

# **CO<sub>2</sub>Sensor Basic / ES 999**

CO<sub>2</sub> sensor

**Sensor for ventilation plant for  
increased comfort**

Optional accessories:  
External power supply with  
set-point relay  
MultiController E 0-100%  
MultiController E Regulate

## **Properties:**

ES 999 is to be used as sensor for controlling ventilation according to CO<sub>2</sub> level in single rooms or in more complicated ventilation systems. ES 999 is provided with a 0-10V proportional output based on the current CO<sub>2</sub> level, which is used as input for a regulator or ventilation plant.

Both design and ease-of-use have been prioritised:

- Easy mounting and installation.

- Maintenance free.

- Discreet sensor ideal for mounting in households and office environments.

- Input signal for controlling ventilation plant based on CO<sub>2</sub> level.

- To be used only as CO<sub>2</sub> measurer.

## **Functionality:**

ES 999 measures the CO<sub>2</sub> level in the room and translates the measurement to a proportional 0-10V output. ES 999 can also be used as ON/OFF controller in combination with external 0-10V set-point relay. Power supply ES 963 is designed for use with the CO<sub>2</sub> sensor and has a built-in set-point relay.

## **CO<sub>2</sub> proportional output:**

The voltage varies proportionally with the CO<sub>2</sub> level between 0 and 10V corresponding to 0 and 2000 ppm.

## **Mounting / installation:**

Supply:

Supply is connected to the clamps marked + og 0 for DC or ~ og ⊥ for AC.

CO<sub>2</sub> level:

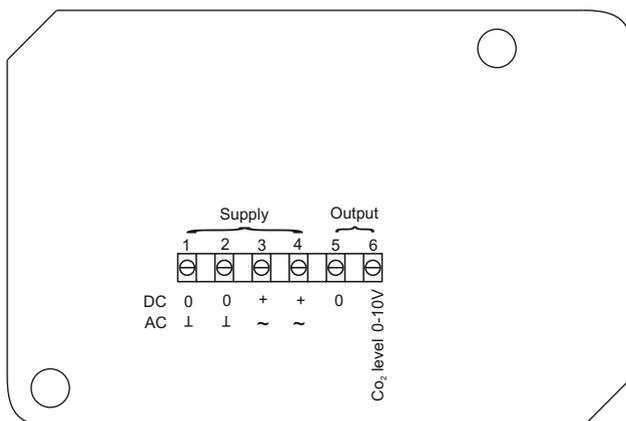
The output signal is polarized and should therefore be connected correctly as shown on the drawing and on the marking on the clamps terminal.

# Connection diagram

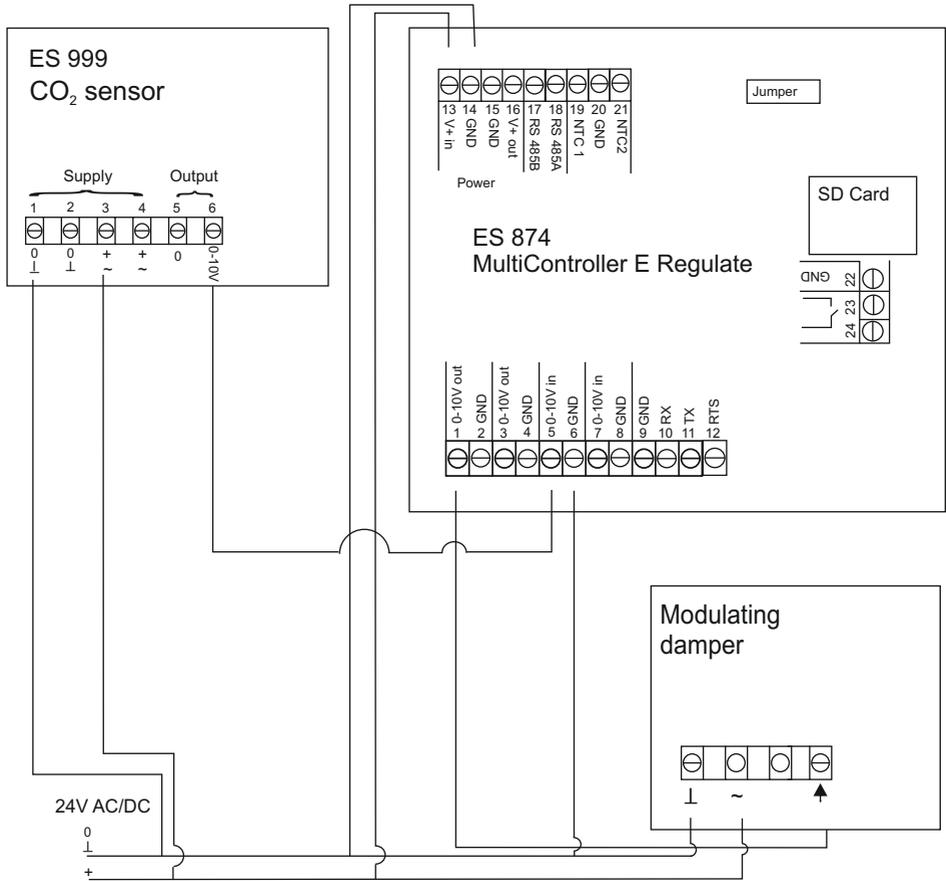
Front



Rear



## Connection diagram for regulator and modulating damper:



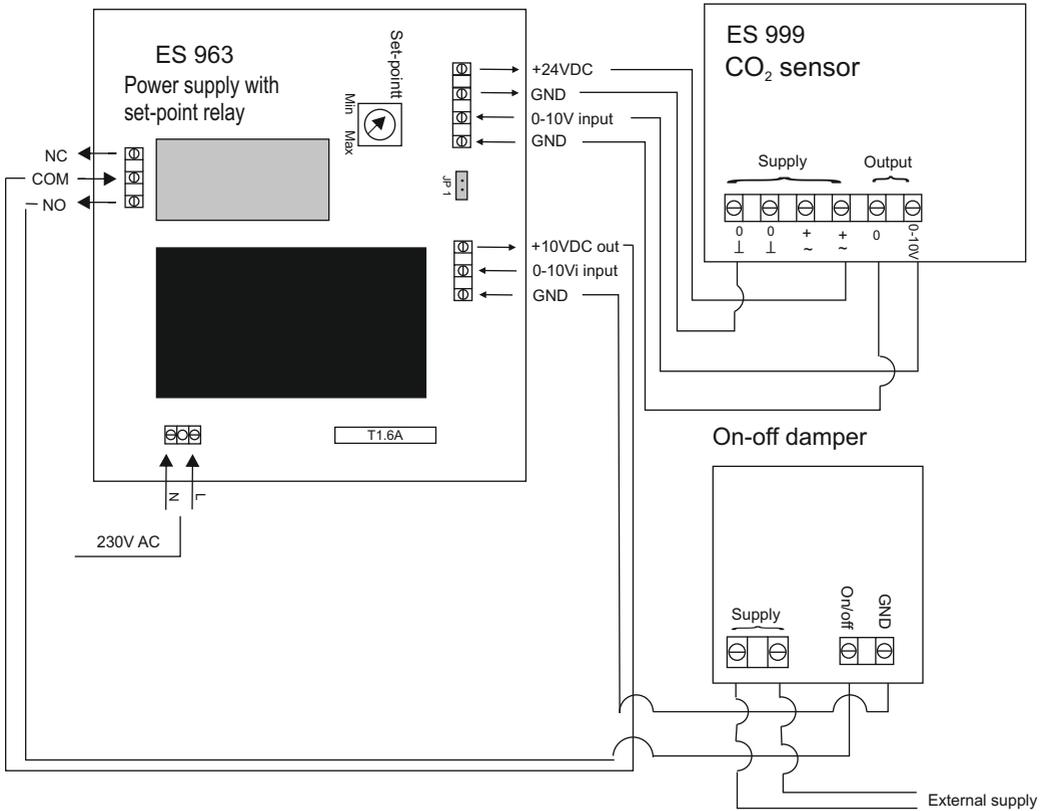
### Important:

The unit is intended for mounting in the supplied base. Alternative mounting may influence the function of the CO<sub>2</sub> sensor.

To be connected in accordance with the current low voltage directive.

The suggested regulator is also available for 230V AC supply (ES 974), please consult the appropriate instructions for mounting.

## Connection diagram for on/off damper:



### Important:

The unit is intended for mounting in the supplied base. Alternative mounting may influence the function of the CO<sub>2</sub> sensor.

To be connected in accordance with the current low voltage directive.

### Accessories for ES 999:

ES 963 External Power supply with set-point relay.  
Complete power supply for ES 999 which is capable of supplying one sensor. For connection to 230V AC with 24V DC 3VA output voltage. The design matches the ES 999 elegant style of enclosure. In addition the ES 963 has a built in set-point relay which provides the possibility of an on/off function.



**Notes:**

## Technical data:

Supply: DC: 24V  $\pm$ 10% 3VA  
AC: 24V  $\pm$ 10% 6,4VA

Operating temperature: 10 - 50°C

Measuring range CO<sub>2</sub> sensor: 0 - 2000ppm  
Accuracy CO<sub>2</sub> sensor:  $\pm$ 50ppm ved 500ppm

CO<sub>2</sub> proportional output: 0 - 10V 15mA

Maintenance free when used in households and office environments.

Enclosure: IP 21  
Dimensions (HxBxD): 85 x 85 x 35 mm

## WEEE

Electrical and electronic equipment contains material which may be hazardous to human health and environment if it is not handled correctly at disposal. Electrical and electronic equipment is marked with a crossed-out wheelee bin logo. This logo symbolises that electrical and electronic equipment should not be disposed of together with normal household waste but must be collected separately. Contact your local suthorities for further information on disposal of equipment under the WEEE directive



## The product complies with the following standard

EN 60730-1



Date: 13-02-2013  
Drawing: 950-205654\_CO2SensorBasic\_ES999\_EN  
Drawn by: FF-DF  
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**LSCONTROL**