

JUNG



Saving energy selectively:
Modern electrical installations for your home





How does a modern electrical installation contribute to saving energy?

With the continuously rising costs for energy, economical use is increasingly important. In private households there is indeed a growing awareness of the effective use of electricity, heating oil and gas, but the potential for saving energy in these areas has not yet been exhausted. Little-known facts: A significant proportion of consumption can be easily saved, without giving up the comfort you are used to.

Modern electrical installations are crucial in this respect. Advanced technology increases not only the ease of operation significantly, but also saves energy. With thorough planning, these advantages are available both to new buildings and to existing buildings when retrofitting existing equipment. This can range from equipping with conventional equipment to KNX intelligent building technology.



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Energy management

Automatic use of cheap electricity tariffs for equipment using large amounts of electricity. Central-heating boiler controlled according to need.



Lighting

Lighting in house and garden controlled in accordance with occupancy.



Heating

Individual temperature control for each room according to usage and your own requirements.



Visualisation

Display of room conditions and consumption levels for recording, checking and evaluation.



Blinds

Automatic control of blinds and shutters according to need.

ENERGY SAVINGS IN A REAL KNX INSTALLATION

Office building 7500 m² floor space

	Savings
Heating energy consumption per year: 750.00 kWh/a (100 kWh/m ² a) = 48.750,00 Euro (0,065 Euro/kWh)	25 % = 12,187.50 Euro
Electricity consumption per year: 225.00 kWh/a (30 kWh/m ² a) = 45.000,00 Euro (0,20 Euro/kWh)	
Total savings:	32,437.50 Euro

Due to different pre-conditions and various operating behaviour, these figures are variable !

Additional effort for KNX - material, installation, programming and commissioning **190,000.00 Euro**

Payback period approx. 6 years

ENERGY EFFICIENCY WITH KNX IN COMMERCIAL BUILDINGS

Functions in offices / corridors	Saving potential
Constant light control (presence dependent, dimmed)	30 – 45 % electricity energy
Sun protection (automatic shading function)	15 – 20 % electricity energy
Automatic lighting control (movement dependent, timer)	5 – 10 % electricity energy
Automatic change of operation modes for heating	5 – 10 % heating energy
Window monitoring (window open = heating valve closed)	5 – 10 % heating energy
Occupancy function (office not occupied = temperature reduced)	5 – 10 % heating energy
Heating / cooling automatic (sun protection supports presence dependent the heating or cooling)	10 – 13 % heating energy



Saving energy with lighting control

There is no need for great technical effort to be able to optimise the comfort levels while still saving energy. It can be achieved with simple means. Lighting control is one example: Whether you use automatic switches controlled by presence or movement, LED orientation lights or dimmers – with the products from JUNG Light Management, energy-efficient lighting regulation can be simply achieved.



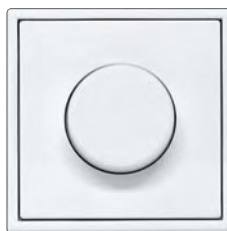
A presence detector provides control of lighting and heating indoors based on the presence of people. The light is only switched on and the room temperature brought to the set temperature only if there are people in the room. The switching off delay can be individually set.



For more security and energy-saving outdoors: The observer only switches on the light on the property when people move within the detection area – and after a preset time it switches off automatically. Matched to your needs and energy efficient.



The automatic switch turns on the lighting for rooms, corridors and gardens whenever there is somebody in its detection area. There is no longer any need to operate a switch by hand – and the light is never left on accidentally. Also available in a radio version and thus ideal for retrofitting.



Rotary and touch dimmers not only provide the appropriate interior lighting for the mood, they also save energy: The dimmed lights consume less electricity and have a significantly longer life.



The SCHUKO socket with integrated LED orientation light provides enough light in the dark to go into the bathroom without switching on the main lighting.



Saving energy with temperature control

Energy can be saved by controlling the temperature in each room according to need. To fully utilise the potential, the Temperature Management products from JUNG are ideal. With these, the temperature required for each room can be controlled separately, independent of the heating system – simply and user-friendly. Whether wired or with the wireless system for retrofitting: the ease of the installation and operation contrast with the newly-won comfort and effective potential for saving energy



The maintenance-free, thermal valve operation opens and closes small valves completely silently. In combination with the classic room temperature controller with setting knob or the timer thermostat, these provide individual temperature control according to your wishes and individual demand.



Ideal for retrofitting: Energy-efficient temperature control is also possible using radio technology. The radio-controlled valve drive for operating heating valves, together with the radio timer thermostat creates convenient control for the individual comfort level.







Saving energy with blinds control

Automatic blinds control not only provides reliable protection against sun and heat, but also helps to save energy. In the summer, rooms are protected against overheating with little or no use of air-conditioning, and in the winter the heat from the sun's energy is optimally used to reduce heating costs. Additional comfort plus: Sensors installed on the house provide even more security. They not only automatically control the shade, but also protect against damage by storm and heavy precipitation by withdrawing blinds and shutters as needed.



The combination sensor records data for brightness, wind and precipitation on the building. As a result it ensures reliable blind and shutter movement according to need. This not only saves energy, but also protects against damage to the equipment – an important point especially for public buildings.



With the universal timer, the "schedule" for the blind control is individually and simply programmed – and the rooms are then protected against, for example, strong sunshine at midday. Convenient and energy-saving.

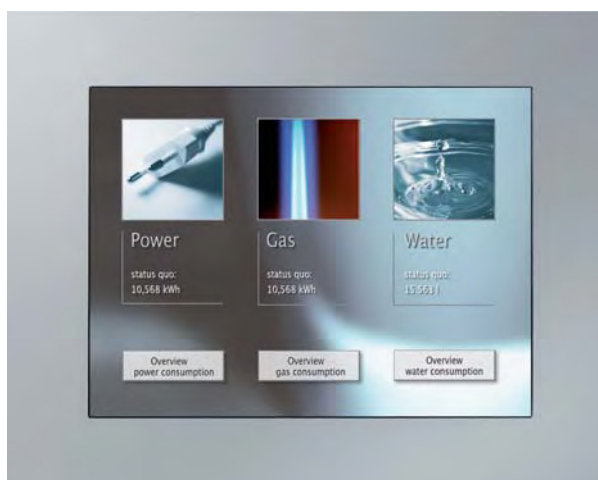


Saving energy with KNX technology

With the KNX intelligent building technology, there is great potential for saving energy: By connecting individual functions and individual appliances throughout the house, the occupier has comprehensive

Reduce consumption in a targeted manner

To reduce consumption values, the Facility Pilot can be used to specify exact limits. If the energy consumption exceeds this



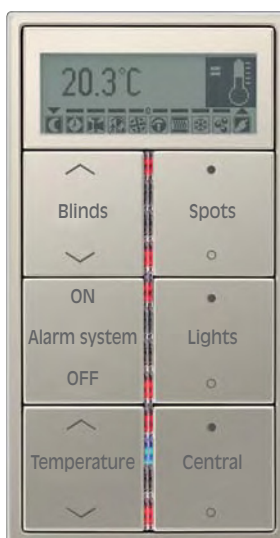
Energy monitoring: Display and evaluation of consumption data via the touch screen interface.

control. From lighting and temperature control via moving slides and shutters in and out to alarm technology or music control, processes can be programmed, monitored and controlled in an energy-efficient manner according to individual requirements.

limit for a specified period of time, the supply to particularly "hungry" appliances is deactivated. Alternatively, the individual electrical circuits can be controlled such that they are only in use when the most economical tariffs are available.

Full control of consumption values

The exact composition of energy consumption values is often not known. But it is necessary to utilise the potential for saving energy optimally. For this, the operating and consumption data for water, electricity, gas and oil are recorded by sensors, saved and managed by the JUNG Facility Pilot and can then be represented and evaluated on the Flat Panel PC with easy-to-understand charts. In this way, developments can be documented over the whole year, compared to each other and possibilities for saving energy deduced.



Configuration of individual rooms with the KNX Room Controller. With full-text display in graphic mode and operation using large function buttons.



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