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We need to talk

Heinz Lux
CEO, KNX Association

Complexity theory forms integral part of theoretical information technology. It focusses on how to solve problems in order to find a solution with respect to the necessary effort. Particular attention is paid to marking out the practically and efficiently resolvable problems.

One of the current pressing, but practically solvable challenges is the question of a future energy management. Naturally, part of the energy management is energy saving, but also the question of energy efficiency. There is also another requirement for the management of energy: lateral thinking beyond system boundaries, the sector coupling. According to the rules of specialisation, created within the vertical division of labor, we have always thought in siloes. In this vertical approach we separated neatly and tidily electric power from coal or gas, sun from other energy sources and traffic from buildings. And in the same manner the markets and the manufacturers of devices but also the trades and the installers organized themselves – as suppliers of stand-alone solutions.
Already from Aristotle we could learn that the whole is more than the sum of its parts. But this segmentation is completely irrelevant for the final customer. The harmonic interaction of the parts, which gives meaning to the whole, is important for him. What counts for him is that it is warm in his home, his office, his workshop, to have water at the correct time with the proper temperature, to have his electric car fully charged, when he needs it. He does not split up into sectors like heat, traffic or electric power, sometimes even not if the necessary energy is produced from fossil or sustainable sources or from batteries.
Consequently the question of how to handle energy becomes a requirement on the practically resolvable problems, on the complexity of energy saving, efficiency, different resources and consumption varying in time – and thus on us as enabler of sector coupling as THE SOLUTION of the future energy management.
And here theory supports us, too. Information technology uses algorithms for decision making. They connect system elements and let them “talk” together. Let us talk the things together! Here we as KNX with our specification for the energy management are the first choice; this is our successful business model. We offer the IT infrastructure and resolve as sector coupler the complexity. Thus we deliver more than the sum of the involved components. Here we are perfectly in line with Aristotle.

Let us talk the things together! Here we as KNX with our specification for the energy management are the first choice; this is our successful business model.

KNX on track for success again in 2019: sector coupling and IoT in focus

Largest KNX product growth and highest sales of ETS licenses since the foundation of the association

Franz Kammerl
(Siemens) is president of the KNX Association in Brussels

The increasing popularity of the Internet of Things (IoT) set new records for KNX, the world's leading standard for intelligent building networking, last year. In 2018, the KNX standard, which now has more than 470 leading technology groups from 44 countries and almost 82,000 certified partner companies in 190 countries behind it, maintained its leading position in the smart building sector.

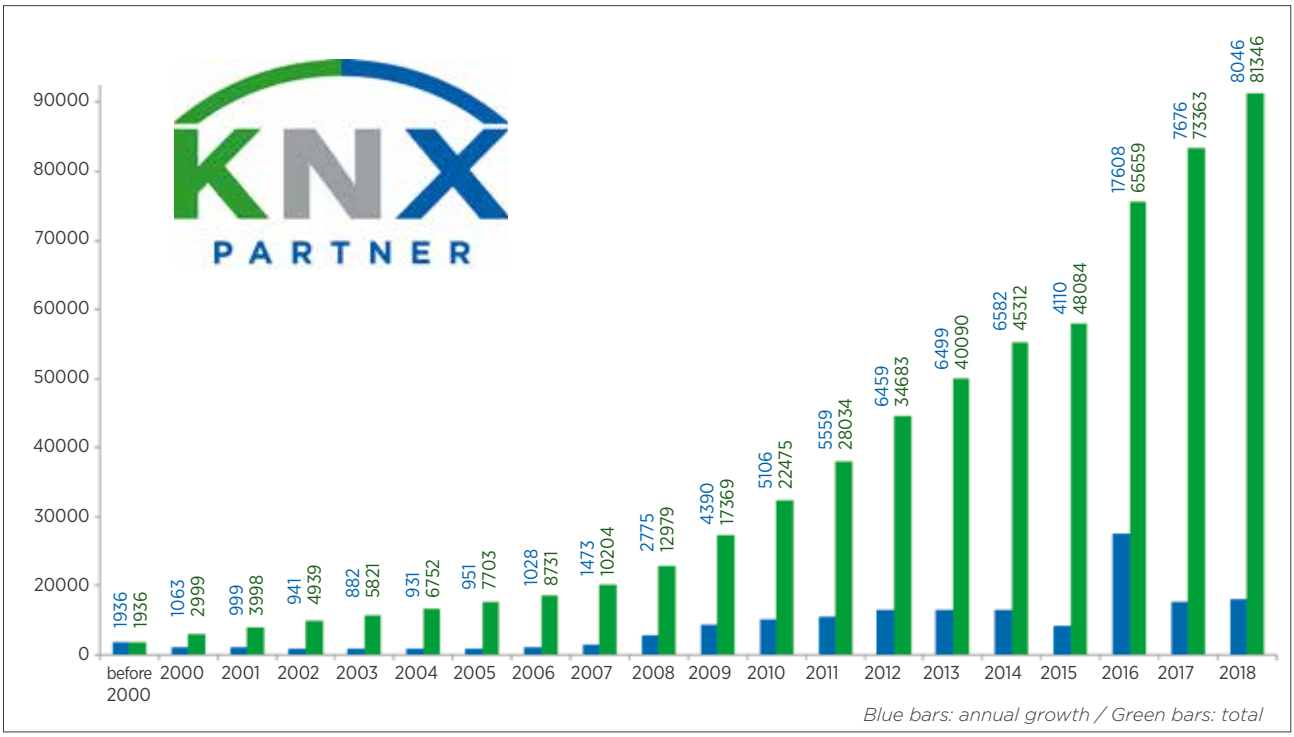
Within a year, the number of KNX certified products rose from 7,000 to 8,000 – more than ever before since the founding of the association in 1990. In addition, the number of ETS licenses sold reached new records in monthly comparison to previous years.

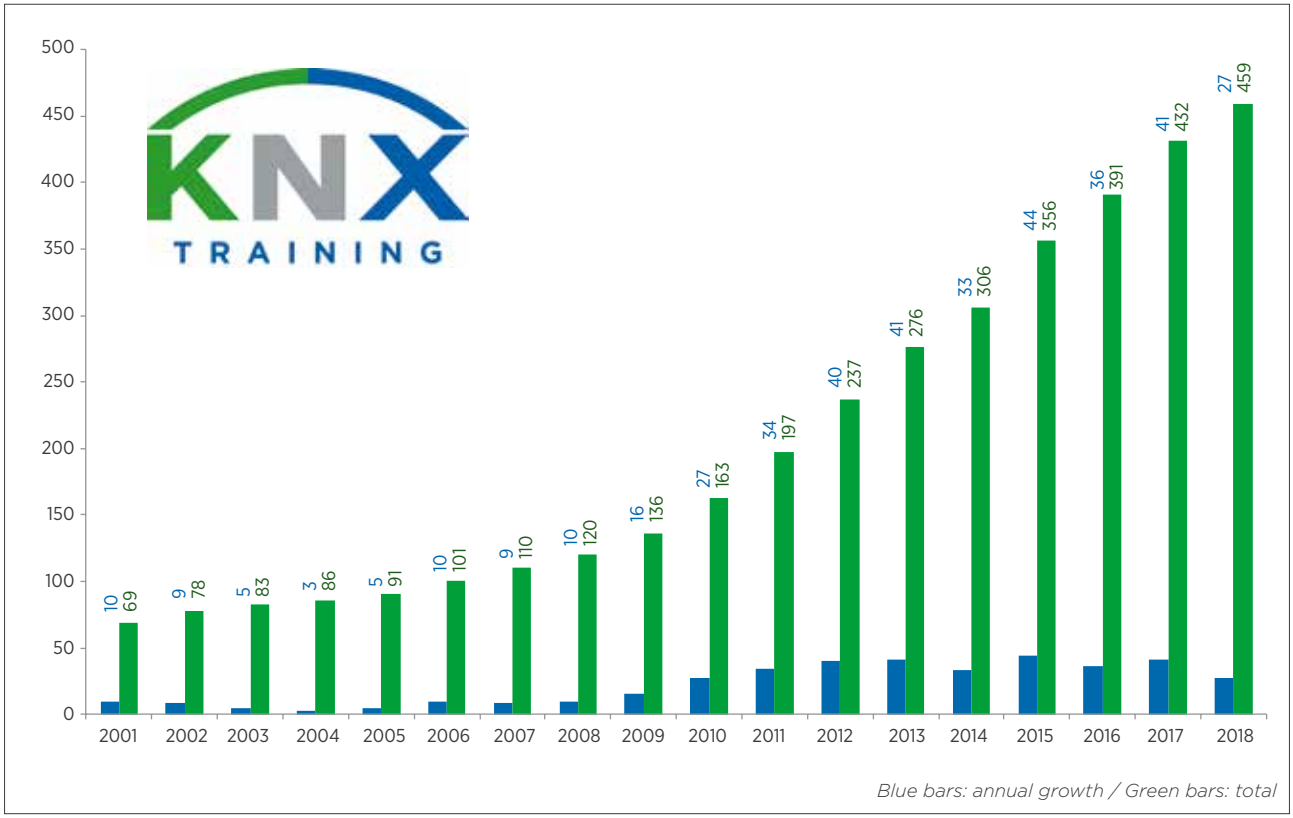
Market analyses regularly show considerable market shares of over 50% for the standard in important markets. Even in China, the most important growth market, KNX has approached this milestone with a recent share of 42%. In the meantime, more than 300 million KNX certified products are in use in various projects worldwide.

An overview of future topics

"As a future standard, KNX will undoubtedly be the leading system on the world market in 2019, at which point we will address the future topics of sector coupling and IoT even more," explains Franz Kammerl, President of the KNX Association. Even today, IP and digitisation are permeating all areas of life. KNX is leading the way, providing KNX IoT manufacturers and system integrators with key technology and expertise for the latest IoT developments.

This has enabled us to significantly expand our application portfolio





with topics such as energy management, mobility, renewable energies, energy storage, smart metering and the smart grid.

ETS continues to be popular

In addition, the number of ETS licenses sold reached new records in monthly comparison to previous years. The strongest market developments were reported by the partner companies in Italy, Great Britain, Switzerland as well as in China and India. At the same time, the number of KNX certified training centers has risen enormously to 460. This explains the high number of nearly 82,000 KNX partners in 190 countries. The offer of licenses for pupils and students continues to enjoy great popularity. The eCampus online training is really breaking records with an average of 2,000 new customers per month.

Manufacturers benefit from the positive trend

Since the birth of KNX in 1990, the absolute preservation for the compatibility of all products, a restrictive certification process, well-defined interworking and a consistent, neutral tool have set the standard. These quality advantages are also reflected in the KNX sales of the member companies. In the relevant markets, sales increased in some cases by more than 60% compared to the previous year.

This is clear evidence that standardisation is increasingly playing an important role in investors' decisions. With the international (ISO / IEC), the European (CEN, CENELEC), the North American (ANSI, ASHRAE), the Chinese standard (GB / T 20965) as well as since 2018 the national standard in Australia / New Zealand, KNX can make the investor decision worldwide to convince.

Survey confirms the positive trend

The facts and figures just mentioned confirm the results of a pan-European survey by BSRIA, according to which KNX was the most popular protocol in most European markets. The standard contributes to technical standardisation in the industry. BSRIA estimates that the proportion of KNX based solutions averages 50%. This reflects the growing importance of KNX in Europe. Even in the UK, where the market is dominated by special solutions compared to continental Europe, KNX's market share is already rising to 27%.

The future development is firmly under control

After the very positive impulses from the developments in 2018, such as the secure transmission with KNX Secure, the easy commissioning with ETS Inside and the very strong expansion of the KNX Radio Frequency (KNX RF) product portfolio, KNX is well prepared for the next year of its success story. As a future standard, KNX is also setting new expectations in energy management. KNX IoT combines sectors such as transport, electricity, renewable energy, energy storage and heat supply as part of sectoral interconnection, and offers a holistic approach to increasing energy efficiency in the smart city.

KNX Secure Roadshow

Over 30 events in Europe, Africa, Asia, Australia and Latin America

Intelligent building networking has become indispensable in the private and commercial sectors. More and more functions and applications in buildings are now being networked and connected to the Internet in the spirit of the Internet of Things (IoT). This simplifies building control for the user considerably. But increasing networking can also provide a greater target for hackers, unless appropriate security measures are taken. But how can owners and occupants of smart buildings best protect themselves from hacker attacks and defend their data? What protective measures exist? All these questions were answered during the KNX Secure Roadshow.

Holistic reconnaissance by security specialists

The success of the KNX Secure Roadshow speaks for itself: In a total of over 30 events in Europe, Africa, Asia, Australia and Latin America, visitors to the KNX Secure Roadshow learned the basics of protecting smart homes and buildings. Visitors could experience at first hand the advantages of the world's leading security standard in this field: KNX Secure. In addition to exciting presentations and the oppor-

KNX Secure event in Norway

Lively discussion at KNX Roadshow in Denmark

KNX Thailand spreading awareness of security

tunity to talk to security and industry experts, the KNX Association and KNX National Groups also offered webinars on the protection of smart buildings. "Undoubtedly, the triumph of the Smart Home and Building sector is accompanied by innovative changes that make our lives much easier. But intelligent building networking also brings with it challenges, especially in data protection, which can be easily mastered with the KNX Secure solution.
With our roadshow, we were able to sensitise users to the topic of safety and educate them about protection options." explains Franz Kammerl, President of the KNX Association.

KNX Secure: The world's leading security standard

KNX attaches great importance to security in the Smart Home and Building sector and began developing protective measures at an early stage. As early as 2015, KNX Secure was designed as a security concept and included in ETS5.5 in 2016. KNX Secure is the only security standard for smart homes and buildings that meets the world's highest cyber security requirements.
The specified protection mechanisms are based on internationally standardised security algorithms according to ISO 18033-3 and use the recognised encryption in accordance with AES 128 CCM. "This revolutionary security approach is unique and offers owners and occupants of smart buildings protection against internal and external hacker attacks." says KNX President Franz Kammerl.

A special appreciation for success of the 2018 KNX Secure Roadshow goes to the supporters:

- ABB
- Jung
- Controltronic
- enertex bayern
- Tapko Technologies
- Weinzierl

KNX National Group Korea introduces KNX Secure

KNX South Africa highlighting importance of security

KNX RF: A new era for safe wireless applications

Versatile in use and all-round security in combination with KNX

With "Linky", France is currently heralding a new era of wireless building networking on a grand scale. The ambitious project aims to modernise over 30 million households nation-wide with smart meters.
By 2020, 95 percent of electricity meters are set to be digitalised. The KNX RF standard is used here. This is not only a technological leader in the field of wireless networking of buildings. Thanks to the possibility of a complete implementation of KNX Secure, it also offers the best possible protection of the highly sensitive data transmitted wirelessly from the smart meters. This is ensured by ISO 18033-3 standardised security algorithms and the internationally recognised CCM encryption according to AES 128.

"KNX has its finger on the pulse of the times with KNX RF"

In any case, the demand for wireless applications in the smart home and building sector is constantly increasing, which is why KNX is constantly working on the further development and optimisation of wireless signal transmission. KNX RF offers a solution that is a simple, but intelligent addition to wired building networking without compromising interoperability. Here, too, ETS ensures the optimum operation of KNX certified devices. "KNX has its finger on the pulse of the times with KNX RF. Because the demand for intelligent building networking is constantly increasing. Never before has it been so easy to wirelessly implement smart devices in existing buildings", explains Franz Kammerl, President of the KNX Association.

Wide range of KNX RF products

At Light + Building 2018 in Frankfurt, numerous new KNX RF devices were presented, demonstrating the many possibilities of wireless communication: from a motor control unit for shading or window drives to remote controls, media couplers or push-buttons. Whether as a hand-held transmitter, wall transmitter, flush-mounted or universal interface – KNX RF offers a whole range of options.
Thanks to numerous different carrier frequencies that do not influence each other, the number of radio transmitters and receivers is not subject to technical restrictions.
KNX RF also available as an energy self-sufficient solution
Radio-based building control with KNX can also be carried out completely independently of batteries. This is demonstrated by the energy self-sufficient solution from KNX RF. Here too, the individual devices can be tailored to the individual needs of the user without changing the basic structure of the building. For example, touch modules can be easily attached to modern glass wall structures. A decisive advantage is the simple configuration of the modules directly in the ETS, so that the parameters can then be loaded into the devices via radio.

ALS-PATIENT CONTROLS SMART HOME WITH WORDS

Voice control and KNX makes life easier for the disabled

Seldom has home automation contributed so much to the quality of life as in the home of Bernhard Müller. The Dutch entrepreneur was diagnosed with the incurable illness amyotrophic lateral sclerosis (ALS) in 2010. Previously he was successful with new business models in the maritime service business at Rotterdam Harbour. He now applies his entrepreneurial skills to understanding the illness and even perhaps overcoming it. He has initiated the largest genetic research project for ALS and has got involved in the development of ALS therapeutics. The fact that Bernhard can work at home as independently as possible, he owes to his KNX home automation in connection with Thinka voice control.

"Siri, put the light on in the kitchen", "Siri, open the patio door", with sentences like these Müller can act at home. He uses a wheelchair and only has limited strength in his hands. It is increasingly difficult for him to use push buttons or the smartphone: "For many, it is a luxury to operate functions in the home using your voice. For me, it is a necessity". This is the basis for the renovation and technical conversion

of his home in Willemstad several years ago. The aim was not to have a high-tech care home but a modern living environment with helpful functions. Together with the architect and KNX system integrator Domoticom, the house was equipped for the disabled.

Tailor-made solutions

These include a separate wheelchair access, electrically driven sliding doors, a spacious glass lift and a multitude of important and practical building functions. Even the drive control for the adjustable bed is linked with a KNX interface. The automation system is used to operate the lights, blinds, heating with room temperature control, a gas fireplace as well as the bed and bed lift. The first operating concepts are local wall switches, the PC of the homeowner and an Iridium visualisation as an app for the iPhone. With increasing weakness in his arms and hands, Müller decided on the Thinka voice control as a further operating option. The bridge between the Siri voice assistant and the KNX home automation translates the voice commands into KNX telegrams for corresponding control processes. To do so, the KNX program simply had to be imported and the applications adapted to the parameters of the device. Müller is happy with the solution: “I am therefore not reliant on people assisting me with every movement.” Moreover, the voice control offers further benefits for communication, information and entertainment.

More supportive technology

If Bernhard Müller wishes to go to the top floor with his high-tech wheelchair, he merely has to announce it and the lift starts up. The bedroom door opens on arrival with the help of a presence detector. The required bed position can be set in the room by voice, the lifting aid can be lowered and used, the lighting can be controlled and the television can be operated. For safety reasons, the system integrator has defined a command sequence in individual phases specifically for the bed control. There is however no end to the inventiveness. Müller expects that he will soon need further technology to support him. He has therefore ordered a robot arm as an operating lever for attaching to the wheelchair. A further operating concept could be based on visual perceptions and interrelated concepts. A new control technology must convert the established patterns into clear commands. Müller builds on appropriate research and is already working together with the developers of Thinka. include lighting control systems, blind controls and closed-loop control of the heating, ventilation and air conditioning system (HVAC).

Automatically free from snow and ice

The practices, patient rooms and offices are fitted with energy-saving, constant light, closed-loop control systems. In the medical rooms, the corridors and staircases, and for the outside systems, the lighting is switched automatically according to a schedule and to presence. In conjunction with KNX/DALI gateways, KNX controls the emergency lighting systems. The blind control system comprises central automation with wind and rain protection, positioning and interaction with the lighting and HVAC. Operation and control are done manually on-site with buttons, panels and by means of web servers, as well as by tablets and smartphones. To protect against snow and ice, KNX also controls the hot water underfloor heating of the entrances and access routes. This is an important function in the sunless winter months. A WAGO PLC controller with a KNX module, in cooperation with a ground temperature sensor, acts as a central control unit. The controller also analyses CO_2 concentration wensors and cooling data and controls the ventilation system valves accordingly.

BENEFITS OF KNX IN THIS PROJECT

- *Home automation*
- *Adaptable to the needs of the occupant*
- *Flexible for special functions*
- *Visualisation with Iridium Browser*
- *Supports assisted living*

TECHNICAL HIGHLIGHTS

- *Coupling with Siri voice control*
- *iPad on the wheelchair for operation via visualisation*
- *Bed control with safe command sequence*

TRADES / APPLICATIONS

- *Lighting*
- *Blinds*
- *Air conditioning systems*
- *Door control*
- *Media control*

KNX COMPONENTS

- ***Number:*** *50*
- ***KNX units (extract):*** *Basalte: Bus push button*
  Hager: Actuators and other built-in devices
  Thinka: Voice control
  Zennio: Logic module

COMPANIES INVOLVED

- ***Contractor and system integrator:***
  Domoticom, 6372 DV Landgraaf,
  www.domoticom.nl

ACADEMY FOR SUSTAINABILITY

KNX gives a practical example and manages energy-efficient functions

The Energy Academy Europe (EAE) in the Dutch town of Groningen is a special building not only from the outside. The institute of the state university is also unique as the most sustainable educational establishment in the country. According to its own commission to promote research for renewable energy, the building itself is a flagship. Due to its design, its use of the natural elements of the sun, earth, water and air as well as energy-saving automation, there is still energy remaining despite the 1,600 people studying and working in it. Through the surplus of almost 200 MWh a year, the CO_2 footprint of the new building is offset in only 40 years.

The building has been awarded the BREAAM Outstanding Energy Label and has earned the International BREEAM Award 2017. This high distinction would not have been achieved without the integration of all the energy-efficient building functions in a compulsory control system, as ensured by the system integrator Engie Services. KNX presented itself as a building system technology for the control of building functions on the field level.

Interaction of the processes

Unseen at first, the building consists of two sections. The research laboratories are housed in the north section while the education institutes are in the south section with an open atrium between them acting as a meeting place. There is a park-like conservatory attached to the south section. The visually appealing outer shell with an insulating glass design spans above the two sections. The 2,000 three-dimensional PV panels on the roof are built for optimum solar yields and with a window for maximum daylight. The roof design causes natural ventilation through convection. Air heaters or coolers obtain their temperatures from the sun or cool night air as well as from underground heating and cooling accumulators, partially with the support of heat pumps. The energy requirement for artificial lighting is restricted due to the level of natural light. The use of rainwater reduces the consumption of mains water. An efficient interaction of all the processes for ventilation, heating, cooling, sun protection and lighting is the prerequisite for sustainable building use.

Efficient lighting in the call centre and other rooms with natural daylight due to constant lighting control systems.

Management on the field level

KNX is coupled with other systems (e.g. BACnet, Modbus and DALI) in order to achieve smooth interoperability amongst them. In total, KNX controls 1,400 DALI lamps via corresponding gateways. KNX communicates with Desigo via gateways, compatible KNX PL-Link peripheral devices and KNX IO modules. KNX forms the field level of the complete system and links different trades to one energy management system. This system determines energy data and evaluates it for the optimisation of the energy applications. Energy-efficient functions for lighting, sun protection, room temperature etc. are based on sensor values for temperature, CO_2 content of the air, presence and daylight. KNX also implements central and distributed operating concepts. Lighting can be controlled and operated centrally via a touch panel in the reception area. The brightness or time functions can be adapted via local control panels if the work processes require it. The lighting in the lecture halls can be set centrally via the media technology for presentations. Values for lighting, sun protection and room temperature can be modified via room controllers for personal requirements. Any inefficient settings are thereby indicated. Finally, the flexibility of KNX decisive in adapting the energy-related processes to future findings. Currently there are around 1,100 components installed, distributed across 31 lines.

BENEFITS OF KNX IN THIS PROJECT

- *Lighting control*
- *Temperature control*
- *Monitoring of building functions*
- *Energy management*
- *Flexible system*
- *Central and distributed operation*
- *Visualisation*

TECHNICAL HIGHLIGHTS

- *Thermal regulation in combination with Desigo KNX PL-Link*
- *Lighting control with KNX/DALI*
- *Constant lighting control dependent on presence, brightness and sun protection*

TRADES / APPLICATIONS

- *Lighting*
- *Sun protection*
- *HVAC and solar technology*
- *Safety monitoring*
- *Smart metering*

KNX COMPONENTS

- ***Number:** 1,161*
  - *137 room controllers*
  - *24 temperature sensors*
  - *130 CO_2 sensors*
  - *223 daylight and presence sensors*
  - *178 control modules for sun protection*
  - *31 KNX/IP-Link controllers*
  - *240 KNX IO modules*
  - *151 KNX/IP-Link VAV drives*
  - *28 KNX/DALI gateways*
  - *1 central touch panel*
  - *18 local touch panels*

COMPANIES INVOLVED

- ***Client:** University of Groningen*
- ***Architect:** BROEKBAKEMA, Rotterdam*
- ***Installer:** Engie Services, Zaandam*
- ***Project partner:** Siemens Building Automation*
- ***System integrator:** Engie-Services, www.engie.com*

SIGNALLING EFFECT FOR SUSTAINABLE URBAN DEVELOPMENT

KNX lighting control systems and energy management support LEED standards

The Plaza Galicia in the Argentinian capital of Buenos Aires is an example of sustainable building in the largest metropolitan area in South America. The unconventional design with its glass elements and interior ambience are part of the strategy to meet the high requirements of the LEED (Leadership in Energy and Environmental Design) standard. In addition to the protection and support of the environment during building and usage, the efficiency of energy use also plays an important role. This requires continuous energy management in building technology. The KNX automation integrated by the engineering firm Factum in Buenos Aires meets these technical building requirements.

The ambitious building project was planned by AFT Arquitectos, one of the best architectural practices in Argentina. Both sections of the building have a floor space of 34,000 square metres over ten floors. The headquarters of the Galicia Bank of Argentina occupies the largest area. In addition, there is an extensive call centre, one of the largest data centres in the country, record offices, bank counters, lobbies, social areas with dining areas, fitness studio, cafeteria and garden terrace. The green areas inside the building which comprise almost 1,000 square metres are accessible daily to the around 1,500 employees and visitors for leisure and relaxation. Underground car parks are located in the basement. According to sustainable use, there are also bicycle parking spaces in the building.

Efficient constant lighting

The lighting control system with around 10,000 DALI lamps provides a proportion of the installation. These are located for example in offices, foyers, conference rooms, underground car parks and outdoor areas. The automatic control is carried out via light sensors, presence detectors and twilight sensors and using time programs. Wherever there is a lot of natural light through the glass windows, constant lighting control systems reduce the current consumption for artificial light in the rooms. The functions are precisely matched with automatic blinds. Energy-efficient interior lighting is thus achieved with a consistent setpoint value. The automatic blind control systems which are organised in groups or individually are also efficient for shading. They are operated according to the position of the sun and linked with temperature and light values.

Controlled energy consumption

The entire control strategy is synchronous with energy management. This is supported by the values of smart meters which are used to evaluate the optimisation of the energy loads. The KNX functions of the various applications run together on a visualisation server. Operating states can be controlled and influenced via the graphical interfaces. BMS functions and interactions enable distributed control and operation via display devices, touch screen and smartphone as well as monitoring on the computer in the security bunker. Alarm signals for example from the KNX/DALI lighting control system are also quickly detected. Around 750 KNX devices were installed. The installations are combined floor by floor in terms of the topology and linked via IP backbone.

Efficient lighting in the call centre and other rooms with natural daylight due to constant lighting control systems.

Bright rooms due to the green areas inside the building complex

BENEFITS OF KNX IN THIS PROJECT

- *Control of the lighting*
- *Intelligent shading*
- *Energy management*
- *Central supervision through visualisation*
- *Security monitoring*

TECHNICAL HIGHLIGHTS

- *Control and monitoring of 10,000 DALI lamps via KNX/DALI gateways*
- *IP backbone on each floor*
- *Over 400 light sensors, presence detectors and twilight switches for efficient energy use in lighting systems*
- *Distributed operation via smartphone*

TRADES / APPLICATIONS

- *Lighting*
- *Sun protection*
- *Visualisation*
- *Security monitoring*
- *Smart metering and energy management*

KNX COMPONENTS

- ***Number:*** *750*
  Schneider Electric: Distribution boxes, actuators, DALI-gateways, IP-routers, sensors, lighting controllers, visualisation and other components

COMPANIES INVOLVED

- ***Client:*** *Banca Galicia*
- ***Architect:*** *AFT Arquitectos, www.aftarquitectos.com.ar*
- ***System integrator:*** *Factum Ingenieria, www.factum.com.ar*

FOR GREAT MUSIC

KNX controller guarantees the perfect lighting ambience

Two years ago, the most beautiful concert hall in the world was officially opened with the performance of Beethoven's 9th symphony to a large audience. 2,000 designer lights also had their premiere. A KNX controller guarantees the perfect lighting ambience. The decision in favour of KNX was evident even in the early building phase. Which system would otherwise meet the requirements for Hamburg's spectacular Elbe Philharmonic Hall? The new glass building with a pavilion roof on the site of a former warehouse towers 100 metres above the surface of the water. The building is also a technological wonder.

The concert hall is the heart of the complex. The entire audience is close to the orchestra in a pleasant ambience. The 2,100 spaces are arranged on terraces around the stage. The lighting effect caused by the glass balls is enchanting. The LED lamps are a custom-made project from the manufacturer Zumtobel and specially optimised for the challenging dimming function of this application. The design is continued in the foyers and staircases. In addition to the

Lighting control and operating concepts for different building functions

LED globe lights, around 800 RGB linear luminaires are also installed. The KNX automation is responsible for the perfect control and brightness – in combination with DMX in the hall and with DALI and RGB control in the foyer. Some of the luminaires can be switched to emergency lighting. Among the lighting solutions is mobile stage lighting which is controlled via KNX/DMX.

Four KNX worlds

There are various building uses across the 125,000 square metre space such as two smaller concert halls, a hotel, restaurants and conference rooms, luxury apartments, foyers, a multi-storey car park and a plaza with a view onto the harbour. Around 1,800 KNX components were installed. The engineering firm Beyer provided over 20 years of experience and know-how in building system technology. The topology of the KNX network alone required an expert in light of the different building uses. Event areas, apartments, the hotel and car park are commercially and technically separate areas. Four KNX worlds were formed as a result with no data traffic occurring between them. Nevertheless, it is possible to use sensor values from the weather station together.

Smooth start

The main application is the lighting control. Specific functions have been implemented depending on use. The lighting circuits in the halls and foyers rather require central control and operating concepts. Visualisations can be operated via touch panels or PCs. Room functions in the offices, cloakrooms etc. require distributed solutions. Façades and architectural lighting are controlled dependent on time and brightness. Light scenes which can be retrieved from the lighting control provide situation-based lighting moods. The tasks can be ideally resolved thanks to the large selection of KNX control and operating components. A well-conceived project design with ETS guarantees smooth operation from the start.

Smartphone off

A further task for KNX automation: it collects and signals fault messages from all the applications and transfers them to risk management. KNX also manages the call and listening system. Transmissions to the cloakrooms can be controlled and announcements can be acknowledged. The shading automation system is based on KNX. Energy management evaluates loads via meters with a KNX interface and is used for the optimisation of current loads. A smart functional idea is the disconnection of the mobile in-house phone network: one switch command and no smartphones that have been left on accidentally can disrupt the performance.

BENEFITS OF KNX IN THIS PROJECT

- *Project-specific solutions due to large product selection*
- *Lighting control and operating concepts for different building use*
- *Fault monitoring management of all applications*
- *Automatic shading*
- *Smart metering for energy management*
- *Visualisation*

TECHNICAL HIGHLIGHTS

- *Uniform dimming of LED global lamps in the hall*
- *Lightscenes for situation-based lighting moods*
- *Control of scenographic stage lighting*
- *Disconnection of the mobile phone network during the performance*

TRADES / APPLICATIONS

- *Lighting*
- *Sun protection*
- *Fault monitoring management*
- *Smart metering*
- *Visualisation*

KNX COMPONENTS

- ***Number:** around 1,782 in four KNX worlds*
  ABB: Gira: B.E.G. WAGO: Elka: TCI: WHD:

COMPANIES INVOLVED

- ***System integrator:** Engineering firm Beyer, building system technology, Dirk Beyer, www.ing-beyer.de*

INTELLIGENT LIGHTING MAKES PRISON SAFER

Largest KNX automation in Australia for over three thousand luminaires

In gangster films, prisons are places that inspire terror. This has however little to do with reality. The Ravenhall Correctional Centre in Victoria, Australia, relies on rehabilitation. Support concepts, experience with social rehabilitation and the management of the detention centre support this. The prison was built in the period 2015 to 2017 for 1,300 male offenders. In the modern correctional facility, secure lighting systems which are controlled by almost 5,300 KNX devices also play a role. The system integrator mySmart proudly calls the project the largest KNX automation in Australia to date.

In addition to the usual detention cells, the Ravenhall Correctional Centre has space for 450 prisoners on remand. It has a forensic mental health ward with 75 beds and enables the preventive detention of 25 prisoners. There are shared cells with space for four or six prisoners as well as individual cells which are built in the Lego block style and are particularly robust against damage. The cells as well as the public areas, communal lounges, social facilities, rooms for guards and administration are divided across 41 buildings. The 300,000 square metre outside area is secured with a concrete wall which is 1,800 metres long and 6 metres high. The border surveillance and security inside the facility are supported by automated lighting systems.

Full control

The automation should be flexible for increasing demands on the lighting and support safe and effective management, these are the conditions imposed on the contract with mySmart. As an open standard which is recognised in Australia, KNX meets these requirements. Long-term support is thus guaranteed. The interior lighting, the low-voltage cell lighting, all exterior lighting on the premises as well as the searchlights that protect the external wall are all controlled with KNX. KNX offers essential benefits: a comprehensive selection of project-specific and thus economic control solutions and the possibility of remote programming outside the security areas. The lighting control using KNX/DALI is particularly advantageous. With the proven protocol, failures of devices and lamps can be quickly detected and rectified. 301 KNX/DALI gateways were used for exactly 13,563 luminaires. Energy savings are achieved using automatic lighting control with presence detection. Sensor types such as PIR presence detectors and microwave sensors with a high range and protective housing meet the required sensitivity and stability. Luminaires are regulated in the meeting rooms in connection with DMX Control.

Adapted lighting conditions support detention management and energy efficiency.

High-security IP networking

The visualisation is essential for the management. As a universal building management platform, the EisBär software also couples KNX and BACnet. The lighting and air conditioning systems can thus be controlled and operated as required via a standard graphical interface at various terminals. To meet the great distances covered by the area, the KNX networks are linked together via a high-security, fibre-optic IP network. Real-time monitoring of the KNX/IP interfaces generates warnings on failure of a network. In the event of an emergency, the management team can immediately overwrite the lighting throughout the building. The dispersed KNX networks were also a challenge for the system integration. All the KNX areas and lines had to be 100% guaranteed to go online on completion. A team was employed for a year onsite with 2,000 programming hours for preparation.

Pleasant foyer outside the usual image of a prison with KNX-controlled lighting.

BENEFITS OF KNX IN THIS PROJECT

- *Project-specific control solutions*
- *Flexible system for future support*
- *Energy saving and safety*
- *Central monitoring and operation*
- *Reduced parameterisation in the prison area*

TECHNICAL HIGHLIGHTS

- *KNX/DALI lighting control for simple programming and monitoring*
- *Presence control using sensitive microwave sensors and wide-range PIR*
- *Real-time monitoring of the KNX/IP interfaces*

TRADES / APPLICATIONS

- *Lighting*
- *Visualisation*
- *Function monitoring*

KNX COMPONENTS

- ***Number:** 5,273*
  - *ABB: KNX/DALI Gateway, presence sensors, switch actuators,*
  - *IP routers, line couplers*
  - *EisBär: Visualisation*
  - *Elka: DMX-Gateway*
  - *Exor: Touch panels*
  - *Intesis: BMS-Gateway*
  - *mySmart: PIR presence detectors, microwave sensors*
  - *Zennio: RS232 interface*

COMPANIES INVOLVED

- ***System integrator:** mySmart, Peter Garrett, www.mysmart.com.au*

Sector coupling with KNX IoT is no longer simply a vision

Smart Energy Management with KNX

To meet politically set climate control objectives, energy sectors such as electricity, heat and traffic must be considered as a whole. The vision is to force the primary use of environmentally friendly electricity, a preference for energy-efficient technologies and savings of fossil fuel energy by coupling them in an intelligent management system.

Until now energy applications in buildings have simply been networked and automated, in order to regulate and control loads more efficiently. New energy sectors are photovoltaic systems for in-house generation of electricity or even charging stations for electrical mobility in the future. Behind these are large quantities of energy which have to be managed. Coupling of individual energy sectors is therefore becoming increasingly more important for climate control.

KNX IoT produces Smart Energy Systems

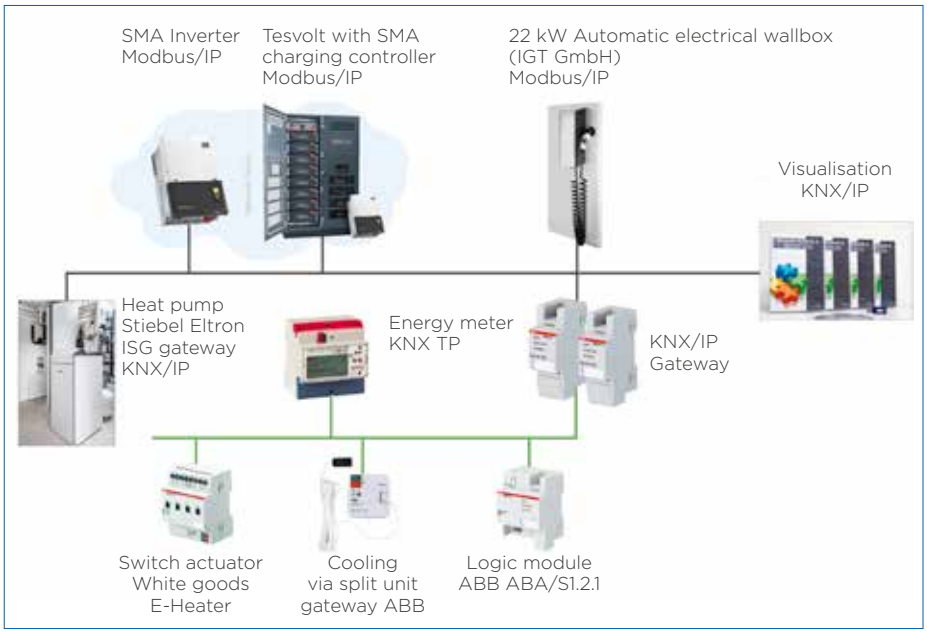
There are no visions for the technical criteria for energy sector networking. In technical jargon, the terms "sector coupling" or "integrated energy" area used. With KNX IoT, these complete "Smart Energy Systems" can be produced in buildings even now. Via KNX/IP, KNX installations interconnect all energy applications, such as electrical loads, electricity generators, heating systems, air conditioning and – a completely new innovation – electrical mobility charging stations In this way, for example, irregular solar power generation can be compensated, better used and peak loads relieved to better effect by means of more flexible charging processes and charging management. This is implemented in a current model installation, which couples the various loads in an intelligent home, depending on proprietary solar power generation with battery backup, to a smart energy management system.

Load management in a smart home

In a smart home, there are, for example, one or more adjustable charging stations for the occupants' electric vehicles, as well as the normal household equipment, electric heat generator, a heat pump unit, ceiling with integrated cooling system and a photovoltaic system with inverter, as well as a charging controller for a battery backup. KNX IoT technology regulates the energy flows so that solar power from in-house generation is used as far as possible. Energy generation from the grid is also available. Load management also ensures that the maximum permissible connected power is not exceeded. Electric car batteries are charged primarily with solar power directly from the photovoltaic system and the battery backup. Charging of electric car batteries is also flexible, given the car downtime, for the analysis of power peaks. The individual energy sectors are coupled via the Internet protocol, in this case KNX/IP interfaces or Modbus/IP. Data for management logistics is available, inter alia, from intelligent energy meters, inverters, battery charging regulators, heat pump control and switching actuators with current sensors. The smart energy management system is operated and controlled via a KNX visualisation. Building automation with KNX IoT is ready for the energy revolution, with the change to environmentally friendly power.

Sector coupling

The term sector coupling refers to the networking of sectors of the energy economy formerly considered independently of each other: electricity, heat and mobility, so that renewable energy is used to best effect and can be integrated. Behind the concept is the overall energy revolution, with the aid of renewable energies and the avoidance of energy generated using fossil fuels. Moreover, intelligent coupling of the use of energy-efficient technologies can promote reduction of the entire energy consumption and compensate for fluctuations in the demand for electricity and variable generation of wind and solar energy. Sector coupling supports the climate control objectives sought with energy and traffic management.



Energy Management with KNX

Technical interfaces for data exchange between energy loads, storage facilities and generators in the domestic sector, as well as a management system

Ongoing digitisation in the energy management sector is facilitating a hitherto non-existent flexibility in the generation, distribution, storage, conversion and consumption of energy. At international level, this digitisation will also be implemented on the basis of standardisations. In the case of (local) energy management, this means designing technical interfaces for data exchange between energy loads, storage facilities and generators in the domestic sector, as well as a management system which handles coordination. For drawing up a standardisation document for these interfaces, the KNX Association is committed to working extensively with the relevant CEN/CENELEC TC205 Standardisation Committees. The objective of this co-operation is to define data and, where relevant, corresponding communication processes for energy management. At the same time, determining the underlying transport mechanisms and data transfer protocols will be deliberately ignored.

Motivation

Energy management occurs at all levels and not only in the form of electrical energy. At local level, this relates to the management of individual buildings or common to the household sector. Energy management at local level also embraces individual energy loads or generators, which are communally present as free-standing equipment (heat pump, charging station, PV unit, etc.) On a global scale, with its very high energy consumptions, these are not individual (terminal) equipment - in this case, one comes up undeniably against the subject of sector coupling. The subjects of heat, electricity and mobility and their energy-saving and finally industry-wide coupling have an objective technically. This is to store different forms of energy efficiently (between) different sectors and provide it to them in their needed form in each case (primarily heat and electricity). At this level, we speak of combined heat and power (KWK) systems, very large storage banks for industrial sites or pumped storage plants. In the following article, this is less about a fresh explanation of the challenges and needs of and for energy management, but about its technical implementation. A few examples of use (known as Use Cases) will illuminate the technical background to energy "management". Of course the examples used present a focus on the management of electrical energy, but the standard itself covers all sectors.

Definitions

Figure 1 defines the basic set-up, including the necessary subscribers or terminal equipment for energy management. There is also a distinction between local and global energy management. Local management can be viewed with a degree of simplification as open-loop control of the (local) household area or the equipment present in it; merging into a larger unit, e.g. an entire street with several houses is possible. With local management, the CEM - as the central unit - is always the contact for the subscriber (see I2 Interface). Global management is related to the complete network/energy associations and less to individual terminal equipment (see I1 Interface). As mentioned already in the introduction, the subject of sector coupling plays a significant role at a global level.

CEM (Customer Energy Manager)

Central Unit for coordinating all subscribers for local energy management; these are broken down into generators/stores/loads for different sectors, e.g. PV units as gener-

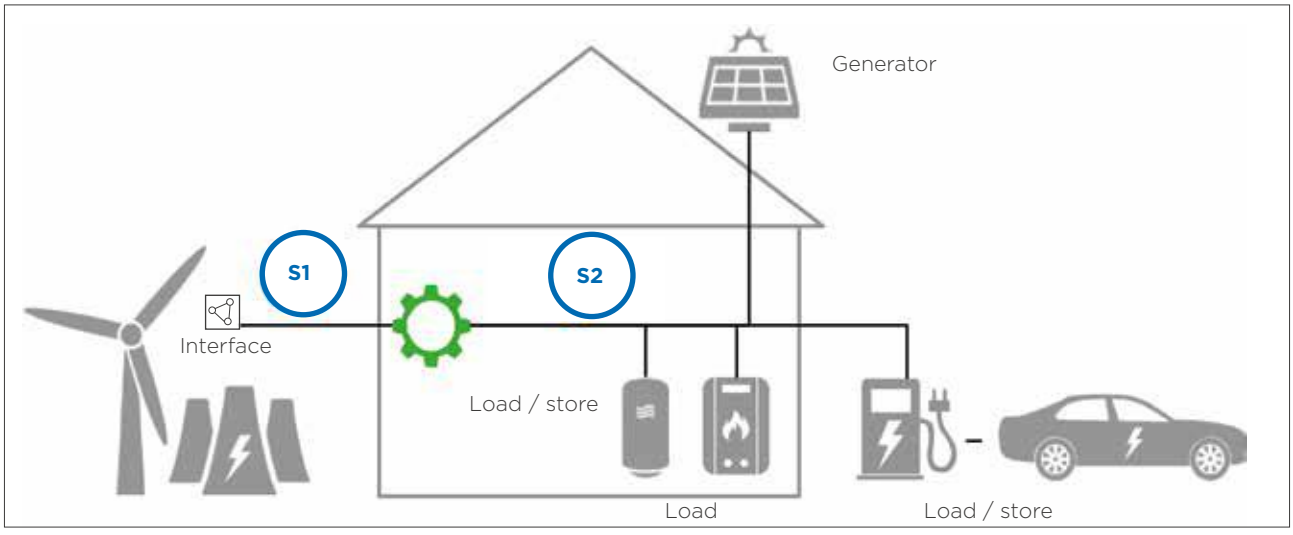


Figure 1. *Players and interfaces for energy management*

ators of electrical energy or boilers as hot water storage. The CEM:

- Optimises subscriber energy flexibility by using algorithms
- Communicates with external units (I1 Interface)
- Can be inside or outside a building (in figure 1, fitted inside)

S1 Interface

External interface, provides the CEM with control information (e.g. Prices) for its optimisation strategies or even ad hoc control instructions. The objective, for example, is global load management or network stability at higher level.

- An illustrative example of "ad hoc" control instructions is, say, according to EEG the option of "remote controlled power limiting" in PV systems up to 30 kW peak (buzzword "ripple control receiver). Currently, however, this acts directly on the PV system inverter which, in ideal energy management, can be viewed as a subscriber – behind the CEM.

S2 Interface

Coordination at local level, driven by various objectives. These may be, for example, cost optimisation, the balance between generated and consumed energy, energy switching from one sector into another (buzzword "sector coupling", not distributed in the local area) or fulfilment of user instructions. Some examples are listed below:

1. Price-based open-loop control enables forward planning of energy consumption with the goal of cost optimisation.

With a tariff known in advance and its cost structure (e.g. from 17:00 onwards, the cost of energy purchase is 30% lower), planning and, in this case, actually changing energy consumption (if this is possible) can achieve a cost optimisation. In principle, nothing other than telephone prices from the late nineties, for which different costs per minute were payable, depending on the time of day.

2. Global network stability will be facilitated with real-time open-loop control. The objective is short-term planning of acceptance/shedding of surplus energy.

One example would be an energy surplus in the global network through severe fluctuation of the fed PV cable at one point and short-term acceptance of surplus energy in a local memory at another point. Perhaps as almost "free of charge" charging of all currently connected electric cars, or the use of flexible hot water preparations, instead of diverting surplus electricity to ground.

In a purely local scenario with PV and storage unit, this is presented as today's proprietary consumption optimisation. In this scenario, the local household network includes a PV system, a (battery) storage unit and sundry loads.

The PV generates energy, relatively volatile depending on weather/cloud cover and reaches its full capacity only under ideal conditions. With relatively steady energy consumption in the home by the loads, in the best case the feed of currently unneeded PV energy is diverted into the global network, for example until this has charged the local (battery) storage completely.

The storage does not act in this case as an absorption buffer to divert surplus PV energy (similar to the ground in the above explanation); naturally the energy in this scenario is then (still) not destroyed. From a proprietary consumption perspective, however, this is the worst case.

Applications

So that some form of local energy management can definitely take place, subscribers are of course needed, who finally consume or generate the relevant amounts of energy and can communicate (with each other). The most important steps for creating such a set-up are limited to three core elements.

a. Organisation

Configuration of the system, incl. identification of all energy-related subscribers (buzzword making the subscriber known to the CEM)

b. Process coordination

Polling and if need be updating of subscriber data by the CEM. Here, in addition to pure administrative data, data also means the corresponding energy consumptions, which are needed by subscribers for certain actions and programme sequences. Directly controllable operations are also available to subscribers for certain time-critical applications.

How to apply process coordination:

The local management (CEM) queries a subscriber's possible actions/programme sequences. Via the profile, the CEM learns about an expected energy consumption or an expected energy generation.

Energy consumption and energy generation can be presented as a table of value pairs for a power needed at any point in time. The summation of the table values across the entire period then gives the total energy requirement.

In fact, in the implementation for energy management, this is a conventional sequence with corresponding slots (1...n), which a subscriber provided to the CEM via its profile. Practical considerations mean that slots do not work with individual values in tabular form, but with a period (start and end times) and – during this period – fixed power value *(see figure 2)*. The minimal resolution of the period is also 1 second, which usually is adequate for the corresponding open-loop controls/optimisations in this case.

• An example would be a washing machine, which provides various short, normal and eco programmes. Each of these programmes finally lasts for different lengths of time in its execution. Within the duration of the programme in each case, there are then different energy consumptions in certain periods (e.g. in the heating phase or while rinsing). In this example here, so to speak, we have a conventional load sequence, with the washing machine always consuming energy - it does not generate it.

c. Optimisation

Optimisation of energy flows across all subscribers by the CEM

How good the final optimisation will be is important for the practical result to be achieved, but is not directly relevant for a standardisation, as long as the result or definitely an optimisation is achieved. Good or better optimisation is the object of the competitor with a complete solutions provider.

How to apply optimisation

Owing to external limitations, local management (CEM) reduces the desired – but in sum too high – energy consumption by subscribers and balances these at local level.

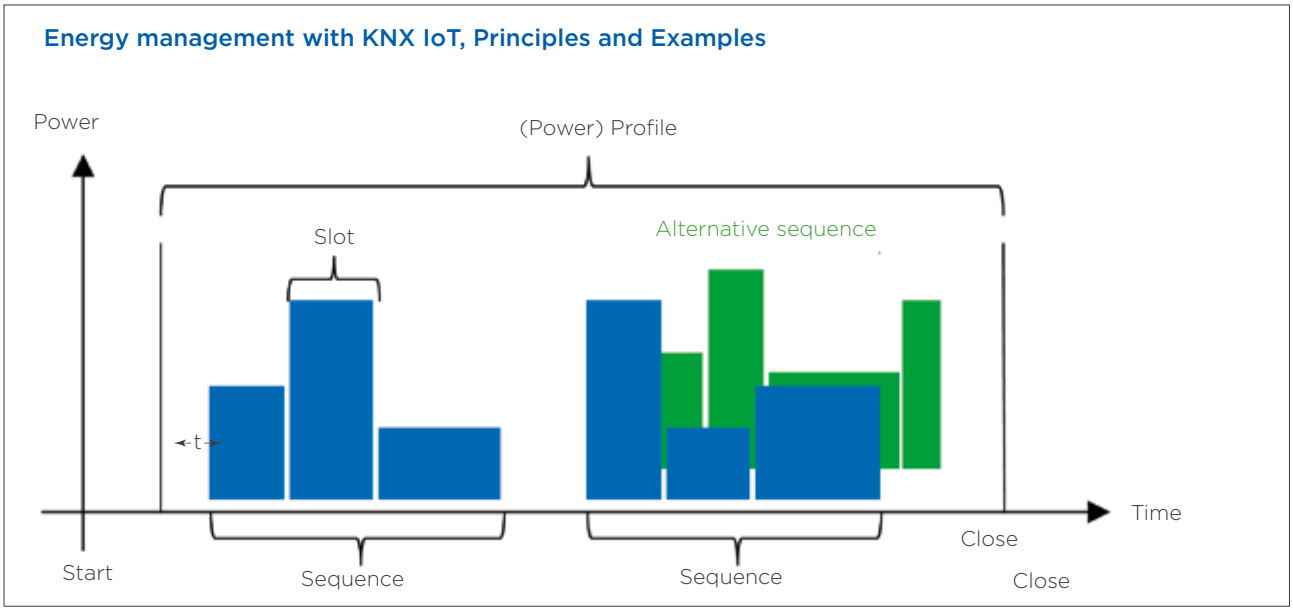


Figure 2. Power profile with its sequential and slot components

- An example is the charging requirement of electric cars - – two – connected to a single charging station. Both energy requirements for charging cannot be met in full simultaneously with maximum charging current (e.g. the reference load across the house connection point would then be too great). The CEM governs the distribution of the maximum available energy for charging at both subscribers. In addition, for example, the boundary condition still applies - that one of the charging processes must be completed at a given time (an electric car must be ready for driving again at time x at the latest).

The a/m applications from sub-headings a) and b) are also to be found again in IEC TR 62746-2 (UC_EM_S200, UC_EM_M304).

Practical example

We have created an example for the application at sub-heading c). This is reflected in *figure 3.*

In a suburban street, two electric cars arrive at their home station and are to be charged. The driver of the green car urgently needs his car at time x, e.g. The car should be recharged adequately by 9 p.m. that evening. The other driver has no such restriction and needs a charged car only the next morning. The power available in the road (distribution board) is limited and shown in figure 3 by max_power. The current energy price is given in the bottom part of the figure by different costs for each time. The objective of both electric car drivers is naturally that both their vehicles will be charged as quickly as possible, but economically. The left part of the figure in scenario 1 shows the most cost-effective version of the charging process (both electric cars are charged immediately at the best tariffs). By restricting the maximum power available, however, this is impossible, as each individual electric car would itself need the maximum available power for charging. The result with equality and without connection to the EVU or an extra control box would be that neither of the electric cars is fully charged.

Scenario 2 is a possible solution. This would be achieved by the CEM shifting the time of the energy amounts to be charged in the corresponding electric car (in this example, the CEM controls the entire street). The green driver can drive away again at 9 p.m., but must accept that he has not paid the best price for this and that a portion of his energy must be bought at the highest price. Broadly speaking, the blue driver avoids this highest price and purchases a significant amount of his energy at other times.

In sum, each driver achieves his charging objective, even if not under ideal conditions individually. The example here will be explained in an exemplary manner and in the figure using two vehicles; a real energy distribution board on a street can certainly supply more than two vehicles simultaneously.

Technical implementation

Roles

Subscribers to energy management can be very flexible in relation to their specific properties. However, everything is communal, in that their – in any form whatsoever – functionality in the final analysis consumes and/or generates energy. In addition to the individual details, which every subscriber has, they are first classified into various roles at the lowest level for each sector. A subscriber can also assume a number of roles.

• ENERGY_PRODUCER

Subscriber who consumes energy with fixed boundary conditions

• ENERGY_CONSUMER

Subscriber who generates energy with fixed boundary conditions

• ENERGY_STORAGE

Subscriber who can store or deliver energy with fixed boundary conditions (e.g. battery storage system).

• ENERGY_MANAGEMENT

Subscriber who has control with fixed boundary conditions over individual subscribers' energy flows (CEM).

Control types

The CEM can access a variety of control mechanisms. What these are will be notified to the CEM for each individual equipment.

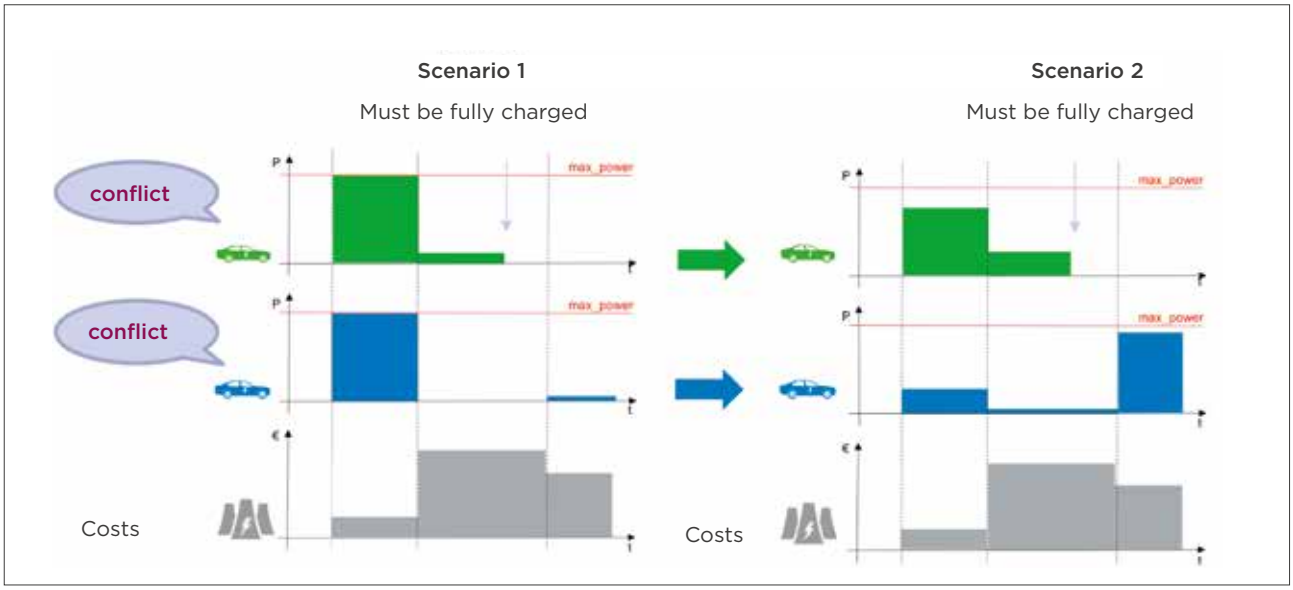


Figure 3. Application of a load shift with a number of energy loads

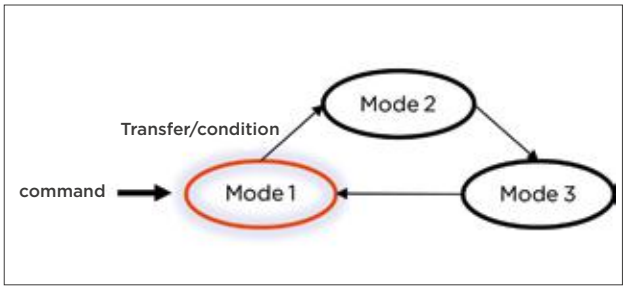
Sequence modifications

As described in the Process coordination sub-section, subscribers provide their "energy requirements" via profiles *(see figure 2).* Modification options for this sequence can be notified to the CEM with every sequence. Depending on the optimisation target, a CEM could then vary the start time of a sequence, as indicated in figure 2 by ➛ t ➛.

The alternative sequences also depicted in figure 2 give a CEM an opportunity to select from several options - in other words sequences - a process for a subscriber.

The advantage of profiles with sequences is in the abstraction of internal equipment processes - hence the CEM knows the extreme boundary conditions based on the individual sequences, but not the subscriber's internal processes. Whether a washing machine or a projector is connected behind a subscriber is of secondary importance. In figure 2, the alternative sequence could illustrate an eco programme with a washing machine, longer in its total duration, with more slots, but lower energy consumption overall.

Once started, a sequence with one subscriber runs its course according to the sequence virtually automatically and can only be interrupted by the CEM in extreme cases or where there is an external danger. This may be viewed as a disadvantage.



Operation mode-oriented processes

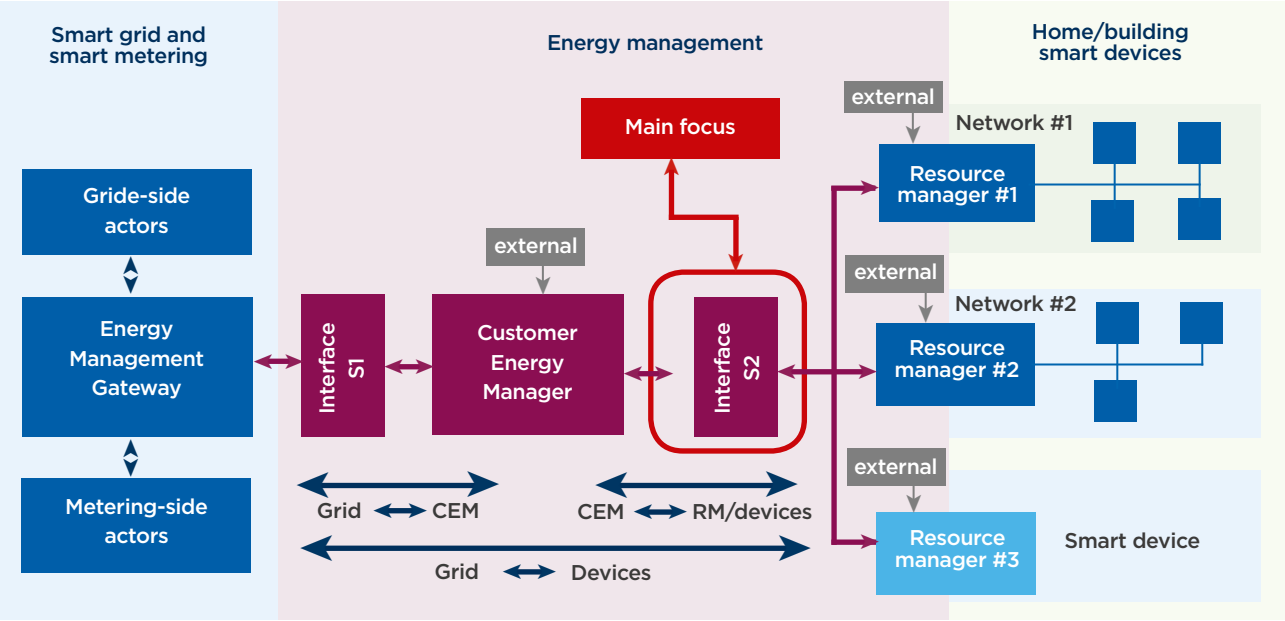
In certain cases, direct open-loop control of the processes in a subscriber is necessary. This is always the case if the CEM is to control in a time-critical manner and more quickly from outside. This method also includes the active feedback by the subscriber to the CEM occurring at the same time (short control loop). For this type of control, significantly more information about a subscriber must be available to the CEM. In particular, under which conditions the transfer from mode 1 to mode 2 can be triggered or made with an external command. In principle, this control option is similar to that to be seen everywhere with status machines in automation systems, IT technology or even in KNX (in KNX as an example, where with a Transport Layer Connect telegram/command, a switch is made from mode 1 "TL is closed" to mode 2 "TL is open".

Summary

The topic of energy management is an integral part of future building management technology. Increasingly in the future, KNX will be included in the topic of energy as a basic system and integral component of buildings. Whether this should be because KNX is functioning even now in the building as a relevant energy load or generator, or because, to achieve the objective, it is essential for particularly energy-intensive subscribers such as PV systems and storage systems to be networked in the overall system. The more subscribers that can be coordinated via a central nodal point and the more sectors that can be coupled by means of this connection, the greater is the flexibility with the optimisation objectives that can be achieved. Without such a total solution, this will remain with local island solutions, which reflect the principle of the actual goal of comprehensive energy management well, but do not achieve it.

Standardisation Landscape for Energy Management

Involvement of KNX



As already mentioned in this Journal, energy management is a hot topic these days, not in the least in standardisation circles.
This has been sparked off originally by the climate debate, which in turn created awareness for making the transition to renewables, or at least lower the dependency on fossil energy.

As renewables are volatile and decentralized, one cannot assume their availability, as is the case for energy generated by classic (gas, coal) energy plants.
Also, it is hoped that when making the transition to renewables, the eCar will play a significant role, although the current energy network may not be able to cope with a whole district trying to recharge batteries when returning home.
First and foremost, energy efficiency of devices and systems should therefore be increased (KNX has already played a significant role in doing since the birth of the system).
On top of that, consumption of individual consumers should be better measured (also for this, KNX manufacturers offer many solutions).
And, in order to be better capable of distributing energy to where it strictly needed, individual consumers could be stimulated to become prosumers, producing their own energy, storing surplus capacity in batteries and only demanding extra power from the grid when absolutely needed or when energy is anyway abundant (and hence cheap).
The EU therefore issued two standardization mandates towards the standardization organizations (CEN, CENELEC and ETSI), one for filling the gaps in standardization on smart metering and one in smart grid.
KNX was already involved in closing the gaps on smart metering standardization: for this the Working Group (WG) 16 of CENELEC Technical Committee (TC) 205 worked out a standard part (EN 50491-11), in which is described how metering data can be communicated towards a home or building automation system. This standard bases on the KNX Functional blocks for Metering.
The task of standardizing the management of energy in a smart home or building was put into the hand of another working group, WG18, of the same TC with the primary goal of bringing (local) production and consumption better in sync or consumption better in sync with the grid. Also in these activities, KNX is involved, with the aim of standardising a technology independent data model, that can be transported across any network or protocol, naturally first and foremost by KNX IoT devices (i.e. devices using https and coaps for data exchange and based on IP).
As the underneath picture shows and the other article in the Journal explains, the Customer Energy Manager (CEM) either acts on requests from the grid or according to user preferences. The main focus of the work lies on the standardisation of the data exchange on the S2 interface, the S1 interface being mainly in the hands of other standardisation committees like IEC TC57.
The communication partner to the CEM is one or more resource managers, which can either be directly a device or a proxy for a complete underlying system (which could even use different formats for the energy data and then also map the standardised data to system or company specific data).
If needed, direct control of smart devices from the grid would also be allowed
The underneath architecture has already been agreed upon in the EN 50491-12-1, the data interface is currently under discussion as EN 50491-12-2.

New ETS Apps

You can find all ETS Apps at
https://my.knx.org ▸ Shop ▸ ETS Apps

Control4 Split Unit Gateway

CONTROL4 CORPORATE This App is needed for configuration of the Control4 C4-KNX-SUAC Split Unit Gateway. The manufacturer of the split unit and the model of the remote are loaded into the ETS application. All SUG/U 1.41 in the project can be processed at the same time. The download into the device is done by normal ETS download.

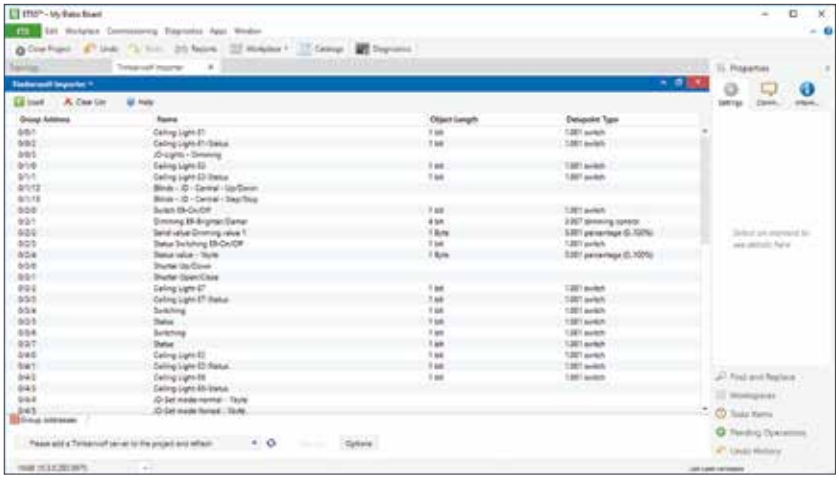
***Contact**: www.control4.com*

Update Copy Convert

CONTROL4 CORPORATE The app provides a series of useful functions for device configuration (parameters and Group Addresses) in an ETS project.
The functions are:
Update – Changes the Application Program to a later or earlier version while retaining current configurations.
Convert – Transfers / adopts a configuration from an identical or compatible source device.
Channel Copy – Copies a channel configuration to other channels on a multi-channel device.
Channel Exchange – Exchanges configurations between two channels on a multi-channel device.
Import / Export – Saves and reads device configurations as external files.

***Contact**: www.control4.com*

Timberwolf Importer



ELABORATED NETWORKS GMBH The Timberwolf Server has a few thousand universal objects, which are deactivated by default. To be able to use a Group Object it has to be released by choosing its data type from a list in the application for the corresponding object. The group object may then be linked with Group Addresses. The Timberwolf Importer App simplifies this process by uploading a control file containing Group Addresses with data type and optional Group Object numbers to be released. This control file can be exported from a Timberwolf Server or a WireGate Server or can be created by hand.

***Contact:** www.wiregate.de*

KNX launches platform for smart home and building projects

With the new platform for smart home and building projects, KNX Association is creating a new central contact point for revolutionary and innovative KNX installations from all over the world. As of now, system integrators, developers and architects will be able to present their KNX projects in a visually appealing manner to the general public on a global scale with just a few clicks. Over 500 projects have already been published since the launch. You can now show your expertise with KNX to the whole KNX Community and help yourself grow as a professional KNX installer via https://projects.knx.org.

Full variety of the KNX world on a single platform

The multifaceted projects on the new KNX Project Platform demonstrate what is already technically possible thanks to KNX's leading global solutions for smart homes and buildings. The KNX-based smart home solutions enable our future way of life to be realised today. In addition, the KNX projects demonstrate how increasingly complex trades can be automated in public and commercial buildings with impressive results. Each project presents its individual highlights, as well as further information, such as the brands used, the transmission media, size of the project, costs, man hours, etc. This allows you to fully grasp the impact of the smart installations with KNX in each project, highlighting the full potential in all applications with all the individual benefits, leaving no questions open.

Build your portfolio

By uploading your own home and/or building automation project on our platform, you create a visible, attractive overview with all the necessary information about your project. This way, you can show your projects not only to the KNX community, but also to potential clients. It has never been easier to show examples and different types of applications of the KNX technology to help you sell your own services to clients.

Create visibility

The project platform is a tool to build a community of KNX installers worldwide. By uploading your own work, you'll connect yourself to the KNX brand. This will generate more visibility for your professional services and back up your expertise with the KNX software.

Get inspired

The project platform collects KNX projects with all types of different applications and devices from all over the world. This means that you can look into a broad range of inspirational smart homes and buildings. Do you have a specific idea for a smart home but you don't know how to start? There's a chance that someone else has done exactly the same thing before you on the other side of the world. The project platform provides a wealth of knowledge that you can use for your own installations.

Ready to upload your own project?

The project platform was created with ease of use in mind. You can create and upload a project in a matter of minutes. You can upload a product by going through just a few easy steps: you select the general specifics of the project, you choose all the applications that are realised with KNX, add some pictures and a short intro and you are ready. All without the need to write long descriptions or technical information. You can however add YouTube videos and documentation to your project to paint a clear picture of your achievements with KNX. All projects you upload are added and can be managed directly from your MyKNX account. You can even store the ETS project files so you will always have access to them. These files will be visible to you only. In just a few steps, you'll get your own spot on the KNX project platform.

Try it now at https://projects.knx.org and join the already extensive database of realised KNX projects.

New Members

Blue and Red BV

THE NETHERLANDS Blue and Red BV in the Netherlands is a software engineering company with highly skilled developers working on a product which is called "TEOS Manage". TEOS Manage is a platform that enables you to easily manage all of a building's rooms and IP devices from displays to projectors and tablets from all brands. Blue and Red is currently working on the integration with KNX so that the complete building, including all KNX controllable devices can be managed from one centralised platform. The system contains smart scheduling and has integration with calendars so that complete rooms can be managed and controlled automatically. ***Contact:*** *www.tdmsignage.com*

Bosch Rexroth AG Germany

GERMANY As one of the world's leading suppliers of drive and control technologies, Bosch Rexroth ensures efficient, powerful and safe movement in machines and systems of any size. The company bundles global application experience in the market segments of mobile applications, machinery applications and engineering, and factory automation. With its intelligent components, customised system solutions and services, Bosch Rexroth is creating the necessary environment for fully connected applications. Bosch Rexroth offers its customers hydraulics, electric drive and control technology, gear technology and linear motion and assembly technology, including software and interfaces to the Internet of Things. With locations in over 80 countries, more than 30,500 associates generated sales revenue of 5.5 billion euros in 2017. ***Contact:*** *www.boschrexroth.de*

Core

TURKEY Core Smart Home is a technology company with a special focus on visualisation and control of home & building automation systems. They offer a complete automation experience with top tier innovative touch panels with functionalities such as a smart home server, advanced intercom and security panel. Thanks to the new generation building management operating system CoreOS, their products support multi-protocol IoT systems. You can control and other technologies together with SONOS, Philips Hue, Netatmo and many other IoT devices. Amazon Alexa, Google Home, and Apple Siri will be launching soon. CoreOS also consists of pure software SIP Server and offers intercom systems that provide a perfect experience. ***Contact:*** *www.core.com.tr*

GV S.r.l. Italy

ITALY Blendom comes from a passion for technology and for everything that brings innovation. The daily use of these technologies in different environments has brought efficiency, comfort and well-being. These are the main reasons that led them to create tools that allow anyone to experience the same emotions. Blendom has created a series of hardware and software to automate your homes, hotels and businesses by connecting and controlling all your devices. Alarm systems, comfort, security, energy saving and communication are integrated into a constantly updated technology. The functions can be customised according to the needs of each user, creating as much scenery as it needs. Blendom's software interfaces the systems of all the main brands which enables them to be controlled to their full potential, both with its easy and intuitive app and with voice control via Amazon Echo and Google Home. ***Contact:*** *www.blendom.com*

Hörmann KG Antriebstechnik Germany

GERMANY The Hörmann Group is Europe's leading supplier of doors. Since the company's foundation in 1935, it has produced and delivered more than 15 million doors worldwide. More than 6,000 employees in 38 specialized factories in Europe, North America and Asia develop and produce high-quality doors, hinged doors, frames and operators for use in private and commercial properties. The headquarters of the globally active Hörmann Group is located in the small town of Steinhagen, Germany. The still family-run company recently recorded an annual turnover of more than 1 billion euros. Hörmann is present in over 100 individual sales locations in more than 40 countries and represented by sales partners in over 50 other countries. Hörmann is international in over 100 individual sales locations in more than 40 companies and represented by sales partners in over 50 other countries ***Contact:*** *www.hoermann.com*

Lenbrook Industries

CANADA Lenbrook International owns, designs and manufactures innovative technologies and products for discerning music lovers around the world through its three brands, NAD Electronics, PSB Speakers, and Bluesound wireless multi-room systems. Over twenty five Lenbrook products are powered by BluOS, a high resolution multi-room audio platform. BluOS gives you complete control of how and where you listen to your music. Whether it's grouping multiple BluOS players, or simply accessing a music streaming service, BluOS gives music lovers multiple ways to enjoy music. ***Contact:*** *www.bluos.net*

Madel Air Technical Diffusion

SPAIN Since 1965, MADEL has designed and produced elements for air diffusion and air control regulation in air conditioned systems. One of the lines of performance of MADEL consists of equipping its products with added aesthetic value in order to introduce the air diffuser as yet another element to be considered in interior architecture. The product range is made up of different air diffusers, fire dampers, airflow regulation dampers, zoning systems and chilled beams; adapted for different types of installation in homes, commercial premises, offices, theatres, sporting installations, industrial buildings,... The development, production and commercialisation of products follow a strict ISO 9001: 2008 quality control system. ***Contact:*** *www.madel.com*

M1glio Limited

HONG KONG M1glio is passionate about life and the way to live it. Their products are designed with Italian passion and Northern European functional pragmatism. This means that they cherish the environment and never stop thinking about how to protect the planet, while still offering good-looking products. On the one hand, they deliver high quality products which integrate seamlessly, but also go further than that. They believe that their passion works best when shared. Therefore, M1glio offers a B2B or B2C platform for enthusiastic entrepreneurs and designers to work together with them to create a one-brand system, so that the end customers have an efficient single point of contact for after sales services.

Contact: *www.m1glio.com*

Minh Ha Tech Co.,Ltd.

VIET NAM Over 13 years, Minh Ha, located in the city of Hanoi, has accumulated vast experience in manufacturing itinerary monitoring equipments, RFID security control, optical transmission, etc. Minh Ha Technologies Co. Ltd has faithfully pursued the philosophy of quality in parallel with high intelligence. They operate as a completely independent enterprise with an advanced production line and a strong R&D team who is always dedicated to bringing the latest technology to customers. The company has noticed the potential of smart home solutions using KNX in the domestic market. Since then, they have studied and tried to become one of the intermediate points in the supply chain of KNX products and the first KNX member in Vietnam.

Contact: *www.brainy.vn*

NIKO NV

BELGIUM Niko designs electr(on)ic solutions to enhance buildings to better suit the needs of the people who live and work in them. By using less energy, by improving lighting comfort and safety and by making sure all applications work together seamlessly. Buildings with Niko are more efficient, are controllable from a distance and interact within bigger ecosystems. Niko is a Belgian family business from Sint-Niklaas with 750 employees and 10 European branches. At Niko they ask themselves just one question every day: "How can we enhance buildings to better suit your needs?"

Contact: *www.niko.eu*

Palanira

IRAN Palanira is a newly established company developing LCD display sensors in various sizes focused on lighting , air conditioning and shading systems. Their recent LCD product line consists of seven, five and three inch colour touch screen displays with a customisable graphic user interface. These products are planned to be launched by early 2019. Following their successful launch, their next plan is to design and develop actuators for lighting, air conditioning and shading systems. Based on their estimation, the range of actuator products will be launched in the middle of 2020. As a newly established company, choosing KNX as a worldwide standard helps their products to be used in combination with a vast range of KNX products from other manufacturers to fulfill customers' demands.

Contact: *www.palanira.com*

Pipesbox GmbH

GERMANY As a software development partner for the Internet of Things, PipesBox GmbH has been developing solutions for IoT and smart home projects for more than 6 years. As an IoT expert, they support companies from a wide range of industries in software development and with IoT consulting. The naon smart living app and B2C cloud integration platform is the company's reference product. It is the world's most innovative and advanced smart living product due to the fact that it enables intelligent data-driven applications. naon learns the user's habits and recommends new intelligent applications to increase comfort and improve security technology, with zero setup time and in one single app. The sophisticated and flexible software allows easy integration of new APIs. Powerful tooling helps developers to create IoT applications in minutes.

Contact: *www.naonhome.com*

Silent Gliss International Ltd.

SWITZERLAND Silent Gliss - the architects of silence. Silent Gliss is the leading global supplier of premium interior window treatment systems. With cutting edge technology and a relentless commitment to precision, they develop and manufacture the world's quietest and smoothest gliding curtains and blinds. Driven by their customers' needs, Silent Gliss provides bespoke curtain and blind systems complemented by expert technical advice, installation and support services. Since the company's inception, they have been granted more than 100 patents - clear evidence of their continuous commitment to pushing the boundaries in product design and development. Silent Gliss stands for innovative solutions, exceptional design and outstanding quality. Swiss engineered since 1952.

Contact: *www.silentglissgroup.com*

SUZUKI corporation pte ltd

SINGAPORE Headquartered in Singapore, SUZUKI Corporation Pte. Ltd cofounders envisioned SUZUKI as an export-oriented company with "value for money" and "customer service" as its main positioning pillars. The company placed a high value on the importance of the brand image and invested heavily from the onset to make SUZUKI a recognized name in technology, security and building control industries.The company's philosophy is to select and operate through strategic partner companies in marketing, distribution and manufacturing areas of the business. While the company works with a number of well- established and world-renowned manufacturing houses for some of its products, it still keeps an element of in-house final assembly whenever such assembly adds value to the company and subsequently benefits its customers.

Contact: *www.suzuki.sg*

TIS Control Limited

HONG KONG TIS offers a home automation experience to everyone at the best price, which makes use of the latest technology to define the best products with style and elegance. Ideas, style and excitement are what define TIS Technology. They are exclusively dedicated to excellence in home automation and understand what's most important to you and how best to meet the changing needs of today. So, if you are investing in automation for your home, put your trust in TIS Technology. There are many companies in the world that are trying to define 'smart' and 'style', but few of those actually have the measure to really provide it. TIS Technology has the certainty and the tools to define IT. How do you control your lighting, air conditioning, curtains, security and music? They can all be easily controlled by 1 panel in your room. ***Contact:*** *www.tissmarthome.com*

Total Solution GmbH

GERMANY Total Solution GmbH was founded in 2016 and is a registered KNX member since 2018. With more than 5 years of experience in the field of development, installations and training, and based on their experience of operating both KNX and industrial standards, they are developing products that seek to fill any gap on the market especially concerning integrations, IOT and self-automated devices. We aim at offering simplicity of programming and operation for their devices without affecting the enhanced features, which might be needed for the most advanced installation. ***Contact:*** *www.totalsolution.com*

Voltus GmbH

GERMANY Voltus has established itself as the most successful wholesaler for networked buildings in the market. In addition to the sale of electrical engineering products and building automation via various channels, the focus is on comprehensive advice. All services are not limited to the German-speaking countries, but extend across European borders. Voltus recently founded SCE Elektro GmbH, a manufacturer of electrical cabinets with KNX technology. Under the Constaled brand, they have developed their own products in the field of LED technology which are already leading edge. Voltus' greatest invention and innovation is its 24V LED spot which is dimmable directly via PWM and available in a variety of designs. ***Contact:*** *www.voltus.de*

Zhejiang Tianjie Industrial CORP.

CHINA Zhejiang Tianjie Industrial Corporation was founded on 31st March 1993. Tianjie is a technical innovative enterprise that integrates the development, manufacturing and marketing of products and specialises in coaxial cables, optical-electric composite cables, and electric communication cable products. With more than 30,000 m^2 manufacturing space, a registered capital of RMB 59,754,000, and over 350 employees, they are able to output 300,000 KM cables annually. Due to the past 25 years' of development, they are well known to both domestic and international markets with their constantly innovative technology, continuously high quality products and excellent service. Their main markets reach 40 countries in 5 continents. The company have passed ISO9001 ISO14001, GB/T28001,BSCI and product certification such as UL,ETL,CE(CPR).

Contact: *www.tian-jie.com*

Zhuhai Pilot Technology Co.,Ltd.

CHINA Zhuhai Pilot Technology Co., Ltd. is located in Tangjia hi-tech zone, Zhuhai , Guangdong , China. It is a provider of power and energy management services integrating hardware, software, and integration. With the mission of "smart use of electricity and green energy", Pilot Technology has its own intelligent equipment, IoT gateways, and software products at its core. It has technical capabilities such as program design and system integration to help users manage and use energy more precisely. ***Contact:*** *www.pmac.com.cn*

New Products

KNX LED Dimmers

ABB LED dimmer (UD/S4.210.2.1) optimised for dimming retrofit LED lamps (LED). Also suitable for dimming incandescent lamps, low-voltage halogen lights, 230V halogen lamps and dimmable energy-saving halogen lamps. Automatic load detection (can be deactivated). Separate N-connection per channel. Parallel connection of the outputs possible to increase output power. Programming of the device also possible without applied 230V supply voltage. Extensive test and diagnosis via i-Bus tool. Fast parameterisation in ETS with channel templates. Native ETS application.

Contact: *www.abb.com*

KNX alarm alert (dialler function)

AGFEO GMBH & CO. KG Technology from AGFEO, one of the leading manufacturers of communication systems, enables the evaluation of KNX events and, where necessary, dialling of any required telephone numbers via a communication stack function. Creating a real call is a more direct solution than an email or push alert, which are also possible. A clear, targeted explanatory recorded message can be played when the call is taken. An optional acknowledgement function ensures that the information reaches the correct recipients. The KNX dialler function is installed in all AGFEO ES Series telephone systems as standard and can be used at no extra cost..

Contact: *www.agfeo.de*

Push Button Interface with KNX Data Secure and Outputs for LED

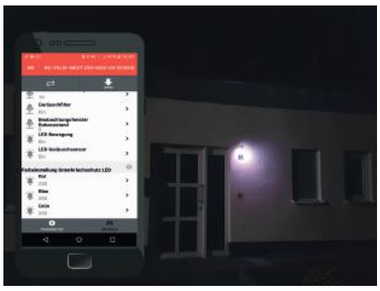
APRICUM D.O.O. Apricum´s 4-fold KNX push button interface TAI4 now supports KNX Data Secure. Commissioning is protected and unwanted manipulation of the secured runtime communication is impossible. For every CO, Data Secure can be activated separately. The I/O module is suitable for sensing binary signals of potential-free contacts like push buttons, conventional switches and contact sensors. Its KNX input functions of dimming, shutter, switch, scene, counter and send value can be used as usual. To supply loads like status LEDs, TAI4-secure is also able to operate its channels as outputs. Even dimming of the LEDs is possible. Due to its small housing, TAI4-secure finds enough space in a flush-mounted box behind the switch.

Contact: *www.apricum.com/tai4*

Aten Control System

ATEN CONTROL SYSTEM The ATEN Control System is a standard Ethernet-based management system that connects all the hardware devices in a room or large facility to provide centralised control directly and effortlessly via a mobile device or tablet. The ATEN Control System supports native KNX/IP technology for building management systems. Users can take the control of KNX devices by simply connecting an IP to TP KNX Interface with the same pro AV device management control. By following the ATEN Control System's intuitive operations, user can fully customise the control and UI settings of KNX and the pro AV devices by importing the ETS file.

Contact: *www.aten.com*



The New RC-plus next N-230-KNX-DX

B.E.G. BRÜCK ELECTRONIC GMBH The outdoor motion detector has undergone a facelift and is full of new functions. The anti-creep cover conceals a downlight that can be used, for example, to illuminate the house number or for ambient lighting of the building in the appropriate corporate colour. The RGB colour of the LED can be freely selected via the B.E.G. app. The integrated temperature sensor feeds the outdoor temperature into the KNX system and enables a frost alarm, for example, via the logic module. The detector is equipped with digital motion sensors that monitor a temperature-stable range of 20m. The intelligent follow-up time is made possible by the detection of the direction of movement.

Contact: *www.beg-luxomat.com*

CUBEVISION 2: New features at a glance

BAB TECHNOLOGIE GMBH CUBEVISION 2 now includes scenes, clocks and logic functions. It offers a unique building visualisation and is very easy to set up and operate. The well conceived user interface automatically scales to almost any display device. Smartphone, tablet etc. become the control centre for your intelligent home in no time at all. CUBEVISION 2 is easy to configure: set up building structures, background images and functions. The complete visualisation is then created automatically. Smart Function Creator: With CUBEVISION 2 you create your own scenes and smart home functions by dragging and dropping within the user interface.

Contact: *www.bab-tec.de*

Basalte Home Visualisation

BASALTE Basalte presents its new KNX visualisation called Basalte Home. Through the beautiful user interface, home owners can easily control lights, shades, music, HVAC, door phones, cameras & more. Basalte Home is powered by the Basalte Core server, which also provides a logical engine, custom notifications and third party integrations with e.g. Amazon Alexa and Philips Hue. Basalte Studio is the configuration software of Basalte Core: a powerful yet very easy-to-use tool for KNX integrators. Basalte Home will be available for iOS and Android. Basalte's upcoming Ellie touch panel (photo) will integrate seamlessly with Basalte Home and other Basalte controls, thanks to its elegant, high-quality finish.

Contact: *www.basalte.be*

DOORY: Smart Control Access

BLUMOTIX SRL Doory is an intelligent numeric keypad that can receive a new access code from a remote smartphone, to facilitate the check-in without a receptionist. The code can be programmed using a dedicated app to be installed on a smartphone (iOS or Android). Doory is a 12-key capacitive touch glass solution, with backlighting activated thanks to the integrated proximity sensor. The memory can contain up to 100 slots to be able to store the codes of every single room.

Contact: *http://blumotix.it*

STX Service-Tool MCU-MODULAR

BMS – BUILDING MANAGEMENT SYSTEMS Simple, fast, faultless - this is how configuration and commissioning work with the STX Service-Tool. The SunControlObject replaces the complex linking of single group addresses and the STX Service-Tool supports the setting of the parameters. Once a channel is completed, individual parameters or entire parameter sets can be copied to other channels just at the push of a button. For commissioning of SMI systems, each drive can be controlled individually via ETS. The channel assignment can be changed directly and the adaptation of the Group Addresses and multiple programming of the application is not necessary anymore. ***Contact:*** *www.bms-solutions.de*

BSMART Glass Touch Panels

BSMART BSMART KNX touch panels – Luxurious, intelligent living has never been so close and affordable.

- Ultra powerful, controls almost all types of smart devices with KNX.
- Ultra slim, easy installation with a mounting bracket, time and cost savings.
- Luxury design, tempered glass front plate with high touch sensitivity.
- Customisable label for any functions configured to the keys.
- Competitive price for new product. ***Contact:*** *www.bsmart-knx.com*

Unique individual solution

BUSCH-JAEGER ELEKTRO GMBH The ABB-tacteo® KNX sensor is an individually configurable control element for the intelligent control of public buildings, exclusive residential buildings and luxury hotels. Due to its glass construction and its production according to individual customer wishes, ABB-tacteo® is unique. The number of functions is variable and can be determined according to requirements and demands. With the capacitive operating surface, all building automation functions such as heating, blinds, lighting or comfort scenes can be controlled.

Contact: *www.busch-jaeger.de*

terminal – the planning tool

ALEXANDER BÜRKLE GMBH & CO. KG terminal – perfect configuration of smart homes: The planning tool for the perfect KNX installation – for beginners and electrical specialists. Using terminal as planning software, electricians can conduct electrical planning of both homes and commercial buildings, flexibly convert standard installations into KNX, guarantee a 100% functional installation and save a great deal of time with the automatic ETS export, for example. Use the terminal app or start directly for free at www.terminal-konfigurator.de!

Contact: *www.terminal-konfigurator.de*

New Jigsaw Server – Supports Google Assistant, Alexa and more

COMFORTCLICK ComfortClick has launched a new version of its Jigsaw KNX server for controlling KNX-based smart buildings. In addition to KNX, Jigsaw now supports Google Assistant, Amazon Alexa, IKEA, Samsung Smart TV, LG Smart TV, Satel and Paradox alarms. All the previously supported systems are also still there, to name a few: Sonos, Philips Hue, IP cameras, Kodi, Global Caché, IRTrans and TCP/IP devices. ComfortClick's bOS software enables the design of custom user interface, logical operations, scenes, and schedules. Control and monitor your smart building with free bOS Client apps for iOS, Android and Windows or Alexa and Google Assistant.

Contact: *www.comfortclick.com*

C4-KNX-IPR - Control4 KNX-IP Router

CONTROL4 This important component is used to connect the Control4 EA controllers to the KNX bus. The previously available universal KNX network driver is now a completely newly developed version that supports the ETS import function into the Control4-Composer Software when using additional Control4-KNX devices.

Contact: *https://www.control4.com*

PS.30.640.2 KNX Power Supply 640mA

CONTROLTRONIC Built on the latest technology, the KNX power supply 640mA with high efficiency and small size of four modules is the perfect base component for each KNX installation. Due to the complete development and production in Germany with the highest quality components, an incomparable reliability is guaranteed. Nevertheless, the cost efficiency required for a frequently used KNX basic component is ensured. An auxiliary voltage connection, diagnostic LEDs and a button for the automatic BUS reset are available.

Contact: *www.controltronic.com*

HomeCockpit Excelsior 5.0

DIALOGIC SYSTEMS GMBH & CO. KG Top performance meets top flexibility – The fifth generation of the intelligent high-end touch panel PC with the latest Windows 10 IoT Enterprise 2019 operating system and freely configurable additional modules is a real performance wonder: Thanks to the mega-strong Intel Core i5-7200U processor, 8 to 32 GB RAM and 120 to 480 GB SSD hard disk size, all KNX applications / visualisations run even faster and more optimised. And so that the new HomeCockpit Excelsior can be easily and harmoniously integrated into any smart home, it is available as a surface-mounted or flush-mounted version for all common installation boxes. Get in touch with the future!

Contact: *www.home-cockpit.de*

RE KNT 008 – Universal 8-channel dimming actuator

DINUY DINUY introduces its new and powerful 8-channel universal dimming actuator. Suitable for RLC+LED loads: LED lamps, incandescent and halogen lamps. Capable of loads of up to 250W on each of the eight channels. Incorporates two dimming technologies: leading and trailing edge. Both technologies can be selected via the parameterisation with the ETS. Each channel can be controlled manually via the push buttons on the front. This allows the lamps to be checked without needing the ETS bus. Modular housing for DIN-rail mounting (8-fold). Different LEDs indicate the status of each channel as well as error messages. Built-in protection against overload, short-circuit and overtemperature. The configuration of the device is performed via ETS5.

Contact: *https://dinuy.com*

Laükadot – New multifunctional capacitive push button

DINUY The LAÜKADot switch range consists of 2-, 4-, 6- and 8-channel touch-sensitive buttons. Designed to provide full control to the user over the lighting, the blinds and, in turn, the ability to memorise scenes to generate the desired ambience. Two different designs available depending on the colour of the front glass and the colour of the edge: black glass and copper edge or white glass and chrome edge. Formed by 2, 4, 6 or 8 touch areas where direct functions can be assigned to control lighting, move the blinds or create personalised scenes. RGB colour LED illumination. The devices are also equipped with a proximity sensor through which the keyboard is activated.

Contact: *https://dinuy.com*

EAE Rosa KNX Touch Switches

EAE TECHNOLOGY "Due to the complete development and production in Germany with the highest quality components, an incomparable reliability is guaranteed. Nevertheless, the cost efficiency required for a frequently used KNX basic component is ensured.

Contact: *www.eaetechnology.com*

DM02A02KNX – Universal Dimmer 2 channels X 300W

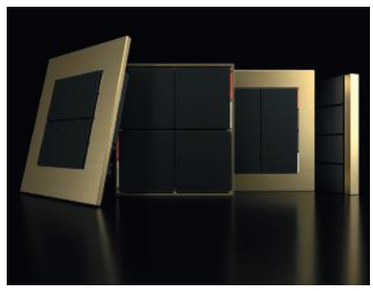
EELECTRON SPA DM02A02KNX is a universal KNX 2-channel dimmer featuring automatic identification of load type and adjustable parameters to optimise the control of different lamps types (LEDs, incandescent, halogen, dimmable compact fluorescent lamps -CFL-, low voltage lamps with electronic or ferromagnetic transformer). The 2 channels can be used independently or combined to drive higher power loads; the DimmerLoadTester software is available to define the maximum load and, in particular, the maximum number of lamps that can be connected. Configuration of output channel in trailing [RC] or leading edge [L].

Contact: *www.eelectron.com*

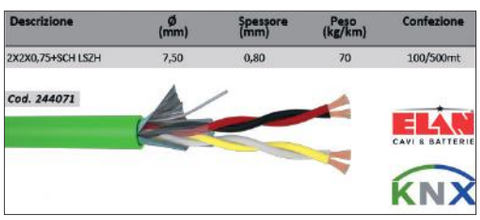
Black & Gold Push Buttons

EKINEX S.P.A. Black & Gold is the new colour combination that Ekinex offers for its KNX push buttons of FF and 71 series. The combination of the two most contemporary colours create a push button suitable for the most sophisticated and elegant settings. Brass finish frame and black metal rockers will be at ease in the living rooms of the coolest houses. The 4-fold KNX push buttons are powered via the bus and allow max. 8 independent bus functions. Depending on the version, they may have integrated room temperature controllers and LEDs. Bus terminal block, screws and mounting support are included in the delivery.

Contact: *www.ekinex.com*



ELAN twisted KNX cable



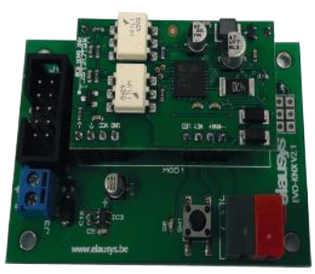
ELAN SRL The KNX cable works on the standardised OSI network communications protocol, succeeding EHS, BATIBUS and EIB. With its excellent electrical and shielded transmission performance, KNX cables can be used for data transmission and to connect building technology systems, allowing the operation and control of lighting and climate control. They can be deployed both in private houses and public places (where a Flame-Retardant, Non-Corrosive Low Smoke Zero Halogen (FRNC-LSZH) sheath is recommended). The KNX protocol runs perfectly on ELAN twisted cables because of its incredibly low capacitance.

Contact: *www.elan.it*

KNX gateway for Interlogix NetworX alarm systems (GE Caddx)

ELAUSYS The integration of alarm systems in a KNX installation offers many advantages. For example, it is possible to control the lights using the motion detectors for staircase lighting or automatically recall KNX scenarios when the alarm system is armed or disabled and much more. The KNX gateway for the GE Interlogix NetworX alarm systems (Caddx) enables bidirectional communication with the alarm system. Real-time status of up to 96 zones, control of up to four areas (arm/partial/disarm) and nine statuses per area are available (intrusion, entry, exit, fire, etc.). Recall of KNX scenes for each status is possible. Gateways for other alarm systems are also available (Jablotron, Paradox EVO, etc.

Contact: *www.elausys.be*



Heating Control KNX eTR 101

ELSNER ELEKTRONIK GMBH KNX eTR 101 is a room temperature controller for KNX that automatically ensures the desired room temperature and enables individual readjustment via "plus" and "minus" touch surfaces. The simple, intuitive user interface allows use in both private and commercial areas. The real glass surface is both elegant and durable. KNX eTR 101 measures the temperature on site and controls heating and, if necessary, cooling. Single-stage and two-stage systems can be controlled. All settings such as connected systems and target temperatures for the operating modes Comfort, Standby, Eco and Building Protection (KNX-HVAC standard) are made in the KNX application of the room temperature controller.

Contact: *www.elsner-elektronik.de*

Compact Actuators

ELSNER ELEKTRONIK GMBH The name says it all with the new "compact" actuators: The housing design is optimised for socket installation. There is one version of each function variant that communicates via Twisted Pair and one for KNX RF. The multifunctional KNX S1R-B4 compact and KNX RF S1R-B2 compact devices control one drive (up, down) or two consumer loads (2x on/off). The KNX application includes locks, priority settings and a comprehensive automatic shading system. The models KNX R1-B4 compact and KNX RF R1-B2 compact switch a load with up to 16 ampere at the potential-free output. All "compact" actuators have binary inputs, e.g. for zero position sensors or push buttons.

Contact: *www.elsner-elektronik.de*

LogicMachine NB-IoT"

EMBEDDED SYSTEMS SIA LogicMachine NB-IoT offers a unique approach for the IoT Edge market with a prepaid data plan for 10 years. No monthly fees, the ownership cost of the device is close to 0. All of Europe, Russia, China, USA is covered. The device has built-in KNXnet/IP, LoRa 433 and many other protocols and technologies. This solution offers its own cloud service and supports any external cloud services like MS Azure, Amazon Cloud and others. LogicMachine NB-IoT has a built-in application engine for developers.

Contact: *www.logicmachine.net*

enertex© KNX MeTa – gold

ENERTEX BAYERN GMBH MeTa® KNX is a KNX touch sensor and room controller with electronic labels and mechanical rockers. Each rocker can be used for four or eight (left / right) KNX functions. Room thermostat, temperature measurement, humidity measurement, an external binary input for potential-free contacts, feedback and operating symbols are integrated. The device has eight character sets that can be changed at runtime e.g. such as Cyrillic, Arabic, Persian, Hebrew. Pure luxury: in addition to a complete aluminum chassis (natural, alu black anodised, aluminum RAL9010 powder-coated), a real gold-plated version with a high-quality brass body is now available.

Contact: *www.enertex.de*

FLAT LARGE Presence Detector

ESYLUX GMBH ESYLUX presents new designs of its FLAT presence and motion detectors, which at 104 mm offer a greater surface diameter than the standard variants. This makes the designer detectors suitable for applications such as installation in larger cavity wall boxes or flush-mounted boxes and it also means that they offer a neat appearance when surface-mounted: the covers ensure an optimum, flush fit on ESYLUX AP-C surface-mounted boxes. The KNX version offers an extensive range of 47 communication objects and, if required, a night-light feature with integrated LEDs in different colours. All FLAT LARGE detectors have a range that is eight metres in diameter and a field of detection of 360°.

Contact: *www.esylux.com*

EVOknx Heating Actuator PRO HAKL-10RFT

EVOKNX With the EVOknx heating actuator PRO, you are able to easily create complex regulations of underfloor heating systems. Up to 10 adaptive controllers per heating/cooling circuit are available. They make commissioning fast and uncomplicated. By using motorised actuators, the control system works precisely and at the same time it saves energy. Two temperature inputs for measuring the flow and return temperature are using 1-wire sensors and support the hydraulic balancing. Furthermore there are binary inputs for humidity and leak detection. All data can be recorded via the integrated data logging and can be used for analysis purposes.

Contact: *www.evoknx.com*

Powerful IoT-ready Controllers/Gateways with KNX Interface

EXOR INTERNATIONAL EXOR International eXware707 and eXware707Q, with powerful dual-core or quad-core ARM CPU, are the ideal control and communication devices for energy efficiency and automation applications in connection with KNX IP/TP. eXware controllers are ready for Internet of Things (IoT) applications thanks to their advanced communication capabilities and EXOR Corvina Cloud service. With the use of EXOR JMobile and Corvina Cloud, eXware707/eXware707Q devices become a powerful gateway that seamlessly connect KNX networks to the cloud using the OPC UA or other mainstream protocols. Connection to other systems makes these devices an integration tool that is simple to use and extremely efficient.

Contact: *www.exorint.com*

Finder 19.6K – 6 outputs 16A

FINDER S.P.A. Type 19.6K actuator implements 40 series relays with AgSnO2 contacts, allowing up to 2000 W loads. These bistable relays are ENEC approved, they can get a maximum peak current up to 120 A. This DIN-rail KNX actuator with six outputs is just 72 mm wide. ETS should be used to configure the relay parameterisation (NC/NO), external keyboard enabling, telegram priority and scenarios. Moreover, the type 19.6K provides many built-in logic and timing functions.Its versatility and reliability can be appreciated in every type of installation.

Contact: *www.findernet.com*

2-pair KNX Cable CPR-Compliant

FS CABLES FS Cables 2-pair KNX-certified cable is increasingly being used in both commercial and high-end residential applications for total building control. It has been independently tested in the UK to BS EN 50575 for CPR-compliance and is now classified to Class Eca. It has also been tested and certified by KNX Association for guaranteed compatibility with KNX devices and equipment.This cable features a LSHF (Low Smoke Halogen Free) green or white jacket and is available in other variations for more demanding applications. The external duct grade version features a tough, waterproof and UV resistant PE (Polyethylene) jacket. For the ultimate protection, the SWA (Steel Wire Armoured) version is offered.

Contact: *www.fscables.com*

Combined KNX actuator, 6-12 channels

GEWISS S.P.A. The combined 6/12-channel KNX actuator has 12 independent 8 AX relays, each with 1 NO output contact, for controlling 12 loads in switching mode or six roller shutters/venetian blinds with 230V AC motors. Each pair of channels can be separately configured: this means that combinations of output channel types (configured for switching or roller shutter commands) can be freely created. The device has 12 push buttons for directly activating the switching relays or the contacts for motor ascent and descent. Loads can be managed using the local push buttons, even in the absence of the bus voltage; in this case, the device must be provided with a 230V AC power supply.

Contact: *www.gewiss.com*

Gira X1 and Sonos

GIRA GIERSIEPEN GMBH & CO. KG Sonos speakers can be easily controlled using the Gira X1 server – and with the smart Gira X1 app, it's child's play. The music control can also be integrated into the wall-mounted Gira KNX touch sensors for quick access to the play function. The current Gira X1 release 2.2 contains new functions. Firstly, the Gira X1 app has been renamed and is now called: Gira Smart Home app. Up to eight Sonos speakers can be controlled via the app, in addition to the user entering the Sonos speaker's IP address. The Gira X1 device website has also been revised so that the order of the playlists for the Sonos feature can be defined.

Contact: *www.gira.com*

3.5/5.0/10.1 inch Touch Panel

GREAT EMPIRE INTERNATIONAL GROUP CO., LTD. The 3.5/5.0/10.1 inch touch panel plus is used to display the status and control various KNX devices, and performs preset functions through the graphical buttons on the touch screen. For example, sending switch light messages, scene messages, curtain and air conditioning control messages, etc. to the bus system to control other devices on the bus. Compared with an ordinary push button panel, the smart touch panel can display pictures and sound prompts through the liquid crystal display, and can be easily and clearly operated through the human-computer interaction interface. The touch panel is mainly applied in the home and building control system, and can be mounted on a conventional 86 box.

Contact: *www.geigcl.com*

8-CH Energy Switch Actuator

GUANGZHOU SEAWIN ELECTRICAL TECHNOLOGIES CO., LTD. Due to the global needs of energy saving and energy management, we recommend the ME48.8.20.1 which provides detailed data of energy consumption. With status value feedback function, each channel can individually detect current / voltage / active power / power factor / energy consumption etc. You can set the logical policy control through this energy actuator. Depending on the settings, the real-time data produced can give an alarm to the bus if the monitoring data exceeds or falls below the set threshold. We have 4 or 8 channels with independent control of lights / loads and manual operation. It is also a standard KNX acuator which you can use daily.

Contact: *http://www.seawin5.com*

Tantron Slim ultra-narrow frame KNX VDP touch screen

GUANGZHOU TANTRON ELECTRONIC CO., LTD. This touch screen has a 10.1' IPS widescreen display and a high definition of 1920x1280 pixels. With an aluminum housing, it is as thin as 7 mm. It is equipped with a built-in web server and mobile app as well as a built-in camera (CCTV). The home automation connectivity via KNX, together with its intercom function via SIP based on Android OS, make it a very powerful tool for home automation.

Contact: *www.tantron.com.cn*

Room Controller Ephesus

I-LUXUS GMBH I-Luxus ® Ephesus is a KNX touch sensor and room controller with four or eight mechanical rockers. A capacitive touch screen can be used for switching/shutter blind operations. HVAC functionality, cooling/heating or fan coil control are supported. It has an embedded temperature/humidity sensor displayed on the LCD screen. Additionally, an ambient sensor and light sensor can be added. The high-quality housing is available in anthracite, white, gold, shiny gold, matt gold, brushed gold, bronze, brushed steel, copper and ruthenium versions. All parameters can be changed by ETS and send periodically to KNX Bus.

Contact: *www.i-luxus.de*

Iddero Mobile app for VERSO+IP

IDDERO The Iddero Mobile app lets users control their VERSO+IP touch panels from smartphones and tablets (iOS and Android). Setup of the app is straightforward: Users simply need to scan a QR code displayed by the VERSO+IP; the device is then linked to the user's idderocloud account. Both direct (LAN) connection and cloud-based operation are supported automatically, with no additional configuration. The app closely mimics the user interface of the VERSO+IP, so no additional learning is required. Push notifications allow users to get notified immediately if an alarm is triggered, even if they are not actively using the app. Communications are fully encrypted and 100% secure.

Contact: *www.iddero.com*

ILEVIA KNX Power Supply

ILEVIA The ILEVIA KNX power supply produces and monitors KNX system voltage. The bus line is decoupled from the power supply with the integrated choke. The power supply is connected to the bus line with a bus connection terminal. A reset is triggered by pressing the reset push button.The bus line disconnected from the power supply and the devices connected to this bus line are returned to their initial state. A 30V DC auxiliary voltage is made available via an additional connection terminal. This voltage can be used to supply a further bus line (in connection with a separate choke). ***Contact:*** *www.ilevia.com*

TA-Slider 160 KNX and KNX R24

IMI HYDRONIC ENGINEERING IMI Hydronic Engineering introduces TA-Slider, a new digitally configurable linear actuator with KNX communication protocol; available with or without an additional 24V relay. TA-Slider 160 KNX and KNX R24 are suitable for valves requiring 160N adjusting force, making them ideal for smaller HVAC applications that call for advanced hydronic control. It has over 100 setting parameters, allowing for optimal on-site adaptability, and IP54 protection in all installation orientations. Its connectivity features allow for configuration and communication directly via the BMS, enabling easy fault detection as it tracks operation statistics and load errors. ***Contact:*** *www.imi-hydronic.com*

MBAC-K – Bes KNX

INGENIUM BES continues to expand its range of climate integrations with the new gateway between KNX and the Mitsubishi Electric® protocol, MBAC-K. This new device is connected to the Mitsubishi indoor unit through a direct cable connection, supplied together with the gateway. This allows an indoor unit to be controlled with each gateway. The new reference, GW631100, allows you to individually control the setpoint temperature, current temperature, operating modes (cold, heat, ventilation, dehumidification or automatic) and fan speed (low, medium, high). A special feature is the swing control by movement or position. In addition, it includes energy saving mode, scenes, arithmetic/logic unit and timers/counters. ***Contact:*** *http://besknx.com*

Save time with the "Auto-Discover"-function in the KNX Universal AC Gateway

INTESIS launched, at the end of 2016, the universal air conditioning gateway IS-IR-KNX-1, compatible with more than 40 different air conditioning brands. The configuration of the gateway is carried out via ETS using a simple plug-in. Sometimes it takes time to find the exact reference of the remote controller in the list offered on the plug-in. Therefore, to make this configuration faster and easier, the "Auto-Discover" function has been implemented. Just enter into "Auto-Discover" mode, press the On/Off button of the infrared remote controller pointing to the gateway and get the result displayed in the plug-in! If the remote controller is not available in the database, a warning will also be displayed, and it is only necessary to ship the remote to get it integrated. ***Contact:*** *www.intesisbox.com*

New modules of Iridium Server

IRIDIUM LTD. The new hardware interfaces – RS485, 1-Wire, CAN – allow you to configure your own iRidium server UMC, a controller for automation systems, including KNX and IoT devices. It is possible to add other equipment to your KNX installation if needed. If you require HDL Buspro and/or Modbus RTU, you can add one or two RS485 modules to your iRidium server UMC. You can also add 1-wire and CAN, if required. As a result, in addition to numerous software functions, including support of BACnet, MQTT, Helvar, iNELS, Lutron, scenes, schedules, logics 24/7, push notifications, BYOD (for hotels), remote cloud control etc., there is a server that is extremely convenient to work with both on the software and hardware levels.

Contact: *www.iridi.com*

Access to the KNX installation by radio

ISE INDIVIDUELLE SOFTWARE UND ELEKTRONIK GMBH With the KNX RF/USB stick, you can conveniently and wirelessly access your KNX installation by PC or laptop. The device serves as an interface to KNX installations via radio, using the KNX RF standard. The stick enables commissioning and troubleshooting via ETS5 Long telegrams (extended frames) and commissioning are supported by KNX RF Secure devices. For the installation no additional USB driver is needed.

Contact: *www.ise.de*

Elvis viewer direct & IoT

IT GMBH Until now, the Elvis Viewer direct enabled the visualisation of KNX systems without server hardware. In addition to the KNX protocol, this app now also implements the MQTT protocol, thus opening the gateway to the Internet of Things. This robust IoT protocol considerably increases the number of supported devices and enables cross-protocol linking of data points/Group Addresses of KNX and MQTT devices. This extension is currently available for Android tablets and smartphones (iOS is planned). Optionally, an MQTT broker can be activated in parallel to the MQTT client.

Contact: *www.it-gmbh.de*

Lime Metal Keypad

LIME INTERNATIONAL The simple and essential design that makes a unique feature of high-end metal KNX push buttons. Designed for small budget projects without giving up high-quality standards. With a labelling cover that can be customised with laser engraving. The labelling cover area also comes with backlighting to make it easy to find in the dark. In addition, the Lime KNX keypad comes with all standard functions like switching and dimming.

Contact: *www.lime-smart.com*

KNX IP Interface

ALBRECHT JUNG GMBH & CO. KG Hackers stop at nothing! To effectively protect the digital infrastructure in buildings against attacks, facility planners should already rely on KNX IP Secure during installation. It encrypts data communication in the network and ensures secure transmission of all KNX telegrams. Up to eight tunneling connections can be used for encryption. Using the JUNG KNX IP Interface (IPS 300 SREG), the rooms (for example in hotels or office buildings) are connected to the central visualisation system via a fast IP backbone. The KNX IP Interface has an OLED display to show important device parameters. Additionally the device is powered directly from the KNX bus.

Contact: *www.jung.de*

MDT glass push button II lite 2-fold with temperature sensor, BE-GTL2TW.01

MDT TECHNOLOGIES The new Glass Push Button II Lite is the ideal complement to the Glass Push Button II Smart and is equipped with a comprehensive application. In one- or two-button operation, the functions for switching, dimming, values and scenes are available. An additional channel can be switched via a touch function. The push button is equipped with 2 pairs of push buttons, 4 sensor surfaces and four RGB-W status LEDs. The brightness of the LEDs is adjustable via a day/night object. The integrated temperature sensor is used for room temperature measurement and enables together with the MDT heating actuator an efficient room temperature control. The new Glass Push Button II Lite is neutral in design, available with up/down or I/O symbol. ***Contact:*** *www.mdt.de*

KNX dimming actuator

MEAN WELL ENTERPRISES CO., LTD. The KAA-4R4V dimming actuator is a 4 channel device with high-quality independent latching relay. A DC 0(1)-10V signal performs the dimming on the connected driver at each channel. The dimming curve can be adjusted to linear or logarithmic mode which is suitable for all kinds of luminaires. The product specification indicates the maximum number of LED drivers per channel which is easy for building planning. KNX system integrators can easily program it via ETS, and it can be operated manually via a push button. The compact design with 4 SU(72mm) wide modules makes it suitable for quick and simple installation with one green LED on each channel for indicating the switching status. ***Contact:*** *www.meanwell.com*

Nautibus ETS App EI-Import

NAUTIBUS ENGINEERING Inexpensive KNX project creation with ETS Lite and Nautibus ETS app Ei-Import The ETS app Ei-Import now has new possibilities. In addition to CVS Excel files, the Visu.XML files can now also be imported from EiPlan-outside. Preconfigured devices from EiPlan can now also be used or created from the ETS online catalogue. Since EiPlan-outside can split large ETS projects into individual areas, ETS Lite and EI-Import are usually enough for commissioning. They are easy to use and thus enable the floorplan-based creation of even larger KNX projects. ***Contact:*** *www.nautibus.de*

LC-PBN2568 KNX push button

LIGHT CONTROL Fits 55 mm boxes, 8-6-4-2 buttons, three colours: white, black, silver (colour buttons can be changed), operation with short/long button push and two objects, operation of blinds and shutters, two colour LED on the side of the push buttons for status, value sending, step type switch, RTC operation mode, multiple operation, can be engraved with a backlight or insert paper behind a transparent cover.

Contact: *www.lightcontrol-knx.com*

RealKNX O-two: Offline voice control

PROKNX SAS RealKNX O-two is the new all-in-one, ceiling-mounted speaker/microphone version of RealKNX Air. It is based on "ai" voice recognition with Snips. This completely offline working assistant is simply configured in the ETS product database of the KNX-proServ gateway. Privacy is guaranteed. Commands and queries for lighting, shutters, HVAC and media systems may be intuitively spoken in hundreds of different ways. The speaker/microphone is connected through Ethernet/WiFi. Hence only the power supply needs to be present in the ceiling. Once installed, the system runs "embedded" for years without an internet account or automatic updates, just as we expect it from a KNX installation."

Contact: *https://proknx.com*

KNX-BIN24

SATEL SP. Z O.O. KNX-BIN24 is a universal binary input module. It has eight physical (0-30 VAC/DC), eight virtual, four logic and four timer channels. The inputs can be polarised as NO/NC, and their type can be configured as monostable or bistable. It enables binary signals from outside the KNX bus to be converted into the KNX standard, and standard telegrams to be received from the KNX bus. It has 20 function blocks each of which performs one of the available functions: switch/setpoint adjuster, edge response, dimmer, shutter controller, switching sequence, counter, scene controller. One input, as well as signals from function blocks, can be repeatedly used in other/different blocks.

Contact: *www.satel.eu*

High-Performance sensors

SCHNEIDER ELECTRIC launches new members for the motion sensor´s family, optimized for use in commercial building with HIGH BAY installations, long distance CORRIDORS and MINImalist design spaces, with constant light control, activation of the programing mode by remote control, test function, IQ self-learning staircase time based on user behavior and more new features. Including a surfaced mounted version with IP54 for especial installations and protection cage to protect the devices in open installations. The intuitive database is designed to cover most of the use cases with several ready outputs to control the light, the HVAC or to inform about presence, absence or intent of sabotage.

Contact: *www.schneider-electric.com*

Ultra slim metal KNX push button 8-fold

SHENZHEN SUNRICHER TECHNOLOGY LIMITED. The SR-KN9551NK8 is a newly launched 8-fold KNX push button with ultra powerful functionalities which can be programmed to control almost all sorts of smart devices with KNX. It is designed with an ultra slim size and sleek glossy appearance. The material and finishing colour can be customised. It is suitable for apartments, villas, hotels etc. The labelling cover can be customised with laser engraving, to better indicate which functions are configured to the push buttons. The labelling area comes with a backlit design, easy to find even on a dark night. The new push button module has an operating LED and a status LED for each button, in RGB colours. As a result they can be set individually in red, green or blue, entirely as desired. The operating LED can also provide light for orientation. The new push button is designed with a mounting bracket for easy and fast installation.

Contact: *www.sunricher.com*

New generation of DIN Rail mounted devices

SIEMENS AG The product portfolio of GAMMA instabus has been expanded to include new switching/dimming, solar protection and switching actuators with load current detection. The new products provide comprehensive control, override and diagnostic functions that can be activated via ETS. The devices support optimal control and automation of building functions and increase the comfort in the building, e.g. optimal lighting conditions in the room. The unified design of the new devices features a front control panel and maintenance-free terminals for effective commissioning and reduced installation time.

Contact: *www.siemens.com*

The "EZ" way to get from KNX BACnet

SIERRA MONITOR CORPORATION Among the many popular protocols for building and industrial automation, Sierra Monitor Corporation offers a KNX to BACnet protocol gateway. This device has recently been upgraded to include more storage and faster processing, in the same classic style of the traditional FieldServer products. The easy-to-use protocol gateway uses an intuitive “EZ” setup and configuration tools to interwork any KNX product to BACnet and connect the gateway to the SMC Cloud for remote device management and interface KNX certified products to BACnet management systems.

Contact: *www.sierramonitor.com*

IoMETER 2G

SINAPSI SRL. Sinapsi IoMETER 2G is the user device able to read the new e-distribuzione Open Meter 2G counter. It’s the element that transforms the 2G smart meter into a truly open tool. The availability of data on energy flows exchanged by the building and real-time threshold crossing warnings will pave the way for new application solutions in the field of energy efficiency and consumption monitoring, as well as dynamic energy performance of the building. Thanks to the user device, data is transferred to technologies closer to the world of IoT and home and building automation. IoMETER 2G will offer, thanks to the purchase of the appropriate service, data in KNX from and to CLOUD to allow the analysis of consumption data.

Contact: *www.sinapsitech.it*

True Presence® KNX

STEINEL VERTRIEB GMBH The True Presence® KNX is the world's first true presence detector. It reliably detects the presence of a person regardless of activity. Micro-movements of a person's vital functions, such as breathing, or slight movements of the shoulders are sufficient for precision detection. There is no need for any stay-ON time. The person's distance from the sensor and direction of movement are also registered. This means that True Presence® KNX provides key information for managing tomorrow's buildings and opens up new applications. The sensors of the True Presence® product family are easily controlled via apps and can be wirelessly interconnected via Bluetooth.

Contact: *www.steinel.de*

KNXPM Supply Management

SUDOKU INNOVATION The new KNXPM Supply Management ETS app is so good that you won´t need to use Excel (or that old sketch pad) anymore to track your stock, budget expenses and distributors, and it´s free. The main advantage for a KNX Partner is ETS: one tool to set up and commission the project. Why leave the non-KNX components and equipment (cable, connectors, servers...) out from the project? Manage your whole catalogue and/or import catalogues from your favourite distributors, then manage your stock and budget. Export your list of materials in Word or Excel. Enjoy looking at the dashboard and having everything under control. Chinese language included. ***Contact:*** *www.knxpm.com*

Connecting IP Network Devices to KNX

TAPKO TECHNOLOGIES SIMip opens a simple way to connect IP network devices directly to KNX. Arbitrary end devices having suitable TCP/IP connectivity can be converted to real KNX IP devices and be controlled via the bus system by remote, by voice, by smartphone or just conventional switches. SIMip provides all necessary functions and includes the KNX-certified communication system. No complex handling is needed to make KNX accessible to non-KNX applications. The original non-KNX application can remain unchanged. SIMip supports up to 1024 objects and provides a web front end to update the firmware remotely via IP/Ethernet. A generic ETS database entry for further adaptation can be downloaded from the TAPKO website.

Contact: *www.tapko.de*

Design Touch for individualists

TCI GESELLSCHAFT FÜR TECHNISCHE INFORMATIK MBH The new design Touch ambiento fascinates with its purist Bauhaus design. It combines timeless elegance with a modern display and processor hardware. The 16-inch full HD display with its frameless genuine glass front seems to levitate in front of the wall. A bicolour LED can signal various states. The panels can optionally be equipped with a digital input and output, a KNX interface and a power supply via PoE. The consistent system design in industrial quality ensures long-life and maintenance-free systems.

Contact: *www.ambiento.de*

100% recessed KNX motion detector

TENSE Tense expands its motion detecting product line by adding a completely recessed motion detector. KNX Motivity Plus White, this elegant motion detector has a built-in brightness and temperature sensor, on top of its motion detecting capabilities. The Motivity Plus Black supports motion and temperature sensing. You can install it surface-mount or flush-mount. Thanks to an all-in-one and robust fixture, you can install the Motivity Plus 100% seamlessly in your interior and create a true designer look throughout your project. Top design meets great functionality. This subtle detector (ø 73 mm) has a great action radius up to 8m, a range up to 10m and a 360° detection area. ***Contact:*** *www.tense.be*

KNX actuators DU/ JU/ SU 1 KNX

THEBEN AG The new flush-mounted KNX actuators are available in three versions: The universal dimmer DU 1 KNX is optimised for dimmable LEDs and offers an adjustable dimming curve and automatic load detection. The blind actuator JU 1 KNX with its sun protection and ventilation function ensures an optimal indoor climate. High switching loads (16 A / 740 A peak) are reliably switched with the switch actuator SU 1 KNX. Each of the flush-mounted actuators has two binary inputs for button/switch or temperature sensor. The power supply is provided by the KNX bus voltage. ***Contact:*** *www.theben.de*

Thinknx K2: much more than a room controller

THINKNX Thinknx K2, the elegant smart controller from Thinknx, due to the high number of connection capabilities and features, is the ideal solution in many installation cases. Thanks to the native KNX TP port, it can be used as a room controller or as a complete standalone simplified supervision system for the entire apartment/house. The Ethernet port permits the full remote control with dedicated app available on all the platforms. In addition to its brother Thinknx K, it acts as gateway towards voice control systems (Google Home, Amazon Alexa and Homekit supported), IFTTT and can be enhanced with additional integrations from Thinknx system. ***Contact:*** *www.thinknx.com*

Voxior Box: Voice Control

VOXIOR Voxior Box brings voice control to every smart home owner. Present safety and comfort to your customers with a friendly plug-and-play setup and auto-connection. Increase their security as the connection to the home is made locally and the credentials are also stored locally. Upgrade existing clients to the latest standards of network security and empower them to command their home with all popular assistants (Google Home, Amazon Alexa and soon also Apple Siri). ***Contact:*** *www.voxior.com*

WAREMA KNX SMI Actuator in a surface-mounted housing

WAREMA RENKHOFF SE The new KNX SMI actuators by Warema allow 16 SMI or SMI LoVo motors (depending on the actuator) to be controlled in up to 16 groups independently of each other. Standard commercial (venetian blind) push buttons can be connected by integrated binary inputs. Access by emergency/manual control is easy either by means of buttons on the actuator, ETS DCA or smartphone app (Bluetooth LE). Just as simple: commissioning by SMI Key ID via ETS or motor search/allocation by app. The smart SMI motors provide feedback on the position of the sun shading system and send any error messages.

Contact: *www.warema.com*

KNX IP Secure

WEINZIERL ENGINEERING GMBH Secure on IP: KNX IP Security enables secure connection for PCs or visualisations as well as secure routing over IP with full compatibility with existing KNX devices or installations. The new KNX IP Interface 732 secure and KNX IP Router 752 secure are the logical evolution of our successful KNX IP series. The devices have a compact design with a width of only 18mm and are powered by the KNX bus. KNX Security can be activated and deactivated as an option in ETS. The buttons and LEDs on the device allow a local diagnosis of the current operating status and possible communication errors.

Contact: *www.weinzierl.de*

KNX Modbus Gateway 886

WEINZIERL ENGINEERING GMBH KNX for HVAC applications: The KNX gateway 886 enables easy integration of Modbus devices that support the RTU protocol via RS-485. The gateway can act both as a master and as a slave. The data of the application are mapped to Group Objects according to the KNX Datapoint types and vice versa. The assignment between KNX objects and RTU registers is flexible via parameters in ETS®. The device has a width of only 18 mm. Three coloured LEDs on the front of the device visualise the connection and operating status.

Contact: *www.weinzierl.de*

Z35 H

ZENNIO AVANCE Y TECNOLOGÍA, S.L. Capacitive touch panel with a backlit 3.5" display, humidity sensor and internal temperature probe. Up to 42 controls/indicators can be configured, distributed in up to 7 pages. It includes two independent thermostats and 4 inputs. A screensaver with date, time and/or temperature can be set, returning to the menu automatically when the user approaches thanks to its proximity sensor. It can display a full-screen picture. Its brightness can be regulated by the ambient luminosity sensor. It also measures the relative humidity and calculates the dewpoint. It is possible to set alarms for humidity and for the condensation on a surface. Available in white, anthracite, silver and gloss white.

Contact: *www.zennio.com*

KNX-RF Media Coupler from ZF

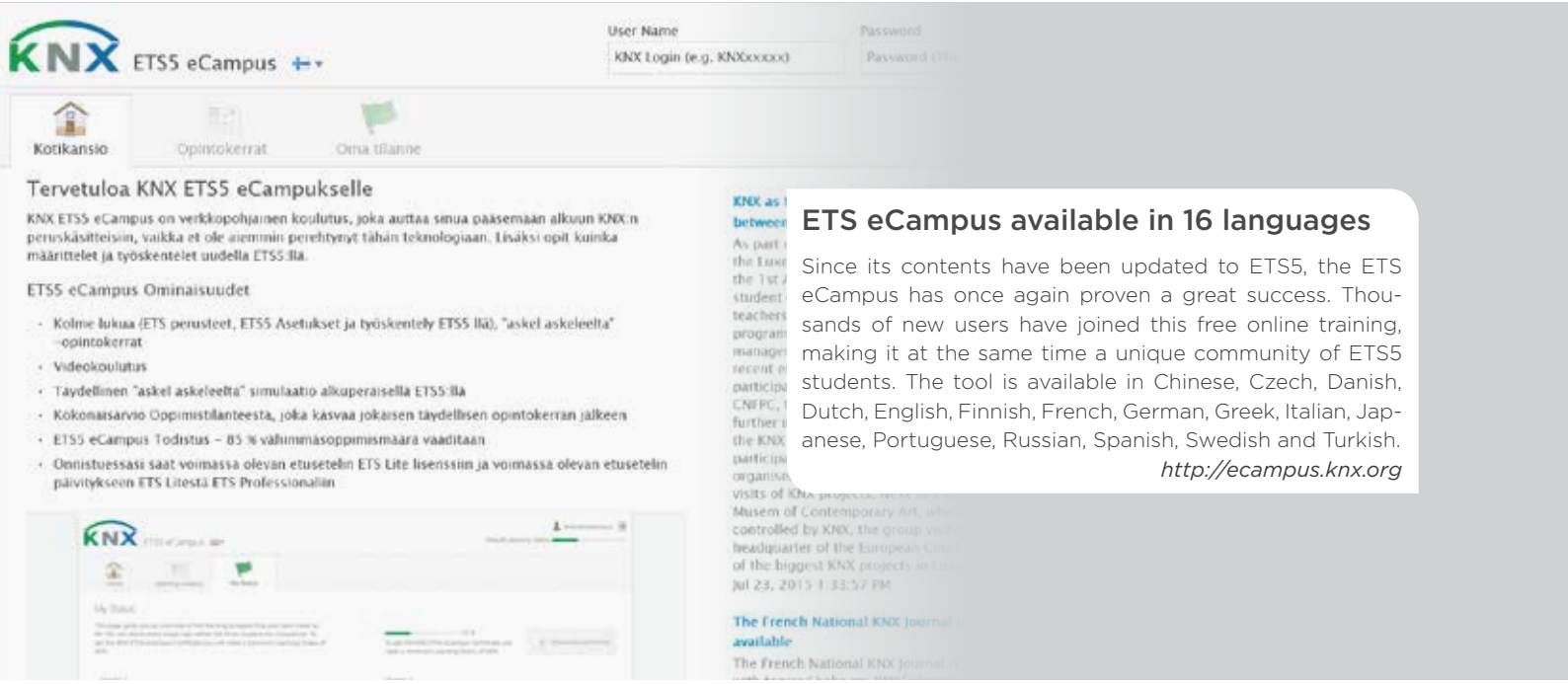
ZF FRIEDRICHSHAFEN AG The basic functionality of the device is coupling a KNX TP (Twisted Pair) main line with a KNX RF sub line. With the media coupler, it is possible to address every bus device in the bus system. It can be used as a receiver for ZF's KNX RF pushbutton module and other KNX RF devices. The media coupler can be configured via the ETS 5 software tool using a product database which is already integrated in the ETS."

Contact: *www.switches-sensors.zf.com*

Unique KNX Rotary Sensor

ZIDATECH AG With the KNX rotary sensor, complex KNX functions can be easily controlled using intuitive conventional operation. You can operate all building functions by turning and pressing the control button: e.g. light on/off, dimming, blinds up/down, brightness values, temperatures, calling up and saving light scenes and more. The rotary sensor also has three binary inputs for potential-free contacts. This means that conventional switches can also be connected to the bus. The KNX rotary sensor is available in all common Swiss push button designs and in the exclusive JUNG design - in various colours, for every taste.

Contact: *www.zidatech.ch*



ETS eCampus available in 16 languages

Since its contents have been updated to ETS5, the ETS eCampus has once again proven a great success. Thousands of new users have joined this free online training, making it at the same time a unique community of ETS5 students. The tool is available in Chinese, Czech, Danish, Dutch, English, Finnish, French, German, Greek, Italian, Japanese, Portuguese, Russian, Spanish, Swedish and Turkish.

http://ecampus.knx.org

National Groups

KNX Argentina promotes the Smart City

ARGENTINA In times of growing awareness of cloud-based and IoT solutions, it is now more important than ever to implement smart cities. With this in mind, KNX Argentina was invited to present the advantages of KNX technology, since KNX has, and will continue to play a crucial part in the development of smart homes, smart buildings and smart cities.

Contact: *Augustin Abdala | augustin.abdala@knxargentina.com*
www.knxargentina.com

Agustin Abdala presents the KNX city.

Members of KNX with connected Home Award

KNX Roadshow in Australia marks a new standard

AUSTRALIA Messages of congratulations were sent from all over the world to KNX Australia for its major achievement: the recognition of KNX as a technical specification for the market Down Under. In order to share this great news with the wider Australian community, KNX Australia successfully organised a KNX Roadshow in four cities. This not only promoted the fact that KNX is now part of Australia, but highlighted why KNX is the technology to choose.

Contact: *Peter Garrett* / peter.garrett@mysmart.com.au / *www.knx.org.au*

Successful KNX network meeting

BELGIUM On 25 October, KNX Belgium organised a network meeting for anyone interested in KNX. Following an overall theme of KNX and security, various speakers gave illuminating presentations and explained what role KNX can play in this field.

Contact: *Rob Van Mill | info@knx.be | www.knx.be*

Attendees at KNX Belgium network meeting

Networking cocktail party on Day 1 of KNX Brazil's KNX Days

KNX Days in Brazil

BRAZIL Brazil saw its first KNX Days kick off with a three-day event in Sao Paulo. More than 100 participants joined the KNX conference, during which speakers from various fields highlighted why KNX is the number one technology in Latin America. The conference was followed by a sold-out certified KNX training course, organised by a national KNX training centre. This marks a new beginning in Latin America where further KNX Days are expected to take place, as well as in more countries all over the world.

Contact: *executivo@knx.org.br | www.knx.org/br*

More events than ever

CHINA 2018 saw an unprecedented level of activity by KNX China. With participation at two fairs, the organisation of various workshops and trainings, and the year's concluding KNX Roadshow in Beijing, Hangzhou and Guangzhou, a new bar was set in China. KNX enjoys continuing growth in the country, and is not only the most demanded technology for smart homes and buildings, but is also spearheading activities in China.

Contact: *Shen Pu | knxchina@knx.org | www.knxchina.org*

KNX China booth at SIBT

Mr Gössel winning the lottery at the KNX Secure Roadshow in Brno.

Best KNX Project Competition in the Czech Republic

CZECH REPUBLIC The whole KNX community turned out for the KNX Secure Roadshow organised by KNX Czech Republic. This not only focussed on KNX Secure, but created a whole new understanding of the world's leading control technology, as well as playing host to the unforgettable best Czech KNX Project award.

Contact: *Josef Kunc | eibsyst@volny.cz | www.knx.org/cz*

New milestones for KNX Denmark

DENMARK The KNX Denmark General Assembly 2018 heralded a new era for KNX in Denmark, and saw various successful decisions made regarding events, focus and strategies. These included organising a KNX Roadshow in three cities, attending a major trade fair and putting more emphasis on social media - a trend which is set to grow in 2019.

Contact: *Martin Mortensen | martin.mortensen@dk.abb.com | www.knxdenmark.dk*

KNX Denmark at the Ajour trade fair

More than 200 participants at the tenth anniversary celebrations

Ten years - more than just a celebration!

FINLAND KNX Finland had plenty to celebrate in 2018. Not only did it succeed in making KNX the leading system in Finland within ten years, it also reached out to the highest levels of government and saw KNX chosen for a Helsinki smart city project. The mayor of Helsinki joined over 200 professionals for the KNX Finland 10th anniversary celebrations, which comprised a full-day event including keynote speeches, presentations and workshops.

Contact: *Johan Stigzelius | johan.stigzelius@knx.fi | www.knx.fi*

KNX France at IBS Show

FRANCE IBS is the leading show for smart homes and smart buildings in France. No surprise that KNX France took the chance to present KNX in the best possible light! The KNX France booth was the first point of contact for those interested in smart homes and smart buildings. In addition, KNX France launched the latest edition of the national KNX Journal, all editions were claimed within the first days.

Contact: *Amel Karim | contact@knx.fr | www.knx.fr*

KNX France took the chance to present KNX

Panel Discussion at Colloquium in Frankfurt

9th Colloquium in Frankfurt

GERMANY More than 400 participants from various areas of the electronic industry followed the call for participation in the 9th Colloquium by KNX Germany. Focussed topic was “IoT – From the intelligent building to smart services”. Next to interesting presentations and discussions, the KNX Colloquium featured for the first time an exciting start-up pitch. More information at www.knx.de.

Contact: *Hajo Deul | knx@zvei.org | www.knx.de*

KNX Hungary sets the tone at EuroSkills

HUNGARY KNX Hungary performed impressively at EuroSkills, the competition for the best young professionals from across Europe. Not only was KNX chosen as the main technology for the skill of electrical engineering, KNX Hungary made sure that the advantages of KNX were brought to a whole new generation of systems integrators.
Handing out the award at the closing ceremony for the winners of the category further highlighted the importance and recognition of KNX in Hungary.

Contact: *Zoltan Balogh | bz@berker.hu | www.knxhungary.eu*

KNX – the highlight at EuroSkills

Green Building Council's President, Rick Fedrizzi

KNX India at Greenbuild 2018

INDIA The KNX Secure Roadshow made a stop in Mumbai, when KNX India participated in the leading Greenbuild show with a perfect booth location at the centre of the fair, which was also visited by the Green Building Council's President, Rick Fedrizzi. The theme of KNX Secure created even more awareness, since automation technologies were identified as key for the implementation of smart buildings.

Contact: *Bhavesh Doshi | info@knx.in | www.knx.in*

Fully booked event!

KNX Italy Days 2018

ITALY KNX Italy opted for life in the fast lane by hosting the 2018 KNX Italy Days at the Museo Casa Enzo Ferrari in Modena. The event was held on 23 November and welcomed experts from various fields and industries, as well as keynote speakers. It was hailed a success thanks to a diverse agenda, which offered something for everybody.

Contact: *Silvia Siliprandi | segreteria@knx.it | www.knx.it*

Advertisement by KNX Japan

KNX Japan goes the extra mile

JAPAN After a successful 2018, KNX Japan is looking forward to its 6th anniversary this year. Besides the traditional forum, which attracts more than 100 participants each year, KNX Japan will also participate at JECA Fair 2019. With advertisements in various magazines, KNX Japan has highlighted impressively that KNX is the most suitable technology for one of the world's largest economies.

Contact: *Takayuki Shintani | knxjapan@itrco.jp | www.knx.org*

KNX Secure the answer for Korea

KOREA KNX Natioanla Group Korea is rightfully known for technology and achievements, which is why the demand for KNX has been skyrocketing over the past couple of years. But where awareness for a technology grows, so do concerns about security. Hence the KNX Secure Roadshow, hosted by KNX Korea, was welcomed by an eager audience, and convinced everyone that KNX is the secure solution for the smart home and building market thanks to the double security concept of KNX Data Secure and KNX IP Secure.

Contact: *Daniel Lee | info@knx.or.kr | www.knx.or.kr*

Daniel Lee welcomes participants at the KNX Roadshow

Thomas Plein highlights the importance of security

Luxembourg educates about security

LUXEMBOURG Another stop of the KNX Secure Roadshow was in Luxembourg, where the KNX training centre CNFPC hosted the KNX Secure event. KNX Secure was discussed for more than two hours, and the result was impressive. All teachers, students and professionals agreed that KNX is far ahead of any other technology in terms of capability and security.

Contact: *Thomas Plein | info@knx.lu | www.knx.lu*

Effects of first KNX Secure event still reverberate globally

MIDDLE EAST In 2017, KNX Association organised the first KNX Secure event in Dubai. Although KNX Secure devices were still in development at the time, the event showed that KNX has always been a secure technology. The success of the event confirmed that security is not a bubble, but a substantial topic. The long-lasting effects of this event are still evident the world over, as exemplified by the KNX Secure Roadshow, which took place during 2018.

Contact: *info@knx.ae | www.knx.ae*

The first KNX Secure event took place in Dubai

KNX at the Bits, Bricks & Behaviour conference

KNX Netherlands at successful conference

NETHERLANDS KNX was part of the successful Bits, Bricks & Behaviour conference , which took place alongside the Smart Homes & Intelligent Buildings show. A total of 704 visitors attended both events. The KNX booth at the exhibition informed visitors about KNX and recruited members to the new KNX Netherlands initiative, Smart Inside, an online platform for professionals in real estate and technology. Smart Inside includes project descriptions, brochures, white papers, updates about events and more.

Contact: *Rob van Mil | info@knx.nl | www.knx.nl*

KNX New Zealand – the rising Kiwi

NEW ZEALAND 2018 was a spectacular year for the growth in the number of KNX engineers and delivered projects in New Zealand. The hard work of the early years was reflected in the successful KNX Day event in May, where participants from all aspects of the KNX world came together to celebrate and recognise the excellent projects submitted to the KNX Awards in the categories of Residential, Commercial and Best project.

Contact: *Colin Price | info@knxnz.org | www.knx.org.nz*

Colin Price presents awards at the KNX Day

Fully-booked KNX Secure event

Sustainable security in Norway

NORWAY In a country where KNX is leading the way for a whole Norwegian industry, there is one topic which requires most attention: security. A sold-out KNX Secure workshop, as part of the KNX Secure Roadshow, was the platform for KNX Secure, as well as a discussion amongst all participants, which lasted for several hours. Understanding that KNX Secure is not only an extension to the existing technology, but another feature which makes KNX not only unique but leading in this field, confirmed again that KNX will always be the right choice.

Contact: *info@knx.no | www.knx.no*

KNX Secure conference in Warsaw

POLAND Concluding an eventful 2018 for KNX Poland comprising various activities and success stories, the KNX Secure Roadshow made an impressive stop in Warsaw at the Intelligent House 2018 show. At this, the largest home automation fair in Poland, the KNX Secure booth was visited by no less than a couple of thousand enthusiastic attendees.

Contact: *Jan Worobiec | jan.worobiec@targetpress.pl | www.knxpolska.pl*

KNX Secure Roadshow in Warsaw

Secure Roadshow in Lisbon

A step towards security in Lisbon

PORTUGAL KNX Portugal hosted the KNX Secure Roadshow with an impressive event in Lisbon where, following the presentations, lively discussions among the audience underlined the importance of KNX Secure for the whole smart home and smart building market. The KNX Secure event was just the initial spark for more upcoming activities in Portugal.

Contact: *Rui Horta Carneiro | rui.carneiro@knx.pt | www.knx.pt*

KNX Romania more active than ever

KNX Romania grows market understanding

ROMANIA Thanks to three successful events organised by KNX Romania, the Romanian market has an increased awareness of smart home and smart building security, and a greater understanding of KNX and why it is ahead of its time.

Contact: *Rafael Marculescu | presidente@knx.ro | www.knx.ro*

KNX Russia at Interlight show

Busy year for KNX Russia

RUSSIA 2018 ended with major achievements, successes and milestones for KNX Russia, including PlugFests, two fairs and numerous workshops. 2019 sees another full schedule, including a KNX Secure Roadshow that will travel across the country. Due to the growing KNX market in Russia, there are plenty of opportunities for everyone to benefit from the positive impact of these activities, so the national group invites you to join in and contact them for further details.

Contact: *Andrey Golovin | golovin@konnex-russsia.ru | www.konnex-russia.ru*

KNX Secure Roadshow in Johannesburg

KNX South Africa discusses strategy

SOUTH AFRICA In addition to the KNX Secure Roadshow in Johannesburg, KNX South Africa organised a meeting supported by various KNX members, at which the upcoming strategy and future were discussed. The meeting was followed by an evening reception, where representatives from KNX South Africa and members of KNX Association highlighted the benefits of KNX and why it is the right technology for South Africa.

Contact: *Matthew Carter | matt@knxsa.com | www.knx.org/za*

25th anniversary of KNX Spain

KNX Spain celebrates 25th anniversary in style

SPAIN KNX Spain celebrated its 25th anniversary in 2018 by attending trade fairs, organising workshops holding national KNX Awards, events, lotteries and more. The highlight was, without doubt, a booth at the Matelec 2018 show, at which KNX Spain held impressive celebrations. KNX Association sincerely congratulates KNX Spain for 25 years of success!

Contact: *Michael Sartor | info@knx.es | www.knx.es*

Fully-booked KNX Days in Sweden

KNX Day at easyFairs

SWEDEN The KNX Sweden booth at the easyFairs electrical exhibition in October was the centre of attention, thanks to the current hot topics of KNX Secure and KNX IoT. The concurrent KNX Days also focussed on these subjects as well as other areas of interest, and were a clear success for KNX Sweden, as evidenced by them being fully-booked by more than 120 eager participants.

Contact: *Jan Hammersköld | info@knx.se | www.knx.se*

Competitors hard at work

KNX Programming @ ASEAN Skills

SINGAPORE Participants from all South East Asian countries gathered and competed to determine, who is the best young electrical engineer in South East Asia. Part of the competition was also the programming with KNX, due to its openness and accessibility all over the world. A great compliment goes to all other participants, as they were chosen as the best in order represent their countries at ASEAN Skills!

Contact: *www.knx.org*

Only a few seats left for upcoming BIM courses

KNX Swiss organises BIM courses

SWITZERLAND After the successful launch of the KNX Swiss BIM Handbook, KNX Switzerland will organise the first BIM introduction courses in 2019. The courses are open to members and interested parties. Part of the content will be BIM basics and practical examples. Experienced professionals will support the courses as speakers. Dates can be found on the KNX Switzerland website.

Contact: *René Senn | knx@knx.ch | www.knx.ch*

The KNX Thailand booth at Thailand Building Fair

KNX Thailand at Thailand Building Fair

THAILAND Thanks to a great performance at the Thailand Building Fair, which was joined by three more KNX manufacturers, KNX Thailand is seeing the demand for KNX in Thailand rocket. The question is not whether KNX Thailand will participate at the next Thailand Building Fair, but how it can build further on this success.

Contact: *Nuttanicha Navy | netty@phuket-technology.com*

Bonhomie at KNX UK Christmas party

KNX UK poised for a great 2019

UNITED KINGDOM KNX UK moves into 2019 with a heightened national profile, enabling it to spread the KNX message far and wide via participation at major exhibitions and events, and articles in key journals throughout the year. Wholesalers are stocking more KNX products and the seven KNX training centres in the UK are busy. KNX UK members continue to support each other, and the deep friendships amongst all KNX UK members were apparent at the annual Christmas Party in London.

Contact: *Tara Garland | admin@knxuk.org | www.knxuk.org*

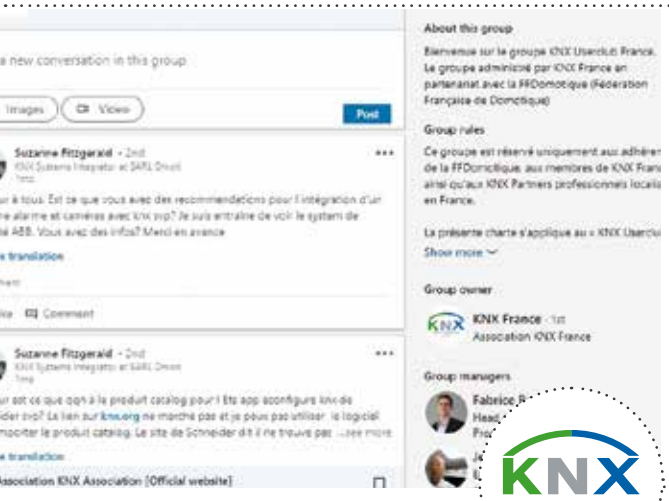
Userclub / Professionals

KNX Innovation Award 2018

BELGIUM System integrator, Casa Domotic, won the KNX Innovation Award 2018 by integrating a private villa with a large number of functions, based on KNX. The presentation of the Award took place during the KNX Network Event held on 25th October at Hogeschool Thomas More in Sint-Katelijne Waver.

Contact: *Rob van Mil | info@knx-professionals.be*
www.knx-professionals.be

Networking at its best



The LinkedIn Group

KNX Userclub France on LinkedIn

FRANCE The successful re-launch of KNX Userclub France exceeded all expectations in increasing its visibility. Now KNX Userclub France has moved to LinkedIn in order to spread the latest news and offer support for its community. Visit KNX Userclub France's LinkedIn page at https://www.linkedin.com/groups/8677496/

Contact: *Amel Karim | contact@knx.fr | www.knx.fr*

KNX Professionals at Fairs

GERMANY KNX Professionals Germany made the headlines with its first participation at IFA, the world's leading fair for consumer electronics in Berlin. Promoted by the German Ministry of Economy and Energy, the KNX booth generated an unexpected footfall. Following this success, KNX Professionals Germany has secured a booth in Hall 6 at 'eltefa' in Stuttgart.

Contact: *Dirk Müller | info@knx-professionals.de*
www.knx-professionals.de

Podium discussion at IFA

Conference in Iran

KNX Iran highlights openness

IRAN KNX Userclub Iran welcomed representatives from various companies in order to share the latest developments about the smart home and smart building market. Needless to say that KNX offers a solution for all problems due to its openness, and the Iranian KNX community came to the conclusion that the market can only grow if it is open to different brands.

Contact: *Roozbeh Bita | roozbeh2004@gmail.com*

KNX UC Malaysia promotes training

MALAYSIA KNX Userclub Malaysia continues its efforts to bring KNX training to young professionals. For this reason, KNX Userclub Malaysia invited young vocational students to implement a KNX project and practise their knowledge. Furthermore, KNX Userclub Malaysia signed additional agreements to have KNX included in the curricular of schools all over the country.

Contact: *Peng Wah Siew | pw_siew@yahoo.com | www.knx.asia*

Proud KNX students

The new online community Smart Inside

KNX Professionals with new online community

THE NETHERLANDS KNX Professionals set up the online community 'Smart Inside' this year. Smart Inside is a brand-new platform for professionals in the field of home and building automation. The primary goal of this online community is to bring professionals in contact with each other, so they can easily network and share information.

Contact: *Ineke van Erp | info@knx.nl | www.knx-professionals.nl*

Summer PlugFest

Summer Edition of KNX PlugFest

RUSSIA KNX Userclubs Russia and Messe Frankfurt organised another successful KNX PlugFest. The Summer edition was supported by various members, and allowed participants to experience the newest releases, features and highlights of KNX. More than 100 participants took part, demonstrating the success and importance of these recurring KNX events.

Contact: *Dmitry Sass | dmitry.sass@knx-user-club.ru*
www.knx-user-club.ru

Spanish KNX Awards at MATELEC

SPAIN The winners of the KNX Spain Award were announced at a ceremony held during MATELEC on 14th November. KNX Association would like to congratulate the winning projects ShoWorking Rivas by Imeyca, Cadielsa Smartbuilding by Cadielsa and Villa La Pera by HomeFutura.

Contact:
Michael Sartor | michael.sartor@knx.es
www.knx-professionals.es

Proud winners

KNX Sweden awarding the best project

KNX Sweden Awards

SWEDEN KNX Professionals Sweden awarded its annual KNX Sweden Award for best project to Håkan Ruudh. The winning project, Säröhus, is a conference centre and hotel located in the archipelago South of Gothenburg. KNX Sweden and the KNX Association congratulate Håkan Ruudh for this outstanding success.

Contact: *Jan Hammersköld | info@knx.se*
www.knx.se

New Training Centres

ABB México
Mexico
guillermo.bribiesca@mx.abb.com
www.abb.com.mx

ABB Pte Ltd
Singapore
jeffrey.lim@sg.abb.com
www.abb.com

BBPLK Serang
Indonesia
knx.indonesia@gmail.com
www.kios3in1.net/002

ELEK-Egypt
Egypt
nour@iec-egypt.com
www.elek-eg.com

Ergo Design & Technology srl
Italy
laura.pampurini@ergosolution.it
www.ergosolution.it

MEGAWATT SPA
Italy
annitacorbosiero@gruppomegawatt.it
www.gruppomegawatt.it

Reyse Formación

Spain
antonio@reyse-automatizacion.com
www.reyse-automatizacion.com

Innung für Elektrotechnik Recklinghausen

Germany
erlhoff@me.com
www.elektroinnung-recklinghausen.de

Limtec+

Belgium
alexander.hermans@limtec.be
www.limtec.be

Rafmennt

Iceland
finnur@raf.is
www.rafmennt.is

TFO Bruneck

Italy
tfobruneckknx@yahoo.de
www.tfo.bruneck.it

Yönnet Bilisim Yazilim Egt.ve Dan.Hiz. Tic.A.S.

Turkey
mustafacan.kaya@interra.com.tr
www.interra.com.tr

New Scientific Partners

Frankfurt University of Applied Sciences
Germany
becker@fb2.fra-uas.de
www.frankfurt-university.de

Polytech Orléans
France
kamel.ladrouz@univ-orleans.fr
www.univ-orleans.fr/polytech/specialite-intelligence-du-batiment

ITS Energia ed Ambiente
Italy
info@ohmegaprogettazioni.com
www.its-energiaeambiente.it/

Start@KNX

Are you looking to expand your knowledge about KNX? "Start@KNX" offers an overview of the various training options, accompanying material and identifies how teaching materials and methods can effectively be used in order to increase knowledge about KNX. Find all info at *https://start.knx.org*

KNX at International Conferences and Fairs

KNX Scientific Conference

AUSTRIA The bi-annual KNX Scientific Conference was organized at the FH Technikum in Vienna on 18-19 October. More than 50 participants from universities and KNX member companies followed presentations on KNX system innovations and research projects. The winner for the "Best Conference Paper" of the Scientific Conference was 17-year old Bram Roelandts Praus for his paper "LoRa as a secure and wireless complement to KNX".

Contact: *www.knx.org*

CTO Joost Demarest congratulating the winner

KNX Certification Conference

AUSTRIA The Certification Conference was hosted by the FH Technikum in Vienna in October. The conference was attended by more than 40 (potential) member companies. The new product registration tool, EITT and product development were the highlighted topics of this years' edition.

Contact: *www.knx.org*

The audience of the certification conference

KNX Training Centre Conference

AUSTRIA This year's Training Centre Conference took place at the HTL Training Centre in St. Pölten. One day prior, the representatives got a guided tour at the Schönbrunn castle in Vienna and enjoyed a classical concert at the venue. On the Conference day, updates in the training centre tool were presented, ETS and ETS Inside novelties were shown and eight member companies presented their innovations.

Contact: *www.knx.org*

Training Centre representatives during the conference

KNX National Group Conference 2018 in Helsinki

FINLAND From Oct. 2nd till 4th, 20 National groups gathered in Helsinki, Finland. Besides being in awe with the beauty and progression of Helsinki at the same time as well as the visit of the award-winning KNX city project, the focus of the KNX National Group Conference was clearly on the exchange between all KNX National Groups.

Contact: www.knx.org

The representatives together in Helsinki

KNX meets THREAD

GERMANY KNX Association was a guest presenter at the Thread Group Member Meeting in Munich, hosted at OSRAM's World of Light on Tuesday, the 16th of October. Thread's collaborative and interactive Technical, Certification, and Marketing work groups gathered this week with one goal in mind: to create the best way to connect and control IoT products. ***Contact:*** *www.knx.org*

CEO Heinz Lux presenting KNX IoT to the THREAD Group

KNX at the Installers´ Summit 2018 in Stockholm

SWEDEN On the 21st September, the AIE Association organised the annual conference installers summit conference in Stockholm (Sweden). As a main theme of the conference, it was discussed how digitalisation is disrupting virtually every industry, the installation sector not being an exception. KNX had the opportunity to present the benefits that KNX secure brings to digitalisation for smart homes and buildings. ***Contact:*** *www.knx.org*

KNX presenting at the Installers Summit

KNX makes appearance at Licht Davos

SWITZERLAND At the European lighting conference in Davos, consisting of many conference tracks and attracting more than 700 attendants, KNX was invited as guest speaker. KNX highlighted its asset of being able to integrate lighting in an overall automation concept Covering many other application domains, both possible with KNX Classic as well as with the future KNX IoT, fully based on IP.

Contact: *www.knx.org*

KNX International and KNX Swiss at Licht Davos

Events and Fairs Schedule

ISH 2019
11. 3. – 15. 3. 2019
Frankfurt (Germany)
ISH brings two trade fairs together under one roof: energy, building and air-conditioning technology as well as bathroom solutions

www.ish.messefrankfurt.com/frankfurt

elfack 2019
7. 5.– 10. 5. 2019
Gothenburg (Sweden)
The biggest meeting place for the Nordic electronics sector

https://elfack.com

Guangzhou Electrical Building Technology 2019
9. 6. – 12. 6. 2019
Guangzhou (China)
Asia's premier platform for the electrical engineering, building and home automation

www.guangzhou-electrical-building-technology.hk.messefrankfurt.com/guangzhou/en.html

Power Days 2019
13. – 15. 3. 2019
Salzburg (Austria)
Austria's only comprehensive information platform for electrical, lighting, home and building technology

www.power-days.at

Tektonica 2019
8. 5. – 11. 5. 2019
Lisboa (Portugal)
The Largest Portuguese Building and Construction Fair

www.tektonica.fil.pt

Worldskills 2019
22. 8. – 27. 8. 2019
Kazan (Russia)
The world's largest international skills competition

www.worldskills.org

Amper 2019
19. – 22.3.2019
Brünn (Tschechische Republik)
Biggest and most prestigious Event for Electro, IT, Control and Automation in Czech Republic

http://www.amper.cz

Fachtagung Gebäude 4.0 2019
5.6. – 6. 6. 2019
Munich (Germany)
Symposium about securing quality in the life cycle with building automation

www.netinform.de/Veranstaltungen/Veranstaltung.aspx?ID=6163

Shanghai Intelligent Building Technology 2019
3. 9. – 5. 9. 2019
Shanghai (China)
Event that aims at brand building and invites professional buyers

www.shanghai-intelligent-building-technology.hk.messefrankfurt.com/shanghai/en

eltefa 2019
20. – 23. 3. 2019
Stuttgart (Germany)
Leading fair for electronics in Germany and the neighbouring countries

www.messe-stuttgart.de/eltefa

JECA fair 2019
22.5. – 24.5.2019
Tokyo (Japan)
Exhibition of electrical construction equipment, materials, tools and construction methods

www.jecafair.jp

ineltec 2019
10.9. – 13. 9. 2019
Basel (Switzerland)
Switzerland's leading intelligent building fair

www.ineltec.ch

IFA
6. 9. - 11. 9. 2019
Berlin (Germany)
This is the meeting point where the consumer tech meets innovation

https://b2b.ifa-berlin.com

Facilities Integrate 2019
25. 9. – 26. 9. 2019
Auckland (News Zealand)
The NZ trade exhibition for the facilities management and system integration industries

www.facilitiesintegrate.nz

KNX Training Centre Conference
17.10. – 18.10.2019
Milan (Italy)
Yearly conference that brings together KNX Certified Training Centres

www.knx.org

Elmässan 2019
16. 10. – 17. 10. 2019
Kista (Sweden)
Electrical fair in Sweden

www.easyfairs.com/elmaessan-stockholm-2019/

Thailand Building Fair
28.10. – 30.10.2019
Bangkok (Thailand)
The ASEAN platform for Building Automation & Electrical Engineering

https://thailandlightingfair.hk.messefrankfurt.com

Hi-Tech Building 2019
23. 10. – 25. 10. 2019
Moscow (Russia)
Most important annual event for home and building automation in Russia & the CIS.

https://en.hitechbuilding.ru

energetab 2019
17. 9. – 19. 9. 2019
Bielsko-Biala (Poland)
The largest energy fair in central Europe

www.energetab.com

interclima + elec 2019
5. 11. – 8. 11. 2019
Paris (France)
An opportunity to discover the most innovative solutions which combine energy efficiency and comfort

www.interclima.com/en

Imprint

KNX Journal International
The KNX Journal is the international magazine for home and building control based on KNX technology. Experts, practitioners and professionals show the way in applying and developing the KNX standard – from home and building control trends to devices and application projects; from the KNX members and partners to useful information on event stands and publications. Special attention is given to members and activities of the KNX Association International and their national groups.

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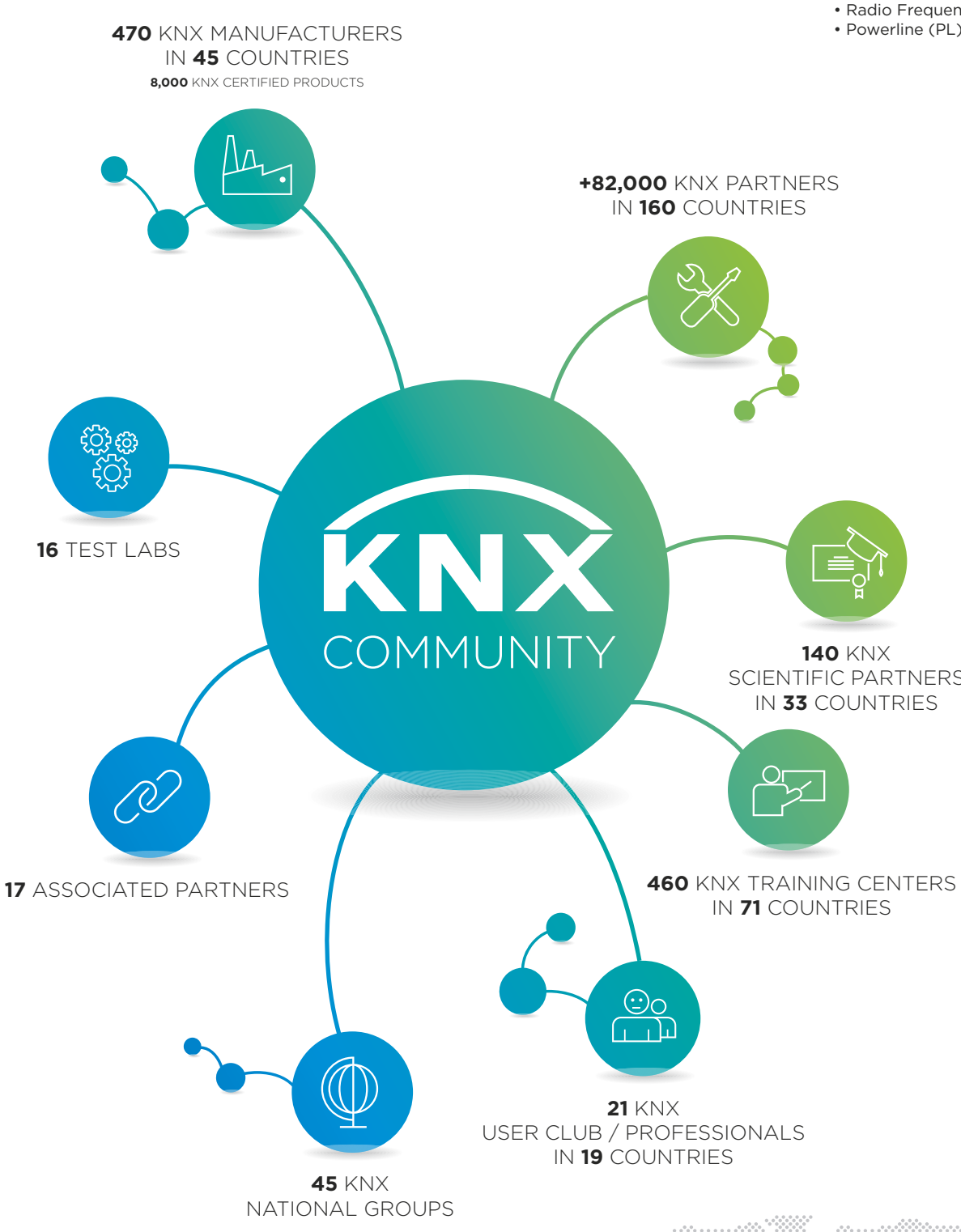

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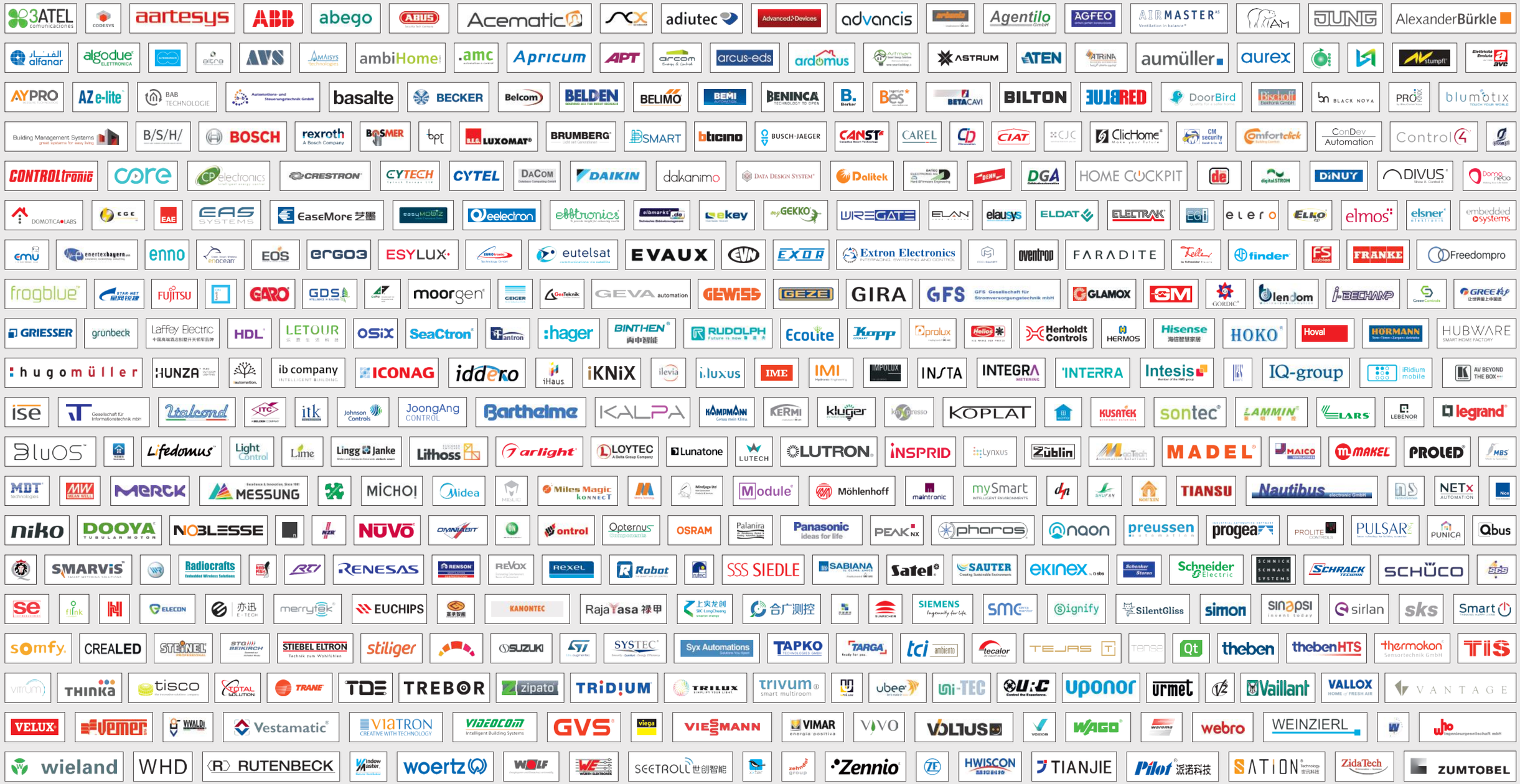

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