

EP4 SERIAL COMMUNICATION

Communication Protocol: *Modbus RTU*

Baud Rate: 1.200 to 57.600 (Auto Baud Rate)

Data bits: 8

Stop bits: 1

Parity: None

MODBUS Address	Reading Range	Bits Index	State	Description/Point Name	Write/Reading	Scale
1	0 – 2000	-	-	Sensor Temperature Alarm 1;	W / R	1:10
2	0 – 2000	-	-	Sensor Temperature Alarm 2;	W / R	1:10
3	0 – 2000	-	-	Sensor Temperature Alarm 3;	W / R	1:10
4	0 – 2000	-	-	Sensor Temperature Alarm 4 (Environment);	W / R	1:10
9	0 – 100	-	-	Alarm Hysteresis Value.	W / R	1:10
10	0 – 2000	-	-	Sensor Temperature TRIP 1;	W / R	1:10
11	0 – 2000	-	-	Sensor Temperature TRIP 2;	W / R	1:10
12	0 – 2000	-	-	Sensor Temperature TRIP 3;	W / R	1:10
13	0 – 2000	-	-	Sensor Temperature TRIP 4 (Environment);	W / R	1:10
18	0 – 20	-	-	TRIP Time Delay in minutes.	W / R	1:1
28	-	-		Register – Comamands:	-	
		0	1	Maximum Temperature Reset;	W / R	-
		1	1	CPU Reset;	W / R	-
29	0 – 2000	-	-	Temperature measured by sensor 1;	R	1:10
30	0 – 2000	-	-	Temperature measured by sensor 2;	R	1:10
31	0-2000	-	-	Temperature measured by sensor 3;	R	1:10
32	0-2000	-	-	Temperature measured by sensor 4 (Environment);	R	1:10
37	0-2000	-	-	Maximum Temperature reached by Sensor 1;	R	1:10
38	0-2000	-	-	Maximum Temperature reached by Sensor 2;	R	1:10
39	0-2000	-	-	Maximum Temperature reached by Sensor 3;	R	1:10

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Endereço MODBUS	Faixa de Reading	Bits Index	State	Description Point Name	Writing Reading	Scale
42	-	-		Register – Status dos Sensores:	-	
		0	0	Sensor 1 Disabled;	W / R	-
			1	Sensor 1 Enabled;	W / R	-
		1	0	Sensor 2 Disabled;	W / R	-
			1	Sensor 2 Enabled;	W / R	-
		2	0	Sensor 3 Disabled;	W / R	-
			1	Sensor 3 Enabled;	W / R	-
		3	0	Sensor 4 Disabled (Environment);	W / R	-
			1	Sensor 4 Enabled (Environment);	W / R	-
43	-	-		Register – Alarms Return Logic:	-	
		0	0	Logic of the Relay 1 Normal (Alarm);	R	-
			1	Logic of the Relay 1 Inversa (Alarm);	R	-
		1	0	Logic of the Relay 2 Normal (TRIP);	R	-
			1	Logic of the Relay 2 Inversa (TRIP);	R	-
		2	0	Logic of the Relay 3 Normal (Fail);	R	-
			1	Logic of the Relay 3 Inversa (Fail);	R	-
		3	0	Logic of the Relay 4 Normal (Ventilation);	R	-
			1	Logic of the Relay 4 Normal (Ventilation);	R	-
45	-	-		Register – Alarms Status:	-	
		0	1	High Temperature Alarm on Sensor 1;	R	-
		1	1	High Temperature Alarm on Sensor 2;	R	-
		2	1	High Temperature Alarm on Sensor 3;	R	-
		8	1	TRIP Counting activated;	R	-

46	-	-	Register – Status dos TRIPs:		-	
		0	1	TRIP Counting by high temperature on Sensor 1	R	-
		1	1	TRIP Counting by high temperature on Sensor 2	R	-
		2	1	TRIP Counting by high temperature on Sensor 3	R	-
		3	1	TRIP Counting by high temperature on Sensor 4 (Environment);	R	-
47	-	-	Register – Status de TRIP:		-	
		0	1	TRIP by high temperature on Sensor 1	R	-
		1	1	TRIP by high temperature on Sensor 2	R	-
		2	1	TRIP by high temperature on Sensor 3	R	-
		3	1	TRIP by high temperature on Sensor 4 (Environment);	R	-
		8	1	TRIP by high temperature activated;	R	-

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Endereço MODBUS	Faixa de Reading	Bits Index	State	Description Point Name	Writing Reading	Scale
48	-	-	Register – Situação do Refrigerador:		R	-
		0	1	Cooling activated by Sensor 1;	R	-
		1	1	Cooling activated by Sensor 2;	R	-
		2	1	Cooling activated by Sensor 3;	R	-
		3	1	Cooling activated by Sensor 4 (Environment);	R	-
		4	1	Cooling System;	R	-
	-	5	1	Cooling system activated by the Ventilation Exercise;	R	-
		8	1	Ventilation activated	R	-
49	-	-	Register – Status de Fail:		R	-
		0	1	Reading Failure on Sensor 1;	R	-
		1	1	Reading Failure on Sensor 2;	R	-
		2	1	Reading Failure on Sensor 3;	R	-

		3	1	Reading Failure on Sensor 4 (Environment);	R	-
		8	1	Sensor Failure activated;	R	-
50	1-254	-	-	Serial Network Address	R	-
51	0 - 1	-	0	Cooling Exercise OFF;	R	-
		-	1	Cooling Exercise ON;	R	-
54	0 - 2	-		Register – Analog Output Type;	R	-
		-	0	0 to 10mA Analog Output Range;	R	-
			1	0 to 20mA Analog Output Range;	R	-
			2	4 to 20mA Analog Output Range;	R	-
55	0 - 5	-		Register – Analog Output reflection:	W / R	-
		-	0	Analog Output Disable;	W / R	-
			1	Analog Output fixed on Sensor 1;	W / R	-
			2	Analog Output fixed on Sensor 2;	W / R	-
			3	Analog Output fixed on Sensor 3;	W / R	-
			4	Analog Output fixed on Sensor 4;	W / R	-
56	0 – 2	-		Reflects the highest temperature;	W / R	-
		-		Register – Display Presentation mode:	W / R	-
		-	0	Display fixed on the highest temperature;	W / R	-
		-	1	Defines the display on SCAN mode;	W / R	-
60	1-31	-	2	Defines the display on MANUAL mode;	W / R	-
		-	-	Calibration Day;	R	-
61	1-12	-	-	Calibration Month;	R	-
62	2017-2099	-	-	Calibration Year;	R	-
63	0-65535	-	-	Equipment Serial Number – LSB;	R	-