

EP3 SERIAL COMMUNICATION

Communication Protocol: MODBUS RTU

Transmission Rate: 1,200 to 57,600 (Auto Baud Rate)

Data Bits: 8

Parity: None

Stop Bits: 1

Address MODBUS RTU	Reading Range	Bits Index	State	Point Name	Write Reading	Scale
1	0 – 2000	-	-	Sensor 1 alarm temperature;	W / R	1:10
2	0 – 2000	-	-	Sensor 2 alarm temperature;	W / R	1:10
3	0 – 2000	-	-	Sensor 3 alarm temperature;	W / R	1:10
9	0 – 100	-	-	Alarm Hysteresis Value.	W / R	1:10
10	0 – 2000	-	-	Sensor 1 shutdown temperature;	W / R	1:10
11	0 – 2000	-	-	Sensor 2 shutdown temperature;	W / R	1:10
12	0 – 2000	-	-	Sensor 3 shutdown temperature;	W / R	1:10
18	0 – 20	-	-	Shutdown delay time in minutes.	W / R	1:1
28	-	-	-	Register - Commands:	-	-
		2	1	Maximum Temperature Reset;	W / R	-
		3	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
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

CONTINUED EP 3 SERIAL COMMUNICATION TABLE

Address MODBUS RTU	Reading Range	Bits Index	State	Descrição Point Name	Write Reading	Scale
42	-	-		Register - Sensor Status:	-	
		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	-
45	-	-		Register - Alarm 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	High temperature alarm relay activated;	R	-
46	-	-		Register - Shutdown Count Status:	-	
		0	1	Sensor 1 High Temperature Shutdown Count;	R	-
		1	1	Sensor 2 High Temperature Shutdown Count;	R	-
		2	1	Sensor 3 High Temperature Shutdown Count;	R	-
		8	1	Time count for Shutdown triggered;	R	
47	-	-		Register - Termination Status:	-	
		0	1	High Temperature Shutdown Sensor 1	R	-
		1	1	High Temperature Shutdown Sensor 2	R	-
		2	1	High Temperature Shutdown Sensor 3	R	-
		8	1	High Temperature Shutdown triggered;	R	-

CONTINUED EP 3 SERIAL COMMUNICATION TABLE

Address MODBUS RTU	Reading Range	Bits Index	State	Descrição Point Name	Write Reading	Scale
49	-	-		Register - Failure Status:	R	-
		0	1	Sensor 1 Reading Failure;	R	-
		1	1	Sensor 2 Reading Failure;	R	-
		2	1	Sensor 3 Reading Failure;	R	-
		8	1	Sensor Failure triggered;	R	-
50	1-254	-	-	Serial Network Address	R	-
56	0 – 2	-		Register - Display Presentation Mode:	-	
		-	0	Display fixed at the highest temperature;	W / R	-
		-	1	Set the display to SCAN mode;	W / R	-
		-	2	Set the display to Manual mode;	W / R	-
57	0 - 7	-		Register - Relay activation logic:	W / R	-
		0	0	Normal relay 1 logic;	W / R	-
			1	Inverse relay 1 logic;	W / R	-
		1	0	Normal relay 2 logic;	W / R	-
			1	Relay 2 logic inverse;	W / R	-
		2	0	Normal relay 3 logic;	W / R	-
			1	Inverse relay 3 logic;	W / R	-
60	1-31	-	-	Calibration Day;	R	-
61	1-12	-	-	Calibration Month;	R	-
62	2017-2099	-	-	Calibration Year;	R	-
63	0-65535	-	-	Equipment Serial Number – LSB;	R	-

Registers Map - MODBUS RTU
Thermal Protection Relay - EP3
ANSI – 23 / 26/ 38 / 45 / 49 / 74 / 77 / 94

64	0-255	-	-	Equipment Serial Number – MSB;	R	-
----	-------	---	---	--------------------------------	---	---