

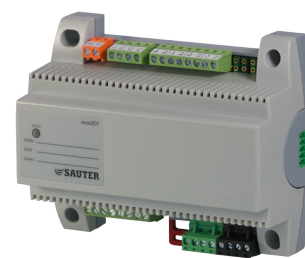
## EY-RC 301, 302: Room controller, ecos301, 302

### How energy efficiency is improved

The ecos 3 controller enables precise room climate regulation and thus ensures minimum energy consumption in the room.

### Features

- Part of the SAUTER EY-modulo 3 system family (BACnet MS/TP)
- Single-room controller for an energy-optimised room climate
- BACnet room controller (B-ASC) for fan coil unit, chilled beam, chilled ceiling, radiator heater etc.
- Individual adjustment of the room climate with the ecoUnit382 room operating unit (EY-RU 382)
- Universal PI and/or binary control sequences (loop) for all the analogue and digital input/output signals
- Optimises energy consumption thanks to presence function, window contact monitoring, demand-controlled switching of fan speeds and time-dependent setpoint specification
- Additional functions: automatic heating/cooling changeover, automatic switching on, setpoint compensation, free external cooling and other
- Mathematical functions for universal inputs: Subtraction, mean, min. and max.
- Eight freely assignable alarm conditions with a selectable status for the outputs for an alarm condition
- Time and weekly calendar function (time software)
- Integration into the building management system via BACnet router (MS/TP to IP)
- Parametrisation with ecoUnit382 room operating unit
- System bus: RS-485 (BACnet MS/TP)
- Bus for operating unit: RS-485 (VCPD)



EY-RC301F015

EY-RC302F011

### Technical data

#### Ambient conditions

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

#### Inputs / outputs

Active inputs	Analogue inputs	U/(I) 0...10 V=, 2...10 V=
	Passive inputs	Temperature sensor Resistance input Digital input, open contact
Virtual inputs	BACnet AV object	4 ×
Outputs	Triac switching outputs	0-I, PWM (24 V~, total 250 mA)
	Relay switching outputs	Normally-open contacts (250 V~/24 V=, 2 A) Normally-open contacts (250 V~, 10 A)
	Analogue outputs	3 × 0...10 V=, 2...10 V= (load ≥ 1 kΩ)

#### Interfaces and communication

Interface	Room operating unit (ROU)	1 × RS-485 for EY-RU 382 (VCPD)
Communication	BACnet MS/TP	1 × RS-485 galv. isolated, ½ load

#### Construction

Dimensions W x H x D	147 × 115 × 57 mm
Electrical connection	Screw terminals for cables from 0.34...2.5 mm <sup>2</sup>
Power supply, bus and ROU connection	Pluggable screw terminals

#### Standards and directives

Type of protection <sup>1)</sup>	IP00 (EN 60529)
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<sup>1)</sup> The type of protection is IP30...IP40 (depending on the cover in the cabinet) from the front side, if installed correctly as per EN 60730-1



	Protection class	II (IEC 60536)
	Energy class	VIII = 5% as per EU 811/2013, 2010/30/EU, 2009/125/EC
	Degree of contamination	II (EN 60730-1)
	Environment class	3K3 (IEC 60721-3-3)
CE conformity according to	EMC Directive 2014/30/EU	EN 60730-1 (type 1)
	Low-Voltage Directive 2014/35/EU	EN 60730-1, EN 60730-2-9
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	EY-RC301F015	EY-RC302F011
Power supply	24 V~ ±10%, 50/60 Hz 24 V= ±10% SELV, HD 384, Class II, 48 VA	230 V~ ±10%, 50/60 Hz
Power consumption	Max. 10 VA	Max. 13 VA
Output for power supply	–	24 V~, max. 6 VA
Number of I/Os	13	16
Passive inputs	3	4
Active inputs	3	2
Triac	–	2 (24 V~)
Relay	4 (2 A)	4 (2 A), 1 (10 A)
Control sequences (loop)	2	2
Weight	0.268 kg	0.55 kg

#### Accessories

Type	Description
0940183005	Memory plug-in for ecos 3 controller (contains 5 pcs of 0940183001)

#### Suitable products

AXT *** / AXS ***	Thermal actuators for unit valves (see product data sheets)
AXM ***	Motorised actuators for unit valves (see product data sheets)
EGT ***	External temperature sensors (active or NTC 10k) (see product data sheets)
EGT 688	Room temperature sensor (with adjuster)
EGH 102	Dew point monitor with sensor
EGT353F***	Cable temperature sensor (NTC 10k)
0450232001	Outdoor temperature sensor (NTC 10k)

#### 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.

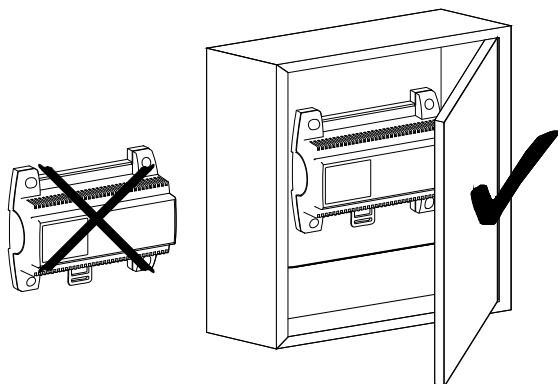
#### Engineering notes

See manual (I) "ecos 3 - parametrisation".

Generation 1: ecos301/302 as types EY-RC301F005 and EY-RC302F001 have a firmware version 1.2 with a PI and/or binary control sequence (1-loop).

Generation 2: ecos301/302 as types EY-RC301F015 and EY-RC302F011 have a firmware version 1.4 or higher with two PI and/or binary control sequences (2-loop). These controllers are hardware-identical and compatible with controllers with a control sequence.

**Fitting**



**Additional information**

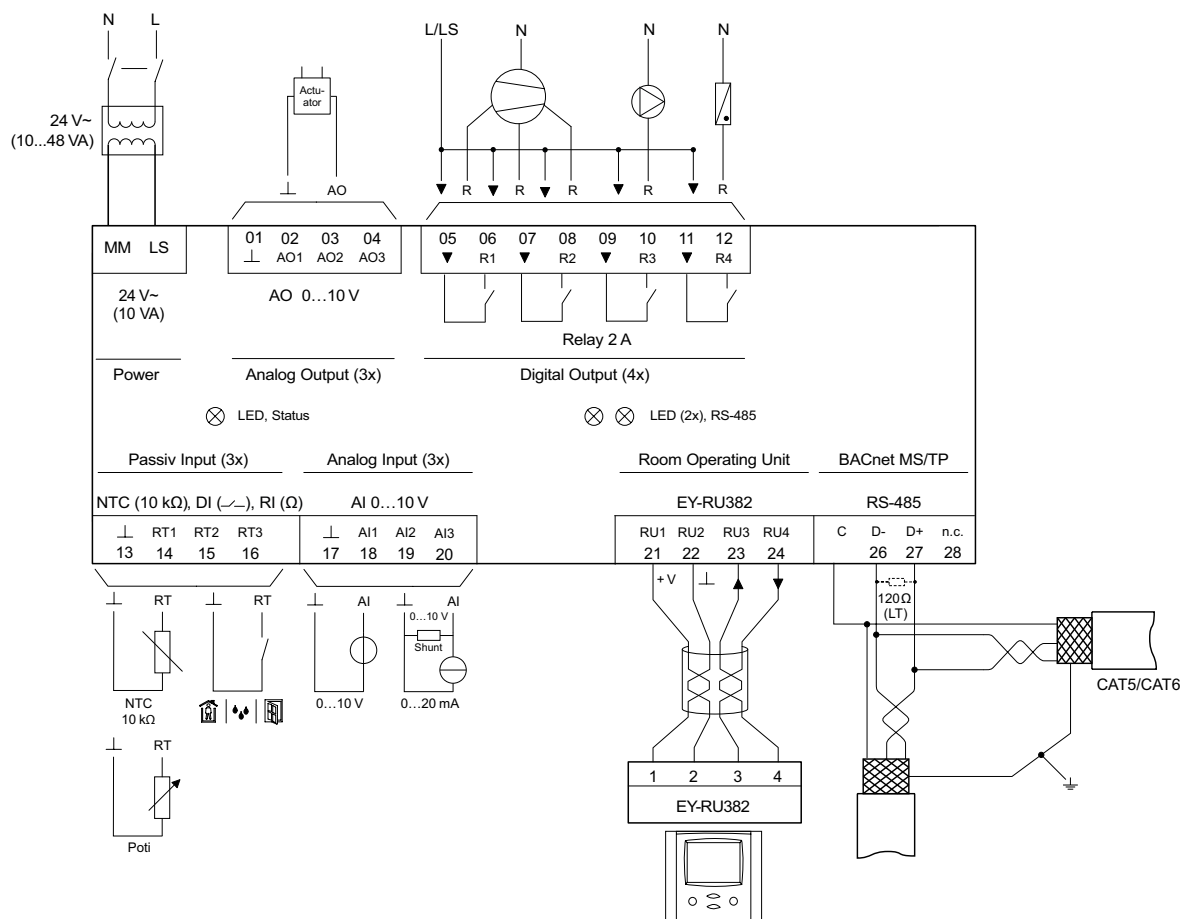
Fitting instructions	P100012806
Manual (I): ecos 3 - room controller - parametrisation	D100233615

**Disposal**

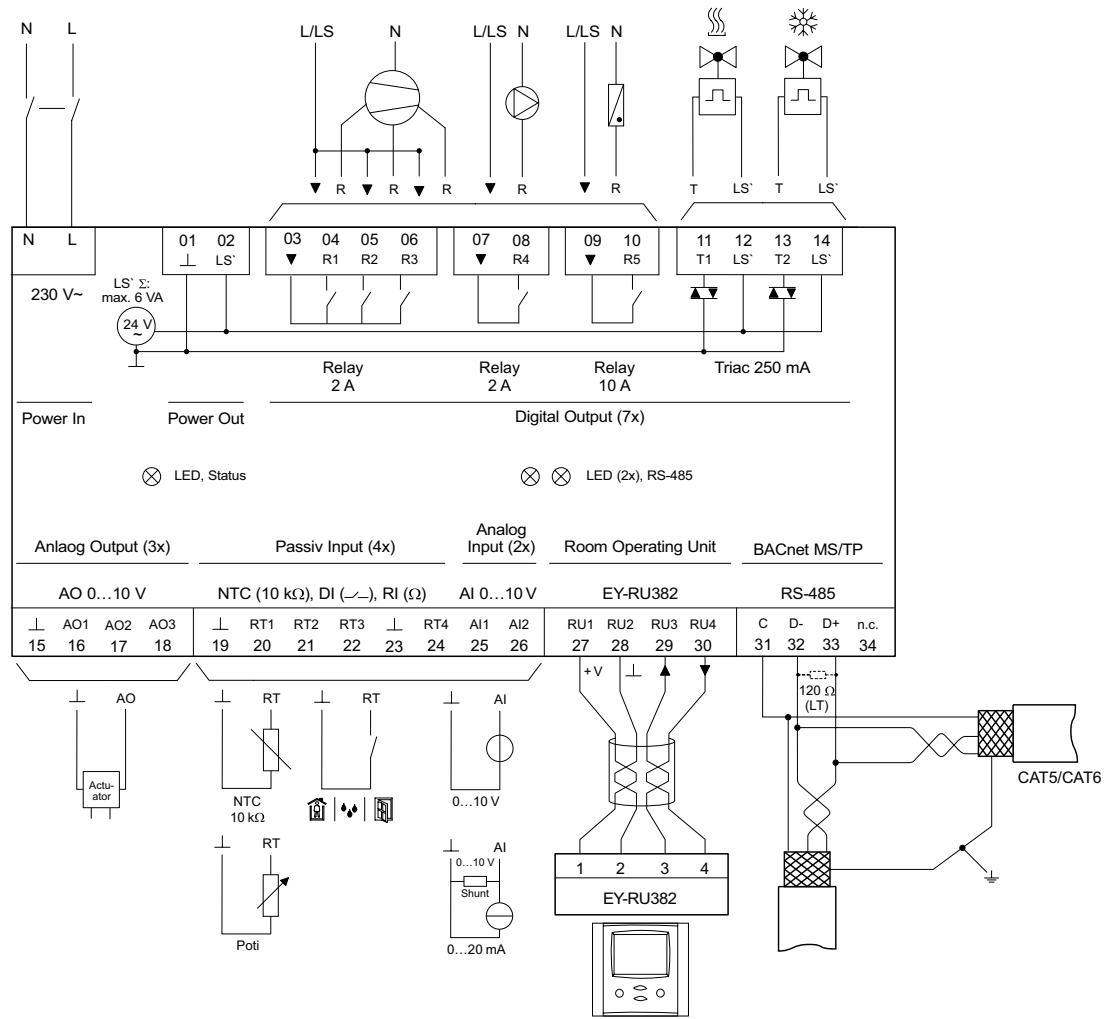
The local, currently valid laws must be observed when disposing of the device.

**Connection diagram**

EY-RC301F015



**EY-RC302F011**



**Dimension drawing**

