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SCPT Master List



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# LONMARK<sup>®</sup>

# SCPT Master List

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## SCPT Master List Introduction

Standard Configuration Property Types (SCPTs) facilitate interoperability by providing a well-defined compact mechanism for handling large amounts of configuration information on a device. SCPTs do not use up network variable resources and are downloaded and uploaded to a device via the LONWORKS file transfer protocol or by network management read/write messages. A list of all available SCPTs and details of their definitions is provided in this document.

This document provides information on all available SCPTs. A SCPT index is defined for each configuration property that is used when defining self-documentation for configuration network variables, and also when defining configuration parameter template files. The SCPT names are provided for use in network and development tools.

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## SCPT Version Numbers

This version of the SCPT Master List corresponds to version 13 of the LONMARK resource files. New SCPTs are added in numerical order. The following table shows the number of SCPTs defined in this and several earlier versions of the resource files.

<b><i>Resource File Version</i></b>	<b><i>SCPT IDs Defined</i></b>
7	1 – 134
8	1 – 157
9	1 – 168
10	1 – 169
11	1 – 256
12	1 – 279
13	1 – 304

---

## SCPTactFbDly (1)

### *Actual Position Feedback Delay*

This configuration property sets the period for updating the actual actuator position feedback output from a functional block when the actuator position does not match the requested position as specified by the primary input network variable of the functional block.

SCPT Index	Measurement	Type Category	Type Size
1	SNVT_elapsed_tm	Structure	7 bytes

### *Structure Definition*

```
typedef struct {  
    unsigned long    day;  
    unsigned short   hour;  
    unsigned short   minute;  
    unsigned short   second;  
    unsigned long    millisecond;  
} SCPTactFbDly;
```

**day:** Not used.

Field	Measurement	Field Type Category	Field Size
day	Days	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 0	1	Days	N/A
Raw Range	Scale Factors	File Name	Default Value
0 .. 0	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0

**hour:** Not used.

Field	Measurement	Field Type Category	Field Size
hour	Hours	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 0	1	Hours	N/A
Raw Range	Scale Factors	File Name	Default Value
0 .. 0	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0



**minute:** Not used.

Field	Measurement	Field Type Category	Field Size
minute	Minutes	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 0	1	Minutes	N/A
Raw Range	Scale Factors	File Name	Default Value
0 .. 0	1, 0, 0 $S = a \cdot 10^{b*}(R+c)$	N/A	0

**second:** Number of seconds to delay.

Field	Measurement	Field Type Category	Field Size
second	Seconds	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 59	1	Seconds	N/A
Raw Range	Scale Factors	File Name	Default Value
0 .. 59 (0 .. 3B)	1, 0, 0 $S = a \cdot 10^{b*}(R+c)$	N/A	0

**millisecond:** Number of milliseconds to delay.

Field	Measurement	Field Type Category	Field Size
millisecond	Milliseconds	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 999	1	Milliseconds	N/A
Raw Range	Scale Factors	File Name	Default Value
0 .. 999 (0 .. 0x3E7)	1, 0, 0 $S = a \cdot 10^{b*}(R+c)$	N/A	0

---

## SCPTactuatorCharacteristic (284)

### *Actuator Characteristic*

This configuration property can be used to provide the characteristic of the actuator.

SCPT Index	Measurement	Type Category	Type Size
284	SNVT_dev_c_mode	Enumeration	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
SNVT_dev_c_mode	1	N/A	DCM_NUL
Raw Range	Scale Factors	File Name	Default Value
SNVT_dev_c_mode	N/A	N/A	DCM_SPEED_CONST

---

## SCPTactuatorType (41)

### *Actuator Type*

This configuration property is used to identify the exact actuator type or label.

SCPT Index	Measurement	Type Category	Type Size
41	SNVT_str_asc	Structure	31 bytes

### *Structure Definition*

```
typedef struct {  
    unsigned char    ascii[31];  
} SCPTactuatorType;
```

**ascii[31]:** Actuator type or label.

Field	Measurement	Field Type Category	Field Size
ascii	Type or Label	Unsigned Character	31 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 255 for each byte	1	N/A	N/A
Raw Range	Scale Factors	File Name	Default Value
0 .. 255 for each byte (0x00 .. 0xFF)	1, 0, 0 $S = a \cdot 10^{b \cdot (R+c)}$	N/A	Manufacturer-defined

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## SCPTahamApplianceModel (304)

### *AHAM Appliance Model*

Appliance Model code as defined by the Association of Home Appliance Manufacturers.

SCPT Index	Measurement	Type Category	Type Size
304	aham_appl_t	Enumeration	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
aham_appl_t	1	N/A	AHAM_NUL
Raw Range	Scale Factors	File Name	Default Value
aham_appl_t	N/A	SNVT_AHM.h	AHAM_CLOTHES_ WASHER

---

## SCPTairTemp1Alrm (132)

### *Air Temperature 1% Alarm*

This configuration property sets the weighting of an nviAirTemp1 sensor when calculating the nviAlarmAirTemp alarm. The nviAirTemp2 portion is automatically calculated.

SCPT Index	Measurement	Type Category	Type Size
132	SNVT_lev_percent	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 100%	0.005%	Percent	163.835% (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 200 (0 .. 0x64)	5, -3, 0 $S = a * 10^b * (R + c)$	N/A	100% (i.e. the nviAirTemp2 sensor is not used in calculating the nviAlarmAirTemp)

---

## SCPTairTemp1Day (126)

### *Air Temperature 1% Day*

This configuration property indicates the air temperature weighting to be used during Day control. The nviAirTemp2 portion is automatically calculated.

For example:

nviAirTemp1 measures -25°C and nviAirTemp2 measures -20°C. Required as a regulation parameter is a weighted average consisting of 60% nviAirTemp1 and the rest from nviAirTemp2 (only the nviAirTemp1 share is programmed). This gives the following regulating value:

$$(0.6 \times -25 \text{ degrees C}) + (0.4 \times -20 \text{ degrees C}) = -23 \text{ degrees C}$$

SCPT Index	Measurement	Type Category	Type Size
126	SNVT_lev_percent	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 100%	0.005%	Percent	163.835% (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 200 (0 .. 0x64)	5, -3, 0 $S = a * 10^b * (R + c)$	N/A	100% (i.e. the nviAirTemp2 sensor is not used in calculating the nviAlarmAirTemp)

---

## SCPTairTemp1Night (131)

### *Air Temperature 1% Night*

This configuration property indicates the air temperature weighting to be used during Day control. The nviAirTemp2 portion is automatically calculated.

For example:

nviAirTemp1 measures -25 degrees C and nviAirTemp2 measures -20 degrees C. Required as a regulation parameter is a weighted average consisting of 60% nviAirTemp1 and the rest from nviAirTemp2 (only the nviAirTemp1 share is programmed). This gives the following regulating value

$$(0.6 \times -25 \text{ degrees C}) + (0.4 \times -20 \text{ degrees C}) = -23 \text{ degrees C}$$

SCPT Index	Measurement	Type Category	Type Size
131	SNVT_lev_percent	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 100%	0.005%	Percent	163.835% (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 200 (0 .. 0x64)	5, -3, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	100% (i.e. the nviAirTemp2 sensor is not used in calculating the nviAlarmAirTemp)

---

## SCPTalarmClrT1 (2)

### *Alarm Clear Time 1*

This configuration property is used to determine the time period that an alarm 1 condition must not exist before it is regarded as a valid cleared alarm.

SCPT Index	Measurement	Type Category	Type Size
2	SNVT_elapsed_tm	Structure	7 bytes

## Structure Definition

```
typedef struct {
    unsigned long    day;
    unsigned short   hour;
    unsigned short   minute;
    unsigned short   second;
    unsigned long    millisecond;
} SCPTAlrmClrT1;
```

**day:** Not used.

Field	Measurement	Field Type Category	Field Size
day	Days	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 0	1	Days	N/A
Raw Range	Scale Factors	File Name	Default Value
0 .. 0	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0

**hour:** Not used.

Field	Measurement	Field Type Category	Field Size
hour	Hours	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 0	1	Hours	N/A
Raw Range	Scale Factors	File Name	Default Value
0 .. 0	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0

**minute:** Not used.

Field	Measurement	Field Type Category	Field Size
minute	Minutes	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 0	1	Minutes	N/A
Raw Range	Scale Factors	File Name	Default Value
0 .. 0	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0

**second:** Number of seconds to delay.

Field	Measurement	Field Type Category	Field Size
second	Seconds	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 59	1	Seconds	N/A
Raw Range	Scale Factors	File Name	Default Value
0 .. 59 (0 .. 3B)	1, 0, 0 $S = a \cdot 10^{b*}(R+c)$	N/A	0

**millisecond:** Number of milliseconds to delay.

Field	Measurement	Field Type Category	Field Size
millisecond	Milliseconds	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 999	1	Milliseconds	N/A
Raw Range	Scale Factors	File Name	Default Value
0 .. 999 (0 .. 0x3E7)	1, 0, 0 $S = a \cdot 10^{b*}(R+c)$	N/A	0

---

## SCPTalrmClrT2 (3)

### *Alarm Clear Time 2*

This configuration property is used to determine the time period that an alarm 2 condition must not exist before it is regarded as a valid cleared alarm.

SCPT Index	Measurement	Type Category	Type Size
3	SNVT_elapsed_tm	Structure	7 bytes

### *Structure Definition*

```
typedef struct {
    unsigned long    day;
    unsigned short   hour;
    unsigned short   minute;
    unsigned short   second;
    unsigned long    millisecond;
} SCPTalrmClrT2;
```

**day:** Not used.

Field	Measurement	Field Type Category	Field Size
day	Days	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 0	1	Days	N/A
Raw Range	Scale Factors	File Name	Default Value
0 .. 0	1, 0, 0	N/A	0

	$S = a \cdot 10^b \cdot (R+c)$		
--	--------------------------------	--	--

**hour:** Not used.

Field	Measurement	Field Type Category	Field Size
hour	Hours	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 0	1	Hours	N/A
Raw Range	Scale Factors	File Name	Default Value
0 .. 0	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0

**minute:** Not used.

Field	Measurement	Field Type Category	Field Size
minute	Minutes	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 0	1	Minutes	N/A
Raw Range	Scale Factors	File Name	Default Value
0 .. 0	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0

**second:** Number of seconds to delay.

Field	Measurement	Field Type Category	Field Size
second	Seconds	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 59	1	Seconds	N/A
Raw Range	Scale Factors	File Name	Default Value
0 .. 59 (0 .. 3B)	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0

**millisecond:** Number of milliseconds to delay.

Field	Measurement	Field Type Category	Field Size
millisecond	Milliseconds	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 999	1	Milliseconds	N/A
Raw Range	Scale Factors	File Name	Default Value
0 .. 999 (0 .. 0x3E7)	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0

## SCPTalrmIhbT (4)

### Alarm Output Inhibit Time

This configuration property is used to determine the time period for which alarms are inhibited after a functional block is enabled or the device is reset or is put on-line.

SCPT Index	Measurement	Type Category	Type Size
4	SNVT_elapsed_tm	Structure	7 bytes

### Structure Definition

```
typedef struct {  
    unsigned long    day;  
    unsigned short   hour;  
    unsigned short   minute;  
    unsigned short   second;  
    unsigned long    millisecond;  
} SCPTalrmClrT1;
```

**day:** Not used.

Field	Measurement	Field Type Category	Field Size
day	Days	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 0	1	Days	N/A
Raw Range	Scale Factors	File Name	Default Value
0 .. 0	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0

**hour:** Not used.

Field	Measurement	Field Type Category	Field Size
hour	Hours	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 0	1	Hours	N/A
Raw Range	Scale Factors	File Name	Default Value
0 .. 0	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0

**minute:** Not used.

Field	Measurement	Field Type Category	Field Size
minute	Minutes	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 0	1	Minutes	N/A
Raw Range	Scale Factors	File Name	Default Value
0 .. 0	1, 0, 0	N/A	0



	$S = a \cdot 10^b \cdot (R+c)$		
--	--------------------------------	--	--

**second:** Number of seconds to delay.

Field	Measurement	Field Type Category	Field Size
second	Seconds	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 59	1	Seconds	N/A
Raw Range	Scale Factors	File Name	Default Value
0 .. 59 (0 .. 3B)	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0

**millisecond:** Number of milliseconds to delay.

Field	Measurement	Field Type Category	Field Size
millisecond	Milliseconds	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 999	1	Milliseconds	N/A
Raw Range	Scale Factors	File Name	Default Value
0 .. 999 (0 .. 0x3E7)	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0

---

## SCPTalarmSetT1 (5)

### *Alarm Set Time 1*

This configuration property is used to determine the time period that an alarm 1 condition must exist before it is regarded as a valid alarm.

SCPT Index	Measurement	Type Category	Type Size
5	SNVT_elapsed_tm	Structure	7 bytes

### Structure Definition

```
typedef struct {
    unsigned long    day;
    unsigned short   hour;
    unsigned short   minute;
    unsigned short   second;
    unsigned long    millisecond;
} SCPTAlrmSetT1;
```

**day:** Not used.

Field	Measurement	Field Type Category	Field Size
day	Days	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 0	1	Days	N/A
Raw Range	Scale Factors	File Name	Default Value
0 .. 0	1, 0, 0 $S = a * 10^{b * (R+c)}$	N/A	0

**hour:** Not used.

Field	Measurement	Field Type Category	Field Size
hour	Hours	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 0	1	Hours	N/A
Raw Range	Scale Factors	File Name	Default Value
0 .. 0	1, 0, 0 $S = a * 10^{b * (R+c)}$	N/A	0

**minute:** Not used.

Field	Measurement	Field Type Category	Field Size
minute	Minutes	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 0	1	Minutes	N/A
Raw Range	Scale Factors	File Name	Default Value
0 .. 0	1, 0, 0 $S = a * 10^{b * (R+c)}$	N/A	0

**second:** Number of seconds to delay.

Field	Measurement	Field Type Category	Field Size
second	Seconds	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 59	1	Seconds	N/A
Raw Range	Scale Factors	File Name	Default Value
0 .. 59 (0 .. 3B)	1, 0, 0 $S = a \cdot 10^{b \cdot (R+c)}$	N/A	0

**millisecond:** Number of milliseconds to delay.

Field	Measurement	Field Type Category	Field Size
millisecond	Milliseconds	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 999	1	Milliseconds	N/A
Raw Range	Scale Factors	File Name	Default Value
0 .. 999 (0 .. 0x3E7)	1, 0, 0 $S = a \cdot 10^{b \cdot (R+c)}$	N/A	0

---

## SCPTalmSetT2 (6)

### *Alarm Set Time 2*

This configuration property is used to determine the time period that an alarm 2 condition must exist before it is regarded as a valid alarm.

SCPT Index	Measurement	Type Category	Type Size
6	SNVT_elapsed_tm	Structure	7 bytes

### *Structure Definition*

```
typedef struct {
    unsigned long    day;
    unsigned short   hour;
    unsigned short   minute;
    unsigned short   second;
    unsigned long    millisecond;
} SCPTalmSetT2;
```

**day:** Not used.

Field	Measurement	Field Type Category	Field Size
day	Days	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 0	1	Days	N/A
Raw Range	Scale Factors	File Name	Default Value
0 .. 0	1, 0, 0	N/A	0

	$S = a \cdot 10^b \cdot (R+c)$		
--	--------------------------------	--	--

**hour:** Not used.

Field	Measurement	Field Type Category	Field Size
hour	Hours	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 0	1	Hours	N/A
Raw Range	Scale Factors	File Name	Default Value
0 .. 0	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0

**minute:** Not used.

Field	Measurement	Field Type Category	Field Size
minute	Minutes	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 0	1	Minutes	N/A
Raw Range	Scale Factors	File Name	Default Value
0 .. 0	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0

**second:** Number of seconds to delay.

Field	Measurement	Field Type Category	Field Size
second	Seconds	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 59	1	Seconds	N/A
Raw Range	Scale Factors	File Name	Default Value
0 .. 59 (0 .. 3B)	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0

**millisecond:** Number of milliseconds to delay.

Field	Measurement	Field Type Category	Field Size
millisecond	Milliseconds	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 999	1	Milliseconds	N/A
Raw Range	Scale Factors	File Name	Default Value
0 .. 999 (0 .. 0x3E7)	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0

---

## SCPTareaDuctHeat (266)

### *Heating Duct Area*

Nominal cross-sectional airflow area of the hot or ventilation deck of a dual duct VAV terminal unit.

SNVT Index	Measurement	Type Category	Type Size
266	SNVT_area	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 13.1068	0.0002	Square Meters (m <sup>2</sup> )	65,535 (0xFFFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 65,534 (0 .. 0xFFFE)	2, -4, 0 $S = a \cdot 10^{b \cdot (R+c)}$	N/A	65,535 (0xFFFF)

---

## SCPTaudibleLevel (228)

### *Audible Level*

The configuration property of type SCPTaudibleLevel may be used to set the audible output of any product.

SCPT Index	Measurement	Type Category	Type Size
228	SNVT_switch	Structure	2 bytes

### *Structure Definition*

```
typedef struct {  
    unsigned short    value;  
    signed short      state;  
} SCPTaudibleLevel;
```

**value:** Volume as percentage of full scale. The value field is used to set the audible output of a device from zero to the maximum allowed by the device.

Field	Measurement	Field Type Category	Field Size
value	Audible level	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0.0 .. 100.0%	0.5%	Percentage	
Raw Range	Scale Factors	File Name	Default Value
0 .. 200 (0 .. 0xC8)	5, -1, 0 $S = a \cdot 10^{b \cdot (R+c)}$	N/A	Manufacturer-defined

**state:** 0 means output disabled or off; 1 means output enabled or on. When the State field is set to one, the audible output is enabled at the level set by the Value field. When the State field is set to zero, the audible output is zero regardless of the Value field setting.

Field	Measurement	Field Type Category	Field Size
state	On/off state	Signed Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 1	1	State	-1 (0xFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 1	1, 0, 0 $S = a \cdot 10^{b \cdot (R+c)}$	N/A	Manufacturer-defined

---

## SCPTaudOutput (144)

### *Audible Output*

This configuration property allows the sound output specification in dBA to be read from a device. This information is defined at manufacture time. The audible sound output is defined as the sound output at 1-meter distance from the device, as specified by the manufacturer.

SCPT Index	Measurement	Type Category	Type Size
144	SNVT_sound_db	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
-327.68 .. 327.67 decibels (Note 1)	0.01	Decibels (dB)	
Raw Range	Scale Factors	File Name	Default Value
-32,768 .. 32,767 (0x8000 .. 0x7FFF)	1, -2, 0 $S = a \cdot 10^{b \cdot (R+c)}$	N/A	Manufacturer-defined

### *Notes*

Note 1: Manufacturers may define more restricted ranges specific to their markets and code jurisdictions.

---

## SCPTautoAnswer (177)

### *Auto Answer*

This configuration property is used to enable or disable the automatic call answer function of a data modem. Auto-answer is enabled if the value is True, otherwise it is disabled.

SCPT Index	Measurement	Type Category	Type Size
177	boolean_t	Enumeration	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
boolean_t	1	N/A	BOOL_NUL
Raw Range	Scale Factors	File Name	Default Value
boolean_t	N/A	N/A	FALSE

## SCPTbaseValue (164)

### Base Value

This configuration property defines the base value for a Utility Data Logger Register functional block. If the value is changed, the register begins to count starting from the given value.

SCPT Index	Measurement	Type Category	Type Size
164	SNVT_reg_val	Structure	6 bytes

### Structure Definition

```
typedef struct {
    unsigned short    raw[4];
    reg_val_unit_t    unit;
    unsigned short    nr_decimals    :3;
} SCPTbaseValue;
```

**raw[4]:** Base value.

Field	Measurement	Field Type Category	Field Size
raw[4]	Base Value	Unsigned Short Array	4 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
-2,147,483,648 .. 2,147,483,647	1	Defined by Unit field	N/A
Raw Range	Scale Factors	File Name	Default Value
-2,147,483,648 .. 2,147,483,647 (0x80000000 .. 7FFFFFFF)	1, 0, 0 $S = a \cdot 10^{b \cdot (R+c)}$	N/A	0

**unit:** Unit of measure for Raw field.

Field	Measurement	Field Type Category	Field Size
Unit	reg_val_unit_t	Enumeration	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
reg_val_unit_t	1	Unit of measure	RVU_NUL
Raw Range	Scale Factors	File Name	Default Value
reg_val_unit_t	1, 0, 0	N/A	0

	$S = a \cdot 10^{b \cdot (R+c)}$		
--	----------------------------------	--	--

**nr\_decimals:** Number of significant digits to right of the decimal point

Field	Measurement	Field Type Category	Field Size
nr_decimals	Digits	Unsigned Short	3 bits
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 7	1	Digits	N/A
Raw Range	Scale Factors	File Name	Default Value
0 .. 7	1, 0, 0 $S = a \cdot 10^{b \cdot (R+c)}$	N/A	0

---

## SCPTblockProtectionTime (251)

### *Interval Antiblocking Protection*

This configuration property defines the minimum time in hours for movement.  
This periodic cycling prevents blocking.

SCPT Index	Measurement	Type Category	Type Size
251	SNVT_time_hour	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 to 65,535	1 hour	Hours	N/A
Raw Range	Scale Factors	Type Category	Default Value
0 to 65,535 (0 .. 0xFFFF)	1, 0, 0 $S = a \cdot 10^{b \cdot (R+c)}$	N/A	0

### *Notes*

Setting disables the protect function.

---

## SCPTbrightness (230)

### *Actual Position Feedback Delay*

The configuration property of type SCPT\_brightness may be used to set the brightness of a visual display.



SCPT Index	Equivalent SNVT	Type Category	Type Size
230	SNVT_switch	Structure	2 bytes

### Structure Definition

```
typedef struct {
    unsigned short    value;
    signed short      state;
} SCPTbrightness;
```

**value:** Sets the brightness of the display from zero to the maximum allowed by the product.

Field	Measurement	Field Type Category	Field Size
value	Brightness	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0.0 .. 100.0 %	0.5%	Percentage	N/A
Raw Range	Scale Factors	File Name	Default Value
0 .. 200 (0 .. 0xC8)	5, -1, 0 $S = a \cdot 10^{b*}(R+c)$	N/A	Manufacturer-defined

**state:** On/off state. When state is set to one, the display is enabled at the brightness level set by value. When state is set to zero, the display intensity is zero regardless of the value setting.

Field	Measurement	Field Type Category	Field Size
state	State	Signed Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 1	1	N/A	-1 (0xFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 1	1, 0, 0 $S = a \cdot 10^{b*}(R+c)$	N/A	Manufacturer-defined

---

## SCPTbuildingStaticPressureSetpoint (193)

### Building Static Pressure Setpoint

This configuration property defines the default building static pressure setpoint.

SCPT Index	Measurement	Type Category	Type Size
193	SNVT_press_p	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
-32,768 ... 32,766	1	Pascals	32,767 (0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
-32,768 ... 32,766 (0x8000 .. 0x7FFE)	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	25 pascals

---

## SCPTbypassTime (34)

### *Bypass Time*

This configuration property defines the maximum amount of time that a controller can be in the bypass (occupancy) mode following a single bypass request from either a local (hardwired) bypass switch or from another device over the network. Additional bypass requests can restart the timer. Setting this configuration property to zero disables the bypass function and no bypass takes place.

SCPT Index	Measurement	Type Category	Type Size
34	SNVT_time_min	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 65,535	1	Minutes	N/A
Raw Range	Scale Factors	File Name	Default Value
0 .. 65,535 (0 .. 0xFFFF)	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0 (no bypass allowed)

---

## SCPTclockCalibration (300)

### *Clock Calibration*

Corrects clock-cycle variations.

SCPT Index	Measurement	Type Category	Type Size
300	SNVT_sec_state	Signed Long	2 byte
Valid Type Range	Type Resolution	Units	Invalid Value
-32768..32767	1	milliseconds per hour	N/A
Raw Range	Scale Factors	File Name	Default Value
-32768 .. 32767 (0xFFFF .. 0x7FFF)	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	N/A

---

## SCPTclOffDelay (85)

### *Controller Off Delay*

This configuration property is used to determine the delay after which the controller output is switched off. The controller is only switched off after this delay if the actuator output is 0% and the ambient level exceeds the setpoint value plus the relative hysteresis level.

SCPT Index	Measurement	Type Category	Type Size
85	SNVT_time_sec	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 to 6553.4	0.1	Seconds	65,535 (0xFFFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 65,534 (0 .. 0xFFFE)	1, -1, 0 $S = a * 10^b * (R+c)$	N/A	300 seconds

---

## SCPTclOnDelay (86)

### *Controller On Delay*

This configuration property is used to determine the delay after which the controller output is switched on. The controller is only switched on after this delay if the output was switched off due to a too high ambient level and the ambient level is now lower than the setpoint value minus the relative hysteresis.

SCPT Index	Measurement	Type Category	Type Size
86	SNVT_time_sec	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 6553.4	0.1 seconds	Percent	65,535 (0xFFFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 65,534 (0 .. 0xFFFE)	1, -1, 0 $S = a * 10^b * (R+c)$	N/A	0

---

## SCPTcombFlowCharacteristic (287)

### *Combination-Flow Characteristic*

This configuration property can be used to provide the desired system control flow characteristic.

SCPT Index	Measurement	Type Category	Type Size
287	SNVT_dev_c_mode	Enumeration	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
SNVT_dev_c_mode	1	N/A	DCM_NUL
Raw Range	Scale Factors	File Name	Default Value
SNVT_dev_c_mode	N/A	N/A	DCM_SPEED_CONST

---

## SCPTcontrolPriority (171)

### *Control Priority*

This configuration property assigns a group member priority to a controlling device. Low priority values specify low priority, and high priority values specify high priority. In normal control mode the range is 1 to 50, and in alarm control mode the range is 51 to 200. The value zero is used to release control. The range 201 to 255 is reserved.

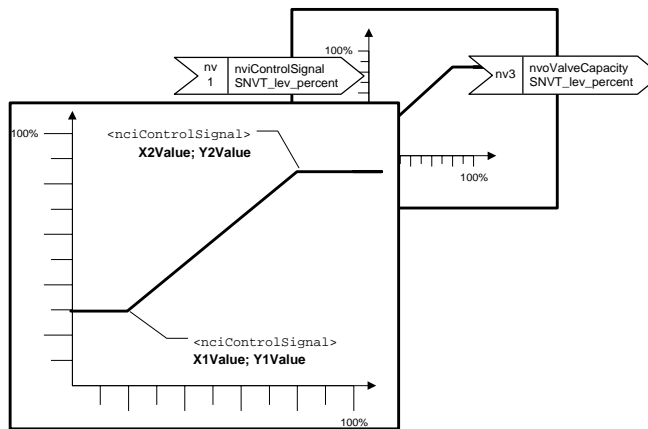
SCPT Index	Measurement	Type Category	Type Size
171	Control Priority	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 200	1	Priority	None
Raw Range	Scale Factors	File Name	Default Value
0 .. 200 (0 .. 0xC8)	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0

---

## SCPTcontrolSignal (245)

### *Control Signal Preparation*

This configuration property sets control signal preparation for sequencing.



SCPT Index	Measurement	Type Category	Type Size
245	Control Signal Preparation	Structure	8 bytes

### Structure Definition

```
typedef struct {
    SNVT_lev_percent      x1Value;
    SNVT_lev_percent      y1Value;
    SNVT_lev_percent      x2Value;
    SNVT_lev_percent      y2Value;
} SCPTcontrolSignal;
```

**x1Value:** The X component of the first point.

Field	Measurement	Field Type Category	Field Size
x1Value	SNVT_lev_percent	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 ... 100.0 %	0.005%	Percent	163.835% (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 200 (0 .. 0x64)	5, -1, 0 $S = a \cdot 10^{b \cdot (R+c)}$	N/A	Manufacturer-defined

**y1Value:** The Y component of the first point.

Field	Measurement	Field Type Category	Field Size
y1Value	SNVT_lev_percent	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 ... 100.0 %	0.005%	Percent	163.835% (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 200 (0 .. 0x64)	5, -1, 0 $S = a \cdot 10^{b \cdot (R+c)}$	N/A	Manufacturer-defined

**x2Value:** The X component of the second point.

Field	Measurement	Field Type Category	Field Size
x2Value	SNVT_lev_percent	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 ... 100.0 %	0.005%	Percent	163.835% (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 200 (0 .. 0x64)	5, -1, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	Manufacturer-defined

**y2Value:** The Y component of the second point.

Field	Measurement	Field Type Category	Field Size
y2Value	SNVT_lev_percent	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 ... 100.0 %	0.005%	Percent	163.835% (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 200 (0 .. 0x64)	5, -1, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	Manufacturer-defined

---

## SCPTcontrolTemperatureWeighting (215)

### *Control Temperature Weighting*

This configuration property is used as the weighting between discharge temperature and return temperature for calculation of a confined-space temperature, according to the following relationship:

$$\text{ConfinedSpaceTemp} = (\text{ContWeight}/100) \cdot \text{ReturnTemp} + (1 - \text{ContWeight}/100) \cdot \text{DischargeTemp}.$$

The value for this configuration property is typically selected such that the resulting value represents the average temperature in the Confined Space, and is thus specific to the actual design of the Confined Space.

SCPT Index	Measurement	Type Category	Type Size
215	SNVT_lev_percent	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 100%	0.005%	Percent	163.835% (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 200 (0 .. 0x64)	5, -1, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	Manufacturer-defined

---

## SCPTcoolingLockout (209)

### *Cooling Lockout Temperature Setpoint*

This configuration property defines the outdoor air temperature cooling lockout setpoint. When the outdoor air temperature is below this value, mechanical cooling will be disabled.

SCPT Index	Measurement	Type Category	Type Size
209	SNVT_temp_p	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
-273.17°C .. 327.66°C	0.01°C	Degrees Celsius	327.67 (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
-27,317 .. 32,766 (0x954B .. 0x7FFE)	1, -2, 0 $S = a * 10^b * (R+c)$	N/A	10°C

---

## SCPTcoolingResetEnable (211)

### *Cooling Reset Enable*

This configuration property is used to enable or disable the discharge air temperature cooling reset control. A True value enables the reset control.

SCPT Index	Measurement	Type Category	Type Size
211	boolean_t	Enumeration	1
Valid Type Range	Type Resolution	Units	Invalid Value
boolean_t	1	N/A	BOOL_NUL
Raw Range	Scale Factors	File Name	Default Value
boolean_t	1, 0, 0 $S = a * 10^b * (R+c)$	N/A	0

---

## SCPTcoolLowerSP (76)

### *Cooling Lower Setpoint*

This configuration property defines the lower limit for the cooling setpoint.

SCPT Index	Measurement	Type Category	Type Size
76	SNVT_temp_p	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
10.0°C .. 35.0°C	0.01°C	Degrees Celsius	327.67 (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
1000 .. 3500 (0x3E8 .. 0xDAC)	1, -2, 0 $S = a * 10^b * (R+c)$	N/A	10°C

---

## SCPTcoolSetpt (75)

### *Cooling Setpoint*

This input configuration network variable establishes the default setpoint for the leaving chilled water temperature, when the SCPTdefltBehave configuration property is set equal to zero (0) or is not defined. When the SCPTdefltBehave configuration property is set equal to one (1), the manufacturer-specified values are used instead.

SCPT Index	Measurement	Type Category	Type Size
75	SNVT_temp_p	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
-40.0°C .. 48.8°C	0.01°C	Degrees Celsius	327.67 (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
-4000 .. 4880 (0xF060 .. 0x1310)	1, -2, 0 $S = a * 10^b * (R+c)$	N/A	7.2°C

---

## SCPTcoolUpperSP (77)

### *Cooling Upper Setpoint*

This configuration property defines the upper limit for the cooling setpoint.



SCPT Index	Measurement	Type Category	Type Size
77	SNVT_temp_p	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
10.0°C .. 35.0°C	0.01°C	Degrees Celsius	327.67 (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
1000 .. 3500 (0x3E8 .. 0xDAC)	1, -2, 0 $S = a * 10^b * (R + c)$	N/A	10°C

---

## SCPTcutOutValue (125)

### *Cut Out Value*

Indicates the cut out limit to be used for control purposes. If day night control is selected this value is used during day control.

This configuration property defines the upper limit to which the cooling setpoint can be set.

SCPT Index	Measurement	Type Category	Type Size
125	SNVT_temp_p	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
Manufacturer-defined	0.01°C	Degrees Celsius	327.67 (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
Manufacturer-defined	1, -2, 0 $S = a * 10^b * (R + c)$	N/A	10°C

---

## SCPTdayDateIndex (103)

### *Days-Dates Index*

This configuration property provides two dates together with a starting index for a Time-Event list. The indicated Time-Event list will be used when the current date falls between the indicated dates.

SCPT Index	Measurement	Type Category	Type Size
103	Days-Dates Index	Structure	6 bytes

### *Structure Definition*

```
typedef struct {
    unsigned short    day_1;
    unsigned short    month_1;
    unsigned short    day_2;
    unsigned short    month_2;
    unsigned long      event_mode_index;
} SCPTdayDateIndex;
```

**day\_1:** Starting day of the month.

Field	Measurement	Field Type Category	Field Size
day_1	Day	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
1 .. 31	1	Days	0 (all fields)
Raw Range	Scale Factors	File Name	Default Value
1 .. 31 (1 .. 0x1F)	1, 0, 0 $S = a \cdot 10^{b*}(R+c)$	N/A	0

**month\_1:** Starting month.

Field	Measurement	Field Type Category	Field Size
month_1	Month	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
1 .. 12	1	Months	0 (all fields)
Raw Range	Scale Factors	File Name	Default Value
1 .. 12 (1 .. 0x0C)	1, 0, 0 $S = a \cdot 10^{b*}(R+c)$	N/A	0

**day\_2:** Ending day of the month.

Field	Measurement	Field Type Category	Field Size
day_1	Day	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 31	1	Days	0 (all fields)
Raw Range	Scale Factors	File Name	Default Value
0 .. 31 (0 .. 0x1F)	1, 0, 0 $S = a \cdot 10^{b*}(R+c)$	N/A	0

**month\_2:** Ending month.

Field	Measurement	Field Type Category	Field Size
month_1	Month	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 12	1	Months	0 (all fields)
Raw Range	Scale Factors	File Name	Default Value
0 .. 12 (0 .. 0x0C)	1, 0, 0 $S = a \cdot 10^{b*}(R+c)$	N/A	0

**month\_2:** Ending month.

Field	Measurement	Field Type Category	Field Size
event_mode_index	Month	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 12	1	Months	0 (all fields)
Raw Range	Scale Factors	File Name	Default Value
0 .. 12 (0 .. 0x0C)	1, 0, 0 $S = a \cdot 10^{b \cdot (R+c)}$	N/A	0

**event\_mode\_index:** Starting index for a time-event array.

Field	Measurement	Field Type Category	Field Size
event_mode_index	Mode index	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 65535	1	Mode index	0 (all fields)
Raw Range	Scale Factors	File Name	Default Value
0 .. 65535 (0 .. 0xFFFF)	1, 0, 0 $S = a \cdot 10^{b \cdot (R+c)}$	N/A	0

---

## SCPTdayNightCntrl (121)

### *Day/Night Control*

This configuration property configures the day/night function.

SCPT Index	Measurement	Type Category	Type Size
121	SNVT_state	Structure	2 bytes

### *Structure Definition*

```
typedef struct {
    unsigned    bit0:1;
    unsigned    bit1:1;
    ...
    unsigned    bit15:1;
} SCPTdayNightCntrl;
```

**bit0:** Selects day/night control based on network variable input, such as an nviDayNight input. Network variable input control is selected when set to one (1). Night setback is disabled if bit0 through bit3 are all zero (0).

Field	Measurement	Field Type Category	Field Size
bit0	NV control flag	Unsigned Bitfield	1 bit
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 1	1	N/A	N/A
Raw Range	Scale Factors	File Name	Default Value
0 .. 1	1, 0, 0	N/A	0

	$S = a \cdot 10^b \cdot (R+c)$		
--	--------------------------------	--	--

**bit1:** Selects day/night control based on time-of-day control. Time-of-day control is selected when set to one (1). Night setback is disabled if bit0 through bit3 are all zero (0).

Field	Measurement	Field Type Category	Field Size
bit1	TOD control flag	Unsigned Bitfield	1 bit
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 1	1	N/A	N/A
Raw Range	Scale Factors	File Name	Default Value
0 .. 1	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0

### Notes

The bit2 and bit3 fields are reserved and must be set to zero (0). The bit3 through bit15 fields can be used for Manufacturer-defined items. All unused bits should be set to zero (0).

---

## SCPTdebounce (139)

### Debounce Time

This configuration property defines the debouncing time for a hardware sensor.

SCPT Index	Measurement	Type Category	Type Size
139	SNVT_time_sec	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 to 6553.4	0.1	Seconds	65,535 (0xFFFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 65,534 (0 .. 0xFFFFE)	1, -1, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0 seconds

---

## SCPTdefaultAutoPanSpeed (176)

### Default Auto Pan Speed

This configuration property sets the default auto-pan speed as a percentage of maximum auto-pan speed.

SCPT Index	Measurement	Type Category	Type Size
176	Percent of Maximum Auto-pan Speed	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 100%	0.4%	Percent	255 (0xFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 250 (0 .. 0xFA)	4, -1, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	25.2% (63 decimal; 0x3F hex)

---

## SCPTdefltBehave (71)

### *Default Behavior*

The configuration property determines which set of values will be used on power up and communications failure. The choice is the stated default values or a list of manufacturer specified values.

SCPT Index	Measurement	Type Category	Type Size
71	SNVT_switch	Structure	2 bytes

### *Structure Definition*

```
typedef struct {
    unsigned short    value;
    signed short      state;
} SCPTdefltBehave;
```

**value:** Not used.

Field	Measurement	Field Type Category	Field Size
value	N/A	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0.0 .. 100.0%	0.5%	Percentage	
Raw Range	Scale Factors	File Name	Default Value
0 .. 200 (0 .. 0xC8)	5, -1, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	N/A

**state:** 0 means use default values; 1 means use Manufacturer-defined values.

Field	Measurement	Field Type Category	Field Size
state	On/off State	Signed Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 1	1	State	-1 (0xFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 1	1, 0, 0 $S = a \cdot 10^{b \cdot (R+c)}$	N/A	0

---

## SCPTdefOutput (7)

### *Default Output*

For a sensor functional block, this configuration property determines the position or level that the primary output network variable for the functional block should adopt, when no updates are received from the hardware within the maximum receive time, at power-on or reset, and when an override request is received for the functional block.

For an actuator functional block, this configuration property determines the position or level that the actuator should adopt, when no updates are received by primary input network variable within the maximum receive time, at power-on or reset, and when an override request is received for the functional block.

The override behavior is defined by the [SCPTovrBehave](#) and [SCPTovrValue](#) configuration properties.

SCPT Index	Measurement	Type Category	Type Size
7	SNVT_XXX	Inherited	4 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
Inherited	Inherited	Inherited	Inherited
Raw Range	Scale Factors	File Name	Default Value
Inherited	1, 0, 0 $S = a \cdot 10^{b \cdot (R+c)}$	N/A	Manufacturer-defined

---

## SCPTdefaultPanTiltZoomSpeeds (175)

### *Default Pan Tilt Zoom Speeds*

This configuration property is used to configure the default pan, tilt, and zoom speeds for a camera. The speeds are given in percent of maximum speed.

SCPT Index	Measurement	Type Category	Type Size
175	SNVT_ptz	Structure	6 bytes

### Structure Definition

```
typedef struct {
    pan_dir_t      pan_dir;
    unsigned short pan_speed;
    tilt_dir_t     tilt_dir;
    unsigned short tilt_speed;
    zoom_t         zoom;
    unsigned short zoom_speed;
} SCPTdefaultPanTiltZoomSpeeds;
```

**pan\_dir:** Pan direction – stop, right, or left.

Field	Measurement	Field Type Category	Field Size
pan_dir	pan_dir_t	Enumeration	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
pan_dir_t	1	N/A	PAN_NUL (-1 decimal; 0xFF)
Raw Range	Scale Factors	File Name	Default Value
pan_dir_t	N/A	snvt_pan.h	PAN_STOP (0)

**pan\_speed:** Pan speed.

Field	Measurement	Field Type Category	Field Size
pan_speed	Speed	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 . to 100%	0.4%	Percent	255 decimal; 0xFF
Raw Range	Scale Factors	File Name	Default Value
0 .. 250 (0x0000 .. 0xFA)	4, -1, 0 $S = a * 10^{b * (R+c)}$	N/A	100%

**tilt\_dir:** Tilt direction – stop, up, or down.

Field	Measurement	Field Type Category	Field Size in Bits
tilt_dir	tilt_dir_t	Enumeration	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
tilt_dir_t	1	N/A	TILT_NUL (-1 decimal; 0xFF)
Raw Range	Scale Factors	File Name	Default Value
tilt_dir_t	N/A	snvt_tlt.h	TILT_STOP (0)

**tilt\_speed:** Tilt speed.

Field	Measurement	Field Type Category	Field Size in Bits
tilt_speed	Speed	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0. to 100%	0.4%	Percent	255 decimal; 0xFF
Raw Range	Scale Factors	File Name	Default Value
0 .. 250 (0x0000 .. 0xFA)	4, -1, 0 $S = a \cdot 10^{b*}(R+c)$	N/A	100%

**zoom:** Zoom type – stop, telephoto, or wide.

Field	Measurement	Field Type Category	Field Size in Bits
zoom	zoom_t	Enumeration	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
zoom_t	1	N/A	ZOOM_NUL (-1 decimal; 0xFF)
Raw Range	Scale Factors	File Name	Default Value
zoom_t	N/A	snvt_zm.h	ZOOM_STOP (0)

**zoom\_speed:** Zoom speed.

Field	Measurement	Field Type Category	Field Size in Bits
zoom_speed	Speed	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0. to 100%	0.4%	Percent	255 decimal; 0xFF
Raw Range	Scale Factors	File Name	Default Value
0 .. 250 (0x0000 .. 0xFA)	4, -1, 0 $S = a \cdot 10^{b*}(R+c)$	N/A	100%

---

## SCPTdefaultSetting (297)

### *default Setting*

Initially designed for the sunblinds industry, this CP type represents the default values for function, setting, and rotation.

SCPT Index	Measurement	Type Category	Type Size
297	SNVT_setting	Structure	4 byte
<b>S</b>			

```
typedef struct {
```



```

    setting_t          function;
    unsigned short     setting;
    signed long        rotation;
} SNVT_setting;

```

**function:**

Field	Measurement	Field Type Category	Field Size
function	setting_t	Enumeration	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
setting_t	1	N/A	SET_NUL
Raw Range	Scale Factors	File Name	Default Value
setting_t	N/A	snvt_set.h	SET_OFF

**setting:**

Field	Measurement	Field Type Category	Field Size
setting	setting	Unsigned Short	7 bit (offset 1)
Valid Type Range	Type Resolution	Units	Invalid Value
0..200	0.5	% of full level	255
Raw Range	Scale Factors	File Name	Default Value
0..127 (0..0x7F)	5, -1, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0

**rotation:**

Field	Measurement	Field Type Category	Field Size
rotation	rotation	Signed Long	7 bit (offset 1)
Valid Type Range	Type Resolution	Units	Invalid Value
-17999..18000	0.02	degrees	32767
Raw Range	Scale Factors	File Name	Default Value
0..127 (0..0x7F)	2, -2, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0

---

## SCPTdefrostCycles (219)

### *Defrost Cycles*

For internally scheduled defrost initiation, this configuration property provides the number of equally-spaced defrost cycles to perform per day with the first defrost starting at the time defined by a SCPTdefStart value.

SCPT Index	Measurement	Type Category	Type Size
219	Cycles	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
Manufacturer-defined	1	Cycles	255 decimal (0xFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 254 (0 .. 0xFE)	1, 0, 0 $S = a * 10^b * (R+c)$	N/A	Manufacturer-defined

### Notes

The valid range will depend on the maximum defrost period and recovery period. A value of zero will have the effect of disabling internally scheduled defrosts

---

## SCPTdefrostDetect (225)

### Defrost Detect

This configuration property provides the value for detecting a defrost in a controlled case. If the coil outlet refrigerant temperature rises above the discharge air temperature by this value, then the case is assumed to have gone into a defrost. If the value is set to zero, this feature is disabled. This feature is typically used when hot-gas or electric defrost is controlled externally from the controller, and allows the controller to determine when to switch off the fans.

SCPT Index	Measurement	Type Category	Type Size
225	SNVT_temp_diff_p	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 50.00°C	0.01°C	C°	+327.67°C (0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 5000 (0 .. 0x1388)	1, -2, 0 $S = a * 10^b * (R+c)$	N/A	Manufacturer-defined

---

## SCPTdefrostFanDelay (222)

### Defrost Fan Delay

This configuration property provides the delay after refrigeration is resumed after defrost before the fan is started. This is typically used to prevent warm, humid air from being sent to the case after defrost.

SCPT Index	Equivalent SNVT	Type Category	Type Size
222	SNVT_time_min	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 65,534 minutes.	1 minute	Minutes	65,535 decimal (0xFFFF hex)
Raw Range	Scale Factors	File Name	Default Value
0 .. 65,334 (0 .. 0xFFFE)	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	Manufacturer-specific

---

## SCPTdefrostHold (224)

### *Defrost Hold*

This configuration property determines whether a controller should remain in defrost mode until the Defrost Signal network variable input (nviDefSignal) goes away. This can be used to synchronize a collection of controllers coming out of defrost.

A value of BOOL\_FALSE specifies that synchronization should be ignored; a value of BOOL\_TRUE specifies that the controller should provide synchronization. Any other value, including BOOL\_NUL, is interpreted as BOOL\_FALSE.

SCPT Index	Measurement	Type Category	Type Size
224	boolean_t	Enumeration	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
boolean_t	1	N/A	BOOL_NUL
Raw Range	Scale Factors	File Name	Default Value
boolean_t	N/A	N/A	Manufacturer-defined

---

## SCPTdefrostInternalSchedule (217)

### *Defrost Internal Schedule*

This configuration property controls internally scheduled defrosts as defined by other configuration properties (SCPTdefStart and SCPTdefNumber). This property does not disable externally scheduled defrosts initiated from the Defrost Signal network variable input (nviDefSignal).

A value of BOOL\_TRUE specifies internally scheduled defrosts and BOOL\_FALSE specifies that defrosts should not be internally scheduled. Any other value, including BOOL\_NUL, is interpreted as BOOL\_FALSE.

SCPT Index	Measurement	Type Category	Type Size
217	boolean_t	Enumeration	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
boolean_t	1	N/A	BOOL_NUL
Raw Range	Scale Factors	File Name	Default Value
boolean_t	N/A	N/A	Manufacturer-defined

---

## SCPTdefrostMode (106)

### *Defrost Mode*

This configuration property indicates the type of defrost to perform.

SCPT Index	Measurement	Type Category	Type Size
106	SNVT_defr_mode	Enumeration	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
SNVT_defr_mode	1	N/A	DFM_NUL
Raw Range	Scale Factors	File Name	Default Value
SNVT_defr_mode	N/A	N/A	DFM_MODE_FORCED (1)

---

## SCPTdefrostRecoveryTime (223)

### *Defrost Recovery Time*

This configuration property sets the time that a case controller will allow after the defrost cycle has finished for the case to return to within its normal operating band. If the case controller does not manage to get back within its normal operating limits within this time, then an over-temperature alarm will be generated. This configuration property is similar to the existing SCPThighLimDefrDly configuration property, except that it has units of minutes rather than seconds

SCPT Index	Measurement	Type Category	Type Size
223	SNVT_time_min	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 to 65,534	1 minute	Percent	65,535 (0xFFFF)
Raw Range	Scale Factors	File Name	Default Value
0 to 65,534 (0 .. 0xFFFE)	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	Manufacturer-defined

---

## SCPTdefScale (162)

### *Default Scale Value*

This configuration property sets the default scale value for network variables and actuating components of a device. One example of its use can be found in the Variable Speed Motor Drive Functional Profile (6010).

SCPT Index	Measurement	Type Category	Type Size
162	SNVT_lev_percent	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
-163.840% .. 163.830%	0.005%	Percent	32767 (0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
-32768 .. 32766 (0xFFFF .. 0x7FFE)	5, -3, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	Manufacturer-defined (0% typical)

---

## SCPTdefrostStart (218)

### *Defrost Start*

This configuration property sets the time at which the first daily defrost will be scheduled for an internally scheduled defrost initiation. Only the hour and minute fields are used.

SCPT Index	Measurement	Type Category	Type Size
218	SNVT_time_stamp	Structure	7 bytes

---

## SCPTdefWeekMask (102)

### *Default Week Mask*

This configuration property sets a default day-type for each day of the week. If there is no schedule set by a SCPTtimeEvent array, this array will be used to determine the daily time event/mode schedule.

SCPT Index	Measurement	Type Category	Type Size
102	Default Week Mask	Structure	14 bytes

### *Structure Definition*

```
typedef struct {  
    unsigned long    time_event_index[7];  
} SCPTdefWeekMask;
```

**time\_event\_index[7]:** The time/event array for each day of the week. Index 0 corresponds to Sunday, 1 to Monday, etc. This is as defined for the days\_of\_week\_t enumeration defined in SNVT\_DT.H.

Field	Measurement	Field Type Category	Field Size
time_event_index	Time Event Index	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 65,535	1	Array Index	None
Raw Range	Scale Factors	File Name	Default Value
0 .. 65,535 (0x0000 .. 0xFFFF)	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	Manufacturer-defined

---

## SCPTdelayTime (96)

### *Default Scene Delay Time*

This configuration property sets the delay time for a scene. It is possible to learn scenes with different delay times by changing this configuration property value for each scene before the learn current command is used.

SCPT Index	Measurement	Type Category	Type Size
96	SNVT_time_sec	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 to 6,553.4	0.1	Seconds	65535 (0xFFFF)
Raw Range	Scale Factors	File Name	Default Value
0 to 65,534 (0 .. 0xFFFE)	1, -1, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0

---

## SCPTdeltaNight (134)

### *Delta Night*

This configuration property sets the value to be added to the SCPTcutOutValue configuration property to get the cut out limit to be used during night control.

SCPT Index	Measurement	Type Category	Type Size
134	SNVT_temp_p	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
Manufacturer-defined	0.01°C	Degrees Celsius	327.67 (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
Manufacturer-defined	1, -2, 0 $S = a * 10^b * (R + c)$	N/A	Manufacturer-defined

---

## SCPTdeviceControlMode (238)

### *Device Control Mode for Normal Operation*

This configuration property sets the device control mode to be used for the normal operating mode when a remote network pressure or flow sensor is not bound to a controller and the internal speed, pressure or flow feedback signal is used by the controller.

SCPT Index	Measurement	Type Category	Type Size
238	SNVT_dev_c_mode	Enumeration	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
SNVT_dev_c_mode	1	N/A	DCM_NUL
Raw Range	Scale Factors	File Name	Default Value
SNVT_dev_c_mode	N/A	N/A	Manufacturer-specific

---

## SCPTdeviceGroupID (172)

### *Device Group ID*

This configuration property sets a unique logical group control ID for a device. The default number is zero (0), the invalid value. This is to avoid any conflict between devices that have been given a valid number, and devices that have yet to be given a valid number. Choosing a number within the valid range for a default would cause the logical group control ID numbering to be non-unique

SCPT Index	Measurement	Type Category	Type Size
172	SNVT_count	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
1 .. 65,535	1	N/A	0
Raw Range	Scale Factors	File Name	Default Value
1 .. 65,535 (0 .. 0xFFFF)	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0

---

## SCPTdevMajVer (165)

### *Device Major Version Number*

This configuration property sets the major version number for a device.

SCPT Index	Measurement	Type Category	Type Size
165	Version Number	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 255	1	Version Number	None
Raw Range	Scale Factors	File Name	Default Value
0 .. 255 (0 .. 0xFF)	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0

---

## SCPTdevMinVer (166)

### *Device Minor Version Number*

This configuration property sets the minor version number for the device.

SCPT Index	Measurement	Type Category	Type Size
166	Version Number	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 255	1	Version Number	None
Raw Range	Scale Factors	File Name	Default Value
0 .. 255 (0 .. 0xFF)	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0



---

## SCPTdialString (178)

### *Dial String*

This configuration property sets a telephone number (including characters used for control) used for dialing a data modem. The telephone number is a null-terminated string with optional ASCII control characters.

Support for the following ASCII control characters is required:

- Digits 0-9 plus \* and # – telephone dialing digits.

Support for the following ASCII control characters is specified but optional (if the corresponding function is to be implemented, it must be done so using the following specified character):

- Letter T (upper or lower case, first character in string only) – Tone dial.
- Letter P (upper or lower case, first character in string only) – Pulse dial.
- Comma (,) – pause dialing for 2 seconds for each comma encountered.
- Letter W (upper or lower case) – Pause dialing until a dial tone is detected.
- Exclamation Point (!) – Hookflash, go onhook for 0.5 seconds, then back offhook.

Support of any other characters/functions in the dial string is considered optional. If an optional character is encountered in the string which is not supported by a particular implementation (including but not limited to punctuation such as space, dash, left and right parentheses), that character must be ignored, rather than causing an error condition.

The default value shall be an empty string.

SCPT Index	Measurement	Type Category	Type Size
178	SNVT_str_asc	Structure	31 bytes

---

## SCPTdiffNight (122)

### *Difference Night*

This configuration property indicates the value to be added to the SCPTcutOutValue configuration property to get the cut in limit if cut in/out control is selected. If modulating thermostat control is selected, the target temperature is the SCPTcutOutValue limit + SCPTdiffNight / 2.

SCPT Index	Measurement	Type Category	Type Size
122	SNVT_temp_p	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
Manufacturer-defined	0.01°C	Degrees Celsius	327.67 (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
Manufacturer-defined	1, -2, 0 $S = a * 10^b * (R+c)$	N/A	Manufacturer-defined

---

## SCPTdiffTempSetpoint (201)

### *Economizer Enable Differential Temperature Setpoint*

This configuration property sets the differential between entering (mixed) air temperature and entering condenser water temperature to enable economizer operation.

SCPT Index	Measurement	Type Category	Type Size
201	SNVT_temp_diff_p	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
-273.17°C .. 327.66°C	0.01°C	Degrees Celsius	327.67 (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
-27,317 .. 32,766 (0x954B .. 0x7FFE)	1, -2, 0 $S = a * 10^b * (R+c)$	N/A	5°C

---

## SCPTdiffValue (130)

### *Difference Value*

This configuration property sets the value to be added to the SCPTcutOutValue configuration property to get the cut in limit if cut in/out control is selected. If modulating thermostat control is selected, the target temperature is the SCPTcutOutValue limit + SCPTdiffValue / 2.

SCPT Index	Measurement	Type Category	Type Size
130	SNVT_temp_diff_p	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
-273.17°C .. 327.66°C	0.01°C	Degrees Celsius	327.67 (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
-27,317 .. 32,766 (0x954B .. 0x7FFE)	1, -2, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	Manufacturer-defined

## SCPTdirection (44)

### *Direction / Safety Position*

This configuration property sets the direction of rotation and safety position for an actuator. Because improper usage may cause a non-functional device, the device manufacturer can disable write access.

SCPT Index	Measurement	Type Category	Type Size
44	SNVT_state	Enumeration	1 byte

### *Structure Definition*

```
typedef struct {
    unsigned          bit0   : 1;
    unsigned          bit1   : 1;
    ...
    unsigned          bit15  : 1;
} SNVT_state;
```

**bit0:** Actuator direction.

0 : actuator runs clockwise to open control device (top view)

1 : actuator runs counterclockwise open control device (top view)

Field	Measurement	Field Type Category	Field Size
bit0	Direction	Bitfield	1 bit
Valid Type Range	Byte Offset	Default Value	Invalid Value
0 .. 1	0	0	N/A

**bit1, bit2:** Safety position.

0,0 : safety position: control device closed

1,0 : safety position: control device open

0,1 : safety position: manufacturer-defined position

1,2 : safety position: hold current position

Field	Measurement	Field Type Category	Field Size
bit1, bit2	Safety Position	Bitfield	Two 1-bit fields
Valid Type Range	Byte Offset	Default Value	Invalid Value
0 .. 1	0	0	N/A

bit2 – bit15: Reserved.

---

## SCPTdischargeAirCoolingSetpoint (183)

### *Discharge Air Cooling Setpoint*

This configuration property sets the default discharge air cooling setpoint.

SCPT Index	Measurement	Type Category	Type Size
183	SNVT_temp_p	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
-273.17°C .. 327.66°C	0.01°C	Degrees Celsius	327.67 (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
-27,317 .. 32,766 (0x954B .. 0x7FFE)	1, -2, 0 $S = a * 10^b * (R+c)$	N/A	13°C

---

## SCPTdischargeAirDewpointSetpoint (204)

### *Discharge Air Dewpoint Setpoint*

This configuration property sets the default discharge air dewpoint setpoint.

SCPT Index	Measurement	Type Category	Type Size
204	SNVT_temp_p	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
-273.17°C .. 327.66°C	0.01°C	Degrees Celsius	327.67 (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
-27,317 .. 32,766 (0x954B .. 0x7FFE)	1, -2, 0 $S = a * 10^b * (R+c)$	N/A	10°C

---

## SCPTdischargeAirHeatingSetpoint (184)

### *Discharge Air Heating Setpoint*

This configuration property sets the default discharge air heating setpoint.

SCPT Index	Measurement	Type Category	Type Size
184	SNVT_temp_p	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
-273.17°C .. 327.66°C	0.01°C	Degrees Celsius	327.67 (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
-27,317 .. 32,766 (0x954B .. 0x7FFE)	1, -2, 0 $S = a * 10^b * (R+c)$	N/A	10°C

---

## SCPTdrainDelay (108)

### *Drain Down Delay*

This configuration property sets the delay to use after defrost has terminated.

This is the first step in the start after defrost sequence.

SCPT Index	Measurement	Type Category	Type Size
108	SNVT_time_sec	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 to 6,553.4	0.1	Seconds	65,535 (0xFFFF)
Raw Range	Scale Factors	File Name	Default Value
0 to 65,534 (0 .. 0xFFFE)	1, -1, 0 $S = a * 10^b * (R+c)$	N/A	0

---

## SCPTdriveT (8)

### *Drive Time*

This configuration property sets the time to be taken by an actuator to move from one extreme to the other.

SCPT Index	Measurement	Type Category	Type Size
8	SNVT_elapsed_tm	Structure	7 bytes

## Structure Definition

```
typedef struct {
    unsigned long    day;
    unsigned short   hour;
    unsigned short   minute;
    unsigned short   second;
    unsigned long     millisecond;
} SNVT_elapsed_tm;
```

**day:** The value 65535 represents NULL or unknown elapsed time.

Field	Measurement	Field Type Category	Field Size
day	Days	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 0	1	Days	65,535 (0xFFFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 0	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0

**hour:** Hours.

Field	Measurement	Field Type Category	Field Size
hour	Hours	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 ..17	1	Hours	None
Raw Range	Scale Factors	File Name	Default Value
0 .. 17 (0x00 .. 0x12)	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0

**minute:** Minutes

Field	Measurement	Field Type Category	Field Size
minute	Minutes	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 ..59	1	Seconds	None
Raw Range	Scale Factors	File Name	Default Value
0 .. 59 (0x00 .. 0x3B)	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0

**second:** Seconds

Field	Measurement	Field Type Category	Field Size
second	Seconds	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 ..59	1	Seconds	None
Raw Range	Scale Factors	File Name	Default Value
0 .. 59 (0x00 .. 0x3B)	1, 0, 0 $S = a * 10^b * (R+c)$	N/A	0

**millisecond:** Milliseconds

Field	Measurement	Field Type Category	Field Size
millisecond	Milliseconds	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 ..999	1	Milliseconds	None
Raw Range	Scale Factors	File Name	Default Value
0 .. 999 (0x0000 .. 0x03E7)	1, 0, 0 $S = a * 10^b * (R+c)$	N/A	0

---

## SCPTdriveTime (45)

### *Drive Time*

This configuration property sets the transition time for a full stroke (100%) of an actuator. Because improper usage may cause a non-functional device, the device manufacturer can disable write access. This configuration property does not affect airflow control actuators.

SCPT Index	Measurement	Type Category	Type Size
45	SNVT_time_sec	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
Manufacturer-defined	0.1	Seconds	65,535 (0xFFFF)
Raw Range	Scale Factors	File Name	Default Value
Manufacturer-defined	1, -1, 0 $S = a * 10^b * (R+c)$	N/A	150 seconds

---

## SCPTductArea (46)

### *Duct Area or Size*

This configuration property sets the area or size of a duct. It is used to calculate air flow through the duct and is typically used by VAV actuators and controllers. Because improper usage may cause a non-functional device, the device manufacturer can disable write access.

The invalid value indicates that the box is not set up correctly.

SCPT Index	Measurement	Type Category	Type Size
46	SNVT_area	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 13,1068	0.0002	Square Meters (m <sup>2</sup> )	65,535 (0xFFFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 65,534 (0 .. 0xFFFE)	2, -4, 0 $S = a * 10^b * (R+c)$	N/A	65,535 (0xFFFF)

---

## SCPTductStaticPressureLimit (192)

### *Duct Static Pressure Limit*

This configuration property sets the duct static pressure limit for equipment protection.

SCPT Index	Measurement	Type Category	Type Size
192	SNVT_press_p	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
-32,768 .. 32,766	1	Pascals	32,767 (0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
-32,768 .. 32,766 (0x8000 .. 0x7FFE)	1, 0, 0 $S = a * 10^b * (R+c)$	N/A	1500 Pascals

---

## SCPTductStaticPressureSetpoint (189)

### *Duct Static Pressure Setpoint*

This configuration property sets a default duct static pressure setpoint.



SCPT Index	Measurement	Type Category	Type Size
189	SNVT_press_p	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
-32,768 .. 32,766	1	Pascals	32,767 (0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
-32,768 .. 32,766 (0x8000 .. 0x7FFE)	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	500 Pascals

## SCPTeffectivePeriod (272)

### *Effective Period*

This configuration property defines the time period during which a functional block is effective. The effective period is defined by a start date and an end date. If the start date is undefined it means any date up to and including the end date. If the end date is undefined it means any date from the start date. If both are undefined, it means the functional block is always effective.

SCPT Index	Measurement	Type Category	Type Size
272	Effective Period	Structure	8 bytes

```
typedef struct {
    struct {
        signed long    year;
        unsigned short month;
        unsigned short day;
    } start;
    struct {
        signed long    year;
        unsigned short month;
        unsigned short day;
    } end;
} SCPTeffectivePeriod;
```

**start.year** and **end.year**: Starting and ending year. The invalid value specifies that the starting and/or ending date is not specified.

Field	Measurement	Field Type Category	Field Size
year	Year	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 3000	1	Year	-1 (0xFFFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 3000 (0 .. 0x0BB8)	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	-1 (0xFFFF)

**start.month** and **end.month**: Starting and ending month.

Field	Measurement	Field Type Category	Field Size
month	Month	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
1 .. 12	1	Month of Year	N/A
Raw Range	Scale Factors	File Name	Default Value
1 .. 12 (1 .. 0x0C)	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	1

**start.day** and **end.day**: Starting and ending day of month.

Field	Measurement	Field Type Category	Field Size
day	Day	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
1 .. 31	1	Day of Month	N/A
Raw Range	Scale Factors	File Name	Default Value
1 .. 31 (1 .. 0x1F)	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	1

---

## SCPTemergCnfg (258)

### *Emergency Mode*

Mode that a device has to be brought to when an emergency request state is pending.

SNVT Index	Measurement	Type Category	Type Size
258	SNVT_xxx	Inherited	Inherited

---

## SCPTemergencyPosition (250)

### *Emergency Position*

This configuration property sets the position of an actuator for emergency operation.

SCPT Index	Measurement	Type Category	Type Size
250	SNVT_lev_percent	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 100%	0.005% (50 ppm)	Percent	163.835% (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 20,000 (0 .. 0x4E20)	5, -3, 0 $S = a * 10^b * (R+c)$	N/A	100% (i.e. the nviAirTemp2 sensor is not used in calculating the nviAlarmAirTemp)

---

## SCPTenergyCntInit (137)

### *Energy Counter Initialization*

This configuration property sets the initial value of the energy counter for the associated output network variable.

SCPT Index	Measurement	Type Category	Type Size
137	SNVT_elec_kwh	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 65,535	1	Kilowatt-hours	None
Raw Range	Scale Factors	File Name	Default Value
0 to 65,535 (0 .. 0xFFFF)	1, 0, 0 $S = a * 10^b * (R+c)$	N/A	0 kW-h

---

## SCPTexhaustEnablePosition (202)

### *Exhaust Enable Position*

This configuration property sets the exhaust enable outdoor-air damper-position setpoint.

SCPT Index	Measurement	Type Category	Type Size
202	SNVT_lev_percent	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
-163.840% .. 163.830%	0.005%	Percent	163.835% (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
-32768 .. 32766 (0xFFFF .. 0x7FFE)	5, -3, 0 $S = a * 10^b * (R+c)$	N/A	25%

---

## SCPTfadeTime (95)

### *Default Scene Fade Time*

This configuration property sets the fade time for a scene. It is used if the fade time is set to 0 or if the learn current functionality defined by the SNVT\_setting network variable type is used. It is possible to learn scenes with different fade times by changing this configuration property for each scene before the learn current command is used.

SCPT Index	Measurement	Type Category	Type Size
95	SNVT_time_sec	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 to 6,553.4	0.1	Seconds	65,535 (0xFFFF)
Raw Range	Scale Factors	File Name	Default Value
0 to 65,534 (0 .. 0xFFFE)	1, -1, 0 $S = a * 10^b * (R+c)$	N/A	1 sec

---

## SCPTfanDifferentialSetpoint (195)

### *Fan Differential Setpoint*

This configuration property sets the default setpoint for the percent capacity difference between the supply and return fans. The return fan will be controlled to maintain this differential in capacity below the supply fan.

SCPT Index	Measurement	Type Category	Type Size
195	SNVT_lev_percent	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
-163.840% .. 163.830%	0.005%	Percent	163.835% (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
-32768 .. 32766 (0xFFFF .. 0xFFFE)	5, -3, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	10%

---

## SCPTfanOperation (260)

### *Fan Operation*

SNVT Index	Measurement	Type Category	Type Size
260	fan_operation_t	Enumeration	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
fan_operation_t	1	N/A	HVF_NUL
Raw Range	Scale Factors	File Name	Default Value
fan_operation_t	N/A	SNVT_HVF.H	HVF_CONTINUOUS (0)

---

## SCPTfieldCalib (90)

### *Field Calibration*

This configuration property specifies the ambient lux value for a light sensor. It is typically used by a light sensor to self calibrate the light sensing hardware. It is typically set to the ambient lux value measured with an external lux meter. The light sensor can then adjust its reflection factor to give exactly the same ambient light output value.

SCPT Index	Measurement	Type Category	Type Size
90	SNVT_lux	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 65,535	1	Lux	None
Raw Range	Scale Factors	File Name	Default Value
0 to 65,535 (0 .. 0xFFFF)	1, 0, 0 $S = a * 10^b * (R+c)$	N/A	Manufacturer-defined

---

## SCPTfireIndicate (153)

### *Fire Indicator Device*

This configuration property sets the fire indicator device.

SCPT Index	Measurement	Type Category	Type Size
153	SNVT_fire_indcte	Enumeration	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
SNVT_fire_indcte	1	N/A	FN_NUL
Raw Range	Scale Factors	File Name	Default Value
SNVT_fire_indcte	N/A	N/A	Manufacturer-defined

---

## SCPTfireInitType (38)

### *Fire Initiator Type Identifier*

This configuration property sets the fire initiator type identifier.

SCPT Index	Measurement	Type Category	Type Size
38	SNVT_fire_init	Enumeration	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
SNVT_fire_init	1	N/A	FI_NUL
Raw Range	Scale Factors	File Name	Default Value
SNVT_fire_init	N/A	N/A	Manufacturer-defined

---

## SCPTfireTxt1 (149)

### *Fire Text 1*

This configuration property sets text information relevant to fire conditions. A “>” character at the end of the text string indicates the presence of additional text in an SCPTfireTxt2 configuration property.

SCPT Index	Measurement	Type Category	Type Size
149	SNVT_str_asc	Structure	31 bytes

### *Structure Definition*

```
typedef struct {  
    unsigned char    ascii[31];  
} SNVT_str_asc;
```

The ascii field contains a nul-terminated string of up to 30 characters. The default value is manufacturer-defined.

---

## SCPTfireTxt2 (150)

### *Fire Text 2*

This configuration property sets text information relevant to fire conditions. It is typically used with the SCPTfireTxt1 configuration property. A “>” character at the end of the text string indicates presence of additional text in an SCPTfireTxt3 configuration property.

SCPT Index	Measurement	Type Category	Type Size
140	SNVT_str_asc	Structure	31 bytes

### Structure Definition

```
typedef struct {  
    unsigned char    ascii[31];  
} SNVT_str_asc;
```

The ascii field contains a nul-terminated string of up to 30 characters. The default value is manufacturer-defined.

---

## SCPTfireTxt3 (151)

### Fire Text 3

This configuration property sets text information relevant to fire conditions. It is typically used with the SCPTfireTxt1 and SCPTfireTxt2 configuration properties.

SCPT Index	Measurement	Type Category	Type Size
151	SNVT_str_asc	Structure	31 bytes

### Structure Definition

```
typedef struct {  
    unsigned char    ascii[31];  
} SNVT_str_asc;
```

The ascii field contains a nul-terminated string of up to 30 characters. The default value is manufacturer-defined.

---

## SCPTflashFreq (145)

### Flash Frequency

This configuration property sets the flash rate for a visible indication (strobe) device. This information is defined at manufacture time.

SCPT Index	Measurement	Type Category	Type Size
145	SNVT_freq_hz	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0.1 .. 5	0.1	Hertz	6553.5 (65,535 decimal; 0xFFFF)
Raw Range	Scale Factors	File Name	Default Value
1 .. 50 (1 .. 0x32)	1, -1, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	Manufacturer-defined



---

## SCPTfreeCoolPosition (247)

### *Free Cooling Position*

This configuration property sets the valve position for the Free Cooling HVAC mode.

SCPT Index	Measurement	Type Category	Type Size
247	SNVT_lev_percent	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 100%	0.005% (50ppm)	Percent	163.835% (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 200 (0 .. 0x64)	5, -3, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0

---

## SCPTgain (31)

### *Generic Gain*

This configuration property sets the multiplication factor for raw data readings from sensor hardware. It is used to calibrate readings from sensor hardware. It applies when the readings are linear and do not require a translation table. The gain is applied before any specified offset is applied. The gain consists of a 16-bit multiplier and a 16-bit divisor. An Invalid Value is represented by a divisor of zero (0).

SCPT Index	Measurement	Type Category	Type Size
31	SNVT_muldiv	Structure	4 bytes

### *Structure Definition*

```
typedef struct {  
    unsigned long    multiplier;  
    unsigned long    divisor;  
} SNVT_muldiv;
```

The default value is a multiplier of 1 and a divisor of 1.

---

## SCPTgainVAV (66)

### *VAV Gain*

This configuration property sets the gain of a VAV controller.

SCPT Index	Measurement	Type Category	Type Size
66	SNVT_multiplier	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 32.7675	0.0005	None	None
Raw Range	Scale Factors	File Name	Default Value
0 .. 65,534 (0 .. 0xFFFE)	5, -4, 0 $S = a * 10^b * (R+c)$	N/A	1

---

## SCPTgainVAVHeat (268)

### *VAV Sensor Constant*

Calibration constant used to calculate airflow.

SNVT Index	Measurement	Type Category	Type Size
268	SNVT_multiplier	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 32.7675	0.0005	None	None
Raw Range	Scale Factors	File Name	Default Value
0 .. 65,534 (0 .. 0xFFFE)	5, -4, 0 $S = a * 10^b * (R+c)$	N/A	2,000 (0x07D0)

---

## SCPTHeatingLockout (210)

### *Heating Lockout Temperature Setpoint*

This configuration property sets the outdoor air temperature heating lockout setpoint. When the outdoor air temperature is above this value, heating will be disabled.

SCPT Index	Measurement	Type Category	Type Size
210	SNVT_temp_p	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
-273.17°C .. 327.66°C	0.01°C	Degrees Celsius	327.67 (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
-27,317 .. 32,766 (0x954B .. 0x7FFE)	1, -2, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	20°C

---

## SCPTHeatingResetEnable (212)

### *Heating Reset Enable*

This configuration property enables or disables discharge air temperature heating reset control. A True value enables the discharge air temperature heating reset control.

SCPT Index	Measurement	Type Category	Type Size
212	boolean_t	Enumeration	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
boolean_t	1	N/A	BOOL_NUL
Raw Range	Scale Factors	File Name	Default Value
boolean_t	N/A	N/A	BOOL_FALSE (disabled)

---

## SCPTheatLowerSP (79)

### *Heating Lower Setpoint*

This configuration property sets the lower limit for the heating setpoint.

SCPT Index	Measurement	Type Category	Type Size
79	SNVT_temp_p	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
10°C .. 35°C	0.01°C	Degrees Celsius	327.67 (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
1000 .. 3500 (0x03E8 .. 0x0DAC)	1, -2, 0 $S = a * 10^b * (R+c)$	N/A	10°C

---

## SCPTheatSetpt (78)

### *Heating Setpoint*

This configuration property sets the default setpoint for the leaving water temperature when in heating mode. If the SCPTdefltBehave configuration property is set to one, the manufacturer-specified values are used instead.

SCPT Index	Measurement	Type Category	Type Size
78	SNVT_temp_p	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
-40°C .. 93°C	0.01°C	Degrees Celsius	327.67 (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
-4000 .. 9300 (0xF060 .. 0x2454)	1, -2, 0 $S = a * 10^b * (R+c)$	N/A	35°C

---

## SCPTheatUpperSP (80)

### *Heating Upper Setpoint*

This configuration property sets the upper limit for the heating setpoint.

SCPT Index	Measurement	Type Category	Type Size
80	SNVT_temp_p	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
10°C .. 35°C	0.01°C	Degrees Celsius	327.67 (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
1000 .. 3500 (0x03E8 .. 0x0DAC)	1, -2, 0 $S = a * 10^b * (R + c)$	N/A	35°C

---

## SCPTHighLimDefrDly (133)

### *High Limit Defrost Delay*

This configuration property sets the time limit before a high nvoAlarmAirTemp alarm during pull-down. This value applies until the actual nvoAlarmAirTemp value has dropped below the SCPTHighLimDefrDly value. Thereafter, the SCPTHighLimit2 value applies.

SCPT Index	Measurement	Type Category	Type Size
133	SNVT_time_sec	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 6,553.4	0.1	Seconds	65,535 (0xFFFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 65,534 (0 .. 0xFFFFE)	1, -1, 0 $S = a * 10^b * (R + c)$	N/A	Manufacturer-defined

---

## SCPThighLimDly (124)

### *High Limit Delay*

This configuration property sets the time limit before a high nvoAlarmAirTemp alarm during normal operation.

SCPT Index	Measurement	Type Category	Type Size
124	SNVT_time_sec	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 6,553.4	0.1	Seconds	65,535 (0xFFFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 65,534 (0 .. 0xFFFE)	1, -1, 0 $S = a * 10^b * (R+c)$	N/A	Manufacturer-defined

---

## SCPThighLimit1 (9)

### *High Limit Value 1*

This configuration property sets the first alarm high limit against which the primary network output network variable value is tested for alarm conditions. The data type is the same as the value field of the output network variable.

SCPT Index	Measurement	Type Category	Type Size
9	SNVT_XXX	Inherited	Inherited

---

## SCPThighLimit1Enable (302)

### *High limit 1 Enable*

Controls whether high limit 1 is in effect.

SCPT Index	Measurement	Type Category	Type Size
302	boolean_t	Enumeration	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
boolean_t	N/A	N/A	BOOL_NUL
Raw Range	Scale Factors	File Name	Default Value
boolean_t	N/A	SNVT_BLN.h	BOOL_FALSE

---

## SCPTHighLimit2 (10)

### *High Limit Value 2*

This configuration property sets the second alarm high limit against which the primary output network variable value is tested for alarm conditions. The data type is the same as the value field of the output network variable.

SCPT Index	Measurement	Type Category	Type Size
9	SNVT_XXX	Inherited	Inherited

---

## SCPTHighLimit2Enable (303)

### *High limit 2 Enable*

Controls whether high limit 2 is in effect.

SCPT Index	Measurement	Type Category	Type Size
303	boolean_t	Enumeration	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
boolean_t	N/A	N/A	BOOL_NUL
Raw Range	Scale Factors	File Name	Default Value
boolean_t	N/A	SNVT_BLN.h	BOOL_FALSE

---

## SCPTHighLimTemp (123)

### *High Limit Temperature*

This configuration property sets the high alarm set point. It is typically used for an nvoAlarmAirTemp output. When there is night setback operation, the alarm limit is raised by the SCPTdeltaNight value.

SCPT Index	Measurement	Type Category	Type Size
123	SNVT_temp_p	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
Manufacturer-defined	0.01°C	Degrees Celsius	327.67 (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
Manufacturer-defined	1, -2, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	Manufacturer-defined

---

## SCPTHoldTime (91)

### *Hold Time*

This configuration property sets the hold time for the occupied state. The hardware input to an occupancy sensor must indicate occupancy for longer than this time before the output value of the occupancy sensor device is changed to indicate occupancy. The purpose of the delay is to avoid unnecessary network traffic when the sensor is not detecting presence continuously. This is useful when passive infrared detectors are used.

SCPT Index	Measurement	Type Category	Type Size
91	SNVT_time_sec	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
1 .. 6,553.4	0.1	Seconds	65,535 (0xFFFF)
Raw Range	Scale Factors	File Name	Default Value
10 .. 65,534 (0x000A .. 0xFFFE)	1, -1, 0 $S = a * 10^b * (R+c)$	N/A	30 sec

---

## SCPTHumSetpt (36)

### *Humidity Setpoint*

This configuration property sets the high limit humidity setpoint for a controlled space. The controller dehumidification functions in response to this limit are manufacturer-defined.

SCPT Index	Measurement	Type Category	Type Size
162	SNVT_lev_percent	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
-163.840% .. 163.830%	0.005%	Percent	163.835% (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
-32768 .. 32766 (0xFFFF .. 0x7FFE)	5, -3, 0 $S = a * 10^b * (R+c)$	N/A	0% (no dehumidification functions)



---

## SCPT HVAC Mode (74)

### *HVAC Mode*

This configuration property sets the default operating mode of a chiller. If the SCPTdefltBehave configuration property is set to one, the manufacturer-specified values are used instead.

SCPT Index	Measurement	Type Category	Type Size
74	SNVT_hvac_mode	Enumeration	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
See below	1	N/A	HVAC_NUL
Raw Range	Scale Factors	File Name	Default Value
See below	N/A	N/A	HVAC_COOL (3)

### *Type Range*

Value	Identifier	Notes
1	HVAC_HEAT	Heating mode
3	HVAC_COOL	Cool mode
10	HVAC_FREE_COOL	Cooling with compressor not running
11	HVAC_ICE	Ice-making mode
0	HVAC_AUTO	Not Used
2	HVAC_MRNG_WRMUP	Not Used
4	HVAC_NIGHT_PURGE	Not Used
5	HVAC_PRE_COOL	Not Used
6	HVAC_OFF	Not Used
7	HVAC_TEST	Not Used
8	HVAC_EMERG_HEAT	Not Used
9	HVAC_FAN_ONLY	Not Used
12	HVAC_MAX_HEAT	Not Used
13	HVAC_ECONOMY	Not Used
14	HVAC_DEHUMID	Not Used
-1 (0xFF)	HVAC_NUL	Value not available

---

## SCPThvacType (169)

### *HVAC Type*

This configuration property sets the type of HVAC equipment that is being controlled.

SCPT Index	Measurement	Type Category	Type Size
169	SNVT_hvac_type	Enumeration	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
SNVT_hvac_type	1	N/A	HVT_NUL
Raw Range	Scale Factors	File Name	Default Value
SNVT_hvac_type	N/A	N/A	Manufacturer-defined (0 typical)

---

## SCPThystHigh1 (11)

### *Hysteresis High 1*

This configuration property sets the hysteresis level for the value field of the [SCPThighLimit1](#) comparison threshold. The data type must be the same as the value field of the output network variable.

SCPT Index	Measurement	Type Category	Type Size
11	SNVT_xxx	Inherited	Inherited

---

## SCPThystHigh2 (12)

### *Hysteresis High 2*

This configuration property sets the hysteresis level for the value field of the [SCPThighLimit2](#) comparison threshold. The data type must be the same as the value field of the output network variable.

SCPT Index	Measurement	Type Category	Type Size
12	SNVT_xxx	Inherited	Inherited

---

## SCPTThystLow1 (13)

### *Hysteresis Low 1*

This configuration property sets the hysteresis level for the value field of the [SCPTlowLimit1](#) comparison threshold. The data type must be the same as the value field of the output network variable.

SCPT Index	Measurement	Type Category	Type Size
13	SNVT_XXX	Inherited	Inherited

---

## SCPTThystLow2 (14)

### *Hysteresis Low 2*

This configuration property sets the hysteresis level for the value field of the [SCPTlowLimit2](#) comparison threshold. The data type must be the same as the value field of the output network variable.

SCPT Index	Measurement	Type Category	Type Size
14	SNVT_XXX	Inherited	Inherited

---

## SCPTinFbDIy (15)

### *Input Value Feedback Delay*

This configuration property sets the time period between the last update in a succession of changes to the primary input network variable of a functional block and the corresponding feedback output network variable being updated.

SCPT Index	Measurement	Type Category	Type Size
15	SNVT_elapsed_tm	Structure	7 bytes

### *Structure Definition*

```
typedef struct {  
    unsigned long    day;  
    unsigned short   hour;  
    unsigned short   minute;  
    unsigned short   second;  
    unsigned long    millisecond;  
} SNVT_elapsed_tm;
```

**day:** The value 65535 represents NULL or unknown elapsed time.

Field	Measurement	Field Type Category	Field Size
day	Days	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
.0 .. 0	1	Days	65,535 (0xFFFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 0	1, 0, 0 $S = a * 10^{b*}(R+c)$	N/A	0

**hour:** Hours.

Field	Measurement	Field Type Category	Field Size
hour	Hours	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 ..0	1	Hours	None
Raw Range	Scale Factors	File Name	Default Value
0 .. 0	1, 0, 0 $S = a * 10^{b*}(R+c)$	N/A	0

**minute:** Minutes

Field	Measurement	Field Type Category	Field Size
minute	Minutes	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 ..0	1	Seconds	None
Raw Range	Scale Factors	File Name	Default Value
0 .. 0	1, 0, 0 $S = a * 10^{b*}(R+c)$	N/A	0

**second:** Seconds

Field	Measurement	Field Type Category	Field Size
second	Seconds	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 ..59	1	Seconds	None
Raw Range	Scale Factors	File Name	Default Value
0 .. 59 (0x00 .. 0x3B)	1, 0, 0 $S = a * 10^{b*}(R+c)$	N/A	0

**millisecond:** Milliseconds

Field	Measurement	Field Type Category	Field Size
millisecond	Milliseconds	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 ..999	1	Milliseconds	None
Raw Range	Scale Factors	File Name	Default Value
0 .. 999 (0x0000 .. 0x03E7)	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0

---

## SCPTinjDelay (109)

### *Injection Delay*

This configuration property sets the delay to use after defrost has terminated.  
This is the second step in the start after defrost sequence.

SCPT Index	Measurement	Type Category	Type Size
109	SNVT_time_sec	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 6,553.4	0.1	Seconds	65,535 (0xFFFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 65,534 (0 .. 0xFFFFE)	1, -1, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	Manufacturer-defined

---

## SCPTinstallDate (146)

### *Installation Date*

This configuration property sets the date of installation for a device.

SCPT Index	Measurement	Type Category	Type Size
146	SNVT_time_stamp	Structure	7 bytes

### *Structure Definition*

```
typedef struct {  
    signed long      year;  
    unsigned short   month;  
    unsigned short   day;  
    unsigned short   hour;  
    unsigned short   minute;  
    unsigned short   second;  
} SNVT_time_stamp;
```

The default value is a manufacturer-specific.

---

## SCPTinstalledLevel (232)

### *Installed Level*

The configuration property sets the installation location of any device used within an elevator control system. It is compatible with the standard elevator notation of identifying each floor (landing) and each front and rear car door opening with a unique level index.

SCPT Index	Measurement	Type Category	Type Size
232	Installed Level	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 to 65,534	1	Level Index	65,535 (0xFFFF)
Raw Range	Scale Factors	File Name	Default Value
0 to 65,534 (0 .. 0xFFFE)	1, 0, 0 $S = a * 10^b * (R+c)$	N/A	Manufacturer-specific

---

## SCPTInvertOut (16)

### *Invert Output*

This configuration property is used to invert the active polarity of an output network variable. This enables the use of either normally closed or normally open contacts. A value other than ST\_OFF specifies that the output value should be inverted.

SCPT Index	Measurement	Type Category	Type Size
16	SNVT_lev_disc	Enumeration	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
SNVT_lev_disc	1	N/A	ST_NUL
Raw Range	Scale Factors	File Name	Default Value
SNVT_lev_disc	N/A	N/A	ST_OFF (0)

---

## SCPTLimitChlrCap (81)

### *Limit Chiller Capacity*

This configuration property sets the default value for the capacity limit of a chiller. If the SCPTdefltBehave configuration property is set one, the manufacturer-specified values are used instead. The capacity limit value is not the nominal capacity limit of the chiller.

SCPT Index	Measurement	Type Category	Type Size
81	SNVT_lev_percent	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 160%	0.005%	Percent	163.835% (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 320 (0 .. 0x0140)	5, -3, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	100%

---

## SCPTlimitCO2 (42)

### *CO<sub>2</sub> Limit*

This configuration property sets the carbon dioxide (CO<sub>2</sub>) threshold value. If the sensed CO<sub>2</sub> value exceeds this limit, then the controller will reduce the CO<sub>2</sub> concentration.

SCPT Index	Measurement	Type Category	Type Size
42	SNVT_ppm	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 65,535	1	Parts-per-Million (ppm)	None
Raw Range	Scale Factors	File Name	Default Value
0 to 65,535 (0 .. 0xFFFF)	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0

---

## SCPTlocation (17)

### *Location Label*

This configuration property sets descriptive physical location information for the associated functional block or device. It provides a more detailed description of the device that can be provided by the Neuron Chip's 6-byte location string.

A SCPTlocation configuration property that applies to the Node Object functional block is used to identify the subsystem containing the device. This allows network recovery tools to recover subsystem information from a device. The subsystem may be a simple location name, or may be a hierarchical subsystem name. If a hierarchical subsystem name is specified, the subsystem hierarchy components must be separated by periods (“.”). For example, a device may have a Node Object SCPTlocation value of “Bldg 1.Floor 2.Rm 29”, representing the Bldg 1/Floor 2/Rm 29 subsystem. Periods must not otherwise be used in a SCPTlocation value that applies to a Node Object functional block. Other characters that cannot be used in a subsystem name are the backslash (“\”), colon (“:”), forward slash (“/”), or double-quote characters. For very large networks, subsystem numbers may be used instead of subsystem names, for example: “1.2.29”. This allows deeply nested hierarchies to fit within the 31 character limit for SCPTlocation.

SCPT Index	Measurement	Type Category	Type Size
17	SNVT_str_asc	Structure	31 bytes



## Structure Definition

```
typedef struct {  
    unsigned char    ascii[31];  
} SNVT_str_asc;
```

The ascii field contains a nul-terminated string of up to 30 characters. The default value is nul string (all zeroes).

---

## SCPTlowLimDly (129)

### *Low-Limit Delay*

This configuration property sets the minimum time that a value must be below the low limit before an alarm is generated.

SCPT Index	Measurement	Type Category	Type Size
129	SNVT_time_sec	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 6,553.4	0.1	Seconds	65,535 (0xFFFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 65,534 (0 .. 0xFFFE)	1, -1, 0 $S = a * 10^b * (R+c)$	N/A	Manufacturer-defined

---

## SCPTlowLimit1 (18)

### *Low Limit Value 1*

This configuration property sets the first alarm low limit against which the value primary network output network variable value is tested for alarm conditions. The data type is the same as the value field of the output network variable.

SCPT Index	Measurement	Type Category	Type Size
18	SNVT_xxx	Inherited	Inherited

---

## SCPTlowLimit1Enable (298)

### *Low limit 1 Enable*

Controls whether low limit 1 is in effect.

SCPT Index	Measurement	Type Category	Type Size
298	boolean_t	Enumeration	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
boolean_t	N/A	N/A	BOOL_NUL
Raw Range	Scale Factors	File Name	Default Value
boolean_t	N/A	SNVT_BLN.h	BOOL_FALSE

---

## SCPTlowLimit2 (19)

### *Low-Limit Value 2*

This configuration property sets the second alarm low limit against which the primary network output network variable value is tested for alarm conditions. The data type is the same as the value field of the output network variable.

SCPT Index	Measurement	Type Category	Type Size
19	SNVT_xxx	Inherited	Inherited

---

## SCPTlowLimit2Enable (299)

### *Low limit 2 Enable*

Controls whether low limit 2 is in effect.

SCPT Index	Measurement	Type Category	Type Size
299	boolean_t	Enumeration	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
boolean_t	N/A	N/A	BOOL_NUL
Raw Range	Scale Factors	File Name	Default Value
boolean_t	N/A	SNVT_BLN.h	BOOL_FALSE

---

## SCPTlowLimTemp (128)

### *Low-Limit Temperature*

This configuration property sets the low alarm temperature set point.

SCPT Index	Measurement	Type Category	Type Size
128	SNVT_temp_p	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
-273.17°C .. 327.66°C	0.01°C	Degrees Celsius	327.67 (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
-27,317 .. 32,766 (0x954B .. 0x7FFE)	1, -2, 0 $S = a * 10^b * (R + c)$	N/A	Manufacturer-defined

---

## SCPTluxSetpoint (82)

### *Illumination-Level Setpoint*

This configuration property sets the illumination-level setpoint. The setpoint value may also be changed temporarily by an input network variable.

SCPT Index	Measurement	Type Category	Type Size
82	SNVT_lux	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 65,535	1	Lux	None
Raw Range	Scale Factors	File Name	Default Value
0 to 65,535 (0 .. 0xFFFF)	1, 0, 0 $S = a * 10^b * (R + c)$	N/A	Manufacturer-defined

---

## SCPTmaintDate (147)

### *Maintenance Date*

This configuration property sets the date of last maintenance (cleaning, inspection, test, etc.) for a device.

SCPT Index	Measurement	Type Category	Type Size
147	SNVT_time_stamp	Structure	7 bytes

### *Structure Definition*

```
typedef struct {  
    signed long    year;  
    unsigned short month;  
    unsigned short day;  
    unsigned short hour;  
    unsigned short minute;  
    unsigned short second;  
} SNVT_time_stamp;
```

The default value is a manufacturer-specific.

---

## SCPTmanfDate (148)

### *Manufacture Date*

This configuration property sets the date of manufacture for a device. The value is set by the device manufacturer.

SCPT Index	Measurement	Type Category	Type Size
148	SNVT_time_stamp	Structure	7 bytes

### *Structure Definition*

```
typedef struct {  
    signed long    year;  
    unsigned short month;  
    unsigned short day;  
    unsigned short hour;  
    unsigned short minute;  
    unsigned short second;  
} SNVT_time_stamp;
```

The default value is a manufacturer-specific.

---

## SCPTmanualAllowed (101)

### *Manual Allowed*

This configuration property enables manual updating of a clock with a manual time input. A True (1) value indicates that the manual time input will be used.

SCPT Index	Measurement	Type Category	Type Size
101	Manual Allowed Flag	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 1	1	Flag	None
Raw Range	Scale Factors	File Name	Default Value
0 .. 1 (0 .. 1)	1, 0, 0 $S = a * 10^b * (R + c)$	N/A	1

---

## SCPTmanOvrTime (35)

### *Manual Override Time*

This configuration property sets the maximum time that a controller will stay in a manual mode when the manual mode was requested by a network variable input, without receiving an update on that network variable. For example, if an override request is received via the network and an update is not received within the Manual Override Time, the controller will go back to the default value. Updates to the network variable input will restart the timer. The specific network variable inputs for which this timer is used are manufacturer-defined.

SCPT Index	Measurement	Type Category	Type Size
35	SNVT_time_min	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 65,534	1	Minutes	65,535 (0xFFFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 65,534 (0 .. 0xFFFE)	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0 (no timer function)

---

## SCPTmasterSlave (97)

### *Master-Slave Operation*

This configuration property provides sets the associated functional block as a master clock or slave clock. It is used when there are multiple clocks in a network. A True value indicates that this is the master clock for the network.

SCPT Index	Measurement	Type Category	Type Size
97	Master Flag	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 1	1	Flag	None
Raw Range	Scale Factors	File Name	Default Value
0 .. 1	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	1

---

## SCPTmaxCameraPrepositions (174)

### *Max Camera Prepositions*

This configuration property sets the maximum number of prepositions supported in a camera telemetry receiver. It is manufacturer-defined.

SCPT Index	Measurement	Type Category	Type Size
174	Camera Prepositions	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 255	1	Prepositions	None
Raw Range	Scale Factors	File Name	Default Value
0 .. 255 (0 .. 0xFF)	1, 0, 0 $S = a * 10^b * (R+c)$	N/A	Manufacturer-defined

---

## SCPTmaxDefrstTemp (110)

### *Defrost Stop Temperature*

This configuration property set the temperature at which to terminate defrost for functional blocks configured to terminate on temperature. If the functional block is set to terminate on time and this temperature is exceeded then an alarm is generated.

SCPT Index	Measurement	Type Category	Type Size
110	SNVT_temp_p	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
-100°C .. 150°C	0.01°C	Degrees Celsius	327.67 (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
-1000 .. 1500 (0x0FC18 .. 0x05DC)	1, -2, 0 $S = a * 10^b * (R+c)$	N/A	Manufacturer-defined

---

## SCPTmaxDefrostTime (221)

### *Maximum Defrost Time*

This configuration property sets the maximum defrost time for defrost functional blocks configured to terminate on temperature. If terminate on time is selected, it indicates the defrost time. If terminate on temperature is selected and this timer expires, an alarm will be generated by the defrost functional block. This configuration property is identical to the SCPTmaxDefrstTime configuration property, except that it has units of minutes rather than seconds. This provides a higher range of time (65,534 minutes compared to 109 minutes).

SCPT Index	Measurement	Type Category	Type Size
221	SNVT_time_min	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 65,534	1	Minutes	65,535 (0xFFFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 65,534 (0 .. 0xFFFE)	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0

---

## SCPTmaxDefrstTime (107)

### *Maximum Defrost Time*

This configuration property sets the maximum defrost time for defrost functional blocks configured to terminate on temperature. If terminate on time is selected, it indicates the defrost time. If terminate on temperature is selected and this timer expires, an alarm will be generated by the defrost functional block.

SCPT Index	Measurement	Type Category	Type Size
107	SNVT_time_sec	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 6,553.4	0.1	Seconds	65,535 (0xFFFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 65,534 (0 .. 0xFFFE)	1, -1, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	3600 sec (1 hour)



---

## SCPTmaxDischargeAirCoolingSetpoint (205)

### *Maximum Discharge Air Cooling Setpoint*

This configuration property sets the maximum discharge air cooling setpoint.

SCPT Index	Measurement	Type Category	Type Size
205	SNVT_temp_p	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
-273.17°C .. 327.66°C	0.01°C	Degrees Celsius	327.67 (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
-27,317 .. 32,766 (0x954B .. 0x7FFE)	1, -2, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	20°C

---

## SCPTmaxDischargeAirHeatingSetpoint (207)

### *Maximum Discharge Air Heating Setpoint*

This configuration property sets the maximum discharge air heating setpoint.

SCPT Index	Measurement	Type Category	Type Size
207	SNVT_temp_p	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
-273.17°C .. 327.66°C	0.01°C	Degrees Celsius	327.67 (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
-27,317 .. 32,766 (0x954B .. 0x7FFE)	1, -2, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	50°C

---

## SCPTmaxDuctStaticPressureSetpoint (190)

### *Maximum Duct Static Pressure Setpoint*

This configuration property sets the maximum duct static pressure setpoint.

SCPT Index	Measurement	Type Category	Type Size
190	SNVT_press_p	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
-32,768 .. 32,766	1	Pascals	32,767 (0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
-32,768 .. 32,766 (0x8000 .. 0x7FFE)	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	1000 Pascals

---

## SCPTmaxFlow (51)

### *Maximum Flow*

This configuration property sets the maximum flow through a device such as a VAV box.

SCPT Index	Measurement	Type Category	Type Size
107	SNVT_flow	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 65,535	1	Liters/Second	
Raw Range	Scale Factors	File Name	Default Value
0 .. 65,535 (0 .. 0xFFFF)	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	65,535 liters/sec

---

## SCPTmaxFlowHeat (37)

### *Maximum Air Flow for Heat*

This configuration property sets the maximum airflow setpoint of a device such as a VAV terminal while heating. The value of the heating maximum flow setpoint must be validated against the value of the heating minimum flow setpoint as follows:

$0 \leq \text{heating minimum flow setpoint} \leq \text{heating maximum flow setpoint}$

SCPT Index	Measurement	Type Category	Type Size
37	SNVT_flow	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 65,535	1	Liters/Second	
Raw Range	Scale Factors	File Name	Default Value
0 .. 65,535 (0 .. 0xFFFF)	1, 0, 0 $S = a * 10^b * (R+c)$	N/A	65,535 liters/sec

---

## SCPTmaxFlowSetpoint (237)

### *User-Defined Operational High-Flow Limit*

This configuration property sets the high-flow limit for the working area of a pump.

SCPT Index	Measurement	Type Category	Type Size
237	SNVT_flow_p	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 ... 655.34 m <sup>3</sup> /Hour	0.01	m <sup>3</sup> /Hour	655.35 (65,535 decimal; 0xFFFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 65,534 (0 .. 0xFFFE)	1, -2, 0 $S = a * 10^b * (R+c)$	N/A	0

---

## SCPTmaxFlowUnit (262)

### *Unit Maximum Air Flow*

Unit maximum airflow for dual duct VAV Terminal units.

SNVT Index	Measurement	Type Category	Type Size
262	SNVT_flow	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 65,535	1	Liters/Second	
Raw Range	Scale Factors	File Name	Default Value
0 .. 65,535 (0 .. 0xFFFF)	1, 0, 0 $S = a * 10^b * (R+c)$	N/A	65,535 liters/sec

---

## SCPTmaxNVLength (255)

### *Maximum Network Variable Type Length*

This configuration property specifies the maximum length of a type that may be assigned to a network variable that supports changeable types. It is used with SCPTnvType.

SCPT Index	Measurement	Type Category	Type Size
255	Length	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
1 .. 31	1	Bytes	0
Raw Range	Scale Factors	File Name	Default Value
1 .. 31 (1 .. 0x1F)	1, 0, 0 $S = a * 10^b * (R+c)$	N/A	0

---

## SCPTmaxOut (93)

### *Maximum Value Output*

This configuration property sets maximum value limit of the associated output network variable. A value of 0% indicates there is no maximum value.

SCPT Index	Measurement	Type Category	Type Size
93	SNVT_lev_cont	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 100	0.5%	Percent	255 (0xFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 200 (0 .. 0xC8)	5, -1, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	100%

---

## SCPTmaxPressureSetpoint (235)

### *User-Defined Operational High-Pressure Limit*

This configuration property sets the high-pressure limit for the working area of a pump.

SCPT Index	Measurement	Type Category	Type Size
235	SNVT_press	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
-3276.8 .. 3276.6	0.1	kiloPascals	32,767 (0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
-32,768 .. 32,766 (0x8000 .. 0x7FFE)	1, -1, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0

---

## SCPTmaxPrivacyZones (173)

### *Maximum Privacy Zones*

This sets the maximum number of privacy zones supported by a camera telemetry receiver. The value is manufacturer-defined.

SCPT Index	Measurement	Type Category	Type Size
173	Privacy Zones	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
1 .. 255	1	Zones	0
Raw Range	Scale Factors	File Name	Default Value
1 .. 255 (1 .. 0xFF)	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	1

---

## SCPTmaxRcvT (21)

### *Maximum Receive Time (Receive Heartbeat)*

This configuration property sets the maximum time that elapses after an update to an input network variable of an actuator object before the actuator adopts the default output.

SCPT Index	Measurement	Type Category	Type Size
21	SNVT_elapsed_tm	Structure	12 bytes

### *Structure Definition*

```
typedef struct {
    unsigned long    day;
    unsigned short  hour;
    unsigned short  minute;
    unsigned short  second;
    unsigned long   millisecond;
} SNVT_elapsed_tm;
```

**day:** The value 65535 represents an invalid time.

Field	Measurement	Field Type Category	Field Size
day	Days	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 0	1	Days	65,535 (0xFFFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 0	1, 0, 0 $S = a \cdot 10^{b*}(R+c)$	N/A	0

**hour:** Hours.

Field	Measurement	Field Type Category	Field Size
hour	Hours	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 ..17	1	Hours	None
Raw Range	Scale Factors	File Name	Default Value
0 .. 17 (0x00 .. 0x12)	1, 0, 0 $S = a \cdot 10^{b*}(R+c)$	N/A	0

**minute:** Minutes

Field	Measurement	Field Type Category	Field Size
minute	Minutes	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 ..59	1	Seconds	None
Raw Range	Scale Factors	File Name	Default Value
0 .. 59 (0x00 .. 0x3B)	1, 0, 0 $S = a \cdot 10^{b*}(R+c)$	N/A	0

**second:** Seconds

Field	Measurement	Field Type Category	Field Size
second	Seconds	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 ..59	1	Seconds	None
Raw Range	Scale Factors	File Name	Default Value
0 .. 59 (0x00 .. 0x3B)	1, 0, 0 $S = a \cdot 10^{b*}(R+c)$	N/A	0

**millisecond:** Milliseconds

Field	Measurement	Field Type Category	Field Size
millisecond	Milliseconds	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 ..999	1	Milliseconds	None
Raw Range	Scale Factors	File Name	Default Value
0 .. 999 (0x0000 .. 0x03E7)	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0

---

## SCPTmaxRcvTime (48)

### *Maximum Receive Time (Receive Heartbeat)*

This configuration property sets the maximum time that elapses after an update to a bound network input. A value of zero (0) disable the receive failure detect mechanism.

SCPT Index	Measurement	Type Category	Type Size
48	SNVT_time_sec	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 6,553.4	0.1	Seconds	65,535 (0xFFFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 65,534 (0 .. 0xFFFE)	1, -1, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0

---

## SCPTmaxRemoteFlowSetpoint (242)

### *Maximum Remote Flow Setpoint*

This configuration property sets the high-flow limit for a remote sensor.

SCPT Index	Measurement	Type Category	Type Size
242	SNVT_flow_p	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 ... 655.34 m³/Hour	0.01	m³/Hour	655.35 (65,535 decimal; 0xFFFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 65,534 (0 .. 0xFFFE)	1, -2, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0



---

## SCPTmaxRemotePressureSetpoint (240)

### *Maximum Remote Pressure Setpoint*

This configuration property sets the high-pressure limit for a remote sensor.  
This value replaces the manufacturer-defined setpoint limit when the remote sensor is used.

SCPT Index	Measurement	Type Category	Type Size
240	SNVT_press	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
-3276.8 .. 3276.6	0.1	kiloPascals	3276.7 (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
-32,768 .. 32,766 (0x8000 .. 0x7FFE)	1, -1, 0 $S = a * 10^b * (R+c)$	N/A	0

---

## SCPTmaxRemoteTempSetpoint (244)

### *Maximum Remote Temperature Setpoint*

This configuration property sets the high-temperature limit for a remote sensor.  
This value replaces the Manufacturer-defined setpoint limit when the remote sensor is used.

SCPT Index	Measurement	Type Category	Type Size
244	SNVT_temp_p	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
-273.17°C .. 327.66°C	0.01°C	Degrees Celsius	327.67 (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
-27,317 .. 32,766 (0x954B .. 0x7FFE)	1, -2, 0 $S = a * 10^b * (R+c)$	N/A	0

---

## SCPTmaxReturnExhaustFanCapacity (187)

### *Maximum Return/Exhaust Fan Capacity*

This configuration property sets the maximum return/exhaust fan capacity setpoint.

SCPT Index	Measurement	Type Category	Type Size
187	SNVT_lev_percent	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
-163.840% .. 163.830%	0.005%	Percent	163.835% (32,767 decimal; 0xFFFF)
Raw Range	Scale Factors	File Name	Default Value
-32768 .. 32766 (0xFFFF .. 0xFFFE)	5, -3, 0 $S = a * 10^b * (R+c)$	N/A	100%

---

## SCPTmaxRnge (20)

### *Maximum Range*

This configuration sets the maximum value limit of a network variable. The data type is the same as the network variable. The value must be greater than any specified Minimum Range configuration property.

SCPT Index	Measurement	Type Category	Type Size
20	SNVT_xxx	Inherited	Inherited

---

## SCPTmaxSendTime (49)

### *Maximum Send Time (Send Heartbeat)*

This configuration property sets the maximum period of time before the associated output network variables are automatically updated.

SCPT Index	Measurement	Type Category	Type Size
49	SNVT_time_sec	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 6,553.4	0.1	Seconds	65,535 (0xFFFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 65,534 (0 .. 0xFFFE)	1, -1, 0 $S = a * 10^b * (R+c)$	N/A	Manufacturer-defined

---

## SCPTmaxSetpoint (50)

### *Maximum Setpoint*

This configuration property sets the maximum angle of rotation or the maximum fluid flow for an actuator. Its value has to be greater than or equal to the SCPTminSetpoint value, if any.

SCPT Index	Measurement	Type Category	Type Size
50	SNVT_lev_percent	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
-163.840% .. 163.830%	0.005% (50ppm)	Percent	163.835% (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
-32768 .. 32766 (0xFFFF .. 0xFFFE)	5, -3, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	Manufacturer-defined (0% typical)

---

## SCPTmaxSndT (22)

### *Maximum Send Time (Send Heartbeat)*

This configuration property sets the maximum period of time that expires before the functional block automatically transmits the current value of the associated output network variable. This provides a heartbeat output that can be used by destination objects to ensure that the device is still healthy.

When used with the node object, the maximum send time is used for the nvoStatus output network variable, and the status of each object on the device (including the node object) is returned sequentially in round-robin fashion, one object status per expiration of the timer.

SCPT Index	Measurement	Type Category	Type Size
22	SNVT_elapsed_tm	Structure	7 bytes

### *Structure Definition*

```
typedef struct {  
    unsigned long    day;  
    unsigned short   hour;  
    unsigned short   minute;  
    unsigned short   second;  
    unsigned long    millisecond;  
} SNVT_elapsed_tm;
```

**day:** Not used except for invalid value.

Field	Measurement	Field Type Category	Field Size
day	Days	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 0	1	Days	65,535 (0xFFFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 0	1, 0, 0 $S = a \cdot 10^{b*}(R+c)$	N/A	0

**hour:** Hours.

Field	Measurement	Field Type Category	Field Size
hour	Hours	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 ..17	1	Hours	None
Raw Range	Scale Factors	File Name	Default Value
0 .. 17 (0x00 .. 0x12)	1, 0, 0 $S = a \cdot 10^{b*}(R+c)$	N/A	0

**minute:** Minutes

Field	Measurement	Field Type Category	Field Size
minute	Minutes	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 ..59	1	Seconds	None
Raw Range	Scale Factors	File Name	Default Value
0 .. 59 (0x00 .. 0x3B)	1, 0, 0 $S = a \cdot 10^{b*}(R+c)$	N/A	0

**second:** Seconds

Field	Measurement	Field Type Category	Field Size
second	Seconds	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 ..59	1	Seconds	None
Raw Range	Scale Factors	File Name	Default Value
0 .. 59 (0x00 .. 0x3B)	1, 0, 0 $S = a \cdot 10^{b*}(R+c)$	N/A	0

**millisecond:** Milliseconds

Field	Measurement	Field Type Category	Field Size
millisecond	Milliseconds	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 ..999	1	Milliseconds	None
Raw Range	Scale Factors	File Name	Default Value
0 .. 999 (0x0000 .. 0x03E7)	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0

---

## SCPTmaxStroke (253)

### *Maximum Stroke Limit*

This configuration property sets the maximum stroke.

SCPT Index	Measurement	Type Category	Type Size
253	SNVT_length_mil	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 6533.5mm	0.1mm	Millimeters (mm)	
Raw Range	Scale Factors	File Name	Default Value
0 .. 65,535 (0 .. 0xFFFF)	1, -1, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0

---

## SCPTmaxSupplyFanCapacity (185)

### *Maximum Supply Fan Capacity*

This configuration property sets the maximum supply fan capacity setpoint.

SCPT Index	Measurement	Type Category	Type Size
185	SNVT_lev_percent	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
-163.840% .. 163.830%	0.005%	Percent	163.835% (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
-32768 .. 32766 (0xFFFF .. 0x7FFE)	5, -3, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	100%

---

## SCPTminDefrostTime (220)

### *Minimum Defrost Time*

This configuration property sets the minimum defrost time for defrosts. If the defrost terminates on temperature before this time expires, then the defrost will cycle on and off about the termination temperature until the timer expires.

SCPT Index	Measurement	Type Category	Type Size
220	SNVT_time_min	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 65,534	1	Minutes	65,535 (0xFFFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 65,534 (0 .. 0xFFFE)	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	Manufacturer-defined

---

## SCPTminDeltaAngl (43)

### *Send on Delta, Damper Angle*

This configuration property sets the minimum delta on a damper actuator angle required to send an update of the damper angle.

SCPT Index	Measurement	Type Category	Type Size
43	SNVT_angle_deg	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 360.00 degrees	0.02	Degrees	32,767 (0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
0 to 18,000 (0 .. 0x4650)	2, -2, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	Manufacturer-defined

---

## SCPTminDeltaCO2 (63)

### *CO<sub>2</sub> Send on Delta*

This configuration property sets the minimum carbon dioxide (CO<sub>2</sub>) level change required to update the CO<sub>2</sub> level output network variable.

SCPT Index	Measurement	Type Category	Type Size
63	SNVT_ppm	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 65,535	1	Parts-per-million (ppm)	None
Raw Range	Scale Factors	File Name	Default Value
0 to 65,535 (0 .. 0xFFFF)	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	10

---

## SCPTminDeltaFlow (47)

### *Flow Send on Delta*

This configuration property sets the minimum delta on the air flow to update the output variable for air flow.

SCPT Index	Measurement	Type Category	Type Size
47	SNVT_flow	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 65,535	1	Liters/Second	
Raw Range	Scale Factors	File Name	Default Value
0 .. 65,535 (0 .. 0xFFFF)	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0

---

## SCPTminDeltaLevel (88)

### *Send on Delta*

This configuration property sets the amount by which a value must change before the associated output network variable is updated.

SCPT Index	Measurement	Type Category	Type Size
88	SNVT_lev_cont	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 100	0.5%	Percent	255 (0xFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 200 (0 .. 0xC8)	5, -1, 0 $S = a * 10^b * (R+c)$	N/A	Manufacturer-defined

---

## SCPTminDeltaRH (62)

### *Humidity Send on Delta*

This configuration property sets the minimum relative humidity change required before the associated output network variable is updated.

SCPT Index	Measurement	Type Category	Type Size
62	SNVT_lev_percent	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 163.830%	0.005%	Percent RH	163.835% (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 32766 (0 .. 0x7FFE)	5, -3, 0 $S = a * 10^b * (R+c)$	N/A	1% RH



---

## SCPTminDeltaTemp (64)

### *Temperature Send on Delta*

This configuration property sets the minimum temperature change required before the associated output network variable is updated.

SCPT Index	Measurement	Type Category	Type Size
64	SNVT_temp_p	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
-273.17°C .. 327.66°C	0.01°C	Degrees Celsius	327.67 (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
-27,317 .. 32,766 (0x954B .. 0x7FFE)	1, -2, 0 $S = a * 10^b * (R+c)$	N/A	Manufacturer-defined

---

## SCPTminDischargeAirCoolingSetpoint (206)

### *Minimum Discharge Air Cooling Setpoint*

This configuration property sets the minimum discharge air cooling setpoint.

SCPT Index	Measurement	Type Category	Type Size
206	SNVT_temp_p	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
-273.17°C .. 327.66°C	0.01°C	Degrees Celsius	327.67 (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
-27,317 .. 32,766 (0x954B .. 0x7FFE)	1, -2, 0 $S = a * 10^b * (R+c)$	N/A	10°C

---

## SCPTminDischargeAirHeatingSetpoint (208)

### *Minimum Discharge Air Heating Setpoint*

This configuration property sets the minimum discharge air heating setpoint..

SCPT Index	Measurement	Type Category	Type Size
208	SNVT_temp_p	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
-273.17°C .. 327.66°C	0.01°C	Degrees Celsius	327.67 (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
-27,317 .. 32,766 (0x954B .. 0x7FFE)	1, -2, 0 $S = a * 10^b * (R+c)$	N/A	30°C

---

## SCPTminDuctStaticPressureSetpoint (191)

### *Minimum Duct Static Pressure Setpoint*

This configuration property sets the minimum duct static pressure setpoint.

SCPT Index	Measurement	Type Category	Type Size
191	SNVT_press_p	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
-32,768 .. 32,766	1	Pascals	32,767 (0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
-32,768 .. 32,766 (0x8000 .. 0x7FFE)	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	100 Pascals

---

## SCPTminFlow (54)

### *Minimum Flow*

This configuration property sets the minimum flow through a device such as a VAV box.

SCPT Index	Measurement	Type Category	Type Size
54	SNVT_flow	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 65,535	1	Liters/Second	
Raw Range	Scale Factors	File Name	Default Value
0 .. 65,535 (0 .. 0xFFFF)	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0

---

## SCPTminFlowHeat (55)

### *Minimum Flow for Heat*

This configuration property sets the minimum flow a VAV controller will control to when reheat is utilized.

SCPT Index	Measurement	Type Category	Type Size
55	SNVT_flow	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 65,535	1	Liters/Second	
Raw Range	Scale Factors	File Name	Default Value
0 .. 65,535 (0 .. 0xFFFF)	1, 0, 0 $S = a * 10^b * (R+c)$	N/A	0

---

## SCPTminFlowHeatStby (263)

### *Standby Heating Minimum Air Flow*

Heating or ventilated deck minimum flow of a dual duct VAV Terminal unit during occupied standby mode.

SNVT Index	Measurement	Type Category	Type Size
263	SNVT_flow	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 65,535	1	Liters/Second	
Raw Range	Scale Factors	File Name	Default Value
0 .. 65,535 (0 .. 0xFFFF)	1, 0, 0 $S = a * 10^b * (R+c)$	N/A	0

---

## SCPTminFlowSetpoint (236)

### *User defined operational flow low limit*

This configuration property sets the low-flow limit for the working area of a pump.

SCPT Index	Measurement	Type Category	Type Size
236	SNVT_flow_p	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 ... 655.34 m <sup>3</sup> /Hour	0.01	m <sup>3</sup> /Hour	655.35 (65,535 decimal; 0xFFFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 65,534 (0 .. 0xFFFE)	1, -2, 0 $S = a * 10^b * (R+c)$	N/A	0

---

## SCPTminFlowStby (56)

### *Minimum Flow for Standby*

This configuration property sets the minimum flow through a device, such as VAV box, in standby mode.

SCPT Index	Measurement	Type Category	Type Size
56	SNVT_flow	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 65,535	1	Liters/Second	
Raw Range	Scale Factors	File Name	Default Value
0 .. 65,535 (0 .. 0xFFFF)	1, 0, 0 $S = a * 10^b * (R+c)$	N/A	0

---

## SCPTminFlowUnit (261)

### *Unit Minimum Air Flow*

Unit minimum airflow for dual duct VAV Terminal units.

SNVT Index	Measurement	Type Category	Type Size
261	SNVT_flow	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 65,535	1	Liters/Second	
Raw Range	Scale Factors	File Name	Default Value
0 .. 65,535 (0 .. 0xFFFF)	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0

---

## SCPTminFlowUnitHeat (270)

### *Unit Heating Minimum Flow*

Minimum airflow setpoint of a single duct, or the unit minimum-airflow setpoint of a dual-duct VAV terminal when using a unit (local) heating source.

SNVT Index	Measurement	Type Category	Type Size
270	SNVT_flow	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 65,535	1	Liters/Second	
Raw Range	Scale Factors	File Name	Default Value
0 .. 65,535 (0 .. 0xFFFF)	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0

---

## SCPTminFlowUnitStby (264)

### *Standby Unit Minimum Air Flow*

Total unit minimum airflow for dual-duct units during occupied standby mode.

SNVT Index	Measurement	Type Category	Type Size
264	SNVT_flow	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 65,535	1	Liters/Second	
Raw Range	Scale Factors	File Name	Default Value
0 .. 65,535 (0 .. 0xFFFF)	1, 0, 0 $S = a * 10^b * (R+c)$	N/A	0

---

## SCPTminOutdoorAirFlowSetpoint (198)

### *Minimum Outdoor Air Flow Setpoint*

This configuration property sets the default minimum outdoor airflow setpoint.

SCPT Index	Measurement	Type Category	Type Size
198	SNVT_flow	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 65,535	1	Liters/Second	
Raw Range	Scale Factors	File Name	Default Value
0 .. 65,535 (0 .. 0xFFFF)	1, 0, 0 $S = a * 10^b * (R+c)$	N/A	0

---

## SCPTminPressureSetpoint (234)

### *Operational Low-Pressure Limit*

This configuration property sets the low-pressure limit for the working area of a pump.

SCPT Index	Measurement	Type Category	Type Size
234	SNVT_press	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
-3276.8 .. 3276.6	0.1	Kilopascals	32,767 (0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
-32,768 .. 32,766 (0x8000 .. 0x7FFE)	1, -1, 0 $S = a * 10^b * (R+c)$	N/A	0

---

## SCPTminRemoteFlowSetpoint (241)

### *Minimum Remote-Flow Setpoint*

This configuration property sets the low-flow limit for a remote sensor.

SCPT Index	Measurement	Type Category	Type Size
241	SNVT_flow_p	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 ... 655.34 m <sup>3</sup> /Hour (0.01 m <sup>3</sup> /h)	0.01	m <sup>3</sup> /Hour	655.35 (65,535 decimal; 0xFFFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 65,534 (0 .. 0xFFFE)	1, -2, 0 $S = a * 10^b * (R+c)$	N/A	0

---

## SCPTminRemotePressureSetpoint (239)

### *Minimum Remote-Pressure Setpoint*

This configuration property sets the low-pressure limit for a remote sensor. This value replaces the manufacturer-defined setpoint limit when the remote sensor is used.

SCPT Index	Measurement	Type Category	Type Size
239	SNVT_press	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
-3276.8 .. 3276.6	0.1	Kilopascals	32,767 (0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
-32,768 .. 32,766 (0x8000 .. 0x7FFE)	1, -1, 0 $S = a * 10^b * (R+c)$	N/A	0

---

## SCPTminRemoteTempSetpoint (243)

### *Minimum Remote-Temperature Setpoint*

This configuration property sets the low-temperature limit for a remote sensor. This value replaces the manufacturer-defined setpoint limit when the remote sensor is used.

SCPT Index	Measurement	Type Category	Type Size
243	SNVT_temp_p	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
-273.17°C .. 327.66°C	0.01°C	Degrees Celsius	327.67 (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
-27,317 .. 32,766 (0x954B .. 0x7FFE)	1, -2, 0 $S = a * 10^b * (R+c)$	N/A	0

---

## SCPTminReturnExhaustFanCapacity (188)

### *Minimum Return/Exhaust Fan Capacity*

This configuration property sets the minimum return/exhaust fan capacity setpoint.

SCPT Index	Measurement	Type Category	Type Size
188	SNVT_lev_percent	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
-163.840% .. 163.830%	0.005%	Percent	163.835% (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
-32768 .. 32766 (0xFFFF .. 0x7FFE)	5, -3, 0 $S = a * 10^b * (R+c)$	N/A	0



---

## SCPTminRnge (23)

### *Minimum Range*

This configuration property sets the minimum value limit of an output network variable. The data type is the same as the value field of the output network variable. The value must be less than any specified Maximum Range configuration property.

SCPT Index	Measurement	Type Category	Type Size
23	SNVT_xxx	Inherited	Inherited

---

## SCPTminSendTime (52)

### *Minimum Send Time (Send Throttle)*

This configuration property sets the minimum period of time between output network variable transitions.

SCPT Index	Measurement	Type Category	Type Size
52	SNVT_time_sec	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 65,534	0.1	Seconds	65,535 (0xFFFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 65,534 (0 .. 0xFFFE)	1, -1, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0

---

## SCPTminSetpoint (53)

### *Minimum Setpoint*

This configuration property sets the minimum angle of rotation or the minimum fluid flow for an actuator. This value must be less than or equal to the SCPTmaxSetpoint value.

SCPT Index	Measurement	Type Category	Type Size
53	SNVT_lev_percent	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
-163.840% .. 163.830%	0.005% (50ppm)	Percent	163.835% (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
-32768 .. 32766 (0xFFFF .. 0x7FFE)	5, -3, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0

## SCPTminSndT (24)

### Minimum Send Time (Send Throttle)

This configuration property sets the minimum period between output network variable updates (maximum update rate). It provides a way to tailor the output network variable update rate to available bandwidth.

Update rate limiting may be disabled by setting all fields to zero.

SCPT Index	Measurement	Type Category	Type Size
24	SNVT_elapsed_tm	Structure	7 bytes

### Structure Definition

```
typedef struct {
    unsigned long    day;
    unsigned short   hour;
    unsigned short   minute;
    unsigned short   second;
    unsigned long    millisecond;
} SNVT_elapsed_tm;
```

**day:** Not used except for invalid value.

Field	Measurement	Field Type Category	Field Size
day	Days	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 0	1	Days	65,535 (0xFFFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 0	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0

**hour:** Hours.

Field	Measurement	Field Type Category	Field Size
hour	Hours	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 17	1	Hours	None
Raw Range	Scale Factors	File Name	Default Value
0 .. 17 (0x00 .. 0x12)	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0

**minute:** Minutes

Field	Measurement	Field Type Category	Field Size
minute	Minutes	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 ..59	1	Seconds	None
Raw Range	Scale Factors	File Name	Default Value
0 .. 59 (0x00 .. 0x3B)	1, 0, 0 $S = a * 10^{b*}(R+c)$	N/A	0

**second:** Seconds

Field	Measurement	Field Type Category	Field Size
second	Seconds	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 ..59	1	Seconds	None
Raw Range	Scale Factors	File Name	Default Value
0 .. 59 (0x00 .. 0x3B)	1, 0, 0 $S = a * 10^{b*}(R+c)$	N/A	See below

**millisecond:** Milliseconds

Field	Measurement	Field Type Category	Field Size
millisecond	Milliseconds	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 ..999	1	Milliseconds	None
Raw Range	Scale Factors	File Name	Default Value
0 .. 999 (0x0000 .. 0x03E7)	1, 0, 0 $S = a * 10^{b*}(R+c)$	N/A	0

## Default Value

If this configuration property is present the default value is set according to the bit rate of the transmission medium as follows:

<b>Bit Rate</b>	<b>Default Minimum Time Between Updates</b>
2kbps	60 sec
4kbps	60 sec
10kbps	30 sec
39kbps	15 sec
78kbps	15 sec
1.25Mbps	1 sec

---

## SCPTminStroke (252)

### *Minimum-Stroke Limit*

This configuration property sets the minimum stroke.

SCPT Index	Measurement	Type Category	Type Size
252	SNVT_length_mil	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 6533.5mm	0.1mm	Millimeters (mm)	
Raw Range	Scale Factors	File Name	Default Value
0 .. 65,535 (0 .. 0xFFFF)	1, -1, 0 $S = a * 10^b * (R+c)$	N/A	0

---

## SCPTminSupplyFanCapacity (186)

### *Minimum Supply Fan Capacity*

This configuration property sets the minimum supply fan capacity setpoint.

SCPT Index	Measurement	Type Category	Type Size
186	SNVT_lev_percent	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
-163.840% .. 163.830%	0.005%	Percent	163.835% (32,767 decimal; 0xFFFF)
Raw Range	Scale Factors	File Name	Default Value
-32768 .. 32766 (0xFFFF .. 0x7FFE)	5, -3, 0 $S = a * 10^b * (R+c)$	N/A	0

---

## SCPTmixedAirLowLimitSetpoint (196)

### *Mixed Air Low-Limit Setpoint*

This configuration property sets the mixed air low-limit setpoint.

SCPT Index	Measurement	Type Category	Type Size
196	SNVT_temp_p	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
-273.17°C .. 327.66°C	0.01°C	Degrees Celsius	327.67 (32,767 decimal; 0xFFFF)
Raw Range	Scale Factors	File Name	Default Value
-27,317 .. 32,766 (0x954B .. 0x7FFE)	1, -2, 0 $S = a * 10^b * (R+c)$	N/A	7°C

---

## SCPTmixedAirTempSetpoint (197)

### *Mixed Air Temperature Setpoint*

This configuration property sets the default mixed air temperature setpoint.

SCPT Index	Measurement	Type Category	Type Size
197	SNVT_temp_p	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
-273.17°C .. 327.66°C	0.01°C	Degrees Celsius	327.67 (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
-27,317 .. 32,766 (0x954B .. 0x7FFE)	1, -2, 0 $S = a * 10^b * (R+c)$	N/A	11°C

---

## SCPTmodeHrtBt (105)

### *Mode Output Heart Beat*

This configuration property sets the time that must pass without an update for mode definitions to be automatically retransmitted. A value of 0 indicates that there is no heartbeat.

SCPT Index	Measurement	Type Category	Type Size
105	SNVT_time_sec	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 6,553.4	0.1	Seconds	65,535 (0xFFFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 65,534 (0 .. 0xFFFE)	1, -1, 0 $S = a * 10^b * (R+c)$	N/A	0

---

## SCPTneuronId (301)

### *Neuron Identifier*

A unique 6-byte identifier for an ANSI/CEA-709.1 / EN14908 device.

SCPT Index	Measurement	Type Category	Type Size
301	Neuron Identifier	Structure	6 byte

```
typedef struct {  
    unsigned char id[6];  
};
```

```
} SCPTneuronid;
```

id[6]:

Field	Measurement	Field Type Category	Field Size
id	Neuron ID	Unsigned Char	1 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0..255	1	N/A	N/A
Raw Range	Scale Factors	File Name	Default Value
0..255 (0..0xFF)	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0

---

## SCPTnightPurgePosition (246)

### *Night Purge Position*

This configuration property defines the valve position for the Night Purge HVAC mode.

SCPT Index	Measurement	Type Category	Type Size
246	SNVT_lev_percent	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 100%	0.005% (50ppm)	Percent	163.835% (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 200 (0 .. 0x64)	5, -3, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0

---

## SCPTnomAirFlow (57)

### *Nominal Air Flow*

This configuration property sets the nominal airflow through a duct. It is used to calculate the airflow through the duct and is typically used by airflow control actuators. Because improper usage may cause a non-functional device, the device manufacturer can disable write access.

SCPT Index	Measurement	Type Category	Type Size
57	SNVT_flow	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 65,535	1	Liters/Second	
Raw Range	Scale Factors	File Name	Default Value
0 .. 65,535 (0 .. 0xFFFF)	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	Manufacturer-defined

---

## SCPTnomAirFlowHeat (267)

### *Heating Nominal Flow*

Nominal airflow volume of a hot or ventilation deck of a dual duct VAV terminal.

SNVT Index	Measurement	Type Category	Type Size
267	SNVT_flow	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 65,534	1	Liters/sec	65,535 (0xFFFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 65,534 (0 .. 0xFFFE)	1, 0, 0 $S = a*10^b*(R+c)$	N/A	0 liters/sec

---

## SCPTnomAngle (58)

### *Nominal Angle*

This configuration property sets the nominal angle for an actuator. Because improper usage may cause a non-functional device, the device manufacturer can disable write access. Write access may also cause an automatic self-test to get the mechanical working range of the actuator.

SCPT Index	Measurement	Type Category	Type Size
58	SNVT_angle_deg	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 95 degrees	0.02	Degrees	32,767 (0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
0 to 4750 (0 .. 0x128E)	2, -2, 0 $S = a*10^b*(R+c)$	N/A	90 degrees

---

## SCPTnomFreq (159)

### *Nominal Motor Frequency*

This configuration property sets the nominal frequency of a motor.

SCPT Index	Measurement	Type Category	Type Size
159	SNVT_freq_hz	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 100	0.1	Hertz	6553.5 (65,535 decimal; 0xFFFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 1000 (0 .. 0x3E8)	1, -1, 0 $S = a * 10^b * (R+c)$	N/A	60

---

## SCPTnormalRotationalSpeed (180)

### *Normal Rotational Speed*

This configuration property sets the normal rotational speed of a mechanical part.

SCPT Index	Measurement	Type Category	Type Size
180	SNVT_freq_hz	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 6553.4	0.1	Hertz	6553.5 (65,535 decimal; 0xFFFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 65,534 (0 .. 0xFFFE)	1, -1, 0 $S = a * 10^b * (R+c)$	N/A	0

---

## SCPTnomRPM (158)

### *Nominal Motor Speed in RPM*

This configuration property sets the nominal speed of a motor.

SCPT Index	Measurement	Type Category	Type Size
158	SNVT_rpm	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 65,535	1	Revolutions-per-Minute (RPM)	
Raw Range	Scale Factors	File Name	Default Value
0 to 65,535	1, 0, 0	N/A	Manufacturer-defined



(0 .. 0xFFFF)	$S = a \cdot 10^b \cdot (R+c)$		(1800 RPM typical)
---------------	--------------------------------	--	--------------------

---

## SCPTnumDampers (269)

### *VAV Sensor Constant*

Calibration constant used to calculate airflow.

SNVT Index	Measurement	Type Category	Type Size
269	SNVT_count	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
1 .. 2	1	Count	None
Raw Range	Scale Factors	File Name	Default Value
1 .. 2 (0x0001 .. 0x0002)	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	1 (0x0001)

---

## SCPTnumDigits (293)

### *Number of Digits on the Meter*

This configuration property is used for setting the total number of digits on the meter.

SCPT Index	Measurement	Type Category	Type Size
293	SNVT_count	Unsigned Long	2 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0..65535	1	N/A	N/A
Raw Range	Scale Factors	File Name	Default Value
0..65535 (0..0xFFFF)	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0

---

## SCPTnumValves (59)

### *Number Of Output Valves*

This configuration property sets the number of pipes or valves in a device. It is manufacturer-defined. The value 1 implies one output valve (two-pipe system), and the value 2 implies two output valves (four-pipe system).

SCPT Index	Measurement	Type Category	Type Size
59	SNVT_count	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
1 .. 2	1	Count	None
Raw Range	Scale Factors	File Name	Default Value
1 .. 2	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	2

---

## SCPTnvDynamicAssignment (256)

### *Network Variable Dynamic Assignment*

This configuration property specifies an assignment of a dynamic network variable to a functional block on the device containing the dynamic network variable.

SCPT Index	Measurement	Type Category	Type Size
256	NV Assignment	Structure	25 bytes

### *Structure Definition*

```
typedef struct {
    unsigned long    nv_index;
    unsigned long    fblock_index;
    unsigned long    member_number;
    struct nv_type {
        unsigned short    type_program_ID[8];
        unsigned short    type_scope;
        unsigned long     type_index;
        nv_type_category_t type_category;
        unsigned short    type_length;
        signed long       scaling_factor_a;
        signed long       scaling_factor_b;
        signed long       scaling_factor_c;
    }
} SCPTnvDynamicAssignment;
```

**nv\_index:** The network variable index of the dynamic network variable.

Field	Measurement	Field Type Category	Field Size
nv_index	NV index	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 4,095	1	N/A	65,535 (0xFFFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 4,095 (0 .. 0xFFFF)	1, 0, 0 $S = a \cdot 10^{b \cdot (R+c)}$	N/A	65,535 (0xFFFF)

**fblock\_index:** The index of the functional block to which the dynamic network variable is assigned.

Field	Measurement	Field Type Category	Field Size
fblock_index	Fblock index	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 4,095	1	N/A	65,535 (0xFFFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 4,095 (0 .. 0xFFFF)	1, 0, 0 $S = a \cdot 10^{b \cdot (R+c)}$	N/A	65,535 (0xFFFF)

**member\_number:** Member number of the functional-block network-variable member to which the network variable is assigned.

Field	Measurement	Field Type Category	Field Size
member_number	Member number	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
1 .. 4,095	1	N/A	65,535 (0xFFFF)
Raw Range	Scale Factors	File Name	Default Value
1 .. 4,095 (1 .. 0xFFFF)	1, 0, 0 $S = a \cdot 10^{b \cdot (R+c)}$	N/A	65,535 (0xFFFF)

**nv\_type:** The network variable type of the dynamic network variable. Uses the same field definitions as SNVT\_nv\_type.

Field	Measurement	Field Type Category	Field Size
nv_type	NV type	Structure	19 bytes

---

## SCPTnvPriority (296)

### *UNVT Flag*

This configuration property is used to set the priorities of the inputs and defines whether the NV is of SNVT (=0) or UNVT (=1).

SCPT Index	Measurement	Type Category	Type Size
296	Priority of SNVT and/or UNVT	Structure	1 byte

**S**

```
typedef struct{
    unsigned int userflag:    1;
    unsigned int Nnv:        7;
}SCPTnvPriority
```

**userflag:** defines if it is a UNVT or SNVT

Field	Measurement	Field Type Category	Field Size
minutes_interval	UNVT Flag	Unsigned Bitfield	1 bit (offset 0)
Valid Type Range	Type Resolution	Units	Invalid Value
0..1	1	N/A	N/A
Raw Range	Scale Factors	File Name	Default Value
0..1	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0

**Nnv:** this is the NV number

Field	Measurement	Field Type Category	Field Size
Nnv	NV Number	Unsigned Bitfield	7 bit (offset 1)
Valid Type Range	Type Resolution	Units	Invalid Value
0..127	1	N/A	N/A
Raw Range	Scale Factors	File Name	Default Value
0..127 (0..0x7F)	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0

---

## SCPTnvType (254)

### *Network Variable Type*

This configuration property specifies the type of a network variable. A SCPTnvType configuration property specifies the network variable type for the network variable that it applies to. When a new value is specified for a SCPTnvType configuration property, the device application must validate that it supports the new setting, and report an error via the Node Object functional

block if the new setting is not supported, or change the application processing required for the network variable based on the new type if the new type is supported. A SCPTmaxNVLength configuration property may be specified for a network variable that supports changeable types to specify the maximum type length supported by the network variable.

SCPT Index	Measurement	Type Category	Type Size
254	SNVT_nv_type	Structure	19 bytes

---

## SCPTnwrkCnfg (25)

### *Network Configuration Source*

The configuration property set the source for network configuration for a device. The source may be the device itself, called *self-installation*, or an external network tool. All devices that support self-installation must provide this configuration property to allow a network tool to take control of the device's network configuration.

SCPT Index	Measurement	Type Category	Type Size
25	SNVT_config_src	Enumeration	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
See below	1	N/A	CFG_NUL
Raw Range	Scale Factors	File Name	Default Value
See below	N/A	N/A	CFG_LOCAL (0)

### *Type Range*

Value	Identifier	Notes
0	CFG_LOCAL	Device will use self-installation functions to set its own network image
1	CFG_EXTERNAL	Device's network image will be set by an outside source
-1 (0xFF)	CFG_NUL	Value not available

---

## SCPTobjMajVer (167)

### *Functional Block Major Version Number*

This configuration property sets the major version number for a functional block. It is used with the SCPTobjMinVer configuration property. See the *LONMARK Application Layer Interoperability Guidelines* for details on usage.

SCPT Index	Measurement	Type Category	Type Size
167	Version Number	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 255	1	Version Number	None
Raw Range	Scale Factors	File Name	Default Value
0 .. 255 (0 .. 0xFF)	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0

---

## SCPTobjMinVer (168)

### *Functional Block Minor Version Number*

This configuration property sets the minor version number for a functional block. It is used with the SCPTobjMajVer configuration property. See the *LONMARK Application Layer Interoperability Guidelines* for details on usage.

SCPT Index	Measurement	Type Category	Type Size
168	Version Number	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 255	1	Version Number	None
Raw Range	Scale Factors	File Name	Default Value
0 .. 255 (0 .. 0xFF)	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0

---

## SCPToemType (61)

### *OEM Label*

This configuration property sets the manufacturer's unit name. It is manufacturer-defined.

SCPT Index	Measurement	Type Category	Type Size
61	SNVT_str_asc	Structure	31 bytes

### *Structure Definition*

```
typedef struct {  
    unsigned char    ascii[31];  
} SNVT_str_asc;
```

The ascii field contains a nul-terminated string of up to 16 characters. All unused character should be zeros (0s). The default value is manufacturer-defined.

---

## SCPToffDely (30)

### *Turn-Off Delay*

This configuration property sets the turn-off delay for a load. It is used to determine the length of time that the load remains energized after a request for a change from ON to OFF has been received. If this property is set to a non-zero value, the load will be kept on for the specified time after the request is set to OFF. The turn-off delay is disabled by setting all fields to zero.

SCPT Index	Measurement	Type Category	Type Size
30	SNVT_elapsed_tm	Structure	7 bytes

### *Structure Definition*

```
typedef struct {  
    unsigned long    day;  
    unsigned short   hour;  
    unsigned short   minute;  
    unsigned short   second;  
    unsigned long    millisecond;  
} SNVT_elapsed_tm;
```

**day:** Not used except for the invalid value.

Field	Measurement	Field Type Category	Field Size
day	Days	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 0	1	Days	65,535 (0xFFFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 0	1, 0, 0 $S = a \cdot 10^{b*}(R+c)$	N/A	0

**hour:** Hours.

Field	Measurement	Field Type Category	Field Size
hour	Hours	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 ..17	1	Hours	None
Raw Range	Scale Factors	File Name	Default Value
0 .. 17 (0x00 .. 0x12)	1, 0, 0 $S = a \cdot 10^{b*}(R+c)$	N/A	0

**minute:** Minutes

Field	Measurement	Field Type Category	Field Size
minute	Minutes	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 ..59	1	Seconds	None
Raw Range	Scale Factors	File Name	Default Value
0 .. 59 (0x00 .. 0x3B)	1, 0, 0 $S = a \cdot 10^{b*}(R+c)$	N/A	0

**second:** Seconds

Field	Measurement	Field Type Category	Field Size
second	Seconds	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 ..59	1	Seconds	None
Raw Range	Scale Factors	File Name	Default Value
0 .. 59 (0x00 .. 0x3B)	1, 0, 0 $S = a \cdot 10^{b*}(R+c)$	N/A	0



**millisecond:** Milliseconds

Field	Measurement	Field Type Category	Field Size
millisecond	Milliseconds	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 ..999	1	Milliseconds	None
Raw Range	Scale Factors	File Name	Default Value
0 .. 999 (0x0000 .. 0x03E7)	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0

---

## SCPToffset (26)

### *Generic Offset*

This configuration property sets the offset to be applied to a hardware sensor to generate a network variable output. It is typically used to calibrate the external hardware by specifying the level that the network variable should take based on the current data from the hardware at the time of the calibration. This offset applies after the use of any translation table or gain factor. The data type must be the same as that of the network variable.

SCPT Index	Measurement	Type Category	Type Size
26	SNVT_xxx	Inherited	Inherited

---

## SCPToffsetCO2 (68)

### *CO<sub>2</sub> Offset*

This configuration property sets the offset to be applied to a carbon dioxide (CO<sub>2</sub>) sensor to generate a network variable output. It is typically used to calibrate the external hardware by specifying the ppm-level that the network variable should take based on the current data from the hardware at the time of the calibration. This offset applies after the use of any translation table or gain factor.

SCPT Index	Measurement	Type Category	Type Size
68	SNVT_ppm	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 65,535	1	Parts-per-million (ppm)	None
Raw Range	Scale Factors	File Name	Default Value
0 to 65,535 (0 .. 0xFFFF)	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	Manufacturer-defined

---

## SCPToffsetFlow (265)

### *Air Flow Offset*

SNVT Index	Measurement	Type Category	Type Size
265	SNVT_flow_f	Floating Point	4 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
-3.40282E38 .. 3.40282E38	N/A	Liters/sec	NAN
Raw Range	Scale Factors	File Name	Default Value
IEEE 754	N/A	N/A	0 liters/sec

---

## SCPToffsetRH (69)

### *Humidity Offset*

This configuration property sets the offset to be applied to a humidity sensor to generate a network variable output. It is typically used to calibrate the external hardware by specifying the RH-level that the network variable should take based on the current data from the hardware at the time of the calibration. This offset applies after the use of any translation table or gain factor.

SCPT Index	Measurement	Type Category	Type Size
69	SNVT_lev_percent	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
-163.840% .. 163.830%	0.005%	Percent	163.835% (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
-32768 .. 32766 (0xFFFF .. 0x7FFE)	5, -3, 0 $S = a * 10^b * (R + c)$	N/A	Manufacturer-defined

---

## SCPToffsetTemp (70)

### *Temperature Offset*

This configuration property sets the offset to be applied to a temperature sensor to generate a network variable output. It is typically used to calibrate the external hardware by specifying the temperature value that the network variable should take based on the current data from the hardware at the time of the calibration. This offset applies after the use of any translation table or gain factor.

SCPT Index	Measurement	Type Category	Type Size
70	SNVT_temp_p	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
-273.17°C .. 327.66°C	0.01°C	Degrees Celsius	327.67 (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
-27,317 .. 32,766 (0x954B .. 0x7FFE)	1, -2, 0 $S = a * 10^b * (R + c)$	N/A	Manufacturer-defined

---

## SCPTonOffHysteresis (84)

### *On/Off Hysteresis*

This configuration property sets the hysteresis for a setpoint. The hysteresis is used in Auto mode to switch a controller on and off. The controller is switched off if the ambient level is higher than the setpoint plus relative hysteresis. The controller is switched on if the ambient level is below the setpoint value minus relative hysteresis. Setting this configuration property to zero disables automatic on/off switching.

SCPT Index	Measurement	Type Category	Type Size
84	SNVT_lev_cont	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 100	0.5%	Percent	255 (0xFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 200 (0 .. 0xC8)	5, -1, 0 $S = a * 10^b * (R + c)$	N/A	0 (no on/off switching)

---

## SCPTorientation (231)

### *Orientation*

This configuration property sets the angle of a displayed or printed image. It is also used to set portrait or landscape mode.

Landscape mode is 0 degrees and Portrait mode is +90 degrees.

SCPT Index	Measurement	Type Category	Type Size
231	SNVT_angle_deg	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
-355.98 .. 360.00 degrees	0.02	Angular Degrees	32,767 (0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
-17,799 to 18,000 (0xBA79 .. 0x4650)	2, -2, 0 $S = a * 10^b * (R+c)$	N/A	Manufacturer-defined

---

## SCPToutdoorAirEnthalpySetpoint (200)

### *Outdoor Air Enthalpy Setpoint*

This configuration property sets the default airside economizer outdoor air enthalpy enable setpoint.

SCPT Index	Measurement	Type Category	Type Size
200	SNVT_enthalpy	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
-327.68 .. 327.66	0.01	Kilojoules/Kilogram	327.67 (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
-32,768 .. 32,766 (0x8000 .. 0x7FFE)	1, -2, 0 $S = a * 10^b * (R+c)$	N/A	40 KiloJoules/Kilogram

---

## SCPToutdoorAirTempSetpoint (199)

### *Outdoor Air Temperature Setpoint*

This configuration property sets the airside economizer outdoor air temperature enable setpoint.

SCPT Index	Measurement	Type Category	Type Size
199	SNVT_temp_p	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
-273.17°C .. 327.66°C	0.01°C	Degrees Celsius	327.67 (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
-27,317 .. 32,766 (0x954B .. 0x7FFE)	1, -2, 0 $S = a * 10^b * (R + c)$	N/A	10°C

---

## SCPTovrBehave (32)

### *Override Behavior*

This configuration property sets the behavior of a sensor or actuator when an override request is received for the associated functional block. The sensor or actuator can retain its last setting, go to a specified value, or go to the default output value.

SCPT Index	Measurement	Type Category	Type Size
32	SNVT_override	Enumeration	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
See below	1	N/A	OV_NUL
Raw Range	Scale Factors	File Name	Default Value
See below	N/A	N/A	OV_RETAIN (0)

### *Type Range*

Value	Identifier	Notes
0	OV_RETAIN	Retain current level
1	OV_SPECIFIED	Go to specified level
2	OV_DEFAULT	Go to default level
-1(0xFF)	OV_NUL	value not available

---

## SCPTovrValue (33)

### *Override Value*

This configuration property sets the value that a sensor or actuator should adopt when a functional block is overridden and the value of the SCPTovrBehave Override Behavior configuration property is OV\_SPECIFIED.

SCPT Index	Measurement	Type Category	Type Size
33	SNVT_XXX	Inherited	Inherited

---

## SCPTpowerupState (87)

### *Power-up State*

This configuration property sets the state (mode) of a controller object after power-up or reset. The state can either be Auto or Off.

SCPT Index	Measurement	Type Category	Type Size
18	SNVT_setting	Structure	4 bytes

### *Structure Definition*

```
typedef struct {  
    setting_t          function;  
    unsigned short     setting;  
    signed long        rotation;  
} SNVT_setting;
```

---

## SCPTprimeVal (155)

### *Primary Default Value*

This configuration property sets the default output value to be used when an area is occupied.

SCPT Index	Measurement	Type Category	Type Size
155	SNVT_switch	Structure	2 bytes

### *Structure Definition*

```
typedef struct {  
    unsigned short     value;  
    signed short       state;  
} SNVT_switch;
```

The default value is On, 100%.

---

## SCPTpulseValue (292)

### *Pulse and Transformer Constant*

This configuration property is used to scale the raw pulse value to an energy-meter value.

SCPT Index	Measurement	Type Category	Type Size
292	SNVT_muldiv	Structure	4 byte

```
typedef struct {  
    unsigned long multiplier;  
    unsigned long divisor;  
} SNVT_muldiv;
```

#### **multiplier:**

Field	Measurement	Field Type Category	Field Size
multiplier	multiplier	Unsigned Long	2 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0..65535	1	N/A	N/A
Raw Range	Scale Factors	File Name	Default Value
0..65535 (0..0xFFFF)	1, 0, 0 $S = a * 10^b * (R + c)$	N/A	0

#### **divisor:**

Field	Measurement	Field Type Category	Field Size
divisor	divisor	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
1..65535	1	N/A	N/A
Raw Range	Scale Factors	File Name	Default Value
1..65535 (0..0xFFFF)	1, 0, 0 $S = a * 10^b * (R + c)$	N/A	0

## SCPTpumpCharacteristic (233)

### Pump Characteristic

This configuration property sets the basic characteristic data for a pump. For further technical information refer to the manufacturer documentation.

SCPT Index	Measurement	Type Category	Type Size
233	Pump Characteristic	Structure	6 bytes

### Structure Definition

```
typedef struct {  
    SNVT_rpm                speedMax  
    SNVT_press              pressMax  
    SNVT_flow_p             flowMax  
} SCPTpumpChar;
```

**speedMax:** Maximum speed.

Field	Measurement	Field Type Category	Field Type Size
speedMax	SNVT_rpm	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 65,534	1	Revolutions-per-Minute (RPM)	
Raw Range	Scale Factors	File Name	Default Value
0 to 65,534 (0 .. 0xFFFE)	1, 0, 0 $S = a * 10^b * (R+c)$	N/A	0

**PressMax:** Maximum pressure by flow 0.

Field	Measurement	Field Type Category	Field Type Size
pressMax	SNVT_press	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
-3276.8 .. 3276.6	0.1	Kilopascals	32,767 (0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
-32,768 .. 32,766 (0x8000 .. 0x7FFE)	1, -1, 0 $S = a * 10^b * (R+c)$	N/A	0

**flowMax:** Maximum flow by pressure 0.

Field	Measurement	Type Category	Type Size
flowMax	SNVT_flow_p	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 ... 655.34 m³/Hour (0.01 m³/h)	0.01	m³/Hour	655.35 (65,535 decimal; 0xFFFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 65,534 (0 .. 0xFFFE)	1, -2, 0 $S = a * 10^b * (R+c)$	N/A	0



---

## SCPTpumpDownDelay (113)

### *Pump Down Delay*

This configuration property sets the delay to use before defrost starts.

SCPT Index	Measurement	Type Category	Type Size
113	SNVT_time_sec	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 6,553.4	0.1	Seconds	65,535 (0xFFFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 65,534 (0 .. 0xFFFE)	1, -1, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	Manufacturer-defined

---

## SCPTpwmPeriod (216)

### *PWM Period*

This configuration property sets the time period to be used in a pulse-width modulation-control strategy.

SCPT Index	Measurement	Type Category	Type Size
216	SNVT_elapsed_tm	Structure	7 bytes

### *Structure Definition*

```
typedef struct {  
    unsigned long    day;  
    unsigned short   hour;  
    unsigned short   minute;  
    unsigned short   second;  
    unsigned long    millisecond;  
} SNVT_elapsed_tm;
```

**day:** Days.

Field	Measurement	Field Type Category	Field Size
day	Days	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 65534	1	Days	65,535 (0xFFFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 65534 (0x0000 .. 0xFFFE)	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0

**hour:** Hours.

Field	Measurement	Field Type Category	Field Size
hour	Hours	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 ..23	1	Hours	None
Raw Range	Scale Factors	File Name	Default Value
0 .. 23 (0x00 .. 0x17)	1, 0, 0 $S = a \cdot 10^{b*}(R+c)$	N/A	0

**minute:** Minutes

Field	Measurement	Field Type Category	Field Size
minute	Minutes	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 ..59	1	Seconds	None
Raw Range	Scale Factors	File Name	Default Value
0 .. 59 (0x00 .. 0x3B)	1, 0, 0 $S = a \cdot 10^{b*}(R+c)$	N/A	0

**second:** Seconds

Field	Measurement	Field Type Category	Field Size
second	Seconds	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 ..59	1	Seconds	None
Raw Range	Scale Factors	File Name	Default Value
0 .. 59 (0x00 .. 0x3B)	1, 0, 0 $S = a \cdot 10^{b*}(R+c)$	N/A	0

**millisecond:** Milliseconds

Field	Measurement	Field Type Category	Field Size
millisecond	Milliseconds	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 ..999	1	Milliseconds	None
Raw Range	Scale Factors	File Name	Default Value
0 .. 999 (0x0000 .. 0x03E7)	1, 0, 0 $S = a \cdot 10^{b*}(R+c)$	N/A	0

---

## SCPTpwrUpDelay (72)

### *Power-Up Delay*

This configuration property controls the minimum period of time that expires before outputs are retransmitted. It also is the minimum amount of elapsed time after a power-up or re-establishment of communications before a control action takes place. This can be used to account for the settle-down time of a network.

SCPT Index	Measurement	Type Category	Type Size
72	SNVT_time_sec	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 65,534	0.1	Seconds	65,535 (0xFFFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 65,534 (0 .. 0xFFFE)	1, -1, 0 $S = a * 10^b * (R+c)$	N/A	0

---

## SCPTpwrUpState (73)

### *Power-up State*

This configuration property sets the default power-up and restart modes of various devices (such as chillers, boilers, and similar devices) unless the SCPTdefltBehave configuration property is set equal to one. In the latter case, use the manufacturer-specified values, instead.

SCPT Index	Measurement	Type Category	Type Size
73	SNVT_switch	Structure	2 bytes

### *Structure Definition*

```
typedef struct {  
    unsigned    value;  
    signed      state;  
} SNVT_switch;
```

The value field is not used. A state value of 0 requests device activity to be Off; a state value of 1 requests device activity to be Auto (run). A state value of -1 (0xFF) indicates an invalid value. The default value is 0 (request device activity Off).

---

## SCPTrampDownTm (161)

### *Minimum Ramp-Down Time*

This configuration property sets the ramp-down time of a device such as a motor.

SCPT Index	Measurement	Type Category	Type Size
161	SNVT_time_sec	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 6,553.4	0.1	Seconds	65,535 (0xFFFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 65,534 (0 .. 0xFFFE)	1, -1, 0 $S = a * 10^b * (R+c)$	N/A	Manufacturer-defined (10 sec typical)

---

## SCPTrampUpTm (160)

### *Minimum Ramp-Up Time*

This configuration property sets the ramp-up time of a device such as a motor.

SCPT Index	Measurement	Type Category	Type Size
160	SNVT_time_sec	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 6,553.4	0.1	Seconds	65,535 (0xFFFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 65,534 (0 .. 0xFFFE)	1, -1, 0 $S = a * 10^b * (R+c)$	N/A	Manufacturer-defined (10 sec typical)

---

## SCPTrefrigGlide (117)

### *Refrigerant Glide*

This configuration property sets the glide of the refrigerant in a system.

SCPT Index	Measurement	Type Category	Type Size
117	SNVT_temp	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
Manufacturer-defined	0.1°C	Degrees Celsius	N/A
Raw Range	Scale Factors	File Name	Default Value
Manufacturer-defined	1, -1, -2740 $S = a * 10^b * (R+c)$	N/A	Manufacturer-defined

---

## SCPTrefrigType (119)

### *Refrigerant Type*

This configuration property sets the refrigerant type used in a system. Its primary use is for temperature-pressure conversion.

SCPT Index	Measurement	Type Category	Type Size
119	Refrigerant Type	Structure	18 bytes

### *Structure Definition*

```
typedef struct {  
    char            refrigerant[6];  
    float_type      A;  
    float_type      B;  
    float_type      C;  
} SCPTrefrigType;
```

The formula used is:

$$t = \left( \frac{B}{\ln(p) - A} \right) - C$$

Where :

- $t$  is temperature in °C
- $p$  is the pressure in Bar absolute
- $A, B, C$  are constants defined for a particular type of refrigerant.

Refrigerant details and numbers are published by ASHRAE. The default values are manufacturer-defined.

---

## SCPTreflection (69)

### *Reflection Factor*

This configuration property sets the internal gain factor for a measured illumination level. Adjusting is needed because the amount of the light reflected back to the sensor element from a light surface differs.

SCPT Index	Measurement	Type Category	Type Size
69	SNVT_lev_percent	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
-163.840% .. 163.830%	0.005% (50ppm)	Percent	163.835% (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
-32768 .. 32766 (0xFFFF .. 0x7FFE)	5, -3, 0 $S = a * 10^b * (R + c)$	N/A	Manufacturer-defined

---

## SCPTregName (163)

### *Register Name*

This configuration property sets the name of a utility data logger register device.

SCPT Index	Measurement	Type Category	Type Size
163	SNVT_str_asc	Structure	31 bytes

### *Structure Definition*

```
typedef struct {  
    unsigned char    ascii[31];  
} SNVT_str_asc;
```

The ascii field contains a nul-terminated string of up to 30 characters. The default value is all nulls (0x00).

---

## SCPTreturnFanStaticPressureSetpoint (194)

### *Return Fan Pressure Setpoint*

This configuration property sets the return fan static pressure setpoint.

SCPT Index	Measurement	Type Category	Type Size
194	SNVT_press_p	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
-32,768 .. 32,766	1	Pascals	32,767 (0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
-32,768 .. 32,766 (0x8000 .. 0x7FFE)	1, 0, 0 $S = a * 10^b * (R + c)$	N/A	10 Pascals

---

## SCPTrunHrAlarm (136)

### *Running Hours Alarm Threshold Level*

This configuration property sets the alarm threshold for a running hours counter output network variable. When the threshold level is exceeded, an alarm is sent via the node object. The days, minutes, seconds, and milliseconds of the SNVT\_elapsed\_tm structure are not used.

SCPT Index	Measurement	Type Category	Type Size
136	SNVT_elapsed_tm	Structure	7 bytes

## Structure Definition

```
typedef struct {
    unsigned long    day;
    unsigned short   hour;
    unsigned short   minute;
    unsigned short   second;
    unsigned long    millisecond;
} SNVT_elapsed_tm;
```

**day:** Not used except for the invalid value.

Field	Measurement	Field Type Category	Field Size
day	Days	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 0	1	Days	65,535 (0xFFFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 0	1, 0, 0 $S = a \cdot 10^{b \cdot (R+c)}$	N/A	0

**hour:** Hours.

Field	Measurement	Field Type Category	Field Size
hour	Hours	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 ..255	1	Hours	None
Raw Range	Scale Factors	File Name	Default Value
0 .. 255 (0x00 .. 0xFF)	1, 0, 0 $S = a \cdot 10^{b \cdot (R+c)}$	N/A	Manufacturer-defined

**minute:** Not used.

Field	Measurement	Field Type Category	Field Size
minute	Minutes	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 ..0	1	Seconds	None
Raw Range	Scale Factors	File Name	Default Value
0 .. 0	1, 0, 0 $S = a \cdot 10^{b \cdot (R+c)}$	N/A	0

**second:** Not used.

Field	Measurement	Field Type Category	Field Size
second	Seconds	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 0	1	Seconds	None
Raw Range	Scale Factors	File Name	Default Value
0 .. 0	1, 0, 0 $S = a \cdot 10^{b \cdot (R+c)}$	N/A	0

**millisecond:** Not used.

Field	Measurement	Field Type Category	Field Size
millisecond	Milliseconds	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 0	1	Milliseconds	None
Raw Range	Scale Factors	File Name	Default Value
0 .. 0	1, 0, 0 $S = a \cdot 10^{b \cdot (R+c)}$	N/A	0

---

## SCPTTrunHrInit (135)

### *Running Hours Counter Initialization*

This configuration property sets the initial value for a running hours counter. The days, minutes, seconds, and milliseconds of the SNVT\_elapsed\_tm structure are not used.

SCPT Index	Measurement	Type Category	Type Size
135	SNVT_elapsed_tm	Structure	7 bytes

### *Structure Definition*

```
typedef struct {
    unsigned long    day;
    unsigned short   hour;
    unsigned short   minute;
    unsigned short   second;
    unsigned long    millisecond;
} SNVT_elapsed_tm;
```



**day:** Not used except for the invalid value.

Field	Measurement	Field Type Category	Field Size
day	Days	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 0	1	Days	65,535 (0xFFFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 0	1, 0, 0 $S = a \cdot 10^{b*}(R+c)$	N/A	0

**hour:** Hours.

Field	Measurement	Field Type Category	Field Size
hour	Hours	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 ..255	1	Hours	None
Raw Range	Scale Factors	File Name	Default Value
0 .. 255 (0x00 .. 0xFF)	1, 0, 0 $S = a \cdot 10^{b*}(R+c)$	N/A	0

**minute:** Not used.

Field	Measurement	Field Type Category	Field Size
minute	Minutes	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 ..0	1	Seconds	None
Raw Range	Scale Factors	File Name	Default Value
0 .. 0	1, 0, 0 $S = a \cdot 10^{b*}(R+c)$	N/A	0

**second:** Not used.

Field	Measurement	Field Type Category	Field Size
second	Seconds	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 0	1	Seconds	None
Raw Range	Scale Factors	File Name	Default Value
0 .. 0	1, 0, 0 $S = a \cdot 10^{b*}(R+c)$	N/A	0

**millisecond:** Not used.

Field	Measurement	Field Type Category	Field Size
millisecond	Milliseconds	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 0	1	Milliseconds	None
Raw Range	Scale Factors	File Name	Default Value
0 .. 0	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0

---

## SCPTrunTimeAlarm (290)

### *Runtime Alarm*

This configuration property can be used to provide the alarm threshold for the run time counter output network variable.

SCPT Index	Measurement	Type Category	Type Size
290	SNVT_elapsed_tm	Structure	7 byte

**S**

```
typedef struct {
    unsigned long day;
    unsigned short hour;
    unsigned short minute;
    unsigned short second;
    unsigned long millisecond;
} SNVT_elapsed_tm;
```

**day:**

Field	Measurement	Field Type Category	Field Size
day	Days	Unsigned Long	2 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0..65535	1	Days	N/A
Raw Range	Scale Factors	File Name	Default Value
0..65535 (0..0xFFFF)	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0

**hour:**

Field	Measurement	Field Type Category	Field Size
hour	Hours	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0..23	1	Hours	N/A
Raw Range	Scale Factors	File Name	Default Value
0..23 (0..0x17)	1, 0, 0 $S = a * 10^b * (R+c)$	N/A	0

**minute:**

Field	Measurement	Field Type Category	Field Size
minute	Minutes	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0..59	1	Minutes	N/A
Raw Range	Scale Factors	File Name	Default Value
0..59 (0..0x3B)	1, 0, 0 $S = a * 10^b * (R+c)$	N/A	0

**second:**

Field	Measurement	Field Type Category	Field Size
second	Seconds	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0..59	1	Seconds	N/A
Raw Range	Scale Factors	File Name	Default Value
0..59 (0..0x3B)	1, 0, 0 $S = a * 10^b * (R+c)$	N/A	0

**millisecond:**

Field	Measurement	Field Type Category	Field Size
millisecond	Milliseconds	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0..999	1	Milliseconds	N/A
Raw Range	Scale Factors	File Name	Default Value
0..999 (0..0x3E7)	1, 0, 0 $S = a * 10^b * (R+c)$	N/A	0

---

## SCPTsafExtCnfg (257)

### *Safety Mode*

Mode that a device has to be brought to when a safety external request state is pending.

SNVT Index	Measurement	Type Category	Type Size
257	SNVT_xxx	Inherited	Inherited

---

## SCPTsaturationDelay (271)

### *Saturation Delay*

SNVT Index	Measurement	Type Category	Type Size
271	SNVT_time_min	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 65,535	1	Minutes	N/A
Raw Range	Scale Factors	File Name	Default Value
0 .. 65,535 (0 .. 0xFFFF)	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0

---

## SCPTsceneNmbr (94)

### *Scene Number*

This configuration property sets the number of the first scene for a scene panel. Other numbers are subsequent. The total number of scenes is hardware dependent.

SCPT Index	Measurement	Type Category	Type Size
94	Scene Number	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
1 .. 255	1	Scene Number	0
Raw Range	Scale Factors	File Name	Default Value
1 .. 255 (1 .. 0xFF)	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	1

---

## SCPTsceneOffset (157)

### *Scene Offset*

This configuration property sets an offset for a scene number. The offset is added to the scene number when data is forwarded from a primary side input to a secondary side output. The offset is subtracted from the scene number when data is forwarded from the secondary side input to the primary side output. The application should take care of possible overflows and underflows of the 8-bit scene number.

SCPT Index	Measurement	Type Category	Type Size
157	Version Number	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 255	1	Version Number	None
Raw Range	Scale Factors	File Name	Default Value
0 .. 255 (0 .. 0xFF)	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0

---

## SCPTschedule (274)

### *Schedule*

This configuration property is used to create an array of schedule descriptions, each including a temporary schedule flag, priority, and an index into the time-value list defined by a SCPTscheduleTimeValue array. Optional schedule names may be provided using a SCPTscheduleName array of the same size as the SCPTschedule array. When multiple schedules are active, the first schedule in the SCPTschedule array with a valid value and the highest priority (lowest priority value) is used.

SCPT Index	Measurement	Type Category	Type Size
274	Schedule	Structure	31 bytes

```
typedef struct {  
    unsigned short    temporary           :1;  
    unsigned short    schedule_priority   :7;  
    unsigned long     time_value_index;  
} SCPTschedule;
```

**temporary:** Flag that identifies a temporary schedule. The Scheduler functional block deletes temporary schedules at the end of the day that they are active.

Field	Measurement	Field Type Category	Field Size
temporary	Temporary Flag	Unsigned Short	1 bit
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 1	1	N/A	N/A
Raw Range	Scale Factors	File Name	Default Value
0 .. 1	1, 0, 0 $S = a \cdot 10^{b \cdot (R+c)}$	N/A	0

**schedule\_priority:** The priority for this schedule. Low priority values specify high priority, and high priority values specify low priority. Zero (0) is the highest priority and 127 is the lowest.

Field	Measurement	Type Category	Field Size
schedule_priority	Schedule Priority	Unsigned Short	7 bits
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 127	1	Priority	None
Raw Range	Scale Factors	File Name	Default Value
0 .. 127 (0 .. 0x7F)	1, 0, 0 $S = a \cdot 10^{b \cdot (R+c)}$	N/A	127 (0x7F)

**time\_value\_index:** Identifies the starting index of a list of time-value events in a SCPTscheduleTimeValue array. The end of the list is identified by the terminator field in the SCPTscheduleTime entry.

Field	Measurement	Field Type Category	Field Size
time_value_index	Time-value Index	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 65,534	1	N/A	65,535
Raw Range	Scale Factors	File Name	Default Value
0 .. 65,534 (0 .. 0xFFFFE)	1, 0, 0 $S = a \cdot 10^{b \cdot (R+c)}$	N/A	65,535

---

## SCPTscheduleDates (273)

### *Schedule Dates*

This configuration property is used to create an array of schedule dates. Each entry consists of a starting date, ending date, and date qualifier for recurring events.

SCPT Index	Measurement	Type Category	Type Size
273	Schedule Date	Structure	12 bytes

### *Structure Definition*

```
typedef struct {
    struct {
        signed long    year;
        unsigned short month;
        days_of_month_t day;
    } start;
    struct {
        signed long    year;
        unsigned short temporary :1;
        unsigned short month : 7;
        days_of_month_t day;
    } end;
    struct {
        months_t    months;
        days_of_month_t days;
    } qualifier;
    unsigned long    schedule_index;
} SCPTscheduleDates;
```

**start.year** and **end.year**: Starting and ending year. Zero (0) means the starting and/or ending year is not specified. If the starting year is not specified, the schedule is active on all years prior to the end year, subject to the starting and ending months and days, and the qualifier. If the ending year is not specified, the schedule is active on the start year and all years after the start date, subject to the starting and ending months and days, and the qualifier. If both the starting year and ending year are not specified, the schedule is active every year, subject to the starting and ending months and days, and the qualifier.

Field	Measurement	Field Type Category	Field Size
year	Year	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 3000	1	Year	-1 (0xFFFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 3000 (0 .. 0x0BB8)	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	-1 (0xFFFF)

**temporary**: Flag that identifies a temporary schedule date. The Calendar functional block deletes temporary schedule dates at the end of the day that they are active. A temporary schedule date must be a one day event.

Field	Measurement	Field Type Category	Field Size
temporary	Temporary Flag	Unsigned Short	1 bit
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 1	1	N/A	N/A
Raw Range	Scale Factors	File Name	Default Value
0 .. 1	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0

**start.month** and **end.month**: Starting and ending month. Zero (0) means the starting and/or ending month is not specified. If the starting month is not specified, the schedule is active January through the end month, subject to the starting and ending years and days, and the qualifier. If the ending month is not specified, the schedule is active on the start month through December, subject to the starting and ending years and days, and the qualifier. If both the starting month and ending month are not specified, the schedule is active every month, subject to the starting and ending years and days, and the qualifier.

Field	Measurement	Field Type Category	Field Size
month	Month	Unsigned Short	1 byte (7 bits for end.month)
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 12	1	Month of Year	N/A
Raw Range	Scale Factors	File Name	Default Value
0 .. 12 (0 .. 0x0C)	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0



**start.day** and **end.day**: Starting and ending day of month. A value of DM\_EVERY\_DAY means the starting and/or ending day is not specified. If the starting day is not specified, the schedule is active starting the first day of the month through the end day, subject to the starting and ending years and months, and the qualifier. If the ending day is not specified, the schedule is active on the start day through the end of the month, subject to the starting and ending years and months, and the qualifier. If both the starting day and ending day are not specified, the schedule is active every day, subject to the starting and ending years and months, and the qualifier. If a value that corresponds to multiple days such as DM\_EVERY\_MON is specified for start.day, the first day of the month that matches the value is used. If a value that corresponds to multiple days such as DM\_EVERY\_MON is specified for end.day, the last day of the month that matches the value is used.

Field	Measurement	Field Type Category	Field Size
day	days_of_month_t	Enumeration	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
days_of_month_t	1	N/A	DY_NUL
Raw Range	Scale Factors	File Name	Default Value
days_of_month_t	N/A	N/A	DM_EVERY_DAY (0)

**qualifier.months**: Months within the dates specified by the start and end dates that the schedule is active.

Field	Measurement	Field Type Category	Field Size
months	months_t	Enumeration	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
months_t	1	N/A	MN_NUL
Raw Range	Scale Factors	File Name	Default Value
months_t	N/A	N/A	MN_NOTHING (0)

**qualifier.days**: Days within the dates specified by the start and end dates that the schedule is active.

Field	Measurement	Field Type Category	Field Size
days	days_of_month_t	Enumeration	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
days_of_month_t	1	N/A	DY_NUL
Raw Range	Scale Factors	File Name	Default Value
days_of_month_t	N/A	N/A	DM_EVERY_DAY (0)

**schedule\_index**: Schedule number. Used as an index into a SCPTschedule and/or SCPTscheduleName array. Identifies a schedule that is associated with

this schedule date. The same schedule may be associated with multiple schedule date entries.

Field	Measurement	Field Type Category	Field Size
schedule_index	Schedule Index	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 65,534	1	N/A	65,535
Raw Range	Scale Factors	File Name	Default Value
0 .. 65,534 (0 .. 0xFFFE)	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	65,535

---

## SCPTscheduleInternal (226)

### *Schedule Internal*

This configuration property determines whether to internally schedule light switching according to a predefined schedule. The SCPTlightOn and SCPTlightOff Lights Timers configuration properties can be used to define the schedule.

A True value enables internal scheduling; a False value disables any schedules. Any non-zero values are assumed to be True.

SCPT Index	Measurement	Type Category	Type Size
226	boolean_t	Enumeration	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
As defined by boolean_t	1	N/A	BOOL_NUL
Raw Range	Scale Factors	File Name	Default Value
As defined by boolean_t	N/A	N/A	Manufacturer-defined

---

## SCPTscheduleName (279)

### *Schedule Name*

This configuration property is used to create an array of schedule names. Each schedule name is associated with a schedule in a SCPTschedule array in a Scheduler, or with schedules referenced by a SCPTscheduleDates array in a Calendar. When used with a SCPTschedule array in a Scheduler, the schedule with the same index in the SCPTschedule array is active when the SCPTscheduleName name matches a name identified as active by a Calendar functional block or other functional block that has a SNVT\_date\_event output.

SCPT Index	Measurement	Type Category	Type Size
279	Schedule Name	Structure	22 bytes

### *Structure Definition*

```
typedef struct {  
    unsigned char    name[22];  
} SCPTscheduleName;
```

**name[22]:** A NUL-terminated string of up to 22 characters that specifies an schedule name. The NUL terminator is not required if the name is 22 characters. An invalid name is specified by a NUL character in the first byte. The name may include a reference to a string defined in a language file. The 0x80 value is reserved to delimit a language string reference. See *Language File String Reference* in the SNVT\_alarm\_2 definition for more details.

Field	Measurement	Field Type Category	Field Size
name	Schedule Name	Unsigned Character Array	22 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
ASCII character for each byte	1	N/A	NUL character in name[0]
Raw Range	Scale Factors	File Name	Default Value
32 .. 126 for each byte (0x20 .. 0x7E)	1, 0, 0 $S = a \cdot 10^{b \cdot (R+c)}$	N/A	Nul string

---

## SCPTscheduleTimeValue (275)

### *Schedule Time-value Pair*

This configuration property is used to create an array of time-value pairs, organized as terminated lists.

SCPT Index	Measurement	Type Category	Type Size
275	Schedule Time Value	Structure	3 bytes

```
typedef struct {  
    unsigned short    invalid    :1;
```

```

        unsigned short    terminator    :1;
        unsigned short    hour         :6;
        unsigned short    minute;
        SNVT_sched_val    value;
    } SCPTscheduleTimeValue;

```

**invalid:** Flag that identifies an undefined time-event entry.

Field	Measurement	Field Type Category	Field Size
invalid	Invalid Flag	Unsigned Short	1 bit
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 1	1	N/A	1
Raw Range	Scale Factors	File Name	Default Value
0 .. 1	1, 0, 0 $S = a * 10^b * (R+c)$	N/A	1

**terminator:** Flag that identifies the end of a time-event list.

Field	Measurement	Field Type Category	Field Size
terminator	Terminator Flag	Unsigned Short	1 bit
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 1	1	N/A	N/A
Raw Range	Scale Factors	File Name	Default Value
0 .. 1	1, 0, 0 $S = a * 10^b * (R+c)$	N/A	0

**hour:** Hour since midnight for a scheduled event.

Field	Measurement	Field Type Category	Field Size
hour	Hours	Unsigned Short	6 bits
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 47	1	Hours Since Midnight	N/A
Raw Range	Scale Factors	File Name	Default Value
0 .. 47 (0 .. 0x2F)	1, 0, 0 $S = a * 10^b * (R+c)$	N/A	0

**minute:** Minute within the hour for a scheduled event.

Field	Measurement	Field Type Category	Field Size
minute	Minutes	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 59	1	Minute of Hour	N/A
Raw Range	Scale Factors	File Name	Default Value
0 .. 59 (0 .. 0x3B)	1, 0, 0 $S = a * 10^b * (R+c)$	N/A	0

**value:** The value to output when the time-value pair is active. The value must be mapped to an output value using a SCPTvalueDefinition array. The value field is used as the output of the scheduler, or as an index into a SCPTvalueDefinition array, where the corresponding SCPTvalueDefinition array value is used as the output value.

Field	Measurement	Field Type Category	Field Size
value	SNVT_sched_val	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 254	1	N/A	255 (0xFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 254 (0 .. 0xFE)	N/A	N/A	255

---

## SCPTscrollSpeed (229)

### *Scroll Speed*

The configuration property sets the rate at which a display image scrolls across the display screen or visible area.

The value field sets the rate from zero to the maximum allowed by the device. The state field enables scrolling. When the state field is set to one, the scroll speed is enabled at the rate set by the value field. When the state field is set to zero, the scroll speed is zero regardless of the value setting

SCPT Index	Measurement	Type Category	Type Size
229	SNVT_switch	Structure	2 bytes

### *Structure Definition*

```
typedef struct {
    unsigned    value;
    signed      state;
} SNVT_switch;
```

**value:** Scroll speed as percentage of full scale.

Field	Measurement	Field Type Category	Field Size
value	Percent	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
Manufacturer-defined	0.5%	Percent	
Raw Range	Scale Factors	File Name	Default Value
Manufacturer-defined	5, -1, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0

**state:** Set to 1 to enable scrolling; 0 to disable.

Field	Measurement	Type Category	Type Size
state	State	Signed Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 1	1	N/A	-1 (0xFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 1	N/A	N/A	0

## SCPTsecondVal (156)

### Secondary Default Value

This configuration property sets the default occupancy value when a neighboring area is occupied.

SCPT Index	Measurement	Type Category	Type Size
156	SNVT_switch	Structure	2 bytes

### Structure Definition

```
typedef struct {
    unsigned    value;
    signed      state;
} SNVT_switch;
```

**value:** Scroll speed as percentage of full scale.

Field	Measurement	Field Type Category	Field Size
value	Percent	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 100	0.5%	Percent	
Raw Range	Scale Factors	File Name	Default Value
0 .. 200 (0 .. 0xC8)	5, -1, 0 $S = a \cdot 10^{b \cdot (R+c)}$	N/A	0

**state:** Set to 1 for On; 0 for Off.

Field	Measurement	Type Category	Type Size
state	State	Signed Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 1	1	N/A	-1 (0xFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 1	N/A	N/A	0

---

## SCPTsensConstTmp (65)

### *Temperature Sensor Constant*

This configuration property sets the calibration multiplier for a temperature sensor.

SCPT Index	Measurement	Type Category	Type Size
65	SNVT_multiplier	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 32.7675	0.0005	None	None
Raw Range	Scale Factors	File Name	Default Value
0 .. 65,534 (0 .. 0xFFFFE)	5, -4, 0 $S = a * 10^b * (R+c)$	N/A	1

---

## SCPTsensConstVAV (67)

### *VAV Sensor Constant*

This configuration property sets the airflow sensor calibration multiplier for a VAV sensor. It is typically used to calculate the air flow by an airflow control actuator.

SCPT Index	Measurement	Type Category	Type Size
67	SNVT_multiplier	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 32.7675	0.0005	None	None
Raw Range	Scale Factors	File Name	Default Value
0 .. 65,534 (0 .. 0xFFFFE)	5, -4, 0 $S = a * 10^b * (R+c)$	N/A	1

---

## SCPTserialNumber (179)

### *Serial Number*

This configuration property sets a manufacturer-defined serial number. The serial number is specified by a string with up to 30 characters followed by a terminating null character (ASCII value zero).

SCPT Index	Measurement	Type Category	Type Size
179	SNVT_str_asc	Structure	31 bytes

### *Structure Definition*

```
typedef struct {  
    unsigned char    ascii[31];  
} SNVT_str_asc;
```

The ascii field contains a nul-terminated string of up to 30 characters. The default value is all nulls (0x00).

---

## SCPTsetPnts (60)

### *Occupancy Temperature Setpoints*

This configuration property sets the occupancy temperature setpoints for heat and cool mode.

SCPT Index	Measurement	Type Category	Type Size
60	SNVT_temp_setpt	Structure	12 bytes

### *Structure Definition*

```
typedef struct {  
    signed long    occupied_cool;  
    signed long    standby_cool;  
    signed long    unoccupied_cool;  
    signed long    occupied_heat;  
    signed long    standby_heat;  
    signed long    unoccupied_heat;  
} SNVT_temp_setpt;
```

**occupied\_cool:** Occupied cooling setpoint.

Field	Measurement	Field Type Category	Field Size
occupied_cool	Temperature	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
-10.00 ... 35.00	0.01°C	Degrees Celsius	327.67 (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
-1000 .. 3500 (0xFC18 .. 0x0DAC)	1, -2, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	23°C



**standby\_cool:** Standby cooling setpoint.

Field	Measurement	Field Type Category	Field Size
standby_cool	Temperature	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
-10.00 ... 35.00	0.01°C	Degrees Celsius	327.67 (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
-1000 .. 3500 (0xFC18 .. 0x0DAC)	1, -2, 0 $S = a \cdot 10^{b*}(R+c)$	N/A	25°C

**unoccupied\_cool:** Unoccupied cooling setpoint.

Field	Measurement	Field Type Category	Field Size
unoccupied_cool	Temperature	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
-10.00 ... 35.00	0.01°C	Degrees Celsius	327.67 (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
-1000 .. 3500 (0xFC18 .. 0x0DAC)	1, -2, 0 $S = a \cdot 10^{b*}(R+c)$	N/A	28°C

**occupied\_heat:** Occupied heating setpoint.

Field	Measurement	Field Type Category	Field Size
occupied_heat	Temperature	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
-10.00 ... 35.00	0.01°C	Degrees Celsius	327.67 (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
-1000 .. 3500 (0xFC18 .. 0x0DAC)	1, -2, 0 $S = a \cdot 10^{b*}(R+c)$	N/A	21°C

**standby\_heat:** Standby heating setpoint.

Field	Measurement	Field Type Category	Field Size
standby_heat	Temperature	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
-10.00 ... 35.00	0.01°C	Degrees Celsius	327.67 (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
-1000 .. 3500 (0xFC18 .. 0x0DAC)	1, -2, 0 $S = a \cdot 10^{b*}(R+c)$	N/A	19°C

**unoccupied\_heat:** Unoccupied heating setpoint.

Field	Measurement	Field Type Category	Field Size
unoccupied_heat	Temperature	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
-10.00 ... 35.00	0.01°C	Degrees Celsius	327.67 (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
-1000 .. 3500 (0xFC18 .. 0xDAC)	1, -2, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	16°C

---

## SCPTsetpoint (213)

### *Setpoint*

This configuration property sets a setpoint.

SCPT Index	Measurement	Type Category	Type Size
213	SNVT_XXX	Inherited	Inherited

---

## SCPTsluiceCnfg (259)

### *Sluice-lock Master-slave Control*

Role of a device in a sluice-lock connection. A sluice-lock is an interlock mechanism between two entry/exit devices, or a sluice manager and several entry/exit devices, to ensure that only one single entry/exit device is opened at once.

SNVT Index	Measurement	Type Category	Type Size
259	master_slave_t	Enumeration	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
master_slave_t	1	N/A	MSC_NUL
Raw Range	Scale Factors	File Name	Default Value
master_slave_t	N/A	SNVT_SL.H	MSC_UNKNOWN (0)

---

## SCPTsmokeDayAlrmLim (40)

### *Smoke Daytime Alarm Limit*

This configuration property sets the daytime alarm limit sensitivity value for an initiator.

SCPT Index	Measurement	Type Category	Type Size
40	SNVT_smo_obscur	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 5.000	0.001	Smoke Obscuration	65,535 (0xFFFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 5000 (0 .. 0x1388)	1, -3, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	Manufacturer-defined

---

## SCPTsmokeDayPreAlrmLim (138)

### *Smoke Daytime Pre-Alarm Limit*

This configuration property sets the daytime pre-alarm limit sensitivity value for an initiator.

SCPT Index	Measurement	Type Category	Type Size
138	SNVT_smo_obscur	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 5.000	0.001	Smoke Obscuration	65,535 (0xFFFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 5000 (0 .. 0x1388)	1, -3, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	Manufacturer-defined

---

## SCPTsmokeNightAlrmLim (127)

### *Smoke Nighttime Alarm Limit*

This configuration property sets the nighttime alarm limit sensitivity value for an initiator.

SCPT Index	Measurement	Type Category	Type Size
127	SNVT_smo_obscur	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 5.000	0.001	Smoke Obscuration	65,535 (0xFFFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 5000 (0 .. 0x1388)	1, -3, 0 $S = a * 10^b * (R+c)$	N/A	Manufacturer-defined

---

## SCPTsmokeNightPreAlrmLim (140)

### *Smoke Nighttime Pre-Alarm Limit*

This configuration property sets the nighttime pre-alarm limit sensitivity value for an initiator.

SCPT Index	Measurement	Type Category	Type Size
140	SNVT_smo_obscur	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 5.000	0.001	Smoke Obscuration	65,535 (0xFFFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 5000 (0 .. 0x1388)	1, -3, 0 $S = a * 10^b * (R+c)$	N/A	Manufacturer-defined

---

## SCPTsmokeNomSens (39)

### *Smoke Nominal Sensitivity*

This configuration property sets the nominal sensitivity value for an initiator.

SCPT Index	Measurement	Type Category	Type Size
39	SNVT_smo_obscur	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 5.000	0.001	Smoke Obscuration	65,535 (0xFFFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 5000 (0 .. 0x1388)	1, -3, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	Manufacturer-defined

---

## SCPTsndDelta (27)

### *Generic Send on Delta*

This configuration property sets the amount by which the value obtained by a data acquisition application must change before an output network variable is updated. The data type is the same as the output network variable. For network variable types that are not zero-based (for example SNVT\_temp) this value is represented as a difference in two values of the SNVT concerned. For SNVT\_switch the continuous (level) part follows this convention. Thus to represent a delta value of 0.5 deg C, the SCPTsndDelta value should be set to 5. Some network monitoring and control tools may display this value as -273.5°C.

SCPT Index	Measurement	Type Category	Type Size
27	SNVT_XXX	Inherited	Inherited

---

## SCPTspaceHumSetpoint (203)

### *Space Humidification Setpoint*

This configuration property sets the default space humidification setpoint.

SCPT Index	Measurement	Type Category	Type Size
203	SNVT_lev_percent	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
-163.840% .. 163.830%	0.005%	Percent	163.835% (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
-32768 .. 32766 (0xFFFF .. 0x7FFE)	5, -3, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	30%

---

## SCPTstandbyRotationalSpeed (181)

### *Standby Rotational Speed*

This configuration property sets the rotational speed of a mechanical part when in standby mode.

SCPT Index	Measurement	Type Category	Type Size
181	SNVT_freq_hz	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 6553.4	0.1	Hertz	6553.5 (65,535 decimal; 0xFFFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 65,534 (0 .. 0xFFFE)	1, -1, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	0

---

## SCPTstep (83)

### *Maximum Step*

This configuration property sets the maximum step that the associated controller is allowed to take to approach the target level. The bigger the steps are, the shorter the response time is for level changes.

SCPT Index	Measurement	Type Category	Type Size
83	SNVT_lev_cont	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 100	0.5%	Percent	255 (0xFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 200 (0 .. 0xC8)	5, -1, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	Manufacturer-defined

---

## SCPTstepValue (92)

### *Ramp or Master Fade Step Value*

This configuration property sets the step value for up/down ramps or fade controllers. When up/down push buttons are used, this configuration property can be used to adjust the total ramp time from 0 to 100%. The SCPTminSendTime configuration property sets the time between subsequent updates.

SCPT Index	Measurement	Type Category	Type Size
92	SNVT_lev_cont	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 100	0.5%	Percent	255 (0xFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 200 (0 .. 0xC8)	5, -1, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	2.5%

---

## SCPTstrtpDelay (111)

### *Start Up Delay*

This configuration property sets the time delay before unrestricted control begins after power up, defrost, or pack fail.

SCPT Index	Measurement	Type Category	Type Size
111	SNVT_time_sec	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 6,553.4	0.1	Seconds	65,535 (0xFFFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 65,534 (0 .. 0xFFFE)	1, -1, 0 $S = a * 10^b * (R+c)$	N/A	Manufacturer-defined

---

## SCPTstrtpOpen (115)

### *Startup Opening*

This configuration property sets the maximum valve opening to use after power up, pack fail, or defrost.

SCPT Index	Measurement	Type Category	Type Size
115	SNVT_lev_percent	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
-163.840% .. 163.830%	0.005% (50ppm)	Percent	163.835% (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
-32768 .. 32766 (0xFFFF .. 0x7FFE)	5, -3, 0 $S = a * 10^b * (R+c)$	N/A	Manufacturer-defined

---

## SCPTsummerTime (99)

### *Start Date and Time Summer Time*

This configuration property sets the start of summer time for purposes of daylight-savings time. At the defined summer date the clock will increase its time by one hour. Setting this table to all zeroes disables daylight savings time. Year, minutes, and seconds are ignored.

SCPT Index	Measurement	Type Category	Type Size
99	SNVT_time_stamp	Structure	7 bytes



## Structure Definition

```
typedef struct {  
    signed long    year;  
    unsigned short month;  
    unsigned short day;  
    unsigned short hour;  
    unsigned short minute;  
    unsigned short second;  
} SNVT_time_stamp;
```

The valid range for this configuration property is 1 January 0 hours, to 31 December 23 hours. Year, minutes, and seconds should be set to zero. The default value is a manufacturer-specific.

---

## SCPTsuperHtRefInit (114)

### *Super Heat Reference Initialization*

This configuration property sets the default value of the target super heat reference.

SCPT Index	Measurement	Type Category	Type Size
114	SNVT_temp_p	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
Manufacturer-defined	0.01°C	Degrees Celsius	327.67 (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
Manufacturer-defined	1, -2, 0 $S = a * 10^b * (R + c)$	N/A	Manufacturer-defined

---

## SCPTsuperHtRefMax (118)

### *Super Heat Reference Maximum*

This configuration property sets the maximum value of the target super heat reference.

SCPT Index	Measurement	Type Category	Type Size
118	SNVT_temp_p	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
Manufacturer-defined	0.01°C	Degrees Celsius	327.67 (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
Manufacturer-defined	1, -2, 0 $S = a * 10^b * (R + c)$	N/A	Manufacturer-defined

---

## SCPTsuperHtRefMin (116)

### *Super Heat Reference Minimum*

This configuration property sets the minimum value of the target super heat reference.

SCPT Index	Measurement	Type Category	Type Size
116	SNVT_temp_p	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
Manufacturer-defined	0.01°C	Degrees Celsius	327.67 (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
Manufacturer-defined	1, -2, 0 $S = a * 10^b * (R+c)$	N/A	Manufacturer-defined

---

## SCPTtemperatureHysteresis (214)

### *Temperature Hysteresis*

This configuration property sets a temperature hysteresis. It provides for some number of degrees between a turn-on point and a turn-off point to avoid rapid cycling of a heating or cooling system. It is not based on any differential of time, but only a differential of temperature.

SCPT Index	Measurement	Type Category	Type Size
214	SNVT_temp_diff_p	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
-273.17°C .. 327.66°C	0.01°C	Degrees Celsius	327.67 (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
-27,317 .. 32,766 (0x954B .. 0x7FFE)	1, -2, 0 $S = a * 10^b * (R+c)$	N/A	Manufacturer-defined

---

## SCPTtempOffset (227)

### *Temperature Offset*

This configuration property sets an offset for calibrating temperature probes. The specified offset (positive or negative) is added to the corresponding temperature measurement before it is used in any calculations or as a network output variable. This configuration property replaces the SCPToffsetTemp (70) configuration property.

SCPT Index	Measurement	Type Category	Type Size
227	SNVT_temp_diff_p	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
-273.17°C .. 327.66°C	0.01°C	Degrees Celsius	327.67 (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
-27,317 .. 32,766 (0x954B .. 0x7FFE)	1, -2, 0 $S = a * 10^b * (R + c)$	N/A	0

---

## SCPTtermTimeTemp (112)

### *Terminate Time/Temperature*

This configuration property determines whether defrost should terminate on time, temperature, or a combination. If the defrost was started by a scheduler, the duration is indicated in the start/stop times. If a termination condition occurs which is not the selected termination condition the functional block will generate an alarm.

SCPT Index	Measurement	Type Category	Type Size
112	SNVT_defr_term	Enumeration	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
SNVT_defr_term	1	N/A	DFT_NUL
Raw Range	Scale Factors	File Name	Default Value
SNVT_defr_term	N/A	N/A	DFT_TERM_TEMP (0)

---

## SCPTthermAlrmROR (142)

### *Thermal Alarm Rate of Rise*

This configuration property sets the thermal alarm trip rate of rise for the initiator. This configuration property is manufacturer-defined.

SCPT Index	Measurement	Type Category	Type Size
142	SNVT_temp_ror	Signed Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
-16384.0°C .. 16383.0°C	0.5°C	Degrees Celsius	-16,383.5°C (32,767 decimal; 0x7FFF)
Raw Range	Scale Factors	File Name	Default Value
-32,768 .. 32,766 (0xFFFF .. 0xFFFE)	5, -1, 0 $S = a * 10^b * (R + c)$	N/A	Manufacturer-defined

---

## SCPTthermMode (120)

### *Thermostat Mode*

This configuration property sets the control strategy.

SCPT Index	Measurement	Type Category	Type Size
120	SNVT_therm_mode	Enumeration	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
SNVT_therm_mode	1	N/A	THERM_NUL
Raw Range	Scale Factors	File Name	Default Value
SNVT_therm_mode	N/A	N/A	THERM_NO_CONTROL (0)

---

## SCPTthermThreshold (152)

### *Thermal Threshold Alarm Trip*

This configuration property sets the thermal alarm trip threshold for an initiator.  
This configuration property is manufacturer-defined.

SCPT Index	Measurement	Type Category	Type Size
152	SNVT_temp	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
-274.0 .. 6279.5	0.1°C	Degrees Celsius	N/A
Raw Range	Scale Factors	File Name	Default Value
0 .. 65,535 (0 .. 0xFFFF)	1, -1, -2740 $S = a \cdot 10^b \cdot (R+c)$	N/A	Manufacturer-defined

---

## SCPTtimeEvent (104)

### *Time Event-mode Array Element*

This configuration property sets a daily schedule with an event-mode for a given time. It's used to create a configuration property array that defines a schedule. The configuration property includes record\_type, hour, minute, and event\_mode fields. If the record\_type field is set to 0, it indicates that this element is the end of the list. A value of 1 indicates a scene, and 2 indicates a mode.

SCPT Index	Measurement	Type Category	Type Size
104	SNVT_elapsed_tm	Structure	12 bytes

### *Structure Definition*

```
typedef struct {  
    event_mode_type_t  record_type;  
    unsigned short     hour;  
    unsigned short     minute;  
    unsigned short     event_mode;  
} SCPTtimeEvent;
```

**record\_type:** Type of time-event record.

Field	Measurement	Field Type Category	Field Size
record_type	event_mode_type_t	Enumeration	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
event_mode_type_t	1	N/A	EMT_NUL
Raw Range	Scale Factors	File Name	Default Value
event_mode_type_t	N/A	N/A	EMT_END_OF_LIST (0)

**hour:** Hours.

Field	Measurement	Field Type Category	Field Size
hour	Hours	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 23	1	Hours	None
Raw Range	Scale Factors	File Name	Default Value
0 .. 23 (0x00 .. 0x17)	1, 0, 0 $S = a \cdot 10^{b*}(R+c)$	N/A	0

**minute:** Minutes.

Field	Measurement	Field Type Category	Field Size
minute	Minutes	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 59	1	Seconds	None
Raw Range	Scale Factors	File Name	Default Value
0 .. 59 (0x00 .. 0x3B)	1, 0, 0 $S = a \cdot 10^{b*}(R+c)$	N/A	0

**event\_mode:** Event mode number.

Field	Measurement	Field Type Category	Field Size
event_mode	Event Mode	Unsigned Short	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 255	1	N/A	None
Raw Range	Scale Factors	File Name	Default Value
0 .. 255 (0 .. 0xFF)	1, 0, 0 $S = a \cdot 10^{b*}(R+c)$	N/A	0

---

## SCPTtimeout (170)

### *Timeout*

This configuration property sets a response timeout value for a controlling device, within which a controllable device must respond, during a control permission request.

SCPT Index	Measurement	Type Category	Type Size
170	SNVT_time_sec	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 6,553.4	0.1	Seconds	65,535 (0xFFFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 65,534 (0 .. 0xFFFE)	1, -1, 0 $S = a * 10^b * (R+c)$	N/A	0

---

## SCPTtimePeriod (291)

### *Historical Period*

This input configuration network variable defines the period of time between transfer of a values to the historical register.

SCPT Index	Measurement	Type Category	Type Size
291	Historical Period	Structure	2 byte

```
t
typedef struct {
interval_of_month_t units;           // units of time
    union {
        unsigned short minutes_interval; // TP_MINUTE
        unsigned short hours_interval;   // TP_HOUR
        unsigned short hour_of_day;      // TP_DAY
        days_of_week_t day_of_week;      // TP_WEEK
        unsigned short date_of_month;    // TP_MONTH
    } period;
} SCPTtimePeriod;
units:
```

Field	Measurement	Field Type Category	Field Size
units	interval_of_month_t	Enumeration	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
interval_of_month_t	1	N/A	IOM_NUL
Raw Range	Scale Factors	File Name	Default Value
interval_of_month_t	N/A	SNVT_IOM.h	IOM_MINUTE

**period.minutes\_interval:**

Field	Measurement	Field Type Category	Field Size
minutes_interval	Minutes Interval	Unsigned Short	1 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
1..255	1	Minutes	N/A
Raw Range	Scale Factors	File Name	Default Value
1..255 (0 .. 0xff)	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	N/A

**period.hours\_interval:**

Field	Measurement	Field Type Category	Field Size
hour_interval	Interval of the Minutes	Unsigned Short	1 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
1 ..255	1	Hours	N/A
Raw Range	Scale Factors	File Name	Default Value
1 ..255 (1 .. 0xff)	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	N/A

**period.hour\_of\_day:**

Field	Measurement	Field Type Category	Field Size
hour_of_day	Hour of the day	Unsigned Short	1 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 ..23	1	Hours	N/A
Raw Range	Scale Factors	File Name	Default Value
0 ..23 (0 .. 0x17)	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	N/A

**period.day\_of\_week:**

Field	Measurement	Field Type Category	Field Size
minutes_interval	days_of_week_t	Enumeration	1 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
days_of_week_t	1	N/A	DAY_NUL
Raw Range	Scale Factors	File Name	Default Value
days_of_week_t	N/A	SNVT_DT.h	N/A



**period.date\_of\_month:**

Field	Measurement	Field Type Category	Field Size
date_of_month	date of the month	Unsigned Short	1 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
1 ..31	1	Months	N/A
Raw Range	Scale Factors	File Name	Default Value
1 ..31 (1 .. 0x1F)	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	N/A

---

## SCPTtimeZone (154)

### *Time Zone*

This configuration property sets the time zone of a device. The time zone is specified as a time offset from GMT, with start and end of DST.

SCPT Index	Measurement	Type Category	Type Size
154	SNVT_time_zone	Structure	14 bytes

### *Default Value*

```
SNVT_time_zone TimeZone;  
TimeZone.second_time_offset = 0;  
TimeZone.type_of_description = CAL_MEU;  
TimeZone.hour_of_start_DST = 2;  
TimeZone.minute_of_start_DST = 0;  
TimeZone.second_of_start_DST = 0;  
TimeZone.start_DST.M_start_DST.month_of_start_DST = 4;  
TimeZone.start_DST.M_start_DST.week_of_start_DST = 1;  
TimeZone.start_DST.M_start_DST.dateday_of_start_DST = 0;  
TimeZone.hour_of_end_DST = 2;  
TimeZone.minute_of_end_DST = 0;  
TimeZone.second_of_end_DST = 0;  
TimeZone.end_DST.M_end_DST.month_of_end_DST = 10;  
TimeZone.end_DST.M_end_DST.week_of_end_DST = 5;  
TimeZone.end_DST.M_end_DST.dateday_of_end_DST = 0;
```

---

## SCPTtrnsTblX (28)

### *Translation Table X*

This configuration property is used in conjunction with the Translation Table Y configuration property to create a translation table that determines how to scale and linearize the raw input signal as received from a hardware device such as a sensor, or how to scale or linearize actuator movement with respect to an input network variable.

SCPT Index	Measurement	Type Category	Type Size
28	SNVT_trans_table	Structure	30 bytes

### Structure Definition

```
typedef struct {
    float_type    point[7];
    unsigned      interp_pts_0_to_1  : 2;
    unsigned      interp_pts_1_to_2  : 2;
    unsigned      interp_pts_2_to_3  : 2;
    unsigned      interp_pts_3_to_4  : 2;
    unsigned      interp_pts_4_to_5  : 2;
    unsigned      interp_pts_5_to_6  : 2;
    unsigned      interp_pts_6_to_0  : 2;
} SNVT_trans_table;
```

There may be an unlimited number of table entries (up to the maximum number of configuration properties). A Translation Table Y value must be specified for each Translation Table X value. The default is manufacturer-defined. See SNVT\_trans\_table for invalid value (3) in each bitfield.

---

## SCPTtrnsTblX2 (285)

### Valve-Plug Characteristic Table X2

This configuration property will be used in conjunction with the translation-table Y2 configuration property to create a translation table that dictates how to scale the flow with respect to the mechanical stroke.

SCPT Index	Measurement	Type Category	Type Size
285	SNVT_trans_table	Structure	30byte

S

```
typedef struct {
    float_type    point[7];
    unsigned      interp_pts_0_to_1  : 2;
    unsigned      interp_pts_1_to_2  : 2;
    unsigned      interp_pts_2_to_3  : 2;
    unsigned      interp_pts_3_to_4  : 2;
    unsigned      interp_pts_4_to_5  : 2;
    unsigned      interp_pts_5_to_6  : 2;
    unsigned      interp_pts_6_to_0  : 2;
} SNVT_trans_table;
```

There may be an unlimited number of table entries (up to the maximum number of configuration properties). A Translation Table Y2 value must be specified for each Translation Table X2 value. The default is manufacturer-defined. See SNVT\_trans\_table for the invalid value definition (3) for each bitfield.

---

## SCPTtrnsTblX3 (288)

### *Combination-Flow Characteristic Table X3*

This configuration property will be used in conjunction with the translation-table Y3 configuration property to create a translation table that dictates how to scale the flow with respect to the valve capacity.

SCPT Index	Measurement	Type Category	Type Size
288	SNVT_trans_table	Structure	30 byte

T

```
typedef struct {  
  
    float_type      point[7];  
    unsigned interp_pts_0_to_1 : 2;  
    unsigned interp_pts_1_to_2 : 2;  
    unsigned interp_pts_2_to_3 : 2;  
    unsigned interp_pts_3_to_4 : 2;  
    unsigned interp_pts_4_to_5 : 2;  
    unsigned interp_pts_5_to_6 : 2;  
    unsigned interp_pts_6_to_0 : 2;  
} SNVT_trans_table;
```

There may be an unlimited number of table entries (up to the maximum number of configuration properties). A Translation Table Y3 value must be specified for each Translation Table X3 value. The default is manufacturer-defined. See SNVT\_trans\_table for the invalid value definition (3) for each bitfield.

---

## SCPTtrnsTblY (29)

### *Translation Table Y*

This configuration property is used in conjunction with the Translation Table X configuration property to create a translation table that determines how to scale or linearize the raw input signal as received from a hardware device such as a sensor, or how to scale or linearize actuator movement with respect to an input network variable.

SCPT Index	Measurement	Type Category	Type Size
29	SNVT_trans_table	Structure	30 bytes

## Structure Definition

```
typedef struct {
    float_type    point[7];
    unsigned      interp_pts_0_to_1 : 2;
    unsigned      interp_pts_1_to_2 : 2;
    unsigned      interp_pts_2_to_3 : 2;
    unsigned      interp_pts_3_to_4 : 2;
    unsigned      interp_pts_4_to_5 : 2;
    unsigned      interp_pts_5_to_6 : 2;
    unsigned      interp_pts_6_to_0 : 2;
} SNVT_trans_table;
```

There may be an unlimited number of table entries (up to the maximum number of configuration properties). A Translation Table X value must be specified for each Translation Table Y value. The default is manufacturer-defined. See SNVT\_trans\_table for invalid value (3) in each bitfield.

---

## SCPTtrnsTblY2 (286)

### *Valve-Plug Characteristic Table Y2*

This configuration property will be used in conjunction with the translation-table X2 configuration property to create a translation table that dictates how to scale the flow with respect to the mechanical stroke.

SCPT Index	Measurement	Type Category	Type Size
286	SNVT_trans_table	Structure	30 byte

S

```
typedef struct {
    float_type    point[7];
    unsigned      interp_pts_0_to_1 : 2;
    unsigned      interp_pts_1_to_2 : 2;
    unsigned      interp_pts_2_to_3 : 2;
    unsigned      interp_pts_3_to_4 : 2;
    unsigned      interp_pts_4_to_5 : 2;
    unsigned      interp_pts_5_to_6 : 2;
    unsigned      interp_pts_6_to_0 : 2;
} SNVT_trans_table;
```

There may be an unlimited number of table entries (up to the maximum number of configuration properties). A Translation Table X2 value must be specified for each Translation Table Y2 value. The default is manufacturer-defined. See SNVT\_trans\_table for the invalid value definition (3) for each bitfield.

---

## SCPTtrnsTblY3 (289)

### *Combination-Flow Characteristic Table Y3*

This configuration property will be used in conjunction with the translation-table X3 configuration property to create a translation table that dictates how to scale the flow with respect to the valve capacity.

SCPT Index	Measurement	Type Category	Type Size
288	SNVT_trans_table	Structure	30 byte

S

```
typedef struct {  
    float_type    point[7];  
    unsigned      interp_pts_0_to_1 : 2;  
    unsigned      interp_pts_1_to_2 : 2;  
    unsigned      interp_pts_2_to_3 : 2;  
    unsigned      interp_pts_3_to_4 : 2;  
    unsigned      interp_pts_4_to_5 : 2;  
    unsigned      interp_pts_5_to_6 : 2;  
    unsigned      interp_pts_6_to_0 : 2;  
} SNVT_trans_table;
```

There may be an unlimited number of table entries (up to the maximum number of configuration properties). A Translation Table X3 value must be specified for each Translation Table Y3 value. The default is manufacturer-defined. See SNVT\_trans\_table for the invalid value definition (3) for each bitfield.

---

## SCPTupdateRate (98)

### *Time Stamp Update Rate*

This configuration property sets the update rate of a master clock output.

SCPT Index	Measurement	Type Category	Type Size
98	SNVT_time_sec	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 6,553.4	0.1	Seconds	65,535 (0xFFFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 65,534 (0 .. 0xFFFE)	1, -1, 0 $S = a * 10^b * (R + c)$	N/A	60 sec

---

## SCPTvalueDefinition (276)

### *Value Definition*

This configuration property is used to create an array of output values to be used for a schedule. A schedule time-value event specifies a value as an index into a SCPTvalueDefinition array. For example, a time-value event may specify a value of 1 at 0800 and a value of 0 at 1700. If a SCPTvalueDefinition array is declared that is called cpValueDef, the value to be produced by the scheduler at 0800 is specified by cpValueDef[1] and the value to be produced by the scheduler at 1700 is specified by cpValueDef[0].

SCPT Index	Measurement	Type Category	Type Size
276	SNVT_XXX	Inherited	Inherited

---

## SCPTvalueName (277)

### *Value Name*

This configuration property is used to create an array of value names for each of the values defined in a SCPTvalueDefinition array. For example, a SNVT\_switch value of “100.0 1” can be given a name of “On” and a value of “0.0 0” can be given a name of “Off.”

SCPT Index	Measurement	Type Category	Type Size
277	Name	Structure	22 bytes

## Structure Definition

```
typedef struct {  
    unsigned char    name[22];  
} SCPTvalueName;
```

The name field contains a nul-terminated string of up to 22 characters. The default value is a nul string (all zeroes). The NUL terminator is not required if the string is 22 characters. The name may include a reference to a string defined in a language file. The 0x80 value is reserved to delimit a language string reference. See *Language File String Reference* in the SNVT\_alarm\_2 definition for more details.

---

## SCPTvalveFlowCharacteristic (248)

### Valve Flow Characteristic

This configuration property sets the actual flow characteristic of the valve. This characteristic will build through the characteristic of the plug or ball and in the firmware implemented conversation table.

SCPT Index	Measurement	Type Category	Type Size
248	SNVT_dev_c_mode	Enumeration	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
20 .. 24	1	N/A	DCM_NUL
Raw Range	Scale Factors	File Name	Default Value
20 .. 24 (0x14 .. 0x18)	N/A	N/A	DCM_QUICK_OPEN (20)

---

## SCPTvalveOperatingMode (249)

### *Valve Operating Mode for Normal Operation*

This configuration property sets the normal working mode of a valve.

SCPT Index	Measurement	Type Category	Type Size
249	SNVT_valve_mode	Enumeration	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
SNVT_valve_mode	1	N/A	VALVE_NUL
Raw Range	Scale Factors	File Name	Default Value
SNVT_valve_mode	N/A	N/A	VALVE_NORMAL (0)

---

## SCPTvisOutput (143)

### *Visible Output*

This configuration property sets the visible output (strobe intensity) in candela (Cd). It contains the fire strobe output specification in Candelas (Cd) at a 0 Deg viewing angle. It is manufacturer-defined.

SCPT Index	Measurement	Type Category	Type Size
143	Visible Output	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 to 1000.0	0.1	Candelas (Cd)	6,553.5 (65,535 decimal; 0xFFFF)
Raw Range	Scale Factors	File Name	Default Value
0 to 10,000 (0 .. 0x2710)	1, -1, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	Manufacturer-defined

The valid type range and raw range may be further restricted based on target market and code jurisdiction.

---

## SCPTweeklySchedule (278)

### *Weekly Schedule*

This configuration property is a structure containing an active schedule for each day of the week.

SCPT Index	Measurement	Type Category	Type Size in Bytes
278	Weekly Schedule	Structure	7 bytes

```
typedef struct {
```



```

        unsigned long      schedule_index[7];
    } SCPTweeklySchedule;

```

**schedule\_index:** Array of indices into the SCPTschedule array. Each entry identifies a schedule that is to be active on the associated day of the week. The first entry (index 0) corresponds to Sunday, the second entry (index 1) to Monday, etc. This is in agreement with the days\_of\_week\_t Enumeration type in the SNVT\_DT.H file.

Field	Measurement	Field Type Category	Field Size
schedule_index	Schedule Index	Unsigned Long Array	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 65,534	1	N/A	65,535
Raw Range	Scale Factors	File Name	Default Value
0 .. 65,534 (0 .. 0xFFFE)	1, 0, 0 $S = a \cdot 10^b \cdot (R+c)$	N/A	65,535

---

## SCPTwinterTime (100)

### *Winter Time Start Date and Time*

This configuration property sets the start of wintertime for purposes of daylight-savings time. At the defined winter date the clock will decrease its time by one hour. Setting this table to all zeroes disables daylight savings time. Year, minutes, and seconds are ignored.

SCPT Index	Measurement	Type Category	Type Size
100	SNVT_time_stamp	Structure	7 bytes

### *Structure Definition*

```

typedef struct {
    signed long      year;
    unsigned short   month;
    unsigned short   day;
    unsigned short   hour;
    unsigned short   minute;
    unsigned short   second;
} SNVT_time_stamp;

```

The valid range for this configuration property is 1 January 0 hours, to 31 December 23 hours. Year, minutes, and seconds should be set to zero. The default value is a manufacturer-specific.

---

## SCPTvalveStroke (280)

### *Valve Stroke*

This configuration property can be used to provide the stroke to fully open the valve.

SCPT Index	Measurement	Type Category	Type Size
280	SNVT_length_mil	Unsigned Long	2 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0..6533.5mm	0.1	Millimeters (mm)	N/A
Raw Range	Scale Factors	File Name	Default Value
0..65,535 (0 .. 0xFFFF)	1, -1, 0 $S = a * 10^b * (R+c)$	N/A	0

---

## SCPTvalveNominalSize (281)

### *Nominal Valve Size*

This configuration property can be used to provide the nominal size of the valve body

SCPT Index	Measurement	Type Category	Type Size
281	SNVT_length_mil	Unsigned Long	2 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0..6533.5mm	0.1	Millimeters (mm)	N/A
Raw Range	Scale Factors	File Name	Default Value
0..65,535 (0 .. 0xFFFF)	1, -1, 0 $S = a * 10^b * (R+c)$	N/A	0

---

## SCPTvalveKvs (282)

### *Valve Flow*

This configuration property can be used to provide the flow through an open valve at 1 bar differential pressure.

SCPT Index	Measurement	Type Category	Type Size
282	SNVT_flow_p	Unsigned Long	2 byte
Valid Type Range	Type Resolution	Units	Invalid Value
0 ... 655.34 m <sup>3</sup> /Hour	0.01	m <sup>3</sup> /Hour	N/A
Raw Range	Scale Factors	File Name	Default Value
0 .. 65,534 (0 .. 0xFFFE)	1, -2, 0 $S = a * 10^b * (R + c)$	N/A	0

---

## SCPTvalveType (283)

### *Valve Type*

This configuration property can be used to provide the valve type.

SCPT Index	Measurement	Type Category	Type Size
283	SNVT_dev_c_mode	Enumeration	1 byte
Valid Type Range	Type Resolution	Units	Invalid Value
SNVT_dev_c_mode	1	N/A	DCM_NUL
Raw Range	Scale Factors	File Name	Default Value
SNVT_dev_c_mode	N/A	N/A	DCM_SPEED_CONST

---

## SCPTzoneNum (141)

### *Zone Number*

This configuration property sets the zone number for a device.

SCPT Index	Measurement	Type Category	Type Size
141	Zone Number	Unsigned Long	2 bytes
Valid Type Range	Type Resolution	Units	Invalid Value
0 .. 65,534	1	N/A	65,535 (0xFFFF)
Raw Range	Scale Factors	File Name	Default Value
0 .. 65,534 (0 .. 0xFFFE)	1, 0, 0 $S = a * 10^b * (R + c)$	N/A	Manufacturer-defined

