

KNX-Sensor Temperature/Humidity/Climate for interior spaces, SK02-TFK

Object Regulator, Room Temperature Controller

The KNX-sensor Temperature-Humidity-Climate SK02-TFK is used to measure the air temperature and humidity in dry interior spaces (IP20). The integrated KNX bus coupler does not need additional auxiliary supply.

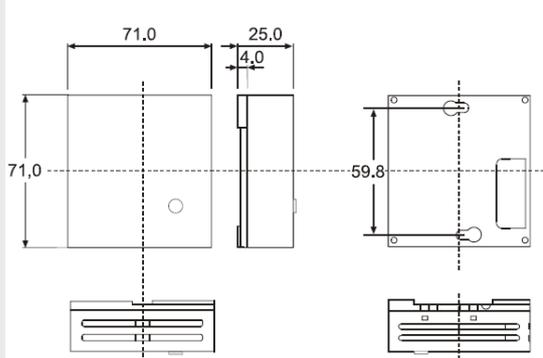
Several controllers are available in the application software (HVAC, Continuous, PWM) for the temperature, and a two-position controller is available for humidity. Additional functions include frost alarm, temperature and humidity limits, minimum/maximum value and update. The climate controller displays 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



Areas of Application:

- Recording the temperature and relative humidity of indoor 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
- Direct set point presetting and display of current set point via KNX-Bus
- Various disable options for the controller

<p>Probe: Indoor Probe SK02 Temperature/Humidity</p> <p>Sensor Description: Capacitor humidity sensor with integrated temperature sensor (Sensirion SHT71), condensation-proof with high long term stability.</p> <p>Sensor Application: The KNX-sensor system for recording and controlling is delivered in a casing for on-wall mounting. The sensor can be used in living quarters and interiors, in hotels, offices, schools and training rooms. On-wall installation in dry interiors (IP20) with 2 screws, or directly into a 68 mm flush-mounted box.</p> <p>Storage Temperature: -30...+60°C Operating Temperature: -25...+55°C Humidity Range: 0...99% rH Not condensating</p>	
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Technical Data	SK02-TFK
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, SHT71 embedded in casing
Environment Temperature:	Storage -30...+60°C, Operating -25...+55°C
Environment Humidity:	0...99% rH, not condensating
Temperature Range:	-25...+55 °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 Temperature/Humidity/Climate SK02
Circuit Points:	KNX-2-pol clamp (red/black)
Protection:	IP20
Fittings:	On-wall mounting, 2 screws (68 mm grid)
Casing:	White plastic
Measurements:	71 mm x 71 mm x 25 mm (W x H x D)
Article Number:	30302201

Optional Available:			
SK02-TFK		Sensor Temperature-Humidity-Climate white	30303201

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.

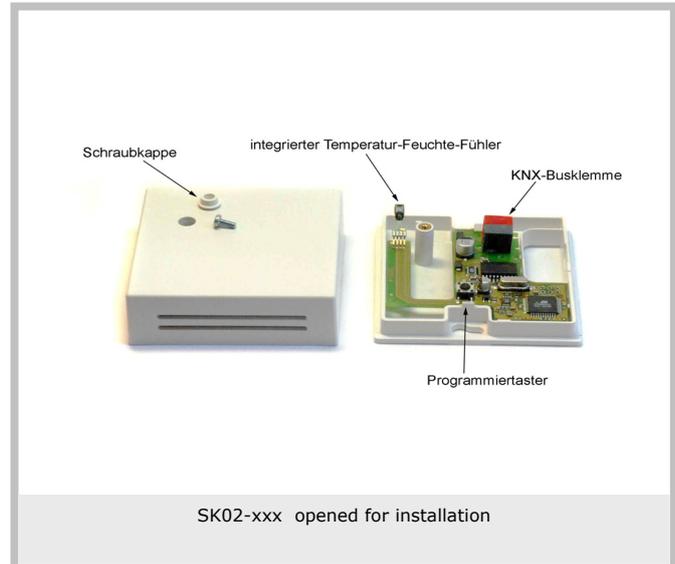
Installation:

SK02-xxx sensors are for installation in dry interiors. They fulfill protection class IP20. They can be fitted directly onto the wall or to a flush-mounted box.

Lead the KNX bus cable through the hole in the casing before mounting it to a wall or ceiling. 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, fix the lid back with its respective screw and push in the screw cap.

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

2 screws are used to mount the SK02-xxx, one at the top and one at the bottom. The temperature-humidity probe must be placed at the lower edge of the casing. For optimal accuracy do not place the sensor in direct sunlight or near other heat sources.

**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 KNX bus clamp and wait for the program LED to light up. This takes from 5-10 seconds.

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