

**KNX Controller 8 Channel Temperature for PT1000, SK08-T8**

The KNX Controller 8 Channel Temperature SK08-T8 is from the S8 series and used for measuring and controlling 8 separate temperatures which are recorded by an external PT1000 temperature sensor (accessory included). There are 8 inputs for the PT1000 temperature sensor and an integrated KNX bus coupler which does not need additional auxiliary supply. The transducer with the bus coupler is enclosed in a durable, sealed, glass ball-reinforced plastic casing which fulfills protection degree IP65.

Several temperature sensors can be used and Arcus-EDS provides a multitude of accessories such as sleeve/screw-in/ceiling/ and feed sensors for many diverse applications.

In the application software a separate controller (2-position or PI controller with continuous or pulsed output) is available for every channel. Other functions include maximum and minimum thresholds and a help key where the set point and thresholds can be switched.

The sensor is configured with ETS (KNX Tool Software) and the application program. Controlling functions such as signal threshold and diverse adjustments are set using ETS (KNX Tool Software).



**Application:**

- General surveillance and controlling of temperatures

**Areas of Application:**

- Surveillance and controlling of temperatures for heating and cooling and temperature logging.

Applicable Sensor:  
PT1000

Measuring Range: -50,00 ... 199,99 °C

Resolution: 0,01 °C

Accuracy +/- 0,3 °C ( + Accuracy of Sensor)

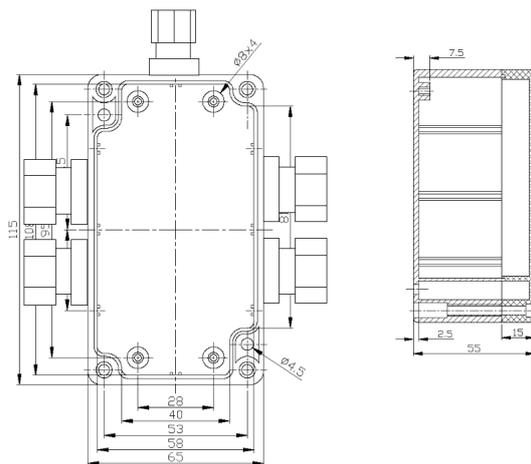
**Use:**

Electronic Measuring Equipment on flat surfaces.

Ambient Temperature Transducer: -20 ... +80°C

Ambient Temperature Electrodes according to manufacturer's specifications

Protection System Casing Transducer: IP65

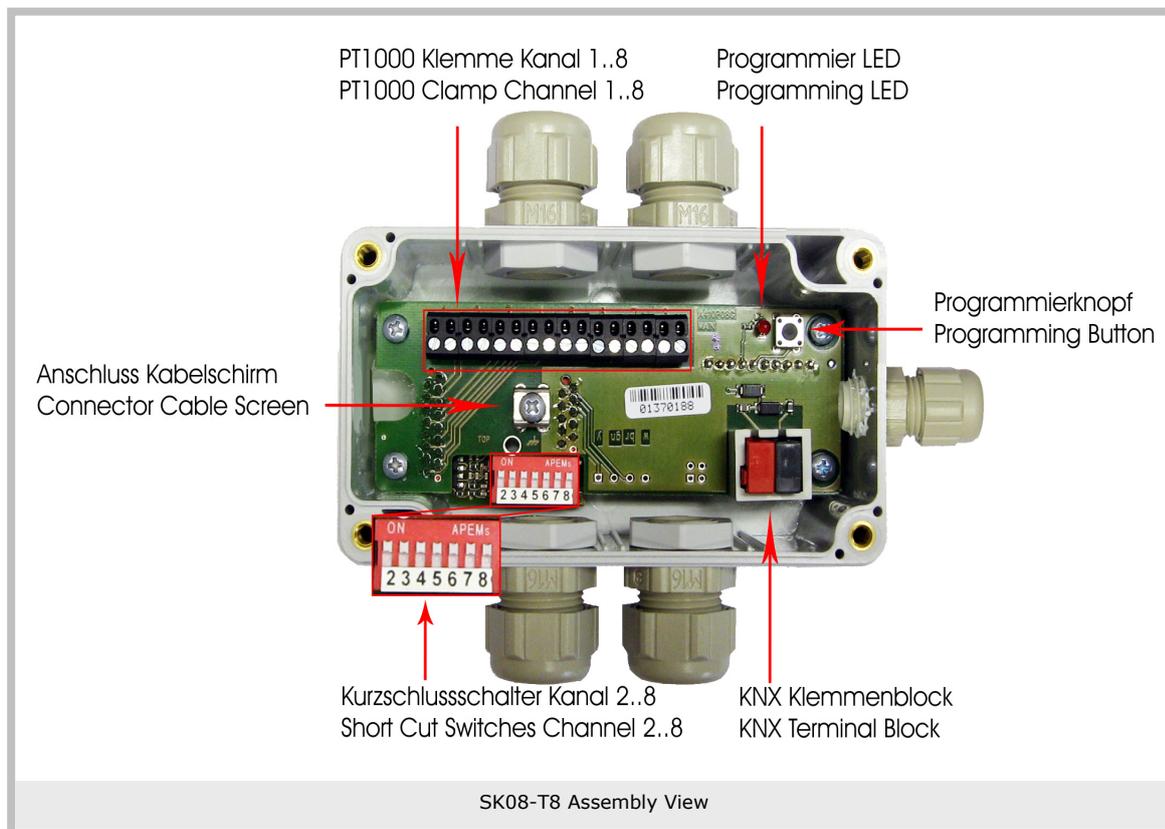


Technical Data	SK08-T8
Measured Data:	Temperature
Sending Options	no sending, cyclical sending when change occurs
Parameters	Cyclical sending with variable periods, sending when change occurs with hysteresis.
Function T1 .. T8	2-byte float, 4-byte float, 1-byte signed integer, 2-byte signed integer
Controller Modi :	Two position controller static, two position controller pulsed, PI controller pulsed
Parameter Two-Position Controller Static	Set point, differential gap, controller mode
Parameter Two-Position Controller Pulsed	Set point, differential gap, controller mode , cycle duration, duty cycle
Parameter PI Controller Continuous	Set point, reset time, proportional factor, controller mode
Parameter PI Controller PWM	Set point, reset time, proportional factor, controller, cycle duration, threshold pitch
Lock Function:	For T1 ... T8 , parameter driven as release or lock
Controller Variables Output:	Switching output (1/0), 1 Bit
	Switching output pulsed, parameter driven duty cycle and cycle duration, 1 Bit
	Switching output pulsed, parameter driven cycle duration, duty cycle variable driven (PWM) with threshold pitch, 1 Bit
	Control variable continuous, 1 Byte
Control Variable Periodic Sending	None or 10-250 seconds parameter driven
Threshold T1 .. T8:	Upper threshold, lower threshold
Auxiliary Quantities:	Set point, lower threshold and upper threshold
Bus power failure	Saving changed auxiliary quantities parameter driven
Calibration:	None
Ambient Temperature Electronic Measuring Equipment Casing:	Storage -20...+100°C, Operation -20...+80°C (transducer)
Ambient Temperature Humidity:	0..95% rH not condensating
Accuracy:	+/- 0,3 °C
Resolution:	+/- 0,01 °C
Operating Voltage:	EIB/KNX bus voltage 21-32V DC
Power Consumption ca.:	240 mW ( at 24V DC )
Auxiliary Supply:	Not required
Bus Coupler:	integrated
Start-up with ETS:	<b>ARC_S8.VD2 Product: SK08-T8</b>
Circuit Points:	EIB-2-pole clamps (red/black)
Protection Class:	IP65
Assembly Type Transducer:	Assembly with 2 screws finery
Casing Transducer:	Plastic grey
Casing Dimensions:	115 mm x 64mm x 56 mm (L x W x H)
Article Number:	<b>30801000</b>
Sensors:	PT1000 any type
Non-used Inputs:	Short-circuiting with short-circuiting switch in device

Order:			
<b>SK08-T8</b>		<b>KNX Controller 8 Channel Temperature</b>	
SK08-T8		Measuring amplifiers/ADC with bus coupler (please order PT1000 temperature sensors separately)	<b>30801000</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.



The temperature sensors on the SK08-T8 are connected in series. Therefore, any input which is not used has to be switched "short-circuited" by the DIP switch. The channel is shorted and thus deactivated when the corresponding DIP switch is "ON" or "1". The 1<sup>st</sup> Channel is always active and must therefore be connected to a sensor.

Chanel	Number	Deactivated with	Error code in case of interruption (Object 1) and shortcut (object 0)
1. Channel	Nr. 1	Always active	0x01
2. Channel	Nr. 2	switch 2	0x02
3. Channel	Nr. 3	switch 3	0x04
4. Channel	Nr. 4	switch 4	0x08
5. Channel	Nr. 5	switch 5	0x10
6. Channel	Nr. 6	switch 6	0x20
7. Channel	Nr. 7	switch 7	0x40
8. Channel	Nr. 8	switch 8	0x80

During start-up, should always be the "error code break" (read object 1). Only if the error code is 0, the device can properly record the temperatures. The error codes of the various channels are added. For example, 0xA2 as an error code that the 2<sup>nd</sup>, 6<sup>th</sup> and the 8<sup>th</sup> have a channel interruption. It can happens, that a new interrupt is displayed, after the removal of a further one, which was previously not displayed. This is caused by the measuring principle witch is used. In any case, all interrupts have to be eliminated, until the error code is 0x00.

Example: There are 5 sensors used on channels 1 to 5 The switch 2 to 5 must "OFF" or "0", the switch to 6, 7 and 8 "ON" or "1". The short-circuit fault code is now "0xE0" or 224, the error interruption code must be 0x00.

**Assembly:**

The Sensor SK08-T8 is for outdoor and (moist) indoor areas. It fulfills protection class IP65. The sensor is attached to the wall with two screws.

The transducer lid is opened by loosening the screws.

In cases where radiations can distort the readings, shielded cables must be used. For the shielding is present on the PCB a connection option.

First attach the sensor to the wall or ceiling, then insert the KNX Bus cable into the slot on the side of the casing (PG Connection). Detach the bus clamp from the device, attach the cable and replace the clamp onto the board. After successfully programming the device, screw the cover back on.

→ Be careful not to damage the electronics with tools and cable heads.

**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:**

Should the sensor crash due to a programming malfunction, the previous project can be deleted by pressing the programming button. Hold the programming button down while connecting the EIB bus clamp and wait until the programming LED display appears. This will take 5 – 10 seconds. The calibration information is then lost.

**Imprint:**

Publisher: Arcus-EDS GmbH, Rigaer Str. 88, 10247 Berlin

Responsible for Content: Hjalmar Hevers, Reinhard Pegelow

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