

ecoUnit210...216: Комнатная панель для EY-modulo 2 ecos

Возможность большей эффективности использования энергии

Индивидуальное задание времени присутствия и отсутствия, а также корректировка комнатных уставок, регулирование освещения и затемнения для оптимизации комнатного потребления энергии.

Область применения

Рабочее устройство для регулирования и обеспечения максимального комфорта в комнате. Измерение и регулировка температуры в комнатах с разными типами оборудования с помощью коммуникативных интеллектуальных контроллеров EY-modulo 2 ecos.

Характеристики

Часть серии систем SAUTER EY-modulo 2

Комнатная панель с широким диапазоном функций, дизайна и цвета.

Устройство с прозрачной передней крышкой монтируется в рамку профиля 55 x 55 мм

Рамки должны быть заказаны как аксессуары.

Внутренний климат может быть отрегулирован индивидуально.

Рабочий режим устанавливается с учетом присутствия людей в комнате, управление 3-ступенчатым вентилятором.

Техническое описание

Питание ecos 2

3-жильное подключение

Продукт

Тип	Описание
EY-RU210F001	ecos 2 комнатная панель, NTC -сенсор
EY-RU211F001	ecos2 комнатная панель, NTC, задатчик уставки (dXs)
EY-RU214F001	ecos2 комнатная панель, NTC, dXs, 2 кнопки
EY-RU216F001	ecos 2 комнатная панель, NTC, dXs, 4 кнопки

Технические данные

Датчик

Диапазон измерения	0...40 °C
Разрешение	0,1 K

Функциональность

Коррекция уставки	настраиваемая
Присутствие LED	3 режима, LED -дисплей
Скорость вентилятора LED	4 режима, LED -дисплей

Соединение

Кабель	3-жильный
Длина	до 100 м

Допустимые окружающие условия

Рабочая температура	0...45 °C
Влажность	до 85 % rh (без конденсата)

Разне

Временная	постоянная	(в 10 мин.
спокойном воздухе)		

1) При обязательном требовании выполнения промышленного стандарта (EN 61000-6-2) максимальная длина кабелей подключения не должна превышать 30 м.

Аксессуары

Тип	Описание
	Установка
094 0240101	Рамка, одинарная, включая фиксирующую пластину (для заглубленной соединительной коробки, 10 x)
094 0240201	Рамка, двойная, включая фиксирующую пластину (для заглубленной соединительной коробки, 10 x)
094 0240301	Основа, одинарная (для монтажа на стену, 10 x)
094 0240401	Основа, двойная (для монтажа на стену, 10 x)
094 0240501	Кабельная пластина, одинарная (для монтажа кабеля на поверхности, 10 x)
094 0240601	Кабельная пластина, одинарная (для монтажа кабеля на поверхности, 10 x)
094 0240701	Фиксирующая пластина, одинарная (для не-Sauter рамки, 10 x)



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094 0240801	Фиксирующая пластина, одинарная (для не-Sauter рамки, 10 x)
094 9241301	Прозрачная крышка (10 x)

Front view



EY-RU210



EY-RU211



EY-RU214



EY-RU216

Engineering notes

Installation

ecoUnit210...216 room operating units are suitable for various types of mounting.

Single mounting (1 device):

Type of mounting	Recessed junction box	Accessories	Designation / scope of delivery
Recessed mounting	Suitable types, e.g.: D: Manufacturer: Kaiser CH: Manufacturer: AGRO F: Manufacturer: Legrand	094 0240201	Frame, single, including fixing plate. (packaging unit of 10 pcs.)
Wall mounting	If necessary	094 0240401	Base, single (packaging unit of 10 pcs.)
Wall mounting with surface-mounted connecting cable	None	094 0240601	Cable plate, single (packaging unit of 10 pcs.)
Recessed mounting with non-Sauter frame	Suitable types, e.g.: D: Manufacturer: Kaiser	094 0240801	Fixing plate, single (packaging unit of 10 pcs.)

Double mounting (2 devices below each other):

Type of mounting	Recessed junction box	Accessories	Designation / scope of delivery
Recessed mounting	Suitable types, e.g.: D: Manufacturer: Kaiser CH: Manufacturer: AGRO F: Manufacturer: Le Grand	094 0240201	Frame, double, including fixing plate (packaging unit of 10 pcs.)
Wall mounting	If necessary	094 0240401	Base, double (packaging unit of 10 pcs.)
Wall mounting with surface-mounted connecting cable	None	094 0240601	Cable plate, double (packaging unit of 10 pcs.)
Recessed mounting with non-Sauter frame	Suitable types, e.g.: D: Manufacturer: Kaiser	094 0240801	Fixing plate, double (packaging unit of 10 pcs.)

Use of different frames

As the device insert is separate from the frame, there are many different possibilities for the type of mounting and choice of frames. This flexibility is implemented by the choice of the relevant accessories.

094 0240101 Frame, single, incl. fixing plate

The fixing plate is screwed onto a recessed junction box. The device insert is placed on the frame and connected to the fixing plate by pressing it in.

094 0240201 Frame, double, incl. fixing plate

Same as single frame. However, this enables two devices to be mounted below or next to each other.

094 0240301 Base, single

The base can be screwed directly onto the wall. In this case, the cable feed also comes out of the wall, from behind. The device insert is fitted onto the base by pressing it in.

094 0240401 Base, double

Same as single frame. However, this enables two devices to be mounted below or next to each other.

094 0240501 Cable plate, single

094 0240601 Cable plate, double

If the cable feed to the base is installed on the surface, this accessory is fitted under the base. The cable plate can be broken open at various points to feed the cable in.

094 0240701 Fixing plate, single

094 0240801 Fixing plate, single

For use with non-Sauter frames. If non-Sauter frames (e.g. from light switch manufacturers) are used, perfect mechanical functioning must be ensured.

The fixing plate is screwed onto a recessed junction box. The device insert is placed on the frame and connected to the fixing plate by pressing it in.

Addresses (MFA) for the ecoUnit 210...216
(with EY-SU306 switching unit)

The type of room operating unit defines the number and types of possible operating functions.

All possible addresses (MFAs) for the room operating unit are shown below.

EY-RU216	Button		Button
	1		
	2		
	3		6
	4		
	5		

EY-SU306	7		12
	8		
	9		

	Button	Function	Address (MFA)
EY-RU216	1	Occupancy mode	56
	2	Not available	-
	3	Freely assignable	0/fc1 (bit24)
	4	Freely assignable	0/fc2 (bit25)
	5	Not available	-
	6	Fan speed	57
	-	Temperature sensor	09
	-	Setpoint adjuster	10
	-	Occupancy LED	40
	-	Fan LED	41
EY-SU306	7...12	Freely assignable	08
	8	Freely assignable	58
	11	Freely assignable	59

Switching unit EY-SU306 extends room operating unit EY-RU216 by adding 6 key functions. It must be connected directly to the EY-RU216. The connection is made with a two-wire connecting cable (included in scope of delivery for EY-SU306).

Position LED

EY-RU216 makes it possible to switch light strips. Depending on the project, it may be necessary to find the light switches easily even if the room is in darkness.

On the EY-RU216, if terminal 4 is wired to terminal 1, the position LED on the operating unit is constantly lit.

Actual value, temperature Xi (MFA 9)

The sensor is an NTC element with 10 kΩ at 25 °C, and it must be linearised in the ecos.

Important: linearisation of this measurement address depends on the type.

EY-RU210	EY-RU211...216
Linear correction	Linear correction
a = 0,14	a = 0,14
b = 3	b = 0

EY-SU306 switching unit (with EY-RU216 only)

Key presses are transmitted to the EY-RC 216 via analogue signals (MFA08).

Linear correction: a = 100, b = 0

The ecos user programme evaluates which of the 6 keys has been pressed.

The two middle keys (8, 11) of the switching unit are also connected to MFA 58 and 59. These two MFAs are processed more quickly.

Setpoint correction dXs (MFA 10)

Due to the different ecos types and their different operating programme versions, different linear correction factors (a, b) are required for individual setpoint correction ranges.

ecos201, 202, 205, 206 (index ≥ H)			ecos201, 202, 205, 206 (index ≤ G)	
ecos200, 208, 209			a	b
Range	a	b		
±1,0 K	0,22	-0,07	0,00348	-0,55
±1,5 K	0,325	-0,1	0,005	-0,7
±2,0 K	0,435	-0,135	0,00662	-0,952
±2,5 K	0,545	-0,17	0,008333	-1,22
±3,0 K	0,655	-0,2	0,010043	-1,487
±3,5 K	0,765	-0,24	0,011753	-1,754
±4,0 K	0,87	-0,28	0,013463	-2,001
±4,5 K	0,983	-0,31	0,015173	-2,248
±5,0 K	1,09	-0,35	0,016883	-2,495

Note: the setpoint correction is automatically zeroed on exiting comfort mode (occupancy = 0). It is usually necessary to enter a linear correction.

Display functions, occupancy and fan LED
Fan speed LED (MFA41)

The next table shows the commands for MFA 41 in order to control the LED display for the fan speeds. A CASE-Engine template is available to control speeds A-3-2-1-0 (circulation control).

FAN speed (LED display)	Command at digital output MFA 41
Auto	No command present
0	Commands 1 + 2 + 3 + 4 simultaneously
1	Command 1
2	Command 2
3	Command 3
All LEDs out	Commands 1 + 2 + 3

ecoUnit 21 also has an active LED display for fan speed 0. If the 'circulation control' stored in the ecos operating programme is used, speed 0 is not controlled and A-3-2-1 are then applicable.

Occupancy modes LED (MFA40)

The next table shows the commands for MFA 40 in order to control the LED display for the occupancy modes.

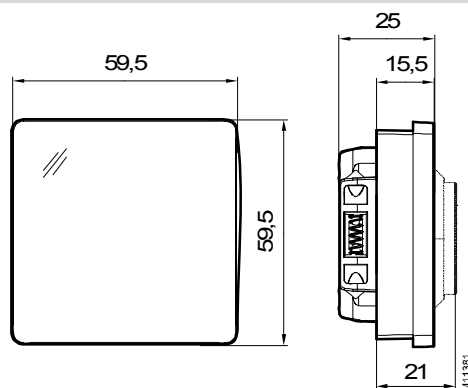
Occupancy modes (LED display)	Command at digital output MFA 40
Absent (building empty)	No command present
Comfort (person in building)	Command 1
Reduced (moon)	Command 2
All LEDs out	Command 1 + command 2

Exchanging room operating units of type EYB250...256 for ecoUnit210...246

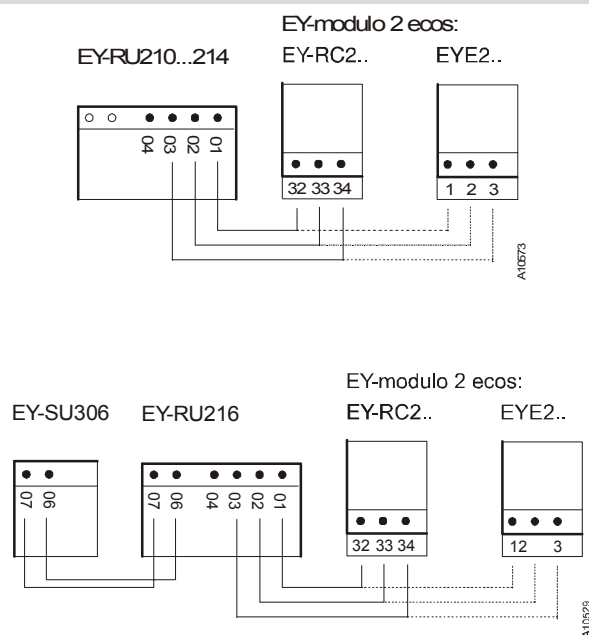
The following changes are required in the ecos user programme in case of an exchange:

MFA	Inscription	Activity
09	NTC sensor	Adapt linear correction a, b
10	Setpoint correction	Adapt linear correction a, b
41	Fan speed display	If an active display is wanted for speed 0 (LED), the programme must be adapted accordingly.

Dimension drawing



Wiring diagram



The noise immunity of transmission between the operating unit and the ecos is increased if twisted wires are used.