

**KNX-Sensor Temperature/Humidity/Climate with Duct Probe, SK01-TFK-KFF**

The KNX-sensor temperature/humidity/climate with the duct probe KFF is used for temperature detection of the air in air ducts (IP65). The integrated KNX bus coupler does not need additional auxiliary supply. The temperature-humidity probe is enclosed in a sheath tube outside the casing. The sensor can be used in building automation, refrigeration, air-conditioning and ventilation technology, in greenhouses and halls.

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.

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.

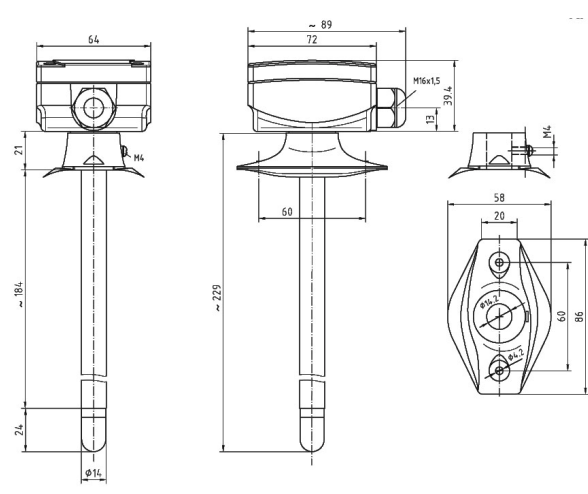


**Application:**


- In air-conditioning ducts in heating technology

**Areas of Application:**

- Temperature detection in air ducts
- Decentralized heating regulation for constant KNX-Valves or electro-thermal valves
- Decentralized ventilation controller
- Shows saved maximum and minimum values on external displays
- Room temperature controller with options Comfort/Standby/Night/Frost Protection
- Direct set point presetting and display of current set point via KNX-Bus
- Various disable options for the controller

<p><b>Probe:</b> Duct Probe Temperature/Humidity/Climate</p> <p><b>Probe Description:</b> Capacitor humidity probe with integrated temperature probe (Sensorion SHT11), condensation-proof with high long term stability. The probe is protected from condensation and dust by a Poroplast protective coating. The metal tube (Ø=14mm, L: 229mm) protects from mechanical load. Maximum operating temperature of the Poroplast coating about 100°C.</p> <p><b>Sensor Application:</b> The sensor can be used in air ducts in heating and air-conditioning technology. It is attached to the air duct using a plastic sleeve and 2 screws.</p> <p>Temperature Range: -20...+80 °C Storage Temperature: -25...+50 °C Operating Temperature: - 5...+55°C Humidity Range: 0...100% r.H.</p>	
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Technical Data	SK01-TFK-KFF
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 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
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 by 24V DC
Auxiliary Supply:	not necessary
Bus Coupler:	integrated
Start-up with ETS:	ARC_TFK.VD2 Product: Sensor Temperatur/Feuchte/Klima IP65
Circuit Points:	EIB-2-pol clamp (red/black)
Protection:	IP65
Fittings:	Attached to air duct with sleeve and 2 screws
Casing:	white plastic
Measurements:	72 mm x 64 mm x 39,4 mm (W x H x D)
Sleeve:	Ø=14mm, Length 230mm, IP65, cast roller-burnished
Article number:	<b>30301057</b>

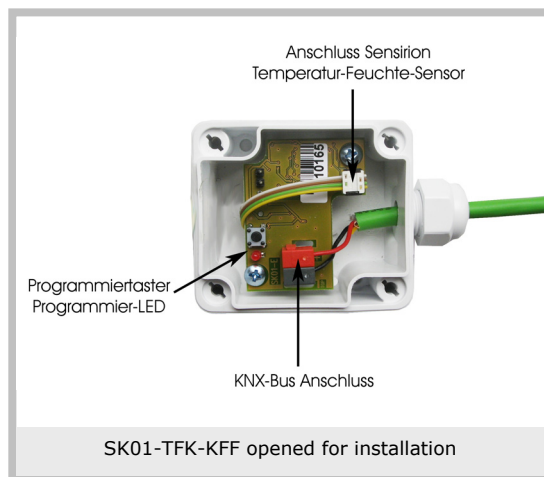
Optional Available:			
<b>KFF</b>		<b>KNX-Sensor Temperature-Humidity-Climate with Duct Probe</b>	
SK01-TFK-KFF		Sensor Temperature-Humidity-Climate -20...+80°C	<b>30301057</b>

**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-TFK-xx sensors are for outdoor use and for (moist) indoor areas. They fulfil protection class IP65. A plastic sleeve is used to hermetically seal the sensor to the air duct.



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

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.

**Imprint:**

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