

SMARTER BUILDING

# Create smarter

Architecture for today and tomorrow



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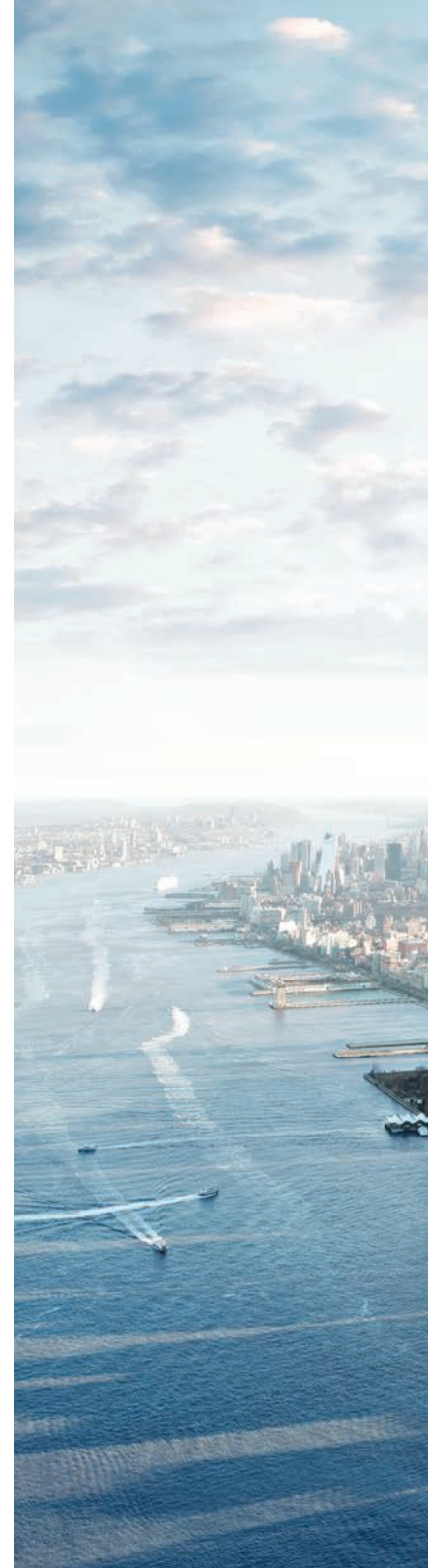
## The world is getting smarter

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The world is constantly changing, and with it so are the needs of the people. Digital, intelligent, and flexible building solutions are in greater demand than ever before and need to be factored into modern building design from the start. ABB is at the forefront of this change and is actively developing a range of smarter systems for homes and buildings with both designer and occupants in mind

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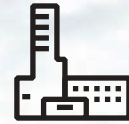
[new.abb.com/buildings](http://new.abb.com/buildings)





## Integration of flexible supply and demand

Solar and EV markets will experience fast growth over the next 20 years



## Urbanization

70% of the world's population will live in cities by 2050



## Digitalization

50 billion networked devices will be in use worldwide by 2022

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**Tomorrow's buildings need to be more than just showpieces for unique ideas and plans. They should work together to create smarter, safer, and more efficient cities, built around intelligent infrastructures – that's what ABB believes anyway.**

**If you agree, come and discover our modern, intelligent systems, and see how they place a world of design and functionality directly at your fingertips.**

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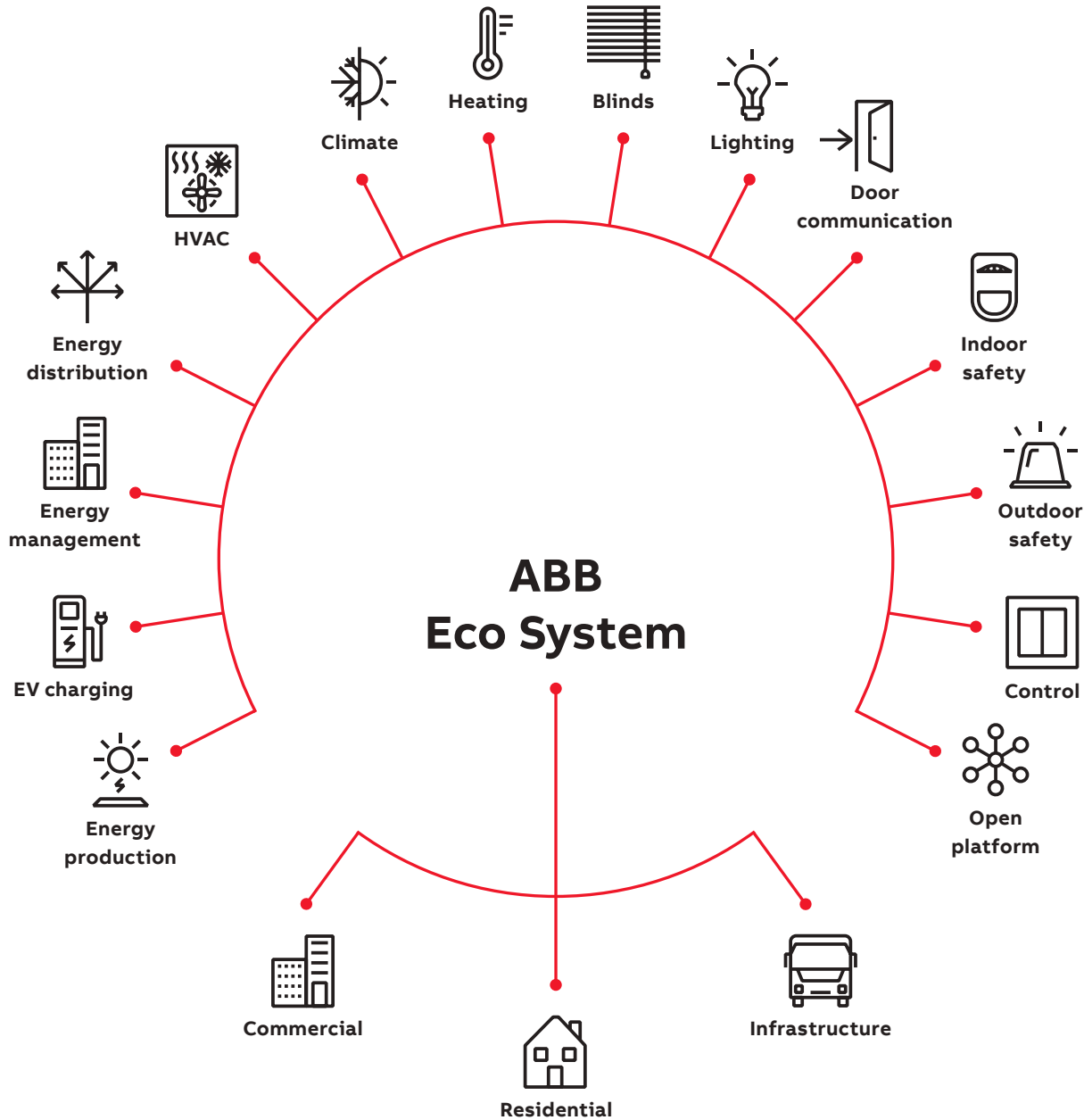
# Solutions for every need

## ABB Eco System



The great thing about digital solutions is that when done properly, they should all work hand in hand to simplify and improve the lives of those using them.

The demand for digital solutions in modern buildings is greater than ever. ABB brings all functions and solutions seamlessly together under one roof, whatever the size of the building.



### ABB Eco System

All ABB's building solutions and systems work hand in hand with each other and fall within the ABB Eco System. Together they provide a holistic answer to modern building management.

This also incorporates the cloud-based, cross-industry, digital system known as ABB Ability.

### ABB Ability™

Controlling and planning smart buildings is now easier than ever: ABB bundles its digital services for homes and buildings in the MyBuildings portal under the ABB Ability umbrella. The online portal gives you access to many of ABB's tools and services that you can use for your individual needs. You no longer need to be in the building to control it. Thanks to state-of-the-art technology, ABB Ability connects people with their buildings in more ways than ever before.

## Efficient climate control in one smart system

Buildings need holistic and sustainable solutions to meet cost and energy efficiency targets



### HVAC

ClimaECO – all HVAC functions in one system. A significant step towards increasing energy efficiency and reducing operational costs, making your building more economic, sustainable, and comfortable.



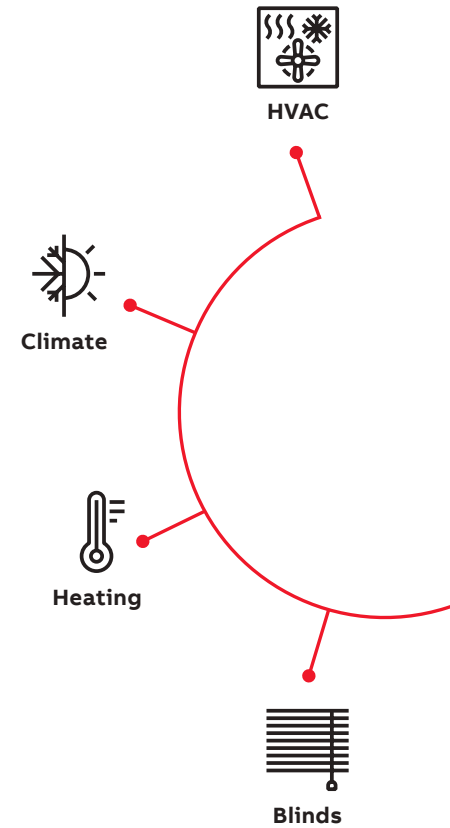
**Climate and heating**

Heating, ventilation, and air-conditioning technology is made up of various systems that until now haven't been integrated into a single one. With the proven ABB i-bus® KNX system, it is now possible to automate all HVAC applications and combine them into a one-stop solution.

**Blinds**

The management of blinds can be effectively integrated into building and home automation. Open and close blinds or adjust the lamella functions fully automatically with timers, sensors, and electric motors.

—  
HVAC automation  
from room to  
management level.



## Safety and security go hand in hand

Today's networked security systems make our buildings safer for everyone who uses them



Lighting



Door communication



Indoor security



Outdoor security



### Lighting

Lighting that thinks for itself. In offices, hotels, and public buildings, light needs to function reliably and safely: but only when it's actually needed. Light switched on unnecessarily means wasted energy and money.



### **Door communication**

Modern buildings can now be equipped with the ABB-Welcome door communication system, providing users with maximum levels of security and comfort.

### **Indoor and outdoor security**

Modern-day technology and contemporary design combine to deliver the ultimate peace of mind both inside and outside the building. Whether it's protecting from intruders, fire, or floods or simply producing a greater feeling of indoor comfort, systems such as ABB-secure@home, Busch-Smoke alarm, Busch-Presence detectors, and Busch-Watchdog have got you covered.

—  
A state-of-the-art building requires an equally modern security system.



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## Control and monitoring from anywhere

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Technology that is about simplifying our day-to-day lives





**Control**

Whether via a switch, a panel, or an app for your smartphone or tablet – you decide how you would like to control your building. Blind, light, heating, air-conditioning, and door communication can be easily controlled in line with your personal preferences. You can use all functions individually or combine them with each other. In other words, you determine the type and number of functions you want to intelligently control yourself.

—  
Your Smart Home can be controlled via voice command using Amazon Alexa, Apple HomeKit, or Google Home.



**Control**



**Open platform**

**Open platform**

Modern cloud architecture monitors and optimizes the operational processes of residential and office buildings, industrial facilities, hotels, shopping malls, and schools. You have the option to plan ABB-Welcome, ABB i-bus® KNX and ABB-free@home® systems, and as well as to extend system functionality with remote access or voice control.



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## Energy efficiency as a future expectation

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Collecting and monitoring energy and consumption data is the key to increasing energy efficiency



### **Energy production**

Network and plant protection solutions are developed specifically for power generation plants. They detect both over- and undervoltage as well as changes in the network frequency. They are used, for instance, in larger photovoltaic and wind power plants.

### **Energy management and distribution**

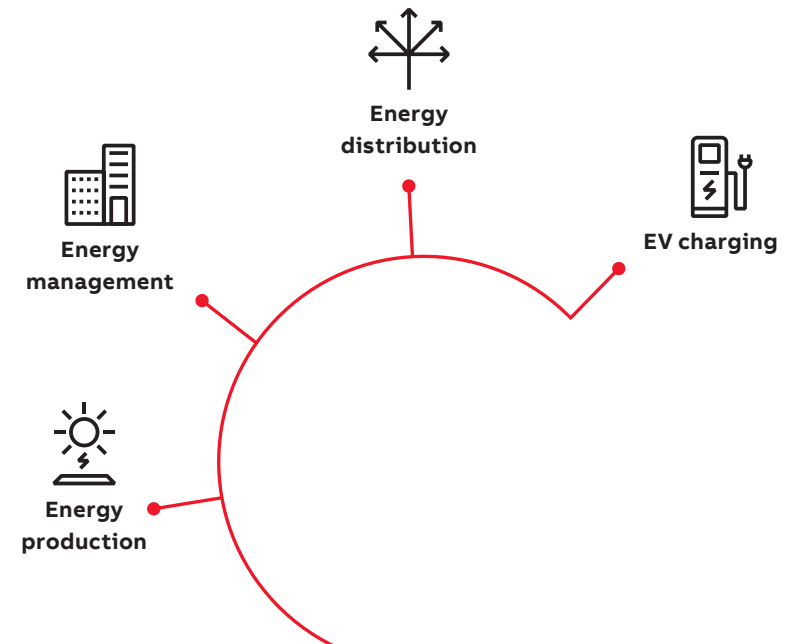
A solution that saves, analyzes, and increases transparency: from light, heating, and air-conditioning consumption to the energy management of a building from one central point. This ensures intelligent energy consumption and efficient operational processes.



—  
The Terra 53 DC charging station is suitable for highway rest stops, gas stations, car dealerships, branches, and heavily frequented inner-city areas.

### EV charging

Charging is the new refueling. Fast, easy, and available everywhere – wherever you are. With electromobility, you maintain the flexibility you've come to expect.



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# More than a question of taste

## Design by ABB

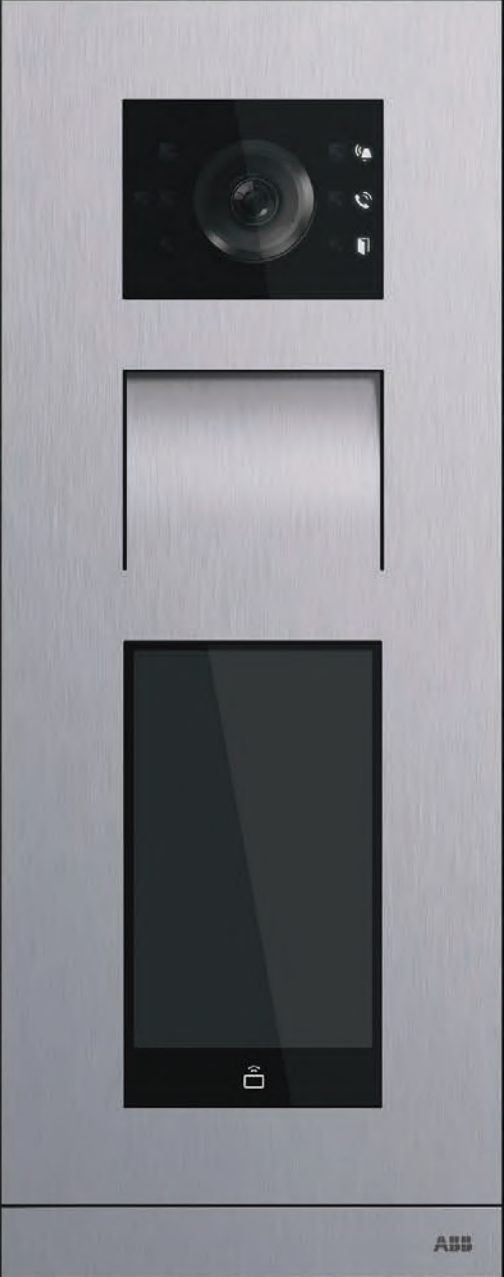


Great design is fundamental to providing people with exactly what they need and desire in their lives. As well as pleasing aesthetically, it should also have a strong element of functionality to help people make the best possible use of their surroundings.

ABB's attention to detail extends to everything from the initial drawing to the finishing touches, from the smallest contact to the most functional surface. All with a view to creating something that leaves people feeling inspired and in control every time they see or touch it.

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The ABB WELCOME IP panel.  
Designed to impress with  
both its look and its feel.



ABB

## Architecture places technology at the forefront

Modern design needs to reflect the ever-increasing role of technology in today's residential and commercial buildings

ABB products are not only some of the most technologically advanced on the market, they're also recognized for being some of the most beautiful. Whatever the shape, whatever the form, ABB impresses with the

diversity of its designs and is continuously coming up with fresh, new ideas that combine design and functionality, enabling a customer's vision for their building to come true time and time again.



ABB has been recognized on numerous occasions for the achievements in innovation and design.



Clean-lined, minimalistic, functional.  
ABB values technology and design equally  
and its touch displays are a prime example  
of this.

The latest technology is fundamental to  
improving building efficiency and security  
but means nothing if the design fails to  
inspire. ABB motion detectors are an  
example of how state-of-the-art  
technology and design work beautifully  
hand in hand.



## Function in its most beautiful form

Maximum functionality and a personal touch: with intelligent control elements for buildings that are as individual as their occupants. ABB sets standards in designing products that blend seamlessly into every kind of interior

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02

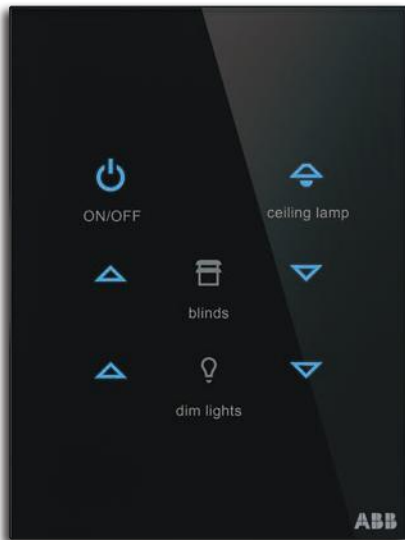
State-of-the-art control panels are designed to fit perfectly into a room's design without stealing attention from the overall look and feel.

### **The right solution for every requirement**

With a wide range of well thought-out products, optimal door communication can be achieved for any type of building thanks to 2-wire bus technology for easy installation, coupled with high-quality, carefully coordinated materials. This makes ABB-Welcome suitable for both initial use in new buildings and for subsequent integration during modernization of any type of property.

- 01 Busch-Icelight®
- 02 Busch-Presence detector
- 03 ABB-tacteo® KNX sensor
- 04 Busch-Radio BTconnect, future® linear
- 05 ABB-Welcome outdoor video station

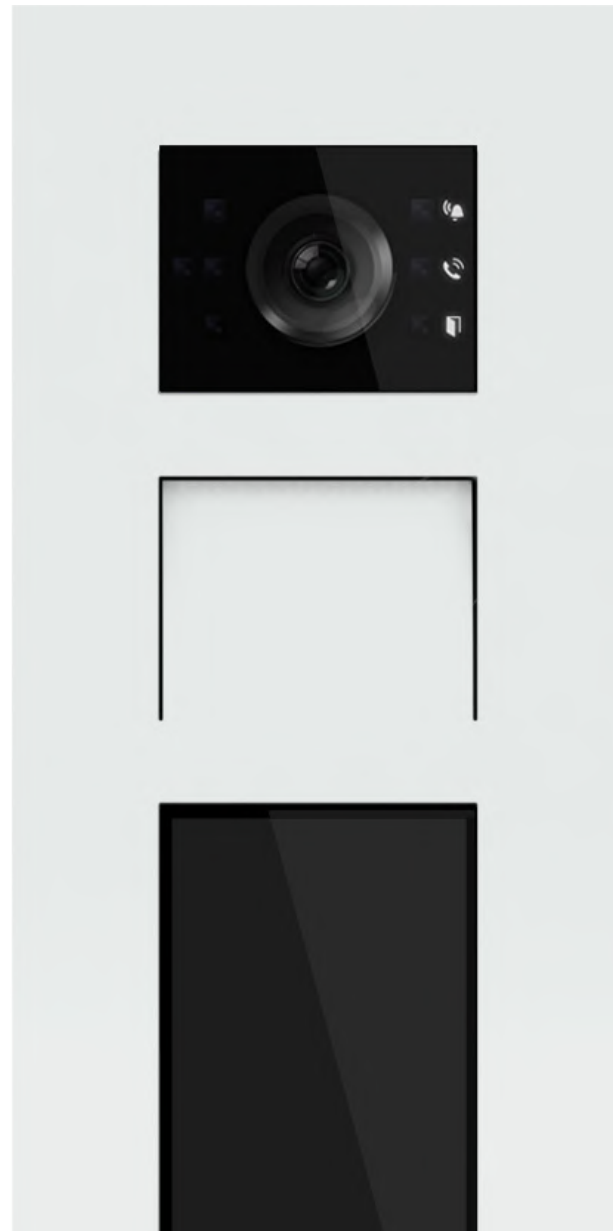
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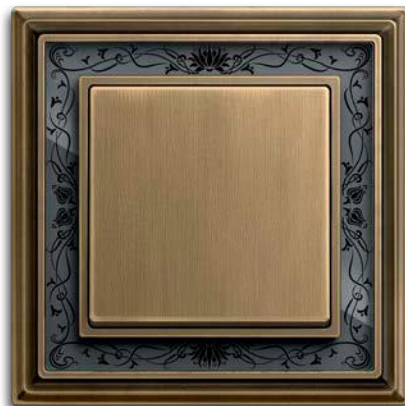
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# Quality of the highest standard



— With a spirit of perfection and love for detail—each switch is handcrafted and unique. This process underscores the value of the product.



— Expression of personal style—the colour and haptics raise the value of each living space and accentuate the luxurious ambience and taste of the owner.



— High-quality standard—the value of the materials reflects the high standard of the owner. Whether brass shines or is antique, it reevaluates each room in its own unique way.

One's private living space deserves the very best – for this reason Busch-dynasty® has been developed jointly with international experts for interior design. Concealed behind its perfect shape you will find the most modern technology of the world's top brand leader in home automation. The production of all Busch-dynasty® switches is of the highest standard. This guarantees the long service life of the products.





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## Diversity of choice to support every vision

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A range of switches and sockets that put the finishing touches to design-oriented hotels, offices, hospitals, and other public and residential buildings



Your vision and ideas shouldn't be held back by switches and sockets that stand out for all the wrong reasons. That's why ours come in a range of shapes, colors and finishes to complement every kind of room and building design imaginable.

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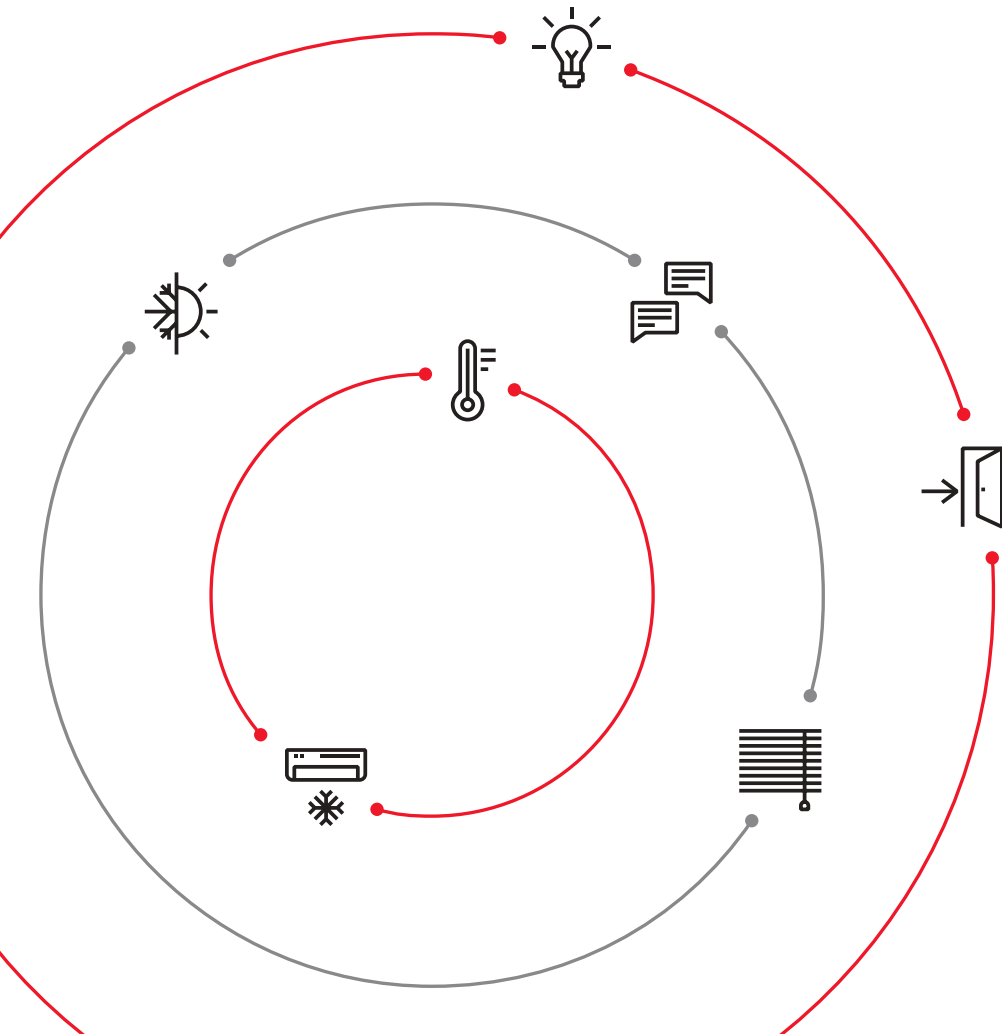
Timeless design and modern functionality create individual living ideas.



- 01 carat®
- 02 pure stainless steel
- 03 Zenit
- 04 Busch-Dynasty®
- 05 Busch-axcent®
- 06 Millenium
- 07 future® linear

# Building intelligence powered by smart technology

## ABB building and home systems



Flexibility, efficiency, security. Powering today's and tomorrow's modern buildings requires more than just creative ideas. ABB not only understands what a smart building should offer, it is also an expert in knowing how to develop the technology behind it.

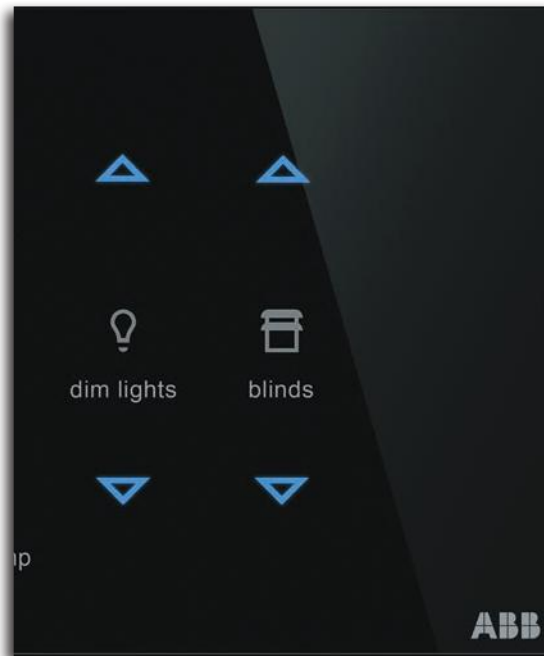
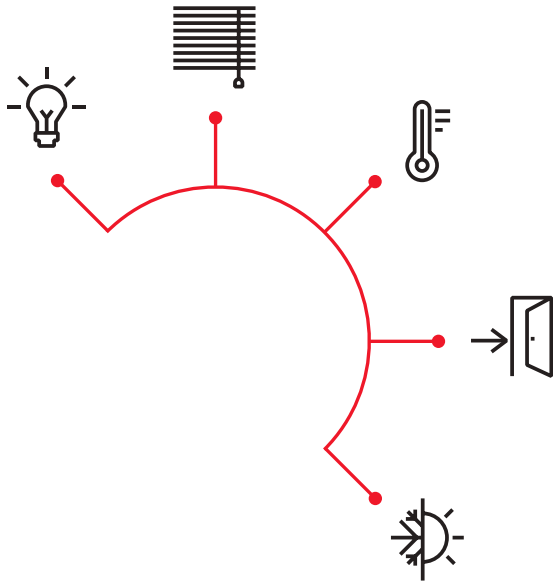
Systems such as ABB-free@home®, ABB-Welcome and ABB secure@home make the best possible use of ABB's i-bus® KNX technology to offer a comprehensive range of solutions that ensure an ABB-powered building reliably gives users a unique, individual experience.

—  
Intelligent buildings  
are powered by the  
smartest technology.



## ABB i-bus® KNX

Intelligent building solution for the demands of today and tomorrow



The ABB-tacteo® KNX sensor is a control element that can be individually configured for intelligent building control of high-end luxury hotels, public buildings, and apartment blocks.

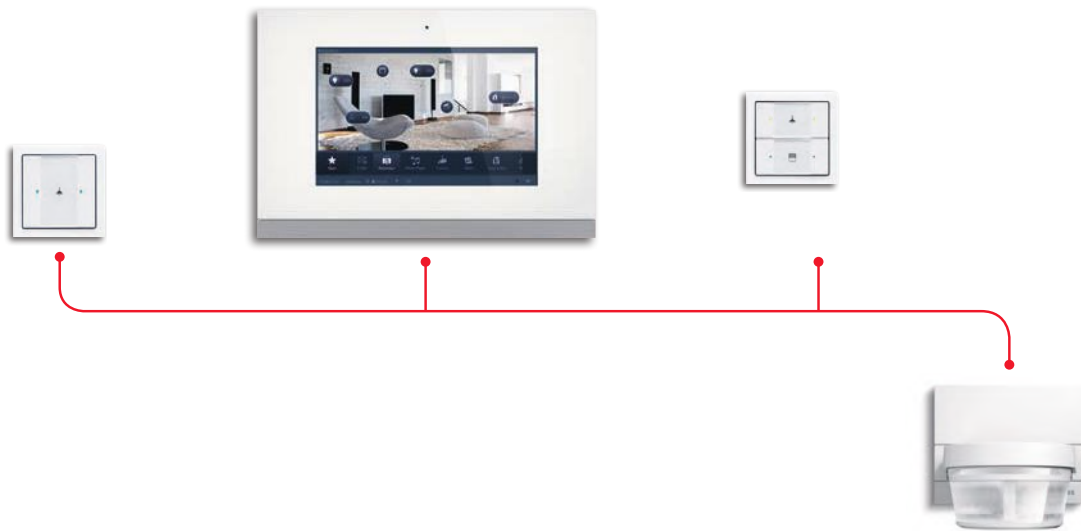
ABB i-bus® KNX is based on the international KNX standard. It is not by chance that ABB plays a leading role in the KNX Association. The fully developed state-of-the-art technology can be used universally and integrates itself perfectly into all current architectural and utilization concepts. Thinking ahead globally is typical for 135,000 ABB employees in more than 100 countries – intelligent networking for smart building systems technology.

### Global perfection

The ABB i-bus® KNX technology is used every day throughout the world by electrical planners, electrical installers, and system integrators. The concept is so well thought out that the people in the buildings are unaware that it is operating, because all the components of the technology bring about a fully functioning unit from the first project step to running operation.

### The advantages for the suppliers

- Reliable planning
- Economic installation
- Fast integration
- Easy to start up
- Flexible extension
- Safe investment for the future



### Changing technology

If you desire total freedom in planning, look no further than ABB i-bus® KNX. The KNX standard even allows the products to be selected independent of manufacturer. The functions of the different trades are linked together, and changes and extensions are possible during the project – without new planning or new cables. Existing systems can also be adapted after many years. Complex becomes simple.

### Flexible planning for

- Lighting
- Air conditioning
- Shading
- Safety
- Energy management
- Operation
- Automation
- Communication

# Ultimate functionality has never looked this good

User Operation - Design Ranges - Unique diversity of the range

01



02



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04



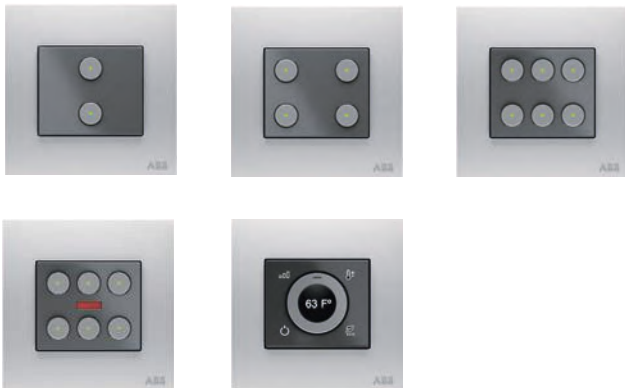
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08



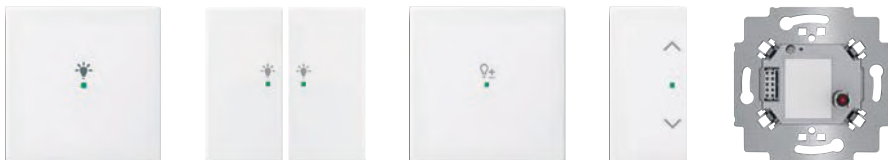
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10



11



- 01 Tacteo
- 02 ClimaECO
- 03 carat®
- 04 pure stainless steel
- 05 Busch-axcent®
- 06 future® linear
- 07 Millenium\*
- 08 Zenit for VDE/NEMA markets
- 09 Busch-triton®
- 10 Busch-priOn®
- 11 Bus Coupling Unit – for conventional Busch-Jaeger series\*\*

Further information regarding the ABB switch ranges are available on <http://new.abb.com/low-voltage/products/residential-products/switch-ranges>

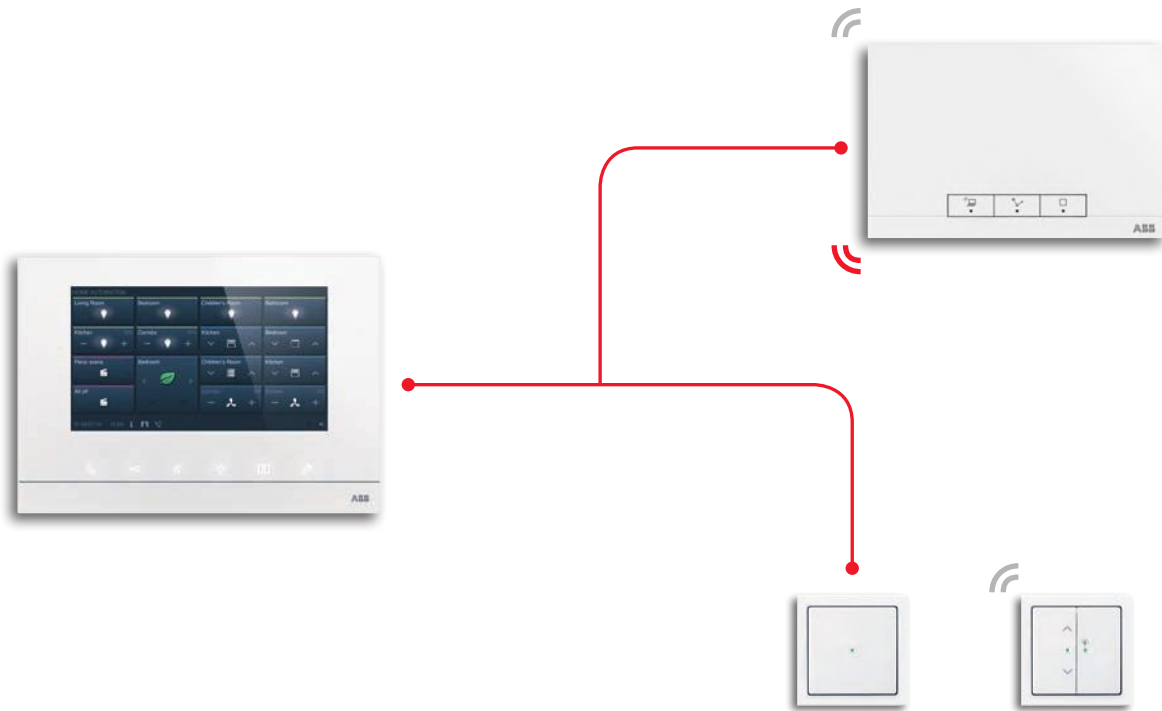


\* Millenium and Zenit series are only available in selected markets.

\*\* Busch-Jaeger switch ranges only available for selected markets. For further information please contact your local ABB office.

# ABB-free@home®

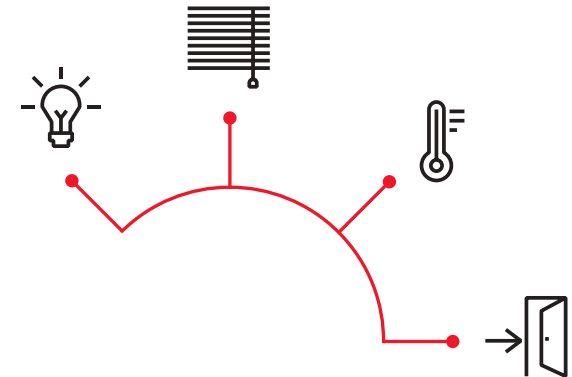
Home automation easier than ever



When needing to change the ambient features of a room, simply adjust the blinds, lighting, or air conditioning from a single, stylish wall panel.

ABB-free@home® is specially tailored to meet the needs of smart residential buildings and is excellently suited for both new buildings as well as renovation projects. Whether blinds, lights, heating, air conditioning, or door communication, it can all be easily controlled to suit your personal preferences.

A perfect example: to change the lighting mood, just tap on the touch screen of your tablet or smartphone, or use a simple voice command: the blinds will move and the lights will change color. You can use all functions individually or combine them. In other words, you determine the type and number of functions you want to intelligently control yourself. Plus, you have the option of adding desired additional functions at a later date. Simply smarter – for the life you desire.





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## Simple control from a single source



### Via touch panels

Panels can be configured with your personal settings and control all functions in your living area from one central location on the wall. The touch screen is easy and comfortable to operate by simply swiping or tapping.



### Via Smart Home switch

The switch is the classic operating mode to control your Smart Home. Available in a range of modern designs, our switches enhance every wall and impress with their excellent surface feel and hard-wearing user interfaces.



### Via cloud

With the aid of the app, you gain access to your Smart Home from anywhere. Simply log in to the MyBuildings portal, and then most functions can be checked and controlled on your smartphone or tablet via cloud while travelling.



### Via voice control

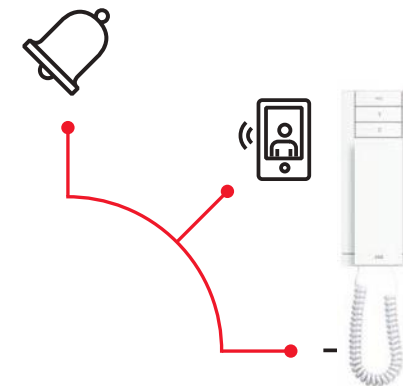
“Switch on the ceiling lamp in the living room.” The system answers: “Okay. The ceiling light has been switched on.” The intelligent voice control feature lets you control all the functions in your home via voice command. Perfect when wanting to spend a few more minutes in bed.

## ABB-Welcome

Open to any possibilities:  
door communication systems for homes or buildings



The front door is the gateway between two worlds. It's what separates and protects living or working spaces on the inside from the outside. The ABB-Welcome door communication system creates new possibilities of entry between these two worlds. It takes care of both comprehensive safety and greater comfort, all revolving around the doors to your home or building. Whether it's a door opener, door communication, light switch, or video surveillance, ABB-Welcome offers you a multitude of solutions you can control via a panel on the wall, a tablet, or with a smartphone. As well as a stand-alone solution, ABB-Welcome can also be combined with ABB-free@home® or ABB i-bus® KNX.





—  
 The ABB-Welcome  
 product series is a holistic system that sets new  
 standards, fully complementing the whole range.



—  
 ABB-Welcome offers  
 you functions to make  
 door communication  
 comfortable: from the  
 bathroom, the couch,  
 or while out and about.

# Switch to the future

## IVIE modular switches



01



02



03

Different finishes and combinations:

- 01 Anthracite grey mechanisms in Silver plate
- 02 Silver mechanisms in Anthracite Grey plate
- 03 Anthracite grey mechanisms in White plate

Thanks to the complete system, The Ivie series provides a comprehensive range of solutions for building concepts. The convex and sleek design not only provides quality and style to the overall building, but is easy to install.



### Residential

Simple and comprehensive design which integrates with any type of architecture, regardless of the home decor. Provides a wealth of features and values. Thanks to its wide range of functions and benefits.



### Hotels

IVIE range is ideal for the hospitality industry. Modern design and functionalities provide a high level of comfort to guests.

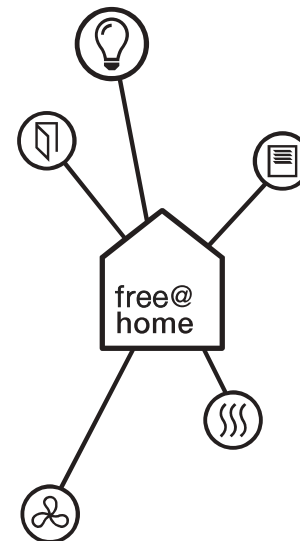


### Commercial

IVIE range offers an elegant look designed for various applications like office spaces, warehouses, stores and shopping malls etc.



The IVIE range is the first Indian range to incorporate wired and wireless home automation systems together. This range can be integrated with ABB-free@home® home automation system, which is the most intelligent way of managing spaces with energy saving.



Great comfort, safety and energy efficiency for buildings

ABB-free@home® sensor for switching control, blind control, dimming and scene control.

# Switch on simplicity

## ABB Tvisha

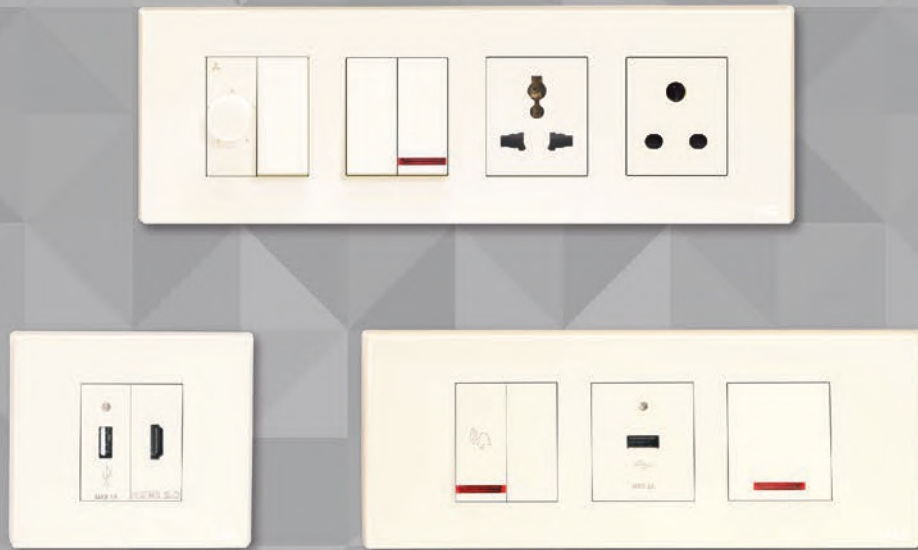


ABB Tvisha is a range of wiring accessories with simple flat surface design that creates a trend on the wall with its elegant Euro white finish.

The range covers a large variety of functionalities that caters to most of the applications beyond the normal switching functions like USB chargers, HDMI ports, communication sockets, foot lamps and dimmers. ABB Tvisha is ideal for residential and commercial requirements.

- Plastic parts which hold current carrying parts are made of PA6 20% glass filled rating upto 16A
- All switches are marked with IS 3854:1997
- Terminals are designed in such a way that wire is tightened without damage
- Bi-metal silver contact tips for less spark and longer life
- 6A & 6/16A marked with IS 1293, up to 16A
- Non-flammable thermoplastic resin parts and a very high insulating resistance after humidity test



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# Switch on life

## Adiya range of wiring devices

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The Adiya switch range combines simple design with high quality materials for reliable performance and adds an elegant look to your living spaces.



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### Long term reliability and safety with high quality materials

Enhanced safety features with unique dual shutter design, heat and impact resistant polycarbonate as well as UV-resistant materials combine durability with a stylish look. High specification electrical contacts material ensure long term reliability.





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# Performance redefined

## ABB ITUS distribution enclosure

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ABB ITUS Distribution Box series with its new range consists of seamless design, new finish and a range that suits all applications up till the final point of distribution.



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### A fresh look

Advances in building design and building methods mean making considerable improvements in utility systems that match the requirements of residential, commercial and industrial infrastructure.

Thanks to its simple, compact design, customization capabilities and multiple protection provisions, the ABB ITUS series with its seamless form, new finish and improved space provisions offers the maximum flexibility for your domain requirements.

Blending in seamlessly to your interiors, keeping pace with new innovative enclosure aspects is what ABB ITUS helps to achieve.



# References

We help these partners achieve their vision



## Private Villa

This private residential villa covers more than 40,000 sq. ft in Mananthavady, Kerala. It is one of the most luxurious and exquisite villas in the state. Comprising of a lavish garden and swimming pool the villa sports separate annex for entertainment. Lighting controls as well as security applications have raised to next level with ABB i-bus® KNX.

<b>Location</b>	Mananthavady, Kerala, India
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<b>Products</b>	ABB i-bus® KNX system
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## Intuit India Product Development Centre, Bengaluru, India

With ABB i-bus® KNX applications, the building is one of the energy efficient buildings located at the heart of Bangalore. Day light harvesting, central control, energy monitoring, load management etc. make the building sustainable and state-of-the-art structure. Thanks to ABB energy efficient applications.

<b>Location</b>	Bengaluru, Karnataka, India
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<b>Products</b>	ABB i-bus® KNX system
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SAMSUNG  
Galaxy Note5



### Indira Gandhi International Airport Terminal 3, New Delhi, India

The Delhi Airport project represents an outstanding reference for ABB i-bus® KNX. The flexibility of the system, its connectivity with other standards and the option of combining decentralized functions to one central building management hub are major benefits and deciding factors for the KNX system.

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**Location** New Delhi, India

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**Products** ABB i-bus® KNX system

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Find more projects at  
[www.new.abb.com](http://www.new.abb.com)



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