

Climatix™
LON communication with POL906.00
SNVTs for standard IV Produkt
EHP application v3.02.xx



Air handling with the focus on LCC

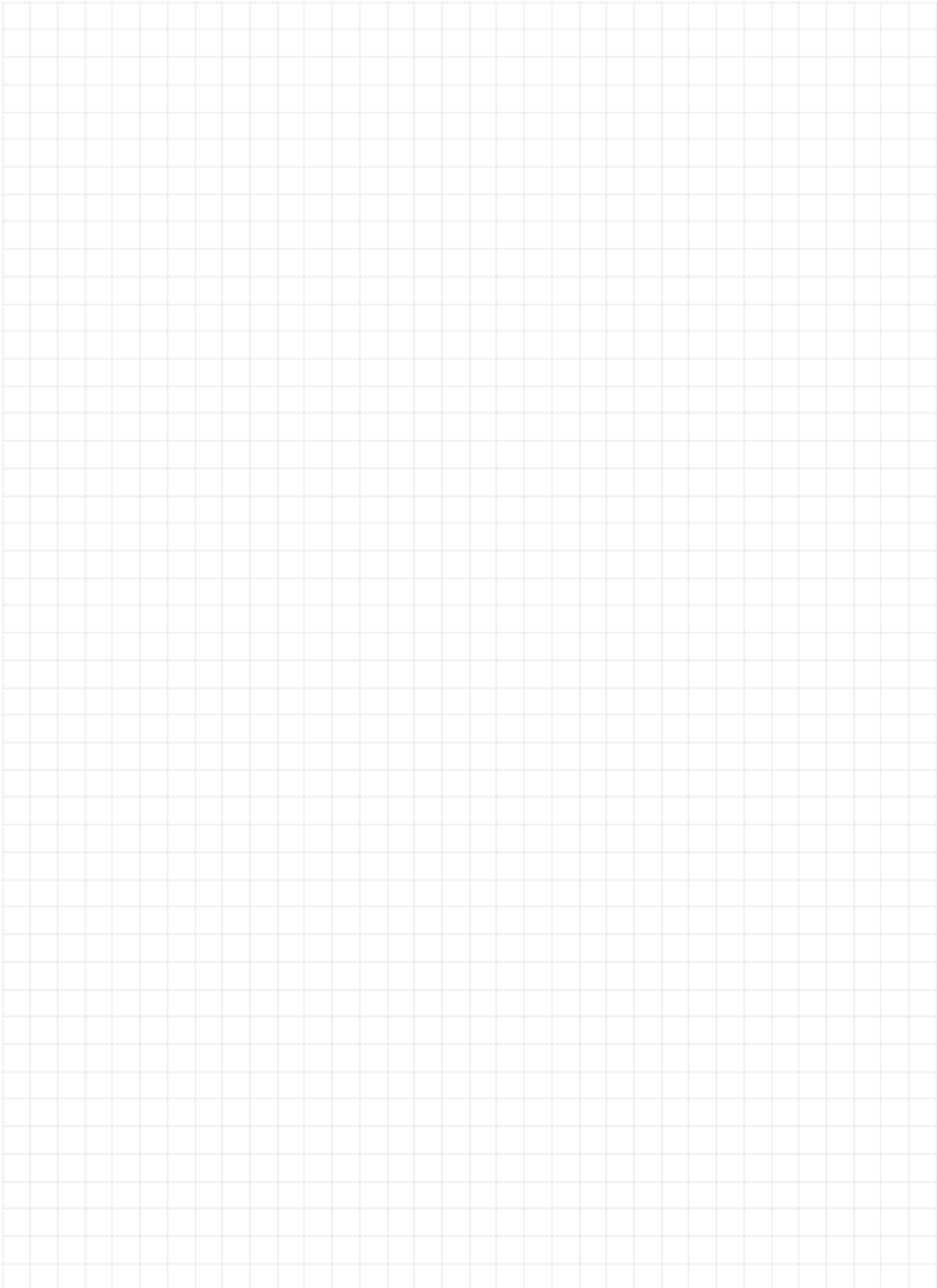
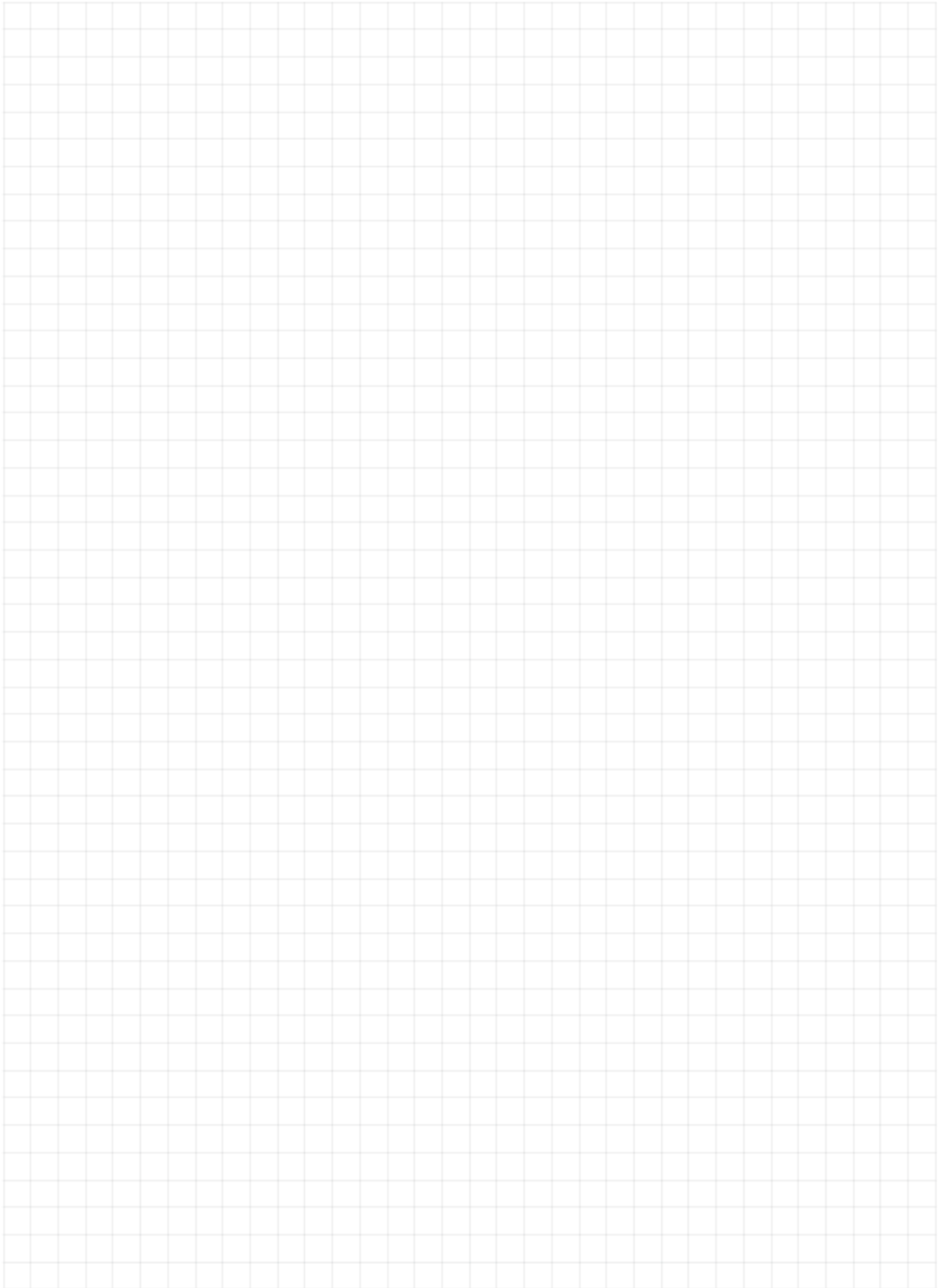


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1 About this document

1.1 Revision history

Version	Date	Changes
.01	2013-06-19	First edition

1.2 Before you start

Validity

This document applies to the following product:

Name	Type (ASN)	Version
IVP EHP application	POL63x.00	v3.02.xx
LON image POL63X.00_EHP_v3.02.xx (Climatix EHP)		1.00



This document is a supplement to the general integration guide:

"LON communication with POL906.00"^{*)}

^{*)} POL906.00: Climatix LON communication module

That document must be read first and all general information such as document conventions, important information on safety, trademarks, copyright etc. are valid for this document as well.



This document only contains the unique information for the product mentioned above. All general engineering information such as mounting modules, communication settings etc. are described in the integration guide.

Prerequisite

User has read the general LON integration guide for Climatix, CB1J3964en.

1.3 Reference documents

Further information

The following documents contain additional information on the products described in this manual:

Document	Order no.
Data sheet "Communication module LON"	CB1Q3931en
Basic documentation "LON communication module"	CB1P3931en
Integration Guide "LON communication with POL906.00"	CB1J3964en

2 Application

2.1 General information

What are standard applications?

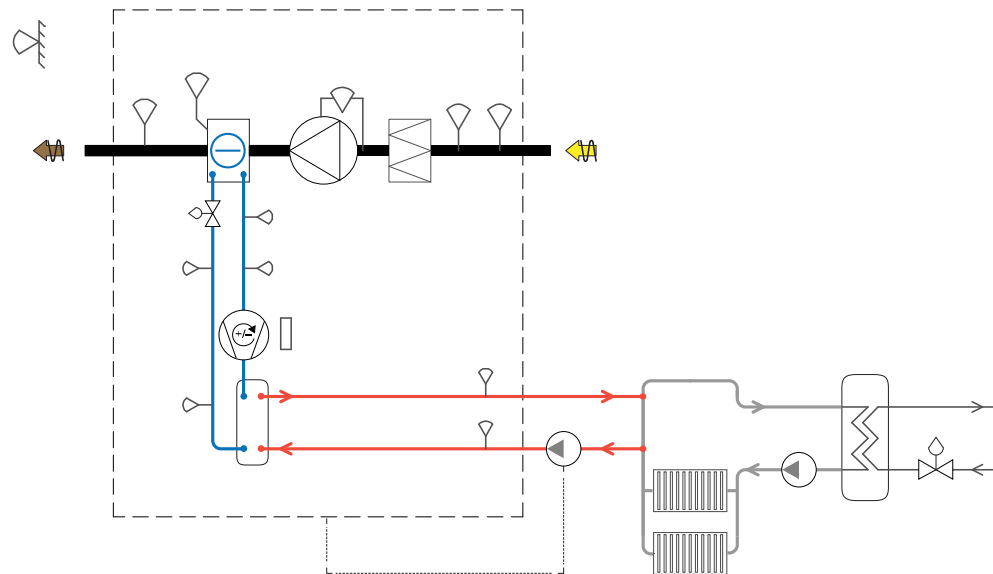
Standard applications for Climatix comprise predefined monitoring and control functions for a particular plant type.

Features:

- OEM customers receive standard applications as a set of loadable files. They can be loaded in the controller via SD card.
- An HMI operator unit allows for assigning inputs and outputs to the respective plant as well as select, configure and parameterize the required functions.

Standard application EHP v3.02.xx

Standard application EHP v3.02.xx is available at this time. It contains all common functions to control and monitor air conditioning units (**Extract Heat Pump**). The following diagram provides an overview of selectable measured values and control equipment:



Detailed information

-

Network variables

The set of loadable files mentioned above also includes a mapping file for integration in a higher building automation and control system via communications module. The Climatix controller automatically assumes the network variables required for integration as per the plant data points and functions configured and parameterized previously.

The following tables list all network variables as per the overview in Section 3.1.

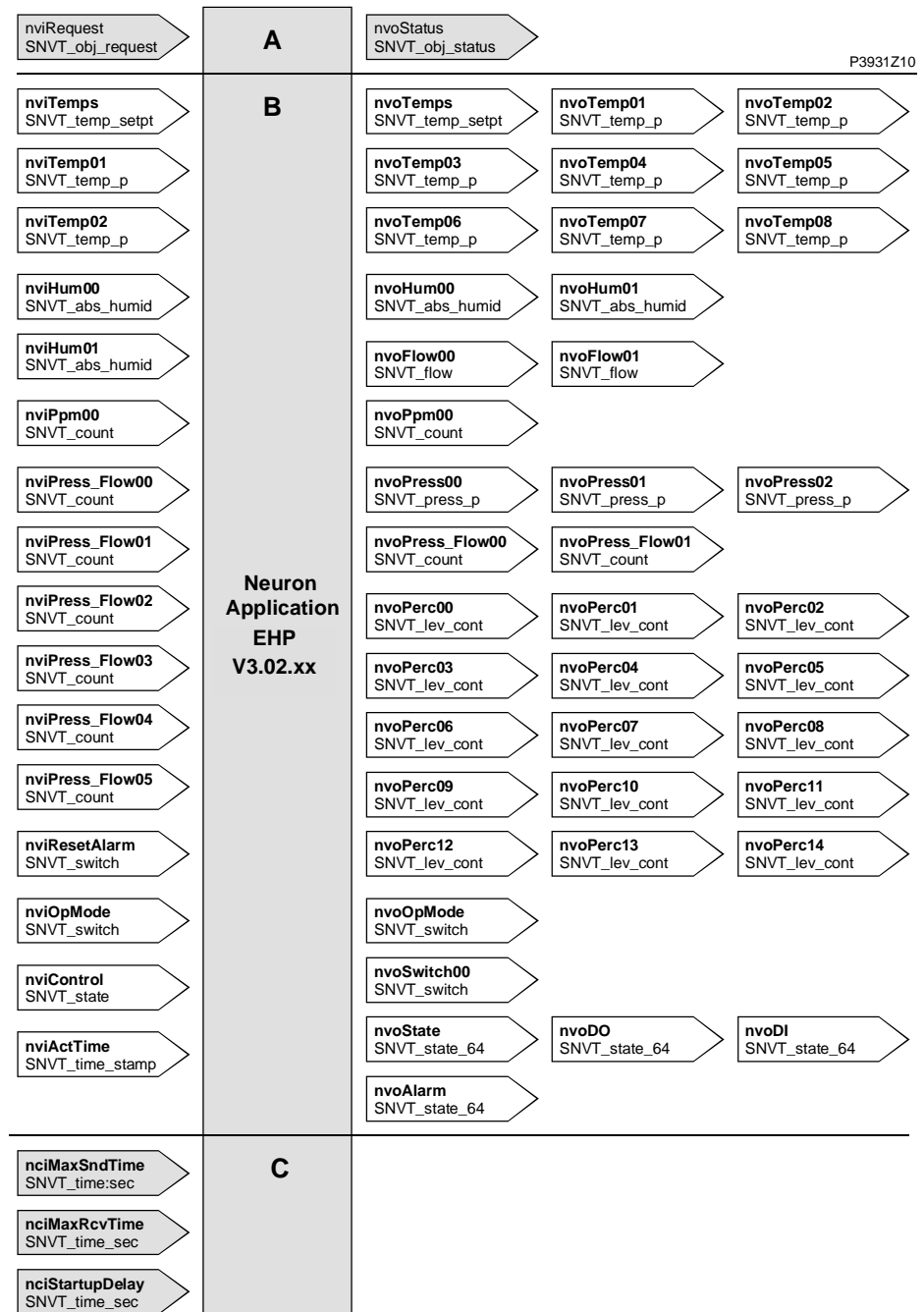
3 Network variables

3.1 Overview

Contents of LON image set EHP v3.02.xx

The LON module's Neuron application supports 62 network variables to integrate controllers with air handling applications in a management station, and allow controllers to exchange data over LON. The figure shows the variables for LON image set (XIF) POL906.00_EHP_v3.02.xx (Climatix EHP V1.0) and their SNVTs, grouped as follows:

- Mandatory network variables (A)
- Optional network variables (B)
- Configuration parameters (C)



The sections below describe the network variables.

3.2 General

Purpose

The following sections describe the network variables used in the specific application and LON image (XIF), see Section 1.2 "Before you start".

SNVT handling

Pay attention to the following explanations concerning some specific characteristics of SNVTs and elements used:

SNVT / Element	Explanation
Heartbeat	All output (nvo) SNVTs send heartbeat. No SNVTs requires heartbeat from the network. All input (nvi) SNVTs write back changed values, from the controller, to the Neuron, means that a setpoint could be set from both the controller and the network, depending on BMS system.
Min Send time	Some output (nvo) SNVTs use the "Min send time". Means that this SNVT have fastest send interval of x seconds.
SNVT_state	Climatix are using SNVT_state binary counted from left to right and due to that some LON devices counts from right. In this case it is necessary to invert the bits, Bit0=Bit15, Bit1=Bit14....
SNVT_switch	The state part for SNVT_switch must be set to 1 (Active) to use the value part.
SNVT_temp_setpt	The SNVT_temp_setpt is used for different temperature set points and to show the actual set points, and it could be different set points than named within the SNVT due to these names are fixed. Example is the first value "occupied cool" used for Basic heating set point instead. See further in this document.

Override I/Os

Inputs that are possible to override via LON is marked with (I/O), these must first be setup to be overridden via communication, see Integration guide.

SNVT info

The following tables briefly describe each variable used and it's SNVT. Thereby the "NV index" presents the network variable number in the XIF file (LON image).

Refer to 4.1 "Description of SNVTs" for more information on the SNVTs.

3.3 Mandatory variables

Introduction

Two of the network variables supported by the LON module's Neuron application are mandatory. They are needed for system purposes: The two variables are:

- nviRequest
- nvoStatus

Input variable

Requires a particular mode for a specific object in a device.

nviRequest

Network Name:	nviRequest
Description:	Object request
Type:	SNVT_obj_request
NV index:	0
Remarks:	

Output variable

Signals the status of the requested object in the device.

nvoStatus

Network Name:	nvoStatus
Description:	Object status
Type:	SNVT_obj_status
NV index:	1
Remarks:	

3.4 Optional input variables

Introduction

The LON module's Neuron application supports 62 network variables. 56 of these are optional. The following tables briefly describe each variable and its SNVT. The network variable tables are listed by:

- Input variables (23)
- Output variables (33)

Input variables

Inputs variables sorted according to the overview of Section 3.1:

nviTemps

Network Name:	nviTemps	Names in SNVT
Description:	<ul style="list-style-type: none"> • Heatpump setpoint Y2 • Heatpump setpoint Y3 • Heatpump setpoint Y4 • Heatpump setpoint Y5 • Heatpump setpoint Y6 • --- 	<ul style="list-style-type: none"> • Water Temp SetpointY2 • Water Temp SetpointY3 • Water Temp SetpointY4 • Water Temp SetpointY5 • Water Temp SetpointY6 • --Not used--
Type:	SNVT_temp_setpt	
NV index:	14	
Remarks:	Structured setpoint variable for 6 temperature setpoints. Heatpump, Heat Curve. Water Setpoint only.	

nviTemp01

Network Name:	nviTemp01
Description:	Not used
Type:	SNVT_temp_p
NV index:	15
Remarks:	

nviTemp02

Network Name:	nviTemp02
Description:	Outside air temperature
Type:	SNVT_temp_p
NV index:	16
Remarks:	(I/O)

nviHum00

Network Name:	nviHum00
Description:	Not used
Type:	SNVT_abs_humid
NV index:	8
Remarks:	-----

nviHum01

Network Name:	nviHum01
Description:	Not used
Type:	SNVT_abs_humid
NV index:	9
Remarks:	-----

Optional input variables, *continued*

nviPpm00

Network Name:	nviPpm00
Description:	Not used
Type:	SNVT_count
NV index:	10
Remarks:	

nviPress_Flow00

Network Name:	nviPress_Flow00
Description:	Exhaust fan step 1 setpoint
Type:	SNVT_count
NV index:	2
Remarks:	For Pressure, Flow and %, depending on configuration. (max 32766 Pa or l/sec)

nviPress_Flow01

Network Name:	nviPress_Flow01
Description:	Exhaust fan step 2 setpoint
Type:	SNVT_count
NV index:	3
Remarks:	For Pressure, Flow and %, depending on configuration. (max 32766 Pa or l/sec)

nviPress_Flow02

Network Name:	nviPress_Flow02
Description:	Exhaust fan step 3 setpoint
Type:	SNVT_count
NV index:	4
Remarks:	For Pressure, Flow and %, depending on configuration. (max 32766 Pa or l/sec)

nviPress_Flow03

Network Name:	nviPress_Flow03
Description:	Not used
Type:	SNVT_count
NV index:	5
Remarks:	-----

nviPress_Flow04

Network Name:	nviPress_Flow04
Description:	Not used
Type:	SNVT_count
NV index:	6
Remarks:	-----

nviPress_Flow05

Network Name:	nviPress_Flow05
Description:	Not used
Type:	SNVT_count
NV index:	7
Remarks:	-----

Optional input variables, *continued*

nviResetAlarm

Network Name:	nviResetAlarm	
Description:	Reset/Acknowledge alarms	
Type:	SNVT_switch	
NV index:	11	
Values:	0	Normal
	1	ResetA/Acknowledge
	> 1	Not defined
State:	0: Inactive	
	1: Active	
Default:	Value: 0	
	State : 0	
Remarks:	State part must be set to 1 to use the value part.	

nviOpMode

Network Name:	nviOpMode	
Description:	BMS control/override time switch program	
Type:	SNVT_switch	
NV index:	12	
Values:	0	Auto, internal time scheduler
	1	Stop mode
		Steps
State:	0: Inactive	
	1: Active	
Default:	Value: 0	
	State : 0	
Remarks:	State part must be set to 1 to use the value part.	
	Value part depending on configuration.	

Optional input variables, *continued*

nviControl

Network Name:	nviControl		
Description:	Control signals		
Type:	SNVT_state (16 bit)		
NV index:	13		
Bits:	Bit [0 ...15]	Binary:	* Reverse:
	- Emergency stop input (I/O)	0	15
	- External control input 1 (I/O)	1	14
	- External control input 2 (I/O)	2	13
	- Summer/winter changeover switch (I/O)	3	12
	-	4	11
	-	5	10
	-	6	9
	- Fire alarm input (I/O)	7	8
	-	8	7
	-	9	6
	-	10	5
	-	11	4
	-	12	3
	-	13	2
	-	14	1
	- Communicationtest puls	15	0
Remarks:	* On some LON tools the bits are named in the other direction, so take care		

nviActTime

Network Name:	nviActTime
Description:	System clock
Type:	SNVT_time_stamp
NV index:	57
Remarks:	

3.5 Optional output variables

Output variables

Output variables sorted according to the overview on Section 3.1:

nvoTemps

Network Name:	nvoTemps	Names in SNVT
Description:	<ul style="list-style-type: none"> Actual heating setpoint, Heatpump, Curve 	<ul style="list-style-type: none"> HeatCurve Act SetP. (COV 1.0)
Type:	SNVT_temp_setpt	
NV index:	40	
Remarks:	Actual set point from Heat curve.	

nvoTemp01

Network Name:	nvoTemp01
Description:	Aux temperature
Type:	SNVT_temp_p
NV index:	41
Remarks:	

nvoTemp02

Network Name:	nvoTemp02
Description:	Return Air temperature
Type:	SNVT_temp_p
NV index:	42
Remarks:	

nvoTemp03

Network Name:	nvoTemp03
Description:	Outside air temperature
Type:	SNVT_temp_p
NV index:	43
Remarks:	Uses Min Send time

nvoTemp04

Network Name:	nvoTemp04
Description:	Exhaust temperature
Type:	SNVT_temp_p
NV index:	44
Remarks:	Depending on configuration

nvoTemp05

Network Name:	nvoTemp05	(Controlled temp)
Description:	Heatpump Flow temperature	
Type:	SNVT_temp_p	
NV index:	45	
Remarks:		

Optional output variables, *continued*

nvoTemp06

Network Name:	nvoTemp06
Description:	Heatpump outgoing temperature
Type:	SNVT_temp_p
NV index:	46
Remarks:	

nvoTemp07

Network Name:	nvoTemp07
Description:	Heat recovery water temperature
Type:	SNVT_temp_p
NV index:	47
Remarks:	

nvoTemp08

Network Name:	nvoTemp08
Description:	Heatpump return temperature
Type:	SNVT_temp_p
NV index:	48
Remarks:	

nvoPpm00

Network Name:	nvoPpm00
Description:	Not used
Type:	SNVT_count
NV index:	49
Remarks:	COV 1.0

nvoPress00

Network Name:	nvoPress00	
Description:	Exhaust air pressure	Pa
Type:	SNVT_press_p	
NV index:	19	
Remarks:	COV 5.0	

nvoPress01

Network Name:	nvoPress01	
Description:	Exhaust filter pressure	Pa
Type:	SNVT_press_p	
NV index:	20	
Remarks:	COV 5.0	

nvoPress02

Network Name:	nvoPress02	
Description:	Not used	Pa
Type:	SNVT_press_p	
NV index:	21	
Remarks:	COV 5.0	

Optional output variables, *continued*

nvoPress_Flow00

Network Name:	nvoPress_Flow00
Description:	Actual exhaust fan setpoint
Type:	SNVT_count
NV index:	22
Remarks:	%, Pa or l/sec depending on configuration COV 1.0

nvoPress_Flow01

Network Name:	nvoPress_Flow01
Description:	Not used
Type:	SNVT_count
NV index:	23
Remarks:	%, Pa or l/sec depending on configuration COV 1.0

nvoFlow00

Network Name:	nvoFlow00
Description:	Exhaust air flow l/sec
Type:	SNVT_flow
NV index:	17
Remarks:	COV 10.0

nvoFlow01

Network Name:	nvoFlow01
Description:	Not used l/sec
Type:	SNVT_flow
NV index:	18
Remarks:	COV 10.0

nvoPerc00

Network Name:	nvoPerc00
Description:	Exhaus Fan output signal
Type:	SNVT_lev_cont
NV index:	24
Remarks:	COV 1.0

nvoPerc01

Network Name:	nvoPerc01
Description:	Heatpump output signal
Type:	SNVT_lev_cont
NV index:	25
Remarks:	COV 1.0

nvoPerc02

Network Name:	nvoPerc02
Description:	Aux output signal, Fan
Type:	SNVT_lev_cont
NV index:	26
Remarks:	COV 1.0

Optional output variables, *continued*

nvoPerc03

Network Name:	nvoPerc03
Description:	Aux TempControl output signal
Type:	SNVT_lev_cont
NV index:	27
Remarks:	COV 1.0

nvoPerc04

Network Name:	nvoPerc04
Description:	Not used
Type:	SNVT_lev_cont
NV index:	28
Remarks:	COV 1.0

nvoPerc05

Network Name:	nvoPerc05
Description:	Not used
Type:	SNVT_lev_cont
NV index:	29
Remarks:	COV 1.0

nvoPerc06

Network Name:	nvoPerc06
Description:	Not used
Type:	SNVT_lev_cont
NV index:	30
Remarks:	COV 1.0

nvoPerc07

Network Name:	nvoPerc07
Description:	Not used
Type:	SNVT_lev_cont
NV index:	31
Remarks:	COV 1.0

nvoPerc08

Network Name:	nvoPerc08
Description:	Not used
Type:	SNVT_lev_cont
NV index:	32
Remarks:	COV 1.0

nvoPerc09

Network Name:	nvoPerc09
Description:	Not used
Type:	SNVT_lev_cont
NV index:	33
Remarks:	COV 1.0

Optional output variables, *continued*

nvoPerc10

Network Name:	nvoPerc10
Description:	Not used
Type:	SNVT_lev_cont
NV index:	34
Remarks:	COV 1.0

nvoPerc11

Network Name:	nvoPerc11
Description:	Not used
Type:	SNVT_lev_cont
NV index:	35
Remarks:	COV 1.0

nvoPerc12

Network Name:	nvoPerc12
Description:	Not used
Type:	SNVT_lev_cont
NV index:	36
Remarks:	COV 1.0

nvoPerc13

Network Name:	nvoPerc13
Description:	Not used
Type:	SNVT_lev_cont
NV index:	37
Remarks:	COV 1.0

nvoPerc14

Network Name:	nvoPerc14
Description:	Not used
Type:	SNVT_lev_cont
NV index:	38
Remarks:	COV 1.0

nvoHum00

Network Name:	nvoHum00
Description:	Not used
Type:	SNVT_abs_humid
NV index:	51
Remarks:	COV 1.0

nvoHum01

Network Name:	nvoHum01
Description:	Not used
Type:	SNVT_abs_humid
NV index:	52
Remarks:	COV 1.0

Optional output variables, *continued*

nvoOpMode

Network Name:	nvoOpMode																												
Description:	Actual operating mode																												
Type:	SNVT_switch																												
NV index:	50																												
Values:	<table border="0"> <tr><td>0</td><td>Off</td></tr> <tr><td>1</td><td>On</td></tr> <tr><td>2</td><td>Not used</td></tr> <tr><td>3</td><td>Not used</td></tr> <tr><td>4</td><td>Not used</td></tr> <tr><td>5</td><td>Not used</td></tr> <tr><td>6</td><td>Not used</td></tr> <tr><td>7</td><td>Not used</td></tr> <tr><td>8</td><td>Firedamper test</td></tr> <tr><td>9</td><td>Fire</td></tr> <tr><td>10</td><td>Stop</td></tr> <tr><td>11</td><td>Overrun</td></tr> <tr><td>12</td><td>Startup</td></tr> <tr><td>> 12</td><td>Not defined</td></tr> </table>	0	Off	1	On	2	Not used	3	Not used	4	Not used	5	Not used	6	Not used	7	Not used	8	Firedamper test	9	Fire	10	Stop	11	Overrun	12	Startup	> 12	Not defined
0	Off																												
1	On																												
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12	Startup																												
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State:	<table border="0"> <tr><td>0</td><td>:Inactive</td><td>:Value = 0</td></tr> <tr><td>1</td><td>:Active</td><td>:Value > 0</td></tr> </table>	0	:Inactive	:Value = 0	1	:Active	:Value > 0																						
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Default:	<table border="0"> <tr><td>Value</td><td>: 0</td></tr> <tr><td>State</td><td>: 0</td></tr> </table>	Value	: 0	State	: 0																								
Value	: 0																												
State	: 0																												
Remarks:																													

nvoSwitch00

Network Name:	nvoSwitch00										
Description:	Actual fan step										
Type:	SNVT_switch										
NV index:	39										
Values:	<table border="0"> <tr><td>0</td><td>OFF</td></tr> <tr><td>1</td><td>Step 1</td></tr> <tr><td>2</td><td>Step 2</td></tr> <tr><td>3</td><td>Step 3</td></tr> <tr><td>> 3</td><td>Not defined</td></tr> </table>	0	OFF	1	Step 1	2	Step 2	3	Step 3	> 3	Not defined
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2	Step 2										
3	Step 3										
> 3	Not defined										
State:	<table border="0"> <tr><td>0</td><td>:Inactive</td><td>:Value = 0</td></tr> <tr><td>1</td><td>:Active</td><td>:Value > 0</td></tr> </table>	0	:Inactive	:Value = 0	1	:Active	:Value > 0				
0	:Inactive	:Value = 0									
1	:Active	:Value > 0									
Default:	<table border="0"> <tr><td>Value</td><td>: 0</td></tr> <tr><td>State</td><td>: 0</td></tr> </table>	Value	: 0	State	: 0						
Value	: 0										
State	: 0										
Remarks:											

Optional output variables, *continued*

nvoState

Network Name:	nvoState		
Description:	General status		
Type:	SNVT_state_64 (64 bit)		
NV index:	55		
Bits	Bit [0 ... 63]	Binary:	* Reverse:
	- Alarm class danger (A)	0	63
	- Alarm class critical (A)	1	62
	- Alarm class low (B)	2	61
	- Alarm class warning (C)	3	60
	-	4	59
	- Manual control active	5	58
	- Summer mode	6	57
	- Communicationtest puls	7	56
	-	8	55
	- Preheating, heating 2 (extra) register	9	54
	-	10	53
	-	11	52
	-	12	51
	-	13	50
	-	14	49
	-	15	48
	-	16	47
	-	17	46
	-	18	45
	-	19	44
	-	20	43
	-	21	42
	-	22	41
	-	23	40
	-	24	39
	-	25	38
	-	26	37
	-	27	36
	-	28	35
	-	29	34
	-	30	33
	-	31	32
	-	32	31
	-	33	30
	-	34	29
	-	35	28
	-	36	27
	-	37	26
	-	38	25
	-	39	24
	-	40	23
Remarks:	* On some LON tools the bits are named in the other direction, so take care		

Optional output variables, *continued*

nvoState, *cont.*

Network Name:	nvoState		
Description:	Bit array for general status		
Type:	SNVT_state_64 (64 bit)		
NV index:	55		
Bits	Bit [0 ... 63]	Binary:	* Reverse:
		41	22
		42	21
		43	20
		44	19
		45	18
		46	17
		47	16
		48	15
		49	14
		50	13
		51	12
		52	11
		53	10
		54	9
		55	8
		56	7
		57	6
		58	5
		59	4
		60	3
		61	2
		62	1
		63	0
Remarks:	* On some LON tools the bits are named in the other direction, so take care		

Optional output variables, *continued*

nvoDO

Network Name:	nvoDO		
Description:	All digital outputs		
Type:	SNVT_state_64 (64 bit)		
NV index:	54		
Bits:	Bit [0 ... 63]	Binary:	* Reverse:
	-	0	63
	- Extract damper	1	62
	- Fire damper	2	61
	-Fire damper2	3	60
	-	4	59
	-	5	58
	-	6	57
	-	7	56
	-	8	55
	- Exhaust fan, running	9	54
	- Exhaust fan, off	10	53
	- Exhaust fan, stage 1	11	52
	- Exhaust fan, stage 2	12	51
	- Exhaust fan, stage 3	13	50
	-	14	49
	-	15	48
	-	16	47
	-	17	46
	-	18	45
	-	19	44
	-	20	43
	-	21	42
	-	22	41
	-	23	40
	-	24	39
	-	25	38
	-	26	37
	-	27	36
	-	28	35
	-	29	34
	-	30	33
	-	31	32
	-	32	31
	-	33	30
	-	34	29
	-	35	28
	-	36	27
	-	37	26
	- Heatpump	38	25
	-	39	24
	-	40	23
Remarks:	* On some LON tools the bits are named in the other direction, so take care		

Optional output variables, *continued*

nvoDO, *cont.*

Network Name:	nvoDO		
Description:	All digital outputs		
Type:	SNVT_state_64 (64 bit)		
NV index:	54		
Bits:	Bit [0 ... 63]	Binary:	* Reverse:
	-	41	22
	-	42	21
	-	43	20
	-	44	19
	-	45	18
	-	46	17
	-	47	16
	- Aux TSP command	48	15
	- Aux operation mode indication	49	14
	- Aux operation mode indication2	50	13
	-	51	12
	-	52	11
	-	53	10
	-	54	9
	-	55	8
	- Alarm output, high	56	7
	- Alarm output, low	57	6
	-	58	5
		59	4
		60	3
		61	2
		62	1
		63	0
Remarks:	* On some LON tools the bits are named in the other direction, so take care		

Optional output variables, *continued*

nvoDI

Network Name:	nvoDI		
Description:	All digital inputs		
Type:	SNVT_state_64 (64 bit)		
NV index:	53		
Bits:	Bit [0 ... 63]	Binary:	* Reverse:
	- Emergency stop	0	63
	- External control 1	1	62
	- External control 2	2	61
	- Summer/winter changeover	3	60
	- Alarm acknowledge	4	59
	- Heatpump, pump indication	5	58
	-	6	57
	-	7	56
	- Aux input	8	55
	-	9	54
	-	10	53
	-	11	52
	-	12	51
	-	13	50
	-	14	49
	-	15	48
	- Dampers open	16	47
	- Fire dampers open	17	46
	- Fire dampers closed	18	45
	-	19	44
	-	20	43
	- Exhaust fan feedback	21	42
	-	22	41
	-	23	40
	-	24	39
	-	25	38
	-	26	37
	- Fire dampers 2 open	27	36
	- Fire dampers 2 closed	28	35
		29	34
		30	33
		31	32
		32	31
		33	30
		34	29
		35	28
		36	27
		37	26
		38	25
		39	24
		40	23
Remarks:	* On some LON tools the bits are named in the other direction, so take care		

Optional output variables, *continued*

nvoDI, *cont.*

Network Name:	nvoDI		
Description:	All digital inputs		
Type:	SNVT_state_64 (64 bit)		
NV index:	53		
Bits:	Bit [0 ... 63]	Binary:	* Reverse:
		41	22
		42	21
		43	20
		44	19
		45	18
		46	17
		47	16
		48	15
		49	14
		50	13
		51	12
		52	11
		53	10
		54	9
		55	8
		56	7
		57	6
		58	5
		59	4
		60	3
		61	2
		62	1
		63	0
Remarks:	* On some LON tools the bits are named in the other direction, so take care		

Optional output variables, *continued*

nvoAlarm

Network Name:	nvoAlarm		
Description:	All alarms		
Type:	SNVT_state_64 (64 bit)		
NV index:	56		
Bits:	Bit [0 ... 63]	Binary:	* Reverse:
	- Dampers	0	63
	- Fire dampers	1	62
	- Fire dampers 2	2	61
	-	3	60
	- Exhaust fan	4	59
	- Fan operating hours	5	58
	-	6	57
	-	7	56
	-	8	55
	-	9	54
	-	10	53
	-	11	52
	-	12	51
	-	13	50
	-	14	49
	-	15	48
	- Heat pump	16	47
	-	17	46
	-	18	45
	-	19	44
	-	20	43
	-	21	42
	-	22	41
	-	23	40
	-	24	39
	-	25	38
	-	26	37
	-	27	36
	-	28	35
	- Fire alarm	29	34
	-	30	33
	- Filter alarm	31	32
	- Out temperature	32	31
	-	33	30
	-	34	29
	-	35	28
	-	36	27
	- Exhaust temperature (return)	37	26
	- Extract temperature	38	25
	-	39	24
	-	40	23
Remarks:	* On some LON tools the bits are named in the other direction, so take care		

Optional output variables, *continued*

nvoAlarm, *cont.*

Network Name:	nvoAlarm		
Description:	All alarms		
Type:	SNVT_state_64 (64 bit)		
NV index:	56		
Bits:	Bit [0 ... 63]	Binary:	* Reverse:
	- Heatpump water supply temperature	41	22
	- Heatpump water outgoing temperature	42	21
	- Auxiliary temperature	43	20
	- Heatpump water return temperature	44	19
	-	45	18
	-	46	17
	-	47	16
	-	48	15
	- Exhaust pressure/flow deviation	49	14
	-	50	13
	-	51	12
	-	52	11
	-	53	10
	-	54	9
	-	55	8
	-	56	7
	- External setpoint	57	6
	- Auxiliary alarm	58	5
	- Auxiliary alarm 1-5	59	4
	- Manual control	60	3
	-	61	2
	- Communication test	62	1
	- Modbus master	63	0
Remarks:	* On some LON tools the bits are named in the other direction, so take care		

3.6 Configuration parameters

Introduction

The LON module's Neuron application supports 62 network variables. 4 of these must be used as configuration parameters as described below.

nciMaxSndTime

Network Name:	nciMaxSndTime
Description:	Send heartbeat Max. time an output variable has to be sent even if there hasn't changed anything.
Type:	SNVT_time_sec
NV index:	58
Remarks:	

nciMaxRcvTime

Network Name:	nciMaxRcvTime
Description:	Receive heartbeat Max. time an input variable has to be received. If it wasn't received during this time the value of this input variable is invalid.
Type:	SNVT_time_sec
NV index:	59
Remarks:	

nciStartupDelay

Network Name:	nciStartupDelay
Description:	
Type:	SNVT_time_sec
NV index:	60
Remarks:	

4 Appendix

4.1 Description of SNVTs

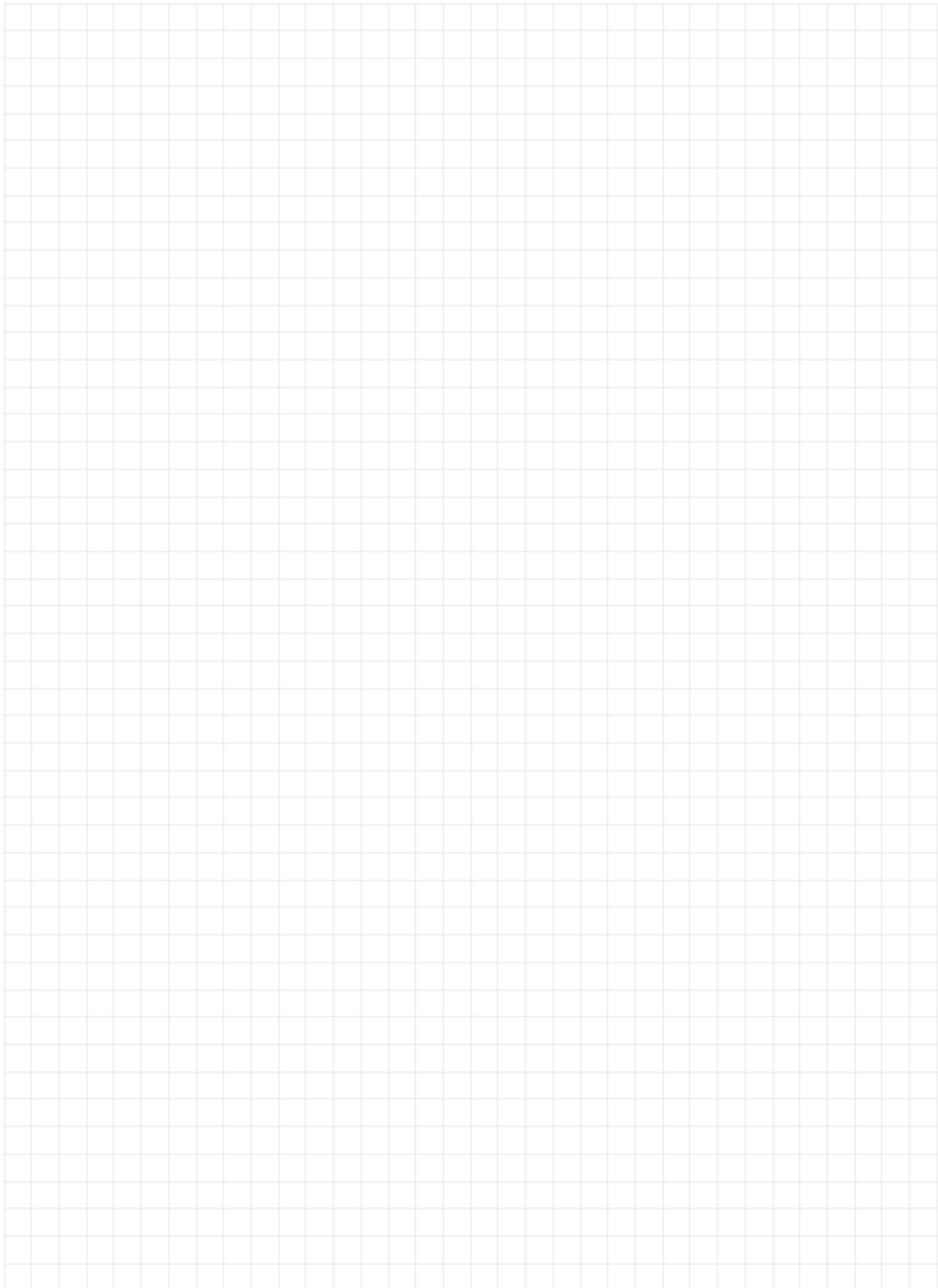


You can find current descriptions of SNVTs (Standard Network Variable Types) used in set Climatix EHP v3.02.xx per Section 2.1, on the homepage of "LonMark International" at:

<http://types.lonmark.org/index.html>

"LONMARK Resource Files, version XX.XX"





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