

KNX-Sensor Temperature/Humidity/Climate with Pendulum Room Probe + Measuring Point Temperature PT1000, SK01-TTFK-RPFF

The KNX-Sensor Temperature/Humidity/Climate SK01-TTFK-xx with the Pendulum Room Probe RPFF is used to measure the air temperature and humidity both outdoors and in damp locations (IP65), and contains a second temperature measuring point. The integrated KNX bus coupler does not need additional auxiliary supply. The temperature is measured by a pendulum room probe. Application areas include building automation, air conditioning and ventilation systems, clean room systems, greenhouses and large rooms and halls with high ceilings. Using an additional external PT1000 Probe, a second temperature reading can be taken and used directly with the dew point regulator.

Several controllers are available in the application software (HVAC, Continuous, PWM) for the temperature, and a two-position controller is available for humidity. Additional functions include frost alarm, temperature and humidity limits, minimum/maximum value and update. The climate controller displays absolute humidity (g/kg), dew point temperature (°C), enthalpy (kJ/kg) and comfort according to DIN 1946. Using the second temperature reading, an additional two-position controller for the external temperature or the calculated dew point can be added on. The sensor is configured with ETS (KNX Tool Software) and the application program. Controlling functions such as HVAC, switching threshold and various adjustment parameters are parameterized with ETS.

The second temperature reading enables the user to add on an additional two-position controller based on the external temperature or dew point reading. The additional temperature reading is especially useful in preventing structural damage. The sensor calculates the dew point temperature with its integrated probe by measuring the room temperature and humidity content. The extra external sensor is placed directly on the monitored building component and activates an alarm or makes an adjustment when the dew point temperature is approached.

Areas of Application:

- Recording the temperature and relative humidity outdoors/damp room areas
- Decentralized heating regulation for constant KNX-Valves or electro-thermal valves
- Decentralized ventilation controller
- Dew point controller and alarm for cooling ceilings or winter gardens
- Dew point alarm for identification of possible mould build-up in cellars
- Shows saved maximum and minimum values on external displays
- Room temperature controller with options Comfort/Standby/Night/Frost Protection
- Rooms with high ceilings with optimal placement of the sensor

Article-Nr.: 30301054



SK01-TTFK-RPFF
Pendulum Room Probe + Measuring
Point PT1000

Probe:
Pendulum Room Probe Temperature/Humidity

Probe Description:

Capacitor humidity probe with integrated temperature probe (Sensirion SHT11), condensation-proof with high long term stability.

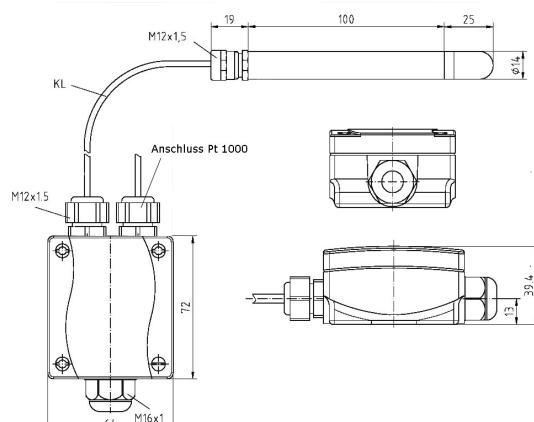
The probe is protected from condensation and dust by a Poroplast protective coating. The metal tube ($\varnothing=14\text{mm}$, L:100mm) protects from mechanical load. Maximum operating temperature of the Poroplast coating about 100°C.

Sensor Application:

The sensor can be used both indoors and outdoors, in the cold, in ventilation technology, greenhouses and halls. The devices are fitted to the wall or channel with 2 screws.

Storage Temperature:
Operating Temperature:
Humidity Range:
Protection Casing:

-25...+50 °C
-5...+55°C
0...100% rH
IP65



Technical Data	SK01-TTFK-RPFF
Measurement:	Temperature, Humidity
Temperature Controller HVAC Modes:	HVAC with increase/decrease options HVAC with relative set point adjustment HVAC with absolute set point adjustment
Temperature Controller Options:	Comfort Temperature, Stand-by Comfort Temperature, Stand-by Temperature Night Temperature, Frost Protection Temperature
Temperature Controller Controller Output:	Continuous / Switching PI-Controller / Two-Position Controller with hysteresis
Temperature Controller HVAC-Display:	HVAC-Status Byte, HVAC-Status-Bits
Limit Alarm (Upper/Lower):	Temperature, Humidity
Minimum/Maximum Temperature:	Saved minimum/maximum actual temperature
Frost Protection Alarm:	Falling below frost protection temperature
Dew Point Alarm:	Surpassing the dew point
Humidity Controller Mode:	Controller with increase/decrease options
Humidity Controller, Controller Output:	Two-position controller with hysteresis
Update:	Temperature, Humidity, Dew Point
Comfort Field:	Comfort Output Text
Calculated Value:	Absolute Humidity, Dew Point Temperature, Enthalpy
Adjustment Parameters:	Offset adjustment, Elevation, Output Inversion
Lock and Reset Objects:	Humidity Controller, Temperature Controller, Minimum/Maximum Temperature
Send Options:	Do Not Send, Periodic Sending by Adjustments
Temperature/Humidity Probe:	Sensirion, SHT11 embedded in sheath tube
PT1000-Input	16Bit-ADC, accuracy: +/- 0,4°C, resolution +/- 0,01°C
Environment Temperature :	Storage -25...+50°C, Operating -5...+55°C
Environment Humidity :	0...100% rH
Temperature Range:	-20...+80°C
Accuracy of Temperature:	+/- 0,5 °C
Temperature Resolution:	+/- 0,01 °C
Humidity Range:	0...100% rH
Accuracy of Humidity:	3% rH
Operating Voltage:	EIB/KNX Bus voltage 24 V DC
Power Consumption ca.:	10 mA at 24V DC
Auxiliary Supply:	Not necessary
Bus Coupler:	Integrated
Start-up with ETS:	ARC_TFK.VD2 Product: Sensor Temperatur/Feuchte/Klima IP65
Circuit Points:	KNX-2-pol clamp (red/black)
Protection:	IP65
Fittings:	Finery, 2 screws
Casing:	White plastic
Cable Length Pendulum Room Probe:	2 m
Measurements:	72 mm x 64 mm x 39,4 mm (W x H x D)
Article Number:	30401054

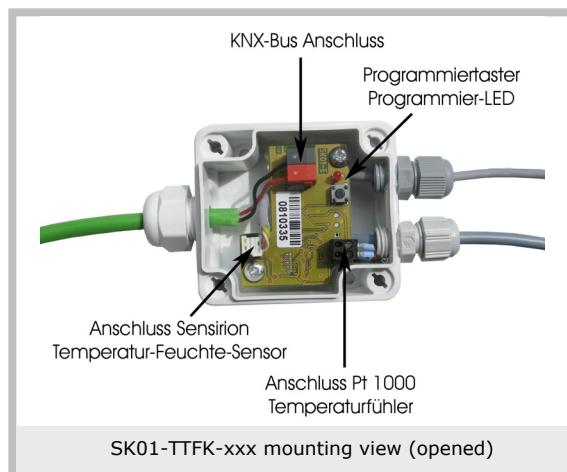
Optional Available:			
SK01-TTFK-RPFF		KNX-Sensor with Pendulum Room Probe, active dew point sensor	
SK01-TTFK-RPFF		With connector for additional PT1000-Probe	30401054
HTF PT1000 PVC		PT1000 Probe	90100002

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.

Installation:

SK01-TTFK-xx sensors are for outdoor use and for (moist) indoor areas. They fulfil protection class IP65. The sensor is attached to the wall with two screws.



The lid can be opened to a 90° angle by loosening the screws.

The cable for the external temperature sensor (PT1000) can be detached from the terminal block. When reattaching, it is not necessary to pay attention to the polarity of clamps 1 and 2.

After the sensor has been mounted onto the wall or ceiling, lead the KNX bus cable through the hole in the casing (PK screw connection).

Remove the bus clamps from the device and connect the cable to it. Place the bus clamps back onto the device. After programming the device, place the lid back on by twisting the screws 90°.

→ Be careful not to damage the electronics during the installation process.

In case of bus line voltage restoration (voltage outage):

All temperature defaults on the KNX/EIB bus are restored. After a line voltage restoration the temperature data is rounded up or down to 0.5°C of the actual value. The controller and outputs start with their current values. The HVAC mode byte is set to 0. ETS Parameter adjustments are restored.

Program de-activate and reset sensor:

If there is an error in programming and the sensor no longer reacts, you can delete the project by pressing the program button. Press the program button down while connecting the EIB bus clamp and wait for the program LED to light up. This takes from 5-10 seconds.

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