ABB safe&smart
KNX Security Panel GM/A 8.1
Security and comfort in its simplest form

Power and productivity
for a better world™

Today, everything is networked – so why not network an alarm system and building installation systems as well?

Until now, you have only been able to equip your business or home with separate alarm and general security systems. But a window contact, for example, would be sufficient to control the air conditioning during the day as well as alert of a break-in – provided, of course, the alarm system has been activated.

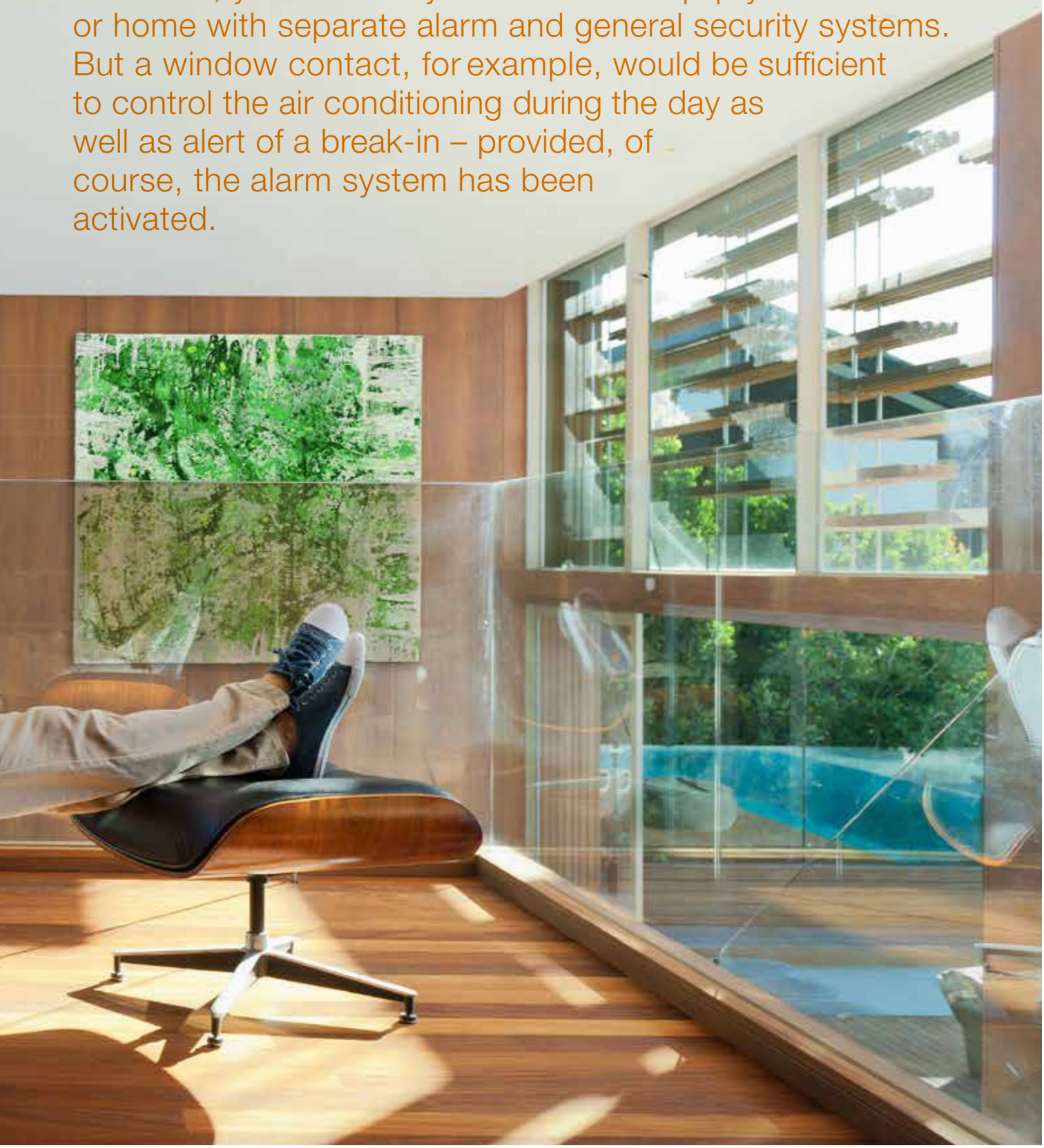
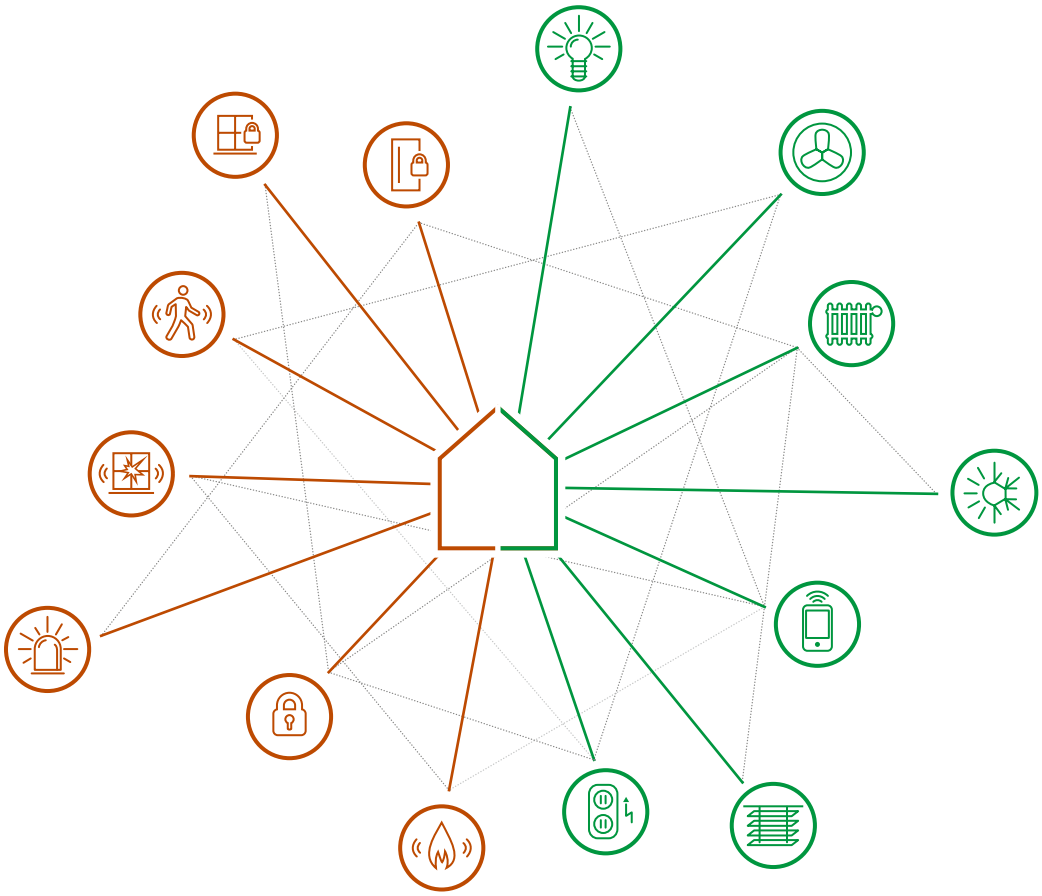


ABB safe&smart –
Security and comfort in its simplest form

Previously, methods of linking alarm and installation systems were very limited. The new ABB safe&smart concept now makes it easier than ever.



Two applications – one panel

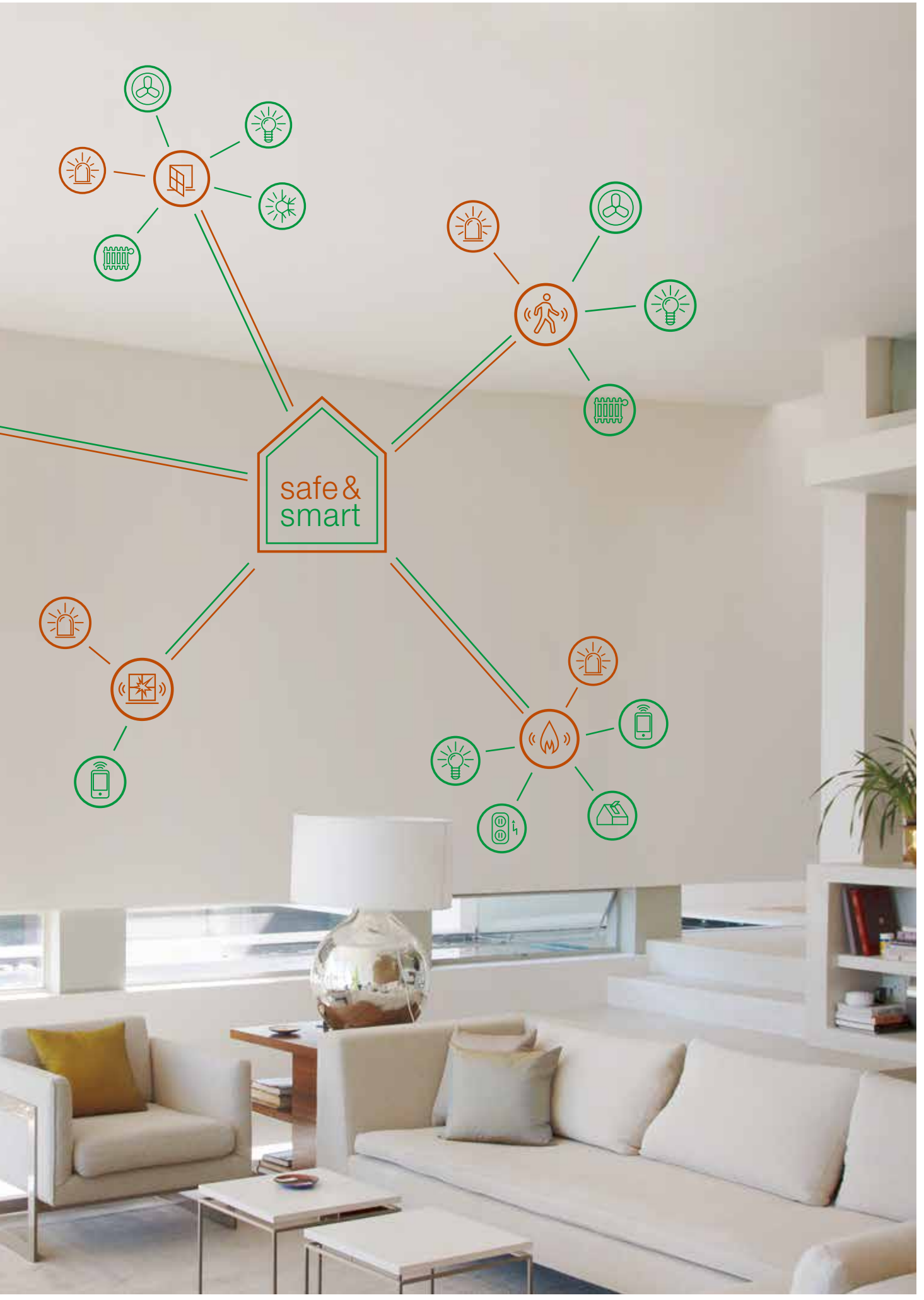
The core of the ABB safe&smart concept, the new KNX Security Panel GM/A 8.1, means that all current status information is available anywhere. Depending on the operating status of the security panel, it can be used automatically both for alarm evaluation and to control the building functions as a whole. The integrated KNX connection allows the output of alarm status on the display devices of the security systems and the automatic control of building functions using the alarm sensor system.

One panel – all the interfaces

The integration of all the necessary system interfaces means that planning, commissioning, and operation of the system are all very easy and there is no additional work necessary to add parameters for other interfaces. The alarm sensors and detectors are connected directly or via a security bus, which links the activation system to the central unit. This also features connections for the new developed operating unit and the internal, external, and remote alarm system.

ABB
GM/A 8.1
ABB i-bus®
KNX

A simple design –
two functions, one concept!


safe &
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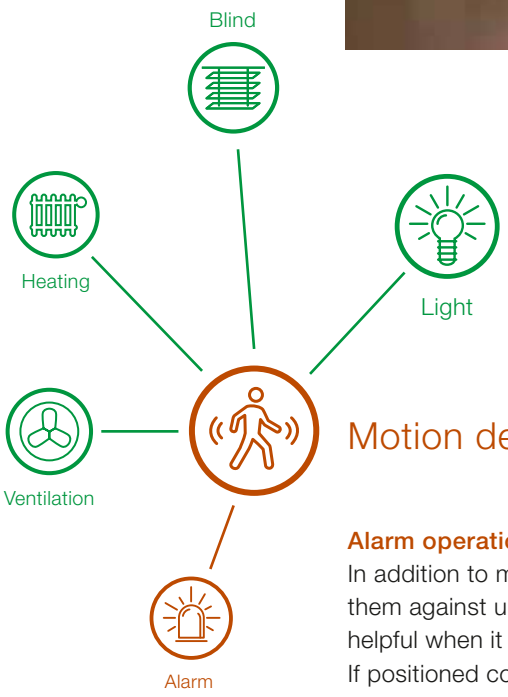


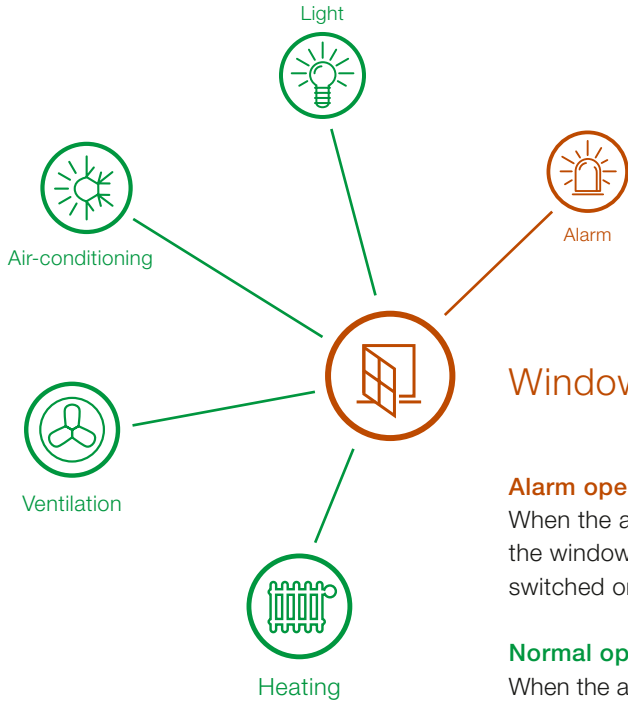
Motion detectors

Alarm operation

In addition to monitoring windows and doors to protect them against unauthorized access, motion detectors are helpful when it comes to monitoring the rooms of a house. If positioned correctly, they can detect every movement in the room and, if the alarm system has been activated, will trigger a preset alarm. When an alarm sounds, the safe&smart system can be used to control roller shutters, switch on lights, or de-energize sockets.

Normal operation

When the alarm system is deactivated, a motion detector can be used, for example, to switch on lights in passage-ways, trigger predefined lighting scenarios, or activate other electrical devices.



Window contact

Alarm operation

When the alarm system is activated, it will sound when the window is opened. In addition, all the lights can be switched on in order to scare off a potential intruder.

Normal operation

When the alarm system is deactivated, the opening of a window can set the heating or air-conditioning to energy-saving mode for as long as the window is open. If the patio door is opened, the contact stops the roller shutters closing automatically, so you can sit back with a nice glass of wine and enjoy the warm summer evening.

ABB safe&smart –
Your house is up to date

ABB safe&smart combines reliable alarm technology with easy-to-use building system technology in a very simple way. This allows the entire system to react in cases of emergency. In normal operation, the alarm sensors are included in the building control system.

Alarm activated
When you leave the house and activate the alarm system, it can switch off the light and selected power circuits centrally, set the heating and air-conditioning system to a defined absence state or, depending on the time of day, close the roller shutters. Then if an alarm should be activated, lights can be switched on and roller shutters can be opened as an additional deterrent.

Even when you're at home, our safe&smart solution can, for example, ensure the peripheral protection of your house and, in the event of an alarm, also switch on lights together with the alarm siren and open the roller shutters.

Alarm deactivated
When you come home again and deactivate the alarm system, it can also switch on the lights in the entrance area automatically and switch your heating to comfort mode.

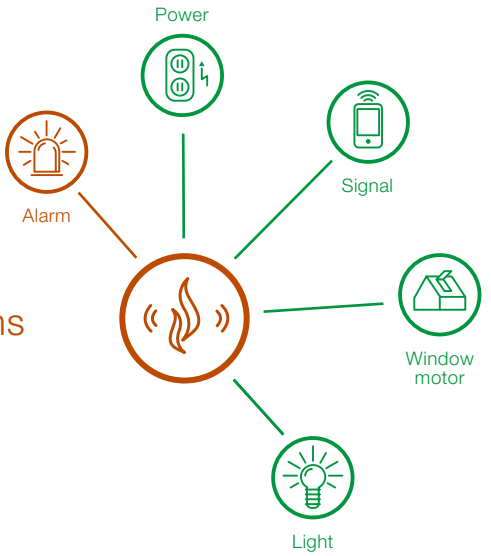
Irrespective of the operating status of the alarm system (activated or deactivated), all the technical sensors, such as those for water, gas, and smoke, are active at all times and, if there is an alarm, they control useful functions such as sockets, roller shutters, and lights.

Always safe

Burglars do not only try to break into empty houses. Even when people are home, some intruders may try to gain access at night or using unwatched entrances. However, this too can be made more difficult with a reliable alarm system.

Even if the alarm system is not activated, the security systems can scare off intruders with a panic function – a press of a button is all it takes. Real added value from ABB safe&smart!

Technical alarms



No matter whether they are smoke, gas, or water detectors, an alarm will sound when these sensors are activated.

However, the connection to the building control system allows even more functions, which can help to minimize damage when a serious malfunction or emergency should arise. For example, the alarm of a gas detector can switch off all the devices in the room in order to prevent sparking, or can open the windows. Alternatively, the triggering of a smoke alarm can switch on all the lights in the appropriate area, in order to aid orientation. Water detectors can switch off sockets in the affected area and make a light flash in order to localize the source of the problem more quickly. In addition, the system also allows messages to be sent to mobile terminal devices.

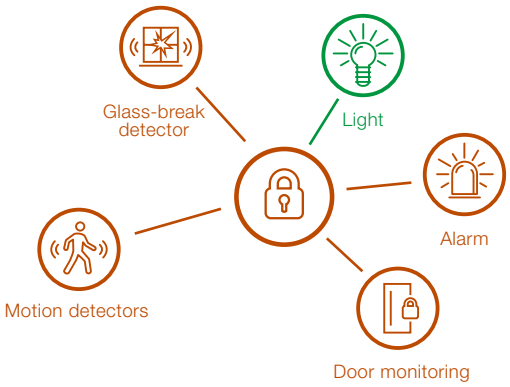
I have to become ever more efficient to develop my business – can’t my security systems work with me?

Installation system solutions, alarm systems, and other protective measures are only efficient in business in the long run when they are as automated, complete, and simple as possible. Complex stand-alone solutions and systems, whose very structure give rise to errors, are counterproductive.

ABB safe&smart –
An efficiency boost for your business

It doesn’t matter what business you’re in – with the ABB safe&smart solution you can interconnect security, efficiency, and convenience in a simple way. Your place of business will learn how it has to react to different situations.

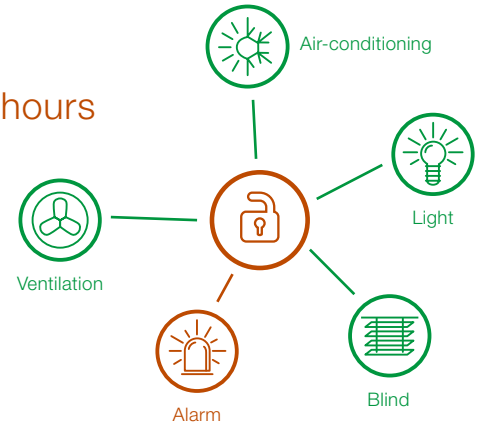
When the store is closed



Alarm activated

The alarm functions of an ABB safe&smart system cover all the standards for the insurance of commercial real estate. It does not matter whether the alarm was triggered via glass-break sensors, door and window contacts, or motion detectors. The targeted coupling to installation systems, such as the power supply, lighting, or roller shutter operation, is always easy to set up.

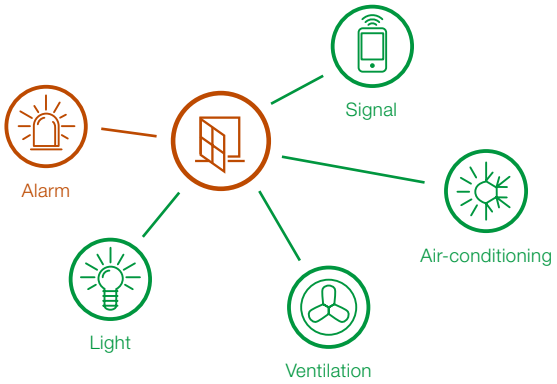
During business hours



Alarm deactivated

Even when the alarm system is deactivated, an ABB safe&smart system can offer a comprehensive range of features, which can increase the security, efficiency, and profitability of your business or office significantly. During the day, you can protect special areas by switching off light and power. Inconspicuous switches that trigger a silent alarm can also be integrated, as well as customizable lighting scenes for showcases and consultation areas, not to mention motion-sensor lighting in bathrooms and storage rooms.

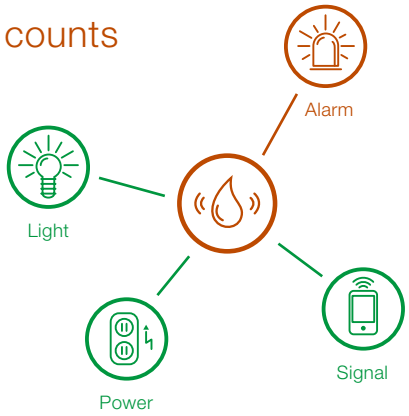
Efficiency and comfort



Innovative installation systems

Intelligent installation systems can make your operations easier and more efficient – without any additional work. For example, daylight-dependent lighting control can help you save an average of up to 25 % on your electricity bills, window contacts can control the air-conditioning, and automated shading can save cooling and heating energy and make working at monitors considerably easier. Safety-relevant functions, such as smoke detectors and protecting critical areas are also possible. All functions can be controlled and monitored easily via a tablet computer or a smartphone.

When it really counts



Technical alarms

Technical defects can also cause long-lasting damage to your business. For example, a fire in the server room which is not detected in time can destroy irreplaceable documents and data. Water damage can also have devastating consequences – if not from the water, then from the resulting short circuits. All kinds of alarm sensors can be integrated into the ABB safe&smart system, thus creating an alarm chain that can go directly to a smartphone. In addition, the coupling of alarms and installation systems is possible, meaning that, if there is a fire, all the windows can be opened or the lights switched on centrally. Even sockets can be powered off in order to prevent short circuits in the event of water damage, for example.

ABB safe&smart – State-of-the-art technology and operation

In the fields of technology, commissioning, and operation, the ABB safe&smart concept can set new standards. Without additional software, the system can be set up and operated intuitively using a standard Web browser. All the alarm and KNX functions can be linked up and access the same text modules.

Software on board
The set-up and commissioning of the KNX Security Panel GM/A 8.1 is very straightforward; it uses a clear Web interface, which can be linked up with a PC or tablet and which is also used for key and user administration. No additional hardware or software is required.

Fault-free and quiet
Commissioning has been kept as simple as possible to minimize possible false alarms. Should the alarm still be activated during the commissioning steps, then the faulty component can be deactivated with a simple mouse click. This means that unnecessary alarm and noise pollution can be avoided if there are wiring errors or incorrect settings.

Everything in sight at all times

The “Live status” feature allows you to view the system status via a tablet or Web interface on a PC, even during commissioning. Faults, short circuits, or system overloads can therefore be detected before installation is completed and eliminated. The interface also shows the status of all the system components, inputs, and outputs.

- Setting parameters of the system using a standard Web browser (Internet Explorer, Firefox, Chrome)
- No additional programming device, no additional software
- Clear display
- Multiple use of text modules, which need to be set only once
- KNX functions adapted to the current alarm configuration

Alarm meets KNX – with just one click

The current configuration of the alarm system and all the defined text modules are applied to the ETS with a single mouse click. All the interfaces required for this are already integrated into the device (security bus, network, KNX, system interface for alarm transmission device).

Plug and play

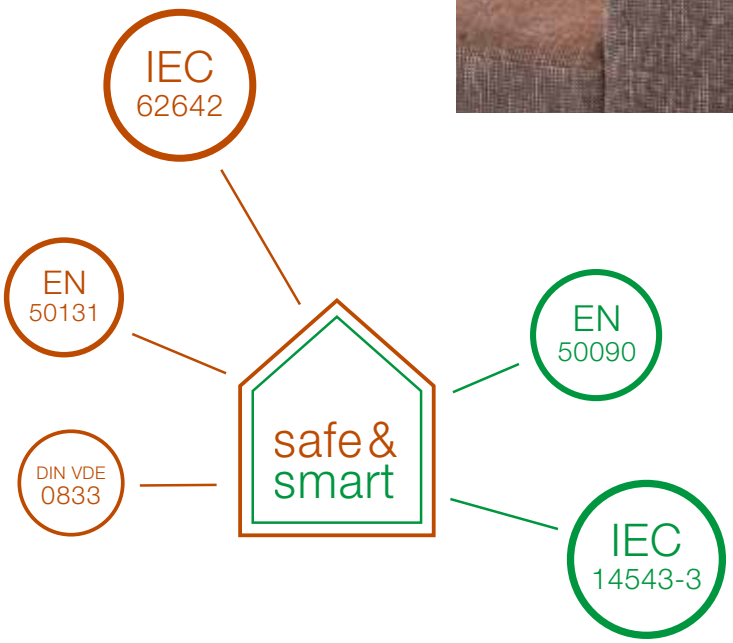
The automatic “Scan” mode detects all the components already connected to the security bus, making manual addition of the components unnecessary.

Text to speech

This function allows the output of all the user-defined texts in the system as a speech message, e.g. to a smartphone and in the form of an alarm. This saves you having to record your own speech messages in the system.

ABB safe&smart –
Extraordinary ease of operation and guaranteed security

What is the use of the best alarm system if the insurance company does not accept it, or its operation is so complex that errors are inevitable, leading to constant faults?



All standards and directives fulfilled

The ABB safe&smart system can be used in systems with increased security requirements according to German VdS Class A, B and C, DIN VDE 0833 Levels 1 to 3 and EN 50131/IEC 62642 Levels 1 to 3.

Encrypted communication

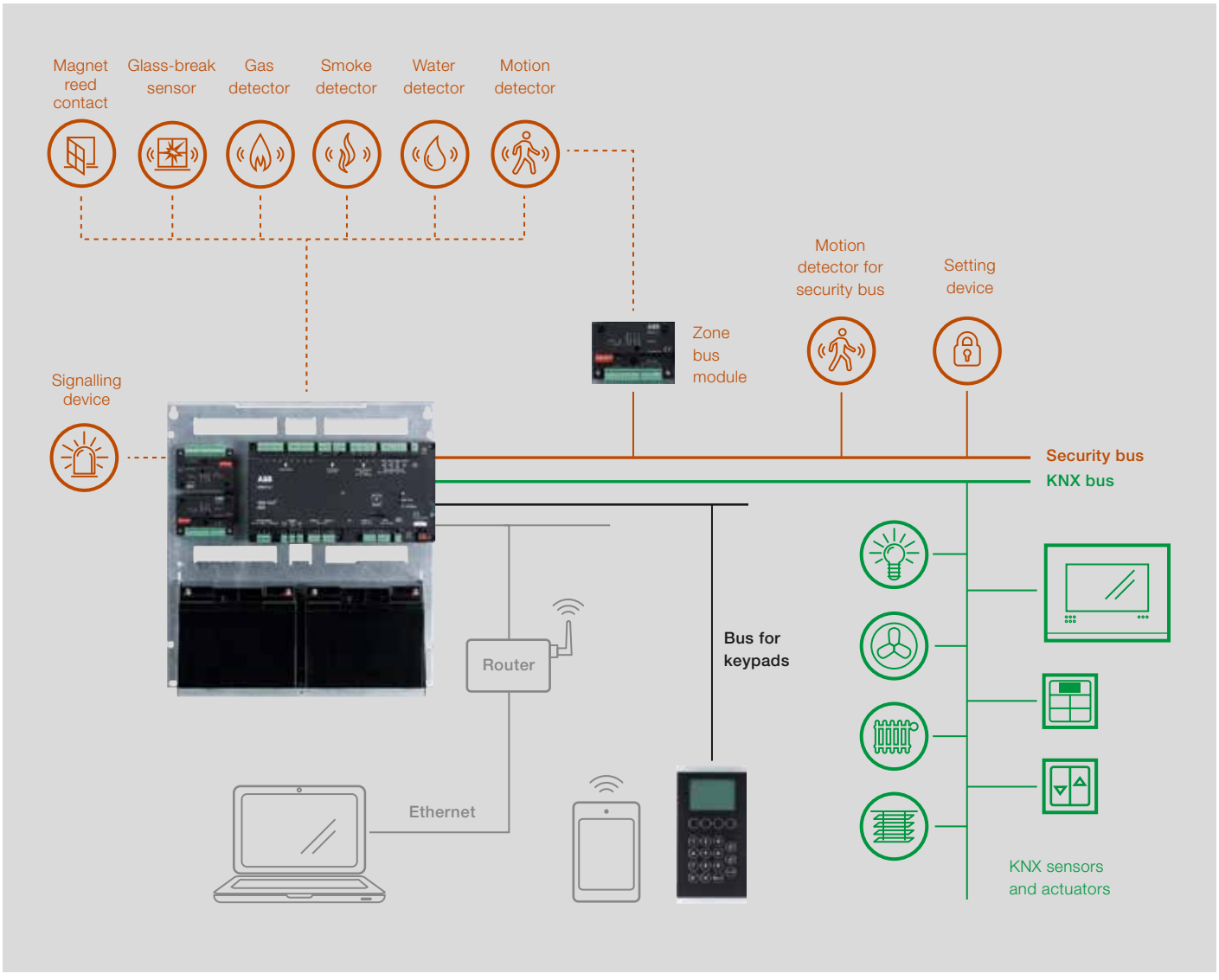
Communication between the system and the Web browser takes place using an encrypted SSL certificate, ensuring the greatest possible security. This effectively prevents communications being read out or manipulated.

Additional security

Up to five control panels can be integrated into the system, offering full access to it in completely different locations. Here, alarms can be set, the system activated and deactivated, and all kinds of functions and scenarios recalled. The device can also be used as a panic switch; besides the alarm functions, this offers controlling also, e.g., light and roller shutter drives.

ABB safe&smart –
A complete package for your building

In our ABB safe&smart system, you can find the right components for every alarm and KNX function, in the quality you've come to expect from ABB and with tested compatibility. Whether sensors or actuators, we can offer you the ideal complete portfolio from a single source.



The new KNX Security Panel – The core of the ABB safe&smart concept

Product name	**KNX Security Panel, surface-mounted**
Product type	GM/A 8.1
	For the protection of small to medium residential or commercial properties against intrusion and technical faults. The Security Panel is suitable for up to five logical setting zones. It has 8 integrated zones for detectors, a Security Bus for Bus-detectors, Bus-Zone Modules or setting devices, Ethernet connection (RJ45) for programming, operating and displaying system status via Web-Browser and an integrated KNX interface. The Security Panel GM/A 8.1 complies with the requirements to VdS classes A, B and C, to the European Standard EN 50131, Grade 1 to 3 and to ISO/IEC 62642 Grade 1 to 3.

Product name	**Zone Module, 4fold**	**Keypad for GM/A 8.1**
Product type	MG/E 4.4.1 or MG/A 4.4.1	BT/A 1.1
	To connect to Security Panel GM/A 8.1 via the Security-Bus. For expansion of the Security-Panel by four detector zones. Used for connection to the exterior perimeter detectors such as magnetic reed contacts and passive glass break sensors. The module has four zones to which several detectors can be connected. The status of each zone is displayed with a status LED. The Zone Module delivers the control signals and the supply voltage for the external detectors. There is no need for an external voltage supply, the Zone Modules are supplied via the Security-Bus.	To connect to Security Panel GM/A 8.1 via the Keypad-Bus. The Keypad allows easy operation of the Security Panel. System messages are displayed on a four-line LCD display. Fife Keypads can be connected to each Security Panel. There is no need for an external voltage supply, the keypads are supplied via the Keypad-Bus.

ABB Security and Surveillance
Extract

Product name	**SafeKey Wall Reader and Chipkey**
Product type	WELT and SCS
	The Wall Reader is used to set or unset a Security Panel. The unit is actuated by inserting the electronic SafeKey chipkey. The SafeKey Wall Reader is equipped with the key reader and an acknowledgement buzzer. The chipkey is an electronic carrier medium for lock actuation and for setting/unsetting on a wall reader. A SafeKey Chipkey can be authorized for any number of different SafeKey systems with different levels of authorization.

Product name	**Combination Signalling Device**	**Electronic Solid-State Siren**
Product type	SSF/GB	SSS
	Siren in an aluminium protective housing with additional protective enamel coating and strobe light mounted on top. Protected against sabotage by a case tamper contact.	With intermittent tone (for interior mounting), used as an interior siren for direct connection an intrusion detection panel.

Product name	**Glass-Break Sensor**
Product type	SPGS
	For surveillance of glass surfaces of windows, display windows and doors with high interference immunity and integrated memory display. For operation directly on detector circuits of intrusion alarm panels or security terminals. Extremely compact dimensions.

You can find the complete product overview in this brochures

The Product Range Overview provides the complete product range for building installation systems and alarm technology and contains all the necessary information for planning and order provision.

Publication number:
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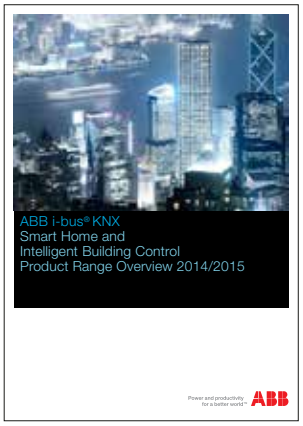

Product name	Dual Motion Detector	Passive Infrared Motion Detector
Product type	EIM	IR
	Motion detector as a bus device for connection to the security bus or conventionally for direct connection to a zone input of the security panel. The motion detectors are available as passive infrared motion detectors (IR) or as dual detectors (EIM). With the dual detectors, the combination of the infrared and microwave detection principles also permits use in more critical environmental conditions. This allows a considerable reduction in the number of false alarms, e.g. from ceiling vents, radiators and windows in the detection area.	

Product name	Water Detector	Gas Detector	Optional Smoke Detector and Detector Base	
Product type	SWM4	SGL	FC650/O	FC600/BREL
	A resin-encapsulated water detector with gold-plated Termipoint pins, detects water ingress, e.g., pipe fractures, ingress of groundwater and sewage, water damage caused by washing machines and dishwashers etc.	For measurement and evaluation of the concentration of natural gas or liquefied gas in the air. The detector has a normally open relay output contact for connection to the Security Panel, features an LED display and a Piezo buzzer.	For early detection of smoke and fire in a building. The combination of these two devices allows the connection of VdS-approved fire detectors to the security panel and KNX security terminals.	

Product name	Magnetic Reed Contact Set	Lock Bolt Switching Contact / Changeover Contact (SPDT)
Product type	MRSS/W	WRK/W
	For connection to the security panel. The magnetic reed contact is used for opening surveillance of windows and doors. Available either in brown or white.	Installed in the strike plate, the contact is used to monitor if the bolt is locked.

ABB i-bus KNX
Extract

Product name	DALI Gateway	Universal Dim Actuator	Switch Actuators
Product type	DG/S 1.16.1	UD/S 2.300.2	SA/S
	The device is used to interface between DALI and KNX installations and incorporates the DALI power supply. Up to 16 DALI devices can be assigned to 16 lighting groups. Each group can be switched, dimmed and controlled with a brightness value. Scenes and sequencer functions are available for lighting effects. Fault feedback messages can be programmed and activated via KNX.	For switching and dimming of incandescent lamps, 230 V halogen lamps or low-voltage halogen lamps which are powered by wound or electronic transformers (automatic load detection). Comprehensive application program with scene and time functions.	Are used for reliable switching of all types of electrical loads in the range 6 A to 16/20 AX C load. Depending on the application, a device can be selected with 2, 4, 8 or 12 switching outputs.

Product name	Blind/Roller Shutter Actuator	Weather Unit	Weather Sensor
Product type	JRA/S	WZ/S 1.3.1.2	WES/A 3.1
	With travel detection and manual operation. Controls 2, 4 or 8 independent blind or roller shutter drives or ventilation flaps. With automatic travel detection and manual operation directly on the device.	Detects and processes the data from a weather sensor (twilight, brightness in three directions, rain, temperature, day/night information, wind speed, date and time). The unit provides the voltage to the weather connected sensor.	Detects wind speed, rain, brightness in three directions, twilight, temperature, day/night and date and time via the GPS signal. An additional heating transformer is not required.

Product name	IP Interface and IP Router
Product type	IPS/S and IPR/S
	Form the interface between the KNX installations and IP networks. The IP interface is used to program or visualize KNX systems via IP networks. IP routers connect KNX lines via IP networks.

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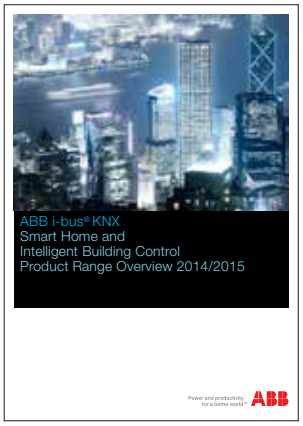

Product name	Fan Coil Actuator	Air Quality Sensor	Room Thermostat Fan Coil
Product type	FCA/S	LGS/A	RDF/A
	For the control of typical blower convectors. An additional load output switches, for example, auxiliary heating. A window contact and a condensation water signal can be polled via binary inputs and transferred to the KNX.	For the monitoring and control of room air quality. The sensor measures the CO_2 concentration, temperature and air humidity and sends the measured values to the KNX bus. The measured variables can be monitored using threshold values. The measured values are used to activate the heating, ventilation and air conditioning devices.	Continuous thermostat for the temperature control of individual rooms for heating, ventilation and air conditioning technology. The intuitive control operation allows each user to set the room temperature and the fan speed individually.

Product name	Valve Drive Actuator	Thermoelectric Valve Drives	Room Thermostat
Product type	VAA/S	TSA/K	SRT/U
	To control thermoelectric valve drives in heating or cooling systems. The outputs are protected against short-ircuits and overloads and can also be controlled using manual operation.	For opening and closing valves in heating, ventilation and air-conditioning systems. Thermoelectric valve drives are controlled by valve drive actuators.	Used for room temperature control in heating and air conditioning systems. The user can also operate lights and blinds manually and very simply using the additional push buttons.

Additional service for your business success

Do you know about our application manual “Security in Buildings”, our planning and wiring information for intrusion detection systems, or our product range overview for intelligent building control? Take advantage of our wide-ranging information and training offers!

At www.abb.com/knx-alarm you can find further information about ABB safe&smart, for example, downloads, videos, links and technical documents.

Contact

Further information and local contacts:
www.abb.com/knx-alarm

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