

Temperature Controller Configuration Software BC-SET User Manual

Warning Symbol

This document contains notices that you should observe to ensure your own personal safety, as well as to protect the product and connected equipment. These notices are highlighted in the manual by a warning triangle and are marked as follows.



The danger symbol indicates that death or severe personal injury may result if proper precautions are not taken. Do not proceed beyond a warning symbol until the indicated conditions are fully understood and met.

Preface

Original equipment manufacturer reserves the right to change information available in this document without notice. The manufacturer is not liable for any damages incurred to equipment/personal during installation or use of equipment as explained in this document. User must acquire sufficient knowledge & skills prior to using equipment in the application and follow all the local standards & regulations to meet safety requirements.

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1 BC-SET Software

1.1 Introduction

BC-SET Software is used to configure different types of temperature controllers. The software will connect with controllers via the programming port or serial communication port. It read and write the parameters from the controllers. The software can read and write parameters from more than one controller.

1.2 System Requirements

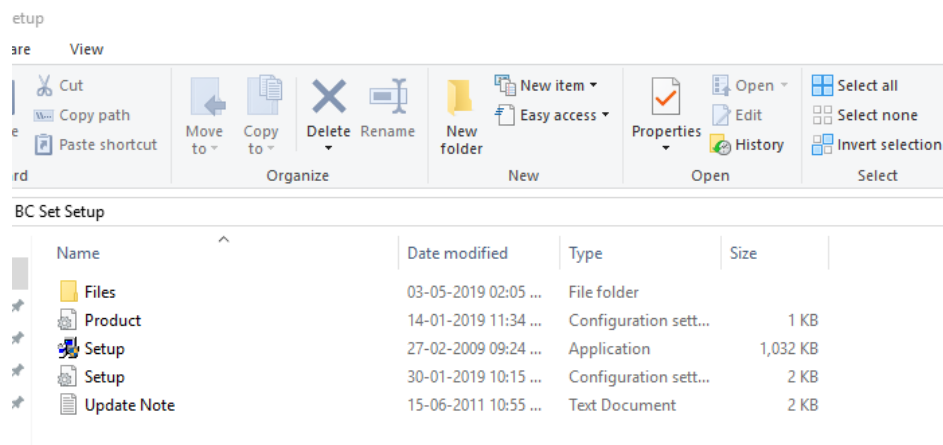
The PC must have at least the below configuration to install BC SET software.

Item	Minimum Requirements
System	IBM PC compatible computer with Intel Pentium IV or above
Operating System	Windows XP or above
Memory	256MB
Hard Disk	50 GB Free Space on the hard disk
Communication Ports	RS232 or RS485 or USB Port

1.3 Software Installation

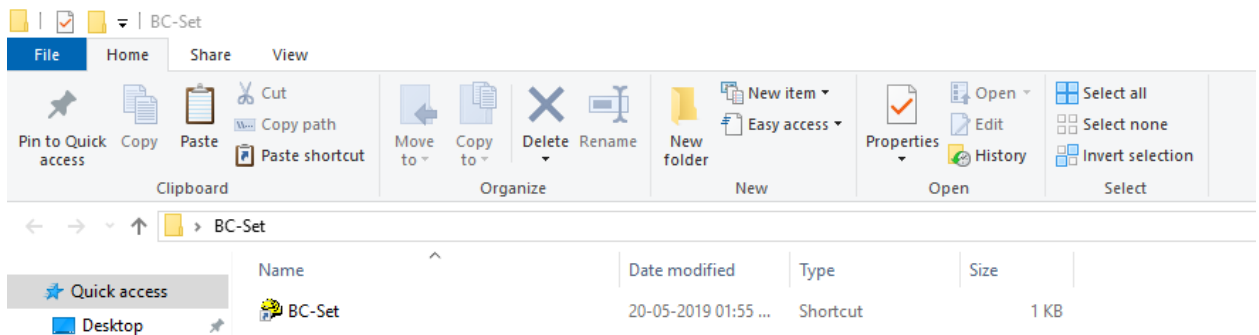
BC-SET software can be installed by following the below procedure.

1. Download BC SET software from the manufacturer's website.
2. Install latest Dot Net software from Microsoft website
3. Install the software by double-clicking the setupwizard.exe from BC-Set Setup folder.



4. Follow the on-screen instruction to complete the installation.

- Now BC-SET Software can be started by using the selecting the BC-Set application shortcut in BC-SET folder on the desktop.



1.4 Supported Devices

The below controllers can be connected with BC-SET Software by using program port cable or serial port (RS232 or RS485) cable to PC.

Controller	Port	Required Accessories
C22, C62, C72, C82, C83, C42, R22, C72P, C82P, C83P, C42P Note: P denotes Profile Version	Programming Port or RS485 Port	Programming Port: PA98-1+CC98-1 RS485: RS485 Interface Cable
B62	Programming Port or RS485 Port	Programming Port: PA98-1+CC98-1 RS485: RS485 Interface Cable
BTC-2500, BTC-4300, BTC-8300, BTC-9300	Programming Port or RS232 or RS485	Programming Port: CC91-3 +SNA10A Serial Port: RS232 or RS485 Interface Cable
BTC-4100, BTC-7100, BTC- 8100, BTC-9100, C21, P41, P91	Programming Port or RS232 or RS485	Programming Port: CC91-1 +SNA10A Serial Port: RS232 or RS485 Interface Cable
C91, L91	Programming Port or RS485	Programming Port: CC91-2 +SNA10A RS485: RS485 Interface Cable

1.5 Power Requirement

The controller needs to be powered before connected with BC-Set Software.

1.6 Network connection

The BC-Set software uses RS232 or RS485 or Programming port to connect with the controllers. For Programming port connection the programming port adaptor SNA10A or PA98-1 is required. If the PC is not equipped with RS232 or RS485 port then USB to RS232/RS485 converters can be used.

1.7 Setup and Use

Once the software is started, it will prompt the user to configure the starting and end node address needs to be connected. After the configuration of the starting and end node address, the software will try to connect with the controller with the default communication setup. If the communication is successful the software will display the parameters list of the connected controllers else the software will show an error message.

BC-Set V1.9

File System Help

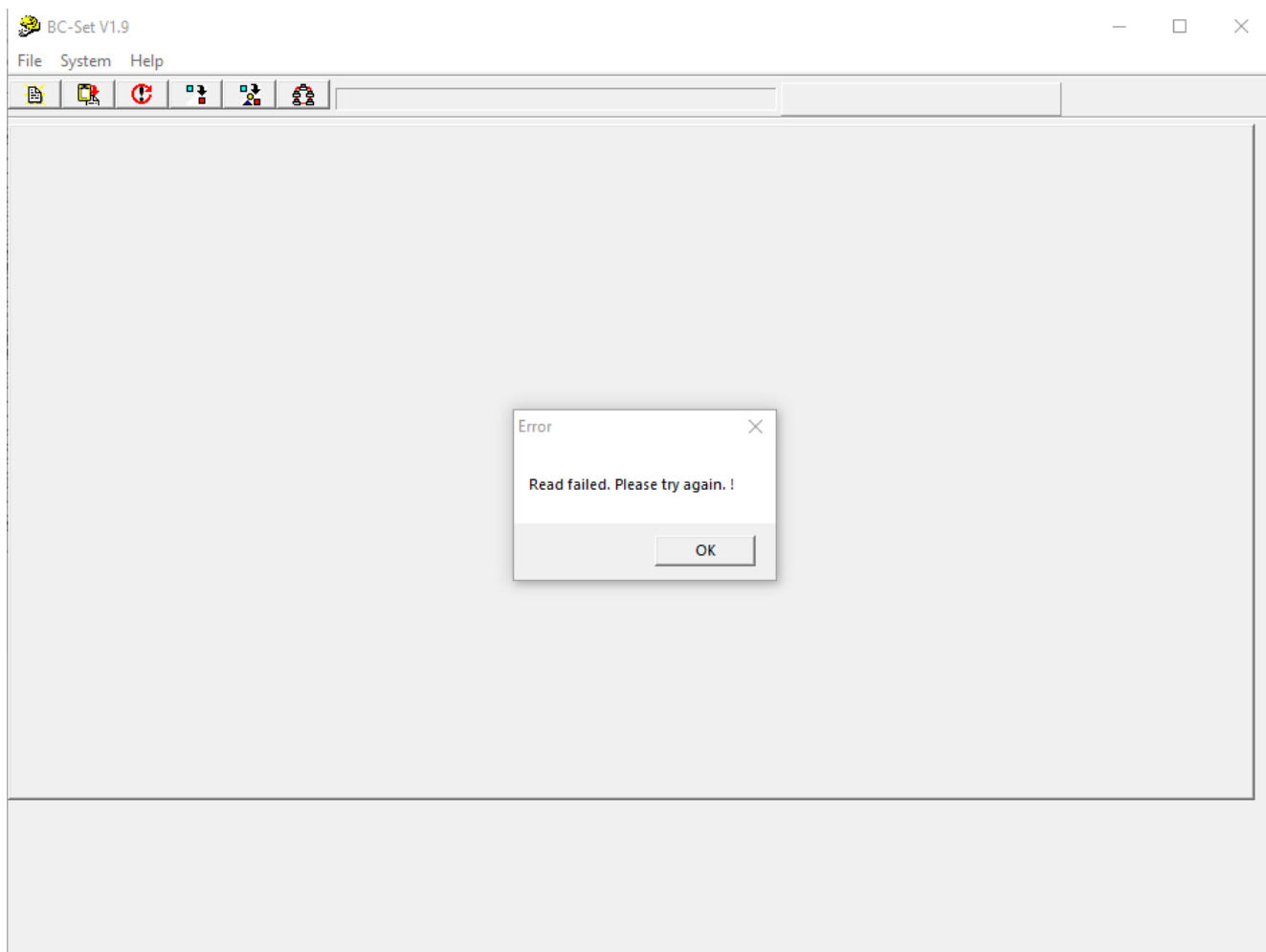
Addr2[C62]

ADDR	NAME	VALUE
0	SP1	-17.71
1	SP2	-16.6
2	SP3	-17.75
3	RESVD	0
4	RESVD	0
5	RESVD	0
6	RESVD	0
7	DTMR	0
8	INPT	16
9	UNIT	0
10	DP	3
11	INLO	-17.778
12	INHI	-17.667
13	SP1L	-17.762
14	SP1H	-17.706
15	FILT	2
16	RESVD	0
17	PB	0.01
18	TI	100
19	TD	25
20	OUT1	0
21	Q1TY	1
22	Q1FT	2
23	Q1HY	0.001
24	CYC1	18.1
25	QFST	25
26	RAMP	2
27	RR	0.635
28	OUT2	2
29	Q2TY	0
30	Q2FT	0
31	CYC2	18
32	CPB	100
33	DB	0
34	A1FN	2
35	A1MD	0
36	A1HY	0.001
37	A1FT	0
38	A1SP	-17.764
39	A1DV	0.001
40	A2OT	0
41	A2FN	2
42	A2MD	0
43	A2HY	0.001
44	A2FT	0
45	A2SP	-17.75
46	A2DV	0.001
47	A3OT	0
48	A3FN	12
49	A3MD	0
50	A3HY	0.001
51	A3FT	0
52	A3SP	0.01
53	A3DV	0.001
54	RESVD	0
55	RESVD	0
56	RESVD	0
57	RESVD	0
58	RESVD	0
59	RESVD	0
60	RESVD	0
61	BPL1	0
62	BPL2	0
63	CJCL	4862
64	PV64	-17.778
65	SV65	-17.778
66	MV166	100
67	MV267	100
68	TIMER	0
69	ERROR	0
70	MODE	0
71	PROG71	62
72	CMND	0
73	JOB1	0
74	JOB2	0
75	JOB3	0
76	CJCT	0
77	ADLO	4.6
78	ADHI	8.2
79	RTDL	-199.9
80	RTDH	-199.9
81	CJLO	26.16
82	CJHI	0
83	V1L	-199.9
84	V1G	-199.9
85	MA1L	-199.9
86	MA1G	-4.8
87	RESVD	0
88	RESVD	0
89	RESVD	0
90	RESVD	0
91	RESVD	0
92	RESVD	0
93	RESVD	0
94	RESVD	0
95	RESVD	0
96	RESVD	0
97	RESVD	0
98	RESVD	0
99	SEL5	0
100	SEL6	0
101	SEL7	0
102	SEL8	0
103	DFS1	1
104	DFS2	0
105	DFS3	0
106	RETY	0
107	RELO	-17.6
108	REHI	-16.6
109	ADDR	2
110	BAUD	2
111	DATA	1
112	PARI	0
113	STOP	0
114	CT1R	0
115	CT2R	0
116	HBEN	0
117	HBHY	0.1
118	HB1T	0
119	HB2T	0
120	HSEN	0
121	HSYH	0.1
122	HS1T	50
123	HS2T	50
124	RESVD	0
125	RESVD	0
126	RESVD	0
127	FILE	0
128	PV	-17.778
129	SV	-17.71
130	MV1	100
131	MV2	0
132	PASS	0
133	CODE	0
134	QFTL	0
135	QFTH	0
136	CALO	0
137	CAHI	1
138	RESVD	0
139	RESVD	0
140	PROG	62.12
141	E1FN	6
142	E2FN	6
143	RESVD	0
144	RESVD	0
145	RESVD	0
146	RESVD	0
147	A1DL	0
148	A2DL	0
149	A3DL	0
150	RESVD	0
151	SFT	0
152	SFL1	0
153	SFL2	0
154	SFTH	-16.6
155	SFTR	0

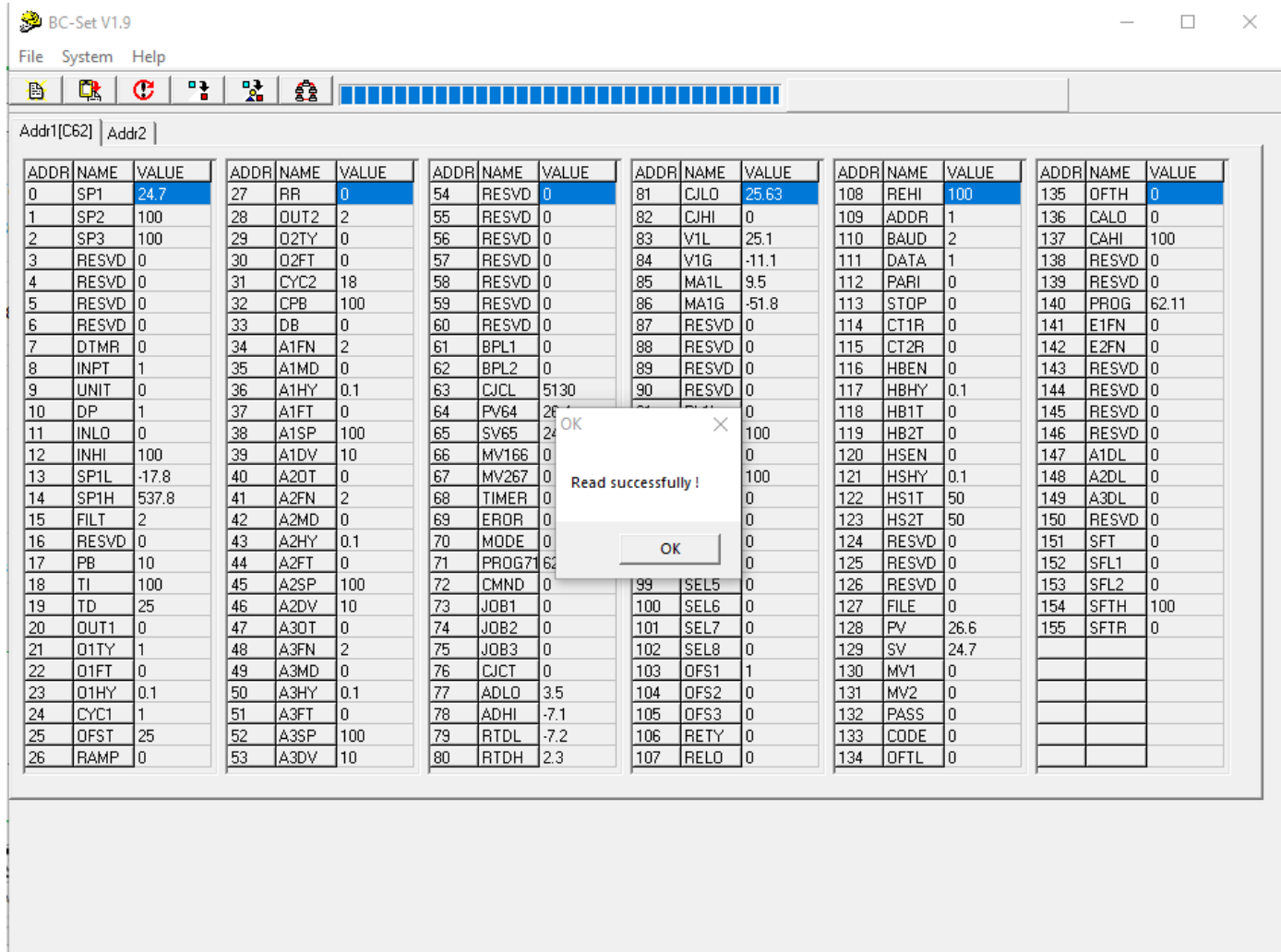
Read successfully!

OK

1-1 Successful communication Single Controller



1-2 Communication Failure



1-3 Successful Communication Multiple Controllers

Once the parameters are listed the user can edit the parameters and write them to controllers. If the same type of controllers connected then the parameters can be read and write at once by selecting the range of node addresses.

1.8 Configuration of Communication parameter

The communication parameter setup of software can be configured by using the configuration menu in the system menu. In the configuration, all parameters have to be configured as per the connected controller's connection and configuration. If multiple controllers are connected then all the controllers have to be configured with the same communication parameters.

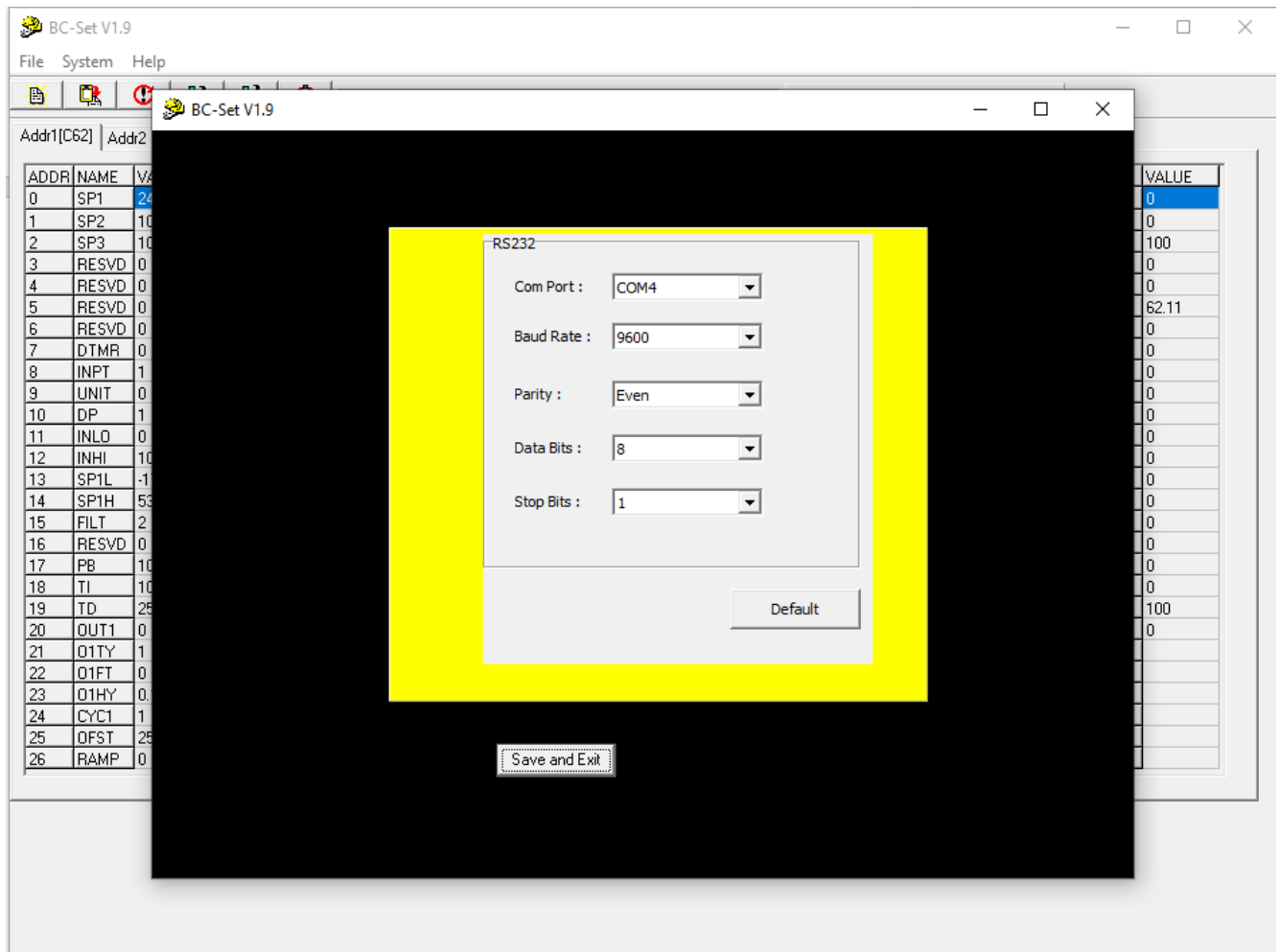
BC-Set V1.9

File System Help

Rescan F5
Read Data F6
Write Data F7
Write Multiple F8
Configuration F9
Profiler Editor

ADDR	NAME	VALUE	ADDR	NAME	VALUE	ADDR	NAME	VALUE	ADDR	NAME	VALUE	ADDR	NAME	VALUE
0	RR	0	54	RESVD	0	81	CJLO	25.63	108	REHI	100	135	OFTH	0
1	OUT2	2	55	RESVD	0	82	CJHI	0	109	ADDR	1	136	CALO	0
2	SP3	100	56	RESVD	0	83	V1L	25.1	110	BAUD	2	137	CAHI	100
3	RESVD	0	57	RESVD	0	84	V1G	-11.1	111	DATA	1	138	RESVD	0
4	RESVD	0	58	RESVD	0	85	MA1L	9.5	112	PARI	0	139	RESVD	0
5	RESVD	0	59	RESVD	0	86	MA1G	-51.8	113	STOP	0	140	PROG	62.11
6	RESVD	0	60	RESVD	0	87	RESVD	0	114	CT1R	0	141	E1FN	0
7	DTMR	0	61	BPL1	0	88	RESVD	0	115	CT2R	0	142	E2FN	0
8	INPT	1	62	BPL2	0	89	RESVD	0	116	HBEN	0	143	RESVD	0
9	UNIT	0	63	CJCL	5130	90	RESVD	0	117	HBHY	0.1	144	RESVD	0
10	DP	1	64	PV64	26.4	91	PL1L	0	118	HB1T	0	145	RESVD	0
11	INLO	0	65	SV65	24.7	92	PL1H	100	119	HB2T	0	146	RESVD	0
12	INHI	100	66	MV166	0	93	PL2L	0	120	HSEN	0	147	A1DL	0
13	SP1L	-17.8	67	MV267	0	94	PL2H	100	121	HSY	0.1	148	A2DL	0
14	SP1H	537.8	68	TIMER	0	95	SEL1	0	122	HS1T	50	149	A3DL	0
15	FILT	2	69	ERROR	0	96	SEL2	0	123	HS2T	50	150	RESVD	0
16	RESVD	0	70	MODE	0	97	SEL3	0	124	RESVD	0	151	SFT	0
17	PB	10	71	PROG71	62.11	98	SEL4	0	125	RESVD	0	152	SFL1	0
18	TI	100	72	CMND	0	99	SEL5	0	126	RESVD	0	153	SFL2	0
19	TD	25	73	JOB1	0	100	SEL6	0	127	FILE	0	154	SFTH	100
20	OUT1	0	74	JOB2	0	101	SEL7	0	128	PV	26.6	155	SFTR	0
21	O1TY	1	75	JOB3	0	102	SEL8	0	129	SV	24.7			
22	O1FT	0	76	CJCT	0	103	QFS1	1	130	MV1	0			
23	O1HY	0.1	77	ADLO	3.5	104	QFS2	0	131	MV2	0			
24	CYC1	1	78	ADHI	-7.1	105	QFS3	0	132	PASS	0			
25	QFST	25	79	RTDL	-7.2	106	RETY	0	133	CODE	0			
26	RAMP	0	80	RTDH	2.3	107	RELO	0	134	QFTL	0			

1-4 System Menu



1-5 Communication Configuration

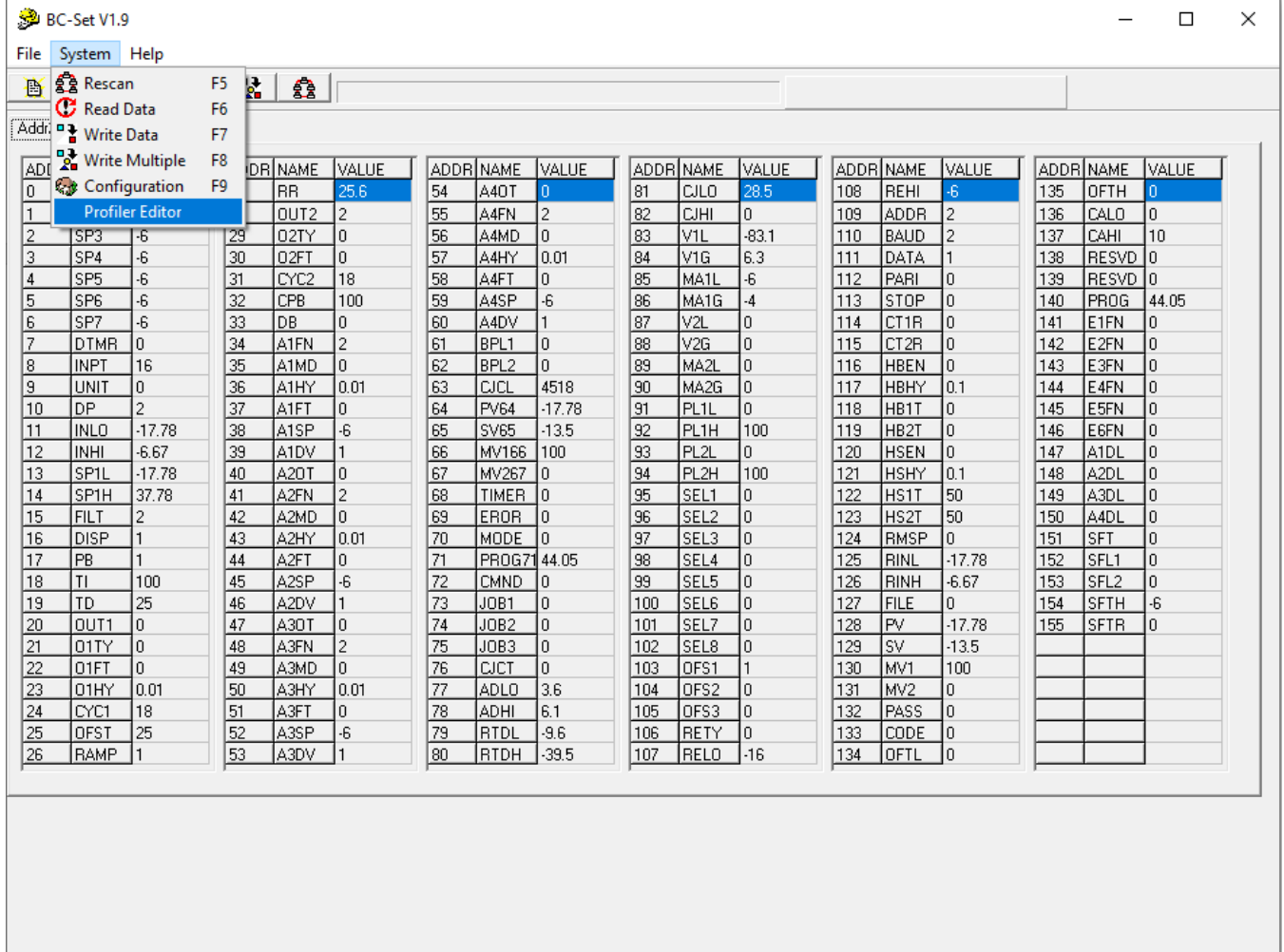
1.9 Guideline for Communication Failure

If the software can't read the parameters from the controller then check the below guidelines.

1. Check the communication cable is connected properly or not.
2. Check the communication port configuration of the controller and the software are the same or not.
3. If RS485 or RS232 communication is used for communication then check the controller has proper communication module on it or not
4. If the programming port is used for communication then the programming port cable is connected properly or not.
5. If the problem still can't be resolved then there might be a problem on hardware. Contact the supplier for assistance.

1.10 Profile Configuration

If the connected controller has a profile function then the profile can be configured by using the profile configuration option in the system menu. The profile parameters can be read and write from the controller in this window.



The screenshot shows the 'BC-Set V1.9' application window. The 'System' menu is open, and the 'Profiler Editor' option is selected. The main window displays a table of profile parameters. The table is organized into columns: ADDRESS, NAME, and VALUE. The parameters are listed in a grid format, with some rows highlighted in blue. The 'Profiler Editor' menu item is highlighted in the 'System' menu.

ADDRESS	NAME	VALUE	ADDRESS	NAME	VALUE	ADDRESS	NAME	VALUE	ADDRESS	NAME	VALUE	ADDRESS	NAME	VALUE
0	RR	25.6	54	A4OT	0	81	CJLO	28.5	108	REHI	-6	135	OPTH	0
1	OUT2	2	55	A4FN	2	82	CJHI	0	109	ADDR	2	136	CALO	0
2	SP3	-6	56	A4MD	0	83	V1L	-83.1	110	BAUD	2	137	CAHI	10
3	SP4	-6	57	A4HY	0.01	84	V1G	6.3	111	DATA	1	138	RESVD	0
4	SP5	-6	58	A4FT	0	85	MA1L	-6	112	PARI	0	139	RESVD	0
5	SP6	-6	59	A4SP	-6	86	MA1G	-4	113	STOP	0	140	PRDG	44.05
6	SP7	-6	60	A4DV	1	87	V2L	0	114	CT1R	0	141	E1FN	0
7	DTMR	0	61	BPL1	0	88	V2G	0	115	CT2R	0	142	E2FN	0
8	INPT	16	62	BPL2	0	89	MA2L	0	116	HBEN	0	143	E3FN	0
9	UNIT	0	63	CJCL	4518	90	MA2G	0	117	HBHY	0.1	144	E4FN	0
10	DP	2	64	PV64	-17.78	91	PL1L	0	118	HB1T	0	145	E5FN	0
11	INLO	-17.78	65	SV65	-13.5	92	PL1H	100	119	HB2T	0	146	E6FN	0
12	INHI	-6.67	66	MV166	100	93	PL2L	0	120	HSEN	0	147	A1DL	0
13	SP1L	-17.78	67	MV267	0	94	PL2H	100	121	HSY	0.1	148	A2DL	0
14	SP1H	37.78	68	TIMER	0	95	SEL1	0	122	HS1T	50	149	A3DL	0
15	FILT	2	69	ERDR	0	96	SEL2	0	123	HS2T	50	150	A4DL	0
16	DISP	1	70	MODE	0	97	SEL3	0	124	RMSP	0	151	SFT	0
17	PB	1	71	PRDG7	44.05	98	SEL4	0	125	RINL	-17.78	152	SFL1	0
18	TI	100	72	CMND	0	99	SEL5	0	126	RINH	-6.67	153	SFL2	0
19	TD	25	73	JOB1	0	100	SEL6	0	127	FILE	0	154	SFTH	-6
20	OUT1	0	74	JOB2	0	101	SEL7	0	128	PV	-17.78	155	SFTR	0
21	Q1TY	0	75	JOB3	0	102	SEL8	0	129	SV	-13.5			
22	Q1FT	0	76	CJCT	0	103	QFS1	1	130	MV1	100			
23	Q1HY	0.01	77	ADLO	3.6	104	QFS2	0	131	MV2	0			
24	CYC1	18	78	ADHI	6.1	105	QFS3	0	132	PASS	0			
25	QFST	25	79	RTDL	-9.6	106	RETY	0	133	CODE	0			
26	RAMP	1	80	RTDH	-39.5	107	RELO	-16	134	OFTL	0			

1-6 Profile Editor

BC-Set V1.9

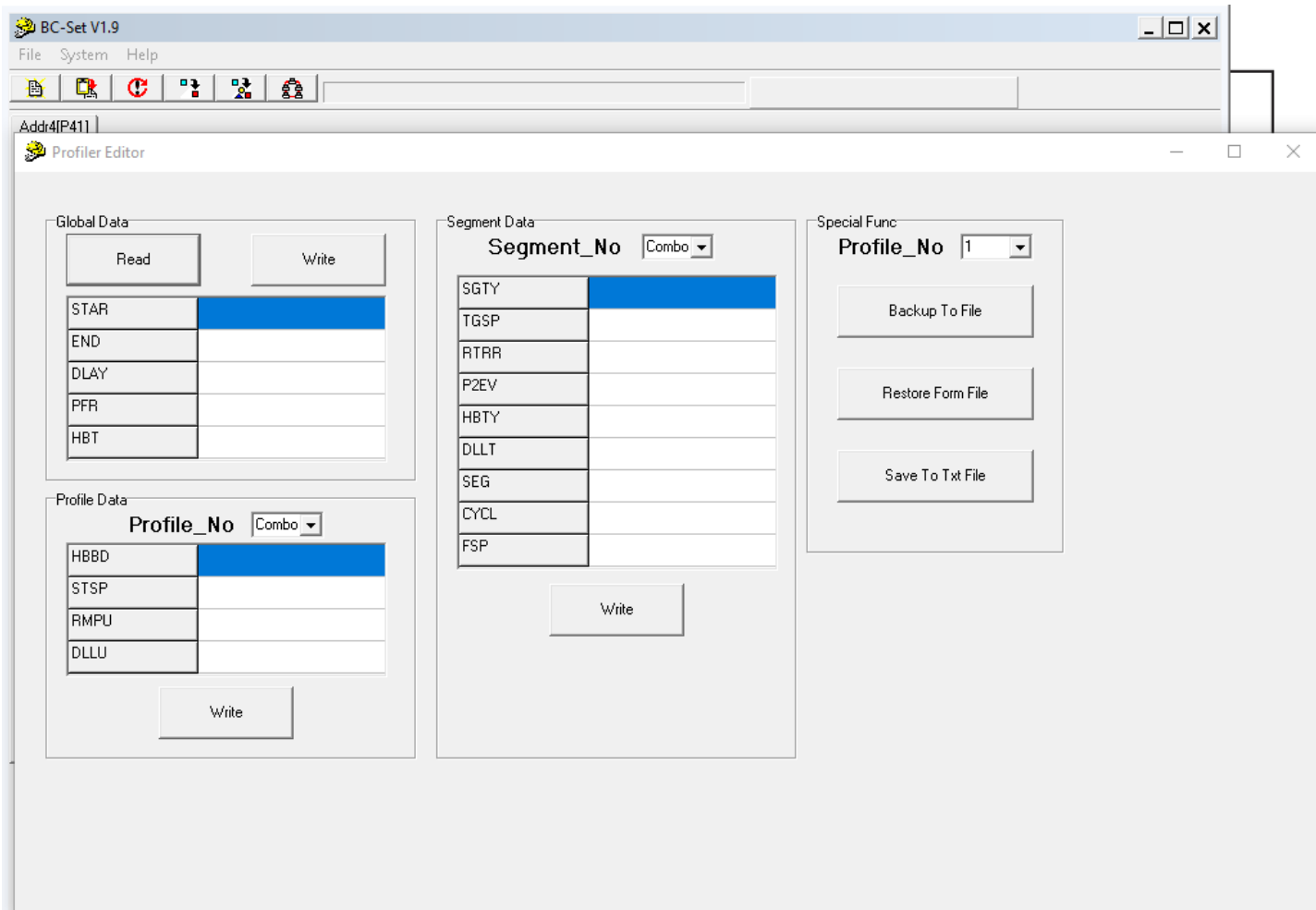
File System Help

Form8

Read Write

ADDR	NAME	VALUE	ADDR	NAME	VALUE	ADDR	NAME	VALUE	ADDR	NAME	VALUE
161	PROF	0 NONE	175	TSP1	-6	193	TSP7	-6	211	TSPD	-6
162	RUN	0 S&AR	176	RPT1	00.00	194	RPT7	00.00	212	RPTD	00.00
163	RMPU	0 HH.MM	177	SKT1	00.00	195	SKT7	00.00	213	SKTD	00.00
164	STAR	0 PV	178	TSP2	-6	196	TSP8	-6	214	TSPE	-6
165	END	0 SP1	179	RPT2	00.00	197	RPT8	00.00	215	RPTD	00.00
166	PFR	2 SP1	180	SKT2	00.00	198	SKT8	00.00	216	SKTE	00.00
167	HBLO	0	181	TSP3	-6	199	TSP9	-6	217	TSPF	-6
168	HBHI	0	182	RPT3	00.00	200	RPT9	00.00	218	RPTF	00.00
169	HB	00.00	183	SKT3	00.00	201	SKT9	00.00	219	SKTF	00.00
170	CYCL	1	184	TSP4	-6	202	TSPA	-6	220	TSPG	-6
171	CYCR	1	185	RPT4	00.00	203	RPTA	00.00	221	RPTG	00.00
172	STEP	1.RP	186	SKT4	00.00	204	SKTA	00.00	222	SKTG	00.00
173	TIMR	00.00	187	TSP5	-6	205	TSPB	-6			
174	STAT	1	188	RPT5	00.00	206	RPTB	00.00			
			189	SKT5	00.00	207	SKTB	00.00			
			190	TSP6	-6	208	TSPC	-6			
			191	RPT6	00.00	209	RPTC	00.00			
			192	SKT6	00.00	210	SKTC	00.00			

1-7 C Series Profile Configuration



1-8 Profile Editor for P41

1.11 File Menu

1.11.1 Open-File (F2)

Open the parameter list of the connected controller from the existing file. By pressing F2 on the keyboard also to open the file.

1.11.2 Save File As (F3)

Save the parameter list to the file. By pressing F3 on the keyboard also to save the file.

1.11.3 Exit (F4)

Close the application. By pressing F4 on the keyboard also to close the file.

1.12 System Menu

1.12.1 Rescan (F5)

Rescan will scan the connected controllers again for communication. By pressing the key F5 on the keyboard also will read the data.

1.12.2 Read Data (F6)

Read data will read the data again from the controller. By pressing the key F6 on the keyboard also will read the data.

1.12.3 Write Data (F7)

Write the data to the connected controller. By pressing the key F7 on the keyboard also write the data.

1.12.4 Write Multiple data (F8)

Write the data to multiple controllers connected. By pressing the key F8 on the keyboard also write the data to multiple controllers.

1.12.5 Configuration (F9)

Open the window to configure the communication settings of the software. By pressing F9 on the keyboard also to open the configuration window.

1.12.6 Profile Editor

Open the profile editor for the controllers with profile function.

1.13 Help Menu

Provide information about the software version.