

## EP3 SERIAL COMMUNICATION

**Communication Protocol:** *MODBUS RTU*

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

**Data Bites:** 8

**Parity:** None

**Stop bits:** 1

**Variable Type:** Holding Register (40,000)

Address MODBUS	Reading range	Bits Index	State	Description Point Name	Writing / Reading	Scale
1	0 – 2000	-	-	Sensor alarm temperature 1;	E / L	1:10
2	0 – 2000	-	-	Sensor alarm temperature 2;	E / L	1:10
3	0 – 2000	-	-	Sensor alarm temperature 3;	E / L	1:10
9	0 – 100	-	-	Alarm Hysteresis Value.	E / L	1:10
10	0 – 2000	-	-	Sensor shutdown temperature 1;	E / L	1:10
11	0 – 2000	-	-	Sensor shutdown temperature 2;	E / L	1:10
12	0 – 2000	-	-	Sensor shutdown temperature 3;	E / L	1:10
18	0 – 20	-	-	Delay time for shutdown in minutes.	E / L	1:1
28	-	-	-	Registrar – Commands:	-	-
		0	1	Forced ventilation – Enabled;	E / L	-
		1	1	Forced ventilation – Disabled;	E / L	-
		2	1	Reset of maximum temperatures;	E / L	-
		3	1	Reset da CPU;	E / L	-
29	0 – 2000	-	-	Temperature measured by sensor 1;	L	1:10
30	0 – 2000	-	-	Temperature measured by sensor 2;	L	1:10
31	0-2000	-	-	Temperature measured by sensor 3;	L	1:10
37	0-2000	-	-	Maximum Temperature reached by Sensor 1;	L	1:10
38	0-2000	-	-	Maximum Temperature reached by Sensor 2;	L	1:10
39	0-2000	-	-	Maximum Temperature reached by Sensor 3;	L	1:10

### CONTINUATION OF SERIAL COMMUNICATION TABLE EP3

Address MODBUS	Reading Range	Bits Index	State	Description Point Name	Written Reading	Scale
42	-	-		Recorder – Status of Sensors:	-	
		0	0	Sensor 1 disabled;	E / L	-
			1	Sensor 1 enabled;	E / L	-
		1	0	Sensor 2 disabled;	E / L	-
			1	Sensor 2 enabled;	E / L	-
		2	0	Sensor 3 disabled;	E / L	-
			1	Sensor 3 enabled;	E / L	-
45	-	-		Recorder – Alarm Status:	-	
		0	1	High temperature alarm on Sensor 1;	L	-
		1	1	High temperature alarm on Sensor 2;	L	-
		2	1	High temperature alarm on Sensor 3;	L	-
		8	1	High temperature alarm relay triggered;	L	-
46	-	-		Registrar – Count Status for Shutdown:	-	
		0	1	Count for High Temperature Shutdown of Sensor 1;	L	-
		1	1	Count for High Temperature Shutdown of Sensor 2;	L	-
		2	1	Count for High Temperature Shutdown of Sensor 3;	L	-
		8	1	Count of time for Shutdown triggered;	L	
47	-	-		Registrar – Status of Shutdowns:	-	
		0	1	High Temperature Shutdown Sensor 1	L	-
		1	1	High Temperature Shutdown Sensor 2	L	-
		2	1	High Temperature Shutdown Sensor 3	L	-
		8	1	High Temperature Shutdown triggered;	L	-

### CONTINUATION OF SERIAL COMMUNICATION TABLE EP3

Address MODBUS	Reading Range	Bits Index	State	Description Point Name	Written Reading	Scale
49	-	-		Registrar – Failure Status:	L	-
		0	1	Reading Failure on Sensor 1;	L	-
		1	1	Sensor 2 Reading Failure;	L	-
		2	1	Sensor 3 Reading Failure;	L	-
		8	1	Sensor Failure triggered;	L	-
50	1-254	-	-	Serial Network Address	L	-
56	0 – 2	-		Registrar - Display Presentation Mode:	-	
		-	0	Fixed display at the highest temperature;	E / L	-
		-	1	Sets the display to SCAN mode;	E / L	-
		-	2	Sets the display to Manual mode;	E / L	-
57	0 - 7	-		Recorder – Logic of activation of the relays:	L / E	E / L
		0	0	Normal relay logic 1;	E / L	-
			1	Logic of the inverse relay 1;	E / L	-
		1	0	Normal relay logic 2;	E / L	-
			1	Inverse relay logic 2;	E / L	-
		2	0	Normal relay logic 3;	E / L	-
			1	Inverse relay logic 3;	E / L	-
60	1-31	-	-	Calibration Day;	L	-
61	1-12	-	-	Calibration Month;	L	-
62	2017-2099	-	-	Year of Calibration;	L	-
63	0-65535	-	-	Equipment Serial Number – LSB;	L	-
64	0-255	-	-	Equipment Serial Number – MSB;	L	-