



Smart Actuator

3 in 1: Actuator and controller
with IoT integration

 **SAUTER**
Creating Sustainable Environments.

Smart energy regulation for state-of-the-art buildings

Valves and actuators are key components in energy distribution. They are deployed in heating and ventilation systems as well as in room automation. Time and again, traditional systems present challenges to operators during installation.

The Smart Actuator system, consisting of an actuator, peripheral devices, an app and a cloud connection, facilitates planning, installation and operation of HVAC systems in modern and refurbished buildings. It supports all phases of the building life-cycle and benefits all user groups.

The most important advantages:

- Distributed intelligence: decentralised, autonomous control without a cabinet and automation station
- Installation of applications from the SAUTER solution library for heating, ventilation and room automation
- Easy, cost-reduced fitting thanks to the plug system
- Commissioning using the smartphone app
- Remote access to the application and operating settings via the SAUTER Cloud

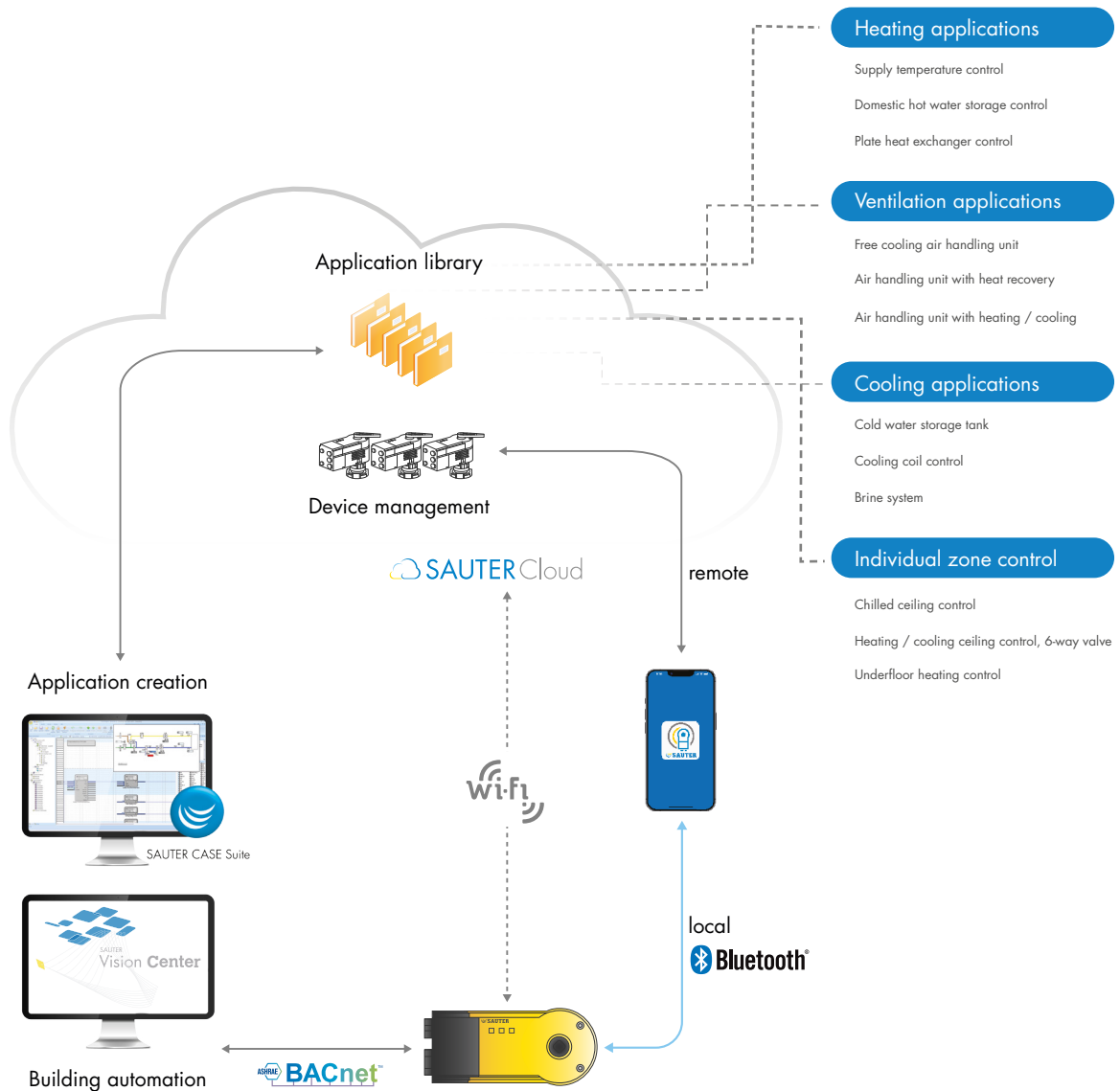


"My projects run smoothly. Tested applications from the cloud and clearly defined interfaces enable digital building."
Project Engineer

Connectivity, IoT and cloud integration

Communication interfaces for every application: Integration into the building automation system is achieved seamlessly via the integrated RS485 or WiFi interface. Bluetooth technology enables easy commissioning and servicing via smartphone. A comprehensive solution library is available in the cloud.

The Smart Actuator is IoT- and cloud-capable. Cloud connectivity is established via the integrated WiFi interface. TLS-encrypted MQTT serves as a secure communication protocol in the Internet of Things.



Product overview

The field devices required for the application can be connected directly to the actuator via two universal I/Os. With the optional I/O box, the range of applications can be significantly expanded.



Actuator for ball valves
AKM115SAF232



Actuator for globe valves
AVM115SAF232



Actuator for dampers
ASM115SAF232

Torque / actuating power	8 Nm	250/500 N	10 Nm
Actuator stroke / angle of rotation	90°	8 mm	90°
Running time	35, 60, 120 s		
Characteristic	Linear, equal percentage, square		
Number of inputs, outputs	2		
Universal input UI	0...10 V DC, Ni1000, Pt1000, 0/1, 100...2500 Ω, 0 (4)...20 mA		
Analogue output AO	0...10 V DC		
Interfaces	RS485, Wi-Fi, Bluetooth	RS485, Wi-Fi, Bluetooth	RS485, Wi-Fi, Bluetooth
Communication	BACnet MSTP, MQTT, BLE (Bluetooth LE), SLC*, EnOcean with accessory EY-CM 582		
Connection	Room operating units of the ecoUnit 3 series (SLC*)		



I/O modul
SAIO100F020

Number of inputs, outputs	5
Universal input UI	0...10 V DC, Ni1000, Pt1000, 0/1, 100...2500 Ω, 0 (4)...20 mA
Analogue output AO	0...10 V DC
Number of relays	3
Loading capacity	10A change over
Interfaces	RS485
Communication	SLC*
Connection	Room operating units of the ecoUnit 3 series (wire connection)

*SLC: RS485 - SAUTER Local Communication

Plug-in cables

The connector system in combination with pre-assembled cables ensures a particularly fast installation. Mechanical and colour coding not only prevents wiring errors, but also results in cost savings.

"Fitting is simple and always error-free. This saves me valuable time."
Installer



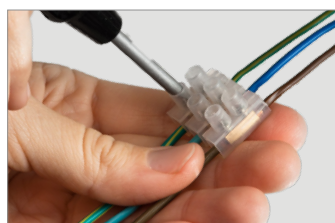
Installation cable, mechanically and colour coded

Type		Cable length (m)	Plug type
053060200**	24-V power supply, open end	0.5, 1, 5, 10, 20, 30	2-pin
053060202**	24-V power supply, Y connector	3	2-pin
053060200**	24 V power supply, daisy chain	1, 5, 10, 20, 30	2-pin
053060310**	I/O signals, 3-wire open end	1, 5, 10, 20, 30	3-pin
05306032005	I/O signals, cable temperature sensor Ni1000 (-35...100 °C), ready to operate	1, 5, 10, 20	3-pin
05306032105	I/O signals, cable temperature sensor Pt1000 (-50...180 °C), ready to operate	1, 5	3-pin
053060311**	I/O signals, ...20 mA	5	3-pin
053060340**	RS-485, daisy chain, 3-wire open end	0.5, 1, 5, 10, 20, 30	3-pin
053060341**	RS-485, daisy chain, connection of two actuators, ready to operate	1, 5, 10, 20, 30	3-pin
053060510**	I/O signals, 3-wire open end	0.5, 1, 5, 10, 20, 30	5-pin
053060530**	I/O signals, connection of actuator with I/O module SAIO100, ready to operate	0.5, 1, 5, 10, 20, 30	5-pin
053060535**	SLC connection, 5-wire open end	0.5, 1, 5, 10, 20, 30	5-pin

Type & cable length

**

00	0.5 m
01	1 m
05	5 m
10	10 m
20	20 m
30	30 m



Conventional cabling with screw fitting.



Plug-in connections for intelligent installation.

Application examples

Control tasks are performed autonomously and without additional control devices by the Smart Actuator when installed decentrally. In small to medium-sized plants, it is even possible to completely dispense with a central system automation in this way. However, the Smart Actuator is also suitable for use in larger plants.

Here, interfaces for system integration enable semi-autonomous control within the overall system. Verified and pre-programmed applications can be accessed via the smartphone app. Additional software is not necessary.



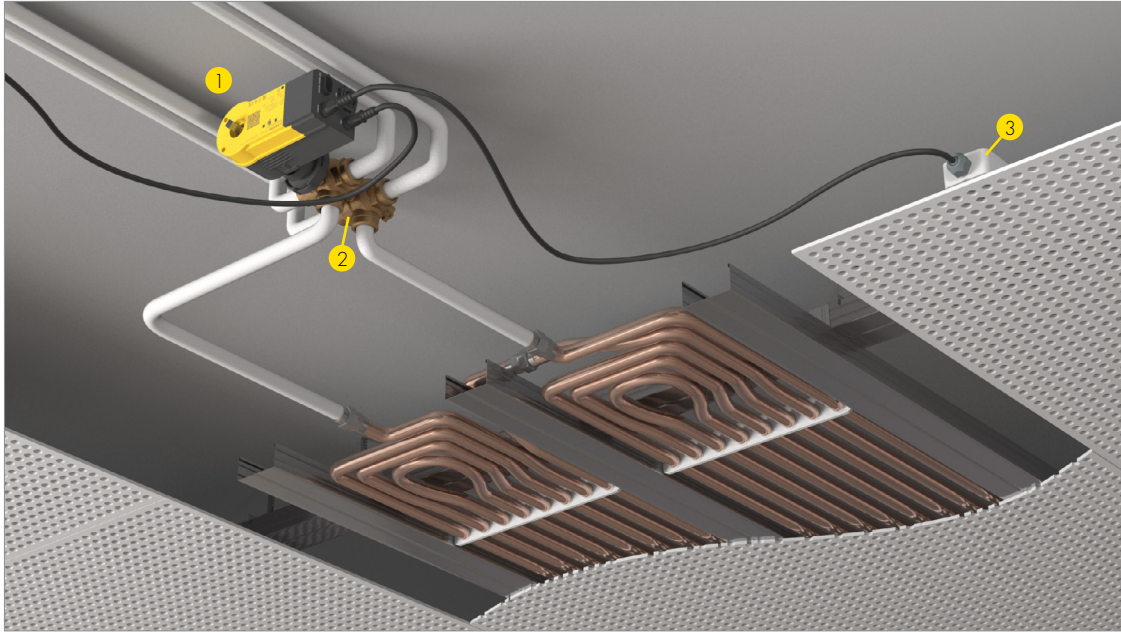
Example: Heating group with supply temperature control

- 1 Smart Actuator in daisy chain configuration
- 2 3-way flanged valve BUE040
- 3 Supply temperature measurement with clamp-on temperature sensor EGT
- 4 Circulation pump

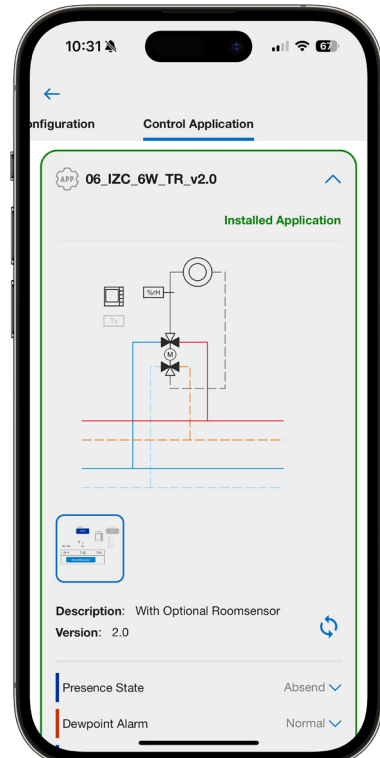


"I can make operation settings myself. If any errors occur during a job, I am immediately notified via the app. This makes my work much easier."

Facility Manager



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Example: Heating and chilled ceilings – without any additional single-room controllers

- 1 Smart Actuator
- 2 6-way ball valve for switching or continuous control of heating and cooling circuits in a 4-pipe system
- 3 Dew-point sensor to prevent condensation
- 4 ecoUnit355 room operating unit with actual value / setpoint display and temperature sensor
- 5 Parameterisation with a smartphone via Bluetooth

“The operating data can be called up via the smartphone. I don’t have to climb ladders or open ceilings to perform a diagnosis.”
Field Service Technician



Key features of the Smart Actuator system

- Simple installation and quick wiring without cabinets
- Individual applications from the solution library can be installed using the app
- Remote access for commissioning, maintenance and operation via the SAUTER Cloud



More
product information
is available online.

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