

MODBUS S-SERIES

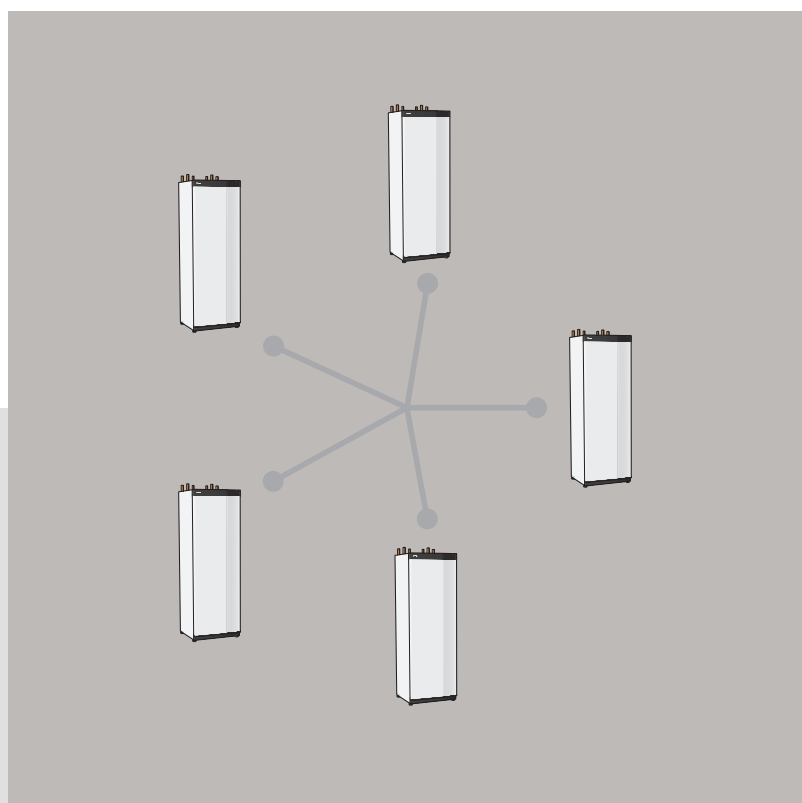
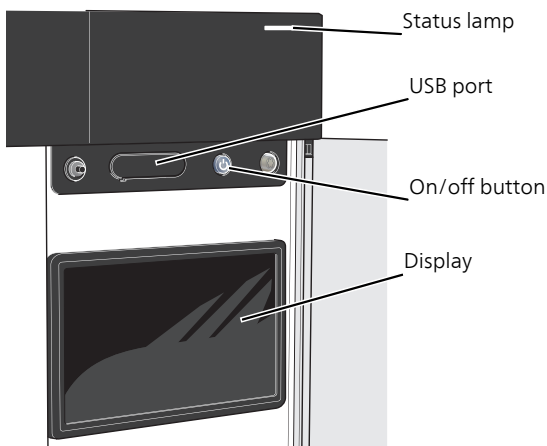


Table of Contents

1	<i>Control - Introduction</i>	3
	Display unit	3
	Navigation	4
	Menu types	4
2	<i>General Modbus information</i>	7
	Export register	7
3	<i>Modbus registers</i>	8
	Common registers	13
	Accessories	14
	<i>Item register</i>	17

1 Control - Introduction

Display unit



THE STATUS LAMP

- lights up white during normal operation.
- lights yellow in emergency mode.
- lights red in the event of a deployed alarm.
- flashes white during active notice.
- is blue when system is switched off.

If the status lamp is red, you receive information and suggestions for suitable actions on the display.

THE USB PORT

Above the display, there is a USB port that can be used e.g. for updating the software. Log into <https://myuplink.com> and click the "General" and then "Software" tab to download the latest version of the software for your installation.

THE ON/OFF BUTTON

The on/off button has three functions:

- start
- switch off
- activate emergency mode

To start: press the on/off button once.

To switch off, restart or activate emergency mode: press and hold the on/off button for 2 seconds. This brings up a menu with various options.

For hard switch off: press and hold the on/off button for 5 seconds.

To activate emergency mode when system is switched off: press and hold the on/off button for 5 seconds. (Deactivate the emergency mode by pressing once).

THE DISPLAY

Instructions, settings and operational information are shown on the display.

Navigation

system has a touchscreen where you simply navigate by pressing and dragging with your finger.

SELECT

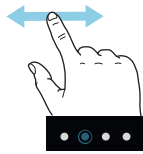
Most options and functions are activated by lightly pressing on the display with your finger.



BROWSE

The dots at the bottom edge show that there are more pages.

Drag to the right or left with your finger to browse between the pages.



SCROLL

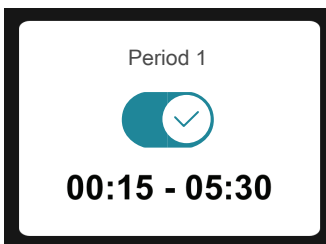
If the menu has several sub-menus, you can see more information by dragging up or down with your finger.



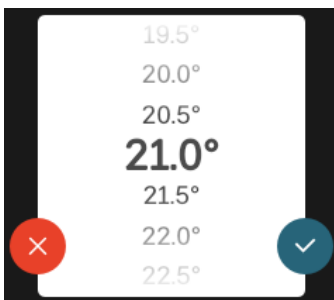
CHANGE A SETTING



Press the setting you want to change.

If it is an on/off setting, it changes as soon as you press it.



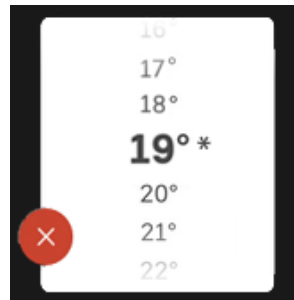
If there are several possible values, a spinning-wheel appears that you drag up or down to find the desired value.




Press  to save your change, or  if you don't want to make a change.

FACTORY SETTING

Factory set values are marked with *.



HELP MENU

 In many menus there is a symbol that indicates that extra help is available.

Press the symbol to open the help text.

You may need to drag with your finger to see all text.

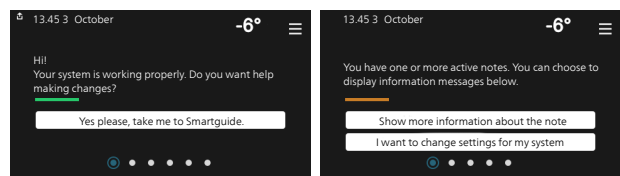
Menu types

HOME SCREENS

Smartguide

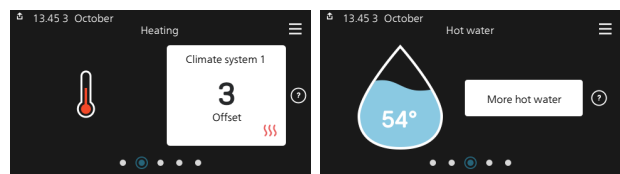
Smartguide helps you both to view information about the current status and to make the most common settings easily. The information that you see depends on the product you have and the accessories that are connected to the product.


Select an option and press it to proceed. The instructions on the screen help you to choose correctly or give you information about what is happening.

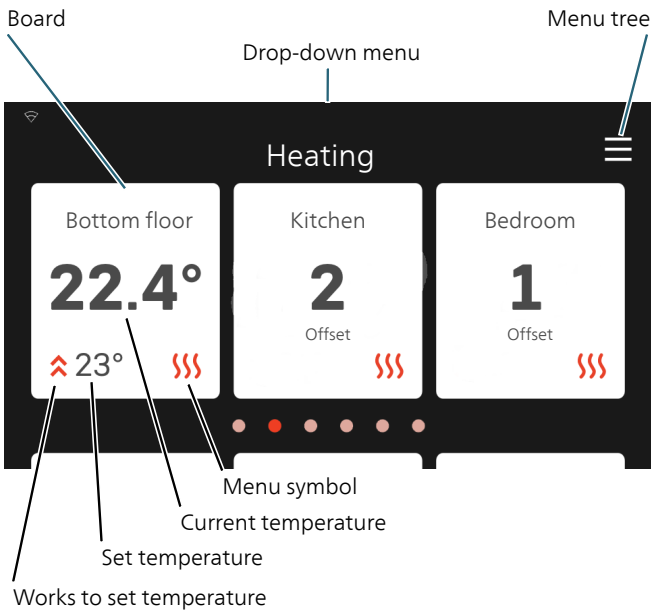


Function pages

On the function pages, you can both view information about the current status and easily make the most common settings. The function pages that you see depend on the product you have and the accessories that are connected to the product.



 Drag to the right or left with your finger to browse between the function pages.

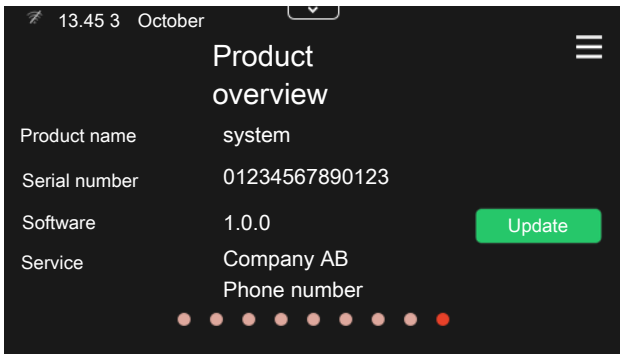


Press the card to adjust the desired value. On certain function pages, drag your finger up or down to obtain more cards.

Product overview

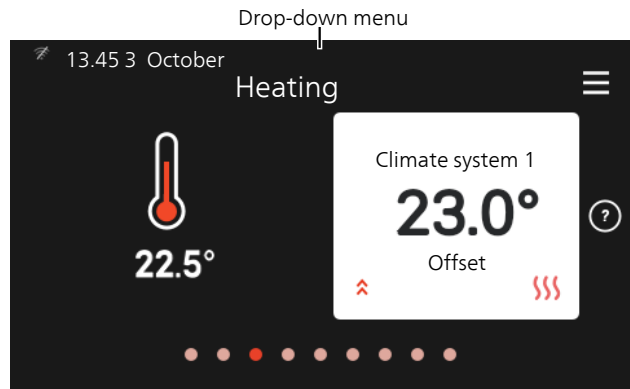
It can be a good idea to have the product overview open during any service cases. You can find it among the function pages.

Here, you can find information about product name, the product's serial number, the version of the software and service. When there is new software to download, you can do it here (provided that system is connected to myUplink).

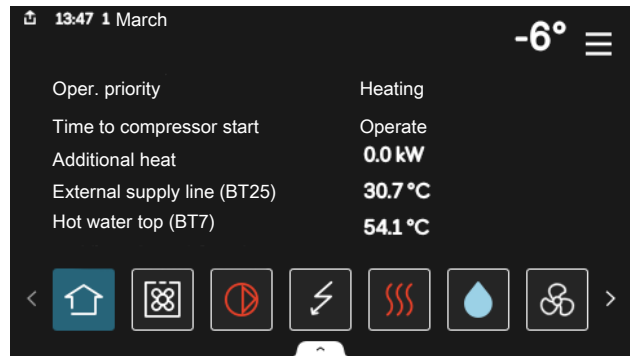


Drop-down menu

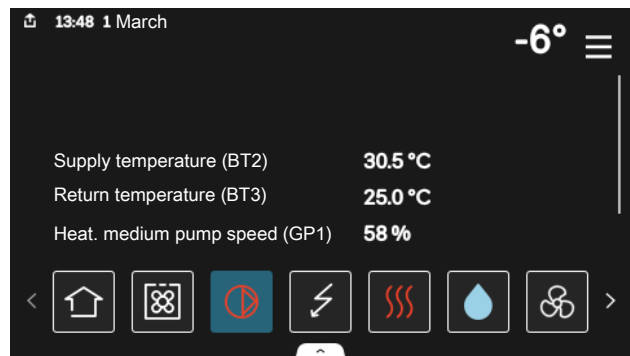
From the home screens, you can reach a new window containing further information by dragging down a drop-down menu.



The drop-down menu shows the current status for system, what is in operation and what system is doing at the moment.

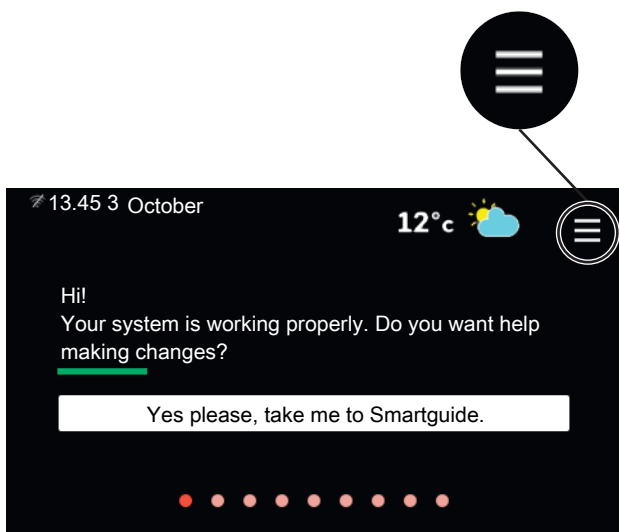


Press the icons on the menu's lower edge for more information about each function. Use the scroll bar to view all information for the selected function.

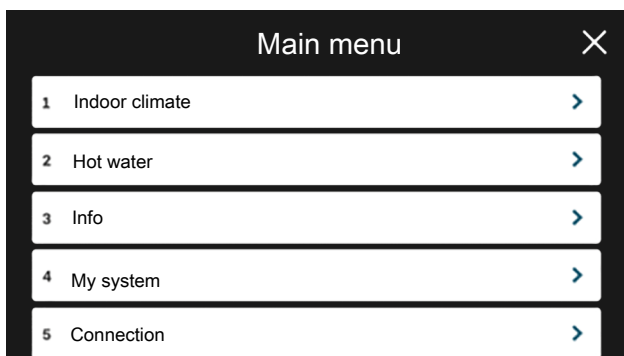


MENU TREE

In the menu tree, you can find all menus and can make more advanced settings.



You can always press "X" to return to the home screens.

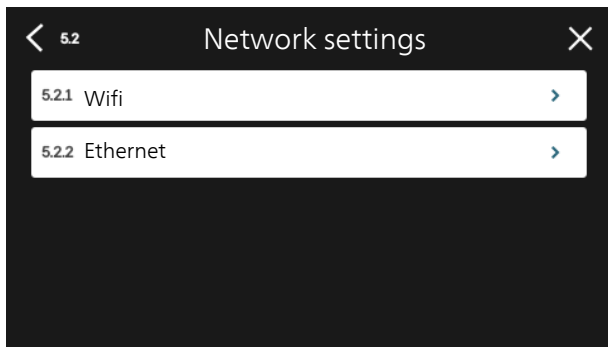


2 General Modbus information

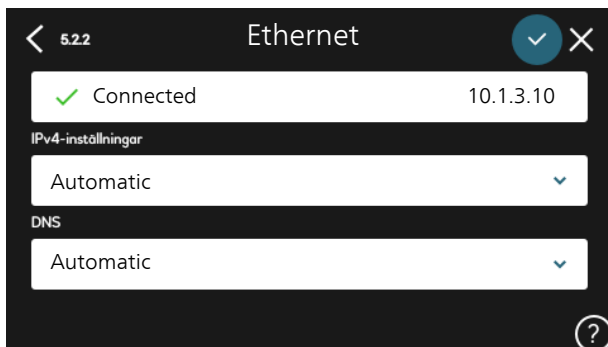
NIBE S-series has built-in support for Modbus TCP/IP that can be activated in menu 7.5.9 - "Modbus TCP/IP".

Modbus protocol uses port 502 for communication.

TCP/IP settings are set in menu 5.2 - "Network settings".



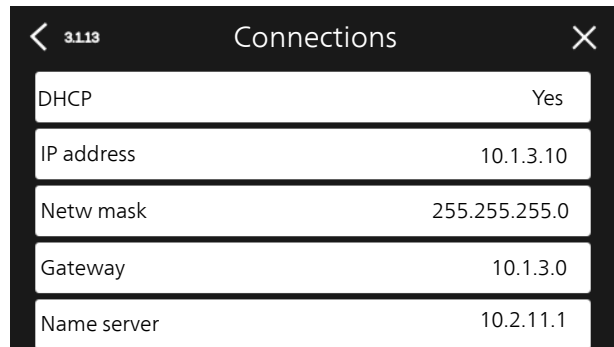
Choose wifi or ethernet.



Readable	ID	Description
Read	0x04	Input Register
Read writable	0x03	Holding Register
Writable multiple	0x10	Write multiple registers
Writable single	0x06	Write single register

Available registers are shown in the display for the current product and its installed and activated accessories (software version 2.2.1 or later required).

Current network settings is located in menu 3.1.13 - "Connections".



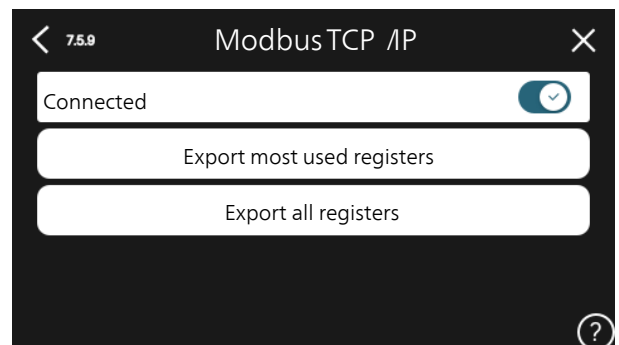
TIP

Feel free to compare your values with menu 3.1 - "Operating info" to check that you are reading the correct values.

For more information, see relevant installer manual for that system.

Export register

1. Insert a USB memory.
2. Go to menu 7.5.9 and choose "Export most used registers" or "Export all registers". These will then be stored on the USB memory in CSV format. (These options is only shown when a USB memory is inserted in the display).



3 Modbus registers

NIBE S1155 / S1255

<i>Function</i>	<i>ID</i>	<i>Type of register</i>	<i>Size</i>	<i>Unit</i>	<i>Factor</i>	<i>Mode</i>	<i>Status</i>
Outdoor temperature (BT1)	1	FC04 Input Register	s16	°C	10	R	
Supply temperature (BT2)	5	FC04 Input Register	s16	°C	10	R	
Return temperature (BT3)	7	FC04 Input Register	s16	°C	10	R	
Hot water top (BT7)	8	FC04 Input Register	s16	°C	10	R	
Hot water charging (BT6)	9	FC04 Input Register	s16	°C	10	R	
Brine in (BT10)	10	FC04 Input Register	s16	°C	10	R	
Brine out (BT11)	11	FC04 Input Register	s16	°C	10	R	
Condenser supply (BT12)	12	FC04 Input Register	s16	°C	10	R	
Discharge (BT14)	13	FC04 Input Register	s16	°C	10	R	
Liquid line (BT15)	14	FC04 Input Register	s16	°C	10	R	
Suction gas (BT17)	16	FC04 Input Register	s16	°C	10	R	
Room temperature 1 (BT50)	26	FC04 Input Register	s16	°C	10	R	
External supply line (BT25)	39	FC04 Input Register	s16	°C	10	R	
Compressor sensor (EB100-BT29)	86	FC04 Input Register	s16	°C	10	R	
Current compressor frequency	1046	FC04 Input Register	u16	Hz	10	R	
Compressor starter	1083	FC04 Input Register	s32	-	1	R	
Compressor status	1100	FC04 Input Register	u8	-	1	R	0 - off 1 - on
Heating medium pump speed (GP1)	1102	FC04 Input Register	u8	%	1	R	
Brine pump speed (GP2)	1104	FC04 Input Register	u8	%	1	R	

NIBE SMO S40

Function	ID	Type of register	Size	Unit	Factor	Mode	Status
Outdoor temperature (BT1)	1	FC04 Input Register	s16	°C	10	R	
Hot water top (BT7)	8	FC04 Input Register	s16	°C	10	R	
Hot water charging (BT6)	9	FC04 Input Register	s16	°C	10	R	
Room temperature 1 (BT50)	26	FC04 Input Register	s16	°C	10	R	
External supply line (BT25)	39	FC04 Input Register	s16	°C	10	R	
Return temperature (BT71)	88	FC04 Input Register	s16	°C	10	R	
External heating medium pump (GP10) status	1066	FC04 Input Register	u8	-	1	R	0 - off 1 - on
Charge pump (EB100-GP12)	1636	FC04 Input Register	u8	%	1	R	

NIBE F2120 slave 1

Function	ID	Type of register	Size	Unit	Factor	Mode	Status
Requested compressor frequency	301	FC04 Input Register	u8	Hz	10	R	
Low press (BP8)	550	FC04 Input Register	s16	°C	10	R	
Hi press (BP9)	551	FC04 Input Register	s16	°C	10	R	
Injection (BT81)	552	FC04 Input Register	s16	°C	10	R	
Evaporator (BT84)	555	FC04 Input Register	s16	°C	10	R	
Return temperature (BT3)	1475	FC04 Input Register	s16	°C	10	R	
Condenser supply (BT12)	1478	FC04 Input Register	s16	°C	10	R	
Discharge (BT14)	1479	FC04 Input Register	s16	°C	10	R	
Liquid line (BT15)	1480	FC04 Input Register	s16	°C	10	R	
Suction gas (BT17)	1481	FC04 Input Register	s16	°C	10	R	
Compressor starts (EP14)	1489	FC04 Input Register	s32	-	1	R	
Total run time compressor (EP14)	1491	FC04 Input Register	s32	h	10	R	
Outdoor temperature (BT28)	1621	FC04 Input Register	s16	°C	10	R	
Evaporator (BT16)	1622	FC04 Input Register	s16	°C	10	R	
Current compressor frequency	1803	FC04 Input Register	s16	Hz	10	R	
Defrost	1805	FC04 Input Register	u8	-	1	R	0 - off 1 - active 2 - passive

NIBE F2120 slave 2

Function	ID	Type of register	Size	Unit	Factor	Mode	Status
Requested compressor frequency	300	FC04 Input Register	u8	Hz	10	R	
Low press (BP8)	534	FC04 Input Register	s16	°C	10	R	
Hi press (BP9)	535	FC04 Input Register	s16	°C	10	R	
Injection (BT81)	536	FC04 Input Register	s16	°C	10	R	
Evaporator (BT84)	539	FC04 Input Register	s16	°C	10	R	
Return temperature (BT3)	1430	FC04 Input Register	s16	°C	10	R	
Condenser supply (BT12)	1433	FC04 Input Register	s16	°C	10	R	
Discharge (BT14)	1434	FC04 Input Register	s16	°C	10	R	
Liquid line (BT15)	1435	FC04 Input Register	s16	°C	10	R	
Suction gas (BT17)	1436	FC04 Input Register	s16	°C	10	R	
Compressor starts (EP14)	1444	FC04 Input Register	s32	-	1	R	
Total run time compressor (EP14)	1446	FC04 Input Register	s32	h	10	R	
Outdoor temperature (BT28)	1617	FC04 Input Register	s16	°C	10	R	
Evaporator (BT16)	1618	FC04 Input Register	s16	°C	10	R	
Current compressor frequency	1789	FC04 Input Register	s16	Hz	10	R	
Defrost	1791	FC04 Input Register	u8	-	1	R	0 - off 1 - active 2 - passive

NIBE F2120 slave 3

Function	ID	Type of register	Size	Unit	Factor	Mode	Status
Requested compressor frequency	299	FC04 Input Register	u8	Hz	10	R	
Low press (BP8)	518	FC04 Input Register	s16	°C	10	R	
Hi press (BP9)	519	FC04 Input Register	s16	°C	10	R	
Injection (BT81)	520	FC04 Input Register	s16	°C	10	R	
Evaporator (BT84)	523	FC04 Input Register	s16	°C	10	R	
Return temperature (BT3)	1385	FC04 Input Register	s16	°C	10	R	
Condenser supply (BT12)	1388	FC04 Input Register	s16	°C	10	R	
Discharge (BT14)	1389	FC04 Input Register	s16	°C	10	R	
Liquid line (BT15)	1390	FC04 Input Register	s16	°C	10	R	
Suction gas (BT17)	1391	FC04 Input Register	s16	°C	10	R	
Compressor starts (EP14)	1399	FC04 Input Register	s32	-	1	R	
Total run time compressor (EP14)	1401	FC04 Input Register	s32	h	10	R	

Function	ID	Type of register	Size	Unit	Factor	Mode	Status
Outdoor temperature (BT28)	1613	FC04 Input Register	s16	°C	10	R	
Evaporator (BT16)	1614	FC04 Input Register	s16	°C	10	R	
Current compressor frequency	1775	FC04 Input Register	s16	Hz	10	R	
Defrost	1777	FC04 Input Register	u8	-	1	R	0 - off 1 - active 2 - passive

NIBE F2120 slave 4

Function	ID	Type of register	Size	Unit	Factor	Mode	Status
Requested compressor frequency	300	FC04 Input Register	u8	Hz	10	R	
Low press (BP8)	502	FC04 Input Register	s16	°C	10	R	
Hi press (BP9)	503	FC04 Input Register	s16	°C	10	R	
Injection (BT81)	504	FC04 Input Register	s16	°C	10	R	
Evaporator (BT84)	507	FC04 Input Register	s16	°C	10	R	
Return temperature (BT3)	1340	FC04 Input Register	s16	°C	10	R	
Condenser supply (BT12)	1343	FC04 Input Register	s16	°C	10	R	
Discharge (BT14)	1344	FC04 Input Register	s16	°C	10	R	
Liquid line (BT15)	1345	FC04 Input Register	s16	°C	10	R	
Suction gas (BT17)	1346	FC04 Input Register	s16	°C	10	R	
Compressor starts (EP14)	1354	FC04 Input Register	s32	-	1	R	
Total run time compressor (EP14)	1356	FC04 Input Register	s32	h	10	R	
Outdoor temperature (BT28)	1609	FC04 Input Register	s16	°C	10	R	
Evaporator (BT16)	1610	FC04 Input Register	s16	°C	10	R	
Current compressor frequency	1761	FC04 Input Register	s16	Hz	10	R	
Defrost	1763	FC04 Input Register	u8	-	1	R	0 - off 1 - active 2 - passive

NIBE F2040

Function	ID	Type of register	Size	Unit	Factor	Mode	Status
Requested compressor frequency	301	FC04 Input Register	u8	Hz	10	R	
Return temperature (BT3)	1475	FC04 Input Register	s16	°C	10	R	
Condenser supply (BT12)	1478	FC04 Input Register	s16	°C	10	R	
Discharge (BT14)	1479	FC04 Input Register	s16	°C	10	R	
Liquid line (BT15)	1480	FC04 Input Register	s16	°C	10	R	
Suction gas (BT17)	1481	FC04 Input Register	s16	°C	10	R	
Compressor starts (EP14)	1489	FC04 Input Register	s32	-	1	R	
Total run time compressor (EP14)	1491	FC04 Input Register	s32	h	10	R	
Outdoor temperature (BT28)	1621	FC04 Input Register	s16	°C	10	R	
Evaporator (BT16)	1622	FC04 Input Register	s16	°C	10	R	
Pressure (BP4)	1801	FC04 Input Register	s16	bar	10	R	
Low pressure switch (BP2)	1802	FC04 Input Register	s16	bar	10	R	
Current compressor frequency	1803	FC04 Input Register	s16	Hz	10	R	
Defrost	1805	FC04 Input Register	u8	-	1	R	0 - off 1 - active 2 - passive
Evaporator (BT16 2)	1966	FC04 Input Register	s16	°C	10	R	

NIBE VVM S320 / S325

Function	ID	Type of register	Size	Unit	Factor	Mode	Status
Outdoor temperature (BT1)	1	FC04 Input Register	s16	°C	10	R	
Supply temperature (BT2)	5	FC04 Input Register	s16	°C	10	R	
Return temperature (BT3)	7	FC04 Input Register	s16	°C	10	R	
Hot water top (BT7)	8	FC04 Input Register	s16	°C	10	R	
Hot water charging (BT6)	9	FC04 Input Register	s16	°C	10	R	
Supply temp. 1 (BT63)	72	FC04 Input Register	s16	°C	10	R	
Heating medium pump speed (GP1)	1636	FC04 Input Register	u8	%	1	R	

Common registers

Function	ID	Type of register	Size	Unit	Factor	Mode	Status
Degree minutes	18	FC03 Holding Register	s16	-	10	R/W	
Degree minutes cooling	20	FC03 Holding Register	s16	-	1	R/W	
Reset alarm	22	FC03 Holding Register	u8	-	1	R/W	
Heating curve	26	FC03 Holding Register	s8	-	1	R/W	
Offset curve	30	FC03 Holding Register	s8	-	1	R/W	
Supply temp. min.	34	FC03 Holding Register	s16	°C	10	R/W	
Supply temp. max.	38	FC03 Holding Register	s16	°C	10	R/W	
Own curve	39-45	FC03 Holding Register	s8	-	1	R/W	
Flow sensor (BF1)	40	FC04 Input Register	s16	l/m	10	R	
Current BE3	46	FC04 Input Register	u32	A	10	R	
Current BE2	48	FC04 Input Register	u32	A	10	R	
Current BE1	50	FC04 Input Register	u32	A	10	R	
Hot water demand	56	FC03 Holding Register	s8	-	1	R/W	0 - small 1 - medium 2 - large 3 - smart control
Degree minutes start additional heat	97	FC03 Holding Register	s16	-	1	R/W	
Degree minutes start compressor	159	FC03 Holding Register	s16	-	1	R/W	
Alarm action, lower room temperature	196	FC03 Holding Register	u8	-	1	R/W	
Alarm action lower HW temperature	197	FC03 Holding Register	u8	-	1	R/W	
Operating mode	237	FC03 Holding Register	u8	-	1	R	0 - Auto 1 - Manual 2 - Add. heat only
Pulse energy meter (BE7/BF3)	396	FC04 Input Register	u32	kWh	100	R	
Pulse energy meter (BE6/BF2)	398	FC04 Input Register	u32	kWh	100	R	
Calculated supply temp	1017	FC04 Input Register	s16	°C	10	R	
Calc supply temp cooling	1567	FC04 Input Register	s16	°C	10	R	
Total run time additional heat	1025	FC04 Input Register	s32	h	10	R	
Operating prioritisation	1028	FC04 Input Register	u8	-	1	R	10 - off 20 - hot water 30 - heat 40 - pool 60 - cooling
Add. heat steps	1029	FC04 Input Register	u8	-	1	R	

Function	ID	Type of register	Size	Unit	Factor	Mode	Status
Compressor starter EP14	1083	FC04 Input Register	s32	-	1	R	
Statistics compressor EP14	1087	FC04 Input Register	s32	h	1	R	
Flow measurement hot water (compressor incl. add)	1575	FC04 Input Register	u32	kWh	10	R	
Flow measurement (compressor incl. add.)	1577	FC04 Input Register	u32	kWh	10	R	
Flow measurement pool (compressor only)	1581	FC04 Input Register	u32	kWh	10	R	
Flow measurement hot water (compressor only)	1583	FC04 Input Register	u32	kWh	10	R	
Flow measurement heat (compressor only)	1585	FC04 Input Register	u32	kWh	10	R	
Alarm number	1975	FC04 Input Register	u16	-	1	R	

Accessories

Shunt-contr add heat (EM1)

Function	ID	Type of register	Size	Unit	Factor	Mode	Status
Boiler temperature (BT52)	38	FC04 Input Register	s16	°C	10	R	
External supply line (BT25)	39	FC04 Input Register	s16	°C	10	R	
Return temperature (BT71)	88	FC04 Input Register	s16	°C	10	R	
Shunt valve QN11	1034	FC04 Input Register	u8	-	1	R	10 - off 20 - active 30 - passive 40 - opening 50 - closing
Ext. heat. medium pump (GP10)	1066	FC04 Input Register	u8	-	1	R	0 - off 1 - on

Step-contr add heat (EB1)

Function	ID	Type of register	Size	Unit	Factor	Mode	Status
External supply line (BT25)	39	FC04 Input Register	s16	°C	10	R	
Ret tmp (BT71)	88	FC04 Input Register	s16	°C	10	R	
Step add. heat type (ELK 26/42)	1029	FC04 Input Register	u8	-	1	R	
Ext. heat. medium pump (GP10)	1066	FC04 Input Register	u8	-	1	R	0 - off 1 - on

Hot water circulation

Function	ID	Type of register	Size	Unit	Factor	Mode	Status
Outgoing hot water (BT70)	87	FC04 Input Register	s16	°C	10	R	
Hot water comfort return (BT82)	174	FC04 Input Register	s16	°C	10	R	
Hot water comfort heater (BT83)	175	FC04 Input Register	s16	°C	10	R	
Hot water circulation (GP11)	1063	FC04 Input Register	u8	-	1	R	0 - off 1 - on

Ground water pump (AXC)

Function	ID	Type of register	Size	Unit	Factor	Mode	Status
Circulation pump GP3	1835	FC04 Input Register	u8	-	1	R	0 - off 1 - on

Extra climate system (ECS) 1

Function	ID	Type of register	Size	Unit	Factor	Mode	Status
Supply temperature (BT2)	4	FC04 Input Register	s16	°C	10	R	
Return temperature (BT3)	78	FC04 Input Register	s16	°C	10	R	
Oper. mode shunt climate system 2	1032	FC04 Input Register	u8	-	1	R	0 - inactive 10 - off 20 - opening 30 - closing
Ext. heat. medium pump (GP10)	1825 (input)	FC04 Input Register	u8	-	1	R	0 - off 1 - on

Shunt-contr brine (EP10)

Function	ID	Type of register	Size	Unit	Factor	Mode	Status
Collector in (BT26)	106	FC04 Input Register	s16	°C	10	R	

Passive cooling (PCS 44)

Function	ID	Type of register	Size	Unit	Factor	Mode	Status
Cooling temperature (EQ1-BT64)	30	FC04 Input Register	s16	°C	10	R	
Return line (EQ1-BT65)	31	FC04 Input Register	s16	°C	10	R	
Passive cooling pump (GP13)	1833	FC04 Input Register	u8	-	1	R	0 - off 1 - on

Pool 40

Function	ID	Type of register	Size	Unit	Factor	Mode	Status
Pool temperature (BT51)	27	FC04 Input Register	s16	°C	10	R	
Reversing valve QN19	1134	FC04 Input Register	u8	-	1	R	0 - closed to pool 1 - open to pool
Circulation pump GP9/GP16	1828	FC04 Input Register	u8	-	1	R	0 - off 1 - on

Pool 310

Function	ID	Type of register	Size	Unit	Factor	Mode	Status
Pool temperature (BT51)	27	FC04 Input Register	s16	°C	10	R	
Reversing valve QN19	1134	FC04 Input Register	u8	-	1	R	0 - closed to pool 1 - open to pool
Speed (GP12)	1589	FC04 Input Register	u8	-	1	R	0 - off 1 - on
Circulation pump GP9/GP16	1828	FC04 Input Register	u8	-	1	R	0 - off 1 - on

ACS 45

Passive/active cooling 4-pipe

Function	ID	Type of register	Size	Unit	Factor	Mode	Status
Cooling temperature (BT64)	30	FC04 Input Register	s16	°C	10	R	
External supply line (BT25)	39	FC04 Input Register	s16	°C	10	R	
Return temperature (BT71)	88	FC04 Input Register	s16	°C	10	R	
Collector temperature (BT57)	90	FC04 Input Register	s16	°C	10	R	
Heating dump temperat. (BT75)	91	FC04 Input Register	s16	°C	10	R	
ACS EQ1-GP20	1831	FC04 Input Register	u8	-	1	R	0 - off 1 - on

ACS 310

Passive/active cooling 4-pipe

Function	ID	Type of register	Size	Unit	Factor	Mode	Status
Cooling temperature (BT64)	30	FC04 Input Register	s16	°C	10	R	
Speed (GP12)	1589	FC04 Input Register	u8	-	1	R	0 - off 1 - on
Passive cooling pump (GP13)	1833	FC04 Input Register	u8	-	1	R	0 - off 1 - on

Item register

A

Accessories

ACS 45

Passive/active cooling 4-pipe

, 16

ACS 310

Passive/active cooling 4-pipe

, 16

Climate system 1

, 15

Ground water pump (AXC)

, 15

Hot water circulation

, 15

Passive cooling 2-pipe (EQ1)

, 15

Passive cooling (PCS 44), 15

Pool 40, 16

Pool 310, 16

Shunt-contr add heat (EM1), 14

Shunt-contr brine (EP10)

, 15

Step-contr add heat (EB1)

, 14

C

Common registers, 13

Control, 3

Control - Introduction, 3

Control - Introduction, 3

H

Help menu, 4

N

Navigation

Help menu, 4

NIBE F2040, 12

NIBE F2120, 9

NIBE S1155 / S1255, 8

NIBE SMO S40, 9

NIBE VVM S320 / S325, 12

S

S1155, 8

NIBE AB Sweden
Hannabadsvägen 5
Box 14
SE-285 21 Markaryd
info@nibe.se
www.nibe.eu

TIF EN 2118-1 M12676EN