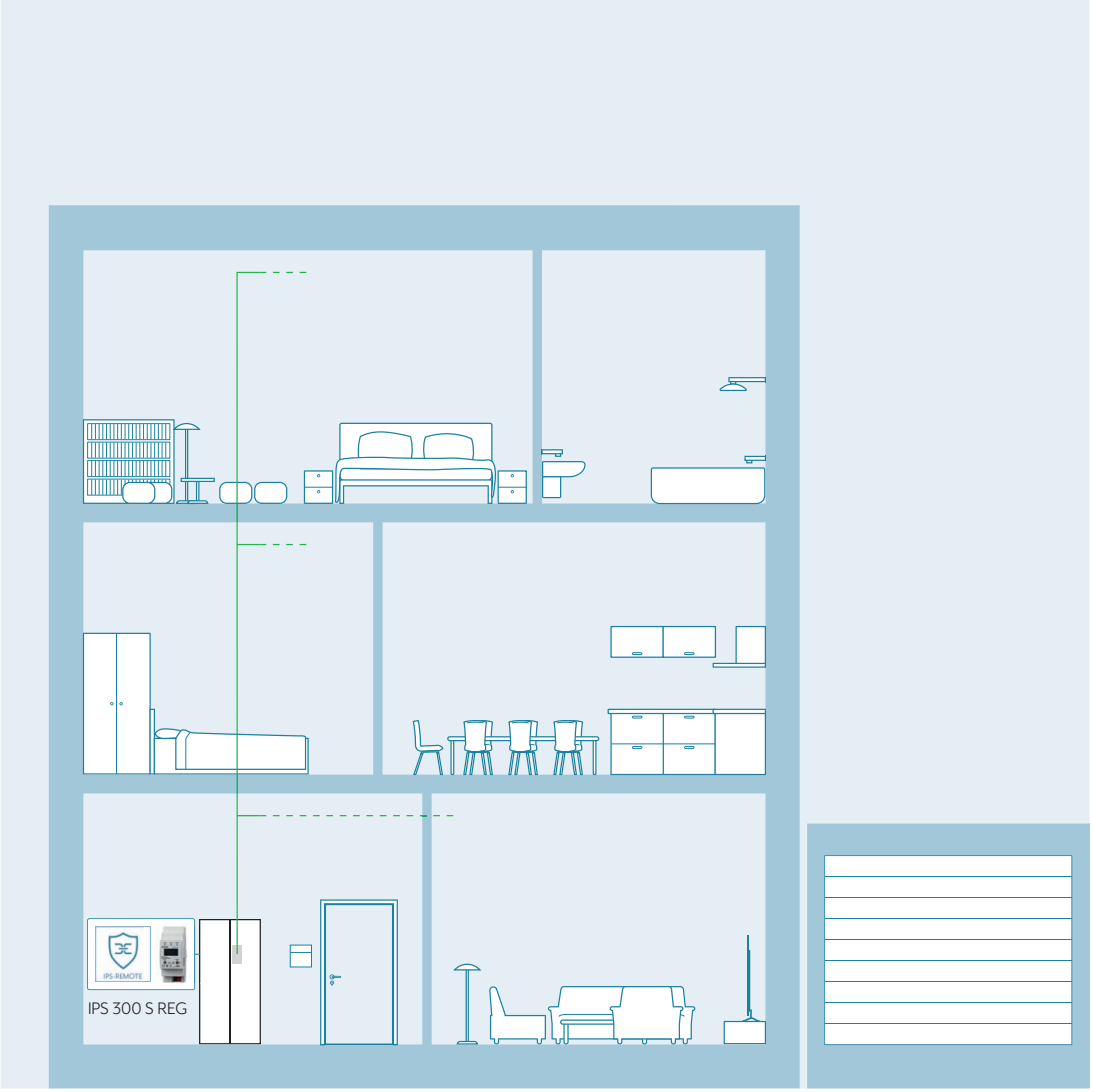
- Later extension of a visualisation possible (for example, Smart Visu Server)

Use case

NEW CONSTRUCTION OF A DETACHED HOUSE

New construction of a detached house

Your own four walls to your own taste. Here, KNX offers many individual automation possibilities. For a new building, create a new KNX project. To do so, you need an IP interface and then integrate the required devices.



The optional software upgrade of the interface makes remote configuration possible: after commissioning, it is thus possible to access the system from outside of the customer network - naturally with the permission of the house owner. Remote access means no more driving time and the work is planned more effectively. If required, a visualisation can be added later without extending the KNX system devices.

Objective of the project

- Resource and cost saving construction of a new installation
- High performance and future-proof installation

In connection with the optional software upgrade:

- Additional project configuration possible without travel costs
- The highest level of security during commissioning even from outside the customer network

Steps in ETS

- Create a new project.
- Add new line
  - Add IPS 300 S REG as KNX interface
- Put all other devices into operation according to the manufacturer specifications

In connection with the software upgrade:

- Purchase of the IPS Remote licence via MyJUNG
- Allocate project password
- Use IPS 300 S REG in encrypted mode (secure mode)
- Allocation of the device certificate
- Allocation of the release code for the remote configuration

Additional note

- Later extension of a visualisation possible (for example, Smart Visu Server)

Use case

NEW CONSTRUCTION OF A TWO-FAMILY HOUSE

New construction of a two-family house

Two homes under one roof. Here, KNX offers many individual automation possibilities. For a new building, create a new KNX project. You take account of each party with its own KNX IP router and then integrate the desired devices.

This division ensures that each party can only access its own KNX island system. At the same time, central components can, however, be jointly used. In this way, a central weather station provides the two individual house parties with automation-relevant data.

Objective of the project

- Exact separation of both living areas
- Joint use of central components

Steps in ETS

- Create a new project.
- Add new lines
  - Add IPR 300 S REG as an IP router in each areas
- Use IPR 300 S REG in unencrypted mode
  - Activate and put filter tables into operation
  - Activate the lock for reprogramming the subline (e.g. outdoor area)
- Put all other devices into operation according to the manufacturer specifications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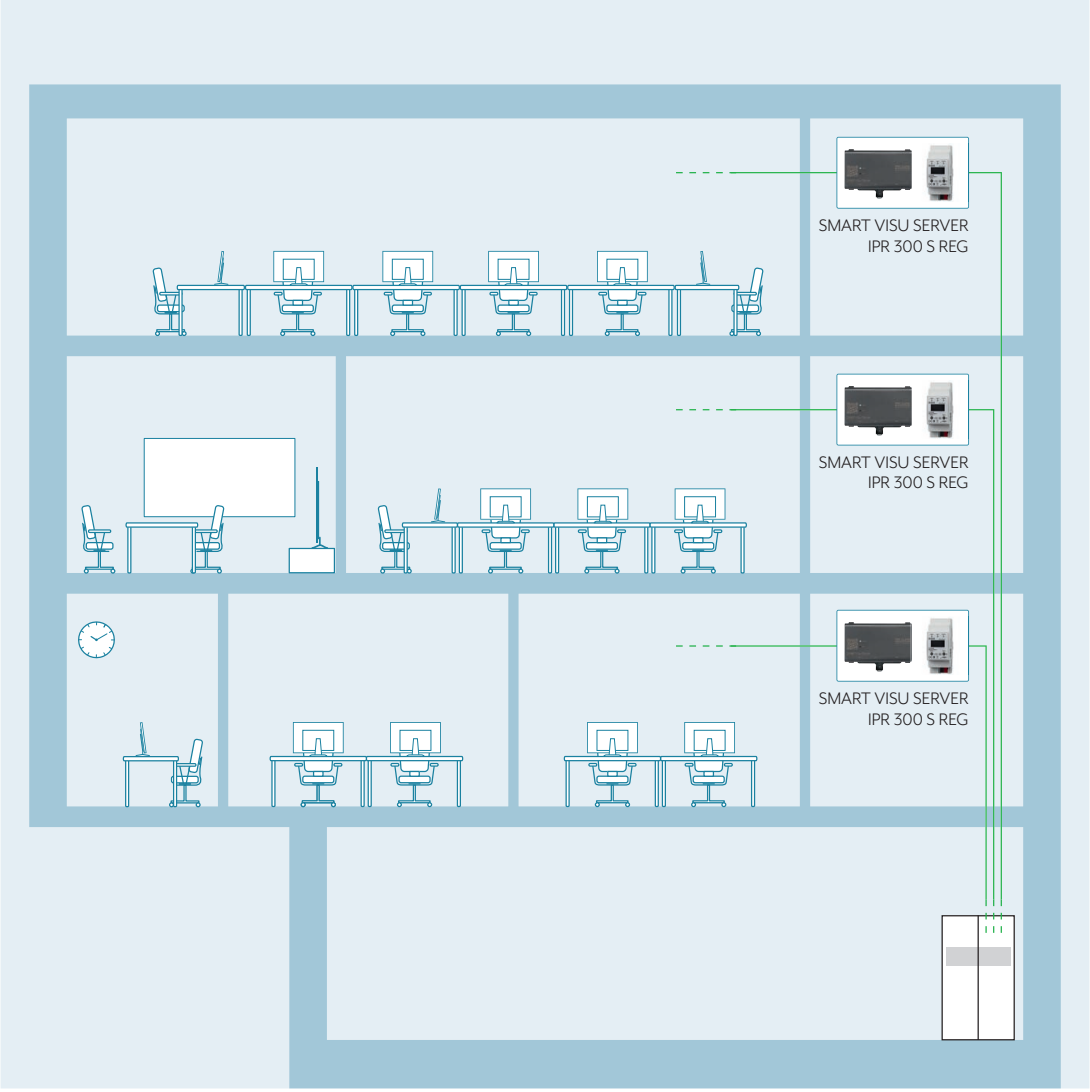
Use case

NEW CONSTRUCTION OF A MULTI-STOREY OFFICE BUILDING

New construction of a multi-storey office building

The requirements for multi-storey office buildings are as varied as the world of work.
For such a new building, it is recommended to provide one KNX IP router and one Smart Visu Server per floor. Thus, each floor can function for itself, but still be managed centrally.



If a floor is modernised during its useful life, all other areas are optimally protected against possible construction work damage. Central devices, such as a weather station, are simply integrated into the overall system via a separate or existing KNX IP router. It is recommended to plan a separate line for the central devices.

Objective of the project

- Functional reliability of the entire system
- Guaranteed connection between the visualisation and the KNX bus
- Galvanic isolation in the event of a fault
- Increased speed for transmission of central commands
- Reduced cabling costs (only install network in each section)

Steps in ETS

- Create a new project.
- Add lines
  - Add IPR 300 S REG as an IP router in each area
- Use IPR 300 S REG in unencrypted mode
  - Activate filter tables
  - Use and start up the preferred connection in the application (for visualisation communication)
  - Establish IP tunnelling for visualisation (use reserved tunnel)
- Put all other devices into operation according to the manufacturer specifications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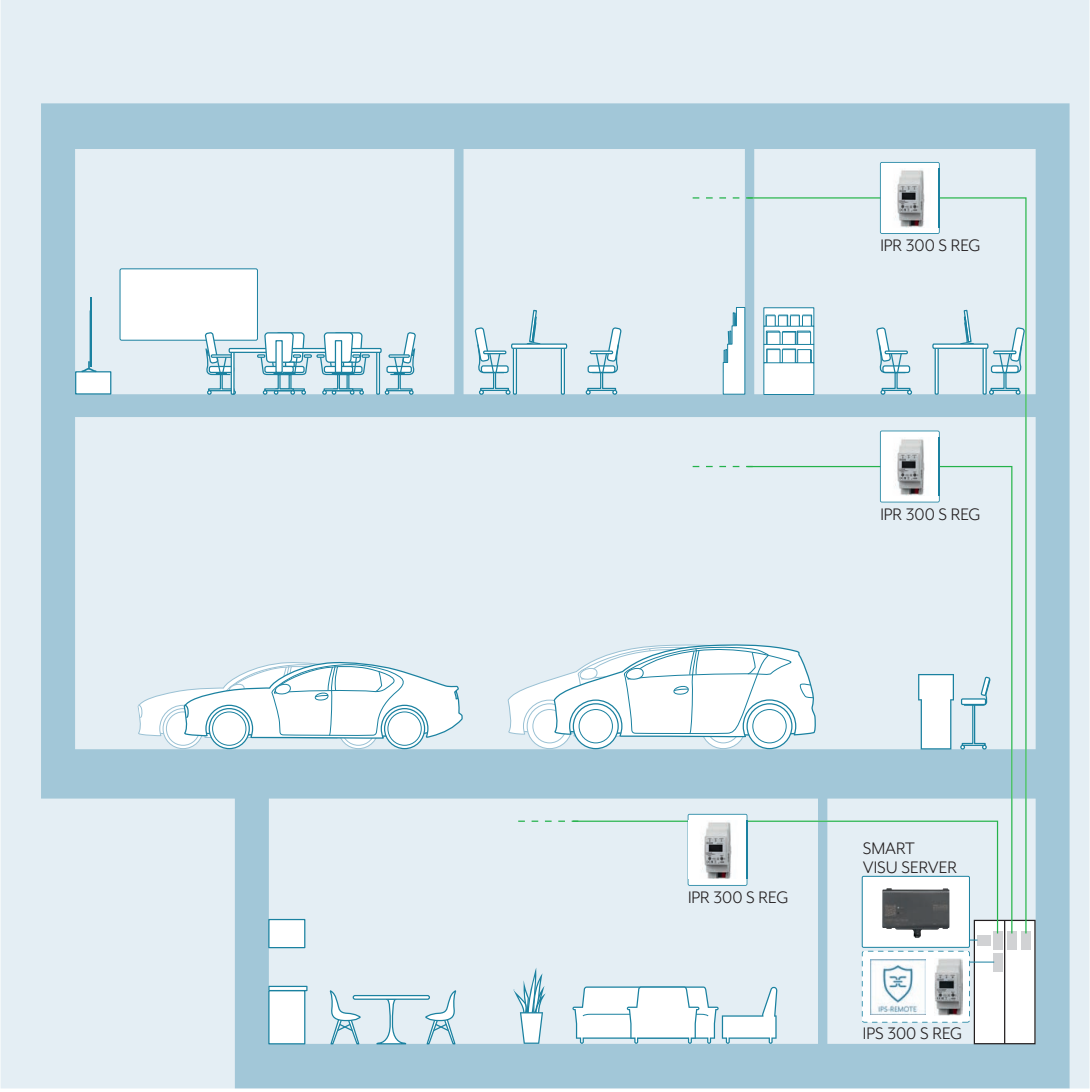
Use case

NEW CONSTRUCTION OF A CAR DEALERSHIP

New construction of a car dealership

When planning a car dealership, the organisational, economic and architectural viewpoints should be considered. In the planning, it is important in addition to be able to easily optimise the car dealership in the future.



To this end, provide an IP router per working area. Provide a Smart Visu Server as the central control component. Thus, each area can function for itself, but still be managed centrally. If an area is modernised during its useful life, all other areas are optimally protected against possible construction work damage. It is recommended to plan a separate line for the central devices.
After commissioning, individual optimisation of the system can also be made possible from outside the customer network. For this you need an additional IP interface and the software upgrade for the interface.

Objective of the project

- Functional reliability of the entire system
- Guaranteed connection between the visualisation and the KNX bus
- Galvanic isolation in the event of a fault
- Increased speed for transmission of central commands
- Reduced cabling costs (only install network in each section)

In connection with the optional software upgrade:

- Additional project configuration possible without travel costs
- The highest level of security during commissioning even from outside the customer network

Steps in ETS

- Create a new project.
- Add lines
  - Add IPR 300 S REG as an IP router in each area
- Use IPR 300 S REG in unencrypted mode
- Activate filter tables
  - Use and start up the preferred connection in the application (for visualisation communication)
  - Establish IP tunnelling for visualisation (use reserved tunnel)
- Put all other devices into operation according to the manufacturer specifications

In connection with the software upgrade:

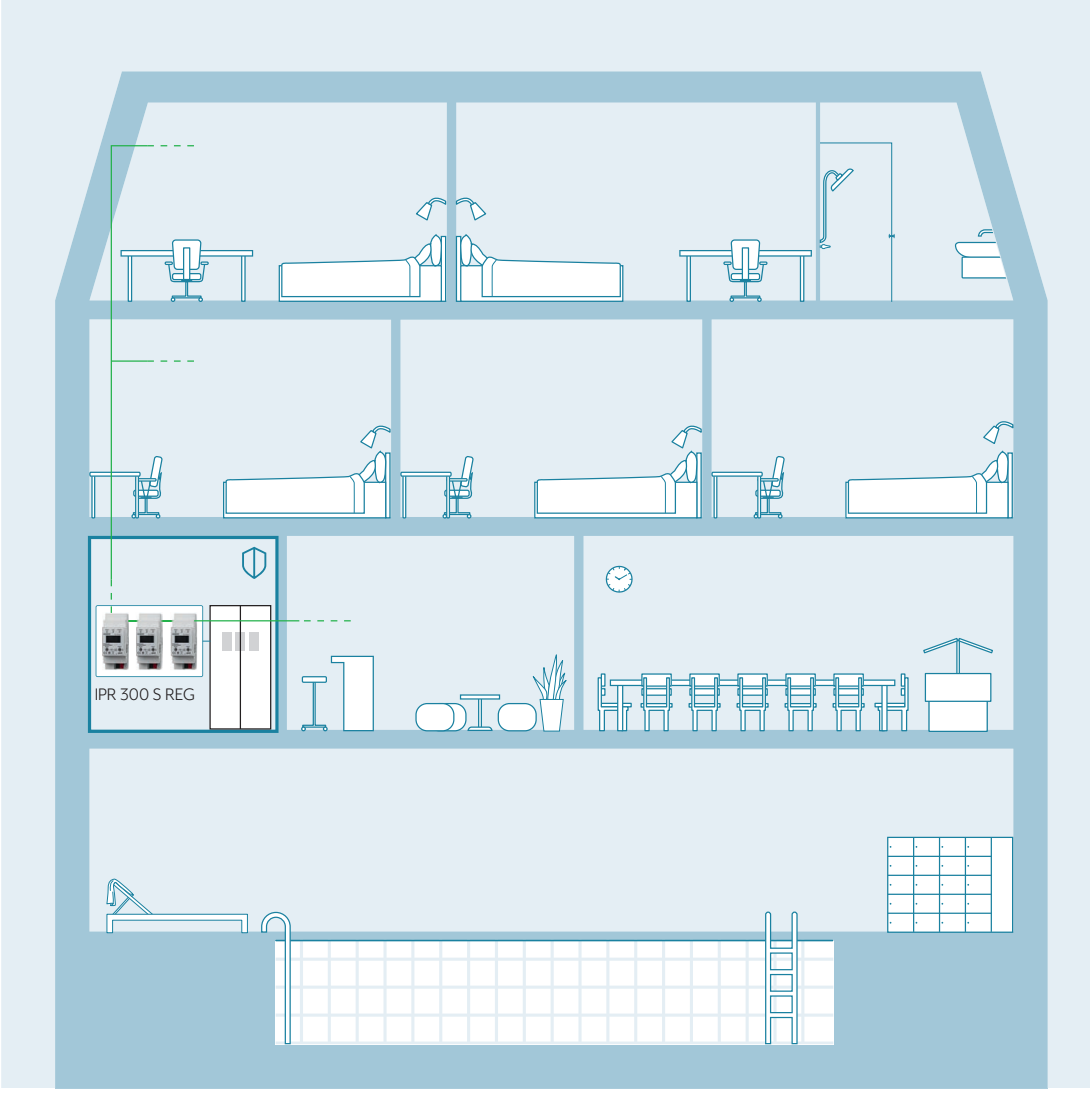
- Add IPS 300 S REG as a KNX interface
- Purchase the IPS Remote licence via MyJUNG
- Allocate project password
- Use IPS 300 S REG in encrypted mode (secure mode)
- Allocation of the device certificate
- Allocation of the release code for the remote configuration

Use case

NEW CONSTRUCTION OF A FAMILY-RUN GUEST HOUSE

New construction of a family-run guest house

Create professional feel-good factors for your guests with building automation. Provide your guests with the highest level of comfort with state of the art technology in the background and allow yourself maximum energy efficiency as the owner.



A central weather station allows location-based weather data to flow into the building automation system. The heating regulation is reduced with rising outdoor temperatures and thus saves money for you. The system should be operated in a fully encrypted KNXnet / IP network so that you can always benefit from these advantages. In this way, potential hacker attacks on your building automation infrastructure can be made significantly more difficult.

Objective of the project

- Resource and cost saving construction of a new installation
- Optimisation and automation of daily processes
- Protection of the customer data
  - Encrypted communication
  - Protection against hacker attacks
- High performance and future-proof installation

Steps in ETS

- Create new project and assign project password
- Add lines
  - Add IPR 300 S REG as an IP router in each area
- Use IPR 300 S REG in encrypted mode (secure mode)
  - Allocation of the device certificate
    - Change commissioning password (optional)
    - Change authentication code (optional)
  - Activate filter tables
  - Use and start up the preferred connection in the application (for visualisation communication)
  - Establish IP tunnelling for visualisation (use reserved tunnel)
- Put all other devices into operation according to the manufacturer specifications

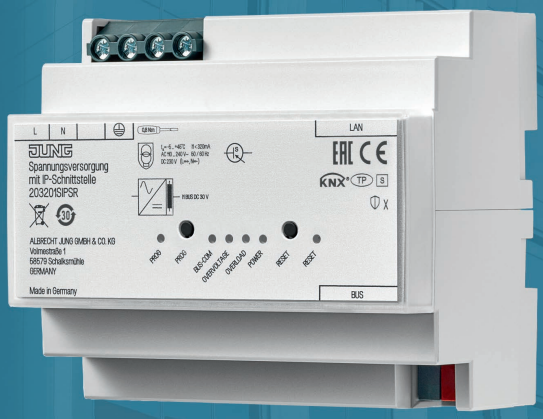
Additional note

- Passwords are not required when the project is open.
- The commissioning password must be entered if the project is not open.

Use case

HOTEL

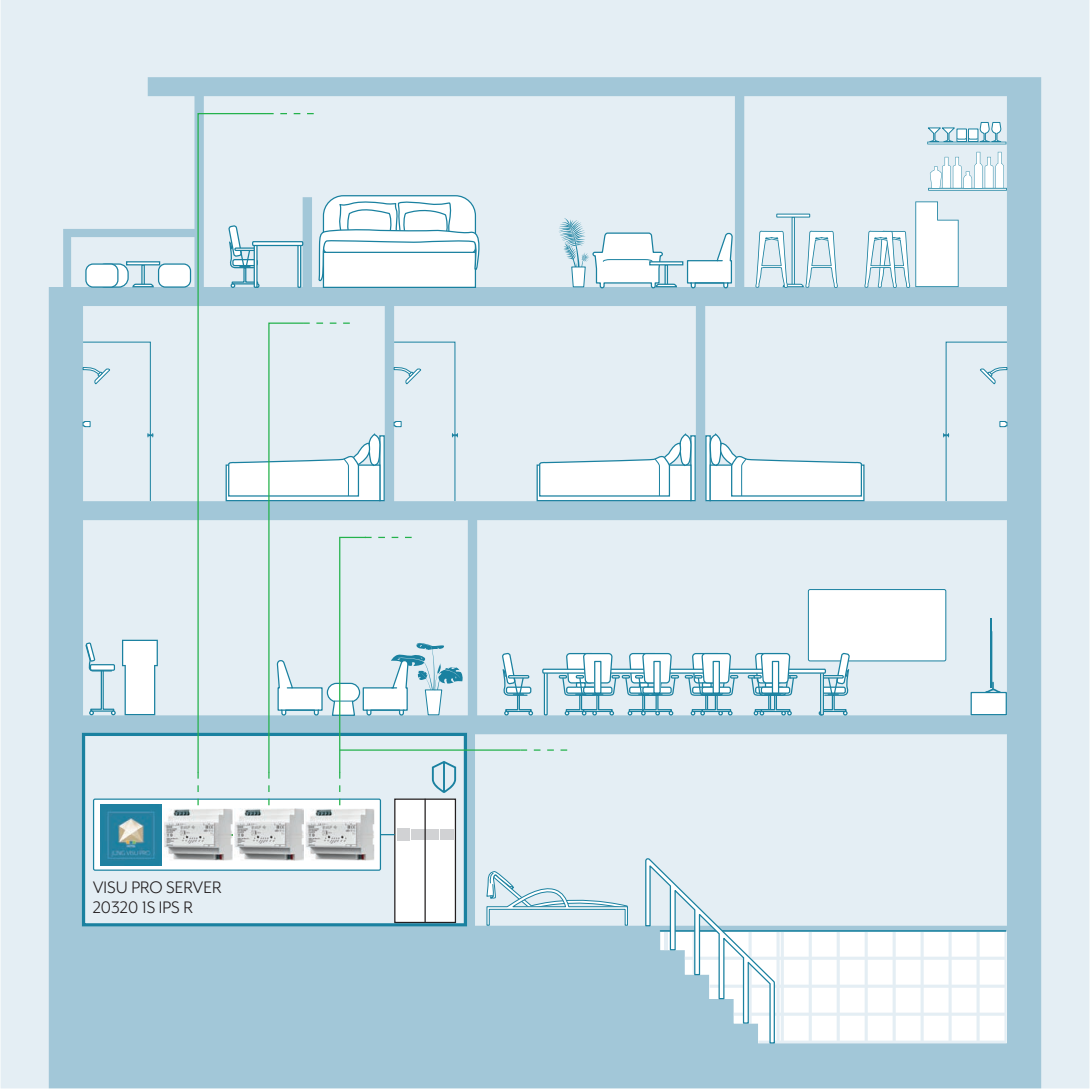
JUNG VISU PRO



NEW CONSTRUCTION OF A SMART HOTEL

Construction of a smart hotel

Modern hotels set new standards for individual comfort. Provide added value for your guests with building automation and relieve hotel personnel. The smart hotel can now already cover some areas perfectly. For example, the temperature in all rooms can be set or changed from a central location.



A DND (Do Not Disturb) or MUR (Make Up Room) request from the guest can also be viewed at a central location. This allows you to optimally plan and execute the daily cleaning process. As sensitive data are also transmitted in such an hotel, it is recommended to protect the data using state of the art technology. Operate a fully encrypted KNXnet / IP network for this to protect your guests and customers. The protection of customer data has the side effect that you as hotel owner are also optimally protected against hacker attacks on your building automation technology.

Objective of the project

- The security of guest data has the highest priority
  - Communication according to the latest security standards
- Each section is considered as its own "island"
  - Project planning can be reflected almost infinitely
- JUNG Visu Pro (JVP) Hotel manages central information of each "island" via the KNX-IP interface
- The required knowledge is minimised in the event of an error
  - Minimisation of spare devices storage
  - Replacement devices can already be pre-programmed

Steps in ETS

- Create new project and assign project password
- Add lines
  - Add 20320 1S IPS R in each case as an IP interface
- Use 20320 1S IPS R in encrypted mode (secure mode)
    - Allocation of the device certificate
    - Change commissioning password (optional)
    - Change authentication code (optional)
  - Use and start up the preferred connection in the application (for visualisation communication)
  - Establish IP tunnelling for visualisation (use reserved tunnel)
- Put all other devices into operation according to the manufacturer specifications

Additional notes

- Passwords are not required when the project is open.
- The commissioning password must be entered if the project is not open.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Picture credits

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