

MODBUS Data – i-MXW

Hardware and software identification

Addr	Type	Attr.	Description	Notes
1000	uns16	R	Controller model, identifies the board type (hexadecimal data)	0x500D CVP2
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	Ambient temperature	°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: Continuous ventilation off 0: Continuous ventilation on
1006	sig16	R	Dip 2 configuration	1: Anti-stratification w/o EV or Res 0: Standard anti-stratification
1007	sig16	R	Dip 3 configuration	1: ECM motor 0: Async motor
1008	sig16	R	Dip 4 configuration	1: Slave 0: Master
1009	sig16	R	Dip 5 configuration	1: Resistance on if water is cold 0: Resistance instead of water
100A	sig16	R	Dip 6 configuration	1: Connectivity Off 0: Connectivity On
100B	sig16	R	Not used	
100C	sig16	R	Not used	
100D	sig16	R	Not used	
100E	sig16	R	Not used	

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	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 used for season choice	0: No 1: Yes
1015	uns16	R	Thermoregulation requested	0: No 1: Yes
1016	uns16	R	Resistance 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 (legacy-only T-MB/IR)	0: OFF 1: ON
101A	uns16	R	Fan Speed Med (legacy-only T-MB/IR)	0: OFF 1: ON
101B	uns16	R	Fan Speed Max (legacy-only T-MB/IR)	0: OFF 1: ON
101C	uns16	R	State of Relay 1 (Fan Min)	0: OFF 1: ON
101D	uns16	R	State of Relay 2 (Fan Med)	0: OFF 1: ON
101E	uns16	R	State eof Relay 3 (Fan Max or Inverter On)	0: OFF 1: ON
101F	uns16	R	State of Relay 4 (Resistance)	0: OFF 1: ON
1020	uns16	R	State of Relay 5 (EV)	0: OFF 1: ON
1021	uns16	R	State of Relay 6 (Boiler)	0: OFF 1: ON
1022	uns16	R	State of Relay 7 (Chiller)	0: OFF 1: ON
1023	uns16	R	Digital Input - Window	0: Closed 1: Opened
1024	uns16	R	Digital Input – Pump Alarm	0: Closed 1: Opened
1025	uns16	R	Not used	

Addr	Type	Attr.	Description	Notes
1026	uns16	R	Not used	
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	Alarmp: Pump input	0: OFF 1: ON

Machine Parameters

Addr	Type	Attr.	Symb	Description	Notes
102C	sig16	RW	OFS	T-MB NTC probe offset	°C*10; -5,0 ÷ 5,0
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		Not used	°C*10; 18,0 ÷ 30,0
1036	sig16	RW		Not used	°C*10; 1,0 ÷ 6,0
1037	sig16	RW		Not used	
1038	sig16	RW	I-rL	Thermoregulation hysteresis	°C*10; 0,5 ÷ 2,0
1039	sig16	RW	dEds	Auto mode Setpoint	°C*10; 18,0 ÷ 30,0
103A	sig16	RW	dEdr	Auto mode Range	°C*10; 1,0 ÷ 6,0
103B	sig16	RW		Not used	
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 T-MB	°C*10; 0,0 ÷ 9,0
1044	sig16	RW		Not used	
1045	sig16	RW		Not used	
1046	sig16	RW		Not used	
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) only T-MB/IR	0: OFF 1: ON
104C	uns16	RW	BLK1	On-Off locked (only T-MB/IR)	0: OFF 1: ON
104D	uns16	RW	BLK2	Working mode locked (only T-MB/IR)	0: OFF 1: ON
104E	uns16	RW	BLK3	Set-point locked (only T-MB/IR)	0: OFF 1: ON

Addr	Type	Attr.	Symb	Description	Notes
104F	uns16	RW	BLK4	Fan mode locked (only T-MB/IR)	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 or night mode 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
1057	sig16	RW	Ft1	Anti-stratification wait time	minutes; 10 ÷ 45
1058	sig16	RW	t1SE	T1 Summer base compensation	°C*10; 0,0 ÷ 2,0
1059	sig16	RW	Ft2E	Summer anti-stratification time	Seconds; 0 ÷ 180
105A	sig16	RW	t1SI	T1 Winter base compensation	°C*10; 0,0 ÷ 5,0
105B	sig16	RW	Ft2I	Winter anti-stratification time	Seconds; 0 ÷ 210

Commands

Addr	Type	Attr.	Description	Notes
105C	uns16	W	ON-OFF command	1=ON 0=OFF
105D	uns16	W	Mode command	0=Summer 1=Winter 2=Only Ventilation 3=Auto
105E	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
106D	uns16	RW	Not used	
106E	uns16	RW	IN2 used for decreasing setpoint	1 Yes 0 No
106F	uns16	RW	decreasing setpoint from IN2 value	3°C - 6°C
1070	uns16	RW	Enabling of ambient probe value via MB	1 Yes 0 No
1071	uns16	RW	Ambient probe value	°C x10
1072	uns16	R	T-MB presence	1 Present 0 Absent
1073	uns16	R	IR presence	1 Present 0 Absent
1074	uns16	R	Mode ±3	0: OFF 1:ON
1075	uns16	R	NTC T-MB	0: ON 1:OFF
1076	uns16	RW	Set variation value (±3 mode)	°C*10; -(reg1043) ÷ reg1043
1077	uns16	W	Parameters Reset	The reset takes place by writing 0x005A
1078	uns16	RW	Time set	MSB: Hour, LSB: Minutes
1079	uns16	RW	Week day set	1=Mon...7=Sun
107A	uns16	RW	Force flap position	0: Flap standard position (or swing stop) 1: Force summer position 2: Force winter position 3: Force all open position 4: Force flap swing
107B	uns16	RW	Fan Voltage Set	10 (1.0V) --- 100 (10.0V)
107C	uns16	RW	Night mode	1: Night mode On 0: Night mode Off

Bit Commands

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