CPE103 - PROFIBUS PROTOCOL FOR FC400

FC400 from release FW 4.0

Rev 2 of 16/09/26

General Index

1. PREFACE....4
2. HYSTORY OF DOCUMENT....4
3. CONTACT ADDRESS OF THE MANUFACTURER AND TECHNICAL SUPPORT....4
4. OVERVIEW OF THE POSITIONS....5
4.1. READ ONLY REGISTERS OF FC400....5
4.1.1. STATUS PARAMETERS....5
4.1.2. MODBUS DIAGNOSTICS....6
4.2. READ & WRITE REGISTER....7
4.2.1. WORRKING PARAMETERS....7
4.2.2. DIGITAL INPUTS....8
4.2.3. SPECIAL FUNCTIONS....9
4.2.3.1. EMERGENCY SPEED....9
4.2.3.2. SHEDDING....9
4.2.3.3. NIGHT LIMIT....9
4.2.3.4. SPEED JUMP....9
4.2.3.5. UNLOCK....10
4.2.3.6. CLEAN....10
4.2.3.7. WASH....10
4.2.3.8. ECO....10
4.2.3.9. SETPOINT SWITCH....11
4.2.3.10. SETPOINT ADJUST....11
4.2.3.11. FLOATING SETPOINT....11
4.2.3.12. SLAVE SAFETY....11
4.2.3.13. FEEDBACK....11
4.2.3.14. BOOST....12
4.2.3.15. CUTOFF....12
4.2.3.16. THERMOSTAT....12
4.2.3.17. THRESHOLD....12
5. DESCRIPTION OF THE REGISTERS OF FC400....13
5.1. READ ONLY REGISTERS OF FC400....13
5.1.1. STATUS PARAMETERS....13
5.1.2. MODBUS DIAGNOSTICS....17
5.2. READ & WRITE REGISTER....18
5.2.1. WORRKING PARAMETERS....18
5.2.2. DIGITAL INPUTS....20
5.2.3. SPECIAL FUNCTIONS....22
5.2.3.1. EMERGENCY SPEED....22
5.2.3.2. SHEDDING....22
5.2.3.3. NIGHT LIMIT....22
5.2.3.4. SPEED JUMP....23
5.2.3.5. UNLOCK....23
5.2.3.6. CLEAN....23

5.2.3.7. WASH....24
5.2.3.8. ECO....24
5.2.3.9. SETPOINT SWITCH....25
5.2.3.10. SETPOINT ADJUST....25
5.2.3.11. FLOATING SETPOINT....26
5.2.3.12. SLAVE SAFETY....26
5.2.3.13. FEEDBACK....27
5.2.3.14. BOOST....27
5.2.3.15. CUTOFF....27
5.2.3.16. THERMOSTAT....28
5.2.3.17. THRESHOLD....28

1. PREFACE

CPE 103 is the PROFIBUS converter for FC400 controller produced by Hyterm.

2. HYSTORY OF DOCUMENT

DATE	REV.	CHANGES
28/10/25	00	Emission
19/08/26	01	Almost every BYTE NR has been shifted to reflect new register insertions New registers for BYTE NR: 56, 58, 96, 208 MODBUS Diagnostic BYTE changed from 208 to 230
16/09/26	02	Paragraphs updates

3. CONTACT ADDRESS OF THE MANUFACTURER AND TECHNICAL SUPPORT

In case of information requests or technical issues the buyer can contact HYTERM at the following address:

HYTERM S.r.l.
Viale del lavoro, 18 – 25045 Castegnato (BS)

Site: www.hyterm.com
E-mail: info@hyterm.com

Technical Support:
E-mail: support@hyterm.com
Teams: support@hyterm.com

4. OVERVIEW OF THE POSITIONS

This section contains information on numeric and non-numeric data exchanged with FC400.



Note that if read and/or write values doesn't seem right you may need to do a **SWAP** operation on the bytes positions when sending or reading data.

4.1. READ ONLY REGISTERS OF FC400

This section contains the information on numeric data reading only.

4.1.1. STATUS PARAMETERS

BYTE NR	DESCRIPTION
0	Operating hours (controller powered)
2	Controller operating hours (CU>0)
4	Device identification
6	Release HW
8	Release FW (Due byte) → Tripletta
10	Controller status
12	Number of working fans
14	Total fan power consumption
16	Fan rotation speed (average)
18	Setpoint value in use
20	Analog input 1 value
22	Analog input 2 value
24	Analog input 3 value
26	Analog input 4 value
28	Analog input 5 value
30	Analog input 6 value
32	Digital input status
34	Actual DAC value for analog output 1
36	Actual DAC value for analog output 2
38	Digital output status
40	CU value (Fan control percentage)
42	Warning code 1

BYTE NR	DESCRIPTION
44	Warning code 2
46	Warning code 3
48	Error code 1
50	Error code 2
52	Error code 3
54	Error code 4
56	Temperature unit of measure in use
58	Pressure unit of measure in use

4.1.2. MODBUS DIAGNOSTICS

This Byte signals a malfunction in the MODBUS side communication (the regulator doesn't respond to MODBUS queries).
See chapter 5.1.2 MODBUS DIAGNOSTICS for details.



When Byte 230 value is greater than 0 wait 60s before triggering an alarm (Communication can automatically re-establish itself within 60s)

BYTE NR	POLL TIME	DESCRIPTION
230	1s	Modbus diagnostic

4.2. READ & WRITE REGISTER

This section contains information on data with the possibility both of reading and writing numeric numbers contained in the position.

4.2.1. WORRKING PARAMETERS

BYTE NR	DESCRIPTION
60	Set Point 1 (regulation)
62	Set Point 2 (regulation)
64	Proportional Band
66	Minimum limit
68	Maximum limit
70	MODBUS slave mode speed set
72	PID Proportional component weight
74	PID Integral component weight
76	PID Peso componente derivativa
78	PID sampling time
80	Pressure scale

4.2.2. DIGITAL INPUTS



The command **Enable control functions** is saved in memory of the regulator, write the desired value and then the **AUTOSAVE** function will save it in memory permanently.



Digital Input from 1 to 7 are **not saved** in memory: you need to write the desired value continuously over time. If not, if the regulator is turned off the set values will be lost.

BYTE NR	DESCRIPTION
82	Digital Input 1
84	Digital Input 2
86	Digital Input 3
88	Digital Input 4
90	Digital Input 5
92	Digital Input 6
94	Digital Input 7
96	Enabling control functions for single digital input

4.2.3. SPECIAL FUNCTIONS



All data in this section (write mode) are saved in memory of the regulator, write the desired value and then the AUTOSAVE function will save it in memory permanently.

4.2.3.1. EMERGENCY SPEED

BYTE NR	DESCRIPTION
98	Enabling the Fan Emergency function
100	Rotation speed in EMERGENCY mode
102	Fan start delay

4.2.3.2. SHEDDING

BYTE NR	DESCRIPTION
104	Enabling the Shedding function
106	Number of start attempts

4.2.3.3. NIGHT LIMIT

BYTE NR	DESCRIPTION
108	Enabling the NIGHT function
110	Function activation time (Enable = 2)
112	Function deactivation time (Enable = 2)
114	Rotation speed in NIGHT mode

4.2.3.4. SPEED JUMP

BYTE NR	DESCRIPTION
116	Enabling the JUMP function
118	Jump lower limit 1
120	Jump upper limit 1
122	Jump lower limit 2
124	Jump upper limit 2

4.2.3.5. UNLOCK

BYTE NR	DESCRIPTION
126	Enabling the UnLock function
128	Fan rotation time
130	Fan rest time
132	Rotation speed in UNLOCK mode

4.2.3.6. CLEAN

BYTE NR	DESCRIPTION
134	Enabling the Clean function
136	Trigger Frequency (Enable = 2)
138	Cleaning start time (Enable = 2)
140	Cleaning cycle duration (Enable = 2)
142	Speed during the cleaning cycle

4.2.3.7. WASH

BYTE NR	DESCRIPTION
144	Enabling the WASH function
146	Trigger Frequency
148	Cleaning start time
150	Battery cooling duration
152	Battery wash duration
154	Speed during the wash cycle

4.2.3.8. ECO

BYTE NR	DESCRIPTION
156	Enabling the ECO function
158	Minimum waiting time before the next activation/deactivation
160	Group activation speed
162	Group deactivation speed
164	Speed KICK

4.2.3.9. SETPOINT SWITCH

BYTE NR	DESCRIPTION
166	Enabling the SP change function with Tamb
168	Temperature change Set point
170	hysteresis

4.2.3.10. SETPOINT ADJUST

BYTE NR	DESCRIPTION
172	Enabling the SP adjustment function with Tamb
174	Minimum acceptable SP
176	Maximum acceptable SP
178	Offset
180	Refrigerant selection for BAR → °C conversion in pressure control Refrigerant used in the condenser

4.2.3.11. FLOATING SETPOINT

BYTE NR	DESCRIPTION
182	Enabling of the Sp regulation function with external signal
184	SP control signal
186	Minimum value that can be set for SP
188	Maximum value that can be set for SP

4.2.3.12. SLAVE SAFETY

BYTE NR	DESCRIPTION
190	Enabling the SLAVE SAFETY function
192	Control signal

4.2.3.13. FEEDBACK

BYTE NR	DESCRIPTION
194	Function enable
196	Feedback speed

4.2.3.14. BOOST

BYTE NR	DESCRIPTION
198	Enabling the BOOST function
200	Activation value
202	Hysteresis

4.2.3.15. CUTOFF

BYTE NR	DESCRIPTION
204	Function enable
206	Activation value
208	Hysteresis

4.2.3.16. THERMOSTAT

BYTE NR	DESCRIPTION
210	Function enable
212	Activation value
214	Hysteresis
216	Function disabled during control

4.2.3.17. THRESHOLD

BYTE NR	DESCRIPTION
218	Enabling the THRESHOLD function
220	THRESHOLD speed

5. DESCRIPTION OF THE REGISTERS OF FC400

List of the position with detailed description.

5.1. READ ONLY REGISTERS OF FC400

5.1.1. STATUS PARAMETERS

BYTE NR	VALUES	MIN	MAX	DEF	DEC
0	**Description**: Operating hours (controller powered)				
	h	0	65535	0	0
2	**Description**: Controller operating hours (CU>0)				
	h	0	65535	0	0
4	**Description**: Device identification				
	0 = ND 3 = FC400 HEADLESS 4 = FC400 CIECO ETHERNET 5 = FC400 UI 6 = FC400 UI ETHERNET 7 = SC400 8 = RB100	0	65535	0	0
6	**Description**: Release HW				
	100 = 1.00	0.00	65535.00	0.00	2
8	**Description**: Release FW (Due byte) → Tripletta				
	Byte 1 (least significant) = Build Byte 2 (most significant) = Upper 4 bits: Minor, Latest 4 bits: Major	0	65535	0	0
10	**Description**: Controller status				
	0 = STARTING 1 = STOP 2 = RUN	0	2	0	0
12	**Description**: Number of working fans				
	nr	0	22	0	0
14	**Description**: Total fan power consumption				
	Sum of the individual powers in W	0	65535	0	0
16	**Description**: Fan rotation speed (average)				
	RPM	0	65535	0	0

BYTE NR	VALUES	MIN	MAX	DEF	DEC
18	**Description**: Setpoint value in use				
	°C	-15.0	90.0	0.0	1
	°F	5.0	194.0	0.0	1
	Bar	0.0	45.0	0.0	1
	Psi	0.0	652.6	0.0	1
20	**Description**: Analog input 1 value				
	Value *	-32768.0	32767.0	0.0	1
22	**Description**: Analog input 2 value				
	Value *	-32768.0	32767.0	0.0	1
24	**Description**: Analog input 3 value				
	Value *	-32768.0	32767.0	0.0	1
26	**Description**: Analog input 4 value				
	Value *	-32768.0	32767.0	0.0	1
28	**Description**: Analog input 5 value				
	Value *	-32768.0	32767.0	0.0	1
30	**Description**: Analog input 6 value				
	Value *	-32768.0	32767.0	0.0	1
32	**Description**: Digital input status				
	Bit 0 = DI1 Bit 1 = DI2 Bit 2 = DI3 Bit 3 = DI4 Bit 4 = DI5 Bit 5 = DI6 Bit 6 = DI7	0	255	0	0
34	**Description**: Actual DAC value for analog output 1				
	Volt (0-10V)	0.00	1000.00	0.00	2
36	**Description**: Actual DAC value for analog output 2				
	Volt (0-10V)	0.00	1000.00	0.00	2
38	**Description**: Digital output status				
	Bit 0 = DO1 Bit 1 = DO2 Bit 2 = DO3 Bit 3 = DO4	0	15	0	0

BYTE NR	VALUES	MIN	MAX	DEF	DEC
40	**Description**: CU value (Fan control percentage)				
	%	0	100	0	0
42	**Description**: Warning code 1				
	Bit 0 = DATALOGGER Bit 1 = FAN (General notification) Bit 2 = CIRCUIT BREAKERS WARNING Bit 3 = REPAIR SWITCH WARNING Bit 4 = PANEL HEATER	0	65535	0	0
44	**Description**: Warning code 2				
	Bit 0 = FAN_1 Bit 1 = FAN_2 Bit 2 = FAN_3 Bit 3 = FAN_4 Bit 4 = FAN_5 Bit 5 = FAN_6 Bit 6 = FAN_7 Bit 7 = FAN_8 Bit 8 = FAN_9 Bit 9 = FAN_10 Bit 10 = FAN_11 Bit 11 = FAN_12 Bit 12 = FAN_13 Bit 13 = FAN_14 Bit 14 = FAN_15 Bit 15 = FAN_16	0	65535	0	0
46	**Description**: Warning code 3				
	Bit 0 = FAN_17 Bit 1 = FAN_18 Bit 2 = FAN_19 Bit 3 = FAN_20 Bit 4 = FAN_21 Bit 5 = FAN_22	0	65535	0	0

BYTE NR	VALUES	MIN	MAX	DEF	DEC
48	**Description**: Error code 1				
	Bit 0 = TK DIGITAL INPUT (Function ALARM) Bit 1 = ALL FAN Bit 2 = ANALOG Input Bit 3 = SLAVE SAFETY Bit 4 = Reserved Bit 5 = ADIABATIC COMMUNICATION Bit 6 = COMMUNICATION REMOTE CONTROL Bit 7 = OVER HEAT (board) Bit 8 = UNDER HEAT (board) Bit 9 = POWER SUPPLY Bit 8 = UNDER HEAT (board)	0	65535	0	0
50	**Description**: Error code 2				
	Bit 0 = FAN_1 Bit 1 = FAN_2 Bit 2 = FAN_3 Bit 3 = FAN_4 Bit 4 = FAN_5 Bit 5 = FAN_6 Bit 6 = FAN_7 Bit 7 = FAN_8 Bit 8 = FAN_9 Bit 9 = FAN_10 Bit 10 = FAN_11 Bit 11 = FAN_12 Bit 12 = FAN_13 Bit 13 = FAN_14 Bit 14 = FAN_15 Bit 15 = FAN_16	0	65535	0	0
52	**Description**: Error code 3				
	Bit 0 = FAN_17 Bit 1 = FAN_18 Bit 2 = FAN_19 Bit 3 = FAN_20 Bit 4 = FAN_21 Bit 5 = FAN_22 Bit 6 = FAN_23 Bit 7 = FAN_24 Bit 10 = Analog input alarm	0	65535	0	0

BYTE NR	VALUES	MIN	MAX	DEF	DEC
54	**Description**: Error code 4				
	Bit 0 = ANALOG INPUT 1 Bit 1 = ANALOG INPUT 2 Bit 2 = ANALOG INPUT 3 Bit 3 = ANALOG INPUT 4 Bit 4 = ANALOG INPUT 5 Bit 5 = ANALOG INPUT 6	0	65535	0	0
56	**Description**: Temperature unit of measure in use				
	Temperature unit 0 = °C 1 = °F	0	1	0	0
58	**Description**: Pressure unit of measure in use				
	Pressure unit 0 = Bar 1 = Psi	0	1	0	0

5.1.2. MODBUS DIAGNOSTICS

This Byte signals a malfunction in the MODBUS side communication (the regulator doesn't respond to MODBUS queries).



When Byte 212 value is greater than 0 wait 60s before triggering an alarm (Communication can automatically re-establish itself within 60s)

BYTE NR	VALUES	MIN	MAX	DEF	ACCESS
230	**Description**: FC400 side diagnostics				
	230 = 0 → Communication OK 230 > 0 → Communication KO	0	256	0	R

5.2. READ & WRITE REGISTER

5.2.1. WORRKING PARAMETERS



All data in this section (write mode) are saved in memory of the regulator, write the desired value and then the AUTOSAVE function will save it in memory permanently.

BYTE NR	VALUES	MIN	MAX	DEF	DEC
60	**Description**: Set Point 1 (regulation)				
	°C	-15.0	90.0	35.0	1
	°F	5.0	194.0	95.0	1
	Bar	0.0	60.0	30.0	1
	Psi	0.0	870.2	435.1	1
62	**Description**: Set Point 2 (regulation)				
	°C	-15.0	90.0	25.0	1
	°F	5.0	194.0	95.0	1
	Bar	0.0	60.0	30.0	1
	Psi	0.0	870.2	435.1	1
64	**Description**: Proportional Band				
	°C	2.0	60.0	7.5	1
	°F	3.6	108.0	13.5	1
	Bar (PSCALE <= 16)	0.0	45.0	2.4	1
	Bar (16 < PSCALE < 45)	0.0	45.0	3.5	1
	Bar (PSCALE >= 45)	0.0	45.0	5.2	1
	Psi (PSCALE <= 16)	0.0	652.6	34.8	1
	Psi (16 < PSCALE < 45)	0.0	652.6	50.7	1
	Psi (PSCALE >= 45)	0.0	652.6	75.4	1
66	**Description**: Minimum limit				
	%	0	100	0	0
68	**Description**: Maximum limit				
	%	0	100	100	0
70	**Description**: MODBUS slave mode speed set				
	0 = 0% 65535 = 100%	0	65535	0	0
72	**Description**: PID Proportional component weight				
	%	0	100	5	0

BYTE NR	VALUES	MIN	MAX	DEF	DEC
74	**Description**: PID Integral component weight				
	%	0	100	5	0
76	**Description**: PID Peso componente derivativa				
	%	0	100	5	0
78	**Description**: PID sampling time				
	s	1	10	1	0
80	**Description**: Pressure scale				
	0 = 15,0 Bar 1 = 16,0 Bar 2 = 25,0 Bar 3 = 30,0 Bar 4 = 40,0 Bar 5 = 45,0 Bar 6 = 50,0 Bar 7 = 60,0 Bar	0	7	3	0
	0 = 217.5 Psi 1 = 232.1 Psi 2 = 362.5 Psi 3 = 435.1 Psi 4 = 580.1 Psi 5 = 652.6 Psi 6 = 725.2 Psi 7 = 870.2 Psi	0	7	3	0

5.2.2. DIGITAL INPUTS



The command **Enable control functions** is saved in memory of the regulator, write the desired value and then the **AUTOSAVE** function will save it in memory permanently.



Digital Input from 1 to 7 are **not saved** in memory: you need to write the desired value continuously over time. If not, if the regulator is turned off the set values will be lost.

BYTE NR	VALUES	MIN	MAX	DEF	DEC
82	**Description**: Digital Input 1				
	0 = OFF 1 = ON	0	1	0	0
84	**Description**: Digital Input 2				
	0 = OFF 1 = ON	0	1	0	0
86	**Description**: Digital Input 3				
	0 = OFF 1 = ON	0	1	0	0
88	**Description**: Digital Input 4				
	0 = OFF 1 = ON	0	1	0	0
90	**Description**: Digital Input 5				
	0 = OFF 1 = ON	0	1	0	0
92	**Description**: Digital Input 6				
	0 = OFF 1 = ON	0	1	0	0
94	**Description**: Digital Input 7				
	0 = OFF 1 = ON	0	1	0	0

BYTE NR	VALUES	MIN	MAX	DEF	DEC
96	**Description**: Enabling control functions for single digital input				
	Bit 0 = digital input 1 –> 0 = OFF / 1 = ON Bit 1 = digital input 2 –> 0 = OFF / 1 = ON Bit 2 = digital input 3 –> 0 = OFF / 1 = ON Bit 3 = digital input 4 –> 0 = OFF / 1 = ON Bit 4 = digital input 5 –> 0 = OFF / 1 = ON Bit 5 = digital input 6 –> 0 = OFF / 1 = ON Bit 6 = digital input 7 –> 0 = OFF / 1 = ON	0	127	0	0

5.2.3. SPECIAL FUNCTIONS



All data in this section (write mode) are saved in memory of the regulator, write the desired value and then the AUTOSAVE function will save it in memory permanently.

5.2.3.1. EMERGENCY SPEED

BYTE NR	VALUES	MIN	MAX	DEF	DEC
98	**Description**: Enabling the Fan Emergency function				
	0 = Function disabled 1 = Function enabled	0	1	0	0
100	**Description**: Rotation speed in EMERGENCY mode				
	%	10	100	100	0
102	**Description**: Fan start delay				
	sec	1	60	5	0

5.2.3.2. SHEDDING

BYTE NR	VALUES	MIN	MAX	DEF	DEC
104	**Description**: Enabling the Shedding function				
	0 = Function disabled 1 = Function enabled	0	1	0	0
106	**Description**: Number of start attempts				
	nr	1	200	20	0

5.2.3.3. NIGHT LIMIT

BYTE NR	VALUES	MIN	MAX	DEF	DEC
108	**Description**: Enabling the NIGHT function				
	0 = Function disabled 1 = Function enabled with digital input 2 = Automatic function	0	2	1	0
110	**Description**: Function activation time (Enable = 2)				
	hh:mm	100	2359	2300	0
112	**Description**: Function deactivation time (Enable = 2)				
	hh:mm	100	2359	600	0
114	**Description**: Rotation speed in NIGHT mode				
	%	1	100	70	0

5.2.3.4. SPEED JUMP

BYTE NR	VALUES	MIN	MAX	DEF	DEC
116	**Description**: Enabling the JUMP function				
	0 = Function disabled 1 = Function enabled	0	1	0	0
118	**Description**: Jump lower limit 1				
	%	0	100	0	0
120	**Description**: Jump upper limit 1				
	%	0	100	0	0
122	**Description**: Jump lower limit 2				
	%	0	100	0	0
124	**Description**: Jump upper limit 2				
	%	0	100	0	0

5.2.3.5. UNLOCK

BYTE NR	VALUES	MIN	MAX	DEF	DEC
126	**Description**: Enabling the UnLock function				
	0 = Function disabled 1 = Function enabled with digital input 2 = Automatic function	0	2	0	0
128	**Description**: Fan rotation time				
	min	1	120	15	0
130	**Description**: Fan rest time				
	min	1	43000	10080	0
132	**Description**: Rotation speed in UNLOCK mode				
	%	10	100	100	0

5.2.3.6. CLEAN

BYTE NR	VALUES	MIN	MAX	DEF	DEC
134	**Description**: Enabling the Clean function				
	0 = Function disabled 1 = Function enabled with digital input 2 = Automatic function	0	2	0	0

BYTE NR	VALUES	MIN	MAX	DEF	DEC
136	**Description**: Trigger Frequency (Enable = 2)				
	day	1	30	10	0
138	**Description**: Cleaning start time (Enable = 2)				
	hh:mm	100	2359	2300	0
140	**Description**: Cleaning cycle duration (Enable = 2)				
	min	1	60	15	0
142	**Description**: Speed during the cleaning cycle				
	%	1	100	100	0

5.2.3.7. WASH

BYTE NR	VALUES	MIN	MAX	DEF	DEC
144	**Description**: Enabling the WASH function				
	0 = OFF 1 = ON	0	1	0	0
146	**Description**: Trigger Frequency				
	day	1	30	10	0
148	**Description**: Cleaning start time				
	hh:mm	100	2359	2300	0
150	**Description**: Battery cooling duration				
	min	1	60	5	0
152	**Description**: Battery wash duration				
	min	1	60	15	0
154	**Description**: Speed during the wash cycle				
	%	1	100	100	0

5.2.3.8. ECO

BYTE NR	VALUES	MIN	MAX	DEF	DEC
156	**Description**: Enabling the ECO function				
	0 = OFF 1 = ON	0	1	0	0
158	**Description**: Minimum waiting time before the next activation/deactivation				
	sec	3	90	10	0

BYTE NR	VALUES	MIN	MAX	DEF	DEC
160	**Description**: Group activation speed				
	%	10	50	25	0
162	**Description**: Group deactivation speed				
	%	10	50	15	0
164	**Description**: Speed KICK				
	%	1	100	80	0

5.2.3.9. SETPOINT SWITCH

BYTE NR	VALUES	MIN	MAX	DEF	DEC
166	**Description**: Enabling the SP change function with Tamb				
	0 = Function disabled 1 = Function enabled	0	1	0	0
168	**Description**: Temperature change Set point				
	°C	-10.0	60.0	30.0	1
	°F	14.0	140.0	86.0	1
170	**Description**: hysteresis				
	°C	3.0	20.0	5.0	1
	°F	14.0	140.0	86.0	1

5.2.3.10. SETPOINT ADJUST

BYTE NR	VALUES	MIN	MAX	DEF	DEC
172	**Description**: Enabling the SP adjustment function with Tamb				
	0 = Function disabled 1 = Function enabled	0	1	0	0
174	**Description**: Minimum acceptable SP				
	°C	0.0	90.0	20.0	1
	°F	32.0	194.0	68.0	1
176	**Description**: Maximum acceptable SP				
	°C	0.0	90.0	40.0	1
	°F	32.0	194.0	104.0	1
178	**Description**: Offset				
	°C	1.0	20.0	5.0	1
	°F	33.8	68.0	41.0	1

BYTE NR	VALUES	MIN	MAX	DEF	DEC
180	**Description**: Refrigerant selection for BAR → °C conversion in pressure control Refrigerant used in the condenser				
	18 = R404A	0	33	18	0

5.2.3.11. FLOATING SETPOINT

BYTE NR	VALUES	MIN	MAX	DEF	DEC
182	**Description**: Enabling of the Sp regulation function with external signal				
	0 = Function disabled 1 = Function enabled	0	1	0	0
184	**Description**: SP control signal				
	0 = 1-10V 1 = 4-20mA	0	1	0	0
186	**Description**: Minimum value that can be set for SP				
	°C	-15.0	90.0	20.0	1
	°F	5.0	194.0	68.0	1
	Bar	0.0	60.0	20.0	1
	Psi	0.0	870.2	290.0	1
188	**Description**: Maximum value that can be set for SP				
	°C	-15.0	90.0	40.0	1
	°F	5.0	194.0	104.0	1
	Bar	0.0	60.0	40.0	1
	Psi	0.0	870.2	580.0	1

5.2.3.12. SLAVE SAFETY

BYTE NR	VALUES	MIN	MAX	DEF	DEC
190	**Description**: Enabling the SLAVE SAFETY function				
	0 = Function disabled 1 = Function enabled	0	1	0	0
192	**Description**: Control signal				
	0 = MODBUS 1 = 1-10V 2 = 4-20mA	0	2	2	0

5.2.3.13. FEEDBACK

BYTE NR	VALUES	MIN	MAX	DEF	DEC
194	**Description**: Function enable				
	0 = Function disabled 1 = Function enabled	0	1	0	0
196	**Description**: Feedback speed				
	%	1	20	10	0

5.2.3.14. BOOST

BYTE NR	VALUES	MIN	MAX	DEF	DEC
198	**Description**: Enabling the BOOST function				
	0 = Function disabled 1 = Function enabled	0	1	0	0
200	**Description**: Activation value				
	°C	-15.0	120.0	100.0	1
	°F	5.0	248.0	212.0	1
	Bar	0.0	60.0	45.0	1
	Psi	0.0	870.2	652.6	1
202	**Description**: Hysteresis				
	°C	1.0	30.0	3.0	1
	°F	1.8	54.0	5.4	1
	Bar	0.1	15.0	1.0	1
	Psi	1.4	217.5	14.5	1

5.2.3.15. CUTOFF

BYTE NR	VALUES	MIN	MAX	DEF	DEC
204	**Description**: Function enable				
	0 = Function disabled 1 = Function enabled	0	1	0	0
206	**Description**: Activation value				
	°C	-25.0	80.0	20.0	1
	°F	-13.0	176.0	68.0	1
	Bar	0.0	60.0	0.0	1
	Psi	0.0	870.2	0.0	1

BYTE NR	VALUES	MIN	MAX	DEF	DEC
208	**Description**: Hysteresis				
	°C	1.0	30.0	3.0	1
	°F	1.8	54.0	5.4	1
	Bar	0.1	15.0	0.1	1
	Psi	1.4	217.5	1.4	1

5.2.3.16. THERMOSTAT

BYTE NR	VALUES	MIN	MAX	DEF	DEC
210	**Description**: Function enable				
	0 = Function disabled 1 = Function enabled	0	1	0	0
212	**Description**: Activation value				
	°C	-35.0	80.0	15.0	1
	°F	-31.0	176.0	59.0	1
214	**Description**: Hysteresis				
	°C	1.0	30.0	5.0	1
	°F	1.8	54.0	5.4	1
216	**Description**: Function disabled during control				
	0 = Function enabled during control 1 = Function disabled during control	0	1	0	0

5.2.3.17. THRESHOLD

BYTE NR	VALUES	MIN	MAX	DEF	DEC
218	**Description**: Enabling the THRESHOLD function				
	0 = Function disabled 1 = Function enabled	0	1	0	0
220	**Description**: THRESHOLD speed				
	%	1	100	30	0