4- 4 MODBUS RTU

Открытый протокол ПО - **MODBUS RTU**, используемый для чтения и написания данных.

В **RID1000-A** вся информация выносится как Holding Registers, это значит, что формат запроса Modbus в чтении и написании всегда аналогичен:

Запрос чтения

Функциональный код	1 Byte	***0x03***
Адрес отправления	2 Bytes	от 0 до 9999
Количество регистров	2 Bytes	от 1 до 16

Одиночный запрос написания

Функциональный код	1 Byte	***0x06***
Адрес отправления	2 Bytes	от 0 до 9999
Показатель регистра	2 Bytes	от 0 до 0xFFFF с правильной конвенцией

Возвращаемое значение после запроса, а также значение, которое будет использоваться для обновления данных, зависит от характеристик переменной, указанной выше.

Тип переменной:

- MB = Byte
- MR = Real
- MW = Word
- I = Input byte
- IR = Input real

- U = Output byte
- MD = Double word

o ***Изображение указывает, если переменная должна быть уменьшена или нет:***

- DT_REAL_1, DT_NUMERIC_OFF_1 уменьшена на 10
- DT_REAL_2, DT_NUMERIC_OFF_2 уменьшена на 100
- DT_REAL_3, DT_NUMERIC_OFF_3 уменьшена на 1000

СПИСОК ПЕРЕМЕННЫХ

Название проэкта:Project name: RID1000A_b4.6.6.12_v1.0.29M
Версия проэкта: 1.0.29
RID1000 Monitor: 4.6.6.12

#	Var.Name	Var.Visual	Var.Type	ID	R/W
1	GLOBALS.Focus	DT_NUMERIC	MB1	40002	R
2	GLOBALS.Program	DT_NUMERIC	MB3	40004	R
3	GLOBALS.Year	DT_NUMERIC	MB210	40035	R
4	GLOBALS.Month	DT_NUMERIC	MB211	40036	R
5	GLOBALS.Day	DT_NUMERIC	MB212	40037	R
6	GLOBALS.Hour	DT_NUMERIC	MB213	40038	R
7	GLOBALS.Minute	DT_NUMERIC	MB214	40039	R
8	GLOBALS.Second	DT_NUMERIC	MB215	40040	R
9	GLOBALS.Day of the week	DT_NUMERIC	MB216	40042	R
10	GLOBALS.Modem Status	DT_NUMERIC	MB218	40043	R
11	RID1000A_BOARD.Input J4.8	DT_ONOFF	I0.0	40134	R
12	RID1000A_BOARD.Input J4.7	DT_ONOFF	I0.1	40135	R
13	RID1000A_BOARD.Input J4.6	DT_ONOFF	I0.2	40136	R
14	RID1000A_BOARD.Input J4.5	DT_ONOFF	I0.3	40137	R
15	RID1000A_BOARD.Input J4.4	DT_ONOFF	I0.4	40138	R
16	RID1000A_BOARD.Oil pressure	DT_REAL_1	IR2	40139	R
17	RID1000A_BOARD.Water temperature	DT_REAL_1	IR6	40140	R
18	RID1000A_BOARD.Fuel level	DT_NUMERIC	IR10	40141	R
19	RID1000A_BOARD.Battery voltage	DT_REAL_1	IR14	40142	R
20	RID1000A_BOARD.Line R voltage mains	DT_NUMERIC	IR18	40143	R
21	RID1000A_BOARD.Line S voltage mains	DT_NUMERIC	IR22	40144	R
22	RID1000A_BOARD.Line T voltage mains	DT_NUMERIC	IR26	40145	R
23	RID1000A_BOARD.Line R voltage genset	DT_NUMERIC	IR30	40146	R
24	RID1000A_BOARD.Line S voltage genset	DT_NUMERIC	IR34	40147	R
25	RID1000A_BOARD.Line T voltage genset	DT_NUMERIC	IR38	40148	R
26	RID1000A_BOARD.Load currente phase R	DT_NUMERIC	IR42	40149	R
27	RID1000A_BOARD.Load current phase S	DT_NUMERIC	IR46	40150	R
28	RID1000A_BOARD.Load current phase T	DT_NUMERIC	IR50	40151	R
29	RID1000A_BOARD.Frequency mains	DT_REAL_1	IR54	40152	R
30	RID1000A_BOARD.Frequency genset	DT_REAL_1	IR58	40153	R
31	RID1000A_BOARD.Active power phase R	DT_REAL_1	IR62	40154	R
32	RID1000A_BOARD.Active power phase S	DT_REAL_1	IR66	40155	R
33	RID1000A_BOARD.Active power phase T	DT_REAL_1	IR70	40156	R
34	RID1000A_BOARD.Phase voltage mains	DT_REAL_1	IR74	40157	R
35	RID1000A_BOARD.Phase voltage genset	DT_REAL_1	IR78	40158	R
36	RID1000A_BOARD.Apparent power phase R	DT_REAL_1	IR82	40159	R
37	RID1000A_BOARD.Apparent power phase S	DT_REAL_1	IR86	40160	R
38	RID1000A_BOARD.Apparent power phase T	DT_REAL_1	IR90	40161	R
39	RID1000A_BOARD.Reactive power phase R	DT_REAL_1	IR94	40162	R
40	RID1000A_BOARD.Reactive power phase S	DT_REAL_1	IR98	40163	R
41	RID1000A_BOARD.Reactive power phase T	DT_REAL_1	IR102	40164	R
42	RID1000A_BOARD.Reactive power totale	DT_REAL_1	IR106	40165	R
43	RID1000A_BOARD.Power factor phase R	DT_REAL_2	IR110	40166	R
44	RID1000A_BOARD.Power factor phase S	DT_REAL_2	IR114	40167	R
45	RID1000A_BOARD.Power factor phase T	DT_REAL_2	IR118	40168	R
46	RID1000A_BOARD.Wrong phase sequence mains	DT_ONOFF	I0.5	40169	R
47	RID1000A_BOARD.Wrong phase sequence genset	DT_ONOFF	I0.6	40170	R
48	RID1000A_BOARD.Emergency	DT_ONOFF	I0.7	40171	R
49	RID1000A_BOARD.Total apparent power	DT_REAL_1	IR122	40174	R
50	RID1000A_BOARD.Total active power	DT_REAL_1	IR126	40175	R
51	RID1000A_BOARD.Total power factor	DT_REAL_2	IR130	40176	R
52	RID1000A_BOARD.Higher consumption current	DT_REAL_1	IR134	40177	R
53	RID1000A_BOARD.Frequency PICKUP (Hz)	DT_NUMERIC	IR138	40178	R
54	RID1000A_BOARD.Voltage D+	DT_REAL_1	IR142	40179	R
55	RID1000A_BOARD.Phase voltage R-S mains	DT_NUMERIC	IR146	40180	R
56	RID1000A_BOARD.Phase voltage S-T mains	DT_NUMERIC	IR150	40181	R
57	RID1000A_BOARD.Phase voltage T-R mains	DT_NUMERIC	IR154	40182	R
58	RID1000A_BOARD.Phase voltage R-S genset	DT_NUMERIC	IR158	40183	R

59	RID1000A_BOARD.Phase voltage S-T genset	DT_NUMERIC	IR162	40184	R
60	RID1000A_BOARD.Phase voltage T-R genset	DT_NUMERIC	IR166	40185	R
61	RID1000A_BOARD.Rpm (SPN 190)	DT_NUMERIC	IR300	40186	R
62	RID1000A_BOARD.Oil pressure (SPN 100)	DT_REAL_1	IR304	40187	R
63	RID1000A_BOARD.Engine temperature (SPN 110)	DT_REAL_1	IR308	40188	R
64	RID1000A_BOARD.Fuel temperature (SPN 174)	DT_REAL_1	IR312	40189	R
65	RID1000A_BOARD.Oil temperature (SPN 175)	DT_REAL_1	IR316	40190	R
66	RID1000A_BOARD.Fuel pressure (SPN 094)	DT_REAL_1	IR320	40191	R
67	RID1000A_BOARD.Oil level (SPN 098)	DT_REAL_1	IR324	40192	R
68	RID1000A_BOARD.Carter pressure (SPN 101)	DT_REAL_1	IR328	40193	R
69	RID1000A_BOARD.Coolant pressure (SPN 109)	DT_REAL_1	IR332	40194	R
70	RID1000A_BOARD.Coolant level (SPN 111)	DT_REAL_1	IR336	40195	R
71	RID1000A_BOARD.Total work hours (SPN 247)	DT_NUMERIC	IR340	40196	R
72	RID1000A_BOARD.Turbo pressure (SPN 102)	DT_REAL_1	IR344	40197	R
73	RID1000A_BOARD.Turbo temeprature (SPN 105)	DT_NUMERIC	IR348	40198	R
74	RID1000A_BOARD.Instant consumption (SPN 183)	DT_REAL_1	IR352	40199	R
75	RID1000A_BOARD.Torque (SPN 513)	DT_NUMERIC	IR356	40200	R
76	RID1000A_BOARD.Torque request (SPN 512)	DT_NUMERIC	IR360	40201	R
77	RID1000A_BOARD.Water level (SPN 97)	DT_NUMERIC	IR364	40202	R
78	RID1000A_BOARD.Accelerator position (%) (SPN 91)	DT_NUMERIC	IR368	40203	R
79	RID1000A_BOARD.Load percentage (SPN 92)	DT_NUMERIC	IR372	40204	R
80	RID1000A_BOARD.Battery voltage (SPN 158)	DT_REAL_1	IR376	40205	R
81	RID1000A_BOARD.Aspiration pressure (SPN 106)	DT_REAL_1	IR380	40206	R
82	RID1000A_BOARD.Atmospheric pressure (SPN 108)	DT_REAL_1	IR384	40207	R
83	RID1000A_BOARD.Discharge temperature (SPN 173)	DT_REAL_1	IR388	40208	R
84	RID1000A_BOARD.DTC - SPN	DT_NUMERIC	IR392	40209	R
85	RID1000A_BOARD.DTC - FMI	DT_NUMERIC	IR396	40210	R
86	RID1000A_BOARD.Start output	DT_ONOFF	U0.0	40215	R
87	RID1000A_BOARD.EV output	DT_ONOFF	U0.1	40216	R
88	RID1000A_BOARD.Genset contactor	DT_ONOFF	U0.2	40217	R
89	RID1000A_BOARD.Mains contactor	DT_ONOFF	U0.3	40218	R
90	RID1000A_BOARD.Excitation	DT_ONOFF	U0.4	40219	R
91	RID1000A_BOARD.Out J5.11	DT_ONOFF	U1.0	40220	R
92	RID1000A_BOARD.Out J5.10	DT_ONOFF	U1.1	40221	R
93	RID1000A_BOARD.Out J5.9	DT_ONOFF	U1.2	40222	R
94	RID1000A_BOARD.Out J5.8	DT_ONOFF	U1.3	40223	R
95	RID1000A_BOARD.Led ON/OFF	DT_ONOFF	U2.0	40224	R
96	RID1000A_BOARD.Led KG1	DT_ONOFF	U2.1	40225	R
97	RID1000A_BOARD.Led RES	DT_ONOFF	U2.2	40226	R
98	RID1000A_BOARD.Led AUT	DT_ONOFF	U2.3	40227	R
99	RID1000A_BOARD.Led KR	DT_ONOFF	U2.4	40228	R
100	RID1000A_BOARD.Led KR1	DT_ONOFF	U2.5	40229	R
101	RID1000A_BOARD.Led KG	DT_ONOFF	U2.6	40230	R
102	RID1000A_BOARD.Led TEST	DT_ONOFF	U2.7	40231	R
103	RID1000A_BOARD.Led MAN	DT_ONOFF	U3.0	40232	R
104	RID1000A_BOARD.Led ALARM	DT_ONOFF	U3.1	40233	R
105	RID1000A_BOARD.Full memory	DT_ONOFF	I500.0	40236	R
106	RID1000A_BOARD.COM protocol	DT_SERIAL_PROTOCOLS_RID	MB250	40050	R
107	RID1000A_BOARD.Baud rate COM	DT_SERIAL_BAUDRATE	MB251	40051	R
108	RID1000A_BOARD.RS485 protocol	DT_SERIAL_PROTOCOLS_RID	MB255	40055	R
109	RID1000A_BOARD.Baud rate RS485	DT_SERIAL_BAUDRATE	MB256	40056	R
110	RID1000A_BOARD.Bit rates	DT_CAN_BITRATES	MB267	40060	R
111	RID1000A_BOARD.CAN protocol	DT_CAN_PROTOCOLS	MB268	40061	R
112	RID1000A_BOARD.Address	DT_NUMERIC	MB260	40062	R
113	RID1000A_BOARD.Centre SMS	DT_STRING	MW270	40063	R
114	RID1000A_BOARD.SMS 1 number	DT_STRING	MW272	40064	R
115	RID1000A_BOARD.SMS 2 number	DT_STRING	MW274	40065	R
116	RID1000A_BOARD.SMS 3 number	DT_STRING	MW276	40066	R
117	RID1000A_BOARD.SMS 4 number	DT_STRING	MW278	40067	R
118	RID1000A_BOARD.SMS 5 number	DT_STRING	MW280	40068	R
119	RID1000A_BOARD.Sampling time	DT_NUMERIC	MW430	40069	R
120	RID1000A_BOARD.Datalogger Enable	DT_NUMERIC_OFF	M432.1	40071	R
121	RID1000A_BOARD.Upload data SMS	DT_STRING	MW586	40077	R
122	RID1000A_BOARD.Upload adta apn	DT_STRING	MW588	40078	R

123	RID1000A_BOARD.Upload data server	DT_STRING	MW590	40079	R
124	RID1000A_BOARD.Upload data service	DT_STRING	MW592	40080	R
125	RID1000A_BOARD.Server port	DT_NUMERIC	MW594	40081	R
126	RID1000A_BOARD.Upload interval	DT_NUMERIC	MW596	40082	R
127	RID1000A_BOARD.Upload type	DT_UPLOAD_TYPE	MB598	40083	R
128	RID1000A_BOARD.ID Upload	DT_NUMERIC_OFF	MW146	40084	R
129	RID1000A_BOARD.Input type 1	DT_DIO_TYPES	MB535	40085	R
130	RID1000A_BOARD.Input type 2	DT_DIO_TYPES	MB536	40086	R
131	RID1000A_BOARD.Input type 3	DT_DIO_TYPES	MB537	40087	R
132	RID1000A_BOARD.Input type 4	DT_DIO_TYPES	MB538	40088	R
133	RID1000A_BOARD.Input type 5	DT_DIO_TYPES	MB539	40089	R
134	RID1000A_BOARD.Emergency input type	DT_DIO_TYPES	MB585	40090	R
135	RID1000A_BOARD.Output type EV	DT_DIO_TYPES	MB540	40091	R
136	RID1000A_BOARD.Output type AVV	DT_DIO_TYPES	MB541	40092	R
137	RID1000A_BOARD.Output type 1	DT_DIO_TYPES	MB542	40093	R
138	RID1000A_BOARD.Output type 2	DT_DIO_TYPES	MB543	40094	R
139	RID1000A_BOARD.Output type 3	DT_DIO_TYPES	MB544	40095	R
140	RID1000A_BOARD.Output type 4	DT_DIO_TYPES	MB545	40096	R
141	RID1000A_BOARD.Analog type 1	DT_ANI_TYPES	MB546	40097	R
142	RID1000A_BOARD.Analog type 2	DT_ANI_TYPES	MB547	40098	R
143	RID1000A_BOARD.Analog type 3	DT_ANI_TYPES	MB548	40099	R
144	RID1000A_BOARD.Offset VRR	DT_NUMERIC	MR549	40100	R
145	RID1000A_BOARD.Offset VRS	DT_NUMERIC	MR553	40101	R
146	RID1000A_BOARD.Offset VRT	DT_NUMERIC	MR557	40102	R
147	RID1000A_BOARD.Offset VGR	DT_NUMERIC	MR561	40103	R
148	RID1000A_BOARD.Offset VGS	DT_NUMERIC	MR565	40104	R
149	RID1000A_BOARD.Offset VGT	DT_NUMERIC	MR569	40105	R
150	RID1000A_BOARD.Offset IR	DT_REAL_1	MR573	40106	R
151	RID1000A_BOARD.Offset IS	DT_REAL_1	MR577	40107	R
152	RID1000A_BOARD.Offset IT	DT_REAL_1	MR581	40108	R
153	GLOBAL_VARIABLES.Generator nominal voltage	DT_REAL_1	MR1914	40473	R
154	GLOBAL_VARIABLES.Generator nominal frequency	DT_REAL_1	MR1918	40474	R
155	GLOBAL_VARIABLES.Stop mode	DT_NUMERIC	MB1882	40476	R
156	GLOBAL_VARIABLES.Electrovalve output	DT_NUMERIC	M1872.7	40478	R
157	GLOBAL_VARIABLES.D+ output	DT_NUMERIC	M30.0	40479	R
158	AlarmsManger1.In alarm	DT_NUMERIC	M20.0	40480	R
159	AlarmsManger1.Siren	DT_NUMERIC	M20.1	40481	R
160	AlarmsManger1.Global alarm #1	DT_NUMERIC	M20.2	40482	R
161	AlarmsManger1.Global alarm #2	DT_NUMERIC	M20.3	40483	R
162	AlarmsManger1.Global alarm #3	DT_NUMERIC	M20.4	40484	R
163	GLOBAL_INPUTS.Engine temperature	DT_REAL_1	MR102	40422	R
164	GLOBAL_INPUTS.Digital engine temperature	DT_ONOFF	M100.0	40423	R
165	GLOBAL_INPUTS.Input D+	DT_REAL_1	MR114	40424	R
166	GLOBAL_INPUTS.Input Pick up	DT_REAL_1	MR118	40425	R
167	GLOBAL_INPUTS.Input SAPRISA	DT_REAL_1	MR122	40426	R
168	GLOBAL_INPUTS.Input W	DT_REAL_1	MR126	40427	R
169	GLOBAL_INPUTS.Oil pressure	DT_REAL_1	MR110	40428	R
170	GLOBAL_INPUTS.Digital oil pressure	DT_ONOFF	M100.2	40429	R
171	GLOBAL_INPUTS.Fuel level (%)	DT_REAL_1	MR106	40430	R
172	GLOBAL_INPUTS.Low fuel level digital	DT_ONOFF	M100.1	40431	R
173	GLOBAL_INPUTS.Battery voltage	DT_REAL_1	MR130	40432	R
174	GLOBAL_INPUTS.Phase voltage	DT_REAL_1	MR138	40433	R
175	GLOBAL_INPUTS.Frequency	DT_REAL_1	MR142	40434	R
176	GLOBAL_RUNTIME.Active alarm	DT_NUMERIC	MW4	40435	R
177	GLOBAL_RUNTIME.Stopping alarm	DT_NUMERIC	M39.1	40437	R
178	GLOBAL_RUNTIME.Cooling on alarm	DT_ONOFF	M20.6	40438	R
179	GLOBAL_RUNTIME.Stopping on alarm	DT_ONOFF	M20.7	40439	R
180	GLOBAL_RUNTIME.Start phase	DT_NUMERIC	MB1880	40468	R
181	Startmotoreendotermico1.Stop phase	DT_NUMERIC	MB1879	40469	R
182	StartDieselEngine1.Starter engine output	DT_NUMERIC	M432.2	40540	R
183	StartDieselEngine1.Pre heating output	DT_NUMERIC	M1881.6	40543	R
184	StartDieselEngine1.IsON	DT_NUMERIC	M1811.3	40557	R
185	StartDieselEngine1.IsNotStopped	DT_NUMERIC	M1942.1	40563	R
186	StopDieselEngine1.Electro magnet output	DT_NUMERIC	M1942.5	40584	R

187	GensetManager1.Mains nominal voltage	DT_NUMERIC	MW1992	40592	R
188	GensetManager1.Mains nominal frequency	DT_NUMERIC	MB1994	40593	R
189	GensetManager1.Low Voltage mains (%)	DT_NUMERIC	MB1995	40594	R
190	GensetManager1.High Voltage mains (%)	DT_NUMERIC	MB1996	40595	R
191	GensetManager1.Low Frequency mains (%)	DT_NUMERIC_OFF	MB1997	40596	R
192	GensetManager1.High Frequency mains (%)	DT_NUMERIC_OFF	MB1998	40597	R
193	GensetManager1.Low Voltage genset (%)	DT_NUMERIC	MB1999	40598	R
194	GensetManager1.High Voltage genset (%)	DT_NUMERIC	MB2000	40599	R
195	GensetManager1.Low Frequency genset (%)	DT_NUMERIC_OFF	MB2001	40600	R
196	GensetManager1.High Frequency genset (%)	DT_NUMERIC_OFF	MB2002	40601	R
197	GensetManager1.Nominal current genset	DT_NUMERIC	MW424	40606	R
198	GensetManager1.Short circuit (%)	DT_NUMERIC	MW2010	40607	R
199	GensetManager1.Current overload (%)	DT_NUMERIC	MW2012	40608	R
200	GensetManager1.mains OK	DT_ONOFF	M1988.4	40624	R
201	GensetManager1.genset OK	DT_ONOFF	M1988.5	40625	R
202	GensetManager1.KWh	DT_NUMERIC	MR2014	40627	R
203	GensetManager1.KVARh	DT_NUMERIC	MR2018	40628	R
204	EngineControl1.RPM	DT_NUMERIC	MW2104	40655	R
205	Modbus MAN mode	DT_NUMERIC	M7692.1	40665	R/W
206	Modbus AUTO mode	DT_NUMERIC	M7692.2	40670	R/W
207	Modbus RESET mode	DT_NUMERIC	M7692.3	40675	R/W
208	Modbus START mdoe	DT_NUMERIC	M7692.4	40680	R/W
209	Modbus STOP mode	DT_NUMERIC	M7692.5	40685	R/W
210	Modbus TEST mode	DT_NUMERIC	M7692.6	40690	R/W
211	Modbus K1 activation	DT_NUMERIC	M7692.7	40695	R/W
212	Modbus K2 activation	DT_NUMERIC	M7693.0	40700	R/W
213	Battery service timer	DT_NUMERIC	MW2388	40721	R
214	K1 output	DT_NUMERIC	M7693.2	40746	R
215	Test active	DT_NUMERIC	M2769.3	40759	R
216	EJP - SCR active	DT_NUMERIC	M6613.2	43480	R
217	Refueling pump output	DT_NUMERIC	M7693.6	40951	R
218	Work hours	DT_NUMERIC	MD3300	41109	R
219	Load percentage	DT_REAL_1	MR6280	43259	R
220	Service hours	DT_NUMERIC	MR3340	41375	R
221	Fuel litres	DT_NUMERIC	MR3386	41395	R
222	Instant consumption	DT_REAL_1	MR6276	43258	R
223	Autonomy hours	DT_NUMERIC	MR3404	41403	R
224	Work interval consumption	DT_REAL_1	MR7564	44167	R
225	Work interval hours	DT_REAL_1	MR7560	44166	R
226	Delta fuel	DT_REAL_1	MR7060	43815	R
227	Dummy load output	DT_NUMERIC	M6612.3	43505	R
228	Total opex cost	DT_REAL_1	MR7080	43820	R
229	Last refilling	DT_NUMERIC	MW7050	43812	R
230	Lost Refilling	DT_NUMERIC	MR7526	44158	R
231	Daily work hours	DT_NUMERIC	MR4060	41753	R
232	Start counter	DT_NUMERIC	MD4822	42171	R
233	Engine warranty	DT_REAL_3	MR5308	42440	R
234	Automatic set 50Hz	DT_NUMERIC	M7427.4	42442	R/W
235	Automatic set 60Hz	DT_NUMERIC	M7427.6	42444	R/W

Выделенные желтым цветом значения были обновлены в версии 1.0.29M!

ПРИЛОЖЕНИЯ

Приложение A: Характеристика датчика топлива

Уровень топлива (%)	VDO (в Ом)	RID1 (в Ом)	RID2 (в Ом)	RID3 (в Ом)
0	10	320	180	172
16	44	273	150	145
32	74	185	117	120
48	103	124	81	93
60	121	105	58	71
76	146	60	32	41
92	170	12	13	14
105	200	-1	-1	-1

Приложение B: Характеристика датчика давления масла

Давление масла (в бар)	VDO (в Ом)	VEGLIA (в Ом)	DATACON (в Ом)
0	10	305	240
2	51	204	174
4	87	114	123
6	122	53	88
8	153	12	62
10	181	12	37
12	181	12	37
14	181	12	37

Приложение C: Характеристика датчика температуры

Температура двигателя (°C)	VDO (в Ом)	VEGLIA (в Ом)	DATACON (в Ом)	RID1 (в Ом)
-50	1000	1000	1000	80
-40	1000	1000	1000	84
-30	1000	1000	1000	88
-20	1000	1000	1000	92
-10	1000	1000	1000	96
0	600	600	600	100
10	600	600	600	104
20	600	600	600	108
25	530	600	600	110
30	455	600	600	112
40	325	600	600	116
50	200	600	455	119
60	145	495	345	123
70	90	320	229	127
80	65	245	172	131
90	44	160	109	135
100	35	125	80	139
110	28	93	63	142
120	22	80	49	146
130	17	67	38	150
140	15	50	30	154
150	-1	-1	-1	157

Приложение D: Характеристика датчика окружающей температуры

Окружающая температура (°C)	PT100 (в Ом)
-50	80
-40	84
-30	88
-20	92
-10	96
0	100
10	104
20	108
30	112
40	116
50	119
60	123
70	127
80	131
90	135
100	139
120	146
130	150
140	154
150	157