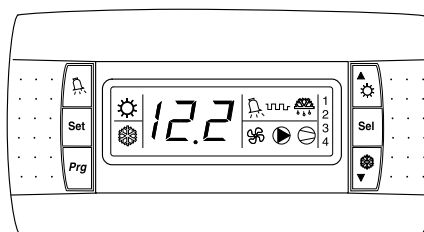
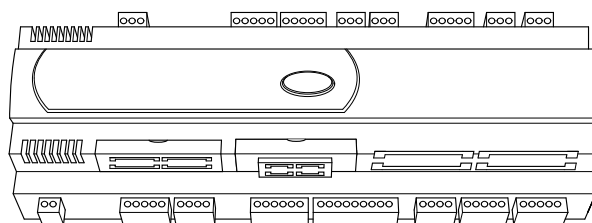




BY JOHNSON CONTROLS

Remote terminal and BMS



User manual

Ref.: N-40269_EN 0911



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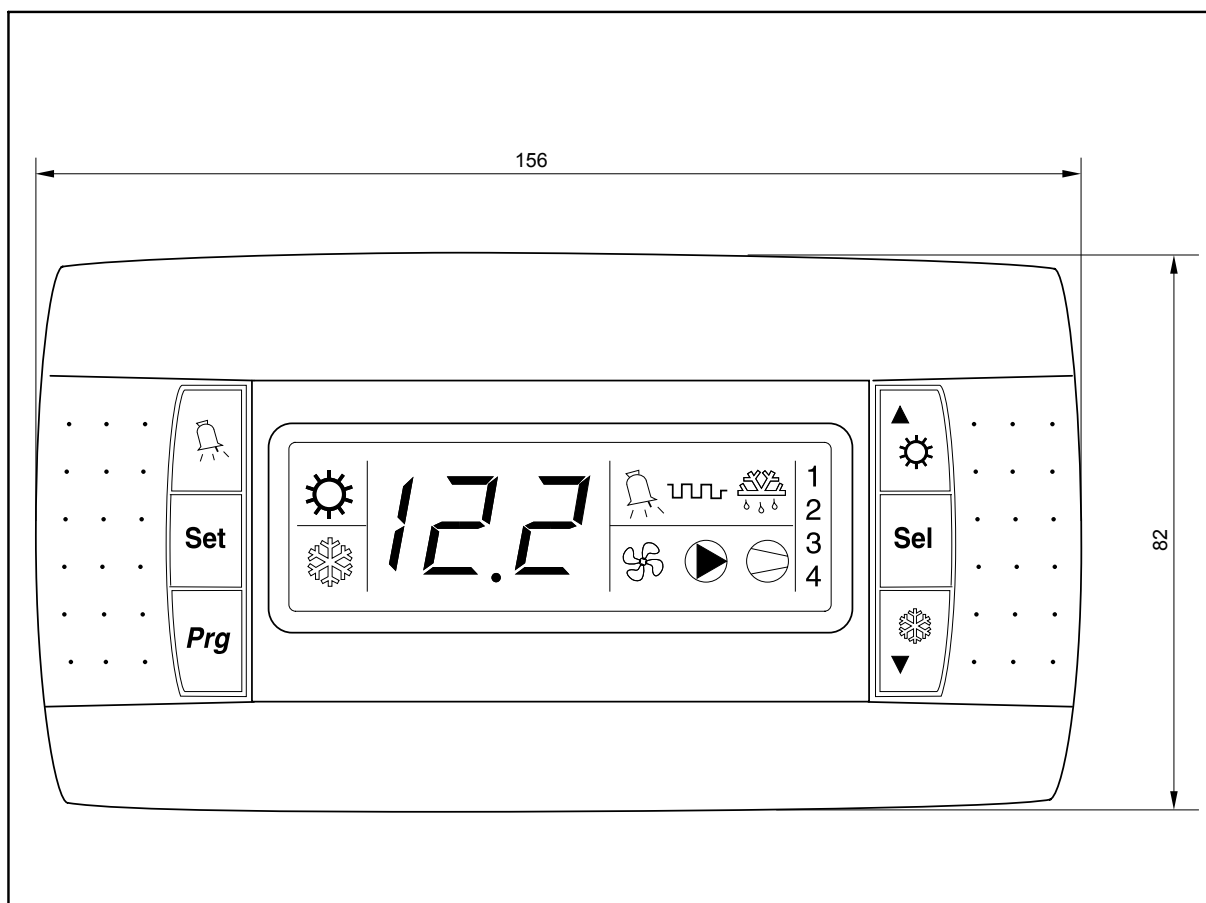
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**Remote terminal, YLCA/YLHA PLUS 5 to
27, YLCA/YLHA 40 to 80 and YLCD/
YLHD 25 to 70**

1.1 General information

This accessory allows to control and monitor the air conditioner remotely (up to 1040 m). The functions that can be performed are the same as with the standard control panel keypad. The remote terminal can coexist with the control panel keypad, and the air conditioner can be accessed from both devices. In order to apply it, it must be interconnected to the system through the *RS-485 serial line connection* accessory.

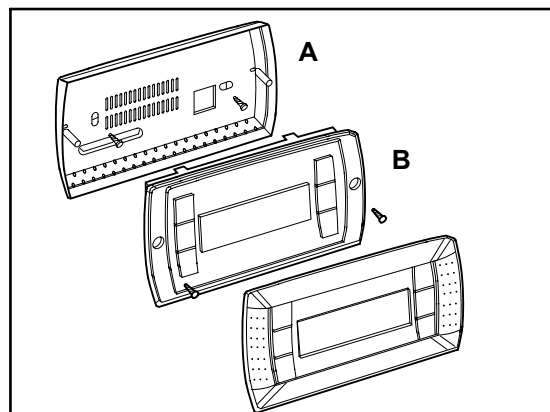
1.2 General dimensions



1.3 Assembly

For assembling on the wall it is necessary to fix the rear bracket -A- to a standard modular box for three switches.

- Fix the rear part of the casing to the box with the two round-head screws.
- Connect the telephone cable.
- Place the control -B- on the rear casing and secure it with two round-head screws.
- Fit the front panel with slight pressure.



1.4 Installation

1. Connect the RS-485 serial device (separate accessory) to the output of the RJ12 *power supply* (included with the remote terminal) and to the supervision connection of the electrical board keypad.



NOTE

Use shielded cable for the connection.



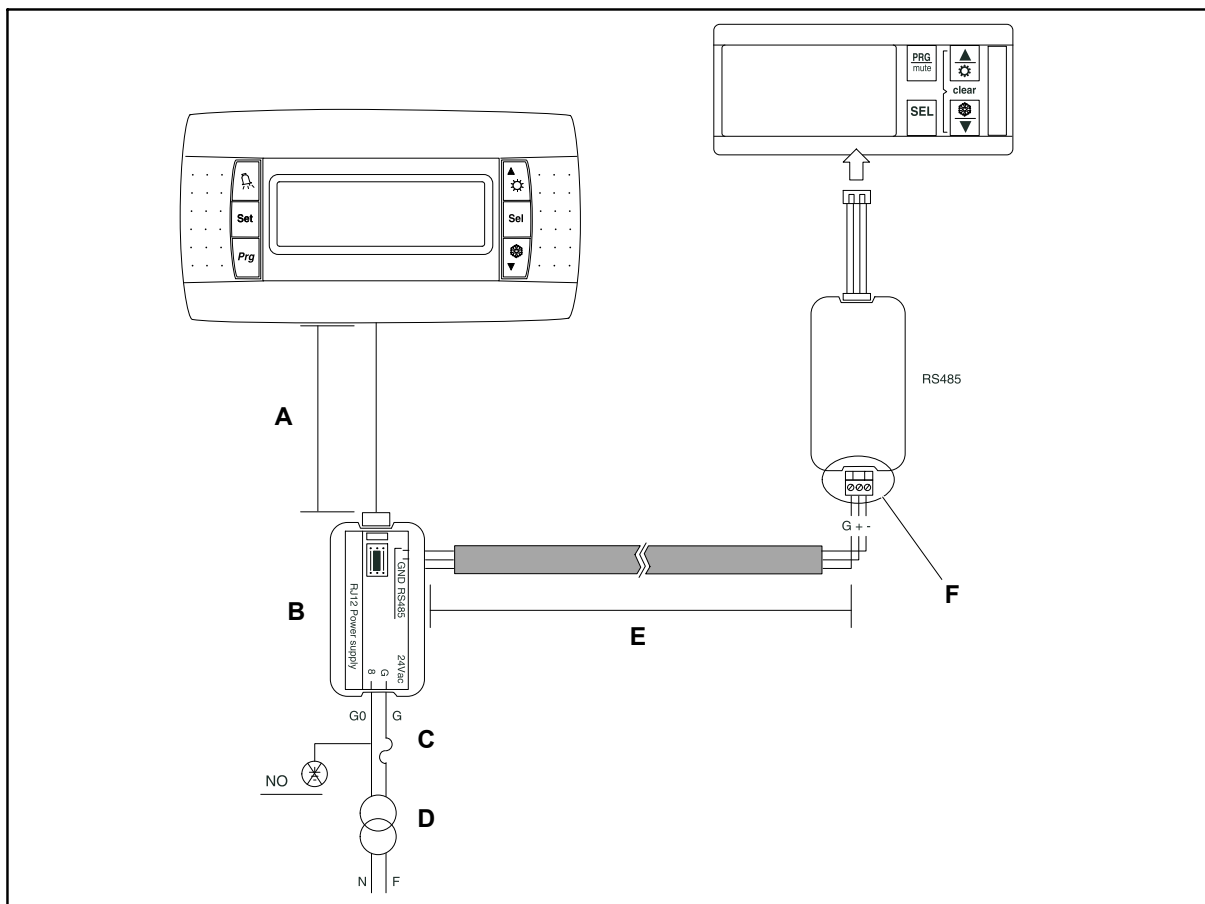
ATTENTION

- *The transformers must be safety type (3 VA class 2).*
 - *A slow 250 mA fuse must be inserted in series with terminal G.*
 - *The transformer secondary must NOT be earthed.*
2. Supply power to terminals **G-G0** with a transformer and a 250 mA fuse. See the [installation diagram](#), see on page 4.
 3. Make the connection between the RJ12 *power supply* and the remote terminal, using the telephone cable that is included.



NOTE

The cable included is 80 cm long. This cable can be replaced with another one up to 40 m.



- A Telephone cable max length = 40 m
- B RJ12 Power supply
- C Slow 250 mA fuse
- D Transformer 3 VA class 2
- E 2 twisted pair cables (max L = 1000 m) with shielding AWG22 (0,35 mm²) Rx/Tx+, Rx/Tx-, GND.
- F With lengths greater than 20 m insert a 120 Ω end of line resistor between Tx/Rx+ and Tx/Rx-

Maximum distance from RS-485	1 km (with a 120 Ω and 1/4 W resistor in RS-485)
Speed	19200 Baud
Cable characteristics	2 shielded twisted pair cables
Cable selection	AWG22 (0,35 mm ²)
Capacity per metre	> 90 pF/m (for example cable BELDEN 8761-8762)
Remote terminal	MCH 200TWO (SAP 371150)
RS-485 board	MCH 2004850 (SAP 371149)

1.5 Parameter configuration



NOTE

No configuration is required for the remote terminal to be operational, as the terminal works regardless of what the control's serial address is (selectable with parameter H10).

1. When performing the start-up, the display will show the control version.
2. After 4 seconds the representation of all the symbols will be displayed. If the connection to RS-485 is incorrect, or if the control is in OFF position, the display will show the message OFFLINE.
3. By pressing keys **UP**, **DOWN** and **SEL** simultaneously for more than 6 seconds, four lines with information on the system and its communications will appear on the display.

Line 1	Terminal version
Line 2	Control version
Line 3	Control monitoring address
Line 4	Percentage of errors between terminal and control

**BMS YLCA/YLHA PLUS 5 to 27, YLCA/
YLHA 40 to 80 and YLCD/YLHD 25 to 70**

2.1 General information

This accessory allows to connect the HVAC unit to a monitoring network through the RS-485 serial line. User with the Microchiller 2 unit.

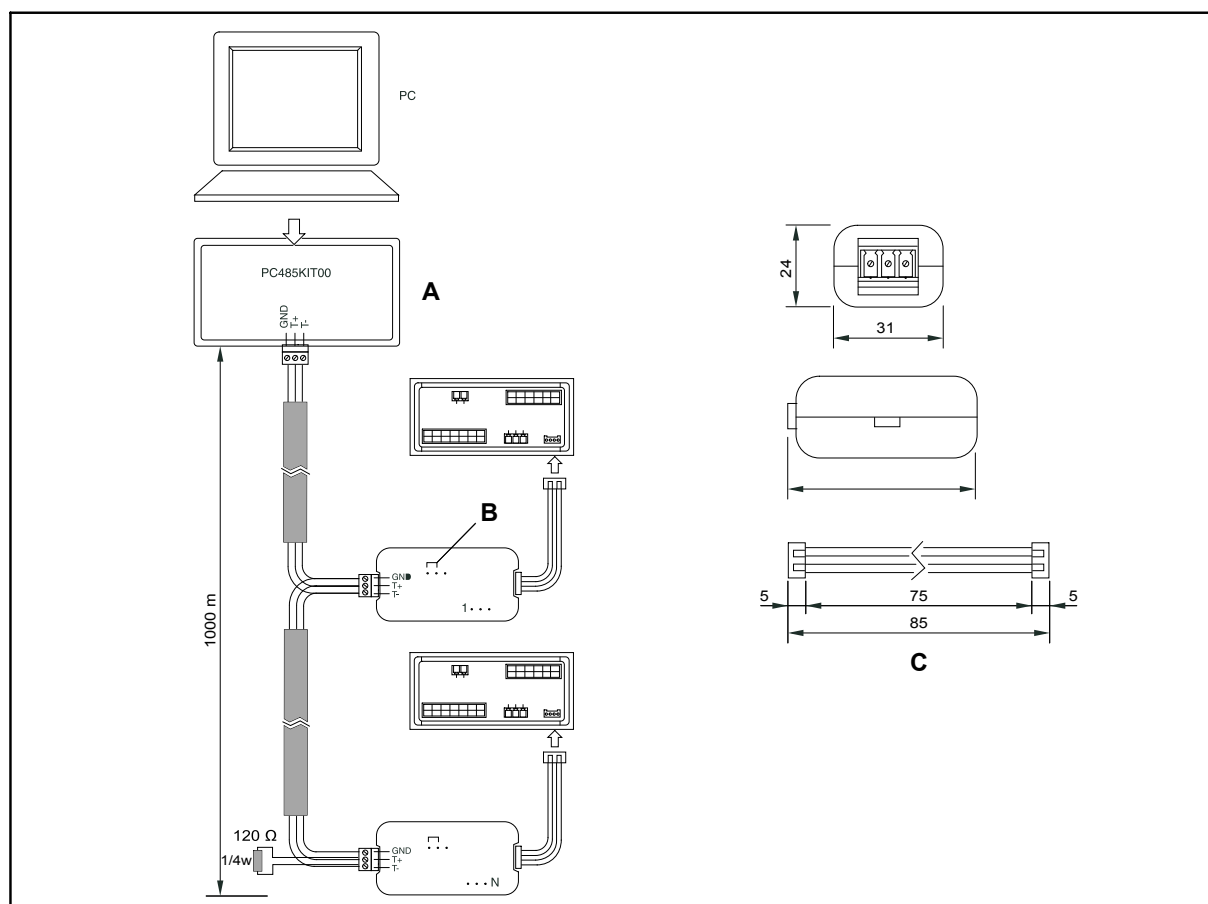
2.2 Installation



ATTENTION

- *Secure the device inside the electrical panel to prevent it from being accidentally disconnected.*
 - *Ensure that the electrical power is disconnected before making the interconnections.*
 - *The serial connection cables must be separated from the power cables.*
1. Connect the accessory to the 4-pole female base in the lower right angle of the module with display and keypad. Use the 4-cable connector included.
 2. Make the connection to the monitoring system as shown in the diagram.
 3. Connect a 120 Ω and 1/4 W resistor between terminals TxRx+ and TxRx- to finish the series.

2.3 Parameter configuration



- A Gateway
B Position of internal jumper
C RS-485 serial line connection

Maximum distance from supervisor	1 km (with a 120 Ω and 1/4 W resistor in RS-485)
Speed	19200 Baud
Cable characteristics	2 shielded twisted pair cables
Cable selection	AWG22 (0,35 mm ²)
RS-485 board	MCH 2004850 (SAP 371149)

2.3 Parameter configuration

- In order to enable the Modbus, it is necessary to modify parameter H23 and set it to 1.

Display	Description	Level	min.	max.	Unit of measure	Variation	By default	Visibility	Carel Address	Modbus Address	Variable type
H23	Modbus protocol enabling	F	0	1	Flag	1	0	-	11 (R/W)	11	Digital/Coil

- Supervisor protocol selection.

H23: Establishes the protocol used for connection to the supervisor from the RS-485 serial card.

H23 = 0: CAREL protocol (Bauds: 19200)

H23 = 1: Modbus protocol

- If there is more than one unit, different addresses must be assigned:

- **Serial address**

H10: Establishes the address of the unit for serial connection, via the optional card, to a monitoring and/or remote management PC.

The default communication parameters are:

- Baudrate: 9600
- Word length: 8
- Parity: N
- Stop bits: 1

3

**BMS YLCA/YLHA 100 to 150 and YLCD/
YLHD 100 to 150**

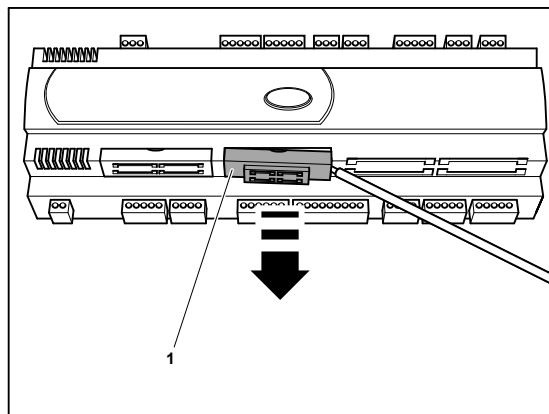
3.1 General information

This accessory allows to connect the HVAC unit to a monitoring network through the RS-485 serial line. User with the MicroChiller 3 unit.

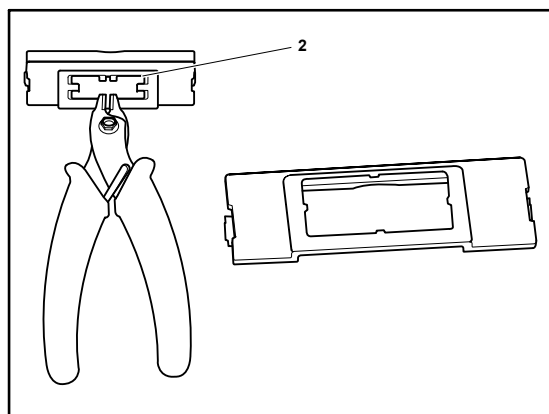
3.2 Assembly

To install the card in the MicroChiller 3 unit, observe the following instructions:

1. Remove the cover -1- of the serial card using a screwdriver.



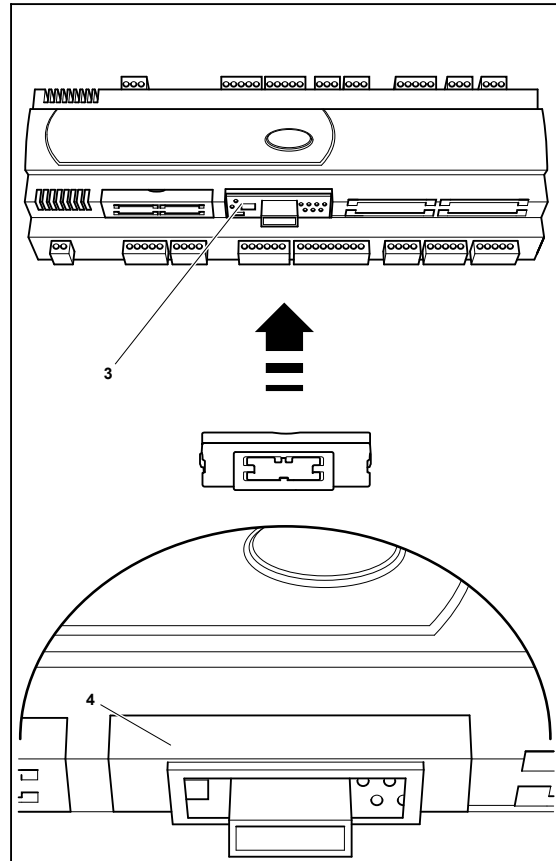
2. Remove the perforated plastic cover -2- to obtain the hole corresponding to the three-pole terminal.



3.2 Assembly

3. Insert the optional card -3- in the corresponding connector and make sure that the card is correctly placed in the two plastic brackets of the MicroChiller 3 unit casing.

4. Fit the plastic cover with the aid of a screwdriver and check that the terminal of the card fits in the perforated hole -4- of the cover.



3.3 Installation



PRECAUCIÓN

Electrical damage can be caused in the electrical components as a result of electrostatic discharges from the operator.

When handling the card, the appropriate precautions must be taken to avoid this:

- *Before handling any electrical component or card, connect yourself to earth.*
- *All components must remain as long as possible in their original packaging. If necessary, change the content of the packages and put it in antistatic packages without touching the box of the components directly with your hands.*
- *Always avoid bags made of non-antistatic plastic, polystyrene or sponges.*
- *Do not pass on the card directly to other operators.*
- *Ensure that the electrical power is disconnected before making the interconnections.*
- *Keep the cables of the RS-485 connection separate from the power cables.*

Connection with the RS-485 network is done with the terminal connector on the PCOS004850 card.

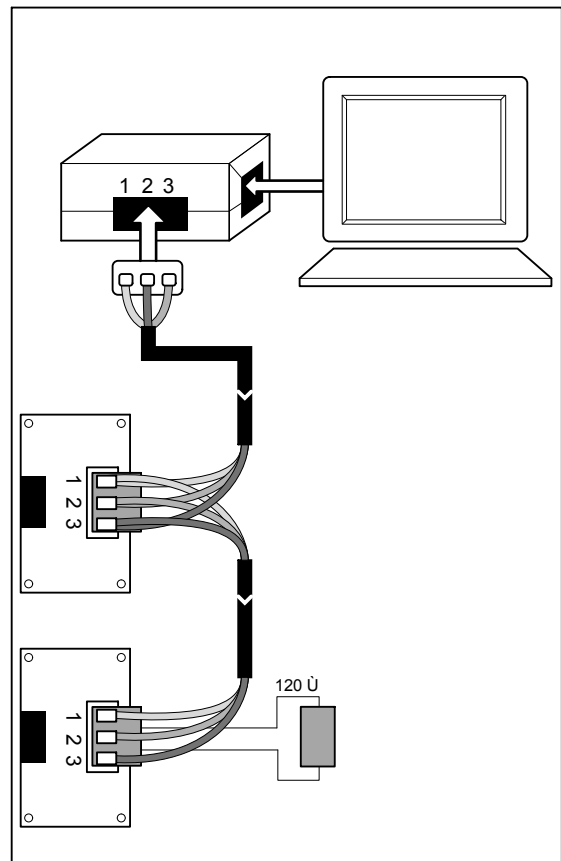


NOTA

The cabling connector pins are stored on the card.

If the cards are placed in the last position of the serial line of the monitoring system, connect pins 2 and 3 to a 120 Ω 1/4 W end of line resistor.

Pin	Description
1	GND
2	RX+ / TX+
3	RX- / TX-



Maximum distance from supervisor	1 km (with a 120 Ω and 1/4 W resistor in RS-485)
Speed	1200, 2400, 4800, 9600, 19200 Baud
Cable characteristics	2 shielded twisted pair cables
Cable selection	AWG22 (0,35 mm ²)
RS-485 board	PCOS004850 (SAP 371154)

3.4 Parameter configuration

3.4 Parameter configuration

As well as enabling the protocol, speed must be assigned, and if there is more than one machine, different addresses must be assigned.

The communication parameters are:

- Baudrate: 9600
- Word length: 8
- Parity: N
- Stop bits: 1

—H—

Description	Range	Units	Value
ON/OFF activation with Supervisor (*)	YES/NO	-	YES
WINTER/SUMMER activation with Supervisor	YES/NO	-	YES
Monitoring protocol	CAREL GSM MODEM ANALOGUE MODEM RS 232 LONWORKS MODBUS	-	MODBUS
Selection of communication speed	1200 2400 4800 9600 19200	Bauds	9600
Monitoring ID number	0 - 200	-	1

- (*) In order to switch the unit on and off by supervisor, it must first be activated manually. Then the ON/OFF by supervision can be performed.

List of variables

4 List of variables

4.1 BMS Microchiller 2 variables YLCA/YLHA PLUS 5 to 27, YLCA/YLHA 40 to 80, YLCD/YLHD 25 to 70

4.1 BMS Microchiller 2 variables YLCA/YLHA PLUS 5 to 27, YLCA/YLHA 40 to 80, YLCD/YLHD 25 to 70

Display	Description	Level	min	max	Unit of measure	Variation	By default	Visibility	Carel Address	Modbus Address	Type of variable
/01	Probe type B1 0=Not present 1=Present	F	0	1	Flag	1	1	-	1 (R/W)	1	Digital
/02	Probe type B2 0=Not present 1=Present	F	0	1	Flag	1	0	-	2 (R/W)	2	Digital
/03	Probe type B3 0=Not present 1=NTC Cond. probe 2=NTC Ext. probe	F	0	2	Flag	1	0	-	14 (R/W)	142	Integer
/04	Probe type B4 0=Not present 1=All/Nothing (D.I) 2=NTC Ext. probe 3=Proportional cond. probe 5Vdc	F	0	3	Flag	1	0	-	15 (R/W)	143	Integer
/05	Probe type B5 0=Not present 1=Present	F	0	1	Flag	1	0	X	3 (R/W)	3	Digital
/06	Probe type B6 0=Not present 1=Present	F	0	1	Flag	1	0	X	4 (R/W)	4	Digital
/07	Probe type B7 0=Not present 1=NTC Cond. probe 2=NTC Ext. probe	F	0	2	Flag	1	0	X	16 (R/W)	144	Integer
/08	Probe type B8 0=Not present 1=All/Nothing (D.I) 2=NTC Ext. probe 3=Proportional cond. probe 5Vdc	F	0	3	Flag	1	0	X	17 (R/W)	144	Integer
/09	Minimum voltage input value	F	0	/10	0,01 Vdc	1	50	P	18 (R/W)	146	Integer
/10	Maximum voltage input value	F	/09	500	0,01 Vdc	1	450	P	19 (R/W)	147	Integer
/11	Minimum pressure value	F	0	/12	bar	1	0	P	1 (R/W)	1	Analog
/12	Maximum pressure value	F	/11	99,9	bar	1	34,5	P	2 (R/W)	2	Analog
/13	B1 probe calibration	F	-12,0	12,0	°C/F	0,1	0	-	3 (R/W)	3	Analog
/14	B2 probe calibration	F	-12,0	12,0	°C/F	0,1	0	-	4 (R/W)	4	Analog
/15	B3 probe calibration	F	-12,0	12,0	°C/F	0,1	0	-	5 (R/W)	5	Analog
/16	B4 probe calibration	F	-12,0	12,0	°C/bar/F	0,1	0	-	6 (R/W)	6	Analog
/17	B5 probe calibration	F	-12,0	12,0	°C/F	0,1	0	X	7 (R/W)	7	Analog
/18	B6 probe calibration	F	-12,0	12,0	°C/F	0,1	0	X	8 (R/W)	8	Analog
/19	B7 probe calibration	F	-12,0	12,0	°C/F	0,1	0	X	9 (R/W)	9	Analog
/20	B8 probe calibration	F	-12,0	12,0	°C/bar/F	0,1	0	X	10 (R/W)	10	Analog
/21	Digital filter	U	1	15	-	1	4	-	20 (R/W)	148	Integer
/22	Input limitation	U	1	15	-	1	8	-	21 (R/W)	149	Integer
/23	Unit of measure 0=°C 1=°F	U	0	1	Flag	1	0	-	5 (R/W)	5	Digital
A01	Antifreeze alarm set-point/Low ambient temperature (Air/Air)	U	A07	A04	°C/°F	0,1	3,0	-	11 (R/W)	11	Analog
A02	Antifreeze alarm differential/Low ambient temperature (Air/Air)	U	0,3 0,3	122,0	°C/°F	0,1	5,0	-	12 (R/W)	12	Analog

Display	Description	Level	min	max	Unit of measure	Variation	By default	Visibility	Carel Address	Modbus Address	Type of variable
A03	Antifreeze alarm bypass time/Low ambient temperature in unit start-up in heating mode	U	0	150	sec	1	0	-	22 (R/W)	150	Integer
A04	Antifreeze/backup resistor setpoint	U	A01	r16	°C/°F	0,1	5,0	-	13 (R/W)	13	Analog
A05	Antifreeze/backup resistor differential	U	0,3	50,0	°C/°F	0,1	1,0	-	14 (R/W)	14	Analog
A06	Auxiliary heater probe 0=Control probe (see Tab 5.1) 1=Antifreeze probe (see Tab 5.1)	F	0	1	Flag	1	0	-	6 (R/W)	6	Digital
A07	Antifreeze alarm setpoint limit	F	-40,0 -40,0	176,0	°C/°F	0,1	-40,0	-	15 (R/W)	15	Analog
A08	Auxiliary heater setpoint in heating mode	U	A01	r15	°C/°F	0,1	25,0	-	16 (R/W)	16	Analog
A09	Auxiliary heater diff. in heating mode	U	0,3	50,0	°C/°F	0,1	3,0	-	17 (R/W)	17	Analog
A10	Automatic antifreeze start-up 0=Function disabled 1=Heater and pump turned on simultaneously in A4/A8 2=Heater and pump turned on independently in A4/A8 3=Heater turned on in A4/A8	U	0	3	Flag	1	0	-	23 (R/W)	151	Integer
b00	Probe selection shown on display 0=Probe B1 1=Probe B2 2=Probe B3 3=Probe B4 4=Probe B5 5=Probe B6 6=Probe B7 7=Probe B8 8=Setpoint without compensation 9=Setpoint (dynamic) with compensation 10=Remote ON/OFF digital input status	U	0	10	Flag	1	0	-	24 (R/W)	152	Integer
b01	Value read by probe B1	D	-	-	°C/°F	-	-	-	70 (R)	70	Analog
b02	Value read by probe B2	D	-	-	°C/°F	-	-	-	71 (R)	71	Analog
b03	Value read by probe B3	D	-	-	°C/°F	-	-	-	72 (R)	72	Analog
b04	Value read by probe B4	D	-	-	°C/°F/ bar	-	-	-	73 (R)	73	Analog
b05	Value read by probe B5	D	-	-	°C/°F	-	-	X	74 (R)	74	Analog
b06	Value read by probe B6	D	-	-	°C/°F	-	-	X	75 (R)	75	Analog
b07	Value read by probe B7	D	-	-	°C/°F	-	-	X	76 (R)	76	Analog
b08	Value read by probe B8	D	-	-	°C/°F/ bar	-	-	X	77 (R)	77	Analog
b09	Driver 1 evaporator temperature	D	-	-	°C/°F	-	-	V	78 (R)	78	Analog
b10	Driver 1 evaporator pressure	D	-	-	bar	-	-	V	79 (R)	79	Analog
b11	Driver 1 superheat	D	-	-	°C/°F	-	-	V	80 (R)	80	Analog
b12	Driver 1 saturation temperature	D	-	-	°C/°F	-	-	V	81 (R)	81	Analog
b13	Driver 1 valve position	D	0	100,0	%	-	-	V	82 (R)	82	Analog
b14	Driver 2 evaporator temperature	D	-	-	°C/°F	-	-	XV	83 (R)	83	Analog
b15	Driver 2 evaporator pressure	D	-	-	bar	-	-	XV	84 (R)	84	Analog

4 List of variables

4.1 BMS Microchiller 2 variables YLCA/YLHA PLUS 5 to 27, YLCA/YLHA 40 to 80, YLCD/YLHD 25 to 70

Display	Description	Level	min	max	Unit of measure	Variation	By default	Visibility	Carel Address	Modbus Address	Type of variable
b16	Driver 2 superheat	D	-	-	°C/°F	-	-	XV	85 (R)	85	Analog
b17	Driver 2 saturation temperature	D	-	-	°C/°F	-	-	XV	86 (R)	86	Analog
b18	Driver 2 valve position	D	0	100,0	%	-	-	XV	87 (R)	87	Analog
b19	Outdoor exchanger output temperature probe c1	D	-	-	°C/°F	-	-	V	88 (R)	88	Analog
b20	Outdoor exchanger output temperature probe c2	D	-	-	°C/°F	-	-	XV	89 (R)	89	Analog
c01	Minimum compressor start-up time	U	0	999	sec	1	60	-	25 (R/W)	153	Integer
c02	Minimum compressor switch-off time	U	0	999	sec	1	60	-	26 (R/W)	154	Integer
c03	Delay between 2 start-ups of one compressor	U	0	999	sec	1	360	-	27 (R/W)	155	Integer
c04	Delay between start-up of 2 compressors	U	0	999	sec	1	10	-	28 (R/W)	156	Integer
c05	Delay between switch-off of 2 compressors	U	0	999	sec	1	0	-	29 (R/W)	157	Integer
c06	Start-up delay	U	0	999	sec	1	0	-	30 (R/W)	158	Integer
c07	Compressor start-up delay after inlet pump/fan start-up (air/air)	U	0	150	sec	1	20	-	31 (R/W)	159	Integer
c08	Compressor switch-off delay after switching off inlet pump/fan	U	0	150	min	1	1	-	32 (R/W)	160	Integer
c09	Tandem compressor maximum operating time	U	0	60	min	1	0	-	33 (R/W)	161	Integer
c10	Compressor 1 hour counter	D	0	800,0	100 Hours	0,1	0	-	90 (R)	90	Analog
c11	Compressor 2 hour counter	D	0	800,0	100 Hours	0,1	0	-	91 (R)	91	Analog
c12	Compressor 3 hour counter	D	0	800,0	100 Hours	0,1	0	-	92 (R)	92	Analog
c13	Compressor 4 hour counter	D	0	800,0	100 Hours	0,1	0	-	93 (R)	93	Analog
c14	Operating hour counter limit	U	0	100	100 Hours	1	0	-	34 (R/W)	162	Integer
c15	Evaporator/fan 1 operating hour counter	D	0	800,0	100 Hours	0,1	0	-	94 (R)	94	Analog
c16	Backup condenser pump/fan 2 operating hour counter	D	0	800,0	100 Hours	0,1	0	-	95 (R)	95	Analog
c17	Minimum time between 2 pump start-ups	U	0	150	min	1	30	-	35 (R/W)	163	Integer
c18	Minimum pump start-up time	U	0	15	min	1	3	-	36 (R/W)	164	Integer
d01	Condensation defrost/antifreeze operation 0=No 1=Yes with shared defrosting	U	0	1	Flag	1	0	-	7 (R/W)	7	Digital
d02	Time or temperature - defrost based on pressure 0=time 1=temperature or pressure 2 = pressure start, temperature end	U	0	2	Flag	1	0	D	90 (R/W)	218	Integer

Display	Description	Level	min	max	Unit of measure	Variation	By default	Visibility	Carel Address	Modbus Address	Type of variable
d03	- Defrost start pressure - Condensation anti-freeze alarm set-point	U	/11	d04	bar	0,1	3,5	DP	18 (R/W)	18	Analog
	- Defrost start temperature - Condensation anti-freeze alarm set-point	U	-40,0	d04	°C/°F	0,1	-5,0	DN	19 (R/W)	19	Analog
d04	Defrost end temperature	U	d03	176,0	°C/°F	0,1	20,0	DP	20 (R/W)	20	Analog
	Defrost end pressure	U	d03	/12	bar	0,1	14,0	DN	21 (R/W)	21	Analog
d05	Minimum defrost start time	U	10	150	sec	1	10	D	37 (R/W)	165	Integer
d06	Minimum defrost duration	U	0	150	sec	1	0	D	38 (R/W)	166	Integer
d07	Maximum defrost duration	U	1	150	min	1	5	D	39 (R/W)	167	Integer
d08	Delay between two defrosts of a single circuit	U	10	150	min	1	30	D	40 (R/W)	168	Integer
d09	Defrost delay between 2 circuits	U	0	150	min	1	10	D	41 (R/W)	169	Integer
d10	Defrost by external contact 0=Function disabled 1=Start by external contact 2=End by external contact 3=Start and end by external contact	F	0	3	Flag	1	0	D	42 (R/W)	170	Integer
d11	Antifreeze resistors in activated in defrosting	U	0	1	Flag	1	0	D	9 (R/W)	9	Digital
d12	Wait time before defrosting	F	0	3	min	1	0	D	43 (R/W)	171	Integer
d13	Wait time after defrosting	F	0	3	min	1	0	D	44 (R/W)	172	Integer
d14	End of defrost with 2 cooling circuits 0=Independent 1=If both in end of defrost 2=If at least one in end of defrost	F	0	2	Flag	1	0	D	45 (R/W)	173	Integer
d15	End of defrost with 2 cooling circuits 0=Independent 1=If both in start of defrost 2=If at least one in start of defrost	F	0	2	Flag	1	0	D	46 (R/W)	174	Integer
d16	Forced ventilation time at defrost end	F	0	360	sec	1	0	D	47 (R/W)	175	Integer
d17	Defrost with compressors off	F	0	80,0	°C/°F	0,1	0	D	22 (R/W)	22	Analog
F01	Fan output enabling 0=Not present 1=Present	F	0	1	Flag	1	0	-	10 (R/W)	10	Digital
F02	Fan operating mode 0=Always on 1=Linked to compr. (parallel operation) 2=Linked to compr. with ON/OFF setting 3=Linked to compr. with speed setting	U	0	3	Flag	1	0	F	48 (R/W)	176	Integer
F03	Minimum Triac voltage limit	F	0	F04	step	1	35	F	49 (R/W)	177	Integer

4 List of variables

4.1 BMS Microchiller 2 variables YLCA/YLHA PLUS 5 to 27, YLCA/YLHA 40 to 80, YLCD/YLHD 25 to 70

Display	Description	Level	min	max	Unit of measure	Variation	By default	Visibility	Carel Address	Modbus Address	Type of variable
F04	Maximum Triac voltage limit	F	F03	100	step	1	75	F	50 (R/W)	178	Integer
F05	Cooling pressure value minimum speed	U	/11	/12	bar	0,1	13,0	FP	23 (R/W)	23	Analog
F05	Cooling temperature value minimum speed	U	-40,0 -40,0	176,0	°C °F	0,1	35,0	FN	24 (R/W)	24	Analog
F06	Cooling pressure value maximum speed	U	0	300	bar	0,1	3,0	FP	25 (R/W)	25	Analog
F06	Cooling temperature value maximum speed	U	0	50,0	°C/°F	0,1	10,0	FN	26 (R/W)	26	Analog
F07	Fan switch-off pressure in cooling mode	U	0	F5	bar	0,1	5,0	FP	27 (R/W)	27	Analog
F07	Fan switch-off differential in cooling mode	U	0	50,0	°C/°F	0,1	15,0	FN	28 (R/W)	28	Analog
F08	Heating pressure value maximum speed	U	/11	/12	bar	0,1	13,0	FP	29 (R/W)	29	Analog
F08	Heating temperature value maximum speed	U	-40,0 -40,0	176,0	°C °F	0,1	35,0	FN	30 (R/W)	30	Analog
F09	Heating pressure value maximum speed	U	0	F08	bar	0,1	4,0	FP	31 (R/W)	31	Analog
F09	Heating temperature value maximum speed	U	0	50,0	°C/°F	0,1	5,0	FN	32 (R/W)	32	Analog
F10	Fan switch-off pressure in heating mode	U	0	30,0	bar	0,1	3,0	FP	33 (R/W)	33	Analog
F10	Fan switch-off temperature in heating mode	U	0	F08	°C/°F	0,1	5,0	FN	34 (R/W)	34	Analog
F11	Fan start-up time	U	0	120	sec	1	0	F	51 (R/W)	179	Integer
F12	Triac pulse duration (fan start-up)	F	0	10	sec	1	2	F	52 (R/W)	180	Integer
F13	Fan management in de-frost mode 0=Fan deactivated 1=Fan in cooling mode 2=Maximum speed after defrost	F	0	2	Flag	1	0	F	53 (R/W)	181	Integer
F14	Fan start-up time with high condensing temperature	U	0	999	sec	1	0	FN	91 (R/W)	219	Integer
H01	Unit model: 0=Air_air unit 1=Air_air heat pump 2=Air_water chiller 3=Air_water heat pump 4=Water_water chiller 5=Water_water reversible gas heat pump 6=Water_water reversible water heat pump 7=Condenser unit 8=Condenser unit with reverse cycle 9=Cold water condenser unit 10=Cold water condenser unit with reverse cycle	F	0	10	Flag	1	2	-	54 (R/W)	182	Integer
H02	Number of ventilation circuits present 0=1 circuit 1=2 circuits	F	0	1	Flag	1	0	F	12 (R/W)	12	Digital
H03	Number of evaporators 0=1 evaporator 1=2 evaporators	F	0	1	Flag	1	0	-	13 (R/W)	13	Digital

Display	Description	Level	min	max	Unit of measure	Variation	By default	Visibility	Carel Address	Modbus Address	Type of variable
H04	Number of compressors per circuit 0= 1 comp. in 1 circuit (single circuit) 1= 2 Tandem comp. in 1 circuit (single circuit) 2= 1 comp. per circuit, 2 circuits (two-circuit) 3= 2 Tandem comp., 2 circuits (two-circuit) 4 = 1 compressor and one partialisation in one circuit 5 = 1 compressor and one partialisation per circuit	F	0	5	Flag	1	0	-	55 (R/W)	183	Integer
H05	Discharge pump/fan mode (Air/Air) (output N2) 0=Absent 1=Always on 2=On under regulator demand 3=On under regulator demand and delay	F	0	3	Flag	1	1	-	56 (R/W)	184	Integer
H06	Digital input summer/winter 0=Absent 1=Present	U	0	1	Flag	1	0	-	14 (R/W)	14	Digital
H07	Digital input ON/OFF 0=Absent 1=Present	U	0	1	Flag	1	0	-	15 (R/W)	15	Digital
H08	Micro chiller 2 network configuration 0 = Only m.c. 1 = m.c.+valve 2 = m.c.+esp 3 = m.c.+esp+valve	F	0	3	Flag	1	0	-	57 (R/W)	185	Integer
H09	Keypad lock 0= Disabled 1=Enabled	U	0	1	Flag	1	1	-	16 (R/W)	16	Digital
H10	Serial address	U	1	200	-	1	1	-	58 (R/W)	186	Integer
H11	Output mode (table)	F	0	5	Flag	1	0	-	59 (R/W)	187	Integer
H12	Logical partialisation and reversing valve 0=Both normally closed 1=Both normally open 2=Reversing valve norm. open and partialisation valve norm. closed 3=Reversing valve norm. closed and partialisation valve norm. open	F	0	3	Flag	1	1	-	60 (R/W)	188	Integer
H21	Second pump function 0=Deactivated 1=Backup and weekly rotation 2=Backup and daily rotation 3=Condensation relative to setpoint 4=Condensation always on	F	0	4	Flag	1	0	-	62 (R/W)	190	Integer
H22	Predetermined load value disabling 0=Function disabled 1=Function enabled	F	0	1	Flag	1	0	-	18 (R)	18	Digital
H23	Modbus enabling	F	0	1	Flag	1	0	-	11	11	Digital
P01	Flow rate control alarm delay at pump start-up	U	0	150	sec	1	20	-	63 (R/W)	191	Integer
P02	Flow rate control alarm delay during operation	U	0	120	sec	1	5	-	64 (R/W)	192	Integer

4 List of variables

4.1 BMS Microchiller 2 variables YLCA/YLHA PLUS 5 to 27, YLCA/YLHA 40 to 80, YLCD/YLHD 25 to 70

Display	Description	Level	min	max	Unit of measure	Variation	By default	Visibility	Carel Address	Modbus Address	Type of variable
P03	Low pressure alarm delay at compressor start-up	U	0	200	sec	1	40	-	65 (R/W)	193	Integer
P04	Partial load in high pressure enabling	U	0	1	Flag	1	0	P	66 (R/W)	194	Integer
P05	Alarm resetting 0=HP1-2/LP1-2/A1-2/Lt manual 1=HP1-2/LP1-2/A1-2/Lt automatic 2=HP1-2/A1-2/Lt manual; LP1-2 automatic 3=HP1-2 manual; LP1-2/A1-2/Lt automatic 4=HP1-2/LP1-2 manual; A1-2/Lt automatic 5=HP1-2/LP1-2 (3 times in one hour) manual; A1-2/Lt automatic 6=HP1-2/LP1-2 (3 times in one hour) manual; A1-2/Lt manual	F	0	6	Flag	1	0	-	67 (R/W)	195	Integer
P06	Cooling/heating logic 0=Chiller; Heat pump 1=Heat pump, Chiller	F	0	1	Flag	1	0	-	19 (R/W)	19	Digital
P07	Low pressure alarm with pressure probes 0=Disabled 1=Enabled	F	0	1	Flag	1	0	P	68 (R/W)	196	Integer
P08	Digital input 1 selection 0=N 1=Man. FL 2=Auto FL 3=Man. TP 4=Auto TP 5=Man. TC1 6=Auto TC1 7=Man. TC2 8=Auto TC2 9=Ref./Cal. 10=Delay Ref./Cal 11=Man. LA 12=Auto LA 13=2° Set 14=2° Set timer 15=Defrost stop c 1 16=Defrost stop c 2 17=Defrost start-up c 1 18=Defrost start-up c 2 19=Step 1 20=Step 2 21=Step 3 22=Step 4	F	0	22	Flag	1	0	-	69 (R/W)	197	Integer
P09	Digital input 2 selection	F	0	22	Flag	1	0	-	70 (R/W)	198	Integer
P10	Digital input 6 selection	F	0	22	Flag	1	0	X	71 (R/W)	199	Integer
P11	Digital input 7 selection	F	0	22	Flag	1	0	X	72 (R/W)	200	Integer
P12	Digital input 10 selection	F	0	22	Flag	1	0	X	73 (R/W)	201	Integer
P13	Set B4 as P8 if /4=1 (digital input)	F	0	22	Flag	1	0	-	74 (R/W)	202	Integer
P14	Set B8 as P8 if /8=1 (digital input)	F	0	22	Flag	1	0	X	75 (R/W)	203	Integer
P15	Low pressure alarm config. 0=Not active with compressor off 1=Active with compressor off	F	0	1	Flag	1	0	-	76 (R/W)	204	Integer
P16	High temperature alarm setpoint	U	-40,0 -40,0	176,0	°C °F	0,1	80,0	-	38 (R/W)	38	Analog
P17	High temperature alarm delay at start-up	U	0	250	min	1	30	-	77 (R/W)	205	Integer

Display	Description	Level	min	max	Unit of measure	Variation	By default	Visibility	Carel Address	Modbus Address	Type of variable
P18	Set high pressure alarm from transducer	F	0	99,9	bar	0,1	20,0	P	39 (R/W)	39	Analog
P19	Low temperature alarm setpoint	U	-40,0 -40,0	176,0	°C °F	0,1	10,0	-	40 (R/W)	40	Analog
P20	Unit start-up protection enabling 0=Disabled 1=Enabled	U	0	1	Flag	1	0	-	20 (R/W)	20	Digital
P21	Alarm relay management 0=Normally deactivated 1=Normally activated	F	0	1	Flag	1	0	-	8 (R/W)	8	Digital
r01	Cooling setpoint	D	r13	r14	°C/°F	0,1	12,0	-	41 (R/W)	41	Analog
r02	Cooling differential	D	0,3	50,0	°C/°F	0,1	3,0	-	42 (R/W)	42	Analog
r03	Heating setpoint	D	r15	r16	°C/°F	0,1	40,0	-	43 (R/W)	43	Analog
r04	Heating differential	D	3	50,0	°C/°F	0,1	3,0	-	44 (R/W)	44	Analog
r05	Compressor rotation 0=Deactivated 1=FIFO type 2=With hour control 3=Direct reciprocity of compressor DI and DO (only for condensers)	F	0	3	Flag	1	0	-	78 (R/W)	206	Integer
r06	Type of compressor setting / use 0 = Proportional input 1 = Proportional input + Neutral zone 2 = Proportional output 3 = Proportional output + Neutral zone 4 = Time output with neutral zone	F	0	4	Flag	1	0	-	79 (R/W)	207	Integer
r07	Neutral zone differential	F	0,1	50,0	°C/°F	0,1	2,0	-	45 (R/W)	45	Analog
r08	Activation delay to r07 lower limit	F	0	999	sec	1	120	-	80 (R/W)	208	Integer
r09	Activation delay to r07 upper limit	F	0	999	sec	1	100	-	81 (R/W)	209	Integer
r10	Activation delay to r12 lower limit	F	0	999	sec	1	120	-	82 (R/W)	210	Integer
r11	Deactivation delay to r12 upper limit	F	0	999	sec	1	100	-	83 (R/W)	211	Integer
r12	Compressor deactivation differential	F	0	50,0	°C/°F	0,1	2,0	-	46 (R/W)	46	Analog
r13	Minimum cooling setpoint	U	-40,0	r14	°C/°F	0,1	-40,0	-	47 (R/W)	47	Analog
r14	Maximum cooling setpoint	U	r13 r13	176,0	°C °F	0,1	80,0	-	48 (R/W)	48	Analog
r15	Minimum heating setpoint	U	-40,0	r16	°C/°F	0,1	-40,0	-	49 (R/W)	49	Analog
r16	Maximum heating setpoint	U	r15	176,0	°C/°F	0,1	80,0	-	50 (R/W)	50	Analog
r17	Cooling offset constant	U	-5,0	5,0		0,1	0	-	51 (R/W)	51	Analog
r18	Maximum setpoint distance	U	0,3	20,0	°C/°F	0,1	0,3	-	52 (R/W)	52	Analog
r19	Start-up compensation temperature in cooling	U	-40,0	176,0	°C/°F	0,1	30,0	-	53 (R/W)	53	Analog
r20	Start-up compensation temperature in heating	U	-40,0	176,0	°C/°F	0,1	0	-	54 (R/W)	54	Analog
r21	Second cooling setpoint from external contact	D	r13	r14	°C/°F	0,1	12,0	-	55 (R/W)	55	Analog
r22	Second heating setpoint from external contact	D	r15	r16	°C/°F	0,1	40,0	-	56 (R/W)	56	Analog

4 List of variables

4.1 BMS Microchiller 2 variables YLCA/YLHA PLUS 5 to 27, YLCA/YLHA 40 to 80, YLCD/YLHD 25 to 70

Display	Description	Level	min	max	Unit of measure	Variation	By default	Visibility	Carel Address	Modbus Address	Type of variable
r27	Accumulator tank suppression enabling 0=Deactivated 1=Activated in cooling 2=Activated in heating 3=Always activated	F	0	3	flag	1	0	-	88 (R/W)	216	Integer
r28	Min. time to determine low load	F	0	999	sec	1	60	-	89 (R/W)	217	Integer
r29	Chiller low load differential	F	0,3	50,0	°C/°F	0,1	3,0	-	58 (R/W)	58	Analog
r30	Heat pump low load differential	F	0,3	50,0	°C/°F	0,1	3,0	-	59 (R/W)	59	Analog
r31	Heating offset constant	U	-5,0	5,0		0,1	0	-	60 (R/W)	60	Analog
H96	Driver 2 software version	D	0	999	Flag			XV	4 (R)	132	Integer
H97	Driver 1 software version	D	0	999	Flag			V	3 (R)	131	Integer
H98	Expansion software version	D	0	999	Flag			X	2 (R)	130	Integer
H99	Software version (displayed after unit start-up)	D	0	999	Flag			-	1 (R)	129	Integer
	Digital input 1	-	0	1	Flag	1	-	-	43 (R)	43	Digital
	Digital input 2	-	0	1	Flag	1	-	-	44 (R)	44	Digital
	Digital input 3	-	0	1	Flag	1	-	-	45 (R)	45	Digital
	Digital input 4	-	0	1	Flag	1	-	-	46 (R)	46	Digital
	Digital input 5	-	0	1	Flag	1	-	-	47 (R)	47	Digital
	Digital input B4	-	0	1	Flag	1	-	-	48 (R)	48	Digital
	Digital output 1	-	0	1	Flag	1	-	-	49 (R/W)	49	Digital
	Digital output 2	-	0	1	Flag	1	-	-	50 (R/W)	50	Digital
	Digital output 3	-	0	1	Flag	1	-	-	51 (R/W)	51	Digital
	Digital output 4	-	0	1	Flag	1	-	-	52 (R/W)	52	Digital
	Digital output 5	-	0	1	Flag	1	-	-	53 (R/W)	53	Digital
	Unit status 0=Standby 1=On	-	0	1	Flag	1	0	-	54 (R/W)	54	Digital
	Cooling/heating status: 0=Cooling 1=Heating	-	0	1	Flag	1	1	-	55 (R/W)	55	Digital
	Digital input 6 (2nd circuit)	-	0	1	Flag	1	-	-	66 (R)	66	Digital
	Digital input 7	-	0	1	Flag	1	-	-	67 (R)	67	Digital
	Digital input 8	-	0	1	Flag	1	-	-	68 (R)	68	Digital
	Digital input 9	-	0	1	Flag	1	-	-	69 (R)	69	Digital
	Digital input 10	-	0	1	Flag	1	-	-	70 (R)	70	Digital
	Digital input B8	-	0	1	Flag	1	-	-	71 (R)	71	Digital
	Digital output 6	-	0	1	Flag	1	-	-	72 (R/W)	72	Digital
	Digital output 7	-	0	1	Flag	1	-	-	73 (R/W)	73	Digital
	Digital output 8	-	0	1	Flag	1	-	-	74 (R/W)	74	Digital
	Digital output 9	-	0	1	Flag	1	-	-	75 (R/W)	75	Digital
	Digital output 10	-	0	1	Flag	1	-	-	76 (R/W)	76	Digital
	Supervisor digital output enabling	-	0	8000	Flag	1	-	-	13 (R/W)	220	Integer
	Defrost status bit0=Defrost circuit 1 bit1=Defrost circuit 2 bit2=Fan Defrost circuit 1 bit3=Fan Defrost circuit 2	-	-	-	-	-	-	104 (R)	Defrost status		Integer

4.2 BMS Microchiller 2–SE variables YLCA/YLHA PLUS 5 to 27, YLCA/YLHA 40 to 80, YLCD/YLHD 25 to 70

Display	Description	Level	min	max	Unit of measure	Variation	By default	Visibility	Carel Address	Modbus Address	Type of variable
H99	Software version (displayed on unit start-up)	D	0	999	int	-	20	-	1 (R)	208	Integer/ Register
H98	Expansion software version	D	0	999	int	-	0	X	2 (R)	209	Integer/ Register
H97	Driver 1 software version	D	0	999	Int	-	0	V	3 (R)	210	Integer/ Register
H96	Driver 2 software version	D	0	999	Int	-	0	XV	4 (R)	211	Integer/ Register
dtE	Current DTE value	D	0	0		-	0		99 (R)	99	Analog/ Register
dC1	Current DTC1 value	D	0	0		-	0		100 (R)	100	Analog/ Register
dC2	Current DTC2 value	D	0	0		-	0		101 (R)	101	Analog/ Register
/01	Probe type B1 0=Not present 1=Present	U	0	1	Flag	1	1	-	1 (R/W)	1	Digital/ Coil
/02	Probe type B2 0=Not present 1=Present	F	0	1	Flag	1	0	-	2 (R/W)	2	Digital/ Coil
/03	Probe type B3 0=Not present 1=NTC Cond. probe 2=NTC Ext. probe 3=Probe for differential setting	F	0	3	Flags	1	0	-	14 (R/W)	221	Integer/ Register
/04	Probe type B4 0=Not present 1=On/Off 2=NTC Ext. probe 3=Ratiometric cond. probe 5Vdc 4=Probe for differential setting	F	0	4	Int	1	0	-	15 (R/W)	222	Integer/ Register
/05	Probe type B5 (expansion) 0=Not present 1=Present	F	0	1	Flag	1	0	X	3 (R/W)	3	Digital/ Coil
/06	Probe type B6 (expansion) 0=Not present 1=Present	F	0	1	Flag	1	0	X	4 (R/W)	4	Digital/ Coil
/07	Probe type B7 (expansion) 0=Not present 1=NTC Cond. probe 2=NTC Ext. probe 3=Probe for differential setting	F	0	3	Int	1	0	X	16 (R/W)	223	Integer/ Register
/08	Probe type B8 (expansion) 0=Not present 1=On/Off 2=NTC ext. probe 3=Ratiometric cond. probe 5Vdce 4=NB probe for differential setting. If there are more differential setting probes the priority is B8, B7, B4, B3	F	0	4	Int	1	0	X	17 (R/W)	224	Integer/ Register
/09	Minimum voltage input value	F	0	/10	Vdc/ 100	1	50	P	18 (R/W)	225	Integer/ Register
/10	Maximum voltage input value	F	/09	500	Vdc/ 100	1	450	P	19 (R/W)	226	Integer/ Register

4 List of variables

4.2 BMS Microchiller 2-SE variables YLCA/YLHA PLUS 5 to 27, YLCA/YLHA 40 to 80, YLCD/YLHD 25 to 70

Display	Description	Level	min	max	Unit of measure	Variation	By default	Visibility	Carel Address	Modbus Address	Type of variable
/11	Minimum pressure value	F	0	/12	Dbar	0,1	0	P	1 (R/W)	1	Analog/ Register
/12	Maximum pressure value	F	/11	999	Dbar	0,1	345	P	2 (R/W)	2	Analog/ Register
/13	B1 probe calibration	F	-120	120	°C/F	0,1	0	-	3 (R/W)	3	Analog/ Register
/14	B2 probe calibration	F	-120	120	°C/F	0,1	0	-	4 (R/W)	4	Analog/ Register
/15	B3 probe calibration	F	-120	120	°C/F	0,1	0	-	5 (R/W)	5	Analog/ Register
/16	B4 probe calibration	F	-120	120	°C/bar/ F	0,1	0	-	6 (R/W)	6	Analog/ Register
/17	B5 probe calibration	F	-120	120	°C/F	0,1	0	X	7 (R/W)	7	Analog/ Register
/18	B6 probe calibration	F	-120	120	°C/F	0,1	0	X	8 (R/W)	8	Analog/ Register
/19	B7 probe calibration	F	-120	120	°C/F	0,1	0	X	9 (R/W)	9	Analog/ Register
/20	B8 probe calibration	F	-120	120	°C/bar/ F	0,1	0	X	10 (R/W)	10	Analog/ Register
/21	Digital filter	U	1	15	-	1	4	-	20 (R/W)	227	Integer/ Register
/22	Input limitation	U	1	15	-	1	8	-	21 (R/W)	228	Integer/ Register
/23	Unit of measure 0=°C 1=°F	F	0	1	Flag	1	0	-	5 (R/W)	5	Digital/ Coil
A01	Antifreeze alarm setpoint/Low ambient temperature (Air/Air)	U	A07	A04	°C/°F	0,1	30	-	11 (R/W)	11	Analog/ Register
A02	Antifreeze alarm differential/Low ambient temperature (Air/Air)	U	3	1220	°C/°F	0,1	50	-	12 (R/W)	12	Analog/ Register
A03	Antifreeze alarm bypass time/Low ambient temperature in unit start-up in winter	U	0	150	sec	1	0	-	22 (R/W)	229	Integer/ Register
A04	Antifreeze/backup resistor setpoint	U	A01	r16	°C/°F	0,1	50	AA	13 (R/W)	13	Analog/ Register
A04	Antifreeze/backup resistor setpoint differential	U	0	200	°C/°F	0,1	70	AR	77 (R/W)	77	Analog/ Register
A05	Antifreeze/backup resistor differential	U	3	500	°C/°F	0,1	10	-	14 (R/W)	14	Analog/ Register
A06	Backup resistor probe 0=Control probe (see Tab 5a) 1=Antifreeze probe (see Tab 5a)	F	0	1	Flag	1	0	-	6 (R/W)	6	Digital/ Coil
A07	Antifreeze alarm setpoint limit	F	-400	1760	°C/°F	0,1	-400	-	15 (R/W)	15	Analog/ Register
A08	Backup resistor setpoint in heating	U	A01	r16	°C/°F	0,1	250	AA	16 (R/W)	16	Analog/ Register
A08	Antifreeze/backup resistor setpoint differential	U	0	200	°C/°F	0,1	70	AR	78 (R/W)	78	Analog/ Register
A09	Backup resistor differential in heating	U	3	500	°C/F	0,1	30	-	17 (R/W)	17	Analog/ Register
A10	Automatic antifreeze start-up 0=Function disabled 1=Resistors and pump turned on simultaneously in A4/A8 2=Resistors and pump turned on independently in A4/A8 3=Resistors turned on in A4/A8	U	0	3		1	0	-	23 (R/W)	230	Integer/ Register

Display	Description	Level	min	max	Unit of measure	Variation	By default	Visibility	Carel Address	Modbus Address	Type of variable
A11	Backup resistor 2 setpoint in heating	U	A01	r16	°C/°F	0,1	250	AA	67 (R/W)	67	Analog/ Register
A11	Backup resistor 2 differential in heating	U	0	200	°C/°F	0,1	70	AR	79 (R/W)	79	Analog/ Register
A12	Delta T setpoint x Dirty filters (Air/Air)	U	0	1760	°C/°F	0,1	150	-	57 (R/W)	57	Analog/ Register
A13	Discharge setpoint in free cooling mode	U	A07	r16	°C/°F	0,1	30	-	80 (R/W)	80	Analog/ Register
A14	Antifreeze alarm setpoint/Low ambient temperature for EVD	U	A07	A04	°C/°F	0,1	30	-	82 (R/W)	82	Analog/ Register
b00	Probe selection shown on display 0=Probe B1 1=Probe B2 2=Probe B3 3=Probe B4 4=Probe B5 5=Probe B6 6=Probe B7 7=Probe B8 8=Setpoint without compensation 9=Setpoint (dynamic) with compensation 10=Remote ON/OFF digital input status 11=Probe UAD	U	0	11	N	1	0	-	24 (R/W)	231	Integer/ Register
b01	Value read by probe B1	D	0	0	°C/F	-	0	-	102 (R)	102	Analog/ Register
b02	Value read by probe B2	D	0	0	°C/F	-	0	-	103 (R)	103	Analog/ Register
b03	Value read by probe B3	D	0	0	°C/F	-	0	-	104 (R)	104	Analog/ Register
b04	Value read by probe B4	D	0	0	°C/F/ dbar	-	0	-	105 (R)	105	Analog/ Register
b05	Value read by probe B5	D	0	0	°C/F	-	0	X	106 (R)	106	Analog/ Register
b06	Value read by probe B6	D	0	0	°C/F	-	0	X	107 (R)	107	Analog/ Register
b07	Value read by probe B7	D	0	0	°C/F	-	0	X	108 (R)	108	Analog/ Register
b08	Value read by probe B8	D	0	0	°C/F/ dbar	-	0	X	109 (R)	109	Analog/ Register
b09	Driver 1 evaporator temperature	D	0	0	°C/F	-	0	V	110 (R)	110	Analog/ Register
b10	Driver 1 evaporator pressure	D	0	0	dbar	-	0	V	111 (R)	111	Analog/ Register
b11	Driver 1 superheat	D	0	0	°C/F	-	0	V	112 (R)	112	Analog/ Register
b12	Driver 1 saturation temperature	D	0	0	°C/F	-	0	V	113 (R)	113	Analog/ Register
b13	Driver 1 valve position	D	0	1000	%	-	0	V	114 (R)	114	Analog/ Register
b14	Driver 2 evaporator temperature	D	0	0	°C/F	-	0	XV	115 (R)	115	Analog/ Register
b15	Driver 2 evaporator pressure	D	0	0	dbar	-	0	XV	116 (R)	116	Analog/ Register
b16	Driver 2 superheat	D	0	0	°C/F	-	0	XV	117 (R)	117	Analog/ Register
b17	Driver 2 saturation temperature	D	0	0	°C/F	-	0	XV	118 (R)	118	Analog/ Register
b18	Driver 2 valve position	D	0	1000	%	-	0	XV	119 (R)	119	Analog/ Register
b19	Outdoor exchanger output temperature probe c1	D	0	0	°C/F	-	0	V	120 (R)	120	Analog/ Register

4 List of variables

4.2 BMS Microchiller 2-SE variables YLCA/YLHA PLUS 5 to 27, YLCA/YLHA 40 to 80, YLCD/YLHD 25 to 70

Display	Description	Level	min	max	Unit of measure	Variation	By default	Visibility	Carel Address	Modbus Address	Type of variable
b20	Outdoor exchanger output temperature probe c2	D	0	0	°C/F	-	0	XV	121 (R)	121	Analog/ Register
b21	Terminal probe (for terminal µAD)	D	-400	800	°C/F	0,1	0		128 (R/W)	128	Analog/ Register
c01	Minimum start-up time	U	0	999	sec	1	60	-	25 (R/W)	232	Integer/ Register
c02	Minimum switch-off time	U	0	999	sec	1	60	-	26 (R/W)	233	Integer/ Register
c03	Delay between 2 start-ups of one compressor	U	0	999	sec	1	360	-	27 (R/W)	234	Integer/ Register
c04	Delay between start-up of 2 compressors	U	0	999	sec	1	10	-	28 (R/W)	235	Integer/ Register
c05	Delay between switch-off of 2 compressors	U	0	999	sec	1	0	-	29 (R/W)	236	Integer/ Register
c06	Start-up delay	U	0	999	sec	1	0	-	30 (R/W)	237	Integer/ Register
c07	Start-up delay of discharge pump/fan start-up compressor	U	0	999	sec	1	20	-	31 (R/W)	238	Integer/ Register
c08	Switch-off delay of compressor discharge pump/fan	U	0	150	min	1	1	-	32 (R/W)	239	Integer/ Register
c09	Tandem compressor maximum operating time	U	0	60	min	1	0	-	33 (R/W)	240	Integer/ Register
c10	Compressor 1 hour counter	D	0	8000	100 Hours	-	0	-	122 (R)	122	Analog/ Register
c11	Compressor 2 hour counter	D	0	8000	100 Hours	-	0	-	123 (R)	123	Analog/ Register
c12	Compressor 3 hour counter	D	0	8000	100 Hours	-	0	-	124 (R)	124	Analog/ Register
c13	Compressor 4 hour counter	D	0	8000	100 Hours	-	0	-	125 (R)	125	Analog/ Register
c14	Operating hour counter limit	U	0	100	100 Hours	1	0	-	34 (R/W)	241	Integer/ Register
c15	Evaporator/fan 1 operating hour counter	D	0	8000	100 Hours	-	0	-	126 (R)	126	Analog/ Register
c16	Backup condenser pump/fan 2 operating hour counter	D	0	8000	100 Hours	-	0	-	127 (R)	127	Analog/ Register
c17	Minimum time between 2 pump start-ups	U	0	150	min	1	30	-	35 (R/W)	242	Integer/ Register
c18	Minimum pump start-up time	U	0	15	min	1	3	-	36 (R/W)	243	Integer/ Register
c19	Minimum pump start-up time	U	0	100	min	1	3	-	125 (R/W)	332	Integer/ Register
d01	Condensation defrost/ antifreeze operation 0=No 1=Yes with uniform defrosting	U	0	1	Flag	1	0	-	7 (R/W)	7	Digital/ Coil
d02	Defrost mode Time or temperature-based defrosting 0=time 1=temperature or pressure 2 = pressure start, temperature end 3=Activation sliding defrost	U	0	3	Flag	1	0	D	90 (R/W)	297	Integer/ Register
d03	- Defrost start pressure - Condensation antifreeze alarm set-point	U	/11	d04	dbar	0,1	35	DP	18 (R/W)	18	Analog/ Register

Display	Description	Level	min	max	Unit of measure	Variation	By default	Visibility	Carel Address	Modbus Address	Type of variable
d03	- Defrost start temperature - Condensation anti-freeze alarm set-point	U	-400	d04	°C/°F	0,1	-50	DN	19 (R/W)	19	Analog/ Register
d04	Defrost end temperature	U	d03	/12	dbar	0,1	140	DP	20 (R/W)	20	Analog/ Register
d04	Defrost end pressure	U	d03	1760	°C/°F	0,1	200	DN	21 (R/W)	21	Analog/ Register
d05	Minimum defrost start time	U	10	150	sec	1	10	D	37 (R/W)	244	Integer/ Register
d06	Minimum defrost duration	U	0	150	sec	1	0	D	38 (R/W)	245	Integer/ Register
d07	Maximum defrost duration	U	1	150	min	1	5	D	39 (R/W)	246	Integer/ Register
d08	Delay between two defrosts of a single circuit	U	10	150	min	1	30	D	40 (R/W)	247	Integer/ Register
d09	Defrost delay between 2 circuits	U	0	150	min	1	10	D	41 (R/W)	248	Integer/ Register
d10	Defrost by external contact 0=Disabled function 1=Start by external contact 2=End by external contact 3=Start and end by external contact	F	0	3	flag	1	0	D	42 (R/W)	249	Integer/ Register
d11	Antifreeze resistors in defrosting	U	0	1	flag	1	0	D	9 (R/W)	9	Digital/ Coil
d12	Wait time before defrosting	F	0	3	min	1	0	D	43 (R/W)	250	Integer/ Register
d13	Wait time after defrosting	F	0	3	min	1	0	D	44 (R/W)	251	Integer/ Register
d14	End of defrost with 2 refrigeration circuits 0=Independent 1=If both in end of defrost condition 2=If at least one in end of defrost condition	F	0	2	flag	1	0	D	45 (R/W)	252	Integer/ Register
d15	Start of defrost with 2 circuits 0=Independent 1=If both in start of defrost condition 2=If at least one in start of defrost condition	F	0	2	Int	1	0	D	46 (R/W)	253	Integer/ Register
d16	Forced ventilation time at defrost end	F	0	360	sec	1	0	D	47 (R/W)	254	Integer/ Register
d17	Setpoint / Light defrost enabled	F	0	800	°C/F	0,1	0	D	22 (R/W)	22	Analog/ Register
d18	Outdoor temperature max. value (sliding defrost)	F	-400	800	°C/F	0,1	-100	D	62 (R/W)	62	Analog/ Register
d19	Defrost start differential (sliding defrost)	F	-400	800	°C/F/ bar	0,1	30	D	63 (R/W)	63	Analog/ Register
d20	Outdoor temperature differential (sliding defrost)	F	0	800	°C/F	0,1	100	D	64 (R/W)	64	Analog/ Register
F01	Fan output enabling 0=Not present 1=Present	F	0	1	flag	1	0	-	10 (R/W)	10	Digital/ Coil

4 List of variables

4.2 BMS Microchiller 2-SE variables YLCA/YLHA PLUS 5 to 27, YLCA/YLHA 40 to 80, YLCD/YLHD 25 to 70

Display	Description	Level	min	max	Unit of measure	Variation	By default	Visibility	Carel Address	Modbus Address	Type of variable
F02	Fan operating mode 0=Always ON 1=Linked to compr. (parallel operation) 2=Linked to compr. with ON/OFF setting 3=Linked to compr. with speed setting	U	0	3	Int	1	0	F	48 (R/W)	255	Integer/ Register
F03	Minimum Triac voltage limit	F	0	F04	step	1	35	F	49 (R/W)	256	Integer/ Register
F04	Maximum Triac voltage limit	F	F03	100	step	1	75	F	50 (R/W)	257	Integer/ Register
F05	Min. speed pressure in summer mode	U	/11	/12	dbar	0,1	130	FP	23 (R/W)	23	Analog/ Register
F05	Speed setpoint temperature in summer mode	U	-400	1760	°C/°F	0,1	350	FN	24 (R/W)	24	Analog/ Register
F06	Max. speed pressure in summer mode	U	0	300	dbar	0,1	30	FP	25 (R/W)	25	Analog/ Register
F06	Max. speed differential in summer mode	U	0	500	°C/°F	0,1	100	FN	26 (R/W)	26	Analog/ Register
F07	Fan switch-off pressure in summer mode	U	0	F05	dbar	0,1	50	FP	27 (R/W)	27	Analog/ Register
F07	Fan switch-off differential in summer mode	U	0	500	°C/°F	0,1	150	FN	28 (R/W)	28	Analog/ Register
F08	Min. speed pressure in winter mode	U	/11	/12	dbar	0,1	130	FP	29 (R/W)	29	Analog/ Register
F08	Speed setpoint temperature in winter mode	U	-400	1760	°C/°F	0,1	350	FN	30 (R/W)	30	Analog/ Register
F09	Max. speed pressure in winter mode	U	0	F08	dbar	0,1	40	FP	31 (R/W)	31	Analog/ Register
F09	Max. speed differential in winter mode	U	0	500	°C/°F	0,1	50	FN	32 (R/W)	32	Analog/ Register
F10	Fan switch-off pressure in winter mode	U	0	300	dbar	0,1	30	FP	33 (R/W)	33	Analog/ Register
F10	Fan switch-off differential in winter mode	U	0	F08	°C/°F	0,1	50	FN	34 (R/W)	34	Analog/ Register
F11	Fan start-up time	U	0	120	sec	1	0	F	51 (R/W)	258	Integer/ Register
F12	Triac pulse duration (fan start-up)	F	0	10	sec	1	2	F	52 (R/W)	259	Integer/ Register
F13	Fan management in defrost mode 0=Fans deactivated 1=Fans in Chiller mode 2=Maximum speed after defrost	F	0	2	Int	1	0	F	53 (R/W)	260	Integer/ Register
F14	Ventilation in high cond. temp. at start-up	U	0	999		1	0	FN	91 (R/W)	298	Integer/ Register
F15	Low noise activation 0=Deactivated 1=Summer activated 2=Winter activated 3=Summer and winter activated	U	0	3		1	0	F	85 (R/W)	292	Integer/ Register
F16	Summer differential low noise	F	0	500	°C/F/ bar	0,1	0	L	35 (R/W)	35	Analog /Register
F17	Winter differential low noise	F	0	500	°C/°F/ bar	0,1	0	L	36 (R/W)	36	Analog/ Register

Display	Description	Level	min	max	Unit of measure	Variation	By default	Visibility	Carel Address	Modbus Address	Type of variable
H01	Unit model: 0=Air_air unit 1=Air_air heat pump 2=Air_water chiller 3=Air_water heat pump 4=Water_water chiller 5=Water_water reversible gas heat pump 6=Water_water reversible water heat pump 7=Motor condenser 8=Motor condenser with reverse cycle 9=Water motor condenser 10=Water motor condenser with reverse cycle 11=Air_air unit only cooling with electronic heating	F	0	11	flag	1	2	-	54 (R/W)	261	Integer/ Register
H02	Number of ventilation circuits present 0=1 circuit 1=2 circuits	U	0	1	flag	1	0	-	12 (R/W)	12	Digital/ Coil
H03	Number of evaporators present 0=1 evaporator 1=2 evaporators	F	0	1	flag	1	0	-	13 (R/W)	13	Digital/ Coil
H04	Number of compressors per circuit 0= 1 comp. in 1 circuit (single circuit) 1= 2 Tandem comp. in 1 circuit (single circuit) 2= 1 comp. per circuit, 2 circuits (two-circuit) 3= 2 Tandem comp., 2 circuits (two-circuit) 4 = 1 compressor and one partialisation in one circuit 5 = 1 compressor and one partialisation per circuit	F	0	5	flag	1	0	-	55 (R/W)	262	Integer/ Register
H05	Discharge pump/fan mode (Air/Air) (output N2) 0=Absent 1=Always ON 2=ON under regulator demand 3=ON under regulator demand and delay 4=Follows hot keep or hot start in winter, always ON in summer 5=Follows hot keep or hot start in winter, follows the comp. in summer	F	0	5	flag	1	1	-	56 (R/W)	263	Integer/ Register
H06	Digital input summer/ winter 0=Absent 1=Present	U	0	1	flag	1	0	-	14 (R/W)	14	Digital/ Coil
H07	Digital input ON/OFF 0=Absent 1=Present	U	0	1	flag	1	0	-	15 (R/W)	15	Digital/ Coil
H08	Micro chiller 2 network configuration 0 = Only m.c. 1 = m.c.+valve 1 2 = m.c.+esp 3 = m.c.+esp+valve 1+valve 2 4 = m.c.+esp+valve 1	F	0	4	flag	1	0	-	57 (R/W)	264	Integer/ Register

4 List of variables

4.2 BMS Microchiller 2-SE variables YLCA/YLHA PLUS 5 to 27, YLCA/YLHA 40 to 80, YLCD/YLHD 25 to 70

Display	Description	Level	min	max	Unit of measure	Variation	By default	Visibility	Carel Address	Modbus Address	Type of variable
H09	Keypad lock 0= Disabled 1=Enabled	U	0	1	flag	1	1	-	16 (R/W)	16	Digital/Coil
H10	Serial address Value 0= Future use as terminal	U	1	200	-	-	1	-	58 (R)	265	Integer/ Register
H11	Output mode (table)	F	0	12	Int	1	0	-	59 (R/W)	266	Integer/ Register
H12	Logical partialisation and reversing valve 0=Both normally closed 1=Both normally open 2=Reversing valve norm. open and partialisation valve norm. closed 3=Reversing valve norm. closed and partialisation valve norm. open	F	0	3	flag	1	1	-	60 (R/W)	267	Integer/ Register
H13	Pump down activation	F	0	1		1	0	V	17 (R/W)	17	Digital/Coil
H14	Pump down minimum pressure	F	0	500	dbar	0,1	20	-	37 (R/W)	37	Analog/ Register
H15	Pump down maximum time	F	0	180	sec	1	30	-	61 (R/W)	268	Integer/ Register
H16	Auto tuning activation	F	0	1		1	0	-	22 (R/W)	22	Digital/Coil
H17	Minimum DTE value permitted	F	0	1760	°C/°F	0,1	0	-	68 (R/W)	68	Analog/ Register
H18	Maximum DTE value permitted	F	0	1760	°C/°F	0,1	800	-	69 (R/W)	69	Analog/ Register
H19	Maximum DTC value permitted	F	0	1760	°C/°F	0,1	800	-	70 (R/W)	70	Analog/ Register
H21	Second pump function 0=Deactivated 1=Backup and weekly rotation 2=Backup and daily rotation 3=Condensation relative to setpoint 4=Condensation always on	F	0	4	Int	1	0	-	62 (R/W)	269	Integer/ Register
H22	Default resetting disabling 0=Function disabled 1=Function enabled	F	0	1	flag	1	0	-	18 (R/W)	18	Digital/Coil
H23	Modbus enabling	F	0	1	flag	1	0	-	11 (R/W)	11	Digital/Coil
P01	Flow rate control alarm delay at pump start-up	U	0	150	sec	1	20	-	63 (R/W)	270	Integer/ Register
P02	Flow rate control alarm delay during operation	U	0	120	sec	1	5	-	64 (R/W)	271	Integer/ Register
P03	Low pressure alarm delay at compressor start-up	U	0	200	sec	1	40	-	65 (R/W)	272	Integer/ Register
P04	Comp. part. enabling at high pressure 0=Partialisation deactivated 1=High pressure partialisation activated 2=Low pressure partialisation activated 3=High and low pressure partialisation activated	U	0	3	flag	1	0	P	66 (R/W)	273	Integer/ Register

Display	Description	Level	min	max	Unit of measure	Variation	By default	Visibility	Carel Address	Modbus Address	Type of variable
P05	Alarm resetting 0=HP1-2/LP1-2/A1-2/Lt manual 1=HP1-2/LP1-2/A1-2/Lt automatic 2=HP1-2/A1-2/Lt manual; LP1-2 automatic 3=HP1-2 manual; LP1-2/A1-2/Lt automatic 4=HP1-2/LP1-2 manual; A1-2/Lt automatic 5=HP1-2/LP1-2 (3 times in one hour) manual; A1-2/Lt automatic 6=HP1-2/LP1-2 (3 times in one hour) manual; A1-2/Lt manual	F	0	6	flag	1	0	-	67 (R/W)	274	Integer/ Register
P06	Summer winter logic 0=Chiller; Heat pump 1=Heat pump; Chiller	F	0	1	flag	1	0	-	19 (R/W)	19	Digital/ Coil
P07	Low pressure alarm with pressure probes 0=Disabled 1=Enabled	F	0	1	flag	1	0	P	68 (R/W)	275	Integer/ Register
P08	Digital input 1 selection 0=N 1=FL man. 2=FL auto. 3=TP man. 4=TP auto. 5=TC1 man. 6=TC1 auto. 7=TC2 man. 8=TC2 auto. 9=Ver/Inv 10=Ver/Inv delayed 11=LA man. 12=LA auto. 13=2nd Set 14=2nd Set timer 15=Stop defrost c 1 16=Stop defrost c 2 17=Start defrost c 1 18=Start defrost c 2 19=Step 1 20=Step 2 21=Step 3 22=Step 4 23=remote ON/OFF 24=Comp alarm 1 25=Comp alarm 1 26=Comp alarm 1 27=Comp alarm 1	F	0	27	int	1	0	-	69 (R/W)	276	Integer/ Register
P09	Digital input 2 selection	F	0	27	int	1	0	-	70 (R/W)	277	Integer/ Register
P10	Digital input 6 selection	F	0	27	int	1	0	X	71 (R/W)	278	Integer/ Register
P11	Digital input 7 selection	F	0	27	int	1	0	X	72 (R/W)	279	Integer/ Register
P12	Digital input 10 selection	F	0	27	int	1	0	X	73 (R/W)	280	Integer/ Register
P13	Selection x B4 as P8 if / 4=1 (digital input)	F	0	27	int	1	0	-	74 (R/W)	281	Integer/ Register
P14	Selection x B8 as P8 if / 8=1 (digital input)	F	0	27	int	1	0	X	75 (R/W)	282	Integer/ Register
P15	Low pressure alarm selection 0=Not active with compressor off 1=Active with compressor off	F	0	1	flag	1	0	-	76 (R/W)	283	Integer/ Register
P16	Unit high temperature alarm setpoint	U	-400	1760	°C/°F	0,1	800	-	38 (R/W)	38	Analog/ Register

4 List of variables

4.2 BMS Microchiller 2-SE variables YLCA/YLHA PLUS 5 to 27, YLCA/YLHA 40 to 80, YLCD/YLHD 25 to 70

Display	Description	Level	min	max	Unit of measure	Variation	By default	Visibility	Carel Address	Modbus Address	Type of variable
P17	High temperature alarm delay at start-up	U	0	250	sec	1	30	-	77 (R/W)	284	Integer/ Register
P18	Set high pressure alarm from transducer	F	P33	999	dbar	0,1	200	P	39 (R/W)	39	Analog/ Register
P19	Unit low temperature alarm setpoint	U	-400	1760	°C/°F	0,1	100	-	40 (R/W)	40	Analog/ Register
P20	Unit start-up protection enabling 0=Disabled 1=Enabled	U	0	1	flag	1	0	-	20 (R/W)	20	Digital/ Coil
P21	Alarm relay output logic 0=Normally not excited 1=Normally excited	F	0	1		1	0	-	8 (R/W)	8	Digital/ Coil
P22	Low pressure alarm delay at compressor start-up in heat pump	U	0	200	sec	1	40	-	86 (R/W)	293	Integer/ Register
P23	Low pressure alarm delay at compressor start-up in defrost	U	0	999	sec	1	40	-	87 (R/W)	294	Integer/ Register
P24	Compressor deactivation in HP and LP partialisation	D	0	1		1	0	P	21 (R/W)	21	Digital/ Coil
P25	Digital output selection 2 0= Disabled 1 = Compressor 2 2 = Antifreeze/backup resistor 3 = Cycle reversing valve 1 4 = Evaporator pump 1 (fans in air/air units) 5 = Freecooling/freeheating opening 6 = Freecooling/freeheating closing 7 = Humidification 8 = Condenser fan on/off 9 = Antifreeze/backup resistor 10 = Alarm 11 = Boiler 12 = Compressor 4 13 = Cycle reversing valve 2 14 = Evaporator pump 2 (fans in air/air units) 15 = Condenser fan 2nd circuit 16 = Warning 17 = Condenser pump	F	0	15	int	1	0	-	108 (R/W)	315	Integer/ Register
P26	Digital output 3 selection (as P25)	F	0	15	int	1	0	-	109 (R/W)	316	Integer/ Register
P27	Digital output 4 selection (as P25)	F	0	15	int	1	0	-	110 (R/W)	317	Integer/ Register
P28	Digital output 5 selection (as P25)	F	0	15	int	1	0	-	111 (R/W)	318	Integer/ Register

Display	Description	Level	min	max	Unit of measure	Variation	By default	Visibility	Carel Address	Modbus Address	Type of variable
P29	Digital output selection 7 0= Disabled 1 = Compressor 2* 2 = Antifreeze/backup resistor 1 3 = Cycle reversing valve 1 4* = Evaporator pump 1 (fans in air/air units)* 5 = Freecooling/freeheating opening 6 = Freecooling/freeheating closing 7 = Humidification 8 = Condenser fan on/off* 9 = Antifreeze/backup resistor 2 10 = Alarm* 11 = Boiler 12 = Compressor 4 13 = Cycle reversing valve 2 14 = Evaporator pump 2 (fans in air/air units) 15 = Condenser fan 2nd circuit 16 = Warning 17 = Condenser pump *= Not available with expansion ver 1.6 or lower	F	0	15	int	1	0	X	112 (R/W)	319	Integer/ Register
P30	Digital output 8 selection (as P29)	F	0	15	int	1	0	X	113 (R/W)	320	Integer/ Register
P31	Digital output 9 selection (as P29)	F	0	15	int	1	0	X	114 (R/W)	321	Integer/ Register
P32	Digital output 10 selection (as P29)	F	0	15	int	1	0	X	115 (R/W)	322	Integer/ Register
P33	Low pressure alarm limit	F	0	P18	dbar	0,1	10	P	76 (R/W)	76	Analog/ Register
P34	Digital input 5 selection	F	0	27	int	1	23	-	122 (R/W)	329	Integer/ Register
P35	Silence alarm with "mute" key 0=No 1=Yes	F	0	1		1	0	-	23 (R/W)	23	Digital/ Coil
P36	Type of high pressure alarm management 0=Always 1=Only if active compressor present and 2 seconds after activation	F	0	1		1	0	-	24 (R/W)	24	Digital/ Coil
r01	Summer setpoint	D	r13	r14	°C/°F	0,1	120	-	41 (R/W)	41	Analog/ Register
r02	Summer differential	D	3	500	°C/°F	0,1	30	-	42 (R/W)	42	Analog/ Register
r03	Winter setpoint	D	r15	r16	°C/°F	0,1	400	-	43 (R/W)	43	Analog/ Register
r04	Winter differential	D	3	500	°C/°F	0,1	30	-	44 (R/W)	44	Analog/ Register
r05	Compressor rotation 0=Deactivated 1=FIFO type 2=With hour control 3=Direct reciprocity of compressor DI and DO (only for motor condensers)	F	0	3	Flag	1	0	-	78 (R/W)	285	Integer/ Register

4 List of variables

4.2 BMS Microchiller 2-SE variables YLCA/YLHA PLUS 5 to 27, YLCA/YLHA 40 to 80, YLCD/YLHD 25 to 70

Display	Description	Level	min	max	Unit of measure	Variation	By default	Visibility	Carel Address	Modbus Address	Type of variable
r06	Type of compressor setting / use 0 = Proportional input 1 = Proportional input + Neutral zone 2 = Proportional output 3 = Proportional output + Neutral zone 4 = Time output with neutral zone	F	0	4	Flag	1	0	-	79 (R/W)	286	Integer/ Register
r07	Neutral zone differential	F	1	500	°C/°F	0,1	20	-	45 (R/W)	45	Analog/ Register
r08	Maximum activation time output control	F	0	999	sec	1	120	-	80 (R/W)	287	Integer/ Register
r09	Minimum activation time output control	F	0	999	sec	1	100	-	81 (R/W)	288	Integer/ Register
r10	Maximum deactivation time output control	F	0	999	sec	1	120	-	82 (R/W)	289	Integer/ Register
r11	Minimum deactivation time output control	F	0	999	sec	1	100	-	83 (R/W)	290	Integer/ Register
r12	Compressor deactivation differential	F	0	500	°C/°F	0,1	20	-	46 (R/W)	46	Analog/ Register
r13	Minimum summer setpoint	U	-400	r14	°C/°F	0,1	-400	-	47 (R/W)	47	Analog/ Register
r14	Maximum summer setpoint	U	r13	1760	°C/°F	0,1	800	-	48 (R/W)	48	Analog/ Register
r15	Minimum winter setpoint	U	-400	r16	°C/°F	0,1	-400	-	49 (R/W)	49	Analog/ Register
r16	Maximum winter setpoint	U	r15	1760	°C/°F	0,1	800	-	50 (R/W)	50	Analog/ Register
r17	Summer offset constant	U	-50	50		0,1	0	-	51 (R/W)	51	Analog/ Register
r18	Maximum set point distance	U	3	200	°C/°F	0,1	3	-	52 (R/W)	52	Analog/ Register
r19	Start-up compensation temperature in summer	U	-400	1760	°C/°F	0,1	300	-	53 (R/W)	53	Analog/ Register
r20	Start-up compensation temperature in winter	U	-400	1760	°C/°F	0,1	0	-	54 (R/W)	54	Analog/ Register
r21	Second summer setpoint from external contact	D	r13	r14	°C/°F	0,1	120	-	55 (R/W)	55	Analog/ Register
r22	Second winter setpoint from external contact	D	r15	r16	°C/°F	0,1	400	-	56 (R/W)	56	Analog/ Register
r23	Automatic change over probe selection	D	0	8	flag	1	0	-	84 (R/W)	291	Integer/ Register
r24	Automatic change over setpoint	D	r15	r16	°C/°F	0,1	400	-	61 (R/W)	61	Analog/ Register
r25	Outdoor temp. setpoint for compressor deactivation	D	-400	800	°C/°F	0,1	-400	-	65 (R/W)	65	Analog/ Register
r26	Summer setpoint in dehumidification	D	r13	r14	°C/°F	0,1	120	-	66 (R/W)	66	Analog/ Register
r27	Accumulator tank suppression enabling 0=Deactivated 1=Activated in winter 2=Activated in summer 3=Always activated	F	0	3	flag	1	0	-	88 (R/W)	295	Integer/ Register
r28	Min. compressor operat. time for low load/damper run time	F	0	999	s	1	60	-	89 (R/W)	296	Integer/ Register
r29	Chiller low load differential/freecooling dif.	F	10	500	°C/°F	0,1	30	-	58 (R/W)	58	Analog/ Register
r30	Pdc low load differential/freeheating dif.	F	10	500	°C/°F	0,1	30	-	59 (R/W)	59	Analog/ Register
r31	Winter offset constant	U	-50	50		0,1	0	-	60 (R/W)	60	Analog/ Register

Display	Description	Level	min	max	Unit of measure	Variation	By default	Visibility	Carel Address	Modbus Address	Type of variable
r32	Hot Start setpoint	D	r15	r16	°C/°F	0,1	120	-	71 (R/W)	71	Analog/ Register
r33	Hot Start differential	F	3	500	°C/°F	0,1	30	-	72 (R/W)	72	Analog/ Register
r34	Freecooling/Freeheating enabling 0=Disabled 1=Freecooling / without compressors / only in cool 2=Freecooling / with compressors / only in cool 3=Freeheating / without compressors / only in heat 4=Freeheating / with compressors / only in heat 5=Freecooling and freeheating / without compressors / freecooling only in cool and freeheating only in heat 6=Freecooling and freeheating / with compressors / freecooling only in cool and freeheating only in heat 7=Freecooling / without compressors / always 8=Freecooling / with compressors / always 9=Freeheating / without compressors / always 10=Freeheating / with compressors / always 11=Freecooling and freeheating / without compressors / always 12=Freecooling and freeheating / with compressors / always	F	0	12	flag	1	0	-	116 (R/W)	323	Integer/ Register
r35	Comp. deactivation time FC/FH active	F	0	999	s	1	240	-	117 (R/W)	324	Integer/ Register
r36	Maximum damper activation time	F	0	600	s	1	20	-	118 (R/W)	325	Integer/ Register
r37	Damper opening duty cycle differential	F	3	500	°C/°F	0,1	30	-	73 (R/W)	73	Analog/ Register
r38	Damper closing duty cycle differential	F	3	500	°C/°F	0,1	30	-	74 (R/W)	74	Analog/ Register
r39	Auto tuning correction coefficient	F	11	30		0,1	13	-	75 (R/W)	75	Analog/ Register
r40	Indicates when to use the minimum damper opening 0=Never 1=In freecooling 2=In freeheating 3=In freecooling and/or in freeheating 4=In all modes except freecooling and freeheating 5=In all modes except freeheating 6=In all modes except freecooling 7=In all modes except 8=In cool 9=In heat	U	0	9		1	0	-	119 (R/W)	326	Integer/ Register
r41	Minimum damper opening	U	0	100	%	1	0	-	120 (R/W)	327	Integer/ Register
r42	Operating limit only freecooling	U	A07	1760	°C/°F	0,1	50	-	81 (R/W)	81	Analog/ Register

4 List of variables

4.2 BMS Microchiller 2-SE variables YLCA/YLHA PLUS 5 to 27, YLCA/YLHA 40 to 80, YLCD/YLHD 25 to 70

Display	Description	Level	min	max	Unit of measure	Variation	By default	Visibility	Carel Address	Modbus Address	Type of variable
r43	Resistor setpoint: 0=A4, A8 and A11 absolute values 1=A4 absolute value, A8 and A11 values relative to setpoint 2=A4 value relative to setpoint, A8 and A11 absolute value 3=A4, A8 and A11 values relative to setpoint	F	0	3		1	0	-	121 (R/W)	328	Integer/ Register
r44	Inactivity time in freecooling setting	F	0	240		1	5	-	123 (R/W)	330	Integer/ Register
t01	RTC hour	U	0	23		1	0	W	129 (R/W)	336	Integer/ Register
t02	RTC minutes	U	0	59		1	0	W	130 (R/W)	337	Integer/ Register
t03	RTC day	U	1	31		1	1	W	131 (R/W)	338	Integer/ Register
t04	RTC month	U	1	12		1	1	W	132 (R/W)	339	Integer/ Register
t05	RTC year	U	0	99		1	6	W	133 (R/W)	340	Integer/ Register
t06	Start hour 2nd summer setpoint	U	0	23		1	0	W	92 (R/W)	299	Integer/ Register
t07	Start minutes 2nd summer setpoint	U	0	59		1	0	W	93 (R/W)	300	Integer/ Register
t08	End hour 2nd summer setpoint	U	0	23		1	0	W	94 (R/W)	301	Integer/ Register
t09	End minutes 2nd summer setpoint	U	0	59		1	0	W	95 (R/W)	302	Integer/ Register
t10	Start hour 2nd winter setpoint	U	0	23		1	0	W	96 (R/W)	303	Integer/ Register
t11	Start minutes 2nd winter setpoint	U	0	59		1	0	W	97 (R/W)	304	Integer/ Register
t12	End hour 2nd winter setpoint	U	0	23		1	0	W	98 (R/W)	305	Integer/ Register
t13	End minutes 2nd winter setpoint	U	0	59		1	0	W	99 (R/W)	306	Integer/ Register
t14	Start hour 2nd summer low-noise	U	0	23		1	23	W	100 (R/W)	307	Integer/ Register
t15	Start minutes 2nd summer low-noise	U	0	59		1	0	W	101 (R/W)	308	Integer/ Register
t16	End hour 2nd summer low-noise	U	0	23		1	7	W	102 (R/W)	309	Integer/ Register
t17	End minutes 2nd summer low-noise	U	0	59		1	0	W	103 (R/W)	310	Integer/ Register
t18	Start hour 2nd winter low-noise	U	0	23		1	23	W	104 (R/W)	311	Integer/ Register
t19	Start minutes 2nd winter low-noise	U	0	59		1	0	W	105 (R/W)	312	Integer/ Register
t20	End hour 2nd winter low-noise	U	0	23		1	7	W	106 (R/W)	313	Integer/ Register
t21	End minutes 2nd winter low-noise	U	0	59		1	0	W	107 (R/W)	314	Integer/ Register
	Indicates the unit parameter (SVCarel communication)	F	0	250		-	108		127 (R)	334	Integer/ Register
	Circuit 1 in alarm	D	0	1		-	0		41 (R)	41	Digital/ Coil
	Circuit 2 in alarm	D	0	1		-	0		42 (R)	42	Digital/ Coil
	EVD valve 1 in alarm	D	0	1		-	0		43 (R)	43	Digital/ Coil
	EVD valve 2 in alarm	D	0	1		-	0		44 (R)	44	Digital/ Coil

Display	Description	Level	min	max	Unit of measure	Variation	By default	Visibility	Carel Address	Modbus Address	Type of variable
	General alarm	D	0	1		-	0		45 (R)	45	Digital/Coil
	Probes in alarm	D	0	1		-	0		46 (R)	46	Digital/Coil
	Compressor warning	D	0	1		-	0		47 (R)	47	Digital/Coil
	Compressor warning with error by digital input	D	0	1		-	0		25 (R)	25	Digital/Coil
	EVD 1 warning	D	0	1		-	0		48 (R)	48	Digital/Coil
	EVD 2 warning	D	0	1		-	0		49 (R)	49	Digital/Coil
	General Warning	D	0	1		-	0		50 (R)	50	Digital/Coil
	Temperature warning	D	0	1		-	0		51 (R)	51	Digital/Coil
	Fan warning	D	0	1		-	0		52 (R)	52	Digital/Coil
	DTE/DTC alarm	D	0	1		-	0		77 (R)	77	Digital/Coil
	Digital input 1	D	0	1		-	0		53 (R)	53	Digital/Coil
	Digital input 2	D	0	1		-	0		54 (R)	54	Digital/Coil
	Digital input 3	D	0	1		-	0		55 (R)	55	Digital/Coil
	Digital input 4	D	0	1		-	0		56 (R)	56	Digital/Coil
	Digital input 5	D	0	1		-	0		57 (R)	57	Digital/Coil
	Digital input B4	D	0	1		-	0		58 (R)	58	Digital/Coil
	Digital output 1	D	0	1		1	0		59 (R/W)	59	Digital/Coil
	Digital output 2	D	0	1		1	0		60 (R/W)	60	Digital/Coil
	Digital output 3	D	0	1		1	0		61 (R/W)	61	Digital/Coil
	Digital output 4	D	0	1		1	0		62 (R/W)	62	Digital/Coil
	Digital output 5	D	0	1		1	0		63 (R/W)	63	Digital/Coil
	Standby/On status 0=Standby 1=On	D	0	1		1	0		64 (R/W)	64	Digital/Coil
	Winter/summer status: 0=Winter 1=Summer	D	0	1		1	1		65 (R/W)	65	Digital/Coil
	Gain constant for probe 1 calibration	F	0	8000		-	1000		5 (R)	212	Integer/ Register
	Gain constant for probe 2 calibration	F	0	8000		-	1000		6 (R)	213	Integer/ Register
	Gain constant for probe 3 calibration	F	0	8000		-	1000		7 (R)	214	Integer/ Register
	Gain constant for probe 4 calibration	F	0	8000		-	1000		8 (R)	215	Integer/ Register
	Offset constant for probe 1 calibration	F	-8000	8000		-	0		9 (R)	216	Integer/ Register
	Offset constant for probe 2 calibration	F	-8000	8000		-	0		10 (R)	217	Integer/ Register
	Offset constant for probe 3 calibration	F	-8000	8000		-	0		11 (R)	218	Integer/ Register
	Offset constant for probe 4 calibration	F	-8000	8000		-	0		12 (R)	219	Integer/ Register

4 List of variables

4.2 BMS Microchiller 2-SE variables YLCA/YLHA PLUS 5 to 27, YLCA/YLHA 40 to 80, YLCD/YLHD 25 to 70

Display	Description	Level	min	max	Unit of measure	Variation	By default	Visibility	Carel Address	Modbus Address	Type of variable
	Digital input 6	D	0	1		-	0		66 (R)	66	Digital/Coil
	Digital input 7	D	0	1		-	0		67 (R)	67	Digital/Coil
	Digital input 8	D	0	1		-	0		68 (R)	68	Digital/Coil
	Digital input 9	D	0	1		-	0		69 (R)	69	Digital/Coil
	Digital input 10	D	0	1		-	0		70 (R)	70	Digital/Coil
	Digital input B8	D	0	1		-	0		71 (R)	71	Digital/Coil
	Digital output 6	D	0	1		1	0		72 (R/W)	72	Digital/Coil
	Digital output 7	D	0	1		1	0		73 (R/W)	73	Digital/Coil
	Digital output 8	D	0	1		1	0		74 (R/W)	74	Digital/Coil
	Digital output 9	D	0	1		1	0		75 (R/W)	75	Digital/Coil
	Digital output 10	D	0	1		1	0		76 (R/W)	76	Digital/Coil
	Password for supervisor output control	D	0	8000		1	0		13 (R/W)	220	Integer/ Register
	Defrost status bit0=Defrost circuit 1 bit1=Defrost circuit 2 bit2=Fan Defrost circuit 1 bit3=Fan Defrost circuit 2	D	0	255		-	0		134 (R)	341	Integer/ Register
	UAD controls: bit0=Terminal status (0 = Not connected; 1= Present) bit2; bit1=Mode set by UAD (00 = AUTO; 01 = Summer; 10= Winter) bit3=Dehumidification enabling bit4=Humidification enabling bit5=Terminal probe alarm bit6=Boiler output bit7= 0=Process mode active; 1=Process mode disabled bit8=Not used bit9=Alarm reset	D	0	1023		1	0		135 (R/W)	342	Integer/ Register
	Signalling for UAD bit0=Ext/inv demand by UAD in action bit1=Ext/inv demand accepted by UAD (1=Summer; 0=Winter) bit2=Fan start-up bit3=Alarm active in UCH bit4=RTC presence in uCH2 SE	D	0	255		-	0		136 (R)	343	Integer/ Register
	DTE value stored in EEPROM	D	0	0		-	0		98 (R)	98	Analog/ Register
	Internal setpoint compensated in case of auto tuning	D	0	0		-	0		97 (R)	97	Analog/ Register
	Ambient setpoint (of UAD)	D	-400	1760		0,1	0		95 (R/W)	95	Analog/ Register
	UAD setpoint variation	D	-100	100		0,1	0		96 (R/W)	96	Analog/ Register
	Ambient setpoint differential	D	-100	100		0,1	0		94 (R/W)	94	Analog/ Register

Display	Description	Level	min	max	Unit of measure	Variation	By default	Visibility	Carel Address	Modbus Address	Type of variable
	UAD controls to save	D	0	32767		1	0	-	137 (R/W)	344	Integer/ Register
	Active alarm signalling: bit0=Probe alarm (E1,E2,E3,E4,E5,E6,E7, E8) bit1=High pressure alarm (HP1, HP2) bit2=Low pressure alarm (LP1, LP2) bit3=Flow rate control alarm (FL) bit4=Expansion communication alarm (ESP) bit5=EE2PROM alarm (EPB) bit6=Antifreeze alarm (A1, A2) bit7=Thermal alarm (TP, TP1, TP2) bit8=Hour counter alarm (H1, H2, H3, H4)	D	0	32767		1	0	-	128 (R/W)	335	Integer/ Register
	Terminal humidity probe (for terminal μ AD)	D	0	1000	%	0,1	0		129 (R/W)	129	Analog/ Register
	Alarm reset	D	0	1		1	0		78 (R/W)	78	Digital/ Coil
	Digital input B1	D	0	1		-	0		79 (R)	79	Digital/ Coil
	New table output	D	0	1		1	1		26 (R/W)	26	Digital/ Coil
	Digital input status	F	0	1		1	0		27 (R/W)	27	Digital/ Coil
	Unused variable	F	0	0		1	0		124 (R/W)	331	Integer/ Register
	Backup variable for digital output 9 management	F	0	17	int	1	0		140 (R/W)	347	Integer/ Register

4 List of variables

4.3 BMS Microchiller 3 variables YLCA/YLHA 100 to 150, YLCD/YLHD 100 to 150

4.3 BMS Microchiller 3 variables YLCA/YLHA 100 to 150, YLCD/YLHD 100 to 150

Description	Variable type Carel	Variable type Modbus	Carel Address	Modbus Address
Driver 1 actual Superheat	Analog	Register (Analog)	60	60
Driver 2 actual Superheat	Analog	Register (Analog)	61	61
Driver 3 actual Superheat	Analog	Register (Analog)	62	62
Driver 4 actual Superheat	Analog	Register (Analog)	63	63
Actual set compensation (B7)	Analog	Register (Analog)	58	58
Analog input 1	Analog	Register (Analog)	43	43
Analog input 10	Analog	Register (Analog)	52	52
1/2 analog input configuration	Integer	Register (Integer)	1	129
Analog input 2	Analog	Register (Analog)	44	44
Analog input 3	Analog	Register (Analog)	45	45
Analog input 4	Analog	Register (Analog)	46	46
Analog input 5	Analog	Register (Analog)	47	47
Analog input 6	Analog	Register (Analog)	48	48
Analog input 7	Analog	Register (Analog)	49	49
Analog input 8	Analog	Register (Analog)	50	50
Analog input 9	Analog	Register (Analog)	51	51
Automatic alarm reset events number	Integer	Register (Integer)	28	156
Automatic alarm reset time	Integer	Register (Integer)	29	157
Analog 3 output status	Analog	Register (Analog)	53	53
Analog output 3	Analog	Register (Analog)	55	55
Analog 4 output status	Analog	Register (Analog)	54	54
Analog output 4	Analog	Register (Analog)	56	56
Driver autoseup re-installation	Digital	Coil	173	173
Auto ON in antifreeze mode selection	Integer	Register (Integer)	11	139
Pumps/Fan time OFF for burst mode	Integer	Register (Integer)	34	162
Pumps/Fan time ON for burst mode	Integer	Register (Integer)	33	161
Driver capacity control type	Integer	Register (Integer)	90	218
Cond. flowstat alarm delay on regime	Integer	Register (Integer)	27	155
Cond. flowstat alarm delay on start	Integer	Register (Integer)	26	154
Clock hour and minute storing	Digital	Coil	22	22
Circuit 1 working mode	Integer	Register (Integer)	105	233
Circuit 2 working mode	Integer	Register (Integer)	106	234
Driver EEV ratio for startup opening	Integer	Register (Integer)	88	216
Driver compressor/unit type	Integer	Register (Integer)	89	217
End temperature summer compensation	Analog	Register (Analog)	28	28
End temperature winter compensation	Analog	Register (Analog)	30	30
Start temperature summer compensation	Analog	Register (Analog)	27	27
Start temperature winter compensation	Analog	Register (Analog)	29	29
Condenser number (1 or 2)	Digital	Coil	3	3
Condensation summer differential	Analog	Register (Analog)	12	12
Pressure/Temperature condensation	Integer	Register (Integer)	37	165
Condensation force time on start	Integer	Register (Integer)	38	166
COND PUMP	Digital	Coil	41	41
Condensation summer setpoint	Analog	Register (Analog)	11	11
Driver 1 condensation temperature	Analog	Register (Analog)	76	76
Driver 2 condensation temperature	Analog	Register (Analog)	77	77
Driver 3 condensation temperature	Analog	Register (Analog)	78	78
Driver 4 condensation temperature	Analog	Register (Analog)	79	79
Unit in cooling mode ON	Digital	Coil	58	58
cooling/heating	Digital	Coil	46	46

Description	Variable type Carel	Variable type Modbus	Carel Address	Modbus Address
Driver cool evaporator type	Integer	Register (Integer)	91	219
Driver custom close extrasteps	Digital	Coil	167	167
Driver custom open extrasteps	Digital	Coil	166	166
Compressor OFF time on defrost	Integer	Register (Integer)	18	146
Defrost maximum time	Integer	Register (Integer)	14	142
Defrost minimum time	Integer	Register (Integer)	15	143
Temperature/pressure/pressure switch defrost	Integer	Register (Integer)	12	140
Driver LOP delay	Integer	Register (Integer)	85	213
Driver MOP delay	Integer	Register (Integer)	86	214
Driver probe error delay	Integer	Register (Integer)	87	215
Driver high Superheat delay	Integer	Register (Integer)	84	212
Driver low Superheat delay	Integer	Register (Integer)	83	211
Digital output 1	Digital	Coil	25	25
Digital output 10	Digital	Coil	34	34
Digital output 11	Digital	Coil	35	35
Digital output 12	Digital	Coil	36	36
Digital output 13	Digital	Coil	37	37
Digital output 14	Digital	Coil	38	38
Digital output 2	Digital	Coil	26	26
Digital output 3	Digital	Coil	27	27
Digital output 4	Digital	Coil	28	28
Digital output 5	Digital	Coil	29	29
Digital output 6	Digital	Coil	30	30
Digital output 7	Digital	Coil	31	31
Digital output 8	Digital	Coil	32	32
Digital output 9	Digital	Coil	33	33
Driver type (EVD400 485/tLAN)	Integer	Register (Integer)	78	206
Driver probe type	Integer	Register (Integer)	79	207
Driver dynamic proportional gain enable	Digital	Coil	168	168
Driver EEV stand-by steps	Integer	Register (Integer)	82	210
Evap. flowstat alarm delay on regime	Integer	Register (Integer)	25	153
Evap. flowstat alarm delay on start	Integer	Register (Integer)	24	152
AIR/AIR unit type	Digital	Coil	42	42
B1 probe enabling	Digital	Coil	11	11
B10 probe enabling	Digital	Coil	20	20
B2 probe enabling	Digital	Coil	12	12
B3 probe enabling	Digital	Coil	13	13
B4 probe enabling	Digital	Coil	14	14
B5 probe enabling	Digital	Coil	15	15
B6 probe enabling	Digital	Coil	16	16
B7 probe enabling	Digital	Coil	17	17
B8 probe enabling	Digital	Coil	18	18
B9 probe enabling	Digital	Coil	19	19
Compressor 1 circuit 1 ok	Digital	Coil	48	48
Compressor 1 circuit 2 ok	Digital	Coil	51	51
Compressor 2 circuit 1 ok	Digital	Coil	49	49
Compressor 1 circuit 2 ok	Digital	Coil	52	52
Compressor 3 circuit 1 ok	Digital	Coil	50	50
Compressor 3 circuit 2 ok	Digital	Coil	53	53
Compressor 1 circuit 1 enabling	Digital	Coil	5	5
Compressor 1 circuit 2 enabling	Digital	Coil	8	8
Compressor 2 circuit 1 enabling	Digital	Coil	6	6
Compressor 2 circuit 2 enabling	Digital	Coil	9	9
Compressor 3 circuit 1 enabling	Digital	Coil	7	7

4 List of variables

4.3 BMS Microchiller 3 variables YLCA/YLHA 100 to 150, YLCD/YLHD 100 to 150

Description	Variable type Carel	Variable type Modbus	Carel Address	Modbus Address
Compressor 3 circuit 2 enabling	Digital	Coil	10	10
Driver biflow EEV	Digital	Coil	165	165
Supervisor summer/winter enabling	Digital	Coil	45	45
Supervisor ON/OFF enabling	Digital	Coil	55	55
WATER/AIR unit type	Digital	Coil	47	47
WATER/WATER unit type	Digital	Coil	43	43
Fan 1 circuit 1 overload alarm	Digital (Alarm)	Coil (Alarm)	75	75
Fan 1 speed value	Integer	Register (Integer)	56	184
Fan 2 circuit 1 overload alarm	Digital (Alarm)	Coil (Alarm)	76	76
Fan 2 speed value	Integer	Register (Integer)	57	185
Fan 1 circuit 2 overload alarm	Digital (Alarm)	Coil (Alarm)	77	77
Fan 2 circuit 2 overload alarm	Digital (Alarm)	Coil (Alarm)	78	78
Freeze alarm delay	Integer	Register (Integer)	9	137
Freeze alarm differential	Analog	Register (Analog)	14	14
Freeze heater differential	Analog	Register (Analog)	16	16
Freeze heater setpoint	Analog	Register (Analog)	15	15
Freeze alarm setpoint	Analog	Register (Analog)	13	13
Driver gas type	Integer	Register (Integer)	81	209
Driver 1 status	Integer	Register (Integer)	93	221
Driver 2 status	Integer	Register (Integer)	94	222
Driver 3 status	Integer	Register (Integer)	95	223
Driver 4 status	Integer	Register (Integer)	96	224
Driver 1 GoAhead	Digital	Coil	169	169
Driver 2 GoAhead	Digital	Coil	170	170
Driver 3 GoAhead	Digital	Coil	171	171
Driver 4 GoAhead	Digital	Coil	172	172
Unit in heating mode ON	Digital	Coil	59	59
Driver heat evaporator type	Integer	Register (Integer)	92	220
Heat heater differential (step 1)	Analog	Register (Analog)	20	20
Heat heater differential (step 2)	Analog	Register (Analog)	22	22
Heat heater setpoint (step 1)	Analog	Register (Analog)	19	19
Heat heater setpoint (step 2)	Analog	Register (Analog)	21	21
Actual board hour	Integer	Register (Integer)	77	205
High pressure circuit 1 (pressure switch)	Digital (Alarm)	Coil (Alarm)	69	69
High pressure circuit 2 (pressure switch)	Digital (Alarm)	Coil (Alarm)	70	70
Circuit 1 HP prevent	Digital	Coil	56	56
Circuit 2 HP prevent	Digital	Coil	57	57
HP prevent delay	Integer	Register (Integer)	41	169
Transducer 1 high pressure alarm	Digital (Alarm)	Coil (Alarm)	73	73
Transducer 2 high pressure alarm	Digital (Alarm)	Coil (Alarm)	74	74
High pressure differential	Analog	Register (Analog)	25	25
High pressure setpoint	Analog	Register (Analog)	24	24
Integration time	Integer	Register (Integer)	42	170
Inverter/Steps condensation type	Digital	Coil	21	21
Regulation band	Analog	Register (Analog)	4	4
Actual setpoint	Analog	Register (Analog)	57	57
Hour	Integer	Register (Integer)	49	177
Minute	Integer	Register (Integer)	48	176
External temperature limit setpoint	Analog	Register (Analog)	34	34
External temperature limit differential	Analog	Register (Analog)	33	33
Low pressure circuit 1 (pressure switch)	Digital (Alarm)	Coil (Alarm)	71	71
Low pressure circuit 2 (pressure switch)	Digital (Alarm)	Coil (Alarm)	72	72
Transducer 1 low pressure alarm	Digital (Alarm)	Coil (Alarm)	104	104
Transducer 2 low pressure alarm	Digital (Alarm)	Coil (Alarm)	105	105

Description	Variable type Carel	Variable type Modbus	Carel Address	Modbus Address
Low pressure alarm delay on regime	Integer	Register (Integer)	23	151
Summer low pressure alarm delay on start	Integer	Register (Integer)	20	148
Defrost low press. alarm delay on start	Integer	Register (Integer)	22	150
Winter low pressure alarm delay on start	Integer	Register (Integer)	21	149
EVP pump1	Digital	Coil	39	39
EVP pump2	Digital	Coil	40	40
Driver 1 autosetup not complete	Digital (Alarm)	Coil (Alarm)	156	156
Driver 2 autosetup not complete	Digital (Alarm)	Coil (Alarm)	157	157
Driver 3 autosetup not complete	Digital (Alarm)	Coil (Alarm)	158	158
Driver 4 autosetup not complete	Digital (Alarm)	Coil (Alarm)	159	159
B1 probe fault or not connected	Digital (Alarm)	Coil (Alarm)	83	83
B10 probe fault or not connected	Digital (Alarm)	Coil (Alarm)	92	92
B2 probe fault or not connected	Digital (Alarm)	Coil (Alarm)	84	84
B3 probe fault or not connected	Digital (Alarm)	Coil (Alarm)	85	85
B4 probe fault or not connected	Digital (Alarm)	Coil (Alarm)	86	86
B5 probe fault or not connected	Digital (Alarm)	Coil (Alarm)	87	87
B6 probe fault or not connected	Digital (Alarm)	Coil (Alarm)	88	88
B7 probe fault or not connected	Digital (Alarm)	Coil (Alarm)	89	89
B8 probe fault or not connected	Digital (Alarm)	Coil (Alarm)	90	90
B9 probe fault or not connected	Digital (Alarm)	Coil (Alarm)	91	91
Condensing flowstat alarm	Digital (Alarm)	Coil (Alarm)	67	67
Clock board fault or not connected	Digital (Alarm)	Coil (Alarm)	102	102
Condensing pump overload	Digital (Alarm)	Coil (Alarm)	80	80
Driver 1 LAN disconnected	Digital (Alarm)	Coil (Alarm)	152	152
Driver 2 LAN disconnected	Digital (Alarm)	Coil (Alarm)	153	153
Driver 3 LAN disconnected	Digital (Alarm)	Coil (Alarm)	154	154
Driver 4 LAN disconnected	Digital (Alarm)	Coil (Alarm)	155	155
Driver 1 eeprom error	Digital (Alarm)	Coil (Alarm)	108	108
Driver 2 eeprom error	Digital (Alarm)	Coil (Alarm)	109	109
Driver 3 eeprom error	Digital (Alarm)	Coil (Alarm)	110	110
Driver 4 eeprom error	Digital (Alarm)	Coil (Alarm)	111	111
Evaporator flowstat alarm	Digital (Alarm)	Coil (Alarm)	68	68
Main fan overload	Digital (Alarm)	Coil (Alarm)	79	79
Driver 1 high Superheat	Digital (Alarm)	Coil (Alarm)	132	132
Driver 2 high Superheat	Digital (Alarm)	Coil (Alarm)	133	133
Driver 3 high Superheat	Digital (Alarm)	Coil (Alarm)	134	134
Driver 4 high Superheat	Digital (Alarm)	Coil (Alarm)	135	135
Comp.1 circ.1 maintenance hour meter	Digital (Alarm)	Coil (Alarm)	96	96
Comp.1 circ.2 maintenance hour meter	Digital (Alarm)	Coil (Alarm)	99	99
Comp.2 circ.1 maintenance hour meter	Digital (Alarm)	Coil (Alarm)	97	97
Comp.2 circ.2 maintenance hour meter	Digital (Alarm)	Coil (Alarm)	100	100
Comp.3 circ.1 maintenance hour meter	Digital (Alarm)	Coil (Alarm)	98	98
Compressor 3 circuit 2 maintenance hour meter	Digital (Alarm)	Coil (Alarm)	101	101
Condenser pump maintenance hour meter	Digital (Alarm)	Coil (Alarm)	107	107
Main fan/pump maintenance hour meter	Digital (Alarm)	Coil (Alarm)	94	94
Main pump 2 maintenance hour meter	Digital (Alarm)	Coil (Alarm)	95	95
Driver 1 LOP timeout	Digital (Alarm)	Coil (Alarm)	120	120
Driver 2 LOP timeout	Digital (Alarm)	Coil (Alarm)	121	121
Driver 3 LOP timeout	Digital (Alarm)	Coil (Alarm)	122	122
Driver 4 LOP timeout	Digital (Alarm)	Coil (Alarm)	123	123
Low room temperature alarm	Digital (Alarm)	Coil (Alarm)	103	103
Driver 1 low Superheat	Digital (Alarm)	Coil (Alarm)	124	124
Driver 2 low Superheat	Digital (Alarm)	Coil (Alarm)	125	125
Driver 3 low Superheat	Digital (Alarm)	Coil (Alarm)	126	126

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4.3 BMS Microchiller 3 variables YLCA/YLHA 100 to 150, YLCD/YLHD 100 to 150

Description	Variable type Carel	Variable type Modbus	Carel Address	Modbus Address
Driver 4 low Superheat	Digital (Alarm)	Coil (Alarm)	127	127
Driver 1 MOP timeout	Digital (Alarm)	Coil (Alarm)	116	116
Driver 2 MOP timeout	Digital (Alarm)	Coil (Alarm)	117	117
Driver 3 MOP timeout	Digital (Alarm)	Coil (Alarm)	118	118
Driver 4 MOP timeout	Digital (Alarm)	Coil (Alarm)	119	119
Driver 1 probe S1 error	Digital (Alarm)	Coil (Alarm)	136	136
Driver 2 probe S1 error	Digital (Alarm)	Coil (Alarm)	137	137
Driver 3 probe S1 error	Digital (Alarm)	Coil (Alarm)	138	138
Driver 4 probe S1 error	Digital (Alarm)	Coil (Alarm)	139	139
Driver 1 probe S2 error	Digital (Alarm)	Coil (Alarm)	140	140
Driver 2 probe S2 error	Digital (Alarm)	Coil (Alarm)	141	141
Driver 3 probe S2 error	Digital (Alarm)	Coil (Alarm)	142	142
Driver 4 probe S2 error	Digital (Alarm)	Coil (Alarm)	143	143
Driver 1 probe S3 error	Digital (Alarm)	Coil (Alarm)	144	144
Driver 2 probe S3 error	Digital (Alarm)	Coil (Alarm)	145	145
Driver 3 probe S3 error	Digital (Alarm)	Coil (Alarm)	146	146
Driver 4 probe S3 error	Digital (Alarm)	Coil (Alarm)	147	147
Evaporator pump overload	Digital (Alarm)	Coil (Alarm)	81	81
Evaporator pump 2 overload	Digital (Alarm)	Coil (Alarm)	82	82
Serious alarm from digital input	Digital (Alarm)	Coil (Alarm)	93	93
Driver 1 EEV motor error	Digital (Alarm)	Coil (Alarm)	112	112
Driver 2 EEV motor error	Digital (Alarm)	Coil (Alarm)	113	113
Driver 3 EEV motor error	Digital (Alarm)	Coil (Alarm)	114	114
Driver 4 EEV motor error	Digital (Alarm)	Coil (Alarm)	115	115
Driver 1 EEV not closed during power OFF	Digital (Alarm)	Coil (Alarm)	128	128
Driver 2 EEV not closed during power OFF	Digital (Alarm)	Coil (Alarm)	129	129
Driver 3 EEV not closed during power OFF	Digital (Alarm)	Coil (Alarm)	130	130
Driver 4 EEV not closed during power OFF	Digital (Alarm)	Coil (Alarm)	131	131
EEV 1 manual mode	Digital	Coil	160	160
EEV 2 manual mode	Digital	Coil	161	161
EEV 3 manual mode	Digital	Coil	162	162
EEV 4 manual mode	Digital	Coil	163	163
Antifreeze alarm	Digital (Alarm)	Coil (Alarm)	60	60
Maximum setpoint compensation	Analog	Register (Analog)	26	26
Driver S1 maximum limit	Analog	Register (Analog)	81	81
Driver config. high superheat al.threshold	Analog	Register (Analog)	88	88
Driver 1 GoAhead request	Digital	Coil	148	148
Driver 2 GoAhead request	Digital	Coil	149	149
Driver 3 GoAhead request	Digital	Coil	150	150
Driver 4 GoAhead request	Digital	Coil	151	151
Actual board minute	Integer	Register (Integer)	76	204
Min. time between different compressor starts	Integer	Register (Integer)	7	135
Min. time between same compressor starts	Integer	Register (Integer)	8	136
Min. compressors time OFF	Integer	Register (Integer)	6	134
Min. compressors time ON	Integer	Register (Integer)	5	133
Driver S1 minimum limit	Analog	Register (Analog)	80	80
EVD driver number	Integer	Register (Integer)	31	159
Unit compressor number	Integer	Register (Integer)	53	181
No connection	Digital (Alarm)	Coil (Alarm)	0	0
Unit OR alarms	Digital (Alarm)	Coil (Alarm)	106	106
Outlet max time OFF	Integer	Register (Integer)	45	173
Outlet min time OFF	Integer	Register (Integer)	46	174
Outlet max time ON	Integer	Register (Integer)	43	171
Outlet min time ON	Integer	Register (Integer)	44	172

Description	Variable type Carel	Variable type Modbus	Carel Address	Modbus Address
Compressor 1 circuit 1 overload alarm	Digital (Alarm)	Coil (Alarm)	61	61
Compressor 1 circuit 2 overload alarm	Digital (Alarm)	Coil (Alarm)	64	64
Compressor 2 circuit 1 overload alarm	Digital (Alarm)	Coil (Alarm)	62	62
Compressor 2 circuit 2 overload alarm	Digital (Alarm)	Coil (Alarm)	65	65
Compressor 3 circuit 1 overload alarm	Digital (Alarm)	Coil (Alarm)	63	63
Compressor 3 circuit 2 overload alarm	Digital (Alarm)	Coil (Alarm)	66	66
Pumpdown end low pressure setpoint	Analog	Register (Analog)	3	3
PumpDown maximum time	Integer	Register (Integer)	2	130
Motodriven percent remote control	Integer	Register (Integer)	51	179
W/A A/A W/W unit type	Integer	Register (Integer)	52	180
Driver PID direction (DIR/INV)	Digital	Coil	164	164
EEV 1 actual position	Integer	Register (Integer)	97	225
EEV 2 actual position	Integer	Register (Integer)	98	226
EEV 3 actual position	Integer	Register (Integer)	99	227
EEV 4 actual position	Integer	Register (Integer)	100	228
Pumps/Fan running mode	Integer	Register (Integer)	32	160
Partwinding time	Integer	Register (Integer)	3	131
Diff.reg.mode (NO/Reg-Est/Est-Reg)	Integer	Register (Integer)	47	175
Defrost reversal cycle delay	Integer	Register (Integer)	19	147
Alarm reset by supervisor	Digital	Coil	23	23
Driver 1 saturation temperature	Analog	Register (Analog)	64	64
Driver 2 saturation temperature	Analog	Register (Analog)	65	65
Driver 3 saturation temperature	Analog	Register (Analog)	66	66
Driver 4 saturation temperature	Analog	Register (Analog)	67	67
Actual external setpoint (B8)	Analog	Register (Analog)	59	59
First time zone summer setpoint	Analog	Register (Analog)	35	35
Second time summer zone setpoint	Analog	Register (Analog)	37	37
Third time zone summer setpoint	Analog	Register (Analog)	39	39
Fourth time zone summer setpoint	Analog	Register (Analog)	41	41
Speed-up time	Integer	Register (Integer)	39	167
Circuit 1 active stage	Integer	Register (Integer)	54	182
Circuit 2 active stage	Integer	Register (Integer)	55	183
Start defrost set	Analog	Register (Analog)	5	5
Minimum sliding defrost set	Analog	Register (Analog)	23	23
EEV 1 power request	Integer	Register (Integer)	101	229
EEV 2 power request	Integer	Register (Integer)	102	230
EEV 3 power request	Integer	Register (Integer)	103	231
EEV 4 power request	Integer	Register (Integer)	104	232
End defrost set	Analog	Register (Analog)	6	6
Driver 1 suction pressure	Analog	Register (Analog)	72	72
Driver 2 suction pressure	Analog	Register (Analog)	73	73
Driver 3 suction pressure	Analog	Register (Analog)	74	74
Driver 4 suction pressure	Analog	Register (Analog)	75	75
Driver 1 suction temperature	Analog	Register (Analog)	68	68
Driver 2 suction temperature	Analog	Register (Analog)	69	69
Driver 3 suction temperature	Analog	Register (Analog)	70	70
Driver 4 suction temperature	Analog	Register (Analog)	71	71
Summer dead-band threshold	Analog	Register (Analog)	32	32
High summer setpoint limit	Analog	Register (Analog)	8	8
Low summer setpoint limit	Analog	Register (Analog)	7	7
Summer/Winter by terminal status	Digital	Coil	44	44
Summer/Winter selection by supervisor	Digital	Coil	2	2
Unit ON/OFF by supervisor	Digital	Coil	1	1
Support heater differential	Analog	Register (Analog)	18	18

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4.3 BMS Microchiller 3 variables YLCA/YLHA 100 to 150, YLCD/YLHD 100 to 150

Description	Variable type Carel	Variable type Modbus	Carel Address	Modbus Address
Support heater setpoint	Analog	Register (Analog)	17	17
Heat supply resistor activation delay	Integer	Register (Integer)	10	138
ON/OFF	Digital	Coil	24	24
Summer setpoint	Analog	Register (Analog)	1	1
Sum/Win auto change valve delay	Integer	Register (Integer)	36	164
Outlet regulation differential	Analog	Register (Analog)	31	31
Driver cool minimum saturation temperature	Analog	Register (Analog)	82	82
Driver defrost min.saturation temperature	Analog	Register (Analog)	84	84
Driver heat minimum saturation temperature	Analog	Register (Analog)	83	83
Driver cool maximum saturation temperature	Analog	Register (Analog)	85	85
Driver defrost max.saturation temperature	Analog	Register (Analog)	87	87
Driver heat maximum saturation temperature	Analog	Register (Analog)	86	86
Defrost start delay	Integer	Register (Integer)	13	141
Pumps rotation time (hour)	Integer	Register (Integer)	35	163
Time for unload activation	Integer	Register (Integer)	4	132
Cond.ON with comp.ON if probe broken	Integer	Register (Integer)	40	168
Compressor rotation type	Integer	Register (Integer)	30	158
Time between different circuit defrost	Integer	Register (Integer)	17	145
Time between same circuit defrost	Integer	Register (Integer)	16	144
Unit is a CH/HP type	Digital	Coil	54	54
Unit status	Integer	Register (Integer)	50	178
N.C./N.A. reversal cycle valve	Digital	Coil	4	4
Driver EEV type	Integer	Register (Integer)	80	208
High winter setpoint limit	Analog	Register (Analog)	10	10
Low winter setpoint limit	Analog	Register (Analog)	9	9
First time zone winter setpoint	Analog	Register (Analog)	36	36
Second time winter zone setpoint	Analog	Register (Analog)	38	38
Third time zone winter setpoint	Analog	Register (Analog)	40	40
Fourth time zone winter setpoint	Analog	Register (Analog)	42	42
Winter setpoint	Analog	Register (Analog)	2	2
Compressor 1 circuit 1 running hour H	Integer	Register (Integer)	64	192
Compressor 1 circuit 2 running hour H	Integer	Register (Integer)	70	198
Compressor 2 circuit 1 running hour H	Integer	Register (Integer)	66	194
Compressor 2 circuit 2 running hour H	Integer	Register (Integer)	72	200
Compressor 3 circuit 1 running hour H	Integer	Register (Integer)	68	196
Compressor 3 circuit 2 running hour H	Integer	Register (Integer)	74	202
Condensing pump running hour H	Integer	Register (Integer)	62	190
Main pump/fan running hour H	Integer	Register (Integer)	58	186
Main pump 2 running hour H	Integer	Register (Integer)	60	188
Compressor 1 circuit 1 running hour L	Integer	Register (Integer)	65	193
Compressor 1 circuit 2 running hour L	Integer	Register (Integer)	71	199
Compressor 2 circuit 1 running hour L	Integer	Register (Integer)	67	195
Compressor 2 circuit 2 running hour L	Integer	Register (Integer)	73	201
Compressor 3 circuit 1 running hour L	Integer	Register (Integer)	69	197
Compressor 3 circuit 2 running hour L	Integer	Register (Integer)	75	203
Condensing pump running hour L	Integer	Register (Integer)	63	191
Main pump/fan running hour L	Integer	Register (Integer)	59	187
Main pump 2 running hour L	Integer	Register (Integer)	61	189