Model B3HU PC CONFIGURATOR Model: B3HUCFG

Users Manual

Contents

1.	GE	TTING	i STARTED	. 3
	1.1.	HARDV	VARE REQUIREMENTS	3
	1.2.	INSTAL	LING & UNISTALLING THE B3HUCFG	3
	1.3.	START	ING UP THE B3HUCFG	3
	1.4.	NOTE .		3
	_			
2.	OP	ERATI	NG THE B3HUCFG PC CONFIGURATOR	. 4
	2.1.	CONNE	ECTING THE DEVICE (B3HU)	5
	2.2.	MONIT	ORING TRENDS	6
		2.2.1.	COMMUNICATION STATUS	6
		2.2.2.	DEVICE STATUS	7
		2.2.3.	BARGRAPH & TREND GRAPH	7
	2.3.	DEVIC	E CONFIGURATION	8
	2.4.	DETAIL	ED DEVICE INFORMATION	9
	2.5.	DIAGN	OSTICS	10
	2.6.	FIXED	ANALOG OUTPUT	. 11
	2.7.	DAC TF	RIMMING	.12
		2.7.1.	ENTER 4mA TRIM MODE	12
		2.7.2.	ENTER 20mA TRIM MODE	.12
		2.7.3.	RESETTING TO THE DEFAULT	.12
	2.8.	SENSC	OR CALIBRATION	13
	2.9.	CUSTC	DM TC	.14
		2.9.1.	CUSTOM TC FILE FORMAT	14
		2.9.2.	CUSTOM TC SETTING	15
	2.10	CUSTC	OM RTD	16
		2.10.1	. CUSTOM RTD FILE FORMAT	16
		2.10.2	. CUSTOM RTD SETTING	17
	2.11.	SPECI	AL CURVE	18
		2.11.1.	SPECIAL CURVE FILE FORMAT	18
		2.11.2.	SPECIAL CURVE SETTING	19
	2.12	. FILE M	ANAGEMENT	20
		2.12.1	. MODIFYING PARAMETERS	21
		2.12.2	. TRANSFERRING DATA TO/FROM DEVICE	21
		2.12.3	. READING/WRITING FILES	22
		2.12.4	. COMPARING FILE TO DEVICE	22
		2.12.5	. FILE MANAGEMENT EXAMPLES	23
	2.13	. LANGL	JAGE	25

1. GETTING STARTED

1.1. HARDWARE REQUIREMENTS

PC	IBM PC compatible
os	Windows XP Service Pack 3 Windows Vista (32-bit) Service Pack 1 Windows 7 (32-bit, 64-bit) Windows 10 (32-bit, 64-bit) The software may not operate adequately in certain conditions.
CPU/Memory	Must meet the relevant Windows' requirements.
Hard disk	10 MB minimum free space
Cable	HART modem cable (model: COP-HU)

1.2. INSTALLING & UNISTALLING THE B3HUCFG

INSTALL

The program is provided as compressed archive at our web site. Decompress the archive and execute 'setup.exe' to start up the B3HUCFG installer program. Follow instructions on the Windows.

UNINSTALL

Open Control Panel > Programs > Programs and Features. Select the B3HUCFG from the program list and click Uninstall button.

Note) For Windows XP, "Add or Remove Programs".

1.3. STARTING UP THE B3HUCFG

Press Start on the task bar and choose B3HUCFG from the Program menu.

The model B3HU Universal Temperature Transmitter must be connected to the PC via a HART modem.

1.4. NOTE

The B3HUCFG does not support a device in the burst mode.

Use Emerson's 275 or 375 HART Communicator.

2. OPERATING THE B3HUCFG PC CONFIGURATOR

Figure 1 shows the initial view of the B3HUCFG PC Configurator window.

In order to enable the settings shown on the screen, the model B3HU Universal Temperature Transmitter must be connected to the PC via a HART modem.

▼ Figure 1. Initial View

🗊 B3 HUC F	G PC Confie	gurator Ver1.0.5										
B3HU Configurator			Comm Status	сом	PE	OVE	FE		SME	BOE	TME	
	Monit	or	Device Status	MAL	CFG	CLD		AFX	AOS	NPV	ΡV	
De	evice Infor	mation	PV	F	°V %		Ter	m.		AO		Functions
Senso	r type	Millivolt	1000		.00		100		IC	20		Connect
Seria	al No.	0	_		_		- 80 -			- - -		Diagnostics
Senso	r wires	2 Wires	800—	{	30 —			_		- - 10		Detailed Device Info
PV	unit	mV	_		_					- 10		Analys Outsut
PV xapaa	Upper	1000.000	- 600—	- 60 - - -			- - 40					Trim DAC
FVTalige	Lower	0.000	-					-		- 12		Sensor Cal
PV upp	oer limit	1100.000	_ 400_	- 40				-		-		
PV low	er limit	-100.000	-	-			 0					Custom TC
PV minim	ium span	10.00		_			=			8 –		Custom RTD
PV da	mping	0.000	200	20 — —			-					Special Curve
Burnout detection		Upscale					-40			-		Delline Address
CJC mode		CJC OFF			3			۲		4		
Transfer	function	LINEAR	0.00	(0.00		- 40.00			0.00		File
Term te	emp unit	degC	m∨		%		degC			mA		Language
			PV Graph	PV	% Graph		Term	Graph		AO Graj	ph	Exit

2.1. CONNECTING THE DEVICE (B3HU)

On the initial view, click [Connect] and the Device Connection menu appears on the screen.

▼ Figure 2. Device Connection

B3HUCFG PC Configurator Ver1.0.5										
B3HU Configurator	Comm Status	сом	PE	OVE	FE		SME	BOE	TME	
Monitor	Device Status	MAL	CFG	CLD		AFX	AOS	NPV	PV	
Device Connection	PV	F	°V %		Ter	rm.		AO		Functions
COM port	1000	1	00		100			20		Connect
M-System COP-HU USB modem (COM6)					80	_		-		Diagnostics
Device address 0	800— _ _	{	08 			- - -		- 16 -		Detailed Device Info
	- 600-				- - 40 -			-		
	-				0	-		-		
Search device	 					_ _ _		12		Sensor Cal
	-				o	_				Custom TC
Connect device	_	-						8 _		Custom RTD
	200— —	2	20			_		- - -		Special Curve
Disconnect device					-40			4		Polling Address
	0.00	().00		- 40	1.00		0.00)	File
	m∨		%		de	gC		mΑ		Language
Close Device Connection	PV Graph	PV 9	% Graph		Term	Graph		AO Gra	ph	Exit

[COM port]	Choose an adequately configured COM port to be connected.
[Device address]	Specify polling address of the device to be connected.
[Search device]	Searches connectable devices among the ones whose polling address is already set between 0 and 15. Starts at the address specified in 'Device address' field.
[Connect device]	Starts communication with the B3HU. Once the connection is established, the program up- loads the device's configuration information and automatically calls up the Device Information view. The Device Information view is the base for various operations to configure the B3HU.
[Disconnect device]	Terminates the communication with the device.
[Close Device Connection]	Quits the Device Connection view.

2.2. MONITORING TRENDS

Once the device is connected, the Device Information menu and the trend monitors appear on the screen. The user can configure various parameters of the B3HU.

🖥 B3HUCFG PC Configurator Ver1.0.5												
	B3HU Configue	Comm Status	сом	PE	OVE	FE		SME	BOE	TME		
	Monit	or	Device Status	MAL	CFG	CLD		AFX	AOS			
D	evice Infor	mation	PV	F	°V %		Ter	m.		AO		Functions
Senso	r type	Millivolt	1000	1	.00		100	'		20		Connect
Seria	al No.	1	-		_		80	_		-		Diagnostics
Senso	r wires	2 Wires	800-	8				-		-		Detailed Device Info
PV	unit	mV			_			_		16-		
	Upper	1000.000					40	-				Analog Output
PV range	Lower	-50.000					40	_				Trim DAC
PV upp) Der limit	1000.000	_ 400_		_			_		12-		Sensor Cal
PV low	er limit	-50.000		2	10 — —		n	=				Custom TC
PV minim	num span	4.00	-		-		U	_		- 8 –		Custom RTD
PV da	mping	0.500			20 — _			-				Special Curve
Burnout detection		Downscale	<u> </u>	-		10	-40 —			-		
CJC mode		CJC ON	-50 —		0					4		Polling Address
Transfer	function	LINEAR	300.27	33.36			15.18			9.34		File
Term te	emp unit	degC	m∨	%			degC			mA		Language
		,	PV Graph	PV 9	% Graph		Term	Graph		AO Gra	ph	Exit

2.2.1. COMMUNICATION STATUS

Comm Status summarizes the current communication status in the HART commands by lamps.

Comm Status	сом	PE	OVE	FE		SME	BOE	TME
-------------	-----	----	-----	----	--	-----	-----	-----

[COM] lamp	Green light blinks with the normal communications condition.
[PE] lamp	Red light turns on when the device detects Parity Error.
[OVE] lamp	Red light turns on when the device detects Overrun Error.
[FE] lamp	Red light turns on when the device detects Framing Error.
[SME] lamp	Red light turns on when the device detects Sum Check Error.
[BOE] lamp	Red light turns on when the device detects Buffer Over Flow Error.
[TME] lamp	Red light turns on when the device detects the communication time out.

PE, OVE, FE, SME, BOE, TME are off together when normal condition.

2.2.2. DEVICE STATUS

Device Status summarizes the current device status in the HART commands by lamps.

Device Statu	ıs	MAL	CFG	CLD		AFX	AOS	NPV	PV	
[MAL] lamp	Red	l light tui	ms on w	nen malf	unction(s	s) occur	(s) in the	e device.	(Off whe	en normal condition)
[CFG] lamp	[CFG] lamp Red light turns on when the device configuration is modified. This lamp can be turned off by [Reset configuration change flag] in the Diagnostics view.									Diagnostics view.
[CLD] lamp	Alw	ays OFF	with the	B3HU.						
[AFX] lamp	Red This	l light tur s lamp tu	rns on w ırns off iı	hen the a n the nor	analog ou mal outp	utput er ut mode	ntered in e, where	Fixed Outp	utput mo out varies	de. s according to the input.
[AOS] lamp	[AOS] lampGreen light turns on when the analog output is diagnosed to be normal.Red light turns on when the output is saturated upscale or downscale.								al.	
NPV	NPV Always off for B3HU.									
[PV] lampGreen light turns on when the sensor input is in the specified PV range. Red light turns on when it is out of the range.								е.		

2.2.3. BARGRAPH & TREND GRAPH

Four bargraphs indicating PV in engineering unit, PV in % of the selected range, the terminal temperature and analog output current are available.

The graph scales can be modified except for the PV in engineering unit of which the scales are automatically determined and fixed according to the PV range (Upper/Lower).

At the bottom of each bargraph is [Graph] button which opens a trend graph for the item. The example below shows the trend graph for [PV Graph]. Use [Start] and [Stop] buttons to activate/deactivate trending, and click [Close Trend Graph] to quit the trend graph view.



2.3. DEVICE CONFIGURATION

In Figure 3, the Device Information menu on the left shows the basic configuration information of the connected device. When you need to change configurations, click the left button for the required item to modify the setting.

Sensor type	OHM	Ni508.4	Type W5					
	Pt100	NiFe604	Type U					
	Pt200	Custom RTD	Type L					
	Pt300	Millivolt	Туре Р					
	Pt400	Туре В	Type PR					
	Pt500	Туре Е	Custom TC					
	Pt1000	Type J	POT 4000 ohms					
	Pt50 (JIS81)	Туре К	POT 2500 ohms					
	JPt100 (JIS89)	Туре N	POT 1200 ohms					
	Ni100	Type R	POT 600 ohms					
	Ni120	Type S	POT 300 ohms					
	Cu10@25	Туре Т	POT 150 ohms					
	Specifies sensor type new sensor type is ch selected for PV range	and number of extens losen, the default settine and PV upper/lower l	sion wires. When a ngs are automatically imits.					
Serial No.	Specifies a serial num	ber for the sensor.						
Sensor wires	Indicates current num	ber of the sensor wire	s.					
PV unit	Specifies the engineer changed, other relate PV upper/lower limits, in the new unit.	ring unit for the PV. W d items such as PV ra , PV minimum span ar	/hen this setting is nge (Upper/Lower), e automatically shown					
PV range	Specifies 0% and 100	% input values.						
PV upper/lower limit	Indicates measurable	maximum and minimu	um values.					
PV minimum span	Indicates minimum sp	an of the input range.						
PV damping	Specifies time consta Set to 0 to cancel the	nt (0.5 to 30 seconds) function.	for damping function.					
Burnout detection (3 selections)	Upscale	Downscale	None					
	Specifies either the or case that a burnout is	utput should go upsca detected.	le or downscale in					
CJC mode (2 selections)	CJC OFF		CJC ON					
	Enables/disables the mocouple input. Whe sensor, the CJC mode this function is disable	cold junction compens n a thermocouple is s e is set to ON at defau ed.	sation (CJC) for ther- pecified as the input lt. With other sensors,					
Transfer function (3 selections)	LINEAR	SQRT	SPECIAL_CURVE					
Enables/disables the Transfer Function, specifying either the output should be linear to the input signal or linearized to a custom curve data. The B3HU supports the user-specific linearization table function (SPECIAL_CURVE). Refer to Section 2.11 for the details.								
Term temp unit (4 selections)	degC	degF degR	Kelvin					
	Specifies the temperature unit at the cold junction terminal.							

Device Information									
Senso	or type	Туре В							
Seria	al No.	1							
Senso	r wires	2 Wires							
PV	unit	degC							
DU van de	Upper	1760.000							
Pvrange	Lower	400.000							
PV upp	per limit	1820.000							
PV low	ver limit	100.000							
PV minin	num span	20.00							
PV da	mping	0.500							
Burnout	detection	None							
CJC	mode	CJC ON							
Transfer	function	LINEAR							
Term te	emp unit	degC							

2.4. DETAILED DEVICE INFORMATION

In Figure 3, clicking [Detailed Device Info] opens the Detailed Device Information menu as shown in Figure 5. Figure 5. Detailed Device Information.

▼ Figure 5. Detailed Device Information

B3HUCFG PC Configurator Ver1.0.5												
Cor	B3HU aficuu	J rator	Comm Status	сом	PE	OVE	FE		SME	BOE	TME	
N N	Nonit	or	Device Status	MAL	CFG	CLD		AFX	AOS	NPV	ΡV	
Detailed D	evice l	Information	PV	F	₩%		Ter	m.		AO		Functions
Manufacture	er	M-System CO	1000	1	00		100			20		Connect
Device type	•	B3HU			_		80			-		Diagnostics
Device identifica	ation	2856	800—	8	30 —			-				Detailed Device Info
Number of prear	nbles	5			_			_		- 10 -		
Universal cmd re	Jniversal cmd revision 5		-	- ហ		40	-		-		Analog Output	
Transmitter specific	revision	1		_				-		- 10		Foncor Col
Hardware revis	sion	1	_ 400—					-		- 12		
Software revis	ion	2	-	2	+U — —		0	-		-		Custom TC
Final assembly nu	umber	16777215	_					=		- 8 –		Custom RTD
Tag name		B3HU-123	_	2	20 — _							Special Curve
Descriptor	DES	CRIPTOR TEST1				16	-40	E		-		
Date	Date 2015/06/17		-50 -		0					4		Polling Address
Message			300.26	3	3.36		16.	28		9.34		File
ME	MESSAGE SAMPLE		m∨		%		de	gC		mA		Language
Close Detaile	d Devi	ce Information	PV Graph	PV 9	% Graph		Term	Graph		AO Gra	ph	Exit

Manufacturer	Indicates the manufacturer.
Device type	Indicates the device type.
Device identification	Indicates the device ID.
Number of preambles	Indicates the number of preambles (value used in the HART communication).
Universal cmd revision	Indicates universal command revision.
Transmitter specific revision	Indicates transmitter specific revision.
Hardware revision	Indicates hardware revision.
Software revision	Indicate software revision.
Final assembly number	You can enter a final assembly number (0 to 16777215).
Tag name	You can enter a tag name and its description (Descriptor). Date is automatically set at the data modified date. Max. 8 alphanumeric characters for the tag, max. 16 alphanumeric characters for the descriptor.
Descriptor	Indicates description of the tag name.
Date	Indicates data modified date.
Message	You can enter a memo in this field. Up to 32 alphanumeric characters.
Close Detailed Device Information	Quits the view.

NOTE

• Only capital letters are used as 'Tag name', 'Descriptor' and 'Message'. Small letters will be automatically converted to capital letters.

2.5. DIAGNOSTICS

Click [Diagnostics] button to open the Diagnostics view as shown in Figure 6.

▼ Figure 6. Diagnostics

B3HUCFG PC Configurator Ver1.0.5										
B3HU Configurator	Comm Status	сом	PE	OVE	FE		SME	BOE	TME	
Monitor	Device Status	MAL	CFG	CLD		AFX	AOS	NPV	PV	
Diagnostics	PV	F	∾V %		Ter	m.		AO		Functions
Execute diagnostics	1000	1	.00		100			20		Connect
Read additional status	-		_		80	_		- -		Diagnostics
Reset configuration change flag	- 800—	8	- 30 —			_		-		Detailed Device Info
Additional Status	-		_			_		16		
EEPROM SUM error (Basic)						_		-		Analog Output
EEPROM SUM error (Custom TC)	-	t	- UC		40	_		-		Trim DAC
EEPROM SUM error (Custom RTD)			_			_		12 -		Sensor Cal
EEPROM SUM error (Special Curve)	400—	,	10			_		-		
EEPROM SUM error (Summary)	-		"		0	=			_	Custom TC
EEPROM hardware error	-		-		U	-				Custom RTD
	-		20 _			-		8		Constin Currun
			-			-		-		
			-	- 16	-40			-		
	-50 —		0					4		Polling Address
	300.26	3	3.36		16.	28		9.34	1	File
	m∨		%		de	gC		mA		Language
Close Diagnostics	PV Graph	PV 9	% Graph		Term(Graph		AO Gra	ph	Exit

Diagnostics	Execute diagnostics	Activates the diagnostics program and the results are displayed under the Additional Status.						
	Read additional status	Calls up the current contents of Additional Status from the device.						
	Reset configuration change flag	Turns off the CFG lamp in Device Status.						
Additional Status	EEPROM SUM error (Basic)	Shows the status of each Additional Status item: green in normal status,						
	EEPROM SUM error (Custom TC)	while read in error.						
	EEPROM SUM error (Custom RTD)							
	EEPROM SUM error (Special Curve)							
	EEPROM SUM error (Summary)							
	EEPROM hardware error							
	Close Diagnostics	Quits the view.						

2.6. FIXED ANALOG OUTPUT

Click [Analog Output] button to open the Analog Output view as shown in Figure 7. You can perform the output loop test.

▼ Figure 7. Analog Output

B3HUCFG PC Configurator Ver1.0.5										
B3HU Configurator	Comm Status	сом	PE	OVE	FE		SME	BOE	TME	
Monitor	Device Status	MAL	CFG	CLD		AFX	AOS	NPV	ΡV	
Analog Output	PV	F	∾ %		Ter	m.		AO		Functions
Set AO for current PV output	1000	1	.00		100			20		Connect
Set AO for specified value	-		_		80	_		-		Diagnostics
Exit fixed AO mode	800-	8				_		-		Detailed Device Info
	- - - - 400- - - - - - - - - - - - - - -	2			40 0 -40			16		Analog Output Trim DAC Sensor Cal Custom TC Custom RTD Special Curve Polling Address
	300.26	3	3.36		16.	26		9.34		File
p	m∨		%		de	gC		mΑ		Language
Close Analog Output	PV Graph	PV	% Graph	n	Term (Graph		AO Gra	ph	Exit

Set AO for current PV output	The output is held at the current value.
Set AO for specified value	You can set a specific value within the range to fix the output, which enables output loop test.
Exit fixed AO mode	Cancels the fixed output mode to return the device into normal output mode. Note: It is recommended to fix the analog output signal while those parameters affecting the output signal such as PV range are changed, and then to reset the device to normal mode after the setting is done.
Close Analog Output	Quits the view.

2.7. DAC TRIMMING

Click [Trim DAC] button to open the Trim DAC view as shown in Figure 8. You can adjust the output zero and span.

B3HUCFG PC Configurator Ver1.0.5										
B3HU Configurator	Comm Status	сом	PE	OVE	FE		SME	BOE	TME	
Monitor	Device Status	MAL	CFG	CLD		AFX	AOS	NPV	PV	
Trim DAC	PV	F	°V %		Ter	rm.		AO		Functions
Enter 4mA trim mode	1000		.00		100			20		Connect
Enter 20mA trim mode			_		80	_		- -		Diagnostics
Trim by actual measured value	800—	8				-		-		Detailed Device Info
Clear trim DAC data	-		_			-		- 16 - -		
		í	- 30		40	_		-		Analog Output
			-			_		- 10		Sensor Cal
	- 400—					-		- 12		
		2	40 — —		•	-				Custom TC
	-		-		U	-		8 _		Custom RTD
	_	:	20 —			_				Special Curve
			_		-4(- - -		
	0 — -50 —		0					4		Polling Address
	300 27	3	3 36		16	24 _		9.3/		File
	mV		%		de	gC		mA		Language
Close Trim DAC	PV Graph	PV 4	% Graph		Term	Graph		AO Gra	ph	Exit

▼ Figure 8. Trim DAC

2.7.1. ENTER 4mA TRIM MODE

- 1) Click [Enter 4mA trim mode]. The device outputs a fixed 4mA signal.
- 2) Measure the actual output current at the receiving instrument to which the device output should be matched.
- 3) Click [Trim by actual measured value] to set the measured value. The actual value can be set from 3.8mA up to 4.2mA.
- 4) Repeat setting [Trim by actual measured value] until the measured output shows 4mA.

2.7.2. ENTER 20mA TRIM MODE

- 1) Click [Enter 20mA trim mode]. The device outputs a fixed 20mA signal.
- 2) Measure the actual output current at the receiving instrument to which the device output should be matched.
- 3) Click [Trim by actual measured value] to set the measured value. The actual value can be set from 19.8mA up to 20.2mA.
- 4) Repeat setting [Trim by actual measured value] until the measured output shows 20mA.

2.7.3. RESETTING TO THE DEFAULT

Click [Clear trim DAC data] to return the device to the factory default trimming values.

[Close Trim DAC] quits the view.

2.8. SENSOR CALIBRATION

The input sensor can be calibrated with Zero and Span: the Zero is represented as offset at the calibration point, while the Span is represented as gain against the zero point. The gain must be set from 0.1 to 10.0.

Calibration points can be specified to any point within the PV range. The mV and thermocouple inputs are calibrated against the measured voltage; while the RTD and resistance inputs are against the measured resistance. Errors caused by extension wire resistance for 2-wire RTDs and by imbalance in that for 3-wire RTDs can be calibrated by the Zero adjustment. The potentiometer input is calibrated against %.

Click [Sensor Cal] button to open the Sensor Calibration view as shown in Figure 9.

Figure 9. Sensor Calibratio	▼	Figure	9.	Sensor	Calibratio	n
-----------------------------	---	--------	----	--------	------------	---

🗊 взнист	G PC Configurator V	er1.0.5										
	B3HU Configurator		Comm Status	сом	PE	OVE	FE		SME	BOE	TME	
	Monitor		Device Status	MAL	CFG	CLD		AFX	AOS	NPV	PV	
Sensor Calibration		PV	F	∾V %		Ter	m.		AO		Functions	
Read calibration data		1000	1	.00		100	' -	IC	20		Connect	
d	lear sensor calibration data		-		_		80	_		- -		Diagnostics
	Zero calibration		800-	8				-				Detailed Device Info
	Span calibration		-		_			_		- 16 -		
PV	300.200623	mV	_	F	 ហ		<u>4</u> 0	_		-		Analog Output
Zero point	300.2652	mV			-			-		- 10		Sensor Cal
Zero value	300.2000	m٧	_ 400—	,	10			_				
Gain	1.0000		-	-	"- -		0	_		-		Custom TC
					-			=		8 -		Custom RTD
				2	20 — _			_				Special Curve
			<u> </u>		-	10	-40			-		
			-50 —		0					4		Polling Address
			300.20	3	3.35		 16.	07		9.34	1	File
			m∨		%		de	gC		mA		Language
Clos	e Sensor Calibratio	on	PV Graph	P۷ ۹	% Graph		Term	Graph		AO Gra	ph	Exit

The present measured value is indicated in the middle column of the PV row. Refer to this value when calibrating the sensor. It takes 5 or 6 seconds for the calibration result to affect the measured value on the display.

Communicate with the sensor and click [Zero calibration] to open the field where you can enter the target value (precise sensor value). The result is shown in the PV display field. The unit is the same as that of the entered target value. The data before calibration is shown in the Zero point field, while the data after calibration is shown in the Zero value field.

Communicate with the sensor and click [Span calibration] to open the field where you can enter the target value (precise sensor value). The result is shown in the PV display field. The gain between the zero point and the span point is shown in the Gain field.

[Read calibration data] calls up the present calibrated values from the B3HU and display them in these fields.

Click [Clear sensor calibration data] button to return the device to the factory default status.

[Close Sensor Calibration] quits the view.

2.9. CUSTOM TC

The B3HU supports the user-specific thermocouple table function. In order to use a user-specific table, the data must be defined and registered.

Following is the procedure to use the user-specific TC table.

- 1) Create a custom TC table as following.
- 2) Click [Custom TC] button to open the Custom TC view.
- 3) Click [Read table from file] button to upload a file stored in the PC. When uploaded, the file contents summary is indicated under Custom TC Table Contents.
- 4) Click [Display Custom TC graph] button to show the I/O characteristics data in a graph.
- 5) Click [write table to device] button to download the data to the B3HU.
- 6) When the downloading is successfully complete, Status under Custom TC Table Contests shows 'Configured'. Then the option 'Custom TC' becomes available to choose among the Sensor type selections. If 'Custom TC' has been already selected before this setting is done, you cannot download a particular data file.
- 7) Click [Read table from device] button to upload the I/O characteristics data registered in the B3HU. If there is no file registered, Status under Custom TC Table Contents shows 'Non configured'.
- 8) Click [Close Custom TC] button to quit the view.

2.9.1. CUSTOM TC FILE FORMAT

The thermocouple characteristics data must be defined in text format.

The file format is as following.

Define the minimum temperature value in Celsius at Minimum TC Temperature.

Specify the Temperature Step used in the table, from 1°C to 50°C.

Describe the characteristics data within $\{ \}$. Data must be between -100 and 1000, and be entered in mV. Up to 1000 points can be specified.

Note: Data longer than 1000 points are ignored. Set 1000 points or less.

```
/* Custom TC Table Definition
/* Ti = f(Xi) ( 0 <= i < Size )
/*
    Temperature Step (1 to 50 degC)
/*
    -100 <= X(i)<= 1000 mV
/*
    X(i) < X(i+1)
    2<= Size <= 1000
/*
Minimum TC Temperature = 0 ← Minimum temperature T0 (°C)
                  ← Temperature step (°C)
Step = 10
{
10.000000
                  ← Voltage value for T0 (mV)
:
20.000000
                   ←Voltage value for maximum temperature Tmax (mV)
}
```

2.9.2. CUSTOM TC SETTING

Click [Custom TC] button to open the Custom TC view as shown in Figure 10.

▼ Figure 10. Custom TC

B3HUCFG PC Configurator Ver1.0.5												
B3H Configu	B3HU Configurator			сом	PE	OVE	FE		SME	BOE	TME	
Moni	tor		Device Status	MAL	CFG	CLD		AFX	AOS	NPV	PV	
Custon	n TC		PV	F	₩ %		Ter	m.		AO		Functions
Read table from device			200-	1	00		100	, 		20		Connect
Write table t	o device		-		-		80	-		-		Diagnostics
Write table	to file		_ 160_	8	- 30 -			-				Detailed Device Info
Read table f	rom file		_		_			_		16-		
Display Custom	Display Custom TC graph							-				Analog Output
Cuetom TC Tab	la Conta	nte	- 120	- 00			40	-		-		Trim DAC
Gustom re rub			-		-			_		12-		Sensor Cal
Status	Confi	gured	80 _	2	40 _			-				
Min temperature	2	degC			-			_		-		Custom TC
Max temperature	200	degC			1			-		8 -		Custom RTD
Temperature step	1	degC	40	2	20 — _			-		-		Special Curve
Table size	199	Max size	-			16	-40			-		
,	,		2 –		0					4		Polling Address
			47.39	2	2.93		17.	21	7.67		<u> </u>	File
					%		de	gC		mA		Language
Close Cus	tom TC		PV Graph	PV	% Graph	·][Term	Graph		AO Gra	ph	Exit

Custom TC	Read table from device	Uploads the custom TC table registered in the B3HU. If there is no file registered, Status under Custom TC Table Contents shows 'Non configured'.
	Write table to device	Downloads the currently displayed custom TC table to the B3HU. When the down- loading is successfully complete, Status under Custom TC Table Contents shows 'Configured'.
	Write table to file	Saves the currently displayed custom TC table to a file. Upload data from the B3HU with [Read table from device] button before saving.
	Read table from file	Uploads a file stored in the PC. When uploaded, the file contents summary is indi- cated under Custom TC Table Contents.
	Display Custom TC graph	Displays a TC table graph (Figure 11). The characteristics of the transfer function can be confirmed.
Custom TC Table	Summarizes the custom TC	table contents.
Contents	Status	Indicates the custom TC table registration of the B3HU.
	Min temperature	Indicates minimum temperature in °C.
	Max temperature	Indicates maximum temperature in °C.
	Temperature step	Indicates temperature step in °C.
	Table size	Indicates number of points defined.
	Close Custom TC	Quits the view.



▼ Figure 11. Custom TC Graph

B3HUCFG EM-7502-F Rev.2 15

2.10. CUSTOM RTD

The B3HU supports the user-specific RTD table function. In order to use a user-specific table, the data must be defined and registered.

Following is the procedure to use the user-specific RTD table.

- 1) Create a custom RTD table as following.
- 2) Click [Custom RTD] button to open the Custom RTD view.
- 3) Click [Read table from file] button to upload a file stored in the PC. When uploaded, the file contents summary is indicated under Custom RTD Table Contents.
- 4) Click [Display Custom RTD graph] button to show the I/O characteristics data in a graph.
- 5) Click [Write table to device] button to download the data to the B3HU.
- 6) When the downloading is successfully complete, Status under Custom RTD Table Contests shows 'Configured'. Then the option 'Custom RTD' becomes available to choose among the Sensor type selections. If 'Custom RTD has been already selected before this setting is done, you cannot download a particular data file.
- 7) Click [Read table from device] button to upload the I/O characteristics data registered in the B3HU. If there is no file registered, Status under Custom RTD Table Contents shows 'Non configured'.
- 8) Click [Close Custom RTD] button to quit the view.

2.10.1. CUSTOM RTD FILE FORMAT

The RTD characteristics data must be defined in text format.

The file format is as following.

Define the minimum temperature value in Celsius at Minimum RTD Temperature.

Specify the Temperature Step used in the table, from 1°C to 50°C.

Describe the characteristics data within { }. Data must be between 0 and 4000, and be entered in ohms. Up to 500 points can be specified.

Note: Data longer than 500 points are ignored. Set 500 points or less.

```
/* Custom RTD Table Definition
/* Ti = f(Xi) ( 0 <= i < Size )
/*
     Temperature Step (1 to 50 degC)
/*
     0 < X(i) <= 4000 Ohm
/*
     X(i) < X(i+1)
     2<= Size <= 500
/*
Minimum RTD Temperature = 0 ← Minimum temperature T0 (°C)
Step = 10
                    ← Temperature step (°C)
{
100.000000
                    \leftarrow Resistance value for T0 (\Omega)
:
200.000000
                    \leftarrowResistance value for maximum temperature Tmax (\Omega)
}
```

2.10.2.CUSTOM RTD SETTING

Click [Custom RTD] button to open the Custom RTD view as shown in Figure 12.

▼ Figure 12. Custom RTD

💕 B3HUCFG PC Conf	igurator V	er1.0.5										
B3H Configu	B3HU Configurator				PE	OVE	FE		SME	BOE	TME	
Moni	tor		Device Status	MAL	CFG	CLD		AFX	AOS	NPV	PV	
Custom	RTD		PV	F	∾ %		Ter	m.		AO		Functions
Read table from device			900	1	.00		100)=		20		Connect
Write table to device			800—		-		80	-		-		Diagnostics
Write table to file				8	- 08			-				Detailed Device Info
Read table from file					_			_		- 16 -		
Display Custom RTD graph			-		-			-				Analog Output
Custom RTD Tal	ole Conte	ents	400-		-		40	-		-		Irim DAC
Status	Config	ured	-	40_				-		12 -		
Min temperature	-200	degC		_	-			3		-		Custom TC
Max temperature	2295	degC			-			-		8 -		Custom RTD
Temperature step	5	degC	0 -	2	20 — -			-		-		Special Curve
Table size	500	Max size 500				Шľ	-40	2		-		
	j j 500				0			۲		4		Polling Address
				2	8.46		17.	21	8.55			File
					%		de	gC		mA		Language
Close Cust	om RTD		PV Graph	PV 9	% Graph		Term	Graph		AO Gra	ph	Exit

Custom RTD	Read table from device	Uploads the custom RTD table registered in the B3HU.If there is no file registered, Status under Custom RTD Table Contents shows 'Non configured'.
	Write table to device	Downloads the currently displayed custom RTD table to the B3HU. When the down- loading is successfully complete, Status under Custom RTD Table Contents shows 'Configured'.
	Write table to file	Saves the currently displayed custom RTD table to a file. Upload data from the B3HU with [Read table from device] button before saving.
	Read table from file	Uploads a file stored in the PC. When uploaded, the file contents summary is indi- cated under Custom RTD Table Contents.
	Display Custom RTD graph	Displays a RTD table graph (Figure 13). The characteristics of the transfer function can be confirmed.
Custom RTD Table	Summarizes the custom RT	D table contents.
Contents	Status	Indicates the custom RTD table registration of the B3HU.
	Min temperature	Indicates minimum temperature in °C.
	Max temperature	Indicates maximum temperature in °C.
	Temperature step	Indicates temperature step in °C.
	Table size	Indicates number of points defined.
	Close Custom RTD	Quits the view.



▼ Figure 13. Custom RTD Graph

B3HUCFG EM-7502-F Rev.2 17

2.11. SPECIAL CURVE

The B3HU supports the user-specific linearization table function (SPECIAL_CURVE). In order to use the SPECIAL_CURVE, the data must be defined and registered.

Following is the procedure to use the user-specific special curve table.

- 1) Create a special curve table as following.
- 2) Click [Special Curve] button to open the Special Curve view.
- 3) Click [Read table from file] button to upload a file stored in the PC. When uploaded, the file contents summary is indicated under Special Curve Table Contents.
- 4) Click [Display Special Curve graph] button to show the I/O characteristics data in a graph.
- 5) Click [Write table to device] button to download the data to the B3HU.
- 6) When the downloading is successfully complete, Status under Special Curve Table Contests shows 'Configured'. Then the option 'SPECIAL_CURVE' becomes available to choose among the Transfer function selections. If 'SPECIAL_CURVE' has been already selected before this setting is done, you cannot download a particular data file.
- 7) Click [Read table from device] button to upload the I/O characteristics data registered in the B3HU. If there is no file registered, Status under Special Curve Table Contents shows 'Non configured'.
- 8) Click [Close Special Curve] button to quit the view.

2.11.1. SPECIAL CURVE FILE FORMAT

The special curve data must be defined in text format.

The file format is as following.

Describe the characteristics data within { }. Sets of X (input) and Y (output) values must be between -15 and 115, and be entered in %. Up to 128 points can be specified.

Note: Data longer than 128 points are ignored. Set 128 points or less.

```
/* Linearization Table( Special Curve ) Definition
/* Yi = f(Xi) ( 0 <= i < Size )</pre>
/*
    -15 <= X(i), Y(i) <= 115 %
/*
    X(i) < X(i+1)
/*
    2 <= Size <= 128
{
0.000000, 0.000000
                        ← The minimum X and Y values
:
100.000000, 100.000000
                            ← The maximum X and Y values
}
```

2.11.2. SPECIAL CURVE SETTING

Click [Special Curve] button to open the Special Curve view as shown in Figure 14.

▼ Figure 14. Special Curve

💞 B3HUCFG PC Conf	igurator '	Ver1.0.5										
B3H Configu	IU Irator		Comm Status	сом	PE	OVE	FE		SME	BOE	TME	
Moni	tor		Device Status	MAL	CFG	CLD		AFX	AOS	NPV	PV	
Special (Curve		PV	F	₩ %		Ter	m.		AO		Functions
Read table fro	om device		1000-		.00		100	' -		20		Connect
Write table t	o device		-		_		80	-		_		Diagnostics
Write table	to file		800-	8	- 30 -		00	-				Detailed Device Info
Read table f	rom file		-		_			_		-16 -		La la Ostada
Display Special C	urve graph			f	- 			-				
Special Curve Ta	able Con	tents	-		-			-		- 17		Sensor Cal
Status	Confi	gured	_ 400—		10			-				
Minimum value	0	%	-	_	-		0	3				Custom TC
Maximum value	100	%						-		8 -		Custom RTD
Table size	101	Max size 128	1	2	20 — -			-				Special Curve
			- 0 -50		0		-40	Ē		4		Polling Address
			300.18	3	3.35		18.	34		9.34		File
			m∨		%		de	gC		mA		Language
Close Speci	al Curve	;	PV Graph	PV 9	% Graph		Term	Graph		AO Gra	ph	Exit

Special Curve	Read table from device	Uploads the special curve table registered in the B3HU. If there is no file registered, Status under Special Curve Table Contents shows 'Non configured'.						
	Write table to device	Downloads the currently displayed special curve table to the B3HU. When the downloading is successfully complete, Status under Special Curve Table Contents shows 'Configured'.						
	Write table to file	Saves the currently displayed special curve table to a file. Upload data from the B3HU with [Read table from device] button before saving.						
	Read table from file	Uploads a file stored in the PC. When uploaded, the file contents summary is indi- cated under Special Curve Table Contents.						
	Display Special Curve graph	Displays a curve table graph (Figure 15). The characteristics of the transfer func- tion can be confirmed.						
Special Curve Table	Summarizes the special curve	table contents.						
Contents	Status	Indicates the special curve table registration of the B3HU.						
	Minimum value	Indicates minimum value in %.						
	Maximum value	Indicates maximum value in %.						
	Table size	Indicates number of points defined.						
	Close Special Curve	Quits the view.						



▼ Figure 15. Special Curve Graph

2.12. FILE MANAGEMENT

The B3HU's configurations can be saved in a file and then read out from a file to be downloaded to multiple modules.

Click [File] button to open the File Management view as shown in Figure 16.

While this view is active, the device connection is severed.

The view is separated in two areas: 'File Configuration' and 'Device Configuration'. 'File Configuration' shows data transfer (Read or Write File) between the PC Configurator and the PC, while 'Device Configuration' shows data transfer (Upload or Download) between the configurator and the B3HU device.

The File Management view consists of two pages. Click [Page] button to switch between pages. The second page appears as follows (Figure 17).

Click [Exit] to complete file management operations. The device will remain disconnected and must be connected with [Connect] button to start monitoring.

NOTE

- The validity of the selected PV range values is not verified in this view. Please make sure to set them according to the described specifications.
- Custom TC, Custom RTD or Linearization Table data are not handled in this view but in each specific function view.

▼ Figure 16. File Management, 1st Page

Ø	B3HUCFG P	C Configurator	Ver1.0.	ō								
ſ	E	Page		Read File		Write File	•		Upload		Downloa	d
	EXIC	1		Compare		All Copy <	<	:	>> All Copy		Compare	•
	Prop	erties		File Conf	iguratio	n			Device Col	nfigurat	ion	
	Tag r	name	СНБ				<	>				СНБ
	Desci	riptor	СНБ				<	>				СНБ
	Da	ate	СНБ				<	>				СНБ
	Mes	sage	СНБ				<	>				СНБ
Γ	Device ide	ntification	СНБ				<	>				CHG
	Sanco	r tupe										
	Senso	r wires	СНБ	<u> </u>			<	>				CHG
┢	PV	unit	СНС									СНБ
	PV uppe	er range					<	>				
	PV lowe	r range	CHG									СНБ
	PV da	mping	СНБ			Sec	<	>			Sec	СНБ
	Transfer	function	СНБ				<	>				СНБ
Γ	Burnout	detection	CHG				<	>				СНБ

▼ Figure 17. File Management, 2nd Page

🗊 ВЗНИС Г ВР	C Configurator	Ver1.0.5	j						
Evit	Page		Read File	Write File			Upload	Download	
	2		Compare	All Copy <-	<	;	∘> All Copy	Compare	
Proj	perties		File Conf	iguration			Device Col	nfiguration	
Term temp	perature unit	СНБ			<	>			СНБ
CCC	mode	СНБ			<	>			СНБ
									C C L C
Sensor	serial No.	CHG							CHG
Final asse	mbly number	СНБ			<	>			СНБ

2.12.1. MODIFYING PARAMETERS

Click [CHG] button at the left of each field to modify the parameter. The field in which the parameter has been changed will be highlighted in light yellow background color. [CHG] buttons placed across multiple fields indicate that these parameters can be modified in single sequence.

When one parameter has been changed, related fields are also affected. For example, when 'Sensor type' is modified, 'PV unit', 'PV upper range' and 'PV lower range' may be automatically changed.

Parameters can be copied between 'File Configuration' and 'Device Configuration' using [>] and [<] buttons. Copied fields will be highlighted in light yellow background color (Figure 18).

Using [All Copy <<] or [>> All Copy] buttons enables transferring all parameters between the areas. Copied fields will be highlighted in light yellow background color.

Figure 18. Parameters Modified

💞 B3HUCFG P	C Configurator	Ver1.0.	5								
	Page		Read File		Write File	•		Upload		Downloa	ł
Exit	1		Compare		All Copy <	<	;	>> All Copy		Compare	,
Prop	erties		File Conf	iguratio	n			Device Cor	nfigurati	ion	
Tagı	name	CHG	B3HU-	-000		<	>	B3HU	-123		СНБ
Desci	iptor	СНБ	DESCRIPTOR TEST1			<	>	DESCRIPTOR TEST1			СНБ
Da	te	СНБ	2015/06/17			<	>	2015/0	06/17		СНБ
Mes	Message		MESSAGE SAMPLE			<	>	MESSAGE SAMPLE			СНБ
Device identification		CHG	2856			<	>	285	56		CHG
Senso	r type	сна	Pt100					Milliv	olt		СНС
Senso	wires	Cild	4 W	ires		Ĺ	Ĺ	2 Wi	ires		
PV	unit	CHG	deç	зC				m'	V		СНБ
PV uppe	r range	ave	850.000		degC	<	>	1000.000		mV	ave
PV lowe	r range	СПО	-200.000		degC			-50.000		mV	
PV da	mping	СНБ	30		Sec	<	>	0.500		Sec	СНБ
Transfer	function	СНБ	SQF	RT		<	>	LINE	AR		СНБ
Burnout	letection	CHG	Nor	ne		<	>	Nor	пе		СНБ

2.12.2.TRANSFERRING DATA TO/FROM DEVICE

Click [Upload] button to connect to the B3HU device, to read out its configuration data and to show it in 'Device Configuration' area on the screen (Figure 19). Once the uploading is complete, all background colors are back to the initial state. Click [Download] button to connect and write the configuration data in 'Device Configuration' area to the B3HU device. If an error occurs and downloading is stopped during the process, erred data field is highlighted in med pale red background color.

When the downloading is successfully complete, the configuration data is automatically uploaded and the background color returns to the initial state.

▼ Figure 19. Data Uploaded

🕖 ВЗНИСЕ В	C Configurator	Ver1.0.	ō								
F	Page		Read File		Write File	•		Upload		Downloa	±
EXIL	1		Compare		All Copy <	<	:	>> All Copy		Compare	,
Prop	erties		File Conf	iguratio	n			Device Col	nfigurati	ion	
Tagı	name	СНБ				<	>	B3HU	-123		СНБ
Desc	riptor	СНБ				<	>	DESCRIPTO	OR TEST	1	СНБ
Da	ite	CHG				<	>	2015/0	06/17		СНБ
Mes	age	СНБ				<	>	MESSAGE	SAMPLE	5	СНБ
Device ide	ntification	CHG				<	>	285	56		СНБ
Senso	r type	CHG						Millis	olt /		CHG
Senso	r wires	Cild				Ù		2 Wi	res		
PV	unit	CHG						m'	1		СНБ
PV uppe	r range	CHC				<	>	1000.000		mV	CHC
PV lowe	r range	CHG						-50.000		mV	Chig
PV da	mping	CHG			Sec	<	>	0.500		Sec	СНБ
Transfer	function	СНБ				<	>	LINE	AR		СНБ
Burnout	detection	CHG				<	>	Nor	ne		СНБ

2.12.3.READING/WRITING FILES

Click [Read File] button to read the configuration data from a specified file and to show it in 'File Configuration' area on the screen (Figure 20). All background colors are back to the initial state.

Click [Write File] button to write the configuration data in 'File Configuration' area to a specified file.

Figure 20. File Read Out	▼	Figure	20.	File	Read	Out	
--------------------------	---	--------	-----	------	------	-----	--

💕 ВЗНИСТС Р	C Configurator	Ver1.0.	ō						
F	Page		Read File	Write	=ile		Upload	Downloa	ł
EXIC	1		Compare	All Copy	<<		>> All Copy	Compare	,
Prop	erties		File Confi	guration			Device Con	figuration	
Tag r	name	СНБ	B3HU-	123	<	>	B3HU-	123	СНБ
Desci	riptor	СНБ	DESCRIPTO	R TEST1	<	>	DESCRIPTO	OR TEST1	СНБ
Da	ite	СНБ	2015/0	6/17	<	>	2015/0	6/17	СНБ
Mes	age	СНБ	MESSAGE	SAMPLE	<	>	MESSAGE	SAMPLE	СНБ
Device ide	ntification	CHG	285	6	<	>	285	i6	CHG
Senso	r type	сна	Millivo	olt		,	Milliv	olt	сна
Senso	r wires		2 Wi	res			2 Wir	res	
PV	unit	СНБ	m\	r			mV	l	СНБ
PV uppe	r range	CHC	1000.000	mV	<	>	1000.000	mV	CHC
PV lowe	r range	СПО	-50.000	mV			-50.000	mV	
PV da	mping	СНБ	5.000	Sec	<	>	0.500	Sec	СНБ
Transfer	function	СНБ	LINE	AR	<	>	LINE	AR	СНБ
Burnout	detection	CHG	Upsc	ale	<	>	Non	e	СНБ

2.12.4.COMPARING FILE TO DEVICE

You can compare the configuration data in 'File Configuration' area and 'Device Configuration' area.

Click [Compare] button in 'Device Configuration' area to compare its data to those in 'File Configuration' area. Deviations will be highlighted in med pale red background color (Figure 21).

Click [Compare] button in 'File Configuration' area to compare its data to those in 'Device Configuration' area. Deviations will be highlighted in med pale red background color.

🗊 B3HUCFG P	C Configurator	Ver1.0.	ō						_ 🗆 🛛	
	Page		Read File	Write	File		Upload	Downlo	ad	
Exit	1		Compare	All Cop	y <<		>> All Copy	Compa	re	
Prop	erties		File Confi	iguration			Device Col	nfiguration		
Tag r	name	СНБ	B3HU-	123	<	>	взни	-123	СНБ	
Descr	riptor	СНБ	DESCRIPTO	OR TEST1	<	>	DESCRIPTO	OR TEST1	СНБ	
Da	ite	СНБ	2015/06/17			>	2015/0	2015/06/17		
Mess	Message Device identification		MESSAGE	SAMPLE	<	>	MESSAGE	СНБ		
Device ide	Device identification		2856			>	285	56	CHG	
							-			
Senso	r type	сна	Milliv	olt		、 、	Milliv	olt	CHG	
Sensor	r wires		2 Wi	res	Ĺ	Ĺ	2 W	ires		
PV u	unit	СНБ	m\	/			m'	V	СНБ	
PV uppe	r range		1000.000	mV	<	>	1000.000	mV	CITC.	
PV lowe	r range	CHG	-50.000	mV			-50.000	mV		
PV da	mping	СНБ	5.000	Sec	<	>	0.500	Sec	СНБ	
Transfer	function	СНБ	LINE	AR	<	>	LINE	AR	СНБ	
Burnout o	detection	СНБ	Upsc	ale	<	>	Nor	ne	СНБ	

▼ Figure 21. Parameters Compared

2.12.5.FILE MANAGEMENT EXAMPLES

Operation procedure to modify the device configurations using the file management function is as follows.

🗊 взниста р	C Configurator	Ver1.0.	5								
	Page		Read File		Write File	,		Upload		Downloa	d
EXR	1		Compare		All Copy <	<		>> Al Copy	Compare		,
Prop	erties		File Conf	iguratio	on .			Device Cor	nfiguration		
Tagır	name	СНБ	B3HU	-123		<	>				СНБ
Desci	iptor	СНБ	DESCRIPTO	OR TES	ST1	<	>				CHG
Da	ke	CHG	2015/0	/06/17		<	>				СНБ
Mess	age	CHG	MESSAG	GE TEST		<	>				СНБ
Device ide	ntification	CHG	2856			<	>				CHG
Com.			Ditt	00							
Senso	r cype	CHG	PU			<	>				CHG
Sensor	wires		4 Wi	ires							
PV	unit	CHG	deç	рC							СНБ
PV uppe	r range	0.0	850.000		degC	<	>				ar
PV lowe	r range	Cha	-200.000		degC						Cho
PV da	mping	CHG	0.000		Sec	<	>			Sec	СНБ
Transfer	function	CHG	LINE	AR		<	>				CHG
Burnout	detection	СНБ	Down	scale		<	>				СНБ

	Deere		Deed File		Utrace City			University	Doupload	
Exit	Faye		Read File		write nie		<u> </u>	upicad	Downick	10
	1		Compare	A	sll Copy <	<	<u>;</u>	>> All Copy	Compar	e
Pn	operties		File Confr	iguration				Device Confi	iguration	
Ta	g name	CHG	B3HU-	-123		<		B3HU-1	23	Ю
De	scriptor	CHG	DESCRIPTO	DESCRIPTOR TEST1 < > DESCR		DESCRIPTOR	R TEST1	Сн		
ſ	Date	CHG	KG 2015/06/17 < > 2015/06/		/17	[O				
Me	essage	CHG	MESSAGE	e test		<	>	MESSAGE S	MESSAGE SAMPLE	
Device i	identification	CHG	285	56		<	>	2856		G
										_
Sene	sor type	CHG	Pt1	00				Pt100	J	0
Sene	sor wires		4 Wi	res		\sim	Ĺ	2 Wire	:5	Ľ
P	4 unit	СНБ	deç)C				degC		0
PV up	iper range		850.000		degC	<	>	850.000	degC	1
PV los	wer range	- 010	-200.000		degC			-200.000	degC	
PV (damping	CHG	0.000		Sec	<	>	0.500	Sec	0
Transf	er function	CHG	LINE	AR		<	>	LINEA	R	0
Burnov	at detection	CHG	Down	scale		<		None		0

Eve	Page		Read File	Write Fil	•		Upload	Download Compare	
LAN	1		Compare	All Copy <	<		>> All Copy		
Pr	operties	File Configuration Device Configuration							
Ta	g name	CHG	B3HU	-123	<	>	B3HU-123		
De	scriptor	CHG	DESCRIPTO	DR TEST1	<	>	DESCRIPTO	R TEST1	
	Date	CHG	2015/0	06/17	<	>	2015/06/17		
М	essage	CHG	MESSAG	<	>	MESSAGE SAMPLE			
Device identification		CHG	285	<	>	2856			
Sensor type		CHG	Pt1	Pt100		~	Pt100		
Sen	sor wires	Cina	4 W	ires		Ĺ	2 Wires		
P	Y unit	CHG	deç			degC			
PV up	per range	ar	850.000	degC	<	>	850.000	degC	
PV lower range		Chia	-200.000	degC			-200.000	degC	
PV	damping	CHG	0.000	Sec	<	>	0.500	Sec	
Transfer function		CHG	LINEAR		<	>	LINEAR		
Burnout detection		CHG	Downscale		<	>	None		

1) Click [Read File] button to read the configuration data from a specified file.

2) Click [Upload] button to read out the configuration data of the connected device.

3) Click [Compare] button in 'File Configuration' area to compare its data to those in 'Device Configuration' area. Deviations will be highlighted in med pale read background color.

🖗 B3HUCFG PC Configurator Ver1.0.5														
	Page		Read File	Write File				Upload	Download					
EXR	1		Compare	All Copy <<			:]	>> All Copy	Compare		;			
Properties		File Configuration					Device Configuration							
Tag name		СНБ	B3HU-123			<	>	B3HU	СНБ					
Descriptor		СНБ	DESCRIPTOR TEST1			<	>	DESCRIPTOR TEST1			СНБ			
Date		CHG	2015/06/17			<	>	2015/06/17			СНБ			
Message		CHG	MESSAGE TEST			<	>	MESSAGE SAMPLE			СНБ			
Device identification		CHG	2856			<	>	285	CHG					
			Ph100						~					
Sensor	Sensor type		PU	.100		<	>	1465			CHG			
Sensor	wires		4 Wires				4 Wires							
PV (unit	СНБ	degC					degC			СНБ			
PV uppe	r range	0.0	850.000		degC	<	>	850.000		degC	010			
PV lower	PV lower range		-200.000	degC				-200.000	degC		Chis			
PV dar	PV damping		0.000		Sec	<	>	0.500		Sec	СНБ			
Transfer	Transfer function		LINEAR		<	> LINE		EAR		CHG				
Burnout detection		CHG	Downscale			<	>	Downscale						

SHUCFG	PC Configurato	r Ver1.0.	5							Ŀ		
	Page		Read File	Write File All Copy <<				Upload	Download Compare		d	
EXR	1		Compare				;	>> All Copy			,	
Pro	perties		File Conf	riguration	ı			Device Configuration				
Taç	name	CHG	B3HU	-123		<	>	B3HU-123			0	
Des	criptor	CHG	DESCRIPTO	OR TES	Т1	<	>	DESCRIPTOR TEST1			G	
C)ate	CHG	2015/0	06/17		<	>	2015/06/17			СНО	
Me	ssage	CHG	MESSAG	E TEST		<	>	MESSAGE SAMPLE			o	
Device identification		CHG	2856			<	>	2856			G	
Sensor type			Pt100					Pt100 4 Wires			сна	
Sens	or wires	- CHG	CHG 4 W		/ires <							
P	/ unit	СНБ	deç	gC				degG	pC		0	
PV upp	ber range		850.000		degC	<	>	850.000		degC		
PV lower range		- CHG	-200.000) degC				-100.000		degC	CHG	
PV d	lamping	CHG	0.000 Sec		<	>	0.500 Se		Sec	0		
Transfe	er function	CHG	LINE	EAR		<	>	LINEAR			G	
Burnout detection CHG		CHG	Downscale			<	>	Downscale				

	Page		Read File	Write Fil			Upload	Download Compare		
LAK	1		Compare	All Copy <	<) :	>> All Copy			
Pro	perties		File Conf	iguration	tion Device Configuration					
Taç	name	CHG	B3HU	-123	<	>	B3HU-123			
Des	criptor	CHG	DESCRIPTO	OR TEST1	<	>	DESCRIPTOR TEST1			
C	Date	CHG	2015/0	06/17	<	>	2015/06/17			
Message		CHG	MESSAG	<	>	MESSAGE SAMPLE				
Device identification		CHG	285	<	>	2856				
Constant			Dt100				DHIC	Pt100		
Sens	or cype	- CHG	4.00	inor	<	>	4 Wires			
bens	or wires		4 11			4 998	-			
P	/ unit	CHG	deç	9C			deg	c		
PV upp	ber range	are	850.000	degC	<	>	850.000	degC	сн	
PV low	ier range	GIN	-200.000	degC			-100.000	degC		
PV d	lamping	CHG	0.000	Sec	<	>	0.500	Sec	0	
Transfer function CHG		LINE	LINEAR <		>	LINEAR				
Burnout detection		CHG	Downscale		<	>	Downscale			

4) Click [>] button of a field to copy the data in 'File Configuration' area to 'Device Configuration' area. The copied field will be highlighted in light yellow background color.

5) Click [CHG] button of a field to modify the data. The field in which the parameter has been changed will be highlighted in light yellow background color.

6) Click [DOWNLOAD] button to write the configuration data in 'Device Configuration' area to the connected device.

When the downloading is successfully complete, the configuration data is automatically uploaded and the background color returns to the initial state.

2.13. LANGUAGE

Click [Language] button to open the Language view as shown in Figure 22. The user can select the display language of the B3HU.

B3HUCFG PC Configurator Ver1.0.5										
B3HU Configurator	Comm Status	сом	PE	OVE	FE		SME	BOE	TME	
Monitor	Device Status	MAL	AL CFG CL			AFX	AOS	NPV	PV	
Language	PV PV %				Term. AO					Functions
Select language English	1000		.00		100)		20		Connect
	-		_		80	_		-		Diagnostics
	800-	{	- 30 —			-		-		Detailed Device Info
			_			_		16		
	-		_			_		-		Analog Output
		(³⁰ —		40	_		-		Trim DAC
			_			_		12 -		Sensor Cal
	400—	2	40 _			_		-		
			_		0	_		-		Custom TC
			-			3		8 –		Custom RTD
			20 — _					-		Special Curve
			-		-4(,		-		
	-50 —		0					4		Polling Address
	300.24	3	3.36		20.	21		9.34	1	File
	m∨	%			degC			mA		Language
Close Language	PV Graph	PV 4	% Graph	ı (Term	Graph		AO Gra	ph	Exit

▼ Figure 22. Language

Click [Select language] to select the available language. The selected language is shown on the screen immediately. English is available in each language version of Windows, while Windows in your PC must support Japanese in order to display it.

[Close Language] quits the view.