Functional Objects Overview

Applicable Viessmann Controls:
Vitotronic 200, HO1 (Vitodens 200, WB2B)
Vitotronic 100, GC1
Vitotronic 300, GW2
Vitotronic 333, MW1/MW1S/MW2/MW2S (Vitocontrol-S/C)
Vitotronic 050/200-H, HK1M
Vitotronic 050/200-H, HK1S
Vitotronic 050/200-H, HK3S

Cautionary Statement:

The information presented in this overview is intended only to be used by those familiar with its application and use. This document is to be considered as a support document to the Viessmann LON Handbook.

Layout:

The tables within are arranged by control model. Each table represents input and output information in relation to the Node Object functionality.

Important Note:

The data points reviewed in this document are those taken directly from the controls without the use of Versatronik 505 Communication Gateways.

Overview of Functional Objects

Vitotronic 200, (Vitodens 200, WB2B)

Input	Point	Object Name	Variable		Output	Point	Object Name	Variable
Node Object					**Node Object**			
Object demand	Node Request	nviNodeRequest	SNVT_obj_request		Object status	Node Status	nvoNodeStatus	SNVT_obj_status
Time of day input	Node Time Setup	nviNodeTimeSet	SNVT_time_stamp		Fault message	Node Alarm	nvoNodeAlarm	SNVT_alarm
Input fault message	Node Alarm	nviNodeAlarm	SNVT_alarm		Time output	Node Time Setup	nvoNodeTimeSet	SNVT_time_stamp
Input outdoor temperature	Node Outdoor Actual Temperature	nviNodeOATemp	SNVT_temp_p		Outdoor temperature output	Node Outdoor Actual Temperature	nvoNodeOATemp	SNVT_temp_p
N/A	N/A	N/A	N/A		Status controller outputs	Node Relay State	nvoNodeRlyState	SNVT_state
DHW Objects					**DHW Objects**			
DHW operating mode	DHW Controller Application Mode	nviDHWCApplicMd	SNVT_hvac_mode		DHW actual temperature	DHW Controller Actual Temperature	nvoDHWCActTemp	SNVT_temp_p
DHW set-point temperature	DHW Controller Set-point	nviDHWCSetpt	SNVT_temp_p		Effective DHW set-point temperature	DHW Controller Effective Set-point	nvoDHWCEffSetpt	SNVT_temp_p
Central Flow Demand Manager (CFDM) Objects					**Central Flow Demand Manager (CFDM) Objects**			
System output set-point	CFDM Production Command	nviCFDMProdCmd	SNVT_switch		Actual system output	CFDM Power State	nvoCFDMPwrState	SNVT_switch
Operating mode	CFDM Application Mode	nviCFDMApplicMd	SNVT_hvac_mode		Actual system temperature	CFDM Supply Temperature	nvoCFDMSupplyT	SNVT_temp_p
System set-point temperature	CFDM Set-point	nviCFDMSetpoint	SNVT_temp_p		Effective system set -point temperature	CFDM Effective Set-point	nvoCFDMEffSetpt	SNVT_temp_p
Heating circuit demand	CFDM Constant Demand	nviCFDMConsDmd	UNVT_Demand		System Status	CFDM Production State	nvoCFDMProdState	UNVT_ProdState

Notes:

Overview of Functional Objects

Vitotronic 200, (Vitodens 200, WB2B)

Input	Point	Object Name	Variable		Output	Point	Object Name	Variable
Heating Circuit Controller (HCC1) Objects					**Heating Circuit Controller (HCC1) Objects**			
Heating circuit operating mode	HCC1 Application Mode	nviHCC1ApplicMd	SNVT_hvac_mode		Actual operating mode	HCC1 Unit State	nvoHCC1UnitState	SNVT_hvac_mode
Room set-point temperature	HCC1 Space Set-point	nviHCC1SpaceSet	SNVT_temp_p		Effective room set-point temperature	HCC1 Effective Set-point	nvoHCC1EffSetpt	SNVT_temp_p
Supply temperature set-point	HCC1 Flow Temperature Set-point	nviHCC1FlowTSet	SNVT_temp_p		N/A	N/A	N/A	N/A
Heating Circuit Controller (HCC2) Objects					**Heating Circuit Controller (HCC2) Objects**			
Heating circuit operating mode	HCC2 Application Mode	nviHCC2ApplicMd	SNVT_hvac_mode		Actual operating mode	HCC2 Unit State	nvoHCC2UnitState	SNVT_hvac_mode
Room set-point temperature	HCC2 Space Set-point	nviHCC2SpaceSet	SNVT_temp_p		Effective room set-point temperature	HCC2 Effective Set-point	nvoHCC2EffSetpt	SNVT_temp_p
Supply temperature set-point	HCC2 Flow Temperature Set-point	nviHCC1FlowTSet	SNVT_temp_p		N/A	N/A	N/A	N/A

Notes:

Overview of Functional Objects

Vitotronic 100, GC1

Input	Point	Object Name	Variable		Output	Point	Object Name	Variable
Node Object					**Node Object**			
Object demand	Node Request	nviNodeRequest	SNVT_obj_request		Object status	Node Status	nvoNodeStatus	SNVT_obj_status
Time input	Node Time Setup	nviNodeTimeSet	SNVT_time_stamp		Fault message	Node Alarm	nvoNodeAlarm	SNVT_alarm
Input fault message	Node Alarm	nviNodeAlarm	SNVT_alarm		Status controller outputs	Node Relay State	nvoNodeRlyState	SNVT_state
DHW Objects					**DHW Objects**			
DHW operating mode	DHW Controller Application Mode	nviDHWCApplicMd	SNVT_hvac_mode		DHW actual temperature	DHW Controller Actual Temperature	nvoDHWCActTemp	SNVT_temp_p
DHW set-point temperature	DHW Controller Set-point	nviDHWCSetpt	SNVT_temp_p		Effective DHW set-point temperature	DHW Controller Effective Set-point	nvoDHWCEffSetpt	SNVT_temp_p
Central Flow Demand Manager (CFDM) Objects					**Central Flow Demand Manager (CFDM) Objects**			
System output set-point	CFDM Production Command	nviCFDMProdCmd	SNVT_switch		Actual system output	CFDM Power State	nvoCFDMPwrState	SNVT_switch
Operating mode	CFDM Application Mode	nviCFDMApplicMd	SNVT_hvac_mode		Actual system temperature	CFDM Supply Temperature	nvoCFDMSupplyT	SNVT_temp_p
System set-point temperature	CFDM Set-point	nviCFDMSetpoint	SNVT_temp_p		Effective system set-point temperature	CFDM Effective Set-point	nvoCFDMEffSetpt	SNVT_temp_p
Heating circuit demand	CFDM Constant Demand	nviCFDMConsDmd	UNVT_Demand		System status	CFDM Production State	nvoCFDMProdState	UNVT_ProdState
Boiler Controller (BoC) Objects					**Boiler Controller (BoC) Objects**			
Boiler output set-point	BoC Boiler Command	nviBoCBoilerCmd	SNVT_switch		Actual boiler output	BoC Boiler State	nvoBoCBlrState	SNVT_switch
Operating mode	BoC Application Mode	nviBoCApplicMd	SNVT_hvac_mode		Actual boiler temperature	BoC Effective Set-point	nvoBoCEffSetpt	SNVT_temp_p
Boiler temperature set-point	BOC Set-point	nviBoCSetpoint	SNVT_temp_p		Effective boiler temperature set-point	BOC Supply Temperature	nvoBoCSupplyT	SNVT_temp_p
N/A	N/A	N/A	N/A		Boiler status	BoC Boiler Controller State	nvoBoCBoCState	UNVT_BoCState

Overview of Functional Objects

Vitotronic 300, GW2

Input	Point	Object Name	Variable		Output	Point	Object Name	Variable
Node Object					**Node Object**			
Object demand	Node Request	nviNodeRequest	SNVT_obj_request		Object status	Node Status	nvoNodeStatus	SNVT_obj_status
Time input	Node Time Setup	nviNodeTimeSet	SNVT_time_stamp		Fault message	Node Alarm	nvoNodeAlarm	SNVT_alarm
Input fault message	Node Alarm	nviNodeAlarm	SNVT_alarm		Time output	Node Time Setup	nvoNodeTimeSet	SNVT_time_stamp
Input outdoor temperature	Node Outdoor Actual Temperature	nviNodeOATemp	SNVT_temp_p		Outdoor temperature output	Node Outdoor Actual Temperature	nvoNodeOATemp	SNVT_temp_p
N/A	N/A	N/A	N/A		Status controller outputs	Node Relay State	nvoNodeRlyState	SNVT_state
DHW Objects					**DHW Objects**			
DHW operating mode	DHW Controller Application Mode	nviDHWCApplicMd	SNVT_hvac_mode		DHW actual temperature	DHW Controller Actual Temperature	nvoDHWCActTemp	SNVT_temp_p
DHW set-point temperature	DHW Controller Set-point	nviDHWCSetpt	SNVT_temp_p		Effective DHW set-point temperature	DHW Controller Effective Set-point	nvoDHWCEffSetpt	SNVT_temp_p
Central Flow Demand Manager (CFDM) Objects					**Central Flow Demand Manager (CFDM) Objects**			
System output set-point	CFDM Production Command	nviCFDMProdCmd	SNVT_switch		Actual system output	CFDM Power State	nvoCFDMPwrState	SNVT_switch
Operating mode	CFDM Application Mode	nviCFDMApplicMd	SNVT_hvac_mode		Actual system temperature	CFDM Supply Temperature	nvoCFDMSupplyT	SNVT_temp_p
System set-point temperature	CFDM Set-point	nviCFDMSetpoint	SNVT_temp_p		Effective system set -point temperature	CFDM Effective Set-point	nvoCFDMEffSetpt	SNVT_temp_p
Heating circuit demand	CFDM Constant Demand	nviCFDMConsDmd	UNVT_Demand		System Status	CFDM Production State	nvoCFDMProdState	UNVT_ProdState

Notes:

Overview of Functional Objects

Vitotronic 300, GW2 Continued

Input	Point	Object Name	Variable		Output	Point	Object Name	Variable
Heating Circuit Controller (HCC1) Objects					**Heating Circuit Controller (HCC1) Objects**			
Heating circuit operating mode	HCC1 Application Mode	nviHCC1ApplicMd	SNVT_hvac_mode		Actual operating mode	HCC1 Unit State	nvoHCC1UnitState	SNVT_hvac_mode
Room set-point temperature	HCC1 Space Set-point	nviHCC1SpaceSet	SNVT_temp_p		Effective room set-point temperature	HCC1 Effective Set-point	nvoHCC1EffSetpt	SNVT_temp_p
Supply temperature set-point	HCC1 Flow Temperature Set-point	nviHCC1FlowTSet	SNVT_temp_p		N/A	N/A	N/A	N/A
Heating Circuit Controller (HCC2) Objects					**Heating Circuit Controller (HCC2) Objects**			
Heating circuit operating mode	HCC2 Application Mode	nviHCC2ApplicMd	SNVT_hvac_mode		Actual operating mode	HCC2 Unit State	nvoHCC2UnitState	SNVT_hvac_mode
Room set-point temperature	HCC2 Space Set-point	nviHCC2SpaceSet	SNVT_temp_p		Effective room set-point temperature	HCC2 Effective Set-point	nvoHCC2EffSetpt	SNVT_temp_p
Supply temperature set-point	HCC2 Flow Temperature Set-point	nviHCC1FlowTSet	SNVT_temp_p		N/A	N/A	N/A	N/A
Heating Circuit Controller (HCC3) Objects					**Heating Circuit Controller (HCC3) Objects**			
Heating circuit operating mode	HCC3 Application Mode	nviHCC3ApplicMd	SNVT_hvac_mode		Actual operating mode	HCC3 Unit State	nvoHCC3UnitState	SNVT_hvac_mode
Room set-point temperature	HCC3 Space Set-point	nviHCC3SpaceSet	SNVT_temp_p		Effective room set-point temperature	HCC3 Effective Set-point	nvoHCC3EffSetpt	SNVT_temp_p
Supply temperature set-point	HCC3 Flow Temperature Set-point	nviHCC3FlowTSet	SNVT_temp_p		N/A	N/A	N/A	N/A

Notes:

Overview of Functional Objects

Vitotronic 333/300-K, MW1, MW1S, MW2 and MW2S (Vitocontrol-S/C)

Input	Point	Object Name	Variable		Output	Point	Object Name	Variable
Node Object					**Node Object**			
Object demand	Node Request	nviNodeRequest	SNVT_obj_request		Object status	Node Status	nvoNodeStatus	SNVT_obj_status
Time input	Node Time Setup	nviNodeTimeSet	SNVT_time_stamp		Fault message	Node Alarm	nvoNodeAlarm	SNVT_alarm
Input fault message	Node Alarm	nviNodeAlarm	SNVT_alarm		Time output	Node Time Setup	nvoNodeTimeSet	SNVT_time_stamp
Indoor output temperature	Node Outdoor Actual Temperature	nviNodeOATemp	SNVT_temp_p		Outdoor temperature output	Node Outdoor Actual Temperature	nvoNodeOATemp	SNVT_temp_p
N/A	N/A	N/A	N/A		Status controller outputs	Node Relay State	nvoNodeRlyState	SNVT_state
DHW Objects					**DHW Objects**			
DHW operating mode	DHW Controller Application Mode	nviDHWCApplicMd	SNVT_hvac_mode		DHW actual temperature	DHW Controller Actual Temperature	nvoDHWCActTemp	SNVT_temp_p
DHW set-point temperature	DHW Controller Set-point	nviDHWCSetpt	SNVT_temp_p		Effective DHW set-point temperature	DHW Controller Effective Set-point	nvoDHWCEffSetpt	SNVT_temp_p
Central Flow Demand Manager (CFDM) Objects					**Central Flow Demand Manager (CFDM) Objects**			
System output set-point	CFDM Production Command	nviCFDMProdCmd	SNVT_switch		Actual system output	CFDM Power State	nvoCFDMPwrState	SNVT_switch
Operating mode	CFDM Application Mode	nviCFDMApplicMd	SNVT_hvac_mode		Actual system temperature	CFDM Supply Temperature	nvoCFDMSupplyT	SNVT_temp_p
System set-point temperature	CFDM Set-point	nviCFDMSetpoint	SNVT_temp_p		Effective system set -point temperature	CFDM Effective Set-point	nvoCFDMEffSetpt	SNVT_temp_p
Heating circuit demand	CFDM Constant Demand	nviCFDMConsDmd	UNVT_Demand		System Status	CFDM Production State	nvoCFDMProdState	UNVT_ProdState
***Production Manager (PM1 through PM4) Objects**					***Production Manager (PM1 through PM4) Objects**			
Actual boiler output 1	PM1 Boiler State	nviPM1BlrState	SNVT_switch		Boiler output set-point 1	PM1 Boiler Command	nvoPM1BlrCmd	SNVT_switch
Actual boiler temperature 1	PM1 Supply Temperature	nviPM1SupplyT	SNVT_temp_p		Operating mode 1	PM1 Application Mode	nvoPM1ApplicMd	SNVT_hvac_mode
Boiler status 1	PM1 Boiler Controller State	nviPM1BoCState	UNVT_BoCState		Boiler temperature set-point 1	PM1 Set-point	nvoPM1Setpoint	SNVT_temp_p

Overview of Functional Objects

Vitotronic 333/300-K, MW1, MW1S, MW2 and MW2S (Vitocontrol-S/C) Continued

Input	Point	Object Name	Variable		Output	Point	Object Name	Variable
Heating Circuit Controller (HCC1) Objects					**Heating Circuit Controller (HCC1) Objects**			
Heating circuit operating mode	HCC1 Application Mode	nviHCC1ApplicMd	SNVT_hvac_mode		Actual operating mode	HCC1 Unit State	nvoHCC1UnitState	SNVT_hvac_mode
Room set-point temperature	HCC1 Space Set-point	nviHCC1SpaceSet	SNVT_temp_p		Effective room set-point temperature	HCC1 Effective Set-point	nvoHCC1EffSetpt	SNVT_temp_p
Supply temperature set-point	HCC1 Flow Temperature Set-point	nviHCC1FlowTSet	SNVT_temp_p		N/A	N/A	N/A	N/A
Heating Circuit Controller (HCC2) Objects					**Heating Circuit Controller (HCC2) Objects**			
Heating circuit operating mode	HCC2 Application Mode	nviHCC2ApplicMd	SNVT_hvac_mode		Actual operating mode	HCC2 Unit State	nvoHCC2UnitState	SNVT_hvac_mode
Room set-point temperature	HCC2 Space Set-point	nviHCC2SpaceSet	SNVT_temp_p		Effective room set-point temperature	HCC2 Effective Set-point	nvoHCC2EffSetpt	SNVT_temp_p
Supply temperature set-point	HCC2 Flow Temperature Set-point	nviHCC2FlowTSet	SNVT_temp_p		N/A	N/A	N/A	N/A
Heating Circuit Controller (HCC3) Objects					**Heating Circuit Controller (HCC3) Objects**			
Heating circuit operating mode	HCC3 Application Mode	nviHCC3ApplicMd	SNVT_hvac_mode		Actual operating mode	HCC3 Unit State	nvoHCC3UnitState	SNVT_hvac_mode
Room set-point temperature	HCC3 Space Set-point	nviHCC3SpaceSet	SNVT_temp_p		Effective room set-point temperature	HCC3 Effective Set-point	nvoHCC3EffSetpt	SNVT_temp_p
Supply temperature set-point	HCC3 Flow Temperature Set-point	nviHCC3FlowTSet	SNVT_temp_p		N/A	N/A	N/A	N/A

Notes:
*The Vitotronic 333/300-K, MW2 when used with the Vitodens 200, WB2B does not communicate LON. Production Manager Objects 1 through 4 are not applicable to this installation as shown on previous page.

Overview of Functional Objects

Vitotronic 050/200-H, HK1M

Input	Point	Object Name	Variable		Output	Point	Object Name	Variable
Node Object					**Node Object**			
Object demand	Node Request	nviNodeRequest	SNVT_obj_request		Object status	Node Status	nvoNodeStatus	SNVT_obj_status
Time input	Node Time Setup	nviNodeTimeSet	SNVT_time_stamp		Fault message	Node Alarm	nvoNodeAlarm	SNVT_alarm
Indoor output temperature	Node Outdoor Actual Temperature	nviNodeOATemp	SNVT_temp_p		Time output	Node Time Setup	nvoNodeTimeSet	SNVT_time_stamp
N/A	N/A	N/A	N/A		Outdoor temperature output	Node Outdoor Actual Temperature	nvoNodeOATemp	SNVT_temp_p
N/A	N/A	N/A	N/A		Status controller outputs	Node Relay State	nvoNodeRlyState	SNVT_state
Local Flow Demand Manager (LFDM) Objects					**Local Flow Demand Manager (LFDM) Objects**			
System status	LFDM Production State	nviLFDMProdState	UNVT_ProdState		Temperature demand	LFDM Constant Demand	nvoLFDMConsDmd	UNVT_Demand
Heating Circuit Controller (HCC1) Objects					**Heating Circuit Controller (HCC1) Objects**			
Heating circuit operating mode	HCC1 Application Mode	nviHCC1ApplicMd	SNVT_hvac_mode		Actual operating mode	HCC1 Unit State	nvoHCC1UnitState	SNVT_hvac_mode
Room set-point temperature	HCC1 Space Set-point	nviHCC1SpaceSet	SNVT_temp_p		Effective room set-point temperature	HCC1 Effective Set-point	nvoHCC1EffSetpt	SNVT_temp_p
Supply temperature set-point	HCC1 Flow Temperature Set-point	nviHCC1FlowTSet	SNVT_temp_p		N/A	N/A	N/A	N/A

Notes:

Overview of Functional Objects

Vitotronic 050/200-H, HK1S

Input	Point	Object Name	Variable		Output	Point	Object Name	Variable
Node Object					**Node Object**			
Object demand	Node Request	nviNodeRequest	SNVT_obj_request		Object status	Node Status	nvoNodeStatus	SNVT_obj_status
Time input	Node Time Setup	nviNodeTimeSet	SNVT_time_stamp		Fault message	Node Alarm	nvoNodeAlarm	SNVT_alarm
Input fault message	Node Alarm	nviNodeAlarm	SNVT_alarm		Time output	Node Time Setup	nvoNodeTimeSet	SNVT_time_stamp
Indoor output temperature	Node Outdoor Actual Temperature	nviNodeOATemp	SNVT_temp_p		Outdoor temperature output	Node Outdoor Actual Temperature	nvoNodeOATemp	SNVT_temp_p
N/A	N/A	N/A	N/A		Status controller outputs	Node Relay State	nvoNodeRlyState	SNVT_state
DHW Objects					**DHW Objects**			
DHW operating mode	DHW Controller Application Mode	nviDHWCApplicMd	SNVT_hvac_mode		DHW actual temperature	DHW Controller Actual Temperature	nvoDHWCActTemp	SNVT_temp_p
DHW set-point temperature	DHW Controller Set-point	nviDHWCSetpt	SNVT_temp_p		Effective DHW set-point temperature	DHW Controller Effective Set-point	nvoDHWCEffSetpt	SNVT_temp_p
Local Flow Demand Manager (LFDM) Objects					**Local Flow Demand Manager (LFDM) Objects**			
System status	LFDM Production State	nviLFDMProdState	UNVT_ProdState		Temperature demand	LFDM Constant Demand	nvoLFDMConsDmd	UNVT_Demand
Heating Circuit Controller (HCC1) Objects					**Heating Circuit Controller (HCC1) Objects**			
Heating circuit operating mode	HCC1 Application Mode	nviHCC1ApplicMd	SNVT_hvac_mode		Actual operating mode	HCC1 Unit State	nvoHCC1UnitState	SNVT_hvac_mode
Room set-point temperature	HCC1 Space Set-point	nviHCC1SpaceSet	SNVT_temp_p		Effective room set-point temperature	HCC1 Effective Set-point	nvoHCC1EffSetpt	SNVT_temp_p
Supply temperature set-point	HCC1 Flow Temperature Set-point	nviHCC1FlowTSet	SNVT_temp_p		N/A	N/A	N/A	N/A

Notes:

Overview of Functional Objects

Vitotronic 050/200-H, HK3S

Input	Point	Object Name	Variable		Output	Point	Object Name	Variable
Node Object					**Node Object**			
Object demand	Node Request	nviNodeRequest	SNVT_obj_request		Object status	Node Status	nvoNodeStatus	SNVT_obj_status
Time input	Node Time Setup	nviNodeTimeSet	SNVT_time_stamp		Fault message	Node Alarm	nvoNodeAlarm	SNVT_alarm
Input fault message	Node Alarm	nviNodeAlarm	SNVT_alarm		Time output	Node Time Setup	nvoNodeTimeSet	SNVT_time_stamp
Indoor output temperature	Node Outdoor Actual Temperature	nviNodeOATemp	SNVT_temp_p		Outdoor temperature output	Node Outdoor Actual Temperature	nvoNodeOATemp	SNVT_temp_p
N/A	N/A	N/A	N/A		Status controller outputs	Node Relay State	nvoNodeRlyState	SNVT_state
DHW Objects					**DHW Objects**			
DHW operating mode	DHW Controller Application Mode	nviDHWCApplicMd	SNVT_hvac_mode		DHW actual temperature	DHW Controller Actual Temperature	nvoDHWCActTemp	SNVT_temp_p
DHW set-point temperature	DHW Controller Set-point	nviDHWCSetpt	SNVT_temp_p		Effective DHW set-point temperature	DHW Controller Effective Set-point	nvoDHWCEffSetpt	SNVT_temp_p
Local Flow Demand Manager (LFDM) Objects					**Local Flow Demand Manager (LFDM) Objects**			
System status	LFDM Production State	nviLFDMProdState	UNVT_ProdState		Temperature demand	LFDM Constant Demand	nvoLFDMConsDmd	UNVT_Demand

Notes:

Overview of Functional Objects

Vitotronic 050/200-H, HK3S Continued

Input	Point	Object Name	Variable		Output	Point	Object Name	Variable
Heating Circuit Controller (HCC1) Objects					**Heating Circuit Controller (HCC1) Objects**			
Heating circuit operating mode	HCC1 Application Mode	nviHCC1ApplicMd	SNVT_hvac_mode		Actual operating mode	HCC1 Unit State	nvoHCC1UnitState	SNVT_hvac_mode
Room set-point temperature	HCC1 Space Set-point	nviHCC1SpaceSet	SNVT_temp_p		Effective room set-point temperature	HCC1 Effective Set-point	nvoHCC1EffSetpt	SNVT_temp_p
Supply temperature set-point	HCC1 Flow Temperature Set-point	nviHCC1FlowTSet	SNVT_temp_p		N/A	N/A	N/A	N/A
Heating Circuit Controller (HCC2) Objects					**Heating Circuit Controller (HCC2) Objects**			
Heating circuit operating mode	HCC2 Application Mode	NviHCC2ApplicMd	SNVT_hvac_mode		Actual operating mode	HCC2 Unit State	nvoHCC2UnitState	SNVT_hvac_mode
Room set-point temperature	HCC2 Space Set-point	NviHCC2SpaceSet	SNVT_temp_p		Effective room set-point temperature	HCC2 Effective Set-point	nvoHCC2EffSetpt	SNVT_temp_p
Supply temperature set-point	HCC2 Flow Temperature Set-point	NviHCC2FlowTSet	SNVT_temp_p		N/A	N/A	N/A	N/A
Heating Circuit Controller (HCC3) Objects					**Heating Circuit Controller (HCC3) Objects**			
Heating circuit operating mode	HCC3 Application Mode	NviHCC3ApplicMd	SNVT_hvac_mode		Actual operating mode	HCC3 Unit State	nvoHCC3UnitState	SNVT_hvac_mode
Room set-point temperature	HCC3 Space Set-point	NviHCC3SpaceSet	SNVT_temp_p		Effective room set-point temperature	HCC3 Effective Set-point	nNvoHCC3EffSetpt	SNVT_temp_p
Supply temperature set-point	HCC3 Flow Temperature Set-point	NviHCC3FlowTSet	SNVT_temp_p		N/A	N/A	N/A	N/A

Notes:

Logical Signals of Control Units in nvoNodeRlyState

Bit	Logical Signal	100 GC1	300 GW2	333/300-K MW1 Used with GC1	050 HK1M	050 HK1S	050 HK3S	333/300-K MW2 Used with Vitodens	200 HO1
0	DHW Production Pump	K	K	K	–	K	K	K	K
1	DHW Recirculation Pump	–	K	K	–	K	K	K	K
2	Heating Circuit Pump 1	–	K	K	X	X	K	K	X
3	Heating Circuit Pump 2	–	K	K	–	–	K	K	K
4	Heating Circuit Pump 3	–	K	K	–	–	K	K	–
5	Setback Contact HCP 1	–	K	K	X	X	K	K	X
6	Setback Contact HCP 2	–	K	K	–	–	K	K	K
7	Setback Contact HCP 3	–	K	K	–	–	K	K	–
8	Supply Pump	–	–	–	K	K	K	–	–
9	Primary pump heat exchanger set for DHW procution	K	K	K	–	K	K	K	–
	Pump for loading system	–	–	–	–	–	–	–	K
10	Boiler circuit or common supply pump	K	K	K	–	–	–	K	K
	Internal Pump	–	–	–	–	–	–	–	X
11	Shunt Pump	K	K	K	–	–	–	K	–
	Diverting valve in space heating position	–	–	–	–	–	–	–	K
12	Flue gas heat exchanger pump	X	X	–	–	–	–	–	–
13	ThermControl switching contact	K	K	–	–	–	–	–	–
	Diverting valve in DHW position	–	–	–	–	–	–	–	K
14	Burner Stage 1	X	X	–	–	–	–	–	–
15	Burner Fault	X	X	–	–	–	–	–	–
	Compiled fault message	–	–	–	–	–	–	–	X

Notes:
X = always applicable for this device
K = dependent on configuration of this device
– = not applicable for this device

The signals are “high active” i.e. a “1” means “contact closed” specifically “function activated”

Error Information

Content of data structure SNVT_alarm for controls

Byte	Name	Content for Viessmann Control Units	
0...5	location	Sending location (6 digits ASCII), factory default setting: "VI " (VI + 4 blank)	
6...7	object_id	Object identification of node object	
8	alarm_type	Alarm type:	
9	priority_type	Priority type: 0 = lowest priority (in case of no fault) 1 = HVAC alarms (in case of fault)	
10...11	index_to_SNVT	Always contains the nvoNodeAlarm index	
12...13	Value[0...1]	Recognition of Viessmann devices: always 0x1917	
14	Value[2]	Bit 2^7	Free
		Bit 2^6	
		Bit 2^5	0 = Participant is not the central fault manager 1 = Participant is the central fault manager
		Bit 2^4	Warning that content changed (content of fault buffer has changed since last return receipt by Vitocom 300)
		Bit 2^3	System Number
		Bit 2^2	
		Bit 2^1	
		Bit 2^0	
15	value[3]	Participant number	
16...17	year	Time of fault	
18	month		
19	day		
20	hour		
21	minute		
22	second		
23...24	millisecond	Always 0	
25...26	alarm_limit[0...1]	Always 0	
27	alarm_limit[2]	Fault code (high byte), in case of participant failure the central fault manager inputs the participant number of participant with a failure, otherwise 0.	
28	alarm_limit[3]	Fault code (low byte), see Fault Codes	

Fault Code Information

Fault Code (hex)	Cause	Description
00	N/A	System without fault
0F	N/A	Perform maintenance check up
10	Short circuit	Outdoor temperature sensor
18	Open circuit	Outdoor temperature sensor
20	Short circuit	Supply temperature sensor HC1/system
28	Open circuit	Supply temperature sensor HC1/system
30	Short circuit	Boiler temperature sensor
38	Open circuit	Boiler temperature sensor
40	Short circuit	Supply temperature sensor HC2
41	Short circuit	Return temperature sensor HC2
44	Short circuit	Supply temperature sensor HC3
45	Short circuit	Return temperature sensor HC3
48	Open circuit	Supply temperature sensor HC2
49	Open circuit	Return temperature sensor HC2
4C	Open circuit	Supply temperature sensor HC3
4d	Open circuit	Return temperature sensor HC3

Notes:

Fault Code (hex)	Cause	Description
50	Short circuit	DHW tank temperature sensor
51	Short circuit	DHW tank temperature sensor 2
58	Open circuit	DHW tank temperature sensor
59	Open circuit	DHW tank temperature sensor 2
60	Short circuit	Return temperature sensor 17
68	Open circuit	Return temperature sensor 17
70	Short circuit	Supply/return temperature sensor 17B
78	Open circuit	Supply/return temperature sensor 17B
92	Short circuit	Solar collector temperature sensor
93	Short circuit	Solar collector return temperature sensor
94	Short circuit	Solar DHW tank temperature sensor
9A	Open circuit	Solar collector temperature sensor
9B	Open circuit	Solar collector return temperature sensor
9C	Open circuit	Solar DHW tank temperature sensor
9F	General fault	Solar control
A7	Fault	Control unit wireless clock module
AE	Fault	Internal fault mixing valve
AF	Fault	Internal fault mixing valve
b0	Short circuit	Flue gas temperature sensor
b1	Comm. fault	Programming unit (internal)
b4	Internal fault	Internal fault
b5	Internal fault	Internal fault
b6	Internal fault	Invalid hardware detection
b7	Internal fault	Boiler protection coding card
b8	Open circuit	Flue gas temperature sensor
bA	Fault	Mixing valve module KM-BUS

Fault Code Information

Fault Code (hex)	Cause	Description
bC	Fault	Vitotrol remote HC1 KM-BUS
bd	Fault	Vitotrol remote HC2 KM-BUS
bE	Fault	Vitotrol remote HC3 KM-BUS
bF	Comm. fault	Wrong LON module
C1	Fault	External fault indication boiler
C5	Fault	Speed controlled pump HC1
C6	Fault	Speed controlled pump HC2
C7	Fault	Speed controlled pump HC3
C8	Fault	Plug in Module LWCO
C9	Fault	Plug in module maximum pressure
CA	Fault	Plug in module min pres/max. pres 2
Cb	Fault	Plug in module maximum pressure 2
CC		Reserved external periphery
Cd	Comm. fault	Vitocom 300 KM-BUS
CE	Comm. fault	Fault indication module KM-BUS

Fault Code (hex)	Cause	Description
CF	Comm. fault	Communication fault: LON module to control card. This fault also appears in toolbinding when the neuron status is “unconfigured”
d1	Burner fault	Boiler
d4	Limit	Fixed high limit on boiler
d5	Comm. fault	Boiler is not responding
d6	External fault	Fault 1 plug in adapter
d7	External fault	Fault 2 plug in adapter
d8	External fault	Fault 3 plug in adapter
dA	Short circuit	Room temperature sensor HC1
db	Short circuit	Room temperature sensor HC2
dC	Short circuit	Room temperature sensor HC3
dd	Open circuit	Room temperature sensor HC1
dE	Open circuit	Room temperature sensor HC2
dF	Open circuit	Room temperature sensor HC3
E0	Fault	External participant

Notes:

Fault Code Information

Fault Code (hex)	Description
E4	Fault power supply voltage
E5	Internal fault combustion control unit
E6	Flue gas/ air supply system clogged
E6	Fault return message oil pre-heater (with Vitoplus)
F0	Communication fault combustion control unit
F1	Flue gas temperature limiter has tripped
F2	Temperature limiter has tripped
F3	Flame signal is present at burner start
F4	Flame signal is not present
F5	Air pressure switch not open for burner start or not closed when ignition load is achieved

Fault Code (hex)	Description
F6	Gas pressure switch not open for burner start or after flame stabilization not closed
F7	Air pressure sensor short circuit or offset value outside of tolerance
F8	Fuel valve closure delayed
F9	Blower speed too low at burner start
FA	Blower speed too high at burner start
FC	Control of modulation valve defect
FD	Fault combustion control unit
FE	Coding plug defect or wrong EMV-error
FF	Internal fault

Notes:

K-W Technologies Group
750 McMurray Road
Waterloo, Ontario, Canada
N2V 2G5
Tel: (519) 747-5042
Fax: (519) 747-4448
www.kwelectronicservice.com
info@kwelectronicservice.com