

## Product Page

The KNX-Sensor Neo-TTHC-CO2-x is used for measuring and controlling indoor air parameters

- 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 inputs can be configured as outputs ( LED / Beeper )

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

Article No. 3054256x



Neo-TTHC-CO2-AQx

Article No. 3054266x



Neo-TTHC-CO2-ARx

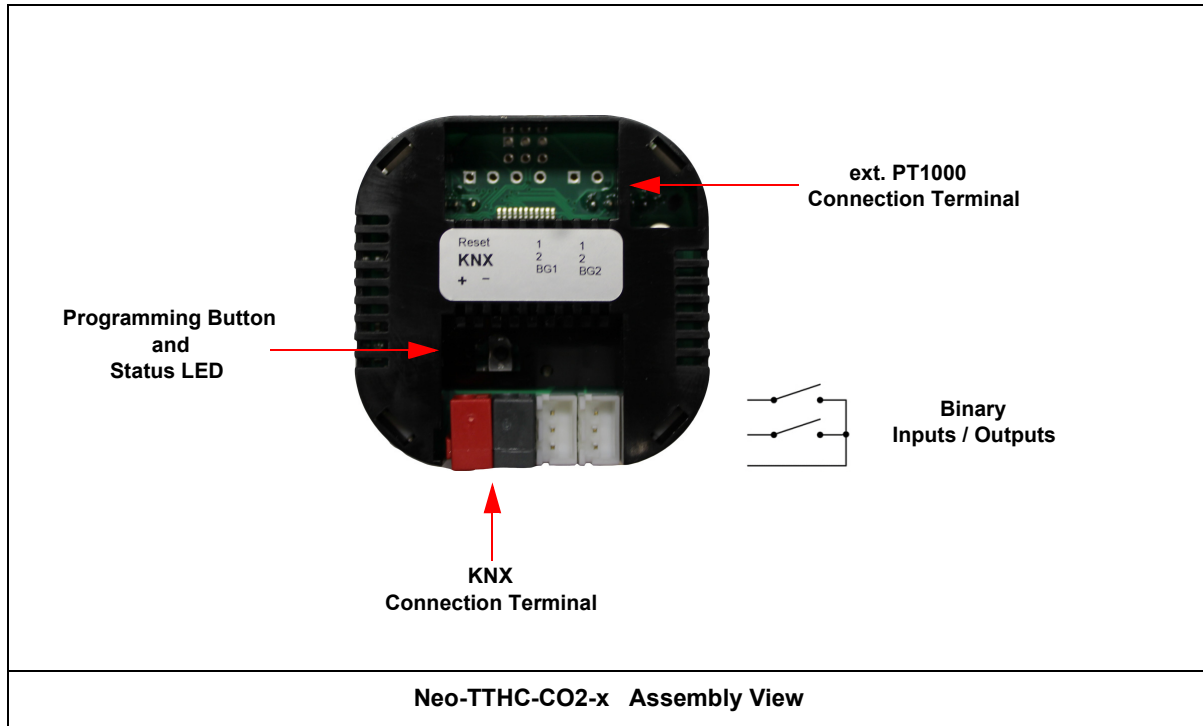
## Startup

The KNX Sensor is set up using the ETS ( Version 4 or higher ) 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-x** 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-x

Measurement	Temperature, rel. Humidity Temperature ( PT1000, external )
Calculated Values	abs. Humidity, Dewpoint Temperature, Enthalpie
Control	integrated
Temperature Range	0 .. +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	300 - 5000 ppm
Accuracy	± ( 50ppm +3% of the measured value )
<b>PT1000 not included</b>	
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: 0 .. +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	<b>HLK305</b>
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 round: Ø 84 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 30542663 Aluminum, round, anodized 30542664 Aluminum, round, anodized, black

## Imprint

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