

EY-RU 341...346: Room operating unit, ecoUnit341...346

How energy efficiency is improved

Individual setting of occupancy and absence as well as a room setpoint correction and control of lightings 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
- Can be extended using EY-SU 306 switching unit
- Recording the temperature and controlling rooms with different conditions using communicative EY-modulo 5 ecos unitary controllers
- The operating mode can be set for the room occupancy and the actuation of a 3-speed fan
- 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
- Indoor climate can be adapted individually
- Control of window blinds, windows and lighting (on/off, dim)
- Display with extensive status information on room conditions
- Multicolour LED indicators for visualisation of local energy consumption
- Frame can be ordered as an accessory



EY-RU346F001

Technical data

Power supply

Power supply	From ecos 5
Current consumption	≤ 8 mA, ≤ 20 mA with 2 × EY-SU 306

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, LCD
	Fan speeds	5 functions, LCD
	Position LED	Switchable: green/red/OFF

Interfaces and communication

Connection to automation station	Interface	RS485
	Protocol	SLC
	Control	ecos 5, modu521
	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 list of accessories)
Dimensions W x H x D	59.5 × 59.5 × 25 mm
Weight	0.1 kg

Standards and directives

	Type of protection	IP 30 (EN 60529)
	Protection class	III (EN 60730-1)
	Environment class	3K3 (IEC 60721)
CE conformity according to	EMC directive 2004/108/EC	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4



Overview of types		
Type	Properties	Buttons
EY-RU341F001	Operating unit with LCD, NTC sensor, dXs set-point correction	2
EY-RU344F001	Operating unit with LCD, NTC sensor, dXs set-point correction, fan, occupancy	4
EY-RU346F001	Operating unit with LCD, NTC sensor, dXs set-point correction, fan, occupancy, window blinds, lighting	6

Accessories	
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.)

Description of operation

The ecoUnit 3 room operating units EY-RU 341...346 record the room temperature and have buttons for setpoint correction, 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 LCD can be controlled using the room controller.

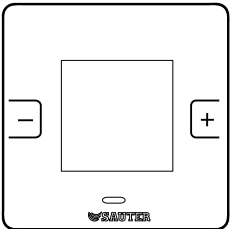
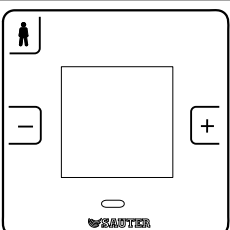
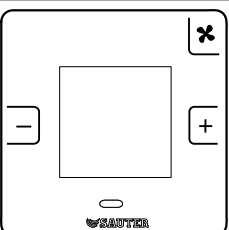
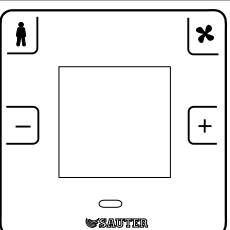
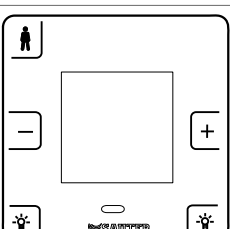
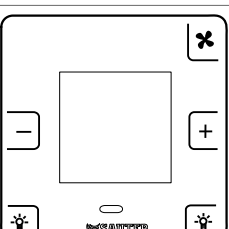
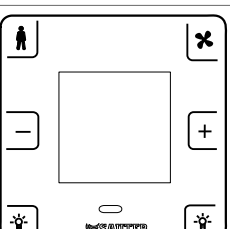
Intended use

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 341			
EY-RU 344			
EY-RU 346			

Engineering notes

Fitting

The room operating units EY-RU 341...346 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 341...346 room operating units with 6 additional button functions.

EY-SU 306 is connected to EY-RU 341...346 with a 2-core connection and can only be used in conjunction with this device.

Two EY-SU 306s 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

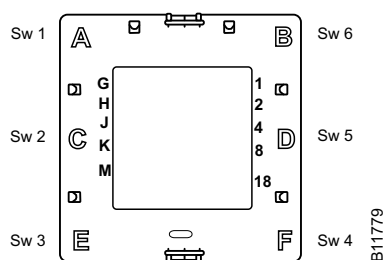
The room operating units must be connected to the ecos 5 with a 4-core cable. If several room operating units are used, these are to be connected in parallel. The system must be disconnected from the electricity supply when the operating units are connected.

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) and top right button (B). On EY-RU 341 devices, these two buttons or LEDs can only be used for addressing.

Addressing mode

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

- no address has previously been assigned to it (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 LCD.

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	Constantly ON	Device is in addressing mode (temporary)
Green	Flashing	Valid address is displayed (temporary, approx. 10 s)
Green, red	Constantly ON or OFF	Device in operation, see position LED

Non-addressed device, set address

In ex works condition, the devices are not addressed, the position LED flashes red after powering up. If button (B) is pressed for over 5 seconds, the device switches to addressing mode and the position LED is lit red continuously. The address 0 is displayed, pressing button (B) again activates the input mode. The device address (1 to 4) can now be set, represented by the last digit in the display. In this mode, the digit flashes.

The addresses 0 and 5...15 are currently not supported by ecos 5 devices. The address is scanned upwards using button (B) and downwards again using button (A). Pressing and holding button (A)

stores the setting 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.

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. The address is scanned upwards using button (B) and downwards again using button (A).

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.

Error messages on the LCD display

Err2: No communication to the automation station

Cause:

- Communication lines are not correctly installed
- Incorrectly engineered, e.g. "ROOM UNIT" module not used
- Automation station has not yet started up completely

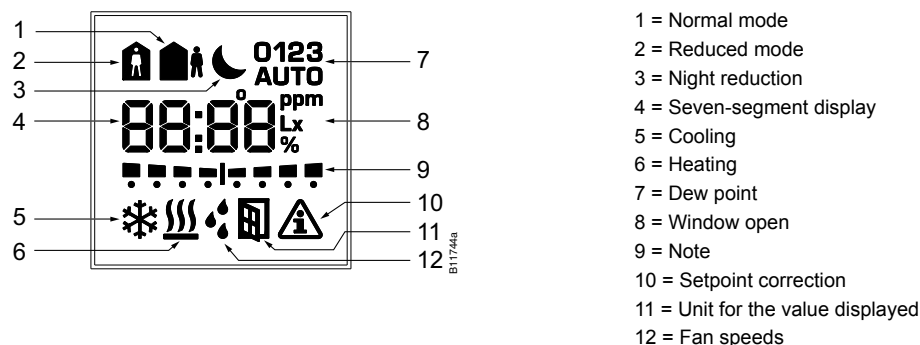
Position LED

As from the devices with index C, the state of the position LED 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 B.

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

How ecos or the operating unit and display 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.

Display functions



Additional information

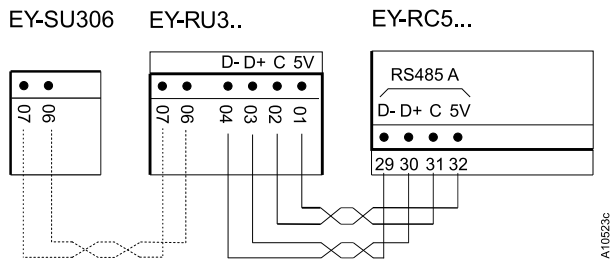
Fitting instructions	P100001966
Declaration on materials and the environment	MD 94.040
Dimension drawing	M10501
Connection diagram	A10523

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

