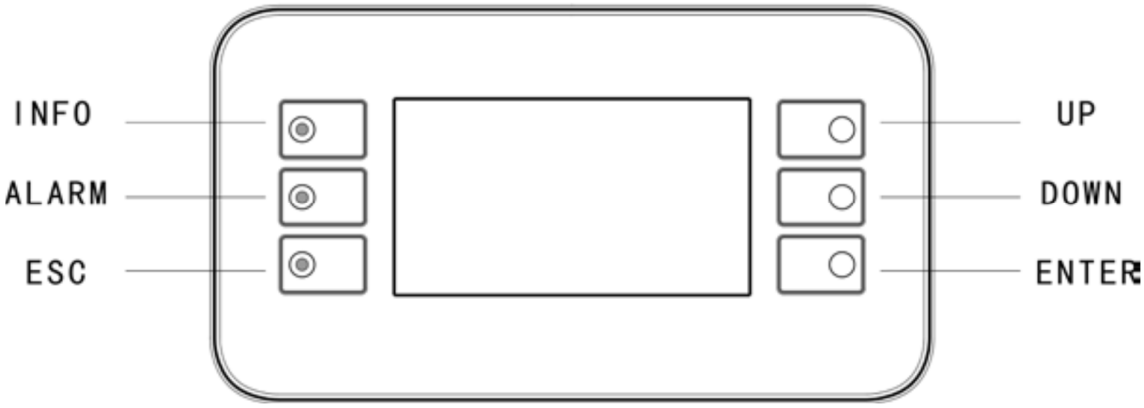
# CLIMATIX MANUAL

# Table of contents

# 1 User guide

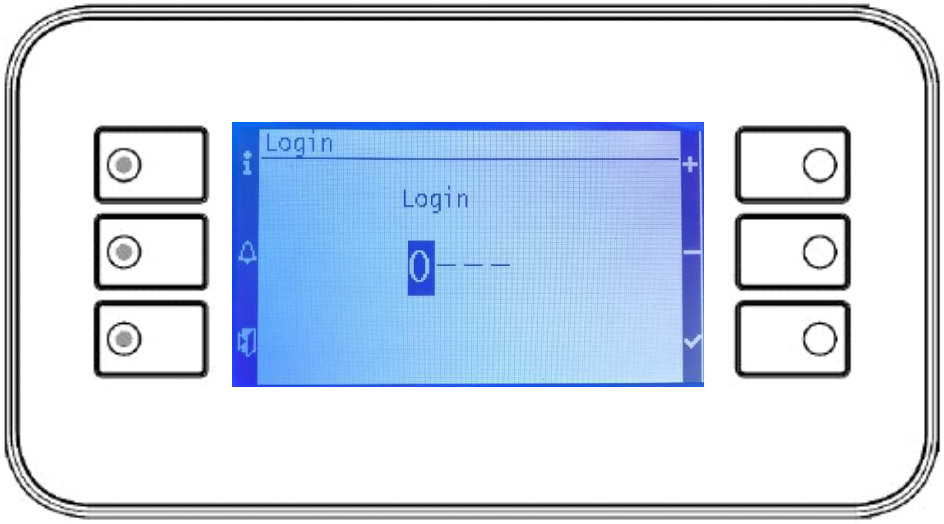
## 1.1 Connecting to user profile

Connect to „User“ profile. Hold „Enter“ button for 3 seconds.




1. Pic. Button placement

After 3 seconds screen changes to Pic. 2.




2. Pic. Login screen

User password is 1000 and it can be entered by “Up” and “Down” buttons and confirm selection press „Enter“. When correct password is entered in the right corner one key icon will be showed.

## 1.2 Chiller start up

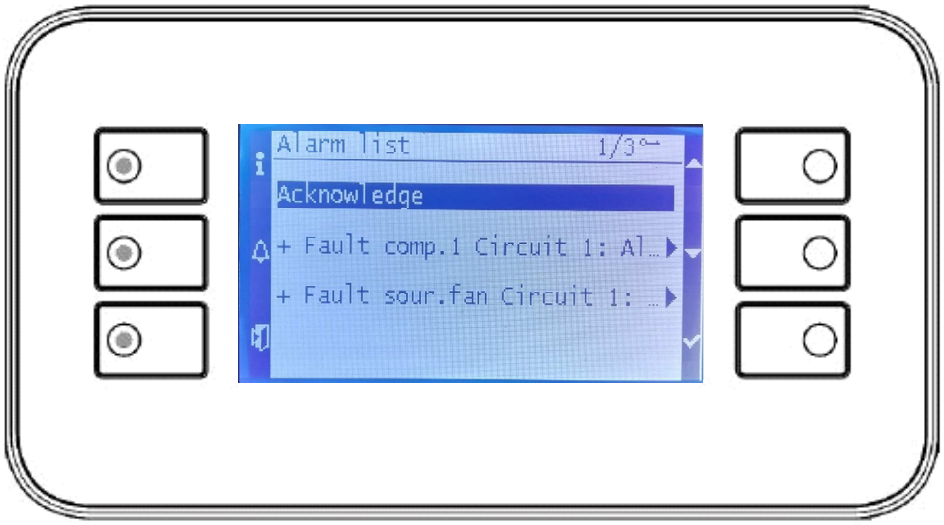
To start up the system user must change “Unit status On/Off” from “Off” -> “On” and check if “Remote On/Off” status is “On”.

## 1.3 Temperature setpoint

Chiller will work unit it reaches setpoint. To change setpoint find parameter “Cooing setpoint “ press „Enter“ and change do the desired temperature confirm with „Enter“.

## 1.4 Alarm acknowledge

All alarms are listed in the in history. To see active alarms and accrued alarms press „Alarm“ button, if there are active alarms firstly they will be showed and „Alarm“ button will blink red. By pressing button „Alarm“ for  couple of time screen to change to history.



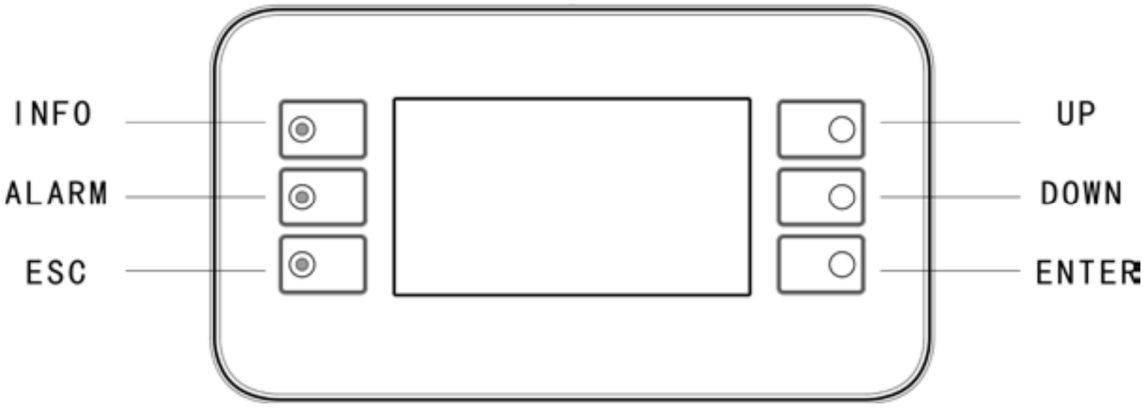

3. Pic. Alarm list

To acknowledge alarm select „Acknowledge“ and press „Enter“ press „Execute“. All alarm will be reseted if conditions are right all other will be left in alarm conditions.

# 2 Service guide

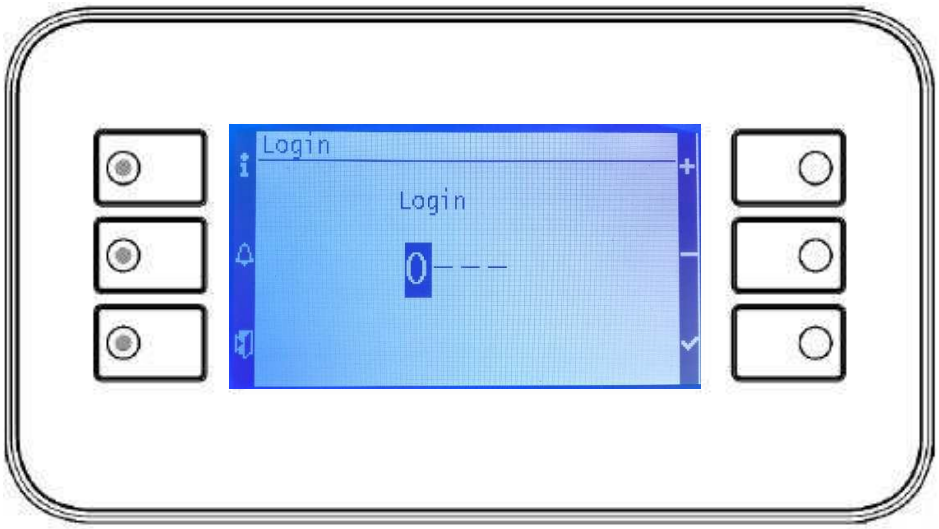
## 2.1 Connecting to service profile

Connect to „Service“ profile. Hold „Enter“ button for 3 seconds.




4. Pic. Button placement

After 3 seconds screen changes to Pic. 6.




5. Pic. Login screen

User password is 2000 and it can be entered by “Up” and “Down” buttons and confirm selection press „Enter“. When correct password is entered in the right corner two key icon will be showed.

## 2.2 Menu map

| Menu map | | | |
|---|---|---|---|
| Main menu | | Sub Menu | |
| I | Supply control | 1 | Settings |
| II | Capacity control | 1 | Settings |
| III | Circuit control | 1 | Settings |
| [1]IV | Scheduler | 1 | Scheduler settings |
| V | System | 1 | Communications |
| | | 2 | Plant info |
| | | 3 | Versions |
| | | 4 | Save / load |
| | | 5 | Archive |
| | | 6 | System alarms |
| | | 7 | Diagnostic |
| | | 8 | Alarming |
| | | 9 | PIN handling |
| | | 10 | Daylight sav.time |
| | | 11 | HMI |
| VI | Overviews | 1 | Operating hours |
| | | 2 | Controller inputs |
| | | 3 | Controller outputs |
| | | 4 | Expansion inputs |
| | | 5 | Expansion outputs |
| | | 6 | Analog inputs alarms |
| | | 7 | Digital inputs alarms |
| VII | Main overview | | |

1 – Active when scheduler function is enabled.

I. Supply control

| | |
|---|---|
| Operating mode | Actual operation mode |
| Flow detetector | Status of flow detector single pump |
| Evap. out t. | |
| Evap. in t. | |
| Settings | Settings of the pumps |

I.1. Supply control settings

| | |
|---|---|
| St-up del. flow | Delay flow alarm after evaporator pump start |
| [1]Pump cond. flow det. delay st-up | Delay flow alarm after condenser pump start |
| St-up dly. comp. | Delay compressor start after pump start |
| [2]Pumps rotation time | Rotation time bettween twin pumps |
| [2]Pump control mode | Control more of twin pump |
| Frost protection | Frost protection pump setpoint |
| Hyst. frost protection | Frost protection hysterisis for alarm reset user pump |
| Frost prot. warning | Frost protection waring pump setpoint |
| Hyst. frost prot. war. | Frost protection waring hysterisis for alarm reset pump |
| [2]Cond. r.t. setpoint | Condenser valve setpoint of return cond. temp. |
| [2]Cond. r.t. dif to close | Condenser valve difference to close valve |
| Warn. frost prot. | Frost protection waring pump alarm |
| Frost protection | Frost protection pump alarm |

1 – Active when water condenser is enabled.

2 – Active then twin pump is enabled.

II. Capacity control menu.

| | |
|---|---|
| Operating mode | Working mode |
| Com.op.mode | Common working mode |
| Control request | Current power request |
| Present request | Current power request |
| Evap. in t. | |
| Cooling setpoint | Cooling setpoint |
| Evap. out t. | |
| Settings | |

II1. Capacity control settings.

| | |
|---|---|
| Cooling setpoint | Cooling setpoint |
| Kp | P value for PID control |
| Ti | I value for PID control |
| Faster power dec. For Kp | When setpoint reached faster shutdown power |

III. Circuit manager.

| | |
|---|---|
| Operating mode | Common working mode |
| Next cirrcuit On | Next circuit witch will be turned on |
| Next cirrcuit Off | Next circuit witch will be turned off |
| Settings | Settings |

III.1. Circuit manager settings.

| | |
|---|---|
| Capacity step regulation delay | Capacity change delay for up/down power operations |

IV. Scheduler

| | |
|---|---|
| Enable scheduler | Turn off/on scheduler |
| 01: Monday | Monday settings |
| 01: Tuesday | Tuesday settings |
| 01: Wednesday | Wednesday settings |
| 01: Thursday | Thursday settings |
| 01: Friday | Friday settings |
| 01: Saturday | Saturday settings |
| 01: Sunday | Sunday settings |
| 01: Exception | Exception settings |

V. System.

| | |
|---|---|
| Current time | Time adjustment |
| Date /Time settings | Time adjustment |
| Restart | Controller restart |
| Communications | Communication controller settings |
| Plant info | |
| Versions | |
| Save / load | Save parameters to sd card |
| Archive | Archive and save to sd card |
| Sistem alarms | System alarms |
| Diagnostic | Controller diagnostic |
| Alarming | Alarm page |
| PIN handling | Pin code change |
| Daylight sav.time | Daylight time saver settngs |
| HMI | Diplay parameters settigns |
| Language selection | Currently only english |

V.1 System communications.

| | |
|---|---|
| Comm.modue overview | Comunication module overview |
| Communic.config. | Comunication config (Modbus slave RS485, TCP/IF, Bacnet RS485/ IP) |
| IP-Config | IP config |
| > | IP |
| > | Uniquec controller name |
| WLAN | WIFI stick settings |
| > | IP WIFI stick |
| Modbus RTU (RS485) | Modbus parameters |
| Climatix IC | Cloud parameters |
| BACnet | BACnet settings |
| Process bus | Process bus settings |

VI. Overviews.

| | |
|---|---|
| Operating hours | Operating hours of the agregates |
| Controller inputs | Controller real input status |
| Controller outputs | Controller real outputs status |
| Expansion inputs | Expansion real input status |
| Expansion outputs | Expansion real outputs status |
| Expansion inputs 2 | Expansion 2 real input status |
| Expansion outputs 2 | Expansion 2 real outputs status |

VII. Main overview.

| | |
|---|---|
| Machine status | Common operating mode |
| Present request | Power request |
| [1]Total power master | Total power with master/slave unit, only visible in master |
| Present capacity | Real power |
| Evap. out t. | Evaporator outlet temperature |
| [1]Evap. common out t. | Common temp. only in master |
| [2]Circuit 1 Evap. out t. | Circuit 1 evaporator outlet temp. |
| [2]Circuit 2 Evap. out t. | Circuit 2 evaporator outlet temp. |
| [2]Circuit 3 Evap. out t. | Circuit 3 evaporator outlet temp. |
| Evap in t. | Evaporator inlet temperature |
| [4]Cond. in t. | Condenser inlet temperature |
| [4]Cond. out t. | Condenser outlet temperature |
| Control temp. | Control temperature Evap in t. / Evap. out t. |
| Cooling setpoint | Cooling setpoint |
| Supply pump | Single pump status |
| [3]Supply pump 1 | Twin pump 1 status |
| [3]Supply pump 2 | Twin pump 2 status |
| Flow det. | Single pump flow detetor |
| [3]Flow det. | Twin pump flow detetor |
| [4]Cond. flow det. | Condeser flow detector |
| Circuit 1 | Circuit one parameters |
| Evap. press. | |
| Cond. press. | |
| Circuit 2 | Circuit two parameters |
| Evap. press. | |
| Cond. press. | |
| [5]Circuit 3 | Circuit three parameters |
| [5]Evap. press. | |
| [5]Cond. press. | |
| [6]Free Cooling | Free Cooling parameters |
| [7]Outdoor temp. | |
| Unit On/Off | Display on/off |
| Remote On/Off | DI on/off |
| [8]Scheduler status | Status of the scheduler in real time |
| Emrgency mode | Then emergency on plant is shut off |
| Main menu | |

1 – Active when Master/Slave is enabled.

2 – Active when evaporators is separate.

3 – Active when twin pump is enabled.

4 – Active when water condenser is enabled.

5 – Active when circuit 3 is enabled.

6 – Active when free cooling is enabled.

7 – Active when free cooling or outside temp. or floating condensation is enabled.

8 – Active when scheduler function is enabled.

Circuit 1,2,3 menu

| | |
|---|---|
| Evap.press. | Evaporator pressure |
| Evaporator temp. | Temperature converted from pressure |
| Cond.press. | Condenser pressure |
| Condenser temp. | Temperature converted from pressure |
| Compressor1 | Compressor 1 status |
| [1]Dcrg. gas temp. | Compressor 1 discharge gas temperature |
| [2]Pos. Comp.1 | Possition of compressor 1 inverter 0-100 power |
| [3]Freq. Comp.1 | Frequency of the Vacon inverter readed from inverter |
| [3]Curr. Comp.1 | Current of the Vacon inverter readed from inverter |
| [4]Freq. Comp.1 | Frequency of the ABB inverter readed from inverter |
| [4]Curr. Comp.1 | Current of the ABB inverter readed from inverter |
| [5]Total SH comp. | Superheat callculation bettwen evaporation temp. and Suction SH temp. sensor |
| [6]Compressor2 | Compressor 2 status |
| [1]Dcrg. gas temp. | Compressor 2 discharge gas temperature |
| [5]Total SH comp. | Superheat callculation bettwen evaporation temp. and Suction SH temp. sensor |
| [7]Compressor3 | Compressor 3 status |
| [1]Dcrg. gas temp. | Compressor 3 discharge gas temperature |
| [5]Total SH comp. | Superheat callculation bettwen evaporation temp. and Suction SH temp. sensor |
| [8]Dcrg. gas temp. | Discharge gas common temperature |
| Superheat | Real superheat |
| Exp.valve | Expansion valve position |
| [9]MVL | Expansion valve position |
| [9]MVL feedback | Expansion valve feedback position |
| Condenser fan | Fan power |
| [10]Liquid temp. | Subcooling temperature |
| Circuit control | Circuit parameters |
| Compr.manager | Compressors management |
| Expansion | Expansion control |
| Condenser | Condenser control |

1 – Active when separate discharge gas sensors are enabled.

2 – Active when compressor with inverter is enabled.

3 – Active when compressor with inverter and control via Modbus with Vacon drive are enabled.

4 – Active when compressor with inverter and control via Modbus with ABB drive are enabled.

5 – Active when additional suction sensor and superheat calculation is enabled.

6 – Active when compressor 2 is enabled.

7 – Active when compressor 3 is enabled.

8 – Active when common discharge gas is enabled.

9 – Active when MVL expansion valve is enabled.

10 – Active when Subcooling temp. is enabled.

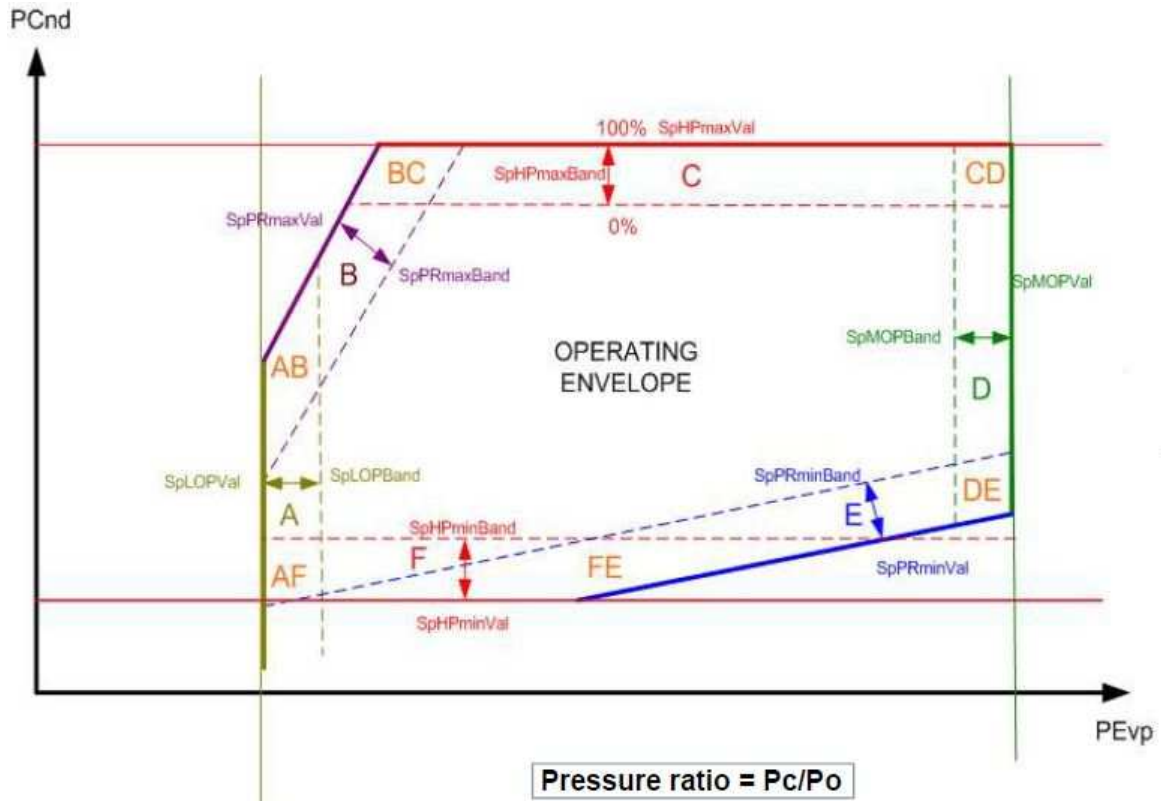
Circuit 1 Circuit control.

| | |
|---|---|
| Com.op.mode | Common working mode |
| Settings | Settings |

Circuit 1 Circuit control settings.

| | |
|---|---|
| St-up d.pr.enve. | Start up delay of envelope alarms |
| Max.High press. | Max. condensing pressure alarm |
| Min.high press. | Min. condensing pressure alarm |
| MOP | MOP alarm |
| LOP | LOP alarm |
| Presss.ratio max. | Pressure ratio max. alarm |
| Presss.ratio min. | Pressure ratio min. alarm |
| Superheat | Superheat |

All limits are in absolute pressure.




6. Pic. „Envelop“

Circuit 1 Comp. manager

| | |
|---|---|
| Operating mode | Common working mode |
| Next compr.On | Next compressor will be on |
| Next compr.Off | Next compressor will be off |
| Settings | Settings |

Circuit 1 Comp. manager settings.

| | |
|---|---|
| Max. Start/h c. | Max. Start of compressor per 1h |
| Minimal on | Minimal on compressor |
| Minimal off | Minimal off compressor |
| Time between same comp. start | Minimal time |
| [1]Capacity min. for FI comp. | Minimum capacity for frequncy inverter |
| [1]Capacity max. for FI comp. | Maximum capacity for frequncy inverter |
| [1]Cap. st.up comp. 1 | Start up compressor 1 power |
| [1]FI ramp step up size | Frequency inverter ramp up speed |
| [1]FI ramp step down size | Frequency inverter ramp down speed |
| [1]FI ramp change delay | Frequency inverter ramp change speed |
| [1]FI start up time | Frequency inverter stay in minimum power |
| [2]ABB Min. freq. | ABB frequency inverter minimum frequency setting |
| [2]ABB Max. freq. | ABB frequency inverter maximum frequency setting |
| Disabled circuit x compressor y | Disabled Circuit x compressor y |

1 – Active when compressor with inverter is enabled.

2 – Active when compressor with inverter and control via Modbus with ABB drive are enabled.

Circuit 1 Expansion

| | |
|---|---|
| Operating mode | Common working mode |
| Superheat setpoint | Setting for setpoint |
| Present SH setpoint | Superheat actual setpoint |
| Superheat | Actual superheat |
| Evap.press | Evaporator pressure |
| Evaporator temp. | Temperature converted from pressure |
| Suct. gas temp. | Suction gas temperature |
| Exp. valve | Requseted position |
| Feedb.exp.val. | Real position |
| [1]Sunction SH. temp. | Additional Suction temperature compressor 1 |
| [1]Total SH comp. 1 | Superheat callculation bettwen evaporation temp. and Suction SH temp. sensor |
| [1,2]Sunction SH. temp. | Additional Suction temperature compressor 2 |
| [1,2]Total SH comp. 1 | Superheat callculation bettwen evaporation temp. and Suction SH temp. sensor |
| [1,3]Sunction SH. temp. | Additional Suction temperature compressor 3 |
| [1,3]Total SH comp. 1 | Superheat callculation bettwen evaporation temp. and Suction SH temp. sensor |
| Settings | Settings |

1 – Active when additional suction sensor and superheat calculation is enabled.

2 – Active when compressor 2 is enabled.

3 – Active when compressor 3 is enabled.

Circuit 1 Expansion settings.

| | |
|---|---|
| Superheat setpoint | Superheat setpoint |
| Kp | PID P value |
| Ti | PID I value |
| Shift enve. | Shift SH setpoint if MOP |
| Startup position | Start up position |
| St-up pos.valve | Delay when start up for start up value |

Circuit 1 Condenser.

| | |
|---|---|
| Operating mode | Common working mode |
| Pres.cooling setpoint | Condenser pressure setpoint display |
| Pressent setpoint | Actual setpoint |
| Cond. Press. | |
| Condenser fan | Condenser power |
| Settings | Settings |

Circuit 1 Condenser settings.

| | |
|---|---|
| Press. cooling setpoint | Condenser pressure setpoints |
| Kp Cooling | PID P value |
| Ti Cooling | PID I value |
| Shift floating setpoint | Shitf condensing setpoint by amount plius outdoor temp. |
| Shift enve. | Shift envelope |
| Fan min pwr. | Fan min. power to run |

## 2.3 BSP and BUS led meaning

| LED | Color | Flash response | Function |
|---|---|---|---|
| BSP | Red/green | Changes at 1 Hz | Software update mode: Download applicationn or new firmware |
| | Green | Continuous | Application loaded and operational |
| | Orange | Continuous | Application loaded but is not operational |
| | Orange | Flashing, 50 ms on / 1000 ms off | |
| | Red | Flashing at 2 Hz | Firmware error |
| | Red | Continuous | Hardware fault |
| BUS | The application sets the response and functional. Additional notes are aviable in the SAPRO online help. | | |

ECV closing and opening LEDs

| Status | Open LED | Close LED |
|---|---|---|
| Motor not moving in this direction | OFF | OFF |
| Valve is moving to fail safe position in case of power fail (only for UPS version) | OFF | OFF |
| Valve is closing | OFF | Green flashing 250ms ON / 250ms OFF |
| Valve is opening | Green flashing 250ms / ON 250ms OFF | OFF |
| Valve is moving to the fail safe position closed | OFF | Green short flashing 50ms ON / 450ms OFF |
| Valve is moving to the fail safe position open | Green short flashing 50ms ON / 450ms OFF | OFF |
| Stepper error (for example, the diagnostics detected an error at startup, such as not connected or shortened coil | Green short flashing 50ms ON / 450ms OFF | Green short flashing 50ms ON / 450ms OFF |

Additional BSP LED meaning:

| BUS (On controller) | BUS |
|---|---|
| Alarm is not acknowledged | 500 ms On / 500 ms Off |
| Alarm is acknowledged | ON |
| No Alarm | OFF |

## 3. Alarm list

| **Water side** | Meaning | Stops | Alarm reset |
|---|---|---|---|
| Evap. out t. Fault: no sens. | Probe disconnected | All plant | Manual |
| Evap. out t. HighLimitActive: 8889 °C | Probe value reached high limit alarm | - | - |
| Evap. in t. Fault: no sens. | Probe disconnected | All plant | Manual |
| Evap. in t. HighLimitActive: 8889 °C | Probe value reached high limit alarm | - | - |
| Fault Supply pump OffNormal: Alarm | Overload pump | All plant | Automatic |
| Fault Supply pump 1,2 OffNormal: Alarm | Overload pump | All plant | Automatic |
| Flow det. OffNormal: No | Pump single or twin no flow alarm | All plant | Manual |
| Warn.frost prot. exchanger | Warning freeze alarm for exchanger | - | Automatic |
| Frost protection exchanger | Freeze alarm for exchanger pump | All plant | Manual |
| Warn.frost prot. medium | Warning freeze alarm for medium | - | Automatic |
| Frost protection medium | Freeze alarm for medium pump | All plant | Manual |
| **Refrigerant side** | | | |
| Exp. Valve Circuit X Fault: no output | No expansion valve is connected of circuit X | Circuit X | Automatic |
| Low pr. detect. Circuit X OffNormal: Alarm | Low pressure alarm by digital input, relay of circuit X | Circuit X | Automatic |
| Low pr. detect. counter Circuit X LowLimitActive: -56 min | Low pressure alarm counter by digital input, relay of circuit X | Circuit X | Manual |
| High pr. detect. Circuit X OffNormal: Alarm | High pressure alarm by digital input, relay of circuit X | Circuit X | Automatic |
| High pr. detect. counter Circuit X LowLimitActive: -56 min | High pressure alarm counter by digital input, relay of circuit X | Circuit X | Manual |
| Fault comp. Y Circuit X OffNormal: Alarm | Overload compressor Y of circuit X | Circuit X Compressor Y | Automatic |
| Fault comp. Y counter Circuit X LowLimitActive: -56 min | Overload compressor Y of circuit X fault counter for number of 3 times in 1 hour locked alarm | Circuit X Compressor Y | Manual |
| St-up counter comp. Y Circuit X LowLimitActive: -30min | More compressors start then allowed of circuit X compressor Y | Circuit X Compressor Y | Manual |
| All compr. In al. Circuit X OffNormal: Alarm | All compressors in circuit X is in alarm/overload | Circuit X | Automatic |
| No compr.avail. (No compr.avail. Circuit X-OffNormal): Normal | Compressors in circuit X not ready to start because of the timers | Circuit X | Automatic |
| Suct gas temp. Circuit x OffNormal: Alarm | Probe disconnected | Circuit X | Manual |
| Suct gas temp. Circuit x HighLimitActive: 8889 °C | Probe value reached high limit alarm of circuit X | Circuit X | Manual |
| Evap. press. Circuit x OffNormal: op.loop | Probe disconnected | Circuit X | Manual |

| | | | |
|---|---|---|---|
| Evap. press. Circuit x HighLimitActive: 8889 bar | Probe value reached high limit alarm of circuit X | Circuit X | Manual |
| Cond. press. Circuit x OffNormal: op.loop | Probe disconnected | Circuit X | Manual |
| Cond. press. Circuit x HighLimitActive: 8889 bar | Probe value reached high limit alarm of circuit X | Circuit X | Manual |
| Fault Condenser fan Circuit X OffNormal: Alarm | Fan alarm of circuit X | Circuit X | - |
| Press ratio max. Circuit X OffNormal: Alarm | Pressure difference too high. Compressor is in the upper left side of the envelope of circuit X | Circuit X | Automatic |
| Press ratio min Circuit X OffNormal: Alarm | Pressure difference too low. Compressor is in the lower right side of the envelope of circuit X | Circuit X | Automatic |
| Max.high press Circuit X OffNormal: Alarm | To high condensing pressure of circuit X | Circuit X | Automatic |
| Min.high press Circuit X OffNormal: Alarm | To low condensing pressure of circuit X | Circuit X | Automatic |
| MOP Circuit X OffNormal: Alarm | MOP alarm of circuit X | Circuit X | Automatic |
| MOP counter Circuit X OffNormal: Alarm | MOP alarm counter locked alarm of circuit X | Circuit X | Manual |
| LOP Circuit X OffNormal: Alarm | LOP alarm of circuit X | Circuit X | Automatic |
| LOP counter Circuit X OffNormal: Alarm | LOP alarm counter locked alarm of circuit X | Circuit X | Manual |
| Superheat Circuit X LowLimitActive: 2K | Low superheat alarm of circuit X | Circuit X | Automatic |
| Superheat Fault counter Circuit X LowLimitActive: -30min | Low superheat alarm of circuit X for number of 3 times in 1 hour locked alarm | Circuit X | Manual |
| Evd comm. Error OffNormal: Alarm | Carel EVD communication alarm | Circuit X | Automatic |
| Evd alarm Circuit x OffNormal:Alarm | Carel EVD Alam | Circuit X | Automatic |
| **General** | | | |
| Al.brute force de. (Al.brute force de.-HighLimitActive): 1 | Indication that a brute force attack.<br>1: external HMI (HMI DM/TM) | None | By logining in with good password |
| Invalid time: Alarm | Alarm that time in controller is wrong | None | By entering right time |
| Fault Ext.IO-m.Fault Ext.IO-m. (Fault Ext.IO-m.Fault Ext.IO-m.-OffNormal): X | Extension module X is disconnected | Plant | Automatic |
| Gas leak OffNormal: Alarm | Gas leak alarm | Plant | Automatic |

# 3 Modbus RTU list

Modbus RTU default: Baude rate 19200, parity Even, bit stop One. Modbus TPC/IP default port 502.

| Parameter | Address | R/W | Gain | Value |
|---|---|---|---|---|
| Operation mode | | | | |
| Common operation mode | H100 | R | | 0 - Off 1 - Cooling |
| Operation mode HMI | H102 | R/W | | 0 - Off 1 - On |
| Operation mode Remote On/Off (DI) | H104 | R | | 0 - Off 1 - On |
| Emergency mode | H106 | R | | 0 - Off 1 - On |
| Cooling setpoint return | H108 | R/W | 0.1 | |
| Heating setpoint return | H110 | R/W | 0.1 | |
| Alarm slave no comunication | H144 | R | | 0 - OK 1 - Alarm |
| Alarm master no comunication | H146 | R | | 0 - OK 1 - Alarm |
| Supply pump paramters | | | | |
| Evap. out t. temperature value | H200 | R | 0.1 | |
| Evap. out t. temperature sensor fault | H201 | R | | 0 - OK 1 - Alarm |
| Evap. in t. temperature value | H202 | R | 0.1 | |
| Evap. in t.  temperature sensor fault | H203 | R | | 0 - OK 1 - Alarm |
| Common Evap. out t. temp. master slave value | H204 | R | | |
| Common Evap. out t. temp. master slave sensor fault | H205 | R | | 0 - OK 1 - Alarm |
| Single pump status | H206 | R | | 0 - Off 1 - On |
| Single pump work hours | H207 | R | | |
| Supply pump\Twin pump 1 alarm | H208 | R | | |
| Twin pump 2 alarm | H209 | R | | |
| Twin pump 1 status | H210 | R | | 0 - Off 1 - On |
| Twin pump 1 work hours | H211 | R | | |
| Twin pump 2 status | H212 | R | | 0 - Off 1 - On |
| Twin pump 2 work hours | H213 | R | | |
| Twin pump 1 flow alarm | H214 | R | | 0 - OK 1 - Alarm |
| Twin pump 2 flow alarm | H215 | R | | 0 - OK 1 - Alarm |
| Supply pump flow status | H216 | R | | |
| Supply pump flow alarm | H217 | R | | 0 - OK 1 - Alarm |
| Twin pump flow status | H218 | R | | |
| Twin pump flow alarm | H219 | R | | 0 - OK 1 - Alarm |
| Frost waring | H220 | R | | 0 - OK 1 - Alarm |
| Frost alarm | H221 | R | | 0 - OK 1 - Alarm |
| Circuit 1 parameters | | | | |
| Condensing pressure value | H300 | R | 0.1 | |
| Condensing pressure alarm | H301 | R | | 0 - OK 1 - Alarm |
| Evaporating pressure value | H302 | R | 0.1 | |
| Evaporating pressure alarm | H303 | R | | 0 - OK 1 - Alarm |
| High pressure alarm | H304 | R | | 0 - OK 1 - Alarm |
| High pressure alarm counter alarm | H305 | R | | 0 - OK 1 - Alarm |
| Low pressure alarm | H306 | R | | 0 - OK 1 - Alarm |
| Low pressure alarm counter alarm | H307 | R | | 0 - OK 1 - Alarm |
| Conensing max pressure | H308 | R | | 0 - OK 1 - Alarm |
| Conensing min pressure | H309 | R | | 0 - OK 1 - Alarm |
| MOP alarm | H310 | R | | 0 - OK 1 - Alarm |

| | | | | |
|---|---|---|---|---|
| MOP counter alarm | H311 | R | | 0 - OK 1 - Alarm |
| LOP alarm | H312 | R | | 0 - OK 1 - Alarm |
| LOP counter alarm | H313 | R | | 0 - OK 1 - Alarm |
| Pressure ratio max alarm | H314 | R | | 0 - OK 1 - Alarm |
| Pressure ratio min alarm | H315 | R | | 0 - OK 1 - Alarm |
| Evaporating temperature | H316 | R | 0.1 | |
| Condensing tempertature | H317 | R | 0.1 | |
| Circuit 1 supply temp. value | H318 | R | 0.1 | |
| Circuit 1 supply temp. sensor alarm | H319 | R | | 0 - OK 1 - Alarm |
| Suction temperature value | H320 | R | 0.1 | |
| Suction temperature sensor fault | H321 | R | | 0 - OK 1 - Alarm |
| Superheat value | H322 | R | 0.1 | |
| Superheat alarm | H323 | R | | 0 - OK 1 - Alarm |
| Superheat alarm counter alarm | H324 | R | | 0 - OK 1 - Alarm |
| Expansion valve value | H325 | R | | |
| Expansion valve alarm | H326 | R | | 0 - OK 1 - Alarm |
| Circuit 1 frost waring | H327 | R | | 0 - OK 1 - Alarm |
| Circuit 1 frost alarm | H328 | R | | 0 - OK 1 - Alarm |
| 0x2203 'Itf\Pdc.TT104' | H329 | R | 0.1 | |
| 0x2203 'Itf\Pdc.TT104' | H330 | R | | 0 - OK 1 - Alarm |
| 0x2203 'Itf\Pdc.TT102' | H331 | R | 0.1 | |
| 0x2203 'Itf\Pdc.TT102' | H332 | R | | 0 - OK 1 - Alarm |
| Defrost end temp. 1 value | H333 | R | 0.1 | |
| Defrost end temp. 1 sensor alarm | H334 | R | | 0 - OK 1 - Alarm |
| Defrost end temp. 2 value | H335 | R | 0.1 | |
| Defrost end temp. 2 sensor alarm | H336 | R | | 0 - OK 1 - Alarm |
| Defrost heater | H337 | R | | 0 - Off 1 - On |
| Reverse valve | H338 | R | | 0 - Off 1 - On |
| High dicharger gas temp. warning | H339 | R | | 0 - OK 1 - Alarm |
| High dicharger gas temp. alarm | H340 | R | | 0 - OK 1 - Alarm |
| Common discharge gas temp. | H341 | R | 0.1 | |
| Common discharge gas temp. sensor alarm | H342 | R | | |
| Low evaporating temp. alarm | H343 | R | | 0 - OK 1 - Alarm |
| Low evaporating pressure alarm | H344 | R | | 0 - OK 1 - Alarm |
| High condensing pressure alarm | H345 | R | | 0 - OK 1 - Alarm |
| No compressor is available alarm | H346 | R | | 0 - OK 1 - Alarm |
| All compressor in alarm | H347 | R | | 0 - OK 1 - Alarm |
| Compressor 1 fault | H348 | R | | 0 - OK 1 - Alarm |
| Compressor 1 possition | H349 | R | | |
| Compressor 1 fault counter alarm | H350 | R | | 0 - OK 1 - Alarm |
| Discharge temp. comp. 1 value | H351 | R | 0.1 | |
| Discharge temp. comp. 1 alarm | H352 | R | | 0 - OK 1 - Alarm |
| Discharge temp. comp. 1 alarm | H353 | R | | 0 - OK 1 - Alarm |
| Suct. temp. comp. 1 value | H354 | R | 0.1 | |
| Suct. temp. comp. 1 alarm | H355 | R | | 0 - OK 1 - Alarm |
| Superheat temp. comp. 1 value | H356 | R | 0.1 | |
| Superheat temp. comp. 1 alarm | H357 | R | | 0 - OK 1 - Alarm |
| Compressor 2 fault | H358 | R | | 0 - OK 1 - Alarm |
| Compressor 2 fault counter alarm | H359 | R | | 0 - OK 1 - Alarm |

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|---|---|---|---|---|
| Discharge temp. comp. 2 value | H360 | R | 0.1 | |
| Discharge temp. comp. 2 alarm | H361 | R | | 0 - OK 1 - Alarm |
| Discharge temp. comp. 2 alarm | H362 | R | | 0 - OK 1 - Alarm |
| Suct. temp. comp. 2 value | H363 | R | 0.1 | |
| Suct. temp. comp. 2 alarm | H364 | R | | 0 - OK 1 - Alarm |
| Superheat temp. comp. 2 value | H365 | R | 0.1 | |
| Superheat temp. comp. 2 alarm | H366 | R | | 0 - OK 1 - Alarm |
| Compressor 3 fault | H367 | R | | 0 - OK 1 - Alarm |
| Compressor 3 fault counter alarm | H368 | R | | 0 - OK 1 - Alarm |
| Discharge temp. comp. 3 value | H369 | R | 0.1 | |
| Discharge temp. comp. 3 alarm | H370 | R | | 0 - OK 1 - Alarm |
| Discharge temp. comp. 3 alarm | H371 | R | | 0 - OK 1 - Alarm |
| Suct. temp. comp. 3 value | H372 | R | | 0 - OK 1 - Alarm |
| Suct. temp. comp. 3 alarm | H373 | R | 0.1 | |
| Superheat temp. comp. 3 value | H374 | R | 0.1 | |
| Superheat temp. comp. 3 alarm | H375 | R | | 0 - OK 1 - Alarm |
| Compressor 1 status | H376 | R | | 1 - Off 2 - On |
| Compressor 1 work hours | H377 | R | | |
| Compressor 1 start up counter alarm | H378 | R | | 0 - OK 1 - Alarm |
| Compressor 1 Vacon freq. inverter alarm | H379 | R | | 0 - OK 1 - Alarm |
| Compressor 1 Vacon freq. inverter feedback alarm | H380 | R | | 0 - OK 1 - Alarm |
| Compressor 1 Vacon freq. inverter comm alarm alarm | H381 | R | | 0 - OK 1 - Alarm |
| Compressor 1 ABB freq. inverter feedback alarm | H382 | R | | 0 - OK 1 - Alarm |
| Compressor 1 ABB freq. inverter alarm | H383 | R | | 0 - OK 1 - Alarm |
| Compressor 1 ABB freq. inverter comm alarm alarm | H384 | R | | 0 - OK 1 - Alarm |
| Compressor 2 status | H385 | R | | 1 - Off 2 - On |
| Compressor 2 work hours | H386 | R | | |
| Compressor 2 start up counter alarm | H387 | R | | 0 - OK 1 - Alarm |
| Compressor 3 status | H388 | R | | 1 - Off 2 - On |
| Compressor 3 work hours | H389 | R | | |
| Compressor 2 start up counter alarm | H390 | R | | 0 - OK 1 - Alarm |
| Condenser position | H391 | R | | 0 - OK 1 - Alarm |
| Fan overload | H392 | R | | 0 - OK 1 - Alarm |
| Evap. low temp. alarm counter | H393 | R | | 0 - OK 1 - Alarm |
| Suction low pressure counter | H394 | R | | 0 - OK 1 - Alarm |
| Discharge high pressure counter | H395 | R | | 0 - OK 1 - Alarm |
| Compressor 1 high pressure alarm | H396 | R | | 0 - OK 1 - Alarm |
| Compressor 1 oil alarm | H397 | R | | 0 - OK 1 - Alarm |
| Compressor 1 motor overload | H398 | R | | 0 - OK 1 - Alarm |
| Compressor 1 circuit braker alarm | H399 | R | | 0 - OK 1 - Alarm |
| Compressor 1 frequency alarm | H400 | R | | 0 - OK 1 - Alarm |
| Compressor 2 high pressure alarm | H401 | R | | 0 - OK 1 - Alarm |
| Compressor 2 oil alarm | H402 | R | | 0 - OK 1 - Alarm |
| Compressor 2 motor overload | H403 | R | | 0 - OK 1 - Alarm |
| Compressor 2 circuit braker alarm | H404 | R | | 0 - OK 1 - Alarm |
| Compressor 3 high pressure alarm | H405 | R | | 0 - OK 1 - Alarm |
| Compressor 3 oil alarm | H406 | R | | 0 - OK 1 - Alarm |
| Compressor 3 motor overload | H407 | R | | 0 - OK 1 - Alarm |

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|---|---|---|---|---|
| Compressor 3 circuit braker alarm | H408 | R | | 0 - OK 1 - Alarm |
| Modbus fan 1 alarm | H409 | R | | 0 - OK 1 - Alarm |
| Modbus fan 1 comunication alarm | H410 | R | | 0 - OK 1 - Alarm |
| Modbus fan 2 alarm | H411 | R | | 0 - OK 1 - Alarm |
| Modbus fan 2 comunication alarm | H412 | R | | 0 - OK 1 - Alarm |
| Modbus fan 3 alarm | H413 | R | | 0 - OK 1 - Alarm |
| Modbus fan 3 comunication alarm | H414 | R | | 0 - OK 1 - Alarm |
| Modbus fan 4 alarm | H415 | R | | 0 - OK 1 - Alarm |
| Modbus fan 4 comunication alarm | H416 | R | | 0 - OK 1 - Alarm |
| Modbus fan 5 alarm | H417 | R | | 0 - OK 1 - Alarm |
| Modbus fan 5 comunication alarm | H418 | R | | 0 - OK 1 - Alarm |
| Modbus fan 6 alarm | H419 | R | | 0 - OK 1 - Alarm |
| Modbus fan 6 comunication alarm | H420 | R | | 0 - OK 1 - Alarm |
| Modbus fan 7 alarm | H421 | R | | 0 - OK 1 - Alarm |
| Modbus fan 7 comunication alarm | H422 | R | | 0 - OK 1 - Alarm |
| Modbus fan 8 alarm | H423 | R | | 0 - OK 1 - Alarm |
| Modbus fan 8 comunication alarm | H424 | R | | 0 - OK 1 - Alarm |
| Modbus fan 9 alarm | H425 | R | | 0 - OK 1 - Alarm |
| Modbus fan 9 comunication alarm | H426 | R | | 0 - OK 1 - Alarm |
| Modbus fan 10 alarm | H427 | R | | 0 - OK 1 - Alarm |
| Modbus fan 10 comunication alarm | H428 | R | | 0 - OK 1 - Alarm |
| Modbus fan 11 alarm | H429 | R | | 0 - OK 1 - Alarm |
| Modbus fan 11 comunication alarm | H430 | R | | 0 - OK 1 - Alarm |
| Modbus fan 12 alarm | H431 | R | | 0 - OK 1 - Alarm |
| Modbus fan 12 comunication alarm | H432 | R | | 0 - OK 1 - Alarm |
| Superheat setpoint circuit 1 from Carel Evd | H433 | R | | 0 - OK 1 - Alarm |
| St-up opening setpoint circuit 1 from Carel Evd | H434 | R | | 0 - OK 1 - Alarm |
| Evaporating pressure circuit 1 from Carel Evd | H435 | R | | 0 - OK 1 - Alarm |
| Suction gas temperature circuit 1 from Carel Evd | H436 | R | | 0 - OK 1 - Alarm |
| Actual superheat circuit 1 from Carel Evd | H437 | R | | 0 - OK 1 - Alarm |
| Actual opening of eev circuit 1 from Carel Evd | H438 | R | | 0 - OK 1 - Alarm |
| Evaporating temperature circuit 1 from Carel Evd | H439 | R | | 0 - OK 1 - Alarm |
| Evaporation pressure sensor from EVD circuit 1 | H440 | R | | 0 - OK 1 - Alarm |
| Suctiong gas temp. sensor from EVD circuit 1 | H441 | R | | 0 - OK 1 - Alarm |
| MOP alarm from EVD circuit 1 | H442 | R | | 0 - OK 1 - Alarm |
| LOP alarm from EVD circuit 1 | H443 | R | | 0 - OK 1 - Alarm |
| Low superheat alarm from EVD circuit 1 | H444 | R | | 0 - OK 1 - Alarm |
| Expansion valve alarm from EVD circuit 1 | H445 | R | | 0 - OK 1 - Alarm |
| Carel EVD communication error circuit 1 | H446 | R | | 0 - OK 1 - Alarm |
| MVL value circuit 1 | H447 | R | | 0 - OK 1 - Alarm |
| MVL alarm circuit 1 | H448 | R | | 0 - OK 1 - Alarm |
| MVL feedback value circuit 1 | H449 | R | | 0 - OK 1 - Alarm |
| MVL feedback alarm circuit 1 | H450 | R | | 0 - OK 1 - Alarm |
| SH filtred value | H451 | R | | 0 - OK 1 - Alarm |
| SH filtred alarm | H452 | R | | 0 - OK 1 - Alarm |
| Circuit 2 parameters | | | | |
| Condensing pressure value | H500 | R | 0.1 | |
| Condensing pressure alarm | H501 | R | | 0 - OK 1 - Alarm |
| Evaporating pressure value | H502 | R | 0.1 | |

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|---|---|---|---|---|
| Evaporating pressure alarm | H503 | R | | 0 - OK 1 - Alarm |
| High pressure alarm | H504 | R | | 0 - OK 1 - Alarm |
| High pressure alarm counter alarm | H505 | R | | 0 - OK 1 - Alarm |
| Low pressure alarm | H506 | R | | 0 - OK 1 - Alarm |
| Low pressure alarm counter alarm | H507 | R | | 0 - OK 1 - Alarm |
| Conensing max pressure | H508 | R | | 0 - OK 1 - Alarm |
| Conensing min pressure | H509 | R | | 0 - OK 1 - Alarm |
| MOP alarm | H510 | R | | 0 - OK 1 - Alarm |
| MOP counter alarm | H511 | R | | 0 - OK 1 - Alarm |
| LOP alarm | H512 | R | | 0 - OK 1 - Alarm |
| LOP counter alarm | H513 | R | | 0 - OK 1 - Alarm |
| Pressure ratio max alarm | H514 | R | | 0 - OK 1 - Alarm |
| Pressure ratio min alarm | H515 | R | | 0 - OK 1 - Alarm |
| Evaporating temperature | H516 | R | 0.1 | |
| Condensing tempertature | H517 | R | 0.1 | |
| Circuit 2 supply temp. value | H518 | R | 0.1 | |
| Circuit 2 supply temp. sensor alarm | H519 | R | | 0 - OK 1 - Alarm |
| Suction temperature value | H520 | R | 0.1 | |
| Suction temperature sensor fault | H521 | R | | 0 - OK 1 - Alarm |
| Superheat value | H522 | R | 0.1 | |
| Superheat alarm | H523 | R | | 0 - OK 1 - Alarm |
| Superheat alarm counter alarm | H524 | R | | 0 - OK 1 - Alarm |
| Expansion valve value | H525 | R | | |
| Expansion valve alarm | H526 | R | | 0 - OK 1 - Alarm |
| Circuit 2 frost waring | H527 | R | | 0 - OK 1 - Alarm |
| Circuit 2 frost alarm | H528 | R | | 0 - OK 1 - Alarm |
| 0x2203 'Itf\Pdc.TT104' | H529 | R | 0.1 | |
| 0x2203 'Itf\Pdc.TT104' | H530 | R | | 0 - OK 1 - Alarm |
| 0x2203 'Itf\Pdc.TT102' | H531 | R | 0.1 | |
| 0x2203 'Itf\Pdc.TT102' | H532 | R | | 0 - OK 1 - Alarm |
| Defrost end temp. 1 value | H533 | R | 0.1 | |
| Defrost end temp. 1 sensor alarm | H534 | R | | 0 - OK 1 - Alarm |
| Defrost end temp. 2 value | H535 | R | 0.1 | |
| Defrost end temp. 2 sensor alarm | H536 | R | | 0 - OK 1 - Alarm |
| Defrost heater | H537 | R | | 0 - Off 1 - On |
| Reverse valve | H538 | R | | 0 - Off 1 - On |
| High dicharger gas temp. warning | H539 | R | | 0 - OK 1 - Alarm |
| High dicharger gas temp. alarm | H540 | R | | 0 - OK 1 - Alarm |
| Common discharge gas temp. | H541 | R | 0.1 | |
| Common discharge gas temp. sensor alarm | H542 | R | | |
| Low evaporating temp. alarm | H543 | R | | 0 - OK 1 - Alarm |
| Low evaporating pressure alarm | H544 | R | | 0 - OK 1 - Alarm |
| High condensing pressure alarm | H545 | R | | 0 - OK 1 - Alarm |
| No compressor is available alarm | H546 | R | | 0 - OK 1 - Alarm |
| All compressor in alarm | H547 | R | | 0 - OK 1 - Alarm |
| Compressor 1 fault | H548 | R | | 0 - OK 1 - Alarm |
| Compressor 1 possition | H549 | R | | |
| Compressor 1 fault counter alarm | H550 | R | | 0 - OK 1 - Alarm |
| Discharge temp. comp. 1 value | H551 | R | 0.1 | |

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|---|---|---|---|---|
| Discharge temp. comp. 1 alarm | H552 | R | | 0 - OK 1 - Alarm |
| Discharge temp. comp. 1 alarm | H553 | R | | 0 - OK 1 - Alarm |
| Suct. temp. comp. 1 value | H554 | R | 0.1 | |
| Suct. temp. comp. 1 alarm | H555 | R | | 0 - OK 1 - Alarm |
| Superheat temp. comp. 1 value | H556 | R | 0.1 | |
| Superheat temp. comp. 1 alarm | H557 | R | | 0 - OK 1 - Alarm |
| Compressor 2 fault | H558 | R | | 0 - OK 1 - Alarm |
| Compressor 2 fault counter alarm | H559 | R | | 0 - OK 1 - Alarm |
| Discharge temp. comp. 2 value | H560 | R | 0.1 | |
| Discharge temp. comp. 2 alarm | H561 | R | | 0 - OK 1 - Alarm |
| Discharge temp. comp. 2 alarm | H562 | R | | 0 - OK 1 - Alarm |
| Suct. temp. comp. 2 value | H563 | R | 0.1 | |
| Suct. temp. comp. 2 alarm | H564 | R | | 0 - OK 1 - Alarm |
| Superheat temp. comp. 2 value | H565 | R | 0.1 | |
| Superheat temp. comp. 2 alarm | H566 | R | | 0 - OK 1 - Alarm |
| Compressor 3 fault | H567 | R | | 0 - OK 1 - Alarm |
| Compressor 3 fault counter alarm | H568 | R | | 0 - OK 1 - Alarm |
| Discharge temp. comp. 3 value | H569 | R | 0.1 | |
| Discharge temp. comp. 3 alarm | H570 | R | | 0 - OK 1 - Alarm |
| Discharge temp. comp. 3 alarm | H571 | R | | 0 - OK 1 - Alarm |
| Suct. temp. comp. 3 value | H572 | R | | 0 - OK 1 - Alarm |
| Suct. temp. comp. 3 alarm | H573 | R | 0.1 | |
| Superheat temp. comp. 3 value | H574 | R | 0.1 | |
| Superheat temp. comp. 3 alarm | H575 | R | | 0 - OK 1 - Alarm |
| Compressor 1 status | H576 | R | | 1 - Off 2 - On |
| Compressor 1 work hours | H577 | R | | |
| Compressor 1 start up counter alarm | H578 | R | | 0 - OK 1 - Alarm |
| Compressor 1 Vacon freq. inverter alarm | H579 | R | | 0 - OK 1 - Alarm |
| Compressor 1 Vacon freq. inverter feedback alarm | H580 | R | | 0 - OK 1 - Alarm |
| Compressor 1 Vacon freq. inverter comm alarm alarm | H581 | R | | 0 - OK 1 - Alarm |
| Compressor 1 ABB freq. inverter feedback alarm | H582 | R | | 0 - OK 1 - Alarm |
| Compressor 1 ABB freq. inverter alarm | H583 | R | | 0 - OK 1 - Alarm |
| Compressor 1 ABB freq. inverter comm alarm alarm | H584 | R | | 0 - OK 1 - Alarm |
| Compressor 2 status | H585 | R | | 1 - Off 2 - On |
| Compressor 2 work hours | H586 | R | | |
| Compressor 2 start up counter alarm | H587 | R | | 0 - OK 1 - Alarm |
| Compressor 3 status | H588 | R | | 1 - Off 2 - On |
| Compressor 3 work hours | H589 | R | | |
| Compressor 2 start up counter alarm | H590 | R | | 0 - OK 1 - Alarm |
| Condenser position | H591 | R | | 0 - OK 1 - Alarm |
| Fan overload | H592 | R | | 0 - OK 1 - Alarm |
| Evap. low temp. alarm counter | H593 | R | | 0 - OK 1 - Alarm |
| Suction low pressure counter | H594 | R | | 0 - OK 1 - Alarm |
| Discharge high pressure counter | H595 | R | | 0 - OK 1 - Alarm |
| Compressor 1 high pressure alarm | H596 | R | | 0 - OK 1 - Alarm |
| Compressor 1 oil alarm | H597 | R | | 0 - OK 1 - Alarm |
| Compressor 1 motor overload | H598 | R | | 0 - OK 1 - Alarm |
| Compressor 1 circuit braker alarm | H599 | R | | 0 - OK 1 - Alarm |

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| Compressor 1 frequency alarm | H600 | R | | 0 - OK 1 - Alarm |
| Compressor 2 high pressure alarm | H601 | R | | 0 - OK 1 - Alarm |
| Compressor 2 oil alarm | H602 | R | | 0 - OK 1 - Alarm |
| Compressor 2 motor overload | H603 | R | | 0 - OK 1 - Alarm |
| Compressor 2 circuit braker alarm | H604 | R | | 0 - OK 1 - Alarm |
| Compressor 3 high pressure alarm | H605 | R | | 0 - OK 1 - Alarm |
| Compressor 3 oil alarm | H606 | R | | 0 - OK 1 - Alarm |
| Compressor 3 motor overload | H607 | R | | 0 - OK 1 - Alarm |
| Compressor 3 circuit braker alarm | H608 | R | | 0 - OK 1 - Alarm |
| Modbus fan 1 alarm | H609 | R | | 0 - OK 1 - Alarm |
| Modbus fan 1 comunication alarm | H610 | R | | 0 - OK 1 - Alarm |
| Modbus fan 2 alarm | H611 | R | | 0 - OK 1 - Alarm |
| Modbus fan 2 comunication alarm | H612 | R | | 0 - OK 1 - Alarm |
| Modbus fan 3 alarm | H613 | R | | 0 - OK 1 - Alarm |
| Modbus fan 3 comunication alarm | H614 | R | | 0 - OK 1 - Alarm |
| Modbus fan 4 alarm | H615 | R | | 0 - OK 1 - Alarm |
| Modbus fan 4 comunication alarm | H616 | R | | 0 - OK 1 - Alarm |
| Modbus fan 5 alarm | H617 | R | | 0 - OK 1 - Alarm |
| Modbus fan 5 comunication alarm | H618 | R | | 0 - OK 1 - Alarm |
| Modbus fan 6 alarm | H619 | R | | 0 - OK 1 - Alarm |
| Modbus fan 6 comunication alarm | H620 | R | | 0 - OK 1 - Alarm |
| Modbus fan 7 alarm | H621 | R | | 0 - OK 1 - Alarm |
| Modbus fan 7 comunication alarm | H622 | R | | 0 - OK 1 - Alarm |
| Modbus fan 8 alarm | H623 | R | | 0 - OK 1 - Alarm |
| Modbus fan 8 comunication alarm | H624 | R | | 0 - OK 1 - Alarm |
| Modbus fan 9 alarm | H625 | R | | 0 - OK 1 - Alarm |
| Modbus fan 9 comunication alarm | H626 | R | | 0 - OK 1 - Alarm |
| Modbus fan 10 alarm | H627 | R | | 0 - OK 1 - Alarm |
| Modbus fan 10 comunication alarm | H628 | R | | 0 - OK 1 - Alarm |
| Modbus fan 11 alarm | H629 | R | | 0 - OK 1 - Alarm |
| Modbus fan 11 comunication alarm | H630 | R | | 0 - OK 1 - Alarm |
| Modbus fan 12 alarm | H631 | R | | 0 - OK 1 - Alarm |
| Modbus fan 12 comunication alarm | H632 | R | | 0 - OK 1 - Alarm |
| Superheat setpoint circuit 2 from Carel Evd | H633 | R | | 0 - OK 1 - Alarm |
| St-up opening setpoint circuit 2 from Carel Evd | H634 | R | | 0 - OK 1 - Alarm |
| Evaporating pressure circuit 2 from Carel Evd | H635 | R | | 0 - OK 1 - Alarm |
| Suction gas temperature circuit 2 from Carel Evd | H636 | R | | 0 - OK 1 - Alarm |
| Actual superheat circuit 2 from Carel Evd | H637 | R | | 0 - OK 1 - Alarm |
| Actual opening of eev circuit 2 from Carel Evd | H638 | R | | 0 - OK 1 - Alarm |
| Evaporating temperature circuit 2 from Carel Evd | H639 | R | | 0 - OK 1 - Alarm |
| Evaporation pressure sensor from EVD circuit 2 | H640 | R | | 0 - OK 1 - Alarm |
| Suctiong gas temp. sensor from EVD circuit 2 | H641 | R | | 0 - OK 1 - Alarm |
| MOP alarm from EVD circuit 2 | H642 | R | | 0 - OK 1 - Alarm |
| LOP alarm from EVD circuit 2 | H643 | R | | 0 - OK 1 - Alarm |
| Low superheat alarm from EVD circuit 2 | H644 | R | | 0 - OK 1 - Alarm |
| Expansion valve alarm from EVD circuit 2 | H645 | R | | 0 - OK 1 - Alarm |
| Carel EVD communication error circuit 2 | H646 | R | | 0 - OK 1 - Alarm |
| MVL value circuit 2 | H647 | R | | 0 - OK 1 - Alarm |
| MVL alarm circuit 2 | H648 | R | | 0 - OK 1 - Alarm |

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| MVL feedback value circuit 2 | H649 | R | | 0 - OK 1 - Alarm |
| MVL feedback alarm circuit 2 | H650 | R | | 0 - OK 1 - Alarm |
| SH filtred value | H651 | R | | 0 - OK 1 - Alarm |
| SH filtred alarm | H652 | R | | 0 - OK 1 - Alarm |
| Circuit 3 parameters | | | | |
| Condensing pressure value | H700 | R | 0.1 | |
| Condensing pressure alarm | H701 | R | | 0 - OK 1 - Alarm |
| Evaporating pressure value | H702 | R | 0.1 | |
| Evaporating pressure alarm | H703 | R | | 0 - OK 1 - Alarm |
| High pressure alarm | H704 | R | | 0 - OK 1 - Alarm |
| High pressure alarm counter alarm | H705 | R | | 0 - OK 1 - Alarm |
| Low pressure alarm | H706 | R | | 0 - OK 1 - Alarm |
| Low pressure alarm counter alarm | H707 | R | | 0 - OK 1 - Alarm |
| Conensing max pressure | H708 | R | | 0 - OK 1 - Alarm |
| Conensing min pressure | H709 | R | | 0 - OK 1 - Alarm |
| MOP alarm | H710 | R | | 0 - OK 1 - Alarm |
| MOP counter alarm | H711 | R | | 0 - OK 1 - Alarm |
| LOP alarm | H712 | R | | 0 - OK 1 - Alarm |
| LOP counter alarm | H713 | R | | 0 - OK 1 - Alarm |
| Pressure ratio max alarm | H714 | R | | 0 - OK 1 - Alarm |
| Pressure ratio min alarm | H715 | R | | 0 - OK 1 - Alarm |
| Evaporating temperature | H716 | R | 0.1 | |
| Condensing tempertature | H717 | R | 0.1 | |
| Circuit 2 supply temp. value | H718 | R | 0.1 | |
| Circuit 2 supply temp. sensor alarm | H719 | R | | 0 - OK 1 - Alarm |
| Suction temperature value | H720 | R | 0.1 | |
| Suction temperature sensor fault | H721 | R | | 0 - OK 1 - Alarm |
| Superheat value | H722 | R | 0.1 | |
| Superheat alarm | H723 | R | | 0 - OK 1 - Alarm |
| Superheat alarm counter alarm | H724 | R | | 0 - OK 1 - Alarm |
| Expansion valve value | H725 | R | | |
| Expansion valve alarm | H726 | R | | 0 - OK 1 - Alarm |
| Circuit 2 frost waring | H727 | R | | 0 - OK 1 - Alarm |
| Circuit 2 frost alarm | H728 | R | | 0 - OK 1 - Alarm |
| 0x2203 'Itf\Pdc.TT104' | H729 | R | 0.1 | |
| 0x2203 'Itf\Pdc.TT104' | H730 | R | | 0 - OK 1 - Alarm |
| 0x2203 'Itf\Pdc.TT102' | H731 | R | 0.1 | |
| 0x2203 'Itf\Pdc.TT102' | H732 | R | | 0 - OK 1 - Alarm |
| Defrost end temp. 1 value | H733 | R | 0.1 | |
| Defrost end temp. 1 sensor alarm | H734 | R | | 0 - OK 1 - Alarm |
| Defrost end temp. 2 value | H735 | R | 0.1 | |
| Defrost end temp. 2 sensor alarm | H736 | R | | 0 - OK 1 - Alarm |
| Defrost heater | H737 | R | | 0 - Off 1 - On |
| Reverse valve | H738 | R | | 0 - Off 1 - On |
| High dicharger gas temp. warning | H739 | R | | 0 - OK 1 - Alarm |
| High dicharger gas temp. alarm | H740 | R | | 0 - OK 1 - Alarm |
| Common discharge gas temp. | H741 | R | 0.1 | |
| Common discharge gas temp. sensor alarm | H742 | R | | |
| Low evaporating temp. alarm | H743 | R | | 0 - OK 1 - Alarm |

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|---|---|---|---|---|
| Low evaporating pressure alarm | H744 | R | | 0 - OK 1 - Alarm |
| High condensing pressure alarm | H745 | R | | 0 - OK 1 - Alarm |
| No compressor is available alarm | H746 | R | | 0 - OK 1 - Alarm |
| All compressor in alarm | H747 | R | | 0 - OK 1 - Alarm |
| Compressor 1 fault | H748 | R | | 0 - OK 1 - Alarm |
| Compressor 1 possition | H749 | R | | |
| Compressor 1 fault counter alarm | H750 | R | | 0 - OK 1 - Alarm |
| Discharge temp. comp. 1 value | H751 | R | 0.1 | |
| Discharge temp. comp. 1 alarm | H752 | R | | 0 - OK 1 - Alarm |
| Discharge temp. comp. 1 alarm | H753 | R | | 0 - OK 1 - Alarm |
| Suct. temp. comp. 1 value | H754 | R | 0.1 | |
| Suct. temp. comp. 1 alarm | H755 | R | | 0 - OK 1 - Alarm |
| Superheat temp. comp. 1 value | H756 | R | 0.1 | |
| Superheat temp. comp. 1 alarm | H757 | R | | 0 - OK 1 - Alarm |
| Compressor 2 fault | H758 | R | | 0 - OK 1 - Alarm |
| Compressor 2 fault counter alarm | H759 | R | | 0 - OK 1 - Alarm |
| Discharge temp. comp. 2 value | H760 | R | 0.1 | |
| Discharge temp. comp. 2 alarm | H761 | R | | 0 - OK 1 - Alarm |
| Discharge temp. comp. 2 alarm | H762 | R | | 0 - OK 1 - Alarm |
| Suct. temp. comp. 2 value | H763 | R | 0.1 | |
| Suct. temp. comp. 2 alarm | H764 | R | | 0 - OK 1 - Alarm |
| Superheat temp. comp. 2 value | H765 | R | 0.1 | |
| Superheat temp. comp. 2 alarm | H766 | R | | 0 - OK 1 - Alarm |
| Compressor 3 fault | H767 | R | | 0 - OK 1 - Alarm |
| Compressor 3 fault counter alarm | H768 | R | | 0 - OK 1 - Alarm |
| Discharge temp. comp. 3 value | H769 | R | 0.1 | |
| Discharge temp. comp. 3 alarm | H770 | R | | 0 - OK 1 - Alarm |
| Discharge temp. comp. 3 alarm | H771 | R | | 0 - OK 1 - Alarm |
| Suct. temp. comp. 3 value | H772 | R | | 0 - OK 1 - Alarm |
| Suct. temp. comp. 3 alarm | H773 | R | 0.1 | |
| Superheat temp. comp. 3 value | H774 | R | 0.1 | |
| Superheat temp. comp. 3 alarm | H775 | R | | 0 - OK 1 - Alarm |
| Compressor 1 status | H776 | R | | 1 - Off 2 - On |
| Compressor 1 work hours | H777 | R | | |
| Compressor 1 start up counter alarm | H778 | R | | 0 - OK 1 - Alarm |
| Compressor 1 Vacon freq. inverter alarm | H779 | R | | 0 - OK 1 - Alarm |
| Compressor 1 Vacon freq. inverter feedback alarm | H780 | R | | 0 - OK 1 - Alarm |
| Compressor 1 Vacon freq. inverter comm alarm alarm | H781 | R | | 0 - OK 1 - Alarm |
| Compressor 1 ABB freq. inverter feedback alarm | H782 | R | | 0 - OK 1 - Alarm |
| Compressor 1 ABB freq. inverter alarm | H783 | R | | 0 - OK 1 - Alarm |
| Compressor 1 ABB freq. inverter comm alarm alarm | H784 | R | | 0 - OK 1 - Alarm |
| Compressor 2 status | H785 | R | | 1 - Off 2 - On |
| Compressor 2 work hours | H786 | R | | |
| Compressor 2 start up counter alarm | H787 | R | | 0 - OK 1 - Alarm |
| Compressor 3 status | H788 | R | | 1 - Off 2 - On |
| Compressor 3 work hours | H789 | R | | |
| Compressor 2 start up counter alarm | H790 | R | | 0 - OK 1 - Alarm |
| Condenser position | H791 | R | | 0 - OK 1 - Alarm |

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|---|---|---|---|---|
| Fan overload | H792 | R | | 0 - OK 1 - Alarm |
| Evap. low temp. alarm counter | H793 | R | | 0 - OK 1 - Alarm |
| Suction low pressure counter | H794 | R | | 0 - OK 1 - Alarm |
| Discharge high pressure counter | H795 | R | | 0 - OK 1 - Alarm |
| Compressor 1 high pressure alarm | H796 | R | | 0 - OK 1 - Alarm |
| Compressor 1 oil alarm | H797 | R | | 0 - OK 1 - Alarm |
| Compressor 1 motor overload | H798 | R | | 0 - OK 1 - Alarm |
| Compressor 1 circuit braker alarm | H799 | R | | 0 - OK 1 - Alarm |
| Compressor 1 frequency alarm | H800 | R | | 0 - OK 1 - Alarm |
| Compressor 2 high pressure alarm | H801 | R | | 0 - OK 1 - Alarm |
| Compressor 2 oil alarm | H802 | R | | 0 - OK 1 - Alarm |
| Compressor 2 motor overload | H803 | R | | 0 - OK 1 - Alarm |
| Compressor 2 circuit braker alarm | H804 | R | | 0 - OK 1 - Alarm |
| Compressor 3 high pressure alarm | H805 | R | | 0 - OK 1 - Alarm |
| Compressor 3 oil alarm | H806 | R | | 0 - OK 1 - Alarm |
| Compressor 3 motor overload | H807 | R | | 0 - OK 1 - Alarm |
| Compressor 3 circuit braker alarm | H808 | R | | 0 - OK 1 - Alarm |
| Modbus fan 1 alarm | H809 | R | | 0 - OK 1 - Alarm |
| Modbus fan 1 comunication alarm | H810 | R | | 0 - OK 1 - Alarm |
| Modbus fan 2 alarm | H811 | R | | 0 - OK 1 - Alarm |
| Modbus fan 2 comunication alarm | H812 | R | | 0 - OK 1 - Alarm |
| Modbus fan 3 alarm | H813 | R | | 0 - OK 1 - Alarm |
| Modbus fan 3 comunication alarm | H814 | R | | 0 - OK 1 - Alarm |
| Modbus fan 4 alarm | H815 | R | | 0 - OK 1 - Alarm |
| Modbus fan 4 comunication alarm | H816 | R | | 0 - OK 1 - Alarm |
| Modbus fan 5 alarm | H817 | R | | 0 - OK 1 - Alarm |
| Modbus fan 5 comunication alarm | H818 | R | | 0 - OK 1 - Alarm |
| Modbus fan 6 alarm | H819 | R | | 0 - OK 1 - Alarm |
| Modbus fan 6 comunication alarm | H820 | R | | 0 - OK 1 - Alarm |
| Modbus fan 7 alarm | H821 | R | | 0 - OK 1 - Alarm |
| Modbus fan 7 comunication alarm | H822 | R | | 0 - OK 1 - Alarm |
| Modbus fan 8 alarm | H823 | R | | 0 - OK 1 - Alarm |
| Modbus fan 8 comunication alarm | H824 | R | | 0 - OK 1 - Alarm |
| Modbus fan 9 alarm | H825 | R | | 0 - OK 1 - Alarm |
| Modbus fan 9 comunication alarm | H826 | R | | 0 - OK 1 - Alarm |
| Modbus fan 10 alarm | H827 | R | | 0 - OK 1 - Alarm |
| Modbus fan 10 comunication alarm | H828 | R | | 0 - OK 1 - Alarm |
| Modbus fan 11 alarm | H829 | R | | 0 - OK 1 - Alarm |
| Modbus fan 11 comunication alarm | H830 | R | | 0 - OK 1 - Alarm |
| Modbus fan 12 alarm | H831 | R | | 0 - OK 1 - Alarm |
| Modbus fan 12 comunication alarm | H832 | R | | 0 - OK 1 - Alarm |
| Superheat setpoint circuit 3 from Carel Evd | H833 | R | | 0 - OK 1 - Alarm |
| St-up opening setpoint circuit 3 from Carel Evd | H834 | R | | 0 - OK 1 - Alarm |
| Evaporating pressure circuit 3 from Carel Evd | H835 | R | | 0 - OK 1 - Alarm |
| Suction gas temperature circuit 3 from Carel Evd | H836 | R | | 0 - OK 1 - Alarm |
| Actual superheat circuit 3 from Carel Evd | H837 | R | | 0 - OK 1 - Alarm |
| Actual opening of eev circuit 3 from Carel Evd | H838 | R | | 0 - OK 1 - Alarm |
| Evaporating temperature circuit 3 from Carel Evd | H839 | R | | 0 - OK 1 - Alarm |
| Evaporation pressure sensor from EVD circuit 3 | H840 | R | | 0 - OK 1 - Alarm |

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|---|---|---|---|---|
| Suctiong gas temp. sensor from EVD circuit 3 | H841 | R | | 0 - OK 1 - Alarm |
| MOP alarm from EVD circuit 3 | H842 | R | | 0 - OK 1 - Alarm |
| LOP alarm from EVD circuit 3 | H843 | R | | 0 - OK 1 - Alarm |
| Low superheat alarm from EVD circuit 3 | H844 | R | | 0 - OK 1 - Alarm |
| Expansion valve alarm from EVD circuit 3 | H845 | R | | 0 - OK 1 - Alarm |
| Carel EVD communication error circuit 3 | H846 | R | | 0 - OK 1 - Alarm |
| Free Cooling | | | | |
| Outside temp. value | H900 | R | 0.1 | |
| Outside temp. sensor fault | H901 | R | | 0 - OK 1 - Alarm |
| Free Cooling outlet temp. value | H902 | R | 0.1 | |
| Free Cooling outlet temp. alarm | H903 | R | | 0 - OK 1 - Alarm |
| Free Cooling temp. value | H904 | R | 0.1 | |
| Free Cooling temp. alarm | H905 | R | | 0 - OK 1 - Alarm |
| Free Cooling fail alarm | H906 | R | | 0 - OK 1 - Alarm |
| Free Cooling fail counter alarm | H907 | R | | 0 - OK 1 - Alarm |
| Free Cooling valve position | H908 | R | | |
| Free Cooling state | H909 | R | | 0 - Off 1 - On |
| Water/Water unit Condenser | | | | |
| Supply t. cond. value | H1000 | R | 0.1 | |
| Supply t. cond. sensor fault | H1001 | R | | 0 - OK 1 - Alarm |
| Return t. cond. value | H1002 | R | 0.1 | |
| Return t. cond. sensor fault | H1003 | R | | 0 - OK 1 - Alarm |
| Pump condenser status | H1004 | R | | 0 - Off 1 - On |
| Fault pump condenser | H1005 | R | | 0 - OK 1 - Alarm |
| Pump cond. flow det. status | H1006 | R | | 0 - Off 1 - On |
| Pump cond. flow det. alarm | H1007 | R | | 0 - OK 1 - Alarm |
| Cond. valve | H1008 | R | | |

# 4 BACnet

Enable BACnet in Main menu -> System -> Communic. Config select BACnet over MS/TP (T6 connector) or BACnet over IP (T-IP connector).

BACnet settings are in Main menu -> System -> Communications -> BACnet. For MS/TP set correct address.

| Object | Member ID | Description |
|---|---|---|
| Operation mode | | |
| 0x2302 'Cmn\OpModHMI' | OpMModHMI=20000 | Operation mode HMI |
| 0x230B 'Cmn\CmnOpMod' | CmnOpMod=20001 | Common operation mode |
| 0x2204 'Itf\Cmn.RemOn' | RemOn=20002 | Remote On/Off |
| 0x2302 'Cmn\OpModHMIEmgOff' | OpModHMIEmgOff=20003 | Emergency off |
| 0x2301 'Cmn\CapCtlSet.TRt' | CapCtlSetTRt=20004 | Cooling setpoint return |
| 0x2203 'Itf\Cmn.TOa' | TOa=20005 | Outdoor temp. |
| 0x2207 'Itf\Cmn.Alarm' | Alarm=20006 | Alarm output |
| 0x2204 'Itf\Cmn.GasAlarm' | GasAlarm=20007 | Gas leak alarm |
| Dispacher | | |
| 0x2203 'Itf\Dsp.TFl' | DspTFl=21000 | Supply temperature value |
| 0x2203 'Itf\Dsp.TRt' | DspTRt=21001 | Return temperature value |
| 0x2207 'Itf\Dsp.SuPuTwin.Cmd1' | DspSuPuTwin.Cmd1=21002 | Twin pump 1 status |
| 0x2207 'Itf\Dsp.SuPuTwin.Cmd2' | DspSuPuTwin.Cmd2=21003 | Twin pump 2 status |
| 0x2204 'Itf\Dsp.FltSuPu' | DspFltSuPu=21004 | Supply pump\Twin pump 1 alarm |
| 0x2204 'Itf\Dsp.FltSuPu2' | DspFltSuPu2=21005 | Twin pump 2 alarm |
| 0x2204 'Itf\Dsp.FlDet' | DspFlDet=21006 | Supply pump flow status |
| 0x2204 'Itf\Dsp.FlDetTwinPu' | DspFlDetTwin=21007 | Twin pump flow status |
| 0x2204 'Itf\Dsp.FlDetTwinPu.Cmd1' | DspFlDetTwinCmd1=21008 | Twin pump flow status |
| 0x2204 'Itf\Dsp.FlDetTwinPu.Cmd2' | DspFlDetTwinCmd2=21009 | Twin pump flow alarm |
| 0x2204 'Itf\Dsp.FrPrtWarn' | DspFrPrtWarn=21010 | Frost waring |
| 0x2204 'Itf\Dsp.FrPrt' | DspFrPrt=21011 | Frost alarm |
| 0x2207 'Itf\Dsp.SuPu' | DspSuPu=21012 | Supply pump |
| Circuit 1 | | |
| 0x2203 'Itf\Pdc.PCdn' | PdcPCnd=22000 | Condensing pressure |
| 0x2203 'Itf\Pdc.PEvp' | PdcPEvp=22001 | Evaporating pressure |
| 0x2204 'Itf\Pdc.HPDet' | PdcHPDet=22002 | High pressure switch |
| 0x2200 'Itf\Pdc.HPDet(Cnt)' | PdcHPDetCnt=22003 | High pressure switch counter |
| 0x2204 'Itf\Pdc.LPDet' | PdcLPDet=22004 | Low pressure switch |
| 0x2200 'Itf\Pdc.LPDet(Cnt)' | PdcLPDetCnt=22005 | Low pressure switch counter |
| 0x2204 'Itf\Pdc.HPmax' | PdcHPmax=22006 | Condensing max pressure |
| 0x2204 'Itf\Pdc.HPmin' | PdcHPmin=22007 | Condensing min pressure |
| 0x2204 'Itf\Pdc.MOP' | PdcMOP=22008 | MOP alarm |
| 0x2200 'Itf\Pdc.MOP(Cnt)' | PdcMOPCnt=22009 | MOP alarm counter |
| 0x2204 'Itf\Pdc.LOP' | PdcLOP=22010 | LOP alarm |
| 0x2200 'Itf\Pdc.LOP(Cnt)' | PdcLOPCnt=22011 | LOP alarm counter |
| 0x2204 'Itf\Pdc.PRmax' | PdcPRmax=22012 | Pressure ratio max alarm |

| | | |
|---|---|---|
| 0x2204 'Itf\Pdc.PRmin' | PdcPRmin=22013 | Pressure ratio min alarm |
| 0x2203 'Itf\Pdc.TEvp' | PdcTEvp=22014 | Evaporating temperature |
| 0x2203 'Itf\Pdc.TCdn' | PdcTCnd=22015 | Condensing temperature |
| 0x2203 'Itf\Pdc.SH' | PdcSH=22016 | Superheat value |
| 0x2206 'Itf\Pdc.EEV' | PdcEEV=22017 | Expansion valve value |
| 0x2204 'Itf\Pdc.NoCprAvl' | PdcNoCprAvl=22018 | No compressor is available alarm |
| 0x2204 'Itf\Pdc.AllCprAlm' | PdcAllCprAlm=22019 | All compressor in alarm |
| 0x2208 'Itf\Pdc.CmdCpr1' | PdcCmdCpr1=22020 | Compressor 1 status |
| 0x2204 'Itf\Pdc.FltCpr1' | PdcFltCpr1=22021 | Compressor 1 fault |
| 0x2208 'Itf\Pdc.CmdCpr2' | PdcCmdCpr2=22022 | Compressor 2 status |
| 0x2204 'Itf\Pdc.FltCpr2' | PdcFltCpr2=22023 | Compressor 2 fault |
| 0x2208 'Itf\Pdc.CmdCpr3' | PdcCmdCpr3=22024 | Compressor 3 status |
| 0x2204 'Itf\Pdc.FltCpr3' | PdcFltCpr3=22025 | Compressor 3 fault |
| 0x2206 'Itf\Pdc.SrcFanPos' | PdcSrcFanPos=22026 | Condenser position |
| 0x2207 'Itf\Pdc.SrcFan' | PdcSrcFan1=22027 | Fan 1 status |
| 0x2207 'Itf\Pdc.SrcFan2' | PdcSrcFan2=22028 | Fan 2 status |
| 0x2204 'Itf\Pdc.FltSrcFan' | PdcFltSrcFan=22029 | Fan overload |
| 0x2203 'Itf\Pdc.TFl' | PdcTFl=22030 | Supply temp. |
| 0x2203 'Itf\Pdc.TDcrgCpr1' | PdcTDcrgCpr1=22031 | Discherge gas comp. 1 |
| 0x2204 'Itf\Pdc.TDcrgAlrmCpr1' | PdcTDcrgAlrmCpr1=22032 | Discherge gas comp. 1 alarm |
| 0x2203 'Itf\Pdc.TSuctR290Cpr1' | PdcTSuctR290Cpr1=22033 | Suct. Gas temp. comp. 1 |
| 0x2203 'Itf\Pdc.SHR290Cpr1' | PdcSHR290Cpr1=22034 | Superheat comp. 1 |
| 0x2203 'Itf\Pdc.TDcrgCpr2' | PdcTDcrgCpr2=22035 | Discherge gas comp. 2 |
| 0x2204 'Itf\Pdc.TDcrgAlrmCpr2' | PdcTDcrgAlrmCpr2=22036 | Discherge gas comp. 2 alarm |
| 0x2203 'Itf\Pdc.TSuctR290Cpr2' | PdcTSuctR290Cpr2=22037 | Suct. Gas temp. comp. 2 |
| 0x2203 'Itf\Pdc.SHR290Cpr2' | PdcSHR290Cpr2=22038 | Superheat comp. 2 |
| 0x2203 'Itf\Pdc.TDcrgCpr3' | PdcTDcrgCpr3=22039 | Discherge gas comp. 3 |
| 0x2204 'Itf\Pdc.TDcrgAlrmCpr3' | PdcTDcrgAlrmCpr3=22040 | Discherge gas comp. 3 alarm |
| 0x2203 'Itf\Pdc.TSuctR290Cpr3' | PdcTSuctR290Cpr3=22041 | Suct. Gas temp. comp. 3 |
| 0x2203 'Itf\Pdc.SHR290Cpr3' | PdcSHR290Cpr3=22042 | Superheat comp. 3 |
| 0x2204 'Itf\Pdc.SuctLP' | PdcSuctLP=22043 | Suctiong gas alarm |
| 0x2204 'Itf\Pdc.DschHP' | PdcDschHP=22044 | Dicharge gas alarm |
| 0x2204 'Itf\Pdc.FcAlCpr1' | PdcFcAlCpr1=22045 | Vacon FC alarm |
| 0x2204 'Itf\Pdc.FcAlFBCpr1' | PdcFcAlFBCpr1=22046 | Vacon FC feedback alarm |
| 0x2204 'Itf\Pdc.FcAlComCpr1' | PdcFcAlComCpr1=22047 | Vacon FC communication alarm |
| 0x2204 'Itf\Pdc.AbbFcAlFBCpr1' | PdcAbbFcAlFBCpr1=22048 | ABB FC alarm |
| 0x2204 'Itf\Pdc.AbbFcAlCpr1' | PdcAbbFcAlFBCpr1=22049 | ABB FC feedback alarm |
| 0x2204 'Itf\Pdc.AbbFcAlComCpr1' | PdcAbbFcAlComCpr1=22050 | ABB FC communication alarm |
| 0x2203 'Itf\Pdc.TSuct' | PdcTSuct=22051 | Suct. Gas temp. |
| 0x2200 'Itf\Pdc.SH(Cnt)' | PdcSHCnt=22052 | Superheat alarm counter |
| 0x2200 'Itf\Pdc.SuctLP(Cnt)' | PdcSuctLP(Cnt)=22053 | Suctiong gas alarm counter |
| 0x2200 'Itf\Pdc.DschHP(Cnt)' | PdcDschLP(Cnt)=22054 | Dicharge gas alarm counter |
| 0x2200 'Itf\Pdc.Flt(Cnt)Cpr1' | PdcFlt(Cnt)Cpr1=22055 | Compressor 1 fault counter |
| 0x2200 'Itf\Pdc.Flt(Cnt)Cpr2' | PdcFlt(Cnt)Cpr2=22056 | Compressor 2 fault counter |
| 0x230A 'Itf\Pdc.VcnFC1Cur' | PdcVcnFC1Cur=22057 | Vacon current |
| 0x230A 'Itf\Pdc.VcnFC1Temp' | PdcVcnFC1Temp=22058 | Vacon temp. |
| 0x2200 'Itf\Pdc.RsttCntCpr1' | PdcRsttCntCpr1=22059 | Start up comp.1 counter alarm |
| 0x2200 'Itf\Pdc.RsttCntCpr2' | PdcRsttCntCpr2=22060 | Start up comp.2 counter alarm |
| 0x230A 'Itf\Itf.A_SH_R' | ASHR=22061 | Superheat setpoint read |

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|---|---|---|
| 0x230A 'Itf\Itf.A_ST_OP_R' | ASTOPR=22062 | St-up opening setpoint read |
| 0x230A 'Itf\Itf.S1' | S1=22063 | Evap. press. Circuit 1 |
| 0x230A 'Itf\Itf.S2' | S2=22064 | Suction gas temp. Circuit 1 |
| 0x230A 'Itf\Itf.A_SH_AC' | ASHAC=22065 | Actual superheat Circuit 1 |
| 0x230A 'Itf\Itf.A_EEV_OP' | AEEVOP=22066 | Exp.valve Circuit 1 |
| 0x230A 'Itf\Itf.A_TEvp' | ATEvp=22067 | Evaporator temp. Circuit 1 |
| 0x2204 'Itf\Cmn.Probe_1_AL' | Probe1AL=22068 | Evap.press alarm Circuit 1 |
| 0x2204 'Itf\Cmn.Probe_2_AL' | Probe2AL=22069 | Suction gas temp. alarm Circuit 1 |
| 0x2204 'Itf\Pdc.MOP_AL' | MOPAL=22070 | MOP alarm Circuit 1 |
| 0x2204 'Itf\Pdc.LOP_AL' | LOPAL=22071 | LOP alarm Circuit 1 |
| 0x2204 'Itf\Pdc.LOWSH_AL' | LOWSHAL=22072 | Superheat alarm Circuit 1 |
| 0x2204 'Itf\Pdc.EEV_AL' | EEVAL=22073 | Exp. Valve alarm Circuit 1 |
| 0x2204 'Itf\Pdc.AL_Evd_Com' | ALEvdCom=22074 | Evd comm. error |
| 0x2204 'Itf\Pdc.FcAlCpr1' | FcAlCpr1=22076 | Frequency inverter Comp. 1 alarm |
| 0x2204 'Itf\Pdc.FcAlComCpr1' | FcAlComCpr1=22077 | Frequency inverter Comp. 1 modbus communication alarm |
| 0x2204 'Itf\Pdc.FcAlFBCpr1' | FcAlFBCpr1=22078 | Frequency inverter Comp. 1 feedback alarm |
| | | |
| Circuit 2 | | |
| 0x2203 'Itf\Pdc2.PCdn' | Pdc2PCnd=23000 | Condensing pressure |
| 0x2203 'Itf\Pdc2.PEvp' | Pdc2PEvp=23001 | Evaporating pressure |
| 0x2204 'Itf\Pdc2.HPDet' | Pdc2HPDet=23002 | High pressure switch |
| 0x2200 'Itf\Pdc2.HPDet(Cnt)' | Pdc2HPDetCnt=23003 | High pressure switch counter |
| 0x2204 'Itf\Pdc2.LPDet' | Pdc2LPDet=23004 | Low pressure switch |
| 0x2200 'Itf\Pdc2.LPDet(Cnt)' | Pdc2LPDetCnt=23005 | Low pressure switch counter |
| 0x2204 'Itf\Pdc2.HPmax' | Pdc2HPmax=23006 | Condensing max pressure |
| 0x2204 'Itf\Pdc2.HPmin' | Pdc2HPmin=23007 | Condensing min pressure |
| 0x2204 'Itf\Pdc2.MOP' | Pdc2MOP=23008 | MOP alarm |
| 0x2200 'Itf\Pdc2.MOP(Cnt)' | Pdc2MOPCnt=23009 | MOP alarm counter |
| 0x2204 'Itf\Pdc2.LOP' | Pdc2LOP=23010 | LOP alarm |
| 0x2200 'Itf\Pdc2.LOP(Cnt)' | Pdc2LOPCnt=23011 | LOP alarm counter |
| 0x2204 'Itf\Pdc2.PRmax' | Pdc2PRmax=23012 | Pressure ratio max alarm |
| 0x2204 'Itf\Pdc2.PRmin' | Pdc2PRmin=23013 | Pressure ratio min alarm |
| 0x2203 'Itf\Pdc2.TEvp' | Pdc2TEvp=23014 | Evaporating temperature |
| 0x2203 'Itf\Pdc2.TCdn' | Pdc2TCnd=23015 | Condensing temperature |
| 0x2203 'Itf\Pdc2.SH' | Pdc2SH=23016 | Superheat value |
| 0x2206 'Itf\Pdc2.EEV' | Pdc2EEV=23017 | Expansion valve value |
| 0x2204 'Itf\Pdc2.NoCprAvl' | Pdc2NoCprAvl=23018 | No compressor is available alarm |
| 0x2204 'Itf\Pdc2.AllCprAlm' | Pdc2AllCprAlm=23019 | All compressor in alarm |
| 0x2208 'Itf\Pdc2.CmdCpr1' | Pdc2CmdCpr1=23020 | Compressor 1 status |
| 0x2204 'Itf\Pdc2.FltCpr1' | Pdc2FltCpr1=23021 | Compressor 1 fault |
| 0x2208 'Itf\Pdc2.CmdCpr2' | Pdc2CmdCpr2=23022 | Compressor 2 status |
| 0x2204 'Itf\Pdc2.FltCpr2' | Pdc2FltCpr2=23023 | Compressor 2 fault |
| 0x2208 'Itf\Pdc2.CmdCpr3' | Pdc2CmdCpr3=23024 | Compressor 3 status |
| 0x2204 'Itf\Pdc2.FltCpr3' | Pdc2FltCpr3=23025 | Compressor 3 fault |
| 0x2206 'Itf\Pdc2.SrcFanPos' | Pdc2SrcFanPos=23026 | Condenser position |
| 0x2207 'Itf\Pdc2.SrcFan' | Pdc2SrcFan1=23027 | Fan 1 status |
| 0x2207 'Itf\Pdc2.SrcFan2' | Pdc2SrcFan2=23028 | Fan 2 status |

| | | |
|---|---|---|
| 0x2204 'Itf\Pdc2.FltSrcFan' | Pdc2FltSrcFan=23029 | Fan overload |
| 0x2203 'Itf\Pdc2.TFl' | Pdc2TFl=23030 | Supply temp. |
| 0x2203 'Itf\Pdc2.TDcrgCpr1' | Pdc2TDcrgCpr1=23031 | Discherge gas comp. 1 |
| 0x2204 'Itf\Pdc2.TDcrgAlrmCpr1' | Pdc2TDcrgAlrmCpr1=23032 | Discherge gas comp. 1 alarm |
| 0x2203 'Itf\Pdc2.TSuctR290Cpr1' | Pdc2TSuctR290Cpr1=23033 | Suct. Gas temp. comp. 1 |
| 0x2203 'Itf\Pdc2.SHR290Cpr1' | Pdc2SHR290Cpr1=23034 | Superheat comp. 1 |
| 0x2203 'Itf\Pdc2.TDcrgCpr2' | Pdc2TDcrgCpr2=23035 | Discherge gas comp. 2 |
| 0x2204 'Itf\Pdc2.TDcrgAlrmCpr2' | Pdc2TDcrgAlrmCpr2=23036 | Discherge gas comp. 2 alarm |
| 0x2203 'Itf\Pdc2.TSuctR290Cpr2' | Pdc2TSuctR290Cpr2=23037 | Suct. Gas temp. comp. 2 |
| 0x2203 'Itf\Pdc2.SHR290Cpr2' | Pdc2SHR290Cpr2=23038 | Superheat comp. 2 |
| 0x2203 'Itf\Pdc2.TDcrgCpr3' | Pdc2TDcrgCpr3=23039 | Discherge gas comp. 3 |
| 0x2204 'Itf\Pdc2.TDcrgAlrmCpr3' | Pdc2TDcrgAlrmCpr3=23040 | Discherge gas comp. 3 alarm |
| 0x2203 'Itf\Pdc2.TSuctR290Cpr3' | Pdc2TSuctR290Cpr3=23041 | Suct. Gas temp. comp. 3 |
| 0x2203 'Itf\Pdc2.SHR290Cpr3' | Pdc2SHR290Cpr3=23042 | Superheat comp. 3 |
| 0x2204 'Itf\Pdc2.SuctLP' | Pdc2SuctLP=23043 | Suctiong gas alarm |
| 0x2204 'Itf\Pdc2.DschHP' | Pdc2DschHP=23044 | Dicharge gas alarm |
| 0x2204 'Itf\Pdc2.FcAlCpr1' | Pdc2FcAlCpr1=23045 | Vacon FC alarm |
| 0x2204 'Itf\Pdc2.FcAlFBCpr1' | Pdc2FcAlFBCpr1=23046 | Vacon FC feedback alarm |
| 0x2204 'Itf\Pdc2.FcAlComCpr1' | Pdc2FcAlComCpr1=23047 | Vacon FC communication alarm |
| 0x2204 'Itf\Pdc2.AbbFcAlFBCpr1' | Pdc2AbbFcAlFBCpr1=23048 | ABB FC alarm |
| 0x2204 'Itf\Pdc2.AbbFcAlCpr1' | Pdc2AbbFcAlFBCpr1=23049 | ABB FC feedback alarm |
| 0x2204 'Itf\Pdc2.AbbFcAlComCpr1' | Pdc2AbbFcAlComCpr1=23050 | ABB FC communication alarm |
| 0x2203 'Itf\Pdc2.TSuct' | Pdc2TSuct=22051 | Suct. Gas temp. |
| 0x2200 'Itf\Pdc2.SH(Cnt)' | Pdc2SHCnt=22052 | Superheat alarm counter |
| Circuit 3 | | |
| 0x2203 'Itf\Pdc3.PCdn' | Pdc3PCnd=24000 | Condensing pressure |
| 0x2203 'Itf\Pdc3.PEvp' | Pdc3PEvp=24001 | Evaporating pressure |
| 0x2204 'Itf\Pdc3.HPDet' | Pdc3HPDet=24002 | High pressure switch |
| 0x2200 'Itf\Pdc3.HPDet(Cnt)' | Pdc3HPDetCnt=24003 | High pressure switch counter |
| 0x2204 'Itf\Pdc3.LPDet' | Pdc3LPDet=24004 | Low pressure switch |
| 0x2200 'Itf\Pdc3.LPDet(Cnt)' | Pdc3LPDetCnt=24005 | Low pressure switch counter |
| 0x2204 'Itf\Pdc3.HPmax' | Pdc3HPmax=24006 | Condensing max pressure |
| 0x2204 'Itf\Pdc3.HPmin' | Pdc3HPmin=24007 | Condensing min pressure |
| 0x2204 'Itf\Pdc3.MOP' | Pdc3MOP=24008 | MOP alarm |
| 0x2200 'Itf\Pdc3.MOP(Cnt)' | Pdc3MOPCnt=24009 | MOP alarm counter |
| 0x2204 'Itf\Pdc3.LOP' | Pdc3LOP=24010 | LOP alarm |
| 0x2200 'Itf\Pdc3.LOP(Cnt)' | Pdc3LOPCnt=24011 | LOP alarm counter |
| 0x2204 'Itf\Pdc3.PRmax' | Pdc3PRmax=24012 | Pressure ratio max alarm |
| 0x2204 'Itf\Pdc3.PRmin' | Pdc3PRmin=24013 | Pressure ratio min alarm |
| 0x2203 'Itf\Pdc3.TEvp' | Pdc3TEvp=24014 | Evaporating temperature |
| 0x2203 'Itf\Pdc3.TCdn' | Pdc3TCnd=24015 | Condensing temperature |
| 0x2203 'Itf\Pdc3.SH' | Pdc3SH=24016 | Superheat value |
| 0x2206 'Itf\Pdc3.EEV' | Pdc3EEV=24017 | Expansion valve value |
| 0x2204 'Itf\Pdc3.NoCprAvl' | Pdc3NoCprAvl=24018 | No compressor is available alarm |
| 0x2204 'Itf\Pdc3.AllCprAlm' | Pdc3AllCprAlm=24019 | All compressor in alarm |
| 0x2208 'Itf\Pdc3.CmdCpr1' | Pdc3CmdCpr1=24020 | Compressor 1 status |
| 0x2204 'Itf\Pdc3.FltCpr1' | Pdc3FltCpr1=24021 | Compressor 1 fault |
| 0x2208 'Itf\Pdc3.CmdCpr2' | Pdc3CmdCpr2=24022 | Compressor 2 status |

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| 0x2204 'Itf\Pdc3.FltCpr2' | Pdc3FltCpr2=24023 | Compressor 2 fault |
| 0x2208 'Itf\Pdc3.CmdCpr3' | Pdc3CmdCpr3=24024 | Compressor 3 status |
| 0x2204 'Itf\Pdc3.FltCpr3' | Pdc3FltCpr3=24025 | Compressor 3 fault |
| 0x2206 'Itf\Pdc3.SrcFanPos' | Pdc3SrcFanPos=24026 | Condenser position |
| 0x2207 'Itf\Pdc3.SrcFan' | Pdc3SrcFan1=24027 | Fan 1 status |
| 0x2207 'Itf\Pdc3.SrcFan2' | Pdc3SrcFan2=24028 | Fan 2 status |
| 0x2204 'Itf\Pdc3.FltSrcFan' | Pdc3FltSrcFan=24029 | Fan overload |
| 0x2203 'Itf\Pdc3.TFl' | Pdc3TFl=24030 | Supply temp. |
| 0x2203 'Itf\Pdc3.TDcrgCpr1' | Pdc3TDcrgCpr1=24031 | Discherge gas comp. 1 |
| 0x2204 'Itf\Pdc3.TDcrgAlrmCpr1' | Pdc3TDcrgAlrmCpr1=24032 | Discherge gas comp. 1 alarm |
| 0x2203 'Itf\Pdc3.TSuctR290Cpr1' | Pdc3TSuctR290Cpr1=24033 | Suct. Gas temp. comp. 1 |
| 0x2203 'Itf\Pdc3.SHR290Cpr1' | Pdc3SHR290Cpr1=24034 | Superheat comp. 1 |
| 0x2203 'Itf\Pdc3.TDcrgCpr2' | Pdc3TDcrgCpr2=24035 | Discherge gas comp. 2 |
| 0x2204 'Itf\Pdc3.TDcrgAlrmCpr2' | Pdc3TDcrgAlrmCpr2=24036 | Discherge gas comp. 2 alarm |
| 0x2203 'Itf\Pdc3.TSuctR290Cpr2' | Pdc3TSuctR290Cpr2=24037 | Suct. Gas temp. comp. 2 |
| 0x2203 'Itf\Pdc3.SHR290Cpr2' | Pdc3SHR290Cpr2=24038 | Superheat comp. 2 |
| 0x2203 'Itf\Pdc3.TDcrgCpr3' | Pdc3TDcrgCpr3=24039 | Discherge gas comp. 3 |
| 0x2204 'Itf\Pdc3.TDcrgAlrmCpr3' | Pdc3TDcrgAlrmCpr3=24040 | Discherge gas comp. 3 alarm |
| 0x2203 'Itf\Pdc3.TSuctR290Cpr3' | Pdc3TSuctR290Cpr3=24041 | Suct. Gas temp. comp. 3 |
| 0x2203 'Itf\Pdc3.SHR290Cpr3' | Pdc3SHR290Cpr3=24042 | Superheat comp. 3 |
| 0x2204 'Itf\Pdc3.SuctLP' | Pdc3SuctLP=24043 | Suctiong gas alarm |
| 0x2204 'Itf\Pdc3.DschHP' | Pdc3DschHP=24044 | Dicharge gas alarm |
| 0x2204 'Itf\Pdc3.FcAlCpr1' | Pdc3FcAlCpr1=24045 | Vacon FC alarm |
| 0x2204 'Itf\Pdc3.FcAlFBCpr1' | Pdc3FcAlFBCpr1=24046 | Vacon FC feedback alarm |
| 0x2204 'Itf\Pdc3.FcAlComCpr1' | Pdc3FcAlComCpr1=24047 | Vacon FC communication alarm |
| 0x2204 'Itf\Pdc3.AbbFcAlFBCpr1' | Pdc3AbbFcAlFBCpr1=24048 | ABB FC alarm |
| 0x2204 'Itf\Pdc3.AbbFcAlCpr1' | Pdc3AbbFcAlFBCpr1=24049 | ABB FC feedback alarm |
| 0x2204 'Itf\Pdc3.AbbFcAlComCpr1' | Pdc3AbbFcAlComCpr1=24050 | ABB FC communication alarm |
| 0x2203 'Itf\Pdc3.TSuct' | Pdc3TSuct=24051 | Suct. Gas temp. |
| 0x2200 'Itf\Pdc3.SH(Cnt)' | Pdc3SHCnt=24052 | Superheat alarm counter |
| Water condenser | | |
| 0x2203 'Itf\SrcW.TFlCnd‘ | SrcWTFlCnd=25000 | Condenser supply temp.  to user |
| 0x2203 'Itf\SrcW.TRtCnd' | SrcWTRtCnd=25001 | Condenser return temp. from user |
| 0x2207 'Itf\SrcW.SuPuCnd' | SrcWSuPuCnd=25002 | Condenser pump status |