

### KNX-Sensor Temperature with Screw-In/Immersion Probe, SK01-T-ETF1

The KNX-sensor temperature SK01-T-xx with the PT1000-probe ETF1 is used for temperature detection of fluid and gaseous media in piping and cases. The integrated KNX-Bus Coupler does not need additional auxiliary voltage. A straight sheath tube encloses the temperature sensor and is mounted onto the casing. The sheath tube is fitted in a brass immersion sleeve (included in the scope of delivery). The immersion sleeve is available in different lengths 50-400mm and materials (also stainless steel V4A, see SK01-T-ETF2). The glass-globe-reinforced impact-resistant plastic casing contains the KNX-Bus components and the electronic measuring equipment. It comes with two quick-locking screws.

Several controllers are available in the application software (HVAC, Continuous, PWM) for the temperature. Additional functions include frost alarm, temperature limits, minimum/maximum value and update.

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 piping systems, in heating technology
- In storage tanks and compact district heating stations
- In warm and cold water installations
- In oil and lubrication cycle systems
- In industry-wide machine, apparatus and plant construction

#### Areas of Application:

- Recording temperature in pipes, storage tanks and containers
- Decentralized heating regulation for constant KNX-Valves or electro-thermal valves
- Saves maximum and minimum values
- 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



Probe:  
Screw-In/Immersion Probe Temperature with Immersion Sleeve (brass)

Probe Description:  
Temperature probe PT1000, high long term stability

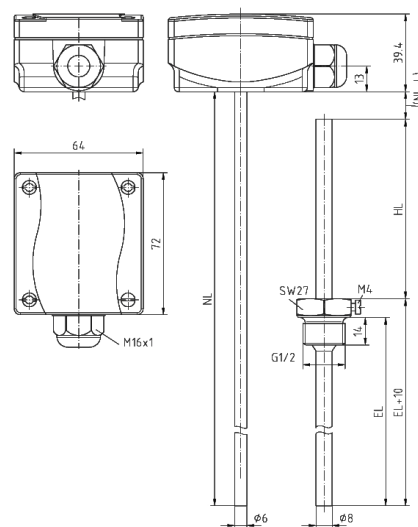
A straight stainless steel V4A sheath tube ( $\varnothing=6\text{mm}$ ) encloses the temperature sensor PT1000 and is fitted in a brass immersion sleeve (max. pressure 10bar).

Sensor Application:  
Installation in tubes and cases and for replacement/repair of already established systems.


Temperature Range: -30...+150°C

Environment Temperature (Transducer): -20...+80°C

Protection: IP65



Technical Data	SK01-T-ETF1
Measurement:	Temperature
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
Minimum/Maximum Temperature:	Saved minimum/maximum actual temperature
Frost Protection Alarm:	Falling below frost protection temperature
Update:	Temperature
Adjustment Parameters:	Offset adjustment, Output Inversion
Lock and Reset Objects:	Minimum/Maximum Temperature
Send Options:	Do Not Send, Periodic Sending by Adjustments
Temperature Probe:	PT1000, embedded in sheath tube IP65
Environment Temperature:	Storage -20...+100°C, Operating -20...+80°C
Environment Humidity:	0...95% rH not condensating
Temperature Range:	-30...+150 °C
Accuracy of Temperature:	+/- 0,5 °C
Temperature Resolution:	+/- 0,01 °C
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 IP65
Circuit Points:	EIB-2-pol clamp (red/black)
Protection:	IP65
Fittings:	Screw-in thread G1/2
Casing:	White plastic
Measurements:	72 mm x 64 mm x 39,4 mm (W x H x D)
Sleeve:	Brass, max. pressure 10bar, length: see Optional Available
Article Number:	<b>30101013, 30101014, 30101015, 30101016, 30101017, 30101018, 30101019</b>

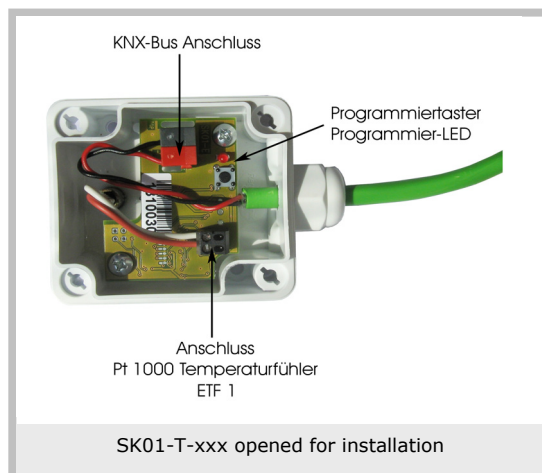
Optional Available:			
ETF 1 PT1000-xx		KNX-Sensor Temperature with Screw-In/Immersion Probe, brass -30...+150°C	
ETF 1 PT1000-50		Length immersion sleeve: G1/2 50mm brass	<b>30101013</b>
ETF 1 PT1000-100		Length immersion sleeve: G1/2 100mm brass	<b>30101014</b>
ETF 1 PT1000-150		Length immersion sleeve: G1/2 150mm brass	<b>30101015</b>
ETF 1 PT1000-200		Length immersion sleeve: G1/2 200mm brass	<b>30101016</b>
ETF 1 PT1000-250		Length immersion sleeve: G1/2 250mm brass	<b>30101017</b>
ETF 1 PT1000-300		Length immersion sleeve: G1/2 300mm brass	<b>30101018</b>
ETF 1 PT1000-400		Length immersion sleeve: G1/2 400mm brass	<b>30101019</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.

**Assembly:**

SK01-T-xx sensors are for outdoor use and for (moist) indoor areas. They fulfil protection class IP65. The sensor is attached to the pipe/storage tank with screws and an additional clamp screw to ensure firm fitting. 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.

**Imprint:**

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