GB

EXcon handheld terminal



Menus and alarms VEX5000



Original instructions



1. The handheld t	terminal	
	1.1. Operation	4
	1.1.1. Operation and functions	4
	1.1.2. Operating levels	5
	1.2. Passwords	5
2. User mode		
	2.1. User menu	6
	2.1.1. Fan operation	7
	2.1.2. Extended operation	8
	2.1.3. Temperature	8
	2.1.4. Time and date	9
	2.1.5. Alarm log	9
	2.1.6. About the control system	9
	2.1.7. Internet	
3. Installer level		
	3.1. Installer menu	
	3.1.1. Fan operation	
	3.1.2. Temperature	
	3.1.3. Initial adjustment	
	3.1.4. Fire	
	3.1.5. Communication	
	3.1.6. Language	
	3.1.7. Factory setting	
	3.1.8. Store functions	
4. Service level		
	4.1. Service menu	
	4.1.1. Fan	25
	4.1.2. Filter	28
	4.1.3. Heating	30
	4.1.4. Heating recovery	35
	4.1.5. Cooling	
	4.1.6. Damper	
	4.1.7. Temperature sensor correction	
	4.1.8. Pressure transmitter.	
5. Alarm summar	V	
	Alarm list manual terminal	46

Symbols and terms		
Prohibition symbol	\bigcirc	Failure to observe instructions marked with a prohibition symbol may result in serious or fatal injury.
Danger symbol	\triangle	Failure to observe instructions marked with a danger symbol may result in personal injury and/or damage to the unit.
Terms	These inst • Supply • Extrac • Outdo • Exhau • Recirc	ructions use the following terms for air flows as given in DS447-2013: y air ct air for air ust air culation
Screen displays	These guid cate which	delines contain screen displays intended to the help the user and indi- menu the user is currently viewing.
NB:	The order of screen displays/menus depends on the VEX units settings. Therefore there may be discrepancies between the order of screen displays in the guidelines and in the VEX unit's handheld terminal.	
Software version	n	
Software version	and in the VEX unit's handheld terminal. These instructions are for use with the following version: • EXcon Master SW: 3.19 • Handheld terminal SW: 1.04 The current software version for both the EXcon Master and the handheld terminal can be seen in the menu: User > On control of the handheld terminal.	

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1. The handheld terminal

1.1 Operation

Functional descrip-

tion

Reading, programming and control can be performed from the handheld terminal. The terminal has a graphic display, a button with PRESS and TURN function, a "?" (help)-button and an "Esc" button.

The handheld terminal menu and settings are structured to correspond to the menu and settings found in the EXcon control system's web server. The functionality, settings, etc. of the EXcon control system are described in the EXcon instructions.

Handheld terminal

Α	Graphic display	
В	Light diode: Green LED which lights up when voltage on the handheld terminal is OK.	12:46 / EXcon A
С	Light diode: Red LED which flash- es in the event of an alarm from the unit or the system alarms.	B C D
D	PRESS button	E
Е	TURN button	F
F	? button	G
G	ESC button	EXHAUSTO

1.1.1 Operation and functions

TURN function	The TURN function is used to switch between menus and for setting values.	
	U Turn to the right > next menu/increase value	
	U Turn to the left > previous menu/decrease value	
PRESS function	The PRESS function is used to enter the menu.	
	One press > confirm and next value	
	Two presses > confirm and previous value	
ESC button	The ESC button is used to exit a menu.	

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? button

Press the ? button to bring up help text on the display.

Changing the set value

The hatched field indicates the active value, which can be changed by turning the turn button. Press the press button to confirm the selected choice. Press the ESC button to exit a menu. The following describes a programming sequence.

Handheld ter- minal	Action	
TURN/PRESS		
U	FIND MENU	Find the desired menu choice in the display by turning the turn button.
습	SELECT MENU	Select the desired menu by pressing the press button.
U	SEARCH FOR VALUE	Find the value you wish to change by turning the turn button.
습	SELECT VALUE	Select the desired value by pressing the press button.
U	SET VALUE	Set the desired value by turning the turn button right or left.
습	CONFIRM VAL- UE	Confirm the set value and go to the next parameter.

NB! If the buttons on the handheld terminal are not activated in 30 minutes, the unit automatically logs out to user level.

1.1.2 Operating levels

The menus in the hand terminal are divided into three operating levels:

- User level free access
- Technician/Installation engineer level requires password
- Service level requires password

1.2 Passwords

Login at a higher level also gives access to the underlying levels.

Handheld terminal

Level	Password
User	No password
Technician	1111
Service	1112

It is not possible to change password on the terminal.

2. User mode

2.1 User menu



The user level menu gives access to operating times, temperature setpoint, clock, alarms, software version and IP address. No password is required for user level.

2.1.1 Fan operation



2.1.2 Extended operation

User menu		
Extended operation		Description
		EXTENDED OPERATION Setup of extended operation period.
Submenu	Any comments	
08:32 EXTENDED OPERATION Start: 00:00 Monday End: 00:00 Monday Operation: Active: Off Timeleft: 0day(s) 00:00		 Extended operation can override the weekly program for an adjusted time period within 7 days. Set starting time: [hh:mm weekday] Set finishing time: [hh:mm weekday] Set operating speed (columns) HIGH/LOW Active: Off / On When the period runs out, operation will automatically continue according to the weekly program.

2.1.3 Temperature

User menu		
Tempe	erature	Description
		TEMPERATURE Setting of the setpoint temperature for the selected regulation type.
Submenu	Any comments	
08:32 TEMPERATURE SETPOINT 0.0 °C Current Constant supply air 15.0 °C 0.0 °C Reduc. night time duty	*Shown if Temp. set- point offset. is config- ured and External set- point is selected	 Shows the current temperature and regulation type. Setting the Setpoint temperature Night-time reduced duty External offset* Corrected setpoint*

2.1.4 Time and date

User menu		
Time a	nd date	Description
		TIME AND DATE Entering time and date.
Submenu	Any comments	
08:32 SET TIME AND DATE 2015 25.June Thursday 11:30		Setting the Year Date and month Day of the week Time EXcon control's built-in clock is among other things used by the weekly program.

2.1.5 Alarm log

User menu		
Alarr	n log	Description
		ALARM LOG Shows the latest alarms.
Submenu	Any comments	
OB:32 ALARMLOG10F4 Time: Date: No: 11:04 25:06:2015 173 11:04 25:06:2015 28 10:55 25:06:2015 100 10:55 25:06:2015 201		This shows the time, date and alarm no. of the 4 most recent alarms. A corresponding log of 5-16 most recent alarms is shown on the next menu displays.
		See alarm list for further information.

2.1.6 About the control system

User menu		
About the co	ntrol system	Description
		ABOUT THE CONTROL SYSTEM Shows the current software version.
Submenu	Any comments	
OB:32 CONTROL SYSTEM INFO EXCON Excon Master SW version: EX 3.18 Excon Hand Terminal SW vers: 0.00		 Current software version Control (EXcon Master) Hand terminal (EXcon Hand terminal)

2.1.7 Internet

	User menu		
Inte	rnet	Description	
	RNET	INTERNET Internet settings - TCP/IP communication	
Submenu	Any comments		
08:32 INTERNET Static/Dynamic IP: DHCP IP Address: 172. 20. 21.205 Netmask: 255.255.252. 0 Gateway: 172. 20. 20. 1 Primary DNS: 172. 20. 20. 4 Secondary DNS: 172. 20. 20. 48		 Set IP address. Static: Set network parameters Dynamic (DHCP): Address is assigned for the closed network. 	

3. Installer level

3.1 Installer menu



The menu at installer level gives access to selections and settings for regulation types and integral functions.

Password

The password for the installer level must be set to allow access to underlying menus.

• Code 1111					
08:32		STAL	LER		
Password:					
1	1	1	1		



Failure to observe instructions marked with a danger symbol may result in personal injury and/or damage to the unit.

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3.1.1 Fan operation

Installer menu			
Fan op	peration	Description	
		FAN OPERATION Selection of fan regulation type, setpoints and automat- ic functions.	
Submenu	Any comments		
CURRENT OPERATION 0 m ³ /h 0 m ³ /h 0 m ³ /h		 Shows current operating values Outdoor air [m³/h] / [l/s] Exhaust air [m³/h] / [l/s] Extract air [m³/h] / [l/s] [Pa] [ppm CO₂] [%] Supply air [m³/h] / [l/s] [Pa] [%] 	
08:32 FANSETPOINT		 Adjust setpoint - Low speed Extract air [m³/h] / [l/s] [Pa] [ppm CO₂] [%] Supply air [m³/h] / [l/s] [Pa] [%] 	
CB:32 FANSETPOINT		 Adjust setpoint - High speed Extract air [m³/h] / [l/s] [Pa] [ppm CO₂] [%] Supply air [m³/h] / [l/s] [Pa] [%] 	
08:32 AIRFLOW Max. 10000 m³/h 10000 m²/h	Shown for regulation modes: • Constant pressure • Extract air slave • Supply air slave	 Set air quantity Max extract air [m³/h] [l/s]* Max supply air [m³/h] [l/s]** * Not shown for extract air slave ** Not shown for supply air slave 	
08:32 AIRFLOW Min. Max. 5000 m³/h10000 m³/h	Shown for regulation modes: • Constant VOC/CO ₂	Set min/max airflow • Min airflow [m ³ /h] • Max airflow [m ³ /h]	
08:32 FANSETPOINT Offset 0.0 %	Shown for regulation modes: • Fan optimiser slave	 Offset Offset extract air [%] 	
08:32 COOLING SPEED	Shown only if cooling is installed	 Set cooler speed Forced cooling: On/ Off % increase of fan speed when cooling is active. 	

Installer menu			
Fan op	eration	Description	
08:32 FANREGULATION Constant airflow m ³ /h m ³ /h		 Select fan regulation form Constant pressure P [Pa] Constant airflow [m³/h] / [l/s] Extract air slave [Pa] & [m³/h] [l/s] Supply air slave [Pa] & [m³/h] [l/s] Constant VOC/CO₂ [ppm CO²] Fan optimiser [m³/h] [l/s] Fan optimiser slave [%] & [m³/h] [l/s] Constant motor speed [%] 	
08:32 FANREGULATION Max. VOC/CO2: 1200ppm Min. VOC/CO2: 1000ppm Min. OutCorie: 00.% Recirc. VOC/CO2: M m³/h VOC/CO2: 0 ppm m³/h	Shown for modulated circulating air / VOC/CO ₂ intermittent circulating air	 Set fan regulation Set point for max VOC/CO₂ [ppm] Setpoint for min. VOC/CO₂ [ppm]* Setpoint for minimum outdoor air [%] Recirculation air VOC/CO₂: On/Off * Shown only if VOC/CO₂ intermittent circulating air is selected 	
0832 PRESSURE TRANSMITTER		Read-out of pressure transmitter Modbus address- es • Extract air = PTH-6202 SwX • Supply air = PTH-6202 SwY	
08:32 FANOPTIMISER Override supply air Fire No Cooling: No Summer night cooling: No	Shown for regulation modes: Fan Optimiser	Override supply air • Fire: Yes/No • Cooling: Yes/No • Summer night cooling: Yes/No	
08:32 FAN OPTIMISER Override extract air Fire No Cooling: No Summer night cooling: No	Shown for regulation modes: Fan Optimiser Fan optimiser slave	Override exit air • Fire: Yes/No • Cooling: Yes/No • Summer night cooling: Yes/No	
OB32 FANCOMPENSATION		 Set fan compensation Outdoor temperature compensation: On/ Off 	
CONTRACTION CONTR	Shown only if outdoor temperature compen- sation is: On	 Set outside temperature compensation Max setpoint reduction [%] Outdoor temperature for full compensation [°C] Outdoor temperature for start of compensation [°C] 	

Installer menu			
Fan operation	Description		
08:32 ALARMRELAYS	Set alarm relay function Set function of B-alarm relay to, for example, operation of extra fan.		
	 B-Alarm: B Alarm Low speed High speed Summer night cooling A-Alarm: A-Alarm A + B alarm 		
08:32 EXTERNAL HIGH Set run-on for external high input:	Set run-on/operating time for digital input External high		
Run-on time: 0 Min.	E.g. from a connected PIR sensor or an extended oper- ation impulse switch.		
	Run-on [min]		

3.1.2 Temperature

Installer menu			
Temperature		Description	
		TEMPERATURE Setting of temperature regulation type, cooling and automatic functions.	
Submenu	Any comments		
08:32 EXT. OUTD. AIR TEMP. SENSOR 00:32 EXT. OUTD. AIR TEMP. SENSOR 00:00 C Selected: 20 10:00 C 00:50 C 00:50 C 25:00 C 20:00 C	Shown if Outdoor air temperature (external sensor) is configured	 External outdoor temperature sensor Switch on/off external outdoor temperature sensor 	
OB:32 CURRENT OPERATION 15.0 °C 23.0 °C 25.0 °C 20.0 °C Constant room		 Shows current operating temperatures Outdoor temperature [°C] Exhaust air [°C] if installed Extract air [°C] if installed Supply air [°C] Current regulation form Shown only when room operation is installed. Symbols which are only shown when Summer/Winter 	
		 changeover is activated: ☆ Shown only when the unit is in summer operation. ✿ Shown only when the unit is in winter operation. 	
08:32 TEMPERATURE SETPOINT 35.0°C x0010 Room control 15.0°C SW version: 25 10.0°C Sensor correction: 0.0°C		 Set temperature setpoint Max. supply air temperature [°C] Temperature setpoint [°C] Min. supply air temperature [°C] Max. and min. are <u>not</u> shown when constant supply air temperature is selected. Calibrate room temperature measurement = Setting of sensor offset on room sensor. 	
08:32 MIN COOLING SUPPLY AIR	Shown only if cooling is installed	 Minimum input air for cooling requirement Min. supply air temperature [°C] 	
08:32 TEMPERATURE REGULATION Regulation mode: Constant supply air		Set temperature regulation form Constant supply air Constant extract air Constant room Constant supply/extract air difference 	
		Summer/winter compensation On/Off Summer/winter compensation 	

Installer menu			
Temperature		Description	
08:32 SUMMER COMPENSATION -5.0 °C 20.0 °C 30.0 °C	Shown only if summer/ winter compensation is: On	Setting compensation of temperature setpoint Summer temperature difference [°C] Summer start [°C] Summer maximum [°C] 	
08:32 WINTER COMPENSATION	Shown only if summer/ winter compensation is: On	 Winter compensation of temperature setpoint Winter temperature difference [°C] Winter start [°C] Winter maximum [°C] 	
0832 RECIRC. TEMPERATURE Recirc. function: On 21.0°C 19.0°C	Shown only if circula- tion air is installed and temperature regulation is set to: Constant room temperature	 Set recirculation air function Recirculation function: On/ Off Recirculation stop temperature [°C] Recirculation start temperature [°C] 	
08:32 FANSPEED, INTERM.RECIRC.	Shown only if VOC/CO ₂ intermittent circulating air is se- lected	 Fan speed - VOC/CO₂ intermittent recirculation air Alter fan speed to: Low speed/High speed Set fan speed when the system is running minimum night/night heating. 	
08:32 SUMMERNIGHT COOLING Status: On Start: 23:00 Stop: 06:00		 Summer night cooling Status: On/ Off Start time for summer night cooling Stop time for summer night cooling 	
0832 SUMMER NIGHT COOLING 120'C 230'C 230'C 200'C 100'C	Shown if summer night cooling is: On	 Set summer night cooling Stop outdoor air temperature [°C] Start room temperature [°C] Stop room temperature [°C] Min supply air temperature [°C] 	
08:32 SUMMER NIGHT COOL Fan setpoints: Supply 10000 m ³ /h Exhaust 10000 m ³ /h	Shown if summer night cooling is: On	 Summer night cooling, set fan setpoint Supply air [%] Extract air [%] 	
OB32 COLDRECOVERY	Shown if cooling is in- stalled	 Cold recovery On/Off cold recovery 	
OB:32 COOLING STOP Outd. temp. stop: 15.0°C	Shown for: • Water cooling • External DX	Set cooling stop on active cooling at low outdoor temperature, so free cooling can be used • Cooling stop [°C]	
08:32 MIN.OUTD.TEMP.COOLSTOP Outd.temp.1stop: 0.0 °C Outd.temp.2stop: 0.0 °C Outd.temp.3stop: 0.0 °C Outd.temp.4stop: 0.0 °C	Shown for: • DX cooling	 Minimum outdoor temperature cooling stop Outdoor air temp. 1, stop [°C] (stop cooling step 1) Outdoor air temp. 2, stop [°C] (stop cooling step 2) Outdoor air temp. 3, stop [°C] (stop cooling step 3) Outdoor air temp. 4, stop [°C] (stop cooling step 4) 	

Installer menu			
Tempe	erature	Description	
08:32 SUM/WINTER CHANGEOVER Outd air temperature	 Shown at following temperature regulations: Constant extract air temperature Constant room temperature 	Set summer/winter change Summer • Room temperature Winter • Supply air temperature Summer/winter changeover • Off • Outdoor air temperature • Calendar • Summer • Winter	
08:32 SUM/WINTER CHANGEOVER Outd.air temperature > 20.0 °C * < 15.0 °C	Shown if change is: Outdoor air tempera- ture	 Set change, outside air temperature Summer for higher temperature [°C] Winter for lower temperature [°C] Not changed if the temperature is within the summer/winter limits. 	
08:32 SUM/WINTER CHANGEOVER Calendar 1.April 1.December	Shown if change is: Calendar	 Set changeover date Changeover to summer operation on this date Changeover to winter operation on this date 	

3.1.3 Initial adjustment

Installer menu		
Initial adjustment		Description
		INITIAL SETTINGS Lock fan speeds while making manual adjustments to the VAV damper in the ventilation ducts.
Submenu	Any comments	
08:32 INITIAL SETTINGLOCK Time: 0000 0.0 % 0.0 %		Setting of time during which fan speeds are locked at the speed level set in the FIRE menu.• Set time: hh:mmThe fans are locked at their current speed if the time is set to any value other than 00:00.The time automatically counts down.The lock is deactivated by setting the time to 00:00 and waiting max. 60 s

3.1.4 Fire

Installer menu			
Fire		Description	
0832 N INSTALLER FIRE		FIRE Setting of fan speed in case of fire alarm, and tempera- ture limit for internal fire alarm in the machine.	
Submenu	Any comments		
08.32 SMOKE VENTILATION 80.0%		 Set fire ventilation When the fire alarm is activated, the fan is forced to operate at the set speed. Extract air fan [%] Supply air fan [%] 	
OB:32 FIRE IN AIR HANDLING UNIT Alarm 70.0 °C 80.0 °C		 Set the temperature limits for internal fire alarm in the unit Temperature in extract air [°C] Temperature in supply air [°C] 	
O8:32 FIREDAMPER Day of the week: None Time: 00:00 Fire damper: Not tested Manual test: Select Rest time: 0000s.	Shown only if a digital input and output are configured for the fire damper test	Set testing of fire damper • Setting of fire damper test • Time of fire damper test • Result of last test. • Manual test • Residual time for this test.	
OB:32 FIRE DAMPER	Shown only if a digital input and output are configured for the fire damper test	Option for fire damper at shutdown Select whether the fire damper is to open or close in the case of unit shutdown.	

NB:

The selected fans mode must meet regulatory standards.

3.1.5 Communication

Installer menu		
Commu	nication	Description
		COMMUNICATION Modbus/RTU settings
Submenu	Any comments	
08:32 MODBUSSETTING Address: 1 Baudrate: 9600 Parity: None Stopbit: 1 Start bit: 1		Modbus settings Settings for remote communication on Modbus RS485 connection. • Modbus address [1 - 240] • Baud rate (9600, 19200, 38400) • Parity[None, Equal, Unequal] • Stopbit [1, 2] • Startbit [1, 2]
08:32 LONINFORMATION Neuron ID: 00:000:00:00:00 SW version: 1.00 Program ID: 9F:FE:22:56:00:06:04:30 External interface file: 0936Ayxxxif Resource file set: RFFE2256000604xxxif	Shown only if LON is installed	 Show LON information Neuron ID Program ID External interface file Resource file set

3.1.6 Language

Installer menu			
Lang	uage	Description	
		SROG Select language in handheld terminal	
Submenu	Any comments		
08:32 SELECT LANGUAGE Select language: Select language: Select language:		Set language Select language: • Swedish • Norwegian • Danish • English • German • French • Russian • Dutch • Finnish Language will change to the selected option on exiting the menu.	

3.1.7 Factory setting

	Inst	aller menu
Factory setting		Description
		DEFAULT SETTINGS Recreate default settings in control system.
Submenu	Any comments	
08:32 FACTORY SETTINGS Load factory settings? Confirm to continue!		Confirm retrieval of default settings ESC: aborts OK: Continues
	08:32 FACTORY SETTINGS Factory settings restored	Acknowledgement of correct re-entry of default set- tings.



3.1.8 Store functions

Installer menu		
Store functions		Description
		SHOP FUNCTIONSSelect on and off settings for energy saving functions.This menu is only available if, under EXcon modules > configure > SettingsShop functions is crossed off.
Submenu	Submenu	
0832 ₩INSTALLER FAN		Setting of functions in fan
	08:32 FAN, SETTING Fan speed: Change low>>high	 Set speed change for fans None Change Low Low > High Change High > Low
	08:32 FAN, SETTING Heating 2 forced:	 Set heating 2 Choose whether activation of Heat2 is to override fan speed. Set fan speed change in case of active Heat2.
		Set functions in recirculation damper
	08:32 Image: RECIRC. SETTINGS Block heat 2 with recirculation operation: Image: Recirculation not selected	 Set blocking of Heat2 with recirculation air Mark to activate blocking Heat 2 is blocked when the unit runs with air recirculation.
	08:32 RECIRC: SETTINGS Start-up recirculation: Start-up time, 100% recirculation3600s Start-up time, current 0 s External outdoor air min. temp: 0.0 °C	 Set heating with recirculation air Mark to activate the function Set heating time [Sec] Read off current start-up time [s] Set outdoor temperature for activation [°C] When the function is activated, the unit will operate with recirculation during the early morning heating of the shop if the outdoor temperature is above the set value.
0832 ₩ STORE FUNCTIONS HEATING 1		Set function for Heat 1 Heating surface 1 can be set according to various reg- ulation principles.
	08:32 HEAT 1 Return water limit: 20 Min. temperature 30.0 °C Time delay for start of heat 1: 20 Sec. Delay/block time not active 0 Sec.	 Set min return water limits Mark to activate the function Set min. return temperature in Heat 1[°C] Set time delay for heat 1 [Sec] Read off current blocking time [s]



Installer menu		
Store fu	inctions	Description
Shown only if reg. type Standard is selected.	08:32 FEAT1 Water heating coil type: Standard	Select Heat 1 regulation type Select Standard if Heat1 is to be regulated as a single heating surface.
Shown only if reg. type Splitter is selected.	08:32 FFAT1 Water heating coil type: Splitter Motor valve: 0-10V Water heating coil, cond.output: 10.0 V	Select Heat 1 regulation type Select Splitter if Heat1 is to be regulated as 2 heating surfaces connected in sequence = Heat1 and Heat12 • Set exit signal Heat 12 [0-10V/2-10V] • Read off current exit signal for Heat 12 [V]
Shown only if reg. type Splitter is selected.	08:32 HEATING 1, OUTPUT 12 Water heating coil type: Splitter Time diff. due to condenser output: Delay time for condenser: 1800Sec. Current delay time: 0 Sec.	 Set reg. parameters for exit Heat 12 Mark to activate the function Set delay for condenser [s] Read off current condenser delay [s]
Shown only if reg. type Splitter is selected.	08:32 FIEATING1, OUTPUT12 Water heating coil type: Splitter Min.active time, output 12: 600Sec. Current active time, output 12: 0 Sec. Incr./falling time, output 12: //3600Sec.	 Set reg. parameters for exit Heat 12 Set min active time for Heat 12 Read off current active time for Heat 12 Mark for activation of rise/fall time Set min rise/fall time [Sec]
Shown only if reg. type Splitter is selected.	08:32 HEATINGRELAY1 Water heating coil type: Splitter Hysterresis on heating relay 1: 🛛 3.0 %	 Set reg. parameters for exit Heat 12 Mark to activate hysteresis Heat 1 Set hysteresis for relay Heat 1 [%]
Shown only if reg. type Splitter is selected.	08:32 FFATING 1, ANL. OUTPUT Water heating coil type: Splitter Heating output 1 disconnected	 Set reg. parameters for exit Heat 1 Mark to deactivate Heat 1
Shown only if reg. type Copy is selected.	08:32 HEAT1 Water heating coil type: Copy	Select Heat 1 regulation type Select Copy if Heat 1 is to be regulated as 2 heat sur- faces connected in parallel.
0832 ₩ STOREFUNCTIONS HEATING 2		Set limits for Heat 2 In many cases Heat2 is an electrically heated surface. To save energy from this heat source, the control sys- tem may be set to automatically reduce use of this heat source, depending on the deviation from room tempera- ture or depending on outdoor temperature. Set limits for Heat 2
	Limiting with: None	None - no limits for Heat 2
Shown only for Room temperature limitation	08:32 HEAT 2, LIMIT Limiting with: Room temperature Temp, difference (setp./active): -20 °C Connection /step: 1000/200% Temperature (setpoint/act 15.0/23.0 °C	 Room temperature limits Set temperature difference (setpoint/current) [°C] Connection degree per step [%] Read of Temperature (setpoint/current) [°C]

	Installer menu		
Store fu	unctions	Description	
Shown only in case of "outdoor tempera- ture" limits	08:32 HEAT 2, LIMIT Limiting with: Outdoor air temp. Connection level, outd. air temp: -5.0 °C Current temperature: 4.3 °C	 Outdoor temperature limits Set connection level [°C] Read off current outdoor temperature [°C] 	
	08:32 HEAT2, START-UP Delay start-up: Delayed start: 3600Sec. Remaining time in delayed start: 0 Sec.	 Delayed start-up Heat 2 Mark to activate the function Set delayed start Heat 2 [Sec.] Read off current time in delayed start [Sec] 	
		Set cooling limits	
	08:32 COOLING BLOCKING Room temperature stop Room temperature stop setpoint: 23.0 °C	 Limit cooling in case of high room temperature The function is set to block connection of cooling even though there is an active cooling requirement. Mark to activate the function Set setpoint for stop of cooling [°C] If the current room temperature exceeds this setpoint, cooling will be blocked. 	
	08:32	 Blocking of cooling This function is used to limit cooling with fresh air. Mark to activate the function Set free cooling stop setpoint [°C] 	
	08:32 COLDRECOVERY Coldrecovery	 Cold recovery Mark to activate the function The function is meant to ensure that when there is a cooling requirement and the outdoor temperature is +1°C > room temperature, the unit damper will be diverted to minimum fresh air to save cooling energy. 	

4. Service level

4.1 Service menu



The service level menu gives access to the operating values, settings and forced operation of the unit's components.

Password The password must be set to allow access to underlying menus. The password gives automatic access to installer level.

• Code 1112

08:32 SERVICE				
Pas	swor	d:		
1	1	1	2	



Failure to observe instructions marked with a danger symbol may result in personal injury and/or damage to the unit.



4.1.1 Fan

Service menu		
Fan		Description
OB:32 A SERVICE		FAN Show current operating status. Set functions and forced fan control.
Submenu	Any comments	
		Set fan operation • SERVICE • Manual STOP • Constant LOW speed • Constant HIGH speed • Automatic operation according to weekly program NB! When setting SERVICE, the unit cannot be started from the WEB user interface, but only from the hand- held terminal.
08:32 SUPPLY AIR FAN 0 SFP EC 0 W 0 RPM 0 m ³ /h k factor: 280		 Supply air fan operating status Current setpoint [%] Specific Fan Power SFP [J/m3] Current power consumption [W] Current rpm [RPM] Current ventilation [m3/h] [l/s] [Pa] Current k-factor for calculating airflow Symbol is shown when an alarm from the frequency converter is triggered.
	FORCED CONTROL OF FAN 0.0 % Timeout: 000000 Forced control: Off 0 RPM 0 m ³ /h kfactor: 280	 Forced control of supply air fan and setting of K factor. Forced operation is only possible once the unit has startet. Set the forced control setpoint [%] Setting of remaining time until forced control expires [hh:mm:ss] Activate forced control: On/Off Current rpm [RPM] Current ventilation [m3/h] [l/s] [Pa] Setting of k-factor Symbol is shown when an alarm from the frequency converter is triggered.
08:32 EXTRACT AIRFAN 0.0% 0 SFP 0 W 0 RPM 0 mP/h kfactor: 100		 Extract air fan operating status Current setpoint [%] Specific Fan Power SFP [J/m3] Current power consumption [W] Current rpm [RPM] Current ventilation [m3/h] [l/s] [Pa] Current k-factor for calculating airflow Symbol is shown when an alarm from the frequency converter is triggered.



Service menu		
Fan		Description
	08:32 FORCED CONTROL OF FAN 0.0% Timeout: 0000000 Forced control: Off 0 RPM 0 m³/h k factor: 100	 Forced control of supply air fan and setting K factor. Forced operation is only possible once the unit has startet. Set the forced control setpoint [%] Setting of remaining time until forced control expires [hh:mm:ss] Activate forced control: On/Off Current rpm [RPM] Current ventilation [m3/h] [l/s] [Pa] Setting of k-factor
08:32 DELAYEDSTART		converter is triggered. Setting of delayed fan start
In the 60Sec. Out the 50Sec.		 Supply air fan delay [sec] Starts x secs after extract air fan Extract air fan delay [sec]
		Starts y sec. alter start of damper opening.
De32 SUPPLY AIR P-band cooling: 7.5 °C P-band heating: 7.5 °C Calibrate temperature measurement Current temperature: 20.0 °C Correction factor: 0.0 °C		 P-band cooling [°C] P-band heating [°C] Shows current temperature [°C] Correction value [°C]
08:32 SUPPLY AIR I-time airflow: 50 Sec. I-time cooling: 10 Sec. I-time heat recovery: 10 Sec. I-time heating 1: 10 Sec. I-time combit 10 Sec.		Set regulation parameters for input I-time airflow [sec] I-time cooling [sec] I-time heat recovery [sec] I-time heating 1 [sec] I-time combi[sec]
08:32 SUPPLY AIR I-time heating 2: 300 Sec. I-time heat pump: 300 Sec.		 Set regulation parameters for input I-time heating 2 [sec] I-time heat pump [sec]
08:32 EXTRACT AIR P-band cooling: 5.0 °C P-band heating: 5.0 °C Calibrate temperature measurement Current temperature: 25.0 °C Correction factor: 0.0 °C		Set temperature regulation for exit air • P-band cooling [°C] • P-band heating [°C] • Shows current temperature [°C] • Correction value [°C]
08:32 EXTRACT AIR I-time airflow: 50 Sec. I-time heat recovery: 300 Sec. I-time heat recovery: 300 Sec. I-time heat recovery: 600 Sec. I-time combit 600 Sec.		Set regulation parameters for exit air • I-time airflow [sec] • I-time cooling [sec] • I-time heat recovery [sec] • I-time heating 1 [sec] • I-time combi [sec]

Service menu		
Fan	Description	
08:32 EXTRACT AIR 1-time heating 2: 600 Sec. I-time heat pump: 600 Sec.	 Set regulation parameters for exit air I-time heating 2 [sec] I-time heat pump [sec] 	
08:32 EXHAUST AIR Calibrate temperature measurement Current temperature: 15.0 °C Correction factor: 0.0 °C	Calibrate temperature measurement for exhaust air (sensor correction/offset) • Shows current temperature [°C] • Correction value [°C]	
08:32 OUTDOOR AIR Temperature sensor correction Current temperature: 0.0 °C Correction factor: 0.0 °C	Calibrate temperature measurement for outdoor air (sensor correction/offset) • Shows current temperature [°C] • Correction value [°C]	

4.1.2 Filter

Service menu		
Fil	ter	Description
08:32 A SERVICE		FILTER Show current pressure. Setting of filter alarms.
Submenu	Any comments	
08:32 OUTDOOR AIRFILTER Alarmlimit: 500% 0Pa 0 Pa		 Set outdoor air filter alarm limit Setting of alarm limit [Pa] [%] Current alarm limit [Pa] * Current filter pressure [Pa] Symbol is shown when a filter alarm is triggered. * Shown only in the event of a dynamic filter alarm
08:32 EXTRACT AIRFILTER Alarm limit: 500% 0Pa 0Pa		 Set exit air filter alarm limit Setting of alarm limit [Pa] [%] Current alarm limit [Pa] * Current filter pressure [Pa] Symbol is shown when a filter alarm is triggered. * Shown only in the event of a dynamic filter alarm
08:32 FILTER ALARM Alarm type: Dynamic Start filter measurement: No Status:Filter measurement complete Supply air fan: 0.0 %		 Set filter alarm type and measurement of filter pressure reference Set alarm type: Static/Dynamic Start filter measurement: Yes/No Show status of filter measurement Not measured Filter measurement in progress Filter measurement completed Static: The alarm limit is fixed and set in Pa Dynamic: The Alarm limit depends on the current air quantity and is set in % deviation relative to measured filter pressure reference. Filter measurement: When dynamic alarm type is selected, a filter reference pressure must be measured on a clean filter. If the filter is changed during servicing, the filter measurement must be repeated. When Yes is selected, the unit automatically measures the filter pressure as a function of flow, and the sequence lasts about 10 min. Both filters are measured at the same time.
08:32 FILTER ALARM Alarm type: Dynamic Start filter measurement: Ves Status:Filter measurement complete Filter measurement underway Supply air fan: 0.0 %		Start filter measurement Confirm to start filter measurement, press Esc to abort.

Service menu			
Filter		Description	
	08:32 FILTER ALARM Alarm type: Dynamic Start filter measurement: No Status:Filter measurement complete Supply air fan: 23.1 %	Filter measurement complete Acknowledgement that filter measurement is in pro- gress/is complete.	

4.1.3 Heating

Service menu		
Heating		Description
		HEATING Show current operating status. Set functions and forced fan control of heating coils.
Submenu	Any comments	
08:32 HEATING COIL 1 0.0 °C Heating: 0.0 % Gain factor: 100 35.0 °C max. 20.0 °C 10.0 °C min.		Show current operating status. Set temperature for heating coil 1 Current outdoor temperature [°C] Current heating [%] Set max supply air temp. [°C] * Current supply air temperature [°C] Set min supply air temp. [°C] * Symbol is shown when an alarm from the heat interface is triggered. * Not shown for temperature regulation: Constant supply air
08:32 WATER HEATING COIL 2 0.0 °C Heating: 0.0 % Gain factor: 100 35.0 °C max. 200 °C 10.0 °C min.		Show current operating status. Set temperature for heating coil 2 Current outdoor temperature [°C] Current heating [%] Set max supply air temp. [°C] * Current supply air temp. [°C] * Set min supply air temp. [°C] * Symbol is shown when an alarm from the heat interface is triggered. * Not shown for temperature regulation: Constant supply air
Electric heating coil		
08:32 ELECTRIC COIL 1 Heating 1: 0.0 % Regulation 1: 0-10V Overheating 1: Low Heating output 1: 0.0 V Heating relay 1: Open Heating relay 2: Open	Shown for the electric heating coil 1	 Show current operating status. Set regulation for current type of electric heating coil 1 Current heating [%] Set regulation form: 0-10 V 1 step 2 step 3 step 4 step 5 step 7-step binary Overheating: Low/High Current signal at heat output [V] Current status Heating relay 1: Open/closed Current status Heating relay 2: Open/closed

Service menu			
Неа	ting	Description	
08:32 FORCED CONTROL HEATING 1: Heating 1: 0.0 % Timeout: 000000 Forced control 1: Off Heating output 1: 0.0 V Heating relay 1: Open Heating relay 2: Open	Shown for the electric heating coil 1	 Forced control of electric heating coil Forced operation is only possible once the unit has started. Set forced operation setpoint [%] Set remaining time until forced operation terminates [hh:mm:ss] Activate forced operation: On/Off Current signal at heating output [V] Current status Heating relay 1: Open/closed Current status Heating relay 2: Open/closed 	
08:32 MIN.AIRFLOW,0% HEATING1 2800 m ⁹ /h 0%	Shown for the electric heating coil 1	 Set min airflow for partially connected electric heating coil 1 Set supply airflow [m3/h] [l/s] Reduced is displayed if the heating output is reduced due to low airflow. 	
08:32 MIN.AIRFL., 100% HEATING1	Shown for the electric heating coil 1	 Set min airflow for 100% connected electric heating coil 1 Set supply airflow [m3/h] [l/s] Reduced is displayed if the heating output is reduced due to low airflow. 	
08:32 ELECTRIC COIL 2 Heating 2: 0.0 % Regulation 2: 0-10V Overheating 2: Low Heating output 2: 0.0 V Heating relay 21: Open	Shown for the electric heating coil 2	 Show current operating status. Set regulation for current type of electric heating coil 2. Current heating [%] Set regulation form: 0-10 V 1 step 2 step 3 step 4 step 5 step 7-step binary Overheating: Low/High Current signal at heating output [V] Current status Heating relay 21: Open/closed Current status Heating relay 22: Open/closed 	
08:32 ELECTRIC COIL 2 Heatingrelay 21: Open Heatingrelay 22: Open Heatingrelay 23: Open Heatingrelay 24: Open Heatingrelay 25: Open Heatingrelay 26: Open	Shown for the electric heating coil 2	Current status electric heating coil 2 • Current status Heating relay 21: Open/closed • Current status Heating relay 22: Open/closed • Current status Heating relay 23: Open/closed • Current status Heating relay 24: Open/closed • Current status Heating relay 25: Open/closed • Current status Heating relay 26: Open/closed	

Service menu		
Неа	ting	Description
08:32 FORCED CONTROL HEATING 2 Heating 2: 0.0 % Timeaut: 00:00:00 Forced control 2: Off Heating output 2: 0.0 V Heating relay 21: Open Heating relay 22: Open	Shown for the electric heating coil 2	 Forced control of electric heating coil 2 Forced operation is only possible once the unit has started. Set forced operation setpoint [%] Set remaining time until forced operation terminates [hh:mm:ss] Activate forced operation: On/ Off Current signal at heating output [V] Current status Heating relay 21: Open/closed Current status Heating relay 22: Open/closed
0832 MIN.AIRFLOW,0% HEATING2 2800 m ³ /h 0%	Shown for the electric heating coil 2	 Set min airflow for partially connected electric heating coil 2 Set supply airflow [m3/h] [l/s] Reduced is displayed if the heating output is reduced due to low airflow.
08:32 MIN. AIRFL., 100% HEATING 2 5700 m ² /h 00%	Shown for the electric heating coil 2	Set min airflow for 100% connected electric heating coil 2 • Set supply airflow [m3/h] [l/s]
	Shown for electric heating coil	 Set after cooling time of electric heating coil Set time [sec] In case of shutdown, the supply air fan continues operation during the aftercooling time.
Water heating coil	I	
08:32 WATER HEATING COIL 1 Heating 1: 0.0 V/ 0.0 % Supply air temperature: 20.0 °C Water temperature 1: 30.0 °C Frost alarm 1: 2.0 °C Heating relay 1: Open Motor valve: 0-10V	Shown for the water heating coil 1	 Show current operating status. Set frost alarm on water heating coil 1 Current heating 1 [%] Current supply air temperature [°C] Current water temperature 1 [°C] Frost alarm 1 [°C] Current status Heat relay 1: Open/closed Set motor valve's regulation area [2-10V = VEX4000 standard]
08:32 HEATING COIL 1 Current valve position 0.0 % Absolute position: 0 * Test run: No Not active	Shown at Belimo Mod- bus valve	 Heating coil 1, Modbus Current valve setting [%] Absolute position [Feedback] Test run: Yes/No Communication: Active / Inactive

Service menu			
Heating		Description	
08:32 FORCED CONTROL HEATING 1 Heating 1: 0.0 % Supply air temperature: 20.0 °C Timeout: 0000000 Forced control1: Off Heating output 1: 0.0 V Heating relay 1: Closed	Shown for the water heating coil 1	 Forced control of water heating coil 1 Forced operation is only possible once the unit has started. Set forced operation setpoint [%] Current supply air temperature [°C] Set remaining time until forced operation terminates [hh:mm:ss] Activate forced operation: On/ Off Current signal at heating output [V] Current status Heating relay 1: Open/closed 	
OB32 PUMPIOPERATION Outdoor air temp. START	Shown for the water heating coil 1	 Set pump operation 1 Pump operation can be set to: Constant operation Auto Outdoor air temperature Heating requirement Start appears when pump is in operation. 	
08:32 PUMP I START TEMPERATURE	Shown at Water heat- ing coil 1 and if out- door temperature is selected	 Set pump 1 start temperature The pump starts when the outdoor temperature is lower than the set value. [°C] Start appears when pump is in operation. 	
0832 PUMPI START HEATING%	Shown at Water heat- ing coil 1 and if out- door temperature is selected	 Set pump 1 start temperature The pump starts when the outdoor temperature is lower than the set value. [%] Start appears when pump is in operation. 	
08:32 FROST PROTECTION 1 Frost protection 1: 5.0 °C Frost alarm 1: 2.0 °C Frost P-band 1: 5.0 °C Start-upheating 1: 0.0 % Standby heating 1: 25.0 °C Water temperature 1: 0.0 °C	Shown for the water heating coil 1	 Setting of frost protection in hot water interface 1 Set temperature for full frost protection [°C] Set temperature for frost alarm [°C] Set frost protection P-band [°C] Set heat boost upon start-up [%] Set hot water interface temperature to standby [°C] Current water temperature [°C] 	
08:32 HEATING COLL 2 Heating2: 10.0 V/ 100.0% Supply air temperature: 0.0 °C Water temperature 2: 0.0 °C Frost alarm2: 2.0 °C Heatingrelay 21: Closed Motor valve: 0-10V	Shown for the water heating coil 2	Show current operating status. Set frost alarm on water heating coil 2 • Current heat 2 [%] • Current input air temperature [°C] • Current water temperature 2 [°C] • Frost alarm 2 [°C] • Current status Heat relay 21: Open/closed • Set motor valve's regulation area [2-10V = VEX4000 standard]	
08:32 HEATING COIL 2 Current valve position 0.0 % Absolute position: 0 * Test run: No Not active	Shown at Belimo Mod- bus valve	 Heating coil 2, Modbus Current valve setting [%] Absolute position [Feedback] Test run: Yes/No Communication: Active / Inactive 	

Service menu		
Hea	ting	Description
08:32 FORCED CONTROL HEATING 2 Heating 2: 0.0 % Supply air temperature: 0.0 °C Timeout: 00:0000 Forced control 2: Off Heating output 2: 10.0 ∨ Heating relay 21: Closed	Shown for the water heating coil 2	 Forced control of water heating coil 2 Forced operation is only possible once the unit has started. Set forced operation setpoint [%] Current input air temperature [°C] Set remaining time until forced operation terminates [hh:mm:ss] Activate forced operation: On/ Off Current signal at heat output [V] Current status Heat relay 21: Open/closed
OB:32 PUMP 2 OPERATION Outdoor air temp. START	Shown for the water heating coil 2	 Set pump operation Pump operation can be set to: Constant operation Auto Outdoor air temperature Heating requirement Start appears when pump is in operation.
08:32 PUMP 2 START TEMPERATURE	Shown at Water heat- ing coil 2 and if out- door temperature is selected	 Set pump 2 start temperature The pump starts when the outdoor temperature is lower than the set value. [°C] Start appears when pump is in operation.
08:32 PUMP 2 START HEAT DEMAND 3.0% START START	Shown at Water heat- ing coil 2 and if out- door temperature is selected	 Set pump 2 start temperature The pump starts when the outdoor temperature is lower than the set value. [%] Start appears when pump is in operation.
08:32 FROST PROTECTION 2 Frost protection 2: 50 °C Frost alarm 2: 20 °C Frost P-band 2: 50 °C Start-up heating 2: 50.0% Standby heating 2: 250 °C Water temperature 2: 0.0 °C	Shown for the water heating coil 2	 Setting of frost protection in water heating coil 2 Set temperature for full frost protection [°C] Set temperature for frost alarm [°C] Set frost protection P-band [°C] Set heat boost upon start-up [%] Set Water heating coil temperature to standby [°C] Current water temperature [°C]

4.1.4 Heating recovery

Service menu		
Heating recovery		Description
		HEATING RECOVERY Show current operating status. Set functions and forced fan control of heat exchanger.
Submenu	Submenu/Any com- ments	
Crossflow heat exchan	ger	
08:32 CROSSFL.HEATEXCHANGER 0.0 °C 0.0 °C 0.0 °C Damper: 100.0% 0.0 °C 0.0 °C 0.0 °C 0.0 °C		 Shows current status of crossflow heat exchanger Current outdoor temperature [°C] Current exhaust air temperature [°C] Current recovery signal [%] Current extract air temperature [°C] Current supply air temperature [°C] Current heating recovery [%]
	08:32 FORCED CTRL.HEAT EXCH Timeout: 00:0000 Forced control: Off Damper: 0.0 % 0.0 °C 0.0 °C 0.0 °C 0.0 %	 Forced control of crossflow heat exchanger Forced operation is only possible once the unit has started. Set remaining time until forced operation terminates [hh:mm:ss] Activate forced operation: On/ Off Set forced operation setpoint [%] Current extract air temperature [°C] Current heat recovery [%]
08:32 CROSS-FL.HEAT EXCH. n: 0% Correction factor: 0.0 % Alarm onlow 1; Alarm level, n: 70.0%		 Efficiency crossflow heat exchanger Current efficiency [%] Correction factor [%] Alarm in case of low efficiency: Yes/No Alarm level [%]
08:32 CROSS-FL.HEAT EXCH. 0.0% 0° Testrun: No Not activ	Shown at Belimo Mod- bus damper	Bypass damper, Modbus Current damper setting [%] Absolute position [Feedback] Test run: Yes/No Communication: Active / Inactive
08:32 ICEPROTECTION Ice protection: 5.0 °C P-band: 5.0 °C Exhaust air temperature: 15.0 °C Protection in progress: No	Shown for tempera- ture-controlled ice pro- tection	 Set ice-protection of crossflow heat exchanger Set ice protection temperature [°C] Set ice protection P band. [°C] Shows current exhaust air temperature [°C] Ice protection in progress: Yes/No
08:32 ICE PROTECTION Exhaustair temperature: 0.0 °C Protection in progress: No	Shown for tempera- ture-controlled ice pro- tection	 Show status of crossflow heat exchanger Shows current exhaust air temperature [°C] Protection in progress: Yes/No

Service menu		
Heating	recovery	Description
08:32 DE-ICING1 De-icing type: Static Start measurement: No De-icing time: 300 s Remaining de-icing time: 0 s Status: Not measured	Shown for tempera- ture-controlled ice pro- tection	Settings for pressure-controlled de-icing, time De-icing type: Static/Dynamic Start measurements: Yes/No De-icing time [s] Remaining de-icing time [s] Measurement status
08:32 DE-ICING 2 Crossfl heat exchanger pressure: 0 Pa De-icing pressure, static: 30 Pa De-icing pressure, dynamic: 45 % De-icing, current: 30 Pa	Shown for tempera- ture-controlled ice pro- tection	 Settings for pressure-controlled de-icing, pressure Current crossflow heat exchanger pressure [Pa] De-icing pressure, static [Pa] De-icing pressure, dynamic [Pa] De-icing pressure, current [Pa]
08:32 HEATRECOVERY Gain factor: 100		 Gain factor Set gain factor
Rotary heat exchanger	, 	
08:32 ROTARY HEAT EXCHANGER 0.0 °C 0.0 °C 0.0 °C Motor: 0.0 % 0.0 °C 0.0 °C		 Shows current status of rotary heat exchanger Current outdoor temperature [°C] Current exhaust air temperature [°C] Current recovery signal [%] Current extract air temperature [°C] Current supply air temperature [°C]
	08:32 FORCED CTRL EXCHANGER Timeout: 00:0000 Forced control: Off Motor: 0.0 % 25.0 °C 20.0 °C	 Forced control of rotary heat exchanger Forced operation is only possible once the unit has started. Setting of remaining time until forced control expires: [hh:mm: ss] Activate forced control: On/ Off Set forced operation setpoint for motor [%] Current extract air temperature [°C] Current supply air temperature [°C]
08:32 ROTARY HEAT EXCHANGER Correction fac. 0.0 % Alarm type: B Alarm at low r): M Alarm lovel r): 70.0% r): 0%		Efficiency Correction factor [%] Alarm type: A or B Alarm in case of low efficiency: Select/deselect Alarm level [%] Current efficiency [%]
08:32 ROTOR PRESS. DIFF. Measure pressure difference Status: Measured Rotor pressure: 0 Pa	Only relevant if pres- sure inlet: Rot. heat exchanger (outdoor/ supply air) is config- ured	 Measure pressure reference Measure pressure reference: Select/deselect Measurement status Current pressure over rotor* [Pa] *Pressure over the rotor's supply air string
08:32 ROTOR PRESS.DIFF. Measure pressure difference, de-icing Status: Not measured Current pressure, de-icing: 0 Pa Calculated pressure limit, de-icing: 30 Pa	Only relevant if pres- sure inlet: Rot. heat exchanger, de-icing (exhaust air/extract air) is configured	 Dynamic de-icing Measure pressure reference, de-icing: Select/deselect Measurement status: Not measured/measured Current pressure over rotor [Pa] Estimate pressure limit, de-icing* [Pa] *Pressure over the rotor's extract air string

Service menu		
Heating recovery		Description
08:32 RHX2M CONTROL Current recovery: 0% Control type: Motor rpm: 0 RPM Motor power: 0 mA Holding torque: 0.0% Software version: 0.00	Shown only in case of RHX2M (Rotor control)	 Show current RHX2M operating status. Current recovery [%] Current control type: RH2M-1212/1412/1612 Motor revs [RPM] Motor power [mA] Holding torque [%] Software version in Master
0832 ROTARYHEAT EXCHANGER	Only relevant if a PTH sensor and pressure inlet have been moun- ted Rot. heat ex- changer (otdoor/ supply air) is config- ured	 Airflow rotating heat exchanger Shows current air quantity in input air string through heat exchanger [m3/h]
08:32 HEAT RECOVERY Rotor de-icing: □ Pressure, start of de-icing 50.0 % Pressure, current: 0 Pa	Only relevant if a PTH sensor and pressure inlet have been moun- ted Rot. heat ex- changer, de-icing (ex- haust air/extract air) is configured	 De-icing rotary heat exchanger Pressure, start of de-icing Select/deselect Pressure, start of de-icing [%] Current pressure over rotor* [Pa] *Pressure over the rotor's extract air string
08:32 HEATRECOVERY Gain factor: 100		Gain factorSet gain factor

4.1.5 Cooling

Service menu		
Cooling		Description
		COOLING Shows current operating status. Set functions and forced fan control of cooling coils.
Submenu	Any comments	
DX Cooling		
08:32 COOLINGCOIL Cooling: 0.0 % 0.0 % 0.0 %		 Shows current status of cooling Current outdoor temperature [°C] Current cooling [%] Current supply air temperature [°C]
08:32 COOLING FORCED CONTROL		Forced control of cooling coil
Cooling: 0.0 V/ 0.0 % Supply air temperature: 0.0 °C Timeout: 000000 Forced control: Off Cooling relay 1: Disconnected Motor valve: 0-10V		 Forced operation is only possible once the unit has started. Set forced operation setpoint [%] Current supply air temperature [°C] Set remaining time until forced operation terminates [hh:mm:ss] Activate forced operation: On/ Off Current status Cooling relay 1: Open/closed Set motor valve's regulation area [2-10V = VEX4000 standard]
08:32 DXCOOLING1 Regulation: 4 step 1 step modulating: No Cooling error: No Cooling output: 0.0 V Minimum airflow: 2800 m³/h After cooling time: 60 Sec.		 Set regulation for current type DX cooling. Set regulation form: 1 step 2 step 1. Step modulating: Yes/No (Yes = VEX4000 standard) Current cooling error: Yes / No Current signal at cooling output [V] Set min. airflow for cooling [m3/h] Set condenser aftercooling [s]
08:32 DX COOLING 2 Cooling relay 1: Open Cooling relay 2: Open Cooling relay 3: Open Cooling relay 4: Open		 Shows current status of cooling relay Current status Cooling relay 1: Open/closed Current status Cooling relay 2: Open/closed Current status Cooling relay 3: Open/closed Current status Cooling relay 4: Open/closed
08:32 DX COOLING 3 Low pressure circuit 1: 0.0 Bar High pressure circuit 1: 0.0 Bar Low pressure circuit 2: 0.0 Bar High pressure circuit 2: 0.0 Bar		 Shows current status of cooling circuit Current status Low pressure circuit 1 [Bar] Current status High pressure circuit 1 [Bar] Current status Low pressure circuit 2 [Bar] Current status High pressure circuit 2 [Bar]
08:32 DX COOLING 4 Low pressure alarm 1: 3.0 Bar High pressure alarm 1: 15.0 Bar Low pressure alarm 2: 3.0 Bar High pressure alarm 2: 15.0 Bar		 Shows current status of pressure alarms Current status Low pressure alarm 1 [Bar] Current status High pressure alarm 1 [Bar] Current status Low pressure alarm 2 [Bar] Current status High pressure alarm 2 [Bar]

Service menu		
Coc	oling	Description
08:32 DXCOOLING5 Cooling error comp. 1: No Cooling error comp. 2: No Cooling error comp. 3: No Cooling error comp. 4: No		 Shows current status of cooling compressors Current cooling errors compressor 1: Yes/No Current cooling errors compressor 2: Yes/No Current cooling errors compressor 3: Yes/No Current cooling errors compressor 4: Yes/No
08:32 DX COOLING 6 Min. cooling time: 0 Sec. Cooling time relay 1: 0 Sec. Cooling time relay 2: 0 Sec. Cooling time relay 3: 0 Sec. Cooling time relay 4: 0 Sec.		Settings for connection times on cooling relays Set min. cooling time [sec] Current cooling time relay 1 [sec] Current cooling time relay 2 [sec] Current cooling time relay 3 [sec] Current cooling time relay 4 [sec]
08:32 DX COOLING 7 Max.restart/hour: 10/h Restarting relay 1: 0/h Restarting relay 2: 0/h Restarting relay 3: 0/h Restarting relay 4: 0/h		 Settings for restart times on cooling relays Set max number restarts per hour Current number restarts relay 1 Current number restarts relay 2 Current number restarts relay 3 Current number restarts relay 4
08:32 DX COOLING 8 Min. stop time: 600 Sec. Stop time, relay 1: 0 Sec. Stop time, relay 2: 0 Sec. Stop time, relay 3: 0 Sec. Stop time, relay 4: 0 Sec.		 Settings for stop times on cooling relays Set min stop time [sec] Current stop time relay 1 [sec] Current stop time relay 2 [sec] Current stop time relay 3 [sec] Current stop time relay 4 [sec]
08:32 DX COOLING 9 Compressor relay 1 blocked: No Compressor relay 2 blocked: No Compressor relay 3 blocked: No Compressor relay 4 blocked: No		Settings for blocking on cooling relays • Compressor relay 1 blocked: Yes/No • Compressor relay 2 blocked: Yes/No • Compressor relay 3 blocked: Yes/No • Compressor relay 4 blocked: Yes/No
Water cooling		
08:32 COOLING COIL COOLING COIL Cooling: 0.0 %		 Shows current status of cooling Current outdoor temperature [°C] Current cooling [%] Current supply air temperature [°C]
08:32 COOLING COIL 0.0 % 0 * Testrum: No Not active	Shown at Belimo Mod- bus valve	Cooling interface, Modbus Current valve setting [%] Absolute position [Feedback] Test run: Yes/No Communication: Active / Inactive
08:32 COOLING FORCED CONTROL Cooling: 0.0 V/ 0.0 % Supply air temperature: 0.0 °C Timeout: 00:00:00 Forced control: Off Cooling relay 1: Disconnected Motor valve: 0-10V		 Forced control of cooling coil Forced operation is only possible once the unit has started. Set forced operation setpoint [%] Current supply air temperature [°C] Set remaining time until forced operation terminates [hh:mm:ss] Activate forced operation: On/ Off Current status Cooling relay 1: Open/closed Set motor valve's regulation area [2-10V = VEX4000 standard]

Service menu		
Cooling		Description
OB:32 PUMP OPERATION Outdoor air temp. STOP		Set pump operation Pump operation can be set to: • Constant operation • Auto • Outdoor air temperature • Cooling requirement Start appears when pump is in operation
08:32 PUMP START 21.0 °C STOP	Shown if outdoor tem- perature is selected	 Set pump start temperature The pump starts when the outdoor temperature is higher than the set value. [°C] Start appears when pump is in operation.
08:32 PUMP START COOLING 25.0% STOP	Shown if cooling re- quirement is selected	 Set pump start cooling requirement The pump starts when the outdoor temperature is lower than the set value. [%] Start appears when pump is in operation.
External DX Cooling		
08:32 EXTERNAL COOLING COIL		 Shows current status of external cooling Current outdoor temperature [°C] Current cooling [%] Current supply air temperature [°C]
08:32 COOLINGFORCED CONTROL Cooling: 0.0 V/ 0.0 % Supply air temperature: 0.0 °C Timeout: 00:0000 Forced control: Off Cooling relay 1: Disconnected Motor valve: 0-10V		 Forced control of external cooling coil Forced operation is only possible once the unit has started. Set forced operation setpoint [%] Current supply air temperature [°C] Set remaining time until forced operation terminates [hh:mm:ss] Activate forced operation: On/ Off Current status Cooling relay 1: Open/closed Set motor valve's regulation area [2-10V = VEX4000 standard]
08:32 EXTERNAL DX COOLING 1 Regulation: 4 step 1 step modulating: No Cooling error: No Cooling output: 0.0 V Minimum airflow: 2800 m²/h After cooling time: 60 Sec.		 Set regulation for current type DX cooling. Set regulation form: 1-step (VEX4000 standard) 1. Step modulating: Yes/No (No = VEX4000 standard) Current cooling error: Yes / No Current signal at cooling output [V] Set min. airflow for cooling [m3/h] Set condenser aftercooling [s]
08:32 EXTERNAL DX COOLING 2 Cooling relay 1: Open Cooling relay 2: Open Cooling relay 3: Open Cooling relay 4: Open		 Shows current status of cooling relay Current status Cooling relay 1: Open/closed Current status Cooling relay 2: Open/closed Current status Cooling relay 3: Open/closed Current status Cooling relay 4: Open/closed

Service menu		
Cooling	Description	
08:32 EXTERNAL DX COOLING 3 Cooling error comp. 1: No Cooling error comp. 2: No Cooling error comp. 3: No Cooling error comp. 4: No	 Shows current status of cooling compressors Current cooler errors compressor 1: Yes/No Current cooler errors compressor 2: Yes/No Current cooler errors compressor 3: Yes/No Current cooler errors compressor 4: Yes/No 	
08:32 EXTERNAL DX COOLING 4 Min. cooling time: 0 Sec. Cooling time relay 1: 0 Sec. Cooling time relay 2: 0 Sec. Cooling time relay 3: 0 Sec. Cooling time relay 4: 0 Sec.	Settings for connection times on cooling relays Set min. cooling time [sec] Current cooling time relay 1 [sec] Current cooling time relay 2 [sec] Current cooling time relay 3 [sec] Current cooling time relay 4 [sec] 	
08:32 EXTERNAL DX COOLING5 Max.restart/hour: 10/h Restarting relay 1: 0/h Restarting relay 2: 0/h Restarting relay 3: 0/h Restarting relay 4: 0/h	 Settings for restart times on cooling relays Set max number restarts per hour Current number restarts relay 1 Current number restarts relay 2 Current number restarts relay 3 Current number restarts relay 4 	
OB:32 EXTERNAL DX COOLING 6 Min. stop time; relay 1: 600 Sec. Stop time; relay 2: 0 Sec. Stop time; relay 3: 0 Sec. Stop time; relay 4: 0 Sec.	Settings for stop times on cooling relays• Set min. stop time [sec]• Current stop time relay 1 [sec]• Current stop time relay 2 [sec]• Current stop time relay 3 [sec]• Current stop time relay 4 [sec]	

4.1.6 Damper

Service menu		
Damper		Description
		DAMPER Show current operating status. Set functions and forced fan control of damper.
Submenu	Any comments	
Outdoor air damper		
0832 OUTDOOR AIR DAMPER		 Outdoor air damper, status Current damper position: Open/closed Current supply air [m3/h] [l/s]
08:32 OUTDOOR AIR DAMPER 0.0 % 0 ° Testrun: No Not active	Shown at Belimo Mod- bus damper motor	 Damper motor, Modbus Current damper setting [%] Absolute position [Feedback] Test run: Yes/No Communication [Active] / [Inactive]
08:32 OUTDOOR AIRDAMPER 00.% Correction: 1.0 Offset: 0.0 V Damper motor: 0-10V 0 m ³ /h	Shown only in case of modulating damper motor	 Set outdoor air damper Current damper setting [%] Set correction factor Set offset [V] Current supply air [m3/h] [l/s]
08:32 OVERRIDE 0.0 % Timeout: 000000 Override: Off Output: 0.00 V 0 m³/h	Shown only in case of modulating damper motor	 Override outdoor air damper Overriding is only possible once the unit has started. Set remaining time until overriding terminates [hh:mm:ss] Activate override: On/ Off Set override operation setpoint [V] Current supply air [m3/h] [l/s]
Extract air/Exhaust air	damper	
OB:32 SUPPLY AIR DAMPER		 Extract air damper, status Current damper position: Open/closed Current extract air [m3/h] [l/s]
0832 SUPPLY AIR DAMPER 0.0 % 0* Testrun: No Not active	Shown at Belimo Mod- bus damper motor	Damper motor, Modbus • Current damper setting [%] • Absolute position [Feedback] • Test run: Yes/No • Communication [Active] / [Inactive]
08:32 EXHAUST AIR DAMPER	Shown at Belimo Mod- bus damper motor Shown only if modula- ted recirculation is con- figured	 Damper motor, Modbus Current damper setting [%] Absolute position [Feedback] Test run: Yes/No Communication [Active] / [Inactive]

Service menu		
Damper		Description
08:32 EXHAUST AIR DAMPER 0.0 % 0 m³/h	Shown only in case of modulating damper motor Shown only if modula- ted recirculation is con- figured	 Exhaust air damper, status Current damper position: [%] Current supply air [m3/h] [l/s]
Recirculation damper		
08:32 RECIRCULATIONDAMPER		 Recirculation damper, status Current damper position: Open/closed Current supply air [m3/h] [l/s]
08:32 RECIRCULATION DAMPER 0.0 % 0 ° Testrun: No Not active	Shown at Belimo Mod- bus damper motor	 Damper motor, Modbus Current damper setting [%] Absolute position [Feedback] Test run: Yes/No Communication [Active] / [Inactive]
08:32 RECIRCULATIONDAMPER 100.0% Correction: 0.80 Offset: 2.00% Damper motor: 0-10V 0 m²/h	Shown only in case of modulating damper motor	Set recirculation damper • Current damper setting [%] • Set correction factor • Set offset [V] • Current supply air [m3/h] [l/s]
08:32 REGULATOR SETTING P-band VOC/CO2: 500 ppm I-time VOC/CO2: 700 s I-time temperature: 700 s	Shown only if modula- ted recirculation is con- figured	Set I-time for modulated recirculation P-band VOC/CO2 [ppm] Set I-time VOC/CO2 [sec] Set I-time temperature [s]
08:32 REGULATOR SETTING Gain factor: 100	Shown only if modula- ted recirculation is con- figured	 Set gain factor for modulated recirculation Set gain factor
Smoke-evacuation damper		
08:32 SMOKE EVACUATION DAMPER 00 % 0° Testrun: No Notactive		 Damper motor, Modbus Current damper setting [%] Absolute position [Feedback] Test run: Yes/No Communication: Active / Inactive
0832 OVERRIDE 0.0 % Timeout: 000000 Override: Off		 Override smoke-evacuation damper Current damper setting [%] Set remaining time until overriding terminates [hh:mm:ss] Override: On/ Off

4.1.7 Temperature sensor correction

Service menu		
Temperature sensor correction		Description
		Settings for sensor correction/calibration For correction of measurement errors, cable resistance and sensor tolerances.
Submenu	Any comments	
08:32 HEATING COIL 1 Calibrate temperature measurement Current temperature: 0,0 °C Calibration value: 0,0 °C	Shown if heating coil 1 is configured	Calibrate temperature measurement - Heating coil 1 Set sensor offset [+/-3.5°C] • Shows current sensor temperature [°C] • Set calibration value [°C]
08:32 HEATING COIL 2 Calibrate temperature measurement Current temperature: 0.0 °C Calibration value: 0.0 °C	Shown if heating coil 2 is configured	 Calibrate temperature measurement - Heating coil 2 Set sensor offset [+/-3.5°C] Shows current sensor temperature [°C] Set calibration value [°C]
08:32 A WATER COOLING Calibrate temperature measurement Current temperature: 0.0 °C Calibration value: 0.0 °C	Shown if water cool- ing is configured	Calibrates temperature measurement - Water cool- ing Set sensor offset [+/-3.5°C] • Shows current sensor temperature [°C] • Set calibration value [°C]
08:32 OUTD. AIR SENSOR (EXT.) Calibrate temperature measurement Current temperature: 0.0 °C Calibration value: 0.0 °C	Shown if outdoor sen- sor is configured	Calibrates temperature measurement - outdoor tem- perature sensor Set sensor offset [+/-3.5°C] • Shows current sensor temperature [°C] • Set calibration value [°C]
08:32 SUPPLEMENT. SENSOR 1 Calibrate temperature measurement Current temperature: 0.0 °C Calibration value: 0.0 °C	Up to 4 additional sensors can be config- ured	Calibrates temperature measurement - Addition sensor Set sensor offset [+/-3.5°C] • Shows current sensor temperature [°C] • Set calibration value [°C]

4.1.8 Pressure transmitter

Service menu										
Pressure t	ransmitter	Description								
		Calibration of pressure transmitters Zero-calibrate all pressure transmitters in the air han- dling unit.								
Submenu	Submenu									
08:32 PRESSURE TRANSMITTER Zero calibratiorAuto		 Select type 0 calibration Set zero calibration: [Manual/Auto] If Auto is selected, zero calibration is carried out automatically every time the unit stops. Start zero-calibration Confirm to start zero calibration, or press Esc to abort. During zero calibration the unit will stop for about 5 min. 5 min. 								
	08:32 PRESSURE TRANSMITTER Zero calibration is being performed	Zero calibration is being performed Acknowledgement that zero calibration is in progress/is complete.								

5. Alarm summary

Alarm list manual terminal

Alarm list EXcon SW version 3.13

Alarm no	Alarm type	Alarm delay secs	Alarm limit	Auto reset	Machine stop	Alarm text - Handheld terminal
1	Α	3	N/A			Fire alarm
2	A	3	N/A		Х	External fire thermostat
3	A	3	N/A		Х	Fire alarm
4	В	3	N/A	Х	Х	External stop
7	A	3	N/A	Х	Х	Supply air EC controller: No communication
8	А	3	N/A	Х	Х	Extract air EC Contrl. No communication
9	В	1200	N/A	Х		Airflow compensation of filter monitor Not measured
10	В	3	N/A	Х		No communication with manual terminal
11	Α	3	N/A	Х	X	No communication with FanIO 1
12	Α	3	N/A	X	X	No communication with FanIO 2
13	А	3	N/A	Х	Х	No communication with expansion module 1
14	Α	3	N/A	Х	X	No communication with expansion module 2
15	В	3	N/A	Х		No communication with LON gateway
16	Α	3	N/A	Х	X	No communication with supply air frequency converter
17	А	3	N/A	Х	Х	No communication with extract frequency converter
18	Α	3	N/A	Х	X	No communication with rotary heat exchanger
19	А	3	N/A	Х	Х	Pressure transmitter (PTH): No communication
20	А	10	N/A	Х	Х	Supply air, temperature sensor triggered
21	Α	10	N/A	Х	X	Extract air, temperature sensor alarm triggered
22	Α	10	N/A	Х	X	Room temperature sensor alarm triggered.
23	Α	10	N/A	Х	X	Exhaust air, temperature sensor alarm triggered
24	Α	10	N/A	Х	X	Outdoor air, temperature sensor alarm triggered
25	Α	10	N/A	Х	X	Water heating coil, temperature sensor alarm triggered
26	Α	10	N/A	Х	Х	Heat recovery, temperature sensor alarm triggered
27	Α	10	N/A		X	Pump alarm, heating
28	Α	3	N/A		Х	Frost alarm, Water heating coil
30	Α	3	N/A		X	Supply air frequency converter low supply voltage (Vlo)
31	Α	3	N/A		X	Supply air frequency converter High supply voltage (Vhi)
32	Α	3	N/A		X	Supply frequency converter High output current (Ihi)
33	А	3	N/A		Х	Supply frequency converter High temperature (Thi)
34	А	3	N/A		Х	Supply frequency converter Loss of supply phase
35	В	3	N/A			Supply frequency converter High internal ripple voltage
37	A	3	N/A		Х	Supply air fan, alarm
38	В	600	N/A			Supply air filter, alarm

EXHAUSTO

Alarm no	Alarm type	Alarm delay secs	Alarm limit	Auto reset	Machine stop	Alarm text - Handheld terminal
39	Α	10	N/A		Х	FanIO 1: +24 VDC overloaded
40	А	3	N/A		Х	Extract frequency converter Low supply voltage (VIo)
41	Α	3	N/A		Х	Extract frequency converter High supply voltage (Vhi)
42	Α	3	N/A		Х	Extract frequency converter High output current (Ihi)
43	Α	3	N/A		Х	Extract frequency converter High temperature (Thi)
44	Α	3	N/A		Х	Extract frequency converter Loss of supply phase
45	В	3	N/A			Extract frequency converter High internal ripple voltage
47	Α	600	N/A		Х	Exhaust air/extract air fan, alarm
48	В	10	N/A			Extract air filter, alarm
49	Α	3	N/A		Х	FanIO 2: +24 VDC overloaded
50	В	3	N/A			Rotary heat exchanger No rotation
51	В	3	N/A			Rotary heat exchanger Low supply voltage (VIo)
52	В	3	N/A			Rotary heat exchanger High supply voltage (Vhi)
53	В	3	N/A			Rotary heat exchanger High output current (Ihi)
54	В	3	N/A			Rotary heat exchanger High internal temperature
55	В	3	N/A			Rotary heat exchanger Torque overload
58	Α	300	N/A		Х	Frost alarm heat exchanger
59	Α	600	N/A		Х	No heat recovery. Low temperature
60	Α	600	SP-10℃		Х	Low supply air temperature
61	В	600	SP+5°C			High supply air temperature
62	В	1200	SP-10 ℃			Low extract air temperature
63	В	1200	SP+5°C			High extract air temperature
65	В	300	N/A	Х		Heating cut out due to low airflow
66	В	3	N/A			Electric heating coil: Overheating alarm
67	В	3	N/A			Reduced airflow
68	В	3	N/A			Contactor for Electric heating coil is stuck
70	В	1200	N/A	Х		High VOC/CO2
71	Α	600	SP-10 ℃		Х	Low supply airflow
72	Α	600	SP+10%		Х	High supply airflow
73	Α	600	SP-10 ℃		Х	Low extract airflow
74	Α	600	SP+10%		Х	High extract airflow
75	В	600	SP-10 ℃			Low supply air pressure
76	Α	600	SP+10%		Х	High supply air pressure
77	В	600	SP-10℃			Low extract air pressure
78	Α	600	SP+10%		Х	High extract air pressure
80	В	3	N/A			Cooling error
81	В	3	N/A			Low cooling pressure circuit 1
82	В	3	N/A			High cooling pressure circuit 1
83	В	3	N/A			Cooling error 1: Compressor 1 overheated circuit 1

Alarm no	Alarm type	Alarm delay secs	Alarm limit	Auto reset	Machine stop	Alarm text - Handheld terminal
84	В	3	N/A			Cooling error 2: Compressor 2 overheated circuit 1
85	В	3	N/A			Low cooling pressure circuit 2
86	В	3	N/A			High cooling pressure circuit 2
87	В	3	N/A			Cooling error 3: Compressor 1 overheated circuit 2
88	В	3	N/A			Cooling error 4: Compressor 2 overheated circuit 2
90	В	3	N/A			Pressure transmitter error: DX low pressure 1
91	В	3	N/A			Pressure transmitter error: DX high pressure 1
92	В	3	N/A			Pressure transmitter error: DX low pressure 2
93	В	3	N/A			Pressure transmitter error: DX high pressure 2
94	В	3	N/A	Х		VOC/CO2 sensor not configured
95	В	3	N/A	Х		FanOpt. supply air not configured
96	В	3	N/A	Х		FanOpt. extract air not configured
100	A	3	N/A	Х	Х	Pressure transmitter 0 (PTH6202): No communication
101	A	3	N/A	Х	Х	Pressure transmitter 1 (PTH6202): No communication
103	A	3	N/A	Х	Х	Pressure transmitter 3 (PTH6202): No communication
104	Α	3	N/A	Х	Х	Pressure transmitter 4 (PTH6202): No communication
105	A	3	N/A	Х	Х	Pressure transmitter 5 (PTH6202): No communication
106	Α	3	N/A	Х	Х	Pressure transmitter 6 (PTH6202): No communication
107	Α	3	N/A	Х	Х	Pressure transmitter 7 (PTH6202): No communication
108	A	3	N/A	Х		Expansion module45 1 (Air2Ext45): No communication
109	A	3	N/A	Х		Expansion module45 2 (Air2Ext45): No communication
111	В	3	N/A	Х		Pressure transmitter, supply air (PTH6202): No communication
112	В	3	N/A	Х		Pressure transmitter, extract air (PTH6202): No communication
113	В	10	N/A	Х		VOC/CO2 sensor error: VOC/CO2 sensor disconnected/short- circuited
115	A	3	N/A		X	Supply air EC controller: Alarm stop
116	A	3	N/A		Х	Supply air EC controller: Rotor blocked
117	В	3	N/A			Supply air EC controller: Power restriction
118	В	3	N/A			Supply air EC controller: Low supply voltage (VIo)
119	В	3	N/A			Supply air EC controller: High supply voltage (Vhi)
120	В	3	N/A			Supply air EC controller: High temperature (Thi)
121	В	3	N/A			Supply air EC controller: High internal ripple voltage
122	A	3	N/A		Х	Extract air EC Contrl. Alarm stop
123	Α	3	N/A		Х	Extract air EC Contrl. Rotor blocked
124	В	3	N/A			Extract air EC Contrl. Power restriction active
125	В	3	N/A			Extract air EC Contrl. Low supply voltage (Vlo)
126	В	3	N/A			Extract air EC Contrl. High supply voltage (Vhi)
127	В	3	N/A			Extract air EC Contrl. High temperature (Thi)
128	В	3	N/A			Extract air EC Contrl. High internal ripple voltage

EXHAUSTO

Alarm no	Alarm type	Alarm delay secs	Alarm limit	Auto reset	Machine stop	Alarm text - Handheld terminal
129	В	3	N/A			Supply air EC Contrl. : Loss of supply phase
130	В	3	N/A			Extract air EC Contrl. Loss of supply phase
131	Α	3	N/A	Х	Х	FanIO 1 (Air2FanIO21): No communication
132	Α	3	N/A	Х	Х	FanIO 2 (Air2FanIO21): No communication
133	Α	3	N/A	Х	Х	Damper motor (supply air), ID 130: No communication
134	Α	3	N/A	Х	Х	Damper motor (exhaust air), ID 131: No communication
135	Α	3	N/A	Х	Х	Damper motor (recirculation), ID 132: No communication
136	Α	3	N/A	Х	Х	Damper motor (heat exchanger), ID 133: No communication
137	Α	3	N/A	Х	Х	Damper motor (drying damper), ID 134: No communication
141	Α	3	N/A	Х	Х	Valve motor (Heating), ID 138: No communication
142	Α	3	N/A	Х	Х	Valve motor (cooling), ID 139: No communication
143	Α	3	N/A	Х	Х	Valve motor (Heating2), ID 140: No communication
144	Α	3	N/A	Х	Х	Valve motor (Heat recovery unit), ID 141: No communication
145	Α	3	N/A	Х	Х	Valve motor (pre-heating), ID 142: No communication
146	Α	3	N/A	Х	Х	Valve motor (6), ID 143: No communication
149	В	10	N/A	Х		Damper motor (supply air): Unable to reach setpoint
150	В	10	N/A	Х		Damper motor (exhaust air): Unable to reach setpoint
151	В	10	N/A	Х		Damper motor (recirculation): Unable to reach setpoint
152	В	10	N/A	Х		Damper motor (heat exchanger): Unable to reach setpoint
153	В	10	N/A	Х		Damper motor (drying damper): Unable to reach setpoint
157	В	10	N/A	Х		Valve motor (Heating): Unable to reach setpoint
158	В	10	N/A	Х		Valve motor (cooling): Unable to reach setpoint
159	В	10	N/A	Х		Valve motor (heating 2): Unable to reach setpoint
160	В	10	N/A	Х		Valve motor (Heat recovery unit): Unable to reach setpoint
161	В	10	N/A	Х		Valve motor (pre-heating): Unable to reach setpoint
162	В	10	N/A	Х		Valve motor (6): Unable to reach setpoint
166	В	360	N/A			Fire damper not closed
167	В	360	N/A			Fire damper not open
168	В	300	N/A	Х		Heating 2 cut out due to low airflow
169	В	30	N/A			Electric heating coil 2: overheating alarm
170	В	30	N/A			Contactor for electric heating coil 2 is stuck
171	Α	10	N/A	Х	Х	Temperature sensor error: Water heating coil 2
172	Α	10	N/A		Х	Pump alarm: Water heating coil 2
173	Α	3	N/A		Х	Frost alarm: Water heating coil 2
174	A	10	N/A	Х	Х	Temperature sensor error: combi-coil
175	A	10	N/A		Х	Pump alarm: Combi-coil
176	A	3	N/A		Х	Frost alarm: Combi interface (heating)
177	A	3	N/A		Х	Frost alarm: Combi interface (cooling)
178	В	10	N/A			Alarm from heat exchanger or circulation pump

Alarm no	Alarm type	Alarm delay secs	Alarm limit	Auto reset	Machine stop	Alarm text - Handheld terminal
179	В	10	N/A	Х		Temperature sensor error: Heat pump
180	Α	10	N/A		Х	Frost alarm, Air
194	В	10	N/A	Х		No communication, Modbus, HTH-6202, sensor
195	В	10	N/A	Х		No communication, Modbus, HTH-6203, sensor
196	В	10	N/A	Х		Output, humidifier not configured
197	В	10	N/A	Х		Alarm input from humidifier
198	В	1200	N/A	Х		High humidity in supply air
199	В	1200	N/A	Х		Low humidity in supply air
200	В	1200	N/A	Х		High humidity in supply air
201	В	1200	N/A	Х		Low humidity in supply air
202	В	10	N/A	Х		Supply temp. cooling coil, sensor alarm
203	Α	3	N/A	Х	Х	Expansion module 3: No communication
204	Α	3	N/A	Х	Х	Expansion module 4: No communication
205	Α	3	N/A	Х	Х	Expansion module 5: No communication
206	Α	3	N/A	Х	Х	Expansion module 6: No communication
207	Α	3	N/A	Х	Х	Expansion module 7: No communication
208	В	3	N/A	Х		Room control: No communication
209	В	3	N/A	Х		VTH-6202, VOC sensor No communication
210	В	600	N/A	Х		VTH-6202, VOC sensor error, measured value outside range
211	В	10	N/A	Х		No communication, HTH-6204, humidity senor
212	В	10	N/A	Х		Dew point sensor error
213	В	300	N/A	Х		INACTIVE
214	A	3	N/A	Х	Х	Expansion module 8: No communication
215	В	30	N/A	Х		Contactor for electrical pre-heating coil stuck
216	В	30	N/A	Х		Preheater: Overheating alarm
217	A	10	N/A	Х	Х	Preheater: Water heatin coil, sensor error
218	A	10	N/A		Х	Preheater: Pump alarm:
219	A	3	N/A		Х	Preheater: Frost alarm
220	A	10	N/A	Х	Х	Preheater: Airflow sensor error
221	В	300	N/A	Х		Preheater: Reduced output
222	В	300	N/A	Х		Heat recovery efficiency is less than minimum setpoint
223	A	3	N/A	Х	Х	Supply air frequency converter (ATV) No communication
224	A	3	N/A	Х	Х	Extract air frequency converter (ATV) No communication
225	В	10	N/A			ATV supply air frequency converter error
226	В	10	N/A			ATV extract air frequency converter error
231	В	1200	N/A	Х		Dynamic pressure control cannot be used
232	В	3	N/A	X		PTH sensor (extract air/exhaust air) rotary heat exchanger not configured
233	В	1800	N/A	Х		Rotary heat exchanger iced up

Alarm no	Alarm type	Alarm delay secs	Alarm limit	Auto reset	Machine stop	Alarm text - Handheld terminal
234	В	1800	N/A			Rotary heat exchanger is soiled
235	A	3	N/A		Х	Supply air, EC-2 controller: Alarm stop
236	A	3	N/A		Х	Supply air, EC-2 controller: Rotor blocked
237	В	3	N/A			Supply air, EC-2 controller: Power restriction
238	В	3	N/A			Supply air, EC-2 controller: Low supply voltage (VIo)
239	В	3	N/A			Supply air, EC-2 controller: High supply voltage (Vhi)
240	В	3	N/A			Supply air, EC-2 controller: High temperature (Thi)
241	В	3	N/A			Supply air, EC-2 controller: High internal ripple voltage
242	Α	3	N/A		Х	Extract air, EC-2 controller: Alarm stop
243	Α	3	N/A		Х	Extract air, EC-2 controller: Rotor blocked
244	В	3	N/A			Extract air, EC-2 controller: Power restriction active
245	В	3	N/A			Extract air, EC-2 controller: Low supply voltage (VIo)
246	В	3	N/A			Extract air, EC-2 controller: High supply voltage (Vhi)
247	В	3	N/A			Extract air, EC-2 controller: High temperature (Thi)
248	В	3	N/A			Extract air, EC-2 controller: High internal ripple voltage
249	В	3	N/A			Supply air, EC-2 controller: Loss of supply phase
250	В	3	N/A			Extract air EC-2 Contrl.:No supply phase
251	Α	3	N/A	Х	Х	Supply air, EC-2 controller: no communication
252	Α	3	N/A	Х	Х	Extract air, EC-2 controller: No communication
253	В	3	N/A			Temperature sensor (HTH6202): No communication
254	В	3	N/A			Temperature sensor (HTH6203): No communication
255	В	3	N/A			Supply airflow correction, temperature sensor error
256	В	10	N/A	Х		Temperature sensor error: Supplementary sensor 1
257	В	10	N/A	Х		Temperature sensor error: Supplementary sensor 2
258	В	10	N/A	Х		Temperature sensor error: Supplementary sensor 3
259	В	10	N/A	Х		Temperature sensor error: Supplementary sensor 4
260	В	3	N/A		Х	Supply air motor control has wrong type no or is defective
261	В	3	N/A		Х	Supply air motor control 2 has wrong type no or is defective
262	В	3	N/A		Х	Supply air motor control 1 has wrong type no or is defective
263	В	3	N/A		Х	Supply air motor control 2 has wrong type no or is defective



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