Carel address	Modbus Address	Description	Unit measure	Read - write	Min value	Max Value
DIGITAL VARIABLES (COILS)						
0	1	Not used		…		
1	2	System On		r		
2	3	Compressor 1 ON- 25% step		r		
3	4	Compressor 1-50% step		r		
4	5	Compressor 1- 75% step		r		
5	6	Compressor 1-100% step		r		
6	7	Compressor 2 ON-25% step		r		
7	8	Compressor 2-50% step		r		
8	9	Compressor 2-75% step		r		
9	10	Compressor 2-100% step		r		
10	11	Liquid solenoid valve circuit 1		r		
11	12	Liquid solenoid valve circuit 2		r		
12	13	Pump 1 on		r		
13	14	Pump 2 on		r		
14	15	--		r		
15	16	Antifreeze heaters (option)		r		
16	17	--		r		
17	18	--		r		
18	19	--		r		
19	20	--		r		
20	21	--		r		
21	22	--		r		
22	23	--		r		
23	24	Low power consumption mode		r		
24	25	Winter mode (Heat pump only)		r		
25	26	Wrong password Alarm		r		
26	27	Water inlet High Temperature Alarm		r		
27	28	Water inlet Low Temperature Alarm		r		
28	29	Loss of water flow Alarm		r		
29	30	Low Pressure 1 PreAlarm (Autom.Reset)		r		
30	31	Low Pressure 2 PreAlarm (Autom.Reset)		r		
31	32	Low Pressure 1 Alarm		r		
32	33	Low Pressure 2 Alarm		r		
33	34	High Pressure 1 Alarm		r		
34	35	High Pressure 2 Alarm		r		
35	36	Compressor 1 Overload Alarm		r		
36	37	Compressor 2 Overload Alarm		r		
37	38	Compressor 1 Integral protection Alarm		r		
38	39	Compressor 2 Integral protection Alarm		r		
39	40	Oil differential pressure 1 Alarm		r		
40	41	Oil differential pressure 2 Alarm		r		
41	42	Antifreeze 1 Prealarm (Automatic Reset)		r		
42	43	Antifreeze 2 Prealarm (Automatic Reset)		r		
43	44	Antifreeze 1 Alarm		r		
44	45	Antifreeze 2 Alarm		r		
45	46	--		r		
46	47	--		r		
47	48	Circulating Pump 1 Overload Alarm		r		
48	49	Circulating Pump 2 Overload Alarm		r		
49	50	--		r		
50	51	Interrupted LAN Alarm		r		
51	52	Water Inlet Temp. Sensor Failure/Disconnected		r		
52	53	Water Outlet Temp. Sensor Failure/Disconnected		r		
53	54	Water Tank Temp. Sensor Failure/Disconnected		r		
54	55	--		r		
55	56	Condensing 1 Temp. Sensor Failure/Disconnected		r		
56	57	Condensing 2 Temp. Sensor Failure/Disconnected		r		
57	58	Evaporating 1 Press. Sensor Failure/Disconnected		r		
58	59	Evaporating 2 Press. Sensor Failure/Disconnected		r		
59	60	Summer/Winter mode remote control		r/w	0	1
60	61	Unit Remote Switch-On/Off Control		r/w	0	1
61	62	Buzzer and Alarm Remote Reset Control		r/w	0	1
62	63	Pump 1-2 Switch-over remote control		r/w	0	1
63	64	Set Back Mode (Sleep Mode)		r/w	0	1
64	65	Reserved variable		r/w	0	1
65	66	Usage of Temp. Values: Local (0) / Mean (1)		r/w	0	1
66	67	No. Of Stand-by Units: one (0) / two (1)		r		
67	68	Water tank range		r		
68	69	Presence of the 2nd water pump		r		
69	70	General Alarm State		r		
70	71	2nd Level Alarm State		r		
71	72	Circuit 1 Pump-down Failed		r		
72	73	Circuit 2 Pump-down Failed		r		
73	74	Not used		r		

74	75	Not used		r		
75	76	High condensing temperature 1		r		
76	77	High condensing temperature 2		r		
77	78	Not used		r		
78	79	Not used		r		
79	80	--		r		
80	81	Compressor 1 hour counter		r		
81	82	Compressor 2 hour counter		r		
82	83	Circulating Pump 1 hour counter		r		
83	84	Circulating Pump 2 hour counter		r		
84	85	--		r		
85	86	Low power request		r/w	0	1
86	87	Loss of water flow Alarm – Cond. circ. 1		r		
87	88	Loss of water flow Alarm – Cond. Circ. 2		r		
88	89	Cond.C1 Water Inlet Temp. Sensor Failure/Discon.		r		
89	90	Cond.C2 Water Inlet Temp. Sensor Failure/Discon.		r		
90	91	Cond.C1 Water Output Temp.Sensor Failure/Discon.		r		
91	92	Cond.C2 Water Output Temp. Sensor Failure/Discon.		r		
92	93	Cond.Circ.1 - Water inlet High Temperature Alarm		r		
93	94	Cond.Circ.2 - Water inlet High Temperature Alarm		r		
94	95	Cond.Circ.1 - Water inlet Low Temperature Alarm		r		
95	96	Cond.Circ.2 - Water inlet Low Temperature Alarm		r		
96	97	Loss of water flow Prealarm		r		
97	98	Loss of water flow Prealarm – Cond. circ. 1		r		
98	99	Loss of water flow Prealarm – Cond. Circ. 2		r		
99	100	Oil differential pressure 1 Prealarm		r		
100	101	Oil differential pressure 2 Prealarm		r		
101	102	Fase sequence prealarm		r		
102	103	Fase sequence alarm		r		
103	104	Compressor 1 Minimun running time not observed		r		
104	105	Compressor 2 Minimun running time not observed		r		
105	106	Board 2 disconnected		r		
106	107	Circuit 1 EXV Driver offline or Tlan failure		r		
107	108	Circuit 2 EXV Driver offline or Tlan failure		r		
108	109	Reserved		r		
109	110	Reserved		r		
110	111	Circuit 1 EXV Driver general alarm		r		
111	112	Circuit 2 EXV Driver general alarm		r		
112	113	DischargeTemp. Sensor Failure/Disconnected Comp.1		r		
113	114	DischargeTemp. Sensor Failure/Disconnected Comp.2		r		
114	115	Liquid refrigerant Temp. Sensor Failure/Disconnected Comp.1		r		
115	116	Liquid refrigerant Temp. Sensor Failure/Disconnected Comp.2		r		
116	117	Line 1 Active (Optional Power supply motorized main switch)		r		
117	118	Line 2 Active (Optional Power supply motorized main switch)		r		
118	119	PowerSupply Failure (Line 1 and Line 2)		r		
119	120	Reset IG Socomec (Optional Power supply motorized main switch)		r/w	0	1
120	121	Quick start (emergency recovery)		r		
121	122	Unit type (0=BRW/H; 1=BRRC)		r		
122	123	Low temperature condensing pressure control: Pressostatic Valves Fitted		r		
123	124	Screw Compressors option (0=Liquid Injection 1=ECO + Subcooling)		r		
124	125	Screw Compressors (0 = Standard; 1 = Extended limit)		r		
125	126	Unit BRRC:fans speed condensing regulation fitted		r		
126	127	Loss of water flow Alarm reset mode (0 = Manual; 1= Automatic)		r		
127	128	Aux Always Powered		r		
128	129	Electric Heaters Fuse F1 Fault		r		
129	130					

ANALOG VARIABLES (HOLDING or INPUT REGISTERS) (all values x 10)

0	1	Not used	-	-		
1	2	Evaporator Water Outlet Temperature	°C	r		
2	3	Evap. Water Outlet Temp. used by regulator	°C	r		
3	4	Evap. Water Inlet Temperature	°C	r		
4	5	Evap. Water Tank Temperature	°C	r		
5	6	--				
6	7	Circuit 1 Condensing Temperature	°C	r		
7	8	Circuit 2 Condensing Temperature	°C	r		
8	9	Circuit 1 Evaporating Temperature	°C	r		
9	10	Circuit 2 Evaporating Temperature	°C	r		
10	11	Circuit 1 Condensing Pressure	Bar	r		
11	12	Circuit 2 Condensing Pressure	Bar	r		
12	13	Circuit 1 Evaporating Pressure	Bar	r		
13	14	Circuit 2 Evaporating Pressure	Bar	r		
14	15	Discharge temperature compressor 1	°C	r		
15	16	Discharge temperature compressor 2	°C	r		
16	17	Press.Valve Ramp or Fans speed regulation (circuit 1) (0-100%)	%	r		
17	18	Press.Valve Ramp or Fans speed regulation (circuit 2) (0-100%)	%	r		
18	19	Delivery Water Temp. Actual Set Point	°C	r		
19	20	Delivery Water Temp. Max. Hysteresi	°C	r		

20	21	Serial Transmission Offset	°C	r/w	0,1	
21	22	Delivery Water Temp. Summer STD Set Point	°C	r/w	6.0 (2)	13.0 (2)
22	23	Delivery Water Temp. Summer OPT Set Point	°C	r/w	6.0 (2)	13.0 (2)
23	24	Del.Water T. Summer SetBack mode SetP.	°C	r/w	6.0 (2)	13.0 (2)
24	25	Delivery Water Temp. Winter Set Point	°C	r/w	28,0	53.0 - 60,0
25	26	Del.Water T. Winter SetBack mode SetP C1	°C	r/w	28,0	53.0 - 60,0
26	27	CW inlet High Temp.Summer Alarm Threshold	°C	r/w	-15,0	25,0
27	28	CW inlet Low Temp.Summer Alarm Threshold	°C	r/w	-15,0	25,0
28	29	CW1 inlet High Temp. Alarm Winter Threshold	°C	r/w	30,0	62,0
29	30	CW1 inlet Low Temp. Alarm Winter Threshold	°C	r/w	20,0	50,0
30	31	--	°C	r/w	-10,0	45,0
31	32	--	°C	r/w	6.0 (2)	13.0 (2)
32	33	--	°C	r/w	-10,0	45,0
33	34	--	°C	r/w	-10,0	15,0
34	35	Del.Water T. Winter SetBack mode SetP C1	°C	r/w	28,0	53.0 - 60,0
35	36	--	°C	r/w	-10,0	15,0
36	37	--	°C	r/w	3,0	9,9
37	38	Condensator Circ.1 Water Outlet Temperature	°C	r		
38	39	Condensator Circ.1. Water Inlet Temperature	°C	r		
39	40	Condensator Circ.2 Water Outlet Temperature	°C	r		
40	41	Condensator Circ.2. Water Inlet Temperature	°C	r		
41	42	Del.Water T. Winter SetBack mode SetP C1	°C	r/w	28,0	53.0 - 60,0
42	43	CW2 inlet High Temp. Alarm Winter Threshold	°C	r/w	30,0	62,0
43	44	CW2 inlet High Temp. Alarm Winter Threshold	°C	r/w	20,0	50,0
…	…	…	…	…	…	…
60	61	Circuit 1 Superheating	°C	r		
61	62	Circuit 2 Superheating	°C	r		
62	63	Circuit 1 Suction Pressure	°C	r		
63	64	Circuit 2 Suction Pressure	°C	r		
64	65	Circuit 1 Suction Temperature	°C	r		
65	66	Circuit 2 Suction Temperature	°C	r		
66	67	Circuit 1 Liquid temperature	°C	r		
67	68	Circuit 2 Liquid temperature	°C	r		
68	69	…				
69	70	…				
70	71	EXV PID Superheat Setpoint	°C	r		
71	72	EXV PID Superheat Proportional Gain	°C	r		
72	73	EXV PID Superheat derivative time	°C	r		
73	74	EXV PID Superheat Dead zone	°C	r		
74	75	EXV Low superheat threshold	°C	r		
75	76	EXV Costant time low superheat	°C	r		
76	77	EXV MOP threshold	°C	r		
77	78	EXV LOP threshold	°C	r		
78	79	EXV Costant time threshold	°C	r		
79	80	EXV Costant time threshold	°C	r		
80	81	Reserved (Advanced antifreezed set)	°C	r		
81	82	Fans speed Temperature cond. ON	°C	r		
82	83	Fans speed Temperature cond. OFF	°C	r		
83	84	Fans speed Temperature cond. Begin	°C	r		
84	85	Fans speed Temperature cond. End	°C	r		
85						
INTEGER VARIABLES (HOLDING or INPUT REGISTERS)						
0	129	Not Used	-	-		
1	130	Compressor 1 hour counter	h	r		
2	131	Compressor 2 hour counter	h	r		
3	132	Circulating Pump 1 hour counter	h	r		
4	133	Circulating Pump 2 hour counter	h	r		
5	134	--				
6	135	Compressor 1 Starting counter	h	r		
7	136	Compressor 1 Starting counter x10.000	$nx10^4$	r		
8	137	Compressor 2 Starting counter	n	r		
9	138	Compressor 2 Starting counter x10.000	$nx10^4$	r		
10	139	--				
11	140	--				
12	141	--				
13	142	--				
14	143	--				
15	144	--				
16	145	--				
17	146	--				
18	147	Unit Type (0= STD Chiller, 1=Low Temp. Ch., 2=Heat Pump)	n	r		
19	148	Circulating Pump Config. (0,1 or 2 Pumps)	n	r		
20	149	Total of units connected in LAN	n	r		
21	150	Comp.1 Status (0=Off,1=On,2=AL,3=Pump.Down)	n	r		
22	151	Comp.2 Status	n	r		
23	152	Comp.1 Step Status	n	r		
24	153	Comp.2 Step Status	n	r		

25	154	Pump 1 Status	n	r		
26	155	Pump 2 Status	n	r		
27	156	--				
28	157	Actual set Point mode (0=std, 2=OPT SetP., 3=Setback SetP., 4=Remote Offset	n	r		
29	158	--				
30	159	--				
31	160	--				
32	161	Restart Delay	s	r/w	0	300
33	162	Regulation Start Transitory	s	r/w	15	99
34	163	Low Pressure Delay	s	r/w	0	300
35	164	Water High/Low Temp. Alarm Delay	min	r/w	0	99
36	165	Excursion time	s	r/w	5	900
37	166	Stand-by Unit Switch-over time	h	r/w	0	999
38	167	Run-Stand-by pump switch-over time	H	r/w	1	99
39	168	Setback Mode Cyclical start	Min	r/w	15	99
40	169	Compr.1 working hours threshold	h *100	r/w	0	320
41	170	Compr.2 working hours threshold	h *100	r/w	0	320
42	171	Pump 1 working hours threshold	h *100	r/w	0	320
43	172	Pump 2 working hours threshold	h *100	r/w	0	320
44	173	--				
45	174	Reserved		r		
46	175	Reserved		r		
47	176	--				
48	177	--				
60	189	Reserved (Valve type)				
61	190	Reserved (Unit size)				
62	191	--				
63	192	--				
64	193	Reserved (Cond. Mode))				
65	194	--				
66	195	Reserved (Serial number 1)		r		
67	196	Reserved (Serial number 2)		r		
68	197	Reserved (Serial number 3)		r		
69	198	Reserved		r		
70	199	Reserved		r		
71	200	Reserved		r		
72	201	Reserved		r		
73	202	--				
74	203	--				
75	204	--				
76	205	--				
77	206	--				
78	207	--				
79	208	Circuit 1 EXV Position	Step	r		
80	209	Circuit 2 EXV Position	Step	r		
81	210	Hour	H	r		
82	211	Minute	Min	r		
83	212	Day	D	r		
84	213	Month	M	r		
85	214	Year	Y	r		
86	215	Bios release		r		
87	216	boot release		r		
88	217	SW release		r		
89	218	Reserved (Aux type)		r		
90	219	Reserved (power type)		r		
91	220	UCAP in charge (time)	sec	r		
92	221	UCAP On Working (time)	sec	r		
93	222					
94	223					