KNX Sensor CO2 and Temperature-Humidity, AM2-S8-CO2-TF

The KNX Sensor CO2 and Temperature-Humidity AM2-S8-CO2-TF is a sensor/regulator from the series S8 for recording the level of carbon dioxide measured by the CO2 sensor, as well as the temperature and humidity of room climate. The absolute humidity is calculated from the measured values.

The AM2-S8-CO2-TF has an integrated KNX bus coupler and needs additional voltage. The transducer with the bus coupler is fixed to an anodized aluminium plate which is flush-mounted.

In the application software there are several controllers (two-position or PI controller with continuous or pulsed output). Additional functions include the display of upper and lower thresholds and switching between the set point and threshold.

The sensor is configured with ETS (KNX Tool Software) and the application program. Controlling functions such as signal threshold and other adjustments are parameterized using ETS (KNX Tool Software).

Item-Nr.: 30803001

AM2-S8-CO2-TF
CO2 and Temperature-Humidity
Controller/Sensor

Areas of Application:

- Testing of air quality and CO2 content in conference rooms, hotel rooms and working areas
- Recording temperature and relative humidity in interior/exterior areas and damp location areas
- Decentralized heating control for continuous KNX valve or electrothermal valve
- Decentralized ventilation control
- Dew Point Alarm for cooling ceilings/floors or conservatories
- Dew Point Alarm for identifying possible mold build-up in cellars
- Calculation of maximum and minimum temperatures

Applicable Sensor:
The SenseAir CO2 Engine K30-STA and a SHT71 is used with the CO2-TFK.

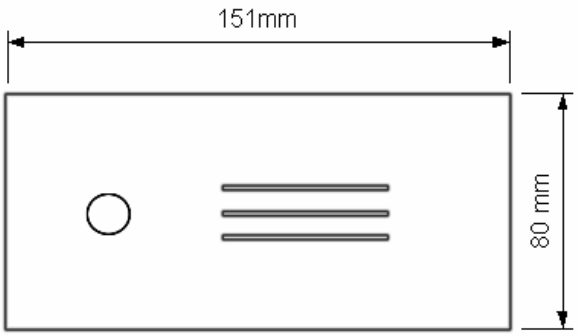
Accuracy of sensor:

CO2- Sensor:	± 20 ppm ± 1% meas. error
SHT71:	± 0,5°C, ±3% rH

Measuring Area : 0- 5000 ppm
-20...+80°C
0 … 99%rH

Ambient Air Temperature CO2-TFK: 0 … +50°C

Protective Housing Transducer : IP20



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Technical Data	**SK08-CO2**
Measured Data:	CO2 Concentration, Air Temperature, Relative Humidity, Dew Point Temperature, Absolute Humidity
Sending options	No sending, periodic sending, sending when change occurs
Parameters	Periodic sending with variable cycle duration, sending when changes occurs with variable hysteresis.
Functions	2-byte float, 4-byte float, 1-byte unsigned integer
Controller Modi:	Two-position controller static, two-position controller pulsed, PI controller static, PI controller pulsed (PWM)
Parameter Two-Position Controller Static	Set point, differential gap, controller
Parameter Two-Position Controller Pulsed	Set point, differential gap, controller, cycle duration, duty cycle
Parameter PI Controller Static	Set point, reset time, proportional factor, controller
Parameter PI Controller PWM	Set point, reset time, proportional factor, controller, cycle duration, threshold pitch
Lock Function:	For pH and ORP controller, parameter driven release or lock
Controller for Control Variable Output:	Switching output (1/0), 1-Bit
	Switching output pulsed, parameter driven duty cycle and cycle duration, 1 Bit
	Switching output pulsed, parameter driven cycle duration, duty cycle variable driven (PWM) with threshold pitch, 1 Bit
	Control variable static, 1-byte
Control Variable Periodic Sending	None or 10-250 seconds parameter driven
Threshold:	Upper threshold, lower threshold
Auxiliary Quantities:	Set point, lower threshold, upper threshold
Bus Power Failure	Saving changed auxiliary quantities is parameter driven
Calibration:	None
Ambient Temperature KNX Sensor:	Storage -20...+70°C, Operation -20...+65°C (Transducer and Sensor)
Ambient Temperature Humidity KNX Sensor:	0…95% rH not condensating
Ambient Temperature CO2 Sensor:	Storage -30...+70°C, Operation -0...+50°C
Ambient Temperature Humidity CO2 Sensor:	0…95% rH
Measurement Area CO2:	0- 5000 ppm
Accuracy CO2:	± 20 ppm ± 1% measured error
Resolution CO2:	± 30 ppm ± 5% measured error
Measurement Area Temperature:	-20...+80°C
Accuracy Temperature:	±0,5 °C
Resolution Temperature:	±0,01 °C
Measured Area Humidity:	0…100% rH
Accuracy Humidity:	3% rH
Operating Voltage:	9-32V DC (e.g. KNX auxiliary supply)
Power Consumption ca.:	240 mW (at 24V DC)
Auxiliary Supply:	9…30VDC 250mW
Bus Coupler:	integrated
Start-up with ETS:	**ARC_S8.VD2 Product: XX2-S8-CO2-TF**
Circuit Points:	EIB-2-pole clamps (red/black)
Protection Class:	IP20
Assembly Type Transducer:	Magnetic fixing, flush-mounted
Housing Transducer:	Aluminium
Housing Dimensions:	115 mm x 64mm x 56 mm (L x H x D)
Article Number:	**30803001**
Sensor:	SenseAir CO2Engine K30-STA, SHT71

Order:			
AM2-S8-CO2-TF		**KNX Sensor CO2 and Temperature-Humidity**	
AM2-S8-CO2-TF		Sensor, Measuring Amplifier, Bus Coupler (Front Plate: Anodized Aluminium)	**30803001**

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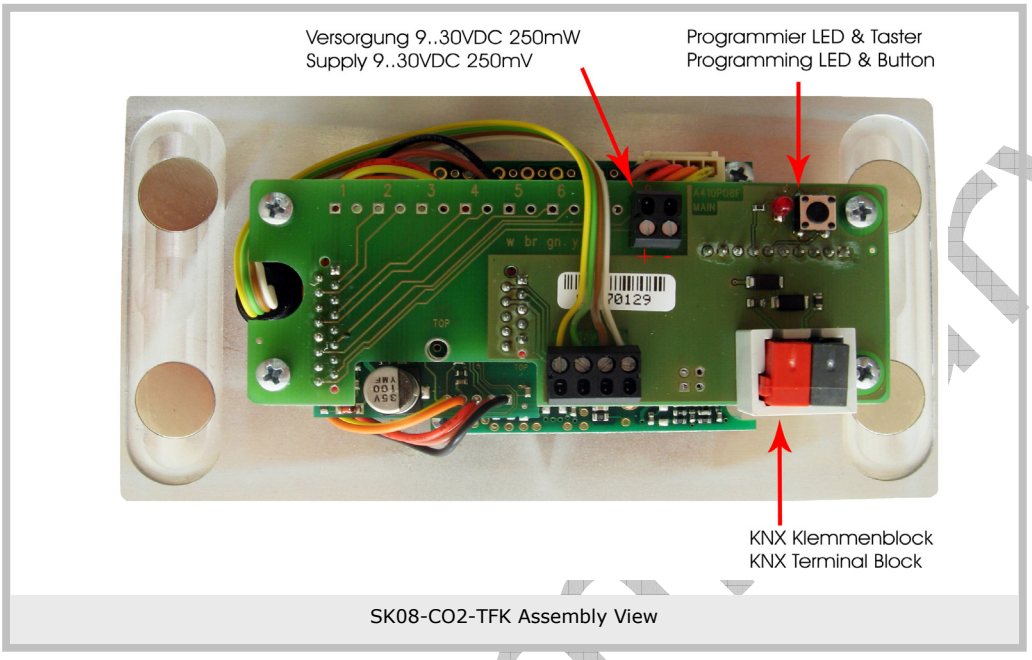
Start-up:
The KNX Sensor is set up using the ETS (KNX Tool Software) and the applicable application program. The sensor is delivered unprogrammed. All functions are programmed and parameterized with ETS. Please read the ETS instructions.

Assembly:
The devices AM2-S8-CO2-TF are assembled in a flush-mounted double socket using the fastening-parts kit and a magnetic fixing which are included in delivery.



SK08-CO2-TFK Assembly View

→ Be careful not to damage the electronics with tools and cable heads.

In Case of Bus Voltage Recurrence:
All changes made using the help key for the KNX/EIB bus are saved if the device has been correctly parameterized. The controller and outputs start with the current values. The ETS parameter settings are saved.

Discharge Program and Reset Sensor:
Should the sensor crash due to a programming malfunction, the previous project can be deleted by pressing the programming button. Hold the programming button down while connecting the EIB bus clamp and wait until the programming LED display appears. This will take 5 – 10 seconds. Any calibrations undertaken will be lost.

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Accountability:
The selection of devices and the determination of the suitability of the devices for a specific purpose lie fully in the hands of the said buyer. For this we give no guarantee and do not accept accountability. The data in the catalogue and data sheets do not promise special properties, but instead are derived from experience and measurements. Arcus excludes responsibility for damage done on the part of the customer due to improper operation/projecting or malfunctions. On the contrary, the operator/projector has to make sure that improper operation, and projection and malfunctions do not lead to any further damage.

Safety Guidelines:
Attention! Installing and assembling electrical devices must only be done by an electronics specialist.
The customer should be aware of and adhere to the safety guidelines of VDE, TÜV and the appropriate energy provider. Our guarantee does not include defects and damage caused by improper use or non-compliance of operating instructions.

Warranty:
We provide a warranty as required by law. Please contact us in case of malfunction and send the device with a full description of the fault to the address below.

Manufacturer:

arcus-eds electronic design services gmbh

Incorporated Trademarks:

CE The CE Trademark is an inofficial market trademark used exclusively by authorities and provides no warranty of properties.

KNX Incorporated trademark of Konnex Association

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