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The KNX-Sensor SK10-THC-RPFF-x is used for measuring and controlling indoor air parameters

- Air temperature (room pendulum sensor) also weighted with external temperature
- Relative humidity (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 and humidity
- Fan control by humidity 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 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

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| <p>Sensor: Sensirion SHT21</p> <p>RPFF The sensor is protected from dust by a propoplast protective coating</p> <p>RPFF-MMF The sensor is protected from condensation and dust by a hydrogas metal membrane filter</p> <p>Measurement Range</p> <p>Temperature: -25 .. +80°C Resolution: 0.02°C Accuracy: ± 0,4°C (5..60°C), else ± 0,8°C</p> <p>rel. Humidity: 0 .. 100% r.H Resolution: 0.02% r.H Accuracy: ± 3% r.H (20..80%) @ 25°C, else ± 5%</p> <p>Operation Temperature: -25 .. +80°C Storage Temperature: -25 .. +80°C</p> <p>Protection Class: IP54/65</p> | |
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SK10-THC-RPFF-x

Room Pendulum Sensor

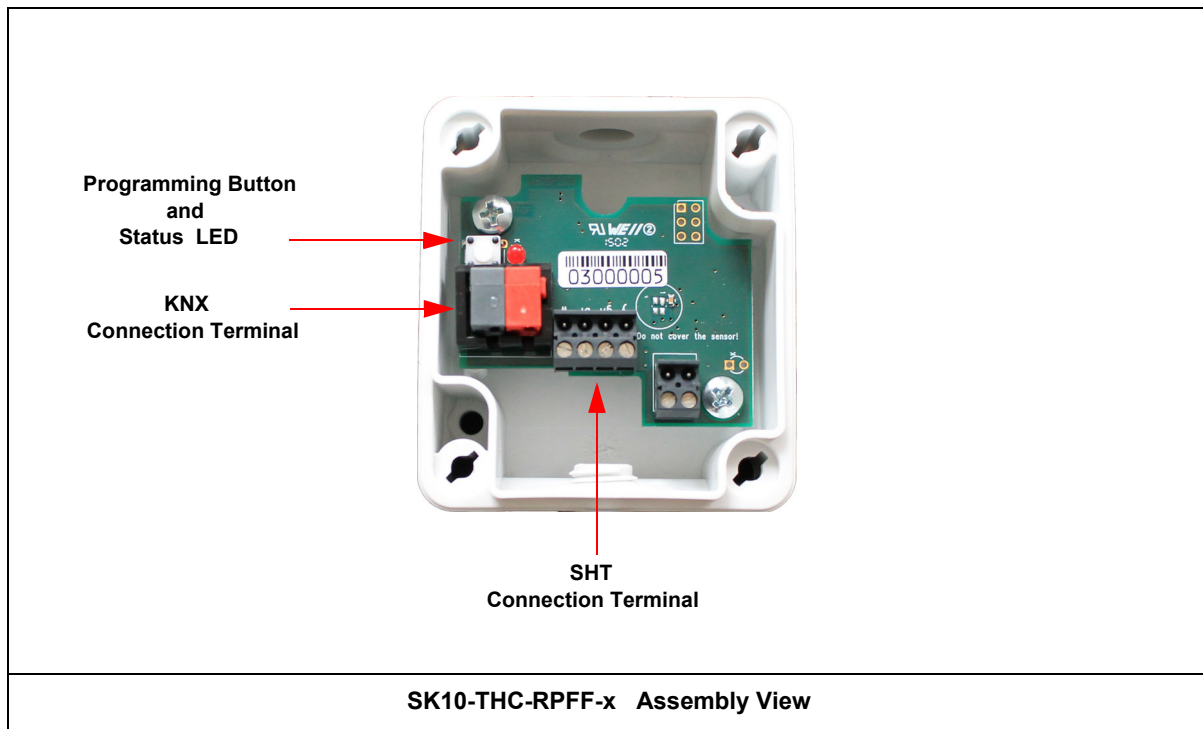
Startup

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 **SK10-THC-RPFF-x** sensors are for outdoor and (moist) indoor areas.

The sensor is located in an IP54/65 plastic housing.

The sensor is mounted on the wall with two screws.

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 - SK10-THC-RPFF-x

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| Measurement | Temperature Relative Humidity |
| Calculated Values | Absolute Humidity Dewpoint Temperature Enthalpie |
| Control | Integrated |
| Temperature Range | -25 .. +80°C |
| Resolution | 0.02°C |
| Accuracy | ± 0,4°C (5..60°C), else ± 0,8°C |
| rel. Humidity Range | 0 .. 100% r.H |
| Resolution | 0.02% r.H |
| Accuracy | ± 3% r.H (20..80%) @ +25°C, else ± 5% r.H |
| Operating Voltage | KNX Bus Voltage 21 .. 32VDC |
| Power Consumption | approx. 240mW (at 24VDC) |
| Environment Temperature KNX-Module | Operating: -25 .. +80°C Storage: -25 .. +80°C |
| Environment Humidity KNX-Module | 0 .. 100% 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 | IP54/65 |
| Housing KNX-Module | Plastic |
| Dimensions Housing KNX-Module | (72 x 64 x 40) mm |
| Article Number | 30531054 RPFF 30531056 RPFF-MMF |

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Room Pendulum Sensor

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.

Please contact us if malfunctions occur. In this case, please send the device including a description of the error to the company's address named below.

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