

Software Description SRCN_HWL_9_1_02 for SRC-04-FTT and SRC-65-FTT



1 Overview

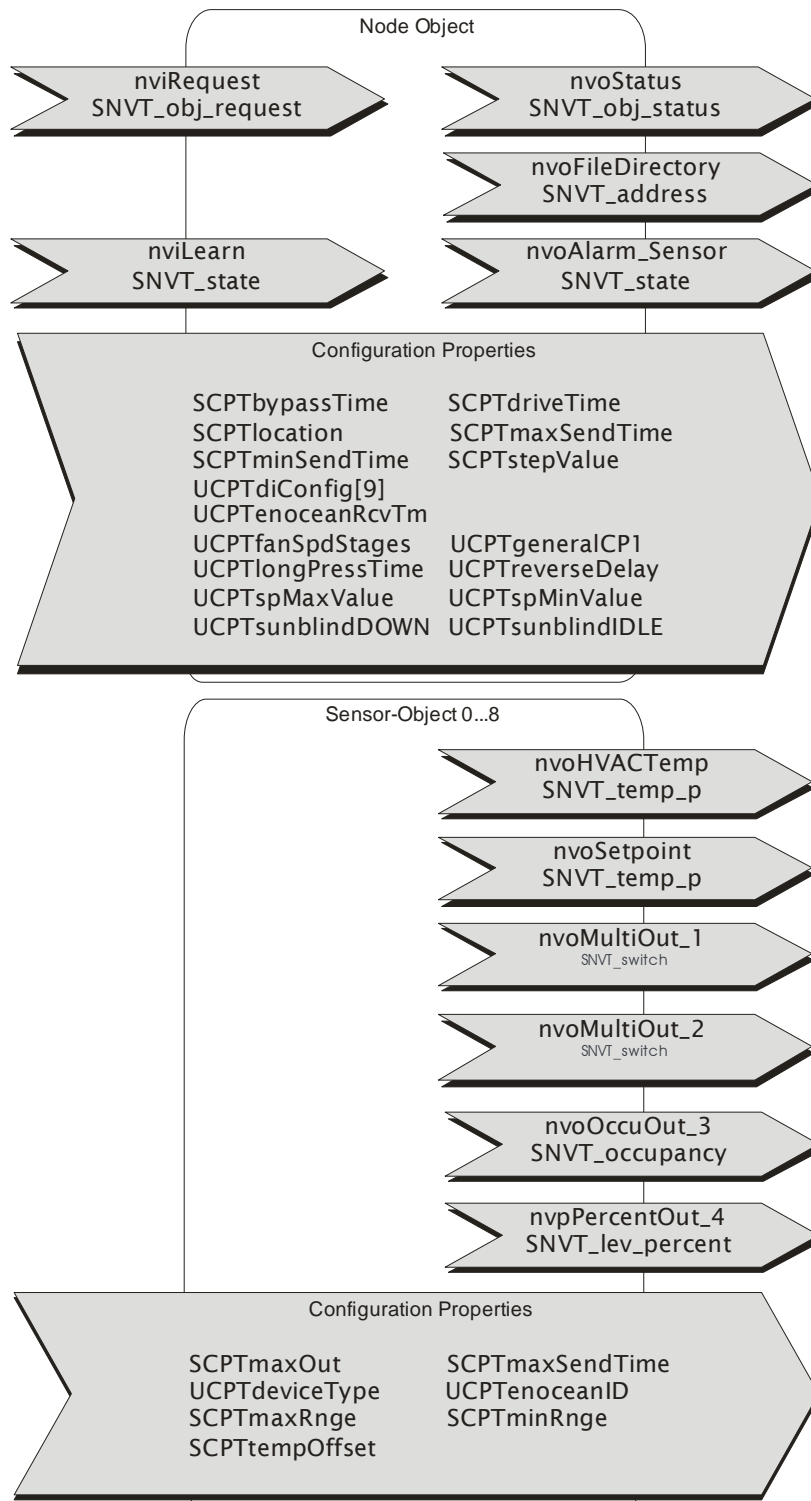
The application enables the receipt and evaluation of max. nine EnOcean wireless sensors. The following sensor types are supported:

- SR04, SR04PST, SR04PS MS: P – set point, S – fan stage, T – button, MS – slide switch
 - o temperature detection, set point adjustment, room occupancy, fan stage adjustment
- SR06, SR07P, SR07P MS, SR07 MS: P – set point, MS – slide switch
 - o temperature detection, set point adjustment, room occupancy
- SR04 rH, SR04P rH, SR04PT rH, SR04P MS rH: P – set point, T – button, MS – slide switch
 - o temperature detection, humidity detection, room occupancy
- SR65, SR65 TF, SR65 AKF, SR65 VFG
 - o temperature detection
- SR65-DI
 - o dry, digital contact
- SR PIR 360°
 - o room occupancy
- SR MDS - SensoLux
 - o room occupancy
- SRW01
 - o window contact Opened/Closed
- SRG01 - SecuSignal®- Window Handle
 - o change of window position Opened/Tilted/Closed
- Wireless chair
 - o room occupancy
- EasyFit, EasySense Tactile Sensors
 - o switch function, dim function, blind, shutters, scene polling, automation

The application uses standard network variables (SNVT) and standard configuration properties (SCPT). For extended adjustment options, user-defined configuration properties (UCPT) are used. The UCPTs used are defined in the Thermokon Device Recource Files from Version 2.1 or higher and should be installed on the PC before making up the device defaults by the installation tool.

2 Overview of Network Variables

Application srcn_hwl_9_1_02 ID: 9F FF AD 0A 00 E6 04 05



3 General Remarks for Installation:

3.1 Manual Input of Sensor Data

Step 1: Register device type in UCPTdeviceType (7 = SR04/ SR65, 6 = SRW01...)

Step 2: Register the 32-Bit Sensor-ID (see device label) in UCPTemoceanID, e.g. 00,00,A0,43

3.2 Installation by Learning Button

Step 1: Register device type in UCPTdeviceType

Step 2: Set the requested sensor object in the learning mode by means of nviLearn_Sensor (see below, Node Object)

Step 3: Actuate learning button on the sensor. ==> All bits of nviLearn_Sensor are set back to „0“.

Step 4: Contrary to the manual registration, where the ID is directly written into the device and the LNSdatabase, it is only possible to store the sensor ID in the SRC receiving module upon installation by the learning button. To check the ID there are two ways:

1. In order to take over the IDs into the database, the receiver must be recommissioned by the adjustment „Current Values in Device“

Example LonMaker:

The screenshot shows a configuration window with two main sections. The left section, titled 'State', contains four radio button options: 'Default', 'Offline', 'Online' (which is selected), and 'Disable'. The right section, titled 'Source of Configuration Property Values', contains three radio button options: 'Current values in database', 'Default values', and 'Current values in device' (which is selected).

3.3 Clearing of a Sensor

If the 32-Bit Sensor-ID 0,0,0,0 is entered into UCPTenoceanID, the sensor can be cleared in the Sensor-Object.

3.4 Device Types UCPTdeviceType

The following devices are available:

- 7 = SR04 / SR06 / SR07 / SR65 - Temperature Sensor
- 701 = SR04 rH - Humidity Sensor
- 702 = SR65 - DI - Digital Input
- 704 = SR PIR 360° - Motion Detector
- 705 = SR MDS - SensoLux - Motion Detector
- 6 = SRW01 - Window Contact
- 5 = Tastsensor - Switch Function
- 501 = Radiochair - Room Occupancy
- 502 = SRG01 - SecuSignal® - Window Handle
- 503 = SRG01 - SecuSignal® - Window Handle; Window Handle with Tilting Position

3.5 Parameterisation of Button Functions with UCPTdiConfig

For parameterisation of the tactile sensors, the configuration property *UCPTdiConfig[0...8].Byte[0...3]* in the Node Object is used.

UCPTdiConfig[0].Byte[0...3] parameterises the tactile sensor in the Sensor-Object 0

UCPTdiConfig[1].Byte[0...3] parameterises the tactile sensor in the Sensor-Object 1

⋮
⋮

UCPTdiConfig[8].Byte[0...3] parameterises the tactile sensor in the Sensor-Object 8

In UCPTdiConfig[0...8] the functions of the individual buttons are parameterised, whereas:

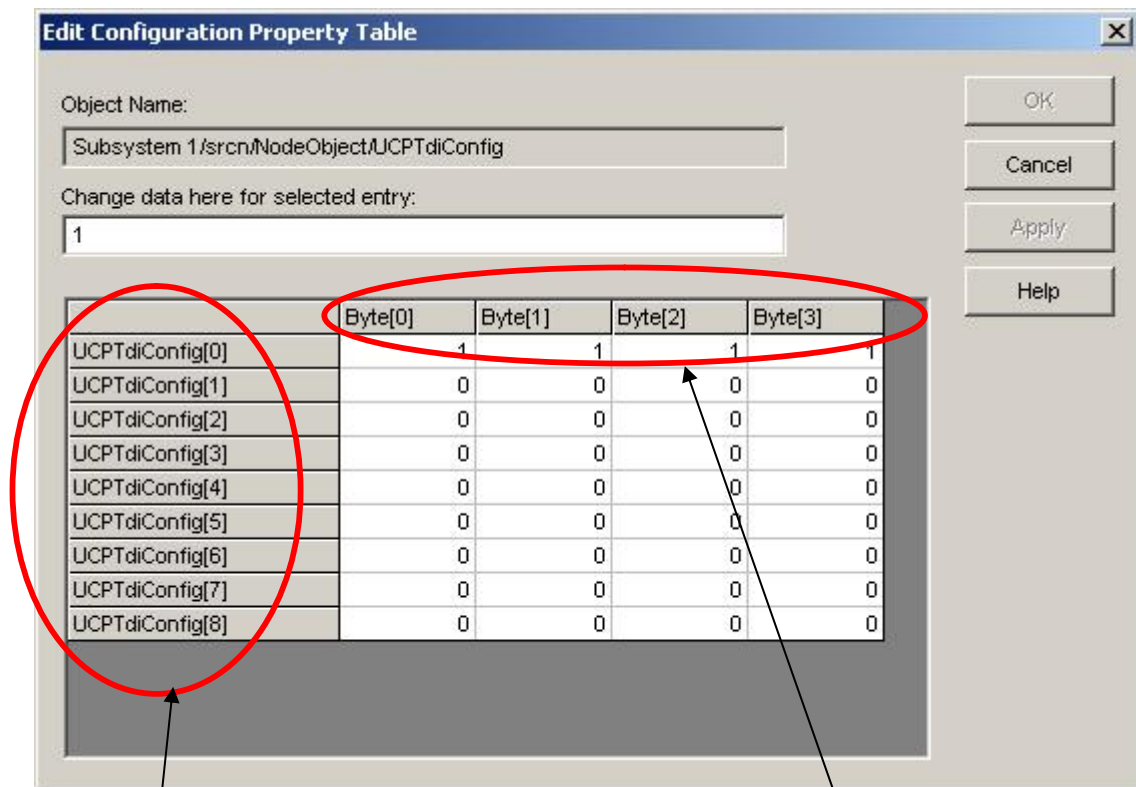
UCPTdiConfig[0...8].Byte[0] defines the function of button 1

UCPTdiConfig[0...8].Byte[1] defines the function of button 2

UCPTdiConfig[0...8].Byte[2] defines the function of button 3

UCPTdiConfig[0...8].Byte[3] defines the function of button 4

When using the LONMaker the configuration window shown below can be opened by a double click on the parameter.



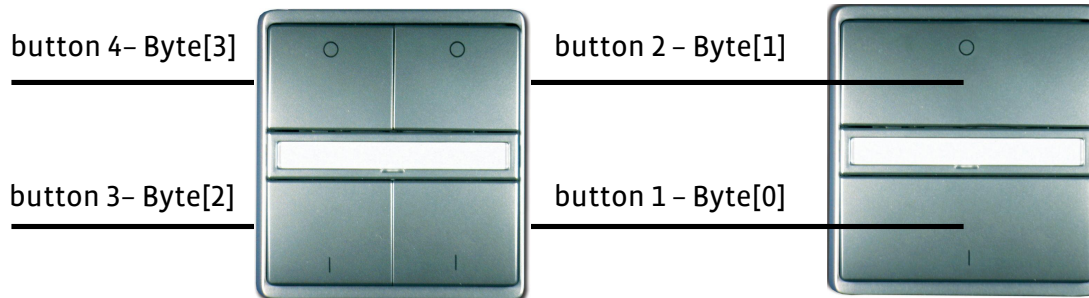
Picture 3-1: LONmaker

Sensor-Object of tactile sensor

Function of button

3.6 Tactile Sensor

A wireless switch / key can be allocated to each object. The button functions of a tactile sensor can be adjusted via the configuration property UCPTdiConfig[0...8] in the NodeObject. UCPTdiConfig[x].Byte[0...3] allocates a function to each button.



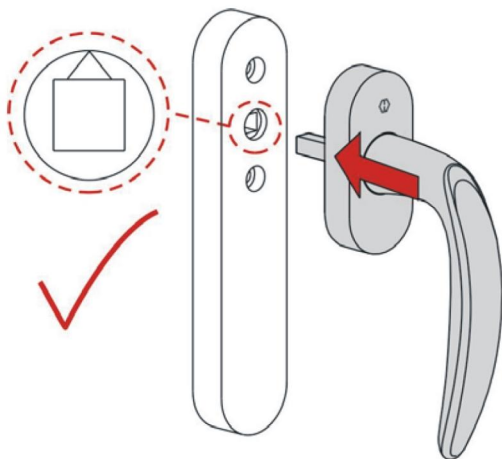
Example:

Tactile sensor in Sensor-Object 3:

Button 1 Light ON -> UCPTdiConfig[3].Byte[0] = 0x05
 Button 2 Light OFF -> UCPTdiConfig[3].Byte[1] = 0x07
 For this a type change from nvoMultiOut_1 to SNVT_switch must be made.
 Button 3 button Shutter UP -> UCPTdiConfig[3].Byte[2] = 0x32
 Button 4 button Shutter DOWN -> UCPTdiConfig[3].Byte[3] = 0x33
 For this a type change from nvoMultiOut_2 to SNVT_setting must be made.

3.7 SecuSignal® Window Handle

As for the SecuSignal® window handle a proper and accurate installation is of paramount importance. (Please also see the SecuSignal® data sheet)



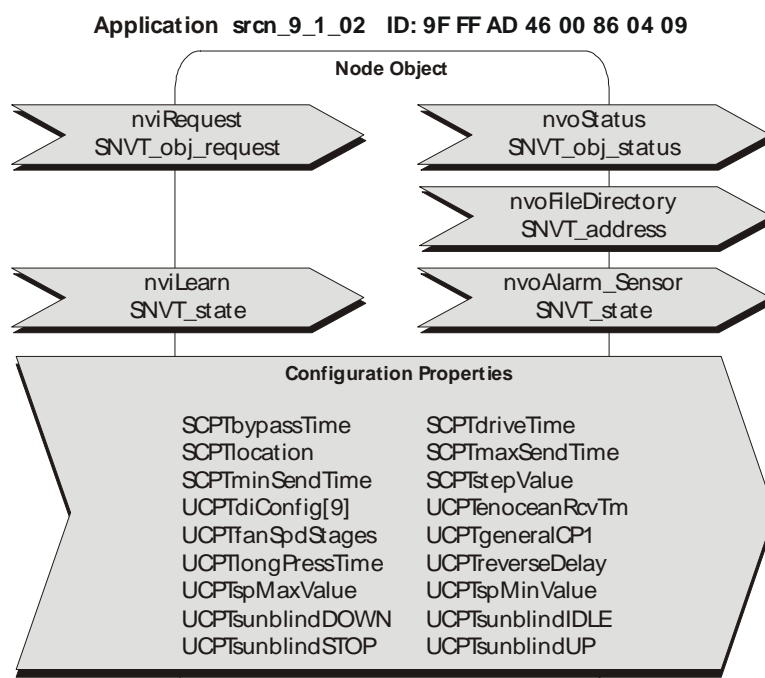
3.8 Sensors

For other device specific settings and parameters such as temperature range, jumper for transmission time etc., please see the corresponding data sheets.

4 Software Description

4.1 Node Object

The Node Object supervises and controls the functions of the individual objects in the device. The basic functions required by the LonMark® are supported, whereas general network variables and configuration parameters for control and parameterisation of the SR-Sensor-Objects can be added.



Sensor Monitoring / Alarm Message:

If no telegram is received for a time exceeding the monitor time UCPTenoceanRcvTm, an alarm message is generated, whereas each sensor is allocated to a bit of the SNVT_state - variable nvoAlarm_Sensor and can be identified, thus. The alarm bits are cleared automatically by receiving the next associated telegram. Telegrams, keys, wireless chairs, SecuSignal - window handle are not monitored.

Set Point Adjustment:

The properties UCPTspMinValue and UCPTspMaxValue determine the output values with left and right stop of the set point potentiometer (e.g. -3 °C to +3 °C or 19°C to 25 °C).

Fan Speed Adjustment:

The rotary switch for fan speed adjustment can be parametrised by

UCPTfanSpdStages for one, two or three- fan stages and is output by nvoMultiOut_1.

Presence Key / Slide Switch:

The function of the after-running time for the wireless chair, presence key respectively the output of the slide switch is adjusted by SCPTbypassTime.

Button:

By UCPTdiConfig[0...8] the button functions of the wireless switch are set. Other properties for the configuration of switching, dimming, blinds, shutters and scene polling are available.

Installation:

If the sensors should be integrated by means of the learn button, each sensor object can be individually put into the learning mode by nviLearn_Sensor. Alternatively, the sensor ID in each object can also be manually written into the parameter UCPTenoceanID. The different device types (SR04/SR65, SRW01, wireless switch) are selected by UCPTdeviceType.

4.1.1 Input Variables Node Object:

nviRequest

SNVT Type: SNVT_obj_request, Index 92

Function: Input variable including the functions RQ_NORMAL, RQ_UPDATE_STATUS and RQ_REPORT_MASK.

nviLearn

SNVT Type: SNVT_state, Index 83

Function: Upon installation of the sensors the objects can be placed in the learning mode by means of nviLearn..., whereas each bit of a network variable is allocated to a SR-sensor object.

nviLearn.bit0 ==> SR-Sensor-Object[0]
nviLearn.bit1 ==> SR-Sensor-Object[1]
::
::
nviLearn.bit8 ==> SR-Sensor-Object[8]

Bit-value = 1, the object is switched to the learning mode. After having received a correct message, the ID is stored in the selected object and the learning modus is automatically left (Bit is set to 0).

4.1.2 Output Variables Node Object :

nvoStatus

SNVT Type: SNVT_obj_status, Index 93

Function: Output variable with the required status bit „invalid_id“ and „invalid_request“.

nvoFileDirectory

SNVT Type: SNVT_address, Index 114

Function: The output variable makes the address data of the configuration property in the device available to the LON integration tool.

nvoAlarm_Sensor

SNVT Type: SNVT_state, Index 83

Function: If no telegram is received for a time exceeding the monitor time **UCPTenocceanRcvTm**, an alarm message is generated by nvoAlarm, whereas each sensor is allocated to a bit. The alarm bits are cleared automatically by receiving the next associated telegram.

nvoAlarm_Sensor.bit0 = 1 ==> Alarm for SR-Sensor-Object[0]
nvoAlarm_Sensor.bit1 = 1 ==> Alarm for SR-Sensor-Object[1]
:
nvoAlarm_Sensor.bit8 = 1 ==> Alarm for SR-Sensor-Object[8]

4.1.3 Configuration Properties Node Object :

4.1.3.1 General Settings

SCPTlocation

SCPT Index: 17, SNVT_str_asc

Function: Additional input option to store information on position identification.

SCPTmaxSendTime

SCPT Index: 49, SNVT_time_sec

Function: Heartbeat function. Stipulates interval time after which all output variables of the device are sent independently of a value change. By means of the input values = 0, the heartbeat function is deactivated. (Preset value: 0, i.e. the output variables are only sent, if an output value has changed, e.g. with an alarm message or if a sensor telegram is received)

UCPTenocceanRcvTm

UCPT Index: 33, SNVT_time_min

Function: If no telegram is received for a time exceeding the monitor time **UCPTenocceanRcvTm**, an alarm message is generated, whereas each sensor of a bit is allocated to the SNVT_state - variable nvoAlarm and can be identified, thus. The individual alarm bits are automatically cleared upon receipt of the next associated telegram. (Preset value: 60 min).

UCPTgeneralCP1

UCPT Index: 7, SNVT_state

Function: Configuration of switching behaviour of receiving LED.

bit0	bit1	Receiving LED
0	0	No flashing
1	0	Flashing with each telegram received
0	1	Flashing with each learned-in sensor received

4.1.3.2 General Button / Wireless Switch -Settings

UCPTdiConfig[0]...[8]

UCPT Index: 44, typedef struct {unsigned short Byte[4]} UNVT_str_hex4

Function: This configuration property determines the button function and their allocation to the output variables. UCPTdiConfig[0] is fix allocated to the tactile sensor in the Sensor-Object 0, UCPTdiConfig[1] to the tactile sensor in the Sensor-Object 1 ... UCPTdiConfig[8] to the tactile sensor in the Sensor-Object 8. For the keys/ wireless switches → the functions in the Sensor-Objects UCPTdeviceType must be set to 5.

UCPTdiConfig[0]	configured	Tactile sensor in Sensor-Object 0
UCPTdiConfig[1]	configured	Tactile sensor in Sensor-Object 1
:		
UCPTdiConfig[8]	configured	Tactile sensor in Sensor-Object 8
UCPTdiConfig[x].Byte[0]	configured	Function of button 1
UCPTdiConfig[x].Byte[1]	configured	Function of button 2
UCPTdiConfig[x].Byte[2]	configured	Function of button 3
UCPTdiConfig[x].Byte[3]	configured	Function of button 4

No function 0x00

UCPTdiConfig. Configuration of buttons	
Byte[0...3]	button 1...4 -function
No Function	
0x00	not used

Switching functions 0x01 – 0x08

UCPTdiConfig. Configuration of buttons		
Byte[0...3]	Button 1...4 - Function	SNVT-Type
Switch		
0x01	pressed / not pressed / nvoMultiOut_1	SNVT_switch
0x02	pressed / not pressed / nvoMultiOut_2	SNVT_switch
0x03	Light Toggle / nvoMultiOut_1	SNVT_switch
0x04	Light Toggle / nvoMultiOut_2	SNVT_switch
0x05	Light only ON nvoMultiOut_1	SNVT_switch
0x06	Light only ON nvoMultiOut_2	SNVT_switch
0x07	Light only OFF nvoMultiOut_1	SNVT_switch
0x08	Light only OFF nvoMultiOut_2	SNVT_switch

0x10 – 0x19 Dim Function

UCPTdiConfig, Configuration of Buttons		
Byte[0...3]	Buttons 1...4 - Function	SNVT-Type
Dimming		
0x10	Light Toggle by Dimming Switch-on value = Max-Wert / nvoMultiOut_1	SNVT_switch
0x11	Light Toggle by Dimming Switch-on value = Max-value / nvoMultiOut_2	SNVT_switch
0x12	Light Toggle by Dimming Switch-on value = last switch- on value nvoMultiOut_1	SNVT_switch
0x13	Light Toggle by Dimming Switch-on value = last switch-on value nvoMultiOut_2	SNVT_switch
0x14	Light only brighter by Dimming Switch-on value = Max-value nvoMultiOut_1	SNVT_switch
0x15	Light only brighter by Dimming Switch-on value = Max-value nvoMultiOut_2	SNVT_switch
0x16	Light only brighter by Dimming Switch-on value = last switch- on value nvoMultiOut_1	SNVT_switch
0x17	Light only brighter by DimmingEinschaltwert = last switch-on value nvoMultiOut_2	SNVT_switch
0x18	Light only darker by Dimming nvoMultiOut_1	SNVT_switch
0x19	Light only darker by Dimming nvoMultiOut_2	SNVT_switch

Short button actuations result in a switching- on/off the lighting. By long button actuations, the light can be dimmed..

In theToggle-Mode the dimming direction (brighter or darker) is changed by a new button actuation.

0x60 – 0x61 Automatic

UCPTdiConfig, Configuration of Buttons		
Byte[0...3]	Buttons 1...4 - Function	SNVT-Type
Automatic		
0x60	Command automatic (= 0.0 –1) nvoMultiOut_1	SNVT_switch
0x61	Command Automatic (= 0.0 –1) nvoMultiOut_2	SNVT_switch

By a short button actuation the output variable is set into the automatic mode.

Example:

Tactile sensor in Sensor-Object 1:

Button 1 Light ON

-> UCPTdiConfig[1].Byte[0] = 0x05

Button 2 Light OFF

-> UCPTdiConfig[1].Byte[1] = 0x07

UCPTlongPresTime

UCPT Index: 71, typedef struct { SNVT_time_sec dimming; SNVT_time_sec sunblind;
SNVT_time_sec scene; SNVT_time_sec universal; }

Function: By means of this configuration property the time (in seconds) for dimming, blinds, scene and universal can be input by a long button actuation. (Preset value: 1.0;2.0;2.0;2.0)

4.1.3.3 General Sensor Settings

SCPTbypassTime

SCPT Index: 34, SNVT_time_min

Function: Configuration property for the output variable **nvoMultiOut_2** of the presenence key / wireless chair /slide switch in the Sensor-Objects.

SCPTbypassTime = 0: Upon actuation nvoMultiOut_2 only sends the value OC_OCCUPIED / 100.0 1. A reset to the value OC_UNOCCUPIED / 0.0 0 is not made.

SCPTbypassTime = 1: The status of the contact is output. The output variable nvoMultiOut_2 sends with closed contact OC_OCCUPIED / 100.0 1 and is reset to OC_UNOCCUPIED / 0.0 0 without any time delay by opening the contact.

By **SCPTbypassTime = 2** each button actuation leads to a toggling of the lighting, i.e. between ON and OFF (only with the network variable type: SNVT_switch)

SCPTbypassTime >= 3: Herewith the overtime function is activated. By actuation, the output variable nvoMultiOut_2 receives the value OC_OCCUPIED / 100.0 1. After expiration of the delay time, it is reset to the value OC_UNOCCUPIED / 0.0 0. Each actuation restarts the timer . (Range: < 1000, preset value : 90 min)

UCPTspMinValue, UCPTspMaxValue

UCPT Index: 40, 41, SNVT_temp_p

Function: The parameter determines the output values of **nvoSetpoint** with left and right stop of the set point potentiometer and defines the adjustment range. (Preset values: -3 °C and +3 °C)

UCPTfanSpdStages

UCPT Index: 13, SNVT_count

Function: Configuration property for default of fan stages.

With switch position Auto	Without switch position Auto
---------------------------	------------------------------

1 – 1 Stage with Auto	11 – 1 Stage without Auto
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2 – 2 Stage with Auto	12 – 2 Stage without Auto
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3– 3 Stage with Auto	13 – 3 Stage without Auto
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(Preset value: 3 ==> OFF, 33,0 %, 66,5 %, 100,0 %, AUTO)

4.1.3.4 Genereal Dimming Settings

SCPTminSendTime

SCPT Index: 52, SNVT_time_sec

Function: This configuration property stipulates the sending interval of the output variable in the dimming mode. By input values = 0, the function is deactivated. (Preset value: 0,3 s)

SCPTstepValue

SCPT Index: 92, SNVT_lev_cont

Function: This configuration property defines the step size of the variable nvoSwitch.value in the dimming mode. (Preset value: 5.0)

4.1.3.5 General Blind/Shutter Settings

UCPTreverseDelay

UCPT Index: 14, SNVT_count

Function: This configuration property defines the toggling delay with a rotation reversing of the blind motors. Thus, a change command from e.g. nvoSetting = SET_UP to nvoSetting = SET_DOWN is output delayed. (Preset value: 500 ms)

SCPTdriveTime

UCPT Index: 45, SNVT_time_sec

Function: This configuration property defines the maximum switch-on time of the blind motors in the automatic run. (Preset value: 100,0 s)

UCPTsunblindUP

UCPT Index: 72, SNVT_setting

Function: By means of this configuration property it can be adjusted which SNVT_setting value shall be sent when the blind/shutter is going up. (Preset value: SET_UP 100.0 0.0)

UCPTsunblindDOWN

UCPT Index: 73, SNVT_setting

Function: By means of this configuration property it can be adjusted which SNVT_setting value shall be sent when the blind/shutter is going down. (Preset value: SET_DOWN 100.0 0.0)

UCPTsunblindSTOP

UCPT Index: 74, SNVT_setting

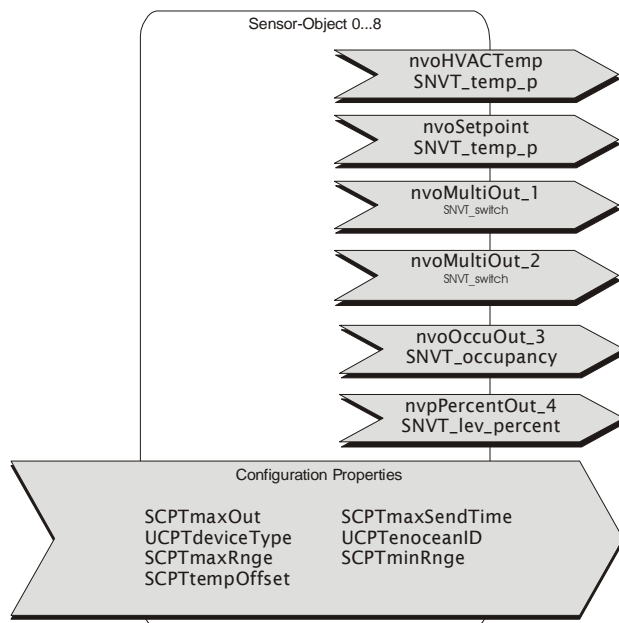
Function: By means of this configuration property it can be adjusted which SNVT_setting value shall be sent when the blind/shutter is stopped. (Preset value: SET_STOP 0.0 0.0)

UCPTsunblindIDLE

UCPT Index: 75, SNVT_setting

Function: By means of this configuration property you it can be adjusted which SNVT_setting value shall be sent for the stand-by mode of the blind/shutter. UCPTsunblindIDLE is sent 500ms after the stop of the blind/shutter, if UCPTsunblindIDLE is unequal UCPTsunblindSTOP. (Preset value: SET_NUL 0.0 0.0)

4.2 Sensor-Objects



Nine identical objects for the detection of Thermokon wireless sensors types SR04 / SR07 / SR04 rH / SR65 / SRW01 as well as for the detection of wireless keys / switches.

The temperature is output via nvoHVACTemp and the set point by nvoSetpoint.

4.2.1 Output Variables Sensor-Object:

nvoHVACTemp

SNVT Type: SNVT_temp_p, Index 105

Function: Output variable for the measured temperature value (resolution 1/100 °C). Data output is made depending on the configuration property SCPTmaxSendTime and upon receipt of a new sensor telegram.

nvoSetpoint

SNVT Type: SNVT_temp_p, Index 105

Function: Output variable for set point correction respectively set point temperature, that can be adjusted by the set point adjuster. As a standard, the value range is lying between -3 and +3 K and can be adjusted by **UCPTspMinValue** and **UCPTspMinValue**. Data output is made analogue to nvoHVACTemp.

nvoMultiOut_1

SNVT Type: SNVT_switch, Index 95

Function: Depending on the configuration, the output variable can either transmit, the position of the rotary switch for fan stage adjustment, the status of the digital input module, the status of a window (opened/closed) and functions for switching/dimming.

Fan Stage

Type: SR04..S (with rotary switch for fan stage adjustment)

- SNVT Type: SNVT_switch
- UCPTdeviceType 7

UCPTfanSpdStages = 1

Fan Stage	nvoMultiOut_1	
	.value	.state
AUTO	0 %	-1
0	0 %	0
1	100 %	1

UCPTfanSpdStages = 2

Fan Stage	nvoMultiOut_1	
	.value	.state
AUTO	0 %	-1
0	0 %	0
1	50 %	1
2	100 %	1

UCPTfanSpdStages = 3

Fan Stage	nvoMultiOut_1	
	.value	.state
AUTO	0 %	-1
0	0 %	0
1	33,0 %	1
2	66,5 %	1
3	100 %	1

UCPTfanSpdStages = 11

Fan Stage	nvoMultiOut_1	
	.value	.state
0	0 %	0
1	100 %	1

UCPTfanSpdStages = 12

Fan Stage	nvoMultiOut_1	
	.value	.state
0	0 %	0
1	50 %	1
2	100 %	1

UCPTfanSpdStages = 13

Fan Stage	nvoMultiOut_1	
	.value	.state
0	0 %	0
1	33,0 %	1
2	66,5 %	1
3	100 %	1

Humidity

nvoPercentOut_4

SNVT Type: SNVT_lev_percent, Index 117

Type: SR04..rH (combi sensor with relative humidity)

- SNVT Type: SNVT_lev_percent
- UCPTdeviceType 701
- nvoPercentOut_4 = 0.0 ... 100.0 %

Digital Switch Contact

Type: SR65-DI (digital input module)

- SNVT Type: SNVT_switch
- UCPTdeviceType 702
- Contact closed: nvoMultiOut_1 = 100.0 1
- Contact opened: nvoMultiOut_1 = 0.0 0

Motion Sensor

Type: SR-PIR 360°

- SNVT Type: SNVT_switch
- UCPTdeviceType 704
- Motion: nvoMultiOut_1 = 100.0 1
- No motion: nvoMultiOut_1 = 0.0 0

Window Contact

Type: SRW01

- SNVT Type: SNVT_switch
- UCPTdeviceType 6
- Window OPENED ==> nvoMultiOut_1 = 100.0 1
- Window CLOSED ==> nvoMultiOut_1 = 0.0 0

Type: Secu-Signal – Window handle

- SNVT Type: SNVT_switch
- UCPTdeviceType 502
- Window OPENED ==> nvoMultiOut_1 = 100.0 1
- Window CLOSED ==> nvoMultiOut_1 = 0.0 0
- UCPTdeviceType 503
- Window OPENED ==> nvoMultiOut_1 = 100.0 1
- Window tilted ==> nvoMultiOut_1 = 50.0 1
- Window CLOSED ==> nvoMultiOut_1 = 0.0 0

Switch

Type: Easyfit / EasySens

- SNVT Type: SNVT_scene, SNVT_switch or SNVT_setting depending on function
- UCPTdeviceType 5

nvoMultiOut_2

SNVT Type: SNVT_switch, Index 95

Function: Depending on the configuration, the output variable can either transmit the presence key or the functions for switching/dimming.

Presence Key

Type: SR04..T (with button respectively slide switch)

- UCPTdeviceType 7

SNVT Typ: SNVT_switch

- By **nviMultiOut_2_FB** the current status of the controlled lighting group can be transferred.
- By **SCPTbypassTime = 0** only the value 100.0 1 is sent with button actuation. A reset to the value 0.0 0 is not made.
- By **SCPTbypassTime = 1** the status of the contact is output. The output variable is reset to 0.0 0 without any time delay by opening the contact.
- By **SCPTbypassTime = 2** each button actuation leads to a switching-over of the lighting, i.e. between ON and OFF
- By **SCPTbypassTime >= 3** the overwork function is activated. By button actuation the output variable receives the value 100.0 1. After expiration of the delay time it is reset to the value 0.0 0. Each button actuation restarts the timer.

nvoOccupOut_3 **Motion Sensor**

Type: SR-PIR 360°

- SNVT Type: SNVT_occupancy
- UCPTdeviceType 704
- Motion: nvoMultiOut_2 = OC_OCCUPIED
- No motion: nvoMultiOut_2 = OC_UNOCCUPIED

Type: SR MDS

- SNVT Type: SNVT_occupancy
- UCPTdeviceType 705
- Motion: nvoMultiOut_2 = OC_OCCUPIED
- No motion: nvoMultiOut_2 = OC_UNOCCUPIED

Wireless Chair

Type: Wireless chair

- SNVT Type: SNVT_switch or SNVT_occupancy
- UCPTdeviceType 501
- By **SCPTbypassTime = 0** only the value 100.0 1 respectively OC_OCCUPIED is sent with button actuation. A reset to the value 0.0 0 respectively OC_UNOCCUPIED is not made.
- By **SCPTbypassTime = 1** the status of the contact is output. The output variable is reset without any time delay to 0.0 0 respectively OC_UNOCCUPIED by opening the contact.
- By **SCPTbypassTime >= 2** the overwork function is activated. By button actuation the output variable receives the value 100.0 1 respectively OC_OCCUPIED. After the opening of the contact (stand up) the delay time is started. After expiration of the delay time, it is reset to the value 0.0 0 respectively OC_UNOCCUPIED. Each button actuation restarts the timer.

Switch

Type: Easyfit / EasySens

- SNVT Typ: SNVT_scene, SNVT_switch or SNVT_setting depending on the function
- UCPTdeviceType 5

Button Evaluation nvoMultiOut_1 / nvoMultiOut_2

Switch/ Button

Button pressed/ not pressed

UCPTdiConfig[x].Byte[0...3] = 01_{hex} / 02_{hex}

SNVT Type: SNVT_switch

Button pressed	nvoMultiOut_1/2.value	= SCPTmaxOut
	nvoMultiOut_1/2.state	= 1
Button not pressed	nvoMultiOut_1/2.value	= 0
	nvoMultiOut_1/2.state	= 0

Lighting Toggle

UCPTdiConfig[x].Byte[0...3] = 03_{hex} / 04_{hex}

Each button actuation results in a toggling of the lighting, i.e. between ON and OFF

SNVT Type: SNVT_switch

Lighting ON	nvoMultiOut_1/2.value	= SCPTmaxOut
	nvoMultiOut_1/2.state	= 1
Lighting OFF	nvoMultiOut_1/2.value	= 0
	nvoMultiOut_1/2.state	= 0

Lighting ON

UCPTdiConfig[x].Byte[0...3] = 05_{hex} / 06_{hex}

Each button actuation results in a toggling of the lighting

SNVT Type: SNVT_switch

Lighting ON	nvoMultiOut_1/2.value	= SCPTmaxOut
	nvoMultiOut_1/2.state	= 1

Lighting OFF

UCPTdiConfig[x].Byte[0...3] = 07_{hex} / 08_{hex}

Each button actuation results in a switching-off of the lighting

SNVT Type: SNVT_switch

Lighting OFF	nvoMultiOut_1/2.value	= 0
	nvoMultiOut_1/2.state	= 0

Dimming

Lighting: Toggle by Dimming, Switch-ON Value = max. Value

UCPTdiConfig[x].Byte[0...3] = 10_{hex} / 11_{hex}

Short button actuations result in a toggling of the current lighting status, whereas the .value –turn-on value always is SCPTmaxOut. By longer button actuations the dimming function is activated, i.e. based on the current lighting status, the .value-value of the switch variables is raised or lowered in percent steps of UCPTstepValue as long as the button is pressed. A renewed long time button actuation results in a reversal of the dimming direction.

SNVT Type: SNVT_switch

Lighting on maximum value nvoMultiOut_1/2.value = SCPTmaxOut

nvoMultiOut_1/2.state = 1

Lighting on 50% nvoMultiOut_1/2.value = 50,0

nvoMultiOut_1/2.state = 1

Lighting OFF nvoMultiOut_1/2.value = 0

nvoMultiOut_1/2.state = 0

Lighting: Toggle by Dimming, Switch-ON Value = Last Switch-ON Value

UCPTdiConfig[x].Byte[0...3] = 12_{hex} / 13_{hex}

Function as with 10_{hex} / 11_{hex}, but with the difference, that not the value SCPTmaxOut but the last turn-on value is taken over. The smallest turn-on value is limited to 20%.

Lighting ON by Brighter-Dimming, Switch-ON Value = max. Value

UCPTdiConfig[x].Byte[0...3] = 14_{hex} / 15_{hex}

If the lighting is switched-off, a button actuation results in an immediate switching-on of the lighting. By longer button actuations the function “dim brighter“ is activated, i.e. based on the current light status the .value – value of the switch variable is reduced in percent steps of UCPTstepValue as long as the maximum value SCPTmaxOut is reached. The sending interval in the mode dimming is adjusted by SCPTminSendTime and is preadjusted to approx. 300ms.

SNVT Type: SNVT_switch

Switching-on of lighting nvoMultiOut_1/2.value = SCPTmaxOut

nvoMultiOut_1/2.state = 1

Brighter dimming of lighting nvoMultiOut_1/2.value = last value + UCPTstepValue

nvoMultiOut_1/2.state = 1

Lighting ON by Brighter Dimming, Switch-ON Value = last ON-value

UCPTdiConfig[x].Byte[0...3] = 16_{hex} / 17_{hex}

Function as with 16_{hex}, 17_{hex}, but with the difference, that not the value SCPTmaxOut is taken over when switching-on the light, but the last turn-on value. The smallest turn-on value is limited to 20%.

Lighting OFF by Darker Dimming

UCPTdiConfig[x].Byte[0...3] = 18_{hex} / 19_{hex}

If the lighting is turned-on, a short button actuation leads to an immediate switching-off of the lighting. By longer button actuations the function “dim darker“ is activated, i.e. based on the current lighting status the .value –value of the switch variables is reduced in percent steps of UCPTstepValue as long as the value 0 is reached. The sending interval in the mode dimming is adjusted by SCPTminSendTime and amounts to approx. 300ms preset.

SNVT Type: SNVT_switch

Switching-off of lighting nvoMultiOut_1/2.value = 0

nvoMultiOut_1/2.state = 0

Darker dimming of lighting nvoMultiOut_1/2.value = last value - UCPTstepValue

nvoMultiOut_1/2.state = 1

Automatic

UCPTdiConfig[x].Byte[0...3] = 60_{hex} / 61_{hex}

The actuation of an "Automatic-Button" switches the variable nvoMultiOut_1/2 to the value 0,0 -1. Thus, e.g. a light controller can be reset in the automatic mode after external override.

SNVT Type: SNVT_switch

4.2.2 Configuration Property Sensor-Object:

SCPTtempOffset

SCPT Index: 227, SNVT_temp_p

Function: Offset for the temperature value. By means of this parameter a software calibration is possible.

SCPTminRnge, SCPTmaxRnge

SCPT Index: 23, 20, SNVT_temp_p

Function: The parameters are for the adjustment of different temperature ranges of SR04.- and SR65.. - sensors. The measuring range is found in the respective data sheet.

- Standard measuring range SR04: 0 to +40 °C
- Standard measuring range SR65: -20 to +60 °C
- Standard measuring range SR65 TF: -20 to +60 °C
- Standard measuring range SR65 AKF: +10 to +90 °C
- Standard measuring range SR65 VFG: +10 to +90 °C

(Preset value: SCPTminRnge = 0,00 °C and SCPTmaxRnge = 40,00 °C)

SCPTmaxOut

SCPT Index: 93, SNVT_lev_cont

Function: This configuration property determines the maximum output value of the variable nvoMultiOut.value. (Preset value: 100.0)

SCPTmaxSendTime

SCPT Index: 49, SNVT_time_sec

Function: Heartbeat function. This configuration property stipulates the interval time after which the output variable is sent. By input values = 0, the heartbeat function is deactivated. (Preset value: 0,0 s)

UCPTdeviceType

UCPT Index: 42, SNVT_count

Function: By UCPTdeviceType the different device types (SR04.../SR65... and SRW01) are selected.

- 7 = SR04 / SR07 / SR65 - Temperature sensor
- 701 = SR04 rH - Humidity sensor
- 702 = SR65 - DI - Digital input
- 704 = SR PIR 360° - Motion sensor
- 705 = SR MDS - SensoLux - Multi sensor, motion sensor, light sensor
- 6 = SRW01 - Window contact
- 5 = Tactile sensor - Switching functions
- 501 = Wireless chair - Room occupancy
- 502 = SRG01 - SecuSignal® - Window handle (Opened / Closed)
- 503 = SRG01 - SecuSignal® - Window handle (Opened / Tilted / Closed)

(Preset value: 7, i.e. SR04/SR65)

UCPTenoceanID

UCPT Index: 39, UNVT_str_hex4

Function: The parameter UCPTenoceanID allocates a special sensor to each object, whereas the sensor ID can either be entered manually or read automatically via the learn button on the sensor. Display format of 32-Bit Sensor-ID in the browser in hex: ID-Byte3, ID-Byte2, ID-Byte1, ID-Byte0