EYE 202: DDC single-room controller, ecos202

How energy efficiency is improved

Individual unitary control, fan coil units, chilled-ceiling control etc.

Features

- Part of the SAUTER EY-modulo 2 system family
- Individual unitary control, fan coil units, chilled-ceiling control etc.
- Individual adjustment of the room climate via room operating units of the EY-RU 2** series
- Optimisation of energy consumption using presence function, monitoring of window contacts, demand-controlled switching of fan speeds and time-dependent setpoint specification
- Time and calendar function
- Recording in historical data base (HDB)
- Integration into the building management system via novaNet data interface
- Programming/parameterisation via PC using CASE Suite software (based on IEC 61131-3)
- novaNet system bus (2-wire)

Technical data

Power supply		
	Power supply	24 V~, ±20%, 50/60 Hz
	Power consumption	10 VA

Ambient conditions		
	Operating temperature	0...45 °C
	Storage and transport temperature	–25...45 °C
	Humidity	< 85% rh, no condensation

Inputs/outputs		
Inputs	Operating unit	1, EY-RU 2**
	Temperature sensor	2, N1,1000
	Command variable	1, 0...10 V, (R_i= 10 kΩ)
	Digital inputs	3, 0-1
Outputs	Triac switching outputs	2, 0-I-II (24 V~, 1 A)
	Relay switching outputs	3, normally-open contacts (250 V~, 2 A)
	Analogue	2, 0...10 V (load ≥ 1 kΩ)

Construction		
	Dimensions W x H x D	178 × 103 × 42 mm
	Weight	0.37 kg

Standards and directives		
	Type of protection	IP10 (EN 60529)
	Protection class	I (EN 60730-1)
	Energy class[1]	I to VIII = up to 5 % as per EU 811/2013, 2010/30/EU, 2009/125/EC
	Software class	EN 60730-1 Appendix H
CE conformity according to	EMC Directive 2014/30/EU[2]	EN 61000-6-1, EN 61000-6-2 EN 61000-6-4
	Low-Voltage Directive 2014/35/EU	EN 60730-1, EN 60730-2-9

Overview of types	
Type	Description
EYE202F001	DDC single-room controller, 3 relays

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[1] When the automation station is being used as a temperature controller, most temperature controller classes can be fulfilled according to EU Directive 2010/30/EU, Regulation 811/2013. For information on the exact temperature class, please refer to the system integrator's user program.

[2] EN 61000-6-2: In order to meet the European Standard, the power cables must not exceed 30 metres in length.

Accessories	
Type	Description
0450573001	Transformer 230 V~/24 V~ 42 VA; for 35 mm DIN rail (EN 50022)

Description of operation

The ecos200 DDC unitary controller enables energy-optimised room control and therefore ensures minimum energy consumption.

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.

Transformer sizing

Only safety transformers conforming to EN 61558 2-6 may be used. Transformers with low outputs sometimes generate excess voltage which can destroy the ecos202 device. It is therefore essential that the transformer from the list of accessories in this product data sheet is used for outputs up to 42 VA. Transformers with an output of 62 VA and higher do not cause these problems. A good, industrial-quality transformer can be used. The output voltage of the transformer, taking into account the full tolerance range of the mains voltage (230 V, ±10%), must always lie within the specified input voltage range of the ecos202 device.

The form factor of the current consumed by the ecos deviates greatly from the sinus function. Therefore it is recommended to size the transformers with a reserve in line with the following list:

• For 1 or 2 ecos: Select a transformer of at least 42 VA
• For 3 or 4 ecos: Select a transformer of at least 62 VA
• For 6 ecos: Select a transformer of at least 75 VA
• For 10 ecos: Select number of transformers ecos x 10 VA

Engineering notes

When connecting it to 230 V~, the unit must be protected against contact.

The communication wiring must be carried out correctly and in accordance with standards EN 50174-1, -2 and -3. Communication wires must be kept separate from other live wires.

Special standards such as IEC/EN 61508, IEC/EN 61511, IEC/EN 61131 1 and -2 were not taken into account. Local requirements regarding installation, usage, access, access rights, accident prevention, safety, dismantling and disposal must be taken into account. Furthermore, the installation standards EN 50178, 50310, 50110, 50274, 61140 and similar must be observed.

The following conditions must be met:

Wire cross-section	Min. 0.8 mm², max. 2.5 mm² copper wire taking standards and national installation requirements into account

This is class A equipment. It may cause wireless interference in residential premises; in this case, the operator may be requested to implement appropriate measures.

For further information, see the fitting instructions.

		EYE 202	
MFA	Address type	HDB	Terminals
04	Ni1000 temperature measurement (measuring range: -10…95 °C)	*	4-6
05	Ni1000 temperature measurement (measuring range: -10…95 °C)	*	4-7
07	Analogue measurement 0...10 V=	*	4-5
09	Ni1000 temperature measurement (operating unit) (measuring range: -10…95 °C)	*	3-2-1
10	Potentiometer measurement (operating unit) (basic setting: ± 2°)	*	3-2-1
20	Analogue output 0 (2)...10 V=	*	8-9
21	Analogue output 0 (2)...10 V=	*	8-10
32	Digital output 0-I-II (Triacs 24 V~, 1 A)	*	19-20-21
33	Digital output 0-I-II (Triacs 24 V~, 1 A)	*	22-23-24
35	Digital output 0-I II III (relays 250 V~, 2 A)	*	11-12-13-14
40	Operating feedback MFA 56 (0-I-II)	*	Internal
41	Operating feedback MFA 57-1 (0-I-II-III)	*	Internal
42	Rotating circuit from MFA 56 0-I-II-0…	*	Internal

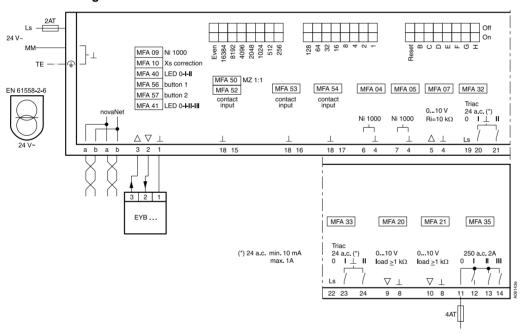| MFA	Address type	EYE 202	
		HDB	Terminals
43	Rotating circuit from MFA 57 0-III-II-I-0…	*	Internal
50	Quantity counter from MFA 52	*	18-15
52	Contacts input	*	18-15
53	Contacts input	*	18-16
54	Contacts input	*	18-17
56	Contacts input button 0-I-II (operating unit)	-	3-2-1
57	Contacts input button 0-I-II-III (operating unit)	-	3-2-1

Additional information

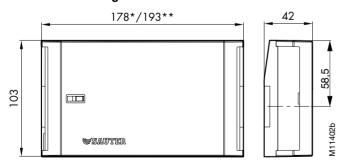| Fitting instructions	MV 505444
Declaration on materials and the environment	MD 94.201

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