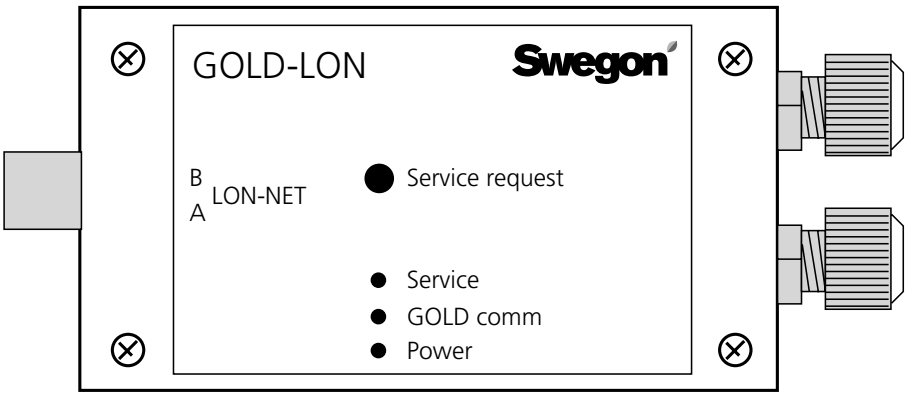
FUNCTIONAL PROFILE:
GOLD-LON interface TBLZ-2-1-1-41, Version 1.0
GOLD Sizes 11-32, Version B (as from Program Version 1.09)



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General

This document describes the profile at the GOLD-LON interface.

The LON interface is a separate communication unit that solely transfers data to and from the control system in the GOLD air handling unit.

This edition of the GOLD-LON interface should be used for monitoring GOLD units sizes 4-5 ver. 3, GOLD units sizes 1-5 ver. 4 and GOLD units sizes 11-32 ver. A across a LON bus.
It is not possible to override the physical inputs of the GOLD air handling unit, only monitor them across the LON bus.

The temperature and air flow set points can be adjusted across the LON network. The functions in the GOLD control system can be adjusted, enabled or disabled. The integrated switching clock can also be set to the current time.

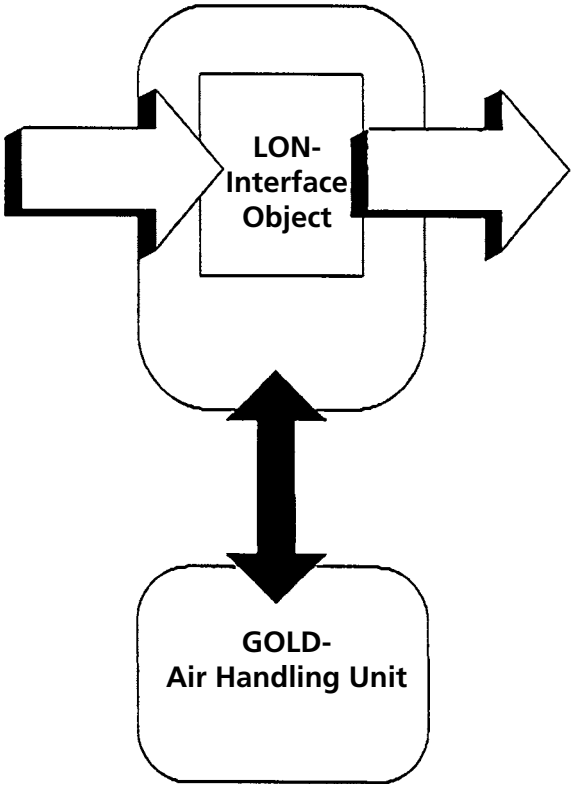
The interface is normally equipped with a Transceiver for **Twisted Pair Open Topology** (TP/FT-10). This is a ready-to-use module, developed and accepted by Echelon.

The LON software in the interface supports the self-documentation and Wink function and thus helps with installing nodes across a network manager.

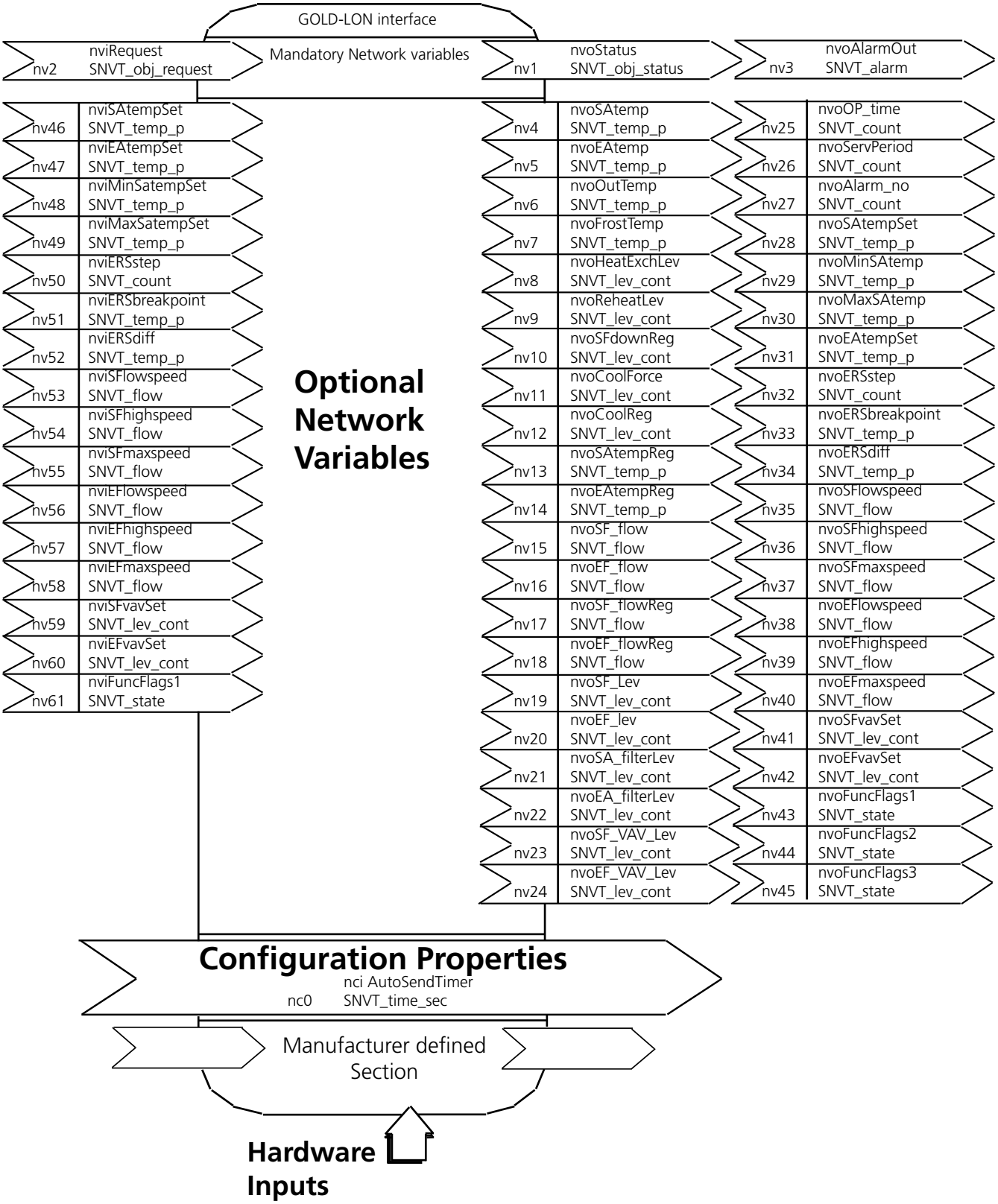
The network variables are to SNVT Standard.

The LON Interface can be illustrated as follows:

Figure 1
Functional profile



Optional Network Variables



Mandatory Network Variables (Output)

The necessary sensors must be connected to the GOLD Air handling unit before it can be operated; however this does not have any effect on the GOLD-LON Communication unit.

nv 1
Object Status Output

Network output snvt_obj_status nvoStatus

This output variable contains the status for the LON node and will be transmitted when Object_request is queried. If Object_request is queried for an object ID other than 0 (the node itself), this will be interpreted as an inquiry as to whether the corresponding alarm numbers are active.

The following functions are supported:

– Object ID Object number (alarm number) that has been queried via Object_request.

– Invalid_id Always returned as object 0 whenever Object ID outside the permissible range is queried.

– Invalid_request The flag will be displayed, if any unsupported function is requested.

– Unable_to_measure No communication with the GOLD Air handling unit.

– Comm_failure No communication with the GOLD Air handling unit.

– Alarm input There is a tripped alarm in the GOLD unit or communication with the GOLD unit has been interrupted and this causes the LON node to indicate an alarm.

– Report_mask The flag will be displayed, together with the flags supported by Reportmask_request (Object_request).

Valid Range: Object ID = 0 – 65535
All others = 0 – 1.
Initializing figure on start-up, all = 0.

When Transmitted: This variable is transmitted every other second.

Default Service Type: Acknowledged.

Mandatory Network Variables (Input)

nv 2
Object Request Input

Network input snvt_obj_request nviRequest

This variable can be used for requesting the status of the LON node. Object_id can be used to indicate whether the user is interested in viewing the status of the LON node (object =) or wants to find out the status of an alarm number (1–48).

The following Requests are supported:

0–RQ_NORMAL: The normal condition of the node. The node is always in this condition, however a request with this content will not cause Invalid_request to appear on the screen

2–RQ_UPDATE_STATUS: Updates Object Status.

4–RQ_UPDATE_ALARM: AlarmOut is promptly updated for the current object_id number received via object_ request. Three 3 seconds will elapse before nvoAlarmOut is updated due to a shift in the alarm situation. This allows the user 3 seconds to call nvoAlarmOut.

5–RQ_REPORT_MASK: Returns Object Status displayed with all flags supported by the node. Report_mask flag is also displayed.

7–RQ_ENABLE: The node is always enabled, but the flag can be used without causing Invalid_request to appear on the screen.

9–RQ_CLEAR_STATUS: Clears all flags in the Object Status.

All other types of Requests cause Invalid_request to appear in the Object Status.

Default Service Type: Acknowledged.

Valid Range: Object ID = 0-65535.
The GOLD air handling unit has 48 alarms. More alarms may eventually be added but this number is not expected to exceed 60.
Request = 0 – 10.

Default Value: 0 for both.

Mandatory Network Variables (Output)

nv 3
Alarm, tripped Output

Network output snvt_alarm nvoAlarmOut

This output variable contains information about an alarm that is presently tripped or an Object_request inquiry about a specific alarm number.

The following particulars are available:

Location	:	Always contains the text: "GOLD".
Object ID	:	Contains the relevant internal alarm code. The codes used are the same as the alarm numbers specified in the "GOLD Operation and Maintenance Instructions".
Alarm type	:	Contains either no alarm or an unspecified alarm.
Priority level and none = 0.)	:	Contains the alarm priority. (No communication = 3, A = 2, B = 1
Index to SNVT	:	Not used. Always set at 0.
Value	:	Not used. Always set at 0.
Year, month, day	:	Date when alarm tripped.*
Hour, min, sec, msec	:	Time of tripped alarm.*
Alarm limit	:	Not used. Always set at 0.

Every time that communication with the GOLD Air handling unit is interrupted for more than 5 seconds, this AlarmOut with Alarm type =3 (Total/Service interval Alarm 1) will be transmitted. The time of tripped alarm indicates the time when the last acknowledged communication took place. 0000 is displayed if there has not been any ackowledged communication or if the power supply to the LON interface has been cut off. A check for faulty communication can also be carried out. To do this, transmit an object_request for object_id and then read the object_status.

Valid Range: Alarm type = Alarm Nos. 0 - approx. 60

Time of tripped alarm = standard for 24-hour clock

Alarm priority = No communication, A, B or none (3, 2, 1 or 0)

When Transmitted: This variable is transmitted whenever an alarm has tripped on the GOLD Air handling unit or after the auto transmission period has expired. If no communication with the GOLD Air handling unit takes place, this parameter will be transmitted once every 5th second.

Default Service Type: Acknowledged.

* If an inquiry about a non-active alarm is submitted, the time for the most recent authorised communication with the GOLD unit will be shown.

Optional Network Variables (Output)

nv 4
SA Temp Output

Network output SNVT_temp_p nvoSAtemp

This output variable contains the current temperature measured by the supply air sensor of the GOLD Air handling unit.

Valid Range: -55 – +125°C

When Transmitted: This variable is transmitted whenever it has been altered or after the auto transmission period has expired.

Default Service Type: Acknowledged.

nv 5
EA Temp Output

Network output SNVT_temp_p nvoEAtemp

This output variable contains the current temperature measured by the exhaust air sensor of the GOLD Air handling unit.

Valid Range: -55 – +125°C

When Transmitted: This variable is transmitted whenever it has been altered or after the auto transmission period has expired.

Default Service Type: Acknowledged.

nv 6
Outdoor Air Temp. Output

Network output SNVT_temp_p nvoOutTemp

This output variable contains the current outdoor air temperature measured by the outdoor air sensor of the GOLD Air handling unit.

Valid Range: -55 – +125°C

When Transmitted: This variable is transmitted whenever it has been altered or after the auto transmission period has expired.

Default Service Type: Acknowledged.

nv 7
Anti-Frost. Monitor Temp. Output

Network output SNVT_temp_p nvoFrostTemp

This output variable contains the current temperature measured by the anti-frosting protection sensor, if fitted. If no sensor is connected, a reading of approx. 72 °C will be displayed.

Valid Range: -55 – +125°C

When Transmitted: This variable is transmitted whenever it has been altered or after the auto transmission period has expired.

Default Service Type: Acknowledged.

nv 8
Heat Exch. Level Output

Network output SNVT_lev_cont nvoHeatExchlev

This output variable contains the current speed setting for the heat exchanger motor.

Valid Range: 0 - 100 %

When Transmitted: This variable is transmitted whenever it has been altered or after the auto transmission period has expired.

Default Service Type: Acknowledged.

nv 9
Reheating Output

Network output SNVT_lev_cont nvoReheatLev

This output variable contains the present output signal, expressed in percent, for the reheating function (coil).

Valid Range: 0 - 100%

When Transmitted: This variable is transmitted whenever it has been altered or after the auto transmission period has expired.

Default Service Type: Acknowledged.

nv 10
SF Down Regulation Output

Network output SNVT_lev_cont nvoSFdownReg

This output variable contains the value for how much the supply air flow has been down regulated in relation to the set point. Down regulation is a sequence in the regulation of the supply air temperature.

Valid Range: 0 - 100%

When Transmitted: This variable is transmitted whenever it has been altered or after the auto transmission period has expired.

Default Service Type: Acknowledged.

nv 11
Boosted Cooling Output

Network output SNVT_lev_cont nvoCoolForce

This output variable contains the current value for how much the flow has been raised to increase the cooling output to max. The value is expressed as a percentage of the flow between the preset high-speed flow rate and the preset max. flow rate.

Valid Range: 0 - 100%.

When Transmitted: This variable is transmitted whenever it has been altered or after the auto transmission period has expired.

Default Service Type: Acknowledged.

nv 12
Cooling Output

Network output SNVT_lev_cont nvoCoolReg

This output variable contains the present output signal, expressed in percent, being modulated to the cooling, if connected.

Valid Range: 0 - 100%

When Transmitted: This variable is transmitted whenever it has been altered or after the auto transmission period has expired.

Default Service Type: Acknowledged.

nv 13
SA Controller Output

Network output SNVT_temp_p nvoSAtempReg

This output variable indicates the current SA set point of the temperature controller including any compensation factors.

Valid Range: 0 - 40 °C

When Transmitted: This variable is transmitted whenever it has been altered or after the auto transmission period has expired.

Default Service Type: Acknowledged.

nv 14
EA Controller Output

Network output SNVT_temp_p nvoEAtempReg

This output variable indicates the current EA set point of the temperature controller including any compensation factors.

Valid Range: 0 - 40 °C

When Transmitted: This variable is transmitted whenever it has been altered or after the auto transmission period has expired.

Default Service Type: Acknowledged.

nv 15
SF Flow Output

Network output SNVT_flow nvoSF_flow

This output variable contains the current air flow from the supply air fan (in the ducting).

Valid Range: 0 - 3900 liter/sec.

When Transmitted: This variable is transmitted whenever it has been altered or after the auto transmission period has expired.

Default Service Type: Acknowledged.

nv 16
EF Flow Output

Network output SNVT_flow nvoEF_flow

This output variable contains the current flow from the exhaust air fan (in the ducting).

Valid Range: 0 - 3900 liter/sec.

When Transmitted: This variable is transmitted whenever it has been altered or after the auto transmission period has expired.

Default Service Type: Acknowledged.

nv 17
SF Flow Controller Output

Network output SNVT_flow nvoSF_flowReg

This output variable indicates the current SF set point of the temperature controller including any compensation factors.

Valid Range: 0 - 3900 liter/sec.

When Transmitted: This variable is transmitted whenever it has been altered or after the auto transmission period has expired.

Default Service Type: Acknowledged.

nv 18
EF Flow Controller Output

Network output SNVT_flow nvoEF_flowReg

This output variable indicates the current EF set point of the temperature controller including any compensation factors.

Valid Range: 0 - 3900 liter/sec.

When Transmitted: This variable is transmitted whenever it has been altered or after the auto transmission period has expired.

Default Service Type: Acknowledged.

nv 19
SF-Level Output

Network output SNVT_lev_cont nvoSF_Lev

This output variable indicates the current operating level of the supply air fan

Valid Range: 0 - 100%

When Transmitted: This variable is transmitted whenever it has been altered or after the auto transmission period has expired.

Default Service Type: Acknowledged.

nv 20
EF-Level Output

Network output SNVT_lev_cont nvoEF_Lev

This output variable indicates the current operating level of the exhaust air fan.

Valid Range: 0 - 100%

When Transmitted: This variable is transmitted whenever it has been altered or after the auto transmission period has expired.

Default Service Type: Acknowledged.

nv 21
SA Filter Status Output

Network output SNVT_lev_cont nvoSA_filterLev

This output variable contains the present degree of fouling in the supply air filter, expressed as a percentage. 0% = clean filter, 100% = factory-preset alarm limit

Valid Range: 0 - 100%

When Transmitted: This variable is transmitted whenever it has been altered or after the auto transmission period has expired.

Default Service Type: Acknowledged.

nv 22
EA Filter Status Output

Network output SNVT_lev_cont nvoEA_filterLev

This output variable contains the present degree of fouling in the exhaust air filter, expressed as a percentage. 0% = clean filter, 100% = factory-preset alarm limit

Valid Range: 0 - 100%

When Transmitted: This variable is transmitted whenever it has been altered or after the auto transmission period has expired.

Default Service Type: Acknowledged.

nv 23
SF VAV/Forcing Output

Network output SNVT_lev_cont nvoSF_VAV_Lev

This output variable contains the current value at the input for VAV/Forcing the air flow from the supply air fan. The value is presented as a percentage (0 – 100% = 0 – 10 V).

Valid Range: 0 - 100%

When Transmitted: This variable is transmitted whenever it has been altered or after the auto transmission period has expired.

Default Service Type: Acknowledged.

nv 24
EF VAV/Forcing Output

Network output SNVT_lev_cont nvoEF_VAV_Lev

This output variable contains the current value at the input for VAV/Forcing the air flow from the exhaust air fan. The value is presented as a percentage (0 – 100% = 0 – 10 V).

Valid Range: 0 - 100%

When Transmitted: This variable is transmitted whenever it has been altered or after the auto transmission period has expired.

Default Service Type: Acknowledged.

nv 25
Operating Time Output

Network Output SNVT_count nvoOP_time

This output variable contains the total in-operation period (in days) of the air handling unit.

Valid Range: 0 - 65535 days

When Transmitted: This variable is transmitted whenever it has been altered or after the auto transmission period has expired.

Default Service Type: Acknowledged.

nv 26
Service Period Output

Network Output SNVT_count nvoServPeriod

This output variable contains the period remaining before the service alarm is tripped. Displayed in days. The alarm is tripped at 0.

Valid Range: 0 - 65535 days

When Transmitted: This variable is transmitted whenever it has been altered or after the auto transmission period has expired.

Default Service Type: Acknowledged.

nv 27
Alarm No. Output

Network output SNVT_count nvoAlarm_no

This output variable indicates the current alarm situation in the GOLD unit.
0 = no alarm
1-49 indicates the current tripped alarm.

Valid Range: 0-65535.

When Transmitted: This variable is transmitted whenever it has been altered or after the auto transmission period has expired.

Default Service Type: Acknowledged.

nv 28
SA Temp. Set Point

Network Output SNVT_temp_p nvoSAtempSet

This output variable contains the preset supply air temperature set point of the control system.

Valid Range: 0 - 40 °C

When Transmitted: This variable is transmitted whenever it has been altered or after the auto transmission period has expired.

Default Service Type: Acknowledged.

nv 29
Min. SA Temp Output

Network output SVNT_temp_p nvoMinSAtemp

This output variable contains the preset min. permissible supply air temperature set point of the control system in conjunction with exhaust air regulation.

Valid Range: 0 - 18 °C.

When Transmitted: This variable is transmitted whenever it has been altered or after the auto transmission period has expired.

Default Service Type: Acknowledged.

nv 30
Max. SA Temp Output

Network output SNVT_temp_p nvoMaxSAtemp

This output variable contains the preset max. permissible supply air temperature set point of the control system in conjunction with exhaust air regulation.

Valid Range: 18 - 40 °C

When Transmitted: This variable is transmitted whenever it has been altered or after the auto transmission period has expired.

Default Service Type: Acknowledged.

nv 31
EA Temp. Set Point Output

Network Output SNVT_temp_p nvoEAtempSet

This output variable contains the preset exhaust air temperature set point of the control system.

Valid Range: 0 - 40 °C

When Transmitted: This variable is transmitted whenever it has been altered or after the auto transmission period has expired.

Default Service Type: Acknowledged.

nv 32
ERS Regulation, Steps Output

Network output SNVT_count nvoERSstep

This output variable contains the preset steps of the control system with ERS Regulation.

Valid Range: 1 - 4

When Transmitted: This variable is transmitted whenever it has been altered or after the auto transmission period has expired.

Default Service Type: Acknowledged.

nv 33
ERS Regulation, Breakpoint Output

Network output SNVT_temp_p nvoERSbreakpoint

This output variable contains the preset breakpoint of the control system with ERS Regulation.

Valid Range: 10 - 30 °C

When Transmitted: This variable is transmitted whenever it has been altered or after the auto transmission period has expired.

Default Service Type: Acknowledged.

nv 34
ERS Regulation Differential Output

Network output SNVT_temp_p nvoERSdiff

This output variable contains the preset differential of the control system with ERS Regulation.

Valid Range: 1 - 10 °C

When Transmitted: This variable is transmitted whenever it has been altered or after the auto transmission period has expired.

Default Service Type: Acknowledged.

nv 35
SF Low Speed Output

Network output SNVT_flow nvoSFlowspeed

This output variable contains the preset air flow set point of the supply air fan running at low speed.

Valid Range: 0 - 3900 liter/sec.

When Transmitted: This variable is transmitted whenever it has been altered or after the auto transmission period has expired.

Default Service Type: Acknowledged.

nv 36
SF High Speed Output

Network output SNVT_flow nvoSFhighspeed

This output variable contains the preset air flow set point of the supply air fan running at high speed.

Valid Range: 0 - 3900 liter/sec.

When Transmitted: This variable is transmitted whenever it has been altered or after the auto transmission period has expired.

Default Service Type: Acknowledged.

nv 37
SF Max. Speed Output

Network output SNVT_flow nvoSFmaxspeed

This output variable contains the preset air flow set point of the supply air fan running at max. speed.

Valid Range: 0 - 3900 liter/sec.

When Transmitted: This variable is transmitted whenever it has been altered or after the auto transmission period has expired.

Default Service Type: Acknowledged.

nv 38
EF Low Speed Output

Network output SNVT_flow nvoEFlowspeed

This output variable contains the preset air flow set point of the exhaust air fan running at low speed.

Valid Range: 0 - 3900 liter/sec

When Transmitted: This variable is transmitted whenever it has been altered or after the auto transmission period has expired.

Default Service Type: Acknowledged.

nv 39
EF High Speed Output

Network output SNVT_flow nvoEFhighspeed

This output variable contains the preset air flow set point of the exhaust air fan running at high speed.

Valid Range: 0 - 3900 liter/sec.

When Transmitted: This variable is transmitted whenever it has been altered or after the auto transmission period has expired.

Default Service Type: Acknowledged.

nv 40
EF Max. Speed Output

Network output SNVT_flow nvoEFmaxspeed

This output variable contains the preset air flow set point of the exhaust air fan running at max. speed.

Valid Range: 0 - 3900 liter/sec.

When Transmitted: This variable is transmitted whenever it has been altered or after the auto transmission period has expired.

Default Service Type: Acknowledged.

nv 41
SF VAV Set Point, High Speed Output

Network output SNVT_lev_cont nvoSFvavSet

This output variable contains the preset set point for the pressure in the supply air duct when the fan is operating at high speed, expressed as a percentage of 10 V on the external SA pressure input.

Valid Range: 0 - 100%

When Transmitted: This variable is transmitted whenever it has been altered or after the auto transmission period has expired.

Default Service Type: Acknowledged.

nv 42
EF VAV Set Point, High Speed Output

Network output SNVT_lev_cont nvoEFvavSet

This output variable contains the preset set point for the pressure in the exhaust air duct when the fan is operating at high speed, expressed as a percentage of 10 V on the external EA pressure input.

Valid Range: 0 - 100%

When Transmitted: This variable is transmitted whenever it has been altered or after the auto transmission period has expired.

Default Service Type: Acknowledged.

nv 43
FuncFlags1 OutPut

Network output SNVT_state nvoFuncFlags1

This output variable consists of the following flags arranged:
b15 b14 b13 b12 b11 b10 b9 b8 b7 b6 b5 b4 b3 b2 b1 b0

0 Set point displacement	Indicates that the function is activated.
1 Outdoor temperature compensation Temp/Flow	Indicates that the function is activated.
2 Reserve	Always indicates 0.
3 Summer night cooling.	Indicates that the function is activated.
4 Cooling, 0-10 V	Indicates that the function is activated.
5 Cooling, on/off, 1-step	Indicates that the function is activated.
6 Cooling, on/off, 2-steps	Indicates that the function is activated.
7 Cooling on/off, 3-steps	Indicates that the function is activated.
8 Boosted cooling, comfort	Indicates that the function is activated.
9 Boosted cooling, economy	Indicates that the function is activated.
10 Internal fire alarm	Indicates that the function is activated.
11 Exhaust air in case of fire	Indicates that the function is activated.
12 LON stop	Indicates that the unit has been shut down via LON.
13 LON low-speed operation	Indicates that the AHU has been ordered to run at low speed via LON.
14 LON high-speed operation	Indicates that the AHU has been ordered to run at high speed via LON.
15 LON alarm reset	Indicates that the alarm has been reset via LON.

Valid Range: 0 - 1 (off/on)

When Transmitted: This variable is transmitted whenever it is altered or after the auto-transmission time has expired.

Default Service Type: Acknowledged.

nv 44
FuncFlags2 Output

Network output SNVT_state nvoFuncFlags2

This output variable consists of the following flags arranged:
b15 b14 b13 b12 b11 b10 b9 b8 b7 b6 b5 b4 b3 b2 b1 b0

0 In-operation output	Indicates the status on the in-operation indication relay.
1 Damper output	Indicates the status on the damper control relay.
2 High speed output	Indicates the status on the high-speed relay.
3 Circulation pump, hot water	Indicates the status on the relay output for circulation pump, heating.
4 Cooling output 1	Indicates the status on the cooling relay 1.
5 Cooling output 2	Indicates the status on the cooling relay 2.
6 Group alarm A	Indicates the status on the relay output for group alarm A.
7 Group alarm B	Indicates the status on the relay output for group alarm B.
8 External stop	Indicates the status on the input for external stop.
9 External low speed	Indicates the status on the input for external low speed.
10 External high speed	Indicates the status on the input for external high speed.
11 External fire alarm	Indicates the status on the input for external fire alarm.
12 External alarm 1	Indicates the status on the input for external alarm 1.
13 External alarm 2	Indicates the status on the input for external alarm 2.
14 Reserve	Always indicates 0.
15 Reserve	Always indicates 0.

Valid Range: 0 - 1 (off / on)

When Transmitted: This variable is transmitted whenever it is altered or after the auto-transmission time has expired.

Default Service Type: Acknowledged.

nv 45
FuncFlags3 Output

Network output SNVT_state nvoFuncFlags3

This output variable consists of the following flags arranged:
b15 b14 b13 b12 b11 b10 b9 b8 b7 b6 b5 b4 b3 b2 b1 b0

0 Stop	Indicates that the AHU has been stopped.
1 Low speed	Indicates that the AHU is operating at low speed.
2 High speed	Indicates that the AHU is operating at high speed.
3 Reserve	Always indicates 0.
4 Cooling energy recovery	Indicates that the cooling energy recovery function is active.
5 Boosted cooling	Indicates that the boosted cooling function is active.
6 Recooling	Indicates that the recooling function for the electric air heater is active.
7 Purging - heat exch.	Indicates that the purging function is active.
8 Summer night cooling	Indicates that the summer night cooling functions is active.
9 Reserve	Always indicates 0.
10 Reserve	Always indicates 0.
11 Reserve	Always indicates 0.
12 Reserve	Always indicates 0.
13 Reserve	Always indicates 0.
14 Reserve	Always indicates 0.
15 Reserve	Always indicates 0.

Valid Range: 0 - 1 (off / on)

When Transmitted: This variable is transmitted whenever it is altered or after the auto-transmission time has expired.

Default Service Type: Acknowledged.

Optional Input Network Variables

nv 46
SA Temp. Set Point Input

Network input SNVT_temp_p nviSAtempSet

This input variable can be used for adjusting the desired supply air temperature set point.

Valid Range: 10 - 40 °C

nv 47
EA Temp. Set Point Input

Network input SNVT_temp_p nviEAtempSet

This input variable can be used for adjusting the desired exhaust air temperature set point.

Valid Range: 10 - 40 °C

nv 48
Min. SA Temp Input

Network input SNVT_temp_p nviMinSAtemp

This input variable can be used for adjusting the desired min. permissible supply air temperature in conjunction with exhaust air regulation.

Valid Range: 0 - 18 °C ((can be further limited at the air handling unit, if required).

nv 49
Max. SA Temp Input

Network input SNVT_temp_p nviMaxSAtemp

This input variable can be used for adjusting the Set Point for permissible supply air temperature in conjunction with exhaust air regulation.

Valid Range: 18 - 40 °C

nv 50
ERS Regulation, Steps Input

Network input SNVT_count nviERSstep

This input variable can be used for adjusting the desired steps of ERS regulation.

Valid Range: 1 - 4

nv 51
ERS Regulation, Breakpoint Input

Network input SNVT_temp_p nviERSbreakpoint

This input variable can be used for adjusting the desired Breakpoint of ERS regulation.

Valid Range: 10 - 30 °C

nv 52
ERS Regulation, Differential Input

Network input SNVT_temp_p nviERSdiff

This input variable can be used for adjusting the desired Differential of ERS regulation.

Valid Range: 1 - 10 °C

nv 53
SF Low Speed Input

Network input SNVT_flow nviSFlowspeed

This input variable can be used for adjusting the desired air flow set point of the supply air fan running at low speed.

Valid Range: 0 - 3900 liter/sec.

nv 54
SF High Speed Input

Network input SNVT_flow nviSFhighspeed

This input variable can be used for adjusting the desired air flow set point of the supply air fan running at high speed.

Valid Range: 0 - 3900 liter/sec.

nv 55
SF Max. Speed Input

Network input SNVT_flow nviSFmaxspeed

This input variable can be used for adjusting the desired air flow set point of the supply air fan running at max. speed.

Valid Range: 0 - 3900 liter/sec.

nv 56
EF Low Speed Input

Network input SNVT_flow nviEFlowspeed

This input variable can be used for adjusting the desired air flow set point of the exhaust air fan running at low speed.

Valid Range: 0 - 3900 liter/sec.

nv 57
EF High Speed Input

Network input SNVT_flow nviEFhighspeed

This input variable can be used for adjusting the desired air flow set point of the exhaust air fan running at high speed.

Valid Range: 0 - 3900 liter/sec.

nv 58
EF Max. Speed Input

Network input SNVT_flow nviEFmaxspeed

This input variable can be used for adjusting the desired air flow set point of the exhaust air fan running at max. speed.

Valid Range: 0 - 3900 liter/sec.

nv 59
SF VAV Set Point, High speed Input

Network input SNVT_lev_cont nviSFvavSet

This input variable is used for setting the desired high-speed set point of the supply air fan for maintaining appropriate duct pressure when VAV regulation is utilised.
The value is expressed as a percentage of 0-10 V on the VAV/Forcing input.

Valid Range: 0 - 100 %

nv 60
EF VAV Set Point, High speed Input

Network input SNVT_lev_cont nviEFvavSet

This input variable is used for setting the desired high-speed set point of the exhaust air fan for maintaining appropriate duct pressure when VAV regulation is utilised.
The value is expressed as a percentage of 0-10 V on the VAV/Forcing input.

Valid Range: 0 - 100%

nv 61
FuncFlags1 Input

Network input SNVT_state nviFuncFlags1

This input variable consists of the following flags arranged:
b15 b14 b13 b12 b11 b10 b9 b8 b7 b6 b5 b4 b3 b2 b1 b0

0 Set point displacement	Used for activating the function.
1 Outdoor temp compensation, Temp/Flow	Used for activating the function.
2 Reserve	Can be ignored.
3 Summer night cooling	Used for activating the function.
4 Cooling, 0-10V	Used for activating the function.
5 Cooling on/off 1-step	Used for activating the function.
6 Cooling on/off 2-steps	Used for activating the function.
7 Cooling on/off 3-steps	Used for activating the function.
8 Boosted cooling, comfort	Used for activating the function.
9 Boosted cooling, economy	Used for activating the function.
10 Internal fire alarm	Used for activating the function.
11 Exhaust air in case of fire	Used for activating the function.
12 LON stop	Forces the AHU to stop via LON.
13 LON low-speed operation	Controls the AHU from S-CL stop to low speed via LON.
14 LON high-speed operation via LON.	Controls the AHU from S-CL stop or low speed to high speed
15 LON alarm reset	Used for resetting the alarms.

Default Service Type:	Acknowledged.
Valid Range:	0 - 1 (OFF - ON)
Default Value:	Factory setting = all are set to 0 = OFF

Configuration Properties

nc 0
AutoSendTimer

Network input config SNVT_time_sec nciAutoSendTime

This variable defines the time it takes for all the parameters to be automatically updated on the network.

This ensures that the values received from this node will always be correct regardless of whether or not the values are constant. Constant values are not updated whenever a change occurs.

As an alternative, the operator himself may decide to demand the desired values from the node. If he does so, this function will not be needed.
Set AutoSendTimer at 0. No automatic transmissions will then occur.

Valid Range: This value must be in the 10..6553.4 sec. range.
0 = The Autosend function is disabled.
(N.B: The figure will be rounded off to the nearest lower integer.)

Wink Function

This command can be used for identifying the GOLD Air handling unit.

The green LEDs flash alternately for 15 seconds while the Wink command is being transmitted to the LON interface.

This input variable can be used for checking whether the LON network is intact up to the LON interface and for identifying a specific air handling unit if several units are connected to the same network.

Data Transfer

The configuration does not include any form of Data transfer.

Power-Up State

All the input variables have a 0 reading before communication with the GOLD air handling unit has been established.
When communication with the GOLD unit has been in progress for about 10 seconds, all the input variables have been upgraded with the values from the GOLD air handling unit's internal EEProm.
This means that the input variables are always upgraded after a power failure and therefore always indicate the current value, as long as the communication is OK.

Boundary and Error Conditions

None have been specified.

Additional Considerations

Polling:
If "polling" has been programmed on the Output or Input Variables, keep in mind that this may delay responses by as much as 170 ms.

This is because data 41 Byte blocks is communicated between the LON interface and the GOLD Air handling unit in. While communication is in progress, the LON node will not be able to process any incoming DataRequest. The call will be stored in a buffer and processed when the GOLD-LON has finished communicating with the GOLD.

Altering a variable:
If a GOLD variable is to be altered across the LON, the node will first fetch a 40 Byte data block containing the parameter to be altered. The relevant parameter will then be altered and the data block will be transmitted back to the GOLD Air handling unit. The node will therefore be occupied for approx. 2 x 170 ms, before it can be called and respond after a normal delay.

Since "polling" is not a normal way of fetching data from the LON interface, it is assumed that response times present no problem.

LED/Keyed Functions

Start-up: On starting up, both green LEDs will flash for about 5 seconds. This indicates that program execution has started.

Normal operation: The "Power" LED will be constantly lit. (Power on). The "GOLD comm" LED will flash whenever ackowledged communication with the GOLD takes place.

On activating the Auto-send function, the "Power" LED will rapidly flash every time all the LON parameters are being transmitted.

Service: The "Service" LED will flash if the node has not been configured. Configuration is normally carried out by a LON manager.

While the LON manager is configuring the node, the operator will be requested to depress "servicepin" to identify the node. (Service Request beneath the sealing cap.) The node has integrated self-identification and self-description of the parameters.