



BUILDINGSense AUSTRALIA PTY LTD

CORPORATE PROFILE



Controls System Partner

BUILDINGSense AUSTRALIA PTY LTD
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ABOUT BUILDINGSense AUSTRALIA

Buildingsense Australia is founded to cater a high quality turnkey solutions in Healthcare, Commercial Retails, Age Care Facility, Education, Hotels, Cultural establishment, Life Sciences, Public Buildings and Data Centres. Buildingsense is a Western Australia based family owned business and primarily focus is to provide 100% satisfaction and Great Service to Local Customer in WA. We recently opened our Sydney office and Melbourne Office is due to open in Mid of Next Year. In Nov 2015 Buildingsense appointed official distributor of SAUTER Control International.

Our offerings are:

- SAUTER BACnet Building Management Systems
- SAUTER BACnet Energy Management System
- SAUTER BACnet Hotel Room Automation System
- Solutions for Green Buildings
- Solutions for Room Climate, lighting, shading
- Solutions for Life sciences and Healthcare
- Solution for Pharmaceutical and Clean Rooms
- Service and Support

BUILDINGSense AUSTRALIA also appointed partners of **BuildingIQ, GAMI and Pettinaroli**

- BuildingIQ - Data analytics and predictive Energy optimisation
- GAMI - GAMI Brand FCU, AHU with fitted controls
- Pettinaroli – Valve Assembly

About SAUTER Controls

For more than 100 years, the SAUTER Group has provided products expertise and solutions for building management and room automation throughout the entire building life cycle. The SAUTER Group, with headquarters in Basel (Switzerland) and new development and production site in Freiburg i.Br. (Germany), is active worldwide.



The SAUTER portfolio covers the four areas: Systems, Components, Services and Facility Management. Together, they stand for the all-round expertise of the company: SAUTER creates sustainable environments.

SAUTER can provide impressive references in the following sectors: office and administration buildings, research and education facilities, hospitals, industry and laboratory buildings, airports and railway stations, and leisure centres and hotels.

SAUTER Controls software in **FDA (FDA 21 CFR 11)** and **GMP** Compliance which is required for pharmaceutical and life sciences Application.

For more information, please visit www.sauter-controls.com

About BuildingIQ

BuildingIQ core technology was originally developed by Australia's National Labs, CSIRO. Over 50 years of R&D have been invested to create the optimization technology and BuildingIQ engineers continue to enhance the solution today. BuildingIQ solutions are installed in millions in Millions of square feet and are providing HVAC energy management to customers throughout North America and Asia. Behind every customer deployment is a 24x7 support team of energy engineers who ensure performance, identify "energy drain" faults that would otherwise go undetected and become a trusted partner for building operators. The solution makes buildings more energy efficient without affecting tenants comfort. It helps owners, managers and tenants reduce energy consumption cost and emissions and obtain more value from their existing energy.



For more information, please visit www.buildingiq.com

About GAMI

GAMI is a proud member of GIBCA group of companies, a leading group in the construction and manufacturing sector in the UAE. GAMI is an ISO-certified manufacturer that produces technical advanced, high-quality and efficient chilled water and DX air-conditioning equipment for the GCC and international markets. GAMI also manufactures tropicalized air-cooled screw chillers in accordance with technical collaboration with HITACHI. These air-cooled screw chillers are manufactured under HITACHI License No. HTCA0601. GAMI is an ISO 9001-2008, ISO 14001-2004 and OHSAS 18001-2007 certified company and adheres to the quality, health, safety and environment management programs established by these organizations. Competent R&D department that caters to the specific requirements of our valued customers by offering them a range of customization options.



Equipment manufactured by GAMI is sold under brand names GAMI and Cool wave. GAMI also manufacture equipment under several other local, regional and international brand names as an OEM.

For more information, please visit www.gami.ae

About Pettinaroli

During the nineties, the company undertook a progressive internationalization, in order to reinforce its position on foreign markets. As a result, Pettinaroli grew to be a Group of nine companies. Two of them are manufacturing units, sited in Italy, while the others take care of logistic and distribution on their respective markets. They are located as follows: three in the US, one in France, one in Switzerland and two in Denmark.



The corporate strategic vision is more and more focused on R&D in various areas of business: heating, conditioning, sanitary and renewable energies. While preserving its industrial identity, gained in 70 years of experience, the Group had the ability to gradually reinvent itself as a supplier of systems and solutions.

Pettinaroli is certified ISO 9001 and ISO 14001. Moreover, its products have obtained the approval of 16 prestigious Institutes, thanks to the high quality standards, the rigorous tests and monitoring of the production and of the perfect quality of the raw materials. These approvals also guarantee the compliance to international Laws and regulations about productive standards.

The Group's latest achievements are: the development of the new Evosolar division to manage the solar thermal energy business; the launch on the market of the new balancing valves that guarantee energy savings, optimizing the hydraulic distribution in air conditioning/heating systems.
For more information, please visit <http://www.pettinaroli.com/>

Company Vision

Vision

Through our far-sighted approach and state-of-the art technology, our vision is to create a sustainable and safe environment.

Values

Customer satisfaction is our core value and we committed to meet customer satisfaction at all the time.

Quality

We provide a high quality standard start from initial consultancy to final delivery of services.



Integrated Building Management Systems



Integrated Building Management Systems are most commonly implemented in large projects with integration with mechanical, HVAC, electrical, plumbing, electronics security system, CCTV system, Lift systems, Metering system etc.

SAUTER Vision Centre 4.0 - latest-generation modular building management software for energy-efficient buildings.

The SAUTER Vision Centre (SVC) is a web-based building management system for individual systems and buildings, as well as for dispersed premises.



The SAUTER Vision Centre is used in all kinds of sectors, for example in hotels, office buildings and public buildings. Using the building management software, geographically separate properties can be centrally operated and visualised. Examples of this are hotel chains, businesses with branch offices and various public buildings in the same municipality.

It guarantees efficient operation and provides visualisation in one place of all plants and equipment systems, because access takes place via a browser, and is possible anytime and anywhere.

To integrate different equipment systems, SVC supports the non-manufacturer-dependent BACnet standard, as well as connection to OPC servers for integrating different protocols in the building automation system.

In order to fully support the integration options, it is also possible to directly connect SAUTER moduWeb Vision via web services and SAUTER novaNet.

This makes it possible to connect existing systems when converting to the new generation of building management software without having to replace the existing automation level.

The integrated energy monitoring module makes it possible to integrate meters and additional manual entry, as well as to view energy consumption directly in the SVC.

Daily, weekly, monthly and annual consumption can be automatically calculated and represented in diagrams. This optional module is the basis for energy monitoring and efficient control of building operation.

For more information, please visit following link on SAUTER Controls Web Site

<http://www.sauter-controls.com/en/products-sauter/product-details/pdm/yzp-480495-sauter-vision-center.html>

Building Management Systems

Buildings provide space to work, live, learn, produce, sell, have fun, etc. Depending on the building's use, the users have different requirements for heating, cooling, air conditioning and lighting. SAUTER's intelligent building automation ensures an optimum indoor climate depending on the respective use. A comfortable building climate positively affects the well-being and productivity of users.



Building automation links the existing systems and optimises their interaction for maximum energy efficiency. It automatically determines (for example, using presence detectors and sensors) the actual requirement for heating, cooling, fresh air, light and shade in the rooms and provides the energy in the right amount, at the right time, and in the right location. This type of needs-based building automation system prevents energy waste and results in a noticeable and worthwhile reduction in operating costs with swift repayment.

Suitable for every building

The needs-led control strategy in accordance with the European standard EN 15232 can be applied to every building, irrespective of the location, use, age, exterior, etc. It also makes the building capable of larger or smaller conversions and is easily adapted to changing requirements. Using the audit methodology that SAUTER applies, the eu.bac system, you can tap into the potential for optimisation and save on energy costs. Continuous recording and tracking of the operating states reduces operating costs over the entire life cycle of the building.

Contributes to preserving your investment

SAUTER's building automation is always modular and flexible. Upgrading is made easy by migration capability and backward compatibility to pre-existing systems, enabling sustainable renovations and smooth modernisation of your buildings. And all of this without interrupting operation, in coexistence with current systems or while integrating new systems. We ensure your systems operate reliably and thereby contribute to preserving your investment.

Automation using the latest technology

BACnet

The open communication standard BACnet (building automation control network) forms the backbone of our building automation system. It is the interface with which our controllers and automation stations communicate.



Modular components

Modular components complete SAUTER's building automation for integrated solutions; field buses and interfaces enable specialist applications:

- DALI:
- MODBUS:
- KNX:
- SMI:
- M-Bus:
- Profibus:
- OPC
-

For more information, please visit following link on SAUTER Controls Web Site

<http://www.sauter-controls.com/en/references-solutions-sauter/technical-building-management-sauter.html>

Integrated Energy Management System

SAUTER EMS is an indispensable tool for energy managers and installation operators. The mobile version, SAUTER EMS Mobile, also enables close monitoring and continuous optimisation of the energy efficiency of buildings and production plants. The mobile application supports the widely used HTML5 standard, independently of the platform, and can be used with every mobile browser.



SAUTER EMS is the professional solution for displaying all types of energy consumption, identifies potential for saving energy and provides fundamental information for operating in a more energy-efficient manner and, therefore, more cost-effectively and competitively. Support is provided for the requirements of the ISO50001:2011 standard and energy audits according to ISO 50002 (EN 16247) for energy management systems and the guidelines for introducing them in companies.

Transparency and visualization of energy consumption and CO2 emissions.

SAUTER EMS offers all the advantages of a state-of-the-art cloud solution. For example, energy management information can be called up at any time online, and reports can be sent automatically in a variety of formats.

As an alternative, EMS is also available as a license solution for implementation in an existing IT infrastructure.

To provide an overview for company-wide energy management, maps of the various locations are available so that users can skip directly to the detailed views. These maps can also be defined as alarm overviews.

For optimized planning, SAUTER EMS provides forecast functions based on reference curves with calculated past values.

Measurement data is analyzed and displayed in standardized reports or on portal pages that are available online and can be called up in a WEB browser via smartphones and tablets (iOS or Android), and via standard PCs and notebooks.

EMS Mobile is a smartphone and tablet app that provides optimized access to alarms and portal pages, as well as the option of entering meter readings online.

SAUTER EMS HIGHLIGHTS

TRANSPARENCY AND VISUALISATION OF ENERGY CONSUMPTION

SAUTER EMS logs your energy data and visualizes your consumption using meaningful diagrams. In this way, any energy consumed by the heating, ventilation, cooling, lighting etc. becomes visible at a glance. Comparative displays of historical data – such as previous year, month or week – give the presentation even more substance.

Key performance indicators and set point referencing are available using web technologies.

To be able to use SAUTER EMS, just a simple web browser is required. This makes access possible from anywhere – with the displays (either global or user-dependent) filtered centrally or locally. The central property management section provides an overview of all the buildings; it is also possible to make specific local portal views available to individual users.



FLEXIBLE AND STANDARDISED

SAUTER EMS offers all the advantages of a modern cloud solution. You can call up your energy management information online and at any time, or have automated reports sent to you in different formats. The entire IT infrastructure and the support for the system is already included in the SAUTER EMS hosting solution. This solution provides you with absolute planning reliability and helps to keep your costs to a minimum.

Would you like your own license solution for storing your energy data? We are happy to incorporate SAUTER EMS into your own IT infrastructure as an alternative.

Because of the wide range of connectivity options and the use of standardized protocols such as BACnet, SAUTER EMS can be used independently of any particular manufacturer. This enables parts of buildings and properties with third-party systems to be incorporated easily into SAUTER EMS

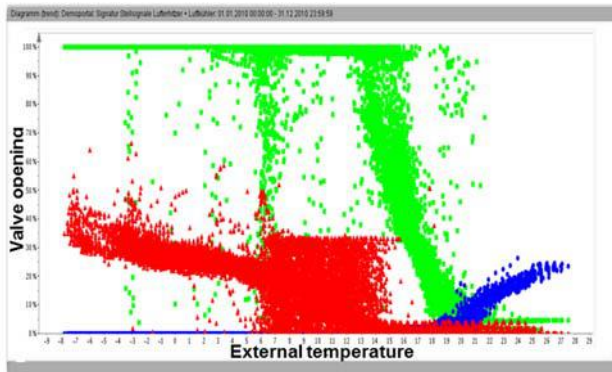
CONTINUOUS OPTIMISATION FOR REDUCING ENERGY CONSUMPTION

EMS provides the foundation for the continuous process of optimization throughout the entire life-cycle of a building. Because of the comprehensive statistical analyses and the comparisons based on benchmarks, direct comparisons and long-term analyses, large cost reductions are possible. SAUTER EMS constantly identifies savings potential that, depending on the degree of optimization, can generate savings of over 40%.

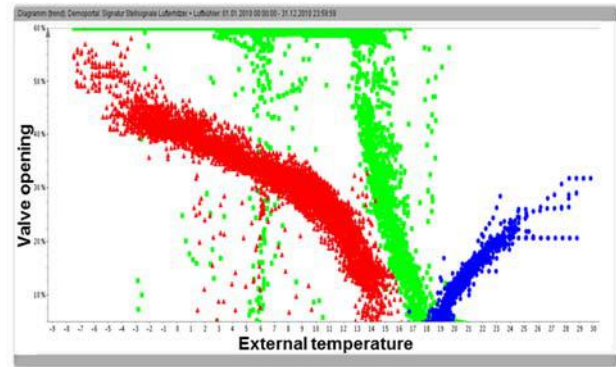
STANDARD REPORTS AND RECORDING

Standard reports for showing measurement data and comprehensive analysis options with scatter and carpet plots, as well as load curves, which are important components and prerequisites for various "Green Building" building certifications as per standards such as LEED, BREEAM, EnEV, MINERGIE, HQE, GreenCalc+, and for ISO 50001 company certification and ISO 50002 / EN 16247 auditing

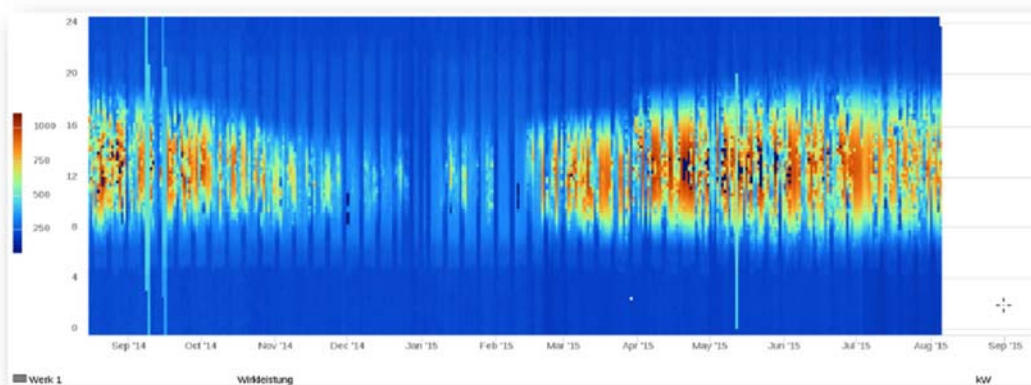
Logbook for documenting measures and entering comments and notes, in line with ISO 50001
Displaying portal elements in external applications, including websites, PowerPoint presentations and Green Building Monitors.
SDC FTP data source for automatic import of CSV, XML, MSCONS and LPEX file formats with definable import interval



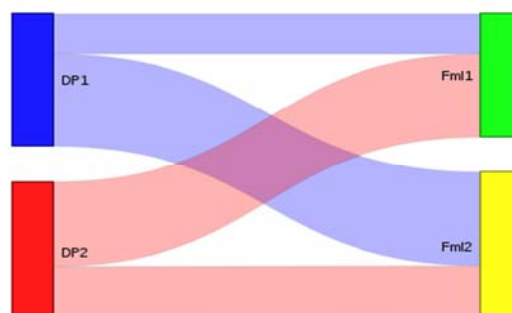
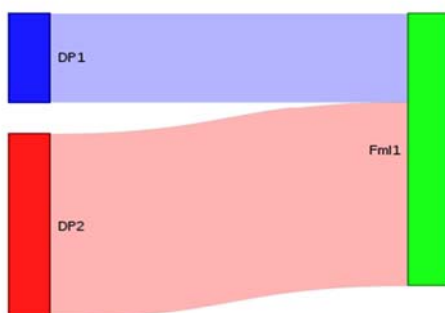
Bad Control
Optimization Required



Optimized Control



Dynamic view of Carpet Plot chart



Energy flow charts (Sankey diagram)

SCALABLE AND MODULAR

SAUTER EMS can record the data of individual buildings, rental properties, or even more widespread branch operations and properties – locally, in Europe and worldwide.

The system can be easily expanded by various modules to include additional properties or branches. SAUTER EMS grows with your requirements

MODULAR FOR DATA ACQUISITION

Software Data Connector (SDC): module for collecting energy data from a building Management system. The data is sent to the EMS server at configurable intervals and then automatically processed for visualization. The SDCs are available for e-mail, SNMP, SQL and various BMS applications.

Independently of BMS applications, two different data loggers (EDL) record the respective energy data using the BACnet, Modbus TCP/IP, MBus and KNX/IP protocols.

The Energy Data Logger EDL 1000 has a capacity of 10,000 data points and sends the recorded and buffered data point values to the EMS server at freely-definable intervals. The EDL 50 is designed to handle up to 50 data points and can send the data to the EMS server either by Ethernet cable or by radio signal (GSM/GPR/Edge). In addition, the EDL 50 has an M-Bus level converter for connecting up to 25 end devices, such as meters.

EMS MOBILE

EMS Mobile provides access to portals, alarms and manual input for smartphones and tablets based on Apple iOS or Android platforms. Entering the meter readings in the smartphone improves efficiency substantially and eliminates a potential source of errors and delays, because the values are transferred directly and automatically from the smartphone into the EMS. If the smartphone or tablet loses reception, the data is saved in the buffer (thanks to EMS Mobile's offline functionality) and automatically sent to the EMS as soon as reception has been restored.



Direct portal access, specially developed for mobile devices, provides the users and energy managers with information at any time and from anywhere. Access rights can be assigned via EMS for each portal and, therefore, to individual energy managers. The third function in EMS Mobile is the access to ALARMS. EMS alarms and their various statuses are always available online and can be acknowledged via EMS Mobile

The wide range of input options makes SAUTER EMS an extremely flexible and versatile energy management solution. The various connection options via software connectors for different BMS systems and for SQL-based systems, plus the direct connection of meters without BMS, make EMS a completely autonomous product that can be used in buildings as well as in a range of industries and production environments.

USE AS A TOOL

In addition to the various ways of presenting the energy consumption levels, EMS provides analysis and monitoring functions, e.g. for assessing the effectiveness of a heat recovery system in detail. In this way, carpet plot and energy signature graphs as a function of supply- and return-air temperatures – as well as valve positions – are important analysis tools which are necessary for any energy manager and energy consultant in addition to the load curve and different KPIs.

Standardized reports provide regular information and are available either automatically or at the touch of a button. It is also possible to create dedicated reports based on the customer's requirements. These may be, for instance, energy flow diagrams with the corresponding consumption values or energy performance certificates or the classification of energy consumption within a KPI scale.

FASTER METER ROUNDS DUE TO THE QR CODE

SAUTER EMS Mobile also provides an extremely useful QR code function for entering meter values: Instead of identifying a data point manually, the user captures the machine-readable code at the individual stations of a meter round using the camera of the mobile device. This simplifies and speeds up the process significantly. The sequence in which the data points are displayed can also be customized for the meter rounds. Data points already read are identified automatically and moved to the end of the list.

CHECKING THE DATA CAPTURE: COMPARISON ENSURES CORRECT DATA

The application also actively helps you avoid meter-reading errors. It compares the entered values online with the value from the last recording period and informs the user about a potential error if there is a significant deviation. If there is no internet connection, all the entries are saved. As soon as there is a connection again, the values are immediately transferred to the SAUTER EMS server.

ADVANTAGE OF SAUTER EMS

- Data acquisition, validation and automatic aggregation to daily, weekly, monthly and yearly values
- Data acquisition and monitoring of locations and rental areas
- Various graphic displays, key performance indicators, carpet plot, load curve
- Key figures such as electricity and heat consumption per area, CO2 emissions per area etc.
- Alarm and fault management
- Manual input of counter values
- Plausibility checks and rectification
- Central user administration
- Portal-based standard reports and optional client-specific reports using the BIRT Report Engine
- Display of graphics on external applications such as the client's website, in a building's entrance area (Green Building Monitor).
- Logbook function for documentation of, and comments on, incidents Active energy management due to the direct forwarding of defined alarms to the building management system
- Online access to portals and alarms with browser-optimized display on smartphone or tablet
- Direct input and transfer of counter values via EMS Mobile to EMS for making manual meter readings more efficient. Furthermore, offline functionality and automatic transfer of data is possible when reception is restored, i.e. it is possible to enter the reading manually offline.
- Complies with the ISO 50001 requirement to introduce energy management systems, plus various 'green building' certifications such as LEED, BREEAM, DGNB, HQE, Minergie etc.



For more information, please visit following link on SAUTER Controls Web Site

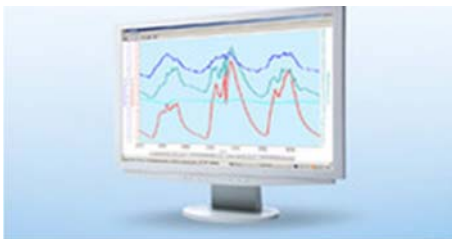
<http://www.sauter-controls.com/en/products-sauter/product-details/pdm/ems-100-200-sauter-ems-and-ems-mobile.html>

Solution for Life Sciences



In the life sciences sector, SAUTER provides solutions for buildings in the pharmaceutical industry, in universities, research institutes and other facilities. As your specialist partner, we control and monitor your critical environments such as clean rooms, laboratories and fume cupboards.

- Control system for fume cupboards
- Laboratory control
- High-security laboratories
- Animal holding and laboratories
- Hospitals & pharmacies
- Clean rooms
- Clean room process monitoring
- Qualification and Validation
- Expertise in Life sciences



For more information, please visit following link on SAUTER Controls Web Site

<http://www.sauter-controls.com/en/references-solutions-sauter/solutions-for-life-sciences-sauter.html>

SAUTER Guest Room Automation System

SAUTER is your room automation specialist. The room climate is a result of the optimum interaction of heating, cooling, ventilation, lighting and shade. Ensuring the optimum room climate is our primary task. Using the latest and certified technology, we can complete this task, adapting it to your requirements.



The local installation and operation of automatic control equipment for room conditions is called '**integrated room automation**'. Its functions can be divided into three groups (room climate, lighting, sun protection), the interaction of which ensure the optimum effect.



Our solutions for room automation mean that we can cover all of our customers' requirements for favourable working environments and functional facilities. We not only ensure an automatically optimised, comfortable indoor climate, but we also offer a simple room control system. Using the local room control system, the user can step in at any time and adjust the room climate to their personal requirements. Open communication allows you to have complete control with a building management system. Consequently, our solutions remain functional, flexible and efficient.

How we achieve two goals:

1. Energy comfort in terms of a pleasant room climate

- Increase in productivity as a result of well-being
- A high level of indoor air quality as a result of needs-based indoor air control
- Individual room climate as a result of local room control

2. Energy efficiency by using minimal energy

- Automatic calculation of the optimum energy utilisation
- Restorable standard values or individual user settings

Our flexibility goes even further: we provide room control units and room sensor technology in a wide variety of designs from a broad range of manufacturers. This means that you always get the solution that is right for you, in terms of function and aesthetics.

We also have open interfaces for integrating high-end touch solutions for room control systems in specialist rooms such as auditoriums, luxury villas, research laboratories and open-plan offices.

Successful collaboration

To guarantee smooth workflows when installing and starting up integrated room automation, we provide everything that is necessary for our partners:

- We give planners all the necessary guidelines and checklists for the project planning.
- We provide architects with a wide choice of design variations, open interfaces and several integration options.
- We provide system integrators with expertise via knowledge libraries and enable flexibility with our modular solutions.

EY-MODULO 500 Room Automation Controller



The ecos 5 room automation stations are a range of stations in the EY modulo 5 families that are specially designed to meet the requirements of comprehensive room automation.

They are structured according to the same technology as the SAUTER modulo 5 automation stations, which means they are also **native BACnet stations with** communication via Ethernet/IP.

Features

- Part of the SAUTER EY-modulo 5 system family
- Communication: BACnet/IP (EN ISO 16484-5)
- Room automation station for up to four rooms or room segments
- Can be extended with up to 16 x eco Link remote I/O modules
- Optimises energy consumption thanks to occupancy function,
- window contact monitoring, demand-controlled switching of fan speeds, control of lighting and window blinds, and time-dependent set point specification
- Predictive control based on meteorological forecast data
- Time and calendar function
- Integration into the building management system via BACnet IP
- 2 x RJ 45 connection for Ethernet (switched)



For more information, please visit following link on SAUTER Controls Web Site

<http://www.sauter-controls.com/en/services-expertise-sauter/room-automation-sauter.html>

Room Climate, Lighting Shading

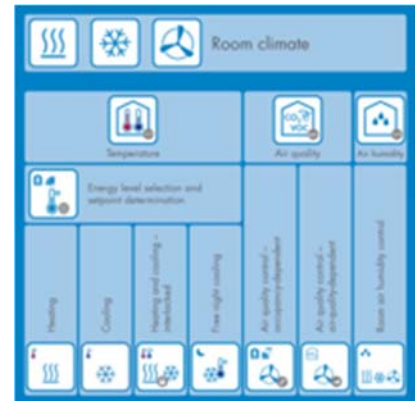


Thanks to its smart controlling and flexible room division, intelligent room management from SAUTER is extremely adaptable and highly efficient. It covers the latest requirements for room automation (such as directive VDI 3813) and saves energy and costs when operating buildings

in accordance with EN 15232.

Integrated room automation significantly lowers a building's energy consumption and operating costs while simultaneously increasing user comfort. This is why SAUTER believes that, along with heating, ventilation and cooling for the room climate, lighting and sunshade are equally important components of integrated room automation.

SAUTER room automation fulfils all tasks based on the functions required:



Room climate control

- The easiest room climate control with fan coil units or chilled ceilings, chilled beams and radiators.
- Demand-led intelligent unitary control with individual room temperature control for each room or room segment and local room

operation:

- With or without occupancy detection and timer program
- With CO2-dependent room climate control

Lighting a room

- Automatic light control (time-dependent)
- Automatic light control (according to needs with light sensor)

Sun shading functions

- Glare protection with automatic control of window blinds, depending on the sun position, also with automatic slat tracking
- Automatic sunshade equipment for using the solar heat radiation for energy-optimised operation of the rooms

For more information, please visit following link on SAUTER Controls Web Site.

<http://www.sauter-controls.com/en/references-solutions-sauter/room-climate-lighting-shading-sauter.html>

SAUTER BACnet DDC Controller/Web Server

SAUTER EY525 BACnet IP DDC with Web Server

APPLICATION: AHU, CHILLED WATER, HOT WATER, COOLING TOWER, CONDENSER WATER

EY-AS BACnet IP Controller is a high end DDC with integrated web server, RTC, Trends, alarm, dual Power supply provision and watchdog output for continuous monitoring of process.

It is most powerful and it can accomplish all the functions required for technical building automation, including precise air-conditioning and regulation, a wide variety of alarm functions, easy-to-use room reservation applications and much more besides. It is a single, integrated system with unlimited scalability



Application areas:

The automation station (AS) is a modular unit that is used for control and regulation in building automation technology as per EN ISO 16484. Short cycle times also make it possible to accomplish control tasks quickly. The automation station contains all the modules and interfaces required for operation, to connect the equipment, and to communicate with other stations and the management level.

It has a total of 16 inputs and 10 outputs. The physical inputs and outputs can also be extended by various I/O modules that can be attached in rows. In addition, the automation station offers the possibility of system integration (connection of non-Sauter systems) by means of communication modules that can be attached in rows.

An integrated web server makes it possible to operate or visualize the parameterized data points within the automation station via a standard internet browser.

Visualization is carried out either in the form of a list, or in plant schematics with dynamised data values. Using the web server, it is possible to set up project-specific, cyclical e-mail notification for alarms, logging and for the transfer of historical data. The outputs on the automation station can also be overridden manually (priority operation) by additional operating elements that can be used on the station itself. The station also allows the direct operating elements to be located remotely, within the plant room (MSSB door).

With no additional precautions, the automation station can be networked and is able to communicate with open communication protocol BACnet/IP based on Ethernet as per EN ISO 16484-5. Programming/parameterization is handled via a PC with the CASE software as per IEC 61131-3.

As a BACnet server, the automation station provides all the objects required for building automation applications, as well as the relevant properties with the necessary services. Typical users of this information include open management systems, bus-wide operating units, and other 'BACnet-compatible' automation stations etc. In its function as a BACnet client, the automation station supports peer-to-peer transmission.

Performance features:

- Hardware inputs/outputs (26x I/O)
- Integrated Ethernet interface,
- BACnet/IP protocol
- Integrated web server
- Can be extended on a modular basis with I/O modules (up to 8) Com modules (up to 2)
- Local priority override and indication
- Software function modules
- HVAC function modules
- Standard control algorithms (P, PI, PID)
- Command and selection modules
- Limitation and limit value modules
- Timer and switching modules
- Calculation/computing modules
- Clock/timer functions
- Extended function modules
- (ECO10), such as:
 - Energy requirement with basic daily value
 - Primary energy plus CO2 with basic daily value
 - FC fan or damper control with air quality sensor
 - Ventilation systems (FC/4-speed fan) for free outside cooling

For more information, please visit following link on SAUTER Controls Web Site.

<http://www.sauter-controls.com/en/products-sauter/product-details/pdm/ey-as-525-modular-automation-station-modu525.html>

SAUTER RDT 808 BACnet IP DDC Controller/Web Server

APPLICATION: VENTILATION SYSTEM

SAUTER RDT 808 is a High End BACnet IP Universal Controller with digital display. Highest level of flexibility with regard to adjusting the controller to the respective system and thus ensuring extremely energy-efficient operation. Additionally, communication with management level via open protocol to exchange data for the energy-efficient operation of the installation.



RDT828F222

Features

- Configurable controllers for a wide range of applications for ventilation, air-conditioning and heating
- Many functions for sequences and monitoring
- Easy to operate with large, illuminated LCD and buttons
- Menus in 20 languages
- Weekly and calendar switching programmes with summertime/winter time change-over
- Configuration using display or PC tool
- RS485 interfaces with BACnet IP, Modbus RTU and integrated web server
- From 8 Inputs/Outputs – 28 Inputs/Outputs

For more information, please visit following link on SAUTER Controls Web Site.

<http://www.sauter-controls.com/en/products-sauter/product-details/pdm/rdt808-815-828-universal-contr-flexotron800-v2.html>

SAUTER ECOS 5 BACnet IP DDC

APPLICATION: VENTILATION SYSTEM, ROOM AUTOMATION

The ecos 5 room automation stations are a range of stations in the EY modulo 5 families that are specially designed to meet the requirements of comprehensive room automation. This controller is freely programmable and can be used for various ventilations fans application. Highest level of flexibility with regard to adjusting the controller to the respective system and thus ensuring extremely energy-efficient operation. Additionally, communication with management level via open protocol to exchange data for the energy-efficient operation of the installation.



Features

- Configurable controllers for a wide range of applications for ventilation, air-conditioning and heating
- Part of SAUTER EY-modulo 5 system family
- Communication, BACnet/IP
- Optimize energy consumption, thanks to occupancy function, windows contact monitoring, demand-controlled switching of fan speeds, control of lighting and windows blinds and time dependent set point specification.
- Predictive control based on meteorological forecast data
- Time and Calendar function
- Integration with BMS system via BACnet IP
- 2Xrj 45 connection for Ethernet Switched.
- Total 42 IO points and can be extended by Extension modules.

For more information, please visit following link on SAUTER Controls Web Site.

<http://www.sauter-controls.com/en/products-sauter/product-details/pdm/ey-rc-500-room-automation-station-ecos500.html>

SAUTER Precise BACnet MSTP DDC

APPLICATION: VAV AND FVAV

SAUTER ASV VAV Controller allows demand-based volume flow control in order to optimize energy consumption in ventilation systems. Differential pressures of as little as **1Pa** can be controlled to allow minimal volume flows for the lowest possible duct pressure and energy consumption.



Features:

- Supply and return air control for individual rooms such as offices, conference rooms and hotel rooms, in conjunction with a VAV box or a damper and flow probe
- Static differential pressure measurement based on the capacitive measurement principle
- Can be used in areas with dirty or contaminated return air
- High-precision measurement of differential pressures with measuring ranges of up to 300 Pa
- Variable running times 30...120 s
- Brushless DC motor guarantees minimum energy consumption and a long service life
- Electronic torque limitation for safe operation
- Disengageable transmission for manual adjustment and damper positioning
- Integrated second controller for additional applications
- Very easy programming using the **SAUTER CASE VAV software**
- Constant air volume control via parameterisable inputs
- Adjustable end values of the differential pressure range
- 100...300 Pa
- Efficient control algorithm

For more information, please visit following link on SAUTER Controls Web Site.

<http://www.sauter-controls.com/en/products-sauter/product-details/pdm/asv115bf152-bacnet-mstp-vav-compact-controller-for-fast-control-loops.html>

SAUTER BACnet MSTP ASC DDC

APPLICATION: FAN COIL UNIT AND CHILLED BEAMS

SAUTER EY-modulo 3 is the right solution for easy room automation. The easy and intelligent EY-modulo 3 room automation solution from SAUTER is ideal for:

Applications

- Fan Coil units
- Chilled Beams
- Ventilation systems



Function modules:

- One control loop with PI algorithm for heating and cooling
- One digital control sequence for ventilation and additional functions
- Parameters on all function modules set individually
- Alarms and interlock for special functions
- Time/date and weekly calendar
- Additional functions
 - Automatic On/Off
 - Comfort/Reduced or Presence/Absence
 - Changeover
 - Summer/winter compensation
 - Economizer (free external cooling)

For more information, please visit following link on SAUTER Controls Web Site.

<http://www.sauter-controls.com/en/products-sauter/product-details/pdm/ey-ru-382-ecount382-room-operating-unit-for-ecos-3.html>

Mechelec and MSSB

Mechelec (Electrical for Mechanical services) and MSSB are integral and one of the core expertise of BSA. BSA have partnership with leading Mechelec contractors to provide a bundle offer of controls and Mechelec installation which includes the followings-

- Engineering and design of MSSB
- Drafting of MSSB
- Manufacturing and installation of MSSB
- Selection and sizing of power cables
- Cable Tray works and complete turnkey supply and installation



Data Analytics and Predictive Energy Optimisation

Buildingsense Australia partner with Building IQ for Data analytics and predictive Energy Optimization. We always talk about big data. In general, what we do in the building through building management system is equal to \$1 of total life cycle of building in the scale of 1 to 10. \$2 to \$10 is all about data science. Data analytics software plays a bigger role in the building energy optimization. Digital building management system helps us to collect massive amount of data in form of telemetry trends and alarms. Buildingsense has joined hand with BuildingIQ which is a next generation data analytic and predictive Energy Optimisation Software Company.



Buildingsense approach is using services of BuildingIQ data analytics software during DLP of project to analyse and fine tuning of controls loops.

Buildingsense will continue using services of Building IQ during ongoing service contracts to make buildings more efficient. Industry is shifting towards predictive maintenance and optimisation rather than standard routine maintenance.

Once building being connected with BuildingIQ software a group of data scientist will continuously monitors and optimise buildings performance. Through this process Buildingsens will submit a monthly report on impartments. This is agile implementation which leads to continuous improvement.

GAMI Brand HVAC Equipment

Buildingsense is partner of GAMI brand Fan Coil Units, Air Handling Units and packaged Units.

Buildingsense is launching a unique concepts of AHU and FCU with fitted controls. All controls components, Temperature sensors, humidity sensors, pressure switch, Damper actuator, Variable Speed Drive and DDC Controller are fitted and prewired at the factory.

Benefits

- Reduce Labour cost on site.
- Reduce point to point test and pre commissioning
- Quality workmanship

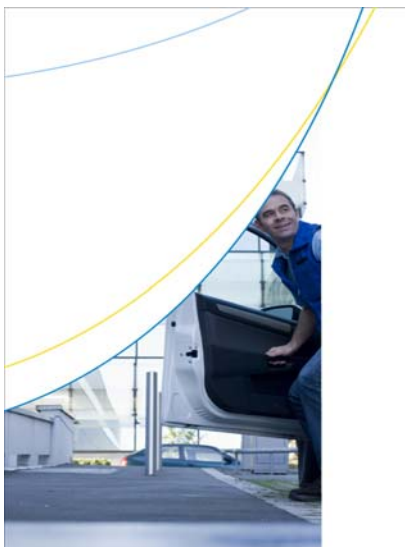


About GAMI

GAMI is a proud member of GIBCA group of companies, a leading group in the construction and manufacturing sector in the UAE. GAMI is an ISO-certified manufacturer that produces technical advanced, high-quality and efficient chilled water and DX air-conditioning equipment for the GCC and international markets. GAMI also manufactures tropicalized air-cooled screw chillers in accordance with technical collaboration with HITACHI. These air-cooled screw chillers are manufactured under HITACHI License No. HTCA0601. GAMI is an ISO 9001-2008, ISO 14001-2004 and OHSAS 18001-2007 certified company and adheres to the quality, health, safety and environment management programs established by these organizations. Competent R&D department that caters to the specific requirements of our valued customers by offering them a range of customization options.

Equipment manufactured by GAMI is sold under brand names GAMI and Cool wave. GAMI also manufacture equipment under several other local, regional and international brand names as an OEM

Service



Buildingsense Services.

- Service quality to preserve the value of buildings and plant in the long term.
- Operating 24/7
- Expertise in all SAUTER systems and non-SAUTER installation
- Numerous service modules to create individual service packages.
- Trained energy advisers.

SAUTER Customers



SAUTER Project Reference

SAUTER have done various projects in following sector-

- Education
- Office Buildings
- Retail
- Health
- Hotels
- Industry
- Cultural establishments
- Life Sciences
- Public Buildings
- Sport and wellness
- Residential buildings

For more information, please visit following link on SAUTER-Controls web site-

<http://www.sauter-controls.com/en/references-solutions-sauter/selected-references-sauter.html>

PROJECT REFERENCE- HOSPITAL PROJECTS(UK)



Walsall Manor Hospital
MEP Contractor: Skanska
Consultant: WSP
Project Value: £ 1,250,000.00



Queen Alexandra Hospital – Portsmouth
MEP Contractor: Crown House Technologies
Consultant: DSSR
Project Value: £ 1,800,000.00



St. James Hospital Leeds – Oncology
MEP Contractor: Rotary Yorkshire
Consultant: AECOM
Project Value: £ 1,500,000.00



John Radcliffe Hospital – Oxford
MEP Contractor: Crown House Technologies
Consultant: BDP
Project Value: £ 1,300,000.00



University College London Hospital
MEP Contractor: BCJV (Balfour Beatty / Haden Young)
Consultant: DSSR
Project Value: £ 2,100,000.00



Royal Opera House
London, England



City Hall
London, England



Central Railway Station
Berlin, Germany



German Stock Exchange
LEED Platinum award



Nu Office Munich
LEED Platinum award



Kremlin Palace
Moscow, Russia

PROJECT REFERENCE- MIDDLE EAST



Lifer Pharma FZE
Jebel Ali, Dubai, UAE



Hyatt Place, Dubai Al Rigga
Dubai, UAE



Al Dewan & Al Khlaif Schools
Abu Dhabi, UAE



Dubai Sports Complex
Dubai, UAE



Um Al Quwain Hospital
Um Al Quwain, UAE

PROJECT REFERENCE- MIDDLE EAST



DEC Tower
Dubai, UAE



**Dubai Mixed Use Development
And Sofitel Hotel**
Dubai, UAE



**Jahili Fort Museum
Mohamed Ali Palace**
Al Ain, UAE



Millennium Airport Hotel Extension
Dubai, UAE



Hotel Hilton Czech Republic



Hotel Hilton Old Town



Hotel Hilton Lyon-France



Hotel Hilton Evian



Hotel Hilton Athene Palace-Greece



Double Tree Hotel Hilton Amsterdam



Hilton Hotel- Hampton



Double Tree Hilton - Romania



Hotel Hilton Athene Palace



Hotel Hilton Novosibirsk



Double Tree by Hilton Bratislava



Double Tree by Hilton Istanbul

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