Home Automation Solutions for

ABOUT CARLO GAVAZZI

Carlo Gavazzi Automation is a multinational electronics group active in the design, manufacture and marketing of electronic equipment targeted at the global markets of industrial and building automation.

Our history is full of firsts and our products are installed in a huge number of applications all over the world. With more than 80 years of successful operation, our experience is unparalleled.

We have our headquarters in Europe and numerous offices around the world. Our R&D competence centres and production sites are located in Denmark, Italy, Lithuania, Malta and the People’s Republic of China. We operate worldwide through 22 own sales companies and also selected representatives in more than 65 countries, from the United States in the West to the Pacific Rim in the East.

Our core competence in automation spans three product lines: Sensors, Switches and Controls.

Our wide array of products includes sensors, monitoring relays, timers, solid-state relays, electronic motor controllers, energy management equipment and fieldbus systems. We focus our expertise on offering state-of-the-art product solutions in selected market segments.

Our customers include original equipment manufacturers of packaging machines, plastic-injection moulding machines, food and beverage production machines, conveying and materials handling equipment, door and entrance control systems, lifts and escalators, as well as heating, ventilation and air-conditioning devices.

Our offer for the Home Automation consists of innovative solutions, designed to make a comfortable living environment, according to your mood and requirements as well as weather conditions.

Comfort, Security, Control, Flexibility and Ease are the synthesis of our commitment for an “intelligent” Home Automation system.

Lighting control  Climate control  Blind and awning control  Alarms  Energy savings
DESIGNED TO MEET MARKET REQUIREMENTS

The new home automation system by Carlo Gavazzi is the evolution of the well-known smart-house system: it looks after your houses in the best possible way, making them comfortable for you and your loved ones. It combines this comfortable living with energy saving, using state-of-the-art technology to improve your well-being and to reduce your carbon footprint.

The complete range of products is designed in Italy.

The system is based on a centralised structure, where the controller is the “brain” that supervises all the domestic functions such as lights, temperatures, rollerblinds, shutters and intruder, gas and water leaks alarms.

New modules and functionalities can be added at any time, making the home “alive” and letting you adapt it according to your wishes, which might change over time.

It also allows you to be aware of energy consumption, providing diagrams of current consumption as well as the logging of what has been consumed in the previous days, months or years. All this data is easily accessible using smartphones, PCs or tablet PCs.

Retrofit installations can also be made when using this new Carlo Gavazzi system, as it features a full range of wireless products that can be used when wiring is not possible or not desired.

The new web server complements traditional methods of managing sophisticated home automation technologies. It is embedded into the SH2WEB controller and it is completely configurable so that you can select your own themes.

The webserver is also designed as webapp to be accessible via any smartphone, tablet pc.

The intuitive, user-friendly interface allows the control of lights, rollerblinds, alarms, timers, temperatures and more, both remotely and on site, all from a multi-function device.

Furthermore, the webserver/webapp enable access to the datalogger where energy data, temperatures and other events are stored, in order to have a clear overview of which appliances are on and how much they are consuming.
Bus and power in the same cable

The bus and power wires follow the same logical path. The “switch wires” needed in conventional installations can be eliminated by use of de-central relays. The installation is fast and simple and last-minute changes are easily accommodated. No special cable or cable termination is required for the bus.

Fast commissioning with no addressing

One of the most innovative features of this system is that no addressing of modules is needed. The installer only has to mount all the components, launch a network scan and the system will automatically find and recognize the connected devices, making the correct association or addressing. This will result in time and cost savings, besides providing an error-free configuration process.
Diagnostic function
Immediate trouble-shooting is assured as the system monitors all the connected devices and advises if one is faulty. The load of the bus is constantly monitored and any anomaly is at once detected and reported.
All the information about short-circuits, bus voltage and load, noise level and quality of the bus signals is logged in a file both locally and remotely accessible.
This can be checked anytime, providing effective time and money savings.

Easy configuration software
The system configuration can be easily done by means of its wizard tools. The user-friendly interface of this software guides the user in the creation of the pre-defined functions.
At the same time, thanks to many basic functions, the most skilled user can also create customized applications.
Test modes are getting easier by the several debug features available.
Carlo Gavazzi offers integrated lighting automation and control. Lighting sets the perfect scene and creates the desired ambience for any occasion. Whether it is a movie night, an intimate dinner for two or a party with friends, lighting establishes the right mood.

The lights can create pre-programmed scenes to simulate the chosen lifestyle patterns. Dimmers do not just set the right atmosphere and create specific entertainment options, they can save money too. Most of the time we do not need to set our lights to full brightness to light a room, and if you dim your lights you are using less energy to run them. This is the aim of the new dimming technology by Carlo Gavazzi, in addition to the integration of energy-saving alternatives such as LED lamps.

The garden lights can be turned on by a light level sensor, whereas the entrance lights can be activated by a movement sensor. Occupancy sensing, which turns off lights when they are not needed, makes Carlo Gavazzi solutions ideal also for special applications such as light management in corridors and staircases.

Comfort and energy saving at a single touch are assured, without sacrificing style or convenience.
Climate control

Carlo Gavazzi maintains your home at a comfortable level at all times, monitoring temperature and humidity levels automatically. There is no need to get up or even be at home to adjust the temperature: with our Home Automation range of products you can control multiple zones from one location and easily pre-set temperature set points. You can keep your home at a more energy efficient temperature while you are out and programme it to automatically adjust to more comfortable levels by the time you get home.

Coming home early? Use your mobile phone or PC to control the climate remotely, even monitoring the wine cellar or greenhouse temperature and humidity level.

- Energy and money savings thanks to the demand-based energy use can be achieved via a timer program with a temperature profile or even via a presence signal.

- As the temperature variables of all the rooms are available centrally via the bus system, heating and cooling energy can be generated according to demand and with a high level of efficiency.
The installation of intelligent control technology in houses allows for the flexible control of blinds and shutters. In this way you can select various control options as:

- Classic control with conventional buttons and switches
- Control from remote PCs and smartphones
- Connection of multiple blinds/shutters to groups
- Realization of central functions such as “all up” buttons, “all blinds on the south side up” or similar

Thanks to full flexibility, it is possible to change switch assignment. Shutter-groups can be created at any time through our configuration software. Furthermore, automation can be specified to respond to a number of different factors:

- Solar control, where the device operates automatically when a certain intensity of light is received by the sensor.
- Timers may be specified.
- An anemometer (wind speed sensor) is fitted so that the blind is retracted in windy conditions.
- Rain sensors may be used in order not to wet the blinds or dirty the window glass.
Carlo Gavazzi protects your home. A water leakage in your kitchen or laundry room can be immediately detected by a sensor at floor level and the water supply will be interrupted, preventing loss and damage. At the same time an SMS message will promptly inform you when you are away from home.

Smoke detectors at different locations in your house are the main elements in the fire alarm system, and can be combined with other functions, for example lights can be switched on and fans switched off in case of fire. The intruder alarms can be programmed so that house lights flash when there is a security breach, as well as sounding the siren. Switching lights on and off in each room at two-second intervals is psychologically distracting and makes it extremely difficult for an intruder to search for jewellery and information such as credit card details. It also draws attention to the house from outside, further deterring any intruder from their actions. The system can also play back loud music or alarm sounds in each room, to further persuade the intruder to leave. Naturally, the police can be notified automatically, along with key-holders and other designated people.
Incorporating a home automation system into a new or existing structure makes it easier to reduce energy consumption, also in combination with energy efficient lighting, Energy Star appliances and alternative energy sources. Another effortless way to enhance the energy efficiency in your home is to take control of your energy consumption, by finding out exactly how much you are using.

Many electricity companies offer lower rates during off-peak hours, such as evenings and weekends. Using appliances such as washing machines, dryers, air conditioners and dishwashers during these hours can lead to substantial savings on your electricity bill.

- These real-time energy usage measurements will lead you to become more efficient with your energy consumption needs and will result in significant energy savings.
- The system reads and logs the energy consumption of the whole installation or of a single load.
- Data can be accessed anytime by means of a webserver/webapp and shown as instantaneous values, or in the form of graphs and/or diagrams.
Scenarios

**Entertainment scenario**
- TV and Home Theatre
- Music Surround
- Lights
- Heating or Air Conditioning
- Roller Blinds

**Holidays scenario**
- Heating
- Alarms
- Roller Blinds
- Doors and Windows
- Automatic Irrigation
- Automatic turn on/off of lights

**Night & Day scenario**
- Roller Blinds & Awnings
- Exterior Lighting
- Heating or Air Conditioning
- Automatic Irrigation (at the set time)
The Carlo Gavazzi smart-house system is based on a central CPU, the SH2WEB24, a Linux based embedded PC that manages all the smart functions.

It is programmed by means of powerful software, the SH tool.

The SH2WEB24 has Ethernet communication capability in order to be remotely controlled and monitored by smart-devices/PCs. It also acts as a datalogger, which can record any kind of value/event coming from the many buses it can be connected to (Wireless and Dupline buses, two RS485 ports).

The master unit is also provided with an sd-card and USB port, which allow data uploading/downloading and system configurations.

Where wired Internet access is not available, Carlo Gavazzi provides a specific mobile modem to be added to the SH2WEB24. This modem makes it possible to control any remote installation, whether it be a cabin in the mountains or a house at the seaside.

If the SH2WEB24 can be considered the “brain” of the smart-house system, the two bus generators are the pulsating “heart” that makes all the information flow. They are connected to the SH2WEB24 via the high speed bus that is present both on the local bus and on the terminals at the bottom.

This means that the connection is very fast and easy in a cabinet, since the modules just have to be plugged together without any wiring.

At the same time it is very straightforward if the bus generators have to be mounted in different cabinets.

Up to 7 bus generators can be connected to one SH2WEB24.
SH2MCG24 - the wired bus generator of smart Dupline®
The SH2MCG24 module is the smart Dupline bus generator, which provides the dupline bus on the local bus and on the terminals at the top.

Thanks to this, the DIN-rail slave modules (dimmers, relays, rollerblind modules, etc...) can simply be plugged into the SH2MCG24, without the need for any wiring.

The decentral modules, such as light switches, PIR sensors and temperature display, are connected to the SH2MCG24 with the two wires coming out from the terminals at the top.

SH2WBU230N - the wireless bus generator of WiDup
The smart-house system also provides a solution where it is not possible to use existing wiring, especially during the renovation of buildings.

The SH2WBU230N is the wireless bus generator that can control wireless light switches and output relay modules. The wireless bus is based on the standard IEEE 802.15.4 @2.4Ghz.

Up to 250 modules can be managed by one SH2WBU230N. The open-space operating distance is 700 metres.
# Home Automation

## Our product range

<table>
<thead>
<tr>
<th>Controllers</th>
<th>Wired bus generators</th>
<th>DALI bus generator</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SH2WEB24</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Master unit: home automation functions and energy data logging configurable by software</td>
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<tr>
<td>• Two RS485 communication ports (Modbus)</td>
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<tr>
<td>• One Ethernet port</td>
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<td></td>
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<tr>
<td>• Two multi purpose USB 2.0 ports</td>
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<td></td>
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<tr>
<td>• Micro SD</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>SH2MCG24</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Connection to SH2WEB24 via internal bus or terminals via the high speed bus</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Up to 7 SH2MCG24 can be connected on the same network, considering the sum of SH2MCG24, SH2WBU24 and SH2WBU230N</td>
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<tr>
<td><strong>SB2DALIT8230</strong></td>
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<td></td>
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<tr>
<td>• Interfaces the Dupline® bus to standard DALI lighting actuators</td>
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<tr>
<td>• Operates as DALI controller and power supply with possibility to connect up to 64 ballasts to the DALI bus output</td>
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<tr>
<td>• Tunable white control</td>
<td></td>
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<tr>
<td>• Multiple SB2DALIT230 units can be connected to the same Dupline® bus</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### MAIN FEATURES
- Dimensions: 2-DIN modules
- DC power supply

### USB dongle modem accessories
- **SH2DSP24**
  - USB port to supply dongle modem HUAWEI MS2131 DUNK DINI 157™
  - Support for wifi USB key
  - Watchdog features to prevent common mobile network hassles

### Digital input modules 4 inputs
- **SH2INDI424**
  - 4 digital inputs NPN, PNP, voltage free
  - The 4 inputs can be configured as contact or counter
  - LED indication for power supply, duplex bus, input activated
  - Connection to other cabinet modules via local bus

### Output modules solid state relay
- **SH2SSTRI424**
  - 4 triac output
  - Module load: 4 x 10 W
  - LED indications for supply, bus and outputs status
  - Connection to other cabinet modules via local bus
  - Push button for local on/off switching

### MAIN FEATURES
- Dimensions: 2-DIN modules
- DC power supply
## Our product range

### Relay modules

<table>
<thead>
<tr>
<th>Model</th>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>SH2RE16A4</td>
<td>4 separate outputs relay, LED indications for supply, bus and outputs status, connection to other cabinet modules via local bus, push button for local on/off switching</td>
</tr>
<tr>
<td>SH2RE16A2</td>
<td>2 outputs relay, LED indications for supply, bus and outputs status, connection to other cabinet modules via local bus, push button for local on/off switching</td>
</tr>
</tbody>
</table>

### Roller blind modules for AC/DC motor

<table>
<thead>
<tr>
<th>Model</th>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>SH2ROAC224</td>
<td>Up/down control of 2 AC/DC roller blind motors, LED indication for power supply, day/night bus, motor up, motor down, connection to other cabinet modules via local bus, push button for local on/off switching</td>
</tr>
</tbody>
</table>

### MAIN FEATURES

- Dimensions: 2-DIN modules
- Bus supplied
- SH2RE16A4: bus supplied
- SH2RE16A2: DC power supply

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### Dimmer modules with energy reading

<table>
<thead>
<tr>
<th>Model</th>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>SH2D500WE230</td>
<td>Universal dimmer switch for R, L, C up to 500 W and LED loads, integrated heat sink for temperature dissipation, energy reading, connection to other cabinet modules via local bus, push button for local on/off switching</td>
</tr>
<tr>
<td>SH2D500W1230</td>
<td>Universal dimmer switch for R, L, C up to 500 W and LED loads, integrated heat sink for temperature dissipation, automatic load detection for L, R, C load, connection to other cabinet modules via local bus, push button for local on/off switching</td>
</tr>
</tbody>
</table>

### MAIN FEATURES

- Dimensions: 2-DIN modules
- 230 V supplied

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### Dimmer modules up to 500 W

<table>
<thead>
<tr>
<th>Model</th>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>SH2D10V424</td>
<td>Switching and dimming adjustable ballasts 1 to 10 V, 4 independent dimmable outputs, LED indications for supply, bus and outputs status, connection to other cabinet modules via local bus, push button for local on/off switching</td>
</tr>
</tbody>
</table>

### MAIN FEATURES

- Dimensions: 2-DIN modules
- DC power supply

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### Dimmer modules up to 1-10 V

<table>
<thead>
<tr>
<th>Model</th>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>SH2D10V424</td>
<td>Switching and dimming adjustable ballasts 1 to 10 V, 4 independent dimmable outputs, LED indications for supply, bus and outputs status, connection to other cabinet modules via local bus, push button for local on/off switching</td>
</tr>
</tbody>
</table>

### MAIN FEATURES

- Dimensions: 2-DIN modules
- DC power supply
## Home Automation

### Our product range

<table>
<thead>
<tr>
<th>Smart-dupline energy meters</th>
<th>Transparent modules</th>
<th>Decentral output modules</th>
</tr>
</thead>
<tbody>
<tr>
<td>SH2EM16A230</td>
<td>SH1DUPFT</td>
<td>BDA-RE13A-U</td>
</tr>
<tr>
<td>• Direct connection: 16 A</td>
<td>• Transparent dupline module</td>
<td>• Small sized single relay output</td>
</tr>
<tr>
<td>• Connection to other cabinet modules via local bus</td>
<td>• The dupline bus is present on the top/bottom connectors and internal bus</td>
<td>• Load: 16 A/250 VAC</td>
</tr>
<tr>
<td>• Energy measurement: kWh</td>
<td>• Connection to other cabinet modules via local bus</td>
<td>• Withstands 130 A inrush current</td>
</tr>
<tr>
<td>• Instantaneous variables readout: A, V, W, Wdmd, VA,</td>
<td></td>
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</tr>
</tbody>
</table>

### MAIN FEATURES
- Dimensions: 2-DIN modules
- 230/110 V supplied

### Analogue input modules

<table>
<thead>
<tr>
<th>Analogue output module</th>
</tr>
</thead>
<tbody>
<tr>
<td>SHPINV2T1P124 / SHPIN1P1</td>
</tr>
<tr>
<td>SHPINI2 / SHPINV324</td>
</tr>
<tr>
<td>• Input modules for thermistor, resistor and voltage measuring</td>
</tr>
<tr>
<td>• Ranges: 10 KΩ thermistor input, 1-11 KΩ resistor input, 0-10 V input, pt1000/ni1000</td>
</tr>
</tbody>
</table>

### MAIN FEATURES
- Design for mounting in eurobox
- Relay load 5 A

### Analogue output modules

<table>
<thead>
<tr>
<th>Analogue output module</th>
</tr>
</thead>
<tbody>
<tr>
<td>SHPOUTV224</td>
</tr>
<tr>
<td>• Output modules with two 0-10 V outputs</td>
</tr>
<tr>
<td>• Small dimensions for decentralized installations</td>
</tr>
</tbody>
</table>

### Decentral roller blind modules

<table>
<thead>
<tr>
<th>Decentral roller blind modules</th>
</tr>
</thead>
<tbody>
<tr>
<td>SHDRODC230</td>
</tr>
<tr>
<td>• Up/down control of 1 AC roller blind motor</td>
</tr>
<tr>
<td>• Up/down interlocking for motor</td>
</tr>
<tr>
<td>• AC power supply</td>
</tr>
</tbody>
</table>

### MAIN FEATURES
- Design for mounting in eurobox
- Relay load 5 A

CARLO GAVAZZI Automation Components. Specifications are subject to change without notice. Illustrations are for example only.
## Our product range

<table>
<thead>
<tr>
<th>Light switch interfaces</th>
<th>Digital input modules</th>
<th>Voltage input modules</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BDB-INCON4-U / BDB-IOCON4-U</strong>&lt;br&gt;BDB-IOC8x-U</td>
<td><strong>BDD-INCON4-U</strong></td>
<td><strong>BDA-INVOL-U</strong></td>
</tr>
<tr>
<td>• Small-sized 4 or 8 I/O modules&lt;br&gt;• 4 or 8 contact inputs for push buttons&lt;br&gt;<strong>MAIN FEATURES</strong>&lt;br&gt;• Compact housing&lt;br&gt;• Bus powered</td>
<td>• 4 contacts or NPN transistor inputs&lt;br&gt;• LED-indications for supply and bus status&lt;br&gt;• LED-indication for armed when using bus supply&lt;br&gt;• 3-wire system with bus and supply of module through external power supply&lt;br&gt;<strong>MAIN FEATURES</strong>&lt;br&gt;• Open PCB with terminal connection&lt;br&gt;• Bracket for DIN-rail mounting available</td>
<td>• Input voltage module for building automation&lt;br&gt;• 1 opto-isolated voltage input 90-265 VAC&lt;br&gt;<strong>MAIN FEATURES</strong>&lt;br&gt;• Compact housing&lt;br&gt;• Bus powered</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Light switches</strong></th>
<th><strong>90° PIR detectors</strong></th>
<th><strong>90° PIR + lux meters</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>B4X-LS4-U / B5X-LS4-U</strong></td>
<td><strong>B4X-PIR90-U / B5X-PIR90-U</strong></td>
<td><strong>SHA4XP90L / SHE5XP90L</strong></td>
</tr>
<tr>
<td>• 4 individually programmable push button inputs&lt;br&gt;• 4 individually programmable LEDs for true response&lt;br&gt;• Bus powered, no external supply required&lt;br&gt;<strong>MAIN FEATURES</strong>&lt;br&gt;• B4X-LS4-U: Developed to fit into wall socket and frames from Fuga, NIKO and Bticino&lt;br&gt;• B5X-LS4-U: Developed to fit into wall socket and frames from Elko, Gira and Jung</td>
<td>• Passive infrared detector (PIR)&lt;br&gt;• Detects movement and presence&lt;br&gt;• Indoor applications&lt;br&gt;• Operating angle: 90°&lt;br&gt;<strong>MAIN FEATURES</strong>&lt;br&gt;• Bus powered&lt;br&gt;• Walk test: LED indication&lt;br&gt;• Programmable sensitivity</td>
<td>• Passive infrared detector (PIR)&lt;br&gt;• Detects movement and presence&lt;br&gt;• Indoor applications&lt;br&gt;• Operating angle: 90°&lt;br&gt;• Lighting measuring range: 0 to 20 K lux&lt;br&gt;<strong>MAIN FEATURES</strong>&lt;br&gt;• Bus powered&lt;br&gt;• Walk test: LED indication&lt;br&gt;• Programmable sensitivity</td>
</tr>
</tbody>
</table>
# Home Automation

## Our product range

<table>
<thead>
<tr>
<th>Light switches + temperature and humidity sensor</th>
<th>Temperature displays</th>
<th>150° PIR detectors + lux meters</th>
</tr>
</thead>
<tbody>
<tr>
<td>SHA4XLS4P90L / SHE5XLS4P90L</td>
<td></td>
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<tr>
<td>- 4 individually programmable push button</td>
<td></td>
<td></td>
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<tr>
<td>- Integrated 90° PIR and luxmeter sensor</td>
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<tr>
<td>- Indoor applications</td>
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<tr>
<td><strong>MAIN FEATURES</strong></td>
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<td></td>
</tr>
<tr>
<td>SHA4XLS4P90L: Developed to fit into wall socket and frames from Fuga, NIKO and Bticino</td>
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<td>SHE5XLS4P90L: Developed to fit into wall socket and frames from Elko, Gira and Jung</td>
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<tr>
<td>SHE5XP150 / SHA4XP150</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Passive infrared detector (PIR)</td>
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<tr>
<td>- Detects movement and presence</td>
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<tr>
<td>- Indoor and outdoor applications</td>
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<tr>
<td>- Operating angle: 150°</td>
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<tr>
<td>- Operating distance: 8 m</td>
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<tr>
<td><strong>MAIN FEATURES</strong></td>
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<tr>
<td>SHA4XP150: Developed to fit into wall socket and frames from Fuga, NIKO and Bticino</td>
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</tr>
<tr>
<td>SHE5XP150: Developed to fit into wall socket and frames from Elko, Gira and Jung</td>
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<tr>
<td>SHA4XP150L / SHE5XP150L</td>
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<td>- Integrated 150° PIR and luxmeter sensor</td>
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## LIGHT SWITCHES

<table>
<thead>
<tr>
<th>Light switches + 90° PIR + lux meter</th>
</tr>
</thead>
<tbody>
<tr>
<td>SHA4XLS4TH / SHE5XLS4TH</td>
</tr>
<tr>
<td>- 4 individually programmable push button</td>
</tr>
<tr>
<td>- Integrated 90° PIR and luxmeter sensor</td>
</tr>
<tr>
<td>- Temperature range: -40° to 60°C</td>
</tr>
<tr>
<td>- Humidity range: 5 to 95%</td>
</tr>
<tr>
<td><strong>MAIN FEATURES</strong></td>
</tr>
<tr>
<td>SHA4XLS4TH: Developed to fit into wall socket and frames from Fuga, NIKO and Bticino</td>
</tr>
<tr>
<td>SHE5XLS4TH: Developed to fit into wall socket and frames from Elko, Gira and Jung</td>
</tr>
</tbody>
</table>

## TEMPERATURE DISPLAYS

<table>
<thead>
<tr>
<th>Temperature with display</th>
</tr>
</thead>
<tbody>
<tr>
<td>SHA4XTEMDIS / SHE5XTEMDIS</td>
</tr>
<tr>
<td>- Shows current room, outdoor and auxiliary temperature</td>
</tr>
<tr>
<td>- Turns on/off heating and cooling</td>
</tr>
<tr>
<td>- Energy Save through 3 different setpoints: comfort, activity, economy</td>
</tr>
<tr>
<td><strong>MAIN FEATURES</strong></td>
</tr>
<tr>
<td>SHA4XTEMDIS: Developed to fit into wall socket and frames from Fuga, NIKO and Bticino</td>
</tr>
<tr>
<td>SHE5XTEMDIS: Developed to fit into wall socket from Elko, Gira and Jung</td>
</tr>
</tbody>
</table>

## 90° PIR LUX METERS

<table>
<thead>
<tr>
<th>90° PIR lux meters</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSD-PIR90-U / SHSDP90L</td>
</tr>
<tr>
<td>- Passive infrared detector (PIR)</td>
</tr>
<tr>
<td>- Detects movement and presence</td>
</tr>
<tr>
<td>- Indoor applications</td>
</tr>
<tr>
<td>- Operating distance: 12 m</td>
</tr>
<tr>
<td>- Operating angle: 90°</td>
</tr>
<tr>
<td><strong>MAIN FEATURES</strong></td>
</tr>
<tr>
<td>BSD-PIR90-U: Developed to fit into wall socket and frames from Fuga, NIKO and Bticino</td>
</tr>
<tr>
<td>SHSDP90L: Developed to fit into wall socket and frames from Elko, Gira and Jung</td>
</tr>
</tbody>
</table>
## Our product range

<table>
<thead>
<tr>
<th>90° PIR lux meters</th>
<th>360° PIR sensors</th>
<th>Outdoor temperature sensors</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BSP-PIR90-U / BSP-PIR90A-U</strong>&lt;br&gt;SHSPP90L / SHSPP90LA &lt;br&gt;• Passive infrared detector (PIR)&lt;br&gt;• Detects movement and presence&lt;br&gt;• Indoor and outdoor applications&lt;br&gt;• Operating distance: 0.5 - 15 m&lt;br&gt;• Operating angle: 90°</td>
<td><strong>SHQP360L7Mxx / SBQP360L24Mxx</strong>&lt;br&gt;• Passive infrared detector (PIR) and luxmeter&lt;br&gt;• Operating distance: 14 m (SHQP360L7Mxx)&lt;br&gt;• Large operating distance: 24 m (SBQP360L24Mxx)&lt;br&gt;• Detects movement and presence&lt;br&gt;• Indoor and outdoor installation&lt;br&gt;• Operating angle: 360°</td>
<td><strong>BSI-TEMANAx-U</strong>&lt;br&gt;• Temperature range: -40° to +60°C&lt;br&gt;• BSI-TEMANAU is delivered with a M12 plug&lt;br&gt;• BSI-TEMANAB-U is delivered with 2 m cable</td>
</tr>
<tr>
<td><strong>BQP360L7Mxx / SBQP360L24Mxx</strong>&lt;br&gt;• Passive infrared detector (PIR) and luxmeter&lt;br&gt;• Operating distance: 14 m (SHQP360L7Mxx)&lt;br&gt;• Large operating distance: 24 m (SBQP360L24Mxx)&lt;br&gt;• Detects movement and presence&lt;br&gt;• Indoor and outdoor installation&lt;br&gt;• Operating angle: 360°</td>
<td><strong>BSI-TEMANAx-U</strong>&lt;br&gt;• Temperature range: -40° to +60°C&lt;br&gt;• BSI-TEMANAU is delivered with a M12 plug&lt;br&gt;• BSI-TEMANAB-U is delivered with 2 m cable</td>
<td><strong>BSI-TEMANAx-U</strong>&lt;br&gt;• Temperature range: -40° to +60°C&lt;br&gt;• BSI-TEMANAU is delivered with a M12 plug&lt;br&gt;• BSI-TEMANAB-U is delivered with 2 m cable</td>
</tr>
</tbody>
</table>

### MAIN FEATURES
- Bus powered
- Programmable sensitivity
- Programmable detection area (SBQP360L24Mxx)

<table>
<thead>
<tr>
<th>Weather stations</th>
<th>Anemometers</th>
<th>Lux meters for outdoor installation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SHOWEAGPS</strong>&lt;br&gt;• Light, wind, temperature measurement&lt;br&gt;• Ranges: 0 to 100K lux, 0 to 35 m/s, -40° to 80°C&lt;br&gt;• Rain sensor included</td>
<td><strong>BSN-ANE-U</strong>&lt;br&gt;• Measuring range: 2 m/s to 25 m/s&lt;br&gt;• Built-in alarm output with programmable threshold</td>
<td><strong>BSH-LUX-U</strong>&lt;br&gt;• Lighting measuring range: 0 to 20K lux&lt;br&gt;• For indoor and outdoor installation&lt;br&gt;• Working temperature: -30° to +60°C</td>
</tr>
<tr>
<td><strong>SHOWEAGPS</strong>&lt;br&gt;• Light, wind, temperature measurement&lt;br&gt;• Ranges: 0 to 100K lux, 0 to 35 m/s, -40° to 80°C&lt;br&gt;• Rain sensor included</td>
<td><strong>BSN-ANE-U</strong>&lt;br&gt;• Measuring range: 2 m/s to 25 m/s&lt;br&gt;• Built-in alarm output with programmable threshold</td>
<td><strong>BSH-LUX-U</strong>&lt;br&gt;• Lighting measuring range: 0 to 20K lux&lt;br&gt;• For indoor and outdoor installation&lt;br&gt;• Working temperature: -30° to +60°C</td>
</tr>
</tbody>
</table>

### MAIN FEATURES
- Easily mountable
- Bus powered
- Modbus RS485 protocol
- Integrated GPS receiver
Home Automation

Our product range

<table>
<thead>
<tr>
<th>Smoke detectors</th>
<th>Water detectors</th>
<th>Environmental sensors</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSG-SMO-U / BSG-SMOA-U</td>
<td>BSF-WAT-U</td>
<td>SHSUXXXXX</td>
</tr>
<tr>
<td>• Detection of smouldering and flaming fires with smoke development</td>
<td>• Integrated water sensor input</td>
<td>• Room sensors for CO₂, temperature and humidity measurement</td>
</tr>
<tr>
<td>• Without radioactive sources</td>
<td>• Water resistant PCB with screw terminals</td>
<td>• Available with display, RGB LED or neutral</td>
</tr>
<tr>
<td>• Detection of up to 60 m²</td>
<td>• External input for Felson moisture cable</td>
<td>• Temperature range: -20°C to +50°C</td>
</tr>
<tr>
<td>• Transmission of alarms and Alive signal via bus</td>
<td></td>
<td>• Humidity range: 0 to 100% RH</td>
</tr>
<tr>
<td></td>
<td>MAIN FEATURES</td>
<td>• CO₂ range: 0 to 2000 ppm</td>
</tr>
<tr>
<td>MAIN FEATURES</td>
<td>• Easily mountable with unique mounting bracket</td>
<td>• Battery backup if the connection is interrupted</td>
</tr>
<tr>
<td>• Battery backup if the connection is interrupted</td>
<td>• Constant monitoring of sensor sensitivity</td>
<td>• Constant monitoring of sensor sensitivity</td>
</tr>
<tr>
<td>• Constant monitoring of sensor sensitivity</td>
<td>• Bus powered</td>
<td>• Bus powered</td>
</tr>
<tr>
<td>• Bus powered</td>
<td></td>
<td>• Low current consumption</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Environmental sensors</th>
<th>Environmental sensors</th>
<th>Programmable alarm keypad</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESCO2THWxVDM</td>
<td>ESTHW50x</td>
<td>BACC-KEYPAD-DC-U</td>
</tr>
<tr>
<td>• Wall mounting</td>
<td>• Wall mounting</td>
<td>• Keypad for building access control and alarm control</td>
</tr>
<tr>
<td>• CO₂ 2000 ppm or 5000 ppm</td>
<td>• Temperature and humidity 2 in 1</td>
<td>• Indoor or outdoor applications</td>
</tr>
<tr>
<td>• 0 to 50°C, 0 to 100% RH</td>
<td>• 0 to 50°C, 0 to 95% RH</td>
<td>• 28 user-programmable codes</td>
</tr>
<tr>
<td>• LCD display</td>
<td>• 0 to 10 V or 4-20 mA output</td>
<td>• Programmable LED indication</td>
</tr>
<tr>
<td>• Modbus communication and analog output</td>
<td>• Dimensions 85x85x30 mm only</td>
<td>• Buzzer output</td>
</tr>
<tr>
<td></td>
<td>MAIN FEATURES</td>
<td>• DC power supply</td>
</tr>
<tr>
<td>MAIN FEATURES</td>
<td>• Compact housing measuring 2 parameters</td>
<td>• Compact housing measuring 2 parameters</td>
</tr>
<tr>
<td>• Compact housing measuring 3 parameters</td>
<td>• Simple to install and use</td>
<td>• Software for easy setting and monitoring</td>
</tr>
<tr>
<td>• Software for easy setting and monitoring</td>
<td>• Aesthetic design, ideal for home installation</td>
<td>• Aesthetic design, ideal for home installation</td>
</tr>
<tr>
<td>• Aesthetic design, ideal for home installation</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Our product range

### Wireless bus generators

**SH2WBU230N**
- Wireless transmission based on IEEE 802.15.4, @ 2.4 GHz
- Maximum slave number: 250
- Up to 7 SH2WBU230N can be connected on the same network
- Connection to SH2WEB24 via internal bus or terminals via the high speed bus

**MAIN FEATURES**
- Dimensions: 2-DIN modules
- DC power supply

### Wireless light switches

**SHE5XWLS4xFx**
- Flat design: can be mounted everywhere
- 4 individually programmable push buttons
- Battery supplied
- Range up to 100m open space

**MAIN FEATURES**
- Temperature sensor
- It can be mounted in many 55x55 frames (see datasheet)

### Wireless window sensors

**SHDWWISEN / SHDWWISENIN1**
- Dimensions: sensor: 60 x 30 x 15.5
  - magnet: 32 x 10.2 x 11.5
- Reed sensor
- Additional voltage free input
- 1 red LED/1 blue LED for battery level indication
- Range up to 100 m in open air

**MAIN FEATURES**
- Wall mounting, crew and double side tape
- Battery supplied

### Wireless relays

**SHJWRE10AE230**
- Smallest housing in the market
- Wireless transmission based on IEEE802.15.4 @ 2.4
- Range up to 700 m in open air
- Load: 10 A/250 VAC

**SHJWRE10AE115**
- Energy reading
- Programmable routing function in two steps
- Mounting into eurobox

### Wireless relays with push buttons

**SHJWRE10AEWLS230**
- Two capacitive push buttons
- Wireless transmission based on IEEE802.15.4 @ 2.4
- Range up to 700 m in open air
- Load: 10 A/250 VAC

**SHJWRE10AEBL5230**
- Energy reading
- Programmable routing function in two steps
- To substitute Bticino switches

### Wireless dimmer with energy reading

**SHJWD200WE230**
- Smallest housing in the market
- Wireless transmission based on IEEE802.15.4 @ 2.4
- Range up to 700 m in open air
- Universal dimmer switch for R, L, C up to 200 W and LED loads

**SHJWD200WE115**
- Energy reading
- Programmable routing function in two steps
- Mounting into eurobox
## Home Automation

### Our product range

<table>
<thead>
<tr>
<th>Wireless dimmer with push buttons</th>
<th>Wireless energy meters</th>
<th>Touch screen/data logger</th>
</tr>
</thead>
<tbody>
<tr>
<td>SHJWD200WEWLS230 SHJWD200WEWBL5230</td>
<td>SHJWEM16A230 SHJWEM16A115</td>
<td>BTM-T4-24 / BTM-T7-24</td>
</tr>
<tr>
<td>• Two capacitive push buttons</td>
<td>• Smallest housing in the market</td>
<td>• 4” / 7” colour display</td>
</tr>
<tr>
<td>• Wireless transmission based on IEEE802.15.4 @ 2.4</td>
<td>• Wireless transmission based on IEEE802.15.4 @ 2.4</td>
<td>• Easy setup of graphic pages and functions with the powerful software Wizard</td>
</tr>
<tr>
<td>• Range up to 700 m in open air</td>
<td>• Range up to 700 m in open air</td>
<td>• Activation of internet links through touch buttons</td>
</tr>
<tr>
<td>• Universal dimmer switch for R, L, C up to 200 W and LED loads</td>
<td>• Energy measurement: kWh</td>
<td>• Support viewing from IP cameras</td>
</tr>
</tbody>
</table>

### MAIN FEATURES

- Energy reading
- Programmable routing function in two steps
- To substitute Bticino switches

## 1-phase energy analyzers

<table>
<thead>
<tr>
<th>EM111 / EM112</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Dimensions: 1 DIN module (2 DIN EM112); DIN-rail mounting</td>
</tr>
<tr>
<td>• Backlit touch LCD</td>
</tr>
<tr>
<td>• Measurement of voltage, current, power, power factor and frequency</td>
</tr>
<tr>
<td>• Bidirectional energy metering, 8 digits cl. B (EN50470)</td>
</tr>
<tr>
<td>• Measuring inputs: 115/230 VAC, 32 A (max 45 A, EM111) or 100 A (EM112)</td>
</tr>
</tbody>
</table>

### MAIN FEATURES

- Self-powered
- Modbus RS485 port
- Sealable terminal covers
- CE, MID

## 3-phase energy analyzers

<table>
<thead>
<tr>
<th>EM24</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Dimensions: 4 DIN modules; DIN-rail mounting</td>
</tr>
<tr>
<td>• LCD display with programming joystick and function selector</td>
</tr>
<tr>
<td>• Measurement of voltage, current, power, power factor and frequency. Metering from external pulse sources and 4-tariff management</td>
</tr>
<tr>
<td>• Bidirectional energy metering on 2 8-digit counters, cl. B (EN50470-3)</td>
</tr>
<tr>
<td>• Measuring inputs: 3x230 (400) VAC, 5 A (by CT) or 65 A (direct)</td>
</tr>
</tbody>
</table>

### MAIN FEATURES

- 115-230 VAC power supply or self-powered
- 3 inputs for external gas/water metering
- RS485 Modbus RTU, or Ethernet Modbus TCP/IP or M-bus communication port
- Sealable terminal covers
- CE, MID, cULus (5A version)
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Fax: +60 3 7842 7399
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