STC-DO 8 Type 2

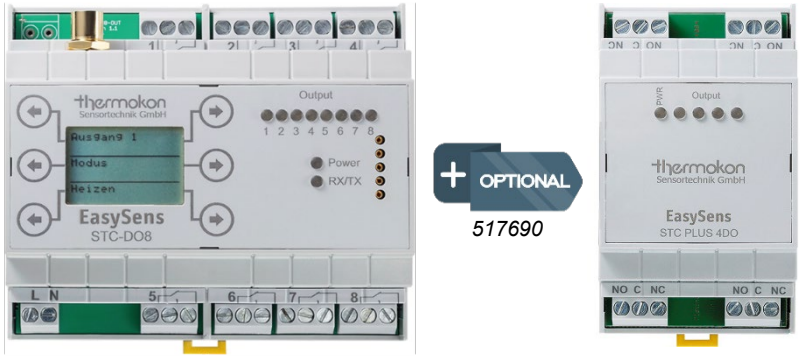
Wireless Actuator with 8 digital outputs and integrated FanCoil controller

thermokon®
HOME OF SENSOR TECHNOLOGY

Datasheet

Subject to technical alteration
Issue date: 26.08.2025 • A140

enocean®



»APPLICATION

Bidirectional receiver with 8 digital outputs (or 12 with extension module STC-Plus 4DO). For heating/cooling control, fan coil control, incl. ext. receiving antenna (2,5 m).

This product is intended for use as part of an automation solution for (functional) buildings. It transmits sensor data within a building over short distances unencrypted by radio to suitable receivers. No personal data or location data is transmitted.

The product cannot communicate directly with the Internet and is not intended for applications that use the Internet to forward unprocessed sensor data. Automation stations that forward data via the Internet, e.g. to visualise the building status, must ensure that the data to be forwarded is encrypted as required by law.

»TYPES AVAILABLE – TYPE 2

Wireless receiver – multi relay 24 V
- STC-DO8 24 V type FanCoil, heating/cooling

Wireless receiver – multi relay 100..230 V
- STC-DO8 230 V type FanCoil, heating/cooling

»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

»PRODUCT TESTING AND CERTIFICATION

Declaration of conformity
The declaration of conformity of the products are available on our website
https://www.thermokon.de/direct/en-gb/categories/stc-do8

»TECHNICAL DATA

Output switch contact	**STC-DO8 24 V:** 8x relay with change-over contact (floating), 24 V =/~ 6 A, 12x relay with additional module STC-PLUS 4DO	**STC-DO8 100..230 V:** 8x relay with change-over contact (floating), 230 V ~ 6 A, 12x relay with additional module STC-PLUS 4DO
Radio technology	EnOcean (IEC 14543-3-10), transmission power <10 mW	
Frequency	868 MHz, optional 902 MHz / 315 MHz	
Antenna	external transmit- / receive antenna	
Data transmission	bidirectional	
Power supply	**STC-DO8 24 V:** 18..24 V = / ~ SELV	**STC-DO8 100..230 V:** 100..240 V ~ (±10%)
Power consumption	**STC-DO8 24 V:** typ. 2,0 W (24 V =) | 3,5 VA (24 V ~)	**STC-DO8 100..230 V:** 3,5 VA
Display	LCD 37,5 mm x 31,6 mm	
Functions	fancoil controller, heating ON/OFF, fan release, lighting, blinds/shutter	
No. Of buttons	6 capacitive touch sensor buttons	
Switching values	**STC-DO8 24 V:** 6 A resistive load (24 V =/~)	**STC-DO8 100..230 V:** 6 A resistive load (230 V ~)
Enclosure	ABS, light grey	
Protection	IP20 according to EN 60529	
Connection electrical	terminal block, max. 1,5 mm²	
Ambient condition	0..+60 °C max. 85% rH non-condensing	
Weight	ca. 250 g (without external antenna)	
Mounting	prepared for mounting on DIN rail TS35 (35x7,5 mm) according to EN 60715	
Delivery contents	external transmit- / receive antenna with magnetic holding	
Notes	For inductive and / or capacitive loads, a suitable protection must be provided (varistor, RC element, inrush current limiting element, ...).	

»INFORMATION ABOUT EASYSENS® (RADIO) / AIRCONFIG GENERAL USAGE

EasySens® - airConfig
Basic information about EasySens® radio and about general usage of our airConfig software, please download from our website.

»OVERVIEW OF THE RADIO TELEGRAMS

EEP
The structure of the data contained in the telegram can be found in the EEP (EnOcean equipment profile) list provided by the EnOcean Alliance. http://www.enocean-alliance.org/eep/

»NOTES ON DISPOSAL

The crossed-out wheelie bin symbol indicates that the product or removable batteries must not be disposed of with household or commercial waste. Within the EU, you are legally obliged to dispose of the product separately and appropriately in accordance with the national laws of your country. Alternatively, please contact your supplier or Thermokon Sensortechnik GmbH. Further information can be found at: www.thermokon.com

» COMPATIBILITY LIST (OVERVIEW OF THE SUPPORTED RADIO TELEGRAMS (EEP´S)/DEVICES)

It is possible to connect the following numbers of sensors to the STC-DO8 per output/channel:

- max. 1x room sensor type SR04x, SR06x or SR07x
- max. 10x digital input modules SR65DI, EnOcean switch or occupancy sensors SR-MDS, MOC, MOW (solar)
- max. 20x window contacts SRW01 or window handles SRG01
- max. 1x superior control unit (EnOcean Profile EEP A5-20-12)
- max. 1x EnOcean valve actuator

Any 4 byte EnOcean based sensor (4BS) can be learned-in to the STC-DO8 via the menu point “Learning-in of individual sensor“. The evaluation of the data detected by this sensor can be freely parameterized by the user. Thus, it is also possible to learn-in and to evaluate sensors which's profiles are not supported by the STC-DO8 actually. (see page 16 individual sensor)

EEP (EnOcean Equipment Profiles)		Device
D5-00-01	**single input contact**	SRW03, thanos, SR65 DI
F6-02-01 (F6-02-xx)	**rocker switch**	SR-MDS Solar, SR65-DI, Handsender
F6-04-01	**key card activated switch**	SR-KCS, SR65-DI
F6-10-00	**window handle**	SRG02
A5-02-05	**temperature 0°C..+40°C**	SR04, SR07, SR65 T
A5-04-01	**temperature 0°C..+40°C and humidity 0..100%**	SR04 rH, SR07 rH, SR65 rH
A5-07-01	**occupancy with supply voltage monitor**	SR-MOC, SR-MOW, SR-MDS Solar, SR65-DI
A5-08-01	**illuminance 0..510lx, temperature 0..+51°C, occupancy button**	SR-MDS, SR-MDS Solar
A5-09-04	**CO2, temperature**	SR04 CO2
A5-30-01	**single input contact, battery monitor**	SR65 DI
A5-10-01	**temperature, set point, fan speed and occupancy control**	SR04 PST
A5-10-02	**temperature, set point set point, fan speed and day/night control**	SR04 PS MS, thanos SR
A5-10-03	**temperature, set point control**	SR04P, SR07P, SR06 2T
A5-10-04	**temperature, set point, fan speed control**	SR04 PS, SR06 4T Typ1
A5-10-05	**temperature, set point and occupancy control**	SR04 PT, SR07 PT
A5-10-06	**temperature, set point and day/night control**	SR04 P MS, SR07 P MS
A5-10-10	**temperature, humidity, set point and occupancy control**	SR04 PT rH, SR07 PT rH
A5-10-11	**temperature, humidity, set point and day/night control**	SR04 P MS rH, SR07 P MS rH, Thanos SR
A5-10-12	**temperature, humidity and set point**	SR04 P rH, SR07 P rH, SR06 2T rH
A5-10-13	**temperature, humidity and occupancy control**	SR04 T rH, SR07 T rH
A5-10-0C	**temperature and occupancy control**	SR04 T
A5-20-01	**Battery powered actuator**	SAB05
A5-20-12	**Temperature Controller Input**	Übergeordnete Steuerung

»MOUNTING ADVICES

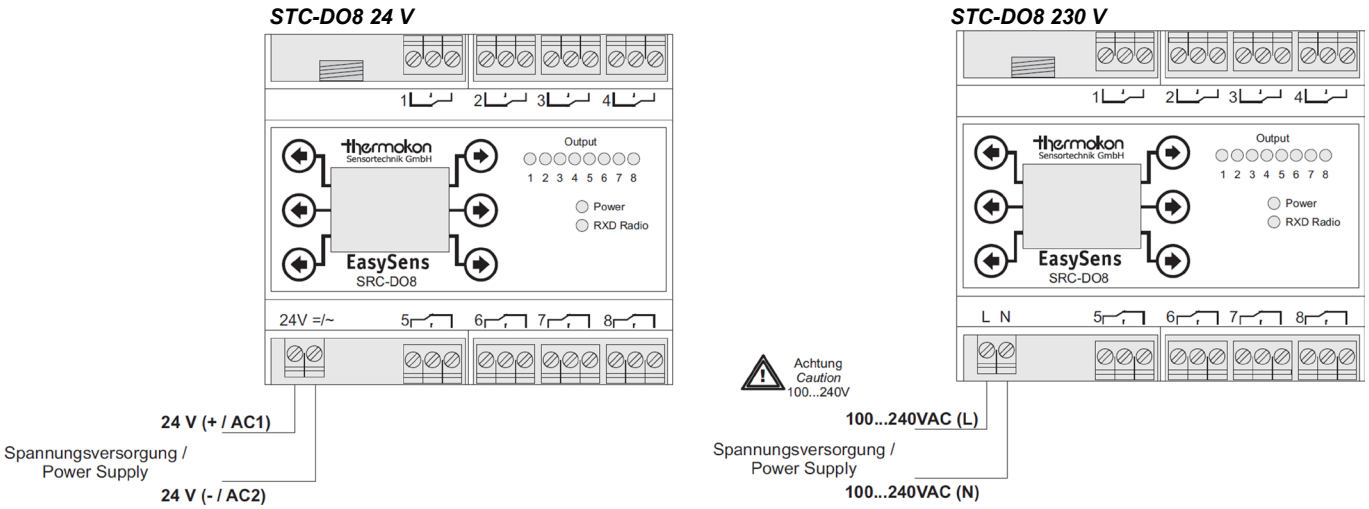
The housing of the module is designed for installation on standard DIN rails according to DIN EN 60715. For operation, a separate external 868 MHz receiving antenna is necessary.

The antenna has a magnetic flux and must be mounted in the middle of a metal plate with the minimum dimensions 180 mm x 180 mm (material: galvanized sheet steel, please see “accessories”). The ideal mounting place in rooms is found approx. 1 m under the ceiling (optimum radio transmission range). The antenna should be adjusted vertically downwards and should have a minimum distance of approx. 90 mm to the wall. The distance to other senders (e.g. GSM/DECT/Wireless LAN/ EnOcean senders) should be 2 m at least. To match the colour of the room, the antenna can be painted, accordingly (do not use any metallic lacquers).

Cable Laying Notice

- Cable laying should be made in an electric conduit.
- A cable crushing should be avoided.
- The minimum bending radius of the extension cable amounts to 50mm
- Do not use an active pull-up device for the cable laying, in order to avoid any damages of the sheathing respectively of the connectors.

»CONNECTION PLAN



Assignment of the outputs

The functions of the individual outputs in dependence on the device settings are shown in the following table:

	2-pipe system	4-pipe system
Output 1	Heat-/Cooling valve	Heating valve
Output 2	Heating/Cooling signaling (OFF=Heating ON=Cooling)	Cooling valve

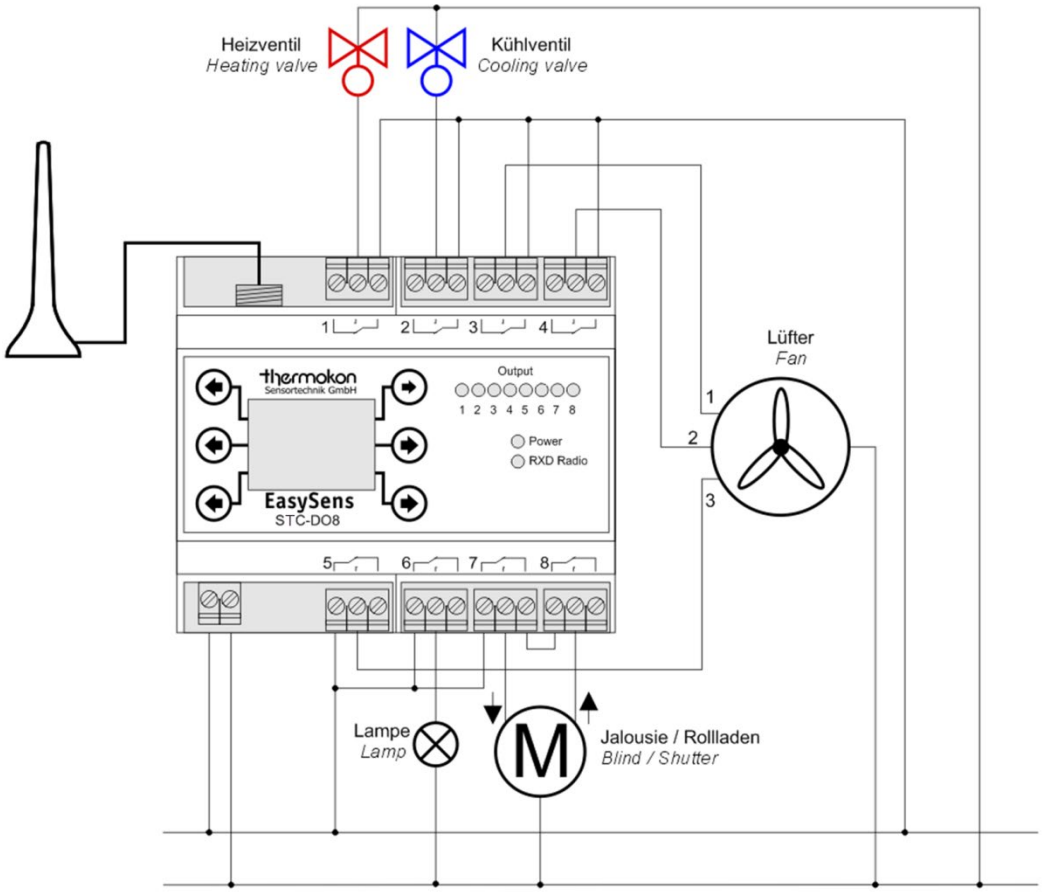
	1 fan stage	2 fan stages	3 fan stages
Output 3	Fan stage 1	Fan stage 1	Fan stage 1
Output 4	Switching output	Fan stage 2	Fan stage 2
Output 5	Switching output	Switching output	Fan stage 3

	Universal / 1-/2-Button operation	Blind / Shutter
Output 4*	On / Off	X
Output 5*	On / Off	Down
Output 6	On / Off	Up
Output 7	On / Off	Down
Output 8	On / Off	Up

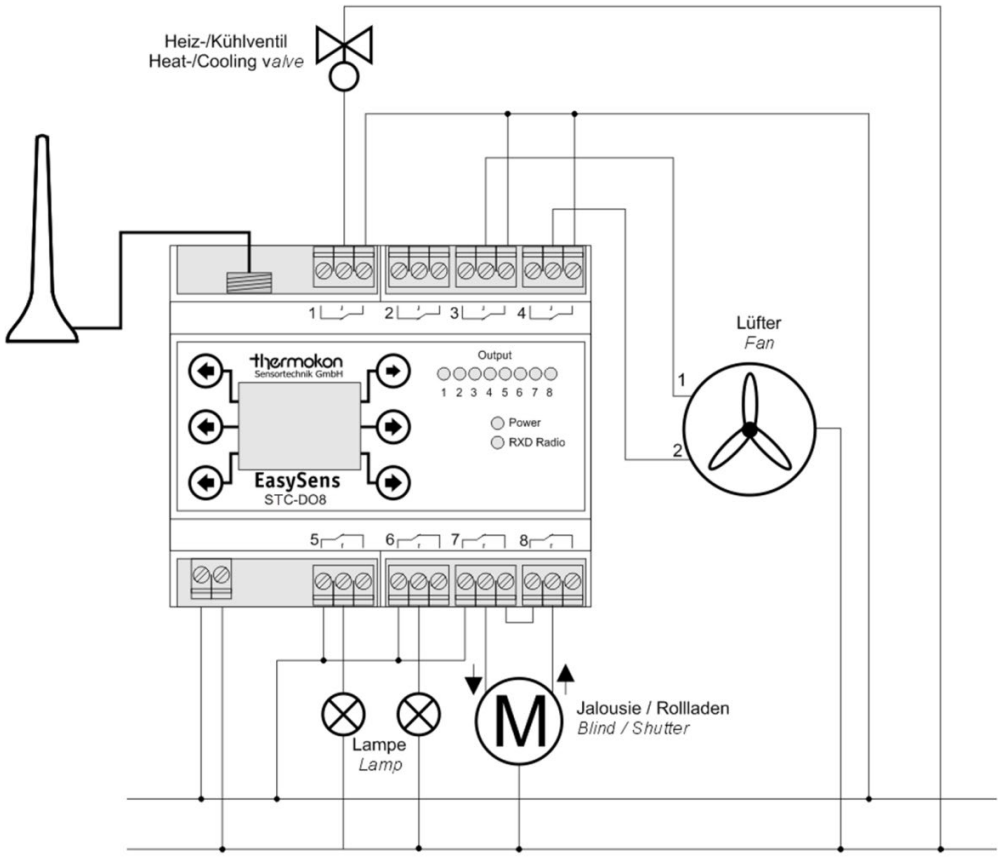
Notice:

A combination of low voltage and mains voltage at the individual outputs is not safe. All relay outputs must use a common phase - various phases are prohibited.

4-pipe system, 3-stage fan, 1 switching output
for control of lighting and 2 switching outputs for control of a blind/shutter motor.



2-pipe system, 2-stage fan, 2 switching outputs
for control of a blind/shutter motor.



» FUNCTION DESCRIPTION

The STC-DO8 compares the room temperature provided by the wireless sensor with the calculated set point. If the room temperature falls below / exceeds the calculated set point, the relays are controlled by the controller according to the corresponding device settings.

The receiver calculates the set point of the room temperature from the adjusted basic set point (default 21°C) and the set point adjustment (default -5k…+5k).

The radio sensor cyclically sends a radio telegram with the measured values to the receiver. In normal operating mode, the reception of a taught-in sensor is indicated at the receiver by a brief lighting up of the "RXD Radio" LED.

Energy Stop Function:
If a window contact or window handle is connected, the STC-DO8 can only switch on the corresponding heating-output if

- the information “window closed” is provided by the window contact/window handle,
- or no signal of the window contact is received in the recent 45 minutes (defective window contact)
- or “window opened” is reported by the window contact/window handle, but the room temperature has fallen below the antifreeze limit set (default 8°C).

Function Comfort/Lowering Operation:
The STC-DO8 has an integrated time switch by which an automatic toggling from comfort to lowering mode or from lowering to comfort mode can be effected. Thus, the time switch has 8 timer clocks, which can be assigned to each output/channel and every weekday.

Furthermore, it is possible to set the STC-DO8 manually into the lowering mode when using the room sensors SR04P MS / SR07P MS or up to 10 sensors of the digital input module SR65DI or wireless EnOcean switches.

When having connected the occupancy sensor (SR-MDS) or when using room sensors SR04T, SR04PT or SR04PST the comfort time adjusted at the STC-DO8 can be prolonged.

Thus, it can be avoided that the temperature is switched down by the controller although the room is still occupied.

Comfort Operating:
In the comfort operation the set point of the controller is formed as follows:

Basic set point + local set point adjustment.

Lowering Operating:
In the lowering operation the set point of the controller is formed as follows:

Basic set point - lowering temperature

With the SR04P MS the switching-over is made by the slide switch (position 1 = lowering mode, position 0 = comfort mode).

As for the SR07P MS the switchingover is made by the slide switch (position night = lowering mode, position day = comfort mode). As for the SR65 DI the switchingover is made by the digital input for floating contacts (contact open = lowering mode, contact closed = comfort mode). As for the EnOcean wireless switches, the switchingover is made by button actuation (Position 1 = comfort mode, position 0 = lowering mode).

Toggling between Heating and Cooling
Via a “change over sensor” an operating mode (heating or cooling) can be predefined to the STC-DO8. This is especially necessary for 2-pipe systems, because there is only one valve for heating and cooling available. As a “change over sensor” the SR04P(S) MS (slide switch position 1 = cooling, position 0 = heating) SR65 DI (input open = heating, input closed = cooling) as well as the SR65 VFG (temperature falls below adjusted switching threshold = cooling, temperature is greater than/equal to adjusted switching threshold= heating) can be used.

Switching Outputs
The STC-DO8 Fan Coil provides 3 to 5 switching outputs (depending on the number of required fan stages) with different functions. By means of these outputs, lighting and blinds/shutters can be controlled.

The following functions are available: Universal, 1-button operation, 2-button operation, blind function, shutter function.

For further information, please see the following descriptions.

» FANCOIL CONTROLLER

PI-Controller
As for the PI-controller the control variable (Y) is calculated by means of the room temperature, the set point and the adjusted control parameter Xp/Tn.

The control variable is output to the corresponding relay output in form of a pulse width modulation (PWM). The property setting of the PI-controller [(P) amplifying P-Band, (I) reset time Tn and the PWM period] can be field adjusted for each output in the configuration menu.

Fan Stages
By means of the calculated control variable as well as the definable switching thresholds, the fan stage is automatically set at the fan coil. Via the manual operation on the sensor (SR04PST) the fan can be manually adjusted, as well.

Switching Outputs

Function Universal
The corresponding output is switched as soon as a switch-on command is received by one or several sensors. All sensors learned-in are logical OR circuit linked. That is to say, as soon as any window contact SRW01 reports “window opened” or any digital module SR65 DI “contact closed” or a multi ceiling sensor SR-MDS reports “occupancy” or a window handle reports “window opened or tilted” or an EnOcean wireless switch is switched-on, the relay is switched. In reverse order, the relay is only deactivated, if the switch-off command is received from all sensors.

Function 1-Button Operation
The corresponding output is switched-on, as soon as the learned-in button of an EnOcean switch is pushed and automatically reset after expiry of an adjustable after-run time (5 seconds…120 minutes).

If the after-run time is deactivated, the output switches-on as long as the button is released again (button operation).

If the after-run time is set to “continuously ON”, the output is switched-on after actuation of the learned-in button and is only switched-off when the button is pushed again.

Function 2-Button Operation
The corresponding output is switched-on, as soon as the I-button of a learned-in EnOcean switch is pushed and is reset after actuation of the O-button of a learned-in EnOcean switch.

Function Blind and Shutter
The outputs 5/6 (5: down, 6: up) and 7/8 (7: down, 8: up) can be used for controlling blinds and shutters.

Blind function: The output Up/Down is switched-on as long as the button Up/Down is pushed. If the corresponding button is pushed for more than 2 seconds, the output remains switched-on for the period of the adjustable after-run time (lock).

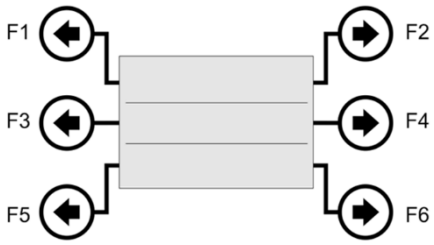
Shutter function: The output Up/Down is switched-on for the period of the adjustable after-run time if the button Up/Down is pushed. If the corresponding button keeps pressed for more than 2 seconds and is released again afterwards, the output switches off immediately. The outputs for “up” and “down” are locked back-to-back by the software, so that always only one relay is switched and a damage of the blind/shutter drive is avoided.

During installation/wiring a wired interlock has to be included additionally according to the application example shown in this product sheet.

»CONFIGURATION

The STC-DO8 has 6 capacitive buttons which re-calibrate themselves automatically after a reset. In order to guarantee a smooth function of the buttons, they must not be touched during calibration. Calibration is finished as soon as the green LED (power) shines continuously.

The STC-DO8 has a configuration menu via which any properties can be set. The menu is partitioned into 3 levels, whereas for operation each level is exactly assigned to 2 keys.



Notice:
For menu items in which 1 value shall be changed (e.g. basic set point), the left button has the function "left/-" and the right button "right/+".

For menu items in which 2 values shall be changed (e.g. time including hours and minutes), the left button has the function "Value A +" and the right button "Value B +".

For menu items in which more than 2 values shall be changed, the left button has the function "Selected value +" and the right button "Select value".

Fancoil Controller
The fan coil controller is parameterized via the menu points “fan coil general & heating” and “fan coil cooling”.

Via “fan coil general & heating”, the settings for the heating function are made. In addition, settings which are valid for the heating and cooling functions in the same way are determined in this menu point (learning-in/deleting of sensors, set point adjustment, night lowering, number of fan stages, pipe system…).

Via “fan coil cooling” exclusively the settings for the cooling function are made and the “change over sensors” are administrated.

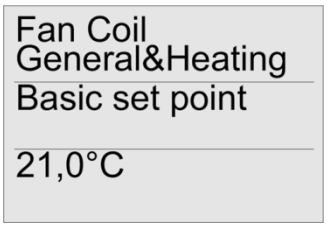
Parameterization of Outputs
The function that shall be parameterized can be selected by the function keys F1 and F2.

By means of the keys F3 and F4 the requested property can be chosen afterwards. With F5 and F6 the values can be changed.

»FANCOIL GENERAL & HEATING

Basic Set Point

Setting of requested heating basic set point



Adjustable range: 10,0°C..30,0°C

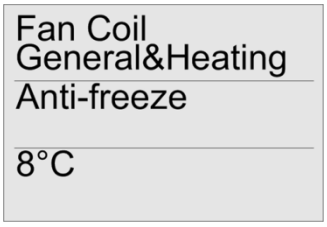
Resolution: 0,1k

Factory setting: 20,0 °C

Antifreeze

Setting of antifreeze limit.

The controller switches to 100% (heating) if the antifreeze limit is under-run, even if a window is opened.



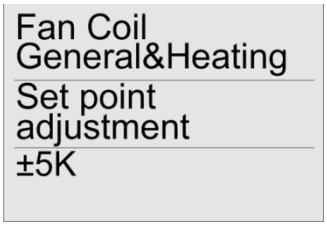
Adjustable range: 5°C…15°C

Resolution: 1K

Factory setting: 8°C

Set Point Adjustment

Manual adjustment of the heating and cooling set point on the sensor.



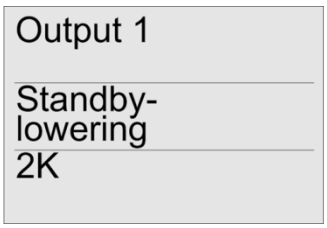
Adjustable range: ±0K…±10k

Resolution: 1K

Factory setting: ±5K

Standby Lowering

The heat-/cooling set point is lowered/ increased by this value when a main-controller sends „Standby“.



Adjustable range: 0K…15K

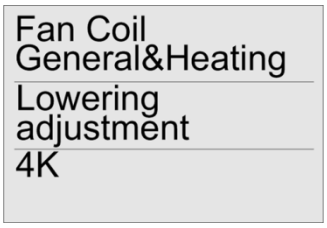
Resolution: 1K

Factory setting: 2K

Notice: Only possible with a superior control unit (EnOcean Profile EEP A5-20-12)

Night Lowering

The heat-/cooling set point is lowered/increased by this value outside the comfort time.



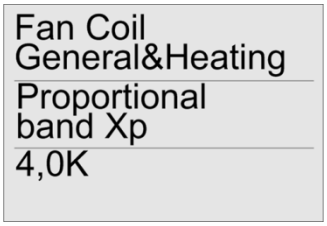
Adjustable range: 0K…15K

Resolution: 1K

Factory setting: 4K

Proportional Range Xp

Setting of Xp for the heating controller. Xp shows the proportional range between the control difference (deviation of actual value and set point) and the control variable.



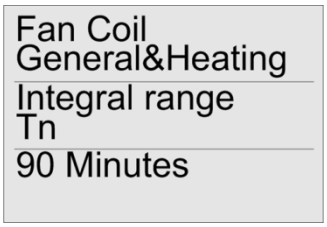
Adjustable range: 0,1…10,0K

Resolution: 0,1K

Factory setting: 4,0K

Integral range Tn

Setting of integral range Tn for the heating controller. The integral range is the time which an I-controller needs to achieve the same control variable change, which is effected instantly by a PI-controller due to its P-part.



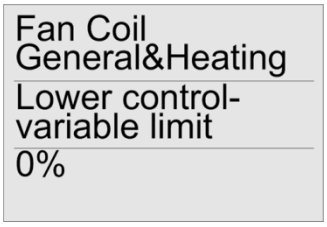
Adjustable range: 0…255 minutes

Resolution: 1 minute

Factory setting: 90 minutes

Minimal Control Variable

Setting of minimal control variable for the heating controller. This control variable is output by the PI-controller at minimum, even if there is no actuation.



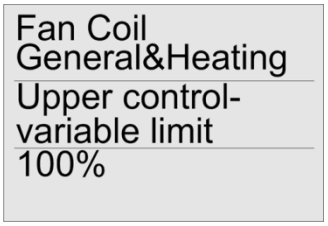
Adjustable range: 0%...100%

Resolution: 1%

Factory setting: 0%

Maximal Control Variable

Setting of maximal control variable for the heating controller. This control variable is output by the PI-controller at maximum.



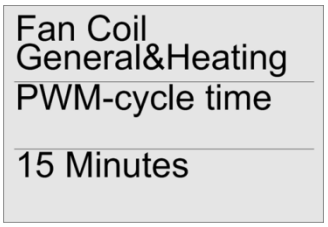
Adjustable range: 0%...100%

Resolution: 1%

Factory setting: 0%

PMW-Cycle Time

Setting of PWM-cycle time for the heating controller.



Adjustable range: 1…255 minutes

Resolution: 1 minute

Factory setting: 15 minutes

Send EnOcean-ID

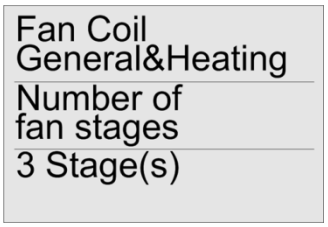
Menu point to send a learn telegram of the output.



Press F6 to generate a learn telegram.

Number of Fan Stages

Fan stage adjustment of fan coil.

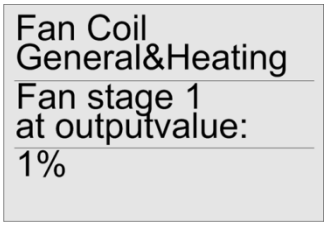


Possible selections: 1, 2 or 3 Stage(s)

Factory setting: 3 Stages

Fan stage 1 at Output Value

Adjustment of switching threshold for fan stage 1 in heating operation. If the heater is in the heating mode and the control variable reaches the value set in this menu point, the output for fan stage 1 is switched on. The relays for the other fan stages will be switched off.



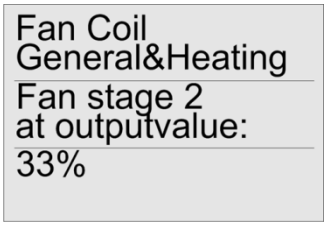
Adjustable range: 0 ... 100%

Factory setting: 1%

Resolution: 1%

Fan stage 2 at Output Value

Adjustment of switching threshold for fan stage 2 in heating operation. If the heater is in the heating mode and the control variable reaches the value set in this menu point, the output for fan stage 2 is switched on. The relays for the other fan stages will be switched off.



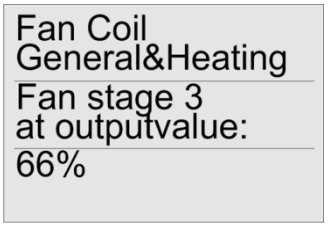
Adjustable range: 0 ... 100%

Factory setting: 33%

Resolution: 1%

Fan stage 3 at Output Value

Adjustment of switching threshold for fan stage 3 in heating operation. If the heater is in the heating mode and the control variable reaches the value set in this menu point, the output for fan stage 3 is switched on. The relays for the other fan stages will be switched off.



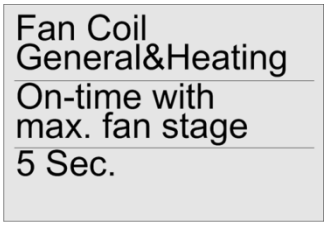
Adjustable range: 0 ... 100%

Factory setting: 66%

Resolution: 1%

Turn-on Time with max. Fan Stage

By means of this property it is determined how long the fan shall run at maximum stage during the startup, to guarantee a proper run up of the fan motor.



Adjustable range: 0 ... 255 Seconds

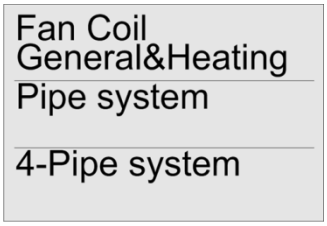
Factory setting: 5 Seconds

Resolution: 1 Second

Pipe system

Selection of pipe system. When choosing the 2-pipe system (combined heating/cooling valve), both heating and cooling control variables have an effect on output 1.

When selecting the 4-pipe system, the heating control variable has an effect on output 1 and the cooling control variable on output 2.

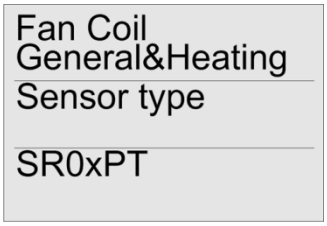


Options for selection: 2- or 4-pipe system

Manufacturer's presetting: 4-pipe system

Type of Room Sensor

Selection of room sensor that shall be seamlessly connected to this output.



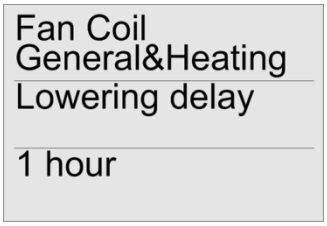
Possible selections: SR0x, SR0xP, SR0xPT, SR0xP MS, SR0xPST, SR0xT and SR0xPS

Factory setting: SR0xPT

Advice: By selecting the type SR0x the set point adjustment will be set to 0K.

Lowering Delay

Setting of lowering delay. The time of the night lowering is delayed by this time, if the presence button on the room sensor SR0xPT/ SR0xPST is actuated or movement is detected by the occupancy sensor.



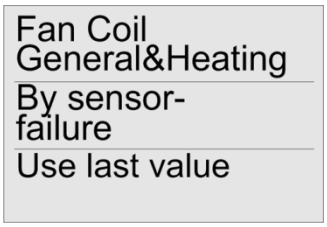
Adjustable range: disabled, 30 minutes,

1 hour, 2 hours, 3 hours, 4 hours and 5 hours

Factory setting: 1 hour

Control Variable during Sensor Failure

In this menu it can be adjusted which heating-control variable shall be output by the controller in case the sensor fails (no telegram was received for a time exceeding 90 minutes).



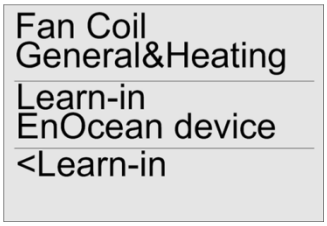
Adjustable range: Use control variables calculated last or 0%...100%

Resolution: 10%

Factory setting: Use last value

Seamless Connection of Sensors

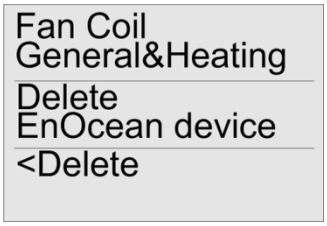
Menu point for seamless connection of a EnOcean device to the set output.



In order to learn-in the requested sensor, the F5 key must be actuated in the corresponding menu. Afterwards, the learning-in procedure for the corresponding sensor described in the operating instructions must be carried out within 45 seconds. If the sensor was connected successfully, a corresponding notice is displayed.

Delete EnOcean Device

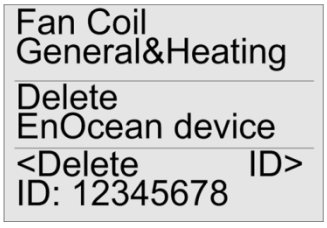
Menu for clearing a EnOcean device at the output set.



In order to clear the requested sensor, the F5 key must be actuated in the corresponding menu. Afterwards, the learning-out procedure for the corresponding sensor described in the operating instructions must be carried out within 45 seconds. If the sensor was successfully disconnected (learned-out) a corresponding notice is displayed.

Delete EnOcean Device via ID

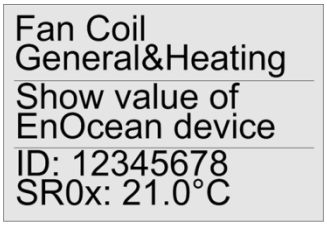
In this menu, EnOcean devices can be cleared by means of their ID.



By button F6 a sensor is selected. By means of button F5 this sensor can be cleared after having confirmed the safety query.

Show value of EnOcean device

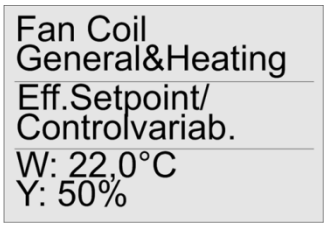
This menu shows the values/status of the EnOcean devices learned-in.



By means of buttons F5 and F6 the sensors can be selected. The ID of the chosen sensor as well as its value/status are displayed.

Show effective Setpoint and Control Variable

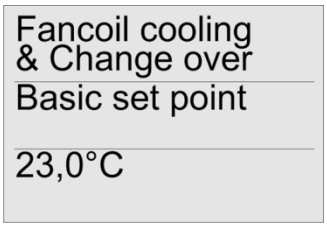
In this menu item, the effective set point (W) and the current controller output variable (Y) are displayed.



»FANCOIL COOLING & CHANGE OVER

Basic Set Point

Setting of requested cooling basic set point



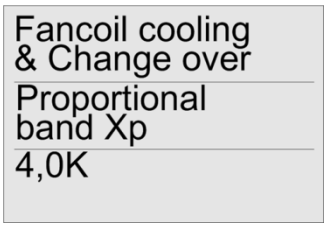
Adjustable range: 10,0°C..30,0°C

Resolution: 0,1k

Factory setting: 23,0 °C

Proportional Range Xp

Setting of Xp for the cooling function. Xp shows the proportional range between the control difference (deviation of actual value and set point) and the control variable.



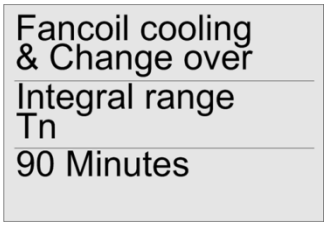
Adjustable range: 0,1…10,0K

Resolution: 0,1K

Factory setting: 4,0K

Integral Range Tn

Setting of integral range Tn for the cooling function. The integral range is the time which an I-controller needs to achieve the same control variable change, which is effected instantly by a PI-controller due to its P-part.



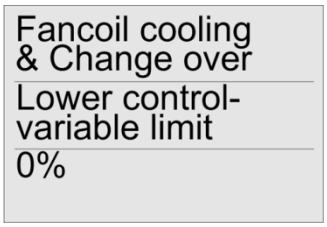
Adjustable range: 0…255 minutes

Resolution: 1 minute

Factory setting: 90 minutes

Minimal Control Variable

Setting of minimal control variable for the cooling function. This cooling control variable is output by the PI-controller at minimum, even if there is no actuation.



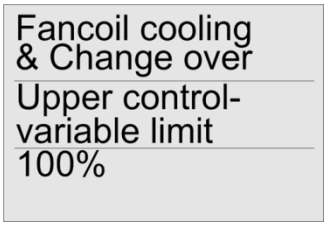
Adjustable range: 0%...100%

Resolution: 10%

Factory setting: 0%

Maximal Control Variable

Setting of maximal control variable for the cooling function. This cooling control variable is output by the PI-controller at maximum.



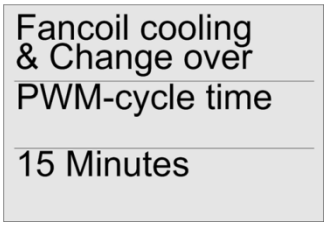
Adjustable range: 0%...100%

Resolution: 10%

Factory setting: 0%

PMW-Cycle Time

Setting of PWM-cycle time for the cooling function.



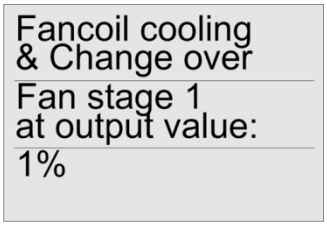
Adjustable range: 1…255 minutes

Resolution: 1 minute

Factory setting: 15 minutes

Fan stage 1 at Output Value

Setting of switching threshold for fan stage 1 in the cooling operation. If the controller is in the cooling operation and reaches the control variable adjusted in this menu point, the output for fan stage 1 is switched-on.



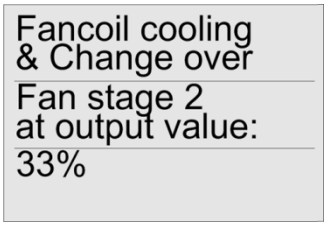
Adjustable range: 0 ... 100%

Factory setting: 1%

Resolution: 1%

Fan stage 2 at Output Value

Setting of switching threshold for fan stage 2 in the cooling operation. If the controller is in the cooling operation and reaches the control variable adjusted in this menu point, the output for fan stage 2 is switched-on.



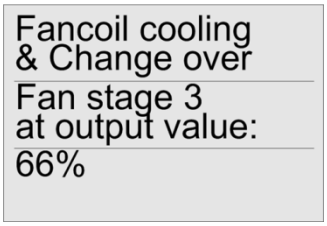
Adjustable range: 0 ... 100%

Factory setting: 33%

Resolution: 1%

Fan stage 3 at Output Value

Setting of switching threshold for fan stage 3 in the cooling operation. If the controller is in the cooling operation and reaches the control variable adjusted in this menu point, the output for fan stage 3 is switched-on.



Adjustable range: 0 ... 100%

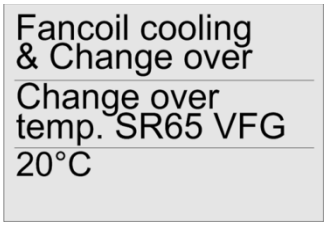
Factory setting: 66%

Resolution: 1%

Change Over Temperature SR65 VFG

If a SR65 VFG is seamlessly connected (learned-in), the SRC-DO8 can automatically toggle between heating and cooling operation by means of the temperature supplied by the SR65 VFG.

If the temperature measured by the SR65 VFG is lower than the temperature set in this menu point, the SRC-DO switches into the cooling mode. If the temperature measured is greater/equal than the temperature set, the SRC-DO 8 switches into the heating mode.



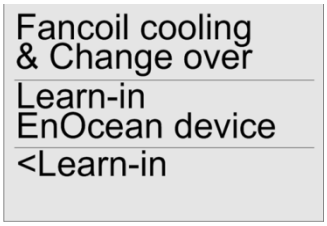
Adjustable range: 10 ... 90°C

Resolution: 1°C

Factory setting: 20°C

Learn-in „change over sensor“

Menu point to learn-in a sensor to toggle between heating/cooling operation. It is possible to learn-in the SR65DI (contact open = heating operation, contact closed = cooling operation) and SR65 VFG (see menu point “Change over temperature SR65 VFG).

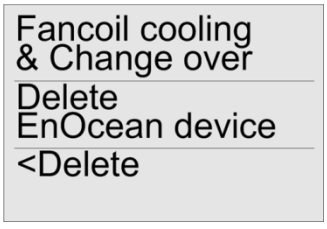


For learning-in, push the button F5 and execute the learning-in procedure for the corresponding sensor (described in the respective operating instructions) within 45 seconds. If the sensor was successfully learned-in, a corresponding notice is displayed.

Notice:
If a SR04P (S) MS is learned-in as a "change-over sensor", a toggling in the lowering mode via the slide switch is not feasible any more.

Delete EnOcean Device

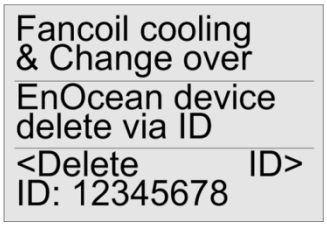
Menu for clearing a EnOcean device at the output set.



In order to clear the requested sensor, the F5 key must be actuated in the corresponding menu. Afterwards, the learning-out procedure for the corresponding sensor described in the operating instructions must be carried out within 45 seconds. If the sensor was successfully disconnected (learned-out) a corresponding notice is displayed.

Delete Sensor via ID

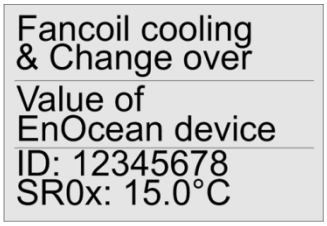
In this menu, „change over sensors“ can be cleared by means of their ID.



By button F6 a sensor is selected. By means of button F5 this sensor can be cleared after having confirmed the safety query.

Show value of EnOcean device

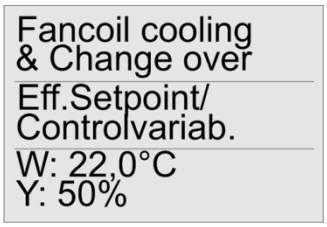
This menu shows the values/status of theEnOcean devices learned-in.



By means of buttons F5 and F6 the sensors can be selected. The ID of the chosen sensor as well as its value/status are displayed.

Show effective Setpoint and Control Variable

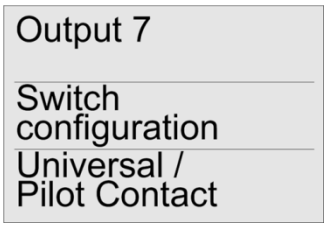
In this menu item, the effective set point (W) and the current controller output variable (Y) are displayed.



»CONFIGURATION OF SWITCHING OUTPUTS

Switch Configuration

In this menu point the behavior of the corresponding output can be adjusted.



Possible selections:Universal / Pilot Contact,

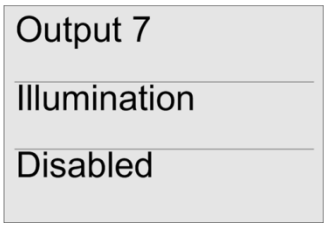
1-Button operation, 2-Button operation, Blind, Shutter

Factory setting: Universal

Illumination (SR-MDS)

In this menu point a switching threshold for the brightness supplied by the SR-MDS sensors can be adjusted. If the measured Lux-value is less than the set threshold and occupancy has detected by the sensor, the output switches on (follow-up time).

Is the measured Lux-value is greater than the set threshold, the output remains off.



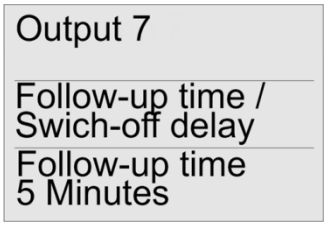
Adjustable range: disabled, 1 ... 512 Lux

Resolution: 1 Lux

Factory setting: Disabled

Follow-up Time / Switch-off delay

Adjustment of the after-run time. Depending on the configuration of the output, the after-run time is used for different functions.



Possible selections: Disabled, 5 seconds, 15 seconds, 30 seconds, 1 minute, 2 minutes, 5 minutes, 15 minutes, 30 minutes, 60 minutes, 120 minutes, Always ON

Factory setting: 5 minutes

Meaning of Follow-Up Time / Switch-off delay
The parameters for the follow-up time has a different meaning depending on the configuration of the output:

Function Universal / Pilot Contact:
If a SR-MDS ... learned-in to an output reports “movement” and if the illumination value is lower than the threshold, the output is switched-on and automatically switched-off again after expiration of the run-after time.

Function 1-Button Operation:
If a learned-in button is pushed, the output is switched-on and automatically switched-off again after expiration of the after-run time. If the after-run time is deactivated, the output is switched-off again, as soon as the button is released. If the after-run time is set to “Duration ON”, the output is switched-on as soon as a learned-in button is pushed and is switched-off again if this or any other learned-in button is pushed, again.

If a SR-MDS ... learned-in to an output reports “movement” and if the illumination value is lower than the threshold, the output is switched-on and automatically switched-off again after expiration of the run-after time.

Function 2-Button Operation:
If a SR-MDS ... learned-in to an output reports “movement” and if the illumination value is lower than the threshold, the output is switched-on and automatically switched-off again after expiration of the run-after time.

Function Blind/Shutters:
If one of the buttons Up/Down is pushed and the corresponding output is in the lock position, it is switched-off automatically after expiration of the after-run time.

STC-DO8 ID send

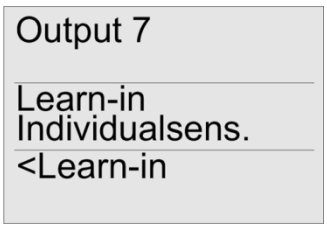
Menu point to send a learn telegram of the output.



Press F6 to generate a learn telegram.

Seamless Connection of Sensors

Menu point for seamless connection of a sensor to the set output.



In order to learn-in the requested sensor, the F5 key must be actuated in the corresponding menu. Afterwards, the learning-in procedure for the corresponding sensor described in the operating instructions must be carried out within 45 seconds. If the sensor was connected successfully, a corresponding notice is displayed.

Delete Sensor

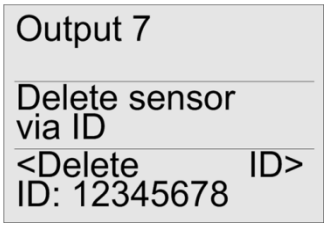
Menu for clearing a sensor at the output set.



In order to clear the requested sensor, the F5 key must be actuated in the corresponding menu. Afterwards, the learning-out procedure for the corresponding sensor described in the operating instructions must be carried out within 45 seconds. If the sensor was successfully disconnected (learned-out) a corresponding notice is displayed.

Delete Sensor via ID

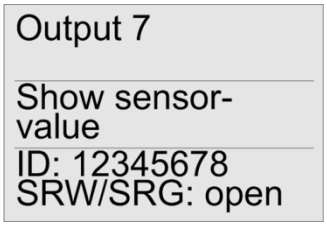
In this menu, sensors can be cleared by means of their ID.



By button F6 a sensor is selected. By means of button F5 this sensor can be cleared after having confirmed the safety query.

Show Sensor value

This menu shows the values/status of the sensors learned-in.



By means of buttons F5 and F6 the sensors can be selected. The ID of the chosen sensor as well as its value/status are displayed.

Individual sensor
Any 4 byte EnOcean based sensor (4BS) can be learned-in to the SxC-DO8 via the menu point “Learning-in of individual sensor“. The evaluation of the data detected by this sensor can be freely parameterized by the user. Thus, it is also possible to learn-in and to evaluate sensors which's profiles are not supported by the STC-DO8 actually.

First, the user has to determine which data byte of the sensor shall be evaluated (menu “Data byte individualsens”). Afterwards, an upper or lower threshold for the evaluation of the data byte must be set (menu “Lower threshold/Upper threshold”). Depending on the configuration of the outputs, the following action can be triggered by the individual sensor:

Function universal:
If the measuring value of the data byte selected exceeds the upper threshold, the output is switched on. If the measuring value of the data byte selected falls down the lower threshold, the output is switched off.

Function 1-Operation of buttons:
If the measuring value of the data byte selected exceeds the upper threshold, the output is switched on for the period of the after-running time adjusted.

Function 2-Operation of buttons:
If the measuring value of the data byte selected exceeds the upper threshold, the output is switched on. If the measuring value of the data byte selected falls down the lower threshold, the output is switched off.

Function Blind/Shutters:
If the measuring value of the data byte selected exceeds the upper threshold, the output for blind/shutters is switched to UP for the period of the after-running time adjusted. If the measuring value of the data byte selected falls down the lower threshold, the output for blind/shutters is switched to DOWN for the period of the after-running time adjusted.

Notice:
If a value less than the lower threshold is parameterized for the upper threshold, the above mentioned functions are executed in reverse order (inverted operation).

Data Byte Individualsensor

Selection of the designated data byte of the individual sensor.



Adjustable range: Data byte 0...3

Factory setting: Data byte 0

Lower Threshold

Setting of the lower threshold to analyse the individualsensor.



Adjustable range: 0...255

Factory setting: 85

Upper Threshold

Setting of the upper threshold to analyse the individualsensor.



Adjustable range: 0...255

Factory setting: 85

Individualsensor Lock Time

Via this parameter it is determined for how many minutes the evaluation of the individual sensors shall be ignored in case an EnOcean based switch, learned-in to the same output, has sent a switch signal.

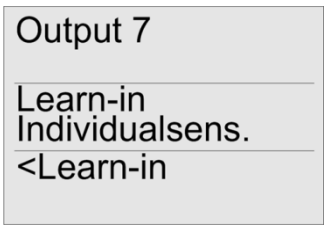


Adjustable range: 0...255 minutes

Factory setting: 30 minutes

Seamless Connection of Individual Sensors

Menu point for seamless connection of a individual sensor to the set output.



In order to learn-in the requested sensor, the F5 key must be actuated in the corresponding menu. Afterwards, the learning-in procedure for the corresponding sensor described in the operating instructions must be carried out within 45 seconds. If the sensor was connected successfully, a corresponding notice is displayed.

Delete Individualsensor

Menu for clearing a individual sensor at the output set.



In order to clear the requested sensor, the F5 key must be actuated in the corresponding menu. Afterwards, the learning-out procedure for the corresponding sensor described in the operating instructions must be carried out within 45 seconds. If the sensor was successfully disconnected (learned-out) a corresponding notice is displayed.

»PARAMETERIZATION OF TIME SWITCH

In total, there are 8 comfort times by which the integrated time switch can be configured.

The comfort times can be field assigned to every weekday.

Comfort time 1…8 (time)

Time setting for the corresponding comfort time.



Key F3 reverses the selection of the weekday chosen.

F4 selects a weekday.

Example:

By means of this setting the comfort time 1 is activated on monday & tuesday.

Comfort time 1…8 (time)

Time setting for the corresponding comfort time.



Factory setting: 6:00 to 23:00 o'clock

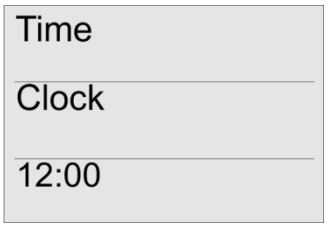
»SETTING OF TIME AND WEEKDAY

The internal clock of the SRC-DO8 is set via the menu “Time”. Therefore, the sub-menus “Clock”, „Day and month“, „Year“ and “clock change” are available.

To make sure that the clock is also working correctly after a power failure, the SRC-DO8 has an integrated energy buffer supplying the internal clock automatically for serval hours.

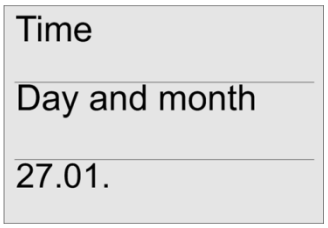
Time

Setting of current time.



Day and Month

Setting of current date.



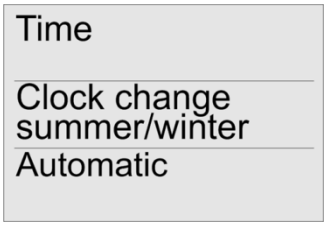
Year

Setting of current year.



Clock Change (summer/winter)

Setting of clock change (summer/winter) mode.



Adjustable range: Automatic, manual.

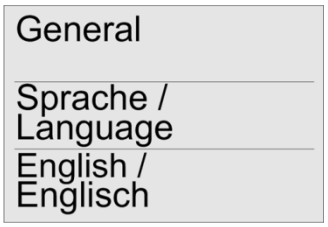
Factory setting: Auto

»GENERAL SETTINGS

In the menu “General” general settings for the SR-DO8 can be determined which are valid for the complete device and which are not assigned to an output or comfort time.

Language

Setting of menu language.

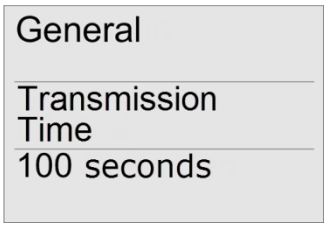


Possible selections: German, English

Factory setting: German

Transmission Time (Type STC-DO8 only)

Setting of the STC-DO8 transmission time.

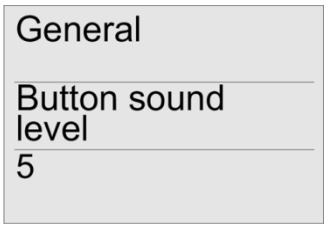


Adjustable range: 5, 10, 100, 1000 seconds

Factory setting: 100 seconds

Volume of Button Sound

Setting of button sound volume.



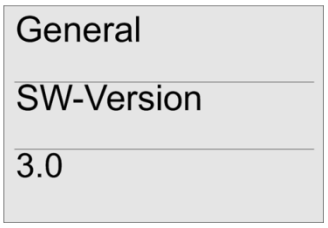
Adjustable range: 0…10

Resolution: 1

Factory setting: 5

Volume of Button Sound

Setting of button sound volume.

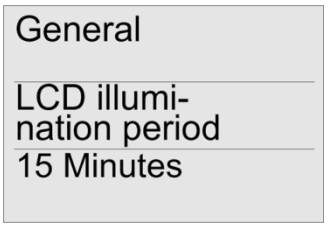


Volume of Button Sound

Setting of button sound volume.

Background Illumination Period

Setting of background illumination period.



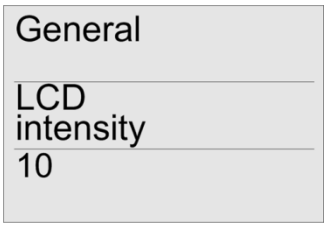
Adjustable range: 1…60 minutes

Resolution: 1 minutes

Factory setting: 15 minutes

Background Illumination Intensity

Setting of background illumination intensity.



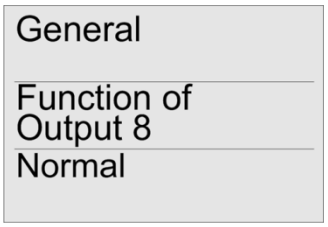
Adjustable range: 0…10

Resolution: 1

Factory setting: 10

Background Illumination Intensity

Setting of background illumination intensity.



Adjustable range: 0…10

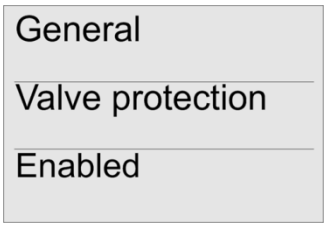
Resolution: 1

Factory setting: 10

Valve Protection

Every output which is used for the control of a valve has an own 24 hour counter. This counter is reset upon control of the corresponding relay. If a valve is not selected for more than 24 hours, the corresponding output is switched-on for

5 minutes with activated valve protection function to avoid a driving fit of the valve.

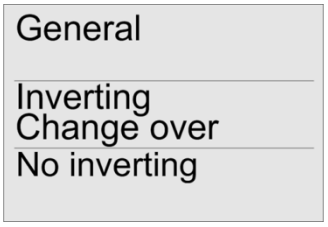


Possible selections: Enabled, disabled

Factory setting: Enabled

Invert Change over Sensor

If a SR65 DI is teached-in as a change-over sensor, the evaluation of the sensor can be inverted via this menu point.

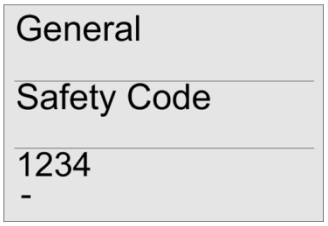


Available options: "No inverting" (open=heating / closed=cooling) and "Inverting" (open=cooling/ closed=heating).

Factory setting: "No inverting"

Safety Code

Setting of a four-digit safety code protecting the SRC-DO8 against unauthorized access.



Adjustable range: 0000 ... 9999 (0000 deactivates the safety code)

Resolution: 1

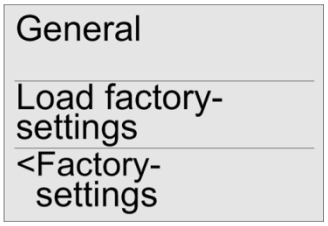
Factory setting: 0000

Notice for setting:

Button F5 increases the selected number by 1. Button F6 selects the next number of the four-digit code.

Load Factory Setting

The SRC-DO8 can be reset to the original factory setting in the menu “General>Load Factory Settings”.



To load the factory settings, F5 must be actuated in the corresponding menu and the following security query must be confirmed.

Restart

The SRC-DO8 can be restarted in the menu “General>Restart”.



To restart the SRC-DO8, F5 must be actuated in the corresponding menu and the following security query must be confirmed.

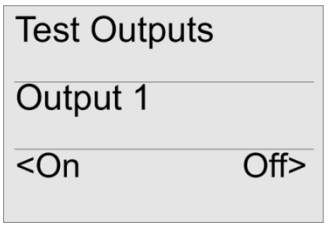
Test Outputs

Via the menu "Test Outputs" the function of all SRC-DO8 outputs and all thermic actuators connected can be tested.

Notice: Please note that the control function of the SRC-DO8 is stopped, as long as you are in the menu "Test Outputs".

The control function is automatically activated again as soon as the menu "Test Outputs" is left.

Test Outputs

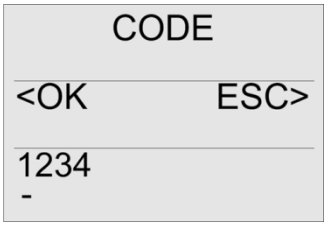


By means of the keys F3 and F4, the output to be tested is selected.

Afterwards, the chosen output can be switched on/off by the keys F5 and F6.

Safety Code Input
In order to prevent an unauthorized setting of the parameters, the SRC-DO8 can be locked by a safety code.

After a restart or if none of the 6 buttons is actuated during the period of the LCD illumination, the next user is asked to insert the safety code when trying to make new settings at the SRC-DO8.



Button F5 increases the selected number

by 1.

Button F6 selects the next number of the four-digit code.

Button F3 confirms the input of the safety code.

Button F4 stops the input of the safety code.

Lock Parameterization
In order to avoid a change of the control properties by mistake after installation, the corresponding menu points can be locked. Due to the locking, only the time switch as well as time and date can be programmed afterwards. To activate the locking, push the two upper buttons (F1 and F2) of the switched-on STC-DO8 for 10 seconds until a tone of confirmation is heard. The unlocking is done in the same way.

» MSG-SERVER FUNCTION (TYPE STC-DO8 ONLY)

Function Principle:

The STC-DO8 with integrated MSG-Server functionality is designed as a gateway between EnOcean actuators (SAB05) and common EnOcean based sensors (temperature, motion, window position etc.). The sensors are transmitting their values to the STC-DO8 time and event controlled (e.g. current room temperature, set point, window status etc.). The STC-DO8 evaluates the data received and calculates the necessary control variable (valve outlet). To enable a long lifetime of the batteries used in the valve actuator, the actuator is set into an energy saving mode (sleep mode) and wakes up in a certain timer interval (wake-up time). If the valve actuator "wakes up", a specification request telegram is sent to the STC-DO8. The STC-DO8 resends the new control variable (valve outlet) within 0,5s to the actuator. Afterwards the valve actuator starts the valve position and is reset to the sleep mode.

The MSG-server function is available parallel to the control of conventional valve actuators. Accordingly, you can teach-in an EnOcean valve actuator to an output, and simultaneously connect a conventional actuator to the corresponding relay. Both actuators are controlled in this case with the same control variable.

» SUPERIOR CONTROL UNIT(FOR FANCOIL CONTROLLER)

In the STC-DO8, a higher-level control unit can be taught-in per output, with which the outputs can be overridden. This makes it possible to influence and adjust the control of the STC-DO8 from a higher level.

Learning in of a superior control unit:

Set the corresponding output of the SxC-DO8 into the learning mode. A learn telegram of the superior control unit with the EnOcean profile EEP A5-20-12 shall be sent within 60 seconds.

» STC-DO8 ENOCEAN TELEGRAMM (FANCOIL CONTROLLER - OUTPUTS 1...3-5)

The type STC-DO8 is able to transmit its current states via the EnOcean radio telegram in order to transmit an acknowledgement of the output states to other EnOcean receivers.

For this purpose the integrated fan coil controller of the STC-DO8 has its own EnOcean ID, under which the STC-DO8 transmits a telegram according to the EnOcean standard EEP A5-11-02.

The transmission interval is set in the "General" menu.

A 10, 100 and 1000 second interval can be selected.

Note: The set transmission interval varies by +/-20.

In addition to cyclical transmission, a telegram is sent each time the status of the outputs changes.

Note:
During a send action, all initial states are always transmitted. So if, for example, only one output changes, the remaining 7 output telegrams are still transmitted.

»EXTENSION MODULES (TYPE STC-DO8 ONLY)

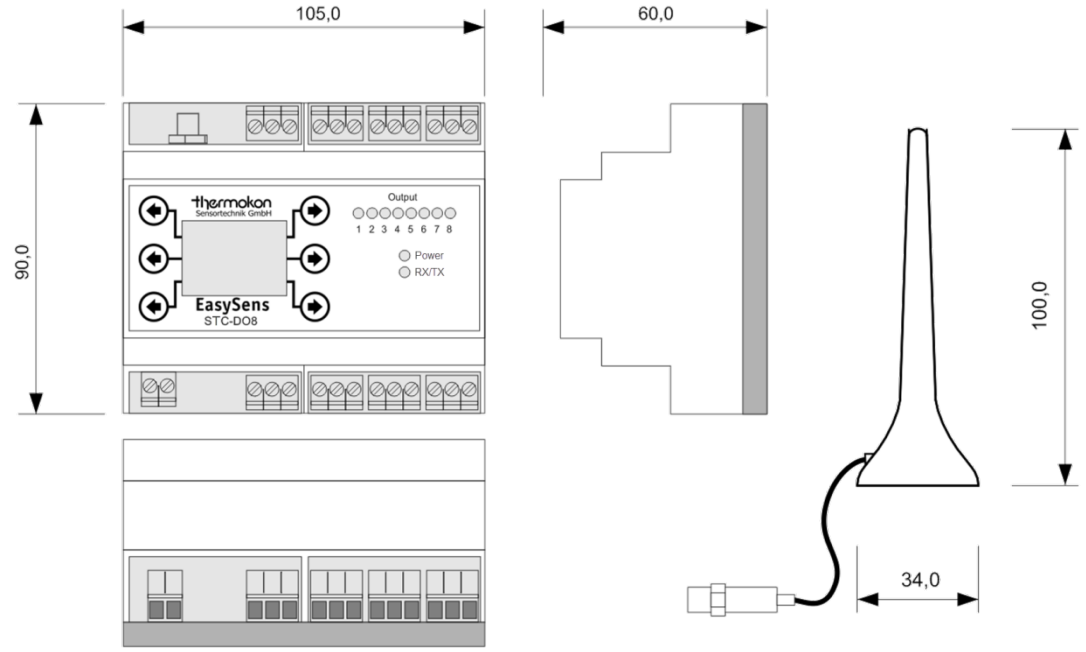
By the specially provided connector on the STC-DO8 extension modules can be added, so that the STC-DO8 can be expanded to a certain number of outputs.

The extension module is identified automatically by the STC-DO8 when starting the device. The identification is displayed with a corresponding message.

Besides the common menus "output 1..8", the "outputs A, B, C, ..." are available in the display menu for configuration of the additional outputs.

Further details can be found in the datasheet of the extension module.

»DIMENSIONS (MM)



»ACCESSORIES (OPTIONAL)

Antenna extension 10 m	Item No. 257206
Antenna extension 20 m	Item No. 257213
Antenna holder form L, 180x180 mm	Item No. 255097
Rawl plugs and screws	Item No. 102209