Easy Cooling Row Chilled Water

MODBUS Address Table

NOTE: 0X, 3X and 4X in the address table are used only to distinguish coils from registers. The actual address is decimal number in 0X, 3X or 4X.

Example: Reading coil addresses from 0X8001 to 0X8005:							
Slave Address	Function Code	Start Address High Bit	Start Address Low Bit	Number of Data Coils High Bit	Number of Data Coils Low Bit	Checksum CRC	
01H	01H	1FH	41H	00H	05H	ABH	C9H
Example: Reading register addresses from 0X8001 to 0X8005：							
Slave Address	Function Code	Start Address High Bit	Start Address Low Bit	Number of Data Coils High Bit	Number of Data Coils Low Bit	Checksum CRC	
01H	03H	1FH	41H	00H	05H	D2H	09H

Unit Status - Coil (Function Code: 01H)

Address	Parameter	Remarks	Default	Minimum	Maximum	Accuracy	Unit
0X8001	On/off status	0: Power off; 1: Power on		0	1		
0X8002	Reserved						
0X8003	Alarm output	0: OFF; 1: ON		0	1		
0X8004	Electrical humidifier status	0: OFF; 1: ON		0	1		
0X8005	Electrical heater 1 status	0: OFF; 1: ON		0	1		
0X8006	Reserved						
0X8007	Supply fan control	0: OFF; 1: ON		0	1		
0X8008	Return air valve	0: OFF; 1: ON		0	1		
0X8009	Reserved						
0X8010	Remote switch	0: OFF; 1: ON		0	1		
0X8011	Reserved						
0X8012	Reserved						
0X8013	Water inlet solenoid valve	0: OFF; 1: ON		0	1		
0X8014	Condensate water pump status	0: OFF; 1: ON		0	1		
0X8015	Reserved						
0X8016	Reserved						
0X8017	Power supply failure	0: Normal; 1: Fault		0	1		

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Address	Parameter	Remarks	Default	Minimum	Maximum	Accuracy	Unit
0X8018	Phase error (Inverse Phase)	0: Normal; 1: Fault		0	1		
0X8019	Phase missing error	0: Normal; 1: Fault		0	1		
0X8020	Electric heater protection	0: Normal; 1: Fault		0	1		
0X8021	Humidifier failure	0: Normal; 1: Fault		0	1		
0X8022	Smoke/fire alarm	0: Normal; 1: Fault		0	1		
0X8023	Water leakage alarm	0: Normal; 1: Fault		0	1		
0X8024	Wet-pad low water level alarm	0: Normal; 1: Fault		0	1		
0X8025	Wet-pad low water level switch failure	0: Normal; 1: Fault		0	1		
0X8026	EEPROM failure	0: Normal; 1: Fault		0	1		
0X8027	Remote communication failure	0: Normal; 1: Fault		0	1		
0X8028	User terminal failure	0: Normal; 1: Fault		0	1		
0X8029	Local network communication failure	0: Normal; 1: Fault		0	1		
0X8030	Mainboard / extend board communication failure	0: Normal; 1: Fault		0	1		
0X8031	Reserved						
0X8032	Air filter clogged alarm	0: Normal; 1: Fault		0	1		
0X8033	Fan 1 speed feedback failure	0: Normal; 1: Fault		0	1		
0X8034	Fan 2 speed feedback failure	0: Normal; 1: Fault		0	1		
0X8035	Fan 3 speed feedback failure	0: Normal; 1: Fault		0	1		
0X8036	Fan 4 speed feedback failure	0: Normal; 1: Fault		0	1		
0X8037	Fan 5 speed feedback failure	0: Normal; 1: Fault		0	1		
0X8038	Fan 6 speed feedback failure	0: Normal; 1: Fault		0	1		
0X8039	Fan 7 speed feedback failure	0: Normal; 1: Fault		0	1		
0X8040	Fan 8 speed feedback failure	0: Normal; 1: Fault		0	1		
0X8041	Reserved						
0X8042	Fan or airflow loss failure	0: Normal; 1: Fault		0	1		
0X8043	Return air high temperature alarm	0: Normal; 1: Fault		0	1		
0X8044	Return air low temperature alarm	0: Normal; 1: Fault		0	1		
0X8045	Return air high humidity alarm	0: Normal; 1: Fault		0	1		
0X8046	Return air low humidity alarm	0: Normal; 1: Fault		0	1		
0X8047	Supply air high temperature alarm	0: Normal; 1: Fault		0	1		
0X8048	Supply air low temperature alarm	0: Normal; 1: Fault		0	1		
0X8049	Return air temperature probe 1 failure	0: Normal; 1: Fault		0	1		
0X8050	Return air temperature probe 2 failure	0: Normal; 1: Fault		0	1		

Address	Parameter	Remarks	Default	Minimum	Maximum	Accuracy	Unit
0X8051	Return air temperature probe 3 failure	0: Normal; 1: Fault		0	1		
0X8052	Return air humidity probe failure	0: Normal; 1: Fault		0	1		
0X8053	Supply air temperature probe 1 failure	0: Normal; 1: Fault		0	1		
0X8054	Supply air temperature probe 2 failure	0: Normal; 1: Fault		0	1		
0X8055	Supply air temperature probe 3 failure	0: Normal; 1: Fault		0	1		
0X8056	Supply air humidity probe failure	0: Normal; 1: Fault		0	1		
0X8057	System drainage failure	0: Normal; 1: Fault		0	1		
0X8058	Air pressure differential sensor failure	0: Normal; 1: Fault		0	1		
0X8059	Humidifier run time exceeded	0: Normal; 1: Fault		0	1		
0X8060	Condensate water high level protection	0: Normal; 1: Fault		0	1		
0X8061	Water inlet temperature probe failure	0: Normal; 1: Fault		0	1		
0X8062	Water outlet temperature probe failure	0: Normal; 1: Fault		0	1		
0X8063	Water inlet pressure probe failure	0: Normal; 1: Fault		0	1		
0X8064	Water outlet pressure probe failure	0: Normal; 1: Fault		0	1		
0X8065	Inlet water high temperature alarm	0: Normal; 1: Fault		0	1		
0X8066	Inlet water low temperature alarm	0: Normal; 1: Fault		0	1		
0X8067	Outlet water high temperature alarm	0: Normal; 1: Fault		0	1		
0X8068	Outlet water low temperature alarm	0: Normal; 1: Fault		0	1		
0X8069	Inlet water low pressure alarm	0: Normal; 1: Fault		0	1		
0X8070	Power supply A failure	0: Normal; 1: Fault		0	1		
0X8071	Power supply B failure	0: Normal; 1: Fault		0	1		
0X8072	Unit run time exceeded	0: Normal; 1: Fault		0	1		
0X8073	Fan run time exceeded	0: Normal; 1: Fault		0	1		
0X8074	Air filter run time exceeded	0: Normal; 1: Fault		0	1		
0X8075	Electric Heater 1 run time exceeded	0: Normal; 1: Fault		0	1		
0X8076	Cabinet inlet air temperature probe 1 failure	0: Normal; 1: Fault		0	1		
0X8077	Cabinet inlet air temperature probe 2 failure	0: Normal; 1: Fault		0	1		
0X8078	Cabinet inlet air temperature probe 3 failure	0: Normal; 1: Fault		0	1		
0X8079	Cabinet inlet air high temperature alarm	0: Normal; 1: Fault		0	1		

Address	Parameter	Remarks	Default	Minimum	Maximum	Accuracy	Unit
0X8080	Cabinet inlet air low temperature alarm	0: Normal; 1: Fault		0	1		
0X8081	Reserved						
0X8082	Reserved						
0X8083	Reserved						

Unit Status – Register (Function Code: 03H)

Address	Parameter	Remarks	Default	Minimum	Maximum	Accuracy	Unit
4X8001	System operation mode	0：Shutdown B0：Cooling; B1：Heating; B2：Humidifying; B3：Deumidifying; B4：Standby; (0:Non-standby; 1:Standby) B5：Fault Shutdown (0: No; 1:Yes) B6：Manual Shutdown (Remote Shutdown/Wire Controller) B7：Master /Backup (0: Master; 1:Backup) B8：Network outage B9：Dry contactor shutdown		0			
4X8002	Reserved						
4X8003	Reserved						
4X8004	Cabinet inlet air temperature Tmax note 1	= Actual value *10		-300	700	0.1	℃
4X8005	Reserved						
4X8006	Return air humidity 1 note 1	= Actual value *10		100	950	0.1	%
4X8007	Supply air humidity 1 note 1	= Actual value *10		100	950	0.1	%
4X8008	Fan run time			0	65535	1	Hour
4X8009	Supply air temperature 1 note 1	= Actual value *10		-300	700	0.1	℃
4X8010	Supply air temperature 2 note 1	= Actual value *10		-300	700	0.1	℃
4X8011	Supply air temperature 3 note 1	= Actual value *10		-300	700	0.1	℃
4X8012	Return air temperature 1 note 1	= Actual value *10		-300	700	0.1	℃
4X8013	Return air temperature 2 note 1	= Actual value *10		-300	700	0.1	℃
4X8014	Return air temperature 3 note 1	= Actual value *10		-300	700	0.1	℃
4X8015	Input power supply voltage			0	300	1	V
4X8016	Cooling requirement			-100	100	1	%
4X8017	Heating requirement			-100	100	1	%
4X8018	Humidifying requirement			-100	100	1	%
4X8019	Dehumidifying requirement			-100	100	1	%
4X8020	Humidifier run time			0	65535	1	Hour
4X8021	Calculating temperature note 1	= Actual value *10		-300	700	0.1	℃

Address	Parameter	Remarks	Default	Minimum	Maximum	Accuracy	Unit
4X8022	Calculating humidity note 1	= Actual value *10		100	950	0.1	%
4X8023	Fan speed control 1			0	100	1	%
4X8024	Fan speed control 2			0	100	1	%
4X8025	Fan speed control 3			0	100	1	%
4X8026	Internal fan 1 speed			0	100	1	%
4X8027	Internal fan 2 speed			0	100	1	%
4X8028	Internal fan 3 speed			0	100	1	%
4X8029	Internal fan 4 speed			0	100	1	%
4X8030	Internal fan 5 speed			0	100	1	%
4X8031	Internal fan 6 speed			0	100	1	%
4X8032	Internal fan 7 speed			0	100	1	%
4X8033	Internal fan 8 speed			0	100	1	%
4X8034	Average indoor temperature/temperature difference (group control) note 1	= Actual value *10		-300	700	0.1	℃
4X8035	Average indoor humidity (group control) note 1	= Actual value *10		100	950	0.1	%
4X8036	Slave unit communication failure	0:No fault; 1:fault B0：Reserved B1：1# slave unit communication fault B2：2# slave unit communication fault B3：3# slave unit communication fault; B4：4# slave unit communication fault; B5：5# slave unit communication fault; B6：6# slave unit communication fault; B7：7# slave unit communication fault; B8：8# slave unit communication fault; B9：9# slave unit communication fault; B10：10# slave unit communication fault B11：11# slave unit communication fault B12：12# slave unit communication fault B13：13# slave unit communication fault B14：14# slave unit communication fault					
4X8037	Slave unit communication failure	0:No fault; 1:fault B0：16# slave unit communication fault B1：17# slave unit communication fault B2：18# slave unit communication fault B3：19# slave unit communication fault; B4：20# slave unit communication fault; B5：21# slave unit communication fault; B6：22# slave unit communication fault; B7：23# slave unit communication fault; B8：24# slave unit communication fault; B9：25# slave unit communication fault;					

Address	Parameter	Remarks	Default	Minimum	Maximum	Accuracy	Unit
		B10：26# slave unit communication fault B11：27# slave unit communication fault B12：28# slave unit communication fault B13：29# slave unit communication fault B14：30# slave unit communication fault B15：31# slave unit communication fault					
4X8038	Air pressure difference note 1			0	1000	1	Pa
4X8039	Inlet water pressure note1	= Actual value *10		0	106	0.1	bar
4X8040	Outlet water pressure note 1	= Actual value *10		0	106	0.1	bar
4X8041	Inlet water temperature note 1	= Actual value *10		-300	700	0.1	℃
4X8042	Outlet water temperature note 1	= Actual value *10		-300	700	0.1	℃
4X8043	Chilled water valve opening			0	100	1	%
4X8044	Cabinet inlet air temperature 1 note 1	= Actual value *10		-300	700	0.1	℃
4X8045	Cabinet inlet air temperature 2 note 1	= Actual value *10		-300	700	0.1	℃
4X8046	Cabinet inlet air temperature 3 note 1	= Actual value *10		-300	700	0.1	℃
4X8047	Unit run time			0	65535	1	Hour
4X8048	Air filter run time			0	65535	1	Hour
4X8049	Electric Heater 1 run time			0	65535	1	Hour
4X8050	Supply air and return air temperature difference note 1	= Actual value *10				0.1	℃
4X8051	Reserved						
4X8052	Reserved						
4X8053	Reserved						
4X8054	Reserved						
4X8055	Reserved						

Parameter Setting 1 (Function Code: 03H, 06H, 10H)

Address	Parameter	Remarks	Default	Minimum	Maximum	Accuracy	Unit
4X3501	Return air temperature setpoint	= Actual value *10	Room：240 Row：350	50	500	0.1	℃
4X3502	Supply air temperature setpoint	= Actual value *10	Room：180 Row：220	50	500	0.1	℃
4X3503	Cabinet inlet air temperature setpoint	= Actual value *10	220	50	500	0.1	%
4X3504	Return air humidity setpoint		25	10	95	1	%
4X3505	Power on/off	0: Power On; 1: Power Off	1	0	1		

Address	Parameter	Remarks	Default	Minimum	Maximum	Accuracy	Unit
4X3506	Supply air and return air temperature difference setpoint	= Actual value *10	130	0	250	0.1	℃
4X3507	Start-up delay time		2	0	240	1	seconds
4X3508	Supply air humidity setpoint	= Actual value *10	50	10	95	1	%
4X3509	Reserved						
4X3510	Reserved						
4X3511	Reserved						
4X3512	Reserved						
4X3513	Reserved						
4X3514	Reserved						

Parameter Setting 2 (Function Code: 03H, 06H, 10H)

Address	Parameter	Remarks	Default	Minimum	Maximum	Accuracy	Unit
4X4021	Water leakage alarm type	0：Immediate shutdown 1：Just alarm, no shutdown	0	0	1	1	
4X4022	Fan temperature control target	0：Return air temperature control; 1：Cabinet inlet airTmax 2：Supply airtemperature control 3：Suppply air andreturn air temperature difference (Delta T) control	2	0	3	1	
4X4023	Cooling deviation (Cooling control accuracy)	= Actual value *10	20	5	100	0.1	℃
4X4024	Heating deviation (Heating control accuracy)	= Actual value *10	30	10	100	0.1	℃
4X4025	Humidifying deviation Humidification control accuracy)	= Actual value *10	50	50	300	0.1	%
4X4026	Dehumidifying deviation (Dehumidifying control accuracy)	= Actual value *10	100	50	300	0.1	%
4X4027	Air pressure difference control deviation		2	1	30	1	Pa
4X4028	Return air high temperature alarm setpoint	= Actual value *10	430	100	500	0.1	℃
4X4029	Return air low temperature alarm setpoint	= Actual value *10	200	0	400	0.1	℃
4X4030	High humidity alarm setpoint	= Actual value *10	70	10	95	0.1	%
4X4031	Low humidity alarm setpoint	= Actual value *10	15	10	95	0.1	%
4X4032	Supply air high temperature alarm value	= Actual value *10	Room：260 Row：320	10	350	0.1	
4X4033	Supply air low temperature alarm value	= Actual value *10	Room：80 Row：120	10	300	0.1	
4X4034	Inlet water high temperature alarm value	= Actual value *10	200	0	300	0.1	℃

Address	Parameter	Remarks	Default	Minimum	Maximum	Accuracy	Unit
4X4035	Inlet water low temperature alarm value	= Actual value *10	50	0	300	0.1	℃
4X4036	Outlet water high temperature alarm value	= Actual value *10	260	0	300	0.1	℃
4X4037	Outlet water low temperature alarm value	= Actual value *10	50	0	300	0,1	℃
4X4038	Inlet water low pressure alarm value	= Actual value *10	0	0	50	0.1	bar
4X4039	Water valve temperature control target	0: Return air control 1: Cabinet inlet air Tmax 2: Supply air control	2	0	2	1	
4X4040	Control temperature calculating method	0: Average temperature 1: Maximum temperature	0	0	1	1	
4X4041	Cabinet inlet air high temperature value	= Actual value *10	320	10	350	0.1	℃
4X4042	Cabinet inlet air low temperature value	= Actual value *10	120	10	300	0.1	℃

Parameter Setting 3 (Function Code: 04H)

Address	Parameter	Remarks	Default	Minimum	Maximum	Accuracy	Unit
3X9041	Temperature calculation type	0：Ratio; 1：PI	1	0	1	1	
3X9042	Fan turn off delay time		10	1	255	1	Second
3X9043	Fan turn on delay time		3	1	255	1	Second
3X9044	Fan maintenance time	= Actual value /100	440	10	655	100	Hour
3X9045	Temperature control backlash (Temperature deadband)	= Actual value *10	5	5	50	0.1	℃
3X9046	Humidity control backlash (Humidity deadband)	= Actual value *10	30	0	100	0.1	%
3X9047	Humidifier maintenance time	= Actual value /100	440	1	655	100	Hour
3X9048	Cooling minimum run time		8	1	30	1	Minute
3X9049	Unit maintenance time	= Actual value /100	655	10	655	100	Hour
3X9050	Air filter maintenance time	= Actual value /100	43	10	655	100	Hour
3X9051	Electric heater maintenance time	= Actual value /100	440	10	655	100	Hour

Model Barcode Information (Function Code: 04H)

Address	Parameter	Remarks	Default	Minimum	Maximum	Accuracy	Unit
3X9061~3-X9076	Unit model	String ending with '\0'					
3X9077~3-X9093	Unit serial number	String ending with '\0'					

Example: Unit model “ERC301AS0CGE”

Register	Value	Register	Value
5501	0x4552	5509	0x0000
5502	0x4333	5510	0x0000
5503	0x3031	5511	0x0000
5504	0x4153	5512	0x0000
5505	0x3043	5513	0x0000
5506	0x4745	5514	0x0000
5507	0x0000	5515	0x0000
5508	0x0000	5516	0x0000