

1.1 Product Page

The KNX-Sensor Temperature/Humidity/Climate **SK01-TFK-RPFF & SK01-TFK-RPFF-MMF** with the pendulum room probe RPFF is used for temperature and humidity detection of the air indoors, outdoors and in damp locations (IP65). 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. The transducer with the bus coupler is enclosed in a durable, sealed, glass ball-reinforced plastic casing which fulfils protection degree IP65.

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 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
- Direct set point presetting and display of current set point via KNX-Bus
- Various disable options for the controller

Sensor:	PT1000 Pendulum Room Probe 100 mm, M12 / 1,5 mm	
RPFF	The probe is protected from dust by a poroplast protective coating	
RPFF-MMF	The probe is protected from condensation and dust by a hydrogas metal membrane	
Connecting Cable:	2m PVC	
Measurement Range:	-30 .. +80 °C PVC	
Accuracy:	± 0,01 °C	
Resolution:	± 0,3 °C 3% rH + Accuracy of the sensors	
Operating Temperature:	-25 .. +80 °C	
Storage Temperature:	-25 .. +85 °C	
Protection Class:	IP65	

1.2 Technical Data

Technical Data - SK01-TFK-RPFF & SK01-TFK-RPFF-MMF

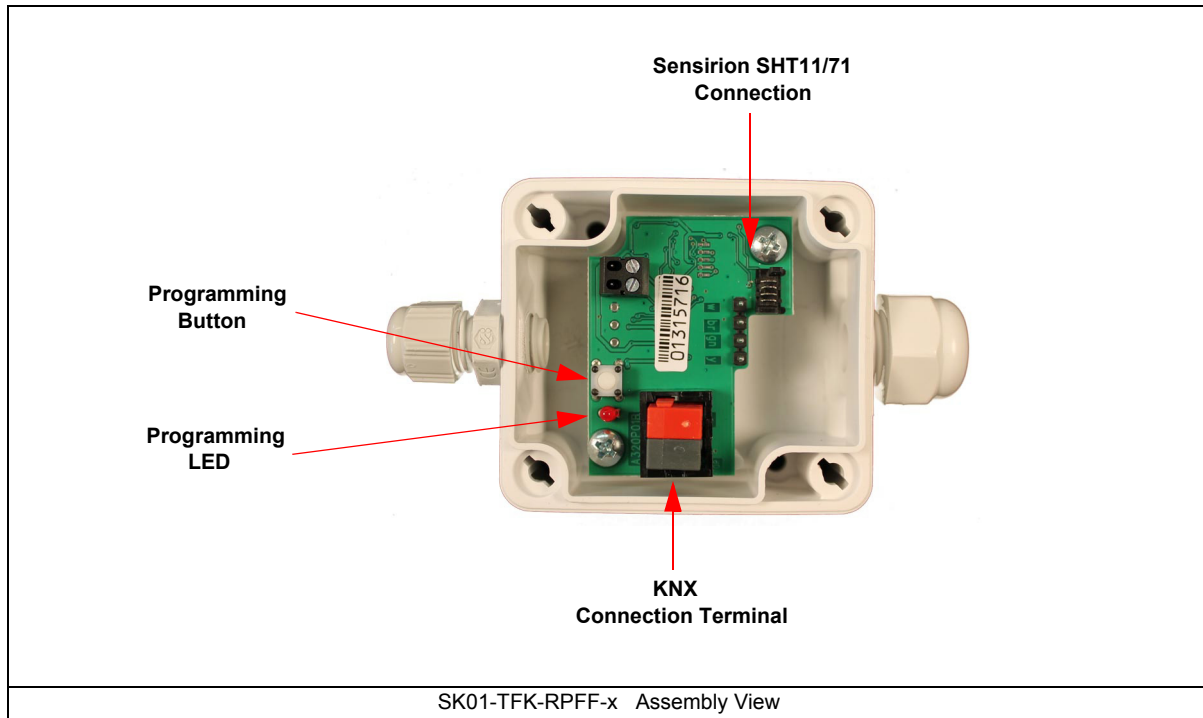
Measurement	Temperature, Humidity
Object Typ	2-Byte-float
Temperature Controller HVAC Modi	HVAC with Increase / Decrease Options HVAC with Relative Set Point Adjustment HVAC with Absolute Set Point Adjustment
Temperature Controller Operating Modes	Comfort Temperature Standby Temperature Night Temperature Frost Protection Temperature
Temperature Controller Controller Output	Steady PI Controller Switched PI Controller (PWM) Two-Position Controller
Temperature Controller HVAC-Display	HVAC-Status Byte
Limit Alarm (upper / lower)	Temperature
Minimum / Maximum Temperature	Saved Minimum / Maximum Actual Temperature
Frost Protection Alarm	Falling Below Frost Protection Temperature
Humidity Controller Mode	Controller with increase/decrease options
Humidity Controller, Controller Output	Two-position controller with hysteresis
Tracking	Temperature
Comfort Field	Comfort Output Text
Calculated Value	Absolute Humidity, Dew Point Temperature, Enthalpy
Adjustment Parameters	Offset Adjustment, Output Inversion
Lock and Reset Object	Minimum / Maximum Temperature
Send Options	Do not Send Periodic Sending by Adjustments
Environment Temperature	Storage: -25 .. +85°C Operating: -25 .. +80°C
Environment Humidity	0 .. 95% rH not Condensed
Temperature Range	-20 .. +80°C
Accuracy	± 0,3°C
Resolution	± 0,01°C
Humidity Range	10 .. 90% rH
Accuracy of Humidity	3% rH

Technical Data - SK01-TFK-RPFF & SK01-TFK-RPFF-MMF (Fortsetzung)

Operating Voltage	EIB/KNX Bus Voltage 21 .. 32VDC
Power Consumption	approx. 240mW (at 24VDC)
Auxiliary Supply	not Required
Bus Coupler	Integrated
Start-up with ETS	ARC_TFK.VD2 Product: Temperature/Humidity/Climate IP65
Circuit Points	EIB-2-Pole Clamps (red / black)
Protection Class	IP65
Assembly Type Transducer	Assembly with 2 Screws Finery
Casing Transducer	White Plastic
Casing Dimensions	72 x 64 x 40 mm (W x D x H)
Article Number	30301054 30301056
Sensor	Sensirion SHT11

1.3 Startup

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.



1.4 Assembly

The **SK01-TFK-RPFF-x** sensors are for outdoor and (moist) indoor areas.
They fulfill protection class (IP65).

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 Voltage Recurrence

All changes made using the help key for the KNX/EIB bus are saved if the device has been correctly parameterized.
The controller and outputs start with their current values and the ETS parameter settings are saved.

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 to zero potential (disconnect the EIB bus coupler).

Press and hold the programming button while reconnecting the EIB bus coupler 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.