

Product Page

The KNX-Sensor Neo-TTHC-CO2-AQx is used to record and control various indoor air parameters in the interior

- Air temperature (sensor in the housing) also weighted with external temperature
- Humidity (sensor in the housing)
- CO2 level (sensor in the housing)
- Calculated values absolute humidity, dew point temperature and energy content (enthalpy)
- Additional floor, ceiling or component temperature (Terminal for external PT1000)
- Control functions for heating and cooling applications (can be combined)
- Setpoint temperatures for Comfort, Standby, Economy and Protection, selectable via KNX HVAC objects
- Setpoint change via objects
- Storage of minimum- and maximum-temperature
- Heat- and frost-alarm
- Limits for temperature, humidity and CO2 level
- Fan control by humidity, CO2 limits and external inputs
- Detecting of dew point temperature and alarm / regulation at risk of condensation
- Adaptation for setpoint and maximum temperatures
- Controller output 0...100% or programmable PWM for thermal actuators
- Valve rinse function
- Second temperature controller as auxiliary controller

Four binary inputs / outputs (floating)

- Light control as switch / button with short, long, double and both function
- Dimmer
- Blind and shutter control
- Programmable Encoder
- Temperature adjustment
- The binary contacts can be parameterized as outputs.
Possibility of connecting low-current LEDs without series resistor.

Four logic blocks for the logical link between internal and external signals.

- 10 associated logic inputs / outputs
- Heat- and cooling-request as additionally available signals
- Functions "AND, OR, NOT, XOR" for binary logic
- Functions "+ - *" for 8-bit values
- Function "=" for conditional forwarding of events

Applications

- Detection and control of room temperature and humidity
- Detection of CO2 level
- Decentralized control for steady KNX-valves or thermal actuators
- Decentralized ventilation control depending on humidity and air quality
- Detecting of component temperature and temperature control (Terminal for external PT1000) to prevent condensation and structural damage
- Evaluation of external switches and push buttons for switching functions



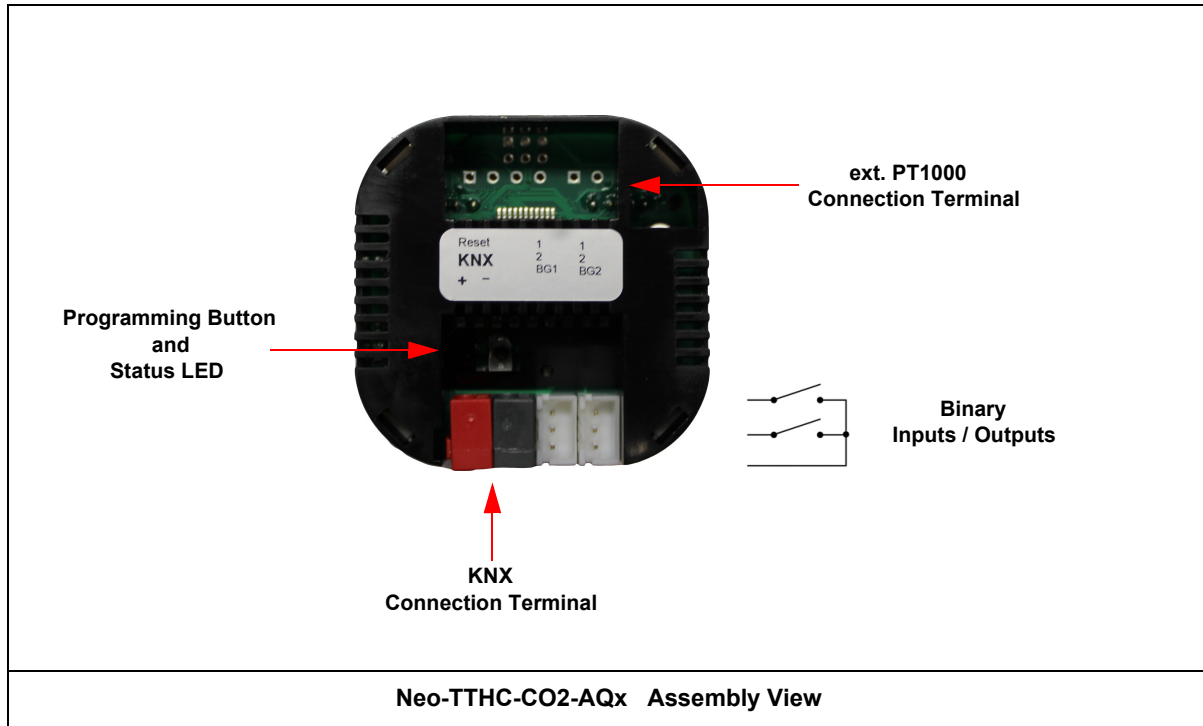
Startup

The KNX Sensor is set up using the ETS 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 **Neo-TTHC-CO2-AQx** sensor is designed for mounting in a standard flush-mounted socket (60/68) mm and is located in an IP20 plastic housing with aluminum cover.

In Case of Bus Voltage Recurrence

All changes made using the help key for the KNX bus are saved if the device has been correctly parameterized..

By using the weighted mixture temperature, the external temperature scaling is set to 0% until an external temperature value is received.

The measuring and control values start with their current values (integral component=0 by PI-Controller).

The ETS parameter settings are retained.

Discharge Program and Reset Sensor

In order to delete the programming (projecting) and to reset the module back to delivery status, it must be switched off (disconnect the KNX bus).

Press and hold the programming button while reconnecting the KNX bus and wait until the programming LED lights up (approx. 5-10 seconds).

Now you can release the programming button.

The module is ready for renewed projecting.

If you release the programming button too early, repeat the aforementioned procedure.

Technical Data

Technical Data - Neo-TTHC-CO2-AQx

Measurement	Temperature, rel. Humidity Temperature (PT1000, external)
Calculated Values	abs. Humidity, Dewpoint Temperature, Enthalpie
Control	integrated
Temperature Range	-10 .. +50°C
Resolution	0.02°C
Accuracy	± 0.4°C (5..60°C), sonst ± 0.8°C
Humidity Range	0 .. 95% r.H
Resolution	0.02% r.H
Accuracy	± 3% r.H (20..80%) at +20°C, else ± 5% r.H
Measurement Range CO2	400 - 5000 ppm
Accuracy	± (50ppm + 5% of measurement)
PT1000 not included	
Temperature Range	-50 .. +400°C (depending on the sensor used)
Resolution	0.02°C
Accuracy	depending on the sensor used
Binary In- / Output	4
Operating Voltage	KNX Bus Voltage 21 .. 32VDC
Power Consumption	approx. 240mW (at 24VDC)
Environment Temperature KNX-Module	Operating: -10 .. +50°C Storage: -25 .. +60°C
Environment Humidity KNX-Module	0 .. 95% r.H Non Condensing
Bus Coupler	integrated
Auxiliary Supply	not required
Startup with the ETS Version 4 or higher	HLK305
Curcuit Points	KNX 2-pole clamps (red / black)
Protection Class	IP20
Housing KNX-Module	Cover aluminum anodized (black) square: (80 x 80 x 6) mm Standard flush-mounted socket (60/68 mm) in the dry interior
Article Number	30542563 Aluminum, square, sanded 30542564 Aluminum, square, sanded, black

Imprint

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Safety Regulations

Attention! Installation and mounting must be carried out by a qualified electrician.

The buyer/operator of the facility has to make sure that all relevant safety regulations, issued by VDE, TÜV and the responsible energy suppliers are respected. There is no warranty for defects and damages caused by improper use of the devices or by non-compliance with the operating manuals.

Warranty

We take over guarantees as required by law.

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Manufacturer



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