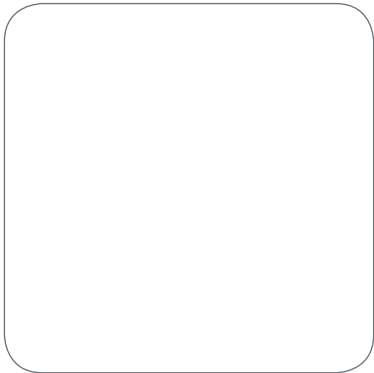


Energy efficiency

Hager solutions to optimise your energy consumption





By raising global awareness, the Kyoto Protocol has had a worldwide impact. As a result, thermal building regulations have emerged.

Today, Hager is at the heart of this issue. Its product and technology expertise, its interface role between the various actors, project managers and contracting authorities, and its ability to design solutions that meet users' needs makes Hager a central player in the energy management market.

This document outlines Hager solutions to energy management for all your buildings in accordance with the new regulations. It also presents our solutions to help you create increasingly efficient buildings, for the benefit of their occupants and future generations.



Energy efficiency: what for ?

During 2012 Climate Change Conference in Doha, Qatar, the United Nations committed to reduce greenhouse gases emissions by at least 18% below 1990 levels from 2013 to 2020. Buildings represent today 40% of total primary energy consumption.

To reduce our dependence to fossil fuels in the coming years, we need not only to find alternative energies but above all to limit our energy consumption.

This idea, considered a few years ago as an environmental concern, is becoming obviously an economical issue. Initial investment in buildings covers only less than 20% of the long term costs. The main long term costs are related to operation and maintenance of the buildings and energy consumption in the buildings contributes a large part of the operation cost.

More and more, design institutes are considering today the global life cycle costs to design and construct high-performance buildings.

Detection, automation, visualisation... This brochure presents Hager solutions to support and motivate building owner and user to save energy... and money!



Summary

Smart buildings, smart solutions

Metering	4 - 7
Lighting management	8 - 13
Shutters control	14 - 17

Applications

Health care and nursing facilities	20 - 23
Hotels	24 - 27
Commercial premises	28 - 31
Offices	32 - 35
Schools	36 - 39
Collective, tourism, senior citizen and student residences	40 - 43



Metering

Measuring to

Before implementing an action plan to make savings, take time to identify the items that use the most energy. Measurement campaigns provide a precise energy consumption analysis and, as such, the appropriate response.



Why should energy be measured?

At a time when energy is scarce and more expensive, reducing unnecessary costs has become a real priority. There is thus a need to identify any excessive usage or operating faults throughout the building and to take corrective action, addressing each area in turn.

Consumption can then be closely monitored in each area to identify actual need, potential sources of savings and help make the right decisions in terms of energy performance.

10%

Providing information on energy consumption and encouraging users to adopt environmentally friendly behaviour can achieve energy savings of up to 10%*.



improve decision-making

Hager, one step ahead

The smart metering device range by Hager allows to monitor different kind of energy (electricity, water, gas...) in the building.

- Measure and count: multi-function meters provide all necessary information for an optimised process and an intelligent plant control. The function scope can be widened thanks to modules mounted on the back of the device (e.g.: temperature, memory, communication...).

The KNX energy meters, with their high measurement accuracy, are recommended to be used for sub-metering.

Total and partial consumption from main installation and individual areas, as well as instantly power data, can be sent periodically to the KNX bus.

- Visualisation and controlling: consumption, alarm signals and temperature are displayed via the Hager webserver. A clear representation of all conditions of the building and the central control of the KNX plants can be done with multi-functional tebis KNX visualisation.

All functions can be customised, for example:

- individual configuration and combination of process pictures by using an editor,
- implementation of own graphics,
- definition of the process parameters (e.g.: e-mail messaging in case of system fault),
- configuration of the time switch functions with the agenda program,
- visualisation of additional process contacts via OPC-connections.



Hager solutions



KWh meters (impulse or **KNX** output)



Multi-function meters (impulse or JBUS/MODBUS or IP output)



Pulses concentrator (JBUS/MODBUS output)

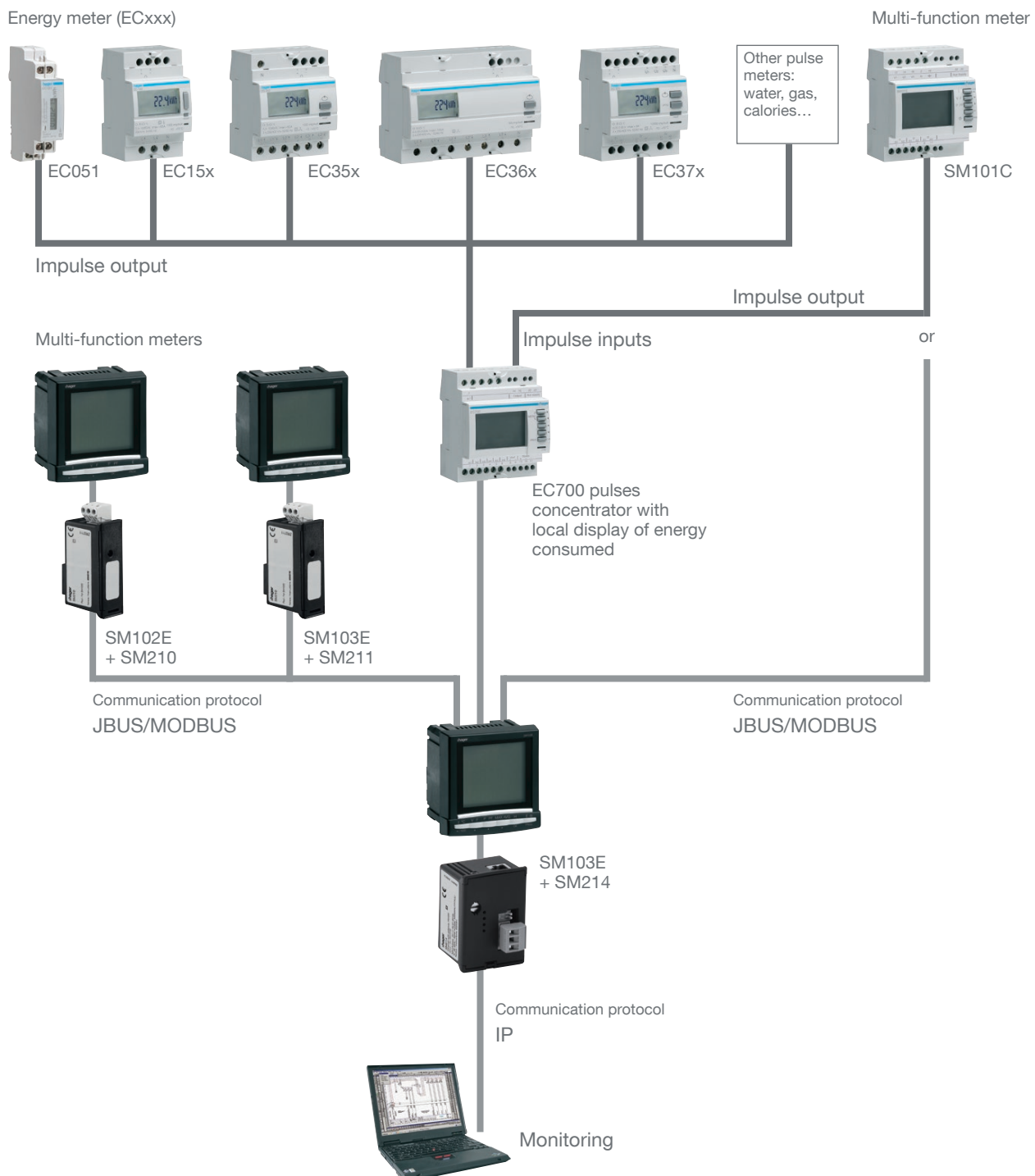


Impulse gateways (**KNX** output)

To measure consumption, Hager provides a two-level solution

- A traditional solution, suitable for any type of installation. This can be built into conventional communication protocols (pulse, JBUS/modbus, IP).
- A **KNX** solution, unique on the market (installation of any KNX solution including metering).

Traditional solutions



Energy meter (ECxxx)



Other pulse meters:
water, gas,
calories...

KNX energy meter (TExxx)



Communication protocol
KNX

IP gateway

TH210

Communication protocol
IP



Monitoring

Shedding light

Lighting is a source of comfort for users, but it is also a major expenditure item: two good reasons to control the situation to achieve energy savings.



Why should lighting be managed?

The requirements of the thermal building regulations have led to significant improvements in building insulation, with the knock-on effect that less energy is consumed for heating and air conditioning. Consequently, lighting (26% of consumption, on average) is a primary concern in commercial buildings.

Several alternatives are worth exploring to keep operating costs under control and to reduce consumption.

- Using electronic lights for comfort (efficient light source, quality of light, no glare)

- Switching lighting on at the right time: switching on lights only when necessary, and switching them off automatically when there is nobody in the room or when there is sufficient light. Here, the installation of presence detectors is an interesting option.
- Using lighting more efficiently while maintaining an optimum level of comfort and a pleasant atmosphere. Technical appliances can be used to vary the level of lighting depending on need: dimmers, detectors, remote controls.
- Identifying different lighting needs: highly frequented walk-through areas, working hours, natural lighting.

Lighting represents up to 40% of electricity consumption in offices.

40%

After one year, 10 minutes of unnecessary lighting, 3 times a day, is the equivalent of 5 days of continuous lighting. *

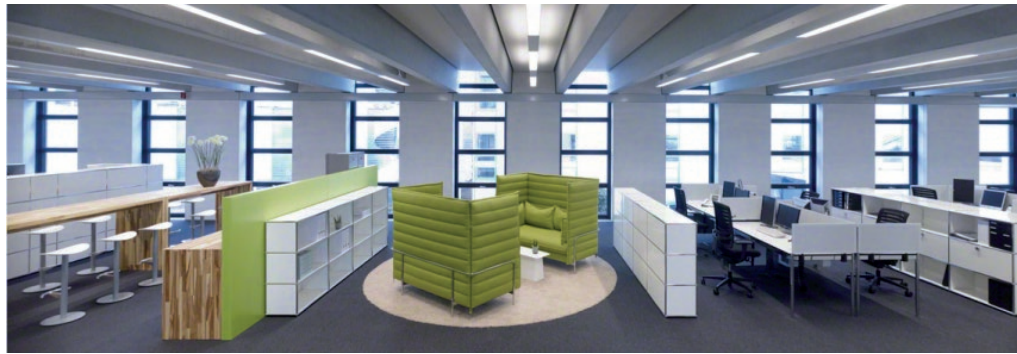


on savings

1. Indoor lighting

The presence detectors are able to detect if someone is in the room and switch the lights on or off accordingly.

The contactors and time switches allow to centralise the lighting function.



Automatic switch ON / OFF



Motion detectors
Berker by Hager
designs (standard,
comfort, RF, **KNX**)



Ceiling mounted
presence detectors
(standard, **KNX** or
DALI)

Programming



Contactors



Time switches

The dimmers allow to always have the right level of brightness in your room, all managed automatically.



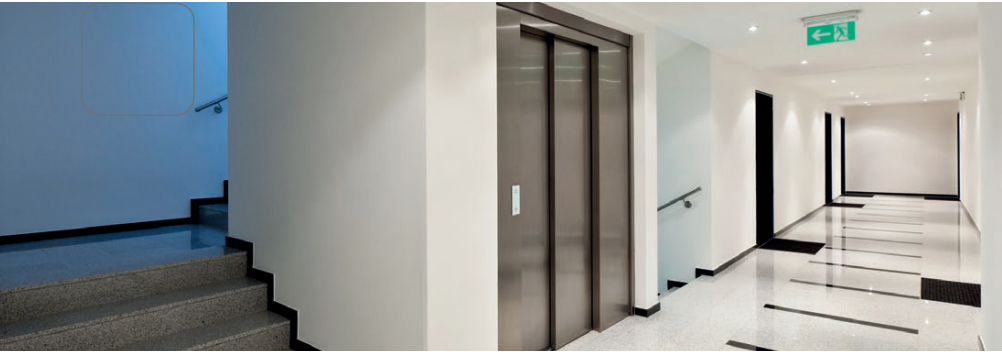
Automatic brightness level adjustment



Dimmers

* Source: French Environment and Energy Management Agency (ADEME)

2. Lighting for corridors and common areas



In passage areas, lighting is only needed for a short duration when someone is in.

Detectors allow to switch on the lights when somebody enters the area. Thanks to their discreet design, they can be mounted anywhere, on the ceiling or on the walls.



Ceiling-mounted motion detectors



IP55 wall-mounted motion detectors (standard or **KNX**)



Presence detectors (standard or **KNX**)



Berker by Hager designs **KNX** motion detectors



Time lag switch

3. Lighting for covered and/or semi-covered parking areas



Detection is not the same when it comes to human beings or objects in motion.

The range of detectors by Hager offers different kinds of technologies adapted to the situation. For example, Hyper-Frequency technology is perfect for application in car parks. It can detect a moving object regardless of its temperature.



IP54 hyper-frequency ceiling-mounted motion detectors



IP55 wall-mounted motion detectors (standard or **KNX**)

4. Outdoor lighting



Might it be about shop windows, glow sign boards or front of a house, there are different ways to adapt lighting timing and intensity.

Outdoor and indoor lights can be managed automatically and on a regular basis, thanks to astro switches or time lag switches, or adapted to the current situation by detection of external constraints, using twilight switches or detectors.

Exterior (shop windows, facades, signs, advertising screens...)



Astro switches



Twilight switches and time switches, (standard or **KNX**)



Floodlight (standard or **KNX**)



Centralised lighting + contactors + time switches
















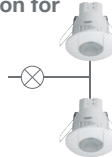
Time lag switch

From traditional to state of the art

Hager offers a wide range of solutions to lighting management issues. The traditional and universal range of solutions is suitable for any type of installation. Efficient and economical, whether used for new buildings or renovation work.

The **KNX** solutions offers an answer to efficient thermal management requirements and exceed them in terms of flexibility, control on a zone-by-zone basis, by group of zones or globally, by remote control.

Traditional solutions

	Push button switches	Motion detectors	IP55 wall-mounted detectors	IP54 motion detectors	Motion detectors	Presence detectors	DALI presence detectors	Presence detectors	Presence detectors 1/10V
	Berker by Hager designs	85341229	EE82x to EE87x TRE50x-51x-700 (quicklink)	EE883	EE804 EE805	EE815	EE816	EE810 EE811	EE812
									
One-way switch automatic mode 	X	X	X	X	X	X	X	X	X
Semi-auto mode (switched on with PB then automatically controlled by detector) 						X	X	X	X
Maintenance override or switch-off 		X	X	4-hour maintenance	X				
Extension for M/E area 		X						X	X
Extension for // area 			X	X	X	X			

Focus

Presence detector

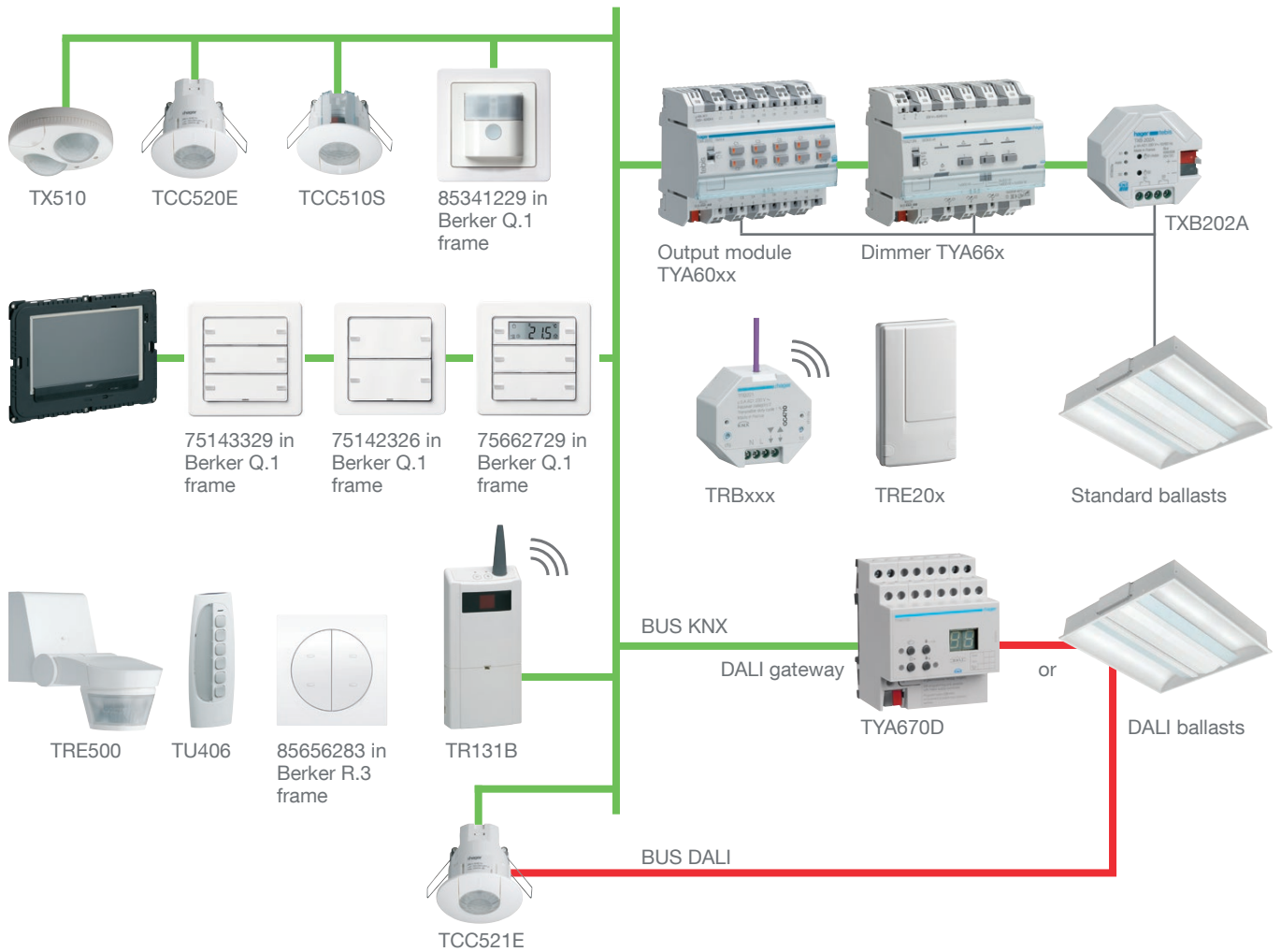


- Ideal for individual offices and meeting rooms
 - Compact and discreet
 - Can be adjusted by remote control
- ref. EE815

Hyper-frequency motion detector



- Ideal for sanitary facilities and covered parking areas
 - Independent temperature detection
 - IP54
- ref. EE883



Focus

Savings through lighting control

- Centralised and automated lighting, an ideal solution for switching lights off at night,
- controlling and dimming lights,
- programming lighting scenarios depending on occupancy.

Shutters
control

Aiming for

Windows are at the heart of building energy performance. The challenge is to know how to get the most out of natural light and heat. Simplicity and efficiency guide technical choices.



Why should shutters be managed?

Shutter control using a single, centralised or automatic motor offers advantages in various areas: it improves the thermal comfort of occupants in the building, maintains a pleasant interior temperature, takes advantage of free energy in winter and avoids the use

of air conditioning currently present in most of the new buildings.

The fluorinated gases used in air conditioning systems are responsible for 2% of greenhouse gas emissions, but the damage they cause is much greater (their impact on global warming is 1,300 to 24,000 times higher than the impact of CO₂ and they have a very long lifetime). This is why they represent a real danger although they only represent a small percentage of the total GHG emissions.

2%



comfort

Summer or winter, life is sweet!

The compact flush-mounted control offers you an easy control of your shutters and roller shutters. You can choose your design among the wide range of Berker by Hager designs.

It can also be automatically managed through the weather station.



Individual control



Control push-button for roller shutters (KNX or wired) Berker R.3

Centralised or automated controls



Centralised control for roller shutters KNX Berker Q.1



Programmable control for roller shutters Berker R.3



Remote controls KNX



Automatic control depending on weather conditions (KNX TG053A weather station)

Temperature controller



Temperature controller KNX Berker Q.1



Electronic time switch



Window opening detector

An answer for everything

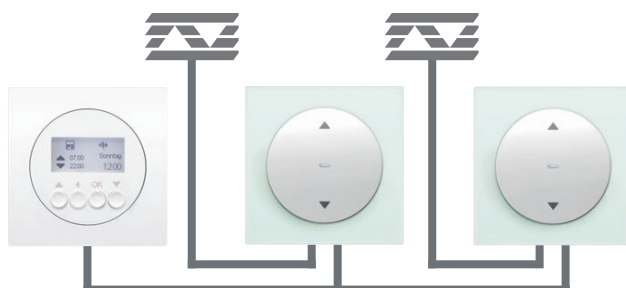
Hager has designed two types of solutions to manage shutters. On the one hand, standard solutions, which are universal and economical, and, on the other, **KNX** smart solutions for finely tuned, optimal control of blinds and shading devices.

Traditional solutions

Direct individual control (852411xx)



Centralised control and programming (857411xx)



Focus

Blind button

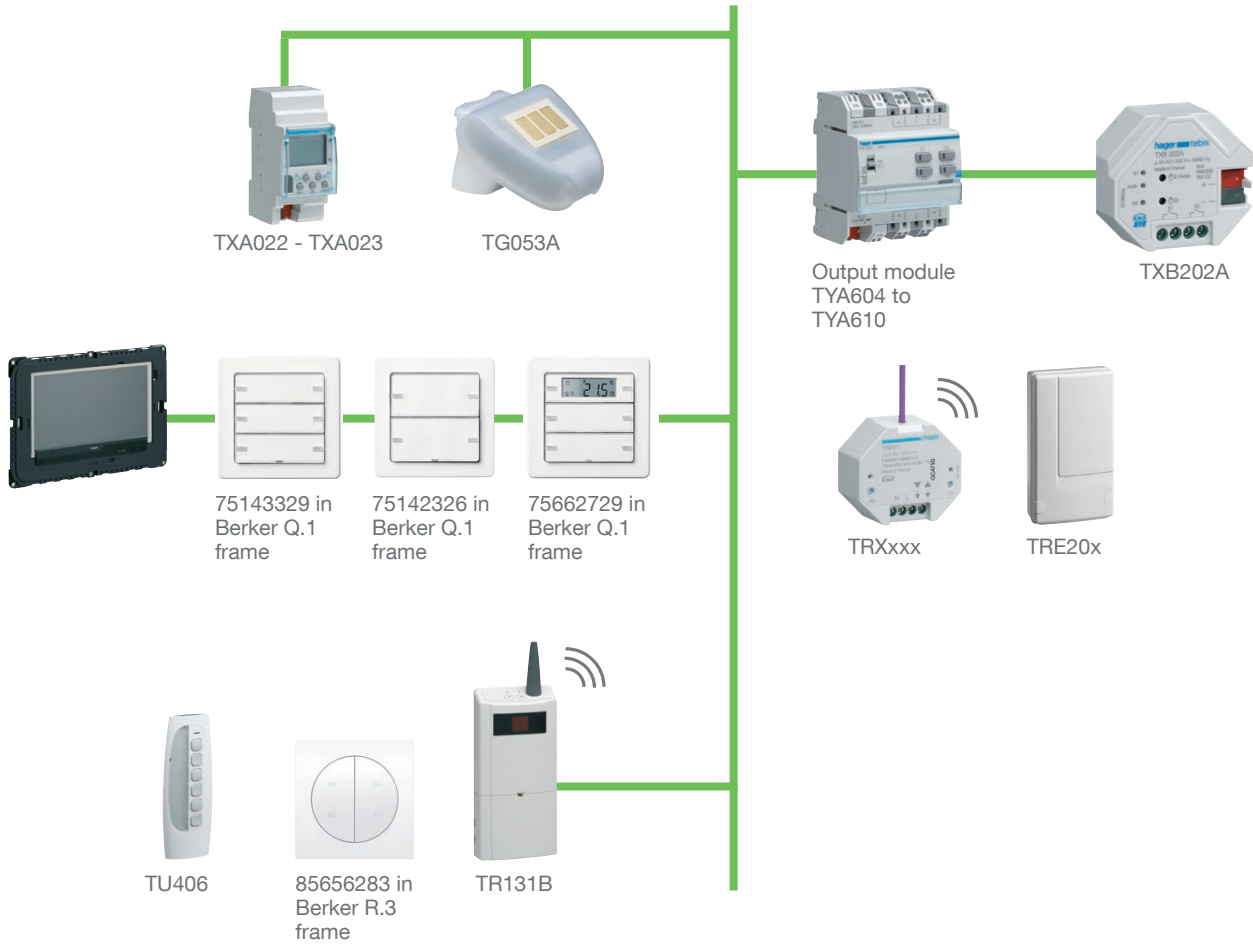
- memory function for automatic execution
 - with labeling fields and operation LEDs
- ref. 751422xx

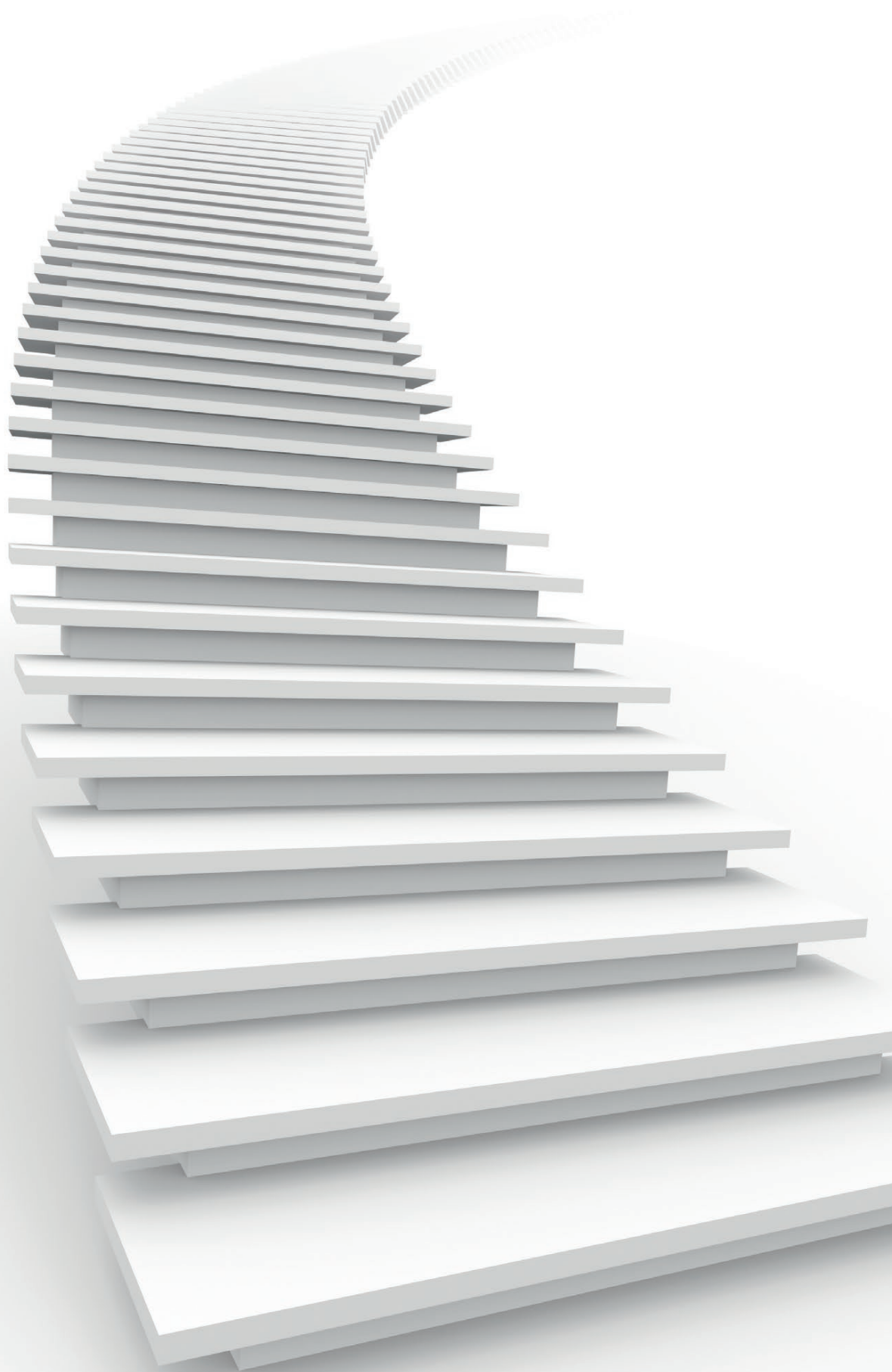


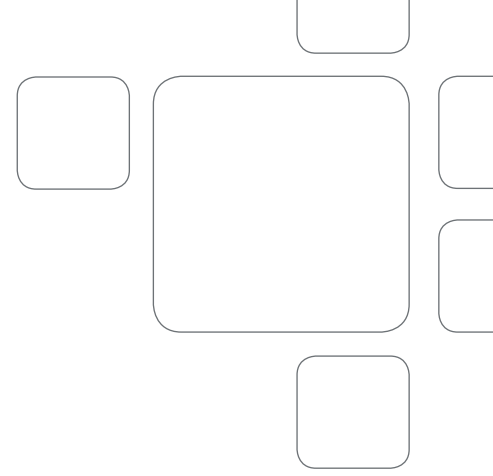
Blind time switch

- With display
 - astro programme for sunrise/sundown switching
- ref. 857411xx









A Hager solution for every building

In the commercial building market, the Hager brand is a leading supplier of customised solutions adapted to the needs, applications and configurations of all types of buildings.

Whether for hotels, nursing facilities, offices, shopping centres or even schools and collective housing, Hager meets the wide range of needs and requirements set out in thermal building regulations. Alongside project managers, contracting authorities and engineering specialists, our teams are part of the quality chain. Their objective is two-fold: to provide a good degree of comfort and an optimal energy performance rating.



Hager
solutions



Hager solutions for health care and nursing facilities

In health care and nursing facilities, a comfortable environment is an essential requirement. Everything is designed to make all residents feel at home.



Efficiency, reliability, performance, simplicity and service: all these qualities are concentrated in Hager's range of solutions for health care and nursing facilities. They form a comprehensive approach that aims to reconcile the comfort elderly people require with adaptable equipment and energy savings.

Synonymous with energy savings, lighting and HVAC control also ensure a comfortable and warm living environment. Our installations can be controlled remotely and thus reduce the user's need to move around and physical effort.

As direct interfaces between the interior and exterior, glazed walls are the only elements of a building that can transfer solar gains. The idea is to take advantage of the natural light and heat to reduce the building's heating and lighting consumption. Hager's automatic blind control systems offer a two-fold benefit: taking advantage of the sun in winter to heat the building and providing protection against the sun's rays in summer, thus keeping the premises cool.









Solutions for health care and nursing facilities

Traditional solutions









Lighting control

	Switches	Dimmers	Motion detectors	Fitted ceiling-mounted presence detectors	Motion detectors	IP54 sealed hyper-frequency ceiling-mounted motion detectors	IP55 sealed wall-mounted motion detectors
	Berker B.7	Berker B.7 11371909	Berker Q.1 8534xxxx	EE815 (ON/OFF) EE816 (DALI)	EE804 EE805	EE883	EE82x to EE87x
							
Reception area	X			X			
Corridors, stairs, bedroom access			X	X	X		
Bedrooms	X	X		X			
Dining room	X	X					
Common room	X	X		X			
Staff offices	X			X			
Stairwells, basement corridors						X	X
Plant room	X		X	X		X	X
Exteriors							X


















Control interfaces (lighting, shutters, HVAC)

Lighting control

	Berker Q.1 (lighting, shutters, ambiance/scenarios ...)	KNX Remote control	domovea kit*	Berker Q.1 motion detector	Fitted ceiling-mounted presence detectors	IP55 sealed wall-mounted motion detectors
	7566272x	TU4xx	TJA451	85345129	TCC510S, TCC520E (ON/OFF) TCC530E (dual-area control) TCC521E (DALI)	TRE5xx (pay attention to the range)
						
Reception area	X	X	X		X	
Corridors, stairs, bedroom access				X	X	
Bedrooms	X	X			X	
Dining room	X					
Common room	X	X			X	
Staff offices	X	X	X		X	
Stairwells, basement corridors						X
Plant room	X			X	X	X
Exteriors						X

* Can be controlled through mobile devices (iPhone, iPad,...)

			
	Shutters control	HVAC control	Metering
Astro switches, twilight switches, time switches	Roller shutter control push-button	Programmable room control	Energy meters, multi-function meters
EHxxx, EEN10x, EGxxx, EE18x	Berker R.3 852411xx	Berker Q.1 2049xxxx, 2034xxxx, 2030xxxx	ECxxx, SMxxx
			
	X	X	Consumption metering system
	X	X	
	X	X	
	X	X	
	X	X	
X			

						
	Shutters control	HVAC control	Metering			
Twilight switches, time switches	Dimmers	Weather station	Room thermostats	Window-opening detectors	Time switches	Energy meters
TXA02x	TYA66x	TG053A	TX320	TXB30x or TRC301B (pay attention to the range)	TXA02x	TE3xx
						
	X	X	X	X	X	Consumption metering system
	X	X	X	X	X	
	X	X	X	X	X	
	X	X	X	X	X	
	X	X	X	X	X	
X						

Add-ons

Energy distribution



Cable management



LED plinths



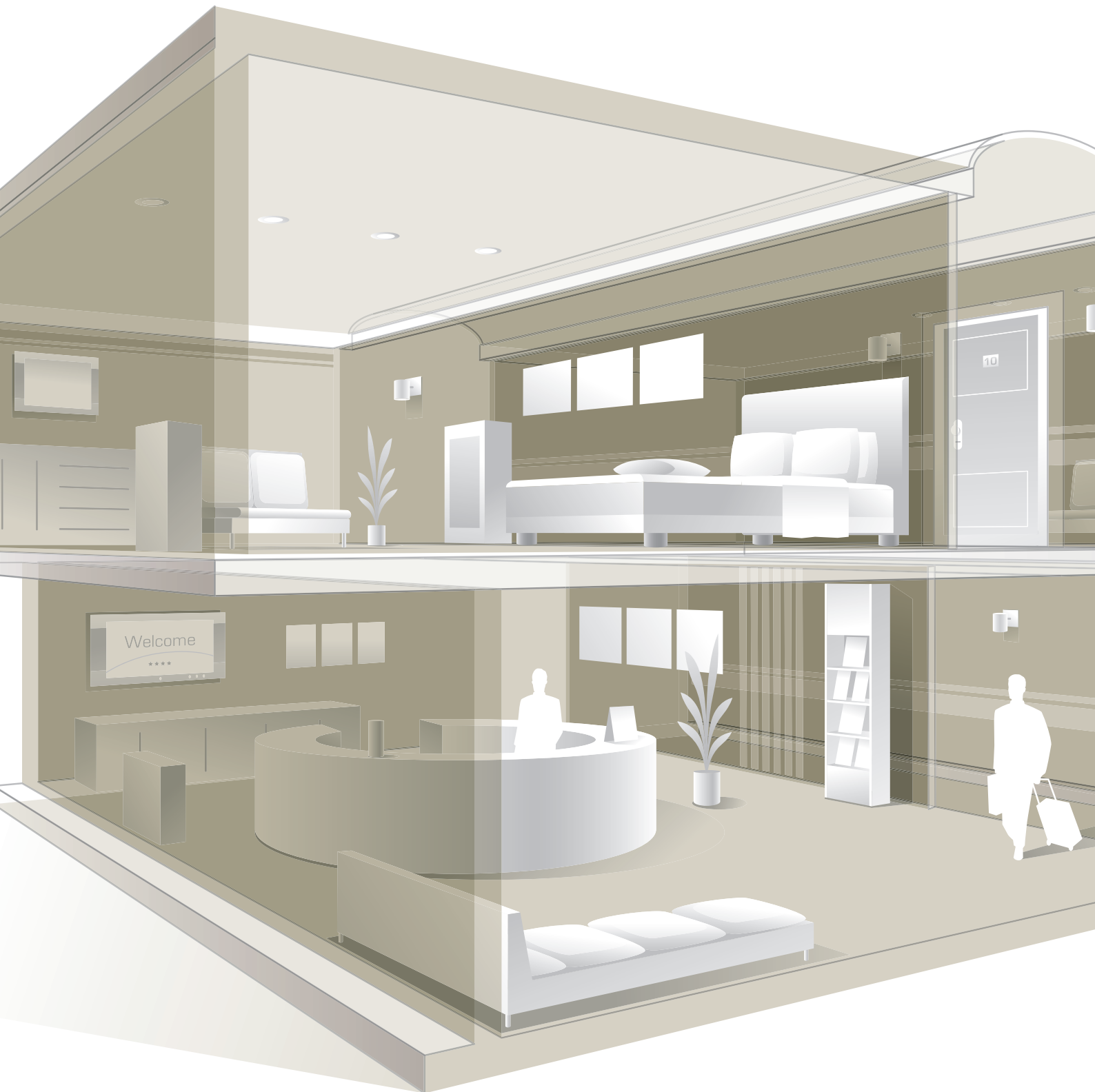
Multi-outlet blocs



Charging stations for electric vehicles

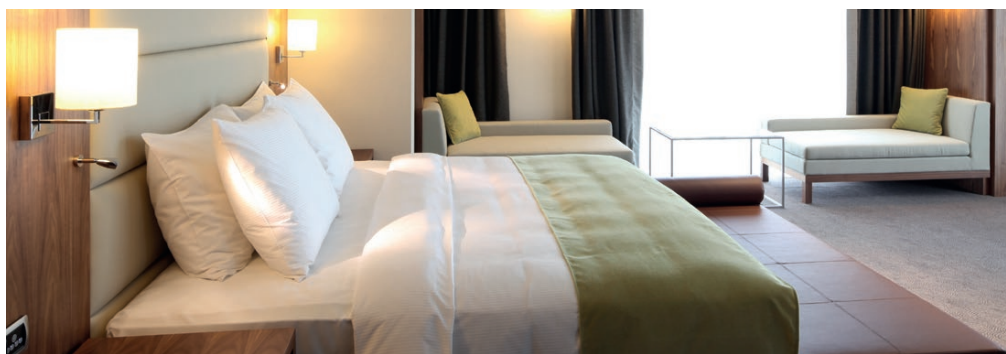


Hager
solutions



Hager solutions for hotels

Providing an increasingly demanding clientele with ever greater comfort and increasing the occupancy rate: a clear priority for hotels, which is shared by Hager.



In hotels, HVAC and lighting are the main energy consumption items after hot water. On average, lighting represents 42% of the electricity consumed by a hotel. Air conditioning also has a significant impact on the premises' energy bill. Due to increasing energy costs, energy consumption must be reduced, whilst ensuring the safety and comfort of guests.

Our lighting management solutions can potentially provide substantial energy savings. These solutions also contribute to the environmental commitment of hotels, which often aspire to a more eco-friendly approach. Programming lighting and varying the intensity of lighting, depending on the room, brings real added value and can showcase a building's modernity.










Solutions for hotels



Lighting control

Traditional solutions







	Switches	Switches	Dimmers	Motion detectors	Fitted ceiling-mounted presence detectors	Motion detectors	IP54 sealed hyper-frequency ceiling-mounted motion detectors
	Berker S.1	Berker B.7	Berker B.7 11371909	Berker Q.1 8534xxxx	EE815 (ON/OFF) EE816 (DALI)	EE804 EE805	EE883
							
Reception area	X	X			X		
Corridors, stairs, bedroom access				X	X	X	
Bedrooms	X	X	X		X		
Dining room	X	X	X				
Meeting room	X	X			X		
Staff offices	X	X			X		
Stairwells, basement corridors							X
Sanitary facilities	X			X	X		X
(Semi-) covered parking							X
Plant room	X			X	X		X
Exteriors							











Control interfaces (lighting, shutters, HVAC)













Lighting control

	Berker Q.1 (lighting, shutters, ambiance/scenarios ...)	KNX Remote control	domovea kit*	Berker Q.1 motion detector	Fitted ceiling-mounted presence detectors	IP55 sealed wall-mounted motion detectors
	7566272x	TU4xx	TJA451	85345129	TCC510S, TCC520E (ON/OFF) TCC530E (dual-area control) TCC521E (DALI)	TRE5xx (pay attention to the range)
						
Reception area	X	X	X		X	
Corridors, stairs, bedroom access				X	X	
Bedrooms	X	X	X		X	
Dining room	X					
Meeting room	X	X	X		X	
Staff offices	X	X			X	
Stairwells, basement corridors						X
Sanitary facilities				X	X	X
(Semi-) covered parking						X
Plant room	X			X	X	X
Exteriors						X

* Can be controlled through mobile devices (iPhone, iPad,...)

				
		Shutters control	HVAC control	Metering
IP55 sealed wall-mounted motion detectors	Astro switches, twilight switches, time switches	Roller shutter control push-button	Programmable room control	Energy meters, multi-function meters
EE82x to EE87x	EHxxx, EEN10x, EGxxx, EE18x	Berker R.3 852411xx	Berker Q.1 2049xxxx, 2034xxxx, 2030xxxx	ECxxx, SMxxx
				
		X	X	Consumption metering system
		X	X	
		X	X	
		X	X	
		X	X	
X				
X				
X				
X				
X	X			

							
		Shutters control	HVAC control				Metering
Twilight switches, time switches	Dimmers	Weather station	Room thermostats	Window-opening detectors	Time switches	Energy meters	
TXA02x	TYA66x	TG053A	TX320	TXB30x or TRC301B (pay attention to the range)	TXA02x	TE3xx	
							
	X	X	X	X	X	Consumption metering system	
	X						
	X	X	X	X	X		
	X	X	X	X	X		
	X	X	X	X	X		
		X	X	X	X		
X							

Add-ons

Energy distribution



Cable management



LED plinths



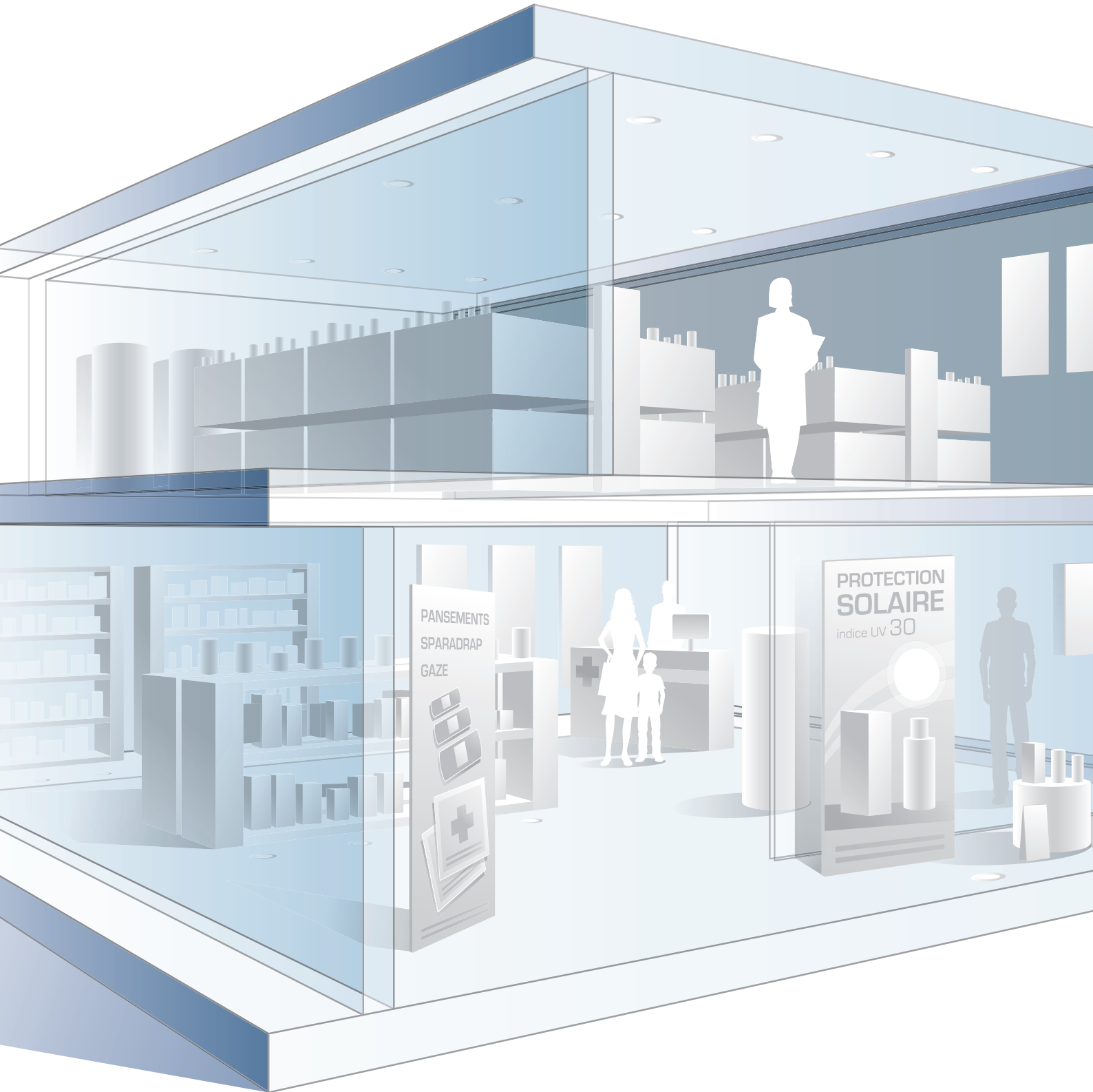
Multi-outlet blocs



Charging stations for electric vehicles



Hager
solutions



Hager solutions for commercial premises

A colourful display is not the only way to promote a sales area. Lighting is a key element to assert a brand's identity. Hager solutions combine a modular system with energy savings.



How can we improve our visibility, make the customer's shopping experience more pleasurable, and still enjoy energy savings? A challenge for commercial premises where each sales point should showcase its offerings. Therefore, lighting represents a large share of a brand's operating costs.

Hager relies on its lighting management expertise and its teams of lighting designers to satisfy its clients' needs. Given the complexity of a lighting project, our technicians provide their engineering expertise to design lighting for sales outlets and advise on the materials to be used.

This approach results in tailor-made solutions. The keyword is 'flexibility'. Lighting equipment must be modular so that it can adapt to any rearrangement of sales outlets, furnishing codes and brand references. With our solutions, it is also possible to programme lighting scenarios based on sales outlet traffic. They implement information and communication technologies to customise and adapt lighting for commercial premises.











Solutions for commercial premises

Traditional solutions










Lighting control

	Switches	Motion detectors	Fitted ceiling-mounted presence detectors (high level of detection)	Ceiling-mounted presence detectors (very high level of detection)	Motion detectors	IP54 sealed hyper-frequency ceiling-mounted motion detectors
	Berker S.1	Berker Q.1 8534xxxx	EE815 (ON/OFF) EE816 (DALI)	EE810 EE811 EE812	EE804 EE805	EE883
						
Shop window / sign / facade						
Sales area	X					
Offices	X		X	X		
Cloakrooms / sanitary facilities	X	X	X			X
Storage area	X	X	X			X
Exteriors						






















Control interfaces (lighting, shutters, HVAC)

Lighting control

	Berker Q.1 (lighting, shutters, ambiance/ scenarios ...)	KNX remote control	domovea kit*	Berker Q.1 motion detector	Fitted ceiling-mounted presence detectors	Ceiling-mounted presence detectors (very high level of detection)	IP55 sealed wall-mounted motion detectors
	7566272x	TU4xx	TJA451	85345129	TCC510S, TCC520E (ON/OFF) TCC530E (dual-area control) TCC521E (DALI)	TX510 (ON/OFF) TX511 (with regulation)	TRE5xx (pay attention to the range)
							
Shop window / sign / facade							
Sales area	X	X	X				
Offices	X	X	X		X	X	
Cloakrooms / sanitary facilities				X	X		X
Storage area	X			X	X		X
Exteriors							X

* Can be controlled through mobile devices (iPhone, iPad,...)

			 Shutters control	 HVAC control	 Metering
IP55 sealed wall-mounted motion detectors	Astro switches, twilight switches, time switches	Dimmers	Roller shutter control push-button	Programmable room thermostats	Energy meters, multi-function meters
EE82x to EE87x	EHxxx, EEN10x, EGxxx, EE18x	EVNxxx	Berker R.3 852411xx	Berker Q.1 2049xxxx, 2034xxxx, 2030xxxx	ECxxx, SMxxx
					
	X				
		X	X	X	Consumption metering system
		X	X	X	
X					
X	X				

			 Shutters control	 HVAC control	 Metering	
Twilight switches, time switches	Dimmers	Weather station	Room thermostats	Window-opening detectors	Time switches	Energy meters
TXA02x	TYA66x TX211A TYA670D	TG053A	TX320	TXB30x or TRC301B (pay attention to the range)	TXA02x	TE3xx
						
X						
	X	X	X		X	Consumption metering system
	X	X	X	X	X	
X						

Add-ons

Energy distribution



Cable management



LED plinths



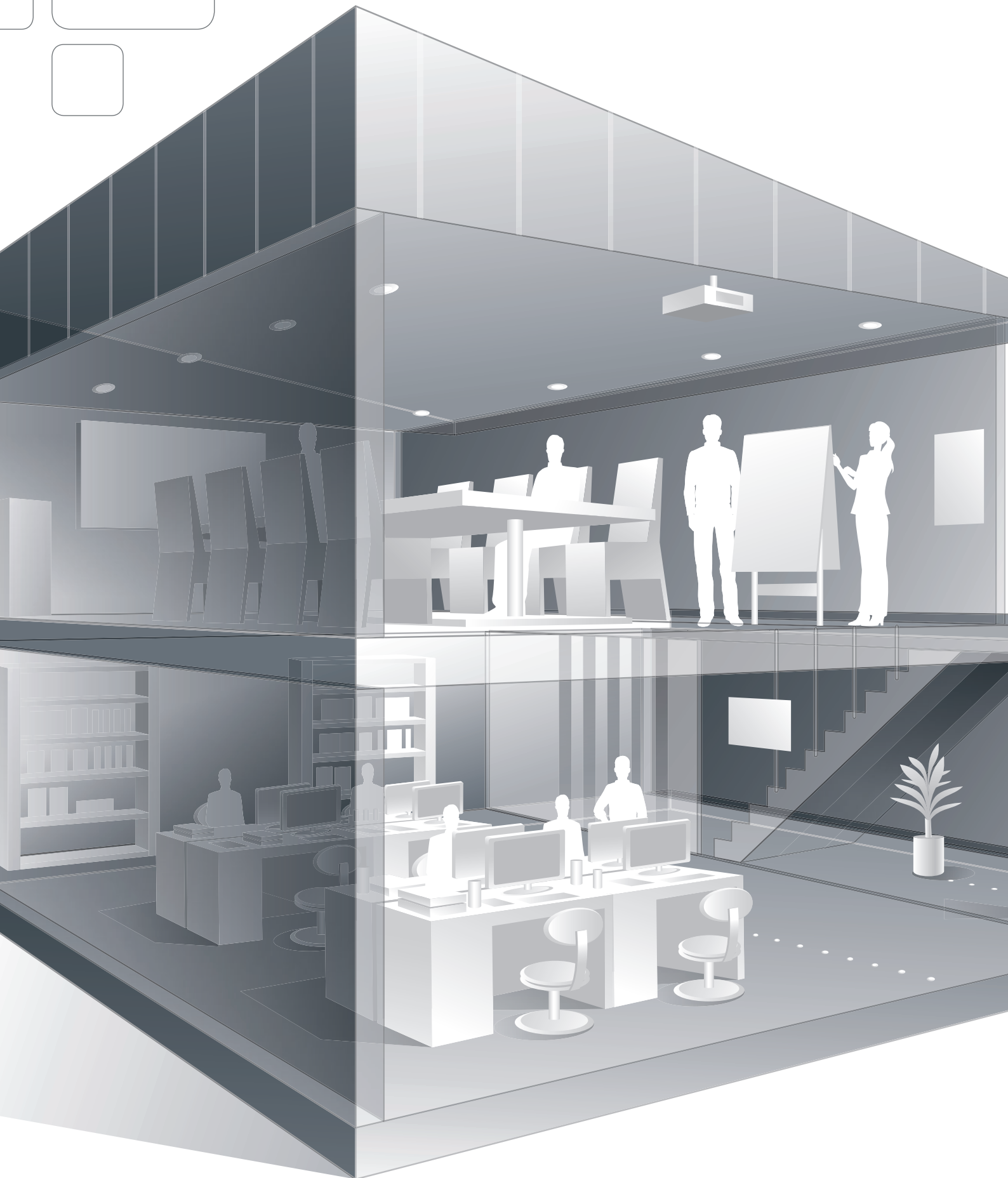
Multi-outlet blocs



Charging stations for electric vehicles



Hager
solutions



Hager solutions for offices

IT equipment, screens, telephones and light sources: in a company, the multitude of equipment drives up energy bills. Metering and reducing consumption are clear objectives to control costs and increase competitiveness.



Hager teams have always responded to the same challenge: to satisfy the needs of companies that aspire to be socially responsible and environmentally friendly while adapting to their economic constraints. As such, our engineers provide support to implement efficient energy solutions in offices.

For computing hardware, our teams work at two levels. Firstly, to reduce consumption. Proposed measures generally include the implementation of automatic systems to switch off computer stations or smart plugs to avoid standby power consumption. Our approach also aims to implement appropriate metering systems. The goal is to monitor changes in consumption and encourage users to act responsibly.

Our solutions also extend to lighting, which is highly energy intensive. We recommend the use of presence and motion detectors to switch on lights at the right time and in the right place while ensuring the safety and comfort of users. Another strategic recommendation is to programme and regulate lighting to reduce unnecessary lighting expenses in unoccupied offices, for example.












Solutions for offices



Lighting control

	Switches	Motion detectors	Fitted ceiling-mounted presence detectors (high level of detection)	Ceiling-mounted presence detectors (very high level of detection)	Motion detectors	IP54 sealed hyper-frequency ceiling-mounted motion detectors	IP55 sealed wall-mounted motion detectors
	Berker S.1	Berker Q.1 8534xxxx	EE815 (ON/OFF) EE816 (DALI)	5236x	EE804 EE805	EE883	EE82x to EE87x
							
Reception area	X		X	X			
Corridors, stairs, office access		X	X		X		
Individual offices	X		X	X			
Open-plan offices	X		X	X			
Meeting rooms	X		X	X			
Break rooms	X		X				
Stairwells, basement corridors						X	X
Sanitary facilities	X	X	X			X	X
(Semi-) covered parking						X	X
Plant room	X	X	X			X	X
Exteriors	X						








Traditional solutions











Control interfaces (lighting, shutters, HVAC)













Lighting control

	Berker Q.1 (lighting, shutters, ambiance/scenarios ...)	KNX Remote control	domovea kit*	Berker Q.1 motion detectors	Fitted ceiling-mounted presence detectors	Ceiling-mounted presence detectors (very high level of detection)	IP55 sealed wall-mounted motion detectors
	7566272x	TU4xx	TJA451	85345129	TCC510S, TCC520E (ON/OFF) TCC530E (dual-area control) TCC521E (DALI)	TX510 (ON/OFF) TX511 (with regulation)	TRE5xx (pay attention to the range)
							
Reception area	X	X	X		X	X	
Corridors, stairs, office access				X	X		
Individual offices	X	X	X		X	X	
Open-plan offices	X		X		X	X	
Meeting rooms	X	X	X		X	X	
Break rooms	X				X		
Stairwells, basement corridors							X
Sanitary facilities				X	X		X
(Semi-) covered parking							X
Plant room	X			X	X		X
Exteriors							X

* Can be controlled through mobile devices (iPhone, iPad,...)

		 Shutters control	 HVAC control	 Metering
Astro switches, twilight switches, time switches	Dimmers	Roller shutter control push-button	Programmable room thermostats	Energy meters, multi-function meters
EHxxx, EEN10x, EGxxx, EE18x	EVNxxx	Berker R.3 852411xx	Berker Q.1 2049xxxx, 2034xxxx, 2030xxxx	ECxxx, SMxxx
				
	X	X	X	Consumption metering system
	X	X	X	
	X	X	X	
	X	X	X	
	X	X	X	
X				

		 Shutters control	 HVAC control	 Metering		
Twilight switches, time switches	Dimmers	Weather station	Room thermostats	Window-opening detectors	Time switches	Energy meters
TXA02x	TYA66x TYA670D TX211A	TG053A	TX320	TXB30x or TRC301B (pay attention to the range)	TXA02x	TE3xx
						
	X	X	X	X	X	Consumption metering system
	X	X	X	X	X	
	X	X	X	X	X	
	X	X	X	X	X	
	X	X	X	X	X	
X						

Add-ons

Energy distribution



Cable management



LED plinths



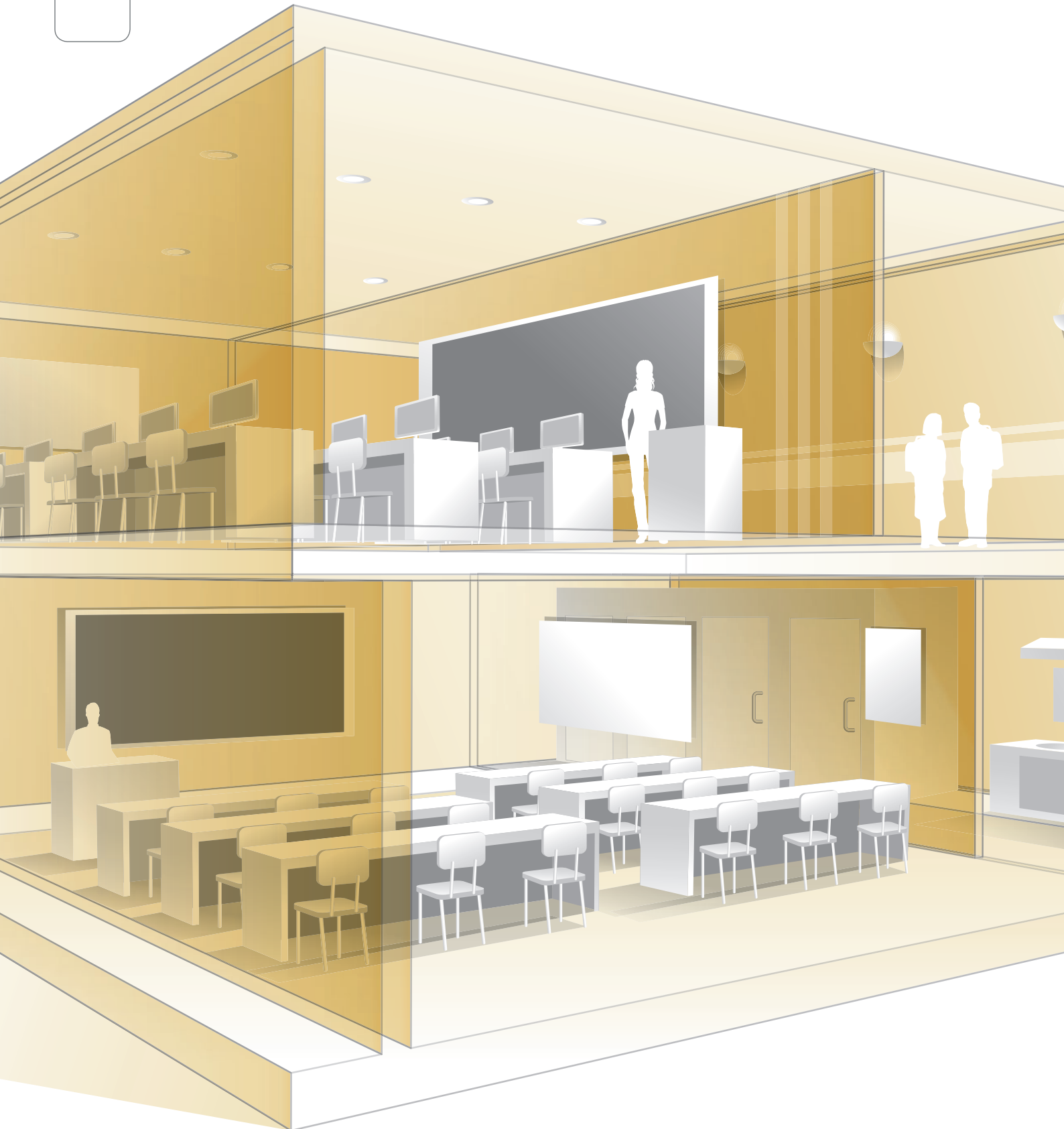
Multi-outlet blocs



Charging stations for electric vehicles



Hager
solutions



Hager solutions for schools

Because sustainability is also a question of education, it is important to offer users – pupils, teachers, administrative staff – a range of technical solutions for a comfortable and healthy environment without losing sight of the demand for overall savings.



Comfort, flexibility and energy savings are at the heart of Hager's solution for schools and universities. Above all, the idea is to create a bright and friendly environment encouraging discussion and exchange, teaching and learning: real, living spaces which can adapt to meet changing teaching requirements.

Here, the electrical architecture is particularly important. It must provide responses that are perfectly in line with the need for flexibility, taking into account the intermittent use of the premises and the desire to meet the challenges of sustainable development. Lighting management systems developed by Hager are switch-operated with a device that automatically switches lighting off when the room is empty. These systems also allow students and teachers to select the lighting

that best suits their activity – solutions that optimise working conditions and result in cost savings.

Our teams, experienced in managing major projects and mobilising resources, are also committed to deadlines. They work closely with clients, are readily available, responsive, methodological and rigorous, providing technological expertise and scheduling to ensure that all projects are successfully completed before the school year starts.







Solutions for schools

Traditional solutions










Lighting control

	Switches	Motion detectors	Fitted ceiling-mounted presence detectors	Ceiling-mounted presence detectors (very high level of detection)	Motion detectors	IP54 sealed hyper-frequency ceiling-mounted motion detectors	IP55 sealed wall-mounted motion detectors
	Berker S.1	Berker Q.1 8534xxxx	EE815 (ON/OFF) EE816 (DALI)	EE810 EE811 EE812	EE804 EE805	EE883	EE82x to EE87x
							
Entrance hall	X				X		X
Corridors, stairs, access to classroom			X		X		
Administration offices	X		X	X			
Classrooms	X		X	X			
Staff rooms	X		X	X			
Locker rooms	X		X		X		
Sanitary facilities	X	X	X			X	X
Plant room	X	X	X			X	X
Exteriors							X




















Control interfaces (lighting, shutters, HVAC)

Lighting control

	Berker Q.1 (lighting, shutters, ambiance/scenarios ...)	KNX remote control	domovea kit*	Berker Q.1 motion detectors	Fitted ceiling-mounted presence detectors	Ceiling-mounted presence detectors (very high level of detection)	IP55 sealed wall-mounted motion detectors
	7566272x	TU4xx	TJA451	85345129	TCC510S, TCC520E (ON/OFF) TCC530E (dual-area control) TCC521E (DALI)	TX510 (ON/OFF) TX511 (with regulation)	TRE5xx (pay attention to the range)
							
Entrance hall	X				X		X
Corridors, stairs, access to classroom				X	X		
Administration offices	X	X	X		X	X	
Classrooms	X	X	X		X	X	
Staff rooms	X	X	X		X	X	
Locker rooms	X				X		
Sanitary facilities				X	X		X
Plant room	X			X	X		X
Exteriors							X

* Can be controlled through mobile devices (iPhone, iPad,...)

	 Shutters control	 HVAC control	 Metering
Astro switches, twilight switches, time switches	Roller shutter control push-button	Programmable room thermostats	Energy meters, multi-function meters
EHxxx, EEN10x, EGxxx, EE18x	Berker R.3 852411xx	Berker Q.1 2049xxxx, 2034xxxx, 2030xxxx	ECxxx, SMxxx
			
X			
	X	X	Consumption metering system
	X	X	
	X	X	
X			

	 Shutters control	 HVAC control	 Metering			
Twilight switches, time switches	Dimmers	Weather station	Room thermostats	Window-opening detectors	Time switches	Energy meters
TXA02x	TYA66x TYA67x TX211A	TG053A	TX320	TXB30x or TRC301B (pay attention to the range)	TXA02x	TE3xx
						
		X	X	X	X	
	X	X	X	X	X	Consumption metering system
		X	X	X	X	
		X	X	X	X	
X						

Add-ons

Energy distribution



Cable management



LED plinths



Multi-outlet blocs



Charging stations for electric vehicles



Hager
solutions



Hager solutions for collective, tourism, senior citizen and student residences

Modern residences can be extremely energy efficient. But between theory and practice, what are the best solutions to achieve these objectives? In this sector, Hager has always been an innovative player, placing the emphasis on automation and smart systems for continuous consumption.



In a collective building, the challenge of reducing energy use often conflicts with the reality of daily life. How much heat should be provided for all residents? How can users who are not concerned with the energy bill be motivated? How can the costly behaviour of certain people be avoided?

The most pragmatic and efficient solution consists in automating the programming and regulation of heating. This automatically lowers the set point temperature, in one or several areas, when people are sleeping or absent, every day of the week.

Installing meters and sensors communicating with the KNX protocol makes analysing and monitoring consumption easier. Occupants can use a touch panel interface to monitor their energy expenditure and optimise their budget via recommendations from the Hager platform, which collects and interprets the data.

As part of a high-quality approach to collective buildings, Hager also provides standardised and reproducible solutions that speed up project implementation and completion. Design and development use industrialised processes that reduce the leadtime for completing operations.










Solutions for **collective, tourism, senior**



Lighting control







Traditional solutions

	Switches	Motion detectors	Dimmers	Fitted ceiling-mounted presence detectors	Motion detectors	IP54 sealed hyper-frequency ceiling-mounted motion detectors	IP55 sealed wall-mounted motion detectors
	Berker B.7	Berker Q.1 8534xxxx	Berker B.7 11371909	EE815 (ON/OFF) EE816 (DALI)	EE804 EE805	EE883	EE82x to EE87x
							
Reception area	X			X			
Corridors, stairs, access to apartments		X		X	X		
Apartments	X		X				
Playroom	X			X			
Staff offices	X			X			
Stairwells, basement corridors						X	X
Plant room, cellars	X	X		X		X	X
Exteriors							X










Control interfaces (lighting, shutters, HVAC)








Lighting control

	Berker Q.1 (lighting, shutters, ambiance/scenarios ...)	KNX remote control	domovea kit*	Berker Q.1 motion detectors	Fitted ceiling-mounted presence detectors	IP55 sealed wall-mounted motion detectors
	7566272x	TU4xx	TJA451	85345129	TCC510S, TCC520E (ON/OFF) TCC530E (dual-area regulation) TCC521E (DALI)	TRE5xx (pay attention to the range)
						
Reception area	X	X	X		X	
Corridors, stairs, access to apartments				X	X	
Apartments	X	X			X	
Playroom	X	X			X	
Staff offices	X	X	X		X	
Stairwells, basement corridors						X
Plant room, cellars	X			X	X	X
Exteriors						X

* Can be controlled through mobile devices (iPhone, iPad,...)

citizen and student residences

	 Shutters control	 HVAC control	 Metering
Astro switches, twilight switches, time switches	Roller shutter control push-button	Programmable room thermostats	Energy meters, multi-function meters
EHxxx, EEN10x, EGxxx, EE18x	Berker R.3 852411xx	Berker Q.1 2049xxxx, 2034xxxx, 2030xxxx	ECxxx, SMxxx
			
	X	X	
	X	X	
	X	X	
	X	X	Consumption metering system
X			

	 Shutters control	 HVAC control	 Metering
Twilight switches, time switches	Dimmers	Weather station	Room thermostats with generic PB
TXA02x	TYA66x	TG053A	TX320
			
	X	X	X
	X	X	X
	X	X	X
	X	X	X
			X
X			

Add-ons

Energy distribution



Cable management



LED plinths



Multi-outlet blocs



Charging stations for electric vehicles



On course for performance

From electrical cabinets to wall appliances and metering solutions, Hager provides a comprehensive range of solutions for commercial sector buildings. Its aim is to optimise the energy performance of electrical systems.

Encompassing both power and protection, Hager solutions are a guarantee of unfailing quality, safety and reliability. Every effort is made to facilitate day-to-day tasks, whether it be during installation or start-up. The range of equipment,

including modular protection devices, cabinets and enclosures, is designed to safely distribute electrical energy. It is accompanied by the construction of low-voltage distribution boards and switchboards in all tertiary service buildings.

The same rationale of safety and simplicity applies when implementing our range of wiring ducts, columns and multi-outlet blocs.

Products can be customised and meet the high requirements for cable



management in complex configurations. The flexibility of installations remains our goal: bringing energy and data to the right location.

Wall-mounted devices provide maximum

comfort and modularity. Functionality and fast installation are the main strengths of Hager's range, whether for new buildings or for renovation work.

In addition to these

products, we offer a service to support user mobility. We provide charging stations for electric vehicles designed for use in public areas and private properties.



In the age of smart buildings

Farewell to the passive user! A new type of consumer is emerging: one who is forward looking and active. Home automation has begun. This technology, which combines automation techniques, IT and electronics, is now being incorporated into buildings to make them smarter. The possibility to programme, control and manage these devices with a view to consuming less energy offers many advantages.

Hager's tebis KNX home automation system handles all electrical functions in the building to ensure they interact according to need.

Flexible and modular, they can be configured to adapt to changes in the building or the occupants' needs.

Our smart solutions, shared by one or more buildings and developed using the KNX protocol, have also allowed new services to emerge. Measurement and control tools are designed to manage buildings more efficiently. Reflecting the technical expertise of the Hager Group, our smart solutions focus on four areas: facade management, lighting management, energy management and display.



How does it work?

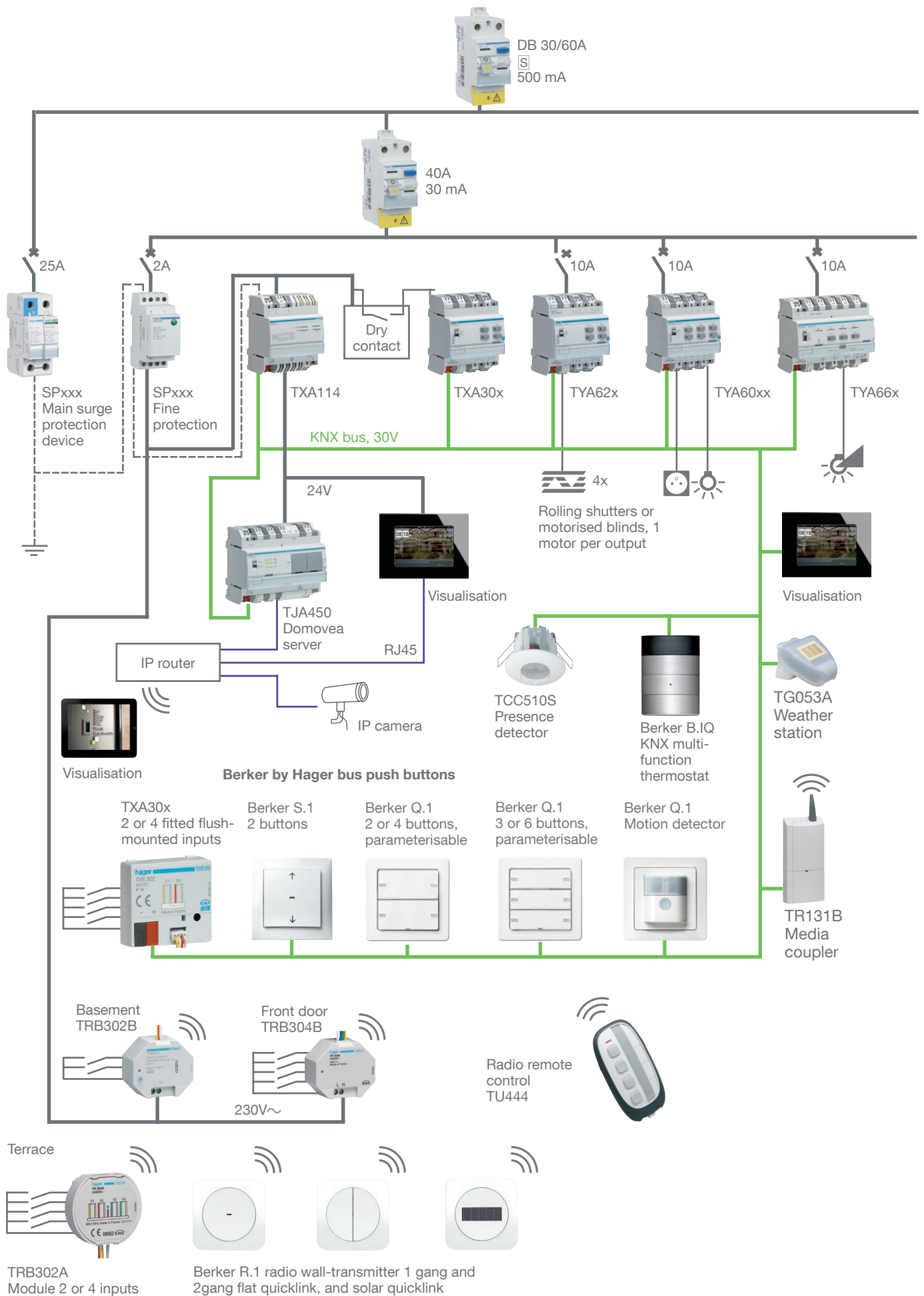
In a smart installation, control and power are separated. Receivers are controlled by output products. The wire or radio bus connects the products to collect control information. Control components connected to voltage-free inputs operate at an extra-low safety voltage. Push buttons and presence detectors are used throughout the building.

More energy savings

With its new dimmers, Hager offers a range of low consumption devices. As an example, the consumption for the TXA210N is only 0.31W. You can save up to 90% energy !

For KNX installations, TXA628C is equipped with an eco-mode which allows to reduce the consumption of the device by switching off LED, activating sleep mode for microcontroller...



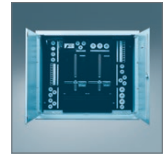


A reliable partner

Hager is an independent, family-owned company, which now has a worldwide presence. The company bases its development on innovation and its proximity to commercial partners.

A pioneering company, now a **supplier of complete solutions**

Since its inception, Hager has coupled its development with a consistent, sustainably innovative approach. Each year, the group spends roughly 5% of its turnover to further develop its range of products and production systems.



1955

Alongside their father Peter, Oswald and Hermann Hager launch Hager Elektro-Plastic OHG in Ensheim near Saarbrücken. At that time, Saarland was part of France.

1959

Specialised in the injection of plastic materials, the company establishes itself in Obernai (France) after Saarland became German. Since then, the company has had roots in both Germany and France.

1968

The meter board is standardised. Hager is the first to industrialise the product and now focus its efforts on electrical installations.

Local partner, **global player**

Do you have a project?
Hager can support you.
The Group can provide all the products required and, thanks to its international production capacity, leadtimes and coordination efforts are reduced, thus ensuring your project can be successfully completed. No matter how complex your project, we are able to respond by working together.





1970

Hager designs and launches the first modular circuit breaker on the French market.



1988

Hager offers solutions for power distribution in business premises and tertiary buildings.



1991

By developing tebis, Hager becomes a pioneer in the development of smart installation systems, which go on to revolutionise the world of home automation.



From 1996 to today

Hager has diversified to offer complete solutions.

The company has acquired:

- Tehalit, a company specialising in cable management systems and dado trunking
- Flash, an electronic components maker
- Weber, a company making switching gear
- Berker, a switch manufacturer
- Elcom, a specialist for modern communication systems and creative entryway design.



Daniel Hager,
CEO

Our strength is the spirit of enterprise

Hager has been an innovative company for more than 50 years. This success can be attributed, first and foremost, to our employees, who are guided by team spirit and a constant concern for customer satisfaction. We form a community, sharing essential values: courage, authenticity and integrity. This company culture is built around our local teams, who are determined to prepare for the future in a rapidly changing market.

Indeed, the demands of modern life and energy efficiency are just as important as the challenge of independence at home, and building automation. All these changes offer numerous opportunities. The employees at Hager are just as well aware of the challenges as they are focused on providing smart solutions and customised services.

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