# EY-RC301F005: Room controller ecos301

## Areas of application

Room controller for energy-optimised regulation and control of various room functions, such as temperature, air quality or humidity. Integrated control functions for individual control of rooms dependent on room occupancy. Controller operates autonomously for integration into a BACnet MS/TP network.

Typical applications for the controller:   
Fan coil unit, radiant heating, fan, cooling ceiling, chilled beams. Using the master/slave function of the controller several room controllers can be connected together and are operating in parallel to create a complete application, so only one room unit controls a couple of the same apparatus synchronously.

## Performance features

Universal room controller with high-performance function modules, to be parameterized, such as:

* Standard control algorithms (P, PI)
* Digital control sequence
* Operating and monitoring functions
* Set point command for control value
* Command of fan
* Simple arithmetic of inputs
* Alarm and interlock functions
* Free outside cooling
* Summer-/winter compensation
* Automatic change-over function
* Automatic presence/absence detection
* On/Off function
* Clock, date
* Local weekly schedule

The room controller can communicate with a building management system with an open, standardized protocol. A router might be used to communicate with a superordinate network.

## Technical data

Power Supply

|  |  |
| --- | --- |
| Power supply | 24 V~ ± 10%, 50/60 Hz or 24 V= ± 10% |
| Power consumption | 10 VA |

Interfaces and communication

|  |  |
| --- | --- |
| System bus | EIA-485 (half-duplex), ½ unit load |
| Protocol | BACnet MS/TP |
| Function profile | B-ASC |
| Connector to room unit | 4-wire cable (EIA-485, +V/GND) |

Inputs/outputs

|  |  |
| --- | --- |
| Number of inputs/outputs (total) | 13x |
| Active inputs | 3x 0/2…10V= |
| Passive inputs | 3x |
| - Binary input | 100%/0% (ON/OFF) |
| - Temperature input | NTC10kOhm |
| - Resistor input | 0…20kOhm |
| Analogue outputs | 3x 0/2…10V= (load ≥1kOhm) |
| Relay outputs (contact load) | 4x NO contacts (250 V~/24 V=, 2 A) |

Room unit (optional)

|  |  |
| --- | --- |
| Room temperature sensor | NTC10kOhm |
| Number of push-buttons | 4x |
| Push-button functions | For operating, parameterization and monitoring |
| LCD display | Large, backlight 2x real values 1x bar graphic (0…100%) |
| Push-button for fan | Circular key (Auto-0-I-II-III) for fan control |
| Two push-buttons | Setpoint adjustment |
| Push-button for modes | ON/OFF, Presence/Absence |
| Operation feedback of functions | Defined symbols on LCD  (heating, cooling, manual, fan, time program…) |

Admissible ambient conditions

|  |  |
| --- | --- |
| Operating temperature | 0...50 °C |
| Humidity | <95% rH (no condensation) |

Mechanical structure / Installation

|  |  |
| --- | --- |
| Compact unit | Plastic housing with fire-retardant material |
| Type of installation | Wall mounting or top-hat rail in cabinet |
| Dimensions, W x H x D (mm) | 147 x 115 x 57 |

Standards and directives

|  |  |
| --- | --- |
| Ingress protection | IP 00 (EN 60529) |
| Protection class | II (EN 60730-1) |
| Environment class | 3K3 (IEC 60721) |
| CE conformity | EN 60730-1, EN 60730-2-9 (Type 1) |

**Manufacturer:** SAUTER

**Type:** EY-RU301F005