

## FCCP 200: Fume-cupboard indicator and monitor

### How energy efficiency is improved

Display and interface for safe, energy-efficient monitoring of fume cupboards, pressure zones and other ambient conditions with an attractive design and state-of-the-art technology

### Features

- Measured value display and indication of operating statuses for a range of ambient conditions such as pressure, temperature, relative humidity etc. in combination with an EY-RC 504/505 room automation station or an ASV 2\*5 VAV compact controller
- Monitoring fume cupboards as per EN 14175-2 to check that they are functioning correctly and that the ventilation is operated to provide maximum safety for the laboratory staff
  - Indication when the front sash is open > 500 mm
  - Switching the fume cupboard lighting on and off
  - Up to two function indicators for double-sided fume cupboards
  - Indication of day/night change-over
  - Audible alarm can be delayed or muted via configuration
- Demand-controlled regulation of fume cupboards as per EN 14175-6 in combination with the ASV 2\*5 VAV compact controller
- Function indicator with visual and audible notification as per EN 14175-2
- Storage of all defined parameters with protection from power failure
- Interface for easy configuration of the connected VAV ASV 2\*5
- Five freely configurable push-buttons<sup>1)</sup>
- Chemical-resistance glass surface
- Units that can be displayed: m/s, fps, l/s, m<sup>3</sup>/h, cfm, Pa, °C, °F, %rh, ppm



FCCP200F010

International Design Award



Focus Open 2016  
Special Mention

### Technical data

#### Power supply

Power supply	5 V, ±10%
Power consumption	0.4 VA

#### Parameters

Audible alarm	Sound pressure level	80 dB (A)
	Frequency	4 kHz
	Alarm duration <sup>2)</sup>	60 s
	Start-up delay	Adjustable from 0 to 3200 s
Optical alarm	Brightness	EN 842, punctiform
	Field of view	> 120°
Temperature sensor	Measuring range of temperature sensor <sup>3)</sup>	-5...50 °C

#### Admissible ambient conditions

Operating temperature	5...45 °C
Storage temperature	-20...80 °C
Humidity without condensation	< 5...85% rh

#### Construction

Dimensions W x H x D	169 × 36 × 12 mm
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#### Standards and directives

Protection class	III (EN 60730)
Protection class (when installed)	IP41 installed vertically
EMC Directive 2014/30/EU	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4

<sup>1)</sup> In combination with the EY-RC 504/505 room automation station and CASE Engine.

<sup>2)</sup> Can be set using software.

<sup>3)</sup> After it is installed, the temperature sensor must be calibrated using CASE Engine software during the commissioning.



### Overview of types

Type	Features
FCCP200F010	Fume cupboard monitor and indicator

### Accessories

Type	Description
0300360001	USB-RS-485 converter
0430600100	USB-C RJ12 cable FCCP 200

## Description of operation

The FCCP 200 unit is a fume cupboard monitor and indicator that is used to monitor fume cupboards, pressure zones and other ambient conditions.

The FCCP 200 unit can be connected to an EY-RC 504/505 room controller via the RS-485 interface using the SLC protocol. This enables a wide range of application options such as displaying, specifying and indicating parameters. A firmware module integrated into the CASE Engine software can be used to set and evaluate all of the inputs and outputs of the FCCP and thus integrate them into complex room automation functions. For example, the entire room climate regulation can be operated and displayed. Selected setpoints and actual values for temperature and volume flow, and also lighting and window blinds, can be controlled via the buttons, and the actual values for multiple sensors can be shown on the display. The FCCP notification and indicator unit can be integrated into the SAUTER room automation to enable the room controls to be changed easily. After a defined period of time, the indicator unit changes to the ECO mode in order to save energy on stand-by, or the time is displayed. Touching the switch-on button displays the dimmed button icons again. The design award-winning FCCP 200 room operating unit combines aesthetics with functionality in clean rooms, laboratories and other challenging spaces.

In combination with an ASV 2\*\* VAV compact controller, the unit can be used as a display and notification unit for room and duct pressure and for the fume cupboard. By changing the backlighting, the unit indicates the transition from a septic to an aseptic state, or that the room pressure has fallen below a defined setpoint. The user can turn off the buzzer via the mute button. The parameterisation is performed in the CASE VAV software. In accordance with EN 14175-2, fume cupboards must be equipped with a function indicator for monitoring the correct return-air volume flow. For this purpose, the return-air volume of the fume cupboard is continuously detected and compared with the return-air volume flow specified by the fume cupboard manufacturer. If the volume flow is not adequate, the user is informed of this malfunction via a visible and audible notification. In combination with the ASV VAV compact controller, the FCCP monitoring system ensures energy-efficient operation and controls the ventilation in accordance with EN 14175-6. The parameterisation socket for the access to the ASV 2\*\* VAV compact controller is located on the bottom of the FCCP 200. This enables convenient configuration of the VAV compact controller. New applications can be installed or parameters changed.

## Intended use

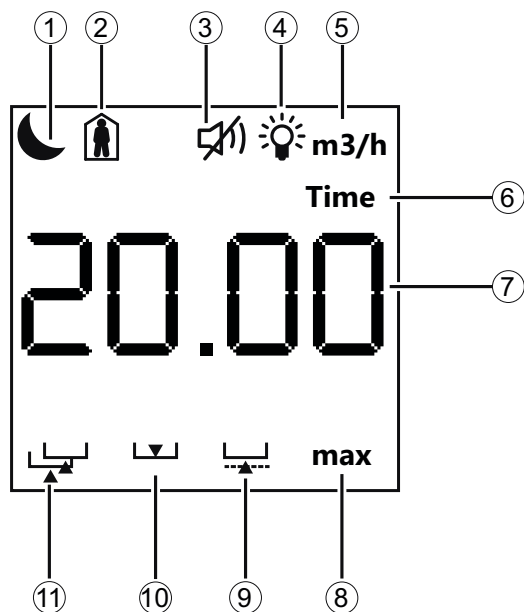
This product is only suitable for the purpose intended by the manufacturer, as described in the "Description of operation" section.

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

## Summary of functions (FCCP)

Button	"Fume cupboard monitoring" function
max	Emergency mode. When the <i>max</i> button is pressed, the return-air volume flow is increased to the parameterised volume flow <i>max</i> independently of the front sash position. Note: The function "damper OPEN" can also be assigned to the ASV 2** instead of <i>max</i> .
min	Set-back mode. When the <i>min</i> button is pressed, the return-air volume flow is decreased to the parameterised volume flow <i>min</i> independently of the front sash position.
Mute	Manual acknowledgement of the audible alarm. After approx. 60 s, the audible alarm is automatically muted.

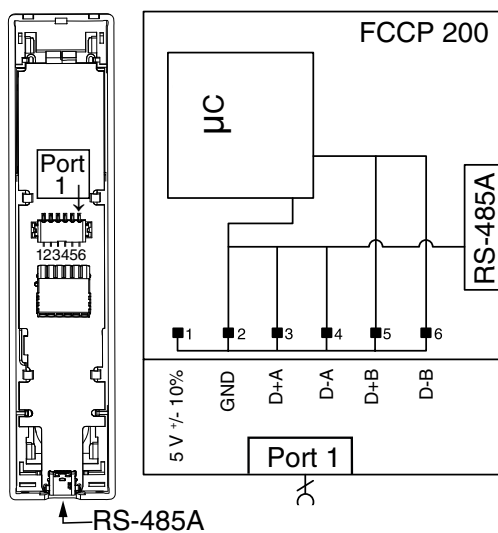
Button "Fume cupboard monitoring" function	
Lighting	Switching the light on/off in the fume cupboard. This functions independently of the current state of the fume cupboard.
⏻	Button for switching the fume cupboard on or off. When the fume cupboard is switched on, it is activated in the general operating state, i.e. the return air is open and the air monitoring becomes active. When the fume cupboard is switched off, the damper of the VAV controller moves to the parameterised end position (factory setting: closed). All of the monitoring functions are deactivated.



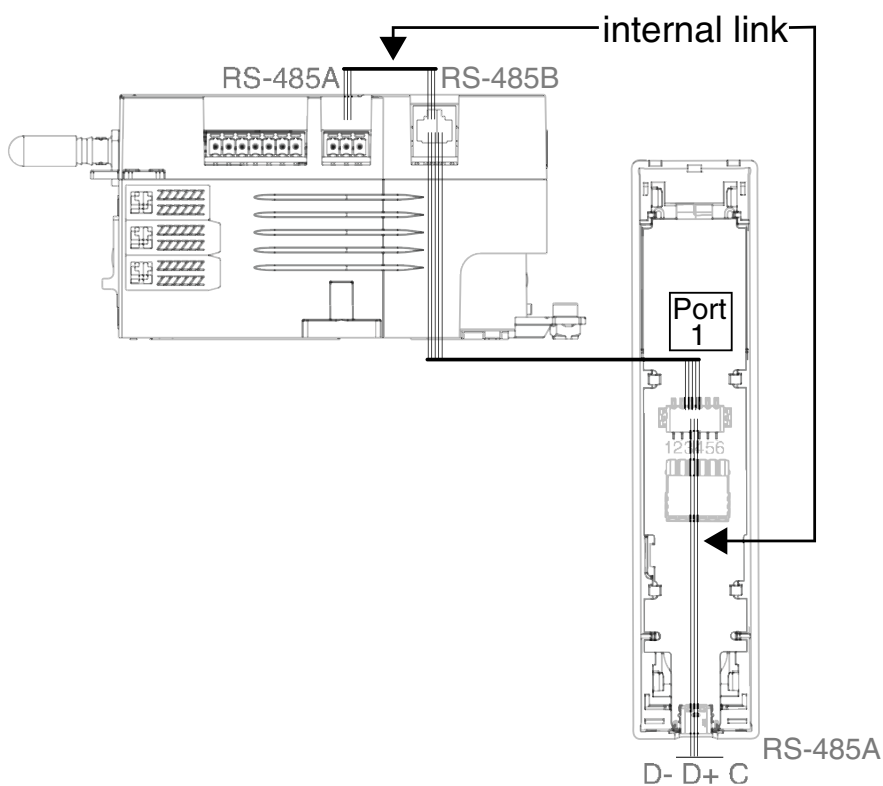
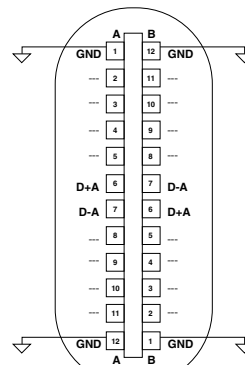
No.	Value	Description
1	Night set-back mode	Confirms the activated night set-back mode. This function can be implemented with a higher-level room automation station (ecos504/505).
2	Occupancy	Shows the status of a presence detector.
3	Mute	Shows that the built-in buzzer is switched off.
4	Lighting	Shows whether the light in the fume cupboard is switched on or off.
5	Unit	Shows the unit of the value displayed: m/s, fps, l/s, m <sup>3</sup> /h, cfm, Pa, C, F, %rH, ppm
6	Time	Is displayed if the FCCP 200 is showing the current system time. (Only in combination with ecos504/505)
7	Value	Shows the value of the physical variable to be monitored.
8	max/min	Confirms the activated function max. or min.
9	Front sash excess opening	Warns if the front sash is open more than 500 mm. The monitoring of the front sash opening can optionally be performed via position sensor SGU 100.
10	Close front sash	Shows that the front sash should be closed.
11	Simultaneousness	Shows that too many fume cupboards are open simultaneously.

### Connection schema

#### Terminal assignment



#### RS-485A

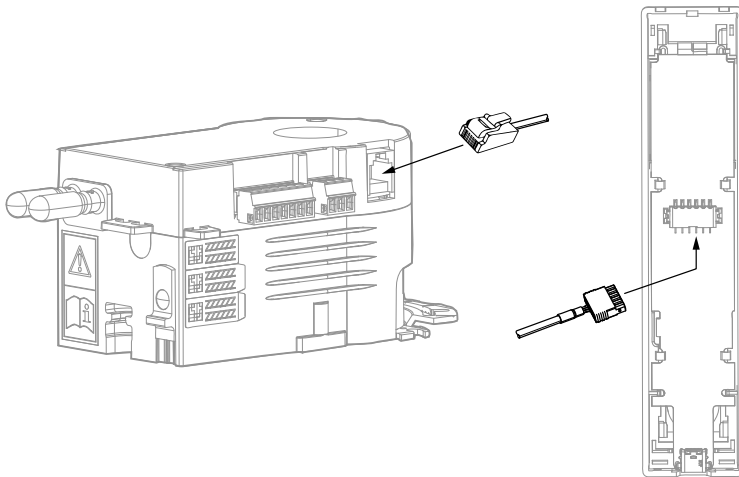


#### Note

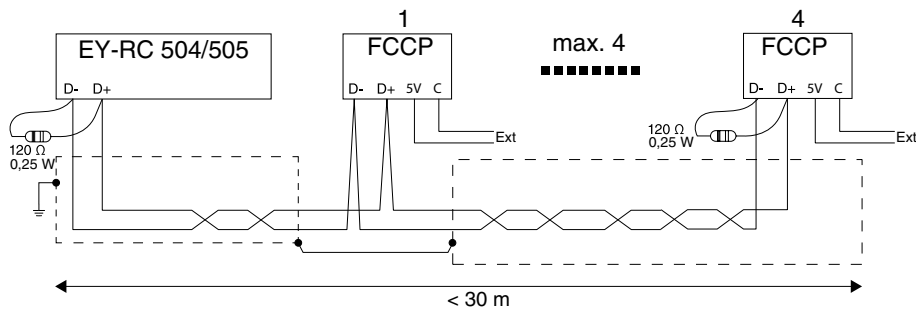
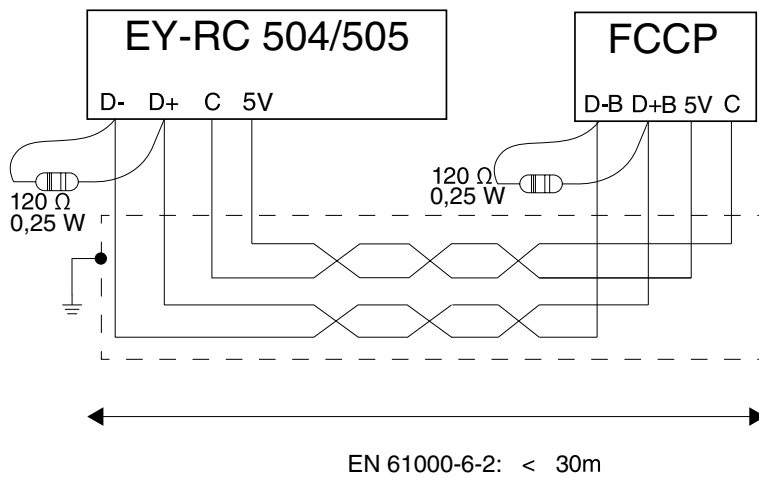


RS-485A via port 1 only enables access to the network for configuring connected ASV 2\*\* devices.  
 RS-485B is used for the point-to-point data connection between ASV 2\*\*, EY-RC 504 and FCCP 200.

Connection of FCCP to ASV 2\*\* with cable provided



Connection of FCCP to EY-RC 504/505



Engineering and fitting notes

The FCCP 200 fume cupboard monitor and indicator can be surface-mounted directly on the fume cupboard. The fume cupboard monitor and indicator is supplied with a 2.9 m connection cable equipped with connectors that enable easy fitting.

As the above schema shows, both the EY-RC room automation unit and the ASV 2\*\* can operate only one FCCP via the internal power supply. Up to four FCCP units can be connected to the EY-RC 504/505 for each RS-485 line and be integrated into the SAUTER room concept. However, these units must have a separate power supply. The maximum cable length is 30 m.

### Connection variants

	ASV 2** with internal power supply	ASV 2** with external power supply 5 V	EY-RC 504/505 with internal power supply	EY-RC 504/505 with external power supply 5 V
Number of FCCP units:	1	4	1 per RS-485 line	4 per RS-485 line

### Wiring

Cross-section	Length
Min. 0.75 mm <sup>2</sup> (AWG20)	Max. 3 m for connection to ASV 2*5
Max. 1.5 mm <sup>2</sup> (AWG16)	> 3 m for connection to EY-RC 504

### 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.

### Address configuration via buttons

To set the Room Unit ID (RUID), press the  $\phi$  (on/off) sensor button and the mute button simultaneously for 5 seconds. The colour of the display then changes to green. The current room unit address is displayed.

The “max” and “min” buttons are pressed to adjust the address in the range from one to four.

Please note: Two identical RUIDs may not be assigned for a bus line.

When used with the EY-RC 504/505, the RUIDs 1 to 4 can be assigned for each bus line; i.e. a maximum of 8 units can be used in one ecos module.

### Dimension drawing (FCCP)

