

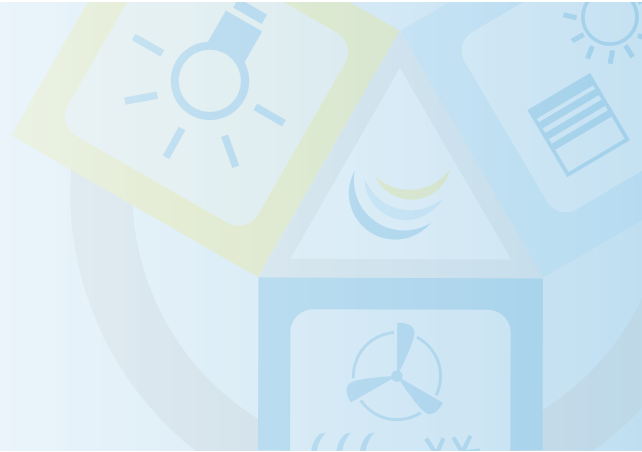
# Integrated Room Automation



# Integrated room automation from SAUTER

User-friendly, efficient and economical

SAUTER combines all functions of building and room automation with a higher-level building and energy management system, thus guaranteeing optimised, flexible and energy-efficient operation of your property. SAUTER's integrated room automation controls not only the room climate, but also lighting and sun-shading. Individual daily programmes and the monitoring of room occupancy ensure minimum energy consumption with maximum comfort.



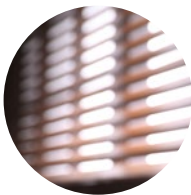
## Health & comfort

SAUTER's room automation solutions provide users with clean air, comfortable temperature and optimum lighting conditions.



## Operation

The open operating concept fulfils users' expectations. Whether regulated with built-in room operating units or individually controlled via app on mobile devices, all channels are open.



## Integration

Open, standardised communication and end-to-end networking from the field level to cloud services for extended Digital Services – making smart spaces and intelligent working environments a reality.



## Flexibility

Prepare the room utilisation for changes: Integrated room automation supports flexible room concepts at the click of a mouse via the Building and Energy Management System.



## Energy & cost efficiency

Intelligent room automation optimises operating costs. Only effective usage determines the energy input.

## Planning of the integrated room automation

### Targets:

- Added comfort
- Flexibility
- Low costs
- Energy efficiency

### Advantages:

- Health and comfort
- Intuitive operation
- Flexible room utilisation and division
- Energy and cost controlling

### Solutions:

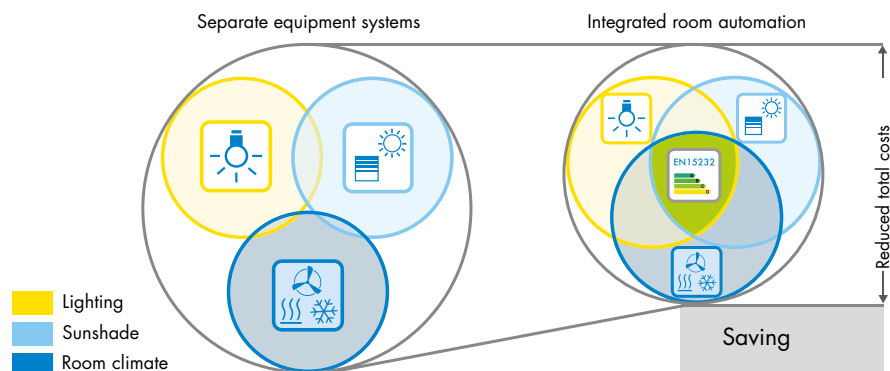
- Integral planning of all equipment systems
- Description of operation according to VDI 3813/3814
- Versatile room operation
- Achievement of Smart Spaces

### Overall solution from a single source

With our solutions for room automation, we meet all customer requirements for positively experienced workspaces and functional facilities. We not only ensure an automatically optimised room climate, but also offer simple room operation. With local room operation, users can intervene at any time and adjust the room climate to their own personal needs. The open communication allows easy control in the building management system, which is seamlessly networked with the building automation of the primary system. The application is thus functional, flexible and efficient at all times.

### Comfort and energy savings

Sensors are the basis for control. Not only physical values are considered – information about the presence of users also offers potential. With technology that bases the use of energy on demand, considerable savings are possible compared to standard consumption. Integrated room automation automatically unlocks savings potential – through the holistic control of heating and cooling, lighting, sunshading and ventilation.



Shared use of sensors, wiring and IT infrastructure

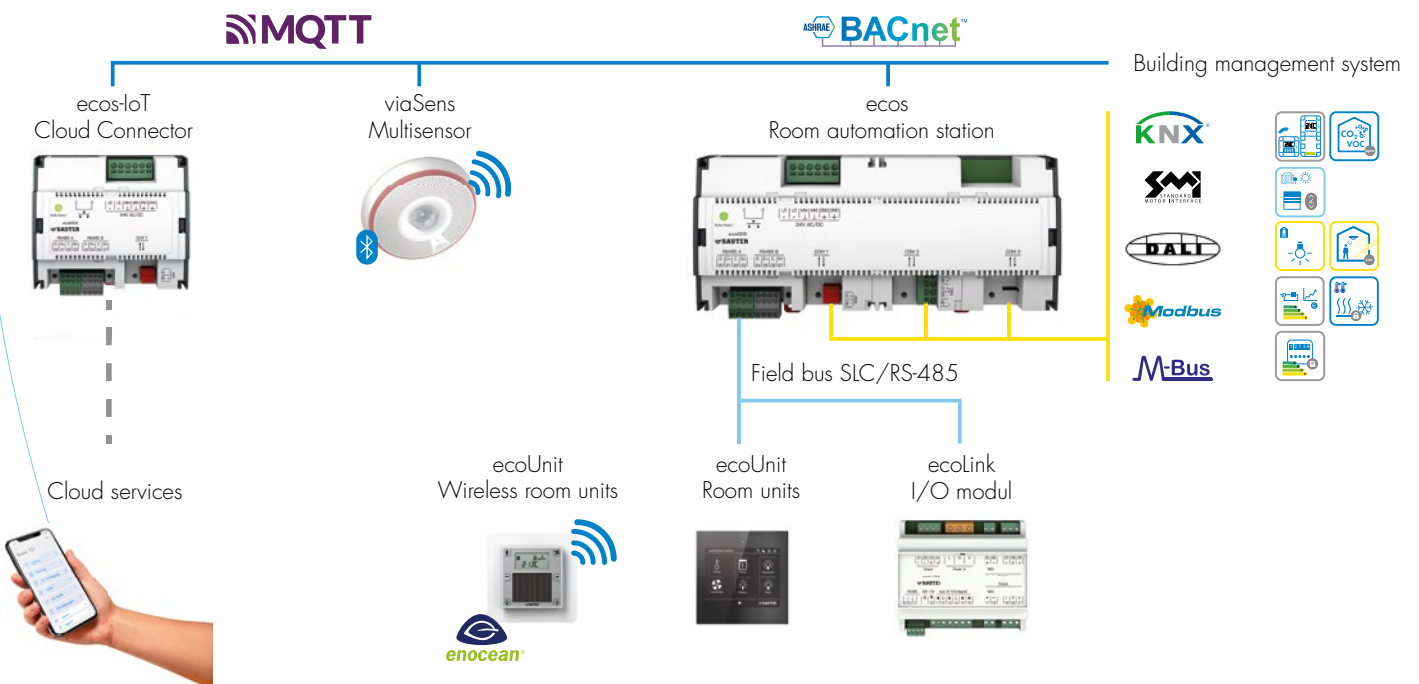
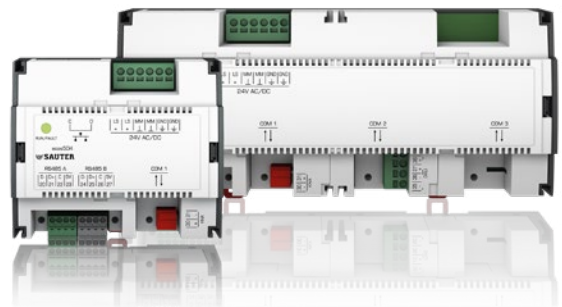
# SAUTER ecos

## The key to open, integrated and modular room automation

### From energy management to room management

The ecos room automation station from the SAUTER modulo system family is the centrepiece of open, modular room automation. The ecos room automation is compatible and expandable, and thus a secure investment. This makes it ideal for both new and existing buildings.

The SAUTER ecos room automation station communicates using the standardised BACnet protocol and integrates all room functions into the building management system. With the ecoLink I/O modules, up to eight rooms can be controlled with one room automation station. It is also possible to integrate additional applications such as the control of fire protection dampers. With the IoT Cloud Connector, cloud services can be integrated and IoT solutions implemented.



# Health & comfort

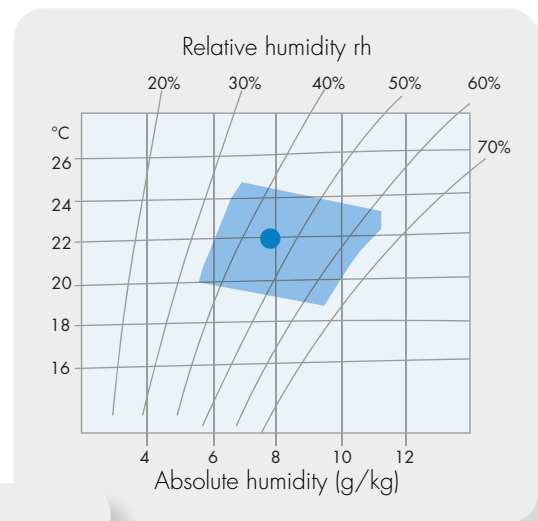
Focus on the building users

## Health and comfort first

When it comes to comfort and indoor climate, schools have different requirements to hospitals, and the requirements for hotels differ from those of office building operators. In working environments, a comfortable indoor climate has been proven to increase productivity. Thermal comfort is often the primary concern. The control of room temperature and humidity has a decisive influence. However, the air quality, which is controlled by means of a CO<sub>2</sub> sensor and demand-controlled ventilation, is also an important parameter. In addition, human centric lighting makes a significant contribution to a comfortable and stimulating room climate. Whatever the use, SAUTER room automation can be flexibly adapted.

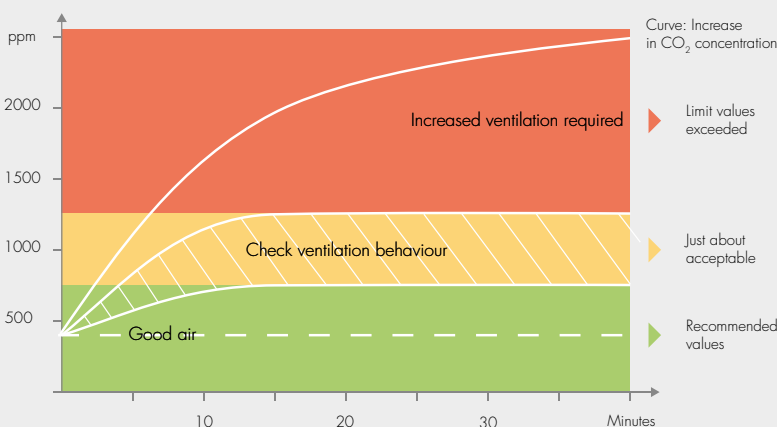
## Individual and energy-efficient at the same time

You want to specify your own values for room climate, lighting and sunshading? With room automation from SAUTER, users have the option of adjusting the setpoints individually and setting the climate that they want. This has a positive effect on well-being and satisfaction. Our solutions for all room functions are standardised and thus ensure the consistently high quality and energy efficiency of the room automation. They also support the certification of buildings and rooms according to the WELL Building Standard.



hx diagram highlighting comfort zone and working point

## CO<sub>2</sub> concentration and indoor air quality



Indoor air quality with increasing CO<sub>2</sub> concentration in a closed room





## Operation

### Individual options for all requirements

#### Range of room operating units

SAUTER's room operating units are the stationary basis for access to all room functions. Choose a design that suits your rooms. You can choose between two, four or more buttons to control the most important functions. Different icons and configuration bring additional flexibility. The standard size enables installation in switch ranges from SAUTER and third parties. SAUTER also offers app solutions and the integration of voice assistants.

#### Intuitive access to functions

Whether via app, with wired or wireless room operating units, SAUTER room automation offers intuitive, individual operation with access to configurable functions, for example:

- Display of actual values, presence mode, fan speed etc.
- Display of date and time
- Adjustment of setpoint
- Selection of an operating mode with different scenarios
- Control of fans, lights and window blinds
- Use of the integrated temperature sensor

#### Bring your own device (BYOD)

The personal smartphone has long since moved on from being limited to making phone calls. Apps can be used to control the room remotely via Bluetooth or the cloud. The SAUTER Mobile Room Control (MRC) app, in conjunction with SAUTER Mobile Building Services (MBS) and the beacon function, enables automatic localisation of the smartphone in the building, and thus room operation of the individual environment with one's own device.



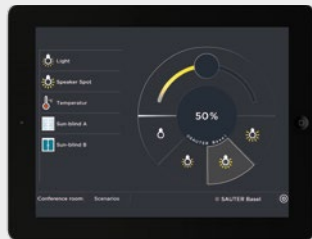
### Room operating units with switch design

- for fitting in frames
- wired or wireless with EnOcean wireless technology



### Room operating units with touch display

- flexible configuration
- with Bluetooth app



### Touch panels

- especially attractive for conference rooms, auditoriums, hotel rooms
- supported with SAUTER MBS or via BACnet, KNX or MQTT



### Voice control

- possibility to integrate cloud-based voice assistants via IoT Cloud Connector and MQTT protocol
- use of e.g. Amazon Echo & Alexa, Google Assistant etc.



### Mobile app

- Mobile Room Control App for secure room control by users
- for smartphones and tablets (iOS/Android)
- localisation via Beacon function of the viaSens multi-sensor

# Integration

End-to-end solutions from sensor to cloud

## All equipment systems optimally integrated with modular system components

Room automation from SAUTER enables more integration than ever before. With all of the usual communication protocols on board, SAUTER room automation effortlessly integrates every room function. Compatible at all levels of the building automation, SAUTER room automation can be seamlessly integrated into the building management system.

## Digitalisation is shifting the focus from technology to the experience and the operation

Not only technical services in buildings have become digital – infrastructural services are also changing. The room automation sensors collect data on the actual use of the areas and prepares it for operation, for example for cleaning staff. In this way,

service processes can be adjusted and costs saved. The property manager receives an evaluation of the space usage in real time.

Sensors for measuring consumables (in soap dispensers, coffee machines etc.) can be integrated via the room automation network, aggregated at the management and operating level, thus enabling demand-controlled management. Digitalisation leads to predictive building operation that is adjusted to the actual use and to maximum user satisfaction.

## Digital User Journey







Control of the energy preparation and distribution, and connection of the Building Management/EMS



Lighting and sensors



Wireless sensors, window contacts, room operation



Room operating units, sensors, actuators



Energy and heat meters



Shading



Energy meters, integration of multi-split air conditioning units



Connection to the cloud, access to IoT



SAUTER Smart Spaces  
Video



Meeting rooms



Building services

**Smart Spaces  
example applications**

- Access control
- Indoor navigation
- Asset tracking
- Demand-controlled, use-dependent room maintenance



# Flexibility

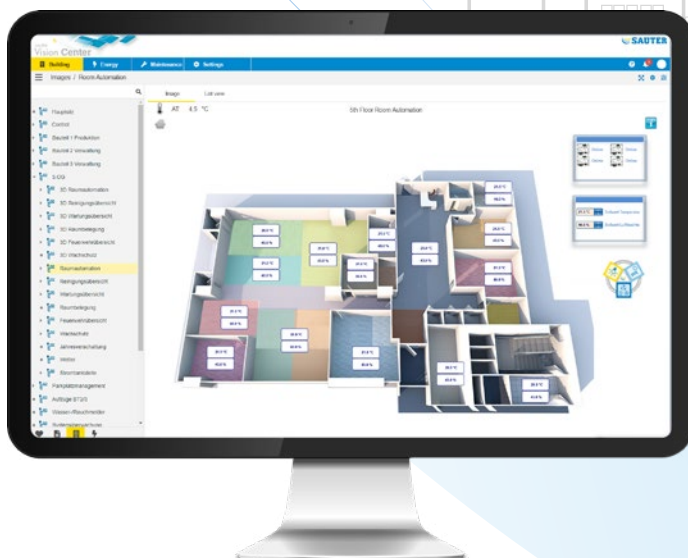
No problem for intelligent room management

## Solution for flexible room concepts

Flexible room utilisation provides scope for corporate development and increases the economic potential of properties. Office space, school rooms, shared spaces, sales areas – with SAUTER room automation, the utilisation options are adjusted in no time at all. Multifunctional buildings are designed for flexible use. What is used as a store today can be an office space tomorrow. Quickly and easily, SAUTER room automation supports the adaptation of the technical room functions to the new use and room layout. Changes are made without interrupting the system operation. With our function modules, the requirement profiles for room climate, lighting and sunshading are quickly configured.

## Flexibility as the basis for space optimisation

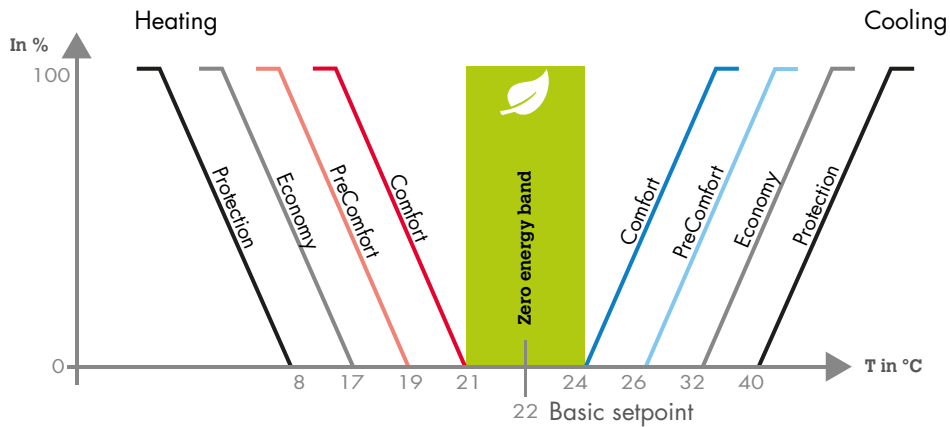
SAUTER room automation supports flexible room usage with a concept featuring modular room segments (“moving walls”). Buildings or floors are divided into segments and automated in a network. Depending on the use of space, these room segments can be combined into one zone with common control of temperature, lighting, glare protection and sunshading. The changes to all integrated systems are made via the building management system.





# Energy & cost efficiency

Energy performance and cost controlling thanks to room automation



Graphic: Setpoints for different comfort levels (according to VDI 3813/3814 and EN ISO 52120)

## Comfort in the zero energy band

A central requirement for the building management is to significantly reduce energy consumption and emissions. Energy efficiency is achieved with integrated room automation. SAUTER room automation works around the clock. Outside the times of use, the room is kept in the "Economy" mode, and in the "PreComfort" mode during times of use. If the presence sensor detects occupancy, the climate is switched to the "Comfort" mode. All systems and functions are coordinated so that the energy consumption is kept to a minimum. If the values are in the so-called "Zero energy band", a comfortable room climate is achieved without any heating or cooling energy at all.

**Integrated room automation from SAUTER.  
The benefits for your property:**

- Health and comfort
- Intuitive operation
- Flexible room utilisation and division
- Energy and cost controlling



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 **SAUTER**  
Creating Sustainable Environments.