

MASTERTEMP SERIAL COMMUNICATION

Communication Protocol: *MODBUS RTU*

Baud Rate: 2.400 to 57.600 bps (Auto Baud Rate)

Data Bits: 8

Parity: None / Even / Odd

Stop Bits: 1

Variable Type: Holding Register (40.000)

MODBUS Address	Reading Range	Bits Index	State	Description Point Name	Writing Reading	Scale
01	-50.0 – 250.0	-	-	Oil Sensor Temperature Alarm;	W / R	-1000:10
02	-50.0 – 250.0	-	-	Oil Temperature Alarm of the Sensor 1;	W / R	-1000:10
03	-50.0 – 250.0	-	-	Oil Temperature Alarm of the Sensor 2;	W / R	-1000:10
04	50.0 – 250.0			Oil Temperature Alarm of the Sensor 3;	W / R	-1000:10
05	0 – 1	-		Register – TRIP by loading:	-	
		0	0	TRIP by loading OFF;	W / R	-
			1	TRIP by loading ON;		
06	-50.0 – 250.0	-	-	TRIP Temperature of the Oil Sensor;	W / R	-1000:10
07	-50.0 – 250.0	-	-	TRIP Temperature from the Sensor of the winding 1;	W / R	-1000:10
08	-50.0 – 250.0	-	-	TRIP Temperature from the Sensor of the winding 2;	W / R	-1000:10
09	-50.0 – 250.0	-	-	TRIP Temperature from the Sensor of the winding 3;	W / R	-1000:10
10	0 – 3	-		Register – Cooling System activation type.	W / R	-
		0	0	Cooling System activation by loading disabled;		
			1	Cooling System activation by loading Enabled;		
11	-50.0 – 250.0	-	-	Activation Temperature of the 1 st Cooling Group of the Oil Sensor;	W / R	-1000:10
12	-50.0 – 250.0	-	-	Activation Temperature of the 1 st Cooling Group of the winding 1 Sensor;	W / R	-1000:10

MASTERTEMP SERIAL COMMUNICATION

Address MODBUS	Reading Range	Bits Index	State	Description Point Name	Writing Reading	Scale
13	-50.0 – 250.0	-	-	Activation Temperature of the 1 st Cooling Group of the winding 2 Sensor;	W / R	-1000:10
14	-50.0 – 250.0	-	-	Activation Temperature of the 1 st Cooling Group of the winding 3 Sensor;	W / R	-1000:10
16	-50.0 – 250.0	-	-	Activation Temperature of the 2 nd Cooling Group of the Oil Sensor;	W / R	-1000:10
17	-50.0 – 250.0	-	-	Activation Temperature of the 2 nd Cooling Group of the winding 1 Sensor;	W / R	-1000:10
18	-50.0 – 250.0	-	-	Activation Temperature of the 2 nd Cooling Group of the winding 2 Sensor;	W / R	-1000:10
19	-50.0 – 250.0	-	-	Activation Temperature of the 2 nd Cooling Group of the winding 3 Sensor;	W / R	-1000:10
21	-50.0 – 250.0	-	-	Activation Temperature of the 3 rd Cooling Group of the Oil Sensor;	W / R	-1000:10
22	-50.0 – 250.0	-	-	Activation Temperature of the 3 rd Cooling Group of the winding 1 Sensor;	W / R	-1000:10
23	-50.0 – 250.0	-	-	Activation Temperature of the 3 rd Cooling Group of the winding 2 Sensor;	W / R	-1000:10
24	-50.0 – 250.0	-	-	Activation Temperature of the 3 rd Cooling Group of the winding 3 Sensor;	W / R	-1000:10
25	0-100	-	-	Alarm Shutdown Hysteresis;	W / R	-1000:10
26	0-100	-	-	Cooling System Shutdown Hysteresis;	W / R	-1000:10
27	0-20	-	-	TRIP time delay (minutes);	W / R	1:1
28	0-1000	-	-	Winding 1 Temperature Gradient;	W / R	1:10
29	0-1000	-	-	Winding 2 Temperature Gradient;	W / R	1:10
30	0-1000	-	-	Winding 3 Temperature Gradient;	W / R	1:10
31	0-300	-	-	Thermal Inertia time constant of the winding 1;	W / R	1:1
32	0-300	-	-	Thermal Inertia time constant of the winding 2;	W / R	1:1
33	0-300	-	-	Thermal Inertia time constant of the winding 3;	W / R	1:1
34	0-200	-	-	HS+ Hotspot factor;	W / R	1:10
35	10-15	-	-	HS* Hotspot factor;	W / R	1:10

MASTERTEMP SERIAL COMMUNICATION

Address MODBUS	Reading Range	Bits Index	State	Description Point Name	Writing Reading	Scale
36	10-20	-	-	2M – Winding Expoent;	W / R	1:10
37	1-9999	-	-	Rated Current of the Winding;	W / R	1000:10
38	1-9999	-	-	Rated Current of the Winding 2;	W / R	1000:10
39	1-9999	-	-	Rated Current of the Winding 3;	W / R	1000:10
40	1-9999	-	-	Electrical Current Transformation Ratio of the CT1;	W / R	1:1
41	1-9999	-	-	Electrical Current Transformation Ratio of the CT2;	W / R	1:1
42	1-9999	-	-	Electrical Current Transformation Ratio of the CT3;	W / R	1:1
43	0 – 3	-	-	Register – Cooling system Activation Type:	-	-
		-	0	Cooling Group Automatic Inversion Disabled;	W / R	-
			1	Cooling Group Automatic Inversion 1 st and 2 nd Groups;	W / R	-
			2	Cooling Group Automatic Inversion 1 st , 2 nd and 3 rd Groups;	W / R	-
			3	Simultaneous activation of all the cooling groups;	W / R	-
44	0 – 3	-	-	Register – Analog Output Type:	-	-
		-	0	When 0 it defines the analog output range as 0 to 1 mA;	W / R	-
			1	When 0 it defines the analog output range as 0 to 5 mA;	W / R	-
			2	When 0 it defines the analog output range as 0 to 10 mA;	W / R	-
			3	When 0 it defines the analog output range as 0 to 20 mA;	W / R	-
			4	When 0 it defines the analog output range as 4 to 20 mA;	W / R	-

MASTERTEMP SERIAL COMMUNICATION

Address MODBUS	Reading Range	Bits Index	State	Description Point Name	Writing Reading	Scale
45	-	-		Register – Temperature Reset and CPU;	-	
		0	1	Temperature Reset on the Sensor 1;	W	-
		1	1	Temperature Reset on the Sensor 2;	W	-
		2	1	Temperature Reset on the Winding 1;	W	-
		3	1	Temperature Reset on the Winding 2;	W	-
		4	1	Temperature Reset on the Winding 3;	W	-
		5	1	CPU Reset;	W	-
47	1 – 254	-		Serial Network Address;	R	1:1
48	-	-		Register – Forced Ventilation:	-	
		0	0	Forced Ventilation as AUT GROUP 1;	W / R	-
			1	Forced Ventilation as ON GROUP 1;	W / R	-
		1	0	Forced Ventilation as AUT GROUP 2;	W / R	-
			1	Forced Ventilation as ON GROUP 2;	W / R	-
		2	0	Forced Ventilation as AUT GROUP 3;	W / R	-
			1	Forced Ventilation as ON GROUP 3;	W / R	-
50	-	-		Register – Winding Situation	-	-
		0	0	When 0 the reading type set as BKP;	-	-
			1	When 1 the reading type set as INDP;	-	-
51	0-100	-	-	Temperature Differential – MDTE;	W / R	1:10

MASTERTEMP SERIAL COMMUNICATION

Address MODBUS	Reading Range	Bits Index	State	Description Point Name	Writing Reading	Scale
52	-	-		Register – CPU and Temperature Reset:	-	
		2	1	Winding 1 Enabled;	W / R	-
			0	Winding 1 Disabled;	W / R	-
		3	1	Winding 2 Enabled;	W / R	-
			0	Winding 2 Disabled;	W / R	-
		4	1	Winding 3 Enabled;	W / R	-
			0	Winding 3 Disabled;	W / R	-
53	-50.0 – 250.0	-	-	Current Temperature on the Sensor 1;	R	-1000:10
54	-50.0 – 250.0	-	-	Current Temperature on the Sensor 2;	R	-1000:10
55	-50.0 – 250.0	-	-	Current Temperature on the Winding Sensor 1;	R	-1000:10
56	-50.0 – 250.0	-	-	Current Temperature on the Winding Sensor 2;	R	-1000:10
57	-50.0 – 250.0	-	-	Current Temperature on the Winding Sensor 3;	R	-1000:10
58	-50.0 – 250.0	-	-	Maximum temperature reached by the sensor1;	R	-1000:10
59	-50.0 – 250.0	-	-	Maximum temperature reached by the sensor2;	R	-1000:10
60	-50.0 – 250.0	-	-	Maximum temperature reached by the Winding Sensor 1;	R	-1000:10
61	-50.0 – 250.0	-	-	Maximum temperature reached by the Winding Sensor 2;	R	-1000:10
62	-50.0 – 250.0	-	-	Maximum temperature reached by the Winding Sensor 3;	R	-1000:10
63	-50.0 – 250.0	-	-	Temperature Final Gradient of the Winding 1;	R	1:10
64	-50.0 – 250.0	-	-	Temperature Final Gradient of the Winding 2;	R	1:10
65	-50.0 – 250.0	-	-	Temperature Final Gradient of the Winding 3;	R	1:10
66	0-9999		-	Loading Percentage of the Winding 1;	R	1:10
67	0-9999		-	Loading Percentage of the Winding 2;	R	1:10

MASTERTEMP SERIAL COMMUNICATION

Address MODBUS	Reading Range	Bits Index	State	Point Name Description	Writing Reading	Scale
68	0-9999	-	-	Loading Percentage of the Winding 3;	R	1:10
69	0-9999	-	-	Thermal Image CT1 Secondary Electrical Current;	R	1:100
70	0-9999	-	-	Thermal Image CT2 Secondary Electrical Current;	R	1:100
71	0-9999	-	-	Thermal Image CT3 Secondary Electrical Current;	R	1:100
72	0-9999	-	-	Thermal Image CT1 Primary Electrical Current;	R	1:100
73	0-9999	-	-	Thermal Image CT2 Primary Electrical Current;	R	1:100
74	0-9999	-	-	Thermal Image CT3 Primary Electrical Current;	R	1:100
75	-	-	-	Register – Auxiliary Relay Status;	-	-
		0	1	Enables the Auxiliary Relay 1;	W / R	-
		1	1	Enables the Auxiliary Relay 1 – Sensor 1;	W / R	-
		2	1	Enables the Auxiliary Relay 1 – Sensor 2;	W / R	-
		3	1	Enables the Auxiliary Relay 1 – Winding 1;	W / R	-
		4	1	Enables the Auxiliary Relay 1 – Winding 2;	W / R	-
		5	1	Enables the Auxiliary Relay 1 – Winding 3;	W / R	-
		6	1	Enables the Auxiliary Relay 1 – Differential Temperature;	W / R	-
		7	1	Enables the Auxiliary Relay 1 – Cooling maintenance;	W / R	-
		8	1	Enables the Auxiliary Relay 1 – Winding 1 Life Loss Alarm;	W / R	-
		9	1	Enables the Auxiliary Relay 1 – Winding 2 Life Loss Alarm;	W / R	-
		10	1	Enables the Auxiliary Relay 1 – Winding 3 Life Loss Alarm;	W / R	-
76	-50.0 – 250.0	-	-	Register – Time Delay of Auxiliary Relay Actuation;	W / R	-1000:10
77	0-100	-	-	Auxiliary Relay Hysteresis;	W / R	1:10

MASTERTEMP SERIAL COMMUNICATION

Address MODBUS	Reading Range	Bits Index	State	Description Point Name	Writing Reading	Scale
78	0 - 1	-		Register – Enabled Auxiliary Relay Time Delay:	W / R	-
		-	0	Time Delay Disabled;	W / R	-
			1	Time Delay Enabled;	W / R	-
79	-	-		Register – Alarms Return Logic:	W / R	-
		0	0	Oil Alarm automatic return;	W / R	-
			1	Oil Alarm manual return;	W / R	-
		1	0	TRIP automatic return.	W / R	-
			1	Oil Shutdown manual return;	W / R	-
		2	0	Alarm of the Winding 1 automatic return;	W / R	-
			1	Alarm of the Winding 1 manual return;	W / R	-
		3	0	Shutdown of the Winding 1 automatic return;	W / R	-
			1	Shutdown of the Winding 1 manual return;	W / R	-
		4	0	Alarm of the Winding 2 automatic return;	W / R	-
			1	Alarm of the Winding 2 manual return;	W / R	-
		5	0	Shutdown of the Winding 2 automatic return;	W / R	-
			1	Shutdown of the Winding 2 manual return;	W / R	-
		6	0	Alarm of the Winding 3 automatic return;	W / R	-
			1	Alarm of the Winding 3 manual return;	W / R	-
		7	0	Shutdown of the Winding 3 automatic return;	W / R	-
			1	Shutdown of the Winding 3 manual return;	W / R	-
		8	0	Fail Relay automatic return;	W / R	-
			1	Fail Relay manual return;	W / R	-

MASTERTEMP SERIAL COMMUNICATION

Address MODBUS	Reading Range	Bits Index	State	Description Point Name	Writing Reading	Scale
79	0 - 8	-		Register – Alarm Return Logic:	W / R	-
		0	0	Oil Alarm Automatic Return;	W / R	-
			1	Oil Alarm Manual Return;	W / R	-
		1	0	Oil Shutdown automatic Return;	W / R	-
			1	Oil Shutdown manual Return;	W / R	-
		2	0	Alarm of the Winding 1 automatic Return;	W / R	-
			1	Alarm of the Winding 1 manual Return;	W / R	-
		3	0	Shutdown of the Winding 1 automatic Return;	W / R	-
			1	Shutdown of the Winding 1 manual Return;	W / R	-
		4	0	Alarm of the Winding 2 automatic return;	W / R	-
			1	Alarm of the Winding 2 manual return;	W / R	-
		5	0	Shutdown of the Winding 2 automatic return;	W / R	-
			1	Shutdown of the Winding 2 manual return;	W / R	-
		6	0	Alarm of the Winding 3 automatic return;	W / R	-
			1	Alarm of the Winding 3 manual return;	W / R	-
		7	0	Shutdown of the Winding 3 automatic return;	W / R	-
			1	Shutdown of the Winding 3 manual return;	W / R	-
		8	0	Fail Relay automatic return;	W / R	-
			1	Fail Relay manual return;	W / R	-

MASTERTEMP SERIAL COMMUNICATION

Address MODBUS	Reading Range	Bits Index	State	Description Point Name	Writing Reading	Scale
80	0 - 15	-		Register – Analog Output 1 Reflecting Channel:	W / R	-
		-	0	Analog Output 1 OFF;	W / R	-
		-	1	It Reflects the Sensor 1 Temperature on the analog output 1;	W / R	-
		-	2	It Reflects the Sensor 2 Temperature on the analog output 1;	W / R	-
		-	3	It Reflects the Winding 1 Temperature on the analog output 1;	W / R	-
		-	4	It Reflects the Winding 2 Temperature on the analog output 1;	W / R	-
		-	5	It Reflects the Winding 3 Temperature on the analog output 1;	W / R	-
		-	6	It Reflects the primary current on Winding 1 on the analog output 1;	W / R	-
		-	7	It Reflects the primary current on Winding 2 on the analog output 1;	W / R	-
		-	8	It Reflects the primary current on Winding 3 on the analog output 1;	W / R	-
		-	9	It Reflects the secondary current on Winding on the analog output 1;	W / R	-
		-	10	It Reflects the secondary current on Winding 2 on the analog output 1;	W / R	-
		-	11	It Reflects the secondary current on Winding 3 on the analog output 1;	W / R	-
		-	12	It reflects Loading of the Winding 1 on the analog output 1;	W / R	-
		-	13	It reflects Loading of the Winding 2 on the analog output 1;	W / R	-
		-	14	It reflects Loading of the Winding 3 on the analog output 1;	W / R	-
		-	15	It Reflects the loading temperature on the analog output 1;	W / R	-

MASTERTEMP SERIAL COMMUNICATION

Address MODBUS	Reading Range	Bits Index	State	Description Point Name	Writing Reading	Scale
81	0 - 15	-		Register – Analog Output 2 Reflecting Channel:	W / R	-
		-	0	Analog Output 2 OFF;	W / R	-
		-	1	It Reflects the Sensor 1 Temperature on the analog output 2;	W / R	-
		-	2	It Reflects the Sensor 2 Temperature on the analog output 2;	W / R	-
		-	3	It Reflects the Winding 1 Temperature on the analog output 2;	W / R	-
		-	4	It Reflects the Winding 2 Temperature on the analog output 2;	W / R	-
		-	5	It Reflects the Winding 3 Temperature on the analog output 2;	W / R	-
		-	6	It Reflects the primary current on Winding 1 on the analog output 2;	W / R	-
		-	7	It Reflects the primary current on Winding 2 on the analog output 2;	W / R	-
		-	8	It Reflects the primary current on Winding 3 on the analog output 2;	W / R	-
		-	9	It Reflects the secondary current on Winding on the analog output 2;	W / R	-
		-	10	It Reflects the secondary current on Winding 2 on the analog output 2;	W / R	-
		-	11	It Reflects the secondary current on Winding 3 on the analog output 2;	W / R	-
		-	12	It reflects Loading of the Winding 1 on the analog output 2;	W / R	-
		-	13	It reflects Loading of the Winding 2 on the analog output 2;	W / R	-
		-	14	It reflects Loading of the Winding 3 on the analog output 2;	W / R	-
		-	15	It Reflects the loading temperature on the analog output 2;	W / R	-

MASTERTEMP SERIAL COMMUNICATION

Address MODBUS	Reading Range	Bits Index	State	Description Point Name	Writing Reading	Scale
82	0 - 15	-		Register – Analog Output 3 Reflecting Channel:	W / R	-
		-	0	Analog Output 3 OFF;	W / R	-
		-	1	It Reflects the Sensor 1 Temperature on the analog output 3;	W / R	-
		-	2	It Reflects the Sensor 2 Temperature on the analog output 3;	W / R	-
		-	3	It Reflects the Winding 1 Temperature on the analog output 3;	W / R	-
		-	4	It Reflects the Winding 2 Temperature on the analog output 3;	W / R	-
		-	5	It Reflects the Winding 3 Temperature on the analog output 3;	W / R	-
		-	6	It Reflects the primary current on Winding 1 on the analog output 3;	W / R	-
		-	7	It Reflects the primary current on Winding 2 on the analog output 3;	W / R	-
		-	8	It Reflects the primary current on Winding 3 on the analog output 3;	W / R	-
		-	9	It Reflects the secondary current on Winding on the analog output 3;	W / R	-
		-	10	It Reflects the secondary current on Winding 2 on the analog output 3;	W / R	-
		-	11	It Reflects the secondary current on Winding 3 on the analog output 3;	W / R	-
		-	12	It reflects Loading of the Winding 1 on the analog output 3;	W / R	-
		-	13	It reflects Loading of the Winding 2 on the analog output 3;	W / R	-
		-	14	It reflects Loading of the Winding 3 on the analog output 3;	W / R	-
		-	15	It Reflects the loading temperature on the analog output 3;	W / R	-

MASTERTEMP SERIAL COMMUNICATION

Address MODBUS	Reading Range	Bits Index	State	Description Point Name	Writing Reading	Scale
83	0 - 15	-		Register – Analog Output 4 Reflecting Channel:	W / R	-
		-	0	Analog Output 4 OFF;	W / R	-
		-	1	It Reflects the Sensor 1 Temperature on the analog output 4;	W / R	-
		-	2	It Reflects the Sensor 2 Temperature on the analog output 4;	W / R	-
		-	3	It Reflects the Winding 1 Temperature on the analog output 4;	W / R	-
		-	4	It Reflects the Winding 2 Temperature on the analog output 4;	W / R	-
		-	5	It Reflects the Winding 3 Temperature on the analog output 4;	W / R	-
		-	6	It Reflects the primary current on Winding 1 on the analog output 4;	W / R	-
		-	7	It Reflects the primary current on Winding 2 on the analog output 4;	W / R	-
		-	8	It Reflects the primary current on Winding 3 on the analog output 4;	W / R	-
		-	9	It Reflects the secondary current on Winding on the analog output 4;	W / R	-
		-	10	It Reflects the secondary current on Winding 2 on the analog output 4;	W / R	-
		-	11	It Reflects the secondary current on Winding 3 on the analog output 4;	W / R	-
		-	12	It reflects Loading of the Winding 1 on the analog output 4;	W / R	-
		-	13	It reflects Loading of the Winding 2 on the analog output 4;	W / R	-
		-	14	It reflects Loading of the Winding 3 on the analog output 4;	W / R	-
		-	15	It Reflects the loading temperature on the analog output 4;	W / R	-

MASTERTEMP SERIAL COMMUNICATION

Address MODBUS	Reading Range	Bits Index	State	Description Point Name	Writing Reading	Scale
84	0 - 15	-		Register – Analog Output 5 Reflecting Channel:	W / R	-
		-	0	Analog Output 5 OFF;	W / R	-
		-	1	It Reflects the Sensor 1 Temperature on the analog output 5;	W / R	-
		-	2	It Reflects the Sensor 2 Temperature on the analog output 5;	W / R	-
		-	3	It Reflects the Winding 1 Temperature on the analog output 5;	W / R	-
		-	4	It Reflects the Winding 2 Temperature on the analog output 5;	W / R	-
		-	5	It Reflects the Winding 3 Temperature on the analog output 5;	W / R	-
		-	6	It Reflects the primary current on Winding 1 on the analog output 5;	W / R	-
		-	7	It Reflects the primary current on Winding 2 on the analog output 5;	W / R	-
		-	8	It Reflects the primary current on Winding 3 on the analog output 5;	W / R	-
		-	9	It Reflects the secondary current on Winding on the analog output 5;	W / R	-
		-	10	It Reflects the secondary current on Winding 2 on the analog output 5;	W / R	-
		-	11	It Reflects the secondary current on Winding 3 on the analog output 5;	W / R	-
		-	12	It reflects Loading of the Winding 1 on the analog output 5;	W / R	-
		-	13	It reflects Loading of the Winding 2 on the analog output 5;	W / R	-
		-	14	It reflects Loading of the Winding 3 on the analog output 5;	W / R	-
		-	15	It Reflects the loading temperature on the analog output 5;	W / R	-

MASTERTEMP SERIAL COMMUNICATION

Address MODBUS	Reading Range	Bits Index	State	Description Point Name	Writing Reading	Scale
85	0 - 1	-		Register – RS485 Register Map Option:	W / R	-
		-	0	Electron Register Map;	W / R	-
			1	Register Map TT;	W / R	-
86	100 – 30000	-	-	Aging Alarm of the Winding 1;	W / R	1:100
87	100 – 30000	-	-	Aging Alarm of the Winding 2;	W / R	1:100
88	100 – 30000	-	-	Aging Alarm of the Winding 3;	W / R	1:100
89	0 – 24	-	-	Time for the next Cooling System Exercise;	R	-
90	0 – 1	-		Register – Communication Protocol:	-	
		-	0	DNP3;	R	-
			1	Modbus RTU;	R	-
91	0 – 9999	-	-	Password Reminder;	R	-
92	0 - 2	-		Register – Communication Parity:	-	
		-	0	No Parity;	W / R	-
		-	1	Odd Parity;	W / R	-
		-	2	Even Parity;	W / R	-
93	0 – 1	-		Register – Protection Against Recording:	-	
		-	0	Disables Protection against Recording by RS485;	W / R	-
		-	1	Enables Protection against Recording by RS485;	W / R	-
94	0-59	-	-	Seconds;	W / R	1:1
95	0-59	-	-	Minute;	W / R	1:1
96	0-23	-	-	Hour;	W / R	1:1
97	1-6	-	-	Day of the Week;	W / R	1:1
98	1-31	-	-	Day of the Month;	W / R	1:1

MASTERTEMP SERIAL COMMUNICATION

Address MODBUS	Reading Range	Bits Index	State	Description Point Name	Writing Reading	Scale
99	1 - 12	-	-	Month of the Year;	W / R	1:1
100	2015 - 2099	-	-	Year;	W / R	1:1
101	-	-		Register – LOG Option memorization:	-	
		0	0	Data Log Disabled;	W / R	-
		0	1	Log by variation Enabled;	W / R	-
		1	1	Log by time Enabled;	W / R	-
102	5 – 180	-		Data log Time;	W / R	1:1
103	-	-		Register – Cooling System Exercise:	-	
		0	0	Cooling System Exercise Disabled;	W / R	-
			1	Cooling System Exercise Enabled;	W / R	
104	-	-		Register – Day of the week for Cooling Exercise;	-	
		0	0	Weekly Cooling Exercise;	W / R	-
			1	Daily Cooling Exercise;		
105	0-6	-		Register – Day of the week for Cooling Exercise;	-	
		-	0	Sunday Exercise;	W / R	-
			1	Monday Exercise;	W / R	-
			2	Tuesday Exercise;	W / R	-
			3	Wednesday Exercise;	W / R	-
			4	Thursday Exercise;	W / R	-
			5	Friday Exercise;	W / R	-
			6	Saturday Exercise;	W / R	-
106	0-23	-		Initial Hour of the Cooling Exercise;	W / R	1:1
107	0-59	-		Initial Minute of the Cooling Exercise;	W / R	1:1

MASTERTEMP SERIAL COMMUNICATION

Address MODBUS	Reading Range	Bits Index	State	Description Point Name	Writing Reading	Scale
108	0-23	-		Loading Percentage of the Winding 3;	W / R	1:1
109	0-59	-		Initial Hour of the Cooling Exercise;	W / R	1:1
110	0-59	-		Initial Minute of the Cooling Exercise;	W / R	1:1
111	0-23	-		Final Hour of the Cooling Exercise;	W / R	1:1
112	0-9999	-		Hour meter Hour of the First Cooling Group;	W / R	1:1
113	0-59	-		Hour meter Day of the First Cooling Group;	W / R	1:1
114	0-23	-		Hour meter Hour of the Second Cooling Group;	W / R	1:1
115	0-999	-		Hour meter Day of the Second Cooling Group;	W / R	1:1
116	0-59	-		Hour meter Minute of the Third Cooling Group;	W / R	1:1
117	0-23	-		Hour meter Hour of the Third Cooling Group;	W / R	1:1
118	0-999	-		Hour meter Day of the Third Cooling Group;	W / R	1:1
119	0 - 2	-		Register – Insulation Thermal Class:	-	
		-	0	Kraft Paper – Class 55;	W / R	-
		-	1	Stabilized Term Paper – Class 65;	W / R	-
		-	2	Nomex Paper – Class 95;	W / R	-
120	0 – 1000	-		Winding 1 Life Percentage;	W / R	1:10
121	0 – 1000	-		Winding 2 Life Percentage;	W / R	1:10
122	0 – 1000	-		Winding 3 Life Percentage;	W / R	1:10
123	0 – 2000	-		Percentage of activation of the 1 st Ventilation Group 1 from the Sensor of the wnd. 1;	W / R	1:10
124	0 – 2000	-		Percentage of activation of the 1 st Ventilation Group 1 from the Sensor of the wnd. 2;	W / R	1:10
125	0 – 2000	-		Percentage of activation of the 1 st Ventilation Group 1 from the Sensor of the wnd. 3;	W / R	1:10
126	0 – 2000	-		Percentage of activation of the 2 nd Ventilation Group 1 from the Sensor of the wnd. 1;	W / R	1:10
127	0 – 2000	-		Percentage of activation of the 2 nd Ventilation Group 1 from the Sensor of the wnd. 2;	W / R	1:10

MASTERTEMP SERIAL COMMUNICATION

Address MODBUS	Reading Range	Bits Index	State	Description Point Name	Writing Reading	Scale
128	0-2000	-		Percentage of activation of the 2 nd Ventilation Group 1 from the Sensor of the wnd. 3;	W / R	1:10
129	0-2000	-		Percentage of activation of the 3 rd Ventilation Group 1 from the Sensor of the wnd. 1;	W / R	1:10
130	0-2000	-		Percentage of activation of the 3 rd Ventilation Group 1 from the Sensor of the wnd. 2;	W / R	1:10
131	0-2000	-		Percentage of activation of the 3 rd Ventilation Group 1 from the Sensor of the wnd. 3;	W / R	1:10
132	0-2000	-		Percentual para TRIP by loading do Winding 1;	W / R	1:10
133	0-2000	-		Percentual para TRIP by loading do Winding 2;	W / R	1:10
134	0-2000	-		Percentual para TRIP by loading do Winding 3;	W / R	1:10
135	0 - 16	-		Register – Cooling of the of the line 1 presentation:	-	
		-	0	Temperature of the Sensor 1;	W / R	1:10
		-	1	Temperature of the Sensor 2;	W / R	1:10
		-	2	Winding Temperature 1;	W / R	1:10
		-	3	Winding Temperature 2;	W / R	1:10
		-	4	Winding Temperature 3;	W / R	1:10
		-	5	Final Gradient of the Winding 1;	W / R	1:10
		-	6	Final Gradient of the Winding 2;	W / R	1:10
		-	7	Final Gradient of the Winding 3;	W / R	1:10
		-	8	Percentual Loading of the Winding 1;	W / R	1:10
		-	9	Percentual Loading of the Winding 2;	W / R	1:10
		-	10	Percentual Loading of the Winding 3;	W / R	1:10
		-	11	Secondary Electrical Current of the Winding 1;	W / R	1:10
		-	12	Primary Electrical Current of the Winding 1;	W / R	1:10
		-	13	Secondary Electrical Current of the Winding 2;	W / R	1:10
		-	14	Primary Electrical Current of the Winding 2;	W / R	1:10

MASTERTEMP SERIAL COMMUNICATION

Address MODBUS	Reading Range	Bits Index	State	Description Point Name	Writing Reading	Scale
135	0-16	-	15	Secondary Electrical Current of the Winding 3;	W / R	1:10
		-	16	Primary Electrical Current of the Winding 3;	W / R	1:10
136	0-16	-		Register – Presentation Variables on line 2:	-	
		-	0	Temperature of the Sensor 1;	W / R	1:10
		-	1	Temperature of the Sensor 2;	W / R	1:10
		-	2	Winding Temperature 1;	W / R	1:10
		-	3	Winding Temperature 2;	W / R	1:10
		-	4	Winding Temperature 3;	W / R	1:10
		-	5	Final Gradient of the Winding 1;	W / R	1:10
		-	6	Final Gradient of the Winding 2;	W / R	1:10
		-	7	Final Gradient of the Winding 3;	W / R	1:10
		-	8	Percentual Loading of the Winding 1;	W / R	1:10
		-	9	Percentual Loading of the Winding 2;	W / R	1:10
		-	10	Percentual Loading of the Winding 3;	W / R	1:10
		-	11	Secondary Electrical Current of the Winding 1;	W / R	1:10
		-	12	Primary Electrical Current of the Winding 1;	W / R	1:10
		-	13	Secondary Electrical Current of the Winding 2;	W / R	1:10
		-	14	Primary Electrical Current of the Winding 2;	W / R	1:10
		-	15	Secondary Electrical Current of the Winding 3;	W / R	1:10
		-	16	Primary Electrical Current of the Winding 3;	W / R	1:10

MASTERTEMP SERIAL COMMUNICATION

Address MODBUS	Reading Range	Bits Index	State	Description Point Name	Writing Reading	Scale
137	0-16	-		Register – Presentation Variables on line 3:	W / R	1:10
		-	0	Temperature of the Sensor 1;	W / R	1:10
		-	1	Temperature of the Sensor 2;	W / R	1:10
		-	2	Winding Temperature 1;	W / R	1:10
		-	3	Winding Temperature 2;	W / R	1:10
		-	4	Winding Temperature 3;	W / R	1:10
		-	5	Final Gradient of the Winding 1;	W / R	1:10
		-	6	Final Gradient of the Winding 2;	W / R	1:10
		-	7	Final Gradient of the Winding 3;	W / R	1:10
		-	8	Percentual Loading of the Winding 1;	W / R	1:10
		-	9	Percentual Loading of the Winding 2;	W / R	1:10
		-	10	Percentual Loading of the Winding 3;	W / R	1:10
		-	11	Secondary Electrical Current of the Winding 1;	W / R	1:10
		-	12	Primary Electrical Current of the Winding 1;	W / R	1:10
		-	13	Secondary Electrical Current of the Winding 2;	W / R	1:10
		-	14	Primary Electrical Current of the Winding 2;	W / R	1:10
		-	15	Secondary Electrical Current of the Winding 3;	W / R	1:10
		-	16	Primary Electrical Current of the Winding 3;	W / R	1:10

MASTERTEMP SERIAL COMMUNICATION

Address MODBUS	Reading Range	Bits Index	State	Description Point Name	Writing Reading	Scale
138	0-16	-		Register – Presentation Variables on line 4:	W / R	1:10
		-	0	Temperature of the Sensor 1;	W / R	1:10
		-	1	Temperature of the Sensor 2;	W / R	1:10
		-	2	Winding Temperature 1;	W / R	1:10
		-	3	Winding Temperature 2;	W / R	1:10
		-	4	Winding Temperature 3;	W / R	1:10
		-	5	Final Gradient of the Winding 1;	W / R	1:10
		-	6	Final Gradient of the Winding 2;	W / R	1:10
		-	7	Final Gradient of the Winding 3;	W / R	1:10
		-	8	Percentual Loading of the Winding 1;	W / R	1:10
		-	9	Percentual Loading of the Winding 2;	W / R	1:10
		-	10	Percentual Loading of the Winding 3;	W / R	1:10
		-	11	Secondary Electrical Current of the Winding 1;	W / R	1:10
		-	12	Primary Electrical Current of the Winding 1;	W / R	1:10
		-	13	Secondary Electrical Current of the Winding 2;	W / R	1:10
		-	14	Primary Electrical Current of the Winding 2;	W / R	1:10
		-	15	Secondary Electrical Current of the Winding 3;	W / R	1:10
		-	16	Primary Electrical Current of the Winding 3;	W / R	1:10

MASTERTEMP SERIAL COMMUNICATION

Address MODBUS	Reading Range	Bits Index	State	Description Point Name	Writing Reading	Scale
139	0-16	-		Register – Presentation Variables on line 5:	W / R	1:10
		-	0	Temperature of the Sensor 1;	W / R	1:10
		-	1	Temperature of the Sensor 2;	W / R	1:10
		-	2	Winding Temperature 1;	W / R	1:10
		-	3	Winding Temperature 2;	W / R	1:10
		-	4	Winding Temperature 3;	W / R	1:10
		-	5	Final Gradient of the Winding 1;	W / R	1:10
		-	6	Final Gradient of the Winding 2;	W / R	1:10
		-	7	Final Gradient of the Winding 3;	W / R	1:10
		-	8	Percentual Loading of the Winding 1;	W / R	1:10
		-	9	Percentual Loading of the Winding 2;	W / R	1:10
		-	10	Percentual Loading of the Winding 3;	W / R	1:10
		-	11	Secondary Electrical Current of the Winding 1;	W / R	1:10
		-	12	Primary Electrical Current of the Winding 1;	W / R	1:10
		-	13	Secondary Electrical Current of the Winding 2;	W / R	1:10
		-	14	Primary Electrical Current of the Winding 2;	W / R	1:10
		-	15	Secondary Electrical Current of the Winding 3;	W / R	1:10
		-	16	Primary Electrical Current of the Winding 3;	W / R	1:10

MASTERTEMP SERIAL COMMUNICATION

Address MODBUS	Reading Range	Bits Index	State	Description Point Name	Writing Reading	Scale
140	-1,00 a 1,00	-	-	Electrical Current Output Correction 1;	W / R	-1000:1000
141	-1,00 a 1,00	-	-	Electrical Current Output Correction 2;	W / R	-1000:10000
142	-1,00 a 1,00	-	-	Electrical Current Output Correction 3;	W / R	-1000:1000
143	-1,00 a 1,00	-	-	Electrical Current Output Correction 4;	W / R	-1000:1000
144	-1,00 a 1,00	-	-	Electrical Current Output Correction 5;	W / R	-1000:1000
145	-1,00 a 1,00	-	-	Temperature of the Sensor 1 Correction;	W / R	-1000:10
146	-1,00 a 1,00	-	-	Temperature of the Sensor 1 Correction;	W / R	-1000:10
147	-1,00 a 1,00	-	-	CT 1 Electrical Current Correction;	W / R	-1000:10
148	-1,00 a 1,00	-	-	CT 2 Electrical Current Correction;	W / R	-1000:10
149	-1,00 a 1,00	-	-	CT 3 Electrical Current Correction;	W / R	-1000:10
150	0 - 1	-	-	Register – Presentation mode:	-	
		-	0	White Display and Black Letters;	W / R	-
		-	1	Black Display and White Letters;	W / R	-
151	0 - 255	-	-	OLED Display Contrast;	W / R	1:1
152	0 - 1	-	-	Register – OLED Display presentation language;	-	
		-	0	Language – Portuguese;	W / R	-
		-	1	Language – English;	W / R	-

MASTERTEMP SERIAL COMMUNICATION

Address MODBUS	Reading Range	Bits Index	State	Description Point Name	Writing Reading	Scale
153	0 - 1	-		Register – OLED Display Line Display Mode:	-	
		-	0	Fixed display in the chosen quantity;	W / R	-
		-	1	The monitor scans the chosen magnitude set;	W / R	-
154	0 - 255	-		Register – 1° OLED Display Line 1 presentation set:	-	
		0	1	Enable Temperature of the Sensor 1;	W / R	-
		1	1	Enable Temperature of the Sensor 2;	W / R	-
		2	1	Not Used;	W / R	-
		3	1	Not Used;	W / R	-
		4	1	Enable Winding Temperature 1;	W / R	-
		5	1	Enable Winding Temperature 2;	W / R	-
		6	1	Enable Winding Temperature 3;	W / R	-
		7	1	Enable Gradient of the Winding 1;	W / R	-
155	0 - 255	-		Register – 2° OLED Display Line 1 presentation set:	-	
		0	1	Enable Gradient of the Winding 1;	W / R	-
		1	1	Enable Gradient of the Winding 2;	W / R	-
		2	1	Enable Loading of the Winding 1;	W / R	-
		3	1	Enable Loading of the Winding 2;	W / R	-
		4	1	Enable Loading of the Winding 3;	W / R	-
		5	1	Enable Secondary Electrical current of the Winding 1;	W / R	-
		6	1	Enable Secondary Electrical current of the Winding 2;	W / R	-
		7	1	Enable Secondary Electrical current of the Winding 3;	W / R	-

MASTERTEMP SERIAL COMMUNICATION

Address MODBUS	Reading Range	Bits Index	State	Description Point Name	Writing Reading	Scale
156	0 - 7	-		Register – OLED Display Line Display Mode:	-	
		0	1	Enable Primary Electrical Current of the do Winding 1;	W / R	-
		1	1	Enable Primary Electrical Current of the do Winding 2;	W / R	-
		2	1	Enable Primary Electrical Current of the do Winding 3;	W / R	-
157	0 - 4	-		Register – Sensor Function 1;	-	
		-	0	Sensor 1 OFF;	W / R	-
		-	1	Sensor 1 Reading the Environment Temperature;	W / R	-
		-	2	Sensor 1 Reading the Oil Top Temperature;	W / R	-
		-	3	Sensor 1 Reading the bottom Oil level Temperature;	W / R	-
		-	4	Sensor 1 Reading the TAP Changer Temperature;	W / R	-
158	0 - 4	-		Register – Sensor Function 1;	-	
		-	0	Sensor 2 OFF;	W / R	-
		-	1	Sensor 2 Reading the Environment Temperature;	W / R	-
		-	2	Sensor 2 Reading the Oil Top Temperature;	W / R	-
		-	3	Sensor 2 Reading the bottom Oil level Temperature;	W / R	-
		-	4	Sensor 2 Reading the TAP Changer Temperature;	W / R	-

MASTERTEMP SERIAL COMMUNICATION

Address MODBUS	Reading Range	Bits Index	State	Description Point Name	Writing Reading	Scale
159	-	-		Register – OLED Display Line Display Mode:	W / R	-
		0	0	Normal Logic – 1° Grupo de Cooling of the;	W / R	-
			1	Inverted Logic – 1° Grupo de Cooling of the;	W / R	-
		1	0	Normal Logic – 2° Grupo de Cooling of the;	W / R	-
			1	Inverted Logic – 2° Grupo de Cooling of the;	W / R	-
		2	0	Normal Logic – Oil Alarm;	W / R	-
			1	Inverted Logic – Oil Alarm;	W / R	-
		3	0	Normal Logic – Oil Shutdown;	W / R	-
			1	Inverted Logic – Oil Shutdown;	W / R	-
		4	0	Normal Logic – Alarm of the Winding 1;	W / R	-
			1	Inverted Logic – Alarm of the Winding 1;	W / R	-
		5	0	Normal Logic – Shutdown of the Winding 1;	W / R	-
			1	Inverted Logic – Shutdown of the Winding 1;	W / R	-
		6	0	Normal Logic – Alarm of the Winding 2;	W / R	-
			1	Inverted Logic – Alarm of the Winding 2;	W / R	-
		7	0	Normal Logic – Shutdown of the Winding 2;	W / R	-
			1	Inverted Logic – Shutdown of the Winding 2;	W / R	-
		8	0	Normal Logic – Alarm of the Winding 3;	W / R	-
			1	Inverted Logic – Alarm of the Winding 3;	W / R	-
		9	0	Normal Logic – Shutdown of the Winding 3;	W / R	-
			1	Inverted Logic – Shutdown of the Winding 3;	W / R	-
		10	0	Normal Logic – Fail Relay;	W / R	-
			1	Inverted Logic – Fail Relay;	W / R	-

MASTERTEMP SERIAL COMMUNICATION

Address MODBUS	Reading Range	Bits Index	State	Description Point Name	Writing Reading	Scale
159	-	11	0	Normal Logic – Auxiliary Relay;	W / R	-
			1	Inverted Logic – Auxiliary Relay;	W / R	-
		12	0	Normal Logic – 3° Grupo de Cooling of the;	W / R	-
			1	Inverted Logic – 3° Grupo de Cooling of the;	W / R	-
160	0 - 50000	-	-	Hour for Maintenance of the Group 1;	W / R	1:1
161	0 - 50000	-	-	Hour for Maintenance of the Group 2;	W / R	1:1
162	0 - 50000	-	-	Hour for Maintenance of the Group 3;	W / R	1:1
163	0.2 a 10.0	-	-	Temperature Variation for SD Card Recording (°C)	W / R	1:10
164	0.1 a 1.0	-	-	Electrical Current Variation for SD Card Recording (A)	W / R	1:10
165	-50.0 a 250.0	-	-	Electrical Current Minimum Temperature of the Sensor 1;	W / R	-1000:10
166	-50.0 a 250.0	-	-	Electrical Current Minimum Temperature of the Sensor 2;	W / R	-1000:10
167	-50.0 a 250.0	-	-	Electrical Current Minimum Temperature of the Winding 1;	W / R	-1000:10
168	-50.0 a 250.0	-	-	Electrical Current Minimum Temperature of the Winding 2;	W / R	-1000:10
169	-50.0 a 250.0	-	-	Electrical Current Minimum Temperature of the Winding 3;	W / R	-1000:10
170	0 – 9.990	-	-	Primary minimum electrical current of the Winding 1;	W / R	1000:10
171	0 – 9.990	-	-	Primary minimum electrical current of the Winding 2;	W / R	1000:10
172	0 – 9.990	-	-	Primary minimum electrical current of the Winding 3;	W / R	1000:10
173	0 – 9.990	-	-	Secondary minimum electrical current of the Winding 1;	W / R	1000:10
174	0 – 9.990	-	-	Secondary minimum electrical current of the Winding 2;	W / R	1000:10
175	0 – 9.990	-	-	Secondary minimum electrical current of the Winding 3;	W / R	1000:10
176	0 – 9.990	-	-	Minimum Load of the Winding 1;	W / R	1000:10

177	0 – 300.0	-	Minimum Load of the Winding 2;	W / R	1000:10
178	0 – 300.0	-	Minimum Load of the Winding 3;	W / R	1000:10

MASTERTEMP SERIAL COMMUNICATION

Address MODBUS	Reading Range	Bits Index	State	Description Point Name	Writing Reading	Scale
179	-50.0 – 250.0	-		Minimum Temperature Differential;	W / R	-1000:10
181	-50.0 – 250.0	-		Electrical Current Maximum Temperature of the Sensor 1;	W / R	-1000:10
182	-50.0 – 250.0	-		Electrical Current Maximum Temperature of the Sensor 2;	W / R	-1000:10
183	-50.0 – 250.0	-		Electrical Current Maximum Temperature of the Winding 1;	W / R	1000:10
184	-50.0 – 250.0	-		Electrical Current Maximum Temperature of the Winding 2;	W / R	1000:10
185	-50.0 – 250.0	-		Electrical Current Maximum Temperature of the Winding 3;	W / R	1000:10
186	-50.0 – 250.0	-		Maximum primary electrical current of the winding 1;	W / R	1:1000
187	-50.0 – 250.0	-		Maximum primary electrical current of the winding 2;	W / R	1:1000
188	0 – 9.990	-		Maximum primary electrical current of the winding 3;	W / R	1:1000
189	0 – 9.990	-		Maximum secondary electrical current of the winding 1;	W / R	1:1000
190	0 – 9.990	-		Maximum secondary electrical current of the winding 2;	W / R	1:1000
191	0 – 9.990	-		Maximum secondary electrical current of the winding 3;	W / R	1:1000
192	0 – 9.990	-		Maximum Loading of the Winding 1;	W / R	1:10
193	0 – 9.990	-		Maximum Loading of the Winding 2;	W / R	1:10
194	0 – 9.990	-		Maximum Loading of the Winding 3;	W / R	1:10
195	-50.0 a 250.0	-		Minimum Temperature Differential;	W / R	-1000:10

MASTERTEMP SERIAL COMMUNICATION

Address MODBUS	Reading Range	Bits Index	State	Description Point Name	Writing Reading	Scale
200	-	-		Register – Auxiliary Relay Actuation Status;	-	
		0	1	Activated by the Sensor 1;	R	-
		1	1	Activated by the Sensor 2;	R	-
		2	1	Activated by the Winding 1;	R	-
		3	1	Activated by the Winding 2;	R	-
		4	1	Activated by the Winding 3;	R	-
		5	1	Enabled by the Temperature Differential;	R	-
		6	1	Enabled by the maintenance of the Group 1;	R	-
201	-	7	1	Enabled by the maintenance of the Group 2;	R	-
		-		Register – 1 st Group Ventilation/Pump Status;	-	
		0	0	Ventilation/Pump of the Oil Disabled (Sensor 1);	R	-
			1	Ventilation/Pump of the Oil Enabled (Sensor 1);	R	-
		1	0	Ventilation/Pump of the Oil Disabled (Sensor 2);	R	-
			1	Ventilation/Pump of the Oil Disabled (Sensor 2);	R	-
		2	0	Ventilation/Pump of the Winding 1 Disable;	R	-
			1	Ventilation/Pump of the Winding 1 Enabled;	R	-
		3	0	Ventilation/Pump of the Winding 2 Disable;	R	-
			1	Ventilation/Pump of the Winding 2 Enabled;	R	-
		4	0	Ventilation/Pump of the Winding 3 Disable;	R	-
			1	Ventilation/Pump of the Winding 3 Enabled;	R	-
		5	0	Ventilation/Pump Manual Exercise Disable;	R	-
			1	Ventilation/Pump Manual Exercise Enabled;	R	-

MASTERTEMP SERIAL COMMUNICATION

Address MODBUS	Reading Range	Bits Index	State	Description Point Name	Writing Reading	Scale
201	-	6	0	Ventilation/Pump automatic exercise Disable;	R	-
			1	Ventilation/Pump automatic exercise Enabled;	R	-
202	-	-		Register – 2 nd Group Ventilation/Pump Status;	-	
		0	0	Ventilation/Pump of the Oil Disabled (Sensor 1);	R	-
			1	Ventilation/Pump of the Oil Enabled (Sensor 1);	R	-
		1	0	Ventilation/Pump of the Oil Disabled (Sensor 2);	R	-
			1	Ventilation/Pump of the Oil Disabled (Sensor 2);	R	-
		2	0	Ventilation/Pump of the Winding 1 Disable;	R	-
			1	Ventilation/Pump of the Winding 1 Enabled;	R	-
		3	0	Ventilation/Pump of the Winding 2 Disable;	R	-
			1	Ventilation/Pump of the Winding 2 Enabled;	R	-
		4	0	Ventilation/Pump of the Winding 3 Disable;	R	-
			1	Ventilation/Pump of the Winding 3 Enabled;	R	-
		5	0	Ventilation/Pump exercise Disable;	R	-
			1	Ventilation/Pump exercise Enabled;	R	-
		6	0	Ventilation/Pump automatic exercise Disable;	R	-
			1	Ventilation/Pump automatic exercise Enabled;	R	-

MASTERTEMP SERIAL COMMUNICATION

Address MODBUS	Reading Range	Bits Index	State	Description Point Name	Writing Reading	Scale
203	-	-		Register – 3 rd Group Ventilation/Pump Status;	-	
		0	0	Ventilation/Pump of the Oil Disabled (Sensor 1);	R	-
			1	Ventilation/Pump of the Oil Enabled (Sensor 1);	R	-
		1	0	Ventilation/Pump of the Oil Disabled (Sensor 2);	R	-
			1	Ventilation/Pump of the Oil Disabled (Sensor 2);	R	-
		2	0	Ventilation/Pump of the Winding 1 Disable;	R	-
			1	Ventilation/Pump of the Winding 1 Enabled;	R	-
		3	0	Ventilation/Pump of the Winding 2 Disable;	R	-
			1	Ventilation/Pump of the Winding 2 Enabled;	R	-
		4	0	Ventilation/Pump of the Winding 3 Disable;	R	-
			1	Ventilation/Pump of the Winding 3 Enabled;	R	-
		5	0	Ventilation/Pump exercise Disable;	R	-
			1	Ventilation/Pump exercise Enabled;	R	-
		6	0	Ventilation/Pump automatic exercise Disable;	R	-
			1	Ventilation/Pump automatic exercise Enabled;	R	-

MASTERTEMP SERIAL COMMUNICATION

Address MODBUS	Reading Range	Bits Index	State	Description Point Name	Writing Reading	Scale
204	-	-		Register – Sensors Failure Status:	-	
		0	1	System Failure of the Sensor 1;	R	-
		1	1	System Failure of the Oil Sensor;	R	-
		2	1	System Failure of the Winding 1;	R	-
		3	1	System Failure of the Winding 2;	R	-
		4	1	System Failure of the Winding 3;	R	-
205	-	-		Register – Alarms Status:	-	
		0	0	Oil Alarm Disabled (Sensor 1);	R	-
			1	Oil Alarm Enabled (Sensor 1);	R	-
		1	0	Oil Alarm Disabled (Sensor 2);	R	-
			1	Oil Alarm Enabled (Sensor 2);	R	-
		2	0	Alarm of the Winding 1 Disabled;	R	-
			1	Alarm of the Winding 1 Enabled;	R	-
		3	0	Alarm of the Winding 2 Disabled;	R	-
			1	Alarm of the Winding 2 Enabled;	R	-
		4	0	Alarm of the Winding 3 Disabled;	R	-
			1	Alarm of the Winding 3 Enabled;	R	-

MASTERTEMP SERIAL COMMUNICATION

Address MODBUS	Reading Range	Bits Index	State	Description Point Name	Writing Reading	Scale
206	-	-		Register – TRIP Timer Status:	-	
		0	0	Countage to Oil Shutdown Disabled (Sensor 1);	R	-
			1	Countage to Oil Shutdown Enabled (Sensor 1);	R	-
		1	0	Countage to Oil Shutdown Disabled (Sensor 2);	R	-
			1	Countage to Oil Shutdown Enabled (Sensor 2);	R	-
		2	0	Countage to Shutdown of the Winding 1 Disabled;	R	-
			1	Countage to Shutdown of the Winding 1 Enabled;	R	-
		3	0	Countage to Shutdown of the Winding 2 Disabled;	R	-
			1	Countage to Shutdown of the Winding 2 Enabled;	R	-
		4	0	Countage to Shutdown of the Winding 3 Disabled;	R	-
			1	Countage to Shutdown of the Winding 3 Enabled;	R	-
		5	0	Countage to Auxiliary Relay 1 Disabled;	R	-
			1	Countage to Auxiliary Relay 1 Enabled;	R	-
		6	0	Countage to Auxiliary Relay 2 Disabled;	R	-
			1	Countage to Auxiliary Relay 2 Enabled;	R	-

MASTERTEMP SERIAL COMMUNICATION

Address MODBUS	Reading Range	Bits Index	State	Description Point Name	Writing Reading	Scale
207	-	-		Register – TRIP Counter Status:	-	
		0	0	Countage to Oil Shutdown Disabled (Sensor 1);	R	-
			1	Countage to Oil Shutdown Enabled (Sensor 1);	R	-
		1	0	Countage to Oil Shutdown Disabled (Sensor 2);	R	-
			1	Countage to Oil Shutdown Enabled (Sensor 2);	R	-
		2	0	Countage to Shutdown of the Winding 1 Disabled;	R	-
			1	Countage to Shutdown of the Winding 1 Enabled;	R	-
		3	0	Countage to Shutdown of the Winding 2 Disabled;	R	-
			1	Countage to Shutdown of the Winding 2 Enabled;	R	-
		4	0	Countage to Shutdown of the Winding 3 Disabled;	R	-
			1	Countage to Shutdown of the Winding 3 Enabled;	R	-
		5	0	Countage to Auxiliary Relay 1 Disabled;	R	-
			1	Countage to Auxiliary Relay 1 Enabled;	R	-
		6	0	Countage to Auxiliary Relay 2 Disabled;	R	-
			1	Countage to Auxiliary Relay 2 Enabled;	R	-
208	-	-		Register – 2 nd Group Cooling System Activation – Loading:	-	
		2	0	Cooling of the do Winding 1 Disabled;	R	-
			1	Cooling of the do Winding 1 Enabled;	R	-
		3	0	Cooling of the do Winding 2 Disabled;	R	-
			1	Cooling of the do Winding 2 Enabled;	R	-
		4	0	Cooling of the do Winding 3 Disabled;	R	-
			1	Cooling of the do Winding 3 Enabled;	R	-

MASTERTEMP SERIAL COMMUNICATION

Address MODBUS	Reading Range	Bits Index	State	Description Point Name	Writing Reading	Scale
209	-	-		Register – 1 st Group Cooling System Activation - Temperature:	-	
		0	0	Cooling of the do Sensor 1 Disabled;	R	-
			1	Cooling of the do Sensor 1 Enabled;	R	-
		1	0	Cooling of the do Sensor 2 Disabled;	R	-
			1	Cooling of the do Sensor 2 Enabled;	R	-
		2	0	Cooling of the do Winding 1 Disabled;	R	-
			1	Cooling of the do Winding 1 Enabled;	R	-
		3	0	Cooling of the do Winding 2 Disabled;	R	-
			1	Cooling of the do Winding 2 Enabled;	R	-
		4	0	Cooling of the do Winding 3 Disabled;	R	-
			1	Cooling of the do Winding 3 Enabled;	R	-
210	-	-		Register – 2 nd Group Cooling System Activation – Loading:	-	
		2	0	Cooling of the do Winding 1 Disabled;	R	-
			1	Cooling of the do Winding 1 Enabled;	R	-
		3	0	Cooling of the do Winding 2 Disabled;	R	-
			1	Cooling of the do Winding 2 Enabled;	R	-
		4	0	Cooling of the do Winding 3 Disabled;	R	-
			1	Cooling of the do Winding 3 Enabled;	R	-

MASTERTEMP SERIAL COMMUNICATION

Address MODBUS	Reading Range	Bits Index	State	Description Point Name	Writing Reading	Scale
211	-	-		Register – 2 nd Group Cooling System Activation - Temperature:	-	
		0	0	Cooling of the do Sensor 1 Disabled;	R	-
			1	Cooling of the do Sensor 1 Enabled;	R	-
		1	0	Cooling of the do Sensor 2 Disabled;	R	-
			1	Cooling of the do Sensor 2 Enabled;	R	-
		2	0	Cooling of the do Winding 1 Disabled;	R	-
			1	Cooling of the do Winding 1 Enabled;	R	-
		3	0	Cooling of the do Winding 2 Disabled;	R	-
			1	Cooling of the do Winding 2 Enabled;	R	-
		4	0	Cooling of the do Winding 3 Disabled;	R	-
			1	Cooling of the do Winding 3 Enabled;	R	-
212	-	-		Register – 3 rd Group Cooling System Activation – Loading:	-	
		2	0	Cooling of the do Winding 1 Disabled;	R	-
			1	Cooling of the do Winding 1 Enabled;	R	-
		3	0	Cooling of the do Winding 2 Disabled;	R	-
			1	Cooling of the do Winding 2 Enabled;	R	-
		4	0	Cooling of the do Winding 3 Disabled;	R	-
			1	Cooling of the do Winding 3 Enabled;	R	-

MASTERTEMP SERIAL COMMUNICATION

Address MODBUS	Reading Range	Bits Index	State	Description Point Name	Writing Reading	Scale
213	-	-		Register – 3 rd Group Cooling System Activation – Temperature:	-	
		0	0	Cooling of the do Sensor 1 Disabled;	R	-
			1	Cooling of the do Sensor 1 Enabled;	R	-
		1	0	Cooling of the do Sensor 2 Disabled;	R	-
			1	Cooling of the do Sensor 2 Enabled;	R	-
		2	0	Cooling of the do Winding 1 Disabled;	R	-
			1	Cooling of the do Winding 1 Enabled;	R	-
		3	0	Cooling of the do Winding 2 Disabled;	R	-
			1	Cooling of the do Winding 2 Enabled;	R	-
		4	0	Cooling of the do Winding 3 Disabled;	R	-
			1	Cooling of the do Winding 3 Enabled;	R	-
214	-	-		Register – TRIP by Temperature:	-	
		0	0	Sensor 1 Disabled;	R	-
			1	Sensor 1 Enabled;	R	-
		1	0	Sensor 2 Enabled;	R	-
			1	Sensor 2 Disabled;	R	-
		2	0	Winding 1 Disabled;	R	-
			1	Winding 1 Enabled;	R	-
		3	0	Winding 2 Disabled;	R	-
			1	Winding 2 Enabled;	R	-
		4	0	Winding 3 Disabled;	R	-
			1	Winding 3 Enabled;	R	-

MASTERTEMP SERIAL COMMUNICATION

Address MODBUS	Reading Range	Bits Index	State	Description Point Name	Writing Reading	Scale
215		-		Register – TRIP by loading:	-	
		2	0	Cooling of the do Winding 1 Disabled;	R	-
			1	Cooling of the do Winding 1 Enabled;	R	-
		3	0	Cooling of the do Winding 2 Disabled;	R	-
			1	Cooling of the do Winding 2 Enabled;	R	-
		4	0	Cooling of the do Winding 3 Disabled;	R	-
			1	Cooling of the do Winding 3 Enabled;	R	-