

MODBUS Data – ali-CXW

Hardware and software identification

Addr	Type	Attr.	Description	Notes
1000	uns16	R	Controller model, identifies the board type (hexadecimal data)	5000 Cassette 5001 Cassette EC
1001	uns16	R	Firmware Release (most significant byte major release, less significant byte minor release)	Ex. If this register contains 106 (hexadecimal) then the release is 1.06

Temperatures read by the probes

Addr	Type	Attr.	Description	Notes
1002	sig16	R	Temperature probe T1	°C*10
1003	sig16	R	Temperature probe T2	°C*10
1004	sig16	R	Temperature probe T3	°C*10

Dip switches configuration

Addr	Type	Attr.	Description	Notes
1005	sig16	R	Dip 1 configuration	1: 4 pipes machine 0: 2 pipes machine
1006	sig16	R	Dip 2 configuration	1: Thermoregulation with fan only 0: Complete thermoregulation
1007	sig16	R	Dip 3 configuration	1: T3 probe on 0: T3 probe off
1008	sig16	R	Dip 4 configuration	1: T3 used in winter/summer 0: T3 used in winter only
1009	sig16	R	Dip 5 configuration	1: Continuous ventilation off 0: Continuous ventilation on
100A	sig16	R	Dip 6 configuration	1: Electrical heater present 0: Electrical heater absent
100B	sig16	R	Dip 7 configuration	1: El.heater integrates T1 probe 0: El.heater integrates T2 probe
100C	sig16	R	Dip 8 configuration	1: Relay7 is associated to the condensation alarm (relay closed if alarm present) 0: Relay7 associated to the machine state (relay closed if machine on)
100D	sig16	R	Dip 9 configuration	1: IN1 indicates the season 0: IN1 indicates the remote on/off
100E	sig16	R	Dip 10 configuration	1: Slave Machine 0: Master Machine

Machine state and alarms

Addr	Type	Attr.	Description	Notes
100F	uns16	R	Machine state	0:OFF 1:ON
1010	uns16	R	Fan Only mode	0: OFF 1: ON
1011	uns16	R	Dead Zone(Auto) mode	0: OFF 1: ON
1012	uns16	R	Machine is in dead zone	0: OFF 1: ON
1013	uns16	R	Season in use	0: Summer 1: Winter
1014	uns16	R	T2 probe found	0: No 1: Yes
1015	uns16	R	Thermoregulation requested	0: No 1: Yes
1016	uns16	R	Electrical heater state	0: OFF 1: ON
1017	uns16	R	State of Automatic Ventilation	0: OFF 1: ON
1018	uns16	R	Ventilation is stopped	0: OFF 1: ON
1019	uns16	R	Fan Speed Min (for ECM machines, this field is not valid with automatic fan speed)	0: OFF 1: ON
101A	uns16	R	Fan Speed Med (for ECM machines, this field is not valid with automatic fan speed)	0: OFF 1: ON
101B	uns16	R	Fan Speed Max (for ECM machines, this field is not valid with automatic fan speed)	0: OFF 1: ON
101C	uns16	R	State of Relay 1 FAN LOW	0: OFF 1: ON
101D	uns16	R	State of Relay 2 FAN MED	0: OFF 1: ON
101E	uns16	R	State of Relay 3 FAN HIGH	0: OFF 1: ON
101F	uns16	R	State of Relay 4 EV hot/Electrical heater (*)	0: OFF 1: ON
1020	uns16	R	State of Relay 5 EV cold/ Electrical heater (*)	0: OFF 1: ON
1021	uns16	R	State of Relay 6 Pump/IAQ (*)	0: OFF 1: ON
1022	uns16	R	State of Relay 7 Condensation alarm/Machine state (*)	0: OFF 1: ON
1023	uns16	R	Digital Input IN2	0: Closed 1: Opened

Addr	Type	Attr.	Description	Notes
1024	uns16	R	Digital Input IN1	0: Closed 1: Opened
1025	uns16	R	Digital Input LNC condensation level (Cassette)	0: Closed 1: Opened
1026	uns16	R	Digital Input LNA condensation level (Cassette)	0: Closed 1: Opened
1027	uns16	R	Analog output 0-10V	Volt*10
1028	uns16	R	Alarm: T1 fault	0: OFF 1: ON
1029	uns16	R	Alarm: T2 fault	0: OFF 1: ON
102A	uns16	R	Alarm: T3 fault	0: OFF 1: ON
102B	uns16	R	Allarm: Condensation level	0: OFF 1: ON

() depending on the configuration*

Machine Parameters

Addr	Type	Attr.	Symb	Description	Notes
102C	sig16	RW	OFS	T-MB NTC probe offset	°C*10; -3,0 ÷ 3,0
102D	sig16	RW	LSE	Summer set-point	°C*10; reg1047 ÷ reg1048
102E	sig16	RW	LSI	Winter set-point	°C*10; reg1049 ÷ reg104A
102F	sig16	RW	T2-1	T2 change-over temperature: ventilation-->cooling	°C*10; 12,0 ÷ 22,0
1030	sig16	RW	T2-2	T2 change-over temperature: ventilation-->heating	°C*10; 28,0 ÷ 36,0
1031	sig16	RW	T2-3	T2 change-over hysteresis	°C*10; 2,0 ÷ 5,0
1032	sig16	RW	T3-1	T3 Fan ON when heating	°C*10; 30,0 ÷ 40,0
1033	sig16	RW	T3-2	T3 Fan ON when cooling	°C*10; 10,0 ÷ 25,0
1034	sig16	RW	I-T3	T3 Fan control hysteresis	°C*10; 2,0 ÷ 8,0
1035	sig16	RW	F-t1	Fan maximum off time for antistratification	minutes; 5 ÷ 13
1036	sig16	RW	F-t2	Antistratification on time (*)	seconds; 30 ÷ 120
1037	sig16	RW	F-t3	Post-ventilation time	seconds; 5 ÷ 240
1038	sig16	RW	I-rL	Thermoregulation hysteresis	°C*10; 0,5 ÷ 2,0
1039	sig16	RW	dEds	Dead zone central set	°C*10; 18,0 ÷ 30,0
103A	sig16	RW	dEdr	Dead zone range	°C*10; 1,0 ÷ 6,0
103B	sig16	RW	t1dS	T1 Compensation delta	°C*10; 0,5 ÷ 2,0
103C	sig16	RW	SLu1	ECM Voltage MIN Speed	Volt*10; 1,0 ÷ 6,0
103D	sig16	RW	SCu2	ECM Voltage MED Speed	Volt*10; 3,0 ÷ 8,0
103E	sig16	RW	SHu3	ECM Voltage MAX Speed	Volt*10; 6,0 ÷ 10,0
103F	sig16	RW	LLSI	ECM auto fan speed minimum voltage in Winter	Volt*10; 1,0 ÷ 6,0
1040	sig16	RW	HLSI	ECM auto fan speed maximum voltage in Winter	Volt*10; 5,0 ÷ 10,0
1041	sig16	RW	PFC	Summer proportional bandwidth	°C*10; 2,0 ÷ 6,0
1042	sig16	RW	PFH	Winter proportional bandwidth	°C*10; 2,0 ÷ 6,0
1043	sig16	RW	dS	Allowed set point variation from ETN	°C*10; 0,0 ÷ 9,0
1044	sig16	RW	P-t1	Pump, delay time	seconds; 0 ÷ 300
1045	sig16	RW	P-t2	Pump, OFF time in summer	minutes; 30 ÷ 90
1046	sig16	RW	P-t2	Pump, minimum ON time in summer	minutes; 0 ÷ 5
1047	sig16	RW	SminE	Summer set-point min limit	°C*10; 10,0 ÷ 30,0
1048	sig16	RW	SmaxE	Summer set-point max limit	°C*10; 10,0 ÷ 30,0
1049	sig16	RW	SminI	Winter set-point min limit	°C*10; 10,0 ÷ 30,0
104A	sig16	RW	SmaxI	Winter set-point max limit	°C*10; 10,0 ÷ 30,0
104B	uns16	RW	BLK0	All settings locked (see the next 4 registers)	0: OFF 1: ON
104C	uns16	RW	BLK1	On-Off locked	0: OFF 1: ON
104D	uns16	RW	BLK2	Working mode locked	0: OFF 1: ON
104E	uns16	RW	BLK3	Set-point locked	0: OFF 1: ON

Addr	Type	Attr.	Symb	Description	Notes
104F	uns16	RW	BLK4	Fan mode locked	0: OFF 1: ON
1050	sig16	RW	LLSE	ECM auto fan speed minimum voltage in Summer	Volt*10; 1,0 ÷ 6,0
1051	sig16	RW	HLSE	ECM auto fan speed maximum voltage in Summer	Volt*10; 5,0 ÷ 10,0
1052	sig16	RW	T-AG	Antifreeze temperature	°C*10; 4,0 ÷ 8,0
1053	sig16	RW	dTRE	Energy saving temperature delta	°C*10; 3,0 ÷ 8,0
1054	uns16	RW	t-Pr	Weekly Timer programmed by the T-MB	0: OFF 1: ON
1055	uns16	RW	AGon	Antifreeze function	0: OFF 1: ON
1056	uns16	RW	REon	Energy saving function	0: OFF 1: ON

(*) depending on the configuration

Commands

Addr	Type	Attr.	Description	Notes
1057	uns16	W	ON-OFF command	1=ON 0=OFF
1058	uns16	W	Mode command	0=Summer 1=Winter 2=Only Ventilation 3=Auto(Dead Zone)
1059	uns16	W	Fan command	0= Automatic Fan Speed 1= Min Fan Speed 2= Med Fan Speed 3= Max Fan Speed

Additional functionalities

Addr	Type	Attr.	Description	Notes
106C	uns16	RW	IAQ enabled	1 On 0 Off
106D	uns16	RW	IN2 used for decreasing setpoint	1 Yes 0 No
106E	uns16	RW	decreasing setpoint from IN2 value	3°C - 6°C
106F	uns16	RW	Enabling of ambient probe value via MB	1 Yes 0 No
1070	uns16	RW	Ambient probe value	°C x10
1071	uns16	R	T-MB presence	1 Present 0 Absent
1072	uns16	R	IR presence	1 Present 0 Absent
1073	uns16	W	Parameters Reset	The reset takes place by writing 0x005A

Additional functionalities

Addr	Type	Attr.	Description	Notes
106C	uns16	RW	IAQ enabled	1 On 0 Off
106D	uns16	RW	IN2 used for decreasing setpoint	1 Yes 0 No
106E	uns16	RW	decreasing setpoint from IN2 value	3°C - 6°C
106F	uns16	RW	Enabling of ambient probe value via MB	1 Yes 0 No
1070	uns16	RW	Ambient probe value	°C x10
1071	uns16	R	T-MB presence	1 Present 0 Absent
1072	uns16	R	IR presence	1 Present 0 Absent
1073	uns16	R	Dip 1 T-MB	1: ON 0:OFF
1074	uns16	R	Dip 2 T-MB	1: ON 0:OFF
1075	uns16	RW	Set variation value (± 3 mode)	°C*10; -(reg1043) ÷ reg1043
1076	uns16	W	Parameters Reset	The reset takes place by writing 0x005A

Additional functionalities

Addr	Type	Attr.	Description	Note
1077	uns16	RW	Time set	MSB: Hour, LSB: Minutes
1078	uns16	RW	Week day set	1=Mon...7=Sun

Bit Command

Addr	Type	Attr.	Descrizione	Note
1100	uns16	W	Summer mode	1 executes the command
1101	uns16	W	Winter mode	1 executes the command
1102	uns16	W	Auto mode	1 executes the command
1103	uns16	W	Only Fan mode	1 executes the command
1104	uns16	W	Fan speed Auto	1 executes the command
1105	uns16	W	Fan speed Min	1 executes the command
1106	uns16	W	Fan speed Med	1 executes the command
1107	uns16	W	Fan speed Max	1 executes the command

MODBUS data – I/O Board

Hardware and software identification

Addr	Type	Attr.	Description	Notes
0100	uns16	R	Controller model, identifies the board type (hexadecimal data)	5101 I/O board
0101	uns16	R	Firmware Release (most significant byte major release, less significant byte minor release)	Ex. If this register contains 106 (hexadecimal) then the release is 1.06

Inputs e Outputs

Addr	Type	Attr.	Description	Notes
0102	uns16	R	Digital input IN1	0: Closed 1: Opened
0103	uns16	R	Digital input IN2	0: Closed 1: Opened
0104	uns16	R	Digital input IN3	0: Closed 1: Opened
0105	uns16	R	Digital input IN4	0: Closed 1: Opened
0106	uns16	R	Digital input IN5	0: Closed 1: Opened
0107	uns16	R	Digital input IN6	0: Closed 1: Opened
0108	uns16	R	Digital input IN7	0: Closed 1: Opened
0109	uns16	R	Digital input IN8	0: Closed 1: Opened
010A	uns16	RW	Relay 1 state	0: Not active 1: Active
010B	uns16	RW	Relay 2 state	0: Not active 1: Active
010C	uns16	RW	Relay 3 state	0: Not active 1: Active
010D	uns16	RW	Relay 4 state	0: Not active 1: Active
010E	uns16	RW	Relay 5 state	0: Not active 1: Active
010F	uns16	RW	Relay 6 state	0: Not active 1: Active
0110	uns16	RW	Relay 7 state	0: Not active 1: Active
0111	uns16	RW	Relay 8 state	0: Not active 1: Active