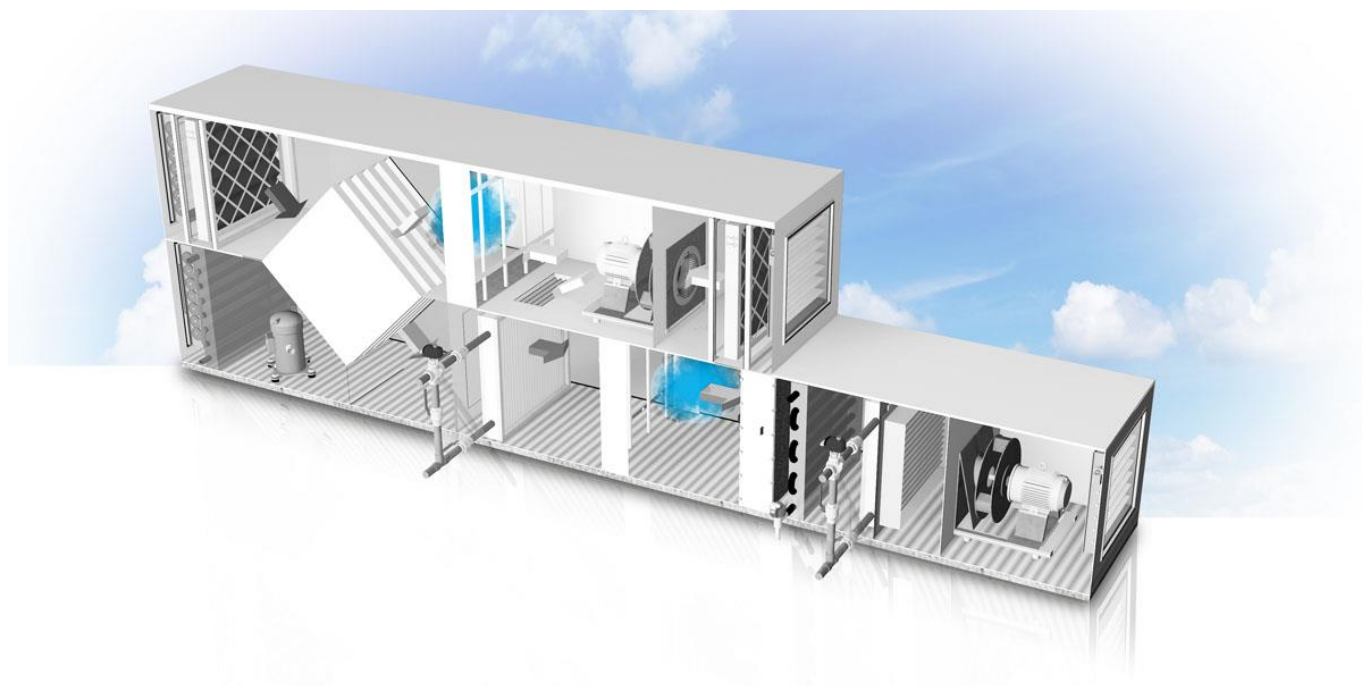


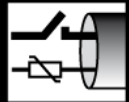
kVent+

Controller for ventilation units



Manual

→ **LEGGI E CONSERVA
QUESTE ISTRUZIONI** ←
**READ AND SAVE
THESE INSTRUCTIONS**

  **NO POWER
& SIGNAL
CABLES
TOGETHER**
READ CAREFULLY IN THE TEXT!

H i g h E f f i c i e n c y S o l u t i o n s

IMPORTANT



CAREL bases the development of its products on decades of experience in HVAC/R, on the continuous investments in technological innovations to products, procedures and strict quality processes with in-circuit and functional testing on 100% of its products, and on the most innovative production technology available on the market. CAREL and its subsidiaries nonetheless cannot guarantee that all the aspects of the product and the software included with the product respond to the requirements of the final application, despite the product being developed according to start-of-the-art techniques. The customer (manufacturer, developer or installer of the final equipment) accepts all liability and risk relating to the configuration of the product in order to reach the expected results in relation to the specific final installation and/or equipment.

CAREL may, based on specific agreements, acts as a consultant for the positive commissioning of the final unit/application, however in no case does it accept liability for the correct operation of the final equipment/system.

The CAREL product is a state-of-the-art product, whose operation is specified in the technical documentation supplied with the product or can be downloaded, even prior to purchase, from the website www.CAREL.com.

Each CAREL product, in relation to its advanced level of technology, requires setup/configuration/programming/commissioning to be able to operate in the best possible way for the specific application. The failure to complete such operations, which are required/indicated in the user manual, may cause the final product to malfunction; CAREL accepts no liability in such cases.

Only qualified personnel may install or carry out technical service on the product.

The customer must only use the product in the manner described in the documentation relating to the product.

In addition to observing any further warnings described in this manual, the following warnings must be heeded for all CAREL products:

- Prevent the electronic circuits from getting wet. Rain, humidity and all types of liquids or condensate contain corrosive minerals that may damage the electronic circuits. In any case, the product should be used or stored in environments that comply with the temperature and humidity limits specified in the manual.
- Do not install the device in particularly hot environments. Too high temperatures may reduce the life of electronic devices, damage them and deform or melt the plastic parts. In any case, the product should be used or stored in environments that comply with the temperature and humidity limits specified in the manual.
- Do not attempt to open the device in any way other than described in the manual.
- Do not drop, hit or shake the device, as the internal circuits and mechanisms may be irreparably damaged.
- Do not use corrosive chemicals, solvents or aggressive detergents to clean the device.
- Do not use the product for applications other than those specified in the technical manual.

All of the above suggestions likewise apply to the controllers, serial boards, programming keys or any other accessory in the CAREL product portfolio.

CAREL adopts a policy of continual development. Consequently, CAREL reserves the right to make changes and improvements to any product described in this document without prior warning.

The technical specifications shown in the manual may be changed without prior warning.

The liability of CAREL in relation to its products is specified in the CAREL general contract conditions, available on the website www.CAREL.com and/or by specific agreements with customers; specifically, to the extent where allowed by applicable legislation,

in no case will CAREL, its employees or subsidiaries be liable for any lost earnings or sales, losses of data and information, costs of replacement goods or services, damage to things or people, downtime or any direct, indirect, incidental, actual, punitive, exemplary, special or consequential damage of any kind whatsoever, whether contractual, extra-contractual or due to negligence, or any other liabilities deriving from the installation, use or impossibility to use the product, even if CAREL or its subsidiaries are warned of the possibility of such damage.

DISPOSAL

INFORMATION FOR USERS ON THE CORRECT HANDLING OF WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT (WEEE)

In reference to European Union directive 2002/96/EC issued on 27 January 2003 and the related national legislation, please note that:

- WEEE cannot be disposed of as municipal waste and such waste must be collected and disposed of separately;
- the public or private waste collection systems defined by local legislation must be used. In addition, the equipment can be returned to the distributor at the end of its working life when buying new equipment;
- the equipment may contain hazardous substances: the improper use or incorrect disposal of such may have negative effects on human health and on the environment;
- the symbol (crossed-out wheeled bin) shown on the product or on the packaging and on the instruction sheet indicates that the equipment has been introduced onto the market after 13 August 2005 and that it must be disposed of separately;
- in the event of illegal disposal of electrical and electronic waste, the penalties are specified by local waste disposal legislation.

Warranty of the materials: 2 years (from the date of production, excluding consumables).

Approval: the quality and safety of CAREL INDUSTRIES Hqs products are guaranteed by the ISO 9001 certified design and production system.



WARNING: separate as much as possible the probe and digital input signal cables from the cables carrying inductive loads and power cables to avoid possible electromagnetic disturbance. Never run power cables (including the electrical panel wiring) and signal cables in the same conduits.



The product must be installed with the earth connected, using the special yellow-green terminal on the terminal block. Do not use the neutral for the earth connection.

KEY TO THE ICONS

	NOTE: to bring attention to a very important subject; in particular, regarding the practical use of the various functions of the product.
	IMPORTANT: to bring critical issues regarding the use of the kVent+ to the attention of the user.
	TUTORIAL: some simple examples to accompany the user in configuring the most common settings.

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1. INTRODUCTION

1.1 Main features

Usability and display – kVent+, developed in line with the new CAREL usability standards, assists the manufacturer in the configuration of the installation. The menu-based system allows the application to be configured as a tool for instant diagnostics. All this is possible by the immediately accessible overview screens and the commissioning tool.

Quick menus - information on the status of the kVent+ is accessible directly from the main menu, without needing to access the submenus. Configuration, active function and operating temperature information are arranged in loops of screens, scrolled by pressing the DOWN button from the main screen.

Main features	
Regulation	Temperature PID regulation based on supply
	Humidity PID regulation based on supply or room humidity
	Automatic cooling/heating changeover
	Setpoint compensation
	VOC and CO2 regulation
Scheduler	4 time bands for each day
	3 special periods
	6 special days
Recovery	Rotary heat recovery
	Glycol heat recovery
	Plate cross-flow recovery
Coils	Hydronic systems
	Electric heating
	Direct expansion
	Steam coil
	Reverse coil
Fans	ON/OFF fan
	3 speeds setup
	Air pressure control
	Air flow control
Protection	Filters
	Fire/Smoke alarm
	Frost protection
	Door switch
Interface	Browser interface based on WebKit
	pGDE for advanced function and service
	thTune for end user
	3 different parameters access levels
Languages	EN, PL, RU, CZ, DE, SL, RO, BG
Unit of measure	International
	USA
	CAN
	UK
Alarms	Automatic and manual management
	Log from application
Fieldbus1	Modbus master line
Ethernet	Modbus slave built-in
	Bacnet built-in
	tEra ready
	WebServer / c.field for commissioning

1.2 Accessories available

Below is a list of devices suitable for use with this product. CAREL features passive, active and serial temperature, humidity and differential pressure probes, for room or duct installation, specifically for the air handling unit appliance.



Duct temperature and humidity sensor
(Technical leaflet +050001245)



Outdoor sensors
(Technical leaflet +050001790)



NTC temperature sensors
(Manual +030220655)



PT1000 temperature sensors
(Manual +030220655)



Room air quality sensors
(Technical leaflet +050001300)



Differential air pressure sensors
(Technical leaflet +050000651)



Differential air pressure switches/flow switches
(Technical leaflets +050000645 +050000647)



Smoke and fire sensors
(Technical leaflet +050000520)



pGDE terminal
(Technical leaflet +050001050)



pLDPRO terminal
(Technical leaflet +050001840)



thTune terminal
(Technical leaflet +05000171E)



Fans VFD inverter
(Technical leaflet +050001230)



c.pCOe expansion board
(Technical leaflet +05000591E)



Power+ inverter for BLDC compressors
(Installation manual +0300048EN)



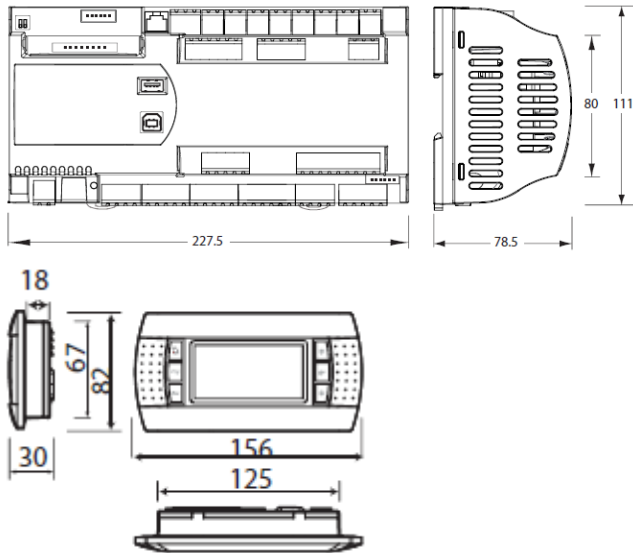
Electronic unipolar expansion Valve
(Technical leaflet EXV Smart +050001460)



2. HARDWARE INSTALLATION

2.1 Mounting and dimensions

The controller is designed to be mounted on a DIN rail. The figure below shows the dimensions.



2.2 Installation

2.2.1 Environmental conditions

Avoid installing the controller and the terminal in places with:

- exposure to direct sunlight and to the elements in general;
- temperature and humidity outside the product's range of operation (see "Technical Specifications");
- large, rapid fluctuations in room temperature;
- strong magnetic and/or radio frequency interference (avoid installing near transmitting antennas);
- strong vibrations or knocks;
- presence of explosives or flammable gas mixtures;
- exposure to aggressive and polluting atmospheres (e.g. sulphur and ammonia vapours, salt mist, fumes) that can cause corrosion and/or oxidation;
- exposure to dust (formation of a corrosive patina with possible oxidation and reduced insulation);
- exposure to water.

2.2.2 Positioning the controller inside the panel

Install the controller inside an electrical panel in a position where it cannot be reached and is protected from knocks or impacts. The controller should be placed inside the panel in a position where it is physically separated from power components (solenoids, contactors, actuators, inverters, etc.) and their respective cables. The ideal solution is to house these two circuits in two separate cabinets. Proximity to such devices/cables may cause random malfunctions that are not immediately evident. The panel's casing must allow an adequate flow of cooling air.



Attention:

- For safety reasons the controller should be installed inside an electrical panel so that the only accessible parts are the display and the built-in terminal's keypad.
- Install the controller so that the disconnection devices can be used safely and without hindrance.
- When laying out the wiring, separate as much as possible the probe cables, digital input cables and serial line cables from the power cables (connected to contactors, thermomagnetic devices, etc.) avoid electromagnetic interference.

- Never run power cables and probe signal cables in the same conduits (including the ones in the electrical panels).
- For control signals, use shielded cables with twisted wires. If the control cables have to cross over power cables, the intersections should be as close as possible to 90 degrees; under no circumstances should the control cables be laid parallel to the power cables.
- Keep the paths of the probe cables as short as possible and avoid making spiral paths that enclose power devices.
- In case of malfunctions do not attempt to repair the device, but contact a CAREL service centre.

2.2.3 Electrical installation



Attention: Before servicing the equipment in any way disconnect the controller from the power mains by putting the system's main switch on OFF.

Make sure the system is provided with a power disconnecting conforming to regulations. Use cable lugs that are suitable for the terminals used.

Loosen each screw and insert the cable lugs, then tighten the screws.

There is no limit to the number of wires that can be connected to each individual terminal. When tightening the terminal screws apply a tightening torque no greater than 0.6 Nm. For information on the maximum allowable length of the connections to the analogue/digital inputs and to the analogue outputs please refer to the "Technical Specifications" table. In environments subject to strong disturbance use shielded cables with the braiding bonded to the earthing conductor in the electrical panel. The terminals can accept wires with a maximum cross-section of 2.5 mm² (12 AWG). After making the connection, gently tug on the cables to make sure they are sufficiently tight.

Note:

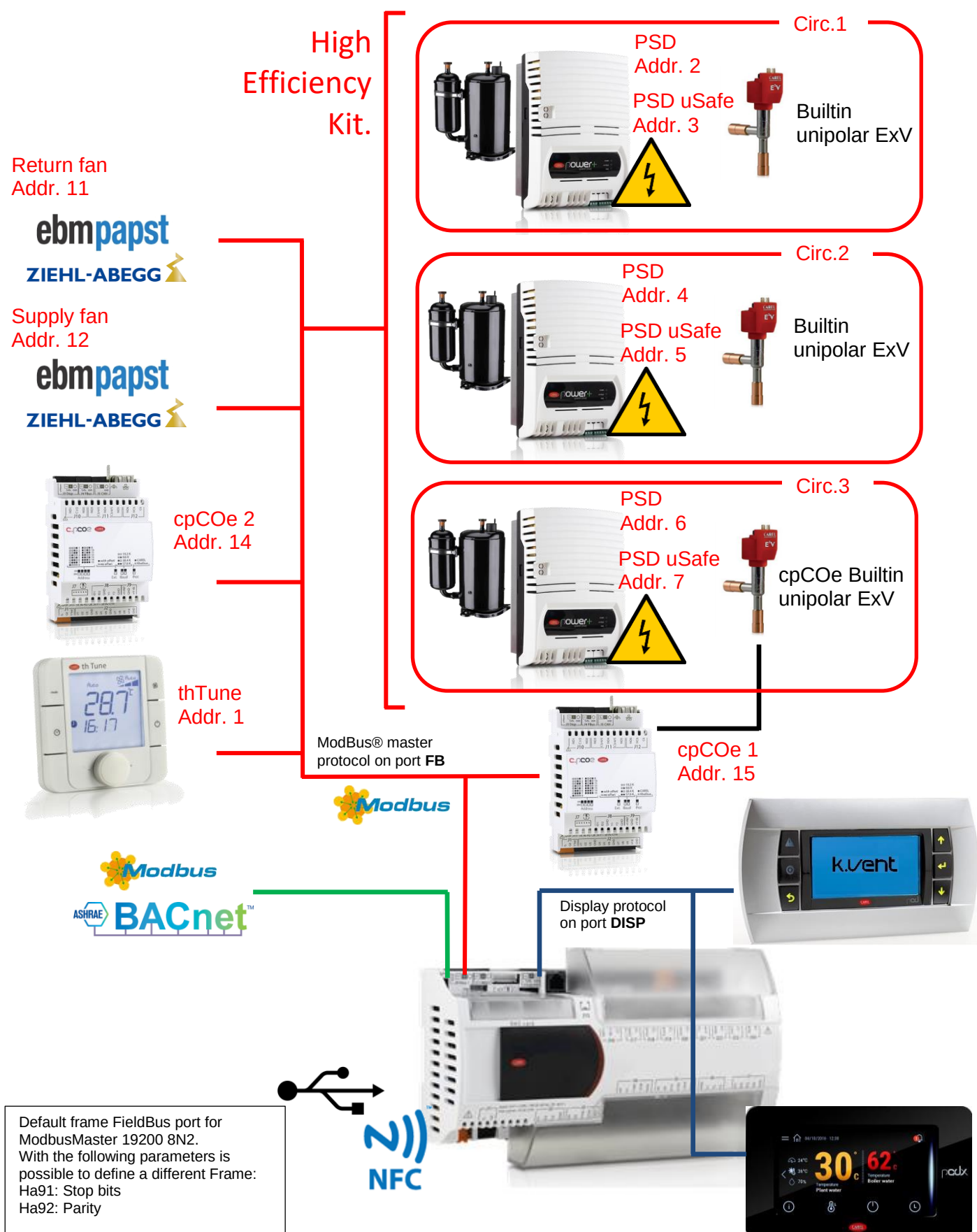
- secure the cables connected to the controller with clamps placed at 3cm from the connectors;
- if the power transformer's secondary winding is earthed, make sure the earth conductor is bonded to the conductor that goes to the controller and is connected to terminal G0. This applies to all the devices connected to the controller through a serial network.



Attention:

- Using a supply voltage other than specified can seriously damage the system.
- Installing, servicing and inspecting the controller should be done only by qualified personnel and in compliance with national and local regulations.
- All the very low voltage connections (24 Vac/Vdc or 28 to 36 Vdc
- analogue and digital inputs, analogue outputs, serial bus connections, power supplies) must have reinforced or double insulation from the power mains.
- Avoid touching or nearly touching the electronic components mounted on the boards to avoid electrostatic discharges from the operator to the components, which can be very damaging.
- Do not press the screwdriver on the connectors with excessive force, to avoid damaging the controller.
- Using the device in any way other than specified by the Manufacturer can compromise its protection system.
- Use only optional boards and connectors supplied by CAREL.

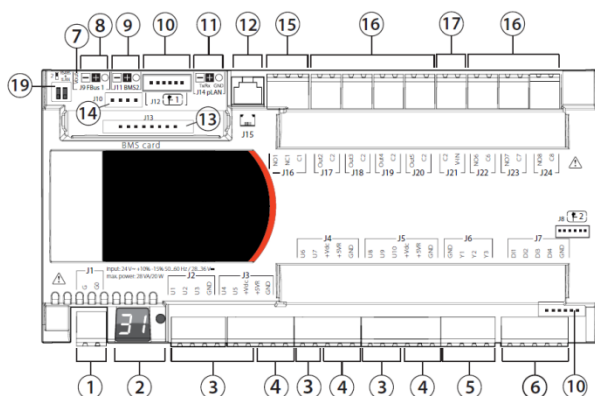
2.3 Field connection



2.4 Input/Output

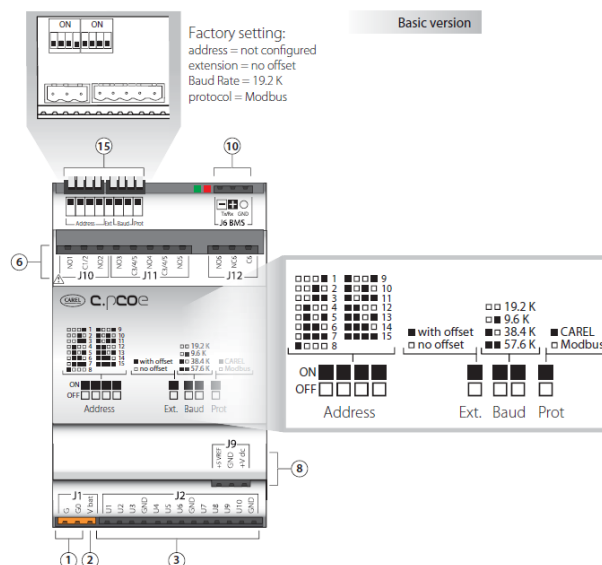
	In/Out	Label	Type	kVent+	c.pCOe
Universal I/O	In	U	NTC input	10	10
	In	U	PT1000 input	10	10
	In	U	0 to 1 Vdc/0 to 10 Vdc input (powered by controller)	6	0
	In	U	0 to 1 Vdc/0 to 10 Vdc input (external power supply)	10	10
	In	U	0 to 20 / 4 to 20mA input (powered by controller)	4	2
	In	U	0 to 20 / 4 to 20mA input (powered externally)	4	4
	In	U	0 to 5 V input for ratiometric probe (+5Vref)	6	2
	In	U	Digital input w/ voltage- free contact	10	10
	Out	U	0 to 10 Vdc output, not opticallyisolated	10	5
TOTAL UNIVERSAL				10	10
Digital inputs	In	DI	Voltage-free contact digital input	4	0
TOTAL DIGITAL INPUTS				4	0
Analog outputs	Out	Y	0 to 10 Vdc output	3	0
TOTAL DIGITAL OUTPUTS				3	0
Digital outputs	Out		NO/NC relay output	1	1
	Out		NO relay output	3	5
	Out		Powered-on relay output	4	0
TOTAL DIGITAL OUTPUTS				8	6

2.4.1 Connections terminals



Ref.	Description
1	Power connector [G(+), G0(-)]
2	Button for setting pLAN address
3	Universal inputs/outputs
4	+Vdc: power to active probes +5 V power to ratiometric probes
5	Analog outputs
6	DI: voltage free contact digital inputs
7	+Vout: power to additional terminal
8	Fieldbus1 connector
9	BMS2 connector
10	Unipolar Valves connectors
11	pLAN plug-in connector
12	pLAN telephone connector for terminal
13	BMS1 optional card connector
14	PLD terminal connector
15	Relay digital outputs

16	Powered-on relay digital outputs
17	Power supply for "powered-on relay digital outputs"
19	Microswitch to select RS485/LAN level on Fielbus1

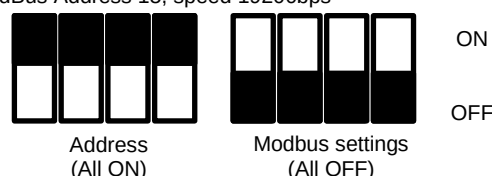


Ref.	Description
1	Power connector [G(+), G0(-)]
2	Power supply from external Ultracap module
3	Universal inputs/outputs
6	Relay digital outputs
8	Power supply ratiometric probes
10	BMS RS485 port
15	DipSwitch for protocol settings

2.4.2 c.pCOe addressing

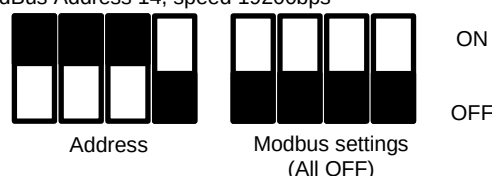
It's possible to connect up to 2 c.pCOe to the controller. c.pCOe communicates with the controller throu ModBus network, so they slave devices must have different ModBus address.

First c.pCOe must have the following dip switches configuration:
ModBus Address 15, speed 19200bps



Second c.pCOe must have the following dip switches configuration:

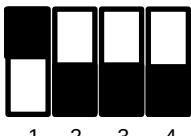
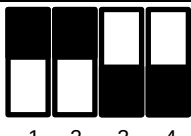
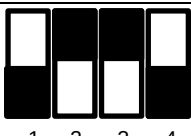
ModBus Address 14, speed 19200bps



2.4.3 PSD addressing

Attention: Plastic cover has to be removed to access dip-switches. Before remove cover be sure to turn-off power supply, to wait leds lightingoff and then disconnect wires from terminals. To remove the cover push the two side clips with a tool (i.e. a screwdriver) and rotate up the cover.

It's possible to connect up to 3 PSD to the controller. PSD communicates with the controller throu ModBus network, so they slave devices must have different ModBus address.

ModBus Address 2		OFF ON
ModBus Address 4		OFF ON
ModBus Address 6		OFF ON

2.4.4 thTune addressing

thTune communicates with the controller throu ModBus network, so the slave devices must have different ModBus address.

To configure ModBus address of thTune, press buttons FAN+ON/OFF for 3s, then enter password 22. Parameters are:

Acronym	Description	Value	Default
Addr	ModBus address	1	1
bAud	Baudrate	2	2

2.4.5 Probes installation

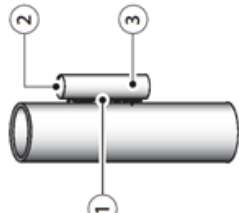
Follow the instructions below to properly install the temperature probes.

1



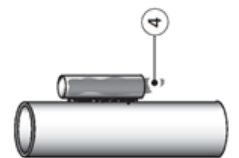
Welding the well to the output or suction gas pipe

2



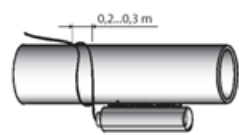
Closed end of well - at the top if vertical. Solder the well in order to create a good thermal connection.

3



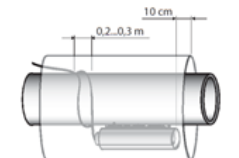
Tubular internal dia. Ø 4.5 mm for probes NTC*WF*
Tubular internal dia. Ø 6 mm for probes NTC*HT* - minimum length 70 mm

4



Put conductive paste in the well, insert the whole sensor in the well, wrap one or two spirals around the piping (to bring the cable at the same temperature measurement and reduce errors) .

5



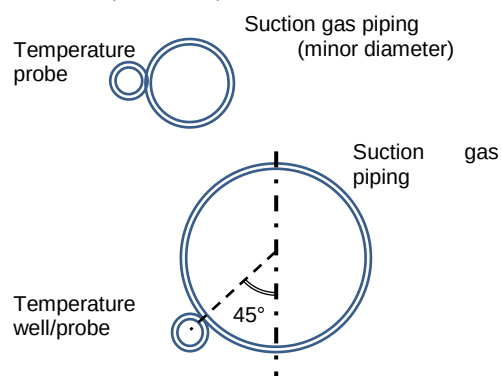
Complete the coupling with a good thermal insulation. For temperature measurements that diverge significantly (a few tenths of °C) from the surrounding temperature, it is good practice to insulate a larger part of the piping in order to ensure a more accurate reading

Positioning of discharge gas temperature probes

They should be installed in the upper part of the piping at 5-6 cm from the attachment of the compressor case. Insulate the entire piping tract from the compressor up to and including the probe.

Positioning the suction temperature probe

Proper installation, as shown in the following figure, is important to ensure proper operation of the superheating control; choose a horizontal tract far from curves (at least 6-8 times the diameter) but near the evaporator output.



2.4.6 Pressure probes installation

In general, pressure probes must be installed on the upper part of the gas pipe to prevent the oil in the chiller circuit from obstructing the passage of the gas in the transducer, which is then unable to provide correct readings. It is preferable to use Schrader valves to allow easy replacement of the transducer.

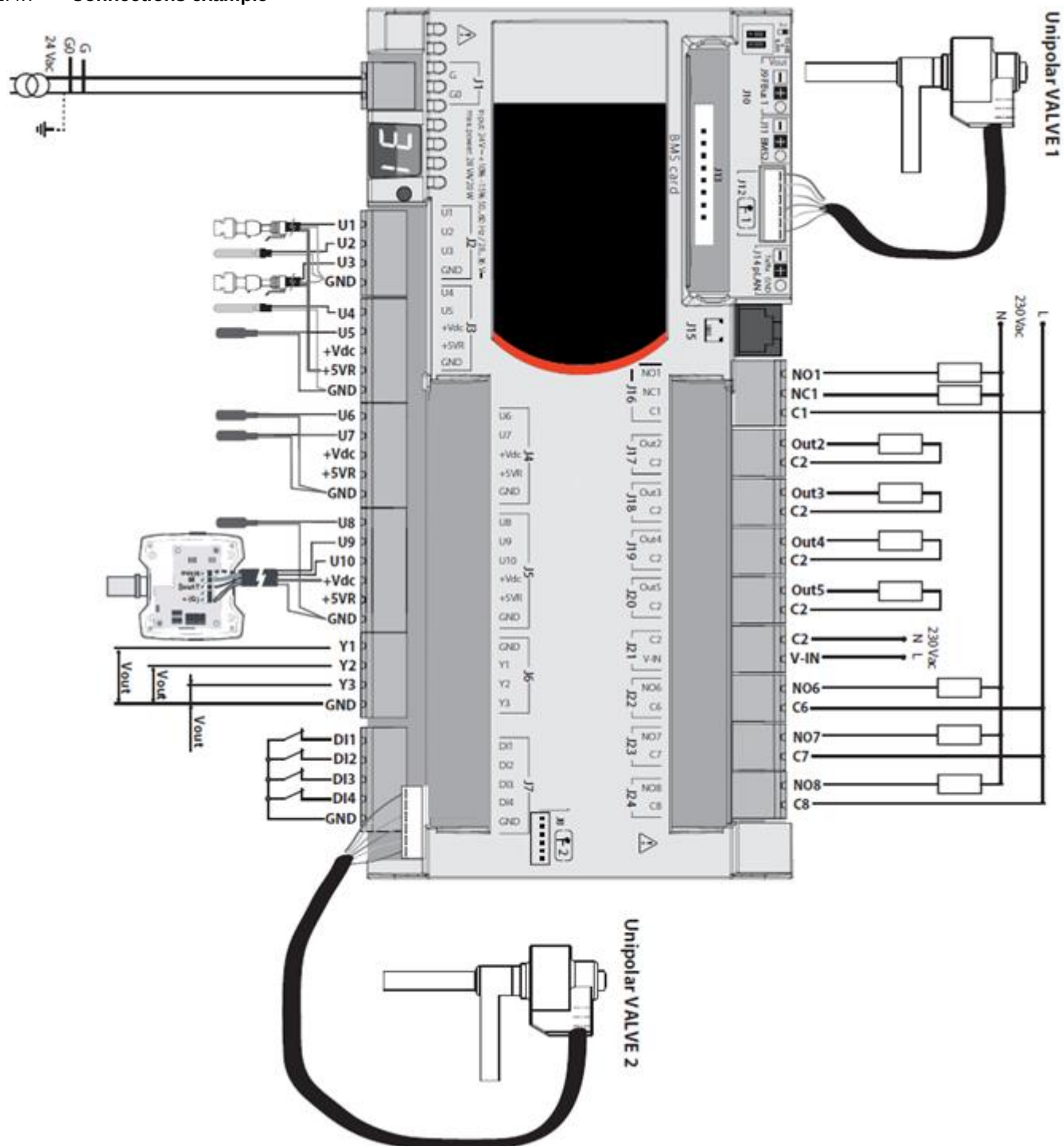
Positioning evaporation pressure probes

They should be installed in the upper part of the suction pipe near the position chosen for the temperature probe.

Positioning condensation pressure probes

They should be installed in the upper part of the discharge gas pipe, far enough away from the compressor to dampen the pulsations that could provide false readings.

2.4.7 Connections example



3. SOFTWARE CONFIGURATION



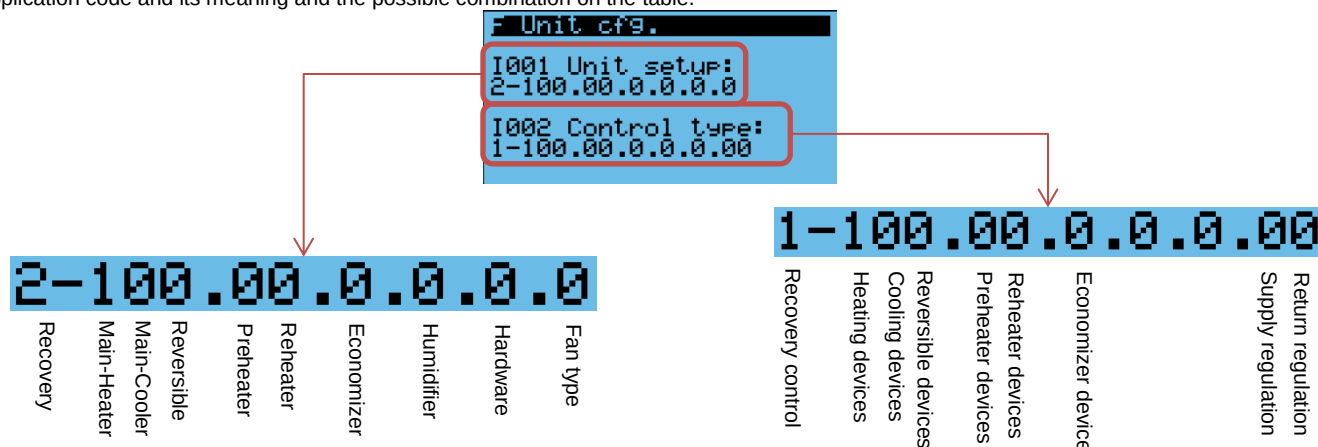
Attention: Structure of the software in class A: the thermal protection safeties for overload and high pressure must act directly on the actuators and are thus wired in series with the command for coil of the actuators contactors.

The software configuration procedure includes these steps:

1. Configure unit setup unique code in Unit config. menu (**I001**)
2. Configure control type unique code in Unit config. menu (**I002**)
3. Assign inputs/outputs with board to point function (menu G)
4. Set regulation and optional parameters
5. Set unit in RUN mode (**I003**)

3.1.1 Unit setup

To configure the unit is enough to setup an unique application code that determines the devices present on the unit. Here an example of application code and its meaning and the possible combination on the table.



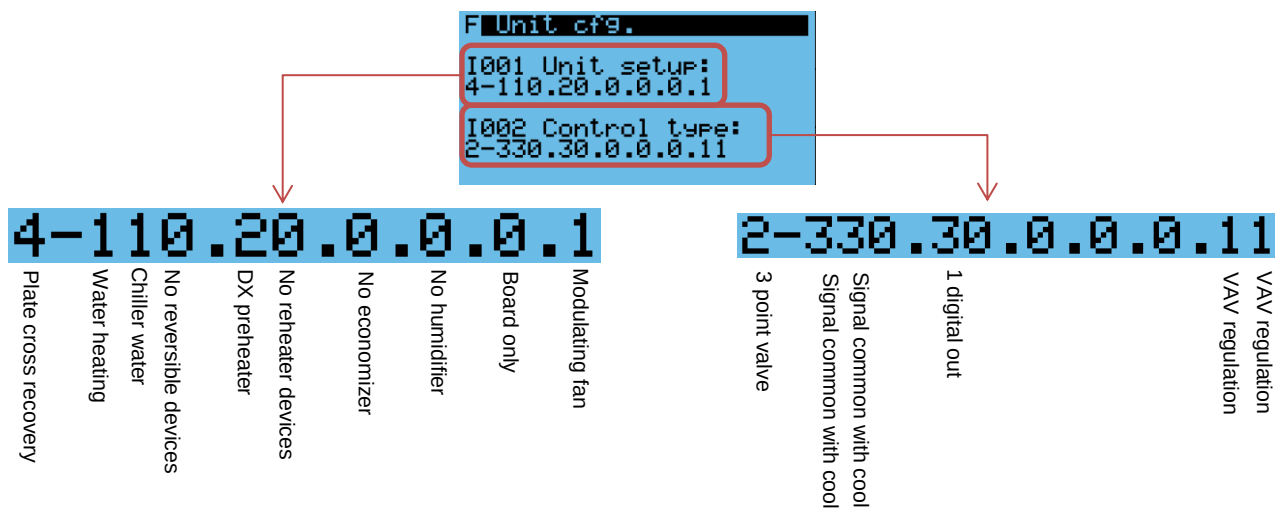
Unit setup	Control type	Mandatory I/O	Not available I/O
Recovery			
0	Supply only	Supply temperature (AI1)	Exhaust temperature (AI4), Exhaust air pressure (AI14), Exhaust air filter (DI15), Exhaust air damper (DO9), Recovery (DO10, DO36, DO37, DO23, DO24, AO6), Exhaust fan (DO15)
1	Supply + Exhaust	Supply temperature (AI1)	Exhaust temperature (AI4), Recovery (DO10, DO36, DO37, DO23, DO24, AO6)
2	Rotary wheel		
	1 0-10V valve control	Supply temperature (AI1), Exhaust temperature (AI4), Fresh temperature (AI3), Modulating recovery (AO6)	Recovery 3point valve (DO23, DO24), Recovery 2 steps (DO36, DO37)
	2 3 point valve control	Supply temperature (AI1), Exhaust temperature (AI4), Fresh temperature (AI3), Recovery 3point valve (DO23, DO24)	Recovery 2 steps (DO36, DO37), Modulating recovery (AO6)
	3 2 steps control	Supply temperature (AI1), Exhaust temperature (AI4), Fresh temperature (AI3), Recovery 2 steps (DO36, DO37)	Recovery 3point valve (DO23, DO24), Modulating recovery (AO6)
	4 ON/OFF control	Supply temperature (AI1), Exhaust temperature (AI4), Fresh temperature (AI3), Recovery ON/OFF (DO10)	Recovery 3point valve (DO23, DO24), Modulating recovery (AO6), Recovery 2 steps (DO36, DO37)
3	Glycol	Supply temperature (AI1), Exhaust temperature (AI4), Fresh temperature (AI3), Recovery ON/OFF (DO10)	Modulating recovery (AO6, DO36, DO37, DO23, DO24)
4	Plate cross		
	1 0-10V valve control	Supply temperature (AI1), Exhaust temperature (AI4), Fresh temperature (AI3), Modulating recovery (AO6)	Recovery 3point valve (DO23, DO24), Recovery 2 steps (DO36, DO37)
	2 3 point valve control	Supply temperature (AI1), Exhaust temperature (AI4), Fresh temperature (AI3), Recovery 3point valve (DO23, DO24)	Recovery 2 steps (DO36, DO37), Modulating recovery (AO6)
	3 2 steps control	Supply temperature (AI1), Exhaust temperature (AI4), Fresh temperature (AI3), Recovery 2 steps (DO36, DO37)	Recovery 3point valve (DO23, DO24), Modulating recovery (AO6)
	4 ON/OFF control	Supply temperature (AI1), Exhaust temperature (AI4), Fresh temperature (AI3), Recovery ON/OFF (DO10)	Recovery 3point valve (DO23, DO24), Modulating recovery (AO6), Recovery 2 steps (DO36, DO37)
Main-Heater			
0	None		Back water temperature (AI6), Freeze alarm (DI8), Heat alarm (DI9), Heat 1 (DO4), Heat 2 (DO6), Modulating heat (DO17, DO18, AO3, AO12)
1	Hot water		
	1 0-10V valve control	Back water temperature (AI6), Fresh temperature (AI3), Freeze alarm (DI8), Heat 1 (DO4), Modulating heat (AO3)	Heat 2 (DO6), Heat 3 point valve (DO17, DO18), Cool/Heat common (AO12)
	2 3 point valve control	Back water temperature (AI6), Fresh temperature (AI3), Freeze alarm (DI8), Heat 1 (DO4), Heat 3 point valve (DO17, DO18)	Heat 2 (DO6), Modulating heat (AO3), Cool/Heat common (AO12)
	3 0-10V valve in common with cool	Back water temperature (AI6), Fresh temperature (AI3), Freeze alarm (DI8), Heat 1 (DO4), Cool/Heat common (AO12)	Heat 2 (DO6), Modulating heat (AO3), Heat 3 point valve (DO17, DO18)

Unit setup		Control type	Mandatory I/O	Not available I/O	
2	Direct expansion	4	1 digital output	Heat 1 (DO4)	Back water temperature (AI6), Freeze alarm (DI8), Heat 3 point valve (DO17, DO18), Heat 2 (DO6), Modulating heat (AO3), Modulating cool/heat (AO12)
		5	1 modulating	Modulating heat (AO3)	Back water temperature (AI6), Freeze alarm (DI8), Heat 3 point valve (DO17, DO18), Heat 1 (DO4), Heat 2 (DO6), Modulating cool/heat (AO12)
		6	2 digital outputs	Heat 1 (DO4), Heat 2 (DO6)	Back water temperature (AI6), Freeze alarm (DI8), Heat 3 point valve (DO17, DO18), Modulating heat (AO3), Modulating cool/heat (AO12)
		7	1 digital output + 1 modulating	Heat 1 (DO4), Modulating heat (AO3)	Back water temperature (AI6), Freeze alarm (DI8), Heat 3 point valve (DO17, DO18), Heat 2 (DO6), Modulating cool/heat (AO12)
		8	2 digital outputs + 1 modulating	Heat 1 (DO4), Heat 2 (DO6), Modulating heat (AO3)	Back water temperature (AI6), Freeze alarm (DI8), Heat 3 point valve (DO17, DO18), Modulating cool/heat (AO12)
		9	1 modulating in common with cool	Modulating cool/heat (AO12)	Back water temperature (AI6), Freeze alarm (DI8), Heat 3 point valve (DO17, DO18), Heat 1 (DO4), Heat 2 (DO6), Modulating heat (AO3)
		A	1 digital output + 1 modulating in common with cool	Heat 1 (DO4), Modulating cool/heat (AO12)	Back water temperature (AI6), Freeze alarm (DI8), Heat 3 point valve (DO17, DO18), Heat 2 (DO6), Modulating heat (AO3)
		B	2 digital outputs + 1 modulating in common with cool	Heat 1 (DO4), Heat 2 (DO6), Modulating cool/heat (AO12)	Back water temperature (AI6), Freeze alarm (DI8), Heat 3 point valve (DO17, DO18), Modulating heat (AO3)
3	Electric heater				
		4	1 digital output	Heat 1 (DO4)	Back water temperature (AI6), Freeze alarm (DI8), Heat 3 point valve (DO17, DO18), Heat 2 (DO6), Modulating heat (AO3), Modulating cool/heat (AO12)
		5	1 modulating	Modulating heat (AO3)	Back water temperature (AI6), Freeze alarm (DI8), Heat 3 point valve (DO17, DO18), Heat 1 (DO4), Heat 2 (DO6), Modulating cool/heat (AO12)
		6	2 digital outputs	Heat 1 (DO4), Heat 2 (DO6)	Back water temperature (AI6), Freeze alarm (DI8), Heat 3 point valve (DO17, DO18), Modulating heat (AO3), Modulating cool/heat (AO12)
		7	1 digital output + 1 modulating	Heat 1 (DO4), Modulating heat (AO3)	Back water temperature (AI6), Freeze alarm (DI8), Heat 3 point valve (DO17, DO18), Heat 2 (DO6), Modulating cool/heat (AO12)
		8	2 digital outputs + 1 modulating	Heat 1 (DO4), Heat 2 (DO6), Modulating heat (AO3)	Back water temperature (AI6), Freeze alarm (DI8), Heat 3 point valve (DO17, DO18), Modulating cool/heat (AO12)
		9	1 modulating in common with cool	Modulating cool/heat (AO12)	Back water temperature (AI6), Freeze alarm (DI8), Heat 3 point valve (DO17, DO18), Heat 1 (DO4), Heat 2 (DO6), Modulating heat (AO3)
		A	1 digital output + 1 modulating in common with cool	Heat 1 (DO4), Modulating cool/heat (AO12)	Back water temperature (AI6), Freeze alarm (DI8), Heat 3 point valve (DO17, DO18), Heat 2 (DO6), Modulating heat (AO3)
		B	2 digital outputs + 1 modulating in common with cool	Heat 1 (DO4), Heat 2 (DO6), Modulating cool/heat (AO12)	Back water temperature (AI6), Freeze alarm (DI8), Heat 3 point valve (DO17, DO18), Modulating heat (AO3)
4	Steam				
		1	0-10V valve control	Back water temperature (AI6), Fresh temperature (AI3), Heat 1 (DO4), Modulating heat (AO3)	Heat 2 (DO6), Heat 3 point valve (DO17, DO18), Cool/Heat common (AO12)
		3	0-10V valve in common with cool	Back water temperature (AI6), Fresh temperature (AI3), Heat 1 (DO4), Cool/Heat common (AO12)	Heat 2 (DO6), Heat 3 point valve (DO17, DO18), Modulating heat (AO3)
Main-Cooler					
0	None			Cooling alarm (DI6), Cool 1 (DO2), Cool 2 (DO3), Cool 3 point valve (DO19, DO20), Modulating cool (AO5)	
1	Chilled water				
		1	0-10V valve control	Fresh temperature (AI3), Cool 1 (DO2), Modulating cool (AO5)	Cool 2 (DO3), Cool 3 point valve (DO19, DO20)
		2	3 point valve control	Fresh temperature (AI3), Cool 1 (DO2), Cool 3 point valve (DO19, DO20)	Cool 2 (DO3), Modulating cool (AO5)
		3	0-10V valve in common with heat	Fresh temperature (AI3), Cool 1 (DO2),	Cool 2 (DO3), Cool 3 point valve (DO19, DO20), Modulating cool (AO5)
2	Direct expansion				
		4	1 digital output	Fresh temperature (AI3), Cool 1 (DO2),	Cool 3 point valve (DO19, DO20), Cool 2 (DO3), Modulating cool (AO5)
		5	1 modulating	Fresh temperature (AI3), Modulating cool (AO5)	Cool 3 point valve (DO19, DO20), Cool 1 (DO2), Cool 2 (DO3)
		6	2 digital outputs	Fresh temperature (AI3), Cool 1 (DO2), Cool 2 (DO3)	Cool 3 point valve (DO19, DO20), Modulating cool (AO5)
		7	1 digital output + 1 modulating	Fresh temperature (AI3), Cool 1 (DO2), Modulating cool (AO5)	Cool 3 point valve (DO19, DO20), Cool 2 (DO3)
		8	2 digital outputs + 1 modulating	Fresh temperature (AI3), Cool 1 (DO2), Cool 2 (DO3), Modulating cool (AO5)	Cool 3 point valve (DO19, DO20),
		9	1 modulating in common with heat	Fresh temperature (AI3),	Cool 3 point valve (DO19, DO20), Cool 1 (DO2), Cool 2 (DO3), Modulating cool (AO5)
		A	1 digital output + 1 modulating in common with heat	Fresh temperature (AI3), Cool 1 (DO2),	Cool 3 point valve (DO19, DO20), Cool 2 (DO3), Modulating cool (AO5)
		B	2 digital outputs + 1 modulating in common with heat	Fresh temperature (AI3), Cool 1 (DO2), Cool 2 (DO3)	Cool 3 point valve (DO19, DO20), Modulating cool (AO5)
Reversible					
0	None			Circuit 1 (AI5, AI7, AI8, AI9, DI7, DI18, DO1), Circuit 2 (AI16, AI17, AI18, AI19, DI16, DI19, DO31), Circuit 3 (AI20, AI21, AI22, AI23, DI17, DI20, DO32), Rofftop circuit 1,2,3 (DO16, DO33, DO34), Reverse 1 (DO5), Reverse 2 (DO7), Reverse 3 point valve (DO21, DO22), Modulating reverse (AO4), Cool/Heat (DO1)	
1	Hydronic				
		1	0-10V valve control	Fresh temperature (AI3), Reverse 1 (DO5), Cool/Heat (DO1), Modulating reverse (AO4)	Circuit 1 (AI5, AI7, AI8, AI9, DI7, DI18, DO1), Circuit 2 (AI16, AI17, AI18, AI19, DI16, DI19, DO31), Circuit 3 (AI20, AI21, AI22, AI23, DI17, DI20, DO32), Rofftop circuit 1,2,3 (DO16, DO33, DO34), Reverse 3 point valve (DO21, DO22)
		2	3 point valve control	Fresh temperature (AI3), Reverse 1 (DO5), Cool/Heat (DO1), Reverse 3 point valve (DO21, DO22)	Circuit 1 (AI5, AI7, AI8, AI9, DI7, DI18, DO1), Circuit 2 (AI16, AI17, AI18, AI19, DI16, DI19, DO31), Circuit 3 (AI20, AI21, AI22, AI23, DI17, DI20, DO32), Rofftop circuit 1,2,3 (DO16, DO33, DO34), Modulating reverse (AO4)
2	Direct expansion				
		3	1 digital output	Fresh temperature (AI3), Cool/Heat (DO1), Reverse 1 (DO5),	Circuit 1 (AI5, AI7, AI8, AI9, DI7, DI18, DO1), Circuit 2 (AI16, AI17, AI18, AI19, DI16, DI19, DO31), Circuit 3 (AI20, AI21, AI22, AI23, DI17, DI20, DO32), Rofftop circuit 1,2,3 (DO16, DO33, DO34), Reverse 2 (DO7), Modulating reverse (AO4)
		4	1 modulating	Fresh temperature (AI3), Cool/Heat (DO1),	Circuit 1 (AI5, AI7, AI8, AI9, DI7, DI18, DO1), Circuit 2 (AI16, AI17,

Unit setup		Control type	Mandatory I/O	Not available I/O	
	F	3 circuits, 1 compressor BLDC only, tandem	DO31), Circuit 3 (AI20, AI21, AI22, AI23, DI17, DO32), ON/OFF compressor (DO41, DO44), Rooftop circuit 1,2, 3 (DO16, DO33, DO34)	compressors (DO38, DO39, DO40, DO42, DO43, DO45, DO46)	
			Circuit 1 (AI5, AI7, AI8, AI9, DI7, DO1), Circuit 2 (AI16, AI17, AI18, AI19, DI16, DO31), Circuit 3 (AI20, AI21, AI22, AI23, DI17, DO32), ON/OFF compressors (DO39, DO42, DO44, DO45), Rooftop circuit 1,2, 3 (DO16, DO33, DO34)	Reverse 1 (DO5), Reverse 2 (DO7), Reverse 3 point valve (DO21, DO22), Modulating reverse (AO4), Cool/Heat (DO1), ON/OFF compressors (DO38, DO40, DO43, DO46)	
		G	3 circuits, 1 compressor BLDC only, trio	Circuit 1 (AI5, AI7, AI8, AI9, DI7, DO1), Circuit 2 (AI16, AI17, AI18, AI19, DI16, DO31), Circuit 3 (AI20, AI21, AI22, AI23, DI17, DO32), , ON/OFF compressors (DO39, DO40, DO42, DO43, DO44, DO45, DO46), Rooftop circuit 1,2, 3 (DO16, DO33, DO34)	Reverse 1 (DO5), Reverse 2 (DO7), Reverse 3 point valve (DO21, DO22), Modulating reverse (AO4), Cool/Heat (DO1), ON/OFF compressors (DO38)
Preheater					
0	None			Preheater back water temperature (AI10), After preheater temperature (AI11), Preheater out (DO11), Modulating preheater (AO7), Preheater 3 point valve (DO27, DO28)	
1	Hot water				
		1	0-10V valve control	Preheater back water temperature (AI10), After preheater temperature (AI11), Preheater out (DO11), Modulating preheater (AO7)	Preheater 3 point valve (DO27, DO28)
		2	3 point valve control	Preheater back water temperature (AI10), After preheater temperature (AI11), Preheater out (DO11), Preheater 3 point valve (DO27, DO28)	Modulating preheater (AO7)
2	Direct expansion				
		3	1 digital output	After preheater temperature (AI11), Preheater out (DO11)	Preheater back water temperature (AI10), Preheater 3 point valve (DO27, DO28), Modulating preheater (AO7)
		4	1 modulating	After preheater temperature (AI11), Modulating preheater (AO7)	Preheater back water temperature (AI10), Preheater 3 point valve (DO27, DO28), Preheater out (DO11)
		5	1 digital output + 1 modulating	After preheater temperature (AI11), Preheater out (DO11), Modulating preheater (AO7)	Preheater back water temperature (AI10), Preheater 3 point valve (DO27, DO28)
3	Electric heater				
		3	1 digital output	After preheater temperature (AI11), Preheater out (DO11)	Preheater back water temperature (AI10), Preheater 3 point valve (DO27, DO28), Modulating preheater (AO7)
		4	1 modulating	After preheater temperature (AI11), Modulating preheater (AO7)	Preheater back water temperature (AI10), Preheater 3 point valve (DO27, DO28), Preheater out (DO11)
		5	1 digital output + 1 modulating	After preheater temperature (AI11), Preheater out (DO11), Modulating preheater (AO7)	Preheater back water temperature (AI10), Preheater 3 point valve (DO27, DO28)
Reheater					
0	None			Reheater out (DO8), Modulating reheater (AO10), Reheater 3 point valve (DO29, DO30)	
1	Hot water				
		1	0-10V valve control	Reheater out (DO8), Modulating reheater (AO10)	Reheater 3 point valve (DO29, DO30)
		2	3 point valve control	Reheater out (DO8), Reheater 3 point valve (DO29, DO30)	Modulating reheater (AO10)
2	Direct expansion				
		3	1 digital output	Reheater out (DO8)	Reheater 3 point valve (DO29, DO30), Modulating reheater (AO10)
		4	1 modulating	Modulating reheater (AO10)	Reheater 3 point valve (DO29, DO30), Reheater out (DO8)
		5	1 digital output + 1 modulating	Reheater out (DO8), Modulating reheater (AO10)	Reheater 3 point valve (DO29, DO30)
3	Electric heater				
		3	1 digital output	Reheater out (DO8)	Reheater 3 point valve (DO29, DO30), Modulating reheater (AO10)
		4	1 modulating	Modulating reheater (AO10)	Reheater 3 point valve (DO29, DO30), Reheater out (DO8)
		5	1 digital output + 1 modulating	Reheater out (DO8), Modulating reheater (AO10)	Reheater 3 point valve (DO29, DO30)
Economizer					
0	None			Eco 3 point valve (DO25, DO26), Modulating eco (AO8)	
1	Yes				
		1	0-10V valve control	Modulating eco (AO8)	Eco 3 point valve (DO25, DO26)
		2	3 point valve control	Eco 3 point valve (DO25, DO26)	Modulating eco (AO8)
Humidifier					
0	None			Humidifier alarm (DI3), Humidifier out (DO12), Modulating humidifier (AO9), IEC out (DO35), Modulating IEC (AO11)	
1	Evaporative		Supply humidity (AI15), Humidifier out (DO12), Modulating humidifier (AO9)	IEC out (DO35), Modulating IEC (AO11)	
2	Steam		Supply humidity (AI15), Humidifier out (DO12), Modulating humidifier (AO9)	IEC out (DO35), Modulating IEC (AO11)	
3	IEC+Evaporative		Supply humidity (AI15), Humidifier out (DO12), Modulating humidifier (AO9)		
Hardware					
0	Board only				
1	1 c.pCOe				
2	2 c.pCOe				
Fan type					
0	ON/OFF		Supply fan (DO14)	Modulating supply fan (AO1), Modulating exhaust fan (AO2)	
1	0-10V signal				
		0	No regulation	Modulating supply fan (AO1), Modulating exhaust fan (AO2)	
		1	VAV	Supply air pressure (AI13), Exhaust air pressure (AI14), Modulating supply fan (AO1), Modulating exhaust fan (AO2)	
		2	CAV	Supply air pressure (AI13), Exhaust air pressure (AI14), Modulating supply fan (AO1), Modulating exhaust fan (AO2)	

Unit setup		Control type	Mandatory I/O	Not available I/O
2	EBM fan		pressure (AI14), Modulating supply fan (AO1), Modulating exhaust fan (AO2)	
		3 Follow supply (only for return)	Modulating supply fan (AO1), Modulating exhaust fan (AO2)	
		3 Hepa filter compensation (only for supply)		
3	Ziehl Abegg fan	0 No regulation		Modulating supply fan (AO1), Modulating exhaust fan (AO2)
		1 VAV	Supply air pressure (AI13), Exhaust air pressure (AI14)	Modulating supply fan (AO1), Modulating exhaust fan (AO2)
		2 CAV	Supply air pressure (AI13), Exhaust air pressure (AI14)	Modulating supply fan (AO1), Modulating exhaust fan (AO2)
		3 Follow supply (only for return)		
		3 Hepa filter compensation (only for supply)		Modulating supply fan (AO1), Modulating exhaust fan (AO2)
		0 No regulation		Modulating supply fan (AO1), Modulating exhaust fan (AO2)
		1 VAV	Supply air pressure (AI13), Exhaust air pressure (AI14)	Modulating supply fan (AO1), Modulating exhaust fan (AO2)
		2 CAV	Supply air pressure (AI13), Exhaust air pressure (AI14)	Modulating supply fan (AO1), Modulating exhaust fan (AO2)
		3 Follow supply (only for return)		
		3 Hepa filter compensation (only for supply)		Modulating supply fan (AO1), Modulating exhaust fan (AO2)

All other I/O not described in the table above, are optional.
According to the table is possible to understand the unit setup in the following example.



3.2 Unit schema

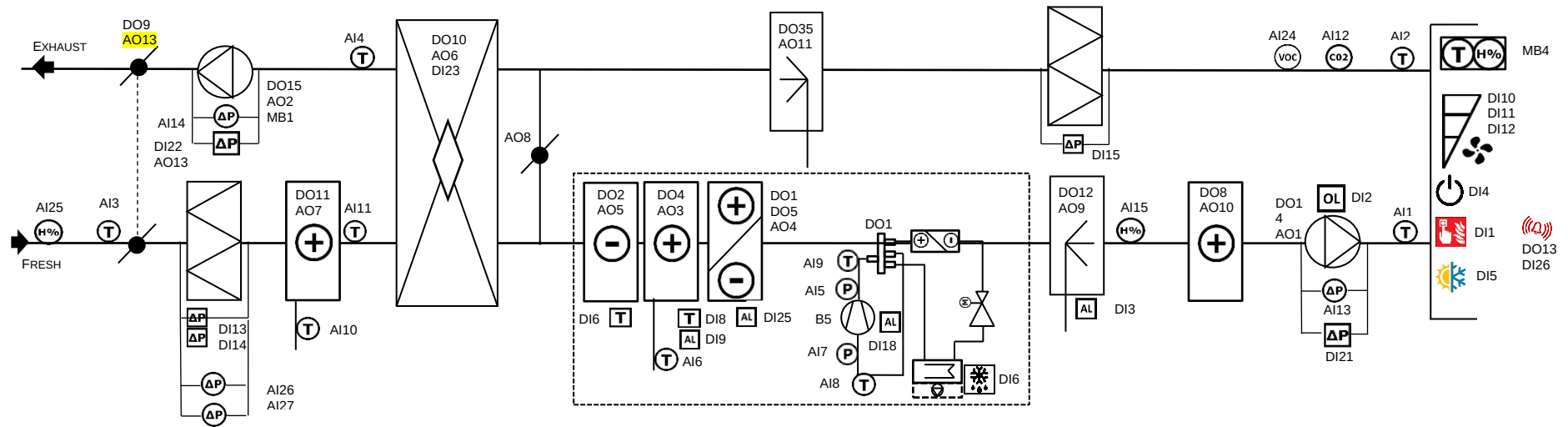
AI	Code	Analog input
1	Ga01	Supply temperature
2	Ga06	Return temperature
3	Ga11	External temperature
4	Ga16	Exhaust temperature
5	Ga21	Discharge pressure
6	Ga26	Back water temperature
7	Ga31	Suction pressure
8	Ga36	Suction temperature
9	Ga41	Discharge temperature
10	Ga 46	Preheater back water temp.
11	Ga51	After preheater temp.
12	Ga56	CO2 sensor
13	Ga61	Supply air pressure
14	Ga66	Exhaust air pressure
15	Ga 71	Supply humidity
16	Ga76	Discharge pressure 2
17	Ga81	Discharge temperature 2
18	Ga86	Suction pressure 2
19	Ga91	Suction temperature 2
20	Ga96	Discharge pressure 3
21	GaA1	Discharge temperature 3
22	GaA6	Suction pressure 3
23	GaB1	Suction temperature 3
24	GaB6	VOC sensor
25	GaC1	Fresh air humidity
26	GaC6	Hepa filter 1
27	GaD1	Hepa filter 2
28	GaD6	Hepa filter 3

DI	Code	Digital input
1	Gb01	Fire alarm
2	Gb03	Fan overload
3	Gb05	Humidifier alarm
4	Gb07	Remote On
5	Gb09	Summer/Winter
6	Gb11	Cooling alarm
7	Gb13	Defrost signal
8	Gb15	Freeze alarm
9	Gb17	Heating alarm
10	Gb19	Eco
11	Gb21	Precomfort
12	Gb23	Comfort
13	Gb25	Supply filter alarm
14	Gb27	Supply filter alarm 2
15	Gb29	Return filter alarm
16	Gb31	Defrost circuit 2
17	Gb33	Defrost circuit 3
18	Gb35	Pressostat circuit 1
19	Gb37	Pressostat circuit 2
20	Gb39	Pressostat circuit 3
21	Gb41	Supply air flow switch
22	Gb43	Return air flow switch
23	Gb45	Recovery clogged
24	Gb47	Door Switch
25	Gb49	Reversible coil alarm
26	Gb51	External generic alarm

DO	Code	Digital output
1	Gc01	Cool/Heat
2	Gc03	Cooling 1
3	Gc05	Cooling 2
4	Gc07	Heating 1
5	Gc09	Reverse 1
6	Gc11	Heating 2
7	Gc13	Reverse 2
8	Gc15	Reheat
9	Gc17	Exhaust air damper
10	Gc19	Recovery
11	Gc21	Preheater
12	Gc23	Humidifier
13	Gc25	Alarm
14	Gc27	Supply fan
15	Gc29	Exhaust fan
16	Gc31	Rooftop fan
17-18	Gc33-35	Heat Op/Cl
19-20	Gc37-39	Cool Op/Cl
21-22	Gc41-43	Cool/Heat Op/Cl
23-24	Gc45-47	Heat rec Op/Cl
25-26	Gc49-51	Mix Op/Cl
27-28	Gc53-55	Preheat Op/Cl
29-30	Gc57-59	Reheat Op/Cl
31	Gc61	Reverse circ.2
32	Gc63	Reverse circ.3
33	Gc65	Rooftop fan 2
34	Gc67	Rooftop fan 3
35	Gc69	IEC humidifier
36	Gc71	Recovery step 1
37	Gc73	Recovery step 2
38-40	Gc75-79	Compressors circuit 1
41-43	Gc81-85	Compressors circuit 2
44-46	Gc87-90	Compressors circuit 3
47-53	Gc91-104	Rooftop fans circuit 1
54-60	Gc105-118	Rooftop fans circuit 2
61-67	Gc119-132	Rooftop fans circuit 3

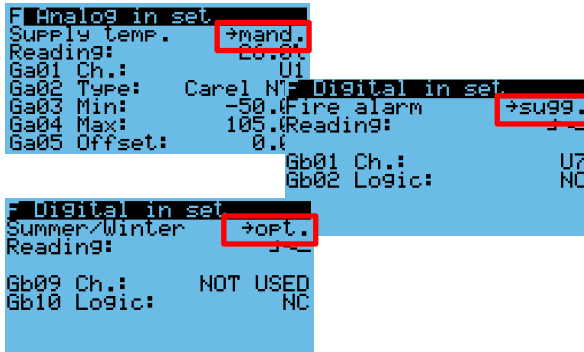
AO	Code	Analog output
1	Gd01	Supply fan
2	Gd02	Exhaust fan
3	Gd03	Heating
4	Gd04	Reverse
5	Gd05	Cooling
6	Gd06	Heat recovery
7	Gd07	Preheater
8	Gd08	Mix
9	Gd09	Humidifier
10	Gd10	Reheater
11	Gd11	IEC
12	Gd12	Cool/Heat signal
13	Gd13	Fresh Damper
14	Gd14	Reserved
15	Gd15	Main cool req. Optional
16	Gd16	Main Rev.Cool req Optional
17	Gd17	Main Heat req. Optional
18	Gd18	Main Rev. Heat req. Optional
19	Gd19	ReHeat req. Optional
20	Gd20	PreHeat req. Optional
21	Gd21	Main Rev.req. Optional
22	Gd22	Modulating Rooftop Fan Circ. 1
23	Gd23	Modulating Rooftop Fan Circ. 2
24	Gd24	Modulating Rooftop Fan Circ. 3

MB	ModBus®
1	Exhaust fan
2	Supply fan
3	c.pCOe
4	th-Tune
5	Power+



3.3 Board to point

kVent+ allows the manufacturer to setup the Inputs/Outputs (I/O) according to the application code and its needs: this function is named board to point. After Unit and control type setup, kVent+ recognize the mandatory, suggested and optional I/O. Not available I/O are not shown in masks.



Suggested I/O are the most common I/O, but not mandatory for regulation, while optional I/O are up to manufacturer.

When manufacturer setup the I/O according to its needs (channels, type, logic and limits), there could be an error code in configuration mask. Here below the error code meaning and the possible solutions:

Err.	pGD description	Error description
1	Reverse not allowed	Application code error: cooling device or heating device cannot be enabled with reversible device.
2	Missing mandatory AI	I/O error: a mandatory analog input is not enabled.
3	Missing mandatory DI	I/O error: a mandatory digital input is not enabled.
4	Missing mandatory DO	I/O error: a mandatory digital output is not enabled.
5	Missing mandatory AO	I/O error: a mandatory analog output is not enabled.
6	Wrong AI config.	I/O error: analog input configured in not available position.
7	Wrong DI config.	I/O error: digital input configured in not available position.
8	Wrong DO config.	I/O error: digital output configured in not available position.
9	Wrong AO config.	I/O error: analog output configured in not available position.
10	Missing c.pCOe	I/O error: c.pCOe configured in I/O, but not in unit setup.
11	Sensors mismatch	I/O error: analog input configured as not available type in that channel.
12	Double DO config.	I/O error: same digital output is used for more functions.
13	Double AO config.	I/O error: same analog output is used for more functions.

3.4 Software upgrade

It is possible to load/update the application software of the controllers family with the following methods:

1. Update from computer by USB cable
2. Update via USB flash drive
3. Update with file transfer via FTP



Attention: only application delivered and approved by CAREL can be loaded into kVent+ controller.

3.4.1 Update from computer by USB cable

Connect the computer to the controller via USB cable using device USB port.

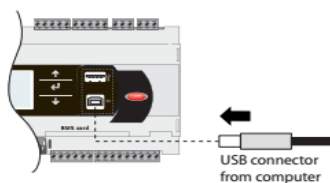


Fig. 6.g

Controller will be shown as a flash memory and it's possible to load the binaries into the folder UPGRADE. When the file transfer is done and the cable has been removed, the OS loads the

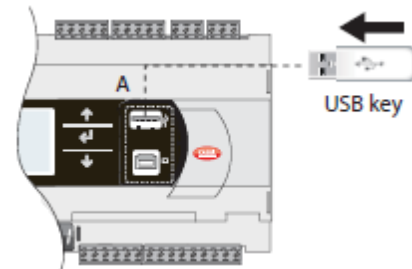
application into the controller, when the cable has been disconnected, the OS install the new version.



Attention: before updating the cpCO controller via USB connection, check in the system menu that the Device USB port is enabled (Settings → USB Settings → PC connection)

3.4.2 Update via USB flash drive

Connect the USB flash memory to the USB host port.

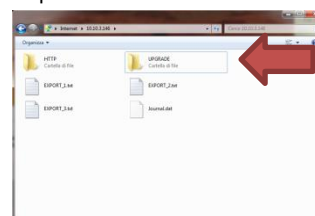


On system screen it's possible to select UPGRADE function then the application program to load into the controller, pressing ENTER button.

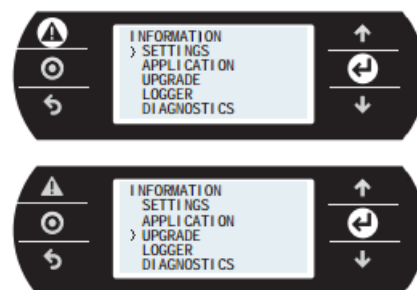
3.4.3 Update with file transfer via FTP

The cpCO family controllers fitted with Ethernet port include an FTP server that provided access to the public partition of the file system. Files and directories in this partition can be read, modified, created and deleted. FTP can also be used to transfer and .ap1 file, for example to update the image of the operating system or the application program. This is done using an FTP client, for example "FileZilla". The default username to access the file system is "anonymous". To protect the contents of the public file system against unauthorised access, different user can be created, assigning each a different access profile, dedicated to each service and adapted to the individual directory. To update via FTP:

1. Open an FTP client. Enter the IP address of the cpCO controller and the access credentials (default user "anonymous", no password)
2. Drag&drop the software update file from the directory on the computer to the "UPGRADE" directory on the cpCO controller



3. Access the system menu on the cpCO and select "UPGRADE"



Note: when having loaded the update file to the "UPGRADE" directory via FTP, the update procedure can also be started using the virtual terminal.

4. USER INTERFACE

4.1 Display PGDE

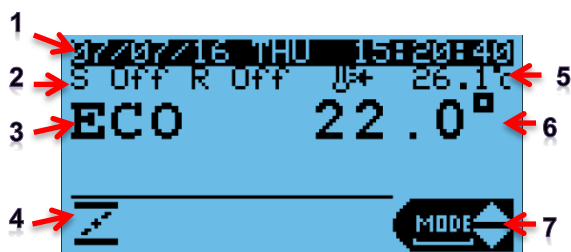
The kVent+ service interface is the PGDE.



The terminal, which is shown in the figure above, has 6 buttons whose meanings are described below:

	- Alarm	Display the list of active alarms Manually reset alarms
	- Prg	Change work mode
	- Esc	Return to the previous screen
	- Up	Navigate between the display screens or increase/decrease the value.
	- Down	
	- Enter	Switch from parameter display to edit Confirm value and return to the parameter list

The following screen displays an example of the main screen with an active unit, highlighting the fields and icons used:

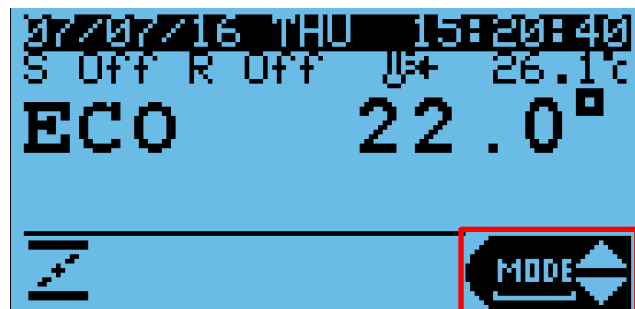


1.	Date and Time
2.	Fans speed
3.	Operating mode
	- STOP
	- ECONOMY
	- PRECOMFORT
	- COMFORT
	- AUTO (scheduler)
4.	Current unit status:
	Opening / Closing dampers
	Fans work
	Heating
	Cooling
	Freecooling Freeheating
	Humidification
	Dehumidification
	Active recovery
	Normal stop
	Emergency stop
	Active scheduler
	Recovery defrost
	Boost function active

5. Main temperature regulation
6. Setpoint
7. Indicates access to the user menu using the UP, DOWN and ENTER keys to confirm

4.1.1 User Menu

On the main screen, the UP and DOWN buttons can be used to scroll through the functions and ENTER used to select them. No password is needed to access and edit these parameters.



	Info
	Set
	Mode

Info

The general synoptics for the unit can be shown from the user menu. The physical status of the inputs, device outputs and probes are available in a menu connected to the synoptics.

The individual screens of the synoptics are shown below.

Set

In this menu is possible to see the current setpoint and the working mode, defined by the scheduler. It's possible to set the setpoint of the unit and the scheduler. Setpoint is represented by one variable for each mode.

Mode

Change operating mode of the unit (stop, economy, precomfort, comfort, auto, in mask **X00a**).

4.1.2 Scheduler

On the th-Tune it is possible to set the number of enabled bands (maximum 6), for each one the starting time and the setpoint of the room temperature.

On the cpCO there are 4 time bands (**Z00d**) and for each one it will be possible to set the starting time and the unit status (Off, Economy, Pre-comfort, Comfort). For each status there will be a set of values applied: main regulation setpoint, humidity setpoint (if any humidity probe is present), CO2 level or air flow setpoint (if differential pressure probe is present).

Besides the daily time band, it will be possible to set up to 3 special periods and 6 special days, for each one it will be possible to set the unit status (Off, Economy, Pre-comfort, Comfort).

The time bands of the cpCO and the set of the th-Tune have the same priority. The last set that comes it will wins.

The options (**I007**) of the scheduler are:

1. No scheduler
2. Scheduler by Board
3. Scheduler by thtune

4.2 Menu description

Regardless of the displayed screen, pressing the programming key accesses the password entry screen which allows access to the main menu shown below.

The code of the mask is determined by the menu tree.

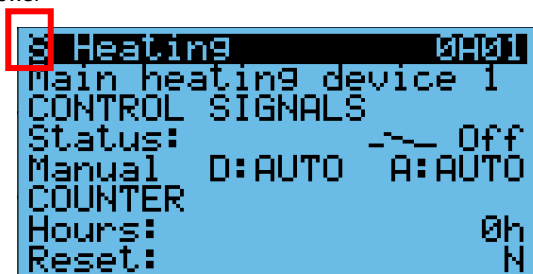
Menu description		Parameters code	
Heating		A	0..999
Cooling		B	0..999
Reversible		C	0..999
	BLDC general	Ca	0..99
	BLDC circ.1	Cb	0..99
	BLDC circ.2	Cc	0..99
	BLDC circ.3	Cd	0..99
	ExV circ.1	Ce	0..99
	ExV circ.2	Cf	0..99
	ExV circ.3	Cg	0..99
	Power+ circ.1	Ch	0..99
	Power+ circ.2	Cg	0..99
	Power+ circ.3	Cj	0..99
Fans		D	0..999
Recovery		E	0..999
Humidity		F	0..999
In/Out settings			
	Analog in set	Ga	0..99
	Digital in set	Gb	0..99
	Digital out set	Gc	0..99
	Analog output set	Gd	0..99
Settings		H	0..999
Unit Cfg.		I	0..999
Logout		J	0..999

4.2.1 Password Management

The program has 3 different password levels:

1. Advanced user (maintenance): read only access to all parameters. Default password: 0000.
2. Service: read access to all parameters with the ability to edit some of them (for more information on the parameters that can be changed, see the parameters table). Default password: 0001.
3. Manufacturer: read/write access to all parameters. Default password: 0002.

In the parameters screen, the access needed to edit the parameters is shown, always with the same codes. An example follows.



Once the password is entered it will be maintained for 5 minutes from the last time a key was pressed and then the password will need to be re-entered in order to access the parameters of the advanced functions. In the Log-Out menu, the password can be force entered without waiting 5 minutes.

4.3 Display th-Tune

The kVent+ user interface is the th-Tune, enabled in configuration mask (I005).



The terminal, which is shown in the figure above, has 4 buttons whose meanings are described below:

Mode	StandBy mode/Auto mode and stop the boost function when active
Clock	Enable scheduler
Clock 2s	thTune scheduler settings
Fan	Change working setpoint:
	1. ECO 
	2. PRECOMFORT 
	3. COMFORT 
4. STOP	
On-Off	Switch ON-OFF th-Tune display Exit from settings
Clock+Mode for 3s	Run boost function 
Encoder 1 press	Check setpoint
Encoder change	Change setpoint
Encoder 2 press	External temperature
Encoder 3 press	Humidity

In case of humidity or temperature setpoint change from th-Tune, the setpoint will change until the next change, by scheduler, PGDE or th-Tune.

In case of StandBy mode by thtune, the unit will be switched OFF. After a settable time from PGDE, the unit will switch ON and it will check the conditions. When the set conditions are reached again, the unit will go to standby condition and it will wait until the next check.

Note: OnOff of thTune will turn OnOff the display, there will not be any action in the unit.

4.3.1 Icons meaning



	Alarm active. Alarm code appear on the second thTune row
	Fans active
	Heating working
	Cooling working
	Defrosting heat pump
	Function locked

4.3.2 Scheduler management

thTune allows to configure the scheduler after pushing CLOCK button for 2s. The data are stored in the thTune, so when passing from a time band (hh:mm) to another one the display is proposing as starting time the hour and minute following the previous one (hh:mm+1). The th-Tune is checking the consistency of the time bands.

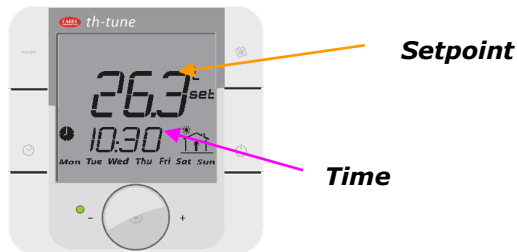
After the push of “ENCODER” terminal displays “Sel days”. Rotating “ENCODER” is possible to select a group of days or a single day:

- “7 days” (mon, tue, wed, thu, fri, sat, sun)
- “5 days” (mon, tue, wed, thu, fri)
- “2 days” (sat, sun)
- “Day by day”

It's possible to select up to 6 time bands for each day.



Parameters of a single time band selected are temperature setpoint and start time.



It's possible to disable a timeband rotating the encoder and setting “--:--” in the display, as the following picture.



To configure an OFF band from thtune, it's possible to rotate to the minimum value of setpoint to OFF, as the following picture.



4.4 User setpoint

The comfort zone of the unit can be changed by:

- Fan button of thTune
- Mode settings of pGDE (X00a)
- Digital input, if configured (Gb07)
- Any browser connected to Ethernet port of kVent+
- Any master device connected to BMS port

Available comfort zones are ECO, PRECOMFORT and COMFORT.

This working mode can change the following sets if the functions are activated:

1. Supply temperature
 - a. Economy (Z001)
 - b. Precomfort (Z002)
 - c. Comfort (Z003)
2. Room/Return temperature
 - a. Economy (Z004)
 - b. Precomfort (Z005)
 - c. Comfort (Z006)
3. Humidity
 - a. Economy (Z007)
 - b. Precomfort (Z008)
 - c. Comfort (Z009)
4. Air quality (CO2)
 - a. Economy (Z010)
 - b. Precomfort (Z011)
 - c. Comfort (Z012)
5. Air quality (VOC)
 - a. Economy (Z013)
 - b. Precomfort (Z014)
 - c. Comfort (Z015)
6. Supply fan speed (in percentage)
 - a. Economy (Z016)
 - b. Precomfort (Z017)
 - c. Comfort (Z018)
7. Return fan speed (in percentage)
 - a. Economy (Z019)
 - b. Precomfort (Z020)
 - c. Comfort (Z021)

thTune can override temperature setpoint determined by comfort zone, but setpoint will be override again by controller in case of comfort zone changing.

5. FUNCTIONS

5.1 Input functions

Here below the list of analog inputs functions:

AI	Code	Analog input	Function
1	Ga01	Supply temperature	Main temperature regulation
2	Ga06	Return temperature	Supply setpoint compensation Fire alarm activation
3	Ga11	External temperature	Recovery control and defrost FreeCooling/freeheating Cool/Heat mode changeover Antifreeze and antifrost control Fast heating function
4	Ga16	Exhaust temperature	Fire alarm in case of return probe broken
5	Ga21	Discharge pressure	Circuit 1 status control (envelope)
6	Ga26	Back water temperature	Antifreeze control
7	Ga31	Suction pressure	Circuit 1 status control (envelope) Circuit 1 SH control
8	Ga36	Suction temperature	Circuit 1 SH control
9	Ga41	Discharge temperature	Circuit 1 status control (envelope)
10	Ga 46	Preheater back water temperature	Antifreeze control
11	Ga51	After preheater temperature	Main preheating regulation Recovery defrost
12	Ga56	CO2 sensor	Fresh air regulation
13	Ga61	Supply air pressure	VAV and CAV regulation
14	Ga66	Exhaust air pressure	VAV and CAV regulation
15	Ga 71	Supply humidity	Main humidity regulation
16	Ga76	Discharge pressure 2	Circuit 2 status control (envelope)
17	Ga81	Discharge temperature 2	Circuit 2 status control (envelope)
18	Ga86	Suction pressure 2	Circuit 2 status control (envelope) Circuit 2 SH control
19	Ga91	Suction temperature 2	Circuit 2 SH control
20	Ga96	Discharge pressure 3	Circuit 3 status control (envelope)
21	GaA1	Discharge temperature 3	Circuit 3 status control (envelope)
22	GaA6	Suction pressure 3	Circuit 3 status control (envelope) Circuit 3 SH control
23	GaB1	Suction temperature 3	Circuit 3 SH control
24	GaB6	VOC sensor	Fresh air regulation
25	GaC1	Fresh air humidity	Freecooling/freeheating enabling

Here below the list of digital inputs functions:

DI	Code	Digital input	Function
1	Gb01	Fire alarm	Fire alarm activation
2	Gb03	Fan overload	Stop unit
3	Gb05	Humidifier alarm	Stop humidifier
4	Gb07	Remote On	Start/Stop the unit with timings
5	Gb09	Summer/Winter	Define working mode
6	Gb11	Cooling alarm	Stop cooling
7	Gb13	Defrost signal	Start/Stop defrost circuit 1
8	Gb15	Freeze alarm	Stop ventilation Force heating valve at 100%
9	Gb17	Heating alarm	Stop unit and force ventilation ON
10	Gb19	Eco	Force unit in Economy mode
11	Gb21	Precomfort	Force unit in Precomfort mode
12	Gb23	Comfort	Force unit in Comfort mode
13	Gb25	Supply filter alarm	Warning dirty filter
14	Gb27	Supply filter alarm 2	Warning dirty filter
15	Gb29	Return filter alarm	Warning dirty filter
16	Gb31	Defrost circuit 2	Start/Stop defrost circuit 2
17	Gb33	Defrost circuit 3	Start/Stop defrost circuit 3
18	Gb35	Pressostat circuit 1	Stop circuit 1
19	Gb37	Pressostat circuit 2	Stop circuit 2
20	Gb39	Pressostat circuit 3	Stop circuit 3
21	Gb41	Supply air flow switch	Check air flow and stop unit
22	Gb43	Return air flow switch	Check air flow and stop unit
23	Gb45	Recovery clogged	Recovery in defrost mode
24	Gb47	Door Switch	Door open

5.2 On request

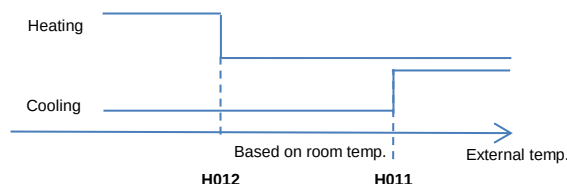
The On status requires the AND logic of:

- Unit configured by Service (**I003**)
- No serious alarm
- On by digital input
- On by the OR of the following conditions:
 - On by pGD (**X00a**)
 - On by BMS
 - On by thTune, if present
 - On by scheduler, if enabled

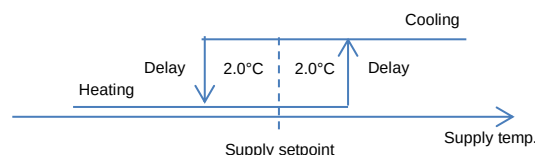
Variable mode is shared with all the control sources.
If any condition go to OFF, the unit will turn OFF.

5.3 Cooling/Heating changeover

The external and room/return temperatures are considered: if the external temperature is lower than a minimum threshold or greater than a upper threshold the heating or cooling mode can be forced:



In the middle, between the heating and cooling external temperature thresholds, or when the external temperature probe isn't available the heating or cooling mode will be decided considering the room temperature or the return temperature (if the probes are available), here below it is represented the behaviour in case of room temperature:



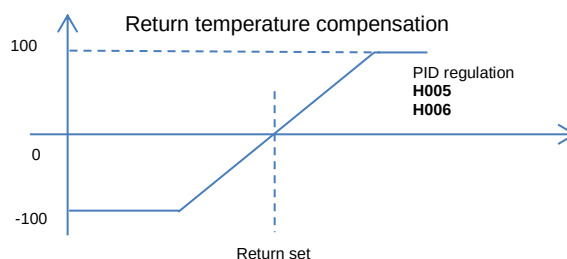
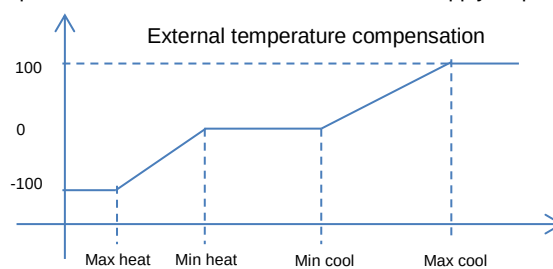
If the room temperature is greater than the setpoint, the unit starts in cooling mode and remains in cooling mode until the room temperature becomes lower than the setpoint for a settable delay (**H013**), then the heating mode is activated. In the same way, if the starting temperature is lower than the setpoint the unit starts in heating mode and remains in heating mode until the room temperature becomes greater than the setpoint for the same delay.

5.4 Temperature regulation strategy

5.4.1 Compensation

The regulation of the unit could be done according the return, supply or room set.

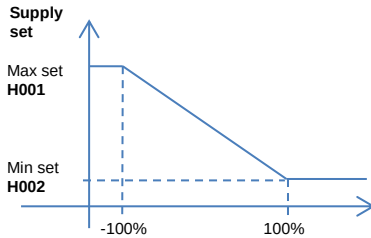
In case of return or room regulation, kVent+ provides the compensation control strategy, based on return or room and external temperature. Compensation modulate the supply setpoint between the minimum and maximum supply setpoint.



Final supply setpoint is calculated as following:

$$\begin{aligned} \text{Compensation}[\%] \\ = \text{External compensation}[\%] \\ + \text{Return compensation}[\%] \end{aligned}$$

-100% is equal to maximum supply setpoint and 100% is equal to minimum supply setpoint, as in the following graph:

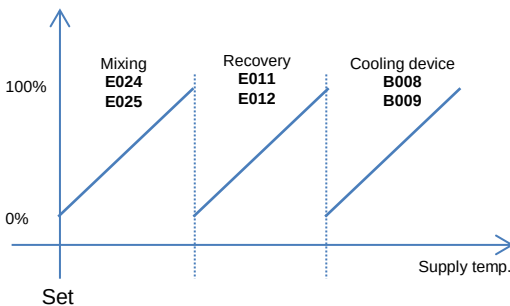


Note: To disable external temperature compensation is possible to setup minimum compensation equal to maximum compensation.

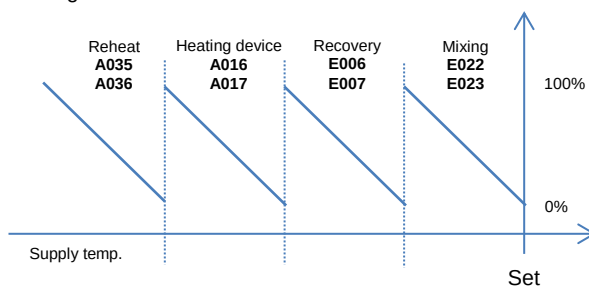
5.4.2 Supply regulation

The temperature regulation is based on supply temperature and its setpoint. If the setpoint set is the room set or return set, according to configuration parameter (I008), this will be converted to supply set.

To calculate the power of devices, a PID sequence is used. The following graph show the PID sequence in case of cooling:



The following graph show the PID sequence in case of heating:



With a unique setpoint and different sets of PID parameters, the first request is calculated with a standard PID. The second request starts when the first one has reached 100%. The setpoint for the second device regulation is the same, while the PID set of parameters are different. According to the PID behaviour of the second device, the percentage of activation of the second device at the start up should be equal to "offset", but thanks to the incremental PID it is possible to consider only the last calculated delta so that there aren't any bumps, then the second device will start from the minimum output, then it will regulate according to PID parameters and supply temperature.

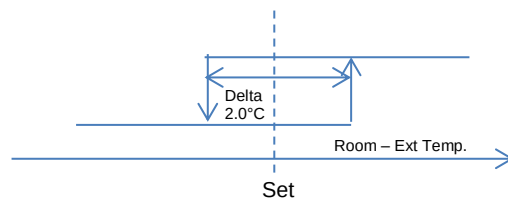
In case we have more devices and one is not available when required from the sequential PID regulation - for activation conditions not verified (i.e. recovery conditions) or active alarms - the request passes to the other one. If the first device becomes available again the device will be turned on at 100%.

5.5 Fresh air regulation

In case of unit without the mixing damper, the supply air is always coming from the outside: if the external temperature is better than the room or return temperature and the activation of freecooling/freeheating is verified (external temperature lower than the regulation temperature of a settable delta), the bypass damper opens and the heat exchanger is bypassed.

In the following picture we represent the "freecooling" enabling, that in case of unit without the mixing damper is the by-pass damper activation condition, considering as example the room temperature as regulation variable.

The freecooling is enabled if the external temperature is higher than the lower supply temperature threshold, while the freeheating is enabled if the external temperature is lower than the upper supply temperature threshold.



The bypass damper can be modulated to reach the desired temperature for the supply air temperature, because the freecooling can be considered as the first step of sequential PID regulation.

In case of unit with the mixing damper, the freecooling/freeheating conditions are the same, but mixing damper and external one modulate accordingly, and the logic acts on the bypass damper as in the previous case.

5.5.1 Night kick

If the unit is in standby mode, it starts at a certain hour (H016) in the night to check the conditions and if there is requests, the unit switch ON. When conditions are reached, the unit goes back to standby.

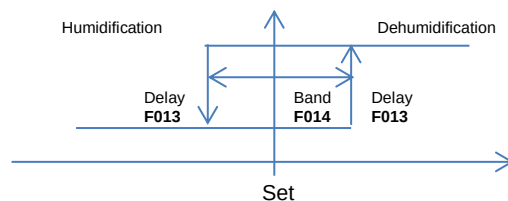
5.6 Humidity regulation

The regulation of the unit could be done according to return, supply or room set, according to configuration parameter (I009). The regulation of humidity in kVent+ is done by absolute humidity.

Absolute humidity setpoint is the conversion between the actual temperature setpoint (room, return or supply) and the relative humidity set that the user can change.

Absolute humidity is the conversion between the actual temperature and the room relative humidity.

Based on these conversions, it's possible to determine if the unit should go in humidifying or dehumidifying mode. When the humidity goes to change mode, a delay is provided to avoid fast change of humidity control.



In case of regulation on return or room temperature, the application check the supply humidity limits to avoid water of the ducts. Closer the supply humidity is to the limits, lower the humidity PID can act.

In case of regulation on supply, the humidity request goes directly to the devices.

During dehumidification:

- The signal to control the cooling devices is calculate from the maximum between output temperature PID and the output humidity PID.

- The main heating devices are disabled and the reheaters works to compensate the cooling effect.
- Mixing damper is closed.

During humidification:

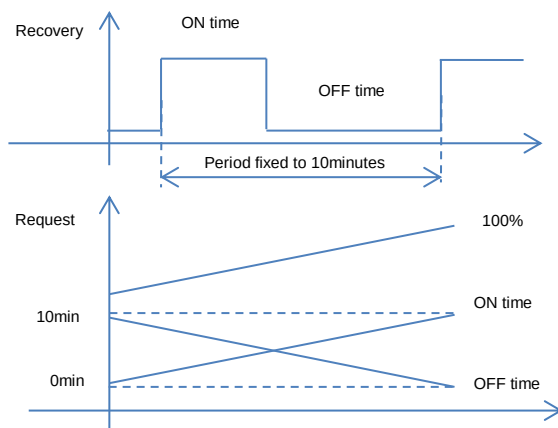
- Mixing damper is open 100%.

5.7 Devices activation

5.7.1 ON/OFF Recovery

In case of ON/OFF recovery, kVent+ calculate modulating recovery request anyway. The digital output is activated by time, calculated by the request, with a fixed period of 10 minutes.

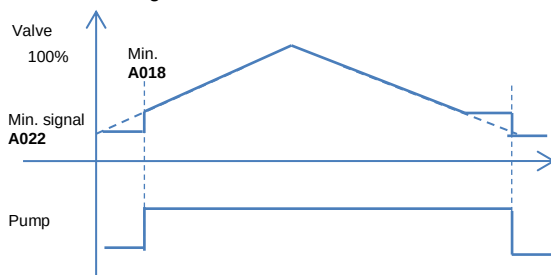
For example if the request is 60%, the digital output is ON for 360s and OFF for 240s, so the following graph show the working logic.



5.7.2 Hydronic circuits in heating

The PID sequence calculates a request 0-100% that is directly executed by the valves, but in case of water antifreeze prevent, the water valve opening increase, according to antifreeze setpoint. For antifreeze details check the related chapter.

Here below the regulation of water devices:



In case of external temperature below the force heating threshold (H012), the pump is ON all the time to measure the back water temperature and be sure that water is above the antifreeze limit (A019). Water valve is closed, so there isn't heating effect on the unit.

5.7.3 3 point valve or damper

In case of water circuits or modulating dampers, kVent+ can provide the 3 point control.

Two digital outputs are provided to open or close the valve. According to percentage request and valve opening time, the digital outputs act to follow the request. To avoid stressed regulation and too many valve actuations, a deadband is provided. If the request reaches 100%, the opening valve is kept for a while to ensure the valve is at maximum opening. Same management, but with closing valve, in case the request reaches 0%.

5.7.4 Heaters

Heaters could be present according application code in main, preheat and reheat sides. The PID sequence calculate a request 0-100% that is directly executed by the heaters. Maximum heaters managed are 2 ON-OFF and 1 modulating. kVent+ needs the power of each heater to divide the power in the best way.

The modulating device has the highest priority and there isn't any rotation, but in case of devices with different power, the priority of ON-OFF devices can change to satisfy in the best way the request by thermoregulation.

Here below an example with devices with the same power:

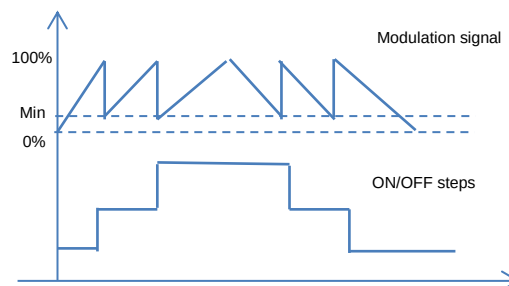
Min inverter power: 20%

Max heaters power: 33.3kW

In this case the second heater will start when the request reach the threshold calculated in the following way:

$$42.67 (\%) = \frac{33.3 + 33.3 + \frac{20 \cdot (33.3 - 33.3)}{100}}{33.3 + 33.3 + 33.3} * 100\% \\ = \frac{42.624}{99.9} * 100\%$$

Before to start the ON-OFF device, the request must be greater than 20% of the power of the second device. Here below the graph:



It's possible to set different power of the heaters (A025, A026, A027), so the ON sequence will be different to follow the request from PID loop.

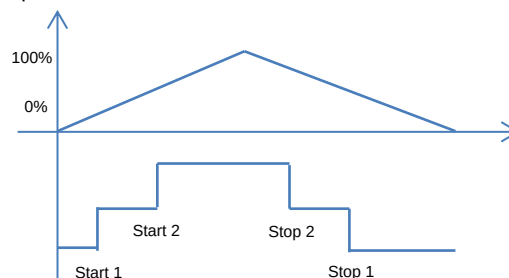
5.7.5 Direct expansion (DX)

Below the description of how the direct expansions circuit works in the application. DX could be present according application code in main cool, main heat, reverse, preheat and reheat sides.

The PID sequence calculate a request 0-100% that is executed by ON-OFF devices and by a modulating device.

Each ON-OFF device has a threshold to start the device and a threshold to stop the device.

The modulating element will follow the request from PID sequence.



Between the stages activation there is a timings control, listed below:

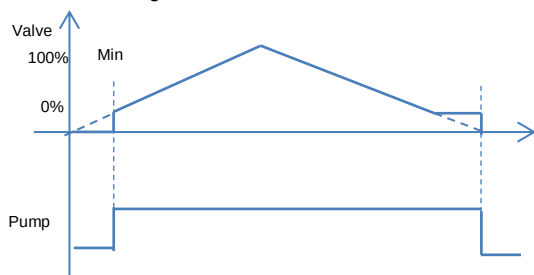
Stages activation	Start 1	Stop 1	Start 2	Stop 2
Heating	A031	A032	A033	A034
Cooling	B015	B016	B017	B018
Reverse	C053	C054	C055	C056

Timings settings	Min ON	Min OFF	Between device
Heating	A028	A029	A0030
Reheating	A040	A041	A042
Postheating	A051	A052	A053
Cooling	B011	B012	B013
Reverse	C050	C051	C052

In case of cooling DX, is possible to disable the cooling DX devices in ECO and PRECOMFORT modes (**B014**).

5.7.6 Steam

Steam device could be present in the main heater only. The PID sequence calculate a request 0-100% that is directly executed by the steam actuator. Here below the regulation of device:



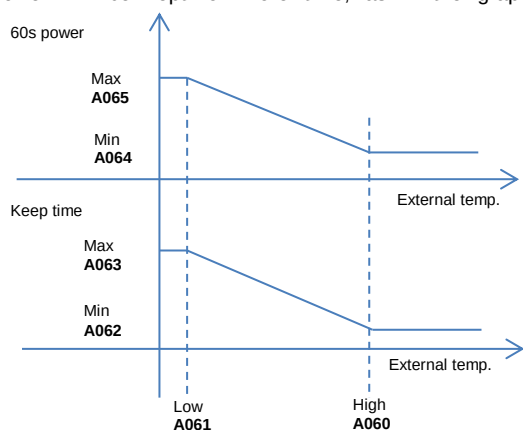
Steam device doesn't need antifreeze and frost protection.

5.8 Freeze and frost protections

5.8.1 Water antifreeze

At startup, in case of heating water coils, the start sequence is divided into the following steps:

1. The external temperature is checked.
2. If the external temperature is lower than antifreeze setpoint, the heating devices will be activated in 60s at power determined by the graph below, then the heating power will be kept for more time, as in the graph.

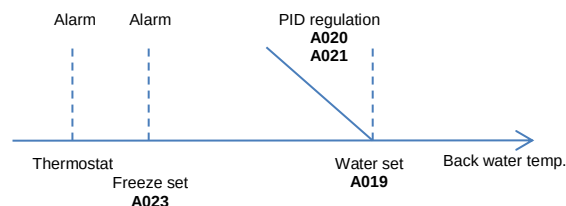


3. In case of external temperature greater than antifreeze setpoint or after the antifreeze sequence timers, the damper will open.
4. After 30s the fan can start and devices can regulate.

At any time, the back water temperature is checked. If the temperature is below the freeze threshold (**A023**), fans are stopped, the dampers are closed and the heating devices (main heating and preheating) are forced to 100%. Same management in case of frost protection by thermostat. Before the stop of unit by water freeze protection, the heating valve increase the opening even if there isn't any request by thermoregulation.

$$\text{Valve opening} = \text{Thermoregulation request} + \text{Antifreeze PID regulation}$$

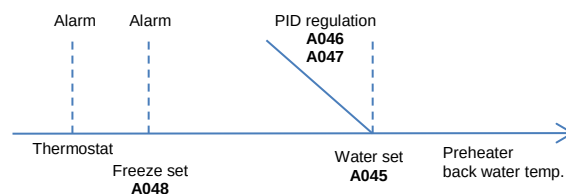
Finally, the back water temperature is controlled as the graph below:



5.8.2 Preheater

The device will modulate according to its PID settings to keep the setpoint based on after preheater coil temperature. Main goal of this device is prepare air for recovery and to avoid antifreeze condition for heat recovery device. The antifreeze procedure of preheater, in case of hot water coil, is the same of main water heater. The antifreeze request from back water temperature is added to main request.

$$\text{Valve opening} = \text{Thermoregulation request} + \text{Antifreeze PID regulation}$$



5.8.3 Recovery defrost

To prevent recovery frost condition that clogs the recovery device and decrease the efficiency of the unit, kVent+ provides a control of a pre-heater device with dedicated PID and setpoint on a dedicated temperature probe placed after the pre-heater and before the heat recovery. In case the pre-heater is not able to fulfill the request to keep the temperature on its setpoint there is possible to manage a timed bypass cycles of intake air flow from the recuperator. With the parameter **E048 Prevent Mode** is possible to select between TIMED (default) or TEMPERATURE.

5.8.3.1 Timed Frost protection

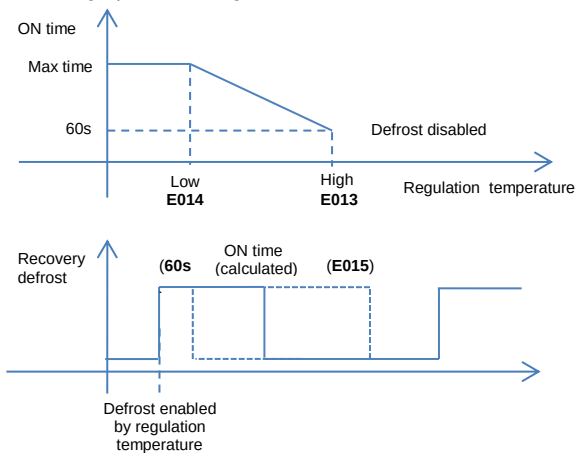
The time of bypass is regulated by after preheater temperature (or external temperature if no pre-heater is configured) in order to keep the bypass open for the minimum time needed for defrost and keep the unit efficiency high as possible.

If the controlled temperature is lower than **high limit E013** the defrost will start with the fixed ON time of **60 seconds**, from **E013** down to **low limit E014** the ON time will be increased with inverse linear relation.

Once temperature is below **low limit E014** the ON time is forced to **maximum time E015**.

OFF time is calculated also with the regulation temperature in order to make frequent defrost (**frost delay min E016**) if temperature is closer to **high limit E013** and longer but less frequent in case of lower temperatures below **E014** with **frost delay max E016a**.

Below the graph of working mode:



To make defrost more effective and avoid to delivery colder supply temperature the modulating fans speed during recovery defrost will be driven at fixed speed configurable with parameters **E036** for supply fan and **E037** for the exhaust one.

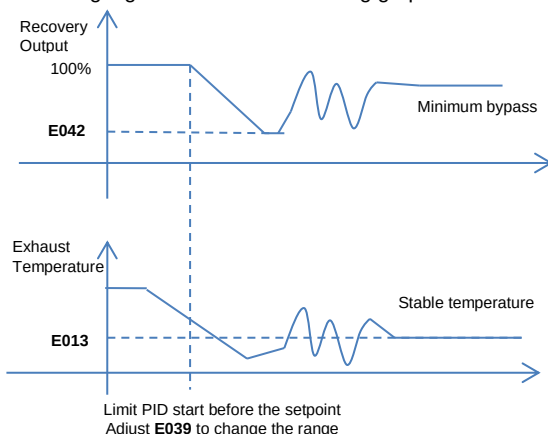
5.8.3.2 Temperature Frost protection

Temperature prevent is specifically made to work with modulating bypass control where a PID logic on the exhaust temperature can extend the precision of the supply regulation with the maximum bypass allowed by the external & return conditions.

The PID output will limit the bypass output using **high limit E013** parameter as the setpoint as well as additional available parameters to fine tune the regulation:

- PID limit proportional gain (Kp) **E039**
- PID limit integral time (Ti) **E040**
- PID limit derivative time (Td) **E041**
- PID minimum possible limit **E042**
- PID limit deadband **E043**

The working logic will follow the following graph:



5.8.4 Unit external temperature design

In case the external temperature is out of temperature design (**H020** for low limit, **H021** for high limit), the unit operates 100% with mixing damper. If the mixing damper is not present, the unit stops and damper will close.

5.9 Fans control

5.9.1 Regulation

With control type parameter (**I002**), the regulation of the fan can be done according to:

1. None (act according to percentage)
2. CAV regulation

3. VAV regulation
4. Follow supply (for exhaust only)

In case of VAV regulation, the air pressure is used as input of the PID and the setpoint is in Pa.
In case of CAV regulation, the air pressure is used to calculate the air volume in m3/h.

It's possible in Setpoint loop to change the fan speed according to unit mode (Eco, PreComfort, Comfort). The value is in percentage of the setpoint of the fan in service menu.

The application is able to manage the following type of fans in ModBus®:

- Ziehl Abegg®
- Ebm papst®

When the unit is turned ON the sequence to start, can be set through the setting menu (**H022**). The two options available are "Start fans before the regulation" or "start the regulation before the fans"

"Start fans before the regulation"

1. Damper ON
2. Supply and return fans start after their own delay
3. Supply and return keep idle speed (**D024** and **D029**)
4. Regulation

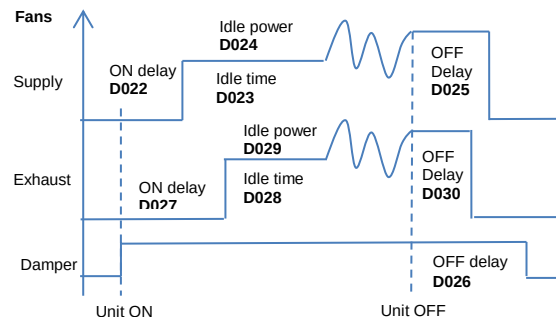
"Start the regulation before the fans"

1. Damper ON
2. Regulation
3. Supply and return fans start after their own delay
4. Supply and return keep idle speed (**D024** and **D029**)

When the unit is turned OFF the sequence to stop is enabled:

1. Keep supply and return fans ON for their own delay
2. Close damper

The sequence is described by the graphs below:



Note: Fans will slow down to minimum speed (**D024** or **D029**) in case of:

1. Power request of 0%
2. Defrost BLDC circuits
3. Supply temperature below minimum threshold

5.10 Mixing chamber control

Mixing chamber saves energy in case of air quality is fine inside the room.

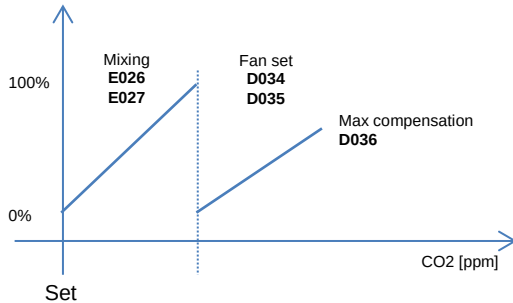
According to CO₂ value, if present, a PID will calculate the request for the mixing chamber. If the PID is higher, then the mixing chamber will close more and more. The greater request between CO₂ request and freecooling/freeheating, will actuate the damper.

It's possible to activate the mixing chamber at startup to reach setpoint temperature quickly. When setpoint is reached, the mixing chamber comes to regulate according to CO₂.

Is possible to keep the mixing damper open when 0% request is calculated with parameter **E028** or limit the maximum opening with parameter **E029**

5.11 CO₂ Regulation

A signal is split and has a direct impact on the degree of participation of outside air and provides a correction signal to drive the VFD. VFD correction signal is limited to the MAX allowable adjustments.



5.12 Boost function

This function turns on to a certain percentage the heating and cooling request (**A070**; **B021**; **C63**) in the unit is in the mode (comfort-precomfort or economy).

From the board the function can be enabled from the mode menu (**X00b**), or by TH-Tune pressing together the buttons "Clock+Mode" for 3s.

The maximum Boost time is settable on the "Setting menu", through the parameter **H023**.

5.13 Compressor management

kVent+ can manage one BLDC compressor as an option in the ventilation unit. BLDC compressor can be driven by Carel Power+ inverter and Carel ExV.

5.13.1 Safety time control

kVent+ ensures the compressor safety timings as:

- Minimum ON time (**Ca25**)
- Minimum OFF time (**Ca26**)
- Minimum time for consecutive start-ups (**Ca27**)

5.13.2 BLDC start-up procedure

kVent+ manages BLDC compressor start-up in accordance with the manufacturer's specifications: when starting the compressor, it is brought to start-up speed and then held at that speed (**Cb06**) regardless of control requirements, for the entire minimum on time; at the end of this period, compressor speed is modulated based on temperature control requirements and in accordance with the set point control conditions defined by the envelope (see paragraph: **Prevention actions**).

Note: If the differential pressure is greater than the allowed value at start-up (**Cb02**), the BLDC remains in a call state, waiting for differential pressure goes down below threshold. If within 5 min BLDC does not start, the specific alarm is given. The alarm condition permits starting up of other available compressors.

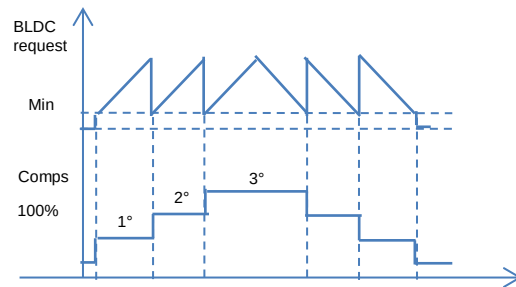
5.13.3 BLDC oil recovery

When the speed of the refrigerant gas in the circuit is lower than the value required for driving the oil (**Ca17**), it is periodically necessary to force the operating mode to a value (**Ca18**) enough to ensure the oil return to the compressor crankcase. The function forces a BLDC condition of greater power for a specific time (**Ca20**), when the circuit remained at low load for a time greater than or equal to as specified (**Ca19**).

5.13.4 Multiple BLDC circuits

In case of more BLDC circuits in the unit, kVent+ tries to equalize the working hours of the compressors. The modulating signal request is the same for all compressors, but

the final status of circuits depends on envelope and inverter status.

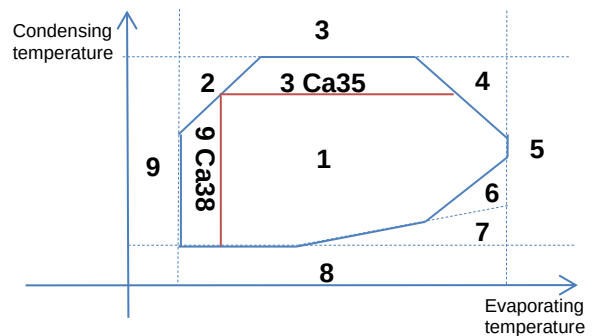


5.13.5 Compressor protections

The operating limits (hereafter defined as envelope) of the compressors are controlled. This control cannot be disabled in order to prevent the compressor from working outside of the safety limits dictated by the manufacturer. All of the compressors inserted thus contain the envelope data.

Besides the operating limits specified by the manufacturer, there is the possibility of customizing the maximum condensation and minimum evaporation thresholds. These thresholds are considered only if they are more restrictive than the operating limits.

The description of the work zones of a generic envelope are shown below:



Zone	Description
1	Zone inside the operating limits (prevention is anyway active to avoid going outside limits)
2	Max compression ratio
3	Max condensation pressure
3 Custom	Max condensing pressure custom threshold
4	Max motor current
5	Max evaporation pressure
6	Min compression ratio
7	Min differential pressure
8	Min condensation pressure
9	Min evaporation pressure
9 Custom	Min evaporating pressure custom threshold

When the operating condition is outside of the envelope, the alarm delay starts counting: if the operating condition remains outside of the envelope when the delay (**Cb14**) has elapsed, a specific alarm is activated, which stops the compressor; if, on the other hand, the operating condition returns within the envelope limits, the alarm delay counter is reset.

The condensation high pressure limit is determined from the minimum between:

- the nominal compressor threshold;
- the threshold that can be set by Service (**Ca35**).

The evaporation high pressure limit is determined from the minimum between:

- the nominal compressor threshold;
- the set MOP threshold (**Ce17**).

The evaporation low pressure limit for prevention is determined from the maximum of:

- the nominal compressor threshold;
- the threshold that can be set by Service (Ca38).

Besides the operating limits dictated by the envelope shape, there is an operating limit on the discharge temperature (Cb20), that turned off the compressor.

5.13.6 Prevention actions

To allow the compressor to work inside the envelope, specific prevention actions are performed through the control of the circuit power, the setpoint of the source fans and the opening of the ExV.

In particular, the actions on the circuit power are:

Decrease the speed for increasing/decreasing the power request coming from the thermoregulation, approaching the envelope limits (for BLDC compressors only).

Limit/increase the circuit power.

The action on the ExV valve is performed by varying the MOP threshold whose algorithm follows the set (evaporation temperature), decreasing the valve opening and thus reducing the refrigerant mass flowrate and lowering the evaporation temperature. This action is performed either with BLDC compressors or with fixed speed compressors.

The control actions on the power variation speed start when the working point is at pre-set distance from the envelope border. These actions are only possible with BLDC compressors.

In case of fixed speed compressors the only possible action on the circuit are to limit/increase its power by acting on number of active/available compressors. This is done when the working point cross the envelope border.

Below we examine the various prevention actions towards the operating limits: action 1 refers to the action of control (before exiting the envelope); the 2 refers to the limit action (operating point outside the envelope).

Prevention for high compression ratio (zone 2)

The high compression ratio is a thermal limit of the compressor.

Generally the envelope limit control acts by reducing the power; if a discharge sensor temperature is fitted (BLDC only) and if the said temperature increases up to the limit, since the critical conditions consists in high compressor discharge temperatures, the management of the compressor power directly controls the related probe.

Device	Description
BLDC compressor	Decrease of power increase speed Power limitation
ExV	-

Prevention for high condensation pressure (zone 3)

Device	Description
BLDC compressor	Decrease of power increase speed Power limitation
ExV	-

In case of high condensation pressure, the software provides a differential from the limit to get the alarm before the out of envelope alarm. This to avoid the high pressure switch that use to need the manual reset.

Prevention for high motor current (zone 4)

Device	Description
BLDC compressor	Decrease of power increase speed Power limitation
ExV	MOP with specific algorithm

Prevention for high evaporation pressure (zone 5)

Device	Description
--------	-------------

BLDC compressor	Decrease of power decrease speed
ExV	MOP
Fan	-

Prevention for low differential pressure (zone 6)

Device	Description
BLDC compressor	Decrease of power decrease speed Power increase
ExV	Variable MOP

Prevention for low compression ratio (zone 7)

Device	Description
BLDC compressor	Decrease of power decrease speed Power increase
ExV	Variable MOP

Prevention for low condensation pressure (zone 8)

Device	Description
BLDC compressor	Decrease of power decrease speed Power increase
ExV	-

Prevention for low evaporation pressure (zone 9)

Device	Description
BLDC compressor	Decrease of power increase speed Power limitation
ExV	-

In case of low evaporation pressure, the software provides a differential from the limit to get the alarm before the out of envelope alarm. This to avoid the low pressure switch.

5.13.7 Power+ inverter

When the circuit features a BLDC compressor, this is controlled by a Power+ inverter, connected to the kVent+ board via Modbus master protocol with a serial baud rate of 19200 bps on the built-in FieldBus serial port. Use a specific RS485 cable (AWG 20-22 with 1½ twisted pair plus shield).

Notes: For further information see the user manual, code +0300048EN.

kVent+ logic for ExV control

The kVent+ controller does the following:

- Valve activation;
- Suction superheat control;
- Alarm and low superheat control (Low SH);
- Minimum evaporation temperature control and alarm (LOP);
- Maximum evaporation temperature control and alarm (MOP);
- Control of the cooling capacity sent from the controller, that sets the valve position according to the circuit control status.
- Prepositions the valve when the cooling capacity change more that 10%;
- Open the ExV when the compressor is requested to avoid high delta pressure at start;
- Completely displays the ExV parameters in the Exv menu, divided by type of regulation.

Notes: For further information see the Individual EVD EVO manual code +0300005EN. The controller has the same logic.

Crackcase heater

kVent+ manages the crankcase heater function of Power+ according to following temperatures, selectable from its configuration (Ca41):

- Supply temperature
- Return temperature
- Exhaust temperature
- External temperature
- Suction temperature

When the temperature is below the threshold and compressor is OFF, the crankcase heater is activated.

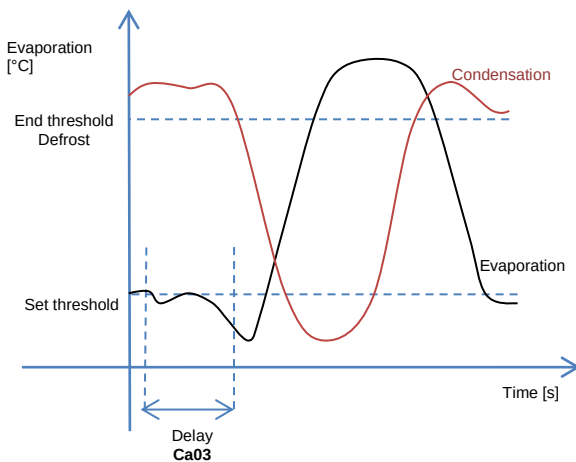
5.13.8 Defrost management

During heating operating, the condenser exchanger works as an evaporator. If the outside temperature is low, frost may form on the coil itself, resulting in a reduction in machine efficiency. In this case, it is best to activate the defrost function to free the exchanger of frost and reset the machine to maximum efficiency conditions.

The defrost procedure can be launched by **Ca01** and stop with **Ca04** according to following options:

- Digital input for each circuit;
- Pressure probe values.

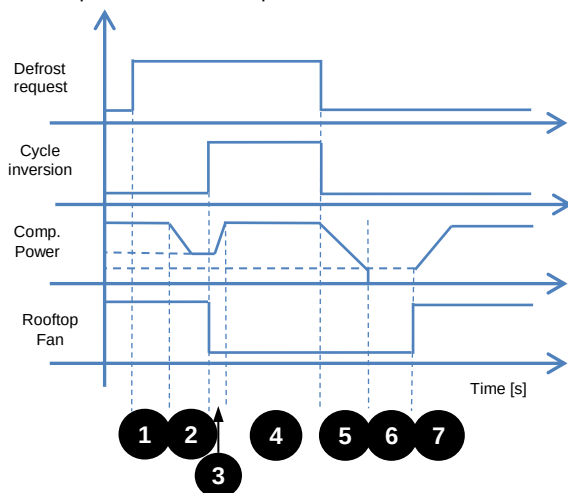
In case of defrost on pressure control, it depends on the value of the reference sensor (pressure transducer, low pressure side) and any delay from when the activation threshold was exceeded as shown in the figure below:



If during defrost delay the low pressure value does not exceed the reset threshold, the procedure will start. Defrost ends when the reference sensor (pressure transducer, high pressure side) exceeds the end defrost threshold.

The figure below shows how the various components of the circuit and defrost phases are managed.

The description of the control phases follows:



Check defrost entry (1)

Once defrost start condition is verified according to the criteria previously described, there is a parameter to delay the entry of the circuit in the defrost phase.

Compressor decrease in defrost entry (2)

In this phase the compressor decreases its power to reach the set defrost entry percentage, during the fridge cycle inversion phase. This procedure has a minimum duration (**Ca09**) that is half the inversion time. If the cycle inversion time is set to zero, the phase will only last for the amount of time needed to bring the compressor to the input setting for the defrost procedure.

Compressor increase in defrost entry (3)

The 4-way valve is positioned in cooling mode to perform the defrost. The compressor starts to increase its power to reach the fixed set point during defrost (**Ca04**). The duration of the phase depends on the cycle inversion time and the time needed for the compressor to turn on if it was off.

Defrost phase (4)

Real defrosting starts in this phase where the compressor delivers full power to defrost the external coil. The minimum defrost time (**Ca11**), maximum defrost time (**Ca12**) and time between two defrost cycles (**Ca13**) are activated in this phase. The minimum time in defrost is necessary to prevent the defrost cycle from not lasting long enough, performing a partial defrost of the exchanger.

The maximum defrost time is necessary to prevent the defrost procedure from lasting too long, blocking the production of hot water required by the utilities.

The time between two defrost cycles is needed to keep the unit from entering defrost too often and to allow the machine to partly satisfy the request. The defrost phase stops for the previously described pressure conditions and time. If the compressor shuts off during the phase, the timers are reset and the circuit remains in the defrost cycle until the compressor starts again and completes it.

Compressor decrease in defrost outgoing (5)

This procedure has a minimum duration that is half the inversion time (**Ca10**). The compressor safety times are respected. If the cycle inversion time is set to zero, the phase will only last for the amount of time needed to bring the compressor to the output setting for the defrost procedure. In this phase the fan is off and activated only to prevent high pressure and the cycle inversion valve stays in cooling mode.

Drip phase (6)

During this phase (**Ca14**), the compressors remain at the defrost outgoing power and the exhaust fan runs at maximum speed. With the time at zero, no phase is performed.

Compressor increase in defrost outgoing (7)

The circuit starts regulating according to normal operation in heating mode.

5.14 Minor functions

5.14.1 Antistack procedure

In case of pumps or steam configured, kVent+ checks if the pumps stayed OFF for a long time. After a settable time of pump off, it has to start in any condition to avoid the risk of stack. The valve stays closed. Time is not saved in permanent memory.

5.14.2 Fire alarm

In case of fire alarm by digital input or in case of exhaust temperature > 70°C, the fire alarm procedure is activated. All the devices are stop, but the fan can run according to service parameter.

5.14.3 Filter alarm

When the dirty filter alarm is active, it is possible to increment the fans speed of a settable percentage (**D041**).

5.15 Import/Export parameters

This function is available from the menu F: Unit cfg.

Here below the parameters and their descriptions present on the mask:

- **I013: Imp/Exp**, is possible to set if the user want import or export the parameters from the kVent+
- **I014: Memory**, it is the parameter to chose where store or take the file, the possibility are: from internal memory or from a USB key
- **I015: Name**: is possible to set the file name to import or export the name must be write "EXPORT_XX" where XX can go from 00 to 99
- **I016:Confirm**, it is to run the import or export

6. PARAMETERS TABLE

The following tables show the parameters and values displayed by the terminal and the variables sent to supervisor.

kVent+ can be connected to various systems of supervision, in particular can be used the following communication protocols BMS on the Ethernet port: Modbus® and BacNet™.

The Modbus® address is the address specified in the Modbus® frame.

BMS index meaning

IR	Input Register
HR	Holding Register
C	Coil
DI	Discrete Input

BacNet index meaning

AV	Analog Value
IV	Integer Value
BV	Binary Value
PIV	Positive Integer Value

6.1 INFO menu in main mask

Mask code	Description	Type	Default	UoM	Range	R/W	Variable Name	BMS	BacNet
Y00a	Supply temperature probe - Probe value	Real		°C		R	SupplyTemp.ReadVal	IR18	AV33
Y00a	Temperature setpoint	Real		°C		R	TempRegSetP	IR1	AV1
Y00a	Modulating heating output - Hardware value	Real		%		R	HeatVlv.HW_Val	IR19	AV34
Y00a	Modulating reverse output - Hardware value	Real		%		R	RevOutVlv.HW_Val	IR20	AV35
Y00a	Modulating cooling output - Hardware value	Real		%		R	CoolVlv.HW_Val	IR21	AV36
Y00a	Modulating cooling/heating signal - Hardware value	Real		%		R	Modul_CoolHeat_NoRev.HW_Val	IR22	AV37
Y00a	Modulating heat recovery output - Hardware value	Real		%		R	HeatRecovery.HW_Val	IR23	AV38
Y00a	MixDampReq	Real		%		R	MixDampReq	IR24	AV39
Y00a	Modulating reheating output - Hardware value	Real		%		R	ReHeatVlv.HW_Val	IR25	AV40
Y00b	Circuit 1 BLDC request	Real		%		R	BLDC_ReqCirc1	IR26	AV41
Y00b	Circuit 1 Power+ information - Current rotor speed [%]	Real				R	BLDC_Mng_Circ1.Info_PWRP.I nfo_RotorSpeed_Perc	IR27	AV42
Y00b	Circuit 1 Power+ information - Current rotor speed [rps]	Real				R	BLDC_Mng_Circ1.Info_PWRP.I nfo_RotorSpeed_rps	IR28	AV43
Y00b	Circuit 1 Power+ information - Current motor consumption [W]	Real				R	BLDC_Mng_Circ1.Info_PWRP.I nfo_MotPwr	IR29	AV44
Y00b	Circuit 1 discharge pressure probe - Probe value	Real		bar		R	G_DscgP.ReadVal	IR30	AV45
Y00b	Circuit 1 ExV parameters - EVD parameters - Status variables - Condensing temperature	Real		°C		R	BLDC_Mng_Circ1.Params_EVD EMB.EVD.Variables.CondTemp.Val	IR31	AV46
Y00b	Envelope status	Int				R	EnvCtrlStatus_1	IR32	IV4
Y00b	Circuit 1 suction temperature probe - Probe value	Real		bar		R	G_SuctTemp.ReadVal	IR33	AV47
Y00b	Circuit 1 suction pressure probe - Probe value	Real		bar		R	G_SuctP.ReadVal	IR34	AV48
Y00b	Circuit 1 ExV parameters - EVD parameters - Status variables - Evaporation temperature	Real		°C		R	BLDC_Mng_Circ1.Params_EVD EMB.EVD.Variables.SH_EvapT emp.Val	IR35	AV49
Y00c	Circuit 1 ExV parameters - EVD parameters - Status variables - Valve position	Int				R	BLDC_Mng_Circ1.Params_EVD EMB.EVD.Variables.EEV_PosSt eps.Val	IR36	IV5
Y00c	Circuit 1 ExV parameters - EVD parameters - Status variables - Valve opening	Real		%		R	BLDC_Mng_Circ1.Params_EVD EMB.EVD.Variables.EEV_PosP ercent.Val	IR37	AV50
Y00c	Circuit 1 ExV parameters - EVD parameters - Status variables - Superheat	Real		°K		R	BLDC_Mng_Circ1.Params_EVD EMB.EVD.Variables.SH_Val	IR38	AV51
Y00c	Circuit 1 ExV parameters - EVD parameters - Main regulation parameters configuration - Superheat setpoint	Real	0.0	°K		R	BLDC_Mng_Circ1.Params_EVD EMB.EVD.MainRegulation.SH_ Set.Val	IR39	AV52
Y00c	Circuit 1 ExV parameters - EVD parameters - Status variables - EVD status	Int				R	BLDC_Mng_Circ1.Params_EVD EMB.EVD.Variables.RegStatus.Val	IR40	IV6
Y00c	Circuit 1 ExV parameters - EVD parameters - Status variables - Protection status	Int				R	BLDC_Mng_Circ1.Params_EVD EMB.EVD.Variables.ProtStatus.Val	IR41	IV7
Y00d	Circuit 2 BLDC request	Real		%		R	BLDC_ReqCirc2	IR42	AV53
Y00d	Circuit 2 Power+ information - Current rotor speed [%]	Real				R	BLDC_Mng_Circ2.Info_PWRP.I nfo_RotorSpeed_Perc	IR43	AV54
Y00d	Circuit 2 Power+ information - Current rotor speed [rps]	Real				R	BLDC_Mng_Circ2.Info_PWRP.I nfo_RotorSpeed_rps	IR44	AV55
Y00d	Circuit 2 Power+ information - Current motor consumption [W]	Real				R	BLDC_Mng_Circ2.Info_PWRP.I nfo_MotPwr	IR45	AV56
Y00d	Circuit 2 discharge pressure probe - Probe value	Real		bar		R	G_DscgP_C2.ReadVal	IR46	AV57
Y00d	Circuit 2 ExV parameters - EVD parameters - Status variables - Condensing temperature	Real		°C		R	BLDC_Mng_Circ2.Params_EVD EMB.EVD.Variables.CondTemp.Val	IR47	AV58
Y00d	Envelope status	Int				R	EnvCtrlStatus_2	IR48	IV8
Y00d	Circuit 2 suction temperature probe - Probe value	Real		bar		R	G_SuctTemp_C2.ReadVal	IR49	AV59
Y00d	Circuit 2 suction pressure probe - Probe value	Real		bar		R	G_SuctP_C2.ReadVal	IR50	AV60
Y00d	Circuit 2 ExV parameters - EVD parameters - Status variables - Evaporation temperature	Real		°C		R	BLDC_Mng_Circ2.Params_EVD EMB.EVD.Variables.SH_EvapT emp.Val	IR51	AV61
Y00e	Circuit 2 ExV parameters - EVD parameters - Status variables - Valve position	Int				R	BLDC_Mng_Circ2.Params_EVD EMB.EVD.Variables.EEV_PosSt eps.Val	IR52	IV9
Y00e	Circuit 2 ExV parameters - EVD parameters - Status variables - Valve opening	Real		%		R	BLDC_Mng_Circ2.Params_EVD EMB.EVD.Variables.EEV_PosP ercent.Val	IR53	AV62
Y00e	Circuit 2 ExV parameters - EVD parameters - Status variables - Superheat	Real		°K		R	BLDC_Mng_Circ2.Params_EVD EMB.EVD.Variables.SH_Val	IR54	AV63

Mask code	Description	Type	Default	UoM	Range	R/W	Variable Name	BMS	BacNet
Y00e	Circuit 2 ExV parameters - EVD parameters - Main regulation parameters configuration - Superheat setpoint	Real	0.0	°K		R	BLDC_Mng_Circ2.Params_EVD EMB.EVD.MainRegulation.SH_Set.Val	IR55	AV64
Y00e	Circuit 2 ExV parameters - EVD parameters - Status variables - EVD status	Int				R	BLDC_Mng_Circ2.Params_EVD EMB.EVD.Variables.RegStatus.Val	IR56	IV10
Y00e	Circuit 2 ExV parameters - EVD parameters - Status variables - Protection status	Int				R	BLDC_Mng_Circ2.Params_EVD EMB.EVD.Variables.ProtStatus.Val	IR57	IV11
Y00f	Circuit 3 BLDC request	Real		%		R	BLDC_RegCirc3	IR58	AV65
Y00f	Circuit 3 Power+ information - Current rotor speed [%]	Real				R	BLDC_Mng_Circ3.Info_PWRP.I nfo_RotorSpeed_Perc	IR59	AV66
Y00f	Circuit 3 Power+ information - Current rotor speed [rps]	Real				R	BLDC_Mng_Circ3.Info_PWRP.I nfo_RotorSpeed_rps	IR60	AV67
Y00f	Circuit 3 Power+ information - Current motor consumption [W]	Real				R	BLDC_Mng_Circ3.Info_PWRP.I nfo_MotPwr	IR61	AV68
Y00f	Circuit 3 discharge pressure probe - Probe value	Real		bar		R	G_DscgP_C3.ReadVal	IR62	AV69
Y00f	Circuit 3 ExV parameters - EVD parameters - Status variables - Condensing temperature	Real		°C		R	BLDC_Mng_Circ3.Params_EVD EMB.EVD.Variables.CondTemp.Val	IR63	AV70
Y00f	Envelope status	Int				R	EnvCtrlStatus_3	IR64	IV12
Y00f	Circuit 3 suction temperature probe - Probe value	Real		bar		R	G_SuctTemp_C3.ReadVal	IR65	AV71
Y00f	Circuit 3 suction pressure probe - Probe value	Real		bar		R	G_SuctP_C3.ReadVal	IR66	AV72
Y00f	Circuit 3 ExV parameters - EVD parameters - Status variables - Evaporation temperature	Real		°C		R	BLDC_Mng_Circ3.Params_EVD EMB.EVD.Variables.SH_EvapT emp.Val	IR67	AV73
Y00g	Circuit 3 ExV parameters - EVD parameters - Status variables - Valve position	Int				R	BLDC_Mng_Circ3.Params_EVD EMB.EVD.Variables.EEV_PosSt eps.Val	IR68	IV13
Y00g	Circuit 3 ExV parameters - EVD parameters - Status variables - Valve opening	Real		%		R	BLDC_Mng_Circ3.Params_EVD EMB.EVD.Variables.EEV_PosP ercent.Val	IR69	AV74
Y00g	Circuit 3 ExV parameters - EVD parameters - Status variables - Superheat	Real		°K		R	BLDC_Mng_Circ3.Params_EVD EMB.EVD.Variables.SH.Val	IR70	AV75
Y00g	Circuit 3 ExV parameters - EVD parameters - Main regulation parameters configuration - Superheat setpoint	Real	0.0	°K		R	BLDC_Mng_Circ3.Params_EVD EMB.EVD.MainRegulation.SH_Set.Val	IR71	AV76
Y00g	Circuit 3 ExV parameters - EVD parameters - Status variables - EVD status	Int				R	BLDC_Mng_Circ3.Params_EVD EMB.EVD.Variables.RegStatus.Val	IR72	IV14
Y00g	Circuit 3 ExV parameters - EVD parameters - Status variables - Protection status	Int				R	BLDC_Mng_Circ3.Params_EVD EMB.EVD.Variables.ProtStatus.Val	IR73	IV15
Y00h	Supply air pressure probe - Probe value	Real		Pa		R	SupplyAirP.ReadVal	IR74	AV77
Y00h	Supply air flow	Real		m3h		R	SupplyAirFlow	IR75	AV78
Y00h	Modulating supply fan - Hardware value	Real		%		R	ModulSupplyFan.HW_Val	IR76	AV79
Y00h	Supply fan - Value	Bool				R	SupplyFan.Ctrl	DI5	BV18
Y00i	Exhaust air pressure probe - Probe value	Real		Pa		R	ExhAirP.ReadVal	IR77	AV80
Y00i	Return air flow	Real		m3h		R	ExhAirFlow	IR78	AV81
Y00i	Modulating return fan - Hardware value	Real		%		R	ModulExhFan.HW_Val	IR79	AV82
Y00i	Return fan - Value	Bool				R	ExhFan.Ctrl	DI6	BV19
Y00j	Supply temperature probe - Probe value	Real		°C		R	SupplyTemp.ReadVal	IR18	AV33
Y00j	Return temperature probe - Probe value	Real		°C		R	RetTemp.ReadVal	IR80	AV83
Y00j	External temperature probe - Probe value	Real		°C		R	ExtTemp.ReadVal	IR81	AV84
Y00j	Exhaust temperature probe - Probe value	Real		°C		R	ExhTemp.ReadVal	IR82	AV85
Y00j	Heating water temperature probe - Probe value	Real		°C		R	W_HeatCoilTemp.ReadVal	IR83	AV86
Y00k	Preheater water temperature probe - Probe value	Real		°C		R	W_PreHeatCoilTemp.ReadVal	IR84	AV87
Y00k	After preheating temperature probe - Probe value	Real		°C		R	AfterPreHeatCoilTemp.ReadVal	IR85	AV88
Y00k	thTune temperature value	Real		°C		R	Temp_THTN_1	IR86	AV89
Y00l	thTune humidity value	Real		%rh		R	Hum_THTN_1	IR87	AV90
Y00l	Supply humidity probe - Probe value	Real		%rh		R	SupplyHum.ReadVal	IR88	AV91
Y00l	Suction temperature probe - Probe value	Real		%rh		R	FreshAirHum.ReadVal	IR89	AV92
Y00l	Return CO2 sensor - Probe value	Real		ppm		R	RetAirCO2.ReadVal	IR90	AV93
Y00l	Return VOC sensor - Probe value	Real		%		R	RetAirVOC.ReadVal	IR91	AV94
Y00m	Circuit 1 suction pressure probe - Probe value	Real		bar		R	G_SuctP.ReadVal	IR34	AV48
Y00m	Circuit 1 discharge pressure probe - Probe value	Real		bar		R	G_DscgP.ReadVal	IR30	AV45
Y00m	Defrost signal - Hardware value	Bool				R	DefrSignal.HW_Val	DI7	BV20
Y00m	Defrost signal - Input value	Bool				R	DefrSignal.ReadVal	DI8	BV21
Y00m	Circuit 1 suction temperature probe - Probe value	Real		bar		R	G_SuctTemp.ReadVal	IR33	AV47
Y00m	Circuit 1 discharge temperature probe circuit 1 - Probe value	Real		°C		R	G_DscgTemp.ReadVal	IR92	AV95
Y00n	Circuit 2 suction pressure probe - Probe value	Real		bar		R	G_SuctP_C2.ReadVal	IR50	AV60
Y00n	Circuit 2 discharge pressure probe - Probe value	Real		bar		R	G_DscgP_C2.ReadVal	IR46	AV57
Y00n	Circuit 2 Defrost signal - Hardware value	Bool				R	DefrSignal_C2.HW_Val	DI9	BV22
Y00n	Circuit 2 Defrost signal - Input value	Bool				R	DefrSignal_C2.ReadVal	DI10	BV23
Y00n	Circuit 2 suction temperature probe - Probe value	Real		bar		R	G_SuctTemp_C2.ReadVal	IR49	AV59
Y00n	Circuit 2 discharge temperature probe - Probe value	Real		°C		R	G_DscgTemp_C2.ReadVal	IR93	AV96
Y00o	Circuit 3 suction pressure probe - Probe value	Real		bar		R	G_SuctP_C3.ReadVal	IR66	AV72
Y00o	Circuit 3 discharge pressure probe - Probe value	Real		bar		R	G_DscgP_C3.ReadVal	IR62	AV69
Y00o	Circuit 3 Defrost signal - Hardware value	Bool				R	DefrSignal_C3.HW_Val	DI11	BV24
Y00o	Circuit 3 Defrost signal - Input value	Bool				R	DefrSignal_C3.ReadVal	DI12	BV25
Y00o	Circuit 3 suction temperature probe - Probe value	Real		bar		R	G_SuctTemp_C3.ReadVal	IR65	AV71
Y00o	Circuit 3 discharge temperature probe - Probe value	Real		°C		R	G_DscgTemp_C3.ReadVal	IR94	AV97
Y00p	Digital input remote ON - Hardware value	Bool				R	RemoteOn.HW_Val	DI13	BV26
Y00p	Digital input remote ON - Input value	Bool				R	RemoteOn.ReadVal	DI14	BV27
Y00p	Digital input supply filter alarm - Hardware value	Bool				R	SupplyAlarmFilter.HW_Val	DI15	BV28

Mask code	Description	Type	Default	UoM	Range	R/W	Variable Name	BMS	BacNet
Y00p	Digital input supply filter alarm - Input value	Bool				R	SupplyAlrmFilter.ReadVal	DI16	BV29
Y00p	Digital input supply filter 2 alarm - Hardware value	Bool				R	SupplyAlrmFilter_2.HW_Val	DI17	BV30
Y00p	Digital input supply filter 2 alarm - Input value	Bool				R	SupplyAlrmFilter_2.ReadVal	DI18	BV31
Y00p	Digital input return filter alarm - Hardware value	Bool				R	ReturnAlrmFilter.HW_Val	DI19	BV32
Y00p	Digital input return filter alarm - Input value	Bool				R	ReturnAlrmFilter.ReadVal	DI20	BV33
Y00p	Digital input door switch- Hardware value	Bool				R	Door_Switch.HW_Val	DI1435	BV1457
Y00p	Digital input door switch-Input value	Bool				R	Door_Switch.ReadVal	DI1436	BV1458
Y00p	Digital input recovery clogeed- Hardware value	Bool				R	Recovery_clogeed.HW_Val	DI1433	BV1455
Y00p	Digital input recovery clogeed -Input value	Bool				R	Recovery_clogeed.ReadVal	DI1434	BV1456
Y00q	Digital input freeze alarm - Hardware value	Bool				R	FreezeHeat_Alrm.HW_Val	DI21	BV34
Y00q	Digital input freeze alarm - Input value	Bool				R	FreezeHeat_Alrm.ReadVal	DI22	BV35
Y00q	Digital input heating overload - Hardware value	Bool				R	DIN_AIHeat.HW_Val	DI23	BV36
Y00q	Digital input heating overload - Input value	Bool				R	DIN_AIHeat.ReadVal	DI24	BV37
Y00q	Digital input cooling alarm - Hardware value	Bool				R	CoolAlrm.HW_Val	DI25	BV38
Y00q	Digital input cooling alarm - Input value	Bool				R	CoolAlrm.ReadVal	DI26	BV39
Y00q	Digital input humidifier alarm - Hardware value	Bool				R	HumAlrm.HW_Val	DI27	BV40
Y00q	Digital input humidifier alarm - Input value	Bool				R	HumAlrm.ReadVal	DI28	BV41
Y00q	Digital input fire alarm - Hardware value	Bool				R	DIN_Fire.HW_Val	DI29	BV42
Y00q	Digital input fire alarm - Input value	Bool				R	DIN_Fire.ReadVal	DI30	BV43
Y00q	Digital input fan overload alarm - Hardware value	Bool				R	DIN_FanOvld.HW_Val	DI31	BV44
Y00q	Digital input fan overload alarm - Input value	Bool				R	DIN_FanOvld.ReadVal	DI32	BV45
Y00r	Digital input economy mode - Hardware value	Bool				R	DIN_Eco.HW_Val	DI33	BV46
Y00r	Digital input economy mode - Input value	Bool				R	DIN_Eco.ReadVal	DI34	BV47
Y00r	Digital input precomfort mode - Hardware value	Bool				R	DIN_PreComf.HW_Val	DI35	BV48
Y00r	Digital input precomfort mode - Input value	Bool				R	DIN_PreComf.ReadVal	DI36	BV49
Y00r	Digital input comfort mode - Hardware value	Bool				R	DIN_Comf.HW_Val	DI37	BV50
Y00r	Digital input comfort mode - Input value	Bool				R	DIN_Comf.ReadVal	DI38	BV51
Y00r	Digital input Winter/Summer - Hardware value	Bool				R	WinSum.HW_Val	DI39	BV52
Y00r	Digital input Winter/Summer - Input value	Bool				R	WinSum.ReadVal	DI40	BV53
Y00s	Exhaust air damper - Hardware value	Bool				R	ExhAirDamp.HW_Val	DI41	BV54
Y00s	Exhaust air damper - Value	Bool				R	ExhAirDamp.Ctrl	DI42	BV55
Y00s	Serious alarm - Hardware value	Bool				R	SrsAlrm.HW_Val	DI43	BV56
Y00s	Serious alarm - Value	Bool				R	SrsAlrm.Ctrl	DI44	BV57
Y00s	Heating device - Hardware value	Bool				R	Heat_1.HW_Val	DI45	BV58
Y00s	Heating device - Value	Bool				R	Heat_1.Ctrl	DI46	BV59
Y00s	Cooling device - Hardware value	Bool				R	Cool_1.HW_Val	DI47	BV60
Y00s	Cooling device - Value	Bool				R	Cool_1.Ctrl	DI48	BV61
Y00s	Supply fan - Hardware value	Bool				R	SupplyFan.HW_Val	DI49	BV62
Y00s	Supply fan - Value	Bool				R	SupplyFan.Ctrl	DI5	BV18
Y00t	Return fan - Hardware value	Bool				R	ExhFan.HW_Val	DI50	BV63
Y00t	Return fan - Value	Bool				R	ExhFan.Ctrl	DI6	BV19
Y00t	Cooling device 2nd step - Hardware value	Bool				R	Cool_2.HW_Val	DI51	BV64
Y00t	Cooling device 2nd step - Value	Bool				R	Cool_2.Ctrl	DI52	BV65
Y00t	Heating device 2nd step - Hardware value	Bool				R	Heat_2.HW_Val	DI53	BV66
Y00t	Heating device 2nd step - Value	Bool				R	Heat_2.Ctrl	DI54	BV67
Y00t	Cool/Heat device - Hardware value	Bool				R	CoolHeat.HW_Val	DI55	BV68
Y00t	Cool/Heat device - Value	Bool				R	CoolHeat.Ctrl	DI56	BV69
Y00t	Recovery device - Hardware value	Bool				R	RecoveryPump.HW_Val	DI57	BV70
Y00t	Recovery device - Value	Bool				R	RecoveryPump.Ctrl	DI58	BV71
Y00v	Humidifier device - Hardware value	Bool				R	Hum.HW_Val	DI59	BV72
Y00v	Humidifier device - Value	Bool				R	Hum.Ctrl	DI60	BV73
Y00v	Preheater - Hardware value	Bool				R	PreHeaterPump.HW_Val	DI61	BV74
Y00v	Preheater - Value	Bool				R	PreHeaterPump.Ctrl	DI62	BV75
Y00v	Reheating device - Hardware value	Bool				R	ReHeat.HW_Val	DI63	BV76
Y00v	Reheating device - Value	Bool				R	ReHeat.Ctrl	DI64	BV77
Y00v	Heating device - Hardware value	Bool				R	Heat_1.HW_Val	DI45	BV58
Y00v	Reverse device - Value	Bool				R	RevOut_1.Ctrl	DI65	BV78
Y00v	Heating device 2nd step - Hardware value	Bool				R	Heat_2.HW_Val	DI53	BV66
Y00v	Reverse device 2nd step - Value	Bool				R	RevOut_2.Ctrl	DI66	BV79
Y00w	Circuit 1 condenser fan in rooftop application - Hardware value	Bool				R	CondRoofFan_1.HW_Val	DI67	BV80
Y00w	Circuit 1 condenser fan in rooftop application - Value	Bool				R	CondRoofFan_1.Ctrl	DI68	BV81
Y00w	Circuit 2 condenser fan in rooftop application - Hardware value	Bool				R	CondRoofFan_2.HW_Val	DI69	BV82
Y00w	Circuit 2 condenser fan in rooftop application - Value	Bool				R	CondRoofFan_2.Ctrl	DI70	BV83
Y00w	Circuit 3 condenser fan in rooftop application - Hardware value	Bool				R	CondRoofFan_3.HW_Val	DI71	BV84
Y00w	Circuit 3 condenser fan in rooftop application - Value	Bool				R	CondRoofFan_3.Ctrl	DI72	BV85
Y00w	Circuit 2 Cool/Heat device - Hardware value	Bool				R	CoolHeat_C2.HW_Val	DI73	BV86
Y00w	Circuit 2 Cool/Heat device - Value	Bool				R	CoolHeat_C2.Ctrl	DI74	BV87
Y00w	Circuit 3 Cool/Heat device - Hardware value	Bool				R	CoolHeat_C3.HW_Val	DI75	BV88
Y00w	Circuit 3 Cool/Heat device - Value	Bool				R	CoolHeat_C3.Ctrl	DI76	BV89
Y00x	Heating 3point valve open - Hardware value	Bool				R	HeatVlv_Op.HW_Val	DI77	BV90
Y00x	Heating 3point valve open - Value	Bool				R	HeatVlv_Op.Ctrl	DI78	BV91
Y00x	Heating 3point valve close - Hardware value	Bool				R	HeatVlv_Cl.HW_Val	DI79	BV92
Y00x	Heating 3point valve close - Value	Bool				R	HeatVlv_Cl.Ctrl	DI80	BV93
Y00x	Cooling 3point valve open - Hardware value	Bool				R	CoolVlv_Op.HW_Val	DI81	BV94
Y00x	Cooling 3point valve open - Value	Bool				R	CoolVlv_Op.Ctrl	DI82	BV95
Y00x	Cooling 3point valve close - Hardware value	Bool				R	CoolVlv_Cl.HW_Val	DI83	BV96

Mask code	Description	Type	Default	UoM	Range	R/W	Variable Name	BMS	BacNet
Y00x	Cooling 3point valve close - Value	Bool				R	CoolVlv_Ci.Ctrl	DI84	BV97
Y00y	Reverse 3point valve open - Hardware value	Bool				R	CoolHeatVlv_Op.HW_Val	DI85	BV98
Y00y	Reverse 3point valve open - Value	Bool				R	CoolHeatVlv_Op.Ctrl	DI86	BV99
Y00y	Reverse 3point valve close - Hardware value	Bool				R	CoolHeatVlv_Ci.HW_Val	DI87	BV100
Y00y	Reverse 3point valve close - Value	Bool				R	CoolHeatVlv_Ci.Ctrl	DI88	BV101
Y00y	Eco 3point valve open - Hardware value	Bool				R	MixVlv_Op.HW_Val	DI89	BV102
Y00y	Eco 3point valve open - Value	Bool				R	MixVlv_Op.Ctrl	DI90	BV103
Y00y	Eco 3point valve close - Hardware value	Bool				R	MixVlv_Ci.HW_Val	DI91	BV104
Y00y	Eco 3point valve close - Value	Bool				R	MixVlv_Ci.Ctrl	DI92	BV105
Y00z	Heat recovery 3point valve open - Hardware value	Bool				R	HeatRecVlv_Op.HW_Val	DI93	BV106
Y00z	Heat recovery 3point valve open - Value	Bool				R	HeatRecVlv_Op.Ctrl	DI94	BV107
Y00z	Heat recovery 3point valve close - Hardware value	Bool				R	HeatRecVlv_Ci.HW_Val	DI95	BV108
Y00z	Heat recovery 3point valve close - Value	Bool				R	HeatRecVlv_Ci.Ctrl	DI96	BV109
Y00z	Preheating 3point valve open - Hardware value	Bool				R	PreHeatVlv_Op.HW_Val	DI97	BV110
Y00z	Preheating 3point valve open - Value	Bool				R	PreHeatVlv_Op.Ctrl	DI98	BV111
Y00z	Preheating 3point valve close - Hardware value	Bool				R	PreHeatVlv_Ci.HW_Val	DI99	BV112
Y00z	Preheating 3point valve close - Value	Bool				R	PreHeatVlv_Ci.Ctrl	DI100	BV113
Y0a0	Reheating 3point valve open - Hardware value	Bool				R	ReHeatVlv_Op.HW_Val	DI101	BV114
Y0a0	Reheating 3point valve open - Value	Bool				R	ReHeatVlv_Op.Ctrl	DI102	BV115
Y0a0	Reheating 3point valve close - Hardware value	Bool				R	ReHeatVlv_Ci.HW_Val	DI103	BV116
Y0a0	Reheating 3point valve close - Value	Bool				R	ReHeatVlv_Ci.Ctrl	DI104	BV117
Y0a0	Recovery device - Hardware value	Bool				R	RecoveryStep1.HW_Val	DI105	BV118
Y0a0	Recovery device - Value	Bool				R	RecoveryStep1.Ctrl	DI106	BV119
Y0a0	Recovery device - Hardware value	Bool				R	RecoveryStep2.HW_Val	DI107	BV120
Y0a0	Recovery device - Value	Bool				R	RecoveryStep2.Ctrl	DI108	BV121
Y0a1	Compressor 1 circuit 1 - Hardware value	Bool				R	Comp1_Circ1.HW_Val	DI109	BV122
Y0a1	Compressor 1 circuit 1 - Value	Bool				R	Comp1_Circ1.Ctrl	DI110	BV123
Y0a1	Compressor 2 circuit 1 - Hardware value	Bool				R	Comp2_Circ1.HW_Val	DI111	BV124
Y0a1	Compressor 2 circuit 1 - Value	Bool				R	Comp2_Circ1.Ctrl	DI112	BV125
Y0a1	Compressor 3 circuit 1 - Hardware value	Bool				R	Comp3_Circ1.HW_Val	DI113	BV126
Y0a1	Compressor 3 circuit 1 - Value	Bool				R	Comp3_Circ1.Ctrl	DI114	BV127
Y0a2	Compressor 1 circuit 2 - Hardware value	Bool				R	Comp1_Circ2.HW_Val	DI115	BV128
Y0a2	Compressor 1 circuit 2 - Value	Bool				R	Comp1_Circ2.Ctrl	DI116	BV129
Y0a2	Compressor 2 circuit 2 - Hardware value	Bool				R	Comp2_Circ2.HW_Val	DI117	BV130
Y0a2	Compressor 2 circuit 2 - Value	Bool				R	Comp2_Circ2.Ctrl	DI118	BV131
Y0a2	Compressor 3 circuit 2 - Hardware value	Bool				R	Comp3_Circ2.HW_Val	DI119	BV132
Y0a2	Compressor 3 circuit 2 - Value	Bool				R	Comp3_Circ2.Ctrl	DI120	BV133
Y0a3	Compressor 1 circuit 3 - Hardware value	Bool				R	Comp1_Circ3.HW_Val	DI121	BV134
Y0a3	Compressor 1 circuit 3 - Value	Bool				R	Comp1_Circ3.Ctrl	DI122	BV135
Y0a3	Compressor 2 circuit 3 - Hardware value	Bool				R	Comp2_Circ3.HW_Val	DI123	BV136
Y0a3	Compressor 2 circuit 3 - Value	Bool				R	Comp2_Circ3.Ctrl	DI124	BV137
Y0a3	Compressor 3 circuit 3 - Hardware value	Bool				R	Comp3_Circ3.HW_Val	DI125	BV138
Y0a3	Compressor 3 circuit 3 - Value	Bool				R	Comp3_Circ3.Ctrl	DI126	BV139
Y0ab	Modulating reverse output - Hardware value	Real		%		R	RevOutVlv.HW_Val	IR20	AV35
Y0ab	Modulating heating output - Hardware value	Real		%		R	HeatVlv.HW_Val	IR19	AV34
Y0ab	Modulating cooling output - Hardware value	Real		%		R	CoolVlv.HW_Val	IR21	AV36
Y0ab	Modulating heat recovery output - Hardware value	Real		%		R	HeatRecovery.HW_Val	IR23	AV38
Y0ab	Modulating humidifier output - Hardware value	Real		%		R	ModulHum.HW_Val	IR95	AV98
Y0ab	Modulating reheating output - Hardware value	Real		%		R	ReHeatVlv.HW_Val	IR25	AV40
Y0ac	Modulating supply fan - Hardware value	Real		%		R	ModulSupplyFan.HW_Val	IR76	AV79
Y0ac	Supply fan - Value	Bool				R	SupplyFan.Ctrl	DI5	BV18
Y0ac	Modulating return fan - Hardware value	Real		%		R	ModulExhFan.HW_Val	IR79	AV82
Y0ac	Return fan - Value	Bool				R	ExhFan.Ctrl	DI6	BV19
Y0ac	Modulating preheating output - Hardware value	Real		%		R	ModulPreHeat.HW_Val	IR96	AV99
Y0ac	Modulating mixing damper output - Hardware value	Real		%		R	ModulMixDamp.HW_Val	IR97	AV100
Y0ac	Modulating cooling/heating signal - Hardware value	Real		%		R	Modul_CoolHeat_NoRev.HW_Val	IR22	AV37
Y0ad	Supply fan - Value	Bool				R	SupplyFan.Ctrl	DI5	BV118
Y0ad	Modulating supply fan - Hardware value	Real		%		R	ModulSupplyFan.HW_Val	IR76	AV79
Y0ad	Ziehl Abegg supply fan - Actual speed [rpm] of the Ziehl-Abegg fan	UInt				R	MB_Devices.FanSpeedInfo_ZA_1.CurrSpeed_rpm	IR98	PIV61
Y0ad	Ziehl Abegg supply fan - Maximum set speed	UInt				R	MB_Devices.FanSpeedInfo_ZA_1.MaxSpeed_rpm	IR99	PIV62
Y0ad	Ziehl Abegg supply fan - Minimum set speed	UInt				R	MB_Devices.FanSpeedInfo_ZA_1.MinSpeed_rpm	IR100	PIV63
Y0ad	Ziehl Abegg supply fan electrical informations - DC link voltage (V)	UInt				R	MB_Devices.FanElectricalInfo_ZA_1.DC_LinkV	IR101	PIV64
Y0ad	Ziehl Abegg supply fan electrical informations - Supply voltage (peak voltage)	UInt				R	MB_Devices.FanElectricalInfo_ZA_1.LineV	IR102	PIV65
Y0ad	Ziehl Abegg supply fan electrical informations - Fan level of speed controller (0-100%)	USInt				R	MB_Devices.FanElectricalInfo_ZA_1.Modulation	IR103	PIV66
Y0ad	Ziehl Abegg supply fan electrical informations - Motor input power (W)	UInt				R	MB_Devices.FanElectricalInfo_ZA_1.MotPwr	IR104	PIV67
Y0ae	Ziehl Abegg supply fan electrical informations - Electronics temperature (°C)	Real				R	MB_Devices.FanElectricalInfo_ZA_1.ElectronicTemp	IR105	AV101
Y0ae	Ziehl Abegg supply fan electrical informations - IGBT temperature (°C)	Real				R	MB_Devices.FanElectricalInfo_ZA_1.IGBT_temp	IR106	AV102
Y0ae	Ziehl Abegg supply fan electrical informations - MCU temperature	Real				R	MB_Devices.FanElectricalInfo_ZA_1.MCU_Temp	IR107	AV103
Y0ae	Ziehl Abegg supply fan electrical informations - Motr temperature (°C)	Real				R	MB_Devices.FanElectricalInfo_ZA_1.MotTemp	IR108	AV104
Y0af	Return fan - Value	Bool				R	ExhFan.Ctrl	DI6	BV19
Y0af	Modulating return fan - Hardware value	Real		%		R	ModulExhFan.HW_Val	IR79	AV82
Y0af	Ziehl Abegg return fan speed informations - Actual	UInt				R	MB_Devices.FanSpeedInfo_ZA	IR109	PIV68

Mask code	Description	Type	Default	UoM	Range	R/W	Variable Name	BMS	BacNet
	speed [rpm] of the Ziehl-Abegg fan						_2.CurrSpeed_rpm		
Y0af	Ziehl Abegg return fan speed informations - Maximum set speed	UInt				R	MB_Devices.FanSpeedInfo_ZA_2.MaxSpeed_rpm	IR110	PIV69
Y0af	Ziehl Abegg return fan speed informations - Minimum set speed	UInt				R	MB_Devices.FanSpeedInfo_ZA_2.MinSpeed_rpm	IR111	PIV70
Y0af	Ziehl Abegg return fan electrical info - DC link voltage (V)	UInt				R	MB_Devices.FanElectricalInfo_ZA_2.DC_LinkV	IR112	PIV71
Y0af	Ziehl Abegg return fan electrical info - Supply voltage (peak voltage)	UInt				R	MB_Devices.FanElectricalInfo_ZA_2.LineV	IR113	PIV72
Y0af	Ziehl Abegg return fan electrical info - Fan level of speed controller (0-100%)	USInt				R	MB_Devices.FanElectricalInfo_ZA_2.Modulation	IR114	PIV73
Y0af	Ziehl Abegg return fan electrical info - Motor input power (W)	UInt				R	MB_Devices.FanElectricalInfo_ZA_2.MotPwr	IR115	PIV74
Y0ag	Ziehl Abegg return fan electrical info - Electronics temperature (°C)	Real				R	MB_Devices.FanElectricalInfo_ZA_2.ElectronicTemp	IR116	AV105
Y0ag	Ziehl Abegg return fan electrical info - IGBT temperature (°C)	Real				R	MB_Devices.FanElectricalInfo_ZA_2.IGBT_temp	IR117	AV106
Y0ag	Ziehl Abegg return fan electrical info - MCU temperature	Real				R	MB_Devices.FanElectricalInfo_ZA_2.MCU_Temp	IR118	AV107
Y0ag	Ziehl Abegg return fan electrical info - Motr temperature (°C)	Real				R	MB_Devices.FanElectricalInfo_ZA_2.MotTemp	IR119	AV108
Y0ah	Supply fan - Value	Bool				R	SupplyFan.Ctrl	DI5	BV18
Y0ah	Modulating supply fan - Hardware value	Real		%		R	ModulSupplyFan.HW_Val	IR76	AV79
Y0ah	EBM supply fan speed info - Current speed in [rpm] of the fan for Ebmpapst fan	UInt		rpm		R	MB_Devices.InfoSpeed_EBM_1.CurrSpeed	IR120	PIV75
Y0ah	EBM supply fan speed info - Maximum admissible speed: all read or speed in [rpm] settings are limited to this value for Ebmpapst fan	UInt		rpm		R	MB_Devices.InfoSpeed_EBM_1.MaxSpeed	IR121	PIV76
Y0ah	EBM supply fan electrical info - DC link voltage for Ebmpapst fan	UInt				R	MB_Devices.ElectrInfo_EBM_1.DC_Link_V	IR122	PIV77
Y0ah	EBM supply fan electrical info - DC link current for Ebmpapst fan	UInt				R	MB_Devices.ElectrInfo_EBM_1.DC_Link_A	IR123	PIV78
Y0ah	EBM supply fan electrical info - Current power in [W] for Ebmpapst fan	UInt		W		R	MB_Devices.ElectrInfo_EBM_1.CurrPower	IR124	PIV79
Y0ai	EBM supply fan electrical info - Internal circuit temperature for Ebmpapst fan	UInt		°C		R	MB_Devices.ElectrInfo_EBM_1.ElectrTemp	IR125	PIV80
Y0ai	Current rotation direction 0: Left; 1: Right; for Ebmpapst fan	UInt				R	MB_Devices.CurrRotDir_EBM_1	IR126	PIV81
Y0ai	EBM supply fan electrical info - Current modulation level in [%] for Ebmpapst fan	UInt		%		R	MB_Devices.ElectrInfo_EBM_1.CurrModulLev	IR127	PIV82
Y0aj	Return fan - Value	Bool				R	ExhFan.Ctrl	DI6	BV19
Y0aj	Modulating return fan - Hardware value	Real		%		R	ModulExhFan.HW_Val	IR79	AV82
Y0aj	EBM return fan speed info - Current speed in [rpm] of the fan for Ebmpapst fan	UInt		rpm		R	MB_Devices.InfoSpeed_EBM_2.CurrSpeed	IR128	PIV83
Y0aj	EBM return fan speed info - Maximum admissible speed: all read or speed in [rpm] settings are limited to this value for Ebmpapst fan	UInt		rpm		R	MB_Devices.InfoSpeed_EBM_2.MaxSpeed	IR129	PIV84
Y0aj	EBM return fan electrical info - DC link voltage for Ebmpapst fan	UInt				R	MB_Devices.ElectrInfo_EBM_2.DC_Link_V	IR130	PIV85
Y0aj	EBM return fan electrical info - DC link current for Ebmpapst fan	UInt				R	MB_Devices.ElectrInfo_EBM_2.DC_Link_A	IR131	PIV86
Y0aj	EBM return fan electrical info - Current power in [W] for Ebmpapst fan	UInt		W		R	MB_Devices.ElectrInfo_EBM_2.CurrPower	IR132	PIV87
Y0ak	EBM return fan electrical info - Internal circuit temperature for Ebmpapst fan	UInt		°C		R	MB_Devices.ElectrInfo_EBM_2.ElectrTemp	IR133	PIV88
Y0ak	Current rotation direction 0: Left; 1: Right; for Ebmpapst fan	UInt				R	MB_Devices.CurrRotDir_EBM_2	IR134	PIV89
Y0ak	EBM return fan electrical info - Current modulation level in [%] for Ebmpapst fan	UInt		%		R	MB_Devices.ElectrInfo_EBM_2.CurrModulLev	IR135	PIV90
Y0al	Circuit 1 Power+ registers - 0: Stop; 1: Run; 2: Alarm; 3: Crankcase heating; 4:DCbus ready)	UInt				R	BLDC_Mng_Circ1.IRparam_PWRP.IR104_DriveStatus	IR136	PIV91
Y0al	Circuit 1 Power+ registers - see doc	UInt				R	BLDC_Mng_Circ1.IRparam_PWRP.IR105_AlrnCode	IR137	PIV92
Y0al	Circuit 1 Power+ information - Speed reference [Hz/rps]	Real				R	BLDC_Mng_Circ1.Info_PWRP.IR104_DriveStatus	IR138	AV109
Y0al	Circuit 1 Power+ information - Current rotor speed [rps]	Real				R	BLDC_Mng_Circ1.Info_PWRP.IR104_DriveStatus	IR28	AV43
Y0al	Circuit 1 Power+ information - Current rotor speed [Hz]	Real				R	BLDC_Mng_Circ1.Info_PWRP.IR104_DriveStatus	IR139	AV110
Y0al	Circuit 1 Power+ information - Current rotorspeed [rpm]	UInt				R	BLDC_Mng_Circ1.Info_PWRP.IR104_DriveStatus	IR140	PIV93
Y0al	Circuit 1 Power+ information - Drive temperature	Real		°C		R	BLDC_Mng_Circ1.Info_PWRP.IR104_DriveStatus	IR141	AV111
Y0am	Circuit 1 Power+ information - Current motor current [A]	Real				R	BLDC_Mng_Circ1.Info_PWRP.IR104_DriveStatus	IR142	AV112
Y0am	Circuit 1 Power+ information - Current motor voltage [V]	UInt				R	BLDC_Mng_Circ1.Info_PWRP.IR104_DriveStatus	IR143	PIV94
Y0am	Circuit 1 Power+ information - Current motor consumption [W]	Real				R	BLDC_Mng_Circ1.Info_PWRP.IR104_DriveStatus	IR29	AV44
Y0am	Circuit 1 Power+ registers - DC bus voltage	UInt				R	BLDC_Mng_Circ1.IRparam_PWRP.IR113_DCBusVoltage	IR144	PIV95
Y0am	Circuit 1 Power+ registers - DC bus ripple	UInt				R	BLDC_Mng_Circ1.IRparam_PWRP.IR134_DCBusRipple	IR145	PIV96
Y0an	Circuit 1 Power+ registers - Motor Overload Accumulator	Real				R	BLDC_Mng_Circ1.IRparam_PWRP.IR153_OvldMot_accumulator	IR146	AV113
Y0an	Circuit 1 Power+ registers - Drive Overload Accumulator	Real				R	BLDC_Mng_Circ1.IRparam_PWRP.IR154_OvldDrive_accumulator	IR147	AV114
Y0an	Circuit 1 Power+ registers - PWM switching frequency (0: 4kHz, 1: 6kHz, 2: 8kHz)	UInt				R	BLDC_Mng_Circ1.IRparam_PWRP.IR124_OperatingSwitchingFreq	IR148	PIV97
Y0an	Circuit 1 Power+ registers - Pre-ramp output frequency reference	Real				R	BLDC_Mng_Circ1.IRparam_PWRP.IR125_PreRampOutput_SpeedRef	IR149	AV115
Y0ao	Circuit 1 Power+ information - Status register bit 15	Bool				R	BLDC_Mng_Circ1.Info_PWRP.StatusReg_Bit_15	DI127	BV140

Mask code	Description	Type	Default	UoM	Range	R/W	Variable Name	BMS	BacNet
Y0ao	Circuit 1 Power+ information - Status register bit 14	Bool				R	BLDC_Mng_Circ1.Info_PWRP.S tatusReg_Bit_14	DI128	BV141
Y0ao	Circuit 1 Power+ information - Status register bit 13	Bool				R	BLDC_Mng_Circ1.Info_PWRP.S tatusReg_Bit_13	DI129	BV142
Y0ao	Circuit 1 Power+ information - Status register bit 12	Bool				R	BLDC_Mng_Circ1.Info_PWRP.S tatusReg_Bit_12	DI130	BV143
Y0ao	Circuit 1 Power+ information - Drive in alarm	Bool				R	BLDC_Mng_Circ1.Info_PWRP.S tatusReg_DriveTripped	DI131	BV144
Y0ao	Circuit 1 Power+ information - Status register bit 10	Bool				R	BLDC_Mng_Circ1.Info_PWRP.S tatusReg_Bit_10	DI132	BV145
Y0ao	Circuit 1 Power+ information - Power supply status: 0=OK; 1=loss of a power supply phase (L1)	Bool				R	BLDC_Mng_Circ1.Info_PWRP.S tatusReg_MainSupplyLossed	DI133	BV146
Y0ao	Circuit 1 Power+ information - Motor overload	Bool				R	BLDC_Mng_Circ1.Info_PWRP.S tatusReg_MotorOverload	DI134	BV147
Y0ao	Circuit 1 Power+ information - Autotune running	Bool				R	BLDC_Mng_Circ1.info_PWRP.S tatusReg_DriveInAutotune	DI135	BV148
Y0ao	Circuit 1 Power+ information - Status register bit 06	Bool				R	BLDC_Mng_Circ1.Info_PWRP.S tatusReg_Bit_06	DI136	BV149
Y0ao	Circuit 1 Power+ information - Switching frequency derating ON	Bool				R	BLDC_Mng_Circ1.Info_PWRP.S tatusReg_SwitchingFreqDeratin gON	DI137	BV150
Y0ao	Circuit 1 Power+ information - Fan ON	Bool				R	BLDC_Mng_Circ1.Info_PWRP.S tatusReg_FanON	DI138	BV151
Y0ao	Circuit 1 Power+ information - Under voltage	Bool				R	BLDC_Mng_Circ1.Info_PWRP.S tatusReg_UnderVoltage	DI139	BV152
Y0ao	Circuit 1 Power+ information - Motor PTC overheating	Bool				R	BLDC_Mng_Circ1.info_PWRP.S tatusReg_MotorPTC_OverHeat	DI140	BV153
Y0ao	Circuit 1 Power+ information - Relay config. ON	Bool				R	BLDC_Mng_Circ1.Info_PWRP.S tatusReg_RelayConfigON	DI141	BV154
Y0ao	Circuit 1 Power+ information - Safety input status (STO); 0=drive enable; 1= drive disable	Bool				R	BLDC_Mng_Circ1.info_PWRP.S tatusReg_DriveInhibit	DI142	BV155
Y0ao	Circuit 1 Power+ information - Speed register bit 15	Bool				R	BLDC_Mng_Circ1.Info_PWRP.S peedReg_Bit_15	DI143	BV156
Y0ao	Circuit 1 Power+ information - Speed register bit 14	Bool				R	BLDC_Mng_Circ1.Info_PWRP.S peedReg_Bit_14	DI144	BV157
Y0ao	Circuit 1 Power+ information - Speed register bit 13	Bool				R	BLDC_Mng_Circ1.Info_PWRP.S peedReg_Bit_13	DI145	BV158
Y0ao	Circuit 1 Power+ information - Speed register bit 12	Bool				R	BLDC_Mng_Circ1.Info_PWRP.S peedReg_Bit_12	DI146	BV159
Y0ao	Circuit 1 Power+ information - Speed register bit 11	Bool				R	BLDC_Mng_Circ1.Info_PWRP.S peedReg_Bit_11	DI147	BV160
Y0ao	Circuit 1 Power+ information - Speed register bit 10	Bool				R	BLDC_Mng_Circ1.info_PWRP.S peedReg_Bit_10	DI148	BV161
Y0ao	Circuit 1 Power+ information - Speed register bit 09	Bool				R	BLDC_Mng_Circ1.Info_PWRP.S peedReg_Bit_09	DI149	BV162
Y0ao	Circuit 1 Power+ information - Speed register bit 08	Bool				R	BLDC_Mng_Circ1.info_PWRP.S peedReg_Bit_08	DI150	BV163
Y0ao	Circuit 1 Power+ information - Speed register bit 07	Bool				R	BLDC_Mng_Circ1.info_PWRP.S peedReg_Bit_07	DI151	BV164
Y0ao	Circuit 1 Power+ information - Speed register bit 06	Bool				R	BLDC_Mng_Circ1.info_PWRP.S peedReg_Bit_06	DI152	BV165
Y0ao	Circuit 1 Power+ information - Speed register bit 05	Bool				R	BLDC_Mng_Circ1.info_PWRP.S peedReg_Bit_05	DI153	BV166
Y0ao	Circuit 1 Power+ information - Speed register bit 04	Bool				R	BLDC_Mng_Circ1.info_PWRP.S peedReg_Bit_04	DI154	BV167
Y0ao	Circuit 1 Power+ information - Speed register bit 03	Bool				R	BLDC_Mng_Circ1.info_PWRP.S peedReg_Bit_03	DI155	BV168
Y0ao	Circuit 1 Power+ information - Speed register bit 02	Bool				R	BLDC_Mng_Circ1.info_PWRP.S peedReg_Bit_02	DI156	BV169
Y0ao	Circuit 1 Power+ information - Speed register bit 01	Bool				R	BLDC_Mng_Circ1.info_PWRP.S peedReg_Bit_01	DI157	BV170
Y0ao	Circuit 1 Power+ information - Speed register bit 00	Bool				R	BLDC_Mng_Circ1.info_PWRP.S peedReg_Bit_00	DI158	BV171
Y0ap	Circuit 2 Power+ registers - 0: Stop; 1: Run; 2: Alarm; 3: Crankcase heating; 4:DCbus ready)	UInt				R	BLDC_Mng_Circ2.IRparam_PW RP.IR104_DriveStatus	IR150	PIV98
Y0ap	Circuit 2 Power+ registers - see doc	UInt				R	BLDC_Mng_Circ2.IRparam_PW RP.IR105_AlmCode	IR151	PIV99
Y0ap	Circuit 2 Power+ information - Speed reference [Hz/rps]	Real				R	BLDC_Mng_Circ2.info_PWRP.I nfo_FreqSetP	IR152	AV116
Y0ap	Circuit 2 Power+ information - Current rotor speed [rps]	Real				R	BLDC_Mng_Circ2.info_PWRP.I nfo_RotorSpeed_rps	IR44	AV55
Y0ap	Circuit 2 Power+ information - Current rotor speed [Hz]	Real				R	BLDC_Mng_Circ2.info_PWRP.I nfo_RotorSpeed_Hz	IR153	AV117
Y0ap	Circuit 2 Power+ information - Current rotorspeed [rpm]	UInt				R	BLDC_Mng_Circ2.info_PWRP.I nfo_RotorSpeed_rpm	IR154	PIV100
Y0ap	Circuit 2 Power+ information - Drive temperature	Real		°C		R	BLDC_Mng_Circ2.info_PWRP.I nfo_DriveTemp	IR155	AV118
Y0aq	Circuit 2 Power+ information - Current motor current [A]	Real				R	BLDC_Mng_Circ2.info_PWRP.I nfo_MotA	IR156	AV119
Y0aq	Circuit 2 Power+ information - Current motor voltage [V]	UInt				R	BLDC_Mng_Circ2.info_PWRP.I nfo_MotV	IR157	PIV101
Y0aq	Circuit 2 Power+ information - Current motor consumption [W]	Real				R	BLDC_Mng_Circ2.info_PWRP.I nfo_MotPwr	IR45	AV56
Y0aq	Circuit 2 Power+ registers - DC bus voltage	UInt				R	BLDC_Mng_Circ2.IRparam_PW RP.IR113_DCBusVoltage	IR158	PIV102
Y0aq	Circuit 2 Power+ registers - DC bus ripple	UInt				R	BLDC_Mng_Circ2.IRparam_PW RP.IR134_DCBusRipple	IR159	PIV103
Y0ar	Circuit 2 Power+ registers - Motor Overload Accumulator	Real				R	BLDC_Mng_Circ2.IRparam_PW RP.IR153_OvldMot_accumulato r	IR160	AV120
Y0ar	Circuit 2 Power+ registers - Drive Overload Accumulator	Real				R	BLDC_Mng_Circ2.IRparam_PW RP.IR154_OvldDrive_accumulat or	IR161	AV121
Y0ar	Circuit 2 Power+ registers - PWM switching frequency (0: 4kHz, 1: 6kHz, 2: 8kHz)	UInt				R	BLDC_Mng_Circ2.IRparam_PW RP.IR124_OperatingSwitchingFr eq	IR162	PIV104
Y0ar	Circuit 2 Power+ registers - Pre-ramp output frequency reference	Real				R	BLDC_Mng_Circ2.IRparam_PW RP.IR125_PreRampOutput_Spe	IR163	AV122

Mask code	Description	Type	Default	UoM	Range	R/W	Variable Name	BMS	BacNet
							edRef		
Y0as	Circuit 2 Power+ information - Status register bit 15	Bool				R	BLDC_Mng_Circ2.Info_PWRP.S tatusReg_Bit_15	DI159	BV172
Y0as	Circuit 2 Power+ information - Status register bit 14	Bool				R	BLDC_Mng_Circ2.Info_PWRP.S tatusReg_Bit_14	DI160	BV173
Y0as	Circuit 2 Power+ information - Status register bit 13	Bool				R	BLDC_Mng_Circ2.Info_PWRP.S tatusReg_Bit_13	DI161	BV174
Y0as	Circuit 2 Power+ information - Status register bit 12	Bool				R	BLDC_Mng_Circ2.Info_PWRP.S tatusReg_Bit_12	DI162	BV175
Y0as	Circuit 2 Power+ information - Drive in alarm	Bool				R	BLDC_Mng_Circ2.Info_PWRP.S tatusReg_DriveTripped	DI163	BV176
Y0as	Circuit 2 Power+ information - Status register bit 10	Bool				R	BLDC_Mng_Circ2.Info_PWRP.S tatusReg_Bit_10	DI164	BV177
Y0as	Circuit 2 Power+ information - Power supply status: 0=OK; 1=loss of a power supply phase (L1)	Bool				R	BLDC_Mng_Circ2.Info_PWRP.S tatusReg_MainSupplyLossed	DI165	BV178
Y0as	Circuit 2 Power+ information - Motor overload	Bool				R	BLDC_Mng_Circ2.Info_PWRP.S tatusReg_MotorOverload	DI166	BV179
Y0as	Circuit 2 Power+ information - Autotune running	Bool				R	BLDC_Mng_Circ2.Info_PWRP.S tatusReg_DriveInAutotune	DI167	BV180
Y0as	Circuit 2 Power+ information - Status register bit 06	Bool				R	BLDC_Mng_Circ2.Info_PWRP.S tatusReg_Bit_06	DI168	BV181
Y0as	Circuit 2 Power+ information - Switching frequency derating ON	Bool				R	BLDC_Mng_Circ2.Info_PWRP.S tatusReg_SwitchingFreqDeratin gON	DI169	BV182
Y0as	Circuit 2 Power+ information - Fan ON	Bool				R	BLDC_Mng_Circ2.Info_PWRP.S tatusReg_FanON	DI170	BV183
Y0as	Circuit 2 Power+ information - Under voltage	Bool				R	BLDC_Mng_Circ2.Info_PWRP.S tatusReg_UnderVoltage	DI171	BV184
Y0as	Circuit 2 Power+ information - Motor PTC overheating	Bool				R	BLDC_Mng_Circ2.Info_PWRP.S tatusReg_MotorPTC_OverHeat	DI172	BV185
Y0as	Circuit 2 Power+ information - Relay config. ON	Bool				R	BLDC_Mng_Circ2.Info_PWRP.S tatusReg_RelayConfigON	DI173	BV186
Y0as	Circuit 2 Power+ information - Safety input status (STO); 0=drive enable; 1= drive disable	Bool				R	BLDC_Mng_Circ2.Info_PWRP.S tatusReg_DriveInhibit	DI174	BV187
Y0as	Circuit 2 Power+ information - Speed register bit 15	Bool				R	BLDC_Mng_Circ2.Info_PWRP.S peedReg_Bit_15	DI175	BV188
Y0as	Circuit 2 Power+ information - Speed register bit 14	Bool				R	BLDC_Mng_Circ2.Info_PWRP.S peedReg_Bit_14	DI176	BV189
Y0as	Circuit 2 Power+ information - Speed register bit 13	Bool				R	BLDC_Mng_Circ2.Info_PWRP.S peedReg_Bit_13	DI177	BV190
Y0as	Circuit 2 Power+ information - Speed register bit 12	Bool				R	BLDC_Mng_Circ2.Info_PWRP.S peedReg_Bit_12	DI178	BV191
Y0as	Circuit 2 Power+ information - Speed register bit 11	Bool				R	BLDC_Mng_Circ2.Info_PWRP.S peedReg_Bit_11	DI179	BV192
Y0as	Circuit 2 Power+ information - Speed register bit 10	Bool				R	BLDC_Mng_Circ2.Info_PWRP.S peedReg_Bit_10	DI180	BV193
Y0as	Circuit 2 Power+ information - Speed register bit 09	Bool				R	BLDC_Mng_Circ2.Info_PWRP.S peedReg_Bit_09	DI181	BV194
Y0as	Circuit 2 Power+ information - Speed register bit 08	Bool				R	BLDC_Mng_Circ2.Info_PWRP.S peedReg_Bit_08	DI182	BV195
Y0as	Circuit 2 Power+ information - Speed register bit 07	Bool				R	BLDC_Mng_Circ2.Info_PWRP.S peedReg_Bit_07	DI183	BV196
Y0as	Circuit 2 Power+ information - Speed register bit 06	Bool				R	BLDC_Mng_Circ2.Info_PWRP.S peedReg_Bit_06	DI184	BV197
Y0as	Circuit 2 Power+ information - Speed register bit 05	Bool				R	BLDC_Mng_Circ2.Info_PWRP.S peedReg_Bit_05	DI185	BV198
Y0as	Circuit 2 Power+ information - Speed register bit 04	Bool				R	BLDC_Mng_Circ2.Info_PWRP.S peedReg_Bit_04	DI186	BV199
Y0as	Circuit 2 Power+ information - Speed register bit 03	Bool				R	BLDC_Mng_Circ2.Info_PWRP.S peedReg_Bit_03	DI187	BV200
Y0as	Circuit 2 Power+ information - Speed register bit 02	Bool				R	BLDC_Mng_Circ2.Info_PWRP.S peedReg_Bit_02	DI188	BV201
Y0as	Circuit 2 Power+ information - Speed register bit 01	Bool				R	BLDC_Mng_Circ2.Info_PWRP.S peedReg_Bit_01	DI189	BV202
Y0as	Circuit 2 Power+ information - Speed register bit 00	Bool				R	BLDC_Mng_Circ2.Info_PWRP.S peedReg_Bit_00	DI190	BV203
Y0at	Circuit 3 Power+ registers - 0: Stop; 1: Run; 2: Alarm; 3: Crankcase heating; 4:DCbus ready)	UInt				R	BLDC_Mng_Circ3.IRparam_PW RP.IR104_DriveStatus	IR164	PIV105
Y0at	Circuit 3 Power+ registers - see doc	UInt				R	BLDC_Mng_Circ3.IRparam_PW RP.IR105_AlrmCode	IR165	PIV106
Y0at	Circuit 3 Power+ information - Speed reference [Hz/rps]	Real				R	BLDC_Mng_Circ3.Info_PWRP.I nfo_FreqSetP	IR166	AV123
Y0at	Circuit 3 Power+ information - Current rotor speed [rps]	Real				R	BLDC_Mng_Circ3.Info_PWRP.I nfo_RotorSpeed_rps	IR60	AV67
Y0at	Circuit 3 Power+ information - Current rotor speed [Hz]	Real				R	BLDC_Mng_Circ3.Info_PWRP.I nfo_RotorSpeed_Hz	IR167	AV124
Y0at	Circuit 3 Power+ information - Current rotorspeed [rpm]	UInt				R	BLDC_Mng_Circ3.Info_PWRP.I nfo_RotorSpeed_rpm	IR168	PIV107
Y0at	Circuit 3 Power+ information - Drive temperature	Real		°C		R	BLDC_Mng_Circ3.Info_PWRP.I nfo_DriveTemp	IR169	AV125
Y0au	Circuit 3 Power+ information - Current motor current [A]	Real				R	BLDC_Mng_Circ3.Info_PWRP.I nfo_MotA	IR170	AV126
Y0au	Circuit 3 Power+ information - Current motor voltage [V]	UInt				R	BLDC_Mng_Circ3.Info_PWRP.I nfo_MotV	IR171	PIV108
Y0au	Circuit 3 Power+ information - Current motor consumption [W]	Real				R	BLDC_Mng_Circ3.Info_PWRP.I nfo_MotPwr	IR61	AV68
Y0au	Circuit 3 Power+ registers - DC bus voltage	UInt				R	BLDC_Mng_Circ3.IRparam_PW RP.IR113_DCBusVoltage	IR172	PIV109
Y0au	Circuit 3 Power+ registers - DC bus ripple	UInt				R	BLDC_Mng_Circ3.IRparam_PW RP.IR134_DCBusRipple	IR173	PIV110
Y0av	Circuit 3 Power+ registers - Motor Overload Accumulator	Real				R	BLDC_Mng_Circ3.IRparam_PW RP.IR153_OvldMot_accumulato r	IR174	AV127
Y0av	Circuit 3 Power+ registers - Drive Overload Accumulator	Real				R	BLDC_Mng_Circ3.IRparam_PW RP.IR154_OvldDrive_accumulat or	IR175	AV128
Y0av	Circuit 3 Power+ registers - PWM switching	UInt				R	BLDC_Mng_Circ3.IRparam_PW	IR176	PIV111

Mask code	Description	Type	Default	UoM	Range	R/W	Variable Name	BMS	BacNet
	frequency (0: 4kHz, 1: 6kHz, 2: 8kHz)						RP.IR124_OperatingSwitchingFreq		
Y0av	Circuit 3 Power+ registers - Pre-ramp output frequency reference	Real				R	BLDC_Mng_Circ3.IRparam_PW RP.IR125_PreRampOutput_SpeedRef	IR177	AV129
Y0aw	Circuit 3 Power+ information - Status register bit 15	Bool				R	BLDC_Mng_Circ3.Info_PWRP.S tatusReg_Bit_15	DI191	BV204
Y0aw	Circuit 3 Power+ information - Status register bit 14	Bool				R	BLDC_Mng_Circ3.Info_PWRP.S tatusReg_Bit_14	DI192	BV205
Y0aw	Circuit 3 Power+ information - Status register bit 13	Bool				R	BLDC_Mng_Circ3.Info_PWRP.S tatusReg_Bit_13	DI193	BV206
Y0aw	Circuit 3 Power+ information - Status register bit 12	Bool				R	BLDC_Mng_Circ3.Info_PWRP.S tatusReg_Bit_12	DI194	BV207
Y0aw	Circuit 3 Power+ information - Drive in alarm	Bool				R	BLDC_Mng_Circ3.Info_PWRP.S tatusReg_DriveTripped	DI195	BV208
Y0aw	Circuit 3 Power+ information - Status register bit 10	Bool				R	BLDC_Mng_Circ3.Info_PWRP.S tatusReg_Bit_10	DI196	BV209
Y0aw	Circuit 3 Power+ information - Power supply status: 0=OK; 1=loss of a power supply phase (L1)	Bool				R	BLDC_Mng_Circ3.Info_PWRP.S tatusReg_MainSupplyLost	DI197	BV210
Y0aw	Circuit 3 Power+ information - Motor overload	Bool				R	BLDC_Mng_Circ3.Info_PWRP.S tatusReg_MotorOverload	DI198	BV211
Y0aw	Circuit 3 Power+ information - Autotune running	Bool				R	BLDC_Mng_Circ3.Info_PWRP.S tatusReg_DriveInAutotune	DI199	BV212
Y0aw	Circuit 3 Power+ information - Status register bit 06	Bool				R	BLDC_Mng_Circ3.Info_PWRP.S tatusReg_Bit_06	DI200	BV213
Y0aw	Circuit 3 Power+ information - Switching frequency derating ON	Bool				R	BLDC_Mng_Circ3.Info_PWRP.S tatusReg_SwitchingFreqDeratingON	DI201	BV214
Y0aw	Circuit 3 Power+ information - Fan ON	Bool				R	BLDC_Mng_Circ3.Info_PWRP.S tatusReg_FanON	DI202	BV215
Y0aw	Circuit 3 Power+ information - Under voltage	Bool				R	BLDC_Mng_Circ3.Info_PWRP.S tatusReg_UnderVoltage	DI203	BV216
Y0aw	Circuit 3 Power+ information - Motor PTC overheating	Bool				R	BLDC_Mng_Circ3.Info_PWRP.S tatusReg_MotorPTC_OverHeat	DI204	BV217
Y0aw	Circuit 3 Power+ information - Relay config. ON	Bool				R	BLDC_Mng_Circ3.Info_PWRP.S tatusReg_RelayConfigON	DI205	BV218
Y0aw	Circuit 3 Power+ information - Safety input status (STO); 0=drive enable; 1= drive disable	Bool				R	BLDC_Mng_Circ3.Info_PWRP.S tatusReg_DriveInhibit	DI206	BV219
Y0aw	Circuit 3 Power+ information - Speed register bit 15	Bool				R	BLDC_Mng_Circ3.Info_PWRP.S peedReg_Bit_15	DI207	BV220
Y0aw	Circuit 3 Power+ information - Speed register bit 14	Bool				R	BLDC_Mng_Circ3.Info_PWRP.S peedReg_Bit_14	DI208	BV221
Y0aw	Circuit 3 Power+ information - Speed register bit 13	Bool				R	BLDC_Mng_Circ3.Info_PWRP.S peedReg_Bit_13	DI209	BV222
Y0aw	Circuit 3 Power+ information - Speed register bit 12	Bool				R	BLDC_Mng_Circ3.Info_PWRP.S peedReg_Bit_12	DI210	BV223
Y0aw	Circuit 3 Power+ information - Speed register bit 11	Bool				R	BLDC_Mng_Circ3.Info_PWRP.S peedReg_Bit_11	DI211	BV224
Y0aw	Circuit 3 Power+ information - Speed register bit 10	Bool				R	BLDC_Mng_Circ3.Info_PWRP.S peedReg_Bit_10	DI212	BV225
Y0aw	Circuit 3 Power+ information - Speed register bit 09	Bool				R	BLDC_Mng_Circ3.Info_PWRP.S peedReg_Bit_09	DI213	BV226
Y0aw	Circuit 3 Power+ information - Speed register bit 08	Bool				R	BLDC_Mng_Circ3.Info_PWRP.S peedReg_Bit_08	DI214	BV227
Y0aw	Circuit 3 Power+ information - Speed register bit 07	Bool				R	BLDC_Mng_Circ3.Info_PWRP.S peedReg_Bit_07	DI215	BV228
Y0aw	Circuit 3 Power+ information - Speed register bit 06	Bool				R	BLDC_Mng_Circ3.Info_PWRP.S peedReg_Bit_06	DI216	BV229
Y0aw	Circuit 3 Power+ information - Speed register bit 05	Bool				R	BLDC_Mng_Circ3.Info_PWRP.S peedReg_Bit_05	DI217	BV230
Y0aw	Circuit 3 Power+ information - Speed register bit 04	Bool				R	BLDC_Mng_Circ3.Info_PWRP.S peedReg_Bit_04	DI218	BV231
Y0aw	Circuit 3 Power+ information - Speed register bit 03	Bool				R	BLDC_Mng_Circ3.Info_PWRP.S peedReg_Bit_03	DI219	BV232
Y0aw	Circuit 3 Power+ information - Speed register bit 02	Bool				R	BLDC_Mng_Circ3.Info_PWRP.S peedReg_Bit_02	DI220	BV233
Y0aw	Circuit 3 Power+ information - Speed register bit 01	Bool				R	BLDC_Mng_Circ3.Info_PWRP.S peedReg_Bit_01	DI221	BV234
Y0aw	Circuit 3 Power+ information - Speed register bit 00	Bool				R	BLDC_Mng_Circ3.Info_PWRP.S peedReg_Bit_00	DI222	BV235
Y0ax	Current version of the application according to standard - X version of the application	UInt				R	CurrVer.X	IR178	PIV112
Y0ax	Current version of the application according to standard - Y version of the application	UInt				R	CurrVer.Y	IR179	PIV113
Y0ax	Current version of the application according to standard - Z version of the application	UInt				R	CurrVer.Z	IR180	PIV114
Y0ax	Current version of the application according to standard - Beta version enable	Bool				R	CurrVer.IsBeta	DI223	BV236
Y0ax	Current version of the application according to standard - D version of the application	UInt				R	CurrVer.D	IR181	PIV115
Y0ax	Application version	UDInt				R	GeneralMng.OsVersion[1]	IR182	PIV116
Y0ax	Application version	UDInt				R	GeneralMng.OsVersion[2]	IR184	PIV117
Y0ax	Application version	UDInt				R	GeneralMng.OsVersion[3]	IR186	PIV118
Y0ay	Type of board (12 = c.pCO, 13 = uPC, 14 = c.pCO mini) and size (10 = Large, 11 = Medium, 12 = Small, 13 = XL, 20 = Basic, 21 = Enhanced, 22 = High End)	UDInt				R	BoardTyp[1]	IR188	PIV119
Y0ay	Type of board (12 = c.pCO, 13 = uPC, 14 = c.pCO mini) and size (10 = Large, 11 = Medium, 12 = Small, 13 = XL, 20 = Basic, 21 = Enhanced, 22 = High End)	UDInt				R	BoardTyp[2]	IR190	PIV120
Y0ay	Automatically generated	UDInt				R	MemWritingsNo	IR192	PIV121
Y0ay	Program speed in ms	UInt		ms		R	PrgCycleMs	IR194	PIV122
Y0ay	Program speed in CyclePerSecond	Real				R	CyclesPerSecond	IR195	AV130
Y0ay	PollingTime	UDInt		s		R	PollingTime	IR196	PIV123

6.2 SET menu in main mask

Mask code	Description	Type	Default	UoM	Range	R/W	Variable Name	BMS	BacNet
Z00a	Temperature setpoint	Real		°C		R	TempRegSetP	IR1	AV1
Z00a	Temperature regulation probe type	USInt	1			R	AppTempReg	IR2	PIV1
Z00a	Actual room temperature setpoint	Real		°C		R	CurrRoomTempSetP_Val	IR3	AV2
Z00a	Actual humidity setpoint	Real				R	CurrHumSetP_Val	IR4	AV3
Z00a	Current air quality setpoint	Real				R	CurrAirQualitySetP_Val	IR5	AV4
Z00a	Current air quality setpoint	Real				R	VOC_QualitySetP_Val	IR6	AV5
Z00b	Air flow current setpoint	Real		m3h		R	CurrAirFlwSetP_Val	IR7	AV6
Z00b	Current air flow setpoint	Real		m3h		R	CurrRetAirFlwSetP_Val	IR8	AV7
Z00b	VAV supply setpoint	Real		Pa		R	VAV_SupplySet	IR9	AV8
Z00b	CAV supply setpoint	Real		m3h		R	CAV_SupplySet	IR10	AV9
Z00b	Unit of measure for user interface	DInt	6			R	Uom_Msk		
Z00b	VAV return setpoint	Real		Pa		R	VAV_RetSet	IR11	AV10
Z00b	CAV return setpoint	Real		m3h		R	CAV_RetSet	IR12	AV11
Z00b	Unit of measure for user interface	DInt	6			R	Uom_Msk		
Z001	Supply temperature setpoint - Economy	Real	22.0	°C	SupplyMinSet...SupplyMaxSet	R/W	UnitSetP.SupplyTempSetP.Economy	HR1	AV12
Z002	Supply temperature setpoint - PreComfort	Real	22.0	°C	SupplyMinSet...SupplyMaxSet	R/W	UnitSetP.SupplyTempSetP.PreComfort	HR2	AV13
Z003	Supply temperature setpoint - Comfort	Real	22.0	°C	SupplyMinSet...SupplyMaxSet	R/W	UnitSetP.SupplyTempSetP.Comfort	HR3	AV14
Z004	Room temperature setpoint - Economy	Real	22.0	°C	SetMinLimit...SetMaxLimit	R/W	UnitSetP.RoomTempSetP.Economy	HR4	AV15
Z005	Room temperature setpoint - PreComfort	Real	22.0	°C	SetMinLimit...SetMaxLimit	R/W	UnitSetP.RoomTempSetP.PreComfort	HR5	AV16
Z006	Room temperature setpoint - Comfort	Real	22.0	°C	SetMinLimit...SetMaxLimit	R/W	UnitSetP.RoomTempSetP.Comfort	HR6	AV17
Z007	Humidity setpoint - Economy	Real	50.0	%rh	0.0...100.0	R/W	UnitSetP.HumSetP.Economy	HR7	AV18
Z008	Humidity setpoint - PreComfort	Real	50.0	%rh	0.0...100.0	R/W	UnitSetP.HumSetP.PreComfort	HR8	AV19
Z009	Humidity setpoint - Comfort	Real	50.0	%rh	0.0...100.0	R/W	UnitSetP.HumSetP.Comfort	HR9	AV20
Z010	CO2 air quality setpoint - Economy	Real	900.0	ppm	0.0...9999.9	R/W	UnitSetP.AirQualitySetP.Economy	HR10	AV21
Z011	CO2 air quality setpoint - PreComfort	Real	900.0	ppm	0.0...9999.9	R/W	UnitSetP.AirQualitySetP.PreComfort	HR11	AV22
Z012	CO2 air quality setpoint - Comfort	Real	900.0	ppm	0.0...9999.9	R/W	UnitSetP.AirQualitySetP.Comfort	HR12	AV23
Z013	VOC air quality setpoint - Economy	Real	70.0	%	0.0...100.0	R/W	UnitSetP.VOC_QualitySetP.Economy	HR13	AV24
Z014	VOC air quality setpoint - PreComfort	Real	60.0	%	0.0...100.0	R/W	UnitSetP.VOC_QualitySetP.PreComfort	HR14	AV25
Z015	VOC air quality setpoint - Comfort	Real	50.0	%	0.0...100.0	R/W	UnitSetP.VOC_QualitySetP.Comfort	HR15	AV26
Z016	Air flow setpoint - Economy	Real	60.0	%	MinFanPwr...100.0	R/W	UnitSetP.AirFlwSetP.Economy	HR16	AV27
Z017	Air flow setpoint - PreComfort	Real	70.0	%	MinFanPwr...100.0	R/W	UnitSetP.AirFlwSetP.PreComfort	HR17	AV28
Z018	Air flow setpoint - Comfort	Real	80.0	%	MinFanPwr...100.0	R/W	UnitSetP.AirFlwSetP.Comfort	HR18	AV29
Z019	Return air flow setpoint - Economy	Real	60.0		MinFanPwr...100.0	R/W	UnitSetP.RetAirFlwSetP.Economy	HR19	AV30
Z020	Return air flow setpoint - PreComfort	Real	60.0		MinFanPwr...100.0	R/W	UnitSetP.RetAirFlwSetP.PreComfort	HR20	AV31
Z021	Return air flow setpoint - Comfort	Real	60.0		MinFanPwr...100.0	R/W	UnitSetP.RetAirFlwSetP.Comfort	HR21	AV32
Z00c	Index of the zone	UInt	38		0...999	R/W	GeneralMng.Zone_TZ	HR22	PIV2
Z00c	Writing of new day value enabled	UInt			1...31	R/W	DayIn	HR23	PIV3
Z00c	Writing of new month value enabled	UInt			1...12	R/W	MonthIn	HR24	PIV4
Z00c	Writing of new year value enabled	UInt			0...99	R/W	YearIn	HR25	PIV5
Z00c	Day of week	UInt				R	DayOfWeek	IR13	PIV6
Z00c	Writing of new Hour value enabled	UInt			0...24	R/W	HourIn	HR26	PIV7
Z00c	Writing of new minute value enabled	UInt		min	0...59	R/W	MinuteIn	HR27	PIV8
Z00c	Writing of new seconds value enabled	UInt			0...59	R/W	SecondIn	HR28	PIV9
Z00c	Scheduler active	Bool				R	SchedActive	DI1	BV1
Z00c		Bool				R	Scheduler_OnOffUnit.Scheduler_1.DaySchedActive	DI2	BV2
Z00c		Bool				R	Scheduler_OnOffUnit.Scheduler_1.VacationActive	DI3	BV3
Z00c		Bool				R	Scheduler_OnOffUnit.Scheduler_1.SpecDayActive	DI4	BV4
Z00c	Unit status currently active	USInt				R	CurrUnitStatus	IR14	PIV10
Z00d		DInt			0...6	R/W	Scheduler_OnOffUnit.Scheduler_1.Day	HR29	IV1
Z00d		DInt			0...7	R/W	Scheduler_OnOffUnit.Scheduler_1.CopyTo_Day	HR31	IV2
Z00d		USInt			0...1	R/W	Scheduler_OnOffUnit.Scheduler_1.EnDayCopy	HR33	PIV11
Z00d	Daily event enabled	Bool			0...1	R/W	Scheduler_OnOffUnit.Scheduler_1.Event_Msk[0].Enabled	C1	BV5
Z00d	Starting time of the daily event (hour)	USInt			0...23	R/W	Scheduler_OnOffUnit.Scheduler_1.Event_Msk[0].Hours	HR34	PIV12
Z00d	Starting time of the daily event (minute)	USInt			0...59	R/W	Scheduler_OnOffUnit.Scheduler_1.Event_Msk[0].Mins	HR35	PIV13
Z00d	Unit status of the daily event (0=OFF; 1=ECONOMY; 2=PRE-COMFORT; 3=COMFORT)	USInt			0...3	R/W	Scheduler_OnOffUnit.Scheduler_1.Event_Msk[0].UnitStatus	HR36	PIV14
Z00d	Daily event enabled	Bool			0...1	R/W	Scheduler_OnOffUnit.Scheduler_1.Event_Msk[1].Enabled	C2	BV6
Z00d	Starting time of the daily event (hour)	USInt			0...23	R/W	Scheduler_OnOffUnit.Scheduler_1.Event_Msk[1].Hours	HR37	PIV15
Z00d	Starting time of the daily event (minute)	USInt			0...59	R/W	Scheduler_OnOffUnit.Scheduler_1.Event_Msk[1].Mins	HR38	PIV16
Z00d	Unit status of the daily event (0=OFF; 1=ECONOMY; 2=PRE-COMFORT; 3=COMFORT)	USInt			0...3	R/W	Scheduler_OnOffUnit.Scheduler_1.Event_Msk[1].UnitStatus	HR39	PIV17
Z00d	Daily event enabled	Bool			0...1	R/W	Scheduler_OnOffUnit.Scheduler_1.Event_Msk[2].Enabled	C3	BV7
Z00d	Starting time of the daily event (hour)	USInt			0...23	R/W	Scheduler_OnOffUnit.Scheduler_1.Event_Msk[2].Hours	HR40	PIV18

Mask code	Description	Type	Default	UoM	Range	R/W	Variable Name	BMS	BacNet
Z00d	Starting time of the daily event (minute)	USInt			0...59	R/W	Scheduler_OnOffUnit.Scheduler_1.Event_Msk[2].Mins	HR41	PIV19
Z00d	Unit status of the daily event (0=OFF; 1=ECONOMY; 2=PRE-COMFORT; 3=COMFORT)	USInt			0...3	R/W	Scheduler_OnOffUnit.Scheduler_1.Event_Msk[2].UnitStatus	HR42	PIV20
Z00d	Daily event enabled	Bool			0...1	R/W	Scheduler_OnOffUnit.Scheduler_1.Event_Msk[3].Enabled	C4	BV8
Z00d	Starting time of the daily event (hour)	USInt			0...23	R/W	Scheduler_OnOffUnit.Scheduler_1.Event_Msk[3].Hours	HR43	PIV21
Z00d	Starting time of the daily event (minute)	USInt			0...59	R/W	Scheduler_OnOffUnit.Scheduler_1.Event_Msk[3].Mins	HR44	PIV22
Z00d	Unit status of the daily event (0=OFF; 1=ECONOMY; 2=PRE-COMFORT; 3=COMFORT)	USInt			0...3	R/W	Scheduler_OnOffUnit.Scheduler_1.Event_Msk[3].UnitStatus	HR45	PIV23
Z00d	Messages to be displayed for daily events	USInt				R	Scheduler_OnOffUnit.Scheduler_1.DaysSchedMsg	IR15	PIV24
Z00d		USInt			0...1	R/W	Scheduler_OnOffUnit.Scheduler_1.SaveData	HR46	PIV25
Z00e	Holiday period enabled	Bool	FALSE		0...1	R/W	Scheduler_OnOffUnit.Scheduler_1.VacationsSched[0].Enabled	C5	BV9
Z00e	First day of period	USInt	1		1...31	R/W	Scheduler_OnOffUnit.Scheduler_1.VacationsSched[0].StartDay	HR47	PIV26
Z00e	First month of period	USInt	1		1...12	R/W	Scheduler_OnOffUnit.Scheduler_1.VacationsSched[0].StartMonth	HR48	PIV27
Z00e	Last day of period	USInt	2		1...31	R/W	Scheduler_OnOffUnit.Scheduler_1.VacationsSched[0].EndDay	HR49	PIV28
Z00e	Last month of period	USInt	1		1...12	R/W	Scheduler_OnOffUnit.Scheduler_1.VacationsSched[0].EndMonth	HR50	PIV29
Z00e	Unit status of the holiday period (0=OFF; 1=ECONOMY; 2=PRE-COMFORT; 3=COMFORT)	USInt	0		0...3	R/W	Scheduler_OnOffUnit.Scheduler_1.VacationsSched[0].UnitStatus	HR51	PIV30
Z00e	Holiday period enabled	Bool	FALSE		0...1	R/W	Scheduler_OnOffUnit.Scheduler_1.VacationsSched[1].Enabled	C6	BV10
Z00e	First day of period	USInt	1		1...31	R/W	Scheduler_OnOffUnit.Scheduler_1.VacationsSched[1].StartDay	HR52	PIV31
Z00e	First month of period	USInt	1		1...12	R/W	Scheduler_OnOffUnit.Scheduler_1.VacationsSched[1].StartMonth	HR53	PIV32
Z00e	Last day of period	USInt	2		1...31	R/W	Scheduler_OnOffUnit.Scheduler_1.VacationsSched[1].EndDay	HR54	PIV33
Z00e	Last month of period	USInt	1		1...12	R/W	Scheduler_OnOffUnit.Scheduler_1.VacationsSched[1].EndMonth	HR55	PIV34
Z00e	Unit status of the holiday period (0=OFF; 1=ECONOMY; 2=PRE-COMFORT; 3=COMFORT)	USInt	0		0...3	R/W	Scheduler_OnOffUnit.Scheduler_1.VacationsSched[1].UnitStatus	HR56	PIV35
Z00e	Holiday period enabled	Bool	FALSE		0...1	R/W	Scheduler_OnOffUnit.Scheduler_1.VacationsSched[2].Enabled	C7	BV11
Z00e	First day of period	USInt	1		1...31	R/W	Scheduler_OnOffUnit.Scheduler_1.VacationsSched[2].StartDay	HR57	PIV36
Z00e	First month of period	USInt	1		1...12	R/W	Scheduler_OnOffUnit.Scheduler_1.VacationsSched[2].StartMonth	HR58	PIV37
Z00e	Last day of period	USInt	2		1...31	R/W	Scheduler_OnOffUnit.Scheduler_1.VacationsSched[2].EndDay	HR59	PIV38
Z00e	Last month of period	USInt	1		1...12	R/W	Scheduler_OnOffUnit.Scheduler_1.VacationsSched[2].EndMonth	HR60	PIV39
Z00e	Unit status of the holiday period (0=OFF; 1=ECONOMY; 2=PRE-COMFORT; 3=COMFORT)	USInt	0		0...3	R/W	Scheduler_OnOffUnit.Scheduler_1.VacationsSched[2].UnitStatus	HR61	PIV40
Z00e	Messages to be displayed for vacation periods	USInt				R	Scheduler_OnOffUnit.Scheduler_1.VacationsMsg	IR16	PIV41
Z00f	Special day enabled	Bool	FALSE		0...1	R/W	Scheduler_OnOffUnit.Scheduler_1.SpecDaysSched[0].Enabled	C8	BV12
Z00f	Special day	USInt	1		1...31	R/W	Scheduler_OnOffUnit.Scheduler_1.SpecDaysSched[0].SpecialDay	HR62	PIV42
Z00f	Special month	USInt	1		1...12	R/W	Scheduler_OnOffUnit.Scheduler_1.SpecDaysSched[0].SpecialMonth	HR63	PIV43
Z00f	Unit status of the special day (0=OFF; 1=ECONOMY; 2=PRE-COMFORT; 3=COMFORT; 4=AUTO)	USInt	0		0...4	R/W	Scheduler_OnOffUnit.Scheduler_1.SpecDaysSched[0].UnitStatus	HR64	PIV44
Z00f	Special day enabled	Bool	FALSE		0...1	R/W	Scheduler_OnOffUnit.Scheduler_1.SpecDaysSched[1].Enabled	C9	BV13
Z00f	Special day	USInt	1		1...31	R/W	Scheduler_OnOffUnit.Scheduler_1.SpecDaysSched[1].SpecialDay	HR65	PIV45
Z00f	Special month	USInt	1		1...12	R/W	Scheduler_OnOffUnit.Scheduler_1.SpecDaysSched[1].SpecialMonth	HR66	PIV46
Z00f	Unit status of the special day (0=OFF; 1=ECONOMY; 2=PRE-COMFORT; 3=COMFORT; 4=AUTO)	USInt	0		0...4	R/W	Scheduler_OnOffUnit.Scheduler_1.SpecDaysSched[1].UnitStatus	HR67	PIV47
Z00f	Special day enabled	Bool	FALSE		0...1	R/W	Scheduler_OnOffUnit.Scheduler_1.SpecDaysSched[2].Enabled	C10	BV14
Z00f	Special day	USInt	1		1...31	R/W	Scheduler_OnOffUnit.Scheduler_1.SpecDaysSched[2].SpecialDay	HR68	PIV48
Z00f	Special month	USInt	1		1...12	R/W	Scheduler_OnOffUnit.Scheduler_1.SpecDaysSched[2].SpecialMonth	HR69	PIV49
Z00f	Unit status of the special day (0=OFF; 1=ECONOMY; 2=PRE-COMFORT; 3=COMFORT; 4=AUTO)	USInt	0		0...4	R/W	Scheduler_OnOffUnit.Scheduler_1.SpecDaysSched[2].UnitStatus	HR70	PIV50
Z00f	Special day enabled	Bool	FALSE		0...1	R/W	Scheduler_OnOffUnit.Scheduler_1.SpecDaysSched[3].Enabled	C11	BV15

Mask code	Description	Type	Default	UoM	Range	R/W	Variable Name	BMS	BacNet
Z00f	Special day	USInt	1		1...31	R/W	Scheduler_OnOffUnit.Scheduler_1.SpecDaysSched[3].SpecialDay	HR71	PIV51
Z00f	Special month	USInt	1		1...12	R/W	Scheduler_OnOffUnit.Scheduler_1.SpecDaysSched[3].SpecialMonth	HR72	PIV52
Z00f	Unit status of the special day (0=OFF; 1=ECONOMY; 2=PRE-COMFORT; 3=COMFORT; 4=AUTO)	USInt	0		0...4	R/W	Scheduler_OnOffUnit.Scheduler_1.SpecDaysSched[3].UnitStatus	HR73	PIV53
Z00f	Special day enabled	Bool	FALSE		0...1	R/W	Scheduler_OnOffUnit.Scheduler_1.SpecDaysSched[4].Enabled	C12	BV16
Z00f	Special day	USInt	1		1...31	R/W	Scheduler_OnOffUnit.Scheduler_1.SpecDaysSched[4].SpecialDay	HR74	PIV54
Z00f	Special month	USInt	1		1...12	R/W	Scheduler_OnOffUnit.Scheduler_1.SpecDaysSched[4].SpecialMonth	HR75	PIV55
Z00f	Unit status of the special day (0=OFF; 1=ECONOMY; 2=PRE-COMFORT; 3=COMFORT; 4=AUTO)	USInt	0		0...4	R/W	Scheduler_OnOffUnit.Scheduler_1.SpecDaysSched[4].UnitStatus	HR76	PIV56
Z00f	Special day enabled	Bool	FALSE		0...1	R/W	Scheduler_OnOffUnit.Scheduler_1.SpecDaysSched[5].Enabled	C13	BV17
Z00f	Special day	USInt	1		1...31	R/W	Scheduler_OnOffUnit.Scheduler_1.SpecDaysSched[5].SpecialDay	HR77	PIV57
Z00f	Special month	USInt	1		1...12	R/W	Scheduler_OnOffUnit.Scheduler_1.SpecDaysSched[5].SpecialMonth	HR78	PIV58
Z00f	Unit status of the special day (0=OFF; 1=ECONOMY; 2=PRE-COMFORT; 3=COMFORT; 4=AUTO)	USInt	0		0...4	R/W	Scheduler_OnOffUnit.Scheduler_1.SpecDaysSched[5].UnitStatus	HR79	PIV59
Z00f	Messages to be displayed for special days	USInt				R	Scheduler_OnOffUnit.Scheduler_1.SpecDaysMsg	IR17	PIV60
Z021	Language	DInt	0		0...4	R/W	LangChange	HR80	IV3

6.3 MODE menu in main mask

Mask code	Description	Type	Default	UoM	Range	R/W	Variable Name	BMS	BacNet
X00a	Current mode	USInt	0		0...MaxSetTyp	R/W	SetTyp	HR82	PIV124
X00a	Machine status	USInt				R	OnOffStatus	IR198	PIV125
X00b	Boost function enable	Bool	FALSE			R/W	En_Boost_Function_Msk	C344	BV1433

6.4 HEATING menu in main menu

Mask code	Description	Type	Default	UoM	Range	R/W	Variable Name	BMS	BacNet
-	Heating device - Hardware value	Bool				R	Heat_1.HW_Val	DI45	BV58
-	Heating device - Value	Bool				R	Heat_1.Ctrl	DI46	BV59
-	Hours counter heating device	UDInt				R	HC_Heat_1.Hrs	IR225	PIV189
A001	Hours counter heating device	UDInt	0		0...999999	R/W	HC_Heat_1.MaintThrsh	HR169	PIV190
A002	Hours counter heating device	Bool			0...1	R/W	HC_Heat_1.Res	C24	BV248
A003	Heating device - Manual value	USInt			0...2	R/W	Heat_1.Man	HR171	PIV191
A004	Modulating heating output - Manual mode analog output	USInt			0...101	R/W	HeatVlv.Man	HR172	PIV192
-	Heating device 2nd step - Hardware value	Bool				R	Heat_2.HW_Val	DI53	BV66
-	Heating device 2nd step - Value	Bool				R	Heat_2.Ctrl	DI54	BV67
-	Hours counter heating 2nd step	UDInt				R	HC_Heat_2.Hrs	IR227	PIV193
A005	Hours counter heating 2nd step	UDInt	0		0...999999	R/W	HC_Heat_2.MaintThrsh	HR173	PIV194
A006	Hours counter heating 2nd step	Bool			0...1	R/W	HC_Heat_2.Res	C25	BV249
A007	Heating device 2nd step - Manual value	USInt			0...2	R/W	Heat_2.Man	HR175	PIV195
-	Preheater - Hardware value	Bool				R	PreHeaterPump.HW_Val	DI61	BV74
-	Preheater - Value	Bool				R	PreHeaterPump.Ctrl	DI62	BV75
-	Hours counter preheating	UDInt				R	HC_PreHeat.Hrs	IR229	PIV196
A008	Hours counter preheating	UDInt	0		0...999999	R/W	HC_PreHeat.MaintThrsh	HR176	PIV197
A009	Hours counter preheating	Bool			0...1	R/W	HC_PreHeat.Res	C26	BV250
A010	Preheater - Manual value	USInt			0...2	R/W	PreHeaterPump.Man	HR178	PIV198
A011	Modulating preheating output - Manual mode analog output	USInt			0...101	R/W	ModulPreHeat.Man	HR179	PIV199
-	Reheating device - Hardware value	Bool				R	ReHeat.HW_Val	DI63	BV76
-	Reheating device - Value	Bool				R	ReHeat.Ctrl	DI64	BV77
-	Hours counter reheating	UDInt				R	HC_ReHeat.Hrs	IR231	PIV200
A012	Hours counter reheating	UDInt	0		0...999999	R/W	HC_ReHeat.MaintThrsh	HR180	PIV201
A013	Hours counter reheating	Bool			0...1	R/W	HC_ReHeat.Res	C27	BV251
A014	Reheating device - Manual value	USInt			0...2	R/W	ReHeat.Man	HR182	PIV202
A015	Modulating reheating output - Manual mode analog output	USInt			0...101	R/W	ReHeatVlv.Man	HR183	PIV203
-	Heating request	Real				R	Heating_PID_Seq[4]	IR233	AV163
A016	PID Heating regulation - Proportional gain	Real	5.0		0.0...999.9	R/W	DevCfg_PID_Seq_Heat[4].Kp	HR184	AV164
A017	PID Heating regulation - Integral time	UInt	120		0...65535	R/W	DevCfg_PID_Seq_Heat[4].Ti	HR185	PIV204
A018	Minimum heating request	Real	2.0	%	-999.9...999.9	R/W	MainHeatMin	HR186	AV165
A019	Hot water setpoint	Real	40.0	°C	-999.9...999.9	R/W	HW_Set	HR187	AV166
A020	Heating water valve PID - Proportional (Kp)	Real	5.0		0.0...999.9	R/W	PID_HeatHW.Kp	HR188	AV167

A021	Heating water valve PID - Integral (Ti)	UInt	300	s	0...65535	R/W	PID_HeatHW.Ti	HR189	PIV205
A022	Minimum heating request	Real	20.0	%	0.0...100.0	R/W	MainHW_MinPID	HR190	AV168
A023	Water heater antifreeze threshold	Real	10.0	°C	-999.9...999.9	R/W	W_HeatFreezeSet	HR191	AV169
A024	Heating water floating control opening time	UDInt	300	s	10...9999	R/W	HeatVlvOpenTime	HR192	PIV206
A025	Electical heaters power	Real	33.0		0.0...999.9	R/W	HE_Pwr[0]	HR194	AV170
A026	Electical heaters power	Real	33.0		0.0...999.9	R/W	HE_Pwr[1]	HR195	AV171
A027	Electical heaters power	Real	33.0		0.0...999.9	R/W	HE_Pwr[2]	HR196	AV172
A028	Time minimum ON heating device	UInt	60	s	0...65535	R/W	HeatMinOnT	HR197	PIV207
A029	Time minimum OFF heating device	UInt	180	s	0...65535	R/W	HeatMinOffT	HR198	PIV208
A030	Time minimum ON ON heater device	UInt	360	s	0...65535	R/W	HeatMinOnOnSameT	HR199	PIV209
A031	Threshold to switch ON 1st heating device	Real	45.0	%	0.0...100.0	R/W	ThrshOnHeat_1	HR200	AV173
A032	Threshold to switch OFF 1st heating device	Real	0.0	%	-999.9...999.9	R/W	ThrshOffHeat_1	HR201	AV174
A033	Threshold to switch ON 2nd heating device	Real	90.0	%	0.0...100.0	R/W	ThrshOnHeat_2	HR202	AV175
A034	Threshold to switch OFF 2nd heating device	Real	45.0	%	-999.9...999.9	R/W	ThrshOffHeat_2	HR203	AV176
-	Heating request	Real				R	Heating_PID_Seq[6]	IR234	AV177
A035	PID Heating regulation - Proportional gain	Real	5.0		-999.9...999.9	R/W	DevCfg_PID_Seq_Heat[6].Kp	HR204	AV178
A036	PID Heating regulation - Integral time	UInt	120		0...65535	R/W	DevCfg_PID_Seq_Heat[6].Ti	HR205	PIV210
A037	Minimum reheater request	Real	2.0	%	0.0...100.0	R/W	ReHeatMin	HR206	AV179
A038	ReHeater power	Real	50.0		-999.9...999.9	R/W	ReHeatHE_Pwr[0]	HR207	AV180
A039	ReHeater power	Real	50.0		-999.9...999.9	R/W	ReHeatHE_Pwr[1]	HR208	AV181
A040	Time minimum ON reheater device	UInt	60	s	0...65535	R/W	ReHeatMinOnT	HR209	PIV211
A041	Time minimum OFF reheater device	UInt	180	s	0...65535	R/W	ReHeatMinOffT	HR210	PIV212
A042	Time minimum ON ON reheater device	UInt	60	s	0...65535	R/W	ReHeatMinOnOnSameT	HR211	PIV213
A043	Minimum reheater hot water valve	Real	20.0	%	0.0...100.0	R/W	ReHW_MinPID	HR212	AV182
A044	ReHeater floating control opening time	UDInt	300	s	10...9999	R/W	ReHeatVlvOpenTime	HR213	PIV214
-	Preheater request	Real		%		R	AfterPreHeatReq	IR235	AV183
A045	Preheating coil PID - Setpoint	Real	5.0	°C	-999.9...999.9	R/W	PID_PreHeatCoil.SetP	HR215	AV184
A046	Preheating coil PID - Proportional (Kp)	Real	5.0		-999.9...999.9	R/W	PID_PreHeatCoil.Kp	HR216	AV185
A047	Preheating coil PID - Integral (Ti)	UInt	300	s	0...65535	R/W	PID_PreHeatCoil.Ti	HR217	PIV215
A048	Minimum preheater request	Real	2.0		0...999.9	R/W	PreHeatMin	HR218	AV186
A049	Preheater power	Real	50.0		-999.9...999.9	R/W	PreHeatHE_Pwr[0]	HR219	AV187
A050	Preheater power	Real	50.0		-999.9...999.9	R/W	PreHeatHE_Pwr[1]	HR220	AV188
A051	Time minimum ON preheater device	UInt	60	s	0...65535	R/W	PreHeatMinOnT	HR221	PIV216
A052	Time minimum OFF preheater device	UInt	180	s	0...65535	R/W	PreHeatMinOffT	HR222	PIV217
A053	Time minimum ON ON preheater device	UInt	360	s	0...65535	R/W	PreheatMinOnOnSameT	HR223	PIV218
-	Preheater antifreeze request	Real		%		R	PreW_AfreezeReq	IR236	AV189
A054	Preheater setpoint	Real	40.0	°C	-999.9...999.9	R/W	PreHeatSet	HR224	AV190
A055	Preheater PID - Proportional (Kp)	Real	5.0		-999.9...999.9	R/W	PID_PreHeatHW.Kp	HR225	AV191
A056	Preheater PID - Integral (Ti)	UInt	300	s	0...65535	R/W	PID_PreHeatHW.Ti	HR226	PIV219
A057	Minimum preheater hot water valve	Real	20.0	%	0.0...100.0	R/W	PreHW_MinPID	HR227	AV192
A058	Preheater antifreeze threshold	Real	20.0	°C	-999.9...999.9	R/W	W_PreHeatFreezeSet	HR228	AV193
A059	PreHeater floating control opening time	UDInt	300	s	10...9999	R/W	PreHeatVlvOpenTime	HR229	PIV220
A060	Antifreeze procedure minimum external temperature	Real	0.0	°C	-999.9...999.9	R/W	AFreezeExtMinTemp	HR231	AV194
A061	Antifreeze procedure maximum external temperature	Real	6.0	°C	-999.9...999.9	R/W	AFreezeExtMaxTemp	HR232	AV195
A062	Antifreeze procedure minimum time	UInt	10	s	0...65535	R/W	AFreezeHeatMinT	HR233	PIV221
A063	Antifreeze procedure max time	UInt	180	s	0...65535	R/W	AFreezeHeatMaxT	HR234	PIV222
A064	Antifreeze procedure minimum opening	Real	20.0	%	-999.9...999.9	R/W	AFreezeHeatMin	HR235	AV196
A065	Antifreeze procedure maximum opening	Real	80.0	%	-999.9...999.9	R/W	AFreezeHeatMax	HR236	AV197
A066	On time pump in off mode	Int	180	min	0...9999	R/W	OnT_Pmp_inOff	HR237	IV23
A067	Off time pump in off mode	Int	180	min	0...9999	R/W	OffT_Pmp_inOff	HR238	IV24
A068	Low supply temperature threshold	Real	10.0	°C	-999.9...999.9	R/W	LowSupplyTempThrsh	HR239	AV198
A069	Low supply temperature alarm delay time at unit in run mode	UInt	300	s	0...65535	R/W	LowTempAlrmDT_Run	HR240	PIV223
A070	Boost function setpoint in heating	Real	50.0	%	0.0...100.0	R/W	MainHeatMin_Boost	HR1074	AV1447

6.5 COOLING menu in main menu

Mask code	Description	Type	Default	UoM	Range	R/W	Variable Name	BMS	BacNet
-	Cooling device - Hardware value	Bool				R	Cool_1.HW_Val	DI47	BV60
-	Cooling device - Value	Bool				R	Cool_1.Ctrl	DI48	BV61
-	Hours counter cooling	UDInt				R	HC_Cool_1.Hrs	IR215	PIV156
B001	Hours counter cooling	UDInt	0		0...999999	R/W	HC_Cool_1.MaintThrsh	HR107	PIV157
B002	Hours counter cooling	Bool			0...1	R/W	HC_Cool_1.Res	C20	BV244
B003	Cooling device - Manual value	USInt			0...2	R/W	Cool_1.Man	HR109	PIV158
B004	Modulating cooling output - Manual mode analog output	USInt			0...101	R/W	CoolVlv.Man	HR110	PIV159
-	Cooling device 2nd step - Hardware value	Bool				R	Cool_2.HW_Val	DI51	BV64
-	Cooling device 2nd step - Value	Bool				R	Cool_2.Ctrl	DI52	BV65
-	Hours counter cooling 2nd step	UDInt				R	HC_Cool_2.Hrs	IR217	PIV160
B005	Hours counter cooling 2nd step	UDInt	0		0...999999	R/W	HC_Cool_2.MaintThrsh	HR111	PIV161
B006	Hours counter cooling 2nd step	Bool			0...1	R/W	HC_Cool_2.Res	C21	BV245
B007	Cooling device 2nd step - Manual value	USInt			0...2	R/W	Cool_2.Man	HR113	PIV162
-	Cooling request	Real				R	Cooling_PID_Seq[4]	IR219	AV133
B008	PID Cooling regulation - Proportional gain	Real	5.0		-999.9...999.9	R/W	DevCfg_PID_Seq_Cool[4].Kp	HR114	AV134
B009	PID Cooling regulation - Integral time	UInt			0...65535	R/W	DevCfg_PID_Seq_Cool[4].Ti	HR115	PIV163
B010	Minimum cooling request	Real	2.0	%	0.0...100.0	R/W	MainCoolMin	HR116	AV135
B011	Time minimum ON ccooling device	UInt	60	s	0...65535	R/W	CoolMinOnT	HR117	PIV164

B012	Time minimum OFF cooling device	UInt	120	s	0...65535	R/W	CoolMinOffT	HR118	PIV165
B013	Time minimum ON ON cooling device	UInt	300	s	0...65535	R/W	CoolMinOnOnSameT	HR119	PIV166
B014	Block cooling in mode	USInt	0		0...2	R/W	CoolIDX_ResTyp	HR120	PIV167
B015	Threshold to switch ON 1st cooling device	Real	50.0	%	0.0...100.0	R/W	ThrshOnCool_1	HR121	AV136
B016	Threshold to switch OFF 1st cooling device	Real	0.0	%	-999.9...999.9	R/W	ThrshOffCool_1	HR122	AV137
B017	Threshold to switch ON 2nd cooling device	Real	90.0	%	0.0...100.0	R/W	ThrshOnCool_2	HR123	AV138
B018	Threshold to switch OFF 2nd cooling device	Real	45.0	%	-999.9...999.9	R/W	ThrshOffCool_2	HR124	AV139
B019	Minimum cooling water coil	Real	20.0	%	0.0...100.0	R/W	MainCW_MinPID	HR125	AV140
B020	Cooling floating control opening time	UDInt	300	s	10...9999	R/W	CoolVivOpenTime	HR126	PIV168
B021	Boost function setpoint in Cooling	Real	50.0	%	0.0...100.0	R/W	MainCoolMin_Boost	HR1073	AV1448

6.6 COOL/HEAT menu in main menu

Mask code	Description	Type	Default	UoM	Range	R/W	Variable Name	BMS	BacNet
-	Reverse device - Hardware value	Bool				R	RevOut_1.HW_Val	DI228	BV264
-	Reverse device - Value	Bool				R	RevOut_1.Ctrl	DI65	BV78
-	Hours counter reverse step	UDInt				R	HC_Rev_1.Hrs	IR264	PIV260
C001	Hours counter reverse step	UDInt	0		0...999999	R/W	HC_Rev_1.MaintThrsh	HR322	PIV261
C002	Hours counter reverse step	Bool			0...1	R/W	HC_Rev_1.Res	C37	BV265
C003	Reverse device - Manual value	USInt			0...2	R/W	RevOut_1.Man	HR324	PIV262
C004	Modulating reverse output - Manual mode analog output	USInt			0...101	R/W	RevOutViv.Man	HR325	PIV263
-	Reverse device 2nd step - Hardware value	Bool				R	RevOut_2.HW_Val	DI229	BV266
-	Reverse device 2nd step - Value	Bool				R	RevOut_2.Ctrl	DI66	BV79
-	Hours counter reverse 2nd step	UDInt				R	HC_Rev_2.Hrs	IR266	PIV264
C005	Hours counter reverse 2nd step	UDInt	0		0...999999	R/W	HC_Rev_2.MaintThrsh	HR326	PIV265
C006	Hours counter reverse 2nd step	Bool			0...1	R/W	HC_Rev_2.Res	C38	BV267
C007	Reverse device 2nd step - Manual value	USInt			0...2	R/W	RevOut_2.Man	HR328	PIV266
-	Compressor 1 circuit 1 - Value	Bool				R	Comp1_Circ1.Ctrl	DI110	BV123
-	Hours counter compressor 1	UDInt				R	HC_CompRotor_1.Hrs	IR268	PIV267
C008	Hours counter compressor 1	UDInt	0		0...999999	R/W	HC_CompRotor_1.MaintThrsh	HR329	PIV268
C009	Hours counter compressor 1	Bool			0...1	R/W	HC_CompRotor_1.Res	C39	BV268
C010	Compressor 1 circuit 1 - Manual value	USInt			0...2	R/W	Comp1_Circ1.Man	HR331	PIV269
C011		USInt			0...101	R/W	ManBLDC_Circ1	HR332	PIV270
-	Compressor 2 circuit 1 - Value	Bool				R	Comp2_Circ1.Ctrl	DI112	BV125
-	Hours counter compressor 2 circuit 1	UDInt				R	HC_Comp2_Circ1.Hrs	IR270	PIV271
C012	Hours counter compressor 2 circuit 1	UDInt	0		0...999999	R/W	HC_Comp2_Circ1.MaintThrsh	HR333	PIV272
C013	Hours counter compressor 2 circuit 1	Bool			0...1	R/W	HC_Comp2_Circ1.Res	C40	BV269
C014	Compressor 2 circuit 1 - Manual value	USInt			0...2	R/W	Comp2_Circ1.Man	HR335	PIV273
-	Compressor 3 circuit 1 - Value	Bool				R	Comp3_Circ1.Ctrl	DI114	BV127
-	Hours counter compressor 3 circuit 1	UDInt				R	HC_Comp3_Circ1.Hrs	IR272	PIV274
C015	Hours counter compressor 3 circuit 1	UDInt	0		0...999999	R/W	HC_Comp3_Circ1.MaintThrsh	HR336	PIV275
C016	Hours counter compressor 3 circuit 1	Bool			0...1	R/W	HC_Comp3_Circ1.Res	C41	BV270
C017	Compressor 3 circuit 1 - Manual value	USInt			0...2	R/W	Comp3_Circ1.Man	HR338	PIV276
-	Compressor 2 circuit 1 - Value	Bool				R	Comp2_Circ1.Ctrl	DI112	BV125
-	Hours counter compressor 2	UDInt				R	HC_CompRotor_2.Hrs	IR274	PIV277
C018	Hours counter compressor 2	UDInt	0		0...999999	R/W	HC_CompRotor_2.MaintThrsh	HR339	PIV278
C019	Hours counter compressor 2	Bool			0...1	R/W	HC_CompRotor_2.Res	C42	BV271
C020	Compressor 1 circuit 2 - Manual value	USInt			0...2	R/W	Comp1_Circ2.Man	HR341	PIV279
C021		USInt			0...101	R/W	ManBLDC_Circ2	HR342	PIV280
-	Compressor 2 circuit 2 - Value	Bool				R	Comp2_Circ2.Ctrl	DI118	BV131
-	Hours counter compressor 2 circuit 2	UDInt				R	HC_Comp2_Circ2.Hrs	IR276	PIV281
C022	Hours counter compressor 2 circuit 2	UDInt	0		0...999999	R/W	HC_Comp2_Circ2.MaintThrsh	HR343	PIV282
C023	Hours counter compressor 2 circuit 2	Bool			0...1	R/W	HC_Comp2_Circ2.Res	C43	BV272
C024	Compressor 2 circuit 2 - Manual value	USInt			0...2	R/W	Comp2_Circ2.Man	HR345	PIV283
-	Compressor 3 circuit 2 - Value	Bool				R	Comp3_Circ2.Ctrl	DI120	BV133
-	Hours counter compressor 3 circuit 2	UDInt				R	HC_Comp3_Circ2.Hrs	IR278	PIV284
C025	Hours counter compressor 3 circuit 2	UDInt	0		0...999999	R/W	HC_Comp3_Circ2.MaintThrsh	HR346	PIV285
C026	Hours counter compressor 3 circuit 2	Bool			0...1	R/W	HC_Comp3_Circ2.Res	C44	BV273
C027	Compressor 3 circuit 2 - Manual value	USInt			0...2	R/W	Comp3_Circ2.Man	HR348	PIV286
-	Compressor 1 circuit 3 - Value	Bool				R	Comp1_Circ3.Ctrl	DI122	BV135
-	Hours counter compressor 3	UDInt				R	HC_CompRotor_3.Hrs	IR280	PIV287
C028	Hours counter compressor 3	UDInt	0		0...999999	R/W	HC_CompRotor_3.MaintThrsh	HR349	PIV288
C029	Hours counter compressor 3	Bool			0...1	R/W	HC_CompRotor_3.Res	C45	BV274
C030	Compressor 1 circuit 3 - Manual value	USInt			0...2	R/W	Comp1_Circ3.Man	HR351	PIV289
C031		USInt			0...101	R/W	ManBLDC_Circ3	HR352	PIV290
-	Compressor 2 circuit 3 - Value	Bool				R	Comp2_Circ3.Ctrl	DI124	BV137
-	Hours counter compressor 2 circuit 3	UDInt				R	HC_Comp2_Circ3.Hrs	IR282	PIV291
C032	Hours counter compressor 2 circuit 3	UDInt	0		0...999999	R/W	HC_Comp2_Circ3.MaintThrsh	HR353	PIV292
C033	Hours counter compressor 2 circuit 3	Bool			0...1	R/W	HC_Comp2_Circ3.Res	C46	BV275
C034	Compressor 2 circuit 3 - Manual value	USInt			0...2	R/W	Comp2_Circ3.Man	HR355	PIV293
-	Compressor 3 circuit 3 - Value	Bool				R	Comp3_Circ3.Ctrl	DI126	BV139
-	Hours counter compressor 3 circuit 3	UDInt				R	HC_Comp3_Circ3.Hrs	IR284	PIV294
C035	Hours counter compressor 3 circuit 3	UDInt	0		0...999999	R/W	HC_Comp3_Circ3.MaintThrsh	HR356	PIV295
C036	Hours counter compressor 3 circuit 3	Bool			0...1	R/W	HC_Comp3_Circ3.Res	C47	BV276
C037	Compressor 3 circuit 3 - Manual value	USInt			0...2	R/W	Comp3_Circ3.Man	HR358	PIV296
-	Cool/Heat device - Hardware value	Bool				R	CoolHeat.HW_Val	DI55	BV68

-	Cool/Heat device - Value	Bool				R	CoolHeat.Ctrl	DI56	BV69
C038	Cool/Heat device - Manual value	USInt			0...2	R/W	CoolHeat.Man	HR359	PIV297
-	Heating request	Real				R	Heating_PID_Seq[5]	IR286	AV259
C039	PID Heating regulation - Proportional gain	Real	5.0		0.0...999.9	R/W	DevCfg_PID_Seq_Heat[5].Kp	HR360	AV260
C040	PID Heating regulation - Integral time	UInt	120		0...65535	R/W	DevCfg_PID_Seq_Heat[5].Ti	HR361	PIV298
C041	Minimum reverse request	Real	0.0	%	-999.9...999.9	R/W	MainRevMin	HR362	AV261
-	Cooling request	Real				R	Cooling_PID_Seq[5]	IR287	AV262
C042	PID Cooling regulation - Proportional gain	Real	5.0		0.0...999.9	R/W	DevCfg_PID_Seq_Cool[5].Kp	HR363	AV263
C043	PID Cooling regulation - Integral time	UInt	120		0...65535	R/W	DevCfg_PID_Seq_Cool[5].Ti	HR364	PIV299
-	Reverse antifreeze request	Real		%		R	RevW_AfreezeReq	IR288	AV264
C044	Hot water setpoint	Real	40.0	°C	-999.9...999.9	R/W	HW_Set	HR187	AV166
C045	Heating water valve PID - Proportional (Kp)	Real	5.0		0.0...999.9	R/W	PID_HeatHW.Kp	HR188	AV167
C046	Heating water valve PID - Integral (Ti)	UInt	300	s	0...65535	R/W	PID_HeatHW.Ti	HR189	PIV205
C047	Minimum heating request	Real	20.0	%	0.0...100.0	R/W	MainHW_MinPID	HR190	AV168
C048	Water heater antifreeze threshold	Real	10.0	°C	-999.9...999.9	R/W	W_HeatFreezeSet	HR191	AV169
C049	Cooling/Heating floating control opening time	UDInt	300	s	10...9999	R/W	CoolHeatVlvOpenTime	HR365	PIV300
C050	Time minimum ON reverse device	UInt	60	s	0...65535	R/W	RevMinOnT	HR367	PIV301
C051	Time minimum OFF reverse device	UInt	180	s	0...65535	R/W	RevMinOffT	HR368	PIV302
C052	Time minimum ON ON reverse device	UInt	300	s	0...65535	R/W	RevMinOnOnSameT	HR369	PIV303
C053	Threshold to switch ON 1st reverse device	Real	40.0	%	0.0...100.0	R/W	ThrshOnRev_1	HR370	AV265
C054	Threshold to switch OFF 1st reverse device	Real	0.0	%	-999.9...999.9	R/W	ThrshOffRev_1	HR371	AV266
C055	Threshold to switch ON 2nd reverse device	Real	90.0	%	0.0...100.0	R/W	ThrshOnRev_2	HR372	AV267
C056	Threshold to switch OFF 2nd reverse device	Real	60.0	%	-999.9...999.9	R/W	ThrshOffRev_2	HR373	AV268
C057	Antifreeze procedure minimum external temperature	Real	0.0	°C	-999.9...999.9	R/W	AFreezeExtMinTemp	HR231	AV194
C058	Antifreeze procedure maximum external temperature	Real	6.0	°C	-999.9...999.9	R/W	AFreezeExtMaxTemp	HR232	AV195
C059	Antifreeze procedure minimum time	UInt	10	s	0...65535	R/W	AFreezeHeatMinT	HR233	PIV221
C060	Antifreeze procedure max time	UInt	180	s	0...65535	R/W	AFreezeHeatMaxT	HR234	PIV222
C061	Antifreeze procedure minimum opening	Real	20.0	%	-999.9...999.9	R/W	AFreezeHeatMin	HR235	AV196
C062	Antifreeze procedure maximum opening	Real	80.0	%	-999.9...999.9	R/W	AFreezeHeatMax	HR236	AV197
C063	Boost function setpoint in heating	Real	50.0	%	0.0...100.0	R/W	MainHeatMin_Boost	HR1074	AV1447
C064	Boost function setpoint in Cooling	Real	50.0	%	0.0...100.0	R/W	MainCoolMin_Boost	HR1073	AV1448

6.6.1 BLDC GENERAL menu

Mask code	Description	Type	Default	UoM	Range	R/W	Variable Name	BMS	BacNet
Ca01	Type start defrost signal	Bool	FALSE		0...1	R/W	DefrStartTyp	C270	BV520
Ca02	Defrost start threshold	Real	-5.0	°C	-999.9...999.9	R/W	DfrStartThrsh	HR722	AV458
Ca03	Delay to start defrost	UInt	60	s	0...65535	R/W	DT_DfrStart	HR723	PIV418
Ca04	Defrost speed for BLDC	Real	80.0	%	-999.9...999.9	R/W	DfrBLDC_Speed	HR724	AV459
Ca05		Int	240	s	0...9999	R/W	DT_DfrOutEnv	HR725	IV110
Ca06	Type stop defrost signal	Bool	TRUE		0...1	R/W	DefrStopTyp	C271	BV521
Ca07	Defrost stop threshold	Real	40.0	°C	-999.9...999.9	R/W	DfrStopThrsh	HR726	AV460
Ca08	4way valve delta P activation	Real	2.0	bar	-999.9...999.9	R/W	RevVlvDeltaP	HR727	AV461
Ca09	Delay of 4way valve going in defrost changeover	UInt	10	s	0...65535	R/W	DT_BeforeChgOver	HR728	PIV419
Ca10	Delay of 4way valve going out from defrost changeover	UInt	10	s	0...65535	R/W	DT_AfterChgOver	HR729	PIV420
Ca11	Defrost minimum time	UInt	3	min	0...65535	R/W	DfrMinT	HR730	PIV421
Ca12	Defrost max time	UInt	10	min	0...65535	R/W	DfrMaxT	HR731	PIV422
Ca13	Interval time between defrost	UInt	20	s	0...65535	R/W	DfrIntervalT	HR732	PIV423
Ca14	Defrost dripping time	UInt	30	s	0...65535	R/W	DfrDripT	HR733	PIV424
Ca15	Enable oil recovery function	Bool	TRUE		0...1	R/W	En_OilRecov	C272	BV522
Ca16	Minimum request for oil recovery activation	Real	30.0	%	-999.9...999.9	R/W	OilRecovMinReqThrsh	HR734	AV462
Ca17	Minimum compressor speed for oil recovery activation	Real	30.0	rad/s	-999.0...999.0	R/W	OilRecovCompMinSpeedThrsh_rps	HR735	AV463
Ca18	Compressor speed in which the compressor is forced	Real	80.0	rad/s	-999.0...999.0	R/W	OilRecovFrcCompSpeed_rps	HR736	AV464
Ca19	Time before oil recovery activation in which the compressor can run at minimum speed	UInt	60	min	0...65535	R/W	OilRecovWaitT_min	HR737	PIV425
Ca20	Duration of the oil recovery in which the compressor speed is forced	UInt	5	min	0...65535	R/W	OilRecovFrcSpeedT_min	HR738	PIV426
Ca21		Bool	FALSE		0...1	R/W	En_Destabil	C273	BV523
Ca22		Real	30.0	%	-999.9...999.9	R/W	DestabilMinRotSpeedThrsh	HR739	AV465
Ca23		UInt	120	h	0...65535	R/W	DestabilDT_CompOff	HR740	PIV427
Ca24		UInt	10	s	0...65535	R/W	DestabilDT_CompOn	HR741	PIV428
Ca25	Time minimum ON BLDC device	UInt	60	s	0...30000	R/W	MinOnT	HR742	PIV429
Ca26	Time minimum OFF BLDC device	UInt	180	s	0...30000	R/W	MinOffT	HR743	PIV430
Ca27	Time minimum ON ON BLDC device	UInt	300	s	0...30000	R/W	MinOnOnSameT	HR744	PIV431
Ca28	Time minimum ON compressor ON/OFF device	UInt	60	s	0...30000	R/W	CompOnOffMinOnT	HR745	PIV432
Ca29	Time minimum OFF compressor ON/OFF device	UInt	180	s	0...30000	R/W	CompOnOffMinOffT	HR746	PIV433
Ca30	Time minimum ON ON compressor ON/OFF device	UInt	300	s	0...30000	R/W	CompOnOffMinOnOnSameT	HR747	PIV434
Ca31	Configuration heaters for heating - Delay time between two on requests in seconds	Int	60	s	0...9999	R/W	BLDC_RotConf.LdUpT	HR748	IV111
Ca32	Configuration heaters for heating - Delay time between two off requests in seconds	Int	5	s	0...9999	R/W	BLDC_RotConf.LdDwnT	HR749	IV112
Ca33	BLDC low suction pressure custom limit	Real	3.0	bar	0.0...10.0	R/W	CustomLoSuctPThr	HR750	AV466
Ca34	BLDC high discharge pressure custom limit	Real	30.0	bar	0.0...60.0	R/W	CustomHiDscgPThr	HR751	AV467
Ca35	High discharge pressure alarm threshold	Real	38.0	bar	0.0...200.0	R/W	HiP_EnvThrsh	HR752	AV468
Ca36	High discharge pressure alarm delay	UInt	10	s	0...65535	R/W	DT_AlrmHiP	HR753	PIV435

Ca37	Retry counter high discharge pressure	USInt	1		0...255	R/W	AlrmCountHiP	HR754	PIV436
Ca38	Low pressure alarm threshold	Real	2.0	bar	-1.0...100.0	R/W	LoP_EnvThrsh	HR755	AV469
Ca39	Low suction pressure alarm delay	UInt	10	s	0...65535	R/W	DT_AlrmLoP	HR756	PIV437
Ca40	Retry counter low suction pressure	USInt	3		0...255	R/W	AlrmCountLoP	HR757	PIV438
Ca41	Crankcase probe type	USInt	1		0...6	R/W	CrankCasePrbChk	HR758	PIV439
Ca42	Temperature setpoint crankcase heater	Real	2.0	°C	-999.9...999.9	R/W	CrankCaseSet	HR759	AV470

6.6.2 BLDC CIRC.1 menu

Mask code	Description	Type	Default	UoM	Range	R/W	Variable Name	BMS	BacNet
Cb01	Circuit 1 BLDC envelope - Max. permitted Delta P to start up [bar]	Real	0.0	bar	0.0...999.9	R/W	BLDC_Mng_Circ1.CfgEnvCtrl_BLDC.StartUp_MaxDeltaP	HR405	AV281
Cb02	Circuit 1 BLDC envelope - Min. variation of Delta P to considered compressor started [bar]	Real	0.0	bar	0.0...2.0	R/W	BLDC_Mng_Circ1.CfgEnvCtrl_BLDC.StartUp_DeltaPvariation	HR406	AV282
Cb03	Circuit 1 BLDC envelope - Delay to check increasing DeltaP to validate compressor started	Int	0		10...99	R/W	BLDC_Mng_Circ1.CfgEnvCtrl_BLDC.StartUp_DeltaPDelay	HR407	IV45
Cb04	Circuit 1 BLDC envelope - Restart delay after a start failure	Int	0		1...360	R/W	BLDC_Mng_Circ1.CfgEnvCtrl_BLDC.StartUp_RestartDelay	HR408	IV46
Cb05	Circuit 1 BLDC envelope - Max Number of starting attempts	Int	5		0...9	R/W	BLDC_Mng_Circ1.CfgEnvCtrl_BLDC.StartUp_Attempts	HR409	IV47
Cb06	Circuit 1 BLDC envelope - Start up speed	Real	0.0		20.0...120.0	R/W	BLDC_Mng_Circ1.CfgEnvCtrl_BLDC.Speed_StartUpSpeed	HR410	AV283
Cb07	Circuit 1 BLDC envelope - Max speed custom (rps)	Real	0.0		0.0...999.9	R/W	BLDC_Mng_Circ1.CfgEnvCtrl_BLDC.Speed_MaxSpeedRpsCustom	HR411	AV284
Cb08	Circuit 1 BLDC envelope - Min speed custom (rps)	Real	0.0		0.0...99.9	R/W	BLDC_Mng_Circ1.CfgEnvCtrl_BLDC.Speed_MinSpeedRpsCustom	HR412	AV285
Cb09	Circuit 1 BLDC envelope - Max. decrease speed rate (in regulation) [rps/s]	Real	0.0		0.1...9.9	R/W	BLDC_Mng_Circ1.CfgEnvCtrl_BLDC.Speed_MaxDescendSpeedRate	HR413	AV286
Cb10	Circuit 1 BLDC envelope - Max. increase speed rate (in regulation) [rps/s]	Real	0.0		0.1...9.9	R/W	BLDC_Mng_Circ1.CfgEnvCtrl_BLDC.Speed_MaxRisingSpeedRate	HR414	AV287
Cb11	Circuit 1 BLDC envelope - Decrease max speed rate (= max admitted value, to stop compressor) [rps/s]	Real	0.0		0.0...9.9	R/W	BLDC_Mng_Circ1.CfgEnvCtrl_BLDC.Speed_SwitchOffSpeedRate	HR415	AV288
Cb12	Circuit 1 BLDC envelope - Decrease speed rate (to come back inside envelope) [rps/s]	Real	0.0		0.1...9.9	R/W	BLDC_Mng_Circ1.CfgEnvCtrl_BLDC.Speed_MaxSlowdownSpeedRate	HR416	AV289
Cb13	Circuit 1 BLDC envelope - Min speed permitted to control compressor working conditions inside envelop	Real	0.0		0.0...99.9	R/W	BLDC_Mng_Circ1.CfgEnvCtrl_BLDC.Speed_MinSpeedControlled	HR417	AV290
Cb14	Circuit 1 BLDC envelope - Out of envelop alarm delay time	Int	180		0...32000	R/W	BLDC_Mng_Circ1.CfgEnvCtrl_BLDC.CstmEnv_EnvOutMaxT	HR418	IV48
Cb15	Circuit 1 BLDC envelope - Suction sat.temp. threshold from zone 1b (Max120rps) to zone 1c (Max90rps SIAM only)	Real	0.0		0.0...999.9	R/W	BLDC_Mng_Circ1.CfgEnvCtrl_BLDC.CstmEnv_SuctTSaturationThrsZone1b1c	HR419	AV291
Cb16	Circuit 1 BLDC envelope - Max Speed in rps for Zone 1c (SIAM Scroll) N.B.: integer rps!	Int	0		20...120	R/W	BLDC_Mng_Circ1.CfgEnvCtrl_BLDC.CstmEnv_MaxSpeedZone1c	HR420	IV49
Cb17	Circuit 1 BLDC envelope - Enable MOP control in low compression ratio condition	Bool	TRUE		0...1	R/W	BLDC_Mng_Circ1.CfgEnvCtrl_BLDC.CstmEnv_EnMopLowCompRatio	C53	BV282
Cb18	Circuit 1 BLDC envelope - Speed up mode enable to control zones 5, 6, 7, 8 (to come back into zone 1)	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.CfgEnvCtrl_BLDC.CstmEnv_EnSpeedUpMode	C54	BV283
Cb19	Circuit 1 BLDC envelope - Low Delta P alarm delay	Int	0	s	0...32000	R/W	BLDC_Mng_Circ1.CfgEnvCtrl_BLDC.CstmEnv_LowDeltaPAlarmDelay	HR421	IV50
Cb20	Circuit 1 BLDC envelope - Discharge gas temperature control threshold for Zone 1a (SIAM scroll only)	Real	0.0	°C	70.0...350.0	R/W	BLDC_Mng_Circ1.CfgEnvCtrl_BLDC.CstmEnv_DscgTempCtrlThrsZone1a	HR422	AV292
Cb21	Circuit 1 BLDC envelope - Discharge gas limit temperature for Zone 1a (SIAM Scroll only)	Real	0.0	°C	80.0...350.0	R/W	BLDC_Mng_Circ1.CfgEnvCtrl_BLDC.CstmEnv_DscgTempAlarmThrsZone1a	HR423	AV293
	Circuit 1 BLDC information - Envelope Type: Siam compressor	Bool				R	BLDC_Mng_Circ1.Info_BLDC.EnvTyp_SiamComp	DI230	BV284
Cb22	Circuit 1 BLDC envelope - Discharge gas temperature control threshold (SIAM scroll only: for zone 1b)	Real	0.0	°C	70.0...350.0	R/W	BLDC_Mng_Circ1.CfgEnvCtrl_BLDC.CstmEnv_DscgTempCtrlThrs	HR424	AV294
Cb23	Circuit 1 BLDC envelope - Discharge gas limit temperature (SIAM Scroll only: for Zone 1b)	Real	0.0	°C	80.0...350.0	R/W	BLDC_Mng_Circ1.CfgEnvCtrl_BLDC.CstmEnv_DscgTempAlarmThrs	HR425	AV295
Cb24	Circuit 1 BLDC envelope - Action distance from High Temperature limit (to reduce speed rate)	Real	0.0	°C	10.0...999.9	R/W	BLDC_Mng_Circ1.CfgEnvCtrl_BLDC.CstmEnv_DscgTempLimitDistance	HR426	AV296
Cb25	Circuit 1 BLDC envelope - Pause between speed reductions when discharge temp. is over control limit	Int	0		1...300	R/W	BLDC_Mng_Circ1.CfgEnvCtrl_BLDC.CstmEnv_DscgTempPause	HR427	IV51
Cb26	Circuit 1 BLDC envelope - Speed Reduction percentage when discharge temp is over control limit	Real	0.0		0.5...60.0	R/W	BLDC_Mng_Circ1.CfgEnvCtrl_BLDC.CstmEnv_DscgTempSpeedReduction	HR428	AV297
Cb27	Time bebor to switch the High discharge temperature alarm in manual reset	UInt	300	s		R/W	HighDscgT_Man_Time	HR1089	PIV1460

6.6.3 BLDC CIRC.2 menu

Mask code	Description	Type	Default	UoM	Range	R/W	Variable Name	BMS	BacNet
Ch01	Circuit 1 BLDC parameters - Compressor model (PowerPlus)	UInt	32		Limited	R/W	BLDC_Mng_Circ1.MiscMng_BLDC.Mng_PwrpMotTyp	HR429	PIV304
-	Circuit 1 BLDC parameters - Compressor model	UInt	32		0...72	R/W	BLDC_Mng_Circ1.MiscMng_BLDC.Mng_CompTyp	HR430	PIV305

Cc01	Circuit 2 BLDC envelope - Max. permitted Delta P to start up [bar]	Real	0.0	bar	0.0...999.9	R/W	BLDC_Mng_Circ2.CfgEnvCtrl_BLDC.StartUp_MaxDeltaP	HR552	AV356
Cc02	Circuit 2 BLDC envelope - Min. variation of Delta P to considered compressor started [bar]	Real	0.0	bar	0.0...2.0	R/W	BLDC_Mng_Circ2.CfgEnvCtrl_BLDC.StartUp_DeltaPVariation	HR553	AV357
Cc03	Circuit 2 BLDC envelope - Delay to check increasing DeltaP to validate compressor started	Int	0		10...99	R/W	BLDC_Mng_Circ2.CfgEnvCtrl_BLDC.StartUp_DeltaPDelay	HR554	IV92
Cc04	Circuit 2 BLDC envelope - Restart delay after a start failure	Int	0		1...360	R/W	BLDC_Mng_Circ2.CfgEnvCtrl_BLDC.StartUp_RestartDelay	HR555	IV93
Cc05	Circuit 2 BLDC envelope - Max Number of starting attempts	Int	0		0...9	R/W	BLDC_Mng_Circ2.CfgEnvCtrl_BLDC.StartUp_Attempts	HR556	IV94
Cc06	Circuit 2 BLDC envelope - Start up speed	Real	0.0		20.0...120.0	R/W	BLDC_Mng_Circ2.CfgEnvCtrl_BLDC.Speed_StartUpSpeed	HR557	AV358
Cc07	Circuit 2 BLDC envelope - Max speed custom (rps)	Real	0.0		0.0...999.9	R/W	BLDC_Mng_Circ2.CfgEnvCtrl_BLDC.Speed_MaxSpeedRpsCustom	HR558	AV359
Cc08	Circuit 2 BLDC envelope - Min speed custom (rps)	Real	0.0		0.0...99.9	R/W	BLDC_Mng_Circ2.CfgEnvCtrl_BLDC.Speed_MinSpeedRpsCustom	HR559	AV360
Cc09	Circuit 2 BLDC envelope - Max. decrease speed rate (in regulation) [rps/s]	Real	0.0		0.1...9.9	R/W	BLDC_Mng_Circ2.CfgEnvCtrl_BLDC.Speed_MaxDescendSpeedRate	HR560	AV361
Cc10	Circuit 2 BLDC envelope - Max. increase speed rate (in regulation) [rps/s]	Real	0.0		0.1...9.9	R/W	BLDC_Mng_Circ2.CfgEnvCtrl_BLDC.Speed_MaxRisingSpeedRate	HR561	AV362
Cc11	Circuit 2 BLDC envelope - Decrease max speed rate (= max admitted value, to stop compressor) [rps/s]	Real	0.0		0.0...9.9	R/W	BLDC_Mng_Circ2.CfgEnvCtrl_BLDC.Speed_SwitchOffSpeedRate	HR562	AV363
Cc12	Circuit 2 BLDC envelope - Decrease speed rate (to come back inside envelope) [rps/s]	Real	0.0		0.1...9.9	R/W	BLDC_Mng_Circ2.CfgEnvCtrl_BLDC.Speed_MaxSlowdownSpeedRate	HR563	AV364
Cc13	Circuit 2 BLDC envelope - Min speed permitted to control compressor working conditions inside envelop	Real	0.0		0.0...99.9	R/W	BLDC_Mng_Circ2.CfgEnvCtrl_BLDC.Speed_MinSpeedControlled	HR564	AV365
Cc14	Circuit 2 BLDC envelope - Out of envelop alarm delay time	Int	0		0...32000	R/W	BLDC_Mng_Circ2.CfgEnvCtrl_BLDC.CstmEnv_EnvOutMaxT	HR565	IV95
Cc15	Circuit 2 BLDC envelope - Suction sat.temp. threshold from zone 1b (Max120rps) to zone 1c (Max90rps SIAM only)	Real	0.0		0.0...999.9	R/W	BLDC_Mng_Circ2.CfgEnvCtrl_BLDC.CstmEnv_SuctTSaturationThreshZone1b1c	HR566	AV366
Cc16	Circuit 2 BLDC envelope - Max Speed in rps for Zone 1c (SIAM Scroll) N.B.: integer rps!	Int	0		20...120	R/W	BLDC_Mng_Circ2.CfgEnvCtrl_BLDC.CstmEnv_MaxSpeedZone1c	HR567	IV96
Cc17	Circuit 2 BLDC envelope - Enable MOP control in low compression ratio condition	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ2.CfgEnvCtrl_BLDC.CstmEnv_EnMopLowCompRatio	C132	BV368
Cc18	Circuit 2 BLDC envelope - Speed up mode enable to control zones 5, 6, 7, 8 (to come back into zone 1)	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ2.CfgEnvCtrl_BLDC.CstmEnv_EnSpeedUpMode	C133	BV369
Cc19	Circuit 2 BLDC envelope - Low Delta P alarm delay	Int	0	s	0...32000	R/W	BLDC_Mng_Circ2.CfgEnvCtrl_BLDC.CstmEnv_LowDeltaPAlarmDelay	HR568	IV97
Cc20	Circuit 2 BLDC envelope - Discharge gas temperature control threshold for Zone 1a (SIAM scroll only)	Real	0.0	°C	70.0...350.0	R/W	BLDC_Mng_Circ2.CfgEnvCtrl_BLDC.CstmEnv_DscgTempCtrlThreshZone1a	HR569	AV367
Cc21	Circuit 2 BLDC envelope - Discharge gas limit temperature for Zone 1a (SIAM Scroll only)	Real	0.0	°C	80.0...350.0	R/W	BLDC_Mng_Circ2.CfgEnvCtrl_BLDC.CstmEnv_DscgTempAlarmThreshZone1a	HR570	AV368
	Circuit 2 BLDC information - Envelope Type: Siam compressor	Bool				R	BLDC_Mng_Circ2.Info_BLDC.EnvTyp_SiamComp	DI237	BV370
Cc22	Circuit 2 BLDC envelope - Discharge gas temperature control threshold (SIAM scroll only: for zone 1b)	Real	0.0	°C	70.0...350.0	R/W	BLDC_Mng_Circ2.CfgEnvCtrl_BLDC.CstmEnv_DscgTempCtrlThresh	HR571	AV369
Cc23	Circuit 2 BLDC envelope - Discharge gas limit temperature (SIAM Scroll only: for Zone 1b)	Real	0.0	°C	80.0...350.0	R/W	BLDC_Mng_Circ2.CfgEnvCtrl_BLDC.CstmEnv_DscgTempAlarmThresh	HR572	AV370
Cc24	Circuit 2 BLDC envelope - Action distance from High Temperature limit (to reduce speed rate)	Real	0.0	°C	10.0...999.9	R/W	BLDC_Mng_Circ2.CfgEnvCtrl_BLDC.CstmEnv_DscgTempLimitDistance	HR573	AV371
Cc25	Circuit 2 BLDC envelope - Pause between speed reductions when discharge temp. is over control limit	Int	0		1...300	R/W	BLDC_Mng_Circ2.CfgEnvCtrl_BLDC.CstmEnv_DscgTempPause	HR574	IV98
Cc26	Circuit 2 BLDC envelope - Speed Reduction percentage when discharge temp is over control limit	Real	0.0		0.5...60.0	R/W	BLDC_Mng_Circ2.CfgEnvCtrl_BLDC.CstmEnv_DscgTempSpeedReduction	HR575	AV372
Cc27	Time bebor to switch the High discharge temperature alarm in manual reset	Uint	300	s		R/W	HighDscgT_Man_Time	HR1089	PIV1460

6.6.4 BLDC CIRC.3 menu

Mask code	Description	Type	Default	UoM	Range	R/W	Variable Name	BMS	BacNet
Cd01	Circuit 3 BLDC envelope - Max. permitted Delta P to start up [bar]	Real	0.0	bar	0.0...999.9	R/W	BLDC_Mng_Circ3.CfgEnvCtrl_BLDC.StartUp_MaxDeltaP	HR576	AV373
Cd02	Circuit 3 BLDC envelope - Min. variation of Delta P to considered compressor started [bar]	Real	0.0	bar	0.0...2.0	R/W	BLDC_Mng_Circ3.CfgEnvCtrl_BLDC.StartUp_DeltaPVariation	HR577	AV374
Cd03	Circuit 3 BLDC envelope - Delay to check increasing DeltaP to validate compressor started	Int	0		10...99	R/W	BLDC_Mng_Circ3.CfgEnvCtrl_BLDC.StartUp_DeltaPDelay	HR578	IV99
Cd04	Circuit 3 BLDC envelope - Restart delay after a start failure	Int	0		1...360	R/W	BLDC_Mng_Circ3.CfgEnvCtrl_BLDC.StartUp_RestartDelay	HR579	IV100
Cd05	Circuit 3 BLDC envelope - Max Number of starting attempts	Int	0		0...9	R/W	BLDC_Mng_Circ3.CfgEnvCtrl_BLDC.StartUp_Attempts	HR580	IV101
Cd06	Circuit 3 BLDC envelope - Start up speed	Real	0.0		20.0...120.0	R/W	BLDC_Mng_Circ3.CfgEnvCtrl_BLDC.Speed_StartUpSpeed	HR581	AV375
Cd07	Circuit 3 BLDC envelope - Max speed custom (rps)	Real	0.0		0.0...999.9	R/W	BLDC_Mng_Circ3.CfgEnvCtrl_BLDC.Speed_MaxSpeedRpsCustom	HR582	AV376
Cd08	Circuit 3 BLDC envelope - Min speed custom (rps)	Real	0.0		0.0...99.9	R/W	BLDC_Mng_Circ3.CfgEnvCtrl_BLDC.Speed_MinSpeedRpsCustom	HR583	AV377

Cd09	Circuit 3 BLDC envelope - Max. decrease speed rate (in regulation) [rps/s]	Real	0.0		0.1...9.9	R/W	BLDC_Mng_Circ3.CfgEnvCtrl_B LDC.Speed_MaxDescendSpeedRate	HR584	AV378
Cd10	Circuit 3 BLDC envelope - Max. increase speed rate (in regulation) [rps/s]	Real	0.0		0.1...9.9	R/W	BLDC_Mng_Circ3.CfgEnvCtrl_B LDC.Speed_MaxRisingSpeedRate	HR585	AV379
Cd11	Circuit 3 BLDC envelope - Decrease max speed rate (= max admitted value, to stop compressor) [rps/s]	Real	0.0		0.0...9.9	R/W	BLDC_Mng_Circ3.CfgEnvCtrl_B LDC.Speed_SwitchOffSpeedRate	HR586	AV380
Cd12	Circuit 3 BLDC envelope - Decrease speed rate (to come back inside envelope) [rps/s]	Real	0.0		0.1...9.9	R/W	BLDC_Mng_Circ3.CfgEnvCtrl_B LDC.Speed_MaxSlowdownSpeedRate	HR587	AV381
Cd13	Circuit 3 BLDC envelope - Min speed permitted to control compressor working conditions inside envelop	Real	0.0		0.0...99.9	R/W	BLDC_Mng_Circ3.CfgEnvCtrl_B LDC.Speed_MinSpeedControlled	HR588	AV382
Cd14	Circuit 3 BLDC envelope - Out of envelop alarm delay time	Int	0		0...32000	R/W	BLDC_Mng_Circ3.CfgEnvCtrl_B LDC.CstmEnv_EnvOutMaxT	HR589	IV102
Cd15	Circuit 3 BLDC envelope - Suction sat.temp. threshold from zone 1b (Max120rps) to zone 1c (Max90rps SIAM only)	Real	0.0		0.0...999.9	R/W	BLDC_Mng_Circ3.CfgEnvCtrl_B LDC.CstmEnv_SuctTSaturationThshZone1b1c	HR590	AV383
Cd16	Circuit 3 BLDC envelope - Max Speed in rps for Zone 1c (SIAM Scroll) N.B.: integer rps!	Int	0		20...120	R/W	BLDC_Mng_Circ3.CfgEnvCtrl_B LDC.CstmEnv_MaxSpeedZone1c	HR591	IV103
Cd17	Circuit 3 BLDC envelope - Enable MOP control in low compression ratio condition	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ3.CfgEnvCtrl_B LDC.CstmEnv_EnMopLowCompRatio	C134	BV371
Cd18	Circuit 3 BLDC envelope - Speed up mode enable to control zones 5, 6, 7, 8 (to come back into zone 1)	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ3.CfgEnvCtrl_B LDC.CstmEnv_EnSpeedUpMode	C135	BV372
Cd19	Circuit 3 BLDC envelope - Low Delta P alarm delay	Int	0	s	0...32000	R/W	BLDC_Mng_Circ3.CfgEnvCtrl_B LDC.CstmEnv_LowDeltaPAlrmDelay	HR592	IV104
Cd20	Circuit 3 BLDC envelope - Discharge gas temperature control threshold for Zone 1a (SIAM scroll only)	Real	0.0	°C	70.0...350.0	R/W	BLDC_Mng_Circ3.CfgEnvCtrl_B LDC.CstmEnv_DscgTempCtrlThshZone1a	HR593	AV384
Cd21	Circuit 3 BLDC envelope - Discharge gas limit temperature for Zone 1a (SIAM Scroll only)	Real	0.0	°C	80.0...350.0	R/W	BLDC_Mng_Circ3.CfgEnvCtrl_B LDC.CstmEnv_DscgTempAlrmThshZone1a	HR594	AV385
	Circuit 3 BLDC information - Envelope Type: Siam compressor	Bool				R	BLDC_Mng_Circ3.Info_BLDC.EnvTyp_SiamComp	DI238	BV373
Cd22	Circuit 3 BLDC envelope - Discharge gas temperature control threshold (SIAM scroll only; for zone 1b)	Real	0.0	°C	70.0...350.0	R/W	BLDC_Mng_Circ3.CfgEnvCtrl_B LDC.CstmEnv_DscgTempCtrlThsh	HR595	AV386
Cd23	Circuit 3 BLDC envelope - Discharge gas limit temperature (SIAM Scroll only; for Zone 1b)	Real	0.0	°C	80.0...350.0	R/W	BLDC_Mng_Circ3.CfgEnvCtrl_B LDC.CstmEnv_DscgTempAlrmThsh	HR596	AV387
Cd24	Circuit 3 BLDC envelope - Action distance from High Temperature limit (to reduce speed rate)	Real	0.0	°C	10.0...999.9	R/W	BLDC_Mng_Circ3.CfgEnvCtrl_B LDC.CstmEnv_DscgTempLimDistance	HR597	AV388
Cd25	Circuit 3 BLDC envelope - Pause between speed reductions when discharge temp. is over control limit	Int	0		1...300	R/W	BLDC_Mng_Circ3.CfgEnvCtrl_B LDC.CstmEnv_DscgTempPause	HR598	IV105
Cd26	Circuit 3 BLDC envelope - Speed Reduction percentage when discharge temp is over control limit	Real	0.0		0.5...60.0	R/W	BLDC_Mng_Circ3.CfgEnvCtrl_B LDC.CstmEnv_DscgTempSpeedReduction	HR599	AV389
Cd27	Time bebor to switch the High discharge temperature alarm in manual reset	Uint	300	s		R/W	HighDscgT_Man_Time	HR1089	PIV1460

6.6.5 ExV CIRC.1 menu

Mask code	Description	Type	Default	UoM	Range	R/W	Variable Name	BMS	BacNet
Ce01	Circuit 1 ExV parameters - EVD parameters - Manual positioner - Enable manual valve positioning	Bool			0...1	R/W	BLDC_Mng_Circ1.Params_EVD EMB.EVD.Manual.ManPositEn.Val	C48	BV277
Ce02	Circuit 1 ExV parameters - EVD parameters - Manual positioner - Manual valve position	Int			Limited	R/W	BLDC_Mng_Circ1.Params_EVD EMB.EVD.Manual.ManPositSteps.Val	HR374	IV26
Ce03	Circuit 1 ExV parameters - EVD parameters - Regulation parameters configuration - Valve nominal opening at start-up (EVAP/EEV capacity ratio)	Int	0	%	Limited	R/W	BLDC_Mng_Circ1.Params_EVD EMB.EVD.Regulation.StartEEV_OpRatio.Val	HR375	IV27
Ce04	Circuit 1 ExV parameters - EVD parameters - Regulation parameters configuration - Regulation starting delay	Int	0	s	Limited	R/W	BLDC_Mng_Circ1.Params_EVD EMB.EVD.Regulation.SH_WaitDT.Val	HR376	IV28
Ce05	Circuit 1 ExV parameters - EVD parameters - Regulation parameters configuration - Valve opened in stand-by	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.Params_EVD EMB.EVD.Regulation.StandByEEV_OpEn.Val	C49	BV278
Ce06	Circuit 1 ExV parameters - EVD parameters - Regulation parameters configuration - Standby valve opening position %	Int	0	%	Limited	R/W	BLDC_Mng_Circ1.Params_EVD EMB.EVD.Regulation.StandByEEV_OpPos.Val	HR377	IV29
Ce07	Circuit 1 ExV parameters - EVD parameters - Main regulation parameters configuration - Superheat setpoint	Real	0.0	°K	Limited	R/W	BLDC_Mng_Circ1.Params_EVD EMB.EVD.MainRegulation.SH_Set.Val	IR39	AV52
Ce08	Circuit 1 ExV parameters - EVD parameters - Main regulation parameters configuration - PID proportional gain	Real	0.0		Limited	R/W	BLDC_Mng_Circ1.Params_EVD EMB.EVD.MainRegulation.PID_Kp.Val	HR378	AV269
Ce09	Circuit 1 ExV parameters - EVD parameters - Main regulation parameters configuration - PID integral time	Real	0.0	s	Limited	R/W	BLDC_Mng_Circ1.Params_EVD EMB.EVD.MainRegulation.PID_Ti.Val	HR379	AV270
Ce10	Circuit 1 ExV parameters - EVD parameters - Main regulation parameters configuration - PID derivative time	Real	0.0		Limited	R/W	BLDC_Mng_Circ1.Params_EVD EMB.EVD.MainRegulation.PID_Td.Val	HR380	AV271
Ce11	Circuit 1 ExV parameters - EVD parameters - Main regulation parameters configuration - LowSH (low superheat) threshold	Real	0.0	°K	Limited	R/W	BLDC_Mng_Circ1.Params_EVD EMB.EVD.MainRegulation.LowSH_Thresh.Val	HR381	AV272
Ce12	Circuit 1 ExV parameters - EVD parameters - Main regulation parameters configuration - LowSH (low	Real	0.0	s	Limited	R/W	BLDC_Mng_Circ1.Params_EVD EMB.EVD.MainRegulation.LowS	HR382	AV273

	superheat) integral time						H_Ti.Val		
Ce13	Circuit 1 ExV parameters - EVD parameters - Regulation parameters configuration - LowSH (low superheat) alarm timeout	Int	0	s	Limited	R/W	BLDC_Mng_Circ1.Params_EVD EMB.EVD.Regulation.LowSH_Al rmDT.Val	HR383	IV30
Ce14	Circuit 1 ExV parameters - EVD parameters - Main regulation parameters configuration - LOP (low evaporation temperature) threshold	Real	0.0	°C	Limited	R/W	BLDC_Mng_Circ1.Params_EVD EMB.EVD.MainRegulation.LOP_ Thrsh.Val	HR384	AV274
Ce15	Circuit 1 ExV parameters - EVD parameters - Main regulation parameters configuration - LOP (low evaporation temperature) integral time	Real	0.0	s	Limited	R/W	BLDC_Mng_Circ1.Params_EVD EMB.EVD.MainRegulation.LOP_ Ti.Val	HR385	AV275
Ce16	Circuit 1 ExV parameters - EVD parameters - Regulation parameters configuration - LOP (low evaporating temperature) alarm timeout	Int	0	s	Limited	R/W	BLDC_Mng_Circ1.Params_EVD EMB.EVD.Regulation.LOP_Alrm DT.Val	HR386	IV31
Ce17	Circuit 1 ExV parameters - EVD parameters - Main regulation parameters configuration - MOP (high evaporation temperature) threshold	Real	0.0	°C	Limited	R/W	BLDC_Mng_Circ1.Params_EVD EMB.EVD.MainRegulation.MOP Thrsh.Val	HR387	AV276
Ce18	Circuit 1 ExV parameters - EVD parameters - Main regulation parameters configuration - MOP (high evaporation temperature) integral time	Real	0.0	s	Limited	R/W	BLDC_Mng_Circ1.Params_EVD EMB.EVD.MainRegulation.MOP Ti.Val	HR388	AV277
Ce19	Circuit 1 ExV parameters - EVD parameters - Regulation parameters configuration - MOP (high evaporating temperature) alarm timeout	Int	0	s	Limited	R/W	BLDC_Mng_Circ1.Params_EVD EMB.EVD.Regulation.MOP_Alrm DT.Val	HR389	IV32
Ce20	Circuit 1 ExV parameters - EVD parameters - Auxiliary regulation parameters configuration - HiTcond (high condensing temperature) threshold	Real	0.0	°C	Limited	R/W	BLDC_Mng_Circ1.Params_EVD EMB.EVD.AuxRegulation.HiTem pCondThrsh.Val	HR390	AV278
Ce21	Circuit 1 ExV parameters - EVD parameters - Auxiliary regulation parameters configuration - HiTcond (high condensing temperature) integral time	Real	0.0	s	Limited	R/W	BLDC_Mng_Circ1.Params_EVD EMB.EVD.AuxRegulation.HiTem pCondTi.Val	HR391	AV279
Ce22	Circuit 1 ExV parameters - EVD parameters - Auxiliary regulation parameters configuration - HiTcond (high condensing temperature) alarm timeout	Int	0	s	Limited	R/W	BLDC_Mng_Circ1.Params_EVD EMB.EVD.AuxRegulation.HiTem pCondAlrmDT.Val	HR392	IV33
Ce23	Circuit 1 ExV parameters - EVD parameters - Regulation parameters configuration - Low suction temperature alarm threshold	Real	0.0	°C	Limited	R/W	BLDC_Mng_Circ1.Params_EVD EMB.EVD.Regulation.LowSuctAl rmThrsh.Val	HR393	AV280
Ce24	Circuit 1 ExV parameters - EVD parameters - Regulation parameters configuration - Low suction temperature alarm timeout	Int	0	s	Limited	R/W	BLDC_Mng_Circ1.Params_EVD EMB.EVD.Regulation.LowSuctAl rmDT.Val	HR394	IV34
Ce25	Circuit 1 ExV parameters - Superparameters - Valve	Int	0		Limited	R/W	BLDC_Mng_Circ1.Params_EVD EMB.Superparameters.EEVtype. Val	HR395	IV35
Ce26	Circuit 1 ExV parameters - Superparameters - Main regulation	Int	0		Limited	R/W	BLDC_Mng_Circ1.Params_EVD EMB.Superparameters.MainReg ulation.Val	HR396	IV36
Ce27	Circuit 1 ExV parameters - Superparameters - Auxiliary regulation	Int	0		Limited	R/W	BLDC_Mng_Circ1.Params_EVD EMB.Superparameters.AuxRegu lationCom.Val	HR397	IV37
Ce28	Circuit 1 ExV parameters - EVD parameters - System configuration - DC power supply enabling	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.Params_EVD EMB.EVD.System.DC_SupplyEn .Val	C50	BV279
Ce29	Circuit 1 ExV parameters - EVD parameters - Regulation parameters configuration - Refrigerant	Int	0		Limited	R/W	BLDC_Mng_Circ1.Params_EVD EMB.EVD.Regulation.GasTyp.V al	HR398	IV38
Ce30	Circuit 1 ExV parameters - EVD parameters - Valve configuration - EEV minimum steps	Int	0		Limited	R/W	BLDC_Mng_Circ1.Params_EVD EMB.EVD.EEV_Config.RegMinP os.Val	HR399	IV39
Ce31	Circuit 1 ExV parameters - EVD parameters - Valve configuration - EEV maximum steps	Int	0		Limited	R/W	BLDC_Mng_Circ1.Params_EVD EMB.EVD.EEV_Config.RegMax Pos.Val	HR400	IV40
Ce32	Circuit 1 ExV parameters - EVD parameters - Valve configuration - EEV closing steps	Int	0		Limited	R/W	BLDC_Mng_Circ1.Params_EVD EMB.EVD.EEV_Config.FullClos Steps.Val	HR401	IV41
Ce33	Circuit 1 ExV parameters - EVD parameters - Valve configuration - EEV step rate	Int	0		Limited	R/W	BLDC_Mng_Circ1.Params_EVD EMB.EVD.EEV_Config.MoveRat e.Val	HR402	IV42
Ce34	Circuit 1 ExV parameters - EVD parameters - Valve configuration - EEV: emergency EEV closing speed	Int	0		Limited	R/W	BLDC_Mng_Circ1.Params_EVD EMB.EVD.EEV_Config.FastClos MoveRate.Val	HR403	IV43
Ce35	Circuit 1 ExV parameters - EVD parameters - Valve configuration - EEV duty cycle	Int	0	%	Limited	R/W	BLDC_Mng_Circ1.Params_EVD EMB.EVD.EEV_Config.MoveDut y.Val	HR404	IV44
Ce36	Circuit 1 ExV parameters - EVD parameters - Valve configuration - EEV opening position synchronization	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.Params_EVD EMB.EVD.EEV_Config.ExtraOp En.Val	C51	BV280
Ce37	Circuit 1 ExV parameters - EVD parameters - Valve configuration - EEV closing position synchronization	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.Params_EVD EMB.EVD.EEV_Config.ExtraClo sEn.Val	C52	BV281

6.6.6 ExV CIRC.2 menu

Mask code	Description	Type	Default	UoM	Range	R/W	Variable Name	BMS	BacNet
Cf01	Circuit 2 ExV parameters - EVD parameters - Manual positioner - Enable manual valve positioning	Bool			0...1	R/W	BLDC_Mng_Circ2.Params_EVD EMB.EVD.Manual.ManPositEn.V al	C122	BV358
Cf02	Circuit 2 ExV parameters - EVD parameters - Manual positioner - Manual valve position	Int			Limited	R/W	BLDC_Mng_Circ2.Params_EVD EMB.EVD.Manual.ManPositStep s.Val	HR490	IV54
Cf03	Circuit 2 ExV parameters - EVD parameters - Regulation parameters configuration - Valve nominal opening at start-up (EVAP/EEV capacity ratio)	Int	0	%	Limited	R/W	BLDC_Mng_Circ2.Params_EVD EMB.EVD.Regulation.StartEEV_ OpRatio.Val	HR491	IV55
Cf04	Circuit 2 ExV parameters - EVD parameters - Regulation parameters configuration - Regulation starting delay	Int	0	s	Limited	R/W	BLDC_Mng_Circ2.Params_EVD EMB.EVD.Regulation.SH_WaitD T.Val	HR492	IV56
Cf05	Circuit 2 ExV parameters - EVD parameters - Regulation parameters configuration - Valve	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ2.Params_EVD EMB.EVD.Regulation.StandByE	C123	BV359

	opened in stand-by						EV_OpEn.Val		
Cf06	Circuit 2 ExV parameters - EVD parameters - Regulation parameters configuration - Standby valve opening position %	Int	0	%	Limited	R/W	BLDC_Mng_Circ2.Params_EVD EMB.EVD.Regulation.StandByE EV_OpPos.Val	HR493	IV57
Cf07	Circuit 2 ExV parameters - EVD parameters - Main regulation parameters configuration - Superheat setpoint	Real	0.0	°K	Limited	R/W	BLDC_Mng_Circ2.Params_EVD EMB.EVD.MainRegulation.SH_Set.Val	IR55	AV64
Cf08	Circuit 2 ExV parameters - EVD parameters - Main regulation parameters configuration - PID proportional gain	Real	0.0		Limited	R/W	BLDC_Mng_Circ2.Params_EVD EMB.EVD.MainRegulation.PID_Kp.Val	HR494	AV332
Cf09	Circuit 2 ExV parameters - EVD parameters - Main regulation parameters configuration - PID integral time	Real	0.0	s	Limited	R/W	BLDC_Mng_Circ2.Params_EVD EMB.EVD.MainRegulation.PID_Ti.Val	HR495	AV333
Cf10	Circuit 2 ExV parameters - EVD parameters - Main regulation parameters configuration - PID derivative time	Real	0.0		Limited	R/W	BLDC_Mng_Circ2.Params_EVD EMB.EVD.MainRegulation.PID_Td.Val	HR496	AV334
Cf11	Circuit 2 ExV parameters - EVD parameters - Main regulation parameters configuration - LowSH (low superheat) threshold	Real	0.0	°K	Limited	R/W	BLDC_Mng_Circ2.Params_EVD EMB.EVD.MainRegulation.LowSH_Thresh.Val	HR497	AV335
Cf12	Circuit 2 ExV parameters - EVD parameters - Main regulation parameters configuration - LowSH (low superheat) integral time	Real	0.0	s	Limited	R/W	BLDC_Mng_Circ2.Params_EVD EMB.EVD.MainRegulation.LowSH_Ti.Val	HR498	AV336
Cf13	Circuit 2 ExV parameters - EVD parameters - Regulation parameters configuration - LowSH (low superheat) alarm timeout	Int	0	s	Limited	R/W	BLDC_Mng_Circ2.Params_EVD EMB.EVD.Regulation.LowSH_AlrmDT.Val	HR499	IV58
Cf14	Circuit 2 ExV parameters - EVD parameters - Main regulation parameters configuration - LOP (low evaporation temperature) threshold	Real	0.0	°C	Limited	R/W	BLDC_Mng_Circ2.Params_EVD EMB.EVD.MainRegulation.LOP_Thresh.Val	HR500	AV337
Cf15	Circuit 2 ExV parameters - EVD parameters - Main regulation parameters configuration - LOP (low evaporation temperature) integral time	Real	0.0	s	Limited	R/W	BLDC_Mng_Circ2.Params_EVD EMB.EVD.MainRegulation.LOP_Ti.Val	HR501	AV338
Cf16	Circuit 2 ExV parameters - EVD parameters - Regulation parameters configuration - LOP (low evaporating temperature) alarm timeout	Int	0	s	Limited	R/W	BLDC_Mng_Circ2.Params_EVD EMB.EVD.Regulation.LOP_AlrmDT.Val	HR502	IV59
Cf17	Circuit 2 ExV parameters - EVD parameters - Main regulation parameters configuration - MOP (high evaporation temperature) threshold	Real	0.0	°C	Limited	R/W	BLDC_Mng_Circ2.Params_EVD EMB.EVD.MainRegulation.MOP_Thresh.Val	HR503	AV339
Cf18	Circuit 2 ExV parameters - EVD parameters - Main regulation parameters configuration - MOP (high evaporation temperature) integral time	Real	0.0	s	Limited	R/W	BLDC_Mng_Circ2.Params_EVD EMB.EVD.MainRegulation.MOP_Ti.Val	HR504	AV340
Cf19	Circuit 2 ExV parameters - EVD parameters - Regulation parameters configuration - MOP (high evaporating temperature) alarm timeout	Int	0	s	Limited	R/W	BLDC_Mng_Circ2.Params_EVD EMB.EVD.Regulation.MOP_AlrmDT.Val	HR505	IV60
Cf20	Circuit 2 ExV parameters - EVD parameters - Auxiliary regulation parameters configuration - HiTcond (high condensing temperature) threshold	Real	0.0	°C	Limited	R/W	BLDC_Mng_Circ2.Params_EVD EMB.EVD.AuxRegulation.HiTempCondThresh.Val	HR506	AV341
Cf21	Circuit 2 ExV parameters - EVD parameters - Auxiliary regulation parameters configuration - HiTcond (high condensing temperature) integral time	Real	0.0	s	Limited	R/W	BLDC_Mng_Circ2.Params_EVD EMB.EVD.AuxRegulation.HiTempCondTi.Val	HR507	AV342
Cf22	Circuit 2 ExV parameters - EVD parameters - Auxiliary regulation parameters configuration - HiTcond (high condensing temperature) alarm timeout	Int	0	s	Limited	R/W	BLDC_Mng_Circ2.Params_EVD EMB.EVD.AuxRegulation.HiTempCondAlrmDT.Val	HR508	IV61
Cf23	Circuit 2 ExV parameters - EVD parameters - Regulation parameters configuration - Low suction temperature alarm threshold	Real	0.0	°C	Limited	R/W	BLDC_Mng_Circ2.Params_EVD EMB.EVD.Regulation.LowSuctAlrmThresh.Val	HR509	AV343
Cf24	Circuit 2 ExV parameters - EVD parameters - Regulation parameters configuration - Low suction temperature alarm timeout	Int	0	s	Limited	R/W	BLDC_Mng_Circ2.Params_EVD EMB.EVD.Regulation.LowSuctAlrmDT.Val	HR510	IV62
Cf25	Circuit 2 ExV parameters - Superparameters - Valve	Int	0		Limited	R/W	BLDC_Mng_Circ2.Params_EVD EMB.Superparameters.EEVtype.Val	HR511	IV63
Cf26	Circuit 2 ExV parameters - Superparameters - Main regulation	Int	0		Limited	R/W	BLDC_Mng_Circ2.Params_EVD EMB.Superparameters.MainRegulation.Val	HR512	IV64
Cf27	Circuit 2 ExV parameters - Superparameters - Auxiliary regulation	Int	0		Limited	R/W	BLDC_Mng_Circ2.Params_EVD EMB.Superparameters.AuxRegulationCom.Val	HR513	IV65
Cf28	Circuit 2 ExV parameters - EVD parameters - System configuration - DC power supply enabling	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ2.Params_EVD EMB.EVD.System.DC_SupplyEn.Val	C124	BV360
Cf29	Circuit 2 ExV parameters - EVD parameters - Regulation parameters configuration - Refrigerant	Int	0		Limited	R/W	BLDC_Mng_Circ2.Params_EVD EMB.EVD.Regulation.GasType.Val	HR514	IV66
Cf30	Circuit 2 ExV parameters - EVD parameters - Valve configuration - EEV minimum steps	Int	0		Limited	R/W	BLDC_Mng_Circ2.Params_EVD EMB.EVD.EEV_Config.RegMinPos.Val	HR515	IV67
Cf31	Circuit 2 ExV parameters - EVD parameters - Valve configuration - EEV maximum steps	Int	0		Limited	R/W	BLDC_Mng_Circ2.Params_EVD EMB.EVD.EEV_Config.RegMaxPos.Val	HR516	IV68
Cf32	Circuit 2 ExV parameters - EVD parameters - Valve configuration - EEV closing steps	Int	0		Limited	R/W	BLDC_Mng_Circ2.Params_EVD EMB.EVD.EEV_Config.FullClosingSteps.Val	HR517	IV69
Cf33	Circuit 2 ExV parameters - EVD parameters - Valve configuration - EEV step rate	Int	0		Limited	R/W	BLDC_Mng_Circ2.Params_EVD EMB.EVD.EEV_Config.MoveRate.Val	HR518	IV70
Cf34	Circuit 2 ExV parameters - EVD parameters - Valve configuration - EEV: emergency EEV closing speed	Int	0		Limited	R/W	BLDC_Mng_Circ2.Params_EVD EMB.EVD.EEV_Config.FastClosingMoveRate.Val	HR519	IV71
Cf35	Circuit 2 ExV parameters - EVD parameters - Valve configuration - EEV duty cycle	Int	0	%	Limited	R/W	BLDC_Mng_Circ2.Params_EVD EMB.EVD.EEV_Config.MoveDuty.Val	HR520	IV72
Cf36	Circuit 2 ExV parameters - EVD parameters - Valve configuration - EEV opening position synchronization	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ2.Params_EVD EMB.EVD.EEV_Config.ExtraOpEn.Val	C125	BV361
Cf37	Circuit 2 ExV parameters - EVD parameters - Valve configuration - EEV closing position synchronization	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ2.Params_EVD EMB.EVD.EEV_Config.ExtraClosingEn.Val	C126	BV362

6.6.7 ExV CIRC.3 menu

Mask code	Description	Type	Default	UoM	Range	R/W	Variable Name	BMS	BacNet
Cg01	Circuit 3 ExV parameters - EVD parameters - Manual positioner - Enable manual valve positioning	Bool			0...1	R/W	BLDC_Mng_Circ3.Params_EVD EMB.EVD.Manual.ManPositEn.Val	C127	BV363
Cg02	Circuit 3 ExV parameters - EVD parameters - Manual positioner - Manual valve position	Int			Limited	R/W	BLDC_Mng_Circ3.Params_EVD EMB.EVD.Manual.ManPositSteps.Val	HR521	IV73
Cg03	Circuit 3 ExV parameters - EVD parameters - Regulation parameters configuration - Valve nominal opening at start-up (EVAP/EEV capacity ratio)	Int	0	%	Limited	R/W	BLDC_Mng_Circ3.Params_EVD EMB.EVD.Regulation.StartEEV_OpRatio.Val	HR522	IV74
Cg04	Circuit 3 ExV parameters - EVD parameters - Regulation parameters configuration - Regulation starting delay	Int	0	s	Limited	R/W	BLDC_Mng_Circ3.Params_EVD EMB.EVD.Regulation.SH_WaitDT.Val	HR523	IV75
Cg05	Circuit 3 ExV parameters - EVD parameters - Regulation parameters configuration - Valve opened in stand-by	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ3.Params_EVD EMB.EVD.Regulation.StandByEEV_OpEn.Val	C128	BV364
Cg06	Circuit 3 ExV parameters - EVD parameters - Regulation parameters configuration - Standby valve opening position %	Int	0	%	Limited	R/W	BLDC_Mng_Circ3.Params_EVD EMB.EVD.Regulation.StandByEEV_OpPos.Val	HR524	IV76
Cg07	Circuit 3 ExV parameters - EVD parameters - Main regulation parameters configuration - Superheat setpoint	Real	0.0	°K	Limited	R/W	BLDC_Mng_Circ3.Params_EVD EMB.EVD.MainRegulation.SH_Set.Val	IR71	AV76
Cg08	Circuit 3 ExV parameters - EVD parameters - Main regulation parameters configuration - PID proportional gain	Real	0.0		Limited	R/W	BLDC_Mng_Circ3.Params_EVD EMB.EVD.MainRegulation.PID_Kp.Val	HR525	AV344
Cg09	Circuit 3 ExV parameters - EVD parameters - Main regulation parameters configuration - PID integral time	Real	0.0	s	Limited	R/W	BLDC_Mng_Circ3.Params_EVD EMB.EVD.MainRegulation.PID_Ti.Val	HR526	AV345
Cg10	Circuit 3 ExV parameters - EVD parameters - Main regulation parameters configuration - PID derivative time	Real	0.0		Limited	R/W	BLDC_Mng_Circ3.Params_EVD EMB.EVD.MainRegulation.PID_Td.Val	HR527	AV346
Cg11	Circuit 3 ExV parameters - EVD parameters - Main regulation parameters configuration - LowSH (low superheat) threshold	Real	0.0	°K	Limited	R/W	BLDC_Mng_Circ3.Params_EVD EMB.EVD.MainRegulation.LowSH_H_Thrsh.Val	HR528	AV347
Cg12	Circuit 3 ExV parameters - EVD parameters - Main regulation parameters configuration - LowSH (low superheat) integral time	Real	0.0	s	Limited	R/W	BLDC_Mng_Circ3.Params_EVD EMB.EVD.MainRegulation.LowSH_H_Ti.Val	HR529	AV348
Cg13	Circuit 3 ExV parameters - EVD parameters - Regulation parameters configuration - LowSH (low superheat) alarm timeout	Int	0	s	Limited	R/W	BLDC_Mng_Circ3.Params_EVD EMB.EVD.Regulation.LowSH_AlrmDT.Val	HR530	IV77
Cg14	Circuit 3 ExV parameters - EVD parameters - Main regulation parameters configuration - LOP (low evaporation temperature) threshold	Real	0.0	°C	Limited	R/W	BLDC_Mng_Circ3.Params_EVD EMB.EVD.MainRegulation.LOP_Thrsh.Val	HR531	AV349
Cg15	Circuit 3 ExV parameters - EVD parameters - Main regulation parameters configuration - LOP (low evaporation temperature) integral time	Real	0.0	s	Limited	R/W	BLDC_Mng_Circ3.Params_EVD EMB.EVD.MainRegulation.LOP_Ti.Val	HR532	AV350
Cg16	Circuit 3 ExV parameters - EVD parameters - Regulation parameters configuration - LOP (low evaporating temperature) alarm timeout	Int	0	s	Limited	R/W	BLDC_Mng_Circ3.Params_EVD EMB.EVD.Regulation.LOP_AlrmDT.Val	HR533	IV78
Cg17	Circuit 3 ExV parameters - EVD parameters - Main regulation parameters configuration - MOP (high evaporation temperature) threshold	Real	0.0	°C	Limited	R/W	BLDC_Mng_Circ3.Params_EVD EMB.EVD.MainRegulation.MOP_Thrsh.Val	HR534	AV351
Cg18	Circuit 3 ExV parameters - EVD parameters - Main regulation parameters configuration - MOP (high evaporation temperature) integral time	Real	0.0	s	Limited	R/W	BLDC_Mng_Circ3.Params_EVD EMB.EVD.MainRegulation.MOP_Ti.Val	HR535	AV352
Cg19	Circuit 3 ExV parameters - EVD parameters - Regulation parameters configuration - MOP (high evaporating temperature) alarm timeout	Int	0	s	Limited	R/W	BLDC_Mng_Circ3.Params_EVD EMB.EVD.Regulation.MOP_AlrmDT.Val	HR536	IV79
Cg20	Circuit 3 ExV parameters - EVD parameters - Auxiliary regulation parameters configuration - HiTcond (high condensing temperature) threshold	Real	0.0	°C	Limited	R/W	BLDC_Mng_Circ3.Params_EVD EMB.EVD.AuxRegulation.HiTempCondThrsh.Val	HR537	AV353
Cg21	Circuit 3 ExV parameters - EVD parameters - Auxiliary regulation parameters configuration - HiTcond (high condensing temperature) integral time	Real	0.0	s	Limited	R/W	BLDC_Mng_Circ3.Params_EVD EMB.EVD.AuxRegulation.HiTempCondTi.Val	HR538	AV354
Cg22	Circuit 3 ExV parameters - EVD parameters - Auxiliary regulation parameters configuration - HiTcond (high condensing temperature) alarm timeout	Int	0	s	Limited	R/W	BLDC_Mng_Circ3.Params_EVD EMB.EVD.AuxRegulation.HiTempCondAlrmDT.Val	HR539	IV80
Cg23	Circuit 3 ExV parameters - EVD parameters - Regulation parameters configuration - Low suction temperature alarm threshold	Real	0.0	°C	Limited	R/W	BLDC_Mng_Circ3.Params_EVD EMB.EVD.Regulation.LowSuctAlrmThrsh.Val	HR540	AV355
Cg24	Circuit 3 ExV parameters - EVD parameters - Regulation parameters configuration - Low suction temperature alarm timeout	Int	0	s	Limited	R/W	BLDC_Mng_Circ3.Params_EVD EMB.EVD.Regulation.LowSuctAlrmDT.Val	HR541	IV81
Cg25	Circuit 3 ExV parameters - Superparameters - Valve	Int	0		Limited	R/W	BLDC_Mng_Circ3.Params_EVD EMB.Superparameters.EEVtype.Val	HR542	IV82
Cg26	Circuit 3 ExV parameters - Superparameters - Main regulation	Int	0		Limited	R/W	BLDC_Mng_Circ3.Params_EVD EMB.Superparameters.MainRegulation.Val	HR543	IV83
Cg27	Circuit 3 ExV parameters - Superparameters - Auxiliary regulation	Int	0		Limited	R/W	BLDC_Mng_Circ3.Params_EVD EMB.Superparameters.AuxRegulationCom.Val	HR544	IV84
Cg28	Circuit 3 ExV parameters - EVD parameters - System configuration - DC power supply enabling	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ3.Params_EVD EMB.EVD.System.DC_SupplyEn.Val	C129	BV365
Cg29	Circuit 3 ExV parameters - EVD parameters - Regulation parameters configuration - Refrigerant	Int	0		Limited	R/W	BLDC_Mng_Circ3.Params_EVD EMB.EVD.Regulation.GasType.Val	HR545	IV85
Cg30	Circuit 3 ExV parameters - EVD parameters - Valve configuration - EEV minimum steps	Int	0		Limited	R/W	BLDC_Mng_Circ3.Params_EVD EMB.EVD.EEV_Config.RegMinPos.Val	HR546	IV86

Cg31	Circuit 3 ExV parameters - EVD parameters - Valve configuration - EEV maximum steps	Int	0		Limited	R/W	BLDC_Mng_Circ3.Params_EVD EMB.EVD.EEV_Config.RegMax Pos.Val	HR547	IV87
Cg32	Circuit 3 ExV parameters - EVD parameters - Valve configuration - EEV closing steps	Int	0		Limited	R/W	BLDC_Mng_Circ3.Params_EVD EMB.EVD.EEV_Config.FullClos Steps.Val	HR548	IV88
Cg33	Circuit 3 ExV parameters - EVD parameters - Valve configuration - EEV step rate	Int	0		Limited	R/W	BLDC_Mng_Circ3.Params_EVD EMB.EVD.EEV_Config.MoveRat e.Val	HR549	IV89
Cg34	Circuit 3 ExV parameters - EVD parameters - Valve configuration - EEV: emergency EEV closing speed	Int	0		Limited	R/W	BLDC_Mng_Circ3.Params_EVD EMB.EVD.EEV_Config.FastClos MoveRate.Val	HR550	IV90
Cg35	Circuit 3 ExV parameters - EVD parameters - Valve configuration - EEV duty cycle	Int	0	%	Limited	R/W	BLDC_Mng_Circ3.Params_EVD EMB.EVD.EEV_Config.MoveDut y.Val	HR551	IV91
Cg36	Circuit 3 ExV parameters - EVD parameters - Valve configuration - EEV opening position synchronization	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ3.Params_EVD EMB.EVD.EEV_Config.ExtraOp En.Val	C130	BV366
Cg37	Circuit 3 ExV parameters - EVD parameters - Valve configuration - EEV closing position synchronization	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ3.Params_EVD EMB.EVD.EEV_Config.ExtraClo sEn.Val	C131	BV367

6.6.8 PSD CIRC.1 menu

Mask code	Description	Type	Default	UoM	Range	R/W	Variable Name	BMS	BacNet
Ch01	Circuit 1 BLDC parameters - Compressor model (PowerPlus)	UInt	32		Limited	R/W	BLDC_Mng_Circ1.MiscMng_BL DC_Mng_PwrpMotTyp	HR429	PIV304
-	Circuit 1 BLDC parameters - Compressor model	UInt	32		0...72	R/W	BLDC_Mng_Circ1.MiscMng_BL DC_Mng_CompTyp	HR430	PIV305
Ch02	Circuit 1 Power+ parameters - Drive type	UInt	0		0...12	R/W	BLDC_Mng_Circ1.MiscMng_PW RP.Mng_DriveTyp	HR431	PIV306
Ch02	Circuit 1 Power+ parameters - Drive type	UInt	0			R	BLDC_Mng_Circ1.MiscMng_PW RP.Mng_DriveTyp	HR431	PIV306
Ch03	Circuit 1 Power+ parameters - Write default request	Int	0		0...1	R/W	BLDC_Mng_Circ1.MiscMng_PW RP.Mng_WriteDefault	HR432	IV52
-	Circuit 1 Power+ information - Reserved	Bool				R	BLDC_Mng_Circ1.Info_PWRP.M ng_CheckVl_NotOK	DI231	BV285
-	Circuit 1 Power+ information - Reserved	Bool				R	BLDC_Mng_Circ1.Info_PWRP.M ng_LoadDefFail	DI232	BV286
-	Circuit 1 Power+ information - Main supply as three phases	Bool				R	BLDC_Mng_Circ1.Info_PWRP.In fo_PSD_400V	DI233	BV287
-	Circuit 1 Power+ information - Device rated current [AA.a]	Real				R	BLDC_Mng_Circ1.Info_PWRP.In fo_PSD_AaA	IR291	AV298
-	Circuit 1 Power+ information - Three-phase inverter required for compressor	Bool				R	BLDC_Mng_Circ1.Info_PWRP.M ng_MotSelect_400V	DI234	BV288
-	Circuit 1 Power+ information - Rated current of compressor	UInt				R	BLDC_Mng_Circ1.Info_PWRP.M ng_MotSelect_AaA	IR292	PIV307
Ch04	Circuit 1 Power+ configuration - Data communication fault timeout	UInt			0...600	R/W	BLDC_Mng_Circ1.CurrCompCfg _PWRP.HR29_DataCommTime out	HR433	PIV308
Ch05	Circuit 1 Power+ parameters - Serial number control enable	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.MiscMng_PW RP.Mng_SerNoCtrl_En	C55	BV289
Ch06	Circuit 1 Power+ configuration - Min output frequency	Real			Limited	R/W	BLDC_Mng_Circ1.CurrCompCfg PWRP.HR07_MinOutFreq	HR434	AV299
Ch07	Circuit 1 Power+ configuration - Max output frequency	Real			Limited	R/W	BLDC_Mng_Circ1.CurrCompCfg PWRP.HR06_MaxOutFreq	HR435	AV300
Ch08	Circuit 1 Power+ configuration - Skip frequency: set 1	Real			Limited	R/W	BLDC_Mng_Circ1.CurrCompCfg PWRP.HR10_SkipFreqSetP	HR436	AV301
Ch09	Circuit 1 Power+ configuration - Skip frequency: band 1	Real			Limited	R/W	BLDC_Mng_Circ1.CurrCompCfg PWRP.HR11_SkipFreqBand	HR437	AV302
Ch10	Circuit 1 Power+ configuration - Skip frequency setpoint 2	Real			Limited	R/W	BLDC_Mng_Circ1.CurrCompCfg PWRP.HR67_SkipFreqSetP_2	HR438	AV303
Ch11	Circuit 1 Power+ configuration - Skip frequency band 2	Real			Limited	R/W	BLDC_Mng_Circ1.CurrCompCfg PWRP.HR68_SkipFreqBand_2	HR439	AV304
Ch12	Circuit 1 Power+ configuration - Skip frequency setpoint 3	Real			Limited	R/W	BLDC_Mng_Circ1.CurrCompCfg PWRP.HR69_SkipFreqSetP_3	HR440	AV305
Ch13	Circuit 1 Power+ configuration - Skip frequency band 3	Real			Limited	R/W	BLDC_Mng_Circ1.CurrCompCfg PWRP.HR70_SkipFreqBand_3	HR441	AV306
Ch14	Circuit 1 Power+ configuration - Switching frequency	UInt			0...2	R/W	BLDC_Mng_Circ1.CurrCompCfg PWRP.HR24_SwitchingFreq	HR442	PIV309
Ch15	Circuit 1 Power+ configuration - Switching frequency derating	UInt			0...1	R/W	BLDC_Mng_Circ1.CurrCompCfg _PWRP.HR25_SwitchingFreqDe rating	HR443	PIV310
Ch16	Circuit 1 Power+ configuration - Motor overtemperature alarm (PTC) enable	UInt			0...1	R/W	BLDC_Mng_Circ1.CurrCompCfg _PWRP.HR27_MotOvTempAlrm PTC_En	HR444	PIV311
Ch17	Circuit 1 Power+ configuration - Motor overtemperature alarm delay	UInt			0...999	R/W	BLDC_Mng_Circ1.CurrCompCfg _PWRP.HR28_MotOvTempAlrm PTC_Delay	HR445	PIV312
Ch18	Circuit 1 Power+ configuration - Reverse speed enable	UInt			0...1	R/W	BLDC_Mng_Circ1.CurrCompCfg PWRP.HR08_EnRevSpeed	HR446	PIV313
Ch19	Circuit 1 Power+ configuration - Speed derating mode	UInt			0...10	R/W	BLDC_Mng_Circ1.CurrCompCfg _PWRP.HR09_SpeedDeratingM ode	HR447	PIV314
Ch20	Circuit 1 Power+ configuration - Stop mode	UInt			0...1	R/W	BLDC_Mng_Circ1.CurrCompCfg _PWRP.HR33_StopMode	HR448	PIV315
Ch21	Circuit 1 Power+ configuration - Flying restart	UInt			0...1	R/W	BLDC_Mng_Circ1.CurrCompCfg PWRP.HR34_FlyingRestart	HR449	PIV316
	Circuit 1 Power+ configuration - Relay configuration	UInt			0...8	R/W	BLDC_Mng_Circ1.CurrCompCfg PWRP.HR26_RelayCfg	HR450	PIV317
Ch23	Circuit 1 Power+ parameters - Motor pole pairs	UInt	0			R	BLDC_Mng_Circ1.MiscMng_PW RP.Mng_MotPoles	IR293	PIV318
Ch23	Circuit 1 Power+ parameters - Motor pole pairs	UInt	0		1...5	R/W	BLDC_Mng_Circ1.MiscMng_PW RP.Mng_MotPoles	IR293	PIV318
Ch24	Circuit 1 Power+ configuration - Motor control mode	UInt			0...2	R/W	BLDC_Mng_Circ1.CurrCompCfg _PWRP.HR00_MotCtrlMode	HR451	PIV319

Ch25	Circuit 1 Power+ configuration - Motor power factor	UInt			0...100	R/W	BLDC_Mng_Circ1.CurrCompCfg_PWRP.HR04_MotPwrFactor	HR452	PIV320
Ch26	Circuit 1 Power+ configuration - Max output current	Real			0.0...200.0	R/W	BLDC_Mng_Circ1.CurrCompCfg_PWRP.HR05_MaxOutCurrent	HR453	AV307
Ch27	Circuit 1 Power+ configuration - Motor base frequency	Real			Limited	R/W	BLDC_Mng_Circ1.CurrCompCfg_PWRP.HR01_MotBaseFreq	HR454	AV308
Ch28	Circuit 1 Power+ configuration - Motor base voltage	UInt			Limited	R/W	BLDC_Mng_Circ1.CurrCompCfg_PWRP.HR02_MotBaseV	HR455	PIV321
Ch29	Circuit 1 Power+ configuration - Motor rated current	Real			Limited	R/W	BLDC_Mng_Circ1.CurrCompCfg_PWRP.HR03_MotRatedA	HR456	AV309
Ch30	Circuit 1 Power+ configuration - Speed profile: frequency 1	Real			Limited	R/W	BLDC_Mng_Circ1.CurrCompCfg_PWRP.HR12_SpeedProfileFreq1	HR457	AV310
Ch31	Circuit 1 Power+ configuration - Speed profile: frequency 2	Real			Limited	R/W	BLDC_Mng_Circ1.CurrCompCfg_PWRP.HR13_SpeedProfileFreq2	HR458	AV311
Ch32	Circuit 1 Power+ configuration - Speed profile: frequency 3	Real			Limited	R/W	BLDC_Mng_Circ1.CurrCompCfg_PWRP.HR14_SpeedProfileFreq3	HR459	AV312
Ch33	Circuit 1 Power+ configuration - Speed profile: acceleration 1	Real			Limited	R/W	BLDC_Mng_Circ1.CurrCompCfg_PWRP.HR15_SpeedProfileAcceleration1	HR460	AV313
Ch34	Circuit 1 Power+ configuration - Speed profile: acceleration 2	Real			Limited	R/W	BLDC_Mng_Circ1.CurrCompCfg_PWRP.HR16_SpeedProfileAcceleration2	HR461	AV314
Ch35	Circuit 1 Power+ configuration - Speed profile: acceleration 3	Real			Limited	R/W	BLDC_Mng_Circ1.CurrCompCfg_PWRP.HR17_SpeedProfileAcceleration3	HR462	AV315
Ch36	Circuit 1 Power+ configuration - Speed profile: acceleration 4	Real			Limited	R/W	BLDC_Mng_Circ1.CurrCompCfg_PWRP.HR18_SpeedProfileAcceleration4	HR463	AV316
Ch37	Circuit 1 Power+ configuration - Speed profile: deceleration	Real			Limited	R/W	BLDC_Mng_Circ1.CurrCompCfg_PWRP.HR23_SpeedProfileDeceleration	HR464	AV317
Ch38	Circuit 1 Power+ configuration - Speed profile: delay 1	UInt			0...600	R/W	BLDC_Mng_Circ1.CurrCompCfg_PWRP.HR19_SpeedProfileDelay1	HR465	PIV322
Ch39	Circuit 1 Power+ configuration - Speed profile: delay 2	UInt			0...600	R/W	BLDC_Mng_Circ1.CurrCompCfg_PWRP.HR20_SpeedProfileDelay2	HR466	PIV323
Ch40	Circuit 1 Power+ configuration - Speed profile: delay 3	UInt			0...600	R/W	BLDC_Mng_Circ1.CurrCompCfg_PWRP.HR21_SpeedProfileDelay3	HR467	PIV324
Ch41	Circuit 1 Power+ configuration - Speed profile start mode (0= always; 1=once at run)	Bool			0...1	R/W	BLDC_Mng_Circ1.CurrCompCfg_PWRP.HR22_0_SpeedProfStartMode	C56	BV290
Ch42	Circuit 1 Power+ configuration - Speed profile start mode (0=-; 1=force freq. 2)	Bool			0...1	R/W	BLDC_Mng_Circ1.CurrCompCfg_PWRP.HR22_1_SpeedProfStartMode	C57	BV291
Ch43	Circuit 1 Power+ configuration - V/f boost voltage	Real			0.0...25.0	R/W	BLDC_Mng_Circ1.CurrCompCfg_PWRP.HR35_V_F_BoostV	HR468	AV318
Ch44	Circuit 1 Power+ configuration - V/f frequency adjustment	Real			0.0...100.0	R/W	BLDC_Mng_Circ1.CurrCompCfg_PWRP.HR36_V_F_FreqAdj	HR469	AV319
Ch45	Circuit 1 Power+ configuration - V/f voltage adjustment	Real			0.0...100.0	R/W	BLDC_Mng_Circ1.CurrCompCfg_PWRP.HR37_V_F_VAdj	HR470	AV320
Ch46	Circuit 1 Power+ configuration - Motor magnetizing current	Real			Limited	R/W	BLDC_Mng_Circ1.CurrCompCfg_PWRP.HR45_MotMagnetizingCurrent	HR471	AV321
Ch47	Circuit 1 Power+ configuration - Stator resistance	UInt			0...30000	R/W	BLDC_Mng_Circ1.CurrCompCfg_PWRP.HR46_StatorResistance	HR472	PIV325
Ch48	Circuit 1 Power+ configuration - Rotor resistance	UInt			0...30000	R/W	BLDC_Mng_Circ1.CurrCompCfg_PWRP.HR47_RotorResistance	HR473	PIV326
Ch49	Circuit 1 Power+ configuration - Stator inductance Ld	Real			0.0...600.0	R/W	BLDC_Mng_Circ1.CurrCompCfg_PWRP.HR48_StatorInductanceLd	HR474	AV322
Ch50	Circuit 1 Power+ configuration - Leakage factor	UInt			0...250	R/W	BLDC_Mng_Circ1.CurrCompCfg_PWRP.HR49_LeakageFactor	HR475	PIV327
Ch51	Circuit 1 Power+ configuration - Stator inductance Lq	Real			0.0...600.0	R/W	BLDC_Mng_Circ1.CurrCompCfg_PWRP.HR50_LqInductance	HR476	AV323
Ch52	Circuit 1 Power+ configuration - Speed loop Kp	Real			0.1...200.0	R/W	BLDC_Mng_Circ1.CurrCompCfg_PWRP.HR55_SpeedLoopKp	HR477	AV324
Ch53	Circuit 1 Power+ configuration - Speed loop Ti	UInt			1...1000	R/W	BLDC_Mng_Circ1.CurrCompCfg_PWRP.HR56_SpeedLoopTi	HR478	PIV328
Ch54	Circuit 1 Power+ configuration - Magnetizing time	UInt			0...30000	R/W	BLDC_Mng_Circ1.CurrCompCfg_PWRP.HR51_MagnetizingTime	HR479	PIV329
Ch55	Circuit 1 Power+ configuration - Starting current	Real			0.0...100.0	R/W	BLDC_Mng_Circ1.CurrCompCfg_PWRP.HR57_StartingCurrent	HR480	AV325
-	Circuit 1 Power+ information - Rated starting current	Real				R	BLDC_Mng_Circ1.Info_PWRP.U_I_RatedStartingA	IR294	AV326
Ch56	Circuit 1 Power+ configuration - Frequency for starting current	Real			0.0...100.0	R/W	BLDC_Mng_Circ1.CurrCompCfg_PWRP.HR58_StartingAFreq	HR481	AV327
Ch57	Circuit 1 Power+ configuration - Crank-case heater mode (0=Strategy mng; 1=forcedON; 2=forcedOFF)	UInt			0...2	R/W	BLDC_Mng_Circ1.CurrCompCfg_PWRP.CrankCaseHeaterMode	HR482	PIV330
Ch58	Circuit 1 Power+ configuration - Crank-case heater current	Real			0.0...100.0	R/W	BLDC_Mng_Circ1.CurrCompCfg_PWRP.HR65_CrankCaseHeaterCurrent	HR483	AV328
-	Circuit 1 Power+ information - Rated crankcase heating current	Real				R	BLDC_Mng_Circ1.Info_PWRP.U_I_RatedCrankCaseHeatA	IR295	AV329
Ch59	Circuit 1 Power+ configuration - Disable phase loss algorithm (0=enabled; 1=disabled)	Bool			0...1	R/W	BLDC_Mng_Circ1.CurrCompCfg_PWRP.HR76_0_DisPhLossDetect	C58	BV292
Ch60	Circuit 1 Power+ configuration - Safety torque off alarm autoreset on drive stand-by	UInt			0...2	R/W	BLDC_Mng_Circ1.CurrCompCfg_PWRP.HR66_STOResetStrategy	HR484	PIV331
Ch61	Circuit 1 Power+ configuration - Thermal Overload Retention Enable	Bool			0...1	R/W	BLDC_Mng_Circ1.CurrCompCfg_PWRP.HR76_3_EnOvldThProtRetention	C59	BV293
-	Circuit 1 Power+ configuration - Inductance saturation factor	Real			0.0...100.0	R/W	BLDC_Mng_Circ1.CurrCompCfg_PWRP.HR77_InductSaturationFactor	HR485	AV330

-	Circuit 1 Power+ information - Inductance saturation reduction (percentage at rated current)	Real				R	BLDC_Mng_Circ1.Info_PWRP.U I_RatedInductsatReductA	IR296	AV331
	Circuit 1 Power+ parameters - Save custom config. command	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.MiscMng_PW RP.MngCstm_SaveCustomCfg	C60	BV294
-	Circuit 1 Power+ parameters - Custom configuration data saving in progress	Bool	FALSE			R	BLDC_Mng_Circ1.MiscMng_PW RP.MngCstm_SaveCustomCfgIn Progress	DI235	BV295
-	Circuit 1 Power+ online	Bool				R	BLDC_Mng_Circ1.PwrOnline_B LDC	DI236	BV296
Ch64	Circuit 1 Power+ alarms reset - Maximum semiautomatic alarm reset retry number	DInt	3		0...5	R/W	BLDC_Mng_Circ1.AlrmResetMn g_PWRP.RetryThrs	HR486	IV53
Ch65	Circuit 1 Power+ alarms reset - Time threshold for semiautomatic reset	UDInt	60		1...1440	R/W	BLDC_Mng_Circ1.AlrmResetMn g_PWRP.TimeThrs	HR488	PIV332
Ch66	Circuit 1 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.AlrmResetMn g_PWRP.AI01_uMotorResetTyp	C61	BV297
Ch66	Circuit 1 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.AlrmResetMn g_PWRP.AI07_uMotorResetTyp	C62	BV298
Ch67	Circuit 1 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.AlrmResetMn g_PWRP.AI02_uMotorResetTyp	C63	BV299
Ch67	Circuit 1 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.AlrmResetMn g_PWRP.AI08_uMotorResetTyp	C64	BV300
Ch68	Circuit 1 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.AlrmResetMn g_PWRP.AI03_uMotorResetTyp	C65	BV301
Ch68	Circuit 1 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.AlrmResetMn g_PWRP.AI09_uMotorResetTyp	C66	BV302
Ch69	Circuit 1 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.AlrmResetMn g_PWRP.AI04_uMotorResetTyp	C67	BV303
Ch69	Circuit 1 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.AlrmResetMn g_PWRP.AI10_uMotorResetTyp	C68	BV304
Ch70	Circuit 1 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.AlrmResetMn g_PWRP.AI05_uMotorResetTyp	C69	BV305
Ch70	Circuit 1 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.AlrmResetMn g_PWRP.AI11_uMotorResetTyp	C70	BV306
Ch71	Circuit 1 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.AlrmResetMn g_PWRP.AI06_uMotorResetTyp	C71	BV307
Ch71	Circuit 1 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.AlrmResetMn g_PWRP.AI12_uMotorResetTyp	C72	BV308
Ch78	Circuit 1 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.AlrmResetMn g_PWRP.AI13_uMotorResetTyp	C73	BV309
Ch78	Circuit 1 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.AlrmResetMn g_PWRP.AI19_uMotorResetTyp	C74	BV310
Ch79	Circuit 1 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.AlrmResetMn g_PWRP.AI14_uMotorResetTyp	C75	BV311
Ch79	Circuit 1 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.AlrmResetMn g_PWRP.AI20_uMotorResetTyp	C76	BV312
Ch80	Circuit 1 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.AlrmResetMn g_PWRP.AI15_uMotorResetTyp	C77	BV313
Ch80	Circuit 1 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.AlrmResetMn g_PWRP.AI21_uMotorResetTyp	C78	BV314
Ch81	Circuit 1 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.AlrmResetMn g_PWRP.AI16_uMotorResetTyp	C79	BV315
Ch81	Circuit 1 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.AlrmResetMn g_PWRP.AI22_uMotorResetTyp	C80	BV316
Ch82	Circuit 1 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.AlrmResetMn g_PWRP.AI17_uMotorResetTyp	C81	BV317
Ch82	Circuit 1 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.AlrmResetMn g_PWRP.AI23_uMotorResetTyp	C82	BV318
Ch83	Circuit 1 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.AlrmResetMn g_PWRP.AI18_uMotorResetTyp	C83	BV319
Ch83	Circuit 1 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.AlrmResetMn g_PWRP.AI24_uMotorResetTyp	C84	BV320
Ch90	Circuit 1 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.AlrmResetMn g_PWRP.AI25_uMotorResetTyp	C85	BV321
Ch91	Circuit 1 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.AlrmResetMn g_PWRP.AI26_uMotorResetTyp	C86	BV322
Ch92	Circuit 1 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.AlrmResetMn g_PWRP.AI27_uMotorResetTyp	C87	BV323
Ch93	Circuit 1 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.AlrmResetMn g_PWRP.AI28_uMotorResetTyp	C88	BV324
Ch94	Circuit 1 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.AlrmResetMn g_PWRP.AI99_uMotorResetTyp	C89	BV325
Ch95	Circuit 1 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.AlrmResetMn g_PWRP.AI101_uSafeResetTyp	C90	BV326
Ch95	Circuit 1 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.AlrmResetMn g_PWRP.AI107_uSafeResetTyp	C91	BV327
Ch96	Circuit 1 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.AlrmResetMn g_PWRP.AI102_uSafeResetTyp	C92	BV328
Ch96	Circuit 1 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.AlrmResetMn g_PWRP.AI108_uSafeResetTyp	C93	BV329
Ch97	Circuit 1 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.AlrmResetMn g_PWRP.AI103_uSafeResetTyp	C94	BV330
Ch97	Circuit 1 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.AlrmResetMn g_PWRP.AI109_uSafeResetTyp	C95	BV331
Ch98	Circuit 1 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.AlrmResetMn g_PWRP.AI104_uSafeResetTyp	C96	BV332
Ch98	Circuit 1 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.AlrmResetMn g_PWRP.AI110_uSafeResetTyp	C97	BV333
Ch99	Circuit 1 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.AlrmResetMn g_PWRP.AI105_uSafeResetTyp	C98	BV334
Ch99	Circuit 1 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.AlrmResetMn g_PWRP.AI111_uSafeResetTyp	C99	BV335
ChA0	Circuit 1 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.AlrmResetMn g_PWRP.AI106_uSafeResetTyp	C100	BV336
ChA0	Circuit 1 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.AlrmResetMn g_PWRP.AI112_uSafeResetTyp	C101	BV337
ChA7	Circuit 1 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.AlrmResetMn g_PWRP.AI113_uSafeResetTyp	C102	BV338

ChA7	Circuit 1 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.AlrmResetMn g_PWRP.AI203_uSafeResetTyp	C103	BV339
ChA8	Circuit 1 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.AlrmResetMn g_PWRP.AI114_uSafeResetTyp	C104	BV340
ChA8	Circuit 1 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.AlrmResetMn g_PWRP.AI204_uSafeResetTyp	C105	BV341
ChA9	Circuit 1 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.AlrmResetMn g_PWRP.AI115_uSafeResetTyp	C106	BV342
ChA9	Circuit 1 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.AlrmResetMn g_PWRP.AI205_uSafeResetTyp	C107	BV343
ChB0	Circuit 1 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.AlrmResetMn g_PWRP.AI116_uSafeResetTyp	C108	BV344
ChB0	Circuit 1 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.AlrmResetMn g_PWRP.AI206_uSafeResetTyp	C109	BV345
ChB1	Circuit 1 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.AlrmResetMn g_PWRP.AI201_uSafeResetTyp	C110	BV346
ChB1	Circuit 1 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.AlrmResetMn g_PWRP.AI207_uSafeResetTyp	C111	BV347
ChB2	Circuit 1 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.AlrmResetMn g_PWRP.AI202_uSafeResetTyp	C112	BV348
ChB2	Circuit 1 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.AlrmResetMn g_PWRP.AI208_uSafeResetTyp	C113	BV349
ChB9	Circuit 1 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.AlrmResetMn g_PWRP.AI209_uSafeResetTyp	C114	BV350
ChB9	Circuit 1 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.AlrmResetMn g_PWRP.AI215_uSafeResetTyp	C115	BV351
ChC0	Circuit 1 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.AlrmResetMn g_PWRP.AI210_uSafeResetTyp	C116	BV352
ChC0	Circuit 1 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.AlrmResetMn g_PWRP.AI216_uSafeResetTyp	C117	BV353
ChC1	Circuit 1 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.AlrmResetMn g_PWRP.AI211_uSafeResetTyp	C118	BV354
ChC2	Circuit 1 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.AlrmResetMn g_PWRP.AI212_uSafeResetTyp	C119	BV355
ChC3	Circuit 1 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.AlrmResetMn g_PWRP.AI213_uSafeResetTyp	C120	BV356
ChC4	Circuit 1 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ1.AlrmResetMn g_PWRP.AI214_uSafeResetTyp	C121	BV357
-	Circuit 1 Power+ information - FB version x	UInt				R	BLDC_Mng_Circ1.Info_PWRP.D bg_FBVersion_X	IR297	PIV333
-	Circuit 1 Power+ information - FB version y	UInt				R	BLDC_Mng_Circ1.Info_PWRP.D bg_FBVersion_Y	IR298	PIV334
-	Circuit 1 Power+ information - FB version zzz	UInt				R	BLDC_Mng_Circ1.Info_PWRP.D bg_FBVersion_Z	IR299	PIV335
-	Circuit 1 Power+ information - FB version beta	UInt				R	BLDC_Mng_Circ1.Info_PWRP.D bg_FBVersion_Beta	IR300	PIV336
-	Circuit 1 Power+ registers - Bootloader version	UInt				R	BLDC_Mng_Circ1.IRparam_PW RP.IR141_BootLoaderRelease	IR301	PIV337
-	Circuit 1 Power+ registers - Firmware version	UInt				R	BLDC_Mng_Circ1.IRparam_PW RP.IR142_FirmwareRelease	IR302	PIV338
-	Circuit 1 Power+ registers - Firmware checksum	UInt				R	BLDC_Mng_Circ1.IRparam_PW RP.IR143_FirmwareCRC	IR303	PIV339
-	Circuit 1 Power+ registers - Motor control version	UInt				R	BLDC_Mng_Circ1.IRparam_PW RP.IR144_MotCtrlRelease	IR304	PIV340
-	Circuit 1 Power+ registers - Hardware identification	UInt				R	BLDC_Mng_Circ1.IRparam_PW RP.IR149_HardwareIdentificatio n	IR305	PIV341

6.6.9 PSD CIRC.2 menu

Mask code	Description	Type	Default	UoM	Range	R/W	Variable Name	BMS	BacNet
Ci01	Circuit 2 BLDC parameters - Compressor model (PowerPlus)	UInt	1		Limited	R/W	BLDC_Mng_Circ2.MiscMng_BLD C.Mng_PwrpMotTyp	HR600	PIV342
	Circuit 2 BLDC parameters - Compressor model	UInt	1		0...72	R/W	BLDC_Mng_Circ2.MiscMng_BLD C.Mng_CompTyp	HR601	PIV343
Ci02	Circuit 2 Power+ parameters - Drive type	UInt	0		0...17	R/W	BLDC_Mng_Circ2.MiscMng_PW RP.Mng_DriveTyp	HR602	PIV344
Ci02	Circuit 2 Power+ parameters - Drive type	UInt	0			R	BLDC_Mng_Circ2.MiscMng_PW RP.Mng_DriveTyp	HR602	PIV344
Ci03	Circuit 2 Power+ parameters - Write default request	Int	0		0...1	R/W	BLDC_Mng_Circ2.MiscMng_PW RP.Mng_WriteDefault	HR603	IV106
-	Circuit 2 Power+ information - Reserved	Bool				R	BLDC_Mng_Circ2.Info_PWRP.Mng_CheckV1_NotOK	DI239	BV374
-	Circuit 2 Power+ information - Reserved	Bool				R	BLDC_Mng_Circ2.Info_PWRP.Mng_LoadDefFail	DI240	BV375
-	Circuit 2 Power+ information - Main supply as three phases	Bool				R	BLDC_Mng_Circ2.Info_PWRP.I nfo_PSD_400V	DI241	BV376
-	Circuit 2 Power+ information - Device rated current [AA.a]	Real				R	BLDC_Mng_Circ2.Info_PWRP.I nfo_PSD_AAa	IR306	AV390
-	Circuit 2 Power+ information - Three-phase inverter required for compressor	Bool				R	BLDC_Mng_Circ2.Info_PWRP.Mng_MotSelect_400V	DI242	BV377
-	Circuit 2 Power+ information - Rated current of compressor	UInt				R	BLDC_Mng_Circ2.Info_PWRP.Mng_MotSelect_AAa	IR307	PIV345
Ci04	Circuit 2 Power+ configuration - Data communication fault timeout	UInt			0...600	R/W	BLDC_Mng_Circ2.CurrCompCfg _PWRP.HR29_DataCommTime out	HR604	PIV346
Ci05	Circuit 2 Power+ parameters - Serial number control enable	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ2.MiscMng_PW RP.Mng_SerNoCtrl_En	C136	BV378
Ci06	Circuit 2 Power+ configuration - Min output frequency	Real			Limited	R/W	BLDC_Mng_Circ2.CurrCompCfg _PWRP.HR07_MinOutFreq	HR605	AV391
Ci07	Circuit 2 Power+ configuration - Max output frequency	Real			Limited	R/W	BLDC_Mng_Circ2.CurrCompCfg _PWRP.HR06_MaxOutFreq	HR606	AV392
Ci08	Circuit 2 Power+ configuration - Skip frequency: set 1	Real			Limited	R/W	BLDC_Mng_Circ2.CurrCompCfg _PWRP.HR10_SkipFreqSetP	HR607	AV393

Ci09	Circuit 2 Power+ configuration - Skip frequency: band 1	Real			Limited	R/W	BLDC_Mng_Circ2.CurrCompCfg_PWRP.HR11_SkipFreqBand	HR608	AV394
Ci10	Circuit 2 Power+ configuration - Skip frequency setpoint 2	Real			Limited	R/W	BLDC_Mng_Circ2.CurrCompCfg_PWRP.HR67_SkipFreqSetP_2	HR609	AV395
Ci11	Circuit 2 Power+ configuration - Skip frequency band 2	Real			Limited	R/W	BLDC_Mng_Circ2.CurrCompCfg_PWRP.HR68_SkipFreqBand_2	HR610	AV396
Ci12	Circuit 2 Power+ configuration - Skip frequency setpoint 3	Real			Limited	R/W	BLDC_Mng_Circ2.CurrCompCfg_PWRP.HR69_SkipFreqSetp_3	HR611	AV397
Ci13	Circuit 2 Power+ configuration - Skip frequency band 3	Real			Limited	R/W	BLDC_Mng_Circ2.CurrCompCfg_PWRP.HR70_SkipFreqBand_3	HR612	AV398
Ci14	Circuit 2 Power+ configuration - Switching frequency	UInt			0...2	R/W	BLDC_Mng_Circ2.CurrCompCfg_PWRP.HR24_SwitchingFreq	HR613	PIV347
Ci15	Circuit 2 Power+ configuration - Switching frequency derating	UInt			0...1	R/W	BLDC_Mng_Circ2.CurrCompCfg_PWRP.HR25_SwitchingFreqDerating	HR614	PIV348
Ci16	Circuit 2 Power+ configuration - Motor overtemperature alarm (PTC) enable	UInt			0...1	R/W	BLDC_Mng_Circ2.CurrCompCfg_PWRP.HR27_MotOverTempAlrm_PTC_En	HR615	PIV349
Ci17	Circuit 2 Power+ configuration - Motor overtemperature alarm delay	UInt			0...999	R/W	BLDC_Mng_Circ2.CurrCompCfg_PWRP.HR28_MotOverTempAlrm_PTC_Delay	HR616	PIV350
Ci18	Circuit 2 Power+ configuration - Reverse speed enable	UInt			0...1	R/W	BLDC_Mng_Circ2.CurrCompCfg_PWRP.HR08_EnRevSpeed	HR617	PIV351
Ci19	Circuit 2 Power+ configuration - Speed derating mode	UInt			0...10	R/W	BLDC_Mng_Circ2.CurrCompCfg_PWRP.HR09_SpeedDeratingMode	HR618	PIV352
Ci20	Circuit 2 Power+ configuration - Stop mode	UInt			0...1	R/W	BLDC_Mng_Circ2.CurrCompCfg_PWRP.HR33_StopMode	HR619	PIV353
Ci21	Circuit 2 Power+ configuration - Flying restart	UInt			0...1	R/W	BLDC_Mng_Circ2.CurrCompCfg_PWRP.HR34_FlyingRestart	HR620	PIV354
-	Circuit 2 Power+ configuration - Relay configuration	UInt			0...8	R/W	BLDC_Mng_Circ2.CurrCompCfg_PWRP.HR26_RelayCfg	HR621	PIV355
Ci23	Circuit 2 Power+ parameters - Motor pole pairs	UInt	0			R	BLDC_Mng_Circ2.MiscMng_PWRP.Mng_MotPoles	IR308	PIV356
Ci23	Circuit 2 Power+ parameters - Motor pole pairs	UInt	0		1...5	R/W	BLDC_Mng_Circ2.MiscMng_PWRP.Mng_MotPoles	IR308	PIV356
Ci24	Circuit 2 Power+ configuration - Motor control mode	UInt			0...2	R/W	BLDC_Mng_Circ2.CurrCompCfg_PWRP.HR00_MotCtrlMode	HR622	PIV357
Ci25	Circuit 2 Power+ configuration - Motor power factor	UInt			0...100	R/W	BLDC_Mng_Circ2.CurrCompCfg_PWRP.HR04_MotPwrFactor	HR623	PIV358
Ci26	Circuit 2 Power+ configuration - Max output current	Real			0.0...200.0	R/W	BLDC_Mng_Circ2.CurrCompCfg_PWRP.HR05_MaxOutCurrent	HR624	AV399
Ci27	Circuit 2 Power+ configuration - Motor base frequency	Real			Limited	R/W	BLDC_Mng_Circ2.CurrCompCfg_PWRP.HR01_MotBaseFreq	HR625	AV400
Ci28	Circuit 2 Power+ configuration - Motor base voltage	UInt			Limited	R/W	BLDC_Mng_Circ2.CurrCompCfg_PWRP.HR02_MotBaseV	HR626	PIV359
Ci29	Circuit 2 Power+ configuration - Motor rated current	Real			Limited	R/W	BLDC_Mng_Circ2.CurrCompCfg_PWRP.HR03_MotRatedA	HR627	AV401
Ci30	Circuit 2 Power+ configuration - Speed profile: frequency 1	Real			Limited	R/W	BLDC_Mng_Circ2.CurrCompCfg_PWRP.HR12_SpeedProfileFreq1	HR628	AV402
Ci31	Circuit 2 Power+ configuration - Speed profile: frequency 2	Real			Limited	R/W	BLDC_Mng_Circ2.CurrCompCfg_PWRP.HR13_SpeedProfileFreq2	HR629	AV403
Ci32	Circuit 2 Power+ configuration - Speed profile: frequency 3	Real			Limited	R/W	BLDC_Mng_Circ2.CurrCompCfg_PWRP.HR14_SpeedProfileFreq3	HR630	AV404
Ci33	Circuit 2 Power+ configuration - Speed profile: acceleration 1	Real			Limited	R/W	BLDC_Mng_Circ2.CurrCompCfg_PWRP.HR15_SpeedProfileAcceleration1	HR631	AV405
Ci34	Circuit 2 Power+ configuration - Speed profile: acceleration 2	Real			Limited	R/W	BLDC_Mng_Circ2.CurrCompCfg_PWRP.HR16_SpeedProfileAcceleration2	HR632	AV406
Ci35	Circuit 2 Power+ configuration - Speed profile: acceleration 3	Real			Limited	R/W	BLDC_Mng_Circ2.CurrCompCfg_PWRP.HR17_SpeedProfileAcceleration3	HR633	AV407
Ci36	Circuit 2 Power+ configuration - Speed profile: acceleration 4	Real			Limited	R/W	BLDC_Mng_Circ2.CurrCompCfg_PWRP.HR18_SpeedProfileAcceleration4	HR634	AV408
Ci37	Circuit 2 Power+ configuration - Speed profile: deceleration	Real			Limited	R/W	BLDC_Mng_Circ2.CurrCompCfg_PWRP.HR23_SpeedProfileDeceleration	HR635	AV409
Ci38	Circuit 2 Power+ configuration - Speed profile: delay 1	UInt			0...600	R/W	BLDC_Mng_Circ2.CurrCompCfg_PWRP.HR19_SpeedProfileDelay1	HR636	PIV360
Ci39	Circuit 2 Power+ configuration - Speed profile: delay 2	UInt			0...600	R/W	BLDC_Mng_Circ2.CurrCompCfg_PWRP.HR20_SpeedProfileDelay2	HR637	PIV361
Ci40	Circuit 2 Power+ configuration - Speed profile: delay 3	UInt			0...600	R/W	BLDC_Mng_Circ2.CurrCompCfg_PWRP.HR21_SpeedProfileDelay3	HR638	PIV362
Ci41	Circuit 2 Power+ configuration - Speed profile start mode (0= always; 1=once at run)	Bool			0...1	R/W	BLDC_Mng_Circ2.CurrCompCfg_PWRP.HR22_0_SpeedProfileStartMode	C137	BV379
Ci42	Circuit 2 Power+ configuration - Speed profile start mode (0=-; 1=force freq. 2)	Bool			0...1	R/W	BLDC_Mng_Circ2.CurrCompCfg_PWRP.HR22_1_SpeedProfileStartMode	C138	BV380
Ci43	Circuit 2 Power+ configuration - V/f boost voltage	Real			0.0...25.0	R/W	BLDC_Mng_Circ2.CurrCompCfg_PWRP.HR35_V_F_BoostV	HR639	AV410
Ci44	Circuit 2 Power+ configuration - V/f frequency adjustment	Real			0.0...100.0	R/W	BLDC_Mng_Circ2.CurrCompCfg_PWRP.HR36_V_F_FreqAdj	HR640	AV411
Ci45	Circuit 2 Power+ configuration - V/f voltage adjustment	Real			0.0...100.0	R/W	BLDC_Mng_Circ2.CurrCompCfg_PWRP.HR37_V_F_VAdj	HR641	AV412
Ci46	Circuit 2 Power+ configuration - Motor magnetizing current	Real			Limited	R/W	BLDC_Mng_Circ2.CurrCompCfg_PWRP.HR45_MotMagnetizingCurrent	HR642	AV413
Ci47	Circuit 2 Power+ configuration - Stator resistance	UInt			0...30000	R/W	BLDC_Mng_Circ2.CurrCompCfg_PWRP.HR46_StatorResistance	HR643	PIV363

Ci48	Circuit 2 Power+ configuration - Rotor resistance	UInt			0...30000	R/W	BLDC_Mng_Circ2.CurrCompCfg_PWRP.HR47_RotorResistance	HR644	PIV364
Ci49	Circuit 2 Power+ configuration - Stator inductance Ld	Real			0.0...600.0	R/W	BLDC_Mng_Circ2.CurrCompCfg_PWRP.HR48_StatorInductanceLd	HR645	AV414
Ci50	Circuit 2 Power+ configuration - Leakage factor	UInt			0...250	R/W	BLDC_Mng_Circ2.CurrCompCfg_PWRP.HR49_LeakageFactor	HR646	PIV365
Ci51	Circuit 2 Power+ configuration - Stator inductance Lq	Real			0.0...600.0	R/W	BLDC_Mng_Circ2.CurrCompCfg_PWRP.HR50_LqInductance	HR647	AV415
Ci52	Circuit 2 Power+ configuration - Speed loop Kp	Real			0.1...200.0	R/W	BLDC_Mng_Circ2.CurrCompCfg_PWRP.HR55_SpeedLoopKp	HR648	AV416
Ci53	Circuit 2 Power+ configuration - Speed loop Ti	UInt			1...1000	R/W	BLDC_Mng_Circ2.CurrCompCfg_PWRP.HR56_SpeedLoopTi	HR649	PIV366
Ci54	Circuit 2 Power+ configuration - Magnetizing time	UInt			0...30000	R/W	BLDC_Mng_Circ2.CurrCompCfg_PWRP.HR51_MagnetizingTime	HR650	PIV367
Ci55	Circuit 2 Power+ configuration - Starting current	Real			0.0...100.0	R/W	BLDC_Mng_Circ2.CurrCompCfg_PWRP.HR57_StartingCurrent	HR651	AV417
	Circuit 2 Power+ information - Rated starting current	Real				R	BLDC_Mng_Circ2.Info_PWRP.UI_RatedStartingA	IR309	AV418
Ci56	Circuit 2 Power+ configuration - Frequency for starting current	Real			0.0...100.0	R/W	BLDC_Mng_Circ2.CurrCompCfg_PWRP.HR58_StartingAFreq	HR652	AV419
Ci57	Circuit 2 Power+ configuration - Crank-case heater mode (0=Strategy mng; 1=forcedON; 2=forcedOFF)	UInt			0...2	R/W	BLDC_Mng_Circ2.CurrCompCfg_PWRP.CrankCaseHeaterMode	HR653	PIV368
Ci58	Circuit 2 Power+ configuration - Crank-case heater current	Real			0.0...100.0	R/W	BLDC_Mng_Circ2.CurrCompCfg_PWRP.HR65_CrankCaseHeaterCurrent	HR654	AV420
	Circuit 2 Power+ information - Rated crankcase heating current	Real				R	BLDC_Mng_Circ2.Info_PWRP.UI_RatedCrankCaseHeatA	IR310	AV421
Ci59	Circuit 2 Power+ configuration - Disable phase loss algorithm (0=enabled; 1=disabled)	Bool			0...1	R/W	BLDC_Mng_Circ2.CurrCompCfg_PWRP.HR76_0_DisPhLossDetect	C139	BV381
Ci60	Circuit 2 Power+ configuration - Safety torque off alarm autoreset on drive stand-by	UInt			0...2	R/W	BLDC_Mng_Circ2.CurrCompCfg_PWRP.HR66_STOResetStrategy	HR655	PIV369
Ci61	Circuit 2 Power+ configuration - Thermal Overload Retention Enable	Bool			0...1	R/W	BLDC_Mng_Circ2.CurrCompCfg_PWRP.HR76_3_EnOvldThProtRetention	C140	BV382
-	Circuit 2 Power+ configuration - Inductance saturation factor	Real			0.0...100.0	R/W	BLDC_Mng_Circ2.CurrCompCfg_PWRP.HR77_InductSatFactor	HR656	AV422
-	Circuit 2 Power+ information - Inductance saturation reduction (percentage at rated current)	Real				R	BLDC_Mng_Circ2.Info_PWRP.UI_RatedInductsatReductA	IR311	AV423
	Circuit 2 Power+ parameters - Save custom config. command	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ2.MiscMng_PWRP.MngCstm_SaveCustomCfg	C141	BV383
-	Circuit 2 Power+ parameters - Custom configuration data saving in progress	Bool	FALSE			R	BLDC_Mng_Circ2.MiscMng_PWRP.MngCstm_SaveCustomCfgInProgress	DI243	BV384
-	Circuit 2 Power+ online	Bool				R	BLDC_Mng_Circ2.PwrpOnline_BLDC	DI244	BV385
Ci64	Circuit 2 Power+ alarms reset - Maximum semiautomatic alarm reset retry number	DInt	0		0...5	R/W	BLDC_Mng_Circ2.AlrmResetMng_PWRP.RetryThrs	HR657	IV107
Ci65	Circuit 2 Power+ alarms reset - Time threshold for semiautomatic reset	UDInt	0		1...1440	R/W	BLDC_Mng_Circ2.AlrmResetMng_PWRP.TimeThrs	HR659	PIV370
Ci66	Circuit 2 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ2.AlrmResetMng_PWRP.AI01_uMotorResetTyp	C142	BV386
Ci66	Circuit 2 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ2.AlrmResetMng_PWRP.AI07_uMotorResetTyp	C143	BV387
Ci67	Circuit 2 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ2.AlrmResetMng_PWRP.AI02_uMotorResetTyp	C144	BV388
Ci67	Circuit 2 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ2.AlrmResetMng_PWRP.AI08_uMotorResetTyp	C145	BV389
Ci68	Circuit 2 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ2.AlrmResetMng_PWRP.AI03_uMotorResetTyp	C146	BV390
Ci68	Circuit 2 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ2.AlrmResetMng_PWRP.AI09_uMotorResetTyp	C147	BV391
Ci69	Circuit 2 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ2.AlrmResetMng_PWRP.AI04_uMotorResetTyp	C148	BV392
Ci69	Circuit 2 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ2.AlrmResetMng_PWRP.AI10_uMotorResetTyp	C149	BV393
Ci70	Circuit 2 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ2.AlrmResetMng_PWRP.AI05_uMotorResetTyp	C150	BV394
Ci70	Circuit 2 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ2.AlrmResetMng_PWRP.AI11_uMotorResetTyp	C151	BV395
Ci71	Circuit 2 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ2.AlrmResetMng_PWRP.AI12_uMotorResetTyp	C152	BV396
Ci71	Circuit 2 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ2.AlrmResetMng_PWRP.AI12_uMotorResetTyp	C153	BV397
Ci78	Circuit 2 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ2.AlrmResetMng_PWRP.AI13_uMotorResetTyp	C154	BV398
Ci78	Circuit 2 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ2.AlrmResetMng_PWRP.AI19_uMotorResetTyp	C155	BV399
Ci79	Circuit 2 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ2.AlrmResetMng_PWRP.AI14_uMotorResetTyp	C156	BV400
Ci79	Circuit 2 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ2.AlrmResetMng_PWRP.AI20_uMotorResetTyp	C157	BV401
Ci80	Circuit 2 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ2.AlrmResetMng_PWRP.AI15_uMotorResetTyp	C158	BV402
Ci80	Circuit 2 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ2.AlrmResetMng_PWRP.AI21_uMotorResetTyp	C159	BV403
Ci81	Circuit 2 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ2.AlrmResetMng_PWRP.AI16_uMotorResetTyp	C160	BV404
Ci81	Circuit 2 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ2.AlrmResetMng_PWRP.AI22_uMotorResetTyp	C161	BV405
Ci82	Circuit 2 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ2.AlrmResetMng_PWRP.AI17_uMotorResetTyp	C162	BV406
Ci82	Circuit 2 Power+ alarms reset - Reset type:	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ2.AlrmResetMn	C163	BV407

6.6.10 PSD CIRC.3 menu

Mask code	Description	Type	Default	UoM	Range	R/W	Variable Name	BMS	BacNet
Cj01	Circuit 3 BLDC parameters - Compressor model (PowerPlus)	UInt	1		Limited	R/W	BLDC_Mng_Circ3.MiscMng_BL DC.Mng_PwrpMotTyp	HR661	PIV380
-	Circuit 3 BLDC parameters - Compressor model	UInt	1		0...72	R/W	BLDC_Mng_Circ3.MiscMng_BL DC.Mng_CompTyp	HR662	PIV381
Cj02	Circuit 3 Power+ parameters - Drive type	UInt	0		0...17	R/W	BLDC_Mng_Circ3.MiscMng_PW RP.Mng_DriveTyp	HR663	PIV382
Cj02	Circuit 3 Power+ parameters - Drive type	UInt	0			R	BLDC_Mng_Circ3.MiscMng_PW RP.Mng_DriveTyp	HR663	PIV382
Cj03	Circuit 3 Power+ parameters - Write default request	Int	0		0...1	R/W	BLDC_Mng_Circ3.MiscMng_PW RP.Mng_WriteDefault	HR664	IV108
-	Circuit 3 Power+ information - Reserved	Bool				R	BLDC_Mng_Circ3.Info_PWRP. Mng_CheckV1_NotOK	DI245	BV447
-	Circuit 3 Power+ information - Reserved	Bool				R	BLDC_Mng_Circ3.Info_PWRP. Mng_LoadDefFail	DI246	BV448
-	Circuit 3 Power+ information - Main supply as three phases	Bool				R	BLDC_Mng_Circ3.Info_PWRP.I nfo_PSD_400V	DI247	BV449
-	Circuit 3 Power+ information - Device rated current [AA.a]	Real				R	BLDC_Mng_Circ3.Info_PWRP.I nfo_PSD_AAa	IR321	AV424
-	Circuit 3 Power+ information - Three-phase inverter required for compressor	Bool				R	BLDC_Mng_Circ3.Info_PWRP. Mng_MotSelect_400V	DI248	BV450
-	Circuit 3 Power+ information - Rated current of compressor	UInt				R	BLDC_Mng_Circ3.Info_PWRP. Mng_MotSelect_AAa	IR322	PIV383
Cj04	Circuit 3 Power+ configuration - Data communication fault timeout	UInt			0...600	R/W	BLDC_Mng_Circ3.CurrCompCfg _PWRP.HR29_DataCommTime out	HR665	PIV384
Cj05	Circuit 3 Power+ parameters - Serial number control enable	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ3.MiscMng_PW RP.Mng_SerNoCtrl_En	C203	BV451
Cj06	Circuit 3 Power+ configuration - Min output frequency	Real			Limited	R/W	BLDC_Mng_Circ3.CurrCompCfg _PWRP.HR07_MinOutFreq	HR666	AV425
Cj07	Circuit 3 Power+ configuration - Max output frequency	Real			Limited	R/W	BLDC_Mng_Circ3.CurrCompCfg _PWRP.HR06_MaxOutFreq	HR667	AV426
Cj08	Circuit 3 Power+ configuration - Skip frequency: set 1	Real			Limited	R/W	BLDC_Mng_Circ3.CurrCompCfg _PWRP.HR10_SkipFreqSetP	HR668	AV427
Cj09	Circuit 3 Power+ configuration - Skip frequency: band 1	Real			Limited	R/W	BLDC_Mng_Circ3.CurrCompCfg _PWRP.HR11_SkipFreqBand	HR669	AV428
Cj10	Circuit 3 Power+ configuration - Skip frequency setpoint 2	Real			Limited	R/W	BLDC_Mng_Circ3.CurrCompCfg _PWRP.HR67_SkipFreqSetP_2	HR670	AV429
Cj11	Circuit 3 Power+ configuration - Skip frequency band 2	Real			Limited	R/W	BLDC_Mng_Circ3.CurrCompCfg _PWRP.HR68_SkipFreqBand_2	HR671	AV430
Cj12	Circuit 3 Power+ configuration - Skip frequency setpoint 3	Real			Limited	R/W	BLDC_Mng_Circ3.CurrCompCfg _PWRP.HR69_SkipFreqSetp_3	HR672	AV431
Cj13	Circuit 3 Power+ configuration - Skip frequency band 3	Real			Limited	R/W	BLDC_Mng_Circ3.CurrCompCfg _PWRP.HR70_SkipFreqBand_3	HR673	AV432
Cj14	Circuit 3 Power+ configuration - Switching frequency	UInt			0...2	R/W	BLDC_Mng_Circ3.CurrCompCfg _PWRP.HR24_SwitchingFreq	HR674	PIV385
Cj15	Circuit 3 Power+ configuration - Switching frequency derating	UInt			0...1	R/W	BLDC_Mng_Circ3.CurrCompCfg _PWRP.HR25_SwitchingFreqD erating	HR675	PIV386
Cj16	Circuit 3 Power+ configuration - Motor overtemperature alarm (PTC) enable	UInt			0...1	R/W	BLDC_Mng_Circ3.CurrCompCfg _PWRP.HR27_MotOvTempAlrm PTC_En	HR676	PIV387
Cj17	Circuit 3 Power+ configuration - Motor overtemperature alarm delay	UInt			0...999	R/W	BLDC_Mng_Circ3.CurrCompCfg _PWRP.HR28_MotOvTempAlrm PTC_Delay	HR677	PIV388
Cj18	Circuit 3 Power+ configuration - Reverse speed enable	UInt			0...1	R/W	BLDC_Mng_Circ3.CurrCompCfg _PWRP.HR08_EnRevSpeed	HR678	PIV389
Cj19	Circuit 3 Power+ configuration - Speed derating mode	UInt			0...10	R/W	BLDC_Mng_Circ3.CurrCompCfg _PWRP.HR09_SpeedDeratingM ode	HR679	PIV390
Cj20	Circuit 3 Power+ configuration - Stop mode	UInt			0...1	R/W	BLDC_Mng_Circ3.CurrCompCfg _PWRP.HR33_StopMode	HR680	PIV391
Cj21	Circuit 3 Power+ configuration - Flying restart	UInt			0...1	R/W	BLDC_Mng_Circ3.CurrCompCfg _PWRP.HR34_FlyingRestart	HR681	PIV392
	Circuit 3 Power+ configuration - Relay configuration	UInt			0...8	R/W	BLDC_Mng_Circ3.CurrCompCfg _PWRP.HR26_RelayCfg	HR682	PIV393
Cj23	Circuit 3 Power+ parameters - Motor pole pairs	UInt	0			R	BLDC_Mng_Circ3.MiscMng_PW RP.Mng_MotPoles	IR323	PIV394
Cj23	Circuit 3 Power+ parameters - Motor pole pairs	UInt	0		1...5	R/W	BLDC_Mng_Circ3.MiscMng_PW RP.Mng_MotPoles	IR323	PIV394
Cj24	Circuit 3 Power+ configuration - Motor control mode	UInt			0...2	R/W	BLDC_Mng_Circ3.CurrCompCfg _PWRP.HR00_MotCtrlMode	HR683	PIV395
Cj25	Circuit 3 Power+ configuration - Motor power factor	UInt			0...100	R/W	BLDC_Mng_Circ3.CurrCompCfg _PWRP.HR04_MotPwrFactor	HR684	PIV396
Cj26	Circuit 3 Power+ configuration - Max output current	Real			0.0...200.0	R/W	BLDC_Mng_Circ3.CurrCompCfg _PWRP.HR05_MaxOutCurrent	HR685	AV433
Cj27	Circuit 3 Power+ configuration - Motor base frequency	Real			Limited	R/W	BLDC_Mng_Circ3.CurrCompCfg _PWRP.HR01_MotBaseFreq	HR686	AV434
Cj28	Circuit 3 Power+ configuration - Motor base voltage	UInt			Limited	R/W	BLDC_Mng_Circ3.CurrCompCfg _PWRP.HR02_MotBaseV	HR687	PIV397
Cj29	Circuit 3 Power+ configuration - Motor rated current	Real			Limited	R/W	BLDC_Mng_Circ3.CurrCompCfg _PWRP.HR03_MotRatedA	HR688	AV435
Cj30	Circuit 3 Power+ configuration - Speed profile: frequency 1	Real			Limited	R/W	BLDC_Mng_Circ3.CurrCompCfg _PWRP.HR12_SpeedProfileFre q1	HR689	AV436
Cj31	Circuit 3 Power+ configuration - Speed profile: frequency 2	Real			Limited	R/W	BLDC_Mng_Circ3.CurrCompCfg _PWRP.HR13_SpeedProfileFre q2	HR690	AV437
Cj32	Circuit 3 Power+ configuration - Speed profile: frequency 3	Real			Limited	R/W	BLDC_Mng_Circ3.CurrCompCfg _PWRP.HR14_SpeedProfileFre q3	HR691	AV438
Cj33	Circuit 3 Power+ configuration - Speed profile: acceleration 1	Real			Limited	R/W	BLDC_Mng_Circ3.CurrCompCfg _PWRP.HR15_SpeedProfileAcc	HR692	AV439

							eleration1		
Cj34	Circuit 3 Power+ configuration - Speed profile: acceleration 2	Real			Limited	R/W	BLDC_Mng_Circ3.CurrCompCfg_PWRP.HR16_SpeedProfileAcceleration2	HR693	AV440
Cj35	Circuit 3 Power+ configuration - Speed profile: acceleration 3	Real			Limited	R/W	BLDC_Mng_Circ3.CurrCompCfg_PWRP.HR17_SpeedProfileAcceleration3	HR694	AV441
Cj36	Circuit 3 Power+ configuration - Speed profile: acceleration 4	Real			Limited	R/W	BLDC_Mng_Circ3.CurrCompCfg_PWRP.HR18_SpeedProfileAcceleration4	HR695	AV442
Cj37	Circuit 3 Power+ configuration - Speed profile: deceleration	Real			Limited	R/W	BLDC_Mng_Circ3.CurrCompCfg_PWRP.HR23_SpeedProfileDeceleration	HR696	AV443
Cj38	Circuit 3 Power+ configuration - Speed profile: delay 1	UInt			0...600	R/W	BLDC_Mng_Circ3.CurrCompCfg_PWRP.HR19_SpeedProfileDelay1	HR697	PIV398
Cj39	Circuit 3 Power+ configuration - Speed profile: delay 2	UInt			0...600	R/W	BLDC_Mng_Circ3.CurrCompCfg_PWRP.HR20_SpeedProfileDelay2	HR698	PIV399
Cj40	Circuit 3 Power+ configuration - Speed profile: delay 3	UInt			0...600	R/W	BLDC_Mng_Circ3.CurrCompCfg_PWRP.HR21_SpeedProfileDelay3	HR699	PIV400
Cj41	Circuit 3 Power+ configuration - Speed profile start mode (0= always; 1=once at run)	Bool			0...1	R/W	BLDC_Mng_Circ3.CurrCompCfg_PWRP.HR22_0_SpeedProfStartMode	C204	BV452
Cj42	Circuit 3 Power+ configuration - Speed profile start mode (0=-; 1=force freq. 2)	Bool			0...1	R/W	BLDC_Mng_Circ3.CurrCompCfg_PWRP.HR22_1_SpeedProfStartMode	C205	BV453
Cj43	Circuit 3 Power+ configuration - V/f boost voltage	Real			0.0...25.0	R/W	BLDC_Mng_Circ3.CurrCompCfg_PWRP.HR35_V_F_BoostV	HR700	AV444
Cj44	Circuit 3 Power+ configuration - V/f frequency adjustment	Real			0.0...100.0	R/W	BLDC_Mng_Circ3.CurrCompCfg_PWRP.HR36_V_F_FreqAdj	HR701	AV445
Cj45	Circuit 3 Power+ configuration - V/f voltage adjustment	Real			0.0...100.0	R/W	BLDC_Mng_Circ3.CurrCompCfg_PWRP.HR37_V_F_VAdj	HR702	AV446
Cj46	Circuit 3 Power+ configuration - Motor magnetizing current	Real			Limited	R/W	BLDC_Mng_Circ3.CurrCompCfg_PWRP.HR45_MotMagnetizingCurrent	HR703	AV447
Cj47	Circuit 3 Power+ configuration - Stator resistance	UInt			0...30000	R/W	BLDC_Mng_Circ3.CurrCompCfg_PWRP.HR46_StatorResistance	HR704	PIV401
Cj48	Circuit 3 Power+ configuration - Rotor resistance	UInt			0...30000	R/W	BLDC_Mng_Circ3.CurrCompCfg_PWRP.HR47_RotorResistance	HR705	PIV402
Cj49	Circuit 3 Power+ configuration - Stator inductance Ld	Real			0.0...600.0	R/W	BLDC_Mng_Circ3.CurrCompCfg_PWRP.HR48_StatorInductanceLd	HR706	AV448
Cj50	Circuit 3 Power+ configuration - Leakage factor	UInt			0...250	R/W	BLDC_Mng_Circ3.CurrCompCfg_PWRP.HR49_LeakageFactor	HR707	PIV403
Cj51	Circuit 3 Power+ configuration - Stator inductance Lq	Real			0.0...600.0	R/W	BLDC_Mng_Circ3.CurrCompCfg_PWRP.HR50_LqInductance	HR708	AV449
Cj52	Circuit 3 Power+ configuration - Speed loop Kp	Real			0.1...200.0	R/W	BLDC_Mng_Circ3.CurrCompCfg_PWRP.HR55_SpeedLoopKp	HR709	AV450
Cj53	Circuit 3 Power+ configuration - Speed loop Ti	UInt			1...1000	R/W	BLDC_Mng_Circ3.CurrCompCfg_PWRP.HR56_SpeedLoopTi	HR710	PIV404
Cj54	Circuit 3 Power+ configuration - Magnetizing time	UInt			0...30000	R/W	BLDC_Mng_Circ3.CurrCompCfg_PWRP.HR51_MagnetizingTime	HR711	PIV405
Cj55	Circuit 3 Power+ configuration - Starting current	Real			0.0...100.0	R/W	BLDC_Mng_Circ3.CurrCompCfg_PWRP.HR57_StartingCurrent	HR712	AV451
-	Circuit 3 Power+ information - Rated starting current	Real				R	BLDC_Mng_Circ3.Info_PWRP.UI_RatedStartingA	IR324	AV452
Cj56	Circuit 3 Power+ configuration - Frequency for starting current	Real			0.0...100.0	R/W	BLDC_Mng_Circ3.CurrCompCfg_PWRP.HR58_StartingAFreq	HR713	AV453
Cj57	Circuit 3 Power+ configuration - Crank-case heater mode (0=Strategy mng; 1=forcedON; 2=forcedOFF)	UInt			0...2	R/W	BLDC_Mng_Circ3.CurrCompCfg_PWRP.CrankCaseHeaterMode	HR714	PIV406
Cj58	Circuit 3 Power+ configuration - Crank-case heater current	Real			0.0...100.0	R/W	BLDC_Mng_Circ3.CurrCompCfg_PWRP.HR65_CrankCaseHeaterCurrent	HR715	AV454
-	Circuit 3 Power+ information - Rated crankcase heating current	Real				R	BLDC_Mng_Circ3.Info_PWRP.UI_RatedCrankCaseHeatA	IR325	AV455
Cj59	Circuit 3 Power+ configuration - Disable phase loss algorithm (0=enabled; 1=disabled)	Bool			0...1	R/W	BLDC_Mng_Circ3.CurrCompCfg_PWRP.HR76_0_DisPhLossDetect	C206	BV454
Cj60	Circuit 3 Power+ configuration - Safety torque off alarm autoreset on drive stand-by	UInt			0...2	R/W	BLDC_Mng_Circ3.CurrCompCfg_PWRP.HR66_STOResetStrategy	HR716	PIV407
Cj61	Circuit 3 Power+ configuration - Thermal Overload Retention Enable	Bool			0...1	R/W	BLDC_Mng_Circ3.CurrCompCfg_PWRP.HR76_3_EnOvldThProtRetention	C207	BV455
	Circuit 3 Power+ configuration - Inductance saturation factor	Real			0.0...100.0	R/W	BLDC_Mng_Circ3.CurrCompCfg_PWRP.HR77_InductSatFactor	HR717	AV456
-	Circuit 3 Power+ information - Inductance saturation reduction (percentage at rated current)	Real				R	BLDC_Mng_Circ3.Info_PWRP.UI_RatedInductsatReductA	IR326	AV457
	Circuit 3 Power+ parameters - Save custom config. command	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ3.MiscMng_PWRP.MngCstm_SaveCustomCfg	C208	BV456
-	Circuit 3 Power+ parameters - Custom configuration data saving in progress	Bool	FALSE			R	BLDC_Mng_Circ3.MiscMng_PWRP.MngCstm_SaveCustomCfgInProgress	DI249	BV457
-	Circuit 3 Power+ online	Bool				R	BLDC_Mng_Circ3.PwrpOnline_BLDC	DI250	BV458
Cj64	Circuit 3 Power+ alarms reset - Maximum semiautomatic alarm reset retry number	DInt	0		0...5	R/W	BLDC_Mng_Circ3.AlrmResetMng_PWRP.RetryThrs	HR718	IV109
Cj65	Circuit 3 Power+ alarms reset - Time threshold for semiautomatic reset	UDInt	0		1...1440	R/W	BLDC_Mng_Circ3.AlrmResetMng_PWRP.TimeThrs	HR720	PIV408
Cj66	Circuit 3 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ3.AlrmResetMng_PWRP.AI01_uMotorResetTyp	C209	BV459
Cj66	Circuit 3 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ3.AlrmResetMng_PWRP.AI07_uMotorResetTyp	C210	BV460

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CjB2	Circuit 3 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ3.AlrmResetMn g_PWRP.AI202_uSafeResetTyp	C260	BV510
CjB2	Circuit 3 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ3.AlrmResetMn g_PWRP.AI208_uSafeResetTyp	C261	BV511
CjB9	Circuit 3 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ3.AlrmResetMn g_PWRP.AI209_uSafeResetTyp	C262	BV512
CjB9	Circuit 3 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ3.AlrmResetMn g_PWRP.AI215_uSafeResetTyp	C263	BV513
CjC0	Circuit 3 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ3.AlrmResetMn g_PWRP.AI210_uSafeResetTyp	C264	BV514
CjC0	Circuit 3 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ3.AlrmResetMn g_PWRP.AI216_uSafeResetTyp	C265	BV515
CjC1	Circuit 3 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ3.AlrmResetMn g_PWRP.AI211_uSafeResetTyp	C266	BV516
CjC2	Circuit 3 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ3.AlrmResetMn g_PWRP.AI212_uSafeResetTyp	C267	BV517
CjC3	Circuit 3 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ3.AlrmResetMn g_PWRP.AI213_uSafeResetTyp	C268	BV518
CjC4	Circuit 3 Power+ alarms reset - Reset type: 0=Manual - 1=Semiautomatic	Bool	FALSE		0...1	R/W	BLDC_Mng_Circ3.AlrmResetMn g_PWRP.AI214_uSafeResetTyp	C269	BV519
-	Circuit 3 Power+ information - FB version x	UInt				R	BLDC_Mng_Circ3.Info_PWRP. Dbg_FBVersion_X	IR327	PIV409
-	Circuit 3 Power+ information - FB version y	UInt				R	BLDC_Mng_Circ3.Info_PWRP. Dbg_FBVersion_Y	IR328	PIV410
-	Circuit 3 Power+ information - FB version zzz	UInt				R	BLDC_Mng_Circ3.Info_PWRP. Dbg_FBVersion_Z	IR329	PIV411
-	Circuit 3 Power+ information - FB version beta	UInt				R	BLDC_Mng_Circ3.Info_PWRP. Dbg_FBVersion_Beta	IR330	PIV412
-	Circuit 3 Power+ registers - Bootloader version	UInt				R	BLDC_Mng_Circ3.IRparam_PW RP.IR141_BootLoaderRelease	IR331	PIV413
-	Circuit 3 Power+ registers - Firmware version	UInt				R	BLDC_Mng_Circ3.IRparam_PW RP.IR142_FirmwareRelease	IR332	PIV414
-	Circuit 3 Power+ registers - Firmware checksum	UInt				R	BLDC_Mng_Circ3.IRparam_PW RP.IR143_FirmwareCRC	IR333	PIV415
-	Circuit 3 Power+ registers - Motor control version	UInt				R	BLDC_Mng_Circ3.IRparam_PW RP.IR144_MotCtrlRelease	IR334	PIV416
-	Circuit 3 Power+ registers - Hardware identification	UInt				R	BLDC_Mng_Circ3.IRparam_PW RP.IR149_HardwareIdentificatio n	IR335	PIV417

6.7 FANS menu in main menu

Mask code	Description	Type	Default	UoM	Range	R/W	Variable Name	BMS	BacNet
-	Supply fan - Hardware value	Bool				R	SupplyFan.HW_Val	DI49	BV62
-	Supply fan - Value	Bool				R	SupplyFan.Ctrl	DI5	BV18
-	Hours counter supply fan	UDInt				R	HC_SupplyFan_1.Hrs	IR220	PIV169
D001	Hours counter supply fan	UDInt	0		0...999999	R/W	HC_SupplyFan_1.MaintThrsh	HR128	PIV170
D002	Hours counter supply fan	Bool			0...1	R/W	HC_SupplyFan_1.Res	C22	BV246
D003	Supply fan - Manual value	USInt			0...2	R/W	SupplyFan.Man	HR130	PIV171
D004	Modulating supply fan - Manual mode analog output	USInt			0...101	R/W	ModulSupplyFan.Man	HR131	PIV172
-	Return fan - Hardware value	Bool				R	ExhFan.HW_Val	DI50	BV63
-	Return fan - Value	Bool				R	ExhFan.Ctrl	DI6	BV19
-	Hours counter return fan	UDInt				R	HC_ExhFan_1.Hrs	IR222	PIV173
D005	Hours counter return fan	UDInt	0		0...999999	R/W	HC_ExhFan_1.MaintThrsh	HR132	PIV174
D006	Hours counter return fan	Bool			0...1	R/W	HC_ExhFan_1.Res	C23	BV247
D007	Return fan - Manual value	USInt			0...2	R/W	ExhFan.Man	HR134	PIV175
D008	Modulating return fan - Manual mode analog output	USInt			0...101	R/W	ModulExhFan.Man	HR135	PIV176
D009	Minimum fan power	Real	30.0	%	0.0...100.0	R/W	MinFanPwr	HR136	AV141
D010	Supply k factor	Real	140.0		0.0...999.9	R/W	K_FactorSupply	HR137	AV142
D011	Supply air flow setpoint	Real	4000.0	m3h	0.0...99999.0	R/W	SupplyAirFlowSet	HR138	AV143
D012	Return k factor	Real	140.0		0.0...999.9	R/W	K_FactorExh	HR139	AV144
D013	Return air flow setpoint	Real	4000.0	m3h	0.0...99999.0	R/W	ExhAirFlowSet	HR140	AV145
-	Unit of measure for user interface	DInt	6			R	Uom_Msk		
D014	Supply air pressure setpoint	Real	200.0	Pa	0.0...9999.99	R/W	SupplyAirPSet	HR141	AV146
D015	Return air pressure setpoint	Real	200.0	Pa	0.0...9999.99	R/W	ExhAirPSet	HR142	AV147
-	Supply fan - Value	Bool				R	SupplyFan.Ctrl	DI5	BV18
-	Modulating supply fan - Hardware value	Real		%		R	ModulSupplyFan.HW_Val	IR76	AV79
D016	Supply fan PID - Proportional (Kp)	Real	0.02		0.1...999.9	R/W	PID_Supply.Kp	HR143	AV148
D017	Supply fan PID - Integral (Ti)	UInt	3	s	0...30000	R/W	PID_Supply.Ti	HR144	PIV177
D018	Supply fan PID - Derivative (Td)	UInt	0	s	0...30000	R/W	PID_Supply.Td	HR145	PIV178
-	Return fan - Value	Bool				R	ExhFan.Ctrl	DI6	BV19
-	Modulating return fan - Hardware value	Real		%		R	ModulExhFan.HW_Val	IR79	AV82
D019	Exhaust fan PID - Proportional (Kp)	Real	0.02		0.1...999.9	R/W	PID_Exh.Kp	HR146	AV149
D020	Exhaust fan PID - Integral (Ti)	UInt	3	s	0...30000	R/W	PID_Exh.Ti	HR147	PIV179
D021	Exhaust fan PID - Derivative (Td)	UInt	0	s	0...30000	R/W	PID_Exh.Td	HR148	PIV180
D022	Delay between damper and supply fan	UInt	5	s	0...65535	R/W	DT_SupplyFan	HR149	PIV181
D023	Supply fan idle time	UInt	40	s	20...65535	R/W	IdleT_SupplyFan	HR150	PIV182
D024	Supply fan speed in idle mode	Real	50.0	%	0.0...999.9	R/W	ManSupplyFanIdle	HR151	AV150
D025	Delay to switch OFF supply fan	UInt	70	s	0...65535	R/W	DOff_SupplyFan	HR152	PIV183
D026	Delay between fan and damper	UInt	15	s	0...65535	R/W	DT_Dmp	HR153	PIV184
D027	Delay between damper and return fan	UInt	10	s	0...65535	R/W	DT_ExhFan	HR154	PIV185
D028	Return fan idle time	UInt	30	s	0...65535	R/W	IdleT_ExhFan	HR155	PIV186
D029	Return fan speed in idle mode	Real	40.0	%	0.0...999.9	R/W	ManExhFanIdle	HR156	AV151

D030	Delay to switch OFF return fan	UInt	60	S	0...65535	R/W	DOff_ExhFan	HR157	PIV187
D116	Run fans when fire alarm is active	Bool	0		0..1	R/W	FireAlFansON	C385	BV1701
D031	Supply fan speed in fire alarm	Real	0.0	%	0.0...100.0	R/W	FireSupplySpeed	HR158	AV152
D032	Return fan speed in fire alarm	Real	0.0	%	0.0...100.0	R/W	FireExhSpeed	HR159	AV153
D033	Fire alarm threshold	Real	85.0	°C	-999.9...999.9	R/W	FireThrsh	HR160	AV154
-	Air quality request for fan	Real		%		R	AirQualFan	IR224	AV155
D034	PID CO2 regulation - Proportional gain	Real	0.1		-999.99...999.99	R/W	DevCfg_PID_Seq_CO2[1].Kp	HR161	AV156
D035	PID CO2 regulation - Integral time	UInt	300		0...65535	R/W	DevCfg_PID_Seq_CO2[1].Ti	HR162	PIV188
D036	Supply fan maximum	Real	30.0		0.0...100.0	R/W	SupplyFanMax	HR163	AV157
D037	Supply air flow alarm threshold	Real	50.0	m3h	0.0...9999.9	R/W	WarnThrshSupplyFlw	HR164	AV158
D038	Return air flow alarm threshold	Real	50.0	m3h	0.0...9999.9	R/W	WarnThrshExhFlw	HR165	AV159
D039	Supply air pressure alarm threshold	Real	50.0	Pa	0.0...9999.9	R/W	AlrmSupplyAirP	HR166	AV160
D040	Return air pressure alarm threshold	Real	50.0	Pa	0.0...9999.9	R/W	AlrmExhAirP	HR167	AV161
D041	Fan speed increase in case of filter warning	Real	10.0	%	-999.9...999.9	R/W	FilterWarnFanIncr	HR168	AV162
D042	Supply fan set in Boost mode	Real	50.0	%	0.0...100.0	R/W	MinFanPwr_Supply	HR1084	AV1450
D043	Return fan set in Boost mode	Real	50.0	%	0.0...100.0	R/W	MinFanPwr_Return	HR1085	AV1451
D044	Pressure set HEPA filter	Real		Pa	0.0...9999.9	R/W	HepaAirPSet	HR1105	AV1512
D045	Maximum Pressure set HEPA filter	Real		Pa	0.0...9999.9	R/W	HepaAirPSet_Max	HR1106	AV1513
D046	Max Fan Speed	Real		%	0.0...100.0	R/W	HepaFansReqMax	HR1107	AV1514
D047	Fan Type Circuit 1	Bool		-	0...1	R/W	FanType_Circ1	D1375	BV1599
D048	SetPoint Rooftop Circuit 1 in chiller mode	Real	10	Barg	-999.9...999.9	R/W	CfgFanRegCirc1.Chiller.Setpoint	HR1213	AV1602
D049	Differential Rooftop Circuit 1 in chiller mode	Real		Barg	-999.9...999.9	R/W	CfgFanRegCirc1.Chiller.Differential	HR1219	AV1605
D050	DeltaCutOff Rooftop Circuit 1 in chiller mode	Real		Barg	-999.9...999.9	R/W	CfgFanRegCirc1.Chiller.DeltaCutOff	HR1225	AV1608
D051	Force SetPoint Rooftop Circuit 1 in chiller mode	Real		Barg	-999.9...999.9	R/W	CfgFanRegCirc1.Chiller.ForceSetpoint	HR1231	AV1611
D052	Force Differential Rooftop Circuit 1 in chiller mode	Real		Barg	-999.9...999.9	R/W	CfgFanRegCirc1.Chiller.ForceDifferential	HR1237	AV1614
D053	SetPoint Rooftop Circuit 1 in heatpump mode	Real		Barg	-999.9...999.9	R/W	CfgFanRegCirc1.HeatPump.Setpoint	HR1243	AV1617
D054	Differential Rooftop Circuit 1 in heatpump mode	Real		Barg	-999.9...999.9	R/W	CfgFanRegCirc1.HeatPump.Differential	HR1249	AV1620
D055	DeltaCutOff Rooftop Circuit 1 in heatpump mode	Real		Barg	-999.9...999.9	R/W	CfgFanRegCirc1.HeatPump.DeltaCutOff	HR1255	AV1623
D056	Force SetPoint of Rooftop Circuit 1 in heatpump mode	Real		Barg	-999.9...999.9	R/W	CfgFanRegCirc1.HeatPump.ForceSetpoint	HR1261	AV1626
D057	Force Differential of Rooftop Circuit 1 in heatpump mode	Real		Barg	-999.9...999.9	R/W	CfgFanRegCirc1.HeatPump.ForceDifferential	HR1267	AV1629
D058	ON/OFF fans differential Rooftop Circuit 1	Real		%	-999.9...999.9	R/W	CfgFanDevCirc1.OnOff.FanDiff	HR1273-1274	AI1632
D059	ON/OFF fans delay RooftopCircuit 1	UInt		Sec	0...65535	R/W	CfgFanDevCirc1.OnOff.FansDelay	HR1279	PIV1635
D060	ON/OFF fans number RooftopCircuit 1	USInt		-	0...3	R/W	CfgFanDevCirc1.OnOff.FanNo	HR1285	PIV1638
D061	Modulating fans Limit Min RooftopCircuit1	Real		%	0.0...100.0	R/W	CfgFanDevCirc1.Inverter.LimMin	HR1291	AV1641
D062	Modulating fans Limit Max RooftopCircuit1	Real		%	0.0...100.0	R/W	CfgFanDevCirc1.Inverter.LimMax	HR1297-1298	AV1644
D063	Modulating fans Speed Up Time RooftopCircuit1	UInt		Sec	0...65535	R/W	CfgFanDevCirc1.Inverter.SpeedUpTime	HR1303	PIV1647
D064	Antifrost threshold Rooftop Circuit 1	Real		Barg	-999.9...999.9	R/W	CfgAntiFrostCirc1.Thrsh	HR1306-1307	AV1650
D065	Antifrost Min Speed Rooftop Circuit 1	Real		%	-999.9...999.9	R/W	CfgAntiFrostCirc1.MinSpeed	HR1312-1313	AV1653
D066	Antifrost Start Up Speed Rooftop Circuit 1	Real		%	-999.9...999.9	R/W	CfgAntiFrostCirc1.StartUpSpeed	HR1318-1319	AV1656
D067	Antifrost Start Up Time Rooftop Circuit 1	UInt		Sec	0...65535	R/W	CfgAntiFrostCirc1.StartUpT	HR1324	PIV1659
D068	Antifrost enable first Rooftop Circuit 1	Bool		-	-999.9...999.9	R/W	CfgAntiFrostCirc1.En_AntiFrost	C378	BV1662
D069	Force Request Rooftop Circuit 1	Real		%	-999.9...999.9	R/W	FrcReq_Circ1	HR1327-1328	AV1665
D070	Fan Type Circuit 2	Bool		-	0...1	R/W	FanType_Circ2	C376	BV1600
D071	SetPoint Rooftop Circuit 2 in chiller mode	Real		Barg	-999.9...999.9	R/W	CfgFanRegCirc2.Chiller.Setpoint	HR1215-1216	AV1603
D072	Differential Rooftop Circuit 2 in chiller mode	Real		Barg	-999.9...999.9	R/W	CfgFanRegCirc2.Chiller.Differential	HR1221-1222	AV1606
D073	DeltaCutOff Rooftop Circuit 2 in chiller mode	Real		Barg	-999.9...999.9	R/W	CfgFanRegCirc2.Chiller.DeltaCutOff	HR1227-1228	AV1609
D074	Force SetPoint Rooftop Circuit 2 in chiller mode	Real		Barg	-999.9...999.9	R/W	CfgFanRegCirc2.Chiller.ForceSetpoint	HR1233-1234	AV1612
D075	Force Differential Rooftop Circuit 2 in chiller mode	Real		Barg	-999.9...999.9	R/W	CfgFanRegCirc2.Chiller.ForceDifferential	HR1239-1240	AV1615
D076	SetPoint Rooftop Circuit 2 in heatpump mode	Real		Barg	-999.9...999.9	R/W	CfgFanRegCirc2.HeatPump.Setpoint	HR1245-1246	AV1618
D077	Differential Rooftop Circuit 2 in heatpump mode	Real		Barg	-999.9...999.9	R/W	CfgFanRegCirc2.HeatPump.Differential	HR1251-1252	AV1621
D078	DeltaCutOff Rooftop Circuit 2 in heatpump mode	Real		Barg	-999.9...999.9	R/W	CfgFanRegCirc2.HeatPump.DeltaCutOff	HR1257-1258	AV1624
D079	Force SetPoint of Rooftop Circuit 2 in heatpump mode	Real		Barg	-999.9...999.9	R/W	CfgFanRegCirc2.HeatPump.ForceSetpoint	HR1263-1264	AV1627
D080	Force Differential of Rooftop Circuit 2 in heatpump mode	Real		Barg	-999.9...999.9	R/W	CfgFanRegCirc2.HeatPump.ForceDifferential	HR1269-1270	AV1630
D081	ON/OFF fans differential Rooftop Circuit 2	Real		%	-999.9...999.9	R/W	CfgFanDevCirc2.OnOff.FanDiff	HR1275-1276	AI1633
D082	ON/OFF fans delay RooftopCircuit 2	UInt		Sec	0...65535	R/W	CfgFanDevCirc2.OnOff.FansDelay	HR1281	PIV1636
D083	ON/OFF fans number RooftopCircuit 2	USInt		-	0...3	R/W	CfgFanDevCirc2.OnOff.FanNo	HR1287	PIV1639
D084	Modulating fans Limit Min RooftopCircuit 2	Real		%	0.0...100.0	R/W	CfgFanDevCirc2.Inverter.LimMin	HR1293-1294	AV1642
D085	Modulating fans Limit Max RooftopCircuit 2	Real		%	0.0...100.0	R/W	CfgFanDevCirc2.Inverter.LimMax	HR1299-1300	AV1645
D086	Modulating fans Speed Up Time RooftopCircuit 2	UInt		Sec	0...65535	R/W	CfgFanDevCirc2.Inverter.SpeedUpTime	HR1304-1305	PIV1648
D087	Antifrost threshold Rooftop Circuit 2	Real		Barg	-999.9...999.9	R/W	CfgAntiFrostCirc2.Thrsh	HR1308-1309	AV1651
D088	Antifrost Min Speed Rooftop Circuit 2	Real		%	-999.9...999.9	R/W	CfgAntiFrostCirc2.MinSpeed	HR1314-1315	AV1654
D089	Antifrost Start Up Speed Rooftop Circuit 2	Real		%	-999.9...999.9	R/W	CfgAntiFrostCirc2.StartUpSpeed	HR1320-	AV1657

							1321	
D090	Antifrost Start Up Time RoofTop Circuit 2	UInt	Sec	0...65535	R/W	CfgAntiFrostCirc2.StartUpT	HR1325	PI1660
D091	Antifrost enable first RoofTop Circuit 2	Bool	-	0...1	R/W	CfgAntiFrostCirc2.En_AntiFrost	C379	BV1663
D092	Force Request RoofTop Circuit 2	Real	%	-999.9...999.9	R/W	FrcReq_Circ2	HR1329-1330	AV1666
D093	Fan Type Circuit 3	Bool	-	0...1	R/W	FanType_Circ3	C377	BV1601
D094	SetPoint RoofTop Circuit 3 in chiller mode	Real	Barg	-999.9...999.9	R/W	CfgFanRegCirc3.Chiller.Setpoint	HR1217-1218	AV1604
D095	Differential RoofTop Circuit 1 in chiller mode	Real	Barg	-999.9...999.9	R/W	CfgFanRegCirc3.Chiller.Differential	HR1223-1224	AV1607
D096	DeltaCutOff RoofTop Circuit 1 in chiller mode	Real	Barg	-999.9...999.9	R/W	CfgFanRegCirc3.Chiller.DeltaCutOff	HR1229-1230	AI1610
D097	Force SetPoint RoofTop Circuit 1 in chiller mode	Real	Barg	-999.9...999.9	R/W	CfgFanRegCirc3.Chiller.ForceSetpoint	HR1235-1236	AI1613
D098	Force Differential RoofTop Circuit 1 in chiller mode	Real	Barg	-999.9...999.9	R/W	CfgFanRegCirc3.Chiller.ForceDifferential	HR1241-1242	AI1616
D099	SetPoint RoofTop Circuit 1 in heatpump mode	Real	Barg	-999.9...999.9	R/W	CfgFanRegCirc3.HeatPump.Setpoint	HR1247-1248	AI1619
D100	Differential RoofTop Circuit 1 in heatpump mode	Real	Barg	-999.9...999.9	R/W	CfgFanRegCirc3.HeatPump.Differential	HR1253-1254	AI1622
D101	DeltaCutOff RoofTop Circuit 1 in heatpump mode	Real	Barg	-999.9...999.9	R/W	CfgFanRegCirc3.HeatPump.DeltaCutOff	HR1259-1260	AI1625
D102	Force SetPoint of RoofTop Circuit 1 in heatpump mode	Real	Barg	-999.9...999.9	R/W	CfgFanRegCirc3.HeatPump.ForceSetpoint	HR1265-1266	AI1628
D103	Force Differential of RoofTop Circuit 1 in heatpump mode	Real	Barg	-999.9...999.9	R/W	CfgFanRegCirc3.HeatPump.ForceDifferential	HR1271-1272	AI1631
D104	ON/OFF fans delay RoofTopCircuit 3	Real	%	-999.9...999.9	R/W	CfgFanDevCirc3.OnOff.FanDiff	HR1277-1278	AI1634
D105	ON/OFF fans number RoofTopCircuit 3	UInt	Sec	0...65535	R/W	CfgFanDevCirc3.OnOff.FansDelay	HR1283	PIV1637
D106	ON/OFF fans delay RoofTopCircuit 3	USInt	-	0...1	R/W	CfgFanDevCirc3.OnOff.FanNo	HR1289	PIV1640
D107	Modulating fans Limit Min RoofTopCircuit 3	Real	%	0.0...100.0	R/W	CfgFanDevCirc3.Inverter.LimMin	HR1295-1296	AV1643
D108	Modulating fans Limit Max RoofTopCircuit 3	Real	%	0.0...100.0	R/W	CfgFanDevCirc3.Inverter.LimMax	HR1301-1302	AV1646
D109	Modulating fans Speed Up Time RoofTopCircuit 3	UInt	Sec	0...65535	R/W	CfgFanDevCirc3.Inverter.SpeedUpTime	HR1305	PIV1649
D110	Antifrost threshold RoofTop Circuit 3	Real	Barg	-999.9...999.9	R/W	CfgAntiFrostCirc3.Thrsh	HR1310-1311	AV1652
D111	Antifrost Min Speed RoofTop Circuit 3	Real	%	-999.9...999.9	R/W	CfgAntiFrostCirc3.MinSpeed	HR1316-1317	AV1655
D112	Antifrost Start Up Speed RoofTop Circuit 3	Real	%	-999.9...999.9	R/W	CfgAntiFrostCirc3.StartUpSpeed	HR1322-1323	AV1658
D113	Antifrost Start Up Time RoofTop Circuit 3	UInt	Sec	0...65535	R/W	CfgAntiFrostCirc3.StartUpT	HR1326-1327	PIV1661
D114	Antifrost enable first RoofTop Circuit 3	Bool	-	0...1	R/W	CfgAntiFrostCirc3.En_AntiFrost	C380	BV1664
D115	Force Request RoofTop Circuit 3	Real	%	-999.9...999.9	R/W	FrcReq_Circ3	HR1331-1332	AV1667

6.8 RECOVERY menu in main menu

Mask code	Description	Type	Default	UoM	Range	R/W	Variable Name	BMS	BacNet
-	Recovery device - Hardware value	Bool				R	RecoveryPump.HW_Val	DI57	BV70
-	Recovery device - Value	Bool				R	RecoveryPump.Ctrl	DI58	BV71
-	Hours counter recovery	UDInt				R	HC_RecoveryPump.Hrs	IR237	PIV224
E001	Hours counter recovery	UDInt	0		0...999999	R/W	HC_RecoveryPump.MaintThrsh	HR241	PIV225
E002	Hours counter recovery	Bool			0...1	R/W	HC_RecoveryPump.Res	C28	BV252
E003		USInt	0		0...2	R/W	RecoveryManINT	HR1353	PIV226
E004	Modulating heat recovery output - Manual mode analog output	USInt			0...101	R/W	HeatRecovery.Man	HR244	PIV227
E005	Modulating mixing damper output - Manual mode analog output	USInt			0...101	R/W	ModulMixDamp.Man	HR245	PIV228
-	Heating request	Real				R	Heating_PID_Seq[2]	IR239	AV199
E006	PID Heating regulation - Proportional gain	Real	5.0		0.0...999.9	R/W	DevCfg_PID_Seq_Heat[2].Kp	HR246	AV200
E007	PID Heating regulation - Integral time	UInt	120		0...65535	R/W	DevCfg_PID_Seq_Heat[2].Ti	HR247	PIV229
E008	Minimum heat recovery	Real	30.0	%	0.0...100.0	R/W	MinHeatRec	HR248	AV201
E009	Minimum for recovery	Real	3.0	%	-999.9...999.9	R/W	Rec_MinPID	HR249	AV202
-	Cooling request	Real				R	Cooling_PID_Seq[2]	IR240	AV203
E010	Enable cooling recovery	Bool	TRUE		0...1	R/W	En_CoolRec	C29	BV253
E011	PID Cooling regulation - Proportional gain	Real	5.0		0.0...999.9	R/W	DevCfg_PID_Seq_Cool[2].Kp	HR250	AV204
E012	PID Cooling regulation - Integral time	UInt	120		0...65535	R/W	DevCfg_PID_Seq_Cool[2].Ti	HR251	PIV230
-	Frost protection request	Bool				R	FrostProtReq	DI225	BV254
E013	Temperature threshold to start recovery defrost	Real	-5.0	°C	-999.9...999.9	R/W	MaxExtFrostRec	HR252	AV205
E014	Minimum temperature threshold for recovery defrost	Real	-20.0	°C	-999.9...999.9	R/W	MinExtFrostRec	HR253	AV206
E015	Maximum time for recovery defrost	UInt	180	S	90...65535	R/W	MaxFrostRecT	HR254	PIV231
E016	Minimum time for recovery defrost	UInt	300	S	0...9999	R/W	MinFrostRecOffT	HR1088	PIV1459
E016 a	Maximum time for recovery defrost	UInt	600	S	0...9999	R/W	FrostRecOffT	HR255	PIV232
E017	Threshold to switch ON recovery device	Real	50.0	%	0.0...100.0	R/W	ThrshOnRecStep1	HR256	AV207
E018	Threshold to switch OFF recovery device	Real	0.0	%	0.0...100.0	R/W	ThrshOffRecStep1	HR257	AV208
E019	Threshold to switch ON recovery 2nd device	Real	100.0	%	0.0...100.0	R/W	ThrshOnRecStep2	HR258	AV209
E020	Threshold to switch OFF recovery 2nd device	Real	50.0	%	0.0...100.0	R/W	ThrshOffRecStep2	HR259	AV210
E021	Recovery bypass floating control opening time	UDInt	300	S	10...9999	R/W	HeatRecoveryOpenTime	HR260	PIV233
-	Heating request	Real				R	Heating_PID_Seq[0]	IR241	AV211
E022	PID Heating regulation - Proportional gain	Real	5.0		0.0...999.9	R/W	DevCfg_PID_Seq_Heat[0].Kp	HR262	AV212
E023	PID Heating regulation - Integral time	UInt	120		0...65535	R/W	DevCfg_PID_Seq_Heat[0].Ti	HR263	PIV234
-	Cooling request	Real				R	Cooling_PID_Seq[0]	IR242	AV213
E024	PID Cooling regulation - Proportional gain	Real	5.0		0.0...999.9	R/W	DevCfg_PID_Seq_Cool[0].Kp	HR264	AV214

E025	PID Cooling regulation - Integral time	UInt	120		0...65535	R/W	DevCfg_PID_Seq_Cool[0].Ti	HR265	PIV235
-	Air quality request	Real				R	AirQualReq_1	IR243	AV215
E026	PID CO2 regulation - Proportional gain	Real	0.1		0.0...999.99	R/W	DevCfg_PID_Seq_CO2[0].Kp	HR266	AV216
E027	PID CO2 regulation - Integral time	UInt	300		0...65535	R/W	DevCfg_PID_Seq_CO2[0].Ti	HR267	PIV236
E028	Min mixing damper opening	Real	10.0	%	0.0...100.0	R/W	ModulMixDampMinVal	HR268	AV217
E029	Max mixing damper opening	Real	90.0	%	0.0...100.0	R/W	ModulMixDampMaxVal	HR269	AV218
E030	Mixing damper floating control opening time	UDInt	300	S	10...9999	R/W	MixOpenTime	HR270	PIV237
E031	Fast heating running	Bool			0...1	R/W	FastHeatTrig	C30	BV255
E032	Fast heating stop	Bool			0...1	R/W	FastHeatStop	C31	BV256
E033	Fast heating time	UInt	1500	S	0...65535	R/W	FastHeatT	HR272	PIV238
E034	Fast cooling threshold	Real	25.0	°C	-999.9...999.9	R/W	FastCoolThrsh	HR273	AV219
E035	Fast heat threshold	Real	10.0	°C	-999.9...999.9	R/W	FastHeatThrsh	HR274	AV220
E036	Supply fan speed during defrost	Real	30.0	%	0.0...100.0	R/W	FrostFanPwr_Supply	HR1344	AV587
E037	Return fan speed during defrost	Real	30.0	%	0.0...100.0	R/W	FrostFanPwr_Exhaust	HR1345	AV588
E038	Prevent mode	Bool			0...1	R/W	Dampers.RecPrevMode	C386	BV662
-	Frost PID limit	Real				R	Dampers.Output_Exh_Lim	IR561	AV586
E039	Frost PID Kp	Real	10	%	0.0...100.0	R/W	Dampers.Kp_Exh_Lim	HR1349	AV584
E040	Frost PID Ti	UInt	150	S	0...65535	R/W	Dampers.Ti_Exh_Lim	HR1350	PIV1698
E041	Frost PID Td	UInt	0	S	0...65535	R/W	Dampers.Td_Exh_Lim	HR1351	PIV1699
E042	Frost minimum limit	Real	10.0	%	0.0...100.0	R/W	Dampers.LowLim_Exh_Lim	HR1352	AV585
E043	Frost PID Deadband	Real	0.0	%	0.0...100.0	R/W	Dampers.DeadBand_Exh_Lim	HR1348	AV583

6.9 HUMIDITY menu in main menu

Mask code	Description	Type	Default	UoM	Range	R/W	Variable Name	BMS	BacNet
-	Humidifier device - Hardware value	Bool				R	Hum.HW_Val	DI59	BV72
-	Humidifier device - Value	Bool				R	Hum.Ctrl	DI60	BV73
-	Hours counter humidifier	UDInt				R	HC_Hum.Hrs	IR244	PIV239
F001	Hours counter humidifier	UDInt	0		0...999999	R/W	HC_Hum.MaintThrsh	HR275	PIV240
F002	Hours counter humidifier	Bool			0...1	R/W	HC_Hum.Res	C32	BV257
F003	Humidifier device - Manual value	USInt			0...2	R/W	Hum.Man	HR277	PIV241
F004	Modulating humidifier output - Manual mode analog output	USInt			0...101	R/W	ModulHum.Man	HR278	PIV242
-	Condenser fan in rooftop application - Hardware value	Bool				R	IEC_Hum.HW_Val	DI226	BV258
-	Condenser fan in rooftop application - Value	Bool				R	IEC_Hum.Ctrl	DI227	BV259
-	Hours counter IEC humidifier	UDInt				R	HC_IEC_Hum.Hrs	IR246	PIV243
F005	Hours counter IEC humidifier	UDInt	0		0...999999	R/W	HC_IEC_Hum.MaintThrsh	HR279	PIV244
F006	Hours counter IEC humidifier	Bool			0...1	R/W	HC_IEC_Hum.Res	C33	BV260
F007	Condenser fan in rooftop application - Manual value	USInt			0...2	R/W	IEC_Hum.Man	HR281	PIV245
F008	Modulating humidifier output - Manual mode analog output	USInt			0...101	R/W	Modul_IEC_Hum.Man	HR282	PIV246
-	Absolute humidity	Real		g/s		R	AbsHum	IR248	AV221
-	Absolute humidity setpoint	Real		gH2O/kg		R	AbsHumSet	IR249	AV222
-	Dehumidification request	Real		%		R	HumRegReq	IR250	AV223
F008	PID CO2 regulation - Proportional gain	Real	10.0		-999.9...999.9	R/W	DevCfg_PID_Seq_Hum[0].Kp	HR283	AV224
F009	PID CO2 regulation - Integral time	UInt	240		0...65535	R/W	DevCfg_PID_Seq_Hum[0].Ti	HR284	PIV247
-	Supply dew point	Real		°C		R	SupplyDewPoint	IR251	AV225
-	Dew point compensation request	Real		%		R	PID_DewCompens	IR252	AV226
F010	Delta dewpoint for compensation	Real	2.0	°K	0.0...99.9	R/W	DeltaDewTemp	HR285	AV227
F011	Delta dew point PID - Proportional (Kp)	Real	5.0		0.1...999.9	R/W	DeltaDew_PID.Kp	HR286	AV228
F012	Delta dew point PID - Integral (Ti)	UInt	60	s	0...30000	R/W	DeltaDew_PID.Ti	HR287	PIV248
F013	Delay time for changeover	UDInt	360		0...999999	R/W	DT_ChangeHum	HR288	PIV249
F014	Humidification regulation dead band	Real	0.0	gH2O/kg	-999.9...999.9	R/W	HumDeadBand	HR290	AV229
F015	Start humidifier digital output	Real	50.0	%	0.0...100.0	R/W	StartHumPerc	HR291	AV230
F016	Stop humidifier digital output	Real	20.0	%	0.0...100.0	R/W	StopHumPerc	HR292	AV231
-	Absolute humidity	Real		g/s		R	AbsHum	IR248	AV221
-	Absolute humidity setpoint	Real		gH2O/kg		R	AbsHumSet	IR249	AV222
F017	Enable dehumidification increasing fan speed	Bool	TRUE		0...1	R/W	En_DeHumFan	C34	BV261
-	CO2 request	Real				R	Hum_PID_Seq[1]	IR253	AV232
F018	PID CO2 regulation - Proportional gain	Real	10.0		-999.9...999.9	R/W	DevCfg_PID_Seq_Hum[1].Kp	HR293	AV233
F019	PID CO2 regulation - Integral time	UInt	240		0...65535	R/W	DevCfg_PID_Seq_Hum[1].Ti	HR294	PIV250
-	Absolute humidity	Real		g/s		R	AbsHum	IR248	AV221
-	Absolute humidity setpoint	Real		gH2O/kg		R	AbsHumSet	IR249	AV222
F020		Bool	FALSE		0...1	R/W	En_DeHumCool	C35	BV262
-	Dehumidification request	Real		%		R	DehumRegReq	IR254	AV234
F021	PID CO2 regulation - Proportional gain	Real	10.0		-999.9...999.9	R/W	DevCfg_PID_Seq_Hum[2].Kp	HR295	AV235
F022	PID CO2 regulation - Integral time	UInt	240		0...65535	R/W	DevCfg_PID_Seq_Hum[2].Ti	HR296	PIV251
F023	Fresh air humidity check to enable freecooling/freeheating	Real	5.0	gH2O/kg	1.0...40.0	R/W	DeltaAbsHum	HR297	AV236

6.10 IN/OUT SETTINGS menu

6.10.1 ANALOG IN SET menu

Mask code	Description	Type	Default	UoM	Range	R/W	Variable Name	BMS	BacNet
-	Analog input functions - Priority	USInt				R	AI_ReadFnt[1].Prio	IR336	PIV440
-	Analog input functions - Hardware value	Real		°C		R	AI_ReadFnt[1].Read.Hw_Val	IR337	AV471
Ga01	Analog input functions - Channel	DInt	0		0...70	R/W	AI_ReadFnt[1].Ch	HR760	IV113
Ga02	Analog input functions - Type	USInt	0		0...50	R/W	AI_ReadFnt[1].Param.Type	HR762	PIV441
Ga03	Analog input functions - Minimum value	Real	-50.0	°C	-999.9...999.9	R/W	AI_ReadFnt[1].Param.Min_Val	HR763	AV472
Ga04	Analog input functions - Maximum value	Real	105.0	°C	-999.9...999.9	R/W	AI_ReadFnt[1].Param.Max_Val	HR764	AV473
Ga05	Analog input functions - Offset	Real	0.0	°K	-99.9...99.9	R/W	AI_ReadFnt[1].Param.Offset	HR765	AV474
-	Analog input functions - Priority	USInt				R	AI_ReadFnt[2].Prio	IR338	PIV442
-	Analog input functions - Hardware value	Real		°C		R	AI_ReadFnt[2].Read.Hw_Val	IR339	AV475
Ga06	Analog input functions - Channel	DInt	0		0...70	R/W	AI_ReadFnt[2].Ch	HR766	IV114
Ga07	Analog input functions - Type	USInt	0		0...50	R/W	AI_ReadFnt[2].Param.Type	HR768	PIV443
Ga08	Analog input functions - Minimum value	Real	-50.0	°C	-999.9...999.9	R/W	AI_ReadFnt[2].Param.Min_Val	HR769	AV476
Ga09	Analog input functions - Maximum value	Real	105.0	°C	-999.9...999.9	R/W	AI_ReadFnt[2].Param.Max_Val	HR770	AV477
Ga10	Analog input functions - Offset	Real	0.0	°K	-99.9...99.9	R/W	AI_ReadFnt[2].Param.Offset	HR771	AV478
-	Analog input functions - Priority	USInt				R	AI_ReadFnt[3].Prio	IR340	PIV444
-	Analog input functions - Hardware value	Real		°C		R	AI_ReadFnt[3].Read.Hw_Val	IR341	AV479
Ga11	Analog input functions - Channel	DInt	0		0...70	R/W	AI_ReadFnt[3].Ch	HR772	IV115
Ga12	Analog input functions - Type	USInt	0		0...50	R/W	AI_ReadFnt[3].Param.Type	HR774	PIV445
Ga13	Analog input functions - Minimum value	Real	-50.0	°C	-999.9...999.9	R/W	AI_ReadFnt[3].Param.Min_Val	HR775	AV480
Ga14	Analog input functions - Maximum value	Real	105.0	°C	-999.9...999.9	R/W	AI_ReadFnt[3].Param.Max_Val	HR776	AV481
Ga15	Analog input functions - Offset	Real	0.0	°K	-99.9...99.9	R/W	AI_ReadFnt[3].Param.Offset	HR777	AV482
-	Analog input functions - Priority	USInt				R	AI_ReadFnt[4].Prio	IR342	PIV446
-	Analog input functions - Hardware value	Real		°C		R	AI_ReadFnt[4].Read.Hw_Val	IR343	AV483
Ga16	Analog input functions - Channel	DInt	0		0...70	R/W	AI_ReadFnt[4].Ch	HR778	IV116
Ga17	Analog input functions - Type	USInt	0		0...50	R/W	AI_ReadFnt[4].Param.Type	HR780	PIV447
Ga18	Analog input functions - Minimum value	Real	-50.0	°C	-999.9...999.9	R/W	AI_ReadFnt[4].Param.Min_Val	HR781	AV484
Ga19	Analog input functions - Maximum value	Real	105.0	°C	-999.9...999.9	R/W	AI_ReadFnt[4].Param.Max_Val	HR782	AV485
Ga20	Analog input functions - Offset	Real	0.0	°K	-99.9...99.9	R/W	AI_ReadFnt[4].Param.Offset	HR783	AV486
-	Analog input functions - Priority	USInt				R	AI_ReadFnt[5].Prio	IR344	PIV448
-	Analog input functions - Hardware value	Real		bar		R	AI_ReadFnt[5].Read.Hw_Val	IR345	AV487
Ga21	Analog input functions - Channel	DInt	0		0...70	R/W	AI_ReadFnt[5].Ch	HR784	IV117
Ga22	Analog input functions - Type	USInt	43		0...50	R/W	AI_ReadFnt[5].Param.Type	HR786	PIV449
Ga23	Analog input functions - Minimum value	Real	0.0	bar	-9999.9...9999.9	R/W	AI_ReadFnt[5].Param.Min_Val	HR787	AV488
Ga24	Analog input functions - Maximum value	Real	45.0	bar	-9999.9...9999.9	R/W	AI_ReadFnt[5].Param.Max_Val	HR788	AV489
Ga25	Analog input functions - Offset	Real	0.0	bar	-99.9...99.9	R/W	AI_ReadFnt[5].Param.Offset	HR789	AV490
-	Analog input functions - Priority	USInt				R	AI_ReadFnt[6].Prio	IR346	PIV450
-	Analog input functions - Hardware value	Real		°C		R	AI_ReadFnt[6].Read.Hw_Val	IR347	AV491
Ga26	Analog input functions - Channel	DInt	0		0...70	R/W	AI_ReadFnt[6].Ch	HR790	IV118
Ga27	Analog input functions - Type	USInt	0		0...50	R/W	AI_ReadFnt[6].Param.Type	HR792	PIV451
Ga28	Analog input functions - Minimum value	Real	-50.0	°C	-999.9...999.9	R/W	AI_ReadFnt[6].Param.Min_Val	HR793	AV492
Ga29	Analog input functions - Maximum value	Real	105.0	°C	-999.9...999.9	R/W	AI_ReadFnt[6].Param.Max_Val	HR794	AV493
Ga30	Analog input functions - Offset	Real	0.0	°K	-99.9...99.9	R/W	AI_ReadFnt[6].Param.Offset	HR795	AV494
-	Analog input functions - Priority	USInt				R	AI_ReadFnt[7].Prio	IR348	PIV452
-	Analog input functions - Hardware value	Real		bar		R	AI_ReadFnt[7].Read.Hw_Val	IR349	AV495
Ga31	Analog input functions - Channel	DInt	0		0...70	R/W	AI_ReadFnt[7].Ch	HR796	IV119
Ga32	Analog input functions - Type	USInt	43		0...50	R/W	AI_ReadFnt[7].Param.Type	HR798	PIV453
Ga33	Analog input functions - Minimum value	Real	0.0	bar	-9999.9...9999.9	R/W	AI_ReadFnt[7].Param.Min_Val	HR799	AV496
Ga34	Analog input functions - Maximum value	Real	17.3	bar	-9999.9...9999.9	R/W	AI_ReadFnt[7].Param.Max_Val	HR800	AV497
Ga35	Analog input functions - Offset	Real	0.0	bar	-99.9...99.9	R/W	AI_ReadFnt[7].Param.Offset	HR801	AV498
-	Analog input functions - Priority	USInt				R	AI_ReadFnt[8].Prio	IR350	PIV454
-	Analog input functions - Hardware value	Real		°C		R	AI_ReadFnt[8].Read.Hw_Val	IR351	AV499
Ga36	Analog input functions - Channel	DInt	0		0...70	R/W	AI_ReadFnt[8].Ch	HR802	IV120
Ga37	Analog input functions - Type	USInt	0		0...50	R/W	AI_ReadFnt[8].Param.Type	HR804	PIV455
Ga38	Analog input functions - Minimum value	Real	-50.0	°C	-999.9...999.9	R/W	AI_ReadFnt[8].Param.Min_Val	HR805	AV500
Ga39	Analog input functions - Maximum value	Real	105.0	°C	-999.9...999.9	R/W	AI_ReadFnt[8].Param.Max_Val	HR806	AV501
Ga40	Analog input functions - Offset	Real	0.0	°K	-99.9...99.9	R/W	AI_ReadFnt[8].Param.Offset	HR807	AV502
-	Analog input functions - Priority	USInt				R	AI_ReadFnt[9].Prio	IR352	PIV456
-	Analog input functions - Hardware value	Real		°C		R	AI_ReadFnt[9].Read.Hw_Val	IR353	AV503
Ga41	Analog input functions - Channel	DInt	0		0...70	R/W	AI_ReadFnt[9].Ch	HR808	IV121
Ga42	Analog input functions - Type	USInt	0		0...50	R/W	AI_ReadFnt[9].Param.Type	HR810	PIV457
Ga43	Analog input functions - Minimum value	Real	-50.0	°C	-999.9...999.9	R/W	AI_ReadFnt[9].Param.Min_Val	HR811	AV504
Ga44	Analog input functions - Maximum value	Real	105.0	°C	-999.9...999.9	R/W	AI_ReadFnt[9].Param.Max_Val	HR812	AV505
Ga45	Analog input functions - Offset	Real	0.0	°K	-99.9...99.9	R/W	AI_ReadFnt[9].Param.Offset	HR813	AV506
-	Analog input functions - Priority	USInt				R	AI_ReadFnt[10].Prio	IR354	PIV458
-	Analog input functions - Hardware value	Real		°C		R	AI_ReadFnt[10].Read.Hw_Val	IR355	AV507
Ga46	Analog input functions - Channel	DInt	0		0...70	R/W	AI_ReadFnt[10].Ch	HR814	IV122
Ga47	Analog input functions - Type	USInt	0		0...50	R/W	AI_ReadFnt[10].Param.Type	HR816	PIV459
Ga48	Analog input functions - Minimum value	Real	-50.0	°C	-999.9...999.9	R/W	AI_ReadFnt[10].Param.Min_Val	HR817	AV508
Ga49	Analog input functions - Maximum value	Real	105.0	°C	-999.9...999.9	R/W	AI_ReadFnt[10].Param.Max_Val	HR818	AV509
Ga50	Analog input functions - Offset	Real	0.0	°K	-99.9...99.9	R/W	AI_ReadFnt[10].Param.Offset	HR819	AV510
-	Analog input functions - Priority	USInt				R	AI_ReadFnt[11].Prio	IR356	PIV460
-	Analog input functions - Hardware value	Real		°C		R	AI_ReadFnt[11].Read.Hw_Val	IR357	AV511
Ga51	Analog input functions - Channel	DInt	0		0...70	R/W	AI_ReadFnt[11].Ch	HR820	IV123
Ga52	Analog input functions - Type	USInt	0		0...50	R/W	AI_ReadFnt[11].Param.Type	HR822	PIV461
Ga53	Analog input functions - Minimum value	Real	-50.0	°C	-999.9...999.9	R/W	AI_ReadFnt[11].Param.Min_Val	HR823	AV512
Ga54	Analog input functions - Maximum value	Real	105.0	°C	-999.9...999.9	R/W	AI_ReadFnt[11].Param.Max_Val	HR824	AV513
Ga55	Analog input functions - Offset	Real	0.0	°K	-99.9...99.9	R/W	AI_ReadFnt[11].Param.Offset	HR825	AV514

-	Analog input functions - Priority	USInt				R	AI_ReadFnt[12].Prio	IR358	PIV462
-	Analog input functions - Hardware value	Real		ppm		R	AI_ReadFnt[12].Read.Hw_Val	IR359	AV515
Ga56	Analog input functions - Channel	DInt	0		0...70	R/W	AI_ReadFnt[12].Ch	HR826	IV124
Ga57	Analog input functions - Type	USInt	43		0...50	R/W	AI_ReadFnt[12].Param.Type	HR828	PIV463
Ga58	Analog input functions - Minimum value	Real	0.0	ppm	-9999.9...9999.9	R/W	AI_ReadFnt[12].Param.Min_Val	HR829	AV516
Ga59	Analog input functions - Maximum value	Real	1000.0	ppm	-9999.9...9999.9	R/W	AI_ReadFnt[12].Param.Max_Val	HR830	AV517
Ga60	Analog input functions - Offset	Real	0.0	ppm	-99.9...99.9	R/W	AI_ReadFnt[12].Param.Offset	HR831	AV518
-	Analog input functions - Priority	USInt				R	AI_ReadFnt[13].Prio	IR360	PIV464
-	Analog input functions - Hardware value	Real		Pa		R	AI_ReadFnt[13].Read.Hw_Val	IR361	AV519
Ga61	Analog input functions - Channel	DInt	0		0...70	R/W	AI_ReadFnt[13].Ch	HR832	IV125
Ga62	Analog input functions - Type	USInt	43		0...50	R/W	AI_ReadFnt[13].Param.Type	HR834	PIV465
Ga63	Analog input functions - Minimum value	Real	0.0	Pa	-9999.9...9999.9	R/W	AI_ReadFnt[13].Param.Min_Val	HR835	AV520
Ga64	Analog input functions - Maximum value	Real	1500.0	Pa	-9999.9...9999.9	R/W	AI_ReadFnt[13].Param.Max_Val	HR836	AV521
Ga65	Analog input functions - Offset	Real	0.0	Pa	-99.9...99.9	R/W	AI_ReadFnt[13].Param.Offset	HR837	AV522
-	Analog input functions - Priority	USInt				R	AI_ReadFnt[14].Prio	IR362	PIV466
-	Analog input functions - Hardware value	Real		Pa		R	AI_ReadFnt[14].Read.Hw_Val	IR363	AV523
Ga66	Analog input functions - Channel	DInt	0		0...70	R/W	AI_ReadFnt[14].Ch	HR838	IV126
Ga67	Analog input functions - Type	USInt	43		0...50	R/W	AI_ReadFnt[14].Param.Type	HR840	PIV467
Ga68	Analog input functions - Minimum value	Real	0.0	Pa	-9999.9...9999.9	R/W	AI_ReadFnt[14].Param.Min_Val	HR841	AV524
Ga69	Analog input functions - Maximum value	Real	1500.0	Pa	-9999.9...9999.9	R/W	AI_ReadFnt[14].Param.Max_Val	HR842	AV525
Ga70	Analog input functions - Offset	Real	0.0	Pa	-99.9...99.9	R/W	AI_ReadFnt[14].Param.Offset	HR843	AV526
-	Analog input functions - Priority	USInt				R	AI_ReadFnt[15].Prio	IR364	PIV468
-	Analog input functions - Hardware value	Real		%rh		R	AI_ReadFnt[15].Read.Hw_Val	IR365	AV527
Ga71	Analog input functions - Channel	DInt	0		0...70	R/W	AI_ReadFnt[15].Ch	HR844	IV127
Ga72	Analog input functions - Type	USInt	43		0...50	R/W	AI_ReadFnt[15].Param.Type	HR846	PIV469
Ga73	Analog input functions - Minimum value	Real	0.0	%rh	-999.9...999.9	R/W	AI_ReadFnt[15].Param.Min_Val	HR847	AV528
Ga74	Analog input functions - Maximum value	Real	100.0	%rh	-999.9...999.9	R/W	AI_ReadFnt[15].Param.Max_Val	HR848	AV529
Ga75	Analog input functions - Offset	Real	0.0	%rh	-99.9...99.9	R/W	AI_ReadFnt[15].Param.Offset	HR849	AV530
-	Analog input functions - Priority	USInt				R	AI_ReadFnt[16].Prio	IR366	PIV470
-	Analog input functions - Hardware value	Real		bar		R	AI_ReadFnt[16].Read.Hw_Val	IR367	AV531
Ga76	Analog input functions - Channel	DInt	0		0...70	R/W	AI_ReadFnt[16].Ch	HR850	IV128
Ga77	Analog input functions - Type	USInt	43		0...50	R/W	AI_ReadFnt[16].Param.Type	HR852	PIV471
Ga78	Analog input functions - Minimum value	Real	0.0	bar	-9999.9...9999.9	R/W	AI_ReadFnt[16].Param.Min_Val	HR853	AV532
Ga79	Analog input functions - Maximum value	Real	45.0	bar	-9999.9...9999.9	R/W	AI_ReadFnt[16].Param.Max_Val	HR854	AV533
Ga80	Analog input functions - Offset	Real	0.0	bar	-99.9...99.9	R/W	AI_ReadFnt[16].Param.Offset	HR855	AV534
-	Analog input functions - Priority	USInt				R	AI_ReadFnt[17].Prio	IR368	PIV472
-	Analog input functions - Hardware value	Real		°C		R	AI_ReadFnt[17].Read.Hw_Val	IR369	AV535
Ga81	Analog input functions - Channel	DInt	0		0...70	R/W	AI_ReadFnt[17].Ch	HR856	IV129
Ga82	Analog input functions - Type	USInt	0		0...50	R/W	AI_ReadFnt[17].Param.Type	HR858	PIV473
Ga83	Analog input functions - Minimum value	Real	-50.0	°C	-999.9...999.9	R/W	AI_ReadFnt[17].Param.Min_Val	HR859	AV536
Ga84	Analog input functions - Maximum value	Real	105.0	°C	-999.9...999.9	R/W	AI_ReadFnt[17].Param.Max_Val	HR860	AV537
Ga85	Analog input functions - Offset	Real	0.0	°K	-99.9...99.9	R/W	AI_ReadFnt[17].Param.Offset	HR861	AV538
-	Analog input functions - Priority	USInt				R	AI_ReadFnt[18].Prio	IR370	PIV474
-	Analog input functions - Hardware value	Real		bar		R	AI_ReadFnt[18].Read.Hw_Val	IR371	AV539
Ga86	Analog input functions - Channel	DInt	0		0...70	R/W	AI_ReadFnt[18].Ch	HR862	IV130
Ga87	Analog input functions - Type	USInt	43		0...50	R/W	AI_ReadFnt[18].Param.Type	HR864	PIV475
Ga88	Analog input functions - Minimum value	Real	0.0	bar	-9999.9...9999.9	R/W	AI_ReadFnt[18].Param.Min_Val	HR865	AV540
Ga89	Analog input functions - Maximum value	Real	17.3	bar	-9999.9...9999.9	R/W	AI_ReadFnt[18].Param.Max_Val	HR866	AV541
Ga90	Analog input functions - Offset	Real	0.0	bar	-99.9...99.9	R/W	AI_ReadFnt[18].Param.Offset	HR867	AV542
-	Analog input functions - Priority	USInt				R	AI_ReadFnt[19].Prio	IR372	PIV476
-	Analog input functions - Hardware value	Real		°C		R	AI_ReadFnt[19].Read.Hw_Val	IR373	AV543
Ga91	Analog input functions - Channel	DInt	0		0...70	R/W	AI_ReadFnt[19].Ch	HR868	IV131
Ga92	Analog input functions - Type	USInt	0		0...50	R/W	AI_ReadFnt[19].Param.Type	HR870	PIV477
Ga93	Analog input functions - Minimum value	Real	-50.0	°C	-999.9...999.9	R/W	AI_ReadFnt[19].Param.Min_Val	HR871	AV544
Ga94	Analog input functions - Maximum value	Real	105.0	°C	-999.9...999.9	R/W	AI_ReadFnt[19].Param.Max_Val	HR872	AV545
Ga95	Analog input functions - Offset	Real	0.0	°K	-99.9...99.9	R/W	AI_ReadFnt[19].Param.Offset	HR873	AV546
-	Analog input functions - Priority	USInt				R	AI_ReadFnt[20].Prio	IR374	PIV478
-	Analog input functions - Hardware value	Real		bar		R	AI_ReadFnt[20].Read.Hw_Val	IR375	AV547
Ga96	Analog input functions - Channel	DInt	0		0...70	R/W	AI_ReadFnt[20].Ch	HR874	IV132
Ga97	Analog input functions - Type	USInt	43		0...50	R/W	AI_ReadFnt[20].Param.Type	HR876	PIV479
Ga98	Analog input functions - Minimum value	Real	0.0	bar	-9999.9...9999.9	R/W	AI_ReadFnt[20].Param.Min_Val	HR877	AV548
Ga99	Analog input functions - Maximum value	Real	45.0	bar	-9999.9...9999.9	R/W	AI_ReadFnt[20].Param.Max_Val	HR878	AV549
GaA0	Analog input functions - Offset	Real	0.0	bar	-99.9...99.9	R/W	AI_ReadFnt[20].Param.Offset	HR879	AV550
-	Analog input functions - Priority	USInt				R	AI_ReadFnt[21].Prio	IR376	PIV480
-	Analog input functions - Hardware value	Real		°C		R	AI_ReadFnt[21].Read.Hw_Val	IR377	AV551
GaA1	Analog input functions - Channel	DInt	0		0...70	R/W	AI_ReadFnt[21].Ch	HR880	IV133
GaA2	Analog input functions - Type	USInt	0		0...50	R/W	AI_ReadFnt[21].Param.Type	HR882	PIV481
GaA3	Analog input functions - Minimum value	Real	-50.0	°C	-999.9...999.9	R/W	AI_ReadFnt[21].Param.Min_Val	HR883	AV552
GaA4	Analog input functions - Maximum value	Real	105.0	°C	-999.9...999.9	R/W	AI_ReadFnt[21].Param.Max_Val	HR884	AV553
GaA5	Analog input functions - Offset	Real	0.0	°K	-99.9...99.9	R/W	AI_ReadFnt[21].Param.Offset	HR885	AV554
-	Analog input functions - Priority	USInt				R	AI_ReadFnt[22].Prio	IR378	PIV482
-	Analog input functions - Hardware value	Real		bar		R	AI_ReadFnt[22].Read.Hw_Val	IR379	AV555
GaA6	Analog input functions - Channel	DInt	0		0...70	R/W	AI_ReadFnt[22].Ch	HR886	IV134
GaA7	Analog input functions - Type	USInt	43		0...50	R/W	AI_ReadFnt[22].Param.Type	HR888	PIV483
GaA8	Analog input functions - Minimum value	Real	0.0	bar	-9999.9...9999.9	R/W	AI_ReadFnt[22].Param.Min_Val	HR889	AV556
GaA9	Analog input functions - Maximum value	Real	17.3	bar	-9999.9...9999.9	R/W	AI_ReadFnt[22].Param.Max_Val	HR890	AV557
GaB0	Analog input functions - Offset	Real	0.0	bar	-99.9...99.9	R/W	AI_ReadFnt[22].Param.Offset	HR891	AV558
-	Analog input functions - Priority	USInt				R	AI_ReadFnt[23].Prio	IR380	PIV484
-	Analog input functions - Hardware value	Real		°C		R	AI_ReadFnt[23].Read.Hw_Val	IR381	AV559

GaB1	Analog input functions - Channel	DInt	0		0...70	R/W	AI_ReadFnt[23].Ch	HR892	IV135
GaB2	Analog input functions - Type	USInt	0		0...50	R/W	AI_ReadFnt[23].Param.Type	HR894	PIV485
GaB3	Analog input functions - Minimum value	Real	-50.0	°C	-999.9...999.9	R/W	AI_ReadFnt[23].Param.Min_Val	HR895	AV560
GaB4	Analog input functions - Maximum value	Real	105.0	°C	-999.9...999.9	R/W	AI_ReadFnt[23].Param.Max_Val	HR896	AV561
GaB5	Analog input functions - Offset	Real	0.0	°K	-99.9...99.9	R/W	AI_ReadFnt[23].Param.Offset	HR897	AV562
-	Analog input functions - Priority	USInt				R	AI_ReadFnt[24].Prio	IR382	PIV486
-	Analog input functions - Hardware value	Real		%		R	AI_ReadFnt[24].Read.Hw_Val	IR383	AV563
GaB6	Analog input functions - Channel	DInt	0		0...70	R/W	AI_ReadFnt[24].Ch	HR898	IV136
GaB7	Analog input functions - Type	USInt	43		0...50	R/W	AI_ReadFnt[24].Param.Type	HR900	PIV487
GaB8	Analog input functions - Minimum value	Real	0.0	%	-999.9...999.9	R/W	AI_ReadFnt[24].Param.Min_Val	HR901	AV564
GaB9	Analog input functions - Maximum value	Real	100.0	%	-999.9...999.9	R/W	AI_ReadFnt[24].Param.Max_Val	HR902	AV565
GaC0	Analog input functions - Offset	Real	0.0	%	-99.9...99.9	R/W	AI_ReadFnt[24].Param.Offset	HR903	AV566
-	Analog input functions - Priority	USInt				R	AI_ReadFnt[25].Prio	IR384	PIV488
-	Analog input functions - Hardware value	Real		%rh		R	AI_ReadFnt[25].Read.Hw_Val	IR385	AV567
GaC1	Analog input functions - Channel	DInt	0		0...70	R/W	AI_ReadFnt[25].Ch	HR904	IV137
GaC2	Analog input functions - Type	USInt	43		0...50	R/W	AI_ReadFnt[25].Param.Type	HR906	PIV489
GaC3	Analog input functions - Minimum value	Real	0.0	%rh	-999.9...999.9	R/W	AI_ReadFnt[25].Param.Min_Val	HR907	AV568
GaC4	Analog input functions - Maximum value	Real	100.0	%rh	-999.9...999.9	R/W	AI_ReadFnt[25].Param.Max_Val	HR908	AV569
GaC5	Analog input functions - Offset	Real	0.0	%rh	-99.9...99.9	R/W	AI_ReadFnt[25].Param.Offset	HR909	AV570
-	Analog input functions - Priority	USInt				R	AI_ReadFnt[26].Prio	IR478	PIV1476
-	Analog input functions - Hardware value	Real		Pa		R	AI_ReadFnt[26].Read.Hw_Val	IR479	AV1477
GaC6	Analog input functions - Channel	DInt	0		0...70	R/W	AI_ReadFnt[26].Ch	HR1091	IV220
GaC7	Analog input functions - Type	USInt	43		0...50	R/W	AI_ReadFnt[26].Param.Type	HR1093	PIV1501
GaC8	Analog input functions - Minimum value	Real	0.0	Pa	-9999.9...9999.9	R/W	AI_ReadFnt[26].Param.Min_Val	HR1094	AV1502
GaC9	Analog input functions - Maximum value	Real	1500.0	Pa	-9999.9...9999.9	R/W	AI_ReadFnt[26].Param.Max_Val	HR1095	AV1503
GaD0	Analog input functions - Offset	Real	0.0	Pa	-99.9...99.9	R/W	AI_ReadFnt[26].Param.Offset	HR1096	AV1504
-	Analog input functions - Priority	USInt				R	AI_ReadFnt[27].Prio	IR480	PIV1478
-	Analog input functions - Hardware value	Real		Pa		R	AI_ReadFnt[27].Read.Hw_Val	IR481	AV1479
GaD1	Analog input functions - Channel	DInt	0		0...70	R/W	AI_ReadFnt[27].Ch	HR1097	IV221
GaD2	Analog input functions - Type	USInt	43		0...50	R/W	AI_ReadFnt[27].Param.Type	HR1099	PIV1506
GaD3	Analog input functions - Minimum value	Real	0.0	Pa	-9999.9...9999.9	R/W	AI_ReadFnt[27].Param.Min_Val	HR1100	AV1507
GaD4	Analog input functions - Maximum value	Real	1500.0	Pa	-9999.9...9999.9	R/W	AI_ReadFnt[27].Param.Max_Val	HR1101	AV1508
GaD5	Analog input functions - Offset	Real	0.0	Pa	-99.9...99.9	R/W	AI_ReadFnt[27].Param.Offset	HR1102	AV1509
-	Analog input functions - Priority	USInt				R	AI_ReadFnt[28].Prio	IR562	PIV1702
-	Analog input functions - Hardware value	Real		Pa		R	AI_ReadFnt[28].Read.Hw_Val	IR563	AV1703
GaD6	Analog input functions - Channel	DInt	0		0...70	R/W	AI_ReadFnt[28].Ch	HR1354	IV1704
GaD7	Analog input functions - Type	USInt	43		0...50	R/W	AI_ReadFnt[28].Param.Type	HR1356	PIV1705
GaD8	Analog input functions - Minimum value	Real	0.0	Pa	-9999.9...9999.9	R/W	AI_ReadFnt[28].Param.Min_Val	HR1357	AV1706
GaD9	Analog input functions - Maximum value	Real	1500.0	Pa	-9999.9...9999.9	R/W	AI_ReadFnt[28].Param.Max_Val	HR1358	AV1707
GaE0	Analog input functions - Offset	Real	0.0	Pa	-99.9...99.9	R/W	AI_ReadFnt[28].Param.Offset	HR1359	AV1708

6.10.2 DIGITAL IN SET menu

Mask code	Description	Type	Default	UoM	Range	R/W	Variable Name	BMS	BacNet
-	Digital input functions - Priority	USInt				R	DI_ReadFnt[1].Prio	IR386	PIV490
-	Digital input functions - Status	Bool				R	DI_ReadFnt[1].Hw_Val	DI251	BV524
Gb01	Digital input functions - Channel	DInt	0		0...70	R/W	DI_ReadFnt[1].Ch	HR910	IV138
Gb02	Digital input functions - Logic	Bool	FALSE		0...1	R/W	DI_ReadFnt[1].Logic	C274	BV525
-	Digital input functions - Priority	USInt				R	DI_ReadFnt[2].Prio	IR387	PIV491
-	Digital input functions - Status	Bool				R	DI_ReadFnt[2].Hw_Val	DI252	BV526
Gb03	Digital input functions - Channel	DInt	0		0...70	R/W	DI_ReadFnt[2].Ch	HR912	IV139
Gb04	Digital input functions - Logic	Bool	FALSE		0...1	R/W	DI_ReadFnt[2].Logic	C275	BV527
-	Digital input functions - Priority	USInt				R	DI_ReadFnt[3].Prio	IR388	PIV492
-	Digital input functions - Status	Bool				R	DI_ReadFnt[3].Hw_Val	DI253	BV528
Gb05	Digital input functions - Channel	DInt	0		0...70	R/W	DI_ReadFnt[3].Ch	HR914	IV140
Gb06	Digital input functions - Logic	Bool	FALSE		0...1	R/W	DI_ReadFnt[3].Logic	C276	BV529
-	Digital input functions - Priority	USInt				R	DI_ReadFnt[4].Prio	IR389	PIV493
-	Digital input functions - Status	Bool				R	DI_ReadFnt[4].Hw_Val	DI254	BV530
Gb07	Digital input functions - Channel	DInt	0		0...70	R/W	DI_ReadFnt[4].Ch	HR916	IV141
Gb08	Digital input functions - Logic	Bool	FALSE		0...1	R/W	DI_ReadFnt[4].Logic	C277	BV531
-	Digital input functions - Priority	USInt				R	DI_ReadFnt[5].Prio	IR390	PIV494
-	Digital input functions - Status	Bool				R	DI_ReadFnt[5].Hw_Val	DI255	BV532
Gb09	Digital input functions - Channel	DInt	0		0...70	R/W	DI_ReadFnt[5].Ch	HR918	IV142
Gb10	Digital input functions - Logic	Bool	FALSE		0...1	R/W	DI_ReadFnt[5].Logic	C278	BV533
-	Digital input functions - Priority	USInt				R	DI_ReadFnt[6].Prio	IR391	PIV495
-	Digital input functions - Status	Bool				R	DI_ReadFnt[6].Hw_Val	DI256	BV534
Gb11	Digital input functions - Channel	DInt	0		0...70	R/W	DI_ReadFnt[6].Ch	HR920	IV143
Gb12	Digital input functions - Logic	Bool	FALSE		0...1	R/W	DI_ReadFnt[6].Logic	C279	BV535
-	Digital input functions - Priority	USInt				R	DI_ReadFnt[7].Prio	IR392	PIV496

-	Digital input functions - Status	Bool				R	DI_ReadFnt[7].Hw_Val	DI257	BV536
Gb13	Digital input functions - Channel	DInt	0		0...70	R/W	DI_ReadFnt[7].Ch	HR922	IV144
Gb14	Digital input functions - Logic	Bool	FALSE		0...1	R/W	DI_ReadFnt[7].Logic	C280	BV537
-	Digital input functions - Priority	USInt				R	DI_ReadFnt[8].Prio	IR393	PIV497
-	Digital input functions - Status	Bool				R	DI_ReadFnt[8].Hw_Val	DI258	BV538
Gb15	Digital input functions - Channel	DInt	0		0...70	R/W	DI_ReadFnt[8].Ch	HR924	IV145
Gb16	Digital input functions - Logic	Bool	FALSE		0...1	R/W	DI_ReadFnt[8].Logic	C281	BV539
-	Digital input functions - Priority	USInt				R	DI_ReadFnt[9].Prio	IR394	PIV498
-	Digital input functions - Status	Bool				R	DI_ReadFnt[9].Hw_Val	DI259	BV540
Gb17	Digital input functions - Channel	DInt	0		0...70	R/W	DI_ReadFnt[9].Ch	HR926	IV146
Gb18	Digital input functions - Logic	Bool	FALSE		0...1	R/W	DI_ReadFnt[9].Logic	C282	BV541
-	Digital input functions - Priority	USInt				R	DI_ReadFnt[10].Prio	IR395	PIV499
-	Digital input functions - Status	Bool				R	DI_ReadFnt[10].Hw_Val	DI260	BV542
Gb19	Digital input functions - Channel	DInt	0		0...70	R/W	DI_ReadFnt[10].Ch	HR928	IV147
Gb20	Digital input functions - Logic	Bool	FALSE		0...1	R/W	DI_ReadFnt[10].Logic	C283	BV543
-	Digital input functions - Priority	USInt				R	DI_ReadFnt[11].Prio	IR396	PIV500
-	Digital input functions - Status	Bool				R	DI_ReadFnt[11].Hw_Val	DI261	BV544
Gb21	Digital input functions - Channel	DInt	0		0...70	R/W	DI_ReadFnt[11].Ch	HR930	IV148
Gb22	Digital input functions - Logic	Bool	FALSE		0...1	R/W	DI_ReadFnt[11].Logic	C284	BV545
-	Digital input functions - Priority	USInt				R	DI_ReadFnt[12].Prio	IR397	PIV501
-	Digital input functions - Status	Bool				R	DI_ReadFnt[12].Hw_Val	DI262	BV546
Gb23	Digital input functions - Channel	DInt	0		0...70	R/W	DI_ReadFnt[12].Ch	HR932	IV149
Gb24	Digital input functions - Logic	Bool	FALSE		0...1	R/W	DI_ReadFnt[12].Logic	C285	BV547
-	Digital input functions - Priority	USInt				R	DI_ReadFnt[13].Prio	IR398	PIV502
-	Digital input functions - Status	Bool				R	DI_ReadFnt[13].Hw_Val	DI263	BV548
Gb25	Digital input functions - Channel	DInt	0		0...70	R/W	DI_ReadFnt[13].Ch	HR934	IV150
Gb26	Digital input functions - Logic	Bool	FALSE		0...1	R/W	DI_ReadFnt[13].Logic	C286	BV549
-	Digital input functions - Priority	USInt				R	DI_ReadFnt[14].Prio	IR399	PIV503
-	Digital input functions - Status	Bool				R	DI_ReadFnt[14].Hw_Val	DI264	BV550
Gb27	Digital input functions - Channel	DInt	0		0...70	R/W	DI_ReadFnt[14].Ch	HR936	IV151
Gb28	Digital input functions - Logic	Bool	FALSE		0...1	R/W	DI_ReadFnt[14].Logic	C287	BV551
-	Digital input functions - Priority	USInt				R	DI_ReadFnt[15].Prio	IR400	PIV504
-	Digital input functions - Status	Bool				R	DI_ReadFnt[15].Hw_Val	DI265	BV552
Gb29	Digital input functions - Channel	DInt	0		0...70	R/W	DI_ReadFnt[15].Ch	HR938	IV152
Gb30	Digital input functions - Logic	Bool	FALSE		0...1	R/W	DI_ReadFnt[15].Logic	C288	BV553
-	Digital input functions - Priority	USInt				R	DI_ReadFnt[16].Prio	IR401	PIV505
-	Digital input functions - Status	Bool				R	DI_ReadFnt[16].Hw_Val	DI266	BV554
Gb31	Digital input functions - Channel	DInt	0		0...70	R/W	DI_ReadFnt[16].Ch	HR940	IV153
Gb32	Digital input functions - Logic	Bool	FALSE		0...1	R/W	DI_ReadFnt[16].Logic	C289	BV555
-	Digital input functions - Priority	USInt				R	DI_ReadFnt[17].Prio	IR402	PIV506
-	Digital input functions - Status	Bool				R	DI_ReadFnt[17].Hw_Val	DI267	BV556
Gb33	Digital input functions - Channel	DInt	0		0...70	R/W	DI_ReadFnt[17].Ch	HR942	IV154
Gb34	Digital input functions - Logic	Bool	FALSE		0...1	R/W	DI_ReadFnt[17].Logic	C290	BV557
-	Digital input functions - Priority	USInt				R	DI_ReadFnt[18].Prio	IR403	PIV507
-	Digital input functions - Status	Bool				R	DI_ReadFnt[18].Hw_Val	DI268	BV558
Gb35	Digital input functions - Channel	DInt	0		0...70	R/W	DI_ReadFnt[18].Ch	HR944	IV155
Gb36	Digital input functions - Logic	Bool	FALSE		0...1	R/W	DI_ReadFnt[18].Logic	C291	BV559
-	Digital input functions - Priority	USInt				R	DI_ReadFnt[19].Prio	IR404	PIV508
-	Digital input functions - Status	Bool				R	DI_ReadFnt[19].Hw_Val	DI269	BV560
Gb37	Digital input functions - Channel	DInt	0		0...70	R/W	DI_ReadFnt[19].Ch	HR946	IV156
Gb38	Digital input functions - Logic	Bool	FALSE		0...1	R/W	DI_ReadFnt[19].Logic	C292	BV561
-	Digital input functions - Priority	USInt				R	DI_ReadFnt[20].Prio	IR405	PIV509
-	Digital input functions - Status	Bool				R	DI_ReadFnt[20].Hw_Val	DI270	BV562
Gb39	Digital input functions - Channel	DInt	0		0...70	R/W	DI_ReadFnt[20].Ch	HR948	IV157
Gb40	Digital input functions - Logic	Bool	FALSE		0...1	R/W	DI_ReadFnt[20].Logic	C293	BV563
-	Digital input functions - Priority	USInt				R	DI_ReadFnt[21].Prio	IR406	PIV510
-	Digital input functions - Status	Bool				R	DI_ReadFnt[21].Hw_Val	DI271	BV564
Gb41	Digital input functions - Channel	DInt	0		0...70	R/W	DI_ReadFnt[21].Ch	HR950	IV158
Gb42	Digital input functions - Logic	Bool	FALSE		0...1	R/W	DI_ReadFnt[21].Logic	C294	BV565
-	Digital input functions - Priority	USInt				R	DI_ReadFnt[22].Prio	IR407	PIV511
-	Digital input functions - Status	Bool				R	DI_ReadFnt[22].Hw_Val	DI272	BV566
Gb43	Digital input functions - Channel	DInt	0		0...70	R/W	DI_ReadFnt[22].Ch	HR952	IV159
Gb44	Digital input functions - Logic	Bool	FALSE		0...1	R/W	DI_ReadFnt[22].Logic	C295	BV567
-	Digital input functions - Priority	USInt				R	DI_ReadFnt[22].Prio	IR407	PIV511
-	Digital input functions - Status	Bool				R	DI_ReadFnt[23].Hw_Val	DI273	BV568
Gb45	Digital input functions - Channel	DInt	0		0...70	R/W	DI_ReadFnt[23].Ch	HR954	IV160
Gb46	Digital input functions - Logic	Bool	FALSE		0...1	R/W	DI_ReadFnt[23].Logic	C296	BV569
Gb47	Digital input functions - Channel	DInt	0		0...70	R/W	DI_ReadFnt[24].Ch	HR1086	IV219
Gb48	Digital input functions - Logic	Bool	FALSE		0...1	R/W	DI_ReadFnt[24].Logic	C350	BV1454
-	Digital input functions - Status	Bool				R	DI_ReadFnt[24].Hw_Val	DI1475	BV1685
Gb49	Digital input functions - Channel	DInt	0		0...70	R/W	DI_ReadFnt[25].Ch	HR1340	IV1709
Gb50	Digital input functions - Logic	Bool	FALSE		0...1	R/W	DI_ReadFnt[25].Logic	C383	BV1474
-	Digital input functions - Status	Bool				R	DI_ReadFnt[25].Hw_Val	DI1476	BV1686
Gb51	Digital input functions - Channel	DInt	0		0...70	R/W	DI_ReadFnt[26].Ch	HR1342	IV1710
Gb52	Digital input functions - Logic	Bool	FALSE		0...1	R/W	DI_ReadFnt[26].Logic	C384	BV1475
-	Digital input functions - Status	Bool				R	DI_ReadFnt[26].Hw_Val	DI1477	BV1687
Gb53	Digital input functions - Channel	DInt	0		0...70	R/W	DI_ReadFnt[27].Ch	HR1337	IV222
Gb54	Digital input functions - Logic	Bool	FALSE		0...1	R/W	DI_ReadFnt[27].Logic	C382	BV1684
-	Digital input functions - Status	Bool				R	DI_ReadFnt[27].Hw_Val	DI1471	BV1683
Gb55	Smoke alarm input - Channel	DInt	0		0...70	R/W	DI_ReadFnt[28].Ch	HR1360	IV1711
Gb56	Smoke alarm input - Logic	Bool	FALSE		0...1	R/W	DI_ReadFnt[28].Logic	C387	BV1712
-	Smoke alarm input - Status	Bool				R	DI_ReadFnt[28].Hw_Val	DI1510	BV1713

6.10.3 DIGITAL OUT SET menu

Mask code	Description	Type	Default	UoM	Range	R/W	Variable Name	BMS	BacNet
-	Digital output functions - Priority	USInt				R	DO_ReadFnt[1].Prio	IR408	PIV512
-	Digital output functions - Status	Bool				R	DO_ReadFnt[1].Hw_Val	DI274	BV570
Gc01	Digital output functions - Channel	DInt	0		0...50	R/W	DO_ReadFnt[1].Ch	HR956	IV161
Gc02	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[1].Logic	C297	BV571
-	Digital output functions - Priority	USInt				R	DO_ReadFnt[2].Prio	IR409	PIV513
-	Digital output functions - Status	Bool				R	DO_ReadFnt[2].Hw_Val	DI275	BV572
Gc03	Digital output functions - Channel	DInt	0		0...50	R/W	DO_ReadFnt[2].Ch	HR958	IV162
Gc04	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[2].Logic	C298	BV573
-	Digital output functions - Priority	USInt				R	DO_ReadFnt[3].Prio	IR410	PIV514
-	Digital output functions - Status	Bool				R	DO_ReadFnt[3].Hw_Val	DI276	BV574
Gc05	Digital output functions - Channel	DInt	0		0...50	R/W	DO_ReadFnt[3].Ch	HR960	IV163
Gc06	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[3].Logic	C299	BV575
-	Digital output functions - Priority	USInt				R	DO_ReadFnt[4].Prio	IR411	PIV515
-	Digital output functions - Status	Bool				R	DO_ReadFnt[4].Hw_Val	DI277	BV576
Gc07	Digital output functions - Channel	DInt	0		0...50	R/W	DO_ReadFnt[4].Ch	HR962	IV164
Gc08	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[4].Logic	C300	BV577
-	Digital output functions - Priority	USInt				R	DO_ReadFnt[5].Prio	IR412	PIV516
-	Digital output functions - Status	Bool				R	DO_ReadFnt[5].Hw_Val	DI278	BV578
Gc09	Digital output functions - Channel	DInt	0		0...50	R/W	DO_ReadFnt[5].Ch	HR964	IV165
Gc10	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[5].Logic	C301	BV579
-	Digital output functions - Priority	USInt				R	DO_ReadFnt[6].Prio	IR413	PIV517
-	Digital output functions - Status	Bool				R	DO_ReadFnt[6].Hw_Val	DI279	BV580
Gc11	Digital output functions - Channel	DInt	0		0...50	R/W	DO_ReadFnt[6].Ch	HR966	IV166
Gc12	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[6].Logic	C302	BV581
-	Digital output functions - Priority	USInt				R	DO_ReadFnt[7].Prio	IR414	PIV518
-	Digital output functions - Status	Bool				R	DO_ReadFnt[7].Hw_Val	DI280	BV582
Gc13	Digital output functions - Channel	DInt	0		0...50	R/W	DO_ReadFnt[7].Ch	HR968	IV167
Gc14	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[7].Logic	C303	BV583
-	Digital output functions - Priority	USInt				R	DO_ReadFnt[8].Prio	IR415	PIV519
-	Digital output functions - Status	Bool				R	DO_ReadFnt[8].Hw_Val	DI281	BV584
Gc15	Digital output functions - Channel	DInt	0		0...50	R/W	DO_ReadFnt[8].Ch	HR970	IV168
Gc16	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[8].Logic	C304	BV585
-	Digital output functions - Priority	USInt				R	DO_ReadFnt[9].Prio	IR416	PIV520
-	Digital output functions - Status	Bool				R	DO_ReadFnt[9].Hw_Val	DI282	BV586
Gc17	Digital output functions - Channel	DInt	0		0...50	R/W	DO_ReadFnt[9].Ch	HR972	IV169
Gc18	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[9].Logic	C305	BV587
-	Digital output functions - Priority	USInt				R	DO_ReadFnt[10].Prio	IR417	PIV521
-	Digital output functions - Status	Bool				R	DO_ReadFnt[10].Hw_Val	DI283	BV588
Gc19	Digital output functions - Channel	DInt	0		0...50	R/W	DO_ReadFnt[10].Ch	HR974	IV170
Gc20	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[10].Logic	C306	BV589
-	Digital output functions - Priority	USInt				R	DO_ReadFnt[11].Prio	IR418	PIV522
-	Digital output functions - Status	Bool				R	DO_ReadFnt[11].Hw_Val	DI284	BV590
Gc21	Digital output functions - Channel	DInt	0		0...50	R/W	DO_ReadFnt[11].Ch	HR976	IV171
Gc22	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[11].Logic	C307	BV591
-	Digital output functions - Priority	USInt				R	DO_ReadFnt[12].Prio	IR419	PIV523
-	Digital output functions - Status	Bool				R	DO_ReadFnt[12].Hw_Val	DI285	BV592
Gc23	Digital output functions - Channel	DInt	0		0...50	R/W	DO_ReadFnt[12].Ch	HR978	IV172
Gc24	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[12].Logic	C308	BV593
-	Digital output functions - Priority	USInt				R	DO_ReadFnt[13].Prio	IR420	PIV524
-	Digital output functions - Status	Bool				R	DO_ReadFnt[13].Hw_Val	DI286	BV594
Gc25	Digital output functions - Channel	DInt	0		0...50	R/W	DO_ReadFnt[13].Ch	HR980	IV173
Gc26	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[13].Logic	C309	BV595
-	Digital output functions - Priority	USInt				R	DO_ReadFnt[14].Prio	IR421	PIV525
-	Digital output functions - Status	Bool				R	DO_ReadFnt[14].Hw_Val	DI287	BV596
Gc27	Digital output functions - Channel	DInt	0		0...50	R/W	DO_ReadFnt[14].Ch	HR982	IV174
Gc28	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[14].Logic	C310	BV597
-	Digital output functions - Priority	USInt				R	DO_ReadFnt[15].Prio	IR422	PIV526
-	Digital output functions - Status	Bool				R	DO_ReadFnt[15].Hw_Val	DI288	BV598
Gc29	Digital output functions - Channel	DInt	0		0...50	R/W	DO_ReadFnt[15].Ch	HR984	IV175
Gc30	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[15].Logic	C311	BV599
-	Digital output functions - Priority	USInt				R	DO_ReadFnt[16].Prio	IR423	PIV527
-	Digital output functions - Status	Bool				R	DO_ReadFnt[16].Hw_Val	DI289	BV600
Gc31	Digital output functions - Channel	DInt	0		0...50	R/W	DO_ReadFnt[16].Ch	HR986	IV176
Gc32	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[16].Logic	C312	BV601
-	Digital output functions - Priority	USInt				R	DO_ReadFnt[17].Prio	IR424	PIV528
-	Digital output functions - Status	Bool				R	DO_ReadFnt[17].Hw_Val	DI290	BV602
Gc33	Digital output functions - Channel	DInt	0		0...50	R/W	DO_ReadFnt[17].Ch	HR988	IV177
Gc34	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[17].Logic	C313	BV603
-	Digital output functions - Priority	USInt				R	DO_ReadFnt[18].Prio	IR425	PIV529
-	Digital output functions - Status	Bool				R	DO_ReadFnt[18].Hw_Val	DI291	BV604
Gc35	Digital output functions - Channel	DInt	0		0...50	R/W	DO_ReadFnt[18].Ch	HR990	IV178
Gc36	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[18].Logic	C314	BV605
-	Digital output functions - Priority	USInt				R	DO_ReadFnt[19].Prio	IR426	PIV530
-	Digital output functions - Status	Bool				R	DO_ReadFnt[19].Hw_Val	DI292	BV606

Gc37	Digital output functions - Channel	DInt	0		0...50	R/W	DO_ReadFnt[19].Ch	HR992	IV179
Gc38	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[19].Logic	C315	BV607
-	Digital output functions - Priority	USInt				R	DO_ReadFnt[20].Prio	IR427	PIV531
-	Digital output functions - Status	Bool				R	DO_ReadFnt[20].Hw_Val	DI293	BV608
Gc39	Digital output functions - Channel	DInt	0		0...50	R/W	DO_ReadFnt[20].Ch	HR994	IV180
Gc40	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[20].Logic	C316	BV609
-	Digital output functions - Priority	USInt				R	DO_ReadFnt[21].Prio	IR428	PIV532
-	Digital output functions - Status	Bool				R	DO_ReadFnt[21].Hw_Val	DI294	BV610
Gc41	Digital output functions - Channel	DInt	0		0...50	R/W	DO_ReadFnt[21].Ch	HR996	IV181
Gc42	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[21].Logic	C317	BV611
-	Digital output functions - Priority	USInt				R	DO_ReadFnt[22].Prio	IR429	PIV533
-	Digital output functions - Status	Bool				R	DO_ReadFnt[22].Hw_Val	DI295	BV612
Gc43	Digital output functions - Channel	DInt	0		0...50	R/W	DO_ReadFnt[22].Ch	HR998	IV182
Gc44	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[22].Logic	C318	BV613
-	Digital output functions - Priority	USInt				R	DO_ReadFnt[23].Prio	IR430	PIV534
-	Digital output functions - Status	Bool				R	DO_ReadFnt[23].Hw_Val	DI296	BV614
Gc45	Digital output functions - Channel	DInt	0		0...50	R/W	DO_ReadFnt[23].Ch	HR1000	IV183
Gc46	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[23].Logic	C319	BV615
-	Digital output functions - Priority	USInt				R	DO_ReadFnt[24].Prio	IR431	PIV535
-	Digital output functions - Status	Bool				R	DO_ReadFnt[24].Hw_Val	DI297	BV616
Gc47	Digital output functions - Channel	DInt	0		0...50	R/W	DO_ReadFnt[24].Ch	HR1002	IV184
Gc48	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[24].Logic	C320	BV617
-	Digital output functions - Priority	USInt				R	DO_ReadFnt[25].Prio	IR432	PIV536
-	Digital output functions - Status	Bool				R	DO_ReadFnt[25].Hw_Val	DI298	BV618
Gc49	Digital output functions - Channel	DInt	0		0...50	R/W	DO_ReadFnt[25].Ch	HR1004	IV185
Gc50	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[25].Logic	C321	BV619
-	Digital output functions - Priority	USInt				R	DO_ReadFnt[26].Prio	IR433	PIV537
-	Digital output functions - Status	Bool				R	DO_ReadFnt[26].Hw_Val	DI299	BV620
Gc51	Digital output functions - Channel	DInt	0		0...50	R/W	DO_ReadFnt[26].Ch	HR1006	IV186
Gc52	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[26].Logic	C322	BV621
-	Digital output functions - Priority	USInt				R	DO_ReadFnt[27].Prio	IR434	PIV538
-	Digital output functions - Status	Bool				R	DO_ReadFnt[27].Hw_Val	DI300	BV622
Gc53	Digital output functions - Channel	DInt	0		0...50	R/W	DO_ReadFnt[27].Ch	HR1008	IV187
Gc54	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[27].Logic	C323	BV623
-	Digital output functions - Priority	USInt				R	DO_ReadFnt[28].Prio	IR435	PIV539
-	Digital output functions - Status	Bool				R	DO_ReadFnt[28].Hw_Val	DI301	BV624
Gc55	Digital output functions - Channel	DInt	0		0...50	R/W	DO_ReadFnt[28].Ch	HR1010	IV188
Gc56	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[28].Logic	C324	BV625
-	Digital output functions - Priority	USInt				R	DO_ReadFnt[29].Prio	IR436	PIV540
-	Digital output functions - Status	Bool				R	DO_ReadFnt[29].Hw_Val	DI302	BV626
Gc57	Digital output functions - Channel	DInt	0		0...50	R/W	DO_ReadFnt[29].Ch	HR1012	IV189
Gc58	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[29].Logic	C325	BV627
-	Digital output functions - Priority	USInt				R	DO_ReadFnt[30].Prio	IR437	PIV541
-	Digital output functions - Status	Bool				R	DO_ReadFnt[30].Hw_Val	DI303	BV628
Gc59	Digital output functions - Channel	DInt	0		0...50	R/W	DO_ReadFnt[30].Ch	HR1014	IV190
Gc60	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[30].Logic	C326	BV629
-	Digital output functions - Priority	USInt				R	DO_ReadFnt[31].Prio	IR438	PIV542
-	Digital output functions - Status	Bool				R	DO_ReadFnt[31].Hw_Val	DI304	BV630
Gc61	Digital output functions - Channel	DInt	0		0...70	R/W	DO_ReadFnt[31].Ch	HR1016	IV191
Gc62	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[31].Logic	C327	BV631
-	Digital output functions - Priority	USInt				R	DO_ReadFnt[32].Prio	IR439	PIV543
-	Digital output functions - Status	Bool				R	DO_ReadFnt[32].Hw_Val	DI305	BV632
Gc63	Digital output functions - Channel	DInt	0		0...70	R/W	DO_ReadFnt[32].Ch	HR1018	IV192
Gc64	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[32].Logic	C328	BV633
-	Digital output functions - Priority	USInt				R	DO_ReadFnt[33].Prio	IR440	PIV544
-	Digital output functions - Status	Bool				R	DO_ReadFnt[33].Hw_Val	DI306	BV634
Gc65	Digital output functions - Channel	DInt	0		0...70	R/W	DO_ReadFnt[33].Ch	HR1020	IV193
Gc66	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[33].Logic	C329	BV635
-	Digital output functions - Priority	USInt				R	DO_ReadFnt[34].Prio	IR441	PIV545
-	Digital output functions - Status	Bool				R	DO_ReadFnt[34].Hw_Val	DI307	BV636
Gc67	Digital output functions - Channel	DInt	0		0...70	R/W	DO_ReadFnt[34].Ch	HR1022	IV194
Gc68	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[34].Logic	C330	BV637
-	Digital output functions - Priority	USInt				R	DO_ReadFnt[35].Prio	IR442	PIV546
-	Digital output functions - Status	Bool				R	DO_ReadFnt[35].Hw_Val	DI308	BV638
Gc69	Digital output functions - Channel	DInt	0		0...70	R/W	DO_ReadFnt[35].Ch	HR1024	IV195
Gc70	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[35].Logic	C331	BV639
-	Digital output functions - Priority	USInt				R	DO_ReadFnt[36].Prio	IR443	PIV547
-	Digital output functions - Status	Bool				R	DO_ReadFnt[36].Hw_Val	DI309	BV640
Gc71	Digital output functions - Channel	DInt	0		0...70	R/W	DO_ReadFnt[36].Ch	HR1026	IV196
Gc72	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[36].Logic	C332	BV641
-	Digital output functions - Priority	USInt				R	DO_ReadFnt[37].Prio	IR444	PIV548
-	Digital output functions - Status	Bool				R	DO_ReadFnt[37].Hw_Val	DI310	BV642
Gc73	Digital output functions - Channel	DInt	0		0...70	R/W	DO_ReadFnt[37].Ch	HR1028	IV197
Gc74	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[37].Logic	C333	BV643
-	Digital output functions - Priority	USInt				R	DO_ReadFnt[38].Prio	IR445	PIV549
-	Digital output functions - Status	Bool				R	DO_ReadFnt[38].Hw_Val	DI311	BV644
Gc75	Digital output functions - Channel	DInt	0		0...70	R/W	DO_ReadFnt[38].Ch	HR1030	IV198
Gc76	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[38].Logic	C334	BV645
-	Digital output functions - Priority	USInt				R	DO_ReadFnt[39].Prio	IR446	PIV550

-	Digital output functions - Status	Bool				R	DO_ReadFnt[39].Hw_Val	DI312	BV646
Gc77	Digital output functions - Channel	DInt	0		0...70	R/W	DO_ReadFnt[39].Ch	HR1032	IV199
Gc78	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[39].Logic	C335	BV647
-	Digital output functions - Priority	USInt				R	DO_ReadFnt[40].Prio	IR447	PIV551
-	Digital output functions - Status	Bool				R	DO_ReadFnt[40].Hw_Val	DI313	BV648
Gc79	Digital output functions - Channel	DInt	0		0...70	R/W	DO_ReadFnt[40].Ch	HR1034	IV200
Gc80	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[40].Logic	C336	BV649
-	Digital output functions - Priority	USInt				R	DO_ReadFnt[41].Prio	IR448	PIV552
-	Digital output functions - Status	Bool				R	DO_ReadFnt[41].Hw_Val	DI314	BV650
Gc81	Digital output functions - Channel	DInt	0		0...70	R/W	DO_ReadFnt[41].Ch	HR1036	IV201
Gc82	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[41].Logic	C337	BV651
-	Digital output functions - Priority	USInt				R	DO_ReadFnt[42].Prio	IR449	PIV553
-	Digital output functions - Status	Bool				R	DO_ReadFnt[42].Hw_Val	DI315	BV652
Gc81	Digital output functions - Channel	DInt	0		0...70	R/W	DO_ReadFnt[42].Ch	HR1038	IV202
Gc82	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[42].Logic	C338	BV653
-	Digital output functions - Priority	USInt				R	DO_ReadFnt[43].Prio	IR450	PIV554
-	Digital output functions - Status	Bool				R	DO_ReadFnt[43].Hw_Val	DI316	BV654
Gc83	Digital output functions - Channel	DInt	0		0...70	R/W	DO_ReadFnt[43].Ch	HR1040	IV203
Gc84	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[43].Logic	C339	BV655
-	Digital output functions - Priority	USInt				R	DO_ReadFnt[44].Prio	IR451	PIV555
-	Digital output functions - Status	Bool				R	DO_ReadFnt[44].Hw_Val	DI317	BV656
Gc85	Digital output functions - Channel	DInt	0		0...70	R/W	DO_ReadFnt[44].Ch	HR1042	IV204
Gc86	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[44].Logic	C340	BV657
-	Digital output functions - Priority	USInt				R	DO_ReadFnt[45].Prio	IR452	PIV556
-	Digital output functions - Status	Bool				R	DO_ReadFnt[45].Hw_Val	DI318	BV658
Gc87	Digital output functions - Channel	DInt	0		0...70	R/W	DO_ReadFnt[45].Ch	HR1044	IV205
Gc88	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[45].Logic	C341	BV659
-	Digital output functions - Priority	USInt				R	DO_ReadFnt[46].Prio	IR453	PIV557
-	Digital output functions - Status	Bool				R	DO_ReadFnt[46].Hw_Val	DI319	BV660
Gc89	Digital output functions - Channel	DInt	0		0...70	R/W	DO_ReadFnt[46].Ch	HR1046	IV206
Gc90	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[46].Logic	C342	BV661
Gc91	Digital output functions - Channel	DInt			0...70	R/W	DO_ReadFnt[47].Ch	HR1169	IV223
Gc92	Digital output functions - Logic	Bool			0...1	R/W	DO_ReadFnt[47].Logic	C354	BV663
	Digital output functions - Priority	USInt				R	DO_ReadFnt[47].Prio	IR502	PIV570
	Digital output functions - Status	Bool				R	DO_ReadFnt[47].Hw_Val	DI1450	BV1578
Gc93	Digital output functions - Channel	DInt	0		0...70	R/W	DO_ReadFnt[48].Ch	HR1171	IV224
Gc94	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[48].Logic	C355	BV664
	Digital output functions - Priority	USInt				R	DO_ReadFnt[48].Prio	IR503	PIV571
	Digital output functions - Status	Bool				R	DO_ReadFnt[48].Hw_Val	DI1451	BV1579
Gc95	Digital output functions - Channel	DInt	0		0...70	R/W	DO_ReadFnt[49].Ch	HR1173	IV225
Gc96	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[49].Logic	C356	BV665
	Digital output functions - Priority	USInt				R	DO_ReadFnt[49].Prio	IR504	PIV572
	Digital output functions - Status	Bool				R	DO_ReadFnt[49].Hw_Val	DI1452	BV1580
Gc97	Digital output functions - Channel	DInt	0		0...70	R/W	DO_ReadFnt[50].Ch	HR1175	IV226
Gc98	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[50].Logic	C357	BV666
	Digital output functions - Priority	USInt				R	DO_ReadFnt[50].Prio	IR505	PIV573
	Digital output functions - Status	Bool				R	DO_ReadFnt[50].Hw_Val	DI1453	BV1581
Gc99	Digital output functions - Channel	DInt	0		0...70	R/W	DO_ReadFnt[51].Ch	HR1177	IV227
Gc100	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[51].Logic	C358	BV667
	Digital output functions - Priority	USInt				R	DO_ReadFnt[51].Prio	IR506	PIV574
	Digital output functions - Status	Bool				R	DO_ReadFnt[51].Hw_Val	DI1454	BV1582
Gc101	Digital output functions - Channel	DInt	0		0...70	R/W	DO_ReadFnt[52].Ch	HR1179	IV228
Gc102	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[52].Logic	C359	BV668
	Digital output functions - Priority	USInt				R	DO_ReadFnt[52].Prio	IR507	PIV575
	Digital output functions - Status	Bool				R	DO_ReadFnt[52].Hw_Val	DI1455	BV1583
Gc103	Digital output functions - Channel	DInt	0		0...70	R/W	DO_ReadFnt[53].Ch	HR1181	IV229
Gc104	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[53].Logic	C360	BV669
	Digital output functions - Priority	USInt				R	DO_ReadFnt[53].Prio	IR508	PIV576
	Digital output functions - Status	Bool				R	DO_ReadFnt[53].Hw_Val	DI1456	BV1584
Gc105	Digital output functions - Channel	DInt	0		0...70	R/W	DO_ReadFnt[54].Ch	HR1183	IV230
Gc106	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[54].Logic	C361	BV670
	Digital output functions - Priority	USInt				R	DO_ReadFnt[54].Prio	IR509	PIV577
	Digital output functions - Status	Bool				R	DO_ReadFnt[54].Hw_Val	DI1457	BV1585
Gc107	Digital output functions - Channel	DInt	0		0...70	R/W	DO_ReadFnt[55].Ch	HR1185	IV231
Gc108	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[55].Logic	C362	BV671
	Digital output functions - Priority	USInt				R	DO_ReadFnt[55].Prio	IR510	PIV578
	Digital output functions - Status	Bool				R	DO_ReadFnt[55].Hw_Val	DI1458	BV1586
Gc109	Digital output functions - Channel	DInt	0		0...70	R/W	DO_ReadFnt[56].Ch	HR1187	IV232
Gc110	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[56].Logic	C363	BV672
	Digital output functions - Priority	USInt				R	DO_ReadFnt[56].Prio	IR511	PIV579
	Digital output functions - Status	Bool				R	DO_ReadFnt[56].Hw_Val	DI1459	BV1587
Gc111	Digital output functions - Channel	DInt	0		0...70	R/W	DO_ReadFnt[57].Ch	HR1189	IV233
Gc112	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[57].Logic	C364	BV673
	Digital output functions - Priority	USInt				R	DO_ReadFnt[57].Prio	IR512	PIV580
	Digital output functions - Status	Bool				R	DO_ReadFnt[57].Hw_Val	DI1460	BV1588
Gc113	Digital output functions - Channel	DInt	0		0...70	R/W	DO_ReadFnt[58].Ch	HR1191	IV234
Gc114	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[58].Logic	C365	BV674
	Digital output functions - Priority	USInt				R	DO_ReadFnt[58].Prio	IR513	PIV581
	Digital output functions - Status	Bool				R	DO_ReadFnt[58].Hw_Val	DI1461	BV1589

Gc115	Digital output functions - Channel	DInt	0		0...70	R/W	DO_ReadFnt[59].Ch	HR1193	IV235
Gc116	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[59].Logic	C366	BV675
	Digital output functions - Priority	USInt				R	DO_ReadFnt[59].Prio	IR514	PIV582
	Digital output functions - Status	Bool				R	DO_ReadFnt[59].Hw_Val	DI1462	BV1590
Gc117	Digital output functions - Channel	DInt	0		0...70	R/W	DO_ReadFnt[60].Ch	HR1195	IV236
Gc118	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[60].Logic	C367	BV676
	Digital output functions - Priority	USInt				R	DO_ReadFnt[60].Prio	IR515	PIV583
	Digital output functions - Status	Bool				R	DO_ReadFnt[60].Hw_Val	DI1463	BV1591
Gc119	Digital output functions - Channel	DInt	0		0...70	R/W	DO_ReadFnt[61].Ch	HR1197	IV237
Gc120	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[61].Logic	C368	BV677
	Digital output functions - Priority	USInt				R	DO_ReadFnt[61].Prio	IR516	PIV584
	Digital output functions - Status	Bool				R	DO_ReadFnt[61].Hw_Val	DI1464	BV1592
Gc121	Digital output functions - Channel	DInt	0		0...70	R/W	DO_ReadFnt[62].Ch	HR1199	IV238
Gc122	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[62].Logic	C369	BV678
	Digital output functions - Priority	USInt				R	DO_ReadFnt[62].Prio	IR517	PIV585
	Digital output functions - Status	Bool				R	DO_ReadFnt[62].Hw_Val	DI1465	BV1593
Gc123	Digital output functions - Channel	DInt	0		0...70	R/W	DO_ReadFnt[63].Ch	HR1201	IV239
Gc124	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[63].Logic	C370	BV679
	Digital output functions - Priority	USInt				R	DO_ReadFnt[63].Prio	IR518	PIV586
	Digital output functions - Status	Bool				R	DO_ReadFnt[63].Hw_Val	DI1466	BV1594
Gc125	Digital output functions - Channel	DInt	0		0...70	R/W	DO_ReadFnt[64].Ch	HR1203	IV240
Gc126	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[64].Logic	C371	BV680
	Digital output functions - Priority	USInt				R	DO_ReadFnt[64].Prio	IR519	PIV587
	Digital output functions - Status	Bool				R	DO_ReadFnt[64].Hw_Val	DI1467	BV1595
Gc127	Digital output functions - Channel	DInt	0		0...70	R/W	DO_ReadFnt[65].Ch	HR1205	IV241
Gc128	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[65].Logic	C372	BV681
	Digital output functions - Priority	USInt				R	DO_ReadFnt[65].Prio	IR520	PIV588
	Digital output functions - Status	Bool				R	DO_ReadFnt[65].Hw_Val	DI1468	BV1596
Gc129	Digital output functions - Channel	DInt	0		0...70	R/W	DO_ReadFnt[66].Ch	HR1207	IV242
Gc130	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[66].Logic	C373	BV682
	Digital output functions - Priority	USInt				R	DO_ReadFnt[66].Prio	IR521	PIV589
	Digital output functions - Status	Bool				R	DO_ReadFnt[66].Hw_Val	DI1469	BV1597
Gc131	Digital output functions - Channel	DInt	0		0...70	R/W	DO_ReadFnt[67].Ch	HR1211	IV243
Gc132	Digital output functions - Logic	Bool	FALSE		0...1	R/W	DO_ReadFnt[67].Logic	C374	BV683
	Digital output functions - Priority	USInt				R	DO_ReadFnt[67].Prio	IR522	PIV590
	Digital output functions - Status	Bool				R	DO_ReadFnt[67].Hw_Val	DI1470	BV1598

6.10.4 ANALOG OUT SET menu

Mask code	Description	Type	Default	UoM	Range	R/W	Variable Name	BMS	BacNet
-	Analog output functions - Priority	USInt				R	AO_ReadFnt[1].Prio	IR454	PIV558
-	Analog output functions - Request	Real				R	AO_ReadFnt[1].Hw_Val	IR455	AV571
Gd01	Analog output functions - Channel	DInt	0		0...60	R/W	AO_ReadFnt[1].Ch	HR1048	IV207
-	Analog output functions - Priority	USInt				R	AO_ReadFnt[2].Prio	IR456	PIV559
-	Analog output functions - Request	Real				R	AO_ReadFnt[2].Hw_Val	IR457	AV572
Gd02	Analog output functions - Channel	DInt	0		0...60	R/W	AO_ReadFnt[2].Ch	HR1050	IV208
-	Analog output functions - Priority	USInt				R	AO_ReadFnt[3].Prio	IR458	PIV560
-	Analog output functions - Request	Real				R	AO_ReadFnt[3].Hw_Val	IR459	AV573
Gd03	Analog output functions - Channel	DInt	0		0...60	R/W	AO_ReadFnt[3].Ch	HR1052	IV209
-	Analog output functions - Priority	USInt				R	AO_ReadFnt[4].Prio	IR460	PIV561
-	Analog output functions - Request	Real				R	AO_ReadFnt[4].Hw_Val	IR461	AV574
Gd04	Analog output functions - Channel	DInt	0		0...60	R/W	AO_ReadFnt[4].Ch	HR1054	IV210
-	Analog output functions - Priority	USInt				R	AO_ReadFnt[5].Prio	IR462	PIV562
-	Analog output functions - Request	Real				R	AO_ReadFnt[5].Hw_Val	IR463	AV575
Gd05	Analog output functions - Channel	DInt	0		0...60	R/W	AO_ReadFnt[5].Ch	HR1056	IV211
-	Analog output functions - Priority	USInt				R	AO_ReadFnt[6].Prio	IR464	PIV563
-	Analog output functions - Request	Real				R	AO_ReadFnt[6].Hw_Val	IR465	AV576
Gd06	Analog output functions - Channel	DInt	0		0...60	R/W	AO_ReadFnt[6].Ch	HR1058	IV212
-	Analog output functions - Priority	USInt				R	AO_ReadFnt[7].Prio	IR466	PIV564
-	Analog output functions - Request	Real				R	AO_ReadFnt[7].Hw_Val	IR467	AV577
Gd07	Analog output functions - Channel	DInt	0		0...60	R/W	AO_ReadFnt[7].Ch	HR1060	IV213
-	Analog output functions - Priority	USInt				R	AO_ReadFnt[8].Prio	IR468	PIV565
-	Analog output functions - Request	Real				R	AO_ReadFnt[8].Hw_Val	IR469	AV578
Gd08	Analog output functions - Channel	DInt	0		0...60	R/W	AO_ReadFnt[8].Ch	HR1062	IV214
-	Analog output functions - Priority	USInt				R	AO_ReadFnt[9].Prio	IR470	PIV566
-	Analog output functions - Request	Real				R	AO_ReadFnt[9].Hw_Val	IR471	AV579
Gd09	Analog output functions - Channel	DInt	0		0...60	R/W	AO_ReadFnt[9].Ch	HR1064	IV215
-	Analog output functions - Priority	USInt				R	AO_ReadFnt[10].Prio	IR472	PIV567
-	Analog output functions - Request	Real				R	AO_ReadFnt[10].Hw_Val	IR473	AV580
Gd10	Analog output functions - Channel	DInt	0		0...60	R/W	AO_ReadFnt[10].Ch	HR1066	IV216
-	Analog output functions - Priority	USInt				R	AO_ReadFnt[11].Prio	IR474	PIV568
-	Analog output functions - Request	Real				R	AO_ReadFnt[11].Hw_Val	IR475	AV581
Gd11	Analog output functions - Channel	DInt	0		0...60	R/W	AO_ReadFnt[11].Ch	HR1068	IV217
-	Analog output functions - Priority	USInt				R	AO_ReadFnt[12].Prio	IR476	PIV569
-	Analog output functions - Request	Real				R	AO_ReadFnt[12].Hw_Val	IR477	AV582
Gd12	Analog output functions - Channel	DInt	0		0...60	R/W	AO_ReadFnt[12].Ch	HR1070	IV218
-	Analog output functions - Priority	USInt				R	AO_ReadFnt[13].Prio	IR484	PIV1482
-	Analog output functions - Request	Real				R	AO_ReadFnt[13].Hw_Val	IR485	AV1483

Gd13	Analog output functions - Channel	DInt	0		0...60	R/W	AO_ReadFnt[13].Ch	HR1353	IV244
-	Analog output functions - Priority	USInt				R	AO_ReadFnt[14].Prio	IR486	PIV1484
-	Analog output functions - Request	Real				R	AO_ReadFnt[14].Hw_Val	IR487	AV1485
Gd14	Analog output functions - Channel	DInt	0		0...60	R/W	AO_ReadFnt[14].Ch	HR1355	IV245
-	Analog output functions - Priority	USInt				R	AO_ReadFnt[15].Prio	IR488	PIV1486
-	Analog output functions - Request	Real				R	AO_ReadFnt[15].Hw_Val	IR489	AV1487
Gd15	Analog output functions - Channel	DInt	0		0...60	R/W	AO_ReadFnt[15].Ch	HR1357	IV246
-	Analog output functions - Priority	USInt				R	AO_ReadFnt[16].Prio	IR490	PIV1488
-	Analog output functions - Request	Real				R	AO_ReadFnt[16].Hw_Val	IR491	AV1489
Gd16	Analog output functions - Channel	DInt	0		0...60	R/W	AO_ReadFnt[16].Ch	HR1359	IV247
-	Analog output functions - Priority	USInt				R	AO_ReadFnt[17].Prio	IR492	PIV1490
-	Analog output functions - Request	Real				R	AO_ReadFnt[17].Hw_Val	IR493	AV1491
Gd17	Analog output functions - Channel	DInt	0		0...60	R/W	AO_ReadFnt[17].Ch	HR1361	IV248
-	Analog output functions - Priority	USInt				R	AO_ReadFnt[18].Prio	IR494	PIV1492
-	Analog output functions - Request	Real				R	AO_ReadFnt[18].Hw_Val	IR495	AV1493
Gd18	Analog output functions - Channel	DInt	0		0...60	R/W	AO_ReadFnt[18].Ch	HR1363	IV249
-	Analog output functions - Priority	USInt				R	AO_ReadFnt[19].Prio	IR496	PIV1494
-	Analog output functions - Request	Real				R	AO_ReadFnt[19].Hw_Val	IR497	AV1495
Gd19	Analog output functions - Channel	DInt	0		0...60	R/W	AO_ReadFnt[19].Ch	HR1365	IV250
-	Analog output functions - Priority	USInt				R	AO_ReadFnt[20].Prio	IR498	PIV1496
-	Analog output functions - Request	Real				R	AO_ReadFnt[20].Hw_Val	IR499	AV1497
Gd-20	Analog output functions - Channel	DInt	0		0...60	R/W	AO_ReadFnt[20].Ch	HR1367	IV251
-	Analog output functions - Priority	USInt				R	AO_ReadFnt[21].Prio	IR500	PIV1498
-	Analog output functions - Request	Real				R	AO_ReadFnt[21].Hw_Val	IR501	AV1499
Gd-21	Analog output functions - Channel	DInt	0		0...60	R/W	AO_ReadFnt[21].Ch	HR1369	IV252
-	Analog output functions - Priority	USInt				R	AO_ReadFnt[22].Prio	IR523	PIV591
-	Analog output functions - Request	Real				R	AO_ReadFnt[22].Hw_Val	IR525	AV1575
Gd-22	Analog output functions - Channel	DInt	0		0...60	R/W	AO_ReadFnt[22].Ch	HR1371	IV253
-	Analog output functions - Priority	USInt				R	AO_ReadFnt[23].Prio	IR527	PIV592
-	Analog output functions - Request	Real				R	AO_ReadFnt[23].Hw_Val	IR529	AV1576
Gd-23	Analog output functions - Channel	DInt	0		0...60	R/W	AO_ReadFnt[23].Ch	HR1373	IV254
-	Analog output functions - Priority	USInt				R	AO_ReadFnt[24].Prio	IR531	PIV593
-	Analog output functions - Request	Real				R	AO_ReadFnt[24].Hw_Val	IR533	AV1577
Gd-24	Analog output functions - Channel	DInt	0		0...60	R/W	AO_ReadFnt[24].Ch	HR1375	IV255

6.11 SETTINGS menu in main menu

Mask code	Description	Type	Default	UoM	Range	R/W	Variable Name	BMS	BacNet
H001	Min supply temperature setpoint	Real	16.0	°C	-999.9...999.9	R/W	SupplyMinSet	HR298	AV244
H002	Max supply temperature setpoint	Real	30.0	°C	-999.9...999.9	R/W	SupplyMaxSet	HR299	AV245
H003	Setpoint minimum limit	Real	5.0	°C	-999.9...999.9	R/W	SetMinLimit	HR300	AV246
H004	Maximum setpoint value	Real	30.0	°C	-999.9...999.9	R/W	SetMaxLimit	HR301	AV247
-	Compensation request	Real		%		R	PID_RegCompens	IR262	AV248
H005	Regulation set point offset	Real	5.0		-999.9...999.9	R/W	RoomReg_SetP_Offs_Kp	HR302	AV249
H006	Regulation set point offset: Integral time for room regulation	UInt	300		0...65535	R/W	RoomReg_SetP_Offs_Ti	HR303	PIV252
-	Compensation request	Real		%		R	ExtTempCompens	IR263	AV250
H007	Min external temperature compensation in heating	Real	10.0	°C	-999.9...999.9	R/W	MinHeatCompens	HR304	AV251
H008	Max external temperature compensation in heating	Real	0.0	°C	-999.9...999.9	R/W	MaxHeatCompens	HR305	AV252
H009	Min external temperature compensation in cooling	Real	30.0	°C	-999.9...999.9	R/W	MinCoolCompens	HR306	AV253
H010	Max external temperature compensation in cooling	Real	30.0	°C	-999.9...999.9	R/W	MaxCoolCompens	HR307	AV254
H011	Cooling external temperature threshold	Real	25.0	°C	-999.9...999.9	R/W	CoolExtTempThrsh	HR308	AV255
H012	Heating external temperature threshold	Real	10.0	°C	-999.9...999.9	R/W	HeatExtTempThrsh	HR309	AV256
H013	Supply temp.: cooling/heating delay time	UDInt	30	s	0...65535	R/W	SupplyTemp_CoolHeatDT	HR310	PIV253
H014	StandBy time	UDInt	0	min	0...9999	R/W	StandbyT	HR312	PIV254
H015	Wake up time	UDInt	180	min	10...9999	R/W	WakeUpT	HR314	PIV255
H016	Night kick hour	UInt	1		0...23	R/W	NightKickHour	HR316	PIV256
H016	Night kick minute	UInt	30	min	0...59	R/W	NightKickMinute	HR317	PIV257
H017	Enable freecooling/freeheating	Bool	TRUE		0...1	R/W	En_FreeCoolHeat	C36	BV263
H018	Antistuck OFF time	UInt	168	h	1...999	R/W	AntiStuckOFF	HR318	PIV258
H019	Antistuck ON time	UInt	300	s	0...9999	R/W	AntiStuckON	HR319	PIV259
H020	Minimum design temperature	Real	-45.0	°C	-999.9...999.9	R/W	MinDesignExtTemp	HR320	AV257
H021	Maximum design temperature	Real	55.0	°C	-999.9...999.9	R/W	MaxDesignExtTemp	HR321	AV258
H022	Start-up unit mode	Bool	FALSE			R/W	Startup_Sequence	C343	BV1430
H023	Boost function maximum time	Int	60	s	0... 32767	R/W	Boost Time	HR1072	IV1452
H025	Enable fix fresh damper position	Bool	FALSE			R/W	EN_FreshDampFixReq	DI1447	BV1471
H026	fresh damper position percentage	Real	100	%	0...100	R/W	FreshDampFixReq	HR1333	AV1668
Ha25	Fresh damper min value open	Real		%	0...100		ModulFreshDampMinVal	HR1334	AV1669
Ha26	Fresh damper max value open	Real		%	0...100		ModulFreshDampMaxVal	HR1335	AV1670
Hb25	Manual management fresh damper	Int	0		0...100		Modul_FreshDampMan	HR1336	PIV1671
H027	Enable external devices management	Bool	FALSE			R/W	En_ExtDevSign	DI1448	BV1472
H028	Enable advanced PID management	Bool	FALSE			R/W	En_PID_Modes	DI1449	BV1473
H029	Modes set PID regulations PreHeat	Real	5.0		-999.9...999.9	R/W	PIDs_PreHeat.Comfort_Kp	HR1152	AV1559
H030	Modes set PID regulations PreHeat	Int	120	s	0...65535	R/W	PIDs_PreHeat.Comfort_Ti	HR1153	PIV1560
H031	Modes set PID regulations PreHeat	Real	5.0		-999.9...999.9	R/W	PIDs_PreHeat.Economy_Kp	HR1112	AV1519
H032	Modes set PID regulations PreHeat	Int	120	s	0...65535	R/W	PIDs_PreHeat.Economy_Ti	HR1113	PIV1520
H033	Modes set PID regulations PreHeat	Real	5.0		-999.9...999.9	R/W	PIDs_PreHeat.Precomfort_Kp	HR1132	AV1539
H034	Modes set PID regulations PreHeat	Int	120	s	0...65535	R/W	PIDs_PreHeat.Precomfort_Ti	HR1133	PIV1540
H035	Modes set PID regulations ReHeat	Real	5.1		-999.9...999.9	R/W	PIDs_ReHeat.Comfort_Kp	HR1150	AV1557
H036	Modes set PID regulations ReHeat	Int	121	s	0...65535	R/W	PIDs_ReHeat.Comfort_Ti	HR1151	PIV1558
H037	Modes set PID regulations ReHeat	Real	5.1		-999.9...999.9	R/W	PIDs_ReHeat.Economy_Kp	HR1110	AV1517

H038	Modes set PID regulations ReHeat	Int	121	s	0...65535	R/W	PIDs ReHeat.Economy_Ti	HR1111	PIV1518
H039	Modes set PID regulations ReHeat	Real	5.1		-999.9...999.9	R/W	PIDs ReHeat.Precomfort_Kp	HR1130	AV1537
H040	Modes set PID regulations ReHeat	Int	121	s	0...65535	R/W	PIDs ReHeat.Precomfort_Ti	HR1131	PIV1538
H041	Modes set PID regulations Heat	Real	5.1		-999.9...999.15	R/W	PIDs Heat.Comfort_Kp	HR1148	AV1555
H042	Modes set PID regulations Heat	Int	121	s	0...65535	R/W	PIDs Heat.Comfort_Ti	HR1149	PIV1556
H043	Modes set PID regulations Heat	Real	5.1		-999.9...999.9	R/W	PIDs Heat.Economy_Kp	HR1108	AV1515
H044	Modes set PID regulations Heat	Int	121	s	0...65535	R/W	PIDs Heat.Economy_Ti	HR1109	PIV1516
H045	Modes set PID regulations Heat	Real	5.2		-999.9...999.9	R/W	PIDs Heat.Precomfort_Kp	HR1128	AV1535
H046	Modes set PID regulations Heat	Int	122	s	0...65535	R/W	PIDs Heat.Precomfort_Ti	HR1129	PIV1536
H047	Modes set PID regulations Cool	Real	5.2		-999.9...999.9	R/W	PIDs Cool.Comfort_Kp	HR1154	AV1561
H048	Modes set PID regulations Cool	Int	122	s	0...65535	R/W	PIDs Cool.Comfort_Ti	HR1155	PIV1562
H049	Modes set PID regulations Cool	Real	5.2		-999.9...999.9	R/W	PIDs Cool.Economy_Kp	HR1114	AV1521
H050	Modes set PID regulations Cool	Int	122	s	0...65535	R/W	PIDs Cool.Economy_Ti	HR1115	PIV1522
H051	Modes set PID regulations Cool	Real	5.2		-999.9...999.9	R/W	PIDs Cool.Precomfort_Kp	HR1134	AV1541
H052	Modes set PID regulations Cool	Int	122	s	0...65535	R/W	PIDs Cool.Precomfort_Ti	HR1135	PIV1542
H053	PIDs Rev Cool.Comfort_Kp	Real	5.2		-999.9...999.9	R/W	PIDs Rev Cool.Comfort_Kp	HR1158	AV1565
H054	PIDs Rev Cool.Comfort_Ti	Int	122	s	0...65535	R/W	PIDs Rev Cool.Comfort_Ti	HR1159	PIV1566
H055	PIDs Rev Cool.Economy_Kp	Real	5.3		-999.9...999.9	R/W	PIDs Rev Cool.Economy_Kp	HR1118	AV1525
H056	PIDs Rev Cool.Economy_Ti	Int	123	s	0...65535	R/W	PIDs Rev Cool.Economy_Ti	HR1119	PIV1526
H057	PIDs Rev Cool.Precomfort_Kp	Real	5.3		-999.9...999.9	R/W	PIDs Rev Cool.Precomfort_Kp	HR1138	AV1545
H058	PIDs Rev Cool.Precomfort_Ti	Int	123	s	0...65535	R/W	PIDs Rev Cool.Precomfort_Ti	HR1139	PIV1546
H059	Modes set PID regulations Rev Heat	Real	5.3		-999.9...999.24	R/W	PIDs Rev Heat.Comfort_Kp	HR1156	AV1563
H060	Modes set PID regulations Rev Heat	Int	123	s	0...65535	R/W	PIDs Rev Heat.Comfort_Ti	HR1157	PIV1654
H061	Modes set PID regulations Rev Heat	Real	5.3		-999.9...999.9	R/W	PIDs Rev Heat.Economy_Kp	HR1116	AV1523
H062	Modes set PID regulations Rev Heat	Int	123	s	0...65535	R/W	PIDs Rev Heat.Economy_Ti	HR1117	PIV1524
H063	Modes set PID regulations Rev Heat	Real	5.3		-999.9...999.9	R/W	PIDs Rev Heat.Precomfort_Kp	HR1136	AV1543
H064	Modes set PID regulations Rev Heat	Int	123	s	0...65535	R/W	PIDs Rev Heat.Precomfort_Ti	HR1137	PIV1544
H065	Modes set PID regulations Heat Rec	Real	5.4		-999.9...999.27	R/W	PIDs Heat Rec.Comfort_Kp	HR1160	AV1567
H066	Modes set PID regulations Heat Rec	Int	124	s	0...65535	R/W	PIDs Heat Rec.Comfort_Ti	HR1161	PIV1568
H067	Modes set PID regulations Heat Rec	Real	5.4		-999.9...999.9	R/W	PIDs Heat Rec.Economy_Kp	HR1120	AV1527
H068	Modes set PID regulations Heat Rec	Int	124	s	0...65535	R/W	PIDs Heat Rec.Economy_Ti	HR1121	PIV1528
H069	Modes set PID regulations Heat Rec	Real	5.4		-999.9...999.9	R/W	PIDs Heat Rec.Precomfort_Kp	HR1140	AV1547
H070	Modes set PID regulations Heat Rec	Int	124	s	0...65535	R/W	PIDs Heat Rec.Precomfort_Ti	HR1141	PIV1548
H071	Modes set PID regulations Cool Rec	Real	5.4		-999.9...999.9	R/W	PIDs Cool Rec.Comfort_Kp	HR1162	AV1569
H072	Modes set PID regulations Cool Rec	Int	124	s	0...65535	R/W	PIDs Cool Rec.Comfort_Ti	HR1163	PIV1570
H073	Modes set PID regulations Cool Rec	Real	5.4		-999.9...999.9	R/W	PIDs Cool Rec.Economy_Kp	HR1122	AV1529
H074	Modes set PID regulations Cool Rec	Int	124	s	0...65535	R/W	PIDs Cool Rec.Economy_Ti	HR1123	PIV1530
H075	Modes set PID regulations Cool Rec	Real	5.5		-999.9...999.9	R/W	PIDs Cool Rec.Precomfort_Kp	HR1142	AV1549
H076	Modes set PID regulations Cool Rec	Int	125	s	0...65535	R/W	PIDs Cool Rec.Precomfort_Ti	HR1143	PIV1550
H077	Modes set PID regulations Heat Rec Mix	Real	5.5		-999.9...999.9	R/W	PIDs Heat_Rec_Mix.Comfort_Kp	HR1164	AV1571
H078	Modes set PID regulations Heat Rec Mix	Int	125	s	0...65535	R/W	PIDs Heat_Rec_Mix.Comfort_Ti	HR1165	PIV1572
H079	Modes set PID regulations Heat Rec Mix	Real	5.5		-999.9...999.9	R/W	PIDs Heat_Rec_Mix.Economy_Kp	HR1124	AV1531
H080	Modes set PID regulations Heat Rec Mix	Int	125	s	0...65535	R/W	PIDs Heat_Rec_Mix.Economy_Ti	HR1125	PIV1532
H081	Modes set PID regulations Heat Rec Mix	Real	5.5		-999.9...999.9	R/W	PIDs Heat_Rec_Mix.Precomfort_Kp	HR1144	AV1551
H082	Modes set PID regulations Heat Rec Mix	Int	125	s	0...65535	R/W	PIDs Heat_Rec_Mix.Precomfort_Ti	HR1145	PIV1552
H083	Modes set PID regulations Cool Rec Mix	Real	5.5		-999.9...999.9	R/W	PIDs Cool_Rec_Mix.Comfort_Kp	HR1166	AV1573
H084	Modes set PID regulations Cool Rec Mix	Int	125	s	0...65535	R/W	PIDs Cool_Rec_Mix.Comfort_Ti	HR1167	PIV1574
H085	Modes set PID regulations Cool Rec Mix	Real	5.6		-999.9...999.9	R/W	PIDs Cool_Rec_Mix.Economy_Kp	HR1126	AV1533
H086	Modes set PID regulations Cool Rec Mix	Int	126	s	0...65535	R/W	PIDs Cool_Rec_Mix.Economy_Ti	HR1127	PIV1534
H087	Modes set PID regulations Cool Rec Mix	Real	5.6		-999.9...999.9	R/W	PIDs Cool_Rec_Mix.Precomfort_Kp	HR1146	AV1553
H088	Modes set PID regulations Cool Rec Mix	Int	126	s	0...65535	R/W	PIDs Cool_Rec_Mix.Precomfort_Ti	HR1147	PIV1554

6.12 UNIT CFG. menu in main menu

Mask code	Description	Type	Default	UoM	Range	R/W	Variable Name	BMS	BacNet
	Unit configuration not allowed - Alarm status	Bool				R	AI_UnitCfgError.Active	DI1037	BV1037
I001	Recovery application code	USInt	0		0...4	R/W	AppCode_Rec	HR83	PIV132
I001	Application heating code	USInt	0		0...4	R/W	AppCode_Heat	HR84	PIV133
I001	Application cooling code	USInt	0		0...2	R/W	AppCode_Cool	HR85	PIV134
I001	Application reverse code	USInt	0		0...MaxAppCode_Rev	R/W	AppCode_Rev	HR86	PIV135
I001	Application preheating code	USInt	0		0...3	R/W	AppCode_PreHeat	HR87	PIV136
I001	Application reheater code	USInt	0		0...3	R/W	AppCode_ReHeat	HR88	PIV137
I001	Application mixing damper code	USInt	0		0...1	R/W	AppCode_Eco	HR89	PIV138
I001	Humidifier code	USInt	0		0...3	R/W	AppCode_Hum	HR90	PIV139
I001	Board application code	USInt	0		0...MaxAppCode_cpCOe	R/W	AppCode_cpCOe	HR91	PIV140
I001	Application fan code	USInt	0		0...3	R/W	AppCode_Fan	HR92	PIV141
I002	Recovery control type	USInt	0		0...4	R/W	AppRec_Special	HR93	PIV142
I002	Heating control type	USInt	0		0...11	R/W	AppHeat_Special	HR94	PIV143
I002	Cooling control type	USInt	0		0...11	R/W	AppCool_Special	HR95	PIV144
I002	Reversible control type	USInt	0		0...16	R/W	AppCoolHeat_Special	HR96	PIV145
I002	Preheat control type	USInt	0		0...5	R/W	AppPreHeat_Special	HR97	PIV146
I002	Reheat control type	USInt	0		0...5	R/W	AppReHeat_Special	HR98	PIV147
I002	Eco control type	USInt	0		0...2	R/W	AppMix_Special	HR99	PIV148
I002	Supply fan regulation type	USInt	0		0...9	R/W	SupplyFanRegTyp	HR100	PIV149
I002	Return fan regulation type	USInt	0		0...9	R/W	ExhFanRegTyp	HR101	PIV150
I003	Run unit	Bool	FALSE		0...1	R/W	UnitConfigured	C15	BV239
I004	Run auto configuration function	Bool			0...1	R/W	RunAutoCfg_IO	C16	BV240
I005	Enable thTune management	Bool	FALSE		0...1	R/W	En_THTN_1	C17	BV241

I006	BMS address	USInt	1		1...127	R/W	BMS_Addr	HR102	PIV152
I007	Scheduler type	USInt	0		0...2	R/W	TypScheduler	HR103	PIV153
I008	Temperature regulation probe type	USInt	1		0...2	R/W	AppTempReg	IR2	PIV1
I009	Regulation probe for humidier	USInt	0		0...2	R/W	AppHumReg	HR104	PIV154
I012	Enable of Buzzer	Bool			0...1	R/W	En_Buzz	C18	BV242
I014	Drive type internal/USB	Byte			0...1	R/W	DriveTyp	HR105	PIV155
I015	Import-Export file name (EXPORT_XX)	Int			0...99	R/W	ImpExpFileName	HR106	IV22
I017	Drive type internal/USB	Byte			0...1	R/W	DriveTyp	HR105	PIV155
I018	Import-Export file name (EXPORT_XX)	Int			0...99	R/W	ImpExpFileName	HR106	IV22
I020	Wipe memory	Bool			0...1	R/W	En_WipeMem	C19	BV243

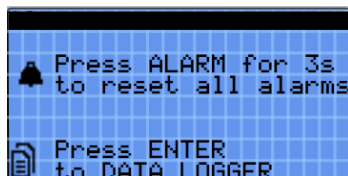
7. ALARMS

7.1 Alarms interface

7.1.1 Alarms screen and LEDs

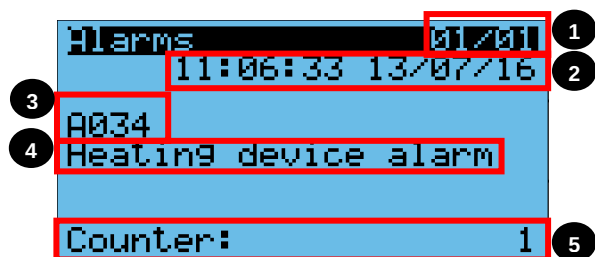
Pressing the ALARM key can occur in two different situations - no alarm or one alarm present.

If there is no alarm, the following screen is displayed:



This screen makes it possible to easily enter the alarms log using the ENTER key.

If there is at least one alarm, the alarms screen is displayed sorted by alarm code from lesser to greater.



Each alarm contains the information needed to understand the cause of the alarm.

The information available in the screen is shown below:

1. Alarm number/total alarms;
2. Alarm date and time;
3. Unique alarm code;
4. Long alarm description;
5. Value of the probe linked to the alarm;
6. Alarm counter.

In every alarm screen, the alarms log can be displayed by pressing ENTER.

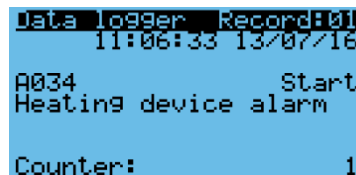
The red LED under the ALARM button can be:

- Off: no active alarm;

- Flashing: there is at least one active alarm and the display shows a screen that is not part of the alarms loop.
- On: there is at least one active alarms and a screen that is part of the alarms loop is displayed.

7.1.2 Alarms log

From the main menu, entering the Alarms Log menu allows access to the following alarms log display screen.



The alarms log memorizes the kVent+ operation status when the alarms are triggered. Each log entry is an event that can be displayed from among all of the events available in the memory. The information saved in the alarms screen will also be saved in the alarms log. The maximum number of events that can be saved is 100. Once the limit is reached, the most recent alarm will overwrite the oldest one. The alarms log can be cleared in the Settings menu or by restoring the cpCO to default values.

7.1.3 Reset alarms

The alarms can be reset manually, automatically or automatically with retries:

- Manual reset: when the cause of the alarm has stopped, the buzzer must first be reset using the ALARM button and then the ALARM button pressed a second time for a true reset. At this point, even the specific alarm action is reset and the device can restart.
- Automatic reset: when the alarm condition stops automatically, the buzzer is silenced and the alarm reset.
- Automatic reset with retries: The number of interventions per hour is checked. If that number is less than the set maximum, the alarm is on automatic reset, once the limit is exceeded it becomes manual.

7.1.4 Reset alarms by TH-tune

To reset the alarms setup in manual reset by the TH-tune display is needed to press together the TH-tune button "Fan" + On/Off for 3s.

7.2 Table of alarms

Code	Description on display	Reset	Action	Variable name	BMS	BacNet
A000	Supply temperature probe not working	Auto reset	Stop unit	AI_SupplyTempPrb	DI1000	BV1000
A001	Cooling device alarm	User reset	Stop cooling	AI_Cool	DI1001	BV1001
A002	Antifreeze alarm by DIN	Auto reset until counter (3 in 3600s)	Stop unit, force heating at 100%	AI_AFreezeDIN	DI1002	BV1002
A003	Prototype software	Auto reset	Stop unit	AI_SwPrototype	DI1003	BV1003
A004	High number of retain memory writings	User reset	None	AI_retain	DI1004	BV1004
A005	Error in retain memory writings	User reset	None	AI_Err_retain_write	DI1005	BV1005
A006	Return temperature probe broken not working	Auto reset	Switch to supply regulation	AI_RetTempPrb	DI1006	BV1006
A007	External temperature probe broken not working	Auto reset	Disable external compensation	AI_ExtTempPrb	DI1007	BV1007
A008	CO2 air quality probe not working	Auto reset	Disable CO2 regulation	AI_RetAir_CO2_Lev_Pr	DI1008	BV1008
A009	Exhaust temperature probe not working	Auto reset	Stop unit	AI_ExhTempPrb	DI1009	BV1009
A010	th-Tune offline	Auto reset	Disable room compensation	AI_Offline_THTN_1	DI1010	BV1010
A011	Supply temperature out of range	Auto reset	None	AI_LowSupplyTemp	DI1011	BV1011
A012	Supply air flow alarm	User reset	Stop unit	AI_SupplyAirFlwSwWarn	DI1012	BV1012
A013	Return air flow alarm	User reset	Stop unit	AI_RetAirFlwSwWarn	DI1013	BV1013
A014	Humidifier alarm	Auto reset	Stop humidifier	AI_Hum	DI1014	BV1014
A015	Humidifier maintenance required	Auto reset	None	AI_HumWorkHrsWarn	DI1015	BV1015
A016	Return fan maintenance required	Auto reset	None	AI_RetFanWorkHrsWarn	DI1016	BV1016
A017	Supply fan maintenance required	Auto reset	None	AI_SupplyFanWorkHrsWarn	DI1017	BV1017
A018	Reheating coil maintenance required	Auto reset	None	AI_ReheatCoilWorkHrsWarn	DI1018	BV1018
A019	Heat recovery maintenance required	Auto reset	None	AI_HeatExchgWorkHrsWarn	DI1019	BV1019
A020	Supply filters alarm	Auto reset	None	AI_Filters	DI1020	BV1020
A021	th-Tune clock not working	Auto reset	None	AI_ThTune_ClkBrd	DI1021	BV1021
A022	th-Tune temperature probe not working	Auto reset	Disable room temperature regulation	AI_ThTune_TempPrb	DI1022	BV1022
A023	th-Tune humidity probe not working	Auto reset	Disable room humidity regulation	AI_ThTune_HumPrb	DI1023	BV1023
A024	BMS offline	Auto reset	None	AI_BMS_Offline	DI1024	BV1024
A025	Supply differential pressure probe not working	Auto reset	None	AI_SupplyAirP_Pr	DI1025	BV1025
A026	Return differential pressure probe not working	Auto reset	None	AI_RetAirP_Pr	DI1026	BV1026
A027	Fire alarm by digital input	User reset	Stop unit, force fan at fire speed	AI_Fire	DI1027	BV1027
A028	Heating coil water temp.probe not working	Auto reset	Stop unit, force valve at 100%	AI_HeatCoilTempPrb	DI1028	BV1028
A029	Preheating coil water temp.probe not working	Auto reset	Stop unit, force valve at 100%	AI_PreHeatCoilTempPrb	DI1029	BV1029
A030	After preheating coil temp.probe not working	Auto reset	Disable preheater	AI_AfterPreHeatCoilTempPrb	DI1030	BV1030
A031	Heating device alarm	Auto reset until counter (3 in 3600s)	Stop heating	AI_Heat	DI1031	BV1031
A032	Fire alarm by temperature	User reset	Stop unit, force fan at fire speed	AI_FireExh	DI1032	BV1032
A033	Antifreeze alarm by heat back water temp.	Auto reset until counter (3 in 3600s)	Stop unit, force valve at 100%	AI_AFreezePRB	DI1033	BV1033
A034	Antifreeze alarm by preheat back water temp.	Auto reset until counter (3 in 3600s)	Stop unit, force valve at 100%	AI_AFreezePreHeatPRB	DI1034	BV1034
A035	Fans overload alarm	Auto reset	Stop unit	AI_FansOvld	DI1035	BV1035
A036	Supply humidity probe not working	Auto reset	Stop humidifier	AI_SupplyAirHum_Pr	DI1036	BV1036
A037	Unit configuration not allowed	Auto reset	Stop unit	AI_UnitCfgError	DI1037	BV1037
A038	Supply fan - Offline	Auto reset	Stop unit	AI_Offline_ZA_1	DI1038	BV1038
A039	Supply fan - Line Fault	Auto reset	Stop unit	AI_LineFault_ZA_1	DI1039	BV1039
A040	Supply fan - Motor blocked	Auto reset	Stop unit	AI_MotorBlock_ZA_1	DI1040	BV1040
A041	Supply fan - Fire alarm	Auto reset	Stop unit	AI_FireAlarm_ZA_1	DI1041	BV1041
A042	Supply fan - Uin Low (FW 10)	Auto reset	Stop unit	AI_UIN_LO_ZA_1	DI1042	BV1042
A043	Supply fan - Uin High (FW 10)	Auto reset	Stop unit	AI_UIN_HI_ZA_1	DI1043	BV1043
A044	Supply fan - UZK low	Auto reset	Stop unit	AI_UZK_Low_ZA_1	DI1044	BV1044
A045	Supply fan - UZK high	Auto reset	Stop unit	AI_UZK_High_ZA_1	DI1045	BV1045
A046	Supply fan - IGBT fault	Auto reset	Stop unit	AI_IGBTfault_ZA_1	DI1046	BV1046
A047	Supply fan - Earth-GND fault	Auto reset	Stop unit	AI_EarthGNDfault_ZA_1	DI1047	BV1047
A048	Supply fan - Peak current error	Auto reset	Stop unit	AI_PeakCurrent_ZA_1	DI1048	BV1048
A049	Supply fan - Hall sensor error	Auto reset	Stop unit	AI_HallSensor_ZA_1	DI1049	BV1049
A050	Supply fan - Offline	Auto reset	Stop unit	AI_Offline_EBM_1	DI1050	BV1050
A051	Supply fan - Phase Failure	User reset	Stop unit	AI_PhaseFault_EBM_1	DI1051	BV1051
A052	Supply fan - Motor blocked	User reset	Stop unit	AI_MotBlocked_EBM_1	DI1052	BV1052
A053	Supply fan - Mains undervolt.	User reset	Stop unit	AI_MainsUnderV_EBM_1	DI1053	BV1053
A054	Supply fan - Mains overvoltage	User reset	Stop unit	AI_MainsOverV_EBM_1	DI1054	BV1054
A055	Supply fan - DC-link overvoltage	User reset	Stop unit	AI_DClintOverV_EBM_1	DI1055	BV1055
A056	Supply fan - DC-link undervoltage	User reset	Stop unit	AI_DClintUnderV_EBM_1	DI1056	BV1056
A057	Supply fan - Motor overheat	User reset	Stop unit	AI_MotSuperHeating_EBM_1	DI1057	BV1057
A058	Supply fan - Intern.circ.overheat	User reset	Stop unit	AI_IntCircSuperHeat_EBM_1	DI1058	BV1058
A059	Supply fan - Out stage overheat.	User reset	Stop unit	AI_OutStageSuperHeat_EBM_1	DI1059	BV1059
A060	Supply fan - Hall sensor error	User reset	Stop unit	AI_HallSenErr_EBM_1	DI1060	BV1060
A061	Supply fan - Communic. Error	User reset	Stop unit	AI_CommunicationErr_EBM_1	DI1061	BV1061
A062	Supply fan - Generic error	User reset	Stop unit	AI_GenericErr_EBM_1	DI1062	BV1062
A063	Supply fan - Out stage high temp.	Auto reset	Stop unit	AI_OutStageHighTemp_EBM_1	DI1063	BV1063
A064	Supply fan - Int.circ.high temp.	Auto reset	Stop unit	AI_InternCircHighTemp_EBM_1	DI1064	BV1064
A065	Supply fan - Motor high temp.	Auto reset	Stop unit	AI_MotHighTemp_EBM_1	DI1065	BV1065
A066	Supply fan - DC-link volt.low	Auto reset	Stop unit	AI_DClintV_Low_EBM_1	DI1066	BV1066
A067	Supply fan - Lim.mains power	Auto reset	Stop unit	AI_LimMainsPwr_EBM_1	DI1067	BV1067
A068	Supply fan - Lim.mains current	Auto reset	Stop unit	AI_LimMainsA_EBM_1	DI1068	BV1068
A069	Supply fan - Brake mode	Auto reset	Stop unit	AI_BrakeMode_EBM_1	DI1069	BV1069
A070	Supply fan - Cable break	Auto reset	Stop unit	AI_CableBreak_EBM_1	DI1070	BV1070
A071	Supply fan - Ice protection	Auto reset	Stop unit	AI_IceProtection_EBM_1	DI1071	BV1071
A072	Supply fan - Heating: motor stop	Auto reset	Stop unit	AI_HeatMotStopped_EBM_1	DI1072	BV1072
A073	Supply fan - Speed under limit	Auto reset	Stop unit	AI_SpeedUnderLim_EBM_1	DI1073	BV1073
A074	Supply fan - DC-voltage high	Auto reset	Stop unit	AI_DC_VoltageHigh_EBM_1	DI1074	BV1074
A075	Supply fan - Supply volt.high	Auto reset	Stop unit	AI_SupplyVoltageHigh_EBM_1	DI1075	BV1075
A076	Supply fan - Line imp. High	Auto reset	Stop unit	AI_LineImpHigh_EBM_1	DI1076	BV1076
A077	Return fan - Offline	Auto reset	Stop unit	AI_Offline_ZA_2	DI1077	BV1077
A078	Return fan - Line Fault	Auto reset	Stop unit	AI_LineFault_ZA_2	DI1078	BV1078
A079	Return fan - Motor blocked	Auto reset	Stop unit	AI_MotorBlock_ZA_2	DI1079	BV1079
A080	Return fan - Fire alarm	Auto reset	Stop unit	AI_FireAlarm_ZA_2	DI1080	BV1080

Code	Description on display	Reset	Action	Variable name	BMS	BacNet
A081	Return fan - Uin Low (FW 10)	Auto reset	Stop unit	AI_UIN_LO_ZA_2	DI1081	BV1081
A082	Return fan - Uin High (FW 10)	Auto reset	Stop unit	AI_UIN_HI_ZA_2	DI1082	BV1082
A083	Return fan - UZK low	Auto reset	Stop unit	AI_UZK_Low_ZA_2	DI1083	BV1083
A084	Return fan - UZK high	Auto reset	Stop unit	AI_UZK_High_ZA_2	DI1084	BV1084
A085	Return fan - IGBT fault	Auto reset	Stop unit	AI_IGBTfault_ZA_2	DI1085	BV1085
A086	Return fan - Earth-GND fault	Auto reset	Stop unit	AI_EarthGNDfault_ZA_2	DI1086	BV1086
A087	Return fan - Peak current error	Auto reset	Stop unit	AI_PeakCurrent_ZA_2	DI1087	BV1087
A088	Return fan - Hall sensor error	Auto reset	Stop unit	AI_HallSensor_ZA_2	DI1088	BV1088
A089	Return fan - Offline	Auto reset	Stop unit	AI_Offline_EBM_2	DI1089	BV1089
A090	Return fan - Phase Failure	User reset	Stop unit	AI_PhaseFault_EBM_2	DI1090	BV1090
A091	Return fan - Motor blocked	User reset	Stop unit	AI_MotBlocked_EBM_2	DI1091	BV1091
A092	Return fan - Mains undervolt.	User reset	Stop unit	AI_MainsUnderV_EBM_2	DI1092	BV1092
A093	Return fan - Mains overvoltage	User reset	Stop unit	AI_MainsOverV_EBM_2	DI1093	BV1093
A094	Return fan - DC-link overvoltage	User reset	Stop unit	AI_DClinkOverV_EBM_2	DI1094	BV1094
A095	Return fan - DC-link undervoltage	User reset	Stop unit	AI_DClinkUnderV_EBM_2	DI1095	BV1095
A096	Return fan - Motor overheat	User reset	Stop unit	AI_MotSuperHeating_EBM_2	DI1096	BV1096
A097	Return fan - Intern.circ.overheat	User reset	Stop unit	AI_IntCircSuperHeat_EBM_2	DI1097	BV1097
A098	Return fan - Out stage overheat.	User reset	Stop unit	AI_OutStageSuperHeat_EBM_2	DI1098	BV1098
A099	Return fan - Hall sensor error	User reset	Stop unit	AI_HallSenErr_EBM_2	DI1099	BV1099
A100	Return fan - Communic. Error	User reset	Stop unit	AI_CommunicationErr_EBM_2	DI1100	BV1100
A101	Return fan - Generic error	User reset	Stop unit	AI_GenericErr_EBM_2	DI1101	BV1101
A102	Return fan - Out stage high temp.	Auto reset	Stop unit	AI_OutStageHighTemp_EBM_2	DI1102	BV1102
A103	Return fan - Int.circ.high temp.	Auto reset	Stop unit	AI_InternCircHighTemp_EBM_2	DI1103	BV1103
A104	Return fan - Motor high temp.	Auto reset	Stop unit	AI_MotHighTemp_EBM_2	DI1104	BV1104
A105	Return fan - DC-link volt.low	Auto reset	Stop unit	AI_DClinkV_Low_EBM_2	DI1105	BV1105
A106	Return fan - Lim.mains power	Auto reset	Stop unit	AI_LimMainsPwr_EBM_2	DI1106	BV1106
A107	Return fan - Lim.mains current	Auto reset	Stop unit	AI_LimMainsA_EBM_2	DI1107	BV1107
A108	Return fan - Brake mode	Auto reset	Stop unit	AI_BrakeMode_EBM_2	DI1108	BV1108
A109	Return fan - Cable break	Auto reset	Stop unit	AI_CableBreak_EBM_2	DI1109	BV1109
A110	Return fan - Ice protection	Auto reset	Stop unit	AI_IceProtection_EBM_2	DI1110	BV1110
A111	Return fan - Heating: motor stop	Auto reset	Stop unit	AI_HeatMotStopped_EBM_2	DI1111	BV1111
A112	Return fan - Speed under limit	Auto reset	Stop unit	AI_SpeedUnderLim_EBM_2	DI1112	BV1112
A113	Return fan - DC-voltage high	Auto reset	Stop unit	AI_DC_VoltageHigh_EBM_2	DI1113	BV1113
A114	Return fan - Supply volt.high	Auto reset	Stop unit	AI_SupplyVoltageHigh_EBM_2	DI1114	BV1114
A115	Return fan - Line imp. High	Auto reset	Stop unit	AI_LineImpHigh_EBM_2	DI1115	BV1115
A116	c.pCOe 1 - Offline	Auto reset	Stop unit	AI_Offline_cpCOe	DI1116	BV1116
A117	c.pCOe 1 - Configuration error	Auto reset	Stop unit	AI_CfgError_cpCOe	DI1117	BV1117
A118	c.pCOe 2 - Offline	Auto reset	Stop unit	AI_Offline_cpCOe_2	DI1118	BV1118
A119	c.pCOe 2 - Configuration error	Auto reset	Stop unit	AI_CfgError_cpCOe_2	DI1119	BV1119
A120	c.pCOe 3 - Offline	Auto reset	Stop unit	AI_Offline_cpCOe_3	DI1120	BV1120
A121	c.pCOe 3 - Configuration error	Auto reset	Stop unit	AI_CfgError_cpCOe_3	DI1121	BV1121
A122	Circ.1 - Discharge pressure probe not working	Auto reset	Stop BLDC circuit 1	AI_G_DscgP_PrB_C1	DI1122	BV1122
A123	Circ.1 - Suction pressure probe not working	Auto reset	Stop BLDC circuit 1	AI_G_SuctP_PrB_C1	DI1123	BV1123
A124	Circ.1 - Suction temperature probe not working	Auto reset	Stop BLDC circuit 1	AI_G_SuctTempPrB_C1	DI1124	BV1124
A125	Circ.1 - Discharge temperature probe not working	Auto reset	Stop BLDC circuit 1	AI_G_DscgTempPrB_C1	DI1125	BV1125
A126	Circ.1 - DeltaP > allowable at startup	Disabled	Stop BLDC circuit 1	AI_DisStartDpState_BLDC_1	DI1126	BV1126
A127	Circ.1 - Compressor shut off	Disabled	Stop BLDC circuit 1	AI_CmprOff_BLDC_1	DI1127	BV1127
A128	Circ.1 - Out of Envelope	Disabled	Stop BLDC circuit 1	AI_OutEnv_BLDC_1	DI1128	BV1128
A129	Circ.1 - Starting failure wait retry	Auto reset	Stop BLDC circuit 1	AI_StartFailRetry_BLDC_1	DI1129	BV1129
A130	Circ.1 - Starting failure exceeded maximum attempts	Auto reset	Stop BLDC circuit 1	AI_StartFailLock_BLDC_1	DI1130	BV1130
A131	Circ.1 - Low delta pressure	Auto reset	Stop BLDC circuit 1	AI_LowDeltaP_BLDC_1	DI1131	BV1131
A132	Circ.1 - High discharge gas temperature	Auto reset	Stop BLDC circuit 1	AI_HighDscgT_BLDC_1	DI1132	BV1132
A133	Circ.1 - Envelope alarm high compressor ratio (zone2)	Auto reset	Stop BLDC circuit 1	AIEnv02_HighRatio_BLDC_1	DI1133	BV1133
A134	Circ.1 - Envelope alarm high discharge pressure (zone3)	Auto reset	Stop BLDC circuit 1	AIEnv03_HighDscg_BLDC_1	DI1134	BV1134
A135	Circ.1 - Envelope alarm high current (zone4)	Auto reset	Stop BLDC circuit 1	AIEnv04_HighCurr_BLDC_1	DI1135	BV1135
A136	Circ.1 - Envelope alarm low suction pressure (zone5)	Auto reset	Stop BLDC circuit 1	AIEnv05_HighSuct_BLDC_1	DI1136	BV1136
A137	Circ.1 - Envelope alarm low compressor ratio (zone6)	Auto reset	Stop BLDC circuit 1	AIEnv06_LowRatio_BLDC_1	DI1137	BV1137
A138	Circ.1 - Envelope alarm low pressure differential (zone7)	Auto reset	Stop BLDC circuit 1	AIEnv07_LowDP_BLDC_1	DI1138	BV1138
A139	Circ.1 - Envelope alarm low discharge pressure (zone8)	Auto reset	Stop BLDC circuit 1	AIEnv08_LowDscg_BLDC_1	DI1139	BV1139
A140	Circ.1 - Envelope alarm low suction pressure (zone9)	Auto reset	Stop BLDC circuit 1	AIEnv09_LowSuct_BLDC_1	DI1140	BV1140
A141	Circ.1 - High discharge temperature	Auto reset	Stop BLDC circuit 1	AIEnv10_HDT_BLDC_1	DI1141	BV1141
A142	Automatic generated by Alarm editor	Auto reset	Stop BLDC circuit 1	AI01_PWRP_1	DI1142	BV1142
A143	Circ.1 - Inverter motor overload (Err02)	Auto reset	Stop BLDC circuit 1	AI02_PWRP_1	DI1143	BV1143
A144	Circ.1 - Inverter DC Bus overvoltage (Err03)	Auto reset	Stop BLDC circuit 1	AI03_PWRP_1	DI1144	BV1144
A145	Circ.1 - Inverter DC bus undervoltage (Err04)	Auto reset	Stop BLDC circuit 1	AI04_PWRP_1	DI1145	BV1145
A146	Circ.1 - Inverter drive overtemperature (Err05)	Auto reset	Stop BLDC circuit 1	AI05_PWRP_1	DI1146	BV1146
A147	Circ.1 - Inverter drive undertemperature (Err06)	Auto reset	Stop BLDC circuit 1	AI06_PWRP_1	DI1147	BV1147
A148	Circ.1 - Inverter overcurrent HW (Err07)	Auto reset	Stop BLDC circuit 1	AI07_PWRP_1	DI1148	BV1148
A149	Circ.1 - Inverter motor overtemperature (Err08)	Auto reset	Stop BLDC circuit 1	AI08_PWRP_1	DI1149	BV1149
A150	Circ.1 - Inverter IGBT module error (Err09)	Auto reset	Stop BLDC circuit 1	AI09_PWRP_1	DI1150	BV1150
A151	Circ.1 - Inverter CPU error (Err10)	Auto reset	Stop BLDC circuit 1	AI10_PWRP_1	DI1151	BV1151
A152	Circ.1 - Inverter parameter default (Err11)	Auto reset	Stop BLDC circuit 1	AI11_PWRP_1	DI1152	BV1152
A153	Circ.1 - Inverter DC bus ripple (Err12)	Auto reset	Stop BLDC circuit 1	AI12_PWRP_1	DI1153	BV1153
A154	Circ.1 - Inverter data communication fault (Err13)	Auto reset	Stop BLDC circuit 1	AI13_PWRP_1	DI1154	BV1154
A155	Circ.1 - Inverter drive thermistor fault (Err14)	Auto reset	Stop BLDC circuit 1	AI14_PWRP_1	DI1155	BV1155
A156	Circ.1 - Inverter autotuning fault (Err15)	Auto reset	Stop BLDC circuit 1	AI15_PWRP_1	DI1156	BV1156
A157	Circ.1 - Inverter drive disabled (Err16)	Auto reset	Stop BLDC circuit 1	AI16_PWRP_1	DI1157	BV1157
A158	Circ.1 - Inverter motor phase fault (Err17)	Auto reset	Stop BLDC circuit 1	AI17_PWRP_1	DI1158	BV1158
A159	Circ.1 - Inverter internal fan fault (Err18)	Auto reset	Stop BLDC circuit 1	AI18_PWRP_1	DI1159	BV1159
A160	Circ.1 - Inverter speed fault (Err19)	Auto reset	Stop BLDC circuit 1	AI19_PWRP_1	DI1160	BV1160
A161	Circ.1 - Inverter PFC module error (Err20)	Auto reset	Stop BLDC circuit 1	AI20_PWRP_1	DI1161	BV1161
A162	Circ.1 - Inverter PFC overvoltage (Err21)	Auto reset	Stop BLDC circuit 1	AI21_PWRP_1	DI1162	BV1162
A163	Circ.1 - Inverter PFC undervoltage (Err22)	Auto reset	Stop BLDC circuit 1	AI22_PWRP_1	DI1163	BV1163
A164	Circ.1 - Inverter STO detection error (Err23)	Auto reset	Stop BLDC circuit 1	AI23_PWRP_1	DI1164	BV1164
A165	Circ.1 - Inverter STO detection error (Err24)	Auto reset	Stop BLDC circuit 1	AI24_PWRP_1	DI1165	BV1165
A166	Circ.1 - Inverter Ground fault (Err25)	Auto reset	Stop BLDC circuit 1	AI25_PWRP_1	DI1166	BV1166
A167	Circ.1 - Inverter ADC conversion sync fault	Auto reset	Stop BLDC circuit 1	AI26_PWRP_1	DI1167	BV1167

Code	Description on display	Reset	Action	Variable name	BMS	BacNet
	(Err26)					
A168	Circ.1 - Inverter Hw sync fault (Err27)	Auto reset	Stop BLDC circuit 1	AI27_PWRP_1	DI1168	BV1168
A169	Circ.1 - Inverter drive overload (Err28)	Auto reset	Stop BLDC circuit 1	AI28_PWRP_1	DI1169	BV1169
A170	Circ.1 - Inverter uC safety Drive Stopped (Err29)	Auto reset	Stop BLDC circuit 1	AI29_PWRP_1	DI1170	BV1170
A171	Circ.1 - Inverter unexpected stop (Err99)	Auto reset	Stop BLDC circuit 1	AI99_PWRP_1	DI1171	BV1171
A172	Circ.1 - Inverter uSafe current measurement fault (Err01)	Auto reset	Stop BLDC circuit 1	AI_Safe101_PWRP_1	DI1172	BV1172
A173	Circ.1 - Inverter uSafe current unbalanced fault (Err02)	Auto reset	Stop BLDC circuit 1	AI_Safe102_PWRP_1	DI1173	BV1173
A174	Circ.1 - Inverter uSafe over current (Err03)	Auto reset	Stop BLDC circuit 1	AI_Safe103_PWRP_1	DI1174	BV1174
A175	Circ.1 - Inverter uSafe STO alarm (Err04)	Auto reset	Stop BLDC circuit 1	AI_Safe104_PWRP_1	DI1175	BV1175
A176	Circ.1 - Inverter uSafe STO hardware alarm (Err05)	Auto reset	Stop BLDC circuit 1	AI_Safe105_PWRP_1	DI1176	BV1176
A177	Circ.1 - Inverter uSafe main power supply missing (Err06)	Auto reset	Stop BLDC circuit 1	AI_Safe106_PWRP_1	DI1177	BV1177
A178	Circ.1 - Inverter uSafe HW fault on inverter command buffer (Err07)	Auto reset	Stop BLDC circuit 1	AI_Safe107_PWRP_1	DI1178	BV1178
A179	Circ.1 - Inverter uSafe HW fault on heater circuitry (Err08)	Auto reset	Stop BLDC circuit 1	AI_Safe108_PWRP_1	DI1179	BV1179
A180	Circ.1 - Inverter uSafe data communication fault (Err09)	Auto reset	Stop BLDC circuit 1	AI_Safe109_PWRP_1	DI1180	BV1180
A181	Circ.1 - Inverter uSafe compressor stall detect (Err10)	Auto reset	Stop BLDC circuit 1	AI_Safe110_PWRP_1	DI1181	BV1181
A182	Circ.1 - Inverter uSafe DC bus over current (Err11)	Auto reset	Stop BLDC circuit 1	AI_Safe111_PWRP_1	DI1182	BV1182
A183	Circ.1 - Inverter uSafe HWF DC bus current alarm (Err12)	Auto reset	Stop BLDC circuit 1	AI_Safe112_PWRP_1	DI1183	BV1183
A184	Circ.1 - Inverter uSafe DC bus voltage alarm (Err13)	Auto reset	Stop BLDC circuit 1	AI_Safe113_PWRP_1	DI1184	BV1184
A185	Circ.1 - Inverter uSafe HWF DC bus voltage alarm (Err14)	Auto reset	Stop BLDC circuit 1	AI_Safe114_PWRP_1	DI1185	BV1185
A186	Circ.1 - Inverter uSafe input voltage alarm (Err15)	Auto reset	Stop BLDC circuit 1	AI_Safe115_PWRP_1	DI1186	BV1186
A187	Circ.1 - Inverter uSafe HWF input voltage alarm (Err16)	Auto reset	Stop BLDC circuit 1	AI_Safe116_PWRP_1	DI1187	BV1187
A188	Circ.1 - Inverter uSafe DC bus power alarm (Err17)	Auto reset	Stop BLDC circuit 1	AI_Safe201_PWRP_1	DI1188	BV1188
A189	Circ.1 - Inverter uSafe HWF power mismatch (Err18)	Auto reset	Stop BLDC circuit 1	AI_Safe202_PWRP_1	DI1189	BV1189
A190	Circ.1 - Inverter uSafe NTC over temperature (Err19)	Auto reset	Stop BLDC circuit 1	AI_Safe203_PWRP_1	DI1190	BV1190
A191	Circ.1 - Inverter uSafe NTC under temperature (Err20)	Auto reset	Stop BLDC circuit 1	AI_Safe204_PWRP_1	DI1191	BV1191
A192	Circ.1 - Inverter uSafe NTC fault (Err21)	Auto reset	Stop BLDC circuit 1	AI_Safe205_PWRP_1	DI1192	BV1192
A193	Circ.1 - Inverter uSafe HWF sync fault (Err22)	Auto reset	Stop BLDC circuit 1	AI_Safe206_PWRP_1	DI1193	BV1193
A194	Circ.1 - Inverter uSafe invalid parameter (Err23)	Auto reset	Stop BLDC circuit 1	AI_Safe207_PWRP_1	DI1194	BV1194
A195	Circ.1 - Inverter uSafe FV fault (Err24)	Auto reset	Stop BLDC circuit 1	AI_Safe208_PWRP_1	DI1195	BV1195
A196	Circ.1 - Inverter uSafe HW fault (Err25)	Auto reset	Stop BLDC circuit 1	AI_Safe209_PWRP_1	DI1196	BV1196
A197	Circ.1 - Inverter uSafe - reseved (Err26)	Auto reset	Stop BLDC circuit 1	AI_Safe210_PWRP_1	DI1197	BV1197
A198	Circ.1 - Inverter uSafe - reseved (Err27)	Auto reset	Stop BLDC circuit 1	AI_Safe211_PWRP_1	DI1198	BV1198
A199	Circ.1 - Inverter uSafe - reseved (Err28)	Auto reset	Stop BLDC circuit 1	AI_Safe212_PWRP_1	DI1199	BV1199
A200	Circ.1 - Inverter uSafe - reseved (Err29)	Auto reset	Stop BLDC circuit 1	AI_Safe213_PWRP_1	DI1200	BV1200
A201	Circ.1 - Inverter uSafe - reseved (Err30)	Auto reset	Stop BLDC circuit 1	AI_Safe214_PWRP_1	DI1201	BV1201
A202	Circ.1 - Inverter uSafe - reseved (Err31)	Auto reset	Stop BLDC circuit 1	AI_Safe215_PWRP_1	DI1202	BV1202
A203	Circ.1 - Inverter uSafe - reseved (Err32)	Auto reset	Stop BLDC circuit 1	AI_Safe216_PWRP_1	DI1203	BV1203
A204	Circ.1 - Inverter offline	Auto reset	Stop BLDC circuit 1	AI_InvOffline_PWRP_1	DI1204	BV1204
A205	Circ.1 - BLDC high pressure by probe	Auto reset until counter (AlrmCountHiP in 3600s)	Stop BLDC circuit 1	AI_HiPbyPrbCirc1	DI1205	BV1205
A206	Circ.1 - BLDC low pressure by probe	Auto reset until counter (AlrmCountLoP in 3600s)	Stop BLDC circuit 1	AI_LoPbyPrbCirc1	DI1206	BV1206
A207	Circ.1 - EEV alarm emergency closing	Auto reset	Stop BLDC circuit 1	AI_EmergencyClosing_EVD1	DI1207	BV1207
A208	Circ.1 - EEV alarm Low SH	Auto reset	Stop BLDC circuit 1	AI_LowSH_A_EVD1	DI1208	BV1208
A209	Circ.1 - EEV alarm LOP	Auto reset	Stop BLDC circuit 1	AI_LOP_A_EVD1	DI1209	BV1209
A210	Circ.1 - EEV alarm MOP	Auto reset	Stop BLDC circuit 1	AI_MOP_A_EVD1	DI1210	BV1210
A211	Circ.1 - EEV motor error	Auto reset	Stop BLDC circuit 1	AI_EEV_A_EVD1	DI1211	BV1211
A212	Circ.1 - EEV alarm low suction temp	Auto reset	Stop BLDC circuit 1	AI_LowSuct_A_EVD1	DI1212	BV1212
A213	Circ.1 - EEV alarm high condensing temp.	Auto reset	Stop BLDC circuit 1	AI_HiTempCond_EVD1	DI1213	BV1213
A214	Circ.1 - EEV alarm settings range error	Auto reset	Stop BLDC circuit 1	AI_RangeError_EVD1	DI1214	BV1214
A215	Circ.1 - EEV alarm setting out of bound	Auto reset	Stop BLDC circuit 1	AI_PinOutOfBound_EVD1	DI1215	BV1215
A216	Circ.2 - Discharge pressure probe not working	Auto reset	Stop BLDC circuit 2	AI_G_DscgP_PrB_C2	DI1216	BV1216
A217	Circ.2 - Suction pressure probe not working	Auto reset	Stop BLDC circuit 2	AI_G_SuctP_PrB_C2	DI1217	BV1217
A218	Circ.2 - Suction temperature probe not working	Auto reset	Stop BLDC circuit 2	AI_G_SuctTempPrb_C2	DI1218	BV1218
A219	Circ.2 - Discharge temperature probe not working	Auto reset	Stop BLDC circuit 2	AI_G_DscgTempPrb_C2	DI1219	BV1219
A220	Circ.2 - DeltaP > allowable at startup	Disabled	Stop BLDC circuit 2	AI_DisStartDpState_BLDC_2	DI1220	BV1220
A221	Circ.2 - Compressor shut off	Disabled	Stop BLDC circuit 2	AI_CmprOff_BLDC_2	DI1221	BV1221
A222	Circ.2 - Out of Envelope	Disabled	Stop BLDC circuit 2	AI_OutEnv_BLDC_2	DI1222	BV1222
A223	Circ.2 - Starting failure wait retry	Auto reset	Stop BLDC circuit 2	AI_StartFailRetry_BLDC_2	DI1223	BV1223
A224	Circ.2 - Starting failure exceeded maximum attempts	Auto reset	Stop BLDC circuit 2	AI_StartFailLock_BLDC_2	DI1224	BV1224
A225	Circ.2 - Low delta pressure	Auto reset	Stop BLDC circuit 2	AI_LowDeltaP_BLDC_2	DI1225	BV1225
A226	Circ.2 - High discharge gas temperature	Auto reset	Stop BLDC circuit 2	AI_HighDscgT_BLDC_2	DI1226	BV1226
A227	Circ.2 - Envelope alarm high compressor ratio (zone2)	Auto reset	Stop BLDC circuit 2	AIEnv02_HighRatio_BLDC_2	DI1227	BV1227
A228	Circ.2 - Envelope alarm high discharge pressure (zone3)	Auto reset	Stop BLDC circuit 2	AIEnv03_HighDscg_BLDC_2	DI1228	BV1228
A229	Circ.2 - Envelope alarm high current (zone4)	Auto reset	Stop BLDC circuit 2	AIEnv04_HighCurr_BLDC_2	DI1229	BV1229
A230	Circ.2 - Envelope alarm low suction pressure (zone5)	Auto reset	Stop BLDC circuit 2	AIEnv05_HighSuct_BLDC_2	DI1230	BV1230
A231	Circ.2 - Envelope alarm low compressor ratio (zone6)	Auto reset	Stop BLDC circuit 2	AIEnv06_LowRatio_BLDC_2	DI1231	BV1231
A232	Circ.2 - Envelope alarm low pressure differential (zone7)	Auto reset	Stop BLDC circuit 2	AIEnv07_LowDP_BLDC_2	DI1232	BV1232
A233	Circ.2 - Envelope alarm low discharge pressure (zone8)	Auto reset	Stop BLDC circuit 2	AIEnv08_LowDscg_BLDC_2	DI1233	BV1233
A234	Circ.2 - Envelope alarm low suction pressure (zone9)	Auto reset	Stop BLDC circuit 2	AIEnv09_LowSuct_BLDC_2	DI1234	BV1234

Code	Description on display	Reset	Action	Variable name	BMS	BacNet
A235	Circ.2 - High discharge temperature	Auto reset	Stop BLDC circuit 2	AIEnv10_HDT_BLDC_2	DI1235	BV1235
A236	Circ.2 - Inverter Overcurrent (Err01)	Auto reset	Stop BLDC circuit 2	AI01_PWRP_2	DI1236	BV1236
A237	Circ.2 - Inverter motor overload (Err02)	Auto reset	Stop BLDC circuit 2	AI02_PWRP_2	DI1237	BV1237
A238	Circ.2 - Inverter DC Bus overvoltage (Err03)	Auto reset	Stop BLDC circuit 2	AI03_PWRP_2	DI1238	BV1238
A239	Circ.2 - Inverter DC bus undervoltage (Err04)	Auto reset	Stop BLDC circuit 2	AI04_PWRP_2	DI1239	BV1239
A240	Circ.2 - Inverter drive overtemperature (Err05)	Auto reset	Stop BLDC circuit 2	AI05_PWRP_2	DI1240	BV1240
A241	Circ.2 - Inverter drive undertemperature (Err06)	Auto reset	Stop BLDC circuit 2	AI06_PWRP_2	DI1241	BV1241
A242	Circ.2 - Inverter overcurrent HW (Err07)	Auto reset	Stop BLDC circuit 2	AI07_PWRP_2	DI1242	BV1242
A243	Circ.2 - Inverter motor overtemperature (Err08)	Auto reset	Stop BLDC circuit 2	AI08_PWRP_2	DI1243	BV1243
A244	Circ.2 - Inverter IGBT module error (Err09)	Auto reset	Stop BLDC circuit 2	AI09_PWRP_2	DI1244	BV1244
A245	Circ.2 - Inverter CPU error (Err10)	Auto reset	Stop BLDC circuit 2	AI10_PWRP_2	DI1245	BV1245
A246	Circ.2 - Inverter parameter default (Err11)	Auto reset	Stop BLDC circuit 2	AI11_PWRP_2	DI1246	BV1246
A247	Circ.2 - Inverter DC bus ripple (Err12)	Auto reset	Stop BLDC circuit 2	AI12_PWRP_2	DI1247	BV1247
A248	Circ.2 - Inverter data communication fault (Err13)	Auto reset	Stop BLDC circuit 2	AI13_PWRP_2	DI1248	BV1248
A249	Circ.2 - Inverter drive thermistor fault (Err14)	Auto reset	Stop BLDC circuit 2	AI14_PWRP_2	DI1249	BV1249
A250	Circ.2 - Inverter autotuning fault (Err15)	Auto reset	Stop BLDC circuit 2	AI15_PWRP_2	DI1250	BV1250
A251	Circ.2 - Inverter drive disabled (Err16)	Auto reset	Stop BLDC circuit 2	AI16_PWRP_2	DI1251	BV1251
A252	Circ.2 - Inverter motor phase fault (Err17)	Auto reset	Stop BLDC circuit 2	AI17_PWRP_2	DI1252	BV1252
A253	Circ.2 - Inverter internal fan fault (Err18)	Auto reset	Stop BLDC circuit 2	AI18_PWRP_2	DI1253	BV1253
A254	Circ.2 - Inverter speed fault (Err19)	Auto reset	Stop BLDC circuit 2	AI19_PWRP_2	DI1254	BV1254
A255	Circ.2 - Inverter PFC module error (Err20)	Auto reset	Stop BLDC circuit 2	AI20_PWRP_2	DI1255	BV1255
A256	Circ.2 - Inverter PFC overvoltage (Err21)	Auto reset	Stop BLDC circuit 2	AI21_PWRP_2	DI1256	BV1256
A257	Circ.2 - Inverter PFC undervoltage (Err22)	Auto reset	Stop BLDC circuit 2	AI22_PWRP_2	DI1257	BV1257
A258	Circ.2 - Inverter STO detection error (Err23)	Auto reset	Stop BLDC circuit 2	AI23_PWRP_2	DI1258	BV1258
A259	Circ.2 - Inverter STO detection error (Err24)	Auto reset	Stop BLDC circuit 2	AI24_PWRP_2	DI1259	BV1259
A260	Circ.2 - Inverter Ground fault (Err25)	Auto reset	Stop BLDC circuit 2	AI25_PWRP_2	DI1260	BV1260
A261	Circ.2 - Inverter ADC conversion sync fault (Err26)	Auto reset	Stop BLDC circuit 2	AI26_PWRP_2	DI1261	BV1261
A262	Circ.2 - Inverter Hw sync fault (Err27)	Auto reset	Stop BLDC circuit 2	AI27_PWRP_2	DI1262	BV1262
A263	Circ.2 - Inverter drive overload (Err28)	Auto reset	Stop BLDC circuit 2	AI28_PWRP_2	DI1263	BV1263
A264	Circ.2 - Inverter uC safety Drive Stopped (Err29)	Auto reset	Stop BLDC circuit 2	AI29_PWRP_2	DI1264	BV1264
A265	Circ.2 - Inverter unexpected stop (Err99)	Auto reset	Stop BLDC circuit 2	AI99_PWRP_2	DI1265	BV1265
A266	Circ.2 - Inverter uSafe current measurement fault (Err01)	Auto reset	Stop BLDC circuit 2	AIuSafe101_PWRP_2	DI1266	BV1266
A267	Circ.2 - Inverter uSafe current unbalanced fault (Err02)	Auto reset	Stop BLDC circuit 2	AIuSafe102_PWRP_2	DI1267	BV1267
A268	Circ.2 - Inverter uSafe over current (Err03)	Auto reset	Stop BLDC circuit 2	AIuSafe103_PWRP_2	DI1268	BV1268
A269	Circ.2 - Inverter uSafe STO alarm (Err04)	Auto reset	Stop BLDC circuit 2	AIuSafe104_PWRP_2	DI1269	BV1269
A270	Circ.2 - Inverter uSafe STO hardware alarm (Err05)	Auto reset	Stop BLDC circuit 2	AIuSafe105_PWRP_2	DI1270	BV1270
A271	Circ.2 - Inverter uSafe main power supply missing (Err06)	Auto reset	Stop BLDC circuit 2	AIuSafe106_PWRP_2	DI1271	BV1271
A272	Circ.2 - Inverter uSafe HW fault on inverter command buffer (Err07)	Auto reset	Stop BLDC circuit 2	AIuSafe107_PWRP_2	DI1272	BV1272
A273	Circ.2 - Inverter uSafe HW fault on heater circuitry (Err08)	Auto reset	Stop BLDC circuit 2	AIuSafe108_PWRP_2	DI1273	BV1273
A274	Circ.2 - Inverter uSafe data communication fault (Err09)	Auto reset	Stop BLDC circuit 2	AIuSafe109_PWRP_2	DI1274	BV1274
A275	Circ.2 - Inverter uSafe compressor stall detect (Err10)	Auto reset	Stop BLDC circuit 2	AIuSafe110_PWRP_2	DI1275	BV1275
A276	Circ.2 - Inverter uSafe DC bus over current (Err11)	Auto reset	Stop BLDC circuit 2	AIuSafe111_PWRP_2	DI1276	BV1276
A277	Circ.2 - Inverter uSafe HWF DC bus current alarm (Err12)	Auto reset	Stop BLDC circuit 2	AIuSafe112_PWRP_2	DI1277	BV1277
A278	Circ.2 - Inverter uSafe DC bus voltage alarm (Err13)	Auto reset	Stop BLDC circuit 2	AIuSafe113_PWRP_2	DI1278	BV1278
A279	Circ.2 - Inverter uSafe HWF DC bus voltage alarm (Err14)	Auto reset	Stop BLDC circuit 2	AIuSafe114_PWRP_2	DI1279	BV1279
A280	Circ.2 - Inverter uSafe input voltage alarm (Err15)	Auto reset	Stop BLDC circuit 2	AIuSafe115_PWRP_2	DI1280	BV1280
A281	Circ.2 - Inverter uSafe HWF input voltage alarm (Err16)	Auto reset	Stop BLDC circuit 2	AIuSafe116_PWRP_2	DI1281	BV1281
A282	Circ.2 - Inverter uSafe DC bus power alarm (Err17)	Auto reset	Stop BLDC circuit 2	AIuSafe201_PWRP_2	DI1282	BV1282
A283	Circ.2 - Inverter uSafe HWF power mismatch (Err18)	Auto reset	Stop BLDC circuit 2	AIuSafe202_PWRP_2	DI1283	BV1283
A284	Circ.2 - Inverter uSafe NTC over temperature (Err19)	Auto reset	Stop BLDC circuit 2	AIuSafe203_PWRP_2	DI1284	BV1284
A285	Circ.2 - Inverter uSafe NTC under temperature (Err20)	Auto reset	Stop BLDC circuit 2	AIuSafe204_PWRP_2	DI1285	BV1285
A286	Circ.2 - Inverter uSafe NTC fault (Err21)	Auto reset	Stop BLDC circuit 2	AIuSafe205_PWRP_2	DI1286	BV1286
A287	Circ.2 - Inverter uSafe HWF sync fault (Err22)	Auto reset	Stop BLDC circuit 2	AIuSafe206_PWRP_2	DI1287	BV1287
A288	Circ.2 - Inverter uSafe invalid parameter (Err23)	Auto reset	Stop BLDC circuit 2	AIuSafe207_PWRP_2	DI1288	BV1288
A289	Circ.2 - Inverter uSafe FW fault (Err24)	Auto reset	Stop BLDC circuit 2	AIuSafe208_PWRP_2	DI1289	BV1289
A290	Circ.2 - Inverter uSafe HW fault (Err25)	Auto reset	Stop BLDC circuit 2	AIuSafe209_PWRP_2	DI1290	BV1290
A291	Circ.2 - Inverter uSafe - reserved (Err26)	Auto reset	Stop BLDC circuit 2	AIuSafe210_PWRP_2	DI1291	BV1291
A292	Circ.2 - Inverter uSafe - reserved (Err27)	Auto reset	Stop BLDC circuit 2	AIuSafe211_PWRP_2	DI1292	BV1292
A293	Circ.2 - Inverter uSafe - reserved (Err28)	Auto reset	Stop BLDC circuit 2	AIuSafe212_PWRP_2	DI1293	BV1293
A294	Circ.2 - Inverter uSafe - reserved (Err29)	Auto reset	Stop BLDC circuit 2	AIuSafe213_PWRP_2	DI1294	BV1294
A295	Circ.2 - Inverter uSafe - reserved (Err30)	Auto reset	Stop BLDC circuit 2	AIuSafe214_PWRP_2	DI1295	BV1295
A296	Circ.2 - Inverter uSafe - reserved (Err31)	Auto reset	Stop BLDC circuit 2	AIuSafe215_PWRP_2	DI1296	BV1296
A297	Circ.2 - Inverter uSafe - reserved (Err32)	Auto reset	Stop BLDC circuit 2	AIuSafe216_PWRP_2	DI1297	BV1297
A298	Circ.2 - Inverter offline	Auto reset	Stop BLDC circuit 2	AI_InvOffline_PWRP_2	DI1298	BV1298
A299	Circ.2 - BLDC high pressure by probe	Auto reset until counter (AlrmCountHiP in 3600s)	Stop BLDC circuit 2	AI_HiPhyPrbCirc2	DI1299	BV1299
A300	Circ.2 - BLDC low pressure by probe	Auto reset until counter (AlrmCountLoP in 3600s)	Stop BLDC circuit 2	AI_LoPhyPrbCirc2	DI1300	BV1300
A301	Circ.2 - EEV alarm emergency closing	Auto reset	Stop BLDC circuit 2	AI_EmergencyClosing_EVD2	DI1301	BV1301
A302	Circ.2 - EEV alarm Low SH	Auto reset	Stop BLDC circuit 2	AI_LowSH_A_EVD2	DI1302	BV1302
A303	Circ.2 - EEV alarm LOP	Auto reset	Stop BLDC circuit 2	AI_LOP_A_EVD2	DI1303	BV1303
A304	Circ.2 - EEV alarm MOP	Auto reset	Stop BLDC circuit 2	AI_MOP_A_EVD2	DI1304	BV1304
A305	Circ.2 - EEV motor error	Auto reset	Stop BLDC circuit 2	AI_EEV_A_EVD2	DI1305	BV1305
A306	Circ.2 - EEV alarm low suction temp	Auto reset	Stop BLDC circuit 2	AI_LowSuct_A_EVD2	DI1306	BV1306
A307	Circ.2 - EEV alarm high condensing temp.	Auto reset	Stop BLDC circuit 2	AI_HiTempCond_EVD2	DI1307	BV1307
A308	Circ.2 - EEV alarm settings range error	Auto reset	Stop BLDC circuit 2	AI_RangeError_EVD2	DI1308	BV1308
A309	Circ.2 - EEV alarm setting out of bound	Auto reset	Stop BLDC circuit 2	AI_PinOutOfBound_EVD2	DI1309	BV1309
A310	Circ.3 - Discharge pressure probe not working	Auto reset	Stop BLDC circuit 3	AI_G_DscgP_Prb_C3	DI1310	BV1310

Code	Description on display	Reset	Action	Variable name	BMS	BacNet
A311	Circ.3 - Suction pressure probe not working	Auto reset	Stop BLDC circuit 3	AI_G_SuctP_PrB_C3	DI1311	BV1311
A312	Circ.3 - Suction temperature probe not working	Auto reset	Stop BLDC circuit 3	AI_G_SuctTempPrB_C3	DI1312	BV1312
A313	Circ.3 - Discharge temperature probe not working	Auto reset	Stop BLDC circuit 3	AI_G_DscgTempPrB_C3	DI1313	BV1313
A314	Circ.3 - DeltaP > allowable at startup	Disabled	Stop BLDC circuit 3	AL_DisStartDpState_BLDC_3	DI1314	BV1314
A315	Circ.3 - Compressor shut off	Disabled	Stop BLDC circuit 3	AI_CmprOff_BLDC_3	DI1315	BV1315
A316	Circ.3 - Out of Envelope	Disabled	Stop BLDC circuit 3	AI_OutEnv_BLDC_3	DI1316	BV1316
A317	Circ.3 - Starting failure wait retry	Auto reset	Stop BLDC circuit 3	AI_StartFailRetry_BLDC_3	DI1317	BV1317
A318	Circ.3 - Starting failure exceeded maximum attempts	Auto reset	Stop BLDC circuit 3	AI_StartFailLock_BLDC_3	DI1318	BV1318
A319	Circ.3 - Low delta pressure	Auto reset	Stop BLDC circuit 3	AI_LowDeltaP_BLDC_3	DI1319	BV1319
A320	Circ.3 - High discharge gas temperature	Auto reset	Stop BLDC circuit 3	AI_HighDscgT_BLDC_3	DI1320	BV1320
A321	Circ.3 - Envelope alarm high compressor ratio (zone2)	Auto reset	Stop BLDC circuit 3	AIEnv02_HighRatio_BLDC_3	DI1321	BV1321
A322	Circ.3 - Envelope alarm high discharge pressure (zone3)	Auto reset	Stop BLDC circuit 3	AIEnv03_HighDscg_BLDC_3	DI1322	BV1322
A323	Circ.3 - Envelope alarm high current (zone4)	Auto reset	Stop BLDC circuit 3	AIEnv04_HighCurr_BLDC_3	DI1323	BV1323
A324	Circ.3 - Envelope alarm low suction pressure (zone5)	Auto reset	Stop BLDC circuit 3	AIEnv05_HighSuct_BLDC_3	DI1324	BV1324
A325	Circ.3 - Envelope alarm low compressor ratio (zone6)	Auto reset	Stop BLDC circuit 3	AIEnv06_LowRatio_BLDC_3	DI1325	BV1325
A326	Circ.3 - Envelope alarm low pressure differential (zone7)	Auto reset	Stop BLDC circuit 3	AIEnv07_LowDP_BLDC_3	DI1326	BV1326
A327	Circ.3 - Envelope alarm low discharge pressure (zone8)	Auto reset	Stop BLDC circuit 3	AIEnv08_LowDscg_BLDC_3	DI1327	BV1327
A328	Circ.3 - Envelope alarm low suction pressure (zone9)	Auto reset	Stop BLDC circuit 3	AIEnv09_LowSuct_BLDC_3	DI1328	BV1328
A329	Circ.3 - High discharge temperature	Auto reset	Stop BLDC circuit 3	AIEnv10_HDT_BLDC_3	DI1329	BV1329
A330	Circ.3 - Inverter Overcurrent (Err01)	Auto reset	Stop BLDC circuit 3	AI01_PWRP_3	DI1330	BV1330
A331	Circ.3 - Inverter motor overload (Err02)	Auto reset	Stop BLDC circuit 3	AI02_PWRP_3	DI1331	BV1331
A332	Circ.3 - Inverter DC Bus overvoltage (Err03)	Auto reset	Stop BLDC circuit 3	AI03_PWRP_3	DI1332	BV1332
A333	Circ.3 - Inverter DC bus undervoltage (Err04)	Auto reset	Stop BLDC circuit 3	AI04_PWRP_3	DI1333	BV1333
A334	Circ.3 - Inverter drive overtemperature (Err05)	Auto reset	Stop BLDC circuit 3	AI05_PWRP_3	DI1334	BV1334
A335	Circ.3 - Inverter drive undertemperature (Err06)	Auto reset	Stop BLDC circuit 3	AI06_PWRP_3	DI1335	BV1335
A336	Circ.3 - Inverter overcurrent HW (Err07)	Auto reset	Stop BLDC circuit 3	AI07_PWRP_3	DI1336	BV1336
A337	Circ.3 - Inverter motor overtemperature (Err08)	Auto reset	Stop BLDC circuit 3	AI08_PWRP_3	DI1337	BV1337
A338	Circ.3 - Inverter IGBT module error (Err09)	Auto reset	Stop BLDC circuit 3	AI09_PWRP_3	DI1338	BV1338
A339	Circ.3 - Inverter CPU error (Err10)	Auto reset	Stop BLDC circuit 3	AI10_PWRP_3	DI1339	BV1339
A340	Circ.3 - Inverter parameter default (Err11)	Auto reset	Stop BLDC circuit 3	AI11_PWRP_3	DI1340	BV1340
A341	Circ.3 - Inverter DC bus ripple (Err12)	Auto reset	Stop BLDC circuit 3	AI12_PWRP_3	DI1341	BV1341
A342	Circ.3 - Inverter data communication fault (Err13)	Auto reset	Stop BLDC circuit 3	AI13_PWRP_3	DI1342	BV1342
A343	Circ.3 - Inverter drive thermistor fault (Err14)	Auto reset	Stop BLDC circuit 3	AI14_PWRP_3	DI1343	BV1343
A344	Circ.3 - Inverter autotuning fault (Err15)	Auto reset	Stop BLDC circuit 3	AI15_PWRP_3	DI1344	BV1344
A345	Circ.3 - Inverter drive disabled (Err16)	Auto reset	Stop BLDC circuit 3	AI16_PWRP_3	DI1345	BV1345
A346	Circ.3 - Inverter motor phase fault (Err17)	Auto reset	Stop BLDC circuit 3	AI17_PWRP_3	DI1346	BV1346
A347	Circ.3 - Inverter internal fan fault (Err18)	Auto reset	Stop BLDC circuit 3	AI18_PWRP_3	DI1347	BV1347
A348	Circ.3 - Inverter speed fault (Err19)	Auto reset	Stop BLDC circuit 3	AI19_PWRP_3	DI1348	BV1348
A349	Circ.3 - Inverter PFC module error (Err20)	Auto reset	Stop BLDC circuit 3	AI20_PWRP_3	DI1349	BV1349
A350	Circ.3 - Inverter PFC overvoltage (Err21)	Auto reset	Stop BLDC circuit 3	AI21_PWRP_3	DI1350	BV1350
A351	Circ.3 - Inverter PFC undervoltage (Err22)	Auto reset	Stop BLDC circuit 3	AI22_PWRP_3	DI1351	BV1351
A352	Circ.3 - Inverter STO detection error (Err23)	Auto reset	Stop BLDC circuit 3	AI23_PWRP_3	DI1352	BV1352
A353	Circ.3 - Inverter STO detection error (Err24)	Auto reset	Stop BLDC circuit 3	AI24_PWRP_3	DI1353	BV1353
A354	Circ.3 - Inverter Ground fault (Err25)	Auto reset	Stop BLDC circuit 3	AI25_PWRP_3	DI1354	BV1354
A355	Circ.3 - Inverter ADC conversion sync fault (Err26)	Auto reset	Stop BLDC circuit 3	AI26_PWRP_3	DI1355	BV1355
A356	Circ.3 - Inverter Hw sync fault (Err27)	Auto reset	Stop BLDC circuit 3	AI27_PWRP_3	DI1356	BV1356
A357	Circ.3 - Inverter drive overload (Err28)	Auto reset	Stop BLDC circuit 3	AI28_PWRP_3	DI1357	BV1357
A358	Circ.3 - Inverter uC safety Drive Stopped (Err29)	Auto reset	Stop BLDC circuit 3	AI29_PWRP_3	DI1358	BV1358
A359	Circ.3 - Inverter unexpected stop (Err99)	Auto reset	Stop BLDC circuit 3	AI99_PWRP_3	DI1359	BV1359
A360	Circ.3 - Inverter uSafe current measurement fault (Err01)	Auto reset	Stop BLDC circuit 3	AIuSafe101_PWRP_3	DI1360	BV1360
A361	Circ.3 - Inverter uSafe current unbalanced fault (Err02)	Auto reset	Stop BLDC circuit 3	AIuSafe102_PWRP_3	DI1361	BV1361
A362	Circ.3 - Inverter uSafe over current (Err03)	Auto reset	Stop BLDC circuit 3	AIuSafe103_PWRP_3	DI1362	BV1362
A363	Circ.3 - Inverter uSafe STO alarm (Err04)	Auto reset	Stop BLDC circuit 3	AIuSafe104_PWRP_3	DI1363	BV1363
A364	Circ.3 - Inverter uSafe STO hardware alarm (Err05)	Auto reset	Stop BLDC circuit 3	AIuSafe105_PWRP_3	DI1364	BV1364
A365	Circ.3 - Inverter uSafe main power supply missing (Err06)	Auto reset	Stop BLDC circuit 3	AIuSafe106_PWRP_3	DI1365	BV1365
A366	Circ.3 - Inverter uSafe HW fault on inverter command buffer (Err07)	Auto reset	Stop BLDC circuit 3	AIuSafe107_PWRP_3	DI1366	BV1366
A367	Circ.3 - Inverter uSafe HW fault on heater circuitry (Err08)	Auto reset	Stop BLDC circuit 3	AIuSafe108_PWRP_3	DI1367	BV1367
A368	Circ.3 - Inverter uSafe data communication fault (Err09)	Auto reset	Stop BLDC circuit 3	AIuSafe109_PWRP_3	DI1368	BV1368
A369	Circ.3 - Inverter uSafe compressor stall detect (Err10)	Auto reset	Stop BLDC circuit 3	AIuSafe110_PWRP_3	DI1369	BV1369
A370	Circ.3 - Inverter uSafe DC bus over current (Err11)	Auto reset	Stop BLDC circuit 3	AIuSafe111_PWRP_3	DI1370	BV1370
A371	Circ.3 - Inverter uSafe HWF DC bus current alarm (Err12)	Auto reset	Stop BLDC circuit 3	AIuSafe112_PWRP_3	DI1371	BV1371
A372	Circ.3 - Inverter uSafe DC bus voltage alarm (Err13)	Auto reset	Stop BLDC circuit 3	AIuSafe113_PWRP_3	DI1372	BV1372
A373	Circ.3 - Inverter uSafe HWF DC bus voltage alarm (Err14)	Auto reset	Stop BLDC circuit 3	AIuSafe114_PWRP_3	DI1373	BV1373
A374	Circ.3 - Inverter uSafe input voltage alarm (Err15)	Auto reset	Stop BLDC circuit 3	AIuSafe115_PWRP_3	DI1374	BV1374
A375	Circ.3 - Inverter uSafe HWF input voltage alarm (Err16)	Auto reset	Stop BLDC circuit 3	AIuSafe116_PWRP_3	DI1375	BV1375
A376	Circ.3 - Inverter uSafe DC bus power alarm (Err17)	Auto reset	Stop BLDC circuit 3	AIuSafe201_PWRP_3	DI1376	BV1376
A377	Circ.3 - Inverter uSafe HWF power mismatch (Err18)	Auto reset	Stop BLDC circuit 3	AIuSafe202_PWRP_3	DI1377	BV1377
A378	Circ.3 - Inverter uSafe NTC over temperature (Err19)	Auto reset	Stop BLDC circuit 3	AIuSafe203_PWRP_3	DI1378	BV1378
A379	Circ.3 - Inverter uSafe NTC under temperature (Err20)	Auto reset	Stop BLDC circuit 3	AIuSafe204_PWRP_3	DI1379	BV1379

Code	Description on display	Reset	Action	Variable name	BMS	BacNet
A380	Circ.3 - Inverter uSafe NTC fault (Err21)	Auto reset	Stop BLDC circuit 3	AlSafe205_PWRP_3	DI1380	BV1380
A381	Circ.3 - Inverter uSafe HWF sync fault (Err22)	Auto reset	Stop BLDC circuit 3	AlSafe206_PWRP_3	DI1381	BV1381
A382	Circ.3 - Inverter uSafe invalid parameter (Err23)	Auto reset	Stop BLDC circuit 3	AlSafe207_PWRP_3	DI1382	BV1382
A383	Circ.3 - Inverter uSafe FW fault (Err24)	Auto reset	Stop BLDC circuit 3	AlSafe208_PWRP_3	DI1383	BV1383
A384	Circ.3 - Inverter uSafe HW fault (Err25)	Auto reset	Stop BLDC circuit 3	AlSafe209_PWRP_3	DI1384	BV1384
A385	Circ.3 - Inverter uSafe - reseved (Err26)	Auto reset	Stop BLDC circuit 3	AlSafe210_PWRP_3	DI1385	BV1385
A386	Circ.3 - Inverter uSafe - reseved (Err27)	Auto reset	Stop BLDC circuit 3	AlSafe211_PWRP_3	DI1386	BV1386
A387	Circ.3 - Inverter uSafe - reseved (Err28)	Auto reset	Stop BLDC circuit 3	AlSafe212_PWRP_3	DI1387	BV1387
A388	Circ.3 - Inverter uSafe - reseved (Err29)	Auto reset	Stop BLDC circuit 3	AlSafe213_PWRP_3	DI1388	BV1388
A389	Circ.3 - Inverter uSafe - reseved (Err30)	Auto reset	Stop BLDC circuit 3	AlSafe214_PWRP_3	DI1389	BV1389
A390	Circ.3 - Inverter uSafe - reseved (Err31)	Auto reset	Stop BLDC circuit 3	AlSafe215_PWRP_3	DI1390	BV1390
A391	Circ.3 - Inverter uSafe - reseved (Err32)	Auto reset	Stop BLDC circuit 3	AlSafe216_PWRP_3	DI1391	BV1391
A392	Circ.3 - Inverter offline	Auto reset	Stop BLDC circuit 3	Al_InvOffline_PWRP_3	DI1392	BV1392
A393	Circ.3 - BLDC high pressure by probe	Auto reset until counter (AlrmCountHiP in 3600s)	Stop BLDC circuit 3	Al_HiPbyPrbCirc3	DI1393	BV1393
A394	Circ.3 - BLDC low pressure by probe	Auto reset until counter (AlrmCountLoP in 3600s)	Stop BLDC circuit 3	Al_LoPbyPrbCirc3	DI1394	BV1394
A395	Circ.3 - EEV alarm emergency closing	Auto reset	Stop BLDC circuit 3	Al_EmergencyClosing_EVD3	DI1395	BV1395
A396	Circ.3 - EEV alarm Low SH	Auto reset	Stop BLDC circuit 3	Al_LowSH_A_EVD3	DI1396	BV1396
A397	Circ.3 - EEV alarm LOP	Auto reset	Stop BLDC circuit 3	Al_LOP_A_EVD3	DI1397	BV1397
A398	Circ.3 - EEV alarm MOP	Auto reset	Stop BLDC circuit 3	Al_MOP_A_EVD3	DI1398	BV1398
A399	Circ.3 - EEV motor error	Auto reset	Stop BLDC circuit 3	Al_EEV_A_EVD3	DI1399	BV1399
A400	Circ.3 - EEV alarm low suction temp	Auto reset	Stop BLDC circuit 3	Al_LowSuct_A_EVD3	DI1400	BV1400
A401	Circ.3 - EEV alarm high condensing temp.	Auto reset	Stop BLDC circuit 3	Al_HiTempCond_EVD3	DI1401	BV1401
A402	Circ.3 - EEV alarm settings range error	Auto reset	Stop BLDC circuit 3	Al_RangeError_EVD3	DI1402	BV1402
A403	Circ.3 - EEV alarm setting out of bound	Auto reset	Stop BLDC circuit 3	Al_PinOutOfBound_EVD3	DI1403	BV1403
A404	VOC air quality probe not working	Auto reset	Stop VOC regulation	Al_RetAir_VOC_Prb	DI1404	BV1404
A405	Supply filter 2 alarm	Auto reset	None	Al_SupplyFilter_2	DI1405	BV1405
A406	Return filter alarm	Auto reset	None	Al_ReturnFilter	DI1406	BV1406
A407	Fresh air humidity probe not working	Auto reset	Stop humidity check for freecooling	Al_FreshAirHumPrb	DI1407	BV1407
A408	Preheating coil maintenance required	Auto reset	None	Al_PreheatCoilWorkHrsWarn	DI1408	BV1408
A409	Compressor 1 maintenance required	Auto reset	None	Al_Comp1_WorkHrsWarn	DI1409	BV1409
A410	Compressor 2 maintenance required	Auto reset	None	Al_Comp2_WorkHrsWarn	DI1410	BV1410
A411	Compressor 3 maintenance required	Auto reset	None	Al_Comp3_WorkHrsWarn	DI1411	BV1411
A412	IEC humidifier maintenance required	Auto reset	None	Al_HumIEC_WorkHrsWarn	DI1412	BV1412
A413	Cool device maintenance required	Auto reset	None	Al_CoolWorkHrsWarn	DI1413	BV1413
A414	Cool device 2 maintenance required	Auto reset	None	Al_Cool2_WorkHrsWarn	DI1414	BV1414
A415	Heat device maintenance required	Auto reset	None	Al_HeatWorkHrsWarn	DI1415	BV1415
A416	Heat device 2 maintenance required	Auto reset	None	Al_Heat2_WorkHrsWarn	DI1416	BV1416
A417	Reverse device maintenance required	Auto reset	None	Al_RevWorkHrsWarn	DI1417	BV1417
A418	Reverse device 2 maintenance required	Auto reset	None	Al_Rev2_WorkHrsWarn	DI1418	BV1418
419	Circ.1 - Pressostat alarm	Auto reset until counter (AlrmCountLoP in 3600s)	Stop BLDC circuit 1	Al_PressCirc1	DI1419	BV1419
420	Circ.2 - Pressostat alarm	Auto reset until counter (AlrmCountLoP in 3600s)	Stop BLDC circuit 2	Al_PressCirc2	DI1420	BV1420
421	Circ.3 - Pressostat alarm	Auto reset until counter (AlrmCountLoP in 3600s)	Stop BLDC circuit 3	Al_PressCirc3	DI1421	BV1421
422	Out of design temperature limits alarm	Auto reset	Open mixing or stop ventilation if not present	Al_OutDesignTemp	DI1422	BV1422
423	Compressor 2 circuit 1 maintenance required	Auto reset	None	Al_Comp2Circ1_WorkHrsWarn	DI1423	BV1423
424	Compressor 3 circuit 1 maintenance required	Auto reset	None	Al_Comp3Circ1_WorkHrsWarn	DI1424	BV1424
425	Compressor 2 circuit 2 maintenance required	Auto reset	None	Al_Comp2Circ2_WorkHrsWarn	DI1425	BV1425
426	Compressor 3 circuit 2 maintenance required	Auto reset	None	Al_Comp3Circ2_WorkHrsWarn	DI1426	BV1426
427	Compressor 2 circuit 3 maintenance required	Auto reset	None	Al_Comp2Circ3_WorkHrsWarn	DI1427	BV1427
428	Compressor 3 circuit 3 maintenance required	Auto reset	None	Al_Comp3Circ3_WorkHrsWarn	DI1428	BV1428
429	Recovery clogged	Auto reset	Stop recovery	Al_Recovery_clogged	DI1429	BV1429
430	Door switch	Auto reset	Stop unit	Al_Door_switch	DI1430	BV1431
431	Hepa 1 pressure probe alarm	Auto reset	None	Al_HEPA_pressProb1	DI1441	BV1456
432	Hepa 2 pressure probe alarm	Auto reset	None	Al_HEPA_pressProb2	DI1442	BV1466
433	Reversible coil alarm	Auto reset	Stop unit	Al_Reversible	DI1443	BV1467
434	Generic external alarm	Auto reset	Stop unit	Al_Input_generic	DI1444	BV1468
435	Hepa filter 1	Auto reset	None	Al_HEPA_Filter1	DI1445	BV1469
436	Hepa filter 2	Auto reset	None	Al_HEPA_Filter2	DI1446	BV1470
437	Supply filter 3	Auto reset	None	Al_Supply_Filter3	DI1447	BV1673
438	Hepa filter 3	Auto reset	None	Al_HEPA_Filter3	DI1448	BV1686
439	Hepa 3 pressure probe alarm	Auto reset	None	Al_HEPA_pressProb3	DI1449	BV1685
A440	Smoke alarm by digital input	Auto reset	Stop unit		DI1480	BV1692

8. NEW FUNCTIONALITIES FROM VER. 2.1.0

8.1 Modulating Fresh air damper

From the release 2.1.0, there is the possibility to setup a Fresh dumer modulating that can work on a fix position or modulate according with the mixing damper if present.

The parameters that permit those settings are under the menu Settings, **H025** to enable the fix position and **H026** to setup the percentage of the fix position opening.

8.2 Additional device signals to send a feedback to external devices

From the release 2.1.0, there is the possibility to send through analoge outputs the request for the main coils to external devices. The enabling is manage under the menu Settings parameter **H027**.

8.3 Advanced PID settings for the working modes

From the release 2.1.0, there is the possibility to setup a different PID values for each devices in base of the working mode set .The enabling is manage under the menu Settings parameter **H028**.

8.4 HEPA filters management

From the release 2.1.0, there is the possibility to setup like supply filters, up to two HEPA filters devices that can work in base of their differential pressure sensor, and you can regulate the fans speed according with their pressure value.

The parameters to setup them are on the control type for the Fan, setting the "HEPA" regulation.

8.5 Regulation CAV and VAV in supply only units

From the release 2.1.0, we added the possibility to set up the VAV or CAV regulation also in case the unit is setup to works with just the supply fan, without the return.

8.6 Condensing Unit Management

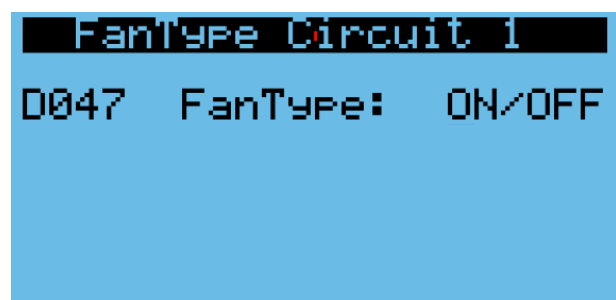
From the version 2.1.0 the k.Vent application give the possibility to manage a condensing unit.

Below, the instructions to set the parameters to manage the Rooftop Fans by masks.

To active the fans parameters is necessary to configurate the AHU in reversible mode with the Rooftop unit

Main settings

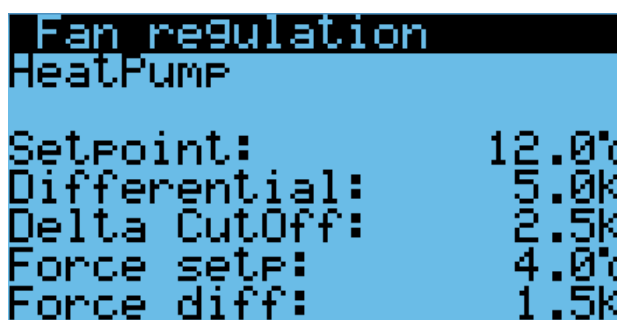
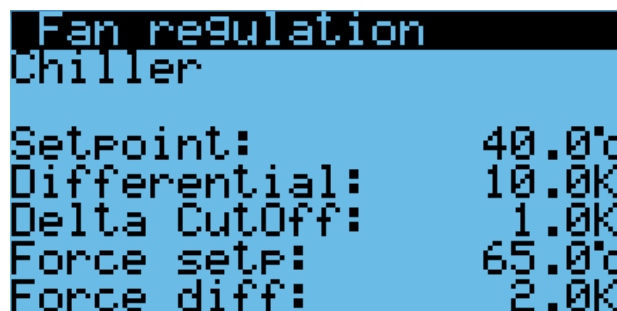
Set the type of Rooftop that you want to use in the condensing unit. It's possible set a different type of fans per each circuits.



Step 1: Setpoints

In base of the supply temperature and the external one, the unit will work in a different mode:

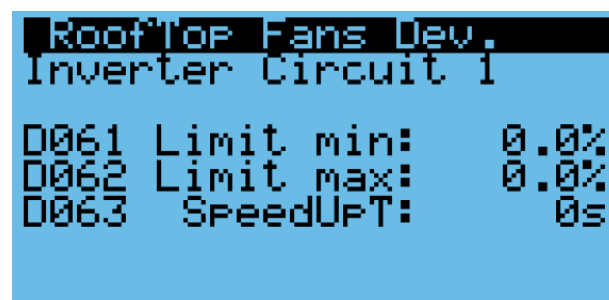
- Chiller mode when these values are below the working setpoint
- Heatpump mode when these ones are above the working setpoint



- SetPoint: value that defines the activation of the condensing unit
- Different → Differential: values range of the SetPoint hysteresis
- DeltaCutOff → Parameter used to avoid the flickering during fan activation/deactivation
- FrcSetP → Force SetPoint
- Force Diff → Differential: values range of the Force SetPoint hysteresis

Step 2: Fan type

Parameters for modulating fans:



- Limit min: Minium speed in percentage of the fan
- Limit max: Maximum speed in percentage of the fan
- SpeedUp time: time to increase the fan speed from minimum value to the max

```

RoofTop Fans Dev.
UnOff Circuit 1

D058 Differ.: 0.0%
D059 Delay: 0s
D060 FansNumb.: 0

```

- Differential: percentage subdivision for individual fans of the total differential setted before in the work mode of the unit, in way to control stably by overlapping the fan hysteresis
- Delay: time of the power on between a fan to another one

Step 3: Antifrost

```

RoofTop Antifrost
Antifrost Circuit 1

D064 Thrshld: 0.0°C
D065 MinSpeed: 0.0%
D066 StrtUpSpd: 0.0%
D067 StartUpT: 0s
D068 Enable: NO

```

The antifrost function has the purpose to avoid the freezing of the fans by low external temperature through the reaching of a threshold.

When this one is reached, the antifrost fuction active the fans to a setted speed until the outside exceeds the activation threshold by 2°C

Thrshld → Threshold: value for which the unit starts the Antifrost function

Min Speed → Minimum Speed of the fans during the function

StrtUpSpd → Start Up Speed in order to impeller rotation

StartUpT → Start Up Time: duration of Start Up Speed

Enable → Manual activation of the startup function

Step 4: Force Request

```

RoofTop force request
Force Req. Circuit 1

D069 ForceReq.: 0.0%

```

This parameter is the percentage of forcing request the fans

8.7 FieldBus frame configuration

From the release 2.1.2, we added the possibility to set up the protocol frame about the Modbus Master, the parameters to define it are Ha91 to Ha93.

9. NOTE

9.1 kVent+ release notes

SW release	Manual release	Modification description
2.0.14B 09-01-2017	1.0 09-01-2017	Changed - x. Improved - First beta version Manual - x
2.0.15B 29-03-2017	2.0 29-03-2017	Changed - x. Improved - Added supervisory line on the configuration Manual - x
2.0.17B 31-03-2017	2.1 31-03-2017	Changed - x. Improved - Added Polish language on UI Manual - x
2.0.18B 07-09-2017	2.4 07-09-2017	Changed - x Improved - webkit added - updated the modbus slave and bacnet line - Added the Boost function, added the Door Switch digital input; fixed the alarm reset by th-tune, fixed the humidity limits with th-tune Manual - En and PL manual
2.1.0 30-05-2018	3.0 01-06-2018	Changed - changed the unit of measure from s, to min on the time setting for the pump on the heating coils during the off time - Fixed the DEV configuration - changed FloatValve management, now at the startup of the unit we force the valve in closing before to start to regulate to be sure that the valve start from zero. Improved - Added the HEPA filters management - Added the possibility to set an output signal for each device request (just for the coils) - implement the logic to define a specific PID set for each working mode for: Freecooling; pre-Heat; coling; Heating; reversible; ReHeating. - Alarms management, added the new alarms for the Hepa filters - Add Display Protocol - Added the new variables on modbus slave and bacnet server lines - Modulating Fresh air damper control - modulating fresh air damper output (AO), it to be separate from mixing damper output. - Setting fresh damper at constant value(fixed) for full fresh units or single zone unites - safety protection for antifreeze, smoke/fire by fresh damper shut-off - if air quality control is enabled the fresh air damper opens according to the request (at single zone units) - support free Colling function (at single zone units) - Create an additional signal for each device used on the kVent (like cooling coil request; heating coil request; pre/Re heating coil) in order to send the same request that kVent send to it device to and external device. - Adding the possibility through the user interface to set up for each working mode (like comfort-pre comfort-economy), not just the set point and fans speed but also a dedicate PID parameters for the free cooling and the relative coil (heating/cooling if it is present). - Adding a function to check the differential of pressure between the supply and exhaust fan, modulating the exhaust or return fan to keep the pressure constant. - in addition, units are equipped with two modulating dampers in fresh air and mixed air .we want two analog outputs for controlling dampers, that a fresh damper can be set to constant value. - added all the masks to set up the PID parameters for each coils in base of the working mode. - added the fresh modulating damper - Condensing Unit Management - Add the RU language - Add the CZ language - Antifrost management for the RoofTop Fans circuits - Add the Modulation Condensing fans in the configuration for rooftop - Added the c.filed web pages for commissioning Manual

		• Add pGDX user interfaces
2.1.2 22-06-2018	3.1 01-06-2018	Changed • changed the unit of measure from s, to min on the time setting for the pump on the heating coils during the off time • Disabled the Antifreeze water probe on the heating coil during the cooling mode Improved • Added the possibility to define the frame on the fieldbus port Manual
2.1.3 22-06-2018	3.1 01-06-2018	Changed • Improved • Support Core2 Manual
2.1.4 08-08-2018	3.2 08-08-2018	Changed • Updated the FB to manage the BLDC compressors now we are using the Comp_BLDC "Comp_BLDC_2.0.30" Improved • Added a third filter option on the supply Manual
2.1.5 20-12-2018	3.3 20-12-2018	Changed • Update the logic to manage the alarms by supply and return air flow filters, now the control is also for 0-10V, EBM and Ziehlabegg fans Improved • Added the third HEPA filter for the modulating fans control Manual
2.2.0 01-10-2020	3.3 19-10-2020	Changed • Added new languages Slovenian, Romanian, German and Bulgarian • Separated smoke and fire alarm management • Added support for Controlla smartphone APP Improved • Updated BLDC compressors list Manual • Recuperator defrost chapter 5.8.3 improved description • Minor parameters description changes • Parameters table, fixed addressing for Modbus and Bacnet

Lined area for notes or calculations.

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