EY-RU 382: Room operating unit ecoUnit 382 for ecos301/302

How energy efficiency is improved

Individual setting of occupancy and absence as well as room temperature and fan speed setpoints for optimisation of the room climate

Features

- Part of the SAUTER EY-modulo 3 system family (BACnet MS/TP)
- Room operating unit for ecos301/302 for control and for ensuring individual room comfort
- Integrated temperature sensor (NTC 10k) for room-temperature control with ecos301/302
- Display, configuration and operation of the ecos301/302 room controller as a remotely installable unit
- Room operating unit with many different functions
- Individual settings (occupancy/absence and room temperature and fan speed setpoints)
- Setting of operating modes and setpoints for controlling the installation, such as fan coil units, chilled beams, chilled ceilings, etc.
- Display of operating statuses and actual values and setpoints
- Display of inputs according to the real values (based on units such as °C/°F, %, p)
- Display and operation for configuration parameters
- Digital communication with 4-wire connection to ecos301/302
- Large, blue-lit LCD

EY-RU382F001

Technical data

Power supply

Power supply		From ecos 301/302 (10...30 V=, 10...26 V~)
Power consumption		Max. 0.5 VA

Ambient conditions

Operating temperature		0...50 °C
Humidity without condensation		Max. 95% rh

Parameters

Sensor		NTC 10kOhm@25°C (Type 2)
Measuring range		0...50 °C
Accuracy		0.2 K
Setpoint		Adjustable, parameterisable
Room occupancy		2 modes, LCD symbol display
Fan speeds		5 modes, LCD

Interfaces and communication

Communication		RS-485
Connections		Screw terminals
Power cable		4-wire, 0.34…2.5 mm^2
Cable type		Shielded, twisted pairs
Cable impedance		100…120 Ω
Cable capacity		≤ 50 pF/m
Protocol		VCPP (point-to-point)

Construction

Dimensions W x H x D		88 × 88 × 30 mm
Fitting		Metal plate for standard recessed junction box (perforation 55 × 55 mm^2)
Weight		120 g

Standards and directives

Type of protection		IP30 (EN 60529)
Protection class		III (EN 60730-1)
Environment class		3K5 (IEC 60721-3-3)
Degree of contamination		II (EN 60730-1)

CE conformity	EMC Directive 2014/30/EU	EN 60730-1 (type 1)
Product standards	Automatic electric regulating and control devices	EN 60730-1
	Special requirements for temperature-dependent control devices	EN 60730-2-9
	Electromagnetic compatibility for residential premises (type 1)	Emission: EN 60730-1 (type 1) Immunity: EN 60730-1 (type 1)

Overview of types

Type	Features
EY-RU382F001	ecoUnit382, room operating unit for ecos 3, with NTC sensor, LCD, 4 push-buttons

Description of operation
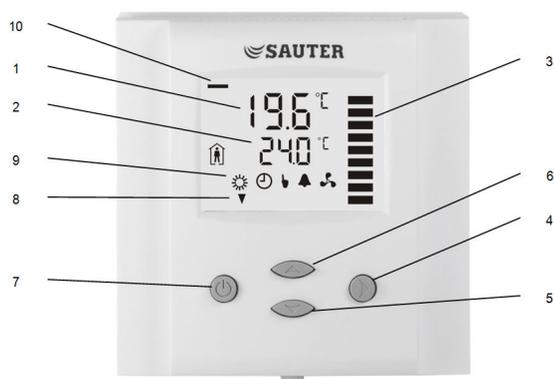
See manual (I) "ecos 3 - parametrisation".

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 regulations must also be adhered to. Changing or converting the product is not admissible.

Display and operation

The ecoUnit382 has 4 buttons and a large LCD lit up in blue. The following functions can be operated and displayed with the room operating unit:

Key

1	**Large numbers**
	Display of input value or setpoint
2	**Small numbers**
	Display of setpoint or parameter value
3	**Vertical bars**
	Analogue output: Resolution of 10%
	Fan output: Fan speed display
4	**Right (OPTION)**
	Press for < 2 seconds: select control loop
	Press for > 2 seconds: switch manually between heating/cooling and display of inputs and outputs
	(Parameter setting: ENTER to select menu option and apply parameter change)
5	**DOWN**
	Reduce SETPOINT step-by-step
	(Parameter setting: SCROLL menu options and parameters)
6	**UP**
	Increase SETPOINT step-by-step
	(Parameter setting: SCROLL menu options and parameters)
7	**Left (POWER)**
	Press for < 2 seconds: switch between occupied/not occupied operating modes, or switch from OFF to ON
	Press for > 2 seconds: switch unit off, text OFF
	(Parameter setting: ESCAPE menu option, discard parameter change)
8	**Display**
	Idle display: active digital output

Key	
9	**Mode**
	Operating mode display
10	**Control loop display**
	Idle display (no button pressed for a period of 30 seconds): Not visible
	Control loop display: bar at top left = control loop 1

Description of display and operation

Symbols for the mode	
⌂	Occupied (comfort): all control functions with normal setpoints
⌂人	Unoccupied (economy, stand-by): control function with reduced setpoints, with the intention of reducing the energy requirement.
OFF	Energy Hold Off: normal control functions are inactive and inputs are active for alarm monitoring

Symbols for the control	
☀	Heating (reverse) active
❅	Cooling (direct) active
✋	Manual override and delay when switching on
⚙	Fan active
⏲	Time programme active

Engineering notes

Electric connections

For the ecoUnit382 room operating unit, normal cables can be used in EMC-stable environments. In extremely influenced EMC environments, only shielded cables should be used. Note the connection specification for the data cables between the room operating unit and the controller. The operating voltage must fulfil the requirements for SELV (safety extra-low voltage) as per EN 60730.

Fitting

• Adhere to the fitting instructions
• Place of installation of the room operating unit: easily accessible on an interior wall, about 1.5 m above the ground, in an area with an average room temperature
• Avoid direct sunlight or other heat sources, such as the vicinity of radiators or other heating elements
• Avoid installation in places such as behind doors, on exterior walls, below or above ventilation grids and openings, and directly beside doors
• The place of installation is less critical if an external temperature sensor is being used with the room controller

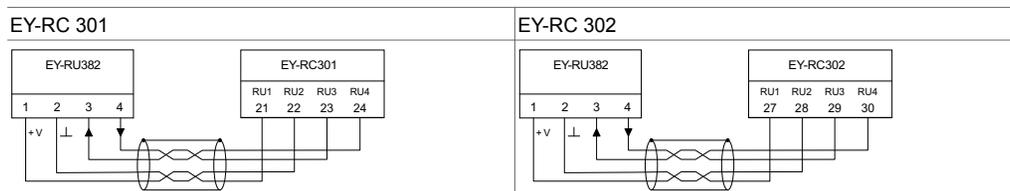For more engineering notes, see manual (I) "ecos 3 - parametrisation"

Additional information

Fitting instructions	P100012807
Manual (I): ecos 3 - room controller - parametrisation	D100233615

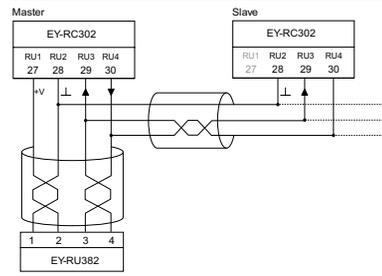### Disposal

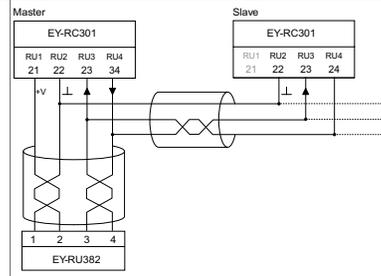The local, currently valid laws must be observed when disposing of the device.

Connection diagram

EY-RC 301	EY-RC 302

Master-slave EY-RC 301	Master-slave EY-RC 302

Dimension drawing