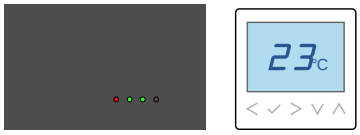
The HeatmiserNeo Driver



The HeatmiserNeo driver connects to the Heatmiser Neo heating and hot water control system. Available for Commander and ObSys.

This document relates to HeatmiserNeo driver version 1.0 and 1.1

Please read the *Commander Manual* or *ObSys Manual* alongside this document, available from *www.northbt.com*

Contents

Compatibility with the Heatmiser Neo System

The HeatmiserNeo driver allows North to interface with the Heatmiser Neo underfloor heating and hot water control system.

The driver connects, via an Ethernet network, to a single Heatmiser neoHub (Fig. 1). The neoHub supports up to 32 zone devices, including thermostats, time clocks and accessories.

The neoHub zones are polled by the driver for their values. These values are stored and made available as objects.

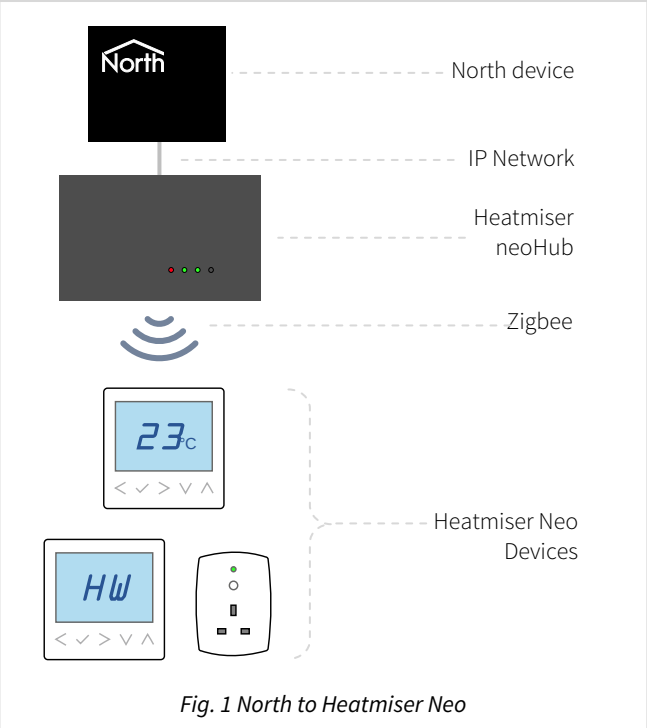


Fig. 1 North to Heatmiser Neo

Equipment

Heatmiser devices compatible with the driver include:

- neoHub gateway
- neoStat thermostats and timeclocks
- neoAir battery-powered thermostats
- neoPlug power sockets

Values

Depending on the type of thermostat or timeclock devices connected, each zone typically has the following values available:

- Standby/Frost protect
- Room temperature
- Room humidity
- Floor temperature
- Temperature setpoint
- Output state
- Preheat optimum start
- Comfort level profiles
- Time clock times
- PIN lock
- Hold
- Holiday mode
- Output delay
- Program mode
- Temperature format
- Date & time

The HeatmiserNeo system does not generate alarm event messages.

Prerequisites

Use the Heatmiser Neo app on a mobile device to set up the neoHub and zones.

The neoHub is assigned an IP address from the local network's DHCP server; a static IP address cannot be assigned. If possible, we recommend creating a reservation for the neoHub within the router/DHCP server. If you are unable to find the IP address of the neoHub from the DHCP server, use the *Find neoHub* feature in the driver to scan the IP network.

Be cautious of adjusting values too frequently. The Heatmiser system uses a Zigbee wireless network with limited bandwidth, sending too many adjustments may cause requests to build up in the neoHub and the system to slow. Use the Write Messages Sent (A.WC) object to monitor how frequently adjustments are made.

The neoHub may become slow to respond – typically if there are problems with its wireless network, or values are adjusted too frequently. Use the neoHub Responding Slowly (A.NS) and Message Reply Time (A.RT) objects to monitor for this issue. If the driver fails to get a response from the neoHub in a timely manner, then it will disconnect and stop making requests for two minutes, allowing the Heatmiser system time to recover.

If you are connecting to a neoHub via a firewall, then the driver will require access to TCP port 4242 on the Heatmiser neoHub.

On the Commander platform, version 2.0 build 01/07/16 or later is required.

Using the Driver

On ObSys, the HeatmiserNeo driver is pre-installed. On Commander, the driver is available to download in the file 'Bank11 HeatmiserNeo.cdm'. On all of these North devices, you can use the driver to create an interface to Heatmiser. Once started, you will need to set up the driver before it can communicate with the Heatmiser Neo system.

Starting the Interface

To start an interface using the HeatmiserNeo driver, follow these steps:

- → **Start Engineering** your North device using ObSys
- → Navigate to **Configuration, Interfaces,** and set a unused **Interface** to 'HeatmiserNeo' to start the particular interface
- → Navigate to the top-level of your North device, then rescan it

The driver setup object (Mc), labelled **Heatmiser Setup**, should now be available. If this object is not available, check an interface licence is available and the driver is installed.

Setting up the Driver

To set up the driver, follow these steps:

- → Navigate to the **Heatmiser Setup** object (Mc). For example, if you started interface 1 with the driver earlier, then the object reference will be 'M1'
- → Set the **Host name/IP address** object (IA) to the IP address or host name of the neoHub.

Checking Communications

You can check that the interface is communicating by reading the **Device Communicating** object (DS). A value of 'yes' indicates the driver has connected to, and is communicating with, the neoHub.

Object Specifications

Once an interface is started, one or more extra objects become available within the top-level object of the device. As with all North objects, each of these extra objects may contain sub-objects, (and each of these may contain sub-objects, and so on) - the whole object structure being a multi-layer hierarchy. It is possible to navigate around the objects using the ObSys Engineering Software.

Each object is specified below, along with its sub-objects.

Example Object Reference

An example of a reference to an object in the same device: the Heatmiser System (S1) contains Heatmiser zone one (Z1). This zone contains a Standby state(V46). Therefore, the complete object reference is 'S1.Z1.V46'.

An example of a reference to an object in a different device: the IP network object (IP) contains Default Commander object (CDIP), which contains the object above (S1.Z1.V46) – therefore the complete object reference is 'IP.CDIP.S1.Z1.V46'.

Device Top-Level Objects

When an interface is started using the HeatmiserNeo driver, the objects below become available within the top-level object of the device. For example, if interface 1 is started, then the object references 'M1' and 'S1' become available.

Description	Reference	Type
Heatmiser Setup Set up the HeatmiserNeo driver, started on interface *c* (*c* is the interface number)	M*c*	Fixed Container: On the Commander platform this will be *[CDM v20\HeatmiserNeo v11]* On the ObSys platform this will be *[OSM v20\HeatmiserNeo v11]*
Heatmiser System Access Heatmiser system connected to interface *c* (*c* is the interface number)	S*c*	Fixed Container: *[HeatmiserNeo v11]*

Heatmiser Driver Setup

Object Type: *[OSM v20\HeatmiserNeo v11]*
Object Type: *[CDM v20\HeatmiserNeo v11]*
Object Type: *[OSM v20\HeatmiserNeo v10]*
Object Type: *[CDM v20\HeatmiserNeo v10]*

The HeatmiserNeo driver contains the following objects:

Description	Reference	Type
Device Label Label displayed when scanning the system	DL	Obj\Text: max. 20 chars; Adjustable
Host name/IP address The host name or IP address of the neoHub. If specifying a host name include the full domain name, eg 'Neo-hub.yourdomain.com'	IA	Obj\Text: max. 63 chars; Adjustable
Find neoHub If you are unable to find the IP address of your neoHub, use this object to scan IP addresses on the local network	F	Fixed container: On the Commander platform this will be *[CDM v20\HeatmiserNeo v11\Find]* On the ObSys platform this will be *[OSM v20\HeatmiserNeo v11\Find]*
Device Communicating Indicates the driver has connected to and is communicating with the neoHub	DS	Obj\NoYes
Default Hold Time (mins) Default time to use when setting Hold Temperature or Timer Boost Time	HT	Obj\Num; Adjustable
Last Write Response Response message from neoHub after last set command	LR	Obj\Text
Advanced Setup Additional configuration options for the driver operation	A	Fixed container: On the Commander platform this will be *[CDM v20\HeatmiserNeo v11\Advanced]* On the ObSys platform this will be *[OSM v20\HeatmiserNeo v11\Advanced]*

Find neoHub

Object Type: *[OSM v20\HeatmiserNeo v11\Find]*
Object Type: *[CDM v20\HeatmiserNeo v11\Find]*
Object Type: *[OSM v20\HeatmiserNeo v10\Find]*
Object Type: *[CDM v20\HeatmiserNeo v10\Find]*

The Find neoHub object triggers the driver to start searching the local network for a neoHub. A DHCP server must assign the IP address of the neoHub, and if a local DNS server is available, the neoHub can be accessed using the host name 'Neo-hub.yourdomain.com'.

If a local DNS server is not available, and the DHCP server's IP address leases are not accessible, then the driver can find the neoHub on the network. The driver attempts each IP address on the local subnet in turn, which can take a while.

Optional start and end IP addresses may be specified to limit the range of the search. If they are not specified, then IP address range of the North device is used.

The Auto Find object (A) is also available to re-find the neoHub if its IP address changes.

The State object (S) provides a description of which IP address the driver is currently attempting.

Description	Reference	Type
Find Now Set the driver to start searching for a neoHub on the local IP network	N	Obj\NoYes; Adjustable
Auto Find Automatically attempt to find the neoHub again if communications are lost	A	Obj\NoYes; Adjustable
Start IP address Optional. First IP address to check for the neoHub. If not specified, then the first IP on the local subnet will be used, eg '192.168.1.1'.	IS	Obj\IP; Adjustable
End IP Address Optional. Last IP address to check for the neoHub. If not specified, then the last IP on the local subnet will be used, eg '192.168.1.254'.	IE	Obj\IP; Adjustable
State Description of current find action	S	Obj\Text

Heatmiser Advanced Setup

Object Type: *[OSM v20\HeatmiserNeo v11\Advanced]*
Object Type: *[CDM v20\HeatmiserNeo v11\Advanced]*

The HeatmiserNeo driver advanced setup contains the following objects.

Description	Reference	Type
Reset Driver This will clear the driver's database of values and then re-initialize communications with the neoHub	RST	Obj\NoYes; Adjustable
Value Read Update Time (s) The driver polls the neoHub periodically, storing all values in its database. The driver waits for this time period before polling for values again	UT	Obj\Num: 15…1200; Adjustable Default: 65s
Responding Slowly Indicates that the neoHub is taking longer than usual to respond (more than 20 seconds). This could indicate a configuration problem with the neoHub wireless network.	NS	Obj\NoYes
Response Time (s) The driver makes several different requests to read all values from the neoHub. This value reports the longest time taken for a reply	RT	Obj\Num
Value Writes Sent (per min) Indicates how many value adjustments the driver has sent to the neoHub in the last minute. Adjusting values too frequently can cause problems with the Heatmiser system.	WC	Obj\Num
Debug Enable This will store additional debug information in the record file. Use this option only when instructed by North Support	DE	Obj\NoYes; Adjustable

Heatmiser System

Object Type: *[HeatmiserNeo v11]*
Object Type: *[HeatmiserNeo v10]*

The Heatmiser Neo system contains up to 32 zone devices, connected wirelessly to a neoHub. Objects are available to read and set values within each zone (Z*x*) and the system (S). Objects are also available to set values in all zones (AZ), all thermostats (AS), and all time clocks (AT).

Description	Reference	Type
System System-wide settings held by the neoHub	S	Fixed container: *[HeatmiserNeo v11/System]*
Zone Label The Heatmiser zone number, *x*, is in the range 1…99. However, a maximum of 32 zones are supported.	Z*x*	Fixed container depending on device type. neoStat devices configured as thermostat: *[HeatmiserNeo v11/Thermostat]* neoStat devices configured as timeclock: *[HeatmiserNeo v11/Timeclock]* neoPlug devices: *[HeatmiserNeo v11/Switch]* Unknown device: *[HeatmiserNeo v11/Unknown]*
All Zones Set values in all devices	AZ	Fixed container: *[HeatmiserNeo v11/AllZone]*
All Thermostats Set values in all neoStat thermostat devices	AS	Fixed container: *[HeatmiserNeo v11/AllThermostat]*
All Timeclocks Set values in all neoStat timeclock devices	AT	Fixed container: *[HeatmiserNeo v11/AllTimeclock]*

System

Object Type: *[HeatmiserNeo v11/System]*
Object Type: *[HeatmiserNeo v10/System]*

The System object contains system-wide configuration settings held by the neoHub.

Description	Reference	Type
Device ID Available in driver v1.1 only	V166	Obj\Text
Date & Time	TIME	Obj\DateTime; Adjustable
Time Zone Offset	V162	Obj\Float: -12…14; Adjustable
Auto Daylight Savings	V153	Obj\OffOn; Adjustable
Daylight Savings	V154	Obj\NoYes
Network Time	V164	Obj\OffOn
Network Time State	V158	Obj\Text
Temperature Format	V151	Obj\Text; Adjustable Values: 'C' or 'F'
Heating Levels Available in driver v1.1 only	V167	Obj\Num
Away Available in driver v1.1 only	V165	Obj\NoYes
Firmware Version	V155	Obj\Num
Partition Count	V159	Obj\Num
Program Mode Select the program mode option for the neoStats Comfort Level and Timeclock profiles. In 'Non-programmable' mode no profile is available. In '24 Hour' programming all days use Monday for the same profile. In '5Day/2Day' programming use Monday for the weekday profile, and Sunday for the weekend profile. In '7 Day' programming each day of the week has a profile.	V160	Obj\ENum; Adjustable Values: 0=Non-programmable, 1=24 Hour, 2=5Day/2Day, 4=7 Day
Zigbee Channel	V163	Obj\Num; Adjustable Values: 11, 14, 15, 19, 20, 24 or 25
Homekit Available in driver v1.1 only	V168	Obj\NoYes

Thermostat

Object Type: *[HeatmiserNeo v11/Thermostat]*
Object Type: *[HeatmiserNeo v10/Thermostat]*

A thermostat object contains values for a programmable room thermostat. Typically a neoStat in thermostat mode.

The neoStat's Current Setpoint (V9) object holds the current setpoint in use for the current mode. For example, if the mode changes to 'standby', then the frost protect setpoint is copied into the current setpoint. This setpoint can be temporarily overridden if required.

To integrate with another HVAC system, you may need the setpoint when the neoStat is in heating mode, and not standby. The driver adds this function with the Manual Setpoint (SP) object – providing either the current setpoint, or the last setpoint before the mode changed to standby, hold, away, or holiday.

Description	Reference	Type
Label Zone label	L	Obj\Text: max 30; Adjustable
Standby Mode Activates standby mode, also called frost protection mode. In this mode the neoStat will only turn on heating if the room temperature falls below the Frost Temperature	V46	Obj\OffOn; Adjustable
Current Setpoint Current temperature setpoint in use for the current mode. This setpoint can be overridden until the next programmed comfort level, or change of mode	V9	Obj\Num: 7…35; Adjustable
Manual Setpoint Adjustable Indicates that the Manual Setpoint is currently adjustable. This is only possible when the neoStat is not in standby, hold, away, or holiday mode	SPA	Obj\NoYes
Manual Setpoint Driver generated value containing the (heating) setpoint used when the neoStat is not in standby, hold, away, or holiday mode. When the interface is started, this value will not be available until Standby Mode is off.	SP	Obj\Num: 7…35; Adjustable
Room Temperature	V10	Obj\Float
Floor Temperature	V8	Obj\Num
Room Humidity (%)	V28	Obj\Num
Maximum Temperature	V32	Obj\Float
Minimum Temperature	V33	Obj\Float
Frost Protection Setpoint Temperature maintained in standby or holiday modes	V109	Obj\Num: 7…17; Adjustable
Heating Demand Indicates thermostat is calling for heat	V23	Obj\OffOn
Hold Indicates if hold mode is active. The hold function manually overrides the current program for a period of time	V49	Obj\OffOn

Description	Reference	Type
Hold Temperature Setpoint temperature when hold mode is active. Set to activate hold temperature for Default Hold Time, or '0' to cancel hold	V24	Obj\Num; Adjustable
Hold Time Remaining (mins) The time remaining in hold mode, if active. Set a time to activate or extend the hold time, or '0' to cancel hold	V25	Obj\Num; Adjustable
Away	V1	Obj\NoYes; Adjustable
Holiday Indicates holiday mode is active. In this mode the neoStat will only turn on heating if the room temperature falls below the Frost Temperature	V26	Obj\NoYes
Holiday Days Remaining The number of days remaining in holiday mode	V27	Obj\Num
Floor Limit Indicates the floor has reached the floor limit temperature	V20	Obj\NoYes
Floor Temperature Limit Set a floor limiting temperature, depending on sensor selection.	V108	Obj\Num: 20…45; Adjustable
Next On Time	V35	Obj\Text
Program Mode Program mode option for the neoStats Comfort Level and Timeclock profiles. In 'Non-programmable' mode no profile is available. In '24 Hour' programming all days use Monday for the same profile. In '5Day/2Day' programming use Monday for the weekday profile, and Sunday for the weekend profile. In '7 Day' programming each day of the week has a profile.	V41	Obj\Text Values: NONPROGRAMMABLE, 24HOURSFIXED, 5DAY2DAY, 7DAY
Comfort Level – *day* Contains a list of time-temperature values to define the profile for a *day*. Refer to Program Mode for which days are in use. A profile contains up to four time-temperature values, referred within Heatmiser at wake, leave, return, sleep. The day, *y*, is in the range 1…7 where 1=Monday .. 7=Sunday	P*y*	Obj\Profile: 4 periods; Adjustable
Enable Boiler	V13	Obj\NoYes
Enable Pump	V15	Obj\NoYes
Enable Valve	V16	Obj\NoYes
Enable Zone	V17	Obj\NoYes
Fail-safe State	V18	Obj\OffOn; Adjustable
Fail-safe Enabled	V19	Obj\NoYes
Output Delay	V37	Obj\OffOn
Output Delay (mins) To prevent rapid switching, an output delay set	V111	Obj\Num: 0…15; Adjustable
Switching Delay	V117	Obj\Num; Adjustable
Switching Delay Time Remaining	V118	Obj\Text

Description	Reference	Type
Switching Differential Controls the switching differential of the thermostat. The default is 1°, which means with a setpoint temperature of 20°, the thermostat will switch the heating on at 19° and off at 20°	V116	Obj\ENum: 0..3; Adjustable Values: 0=0.5°, 1=1°, 2=2°, 3=3°
User Up/Down Limit Limits the use of the up/down temperature keys	V121	Obj\Num: 0…10; Adjustable
Preheat Indicates optimum start is active	V39	Obj\OffOn
Preheat Time	V40	Obj\Text
Max Preheat (Hrs) Optimum start will delay the start up of the heating system to the latest possible moment.	V110	Obj\Num: 0…5; Adjustable
Rate of Change (mins) Used for optimum start. Number of minutes for 1°C temperature rise	V115	Obj\Num
Pump Delay	V42	Obj\OffOn
Pump Delay Setting	V112	Obj\Num: 0…20; Adjustable
Pump Delay Time Remaining	V113	Obj\Text
Lock Indicates if the keypad lock is active. Set to 'Off' (0) to unlock the keypad	V29	Obj\OffOn; Adjustable
Lock PIN Set a 4-digit PIN to activate the keypad lock	V30	Obj\Text: max 4 chars; Adjustable
Low Battery	V31	Obj\NoYes
Offline	V36	Obj\NoYes
Sensor Selection	V44	Obj\Text Values: BUILT_IN_AIR_SENSOR, REMOTE_AIR_SENSOR, FLOOR_SENSOR_ONLY, BUILT_IN_AND_FLOOR, REMOTE_SENSOR_AND_FLOOR
Heat Source	V43	Obj\ENum Value: 0=Radiator, 1=Underfloor
Device Type	V12	Obj\ENum Values: 1=neoStat, 6=neoPlug, 7=neoAir, 10=Repeater, 12=neoStat v2
Device Mode Indicates if the device is in thermostat or time clock mode	V47	Obj\ENum Values: 1=Timeclock, 2=Thermostat
Version Number	V53	Obj\Num
Version Ultra Available in driver v1.1 only	V61	Obj\Num
Write Count	V54	Obj\Num

Time Clock

Object Type: *[HeatmiserNeo v11/Timeclock]*
Object Type: *[HeatmiserNeo v10/Timeclock]*

A timeclock object contains values for a programmable time clock. Typically a neoStat-hw in time clock mode.

Description	Reference	Type
Label Zone label	L	Obj\Text: max 30; Adjustable
Timer State	V51	Obj\OffOn
Standby Activates standby mode	V46	Obj\OffOn; Adjustable
Timer Boost Indicates if boost mode is active. The boost function manually overrides the current program for a period of time. Set 'on' to activate boost for Default Hold Time, or 'no' to cancel	V49	Obj\OffOn; Adjustable
Timer Boost Time (mins) The time remaining in boost mode, if active. Set a time to activate or extend the boost time, or '0' to cancel boost.	V25	Obj\Num; Adjustable
Away	V1	Obj\NoYes; Adjustable
Holiday Indicates holiday mode is active. In this mode the neoStat will only turn on heating if the room temperature falls below the Frost Temperature	V26	Obj\NoYes
Holiday Days Remaining The number of days remaining in holiday mode	V27	Obj\Num
Next On Time	V35	Obj\Text
Program Mode Program mode option for the neoStats Comfort Level and Timeclock profiles. In 'Non-programmable' mode no profile is available. In '24 Hour' programming all days use Monday for the same profile. In '5Day/2Day' programming use Monday for the weekday profile, and Sunday for the weekend profile. In '7 Day' programming each day of the week has a profile.	V41	Obj\Text Values: NONPROGRAMMABLE, 24HOURSFIXED, 5DAY2DAY, 7DAY
Timeclock – *day* Contains a list of on-off times to define the profile for a *day*. Refer to Program Mode for which days are in use. A profile contains up to four on-off times, referred within Heatmiser at wake, leave, return, sleep. The day, *y*, is in the range 1…7 where 1=Monday .. 7=Sunday	T*y*	Obj\Times: 4 periods; Adjustable
Fail-safe State	V18	Obj\OffOn; Adjustable
Fail-safe Enabled	V19	Obj\NoYes

Description	Reference	Type
Lock Indicates if the keypad lock is active. Set to 'Off' (0) to unlock the keypad	V29	Obj\OffOn; Adjustable
Lock PIN Set a 4-digit PIN to activate the keypad lock	V30	Obj\Text: max 4 chars; Adjustable
Low Battery	V31	Obj\NoYes
Offline	V36	Obj\NoYes
Device Type	V12	Obj\ENum Values: 1=neoStat, 6=neoPlug, 7=neoAir, 10=Repeater, 12=neoStat v2
Device Mode Indicates if the device is in thermostat or time clock mode	V47	Obj\ENum Values: 1=Timeclock, 2=Thermostat
Version Number	V53	Obj\Num
Version Ultra Available in driver v1.1 only	V61	Obj\Num
Write Count	V54	Obj\Num

neoPlug

Object Type: *[HeatmiserNeo v11/Switch]*
Object Type: *[HeatmiserNeo v10/Switch]*

A neoPlug object contains values for a neoPlug switchable power socket.

Description	Reference	Type
Label Zone label	L	Obj\Text: max 30; Adjustable
Output State	V51	Obj\OffOn; Adjustable
Auto Program	V58	Obj\OffOn; Adjustable
Hold Indicates if hold mode is active. The hold function manually overrides the current program for a period of time.	V49	Obj\OffOn; Adjustable
Hold Time (mins) The time remaining in hold mode, if active	V25	Obj\Num; Adjustable
Holiday Indicates holiday mode is active. In this mode the neoStat will only turn on heating if the room temperature falls below the Frost Temperature	V26	Obj\NoYes
Holiday Days Remaining The number of days remaining in holiday mode	V27	Obj\Num
Program Mode Program mode option for the neoStats Comfort Level and Timeclock profiles. In 'Non-programmable' mode no profile is available. In '24 Hour' programming all days use Monday for the same profile. In '5Day/2Day' programming use Monday for the weekday profile, and Sunday for the weekend profile. In '7 Day' programming each day of the week has a profile.	V41	Obj\Text Values: NONPROGRAMMABLE, 24HOURSFIXED, 5DAY2DAY, 7DAY
Timeclock – *day* Contains a list of on-off times to define the profile for a *day*. Refer to Program Mode for which days are in use. A profile contains up to four on-off times, referred within Heatmiser at wake, leave, return, sleep. The day, *y*, is in the range 1…7 where 1=Monday .. 7=Sunday	T*y*	Obj\Times: 4 periods; Adjustable
Fail-safe State	V18	Obj\OffOn; Adjustable
Fail-safe Enabled	V19	Obj\NoYes
Offline	V36	Obj\NoYes
Low Battery	V31	Obj\NoYes
Device Type	V12	Obj\ENum Values: 1=neoStat, 6=neoPlug, 7=neoAir, 10=Repeater, 12=neoStat v2
Version Number	V53	Obj\Num
Version Ultra Available in driver v1.1 only	V61	Obj\Num
Write Count	V54	Obj\Num

All Zones

Object Type: *[HeatmiserNeo v11/AllZone]*
Object Type: *[HeatmiserNeo v10/AllZone]*

The All Zones object is used to set common values across all zone devices.

Description	Reference	Type
Standby Mode Activates frost protection mode. In this mode the neoStat will only turn on heating if the room temperature falls below the Frost Temperature	V46	Obj\OffOn; Adjustable
Current Setpoint Adjust the setpoint temperature until the next programmed comfort level	V9	Obj\Num: 7…35; Adjustable
Frost Protection Temperature Temperature maintained in standby or holiday modes	V109	Obj\Num: 7…17; Adjustable
Away	V1	Obj\NoYes; Adjustable
Floor Temperature Limit Set a floor limiting temperature, depending on sensor selection.	V108	Obj\Num: 20…45; Adjustable
Fail-safe State	V18	Obj\OffOn; Adjustable
Output Delay (mins) To prevent rapid switching, an output delay set	V111	Obj\Num: 0…15; Adjustable
Switching Delay	V117	Obj\Num; Adjustable
Switching Differential Controls the switching differential of the thermostat. The default is 1°, which means with a setpoint temperature of 20°, the thermostat will switch the heating on at 19° and off at 20°	V116	Obj\ENum: 0..3; Adjustable Values: 0=0.5°, 1=1°, 2=2°, 3=3°
User Up/Down Limit Limits the use of the up/down temperature keys	V121	Obj\Num: 0…10; Adjustable
Max Preheat (Hrs) Optimum start will delay the start up of the heating system to the latest possible moment.	V110	Obj\Num: 0…5; Adjustable
Pump Delay Setting	V112	Obj\Num: 0…20; Adjustable
Lock Indicates if the keypad lock is active. Set to 'Off' (0) to unlock the keypad	V29	Obj\OffOn; Adjustable
Lock PIN Set a 4-digit PIN to activate the keypad lock	V30	Obj\Text: max 4 chars; Adjustable

All Thermostats

Object Type: *[HeatmiserNeo v11/AllThermostat]*
Object Type: *[HeatmiserNeo v10/AllThermostat]*

The All Thermostats object is used to set common values across all zone thermostat devices.

Description	Reference	Type
Standby/Frost Protect Activates frost protection mode. In this mode the neoStat will only turn on heating if the room temperature falls below the Frost Temperature	V46	Obj\OffOn; Adjustable
Current Setpoint Adjust the setpoint temperature until the next programmed comfort level	V9	Obj\Num: 7…35; Adjustable
Frost Protection Temperature Temperature maintained in frost protect or holiday modes	V109	Obj\Num: 7…17; Adjustable
Hold Temperature Set to activate hold temperature for Default Hold Time, or '0' to cancel hold	V24	Obj\Num; Adjustable
Hold Time Remaining (mins) Set a time to activate or extend the hold time, or '0' to cancel hold	V25	Obj\Num; Adjustable
Away	V1	Obj\NoYes; Adjustable
Floor Temperature Limit Set a floor limiting temperature, depending on sensor selection.	V108	Obj\Num: 20…45; Adjustable
Comfort Level – *day* Contains a list of time-temperature values to define the profile for a *day*. Refer to Program Mode for which days are in use. A profile contains up to four time-temperature values, referred within Heatmiser at wake, leave, return, sleep. The day, *y*, is in the range 1…7 where 1=Monday .. 7=Sunday	P*y*	Obj\Profile: 4 periods; Adjustable
Fail-safe State	V18	Obj\OffOn; Adjustable
Output Delay (mins) To prevent rapid switching, an output delay set	V111	Obj\Num: 0…15; Adjustable
Switching Delay	V117	Obj\Num; Adjustable
Switching Differential Controls the switching differential of the thermostat. The default is 1°, which means with a setpoint temperature of 20°, the thermostat will switch the heating on at 19° and off at 20°	V116	Obj\ENum: 0..3; Adjustable Values: 0=0.5°, 1=1°, 2=2°, 3=3°
User Up/Down Limit Limits the use of the up/down temperature keys	V121	Obj\Num: 0…10; Adjustable
Max Preheat (Hrs) Optimum start will delay the start-up of the heating system to the latest possible moment.	V110	Obj\Num: 0…5; Adjustable
Pump Delay Setting	V112	Obj\Num: 0…20; Adjustable

Description	Reference	Type
Lock Indicates if the keypad lock is active. Set to 'Off' (0) to unlock the keypad	V29	Obj\OffOn; Adjustable
Lock PIN Set a 4-digit PIN to activate the keypad lock	V30	Obj\Text: max 4 chars; Adjustable

All Time Clocks

Object Type: *[HeatmiserNeo v11/AllTimeclock]*
Object Type: *[HeatmiserNeo v10/AllTimeclock]*

The All Time Clocks object is used to set common values across all zone time clock devices.

Description	Reference	Type
Standby Activates standby mode	V46	Obj\OffOn; Adjustable
Timer Boost Indicates if boost mode is active. The boost function manually overrides the current program for a period of time.	V49	Obj\OffOn; Adjustable
Timer Boost Time (min) The time remaining in boost mode, if active. Set a time to activate the boost function.	V25	Obj\Num; Adjustable
Away	V1	Obj\NoYes; Adjustable
Timeclock – *day* Contains a list of on-off times to define the profile for a *day*. Refer to Program Mode for which days are in use. A profile contains up to four on-off times, referred within Heatmiser at wake, leave, return, sleep. The day, *y*, is in the range 1…7 where 1=Monday .. 7=Sunday	T*y*	Obj\Times: 4 periods; Adjustable
Fail-safe State	V18	Obj\OffOn; Adjustable
Lock Indicates if the keypad lock is active. Set to 'Off' (0) to unlock the keypad	V29	Obj\OffOn; Adjustable
Lock PIN Set a 4-digit PIN to activate the keypad lock	V30	Obj\Text: max 4 chars; Adjustable

Driver Versions

Version	Build Date	Details
1.0	1/08/2016	Driver released
1.1	26/05/2017	neoHub devices can be configured with an address > 32. Driver updated to allow for this. Added additional objects supported in neoHub firmware version 2058. Hold Temperature and Time Remaining are now adjustable for neoStats. Added driver object for Default Hold Time. Modified Hold Time Remaining and Timer Boost Time to use minutes, rather than 'h:mm' string. For comfort level profiles and timeclocks, now check program mode for zone rather than system. When writing value to zone, update value in driver cache. Reading value will then give new value, rather than waiting for driver cache to update.
1.1	01/09/2017	Added additional advanced setup objects to control how frequently the neoHub is polled for values Added Manual Setpoint object (SP) to provide standard heating setpoint when not in standby, hold, away or holiday modes. Improved response processing speed. Queue writes to neoHub, and check for COV before writing. When the Heatmiser system is experiencing problems on its wireless network, or too many write commands are sent, the neoHub can become slow to respond. The driver now waits longer for a response, and disconnects for a period of time if the neoHub becomes slow to respond. Added counters to indicate number of writes sent, and response time. Driver tested using a neoHub with firmware version 2066.
1.1	29/05/2018	Added support for neoStat v2

Next Steps…

If you require help, contact support on 01273 694422 or visit *www.northbt.com/support*

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