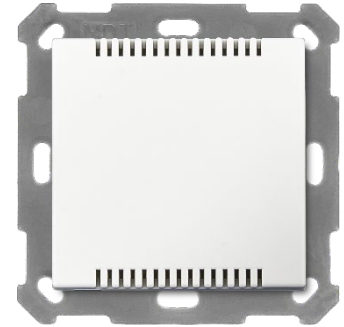


CO2 / VOC Combi Sensor 55 [SCN-CO2MGS.02]

In addition to the measuring channels for CO2 and VOC, the combi-sensor also records the room temperature and relative humidity. With these measured values, it is able to control temperature and air quality. The air quality traffic light alerts you to excessive CO2 or VOC concentrations in the room. VOC is the abbreviation for *volatile organic compounds*, which can be produced during evaporation at room temperature and impair the quality of the room air.



SCN-CO2MGS.02

Air quality functions

Air quality traffic light:

The output of the air quality traffic light can be set as [1 bit] step-, scene-, RGB- or HSV-objects. For example, the lighting colour can change automatically and remind you to ventilate the room. The CO2 or VOC value can be used as input variable. The threshold values of the air quality traffic light are freely adjustable in [ppm] "parts per million" – or in the case of VOC, alternatively as [IAQ] "Indoor Air Quality" Index. The hysteresis between the traffic light levels can be applied in [percent], [ppm] or [IAQ]. The IAQ index from 0 to 500 provides general information about the quality of indoor air, which has an impact on people's well-being.

IAQ Index
0 - 50
51 - 100
101 - 150
151 - 200
201 - 250
251 - 350
>350

Air quality controller:

The air quality control can be activated as a step switch (bit-, binary-, byte-coded) or as PI control. The measured value for the control can be both the CO2 and the VOC value - in each case in combination with the relative humidity. Used as central ventilation control, up to 10 external sensors can be integrated into the regulation via communication objects. A wide range of adjustment options allows you to adapt the air quality control to your own needs. For example, the hysteresis of the step controller, or the reset time and proportional coefficient of the PI control can be adjusted. The setpoints or ventilation levels can be different for day and night. The air quality control can be overridden at any time via the adjustable lock object.

Room temperature controller with temperature sensor

The actual temperature of the internal or an external temperature sensor is sufficient for the PI controller to start the regulation. The setpoints for "Comfort", "Standby" and "Night" can be individually configured independently of the "Basic Comfort" setpoint. This ensures a high level of compatibility with many visualisations. The setpoint shift can be done classically via 1 bit (step), 1 byte (counting pulses) and via 2 bytes (temperature difference and absolute values). This also provides a high degree of compatibility with a wide variety of visualisations. Set values and the operating mode can be saved and restored in the event of a bus voltage failure.

Lock heating/cooling operation while windows are open

If, for example, a window is opened for ventilation in winter, the temperature controller disables the heating operation and switch into frost protection mode. As soon as the window is closed, the heating mode is activated again. In cooling mode, the heat protection would be activated.

Setpoint controlled via outdoor temperature

In cooling mode, it is possible to control the setpoint via the outdoor temperature. In this way, high temperature differences between the outside and inside temperatures can be avoided.

Maximum flow temperature

If the flow temperature is measured with an external temperature sensor and linked via an object, the maximum flow temperature can be limited.

Additional heating level

To shorten the heating phases, the temperature controller has an additional heating level- optionally as a 2-point control or as PWM (switching PI control).

Plain text diagnosis

The CO₂ / VOC Combi Sensor has a plain text diagnosis and outputs the status of the temperature controller via a 14-byte object. This allows errors to be localised in a short time and makes commissioning much easier for the system integrator.

Updateable via DCA App

If necessary, the CO₂ / VOC Combi Sensor can be updated via the MDT Update Tool (DCA). The download is available free of charge at www.mdt.de and www.knx.org.

Long Frame Support

The MDT CO₂ / VOC Combi Sensor supports "long frames" (longer telegrams). These contain more user data per telegram, which significantly reduces the programming time with the ETS.