

## Product Page

The KNX-Sensor Neo-THC-VOC-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 )
- VOC level ( volatile organic compound ) ( sensor in the housing )
- Calculated values absolute humidity, dew point temperature and energy content ( enthalpy )
- 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 VOC level
- Fan control by humidity, VOC 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 VOC level
- Decentralized control for steady KNX-valves or thermal actuators
- Decentralized ventilation control depending on humidity and air quality
- Evaluation of external switches and push buttons for switching functions

Article No. 3051158x



Neo-THC-VOC-AQx

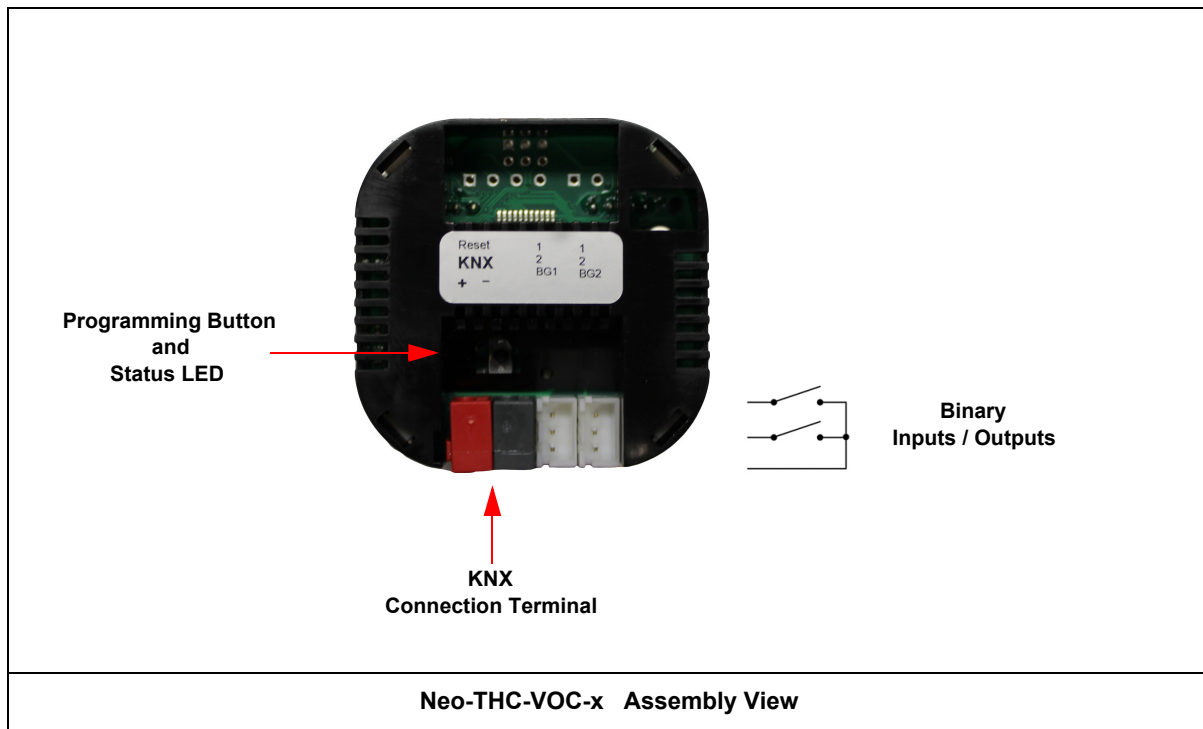
Article No. 3051168x



Neo-THC-VOC-ARx

## Startup

The KNX Sensor is set up using the ETS ( Version 4 or higher ) and the applicable application program.  
Application for ETS from version 3f on request.  
The sensor is delivered unprogrammed.  
All functions are programmed and parameterized with ETS.  
Please read the ETS instructions.



## Assembly

The **Neo-THC-VOC-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-THC-VOC-x

Measurement	Temperature, rel. Humidity, VOC Concentration Temperature ( PT1000, external )
Calculated Values	abs. Humidity, Dewpoint Temperature, Enthalpie
Control	integrated
Temperature Range	0 .. +50°C
Accuracy	± 0,3°C
Resolution	± 0,01°C
Humidity Range	0 .. 95% r.H
Accuracy	± 3% r.H (20..80%) at +20°C, else ± 5% r.H
Measurement Range VOC	450 - 2000 ppm CO2 equivalents
Binary In- / Output	4
Operating Voltage	KNX Bus Voltage 21 .. 32VDC
Power Consumption	approx. 240mW ( at 24VDC )
Environment Temperature KNX-Module	Storage: -20 .. +50°C Operating: 0 .. +50°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	30533563 Aluminum, square, sanded 30533564 Aluminum, square, sanded, black 30533663 Aluminum, round, anodized 30533664 Aluminum, round, anodized, 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.

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