STC-MSG Server UP

Configurable EasySens Message Server for SAB-05

thermokon Sensortechnik GmbH

Datasheet

Subject to technical alteration
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airConfig

enocean alliance
No Wires. No Batteries. No Limits.

Application

AirConfig tool is mandatory for STC-MSG Server UP!

All settings must be programmed using airConfig.

Wirelessly controlled heating regulator for operation of up to 5 valve actuators in connection with wireless room operating units. Furthermore, it is feasible to make use of the function "energy stop" by seamlessly connecting window contacts SRW01 and handles SRG01 to the SAB05, resulting in an automated closing of the valves, if a window is open.

STC-MSG Server UP can learn in the following sensors:

- 5x EnOcean valve actuator (SAB05)
- 1x Room operating panel type SR04x, SR06x or SR07x
- 10x Digital input module SR65DI, EnOcean switches, EnOcean motion sensors (e.g. SR-MDS, SR-MOW)
- 20x Window contact SRW01 or window handle SRG01

Security Advice – Caution

The installation and assembly of electrical equipment should only be performed by authorized personnel.

The product should only be used for the intended application. Unauthorised modifications are prohibited! The product must not be used in relation with any equipment that in case of a failure may threaten, directly or indirectly, human health or life or result in danger to human beings, animals or assets. Ensure all power is disconnected before installing. Do not connect to live/operating equipment.

CAUTION! Risk of electric shock due to live components within the enclosure, especially devices with mains voltage supply (usually between 90..265 V).

Please comply with

- Local laws, health & safety regulations, technical standards and regulations
- Condition of the device at the time of installation, to ensure safe installation
- This data sheet and installation manual

Notes on Disposal

As a component of a large-scale fixed installation, Thermokon products are intended to be used permanently as part of a building or a structure at a pre-defined and dedicated location, hence the Waste Electrical and Electronic Act (WEEE) is not applicable. However, most of the products may contain valuable materials that should be recycled and not disposed of as domestic waste. Please note the relevant regulations for local disposal.

Information about EasySens® (radio) / airConfig general usage

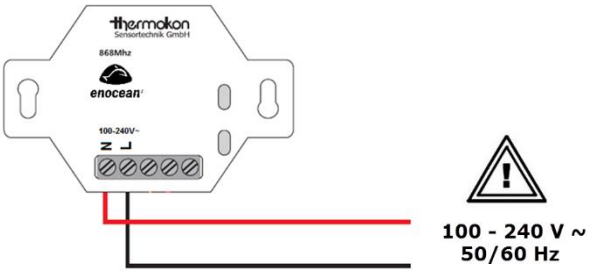
Basic information about EasySens® radio and about general usage of our airConfig software, please download from the following link

http://www.thermokon.de/ftp/info/Information_Radio_airConfig_en.pdf

Technical Data

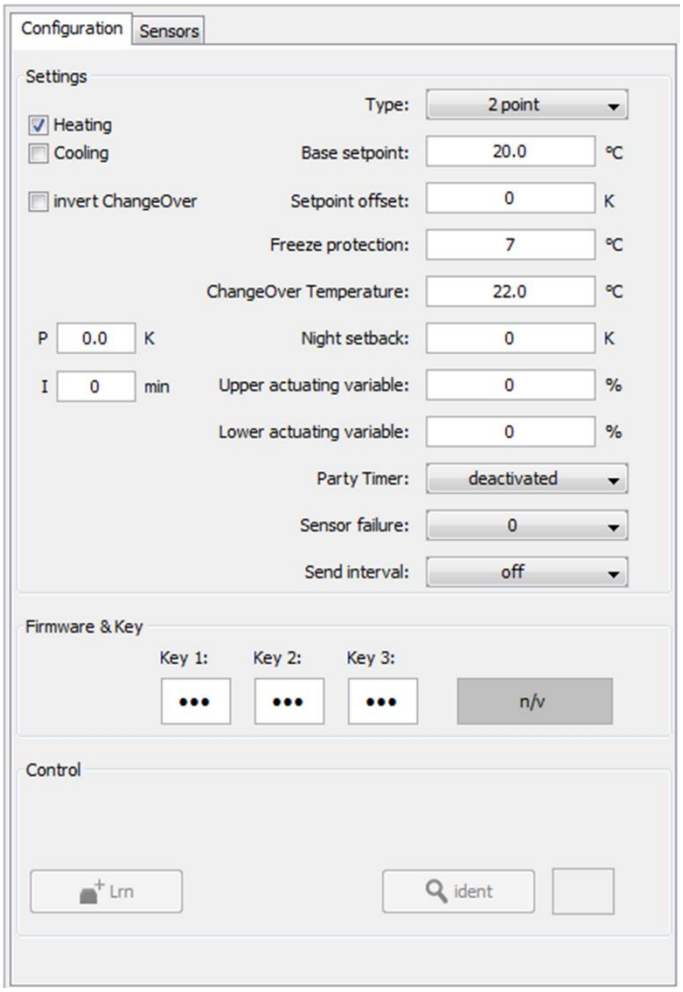
Radio technology	EnOcean, (IEC 14543-3-10)
Frequency	868 MHz
Antenna	internal transmitting/receiving antenna
Power supply	100..240 V ~
Power consumption	max. 2 VA (100..240 V ~)
Enclosure	ABS, red
Protection	IP20 according to EN60529
Connection electrical	terminal block, max. 1,5 mm²
Ambient condition	-20..+60 °C, max. 75% rH, non-condensing
Weight	55 g
Mounting	flush mounting in standard EU Box (Ø=55 mm)

Connection Plan



Configuration of the STC-MSG-Server UP in airConfig

The MSG-Server UP can be used as controller for operating modes “heating und cooling” or “heating and cooling with change over”. A sensor type (i.e. Sr65 VFG) is required, if using the operating mode with change over



Controller Type can be set to 2-point control or proportional control (PI-loop) with PWM for thermal actuators.

Using the 2-point controller causing a large energy consumption in the actuator as the PI controller. However, due to energy performance, this variant will only be recommended for use in exceptional cases.

Base Set point defines the centre position of a dial type setpoint adjuster.

Setpoint Offset is the range by which the user can shift the setpoint up or down.

Freeze-Protection is the threshold to automatically turn on “heating” mode independently of the set point, for frost protection of pipes.

Using 2-pipe systems heating and cooling is only available with change-over sensor SR65 VFG. The operating mode heating will be active if the temperature of the change-over sensor rises obove the ChangeOver temperature. If the value is below the operating mode cooling is active.

Controller’s PI-loop is characterized by parameter **P** (proportional band) and **I** (Integration time)

The actuating variable is given as percentages format.

The **upper** and **lower actuating variable** defines a limited value range.

The heating set point will be reduced and the cooling set point raised by the set value (**Night setback**). This value can be set by an external occupancy sensor (unoccupied). The Base set point will be used as initial value for the night setback.

The Slide switch of the SRxx-MS (EEP: A5-10-06) or the SR65-Di (A5-30-02) switches into night setback.

Using the Party Timer by pressing the button of a SR04 PT it’s extend the occupied state by the configured value.

The Telegrams received of the taught-in sensors will be monitored by the STC-MSG-SVR. If the server has received more than 90 minutes no telegram, the controller switches into an error mode. Depending on the sensor failure settings maintains the control loop its previous actuating variable or uses a selected value.

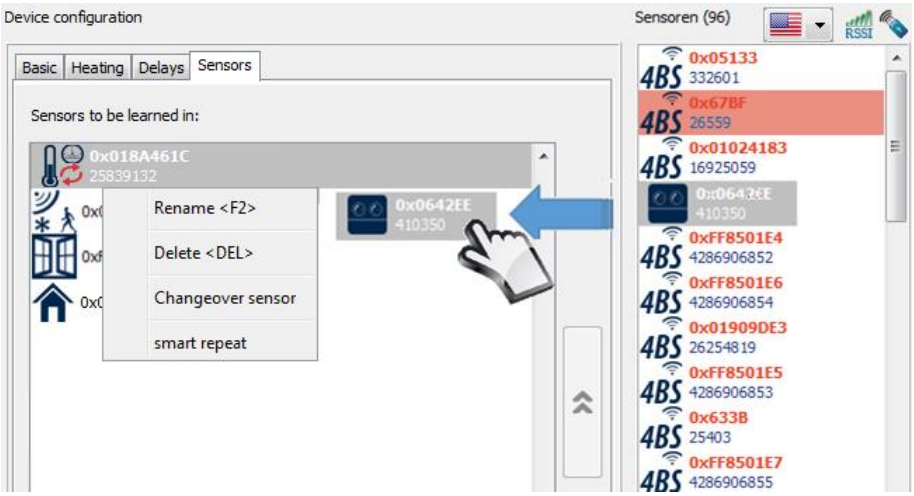
The calculated actuating variable can be transmitted cyclically to the BMS (EEP: A5-11-02). Sending interval selectable: off/10/100/1000sec

The Settings can be password protected with a 3x8 Bit Key (Key 1, 2, 3) (000-255) Factory default is 000-000-000.

LRN sending a Learn-telegram with the EnOceean-ID of the STC-MSG-SVRto the BMS.

In case of a lost PIN code the device´s configuration is secured and cannot be reset or modified and should be replaced with a new unit if changes are required.

Learn-In of sensors



Sensors and devices, within range, are listed on the right side of airConfig. To learn in a specific sensor simply drag and drop the (activated) symbol into the sensors input tab of the STC-DO. The Sensor's (EEP) type must be known to be assigned correctly through activation of the sensor or switch. The sensor type is coded in the EEP, which is included in the sensor's LRN telegram.

Right-clicking on the symbol of the SR65-VFG temperature sensor offers the option to declare this as the change-over sensor, which airConfig indicates by red arrows in a circle.

Superior Controller Profile A5-20-12 for heating / cooling / ventilation

The local control loop can be overwritten by the BMS using the superior controller profile EEP A5-20-12. The BMS through a bidirectional gateway such as the LON, Modbus or BACnet gateway will be taught in as shown above. It because of the special EEP it will override and priority control compared to the local control loop.

To return the control to the local loop the BMS must set back all changes to the default value (send 00-FF-80-08$_{hex}$ (DB3..DB0)). STC-DO will monitor the superior Controller profile telegrams, same as any other sensor signal. If a signal is not received for more than 90 minutes the control will be shifted back to the local control loop and replacing the previously received data from the BMS.

Dimensions (mm)