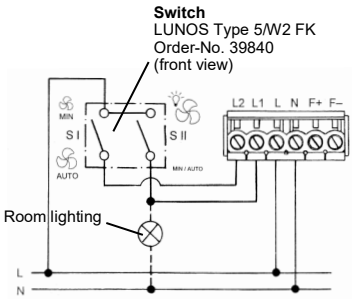
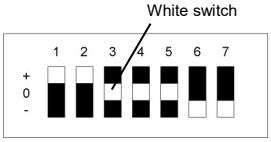
# Installation Manual
# Silvento ec Comfort Board+ 5/EC-FK (90)+

## Connection / Factory settings




**Attention!**
Only adjust the switch when the ventilation unit is voltage-free!

**Factory settings:**

| | |
|---|---|
| Basic ventilation: | 0 m³/h |
| Demand-controlled ventilation: | 60 / (90) m³/h |
| VOC (odour): | ON, normal |
| $CO_2$: | OFF |
| Humidity/temperature: | OFF |

In addition to the familiar humidity/temperature sensor, the Comfort Board+ has a VOC sensor that can detect odours and provides a $CO_2$-equivalent measured value.

The fan permanently records the existing odour (VOC) and generates a moving average which forms the background reference. Only an increase above the reference value by at least 20% will lead to activation of the demand-controlled ventilation stage with activated VOC control. This prevents, for example, a permanently present room odour from leading to permanent ventilation. Odour peaks are effectively detected and removed.

Likewise, the absolute humidity - the water content in the air - is recorded and averaged on a sliding basis. The reference level formed represents the condition that can be achieved by active ventilation. This prevents the fan from running continuously, e.g. in summer when the outside air humidity is high. A temporary increase of at least 5% above the reference level, e.g. due to showering, will lead to activation of the active humidity control if it is activated via DIP switch.

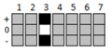
When operating according to $CO_2$ equivalence, the situation is different: here, control is carried out according to the present measured value. Increased $CO_2$ values are a sign of increased ventilation requirements.

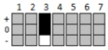
**Switchable demand-controlled ventilation (optional)**
Via L1, the fan can be manually switched to the demand-controlled ventilation stage.

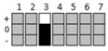
**Deactivation automatic mode (optional)**
The sensor-controlled automatic mode can be deactivated via L2. The fan will then run at the set basic ventilation level.

For the described functionality, it is necessary that the fan is permanently supplied with voltage via L and N.

## Configuration of the automatic functions (DIP switches 3-5)

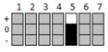

VOC ON, 20% increase


VOC OFF


VOC ON, 30% increase

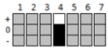

Humidity control OFF


Humidity control ON, 50% - 70%


Humidity control ON, 60% - 80%


$CO_2$ OFF


$CO_2$ ON, 1500-3000 ppm


$CO_2$ ON, 1200-2500 ppm

While reaching the configured increase of the VOC value will lead to an immediate switching of the demand-controlled ventilation stage, automatic operation is controlled in a virtually stepless way according to $CO_2$ and/or humidity values. Exceeding the lower limit value leads to the first increase of the operating stage, starting from the basic ventilation stage. The operating stage is further increased when loads are present and reaches the demand-controlled ventilation stage at the upper limit value.

The available settings of the DIP switches 1,2 and 6,7 for the basic ventilation stage and the demand-controlled ventilation stage can be found in the installation instructions of the fan insert V-EC or the clamp-in fan KL-EC or on the sticker on the filter frame.
The volume flows specified in the accompanying documents refer to the installed condition, taking into account correct design/planning and corresponding installation.
The fans of the Silvento ec series can be configured in combination with the circuit boards listed above and the volume flow can be calibrated. Instructions can also be found at www.lunos.de.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