

EY-RU 310...316: Room operating units, ecoUnit310...316

How energy efficiency is improved

Individual setting of occupancy and absence as well as a room setpoint correction, control of lights and window blinds for optimum energy usage in the room. Visualisation of the local energy consumption by means of multicolour LED indicator

Features

- Part of the SAUTER EY-modulo 5 system family
- Operating unit to control and guarantee the highest possible room comfort.
- Recording the temperature and controlling rooms with different conditions using communicative EY-modulo 5 ecos unitary controllers
- Can be extended with EY-SU 306 push-button unit
- Room operating unit with a wide range of different functions, designs and colours
- Device insert with transparent front, fits into frame with 55 x 55 mm aperture
- Frame can be ordered as an accessory
- Indoor climate can be adapted individually
- The operating mode can be set for the room occupancy and the actuation of a 3-speed fan
- Control of window blinds, windows and lighting (ON/OFF/dim)
- Multi-colour LED indicators for visualisation of local energy consumption



EY-RU316F001



EY-RU310F001

Technical data

Power supply

Power supply	From ecos 5
Current consumption	≤ 25 mA ≤ 38 mA with 2 × EY-SU306

Ambient conditions

Operating temperature	0...45 °C
Storage and transport temperature	-25...70 °C
Admissible ambient humidity	10...85% rh, no condensation

Parameters

Sensors	Measuring range	0...40 °C
	Resolution	0.1 K
	Time constant	approx. 7 min
Functionality	Setpoint correction	variable
	Room occupancy (presence)	3 modes, LED indicator
	Fan speeds	5 functions, LED indicator
	Position LED	Switchable: green/red/OFF

Interfaces and communication

Connection to automation station	Interface	RS485
	Protocol	SLC
	Control	ecos 5, modu 521
	Line	4-core twisted
	Cable length	≤ 30 m
	Connection terminals	pluggable; for wire of 0.12...0.5 mm ² (Ø 0.4...0.8 mm)

Construction

Fitting	recessed/surface-mounted (see accessories)
Dimensions W x H x D	59.5 × 59.5 × 25 mm
Weight	0.1 kg

Standards and directives

CE conformity according to	Type of protection	IP 30 (EN 60529)
	Protection class	III (EN 60730-1)
	Environment class	3K3 (IEC 60721)
	EMC directive 2004/108/EC	EN 61000-6-1, EN 61000-6-3



Overview of types		
Type	Properties	Buttons
EY-RU310F001	Operating unit, NTC sensor	–
EY-RU311F001	Operating unit, NTC sensor, dXs setpoint correction (rotary knob)	–
EY-RU314F001	Operating unit, NTC sensor, dXs setpoint correction (rotary knob), fan, occupancy	2
EY-RU316F001	Operating unit, NTC sensor, dXs setpoint correction (rotary knob), fan, occupancy, window blinds / light	4

Accessories

Operating unit

Type	Description
EY-SU306F001	Push-button unit, without frame

Fitting

Type	Description
0940240***	For frames, mounting plates and adaptors for third-party frames: see product data sheet PDS 94.055
0949360002	4-pin plug-in connector for connecting ecos room operating unit (10 pcs.)
0949241301	Transparent cover (10 pcs.)
0949241302	RAL 9010 white cover for EY-RU 310 (10 pcs.)

Description of operation

The ecoUnit 3 room operating units EY-RU 310...316 record the room temperature and have a rotary knob for setpoint correction, buttons to select the occupancy mode and the fan speed and up to two freely allocatable buttons.

The room operating units belong to the ecos 5 system family and can be connected to ecos 5 room controllers using the digital RS-485 connection. The LED indicators can be controlled using the room controller.

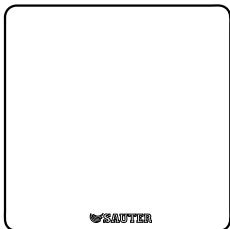
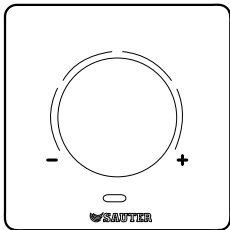
Intended use

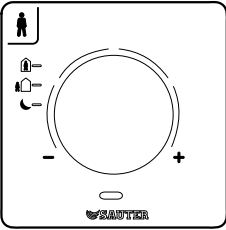
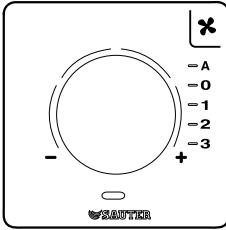
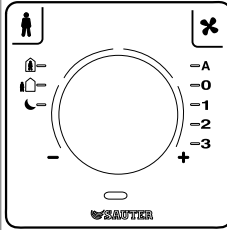
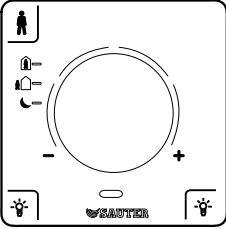
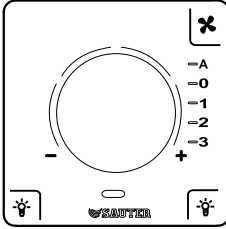
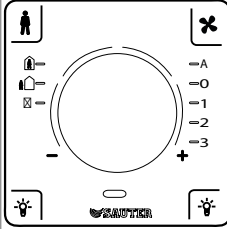
This product is only suitable for the purpose intended by the manufacturer, as described in the “Description of operation” section.

All related product documents must also be adhered to. Changing or converting the product is not admissible.

Front view and labelling inserts

Depending on the type of device, different labelling inserts are included. The operating unit can be adapted to the spatial conditions.

Type	Labelling inserts included in the scope of delivery
EY-RU 310	 B12386
EY-RU 311	 B12397

Type	Labelling inserts included in the scope of delivery		
EY-RU 314			
EY-RU 316			

Engineering notes

Fitting

The room operating units EY-RU 310...316 are suitable for various fitting methods. Product data sheet PDS 94.055 shows the mounting options and the accessory material required.

The EY-SU 306 switch unit can be used to enhance the EY-RU 310...316 room operating devices with 6 additional button functions. EY-SU 306 is connected to EY-RU 310...316 with a 2-core connection and can only be used in conjunction with a basic unit (EY-RU). Two EY-SU 306 with the same button assignment/function can be connected in parallel.

Switch unit EY-SU 306 can be installed up to 30 m (total line length) away from the EY-RU.

Connection to ecos 5

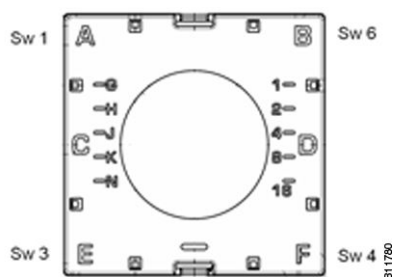
The room operating units must be connected to the ecos 5 with a 4-core cable. If several room operating units are used, these are to be connected in parallel. The system must be disconnected from the electricity supply when the operating units are connected.

Addressing the operating units

The operating units are connected to the ecos 5 stations via a serial RS-485 bus interface. Up to 4 operating units can be connected to an ecos 5 room automation station.

A device address is to be set on the communicative room operating units to ensure that they can be contacted by the ecos 5.

The housing lid of the ecoUnit is located under the transparent cover or labelling insert. All operation and indication functions are clearly labelled on this surface.



Sw: Connection name in firmware module.

At least 2 buttons are available on all variants: Top left button (A), top right button (B). On devices EY-RU 310 and EY-RU 311, these two buttons or LEDs can only be used for addressing.

There are also 5 LEDs on the right-hand side (1, 2, 4, 8, 16) and 3 LEDs on the left-hand side (G, H, J).

Addressing mode

The device address can be set without a time restriction after switching on if:

- no address has previously been assigned (ex works condition) or
- there is no communication with ecos, for example because addressing has been carried out incorrectly.

The addressing mode is signalled using the bi-colour position LED which is located under the poten-

tiometer. The LED state during addressing mode overwrites the LED state requested by the user program of the ecos 5.

The following applies:

Position LED	Status	Meaning
Rot	Flashing	Device is not addressed
Rot	Continuously ON	Device is in addressing mode (temporary)
Green	Flashing	Valid address is displayed (temporary, approx. 10 s)
Green, red	Continuously ON or OFF	Device in operation, see position LED

Non-addressed device, set address

In ex works condition, the devices are not addressed. After powering up, the position LED flashes red.

If button (B) is pressed for over 5 seconds, the device switches to addressing mode, the position LED is lit continuously red and the LED (G) is lit green.

Address 0 is displayed. Pressing the button (B) again activates input mode.

The device address (1 to 4) can now be set. The addresses 0 and 5...15 are currently not supported by ecos 5 devices.

Using button (B), the LEDs (1, 2, 4) are scanned upwards as per binary code, using button (A) they are scanned downwards again.

The following table shows the coding to set the device address:

Address	LED (1)	LED (2)	LED (4)
0	---	---	---
1	X		
2		X	
3	X	X	
4			X

Pressing and holding button (A) stores the setting and returns to the operating mode.

However, if no change is made for 5 seconds, the device returns to the operating mode without saving the settings that have been carried out.

Change addressed devices

The position LED is lit continuously green, red or OFF according to the ecos 5 user program.

If button (B) is pressed for over 5 seconds within the first minute after voltage is restored, the device switches to addressing mode and the set address is displayed. If button (B) is pressed again, the device switches to input mode.

Pressing and holding button (A) stores a new address and returns to operating mode.

However, if no change is made for 5 seconds, the device returns to the operating mode without saving the settings that have been carried out.

Position LED

Starting with the index D devices, the state of the position LED for the types EY-RU 311...316 can be set using the ecos 5 user program: continuously green, red or off. For example, this function can be used to indicate optimal energy consumption in the room by the colour green. The colour red can be used in the same way in order to indicate energy consumption that is too high. This function is not available for devices up to and including index C.

Connect EY-RU 3 ** to the ecos user program

How ecos or the operating unit respond to the press of a button is programmed in the user program (ecos). The "room unit" module is available in the firmware for this purpose. This module is described in the "Firmware modules" documentation.

Additional information

Fitting instructions	P100001965
Declaration on materials and the environment	MD 94.051
Dimension drawing	
EY-RU310	M10487
EY-RU311...316	M10488

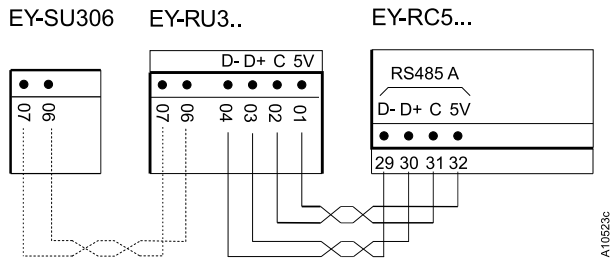
Connection diagram

A10523

Disposal

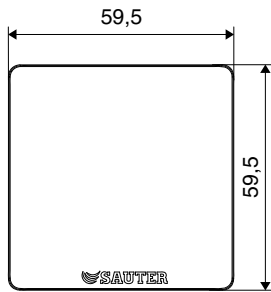
When disposing of the product, observe the currently applicable local laws. More information on materials can be found in the Declaration on materials and the environment for this product.

Connection diagram



Dimension drawing

EY-RU 310



EY-RU 311...316

