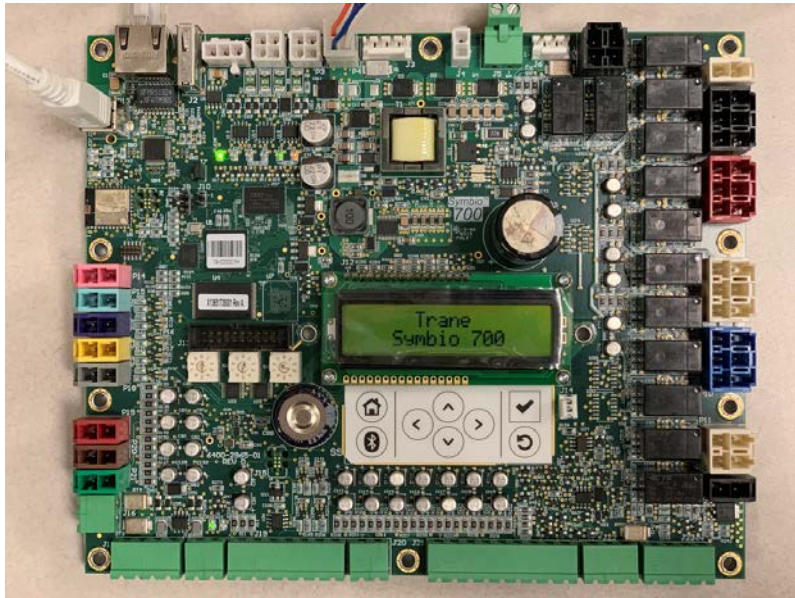




## Integration Guide

# LonTalk Integration to Odyssey Units

with Symbio™ 700 Controls



### ⚠ SAFETY WARNING

Only qualified personnel should install and service the equipment. The installation, starting up, and servicing of heating, ventilating, and air-conditioning equipment can be hazardous and requires specific knowledge and training. Improperly installed, adjusted or altered equipment by an unqualified person could result in death or serious injury. When working on the equipment, observe all precautions in the literature and on the tags, stickers, and labels that are attached to the equipment.



## Introduction

Read this manual thoroughly before operating or servicing this unit.

## Warnings, Cautions, and Notices

Safety advisories appear throughout this manual as required. Your personal safety and the proper operation of this machine depend upon the strict observance of these precautions.

The three types of advisories are defined as follows:



Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



Indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury. It could also be used to alert against unsafe practices.



Indicates a situation that could result in equipment or property-damage only accidents.

## Important Environmental Concerns

Scientific research has shown that certain man-made chemicals can affect the earth's naturally occurring stratospheric ozone layer when released to the atmosphere. In particular, several of the identified chemicals that may affect the ozone layer are refrigerants that contain Chlorine, Fluorine and Carbon (CFCs) and those containing Hydrogen, Chlorine, Fluorine and Carbon (HCFCs). Not all refrigerants containing these compounds have the same potential impact to the environment. Trane advocates the responsible handling of all refrigerants-including industry replacements for CFCs and HCFCs such as saturated or unsaturated HFCs and HCFCs.

## Important Responsible Refrigerant Practices

Trane believes that responsible refrigerant practices are important to the environment, our customers, and the air conditioning industry. All technicians who handle refrigerants must be certified according to local rules. For the USA, the Federal Clean Air Act (Section 608) sets forth the requirements for handling, reclaiming, recovering and recycling of certain refrigerants and the equipment that is used in these service procedures. In addition, some states or municipalities may have additional requirements that must also be adhered to for responsible management of refrigerants. Know the applicable laws and follow them.

### **⚠ WARNING**

#### **Proper Field Wiring and Grounding Required!**

Failure to follow code could result in death or serious injury.

**All field wiring MUST be performed by qualified personnel. Improperly installed and grounded field wiring poses FIRE and ELECTROCUTION hazards. To avoid these hazards, you MUST follow requirements for field wiring installation and grounding as described in NEC and your local/state/national electrical codes.**

## **⚠ WARNING**

### **Personal Protective Equipment (PPE) Required!**

Failure to wear proper PPE for the job being undertaken could result in death or serious injury.

Technicians, in order to protect themselves from potential electrical, mechanical, and chemical hazards, **MUST** follow precautions in this manual and on the tags, stickers, and labels, as well as the instructions below:

- Before installing/servicing this unit, technicians **MUST** put on all PPE required for the work being undertaken (Examples; cut resistant gloves/sleeves, butyl gloves, safety glasses, hard hat/bump cap, fall protection, electrical PPE and arc flash clothing). **ALWAYS** refer to appropriate Safety Data Sheets (SDS) and OSHA guidelines for proper PPE.
- When working with or around hazardous chemicals, **ALWAYS** refer to the appropriate SDS and OSHA/GHS (Global Harmonized System of Classification and Labelling of Chemicals) guidelines for information on allowable personal exposure levels, proper respiratory protection and handling instructions.
- If there is a risk of energized electrical contact, arc, or flash, technicians **MUST** put on all PPE in accordance with OSHA, NFPA 70E, or other country-specific requirements for arc flash protection, **PRIOR** to servicing the unit. **NEVER PERFORM ANY SWITCHING, DISCONNECTING, OR VOLTAGE TESTING WITHOUT PROPER ELECTRICAL PPE AND ARC FLASH CLOTHING. ENSURE ELECTRICAL METERS AND EQUIPMENT ARE PROPERLY RATED FOR INTENDED VOLTAGE.**

## **⚠ WARNING**

### **Follow EHS Policies!**

Failure to follow instructions below could result in death or serious injury.

- All Trane personnel must follow the company's Environmental, Health and Safety (EHS) policies when performing work such as hot work, electrical, fall protection, lockout/tagout, refrigerant handling, etc. Where local regulations are more stringent than these policies, those regulations supersede these policies.
- Non-Trane personnel should always follow local regulations.

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# Overview

## Purpose

The purpose of this document is to provide instructions for integrating the Symbio™ 700 controller into non-Trane building automation systems. This document is targeted to system integrators and controls contractors.

## Symbio 700 Controller Overview

The Symbio 700 controller has been installed, programmed, wired, commissioned, and tested in the factory prior to shipment. While some sensors and end devices are normally wired in the field, nearly all other wiring is factory-provided. Power for the controller is provided and connected from within the control panel.

The unit and associated controller can be applied as standalone or as part of a building automation system.

**Note:** For communicating applications to third-party control systems, network communication wiring must be provided by others.

## Communication Options

The Symbio 700 controller supports the following communication protocol options for integration to either Trane or non-Trane control systems:

- BACnet MS/TP
- BACnet IP
- BACnet/Zigbee (Air-Fi)™
- LonTalk

## Units of Measure

The communicated data of the Symbio 700 controller will be passed in SI by default. The Symbio™ Service and Installation mobile app allows the user to change and customize the Data Display Units Preferences.

Regardless of the communicated (system) units of measure, the user may change the displayed units of measure on their smart device – user preference. These user preference units of measure are independent of the communicated units.



## Communication Setup and Configuration

The Symbio controller can be factory ordered with a specific protocol configuration. The Symbio 700 controller supports BACnet MS/TP, BACnet IP, BACnet/Zigbee (Air-Fi™ Wireless) and LonTalk and can be ordered from the factory with all of these configured.

Depending on the protocol of use and associated parameter definition, use of the mobile application may be necessary. Refer to the following section for additional information on using the mobile application.



# LonTalk Protocol Setup

The Symbio 700 controller supports LonTalk communications with the optional U60 LonTalk module. The LonTalk module is din rail mounted and connected to the Symbio 700 controller using USB.

**Figure 1. Symbio 700 U60 LonTalk module**



**Note:** The Symbio 700 rotary addresses do not apply to LonTalk communications.

Communication between the U60 module and Symbio 700 controller is automatic, established upon connection. The user is not required to complete any further setup or configuration.

A virtual service pin is included through the on-board display of the Symbio 700 controller, found under the utilities menu. When pressed, the service pin will send a service pin message to the LonTalk network. A service pin broadcasts the Neuron ID to the LonTalk network so a LonTalk network management tool can find a device and set its Domain, Subnet, and Node address.

```
Home
v
Status
v
Settings
v
Service
v
Bluetooth
v
Utilities  [Enter]  About
v
Edit Configuration
v
Display
v
Date and Time
v
Service Pin
```

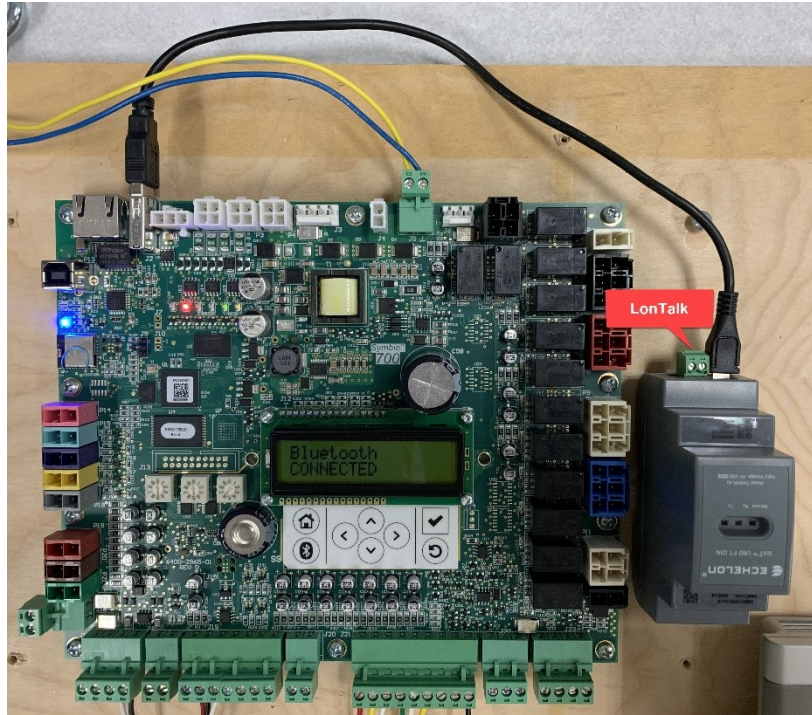
## LonTalk Protocol Setup

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Connect the pair of communication wires to the LonTalk adapter. LonTalk does not require wire polarity, though the factory recommends that the installing technician observe polarity. Refer to the LonTalk standard documentation for detailed information on LonTalk wiring.

All LonTalk devices must have a unique DSN address and must have the same Domain value. The Symbio 700 LonTalk adapter ships on the zero-length domain, easily allowing network managers and tools to discover the device.

**Figure 2. Symbio 700 controller with LonTalk module**







# Network Variables

**Table 1. SCC network variable inputs**

NV#	Name	Recv HrtBt	SNVT	Description
37	nviApplicMode	♥	SNVT_hvac_mode	Heat Cool Mode Request
38	nviAuxHeatEnable		SNVT_switch	Heat Auxiliary Enable
39	nviBldgStaticSP	♥	SNVT_press_p	Building Static Pressure Setpoint
40	nviBldgStatPress		SNVT_press_p	Building Static Pressure
41	nviComprEnable	♥	SNVT_switch	Compressor Cooling Enable BAS
42	nviCWFlow		SNVT_switch	Condenser Water Flow BAS
43	nviDACISP	♥	SNVT_temp_p	Discharge Air Cooling Setpoint BAS
44	nviDAHtSP	♥	SNVT_temp_p	Discharge Air Heating Setpoint BAS
45	nviDAREheatSP	♥	SNVT_temp_p	Discharge Air Reheat Setpoint BAS
46	nviDehumEnable		UNVT_switch_binary	Dehumidification System Enable BAS
47	nviEconEnable	♥	UNVT_switch_multistate	Economizer Enable BAS
48	nviEmergOverride	♥	SNVT_hvac_emerg	Emergency Override BAS
49	nviHumEnable		UNVT_switch_binary	Humidification Enable BAS
50	nviOAMinPos	♥	SNVT_lev_percent	Economizer Minimum Position Setpoint
51	nviOccManCmd	♥	SNVT_lev_percent	Occupancy Request
52	nviOccSchedule	♥	SNVT_lev_percent	Occupancy Request
53	nviOccSensor	♥	SNVT_occupancy	Occupancy Input BAS
54	nviOutdoorRH	♥	SNVT_lev_percent	Outdoor Air Relative Humidity BAS
55	nviOutdoorTemp	♥	SNVT_temp_p	Outdoor Air Temperature BAS



## Network Variables

**Table 1. SCC network variable inputs (continued)**

NV#	Name	Recv HrtBt	SNVT	Description
56	nviRTUConfig		SNVT_state	Rooftop Configuration
	nviRTUConfig.0		(MSB) Bit 0	Reserved
	nviRTUConfig.1		Bit 1	Cooling Lockout
	nviRTUConfig.2		Bit 2	Heating Lockout
	nviRTUConfig.3		Bit 3	Demand Limit Request BAS
	nviRTUConfig.4		Bit 4	Energy Consumption Reset
	nviRTUConfig.5		Bit 5	Supply Fan Compensation
	nviRTUConfig.6		Bit 6	PreCool Enable Command
	nviRTUConfig.7		Bit 7	Morning Warmup Enable Command
	nviRTUConfig.8		Bit 8	Supply Air Tempering Request BAS
	nviRTUConfig.9		Bit 9	Daytime Warmup Enable Command
	nviRTUConfig.10		Bit 10	Timed Override Request (with Bit 11)
	nviRTUConfig.11		Bit 11	Timed Override Request 00 Idle 01 On 10 Cancel 11 Invalid
	nviRTUConfig.12		Bit 12	Reserved
	nviRTUConfig.13		Bit 13	Reserved
nviRTUConfig.14		Bit 14	Reserved	
nviRTUConfig.15		(LSB) Bit 15	Reserved	
57	nviRequest		SNVT_obj_request	Reset Diagnostic Request
58	nviSetpoint	♥	SNVT_temp_p	Space Temperature Setpoint BAS
59	nviSetptOffset	♥	SNVT_temp_p	Space Setpoint Offset BAS
60	nviSetptShift	♥	SNVT_temp_setpt	Space Setpoint Shift BAS
61	nviSpaceCO2	♥	SNVT_ppm	Space CO2 Concentration BAS
62	nviSpaceDehumSP	♥	SNVT_lev_percent	Space Dehumidification Setpoint BAS
63	nviSpaceHumSP		SNVT_lev_percent	Space Humidity Setpoint BAS
64	nviSpaceRH	♥	SNVT_lev_percent	Space Relative Humidity BAS
65	nviSpaceTemp	♥	SNVT_temp_p	Space Temperature BAS
66	nviTraneVar2		UNVT_c5c	Manufacturer-defined

**Note:** Greyed out LonTalk network variables are not supported on Odyssey.

**Table 2. SCC network variable outputs**

NV#	Name	Send HrtBt	SNVT	Description
67	nvoAlarmMessage		SNVT_str_asc	Diagnostic Last Message
68	nvoBldgStatPress	♥	SNVT_press_p	Space Static Pressure Active
69	nvoCondCap	♥	SNVT_lev_percent	Condenser Capacity
70	nvoCoolPrimary	♥	UNVT_switch_binary	Cooling Capacity Status

**Table 2. SCC network variable outputs (continued)**

NV#	Name	Send HrtBt	SNVT	Description
71	nvoCprsrRunning	♥	SNVT_state	Compressor Status
	nvoCprsrRunning.0		(MSB) Bit 0	Validity of bit 8
	nvoCprsrRunning.1		Bit 1	Validity of bit 9
	nvoCprsrRunning.2		Bit 2	Validity of bit 10
	nvoCprsrRunning.3		Bit 3	Validity of bit 11
	nvoCprsrRunning.4		Bit 4	Validity of bit 12
	nvoCprsrRunning.5		Bit 5	Validity of bit 13
	nvoCprsrRunning.6		Bit 6	Validity of bit 14
	nvoCprsrRunning.7		Bit 7	Validity of bit 15
	nvoCprsrRunning.8		Bit 8	Compressor 1A Status
	nvoCprsrRunning.9		Bit 9	Compressor 1B Status
	nvoCprsrRunning.10		Bit 10	Compressor 1C Status
	nvoCprsrRunning.11		Bit 11	Compressor 1D Status
	nvoCprsrRunning.12		Bit 12	Compressor 2A Status
	nvoCprsrRunning.13		Bit 13	Compressor 2B Status
	nvoCprsrRunning.14		Bit 14	Compressor 2C Status
nvoCprsrRunning.15		(LSB) Bit 15	Compressor 2D Status	
72	nvoCWFlow	♥	SNVT_switch	Condenser Water Flow Status
73	nvoCWPump	♥	SNVT_switch	Condenser Water Pump Status
74	nvoCWTemp	♥	SNVT_temp_p	Condenser Water Temperature
75	nvoDAReheatSP	♥	SNVT_temp_p	Discharge Air Reheat Setpoint Active
76	nvoDehumidifier	♥	SNVT_switch	Dehumidification Control Status
77	nvoDischAirTemp	♥	SNVT_temp_p	Discharge Air Temperature
78	nvoEffectOccup	♥	SNVT_occupancy	Occupancy Status
79	nvoEffectSetpt	♥	SNVT_temp_p	Space Temperature Setpoint Active
80	nvoEffSpaceHumSP	♥	SNVT_lev_percent	Space Humidity Active
81	nvoEREABPDamper	♥	SNVT_lev_percent	Energy Recovery Exhaust Air Bypass Damper Position
82	nvoERFrostAvoid	♥	SNVT_switch	Energy Recovery Frost Avoidance Status
83	nvoERLvgExhTemp	♥	SNVT_temp_p	Energy Recovery Leaving Exhaust Temperature Status
84	nvoEROABPDamper	♥	SNVT_lev_percent	Energy Recovery Outdoor Air Bypass Damper Status
85	nvoERPreheat	♥	SNVT_switch	Energy Recovery Preheat Status
86	nvoERStatus	♥	SNVT_switch	Energy Recovery Status
87	nvoExhDamper	♥	SNVT_lev_percent	Exhaust Damper Position
88	nvoExhFanOnOff	♥	SNVT_switch	Exhaust Fan Output Status
89	nvoExhFanStatus	♥	SNVT_switch	Exhaust Fan Speed Status
90	nvoFanSpeed	♥	SNVT_switch	Fan Speed Status



## Network Variables

**Table 2. SCC network variable outputs (continued)**

NV#	Name	Send HrtBt	SNVT	Description
91	nvoFDD	♥	SNVT_state	Fault Detection and Diagnostics
	nvoFDD.0		(MSB) Bit 0	Diagnostic: Not Economizing When Should Be
	nvoFDD.1		Bit 1	Diagnostic: Economizing When Should Not
	nvoFDD.2		Bit 2	Diagnostic: Excessive Outdoor Air Flow
	nvoFDD.3		Bit 3	Diagnostic: Mixed Air Low Temperature Cycle
	nvoFDD.4		Bit 4	Diagnostic: Mixed Air Temperature Sensor Failure
	nvoFDD.5		Bit 5	Diagnostic: Outdoor Air Damper Not Modulating
	nvoFDD.6		Bit 6	Diagnostic: Outdoor Air Temperature Sensor Failure
	nvoFDD.7		Bit 7	Diagnostic: Return Air Temperature Sensor Failure
	nvoFDD.8		Bit 8	Diagnostic: Supply Air Temperature Sensor Failure
	nvoFDD.9		Bit 9	Reserved
	nvoFDD.10		Bit 10	Reserved
	nvoFDD.11		Bit 11	Reserved
	nvoFDD.12		Bit 12	Reserved
	nvoFDD.13		Bit 13	Reserved
	nvoFDD.14		Bit 14	Reserved
nvoFDD.15		(LSB) Bit 15	Reserved	
92	nvoHeatCool	♥	SNVT_hvac_mode	Heat Cool Mode Status
93	nvoHeatPrimary	♥	SNVT_lev_percent	Heating Capacity Primary Status
94	nvoHeatSecondary	♥	SNVT_lev_percent	Heating Capacity Secondary Status
95	nvoHumidifier	♥	SNVT_lev_percent	Humidification Capacity Status
96	nvoLocalCWTemp	♥	SNVT_temp_p	Condenser Water Temperature Local
97	nvoLocalSpaceTmp	♥	SNVT_temp_p	Space Temperature Local
98	nvoMixedAirTemp	♥	SNVT_temp_p	Mixed Air Temperature Local
99	nvoOADamper	♥	SNVT_lev_percent	Outdoor Air Damper Position
100	nvoOAEnthalpy	♥	SNVT_enthalpy	Outdoor Air Enthalpy Active
101	nvoOAFlow	♥	SNVT_flow	Outdoor Air Flow Active
102	nvoOutdoorRH	♥	SNVT_lev_percent	Outdoor Air Humidity Active
103	nvoOutdoorTemp	♥	SNVT_temp_p	Outdoor Air Temperature Active
104	nvoRATemp	♥	SNVT_temp_p	Return Air Temperature
105	nvoRetFanOnOff	♥	SNVT_switch	Return Fan Output Status
106	nvoRetFanPress	♥	SNVT_press_p	Return Fan Air Pressure
107	nvoRetFanStatus	♥	SNVT_switch	Return Fan Speed Status

**Table 2. SCC network variable outputs (continued)**

NV#	Name	Send HrtBt	SNVT	Description
108	nvoRTUStatus	♥	SNVT_state	Rooftop Status
	nvoRTUStatus.0	♥	(MSB) Bit 0	Unit Running State
	nvoRTUStatus.1	♥	Bit 1	Emergency Stop
	nvoRTUStatus.2	♥	Bit 2	External Auto Stop Input Status
	nvoRTUStatus.3	♥	Bit 3	Condensate Overflow Input
	nvoRTUStatus.4	♥	Bit 4	Timed Override Status (with Bit 5)
	nvoRTUStatus.5	♥	Bit 5	Timed Override Status
				00 Idle
				01 On
				10 Cancel
	nvoRTUStatus.6	♥	Bit 6	Precool Mode Status
	nvoRTUStatus.7	♥	Bit 7	Morning Warmup Running
	nvoRTUStatus.8	♥	Bit 8	Supply Air Tempering Status
	nvoRTUStatus.9	♥	Bit 9	Daytime Warmup Running
	nvoRTUStatus.10	♥	Bit 10	Reserved
	nvoRTUStatus.11	♥	Bit 11	Compressor Lockout Status
nvoRTUStatus.12	♥	Bit 12	Coil Frost Protection Status, Circuit 1	
nvoRTUStatus.13	♥	Bit 13	Coil Frost Protection Status, Circuit 2	
nvoRTUStatus.14	♥	Bit 14	Rapid Restart Status	
nvoRTUStatus.15	♥	(LSB) Bit 15	Reserved	
109	nvoSetpoint	♥	SNVT_temp_p	Space Temperature Setpoint Local
110	nvoSpaceCO2	♥	SNVT_ppm	Space CO2 Concentration Active
111	nvoSpaceEnthalpy	♥	SNVT_enthalpy	Return Air Enthalpy Active
112	nvoSpaceRH	♥	SNVT_lev_percent	Space Humidity Active
113	nvoSpaceTemp	♥	SNVT_temp_p	Space Temperature Active
114	nvoStartsRunTmA	♥	UNVT_starts_runtime	Starts - Compressor 1A
		♥	SNVT_count_f	Starts
		♥	SNVT_time_f	Run Time
115	nvoStartsRunTmB	♥	UNVT_starts_runtime	Starts - Compressor 1B
		♥	SNVT_count_f	Starts
		♥	SNVT_time_f	Run Time
116	nvoStartsRunTmC	♥	UNVT_starts_runtime	Starts - Compressor 1C
		♥	SNVT_count_f	Starts
		♥	SNVT_time_f	Run Time
117	nvoStartsRunTmD	♥	UNVT_starts_runtime	Starts - Compressor 2A
		♥	SNVT_count_f	Starts
		♥	SNVT_time_f	Run Time
118	nvoStartsRunTmE	♥	UNVT_starts_runtime	Starts - Compressor 2B
		♥	SNVT_count_f	Starts
		♥	SNVT_time_f	Run Time



## Network Variables

**Table 2. SCC network variable outputs (continued)**

NV#	Name	Send HrtBt	SNVT	Description
119	nvoStartsRunTmF	♥	UNVT_starts_runtime	Starts - Compressor 2C
		♥	SNVT_count_f	Starts
		♥	SNVT_time_f	Run Time
120	nvoStatus	♥	SNVT_obj_status	Local Setpoint Control
121	nvoSucRfgtPrsC1	♥	SNVT_press_f	Suction Refrigerant Pressure, Circuit 1
122	nvoSucRfgtPrsC2	♥	SNVT_press_f	Suction Refrigerant Pressure, Circuit 2
123	nvoSucRfgtTmpC1	♥	SNVT_temp_p	Suction Refrigerant Temperature, Circuit 1
124	nvoSucRfgtTmpC2	♥	SNVT_temp_p	Suction Refrigerant Temperature, Circuit 2
125	nvoDschRfgtPrsC1	♥	SNVT_press_f	Discharge Refrigerant Pressure, Circuit 1
126	nvoDschRfgtPrsC2	♥	SNVT_press_f	Discharge Refrigerant Pressure, Circuit 2
127	nvoDisSatRfgTmp1	♥	SNVT_temp_p	Discharge Refrigerant Temperature, Circuit 1
128	nvoDisSatRfgTmp2	♥	SNVT_temp_p	Discharge Refrigerant Temperature, Circuit 2
129	nvoAirFlowPctC1	♥	SNVT_lev_percent	Air Flow Percentage, Circuit 1
130	nvoAirFlowPctC2	♥	SNVT_lev_percent	Air Flow Percentage, Circuit 2
131	nvoTerminalLoad	♥	SNVT_lev_percent	Unit Energy Demand
132	nvoTraneVar9		UNVT_c5s	Manufacturer-defined
133	nvoUnitCurrent	♥	UNVT_3phase_current	Unit Current Per Line
	nvoUnitCurrent (bytes 1-2)	♥	SNVT_amp_ac	Current L1, in Amps
	nvoUnitCurrent (bytes 3-4)	♥	SNVT_amp_ac	Current L2, in Amps
	nvoUnitCurrent (bytes 5-6)	♥	SNVT_amp_ac	Current L3, in Amps
	nvoUnitCurrent (bytes 7-8)	♥		Invalid
	nvoUnitCurrent (bytes 9-10)	♥		Invalid
	nvoUnitCurrent (bytes 11-12)	♥		Invalid
134	nvoUnitPower	♥	SNVT_power_f	Unit Power Consumption
135	nvoUnitStatus	♥	SNVT_hvac_status	Unit Status
	nvoUnitStatus (byte 1)	♥	.mode	Mode Status
	nvoUnitStatus (bytes 2-3)	♥	.heat_output_primary	Heating Capacity Primary Status
	nvoUnitStatus (bytes 4-5)	♥	.heat_output_secondary	Heating Capacity Secondary Status
	nvoUnitStatus (bytes 6-7)	♥	.cool_output	Cooling Capacity Status
	nvoUnitStatus (bytes 8-9)	♥	.econ_output	Economizer Status
	nvoUnitStatus (bytes 10-11)	♥	.fan_output	Supply Fan Speed Status
	nvoUnitStatus (byte 12)	♥	.in_alarm	In Alarm
136	nvoUnitVoltage	♥	UNVT_3Phase_volt	Unit Voltage
	nvoUnitVoltage (bytes 1-2)	♥	SNVT_volt_ac	Voltage AB
	nvoUnitVoltage (bytes 3-4)	♥	SNVT_volt_ac	Voltage BC
	nvoUnitVoltage (bytes 5-6)	♥	SNVT_volt_ac	Voltage CA

**Note:** Greyed out LonTalk network variables are not supported on Odyssey.

**Table 3. SCC configuration parameters**

<b>NV#</b>	<b>Name</b>	<b>SNVT/UNVT, SCPT/UCPT</b>	<b>Description</b>
0	nciBldgStaticSP	SNVT_press_p	Space Static Pressure Setpoint
1	nciBypassTime	SNVT_time_min	Occupied Bypass Time
2	nciCabinetStyle	UCPT_cabinet_style	Cabinet Style*
3	nciCool	UCPT_cool_type	Cool Type*
4	nciCRC	UCPT_crc	Manufacturer-defined*
5	nciDACISP	SNVT_temp_p	Discharge Air Cooling Setpoint
6	nciDAHtSP	SNVT_temp_p	Discharge Air Heating Setpoint
7	nciDAReheatSP	SNVT_temp_p	Discharge Air Reheat Setpoint
8	nciDevBuildNum	U16	Device Build Number
9	nciDeviceConfig	UCPTdeviceConfig	Manufacturer-defined*
10	nciDevMajVer	SCPTdevMajVer	Software Major Version
11	nciDevMinVer	SCPTdevMinVer	Software Minor Version
12	nciEconConfigTyp	UCPT_econo_config_type	Economizer Decision Method*
13	nciEconVent	UCPT_OA_type	Economizer Type Identifier*
14	nciERFrostAvodSP	UCPT_ERFrostAvoidSP	Energy Recovery Frost Avoidance Temp Setpoint*
15	nciExhaustConfig	UCPT_exhaust_cfg	Exhaust Enable Position Setpoint*
16	nciExhRet	UCPT_ER_type	Exhaust Or Return Fan Type*
17	nciFanOperation	SCPTfanOperation	Supply Fan Configuration Command
18	nciHvacType	SNVT_hvac_type	HVAC Unit Type Identifier
19	nciLocation	SNVT_str_asc	Location Label
20	nciMinOAFlowSP	SNVT_flow	Outdoor Air Minimum Flow Setpoint BAS
21	nciMinOutTm	SNVT_time_sec	Minimum Send Time
22	nciOAEnthSP	SNVT_enthalpy	Economizer Outdoor Air Enthalpy Enable Setpoint BAS
23	nciOAMinPos	SNVT_lev_percent	Outdoor Air Damper Minimum Position
24	nciPreheat	UCPT_heat_type	Preheat Type Identifier*
25	nciRcvHrtBt	SNVT_time_sec	Receive Heartbeat
26	nciRefrigType	UCPT_refrig_type	Refrigeration Type Identifier*
27	nciReheat	UCPT_heat_type	Reheat Type Identifier*
28	nciRetFanPressSP	SNVT_press_p	Return Fan Air Pressure Setpoint
29	nciSetpoints	SNVT_temp_setpt	Occupancy Temperature Setpoints
			Occupied Cool Setpoint
			Occupied Standby Cooling Setpoint
			Unoccupied Cooling Setpoint
			Occupied Heating Setpoint
			Unoccupied Heating Setpoint
30	nciSndHrtBt	SNVT_time_sec	Send Heartbeat Time
31	nciSpaceCO2Lim	SNVT_ppm	Space CO2 High Limit
32	nciSpaceCO2LowLm	SNVT_ppm	Space CO2 Low Limit*
33	nciSpaceHumSP	SNVT_lev_percent	Space Humidification Setpoint
34	nciSupplyFan	UCPT_fan_type	Supply Fan Type Identifier*

## Network Variables

---

**Table 3. SCC configuration parameters (continued)**

NV#	Name	SNVT/UNVT, SCPT/UCPT	Description
35	nciUntryType	UCPT_large_equip_type	Unitary Type Identifier*
			Model Information
			Cooling Source Size
			Heating Source Size
			Number of Circuits
			Number of Compressors, Circuit 1
			Number of Compressors, Circuit 2
36	nciOATSP	SNVT_temp_p	Economizer Outdoor Air Enable Setpoint BAS

**Notes:**

1. \*Manufacturer defined
2. Greyed out LonTalk network variables are not supported on Odyssey.







Notes

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Trane - by Trane Technologies (NYSE: TT), a global innovator - creates comfortable, energy efficient indoor environments for commercial and residential applications. For more information, please visit [trane.com](http://trane.com) or [tranetechnologies.com](http://tranetechnologies.com).

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