

Instruction Manual

Parameter loader for multi-loop module-type temperature controller (PUM)

Fuji Electric Co., Ltd.

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Туре

PUM

Thank you very much for purchasing Fuji's multi-loop module-type temperature controller. Please read this instruction manual carefully before using the instrument. Make sure that this instruction manual will be handed over to the final user of this software (PUM parameter loader).

Note

The contents of this manual are subject to change without notice.

This manual is complied with possible care for the purpose of accuracy, however, Fuji Electric shall not be held liable for any damages, including indirect damage, caused by typographical errors, absence of information or use of information in this manual.

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1 About the copyright of this software

The copyright of this software (PUM parameter loader) belongs to Fuji Electric Co., Ltd. Reproduction of any form or distribution of this software without permission is prohibited.

2 Outline

This software (PUM parameter loader) is an auxiliary tool for setting parameters and tuning the module-type temperature controller. The setting conditions can be edited and saved with this software. By setting, editing, and saving parameters on your PC, the setting can be copied for multiple module-type temperature controllers. The PV, SV, and MV trend can also be displayed as an auxiliary tool for tuning the module-type temperature controllers.

Unless otherwise specified, the parameter loader for module-type temperature controllers (PUM) is referred to as "PUM parameter loader" or "this software" in this manual.

3 Operating environment

OS RAM Free hard disk space Display resolution Excel Reader : Windows XP (English version)

- : 128M bytes or more recommended
- : 500M bytes or more recommended
- : 1024 × 768 pixels or higher
- : Microsoft ® Office Excel
- : Adobe Reader

Note

- Windows® is a registered trademark of Microsoft Corporation.
- Excel® is a registered trademark of Microsoft Corporation.
- Adobe® and Reader® are registered trademarks of Adobe Systems Incorporated.

4 Installing/uninstalling the software

Install the PUM parameter loader in your PC before use. Uninstall the software if it is no longer required.

Installation

Install the PUM parameter loader as follows.

- 1 Open the "PUM loader" folder that has been downloaded, and then double-click "setup.exe."
- Refer to the Table of corresponding revision No. to a PUM parameter loader (P.62) for the software revision No.
- 2 Click [Next] to continue.



- ■To cancel the installation
- Click [Cancel].

3 Enter "User Name" and "Company Name", then click [Next].

PUM loader – InstallShield Wizard	X
Customer Information Please enter your information.	
Please enter your name and the name o	of the company for which you work.
<u>U</u> ser Name:	

Company Name:	
FES	
InstallShield	
	< Back Next > Cancel
	Click.

■To return to the previous screen

Click [<Back].

■To cancel the installation

Click [Cancel].

Note

You can not go to next procedure unless entry user's information.

4 Select set-up type, then click [Next].

PUM loader - InstallShield Wizard	
Select the setup type to install.	2
Please select a setup type.	
• Complete All program features will be installed. (Requires the most disk space.)	
Custom Select which program features you want installed. Recomment for advanced users.	ded
InstallShield <u>Sack Next ></u> Can	cel
Click.	

- When you selected set-up type, [all (C)] \rightarrow go to **7**.
- When you selected set-up type, [Custom (S)] \rightarrow go to $\textbf{\textit{5}}.$
- ■To return to the previous screen Click [<Back].
- **To cancel the installation** Click [Cancel].

5 Select the folder you want to install in, then click [Next].



■To return to the previous screen

Click [<Back].

■To cancel the installation

Click [Cancel].

6 Select the functions you want to install, then click [Next (N)>].



- ■To return to the previous screen Click [<Back].
- ■To cancel the installation

Click [Cancel].

7 Click [Install].



■To return to the previous screen

Click [<Back].

To cancel the installation Click [Cancel].

8 Installation begins.



■To cancel the installation

Click [Cancel].

9 Click [Finish] to exit.



Uninstallation

Select "Setting (S)" \rightarrow "Control panel (C)" \rightarrow "Program Add/Delete" from the start menu to uninstall the software.

5 Connecting your PC to the module-type temperature controller

Connect your PC to the module-type temperature controller using the RS-232C interface.

Note

- Make the setting, being careful not to make the station Nos. of the module-type temperature controllers duplicate. The station number of the control module (PUMA/B) or the analog module is the station number configuration switch +1, and that of the event module (PUME) is the station number configuration switch +17.
- Connection via RS-485 communication is not supported.
- When operating the parameters of the enhanced communication module, connect the loader connecting cable to the loader communication port of the enhanced communication module.

Connection with RS-232C

Provide the optionally available cable for loader connection (RS-232C, Type: PUMZ *L01). Connect the RS-232C port (D-sub 9 pin) and the loader communication port on the front face of the module-type temperature controller with the loader connecting cable.

[When connecting the PUM parameter loader to a control module, an event module, and an analog module]

<Connecting a single unit>



<Connecting multiple units>

(1) Adjust the station number configuration switch to "0" position.
 * The station number configuration switch can be adjusted a control/event/analog module in hexadecimal digits from 0 to F.



- (2) Connect one unit only first, and then select on the tree structure in the left field of the "PUM parameters Support" screen (on P. 23) "Control module →1; Parameter → 6; Communication →6; Master/Slave" setting connected module to "Master". (See "Parameter setting" on P. 23 for details of the setting.)
 - * The multiple module-type temperature controller set in (2) above functions as the master..
- (3) Connect multiple module-type temperature controllers to the one set as the master clockwise.

Note

Be sure to turn off the power of the module-type temperature controllers before making connections.

- (4) Set the station number configuration switches of the connected module-type temperature controllers as 1, 2,, F (station Nos.: 2, 3,, 16) consecutively from left.
 - * Control/Analog module : Station number configuration switch set value + 1 = Station No. Event module : Station number configuration switch set value + 17 = Station No.

Note

Set the station number of the control/analog module in the range of "1" to "16" without number duplication.

(5) Following the procedure "Parameter setting" (on P.23), check that "Control module \rightarrow 1; Parameter \rightarrow 6; Communication \rightarrow 6; Master/Slave setting connected module is set to "Slave" except for the first one, which is set to "Master."

Note

When all the settings are completed, turn on the power again.

Completed connections



[When connecting the PUM parameter loader to the enhanced communication module]



Note

When you operate parameters of an enhanced communication module, the loader connecting cable should be connected to the loader communication port on the enhanced communication module directly.

Note

When all the settings are completed, turn the power on again.

<Completed connections>



Note

Always place the enhanced communication module on the left of the control module set as the master.

6 Starting the PUM parameter loader

Select "PUM loader" on the start menu, and the following " Module type selection" screen appears.

1 Select the type of the module-type temperature controller you want to start on the "module type selection" screen, then click [OK].



2 "Startup mode" screen appears.

The display screen of the control/ event/ analog module on start-up

Startup mode 🔀	
Mode C Initial values startup mode	
• Eile selection startup mode	"Selecting mode/File selection startup mode" (p.15)
© <u>M</u> odule data reception launch mode	 "Selecting mode/File selection startup mode" (p.17) * Only the control/event/analog module is selectable of "Startup mode/Module data
Cancel	reception launch mode"

Startup mode 🔀	
Mode	
 <u>F</u>ile selection startup mode <u>M</u>odule data reception launch mode 	"Selecting mode/File selection startup mode" (p.15) "Selecting mode/Module data reception launch mode" (p.17)
Cancel	

The display screen of the enhanced communication module on start-up

Note

If you select the module type other than the module-type temperature controller selected on the "Module type selection" screen, communication fault on start-up occurs. Select the proper module type.

Selecting mode/File selection startup mode

Read the parameter setting file stored previously as follows.

1 Select "File selection startup mode" on the "Startup mode" screen, and then click [OK].

The display screen of the controllevent/analog module on start-up	_
Startup mode 🛛 🔀	
Mode © Initial values startup mode	(1) Click
○ Module data reception launch mode □ Module connection designation	
(2) Click	

The display screen of the control/event/analog module on start-up

The display screen of the enhanced communication module on start-up

Startup mode 🔀	
Mode © Initial values startup mode	(1) Click
© Module data reception launch mode	(1) 0.00.
(2) Click	

2 On the "File selection startup mode" screen, select the file or the parameter setting stored previously, and then click [Open].

Open					? 🛛	
Look jn	DATA		•	(† 🗈 💣 🔳	•	
My Recent Documents	sample					(1) Sele
Desktop My Documents						(1) 0010
My Computer						
My Network	File <u>n</u> ame:	*.dat		•	<u>O</u> pen	
FIGUES	Files of type:	data(*.dat)		•	Car cel	
					(2) Click	

The "PUM loader-PUM parameters Support" screen appears (p.23).

Selecting mode/module data reception launch mode

Read the parameter setting of the connected module-type temperature controllers as follows.

1 On the "Startup mode" screen, select "Module data reception launch mode" and then click [OK].

The display screen of the control/event/analog module on start-up

Startup mode 🛛 🗙	
Mode Initial values startup mode <u>F</u> ile selection startup mode	
Module data reception launch mode Module connection designation OK Cancel	(1) Click
(2) Click.	•

The display screen of the enhanced communication module on start-up

Startup mode 🔀	
Mode Initial values startup mode <u>File selection startup mode</u>	
Module data reception launch mode	(1) Click.
OK Cancel	

2 The "PUM loader-PUM Parameters Support" screen appears (p.23).

Check the connected module-type temperature controllers automatically, and then read the set value out.

■To cancel reading

Press the [Esc] key on the keyboard to cancel reading.

Note

- Approximately 20 seconds are required to read the parameter settings per module-type temperature controller. Do not
 perform other communication operations while the settings are read.
- Do not turn off the power of the module-type temperature controller while the settings are read.
- Do not pull out the loader connection cable while the settings are read.

Reading the setting by selecting the Station No. of the module-type temperature controllers connected

This method is not available when selected the "Enhanced comm module [Mitsubishi's programless comm]", "Enhanced comm module [Profibus comm]" on the "module type selection".

1 Select "Module data reception launch mode" on the "Startup mode" screen, check "Module connection designation," and click [OK].



2 Check the St No. of the module-type temperature controller to be read on the "Station definition" screen, and then click [OK].

Statio	n definition				X
	Control mod	ule	Event input/o	utput module	
	St. No.	Connect	St. No.	Connect	
	1		17		
	2	V	18		
	3		19		
	4		20		
	5		21		
	6		22		
	8		23		
			24		
	9		25		
	11		20		
	12		28		
	13		29		
	14		30		
	15		31		
	16		32		
			ОК		Cancel
			(2) Click.		

Note

Do not check the ST No. of the controller that is not connected. Otherwise a communication error occurs. The "communication error" message does not appear in this case. (The reading from the module-type temperature controller connected is performed normally.)

3 The "PUM loader – PUM Parameters Support" screen appears (P.23).

Read the parameter set value out from the module-type temperature controller of the St. No. that was checked in the box. **To cancel reading**

Press the [Esc] key on the keyboard to cancel reading.

Note

- Approximately 20 seconds are required to read the parameter settings per module-type temperature controller. Do not perform other communication operations while the settings are read.
- "Offline: STNo." is displayed in (1) and a bar indicating progress status is displayed in (2) while communication is carried out. "Offline: " is displayed in (1) and nothing is displayed in (2) when communication is not carried out.



7 Initial setting

Perform initial setting of the PUM parameter loader as follows.

1 On the "PUM loader – PUM Parameters Support" screen, select "Initial setting" on the "File" menu.



2 Set required items on the "Initial setting" screen, and then click [OK].



* Note 1: Connection method is not selectable when started up with the enhanced communication module.

Note

The "Online/Offline" setting can be made only when startup is performed by selecting "Module connection designation" on the "Startup mode" screen.

The setting is always "Offline" on start-up.

8 Parameter setting

In parameter setting, frequently-used parameters can be registered in Favorite, parameter settings can be changed, state of the connected module-type temperature controllers can be checked, trend can be displayed, and parameters can be copied.

"PUM loader – PUM Parameters Support" screen

On the "PUM loader – PUM Parameter Support" screen, parameter tree is displayed on the left, and setting can be made on the right field.

[The display screen of the control/event/analog module on start-up]

PUM sader/ PUM Parameters Support Image: Control in the control in	Parameter tree is displayed. "Station No						(Channel)"			
PUBLIC Control Model Point Model										
Ext Log Log <thlog< th=""> <thlog< th=""> <thlog< th=""></thlog<></thlog<></thlog<>	PUM oader - PUM Parameters S	Support								<u> – 8 ×</u>
PLM planneter Common control SV value Out Ou	<u>File Toos D</u> ata <u>H</u> elp									
Image: Provide instruction IDecretion I - chi I - chi <thi -="" chi<="" th=""> I - chi I</thi>	⊡-PUM parameter									
SV value 00 <	i avorite i 1:Control Module	1:Operation	1 - ch1	1 - ch2	1 - ch3	1 - ch4	2 - ch1	2 - ch2	2 - ch3	2 - ch4 🛛 📥
Image: Sevent input/control Module MV value 00	1:Parameter	SV value	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
B: Anale reput/dupt/Module Manual mode switch Auto Auto <td></td> <td>MV value</td> <td>0.0</td> <td>0.0</td> <td>0.0</td> <td>0.0</td> <td>0.0</td> <td>0.0</td> <td>0.0</td> <td>0.0</td>		MV value	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Image applie Analog applie Analog applied by the second of the second applied by the second applice by the second applied by the second applied by the se		Manual mode switch	Auto	Auto	Auto	Auto	Auto	Auto	Auto	Auto
Protection module Remote mode Local Local <thlocal< th=""> Local Local</thlocal<>	⊕ 4:Analog Input Module 5:Analog Output Module	Run/Stanby switch	Run	Run	Run	Run	Run	Run	Run	Run
Image: Product of the second distribution distribution of the second distribution	⊡-Control module	Remote mode switch	Local	Local	Local	Local	Local	Local	Local	Local
Distriction Diricial output latch release command 0	i 1:Parameter	Auto-tuning RUN command	Stop/End	Stop/End	Stop/End	Stop/End	Stop/End	Stop/End	Stop/End	Stop/End
- ISV Vale -SM vale -SM vale 100	1:Operation	Digital output latch release command	. 0	. 0	. 0	. 0	. 0	. 0	. 0	. 0
	1:SV value	AIM1 set value 1	100	10.0	10.0	10.0	10.0	10.0	10.0	10.0
4 Arw/Starby switch ArW 2 et value 1 100		Al M1 set value 2	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
- 5Remote mode switch - 6 Auto-turne RUN comman - 6 Auto-turne RUN comman - 70 piral output latch relaxes - 8 ALM set value 1 100 100 100 100 100 100 100 100 - 9 ALM set value 1 - 100 100 100 100 100 100 100 100 100 - 9 ALM set value 1 - 100 100 100 100 100 100 100 100 100 - 10 ALM set value 1 - 100 100 100 100 100 100 100 100 - 10 ALM set value 1 - 100 100 100 100 100 100 100 - 11 ALM set value 2 - 100 100 100 100 100 100 100 - 12 ALM set value 1 - 100 100 100 100 100 100 100 - 13 ALM set value 2 - 100 100 100 100 100 100 100 100 - 14 ALM set value 2 - 100 100 100 100 100 100 100 100 - 13 ALM set value 2 - 100 100 100 100 100 100 100 - 16 ALM set value 2 - 100 100 100 100 </td <td>4:Bun/Stanby switch</td> <td>ALM2 asturbus 1</td> <td>10.0</td> <td>10.0</td> <td>10.0</td> <td>10.0</td> <td>10.0</td> <td>10.0</td> <td>10.0</td> <td>10.0</td>	4:Bun/Stanby switch	ALM2 asturbus 1	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
6-Auto-turing RUN comment ALMS set value 1 100	5:Remote mode switch	ALM2 set value 1	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
2.0 irid output listh release ALMS set value 2 100 1	6:Auto-tuning RUN comman	ALM2 set value 2	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
PALM set Value 1 ALM set value 2 100 100 100 100 100 100 PALM set value 2 100 100 100 100 100 100 100 100 11A M2 set value 2 100 100 100 100 100 100 100 100 11A M2 set value 2 100 100 100 100 100 100 100 11A M2 set value 2 100 100 100 100 100 100 100 11A M2 set value 2 100 100 100 100 100 100 100 11A M2 set value 2 100 100 100 100 100 100 100 11A M2 set value 2 100 100 100 100 100 100 100 11A M2 set value 2 100 100 100 100 100 100 100 11A M2 set value 2 100 100 100 100 100 100 100 12A M3 set value 1 1ALM set value 2 100 100 100 100 100 12A M3 set value 1 1ALM set value 2 100 100 100 100 100 13A	7:Digital output latch releas∉	ALM3 set value 1	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
In ALM2 is tvalue 1 100<	0.41 M1 set value 2	ALM3 set value 2	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Image: High Set Value 2 100	-10:ALM2 set value 1	ALM4 set value 1	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
-12.4LMS set value 1 -12.4LMS set value 1 10.0 10.	-11:ALM2 set value 2	ALM4 set value 2	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
ALM5 set value 2 10.0 10.	- 12:ALM3 set value 1	ALM5 set value 1	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
ISALM4 set value 2 ISALM4 set value 2 ISALM5 set value		ALM5 set value 2	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Control[PD] Setup Setup Softer Sof	- 15:ALM4 set value 2									
Control[PID] B 3Setup B 4System B 5Alarm B 6Communication P 7Configuration Analog input/foutput Module Analog input/Module Analog Output Module Analog Output Module										
Bestup	+ 2:Control[PID]									
	⊞- 3:Setup									
Configuration Formunication Formuni	i _ 4:System									
Configuration Event input/output module Analog Input Module Analog Dutput Module Analog Output Module Analog Output Module	⊕ b:Alarm									
Image: Strategy of the strategy										
Analog input/output Module Analog Dutput Module Analog Output Mo	Event input/output module									
Analog Input Module Analog Output Module Analog Output Module	Analog input/output Module									
B Analog Output Module	🕀 Analog Input Module									
		L								

Parameters are displayed.

Set values are displayed.

[The display screen of the enhanced comm module [Mitsubishi's programless comm] on start-up]

🚦 P UI	M Ibader – PUM Parameters Support				- B	×
<u>F</u> ile	<u>Toos D</u> ata <u>H</u> elp					
- PUM	parameter				_	
	avorite	1:Parameter				-
	1:Parameter	PLC communication speed	000Bh			
	- 1:PLC communication speed	PLC transmission setting	000E			
	2:PLC transmission setting	MC Protocol	5.Form5			
	- 4:PLC communication interspace time	PLC communication interspace time	100			
	-5:PLC communication starting time	PLC communication starting time	10			
	- 6:PLC response monitoring time	PLC response monitoring time	100			
	- 7:Number of retry times	Number of retry times	5			
. ⊨.P	rogram less communication module	Operation on the communication faults	0000h			
	- 1:Parameter					
	1:Inter-PLC communication setting					
	- 1:PLU communication speed 2:PLC transmission setting				•	
	-4:PLC communication interspace time					
	-5:PLC communication starting time					
	- D:PLC response monitoring time 7:Number of retry times					
	- 8:Operation on the communication faults					
	3:Setting area entry 1 to 100 4:Setting area entry 101 to 200					
	⊕ 5:Setting area entry 201 to 200					
	B:Setting area entry 501 to 600 Setting area entry 601 to 700					
	±.9Setting area entry DUL to 700					
	🗄 12:Monitor area entry 101-200					
	⊕ 13:Monitor area entry 201 to 300					
	T4:Monitor area entry 301 to 400					
	17:Monitor area entry 601 to 700					
	≟-18:Monitor area entry 700 to 712					
						Ψ.
<			<		Þ	
Offline:		· · · · · · · · · · · · · · · · · · ·				
	Dor	ameters are displayed	Set values	= are displayed		
	i di		* Blank cel	l cannot he set		

[The display screen of the enhanced comm module [Profibus comm] on start-up]

UM Dader – PUM Parameters Su	pport		_0
E) Tools(T) Data(D) Help(<u>H</u>)			
UM parameter 📉 🔼			
- Favorite	1:Inter-PLC comm setting		
<u>+</u> -I: <profibus communication="" module="" module<="" profibus="" td=""><td>St. No. for communication</td><td>1</td><td></td></profibus>	St. No. for communication	1	
- 1:Param	ProfiBUS comm setting for "output area"		
⊨ 1:Inter-PLC comm setting	ProfiBUS commisetting for "input area"	0	
-1:St. No. for communicati	Tronboo commisciang for impartance .	9	
- 2:ProfiBUS comm settine			
3:ProfiBUS comm setting			
- 2:PLC device setting			
2 Input area device size			
= 3:Output area 1-108			
- 1:Output area 1[St.No./R			
- 2:Output area 2[St.No./R			
3:Output area 3[St.No./R			
- 4:Output area 4[St.No./R			
5:Output area 5[St.No./R			
6:Output area 6[St.No./R			
- 10:Output area 10[St No			
-11:Output area 11[St.No./			
- 12:Output area 12[St.No./			
13:Output area 13[St.No./			
14:Output area 14[St.No./			
15:Output area 15[St.No./			
16:Output area 16[St.No./			
I /: Output area I /[St.No./ 10:Output area 10[St.No./			
19:Output area 10[5t No./			
20:Output area 20[St No			
- 21:Output area 21[St Nov			
- 22:Output area 22[St.No./			
- 23:Output area 23[St.No./			
24:Output area 24[St.No./			
25:Output area 25[St.No./			
26:Output area 26[St.No./			
30:Output area 29[31:N0.7			
	I		

Parameters are displayed.

Set values are displayed. * Blank cell cannot be set.

Setting parameters

This section describes how to set parameters.

1 On the "PUM loader – PUMP Parameters Support" screen (on P.23), select the parameter group to be changed, and on the

PUM loader – PUM Parameters Support <u>File T</u>ools <u>D</u>ata <u>H</u>elp ⊡- PUM parameter 🖃 Favorite Operation 1 - ch1 ch2 - ch3 i 1:Control Module SV value 0.0 0.0 0.0 Manual mode switch Auto Auto Auto Run/Stanby switch Run Run Run Remote mode switch Local Local Local - Control module in 1:Parameter Auto-tuning RUN command Stop/End Stop/End Stop/End Digital output latch release command n 0 ſ 1:SV value 2:MV value ALM1 set value 1 10.0 10.0 10.0 ALM1 set value 2 10.0 10.0 10.0 3:Manual mode switch 4:Run/Stanby switch ALM2 set value 1 10.0 10.0 10.0 5:Remote mode switch 6:Auto-tuning RUN comman ALM2 set value 2 10.0 10.0 10.0 ALM3 set value 1 10.0 10.0 10.0 7:Digital output latch release 8:ALM1 set value 1 9:ALM1 set value 2 ALM3 set value 2 10.0 10.0 10.0 ALM4 set value 1 10.0 10.0 10.0 10:ALM2 set value 1 ALM4 set value 2 10.0 10.0 10.0 11:ALM2 set value 2 ALM5 set value 1 10.0 10.0 10.0 2:ALM3 set value 1 13:ALM3 set value 2 ALM5 set value 2 10.0 10.0 10.0 14:ALM4 set value 1 15:ALM4 set value 2 16:ALM5 set value 1 17:ALM5 set value 2 <u>∔</u>--2:C ontrol[PID] i 3:Setup (1) Select the parameter group from the Parameter tree. (2) Double-click the setting to be changed.

setting screen on the right, double-click the setting to be changed.



■To transmit the changed setting to the module-type temperature controller See Downloading (transmission from PC to PUM) (on P.52).

Note

- When entering or selecting values from the pull-down menu, be careful not to select or enter those other than the set values (such as character strings) or "No function" display other than "0: No function."
- Do not set the same value for "PV input scale lower" and "PV input scale Upper"
- The term "Logic output" used for event module parameters represents event output.
- When PV input type, PV input scale upper/lower limit, or decimal point position is changed, review all the industrial value parameters, which are displayed in %FS unit.
- When the parameter display is scrolled, parameters of a different group may be displayed. In this case, display a different group first, and then display the desired group.
- The setting range display may exceed the value that can actually be set.
- Do not directly enter numeric values for the parameters for which pull-down menu is displayed. (The values that do not fall within the setting range may be set.)
- Some values banned setting are included in the setting range displaied in the enhanced communication module. Refer to the detailed parameter manual in the relevant parameters (p.33) about the values banned setting.

Point

- Press the [Enter] key on the keyboard while the setting to be changed is selected, and the setting entry or selection screen is displayed. If the [F5] key on the keyboard is pressed, the focus is switched between the parameter tree screen (on the left side) and the setting screen (on the right side).
- The settings that have been changed are displayed in red. The red display is kept valid until they are uploaded.
- <SV limit value>
 - The SV value is limited and automatically changed according to the change of SV limit.
- <Automatic industrial value conversion>

The parameters displayed in industrial values are automatically converted into values within the setting range in accordance with the change of PV input type, PV scale, and decimal point position.

<Automatic alarm setting conversion>

The alarm settings are automatically converted into values within the setting range in accordance with the DO output event type setting.

Favorite

Frequently-used parameters can be set in "Favorite" in the parameter tree screen on the left side. Up to 200 parameters per module can be registered.

PUM loader – PUM Parameters	rs Support				
<u>File Tools D</u> ata <u>H</u> elp					
⊡-PUM parameter					
Favorite	1:Parameter	1 - ch1	1 - ch2	1 - ch3	
in 1:Parameter	Proportional band[P]	5.0	5.0	5.0	
1:Proportional band[P]	Integration time[]	240	240	240	
2:Integration time[I]	Derivation time[D]	60.0	60.0	60.0	
	SV value	0.0	0.0	0.0	Displays parameters set in "Eavorite "
5:MV value	MV value	0.0	0.0	0.0	
🖃 Control module					
i 1:Parameter					
⊡ 1:Operation					
- 4:Run/Stanby switch					
5:Remote mode switch					
6:Auto-tuning RUN comma	nan				
7:Digital output latch relea	ase				
8:ALM1 set value 1					
9:ALM1 set value 2					
IU:ALM2 set value 1					
12:01 M2 set value 2					
13:ALM3 set value 2					
14:ALM4 set value 1					

Registering in "Favorite"

1 On the parameter tree of the "PUM loader – PUM Parameters Support" screen (on P.23), right-click the parameter you want to register in "Favorite" and then click "Favorite Add/Delete."

8 PUM loader - PUM Parameters	Support				
<u>F</u> ile <u>T</u> ools <u>D</u> ata <u>H</u> elp					
⊡-PUM parameter					
🚍 Favorite	1:Operation	1 - ch1	1 - ch2	1 - ch3	
⊡ 1:Control Module Z:Event input /output Module	SV value	0.0	0.0	0.0	
	MV value	0.0	0.0	0.0	
🛓 4: Analog Input Module	Manual mode switch	Auto	Auto	Auto	
± 5:Analog Output Module	Run/Stanby switch	Run	Bun	Run	
Control module Differemeter	Bemote mode switch	Local	Local	Local	
i 1:Operation	Auto-tuning BUN command	Stop/End	Stop/End	Stop/End	
	/DELETE				(2) Clic
2:NV value Display ON/0	DFF Jalue 1	10.0	10.0	10.0	
4:Fun/Stanby switch	ALM1 set value 2	10.0	10.0	10.0	
5:Femote mode switch	ALM2 set value 1	10.0	10.0	10.0	
6.4 uto-tuning RUN comman	ALM2 set value 2	10.0	10.0	10.0	
	ALM3 set value 1	10.0	10.0	10.0	
-9:ALM1 set value 2	ALM3 set value 2	10.0	10.0	10.0	
- 10 ALM2 set value 1	ALM4 set value 1	10.0	10.0	10.0	
	ALM4 set value 2	10.0	10.0	10.0	
-13 ALM3 set value 2	ALM5 set value 1	10.0	10.0	10.0	
- 14 ALM4 set value 1	ALM5 set value 2	10.0	10.0	10.0	
- 15 ALM4 set value 2	There out take E	10.0	10.0	10.0	
ia 3:Setu					
i∰ 4:Syst <mark>o</mark> m					
(1) Right-Click.					

Press the [F2] key on the keyboard while a parameter is selected on the parameter tree on the left side, and the parameter can be registered in Favorite.

Point

Deleting the registration in "Favorite"

1 Right-click a parameter within the "Favorite" tree on the "PUM loader – PUM Parameters Support" screen (on P.23), and then click "Favorite Add/Delete."

BUM loader - PUM Parameters S	Support				
<u>File T</u> ools <u>D</u> ata <u>H</u> elp					
⊡- PUM parameter					
⊡-Favorite	1:Parameter	1 - ch1	1 - ch2	1 - ch3	
⊟-1:Parameter	Proportional band[P]	5.0	5.0	5.0	
1:Proportional band[P]	Integration time[1]	240	240	240	
2:Integration time[]	Derivation time[D]	60.0	60.0	60.0	
3:Derivation time[D] Favo	rite ADD/DELETE	0.0	0.0	0.0	(2) Click.
	lay ON/OFF				
i 3:Analog inpu <mark>t</mark> /output Module					
⊕ 4:Analog Input Module					
E Control module					
i-1:Parameter					
🚍 1:Operati <mark>o</mark> n					
4:Run /Stanby switch					
5:Reniote mode switch					
6:Auti -tuning RUN comman 3:Diat al autaut latab valage					
9:ALN 1 set value 2					
-10:AL M2 set value 1					
-13 AL v3 set value 1					
-14:AL v4 set value 1					
(1) Right-click.					

Point

Press the [F2] key on the keyboard while a parameter is selected on the parameter tree screen on the left side, and the parameter can be deleted from Favorite.

Switching between display ON and OFF

Parameter display on the setting screen on the right side can be changed between ON and OFF.

PUM loader – PUM Parameters S	Support				
<u>File T</u> ools <u>D</u> ata <u>H</u> elp					
⊡- PUM parameter					
	1:Operation	1 - ch1	1 - ch2	1 - ch3	
Event input/output Module	SV value	0.0	0.0	0.0	Parameters set as "OFF" are not
	Manual mode switch	Auto	Auto	Auto	displayed on the setting screen on the
⊕ 4:Analog Input Module	Run/Stanby switch	Run	Run	Run	right side.
⊕-5:Analog Uutput Module ⊡-Control module	Remote mode switch	Local	Local	Local	
⊡ 1:Parameter	Auto-tuning RUN command	Stop/End	Stop/End	Stop/End	
1:Operation	Digital output latch release command	0	0	0	
	ALM1 set value 1	10.0	10.0	10.0	Parameters set as "OFF" are displayed
	ALM1 set value 2	10.0	10.0	10.0	in holdface type
-4:Run/Stanby switch	ALM2 set value 1	10.0	10.0	10.0	in bolalace type.
5:Remote mode switch 6:Auto-tuning PUN common	ALM2 set value 2	10.0	10.0	10.0	
	ALM3 set value 1	10.0	10.0	10.0	
8:ALM1 set value 1	ALM3 set value 2	10.0	10.0	10.0	
9:ALM1 set value 2	ALM4 set value 1	10.0	10.0	10.0	
	ALM4 set value 2	10.0	10.0	10.0	
- 12:ALM3 set value 1	ALM5 set value 1	10.0	10.0	10.0	
- 13:ALM3 set value 2	ALM5 set value 2	10.0	10.0	10.0	

Switching between display ON and OFF

1 Right-click the parameter to be or not to be displayed on the parameter tree screen (on the left side) of the "PUM loader – PUM Parameters Support" screen (on P.23), and click "Display ON/OFF."

🚦 PUM loader – PUM Parameters S	Support				
<u>File T</u> ools <u>D</u> ata <u>H</u> elp					
🖃 PUM parameter					
i⊟- Favorite	1:Parameter	1 - ch1	1 - ch2	1 - ch3	
	Proportional band[P]	5.0	5.0	5.0	
	Integration time[]	240	240	240	
⊕ 4:Analog Input Module	Derivation time[D]	60.0	60.0	60.0	
i - 5:Analog Output Module	MV value	0.0	0.0	0.0	
⊟-Control module					
in a since ation					
- <u>1:SV value</u>					
	/DELETE				
4:Bun /Stan	FF -				(2) Click.
5:Ren ote mode switch					
… 7:Digital output latch releas∉					
9:ALN 1 set value 1					
- 10:AL M2 set value 1					
11:AL <mark>M</mark> 2 set value 2					
- 13:AL M3 set value 2 14:AL M4 set value 1					
16:ALM5 set value 1					
17:AL M5 set value 2					
±.4.Svstem					
I i ⊞~+oystem	1				
(1) Pight click					
(I) Nght-chok.					
Point					

- You can also press the [F4] key on the keyboard while the parameter is selected on the parameter tree screen (on the left side) to switch between ON and OFF.
- You can also double-click the parameter on the parameter tree screen (on the left side) to switch between ON and OFF.

 $\left[\right]$

Relevant parameters

Detailed description of the selected parameters can be displayed. Detailed display/settings of related parameters can also be made.

1 Select a parameter from the parameter tree screen on the left side of the "PUM loader – PUM Parameters Support" screen (on P.23), and then right-click the setting that displays a related parameter on the setting screen (on the right side).



(2) Right-click the setting that displays a related parameter, or press the [F1] key on the keyboard. **2** Check the related parameter on the "Relevant parameters" screen.

00000Sv	SV value	Setting of setting value when local operation is running	100.1	
00000SvL	SV Lower Limits	Setting of lower limited value of setting value (SV)	0.0	
00000Svh	SV Upper Limits	Setting of upper limited value of setting value (SV)	400.0	
000SvoF	SV value shift	Setting of quantity of off set against SV	0.0	Diaple is related personal
DOOrEMO	RSV zero adjustment	Setting of zero adjustment value of remote SV input	0.0	Setting change can also
DOODrEMS	RSV span adjustment	Setting of span adjustment value of remote SV input	0.0	made
0000rST	RSV input master Station No.	Setting of the station number of input channel refering as remote S	0	induc.
0000rLP	RSV input master Ch. No.	Setting of the channel number of input channel refering as remote S	1	

■To display detailed manual of the parameter

Click [Manual], and detailed manual of the parameter is displayed.



ers. be

Online function

As soon as the parameter is changed, the change can be written into the module-type temperature controller.

1 Select "Initial setting" on the "File" menu of the "PUM loader – PUMP Parameters Support" screen (on P.23).



2 Select "Online" on the "Initial setting" screen, and then click [OK].



Note

- The "Online/Offline" setting can be made only when startup is performed by selecting "Module data reception launch mode" in "Startup mode" (P.17).
- If a parameter that affects other parameters is changed online, all the parameters of the module-type temperature controller having the changed parameter are read. Reading takes approximately 20 seconds per module-type temperature controller.
- If a parameter that changes its value when processing is exited such as auto tuning start command, reading is continued until the value reaches "0."
- If "Offline" is selected in initial setting, do not set values for the following parameters other than those shown. "Auto - tuning RUN command" = Stop/End

"Digital output latch release command" = OFF

"Reset main unit" = None

• The setting is always "Offline" on start-up.

Module composition

The composition of the connected module-type temperature controllers can be checked.

1 Select "Module composition" from the "Tool" menu of the "PUMP loader – PUM Parameters Support" screen (on P.23).

1 - ch1 200.0	1+ch2	1 - ch3 1
1 - ch1 200.0	1+ch2	1 + oh3 1
200.0	000.0	
.2.0	200.0	200.0
	-3.0	-3.0
Atto	Auto	Auto
Run	Run	Run
Local	Local	Local
Stop/End	Stop/End	Stop/End
0	0	0
400.0	400.0	400.0
10.0	10.0	10.0
10.0	10.0	10.0
10.0	10.0	10.0
10.0	10.0	10.0
10.0	10.0	10.0
10.0	10.0	10.0
10.8	10.0	10.0
10.0	10.0	10.0
10.0	10.0	10.0
	Local Stop/Edd 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Local Local Step/End Step/End 9 (2007) (

2 Check the composition of the module-type temperature controller on the "Module composition" screen.

[Display screen of the control/event/analog module on start-up]





[Display screen of the enhanced communication module on start-up]

Note

Error is displayed if the module-type temperature controller is not connected properly.



[Error display]

Checking the type code

The type code of the module-type temperature controller currently edited can be checked.

1 Select "Model composition" from the "Tool" menu of the "PUM loader – PUM Parameters Support" screen.

PUM loader - PUM P	arameters Supp	ort			
e Tools Data Help					
Module composition					
model code check		1:Operation	1 - ch1	1 - ch2	1 - ch3
Trend definition		SV value	200.0	200.0	200.0
Parameter conv	Module	MV value	-3.0	-3.0	-3.0
Parameter list	: Module	Manual mode switch	Auto	Auto	Auto
E 1'Parameter		Run/Stanby switch	Run	Run	Run
- 1:Operation		Remote mode switch	Local	Local	Local
- 1:SV valu	Je	Auto-tuning RUN command	Stop/End	Stop/End	Stop/End
- 2:MV valu	Je	Digital output latch release command	0	D	D
- 3:Manual	l mode switch	ALM1 set value 1	400.0	400.0	400.0
4:Run/Stanby switch		ALM1 set value 2	10.0	10.0	10.0
- 5:Remote	e mode switch	ALM2 set value 1	10.0	10.0	10.0
- 6:Auto-tu	uning RUN command	ALM2 set value 2	10.0	10.0	10.0
- 7:Digital (output laten release (ist uslus 1	ALM3 set value 1	10.0	10.0	10.0
9:ALM1 S	et value 2	ALM3 set value 2	10.0	10.0	10.0
- 10:ALM2	set value 1	ALM4 set value 1	10.0	10.0	10.0
- 11:ALM2	set value 2	ALM4 set value 2	10.0	10.0	10.0
- 12:ALM3	set value 1	ALM5 set value 1	10.0	10.0	10.0
13:ALM3	set value 2	ALM5 set value 2	10.0	10.0	10.0
14:ALM4	set value 1				
15:ALM4	set value 2				
- 16:ALM5	set value 1				
- 17:ALM5	set value 2				
	2]				

2 Select a desired model code on the "Display model code" screen, and then click [OK].

[Display screen of the control/event/analog module on start-up]

Display model c	o de			×
St. No.	Model code	St. No.	Model code	
1	PUMATEE10AY00	17	PUMERYY10AY	
2	PUMACEE10AY00	18		
3		19		
4		20		
5		21		
6		22		
7		23		
8		24		
9		25		
10		26		
11		27		
12		28		
13		29		
14		30		
15		31		
16		32		
			OK	Cancel
			Click.	

[Display screen of the enhanced communication module on start-up]



Displaying trend

Data trend can be displayed. Pens can be defined for up to 10 groups, with 8 pens regarded as one group. •This method is not available when selected the "Enhanced comm module [Mitsubishi's programless comm]", "Enhanced comm module [Profibus comm]" on the "module type selection".

1 Select "Trend definition" from the "Tool" menu of the "PUM loader – PUM Parameters Support" screen (on P.23).

Tools Data Help Module composition Model code check Trend definition Data Help Parameter copy band[P] Parameter list time[I] Image: Help - 3:Derivation time[D]	1:Parameter Proportionar vano(r.) Integration time[1]	1 - ch1	1 - ch2	1 - ch3
Module composition Model code check Trend definition Parameter copy Parameter list time[I] b=3:Derivation time[D]	1:Parameter Tropononar vano(r.) Integration time[1]	1 - ch1	1 - ch2	1 - ch3
Model code check Trend definition Parameter copy Parameter list time[I] H=3:Derivation time[D]	1:Parameter	1 - ch1	1 - ch2	1 - ch3
Trend definition Parameter copy band[P] Parameter list time[1] i	Integration time[I]	0.00		
Parameter copy band[P] Parameter list time[I]	Integration time[I]		0.00	50.0
Parameter list time[I]		240	240	240
	Derivation time[D]	60.0	60.0	60.0
encernation ame[b]	SV value	200.0	200.0	200.0
4:SV value	MV value	-3.0	-3.0	-3.0
- Analog input/output module				

2 Set required items on the "Trend selection" screen, and then click "Trend Disp."

Tren	d selecti	on						X	
								-	(2) Set the duration from the time when
	Cycle	1 -	5 0	Froun name Group1	•	1			sampling is started.
	-,			,		1			
	Pen No.	St. No.	Ch. No.	Item		Minimum	Maximum		(1) Select a desired group.
	1	1 💌	1 💌	Measurement value (PV)	-	-50.0	100.0		
	2	1 💌	2 💌	Measurement value (PV)	•	-50.0	100.0		
	3	1 💌	3 🔻	Measurement value (PV)	-	-50.0	100.0		
İ	4	1 💌	4 💌	Measurement value (PV)	-	-50.0	100.0	н	(3) Set the values for which trend data
	5	2 🔻	1 💌	Measurement value (PV)	-	-50.0	100.0		is to be displayed.
	6	2 💌	2 💌	Measurement value (PV)	-	-50.0	100.0		1
	7	2 💌	3 🔻	Measurement value (PV)	-	-50.0	100.0		
Í	8	2 💌	4 🗸	Measurement value (PV)	Ţ	-50.0	100.0		
[<u>S</u> tart	Stop	□ (Trend Disp	SV Disp	Car	icel		
		(6) Stops trend	collecting th data.	e (7) Displays CSV for	the trend data	a in		
4) Sta	rts collec	ting the		(5) Click.					
tre	nd data.								

*1: When you select the St. No from the analog module, do not select "Set value (SV)", "Manipulating value (MV1)", or "Manipulating value (MV2)".



3 Check the trend display on the "TrendDisplay – Trend" screen.

Select a pen for which scale is to be displayed.

Note

- Save the trend data, if required, in a CSV file by giving a name to it.
- If the trend data is displayed in a CSV file, the CSV file previously displayed is overwritten.
- If the displayed CSV file is saved, the time display becomes "00" (fraction omitted).
- If sec. display is required, select "time" for display format in Excel cell format setting, change it into desired display format, and then save the data.
- The first data at the start of trend display may differ from the actual value.
- Do not press the "Start trend" button on the trend select screen while the trend is being displayed. Otherwise the trend is displayed overlapped.
- The final data may not be displayed when the trend display is stopped. Check the data in CSV format in this case.
- When you select the St. No from the analog module, do not select "Set value (SV)", "Manipulating value (MV1)", or "Manipulating value (MV2)".

Copying parameters

Parameter settings can be copied between channels or stations.

•This method is not available when selected the "Enhanced comm module [Mitsubishi's programless comm]", "Enhanced comm module [Profibus comm]" on the "module type selection".

Copying between channels

1 Select "Parameter copy" from the "Tool" menu of the "PUM loader – PUM Parameters Support" screen (on P.23).



2 Click the "Ch. Copy" tab on the "Parameter copy" screen.

Parameter copy	
Ch. Copy 3. Copy 3. Copy(event)	Click.
OK Cancel	

3 Select the St-Ch No. from which the parameter is to be copied and that to which it is written, and then click [OK].



4 Click [OK] on the "PUM loader" window.

PUM loa	ader	
⚠	Do you want to cop	by from one Ch. to another?
	ОК	Cancel
	Click	

■To cancel parameter copying

Click [Cancel].

Point

In Ch. copy, the data is copied only within the station specified in "From (St.-Ch. No.)".

Note

- Make sure that the channel No. on the left side becomes smaller than that of the right side when specifying the channel to which the parameter is to be written.
- Copied parameters are not written into the module-type temperature controller online.
- When "Ch. copy" in parameter copy function is used, do not specify the No. of the station that does not exist. Otherwise an erroneous value is copied.

Copying between stations

1 Select "Parameter copy (C)" from the "Tool (T)" menu of the "PUM loader – PUM Parameters Support" screen (on P.23).

🖥 PUM loader - PUM Parameters Su	pport				
File Tools Data Help					
B-PL Module composition					
Model code check	1:Parameter	1 - ch1	1 - ch2	1 - ch3	
Trend definition	Proportional band[P]	50.0	50.0	50.0	
Parameter conv Data	Integration time[I]	240	240	240	
Daramatar list	Derivation time[D]	60.0	60.0	60.0	Clic
	SV value	200.0	200.0	200.0	
4:SV value	MV value	-3.0	-3.0	-3.0	-
5:MV value					
:Event input/output Module					
⊞-3:Analog input/output Module					
Event input/output module					
⊞-Analog input/output module					
1					

2 Click the "St. copy" tab on the "Parameter copy" screen.

Parameter copy	
Ch. Corv St. Copy S Copy(owent)	Click
OK Cancel	

■To copy event module parameters between stations

Click the "St. copy (Event)" tab.

3 Select the St-Ch No. from which the parameter is to be copied and that to which it is written, and then click [OK].



4 Click [OK] on the "PUM loader" screen.



■To cancel the parameter copy Click [Cancel].

Point)

Follow the same procedure for copying parameters between stations (Event).

Note

- Be sure not to specify station No. that has not been defined. Otherwise an erroneous value may be written in the parameter.
- Make sure that the station No. of the left side becomes smaller than that of the right side when specifying the station to which the parameter is to be written.
- Copied parameters are not written into the module-type temperature controller online.
- You cannot inter-station copy on the other type modules.

Parameter list

Parameter setting can be printed or displayed in CSV file format for each module-type temperature controller.

1 Select "Parameter list" from the "Tool" menu of the "PUM loader – PUM Parameters Support" screen (on P.23).

BPUM loader - PUM Parameters Suppo	ort				
ile Tools Data Help					
Module composition					•
🖻 Model code check	1:Parameter	1 - ch1	1 - ch2	1 - ch3	
Trend definition	Proportional band[P]	50.0	50.0	50.0	
Darameter conv	Integration time[I]	240	240	240	
Parameter list	Derivation time[D]	60.0	60.0	60.0	
······································	SV value	200.0	200.0	200.0	
-4:SV value	MV value	-3.0	-3.0	-3.0	
B-3:Analog input/output Module B-Control module B-Event input/output module B-Analog input/output module					

2 Set necessary items on the "Parameter list" screen, and then click "Print" or "CSV Disp."



* Note1: The module type is not selectable when starting up with the enhanced communication module.

Note

- The entered contents may be automatically converted into Excel format depending on the contents of the user comment. (Example: 4-20 → April 20)
- The value "0" in fractional portion is not displayed in CSV format.
- Printing is made on A4 paper in vertical orientation (fixed).
- The setting display of the PUM parameter loader and the display of the printing/CSV output result may not be the same. Example: If the PUM parameter loader display = "0009," the result of printing/CSV output = "9."
- If setting displayed in binary digit is printed or output in CSV format, the setting is displayed as a decimal number. Example: If DO1 optional function setting = "0101," the result of printing/CSV output = "101."

Uploading (Transmission from PUM to PC)

The parameter setting of the module-type temperature controller can be received in batch.

1 Select "Upload (PC ← PUM data transmit) (U)" from the "Data (D)" menu of the "PUM loader – PUM Parameters Support" screen (on P.23).

PUM loader - PUM Parameters Suppor	rt				
File Tools Data Help					
B-PUM par Upload(PC <- PUM data transmit)					
E Favori Download(FC -> Forri data transmit	c) eter	1 - ch1	1 - ch2	1 - ch3	
B-1:C	tional band[P]	50.0	50.0	50.0	
Save	tion time[l]	240	240	240	
- 2:Integration time[1]	pervation time[D]	60.0	60.0	60.0	
3:Derivation time[D]	S∀value	200.0	200.0	200.0	
-4:SV value	MV value	-3.0	-3.0	-3.0	
ar Event input/output module sr Analog input/output module					

- * Proceed to 2 when selected the "control/event/analog" on the "module type selection".
- * Proceed to **3** when selected the "Enhanced comm module [Mitsubishi's programless comm]", "Enhanced comm module [Profibus comm]" on the "module type selection".

2 Check the ST Nos. of the module-type temperature controllers to be uploaded on the "Station definition" screen, and then click [OK].

Control mod	ule	Event input/	output module			
St. No.	Connect	St. No.	Connect			
1		17				
2		18				
3		19				
4		20	Γ			
5		21				
6		22				
7		23	Π			
8		24	Π			
9		25	Π			
10		26				
11		27				
12		28				
13		29				
14		30				
15		31				
16		32				
					(1) C
		OK		Cancel		

Proceed to 4.

Note

Do not check the box of the module not connected.

3 Click [OK] on the "PUM loader" screen.





4 Click [OK] on the "PUM loader" screen.

Click [OK] to save the parameter setting currently selected.



■Not to save the parameter setting currently selected Click [Cancel] .

5 Select the file to which the parameter setting is to be saved on the "Save as" screen, and then click "Save."



Note

- Approximately 20 seconds are required for uploading per module-type temperature controller. Do not perform other communication operations while the settings are read.
- Do not turn off the power of the module-type temperature controller while the settings are read.
- Do not pull out the loader connection cable while the settings are read.

Downloading (Transmission from PC to PUM)

Parameter settings can be transmitted to the connected module-type temperature controllers.

1 Select "Download (PC → PUM data transmit (D)" from the "Data (D)" menu of the "PUM loader – PUM Parameters Support" screen (on P.23).

PUM loader - PUM Parameters Suppo	rt				
File Tools Data Help					
B-PUM para Upload(PC <- PUM data transmit)					
B-Favor Download(PC -> PUM data transm	nit) e c.		i - oii2	1-010	(
B-1:C	ional band[P]	50.0	50.0	50.D	
Save	tion time[l]	240	240	240	
2:Integration time[1]	penvation time[D]	60.0	60.0	60.0	
3:Derivation time[D]	S∨value	200.0	200.0	200.0	
- 4:SV value	MV value	-3.0	-3.0	-3.0	
#-3:Analog input/output Module #-Control module #-Event input/output module #- Analog input/output module					

- * Proceed to 2 when selected the "control/event/analog" on the "module type selection".
- * Proceed to **3** when selected the "Enhanced comm module [Mitsubishi's programless comm]", "Enhanced comm module [Profibus comm]" on the "module type selection".

2 Check the St Nos. of the module-type temperature controllers to be downloaded on the "Station definition" screen, and then click [OK].



Note

Do not check the box of the module not connected.

■To cancel downloading.

Click [Cancel] .

3 Click [OK] on the "PUM loader" screen.



■To cancel downloading.

Click [Cancel] .

Note

- Approximately 20 seconds are required for downloading per module-type temperature controller. Do not perform other communication operations while downloading.
- Do not turn off the power of the module-type temperature controller while downloading.
- Do not pull out the loader connection cable while downloading.
- Do not carry out downloading with the auto tuning start command set at "1."
- Check that the main unit reset is set to "0," communication permit setting to "1," and that the master/slave data is correct, and then carry out downloading.

Opening files

Data saved in a file can be read.

1 Select "Open" from the "Data" menu of the "PUM loader – PUM Parameters Support" screen (on P.23).



2 Click [OK] on the "PUM loader" screen.

Click [OK] to save the parameter setting currently selected and go to 3.



■Not to save the parameter setting currently selected and go to 4. Click [Cancel].

3 Select a file to which the parameter setting is to be saved on the "Save as" screen, and then click [Save (S)].

Save As					<u>? ×</u>	
Save jn:	DATA		-	È 💣 🎟 •		
My Recent Documents Desktop My Documents My Computer	sample —					(1) Select the file in which the data is saved.
My Network Places	File <u>n</u> ame:	*.dat			<u>Save</u>	(2) Click.
	Save as <u>t</u> ype:	data(*.dat)		•	Cancel	

4 Select the desired file on the "Open" screen, and then click [Open].

Open					? X	
Look in: 📔	DATA		• 🗢 🔁	* •		
My Recent Documents Desktop My Documents My Computer	<u>sample</u>					(1) Select the parameter setting file.
My Network File Places File	e <u>n</u> ame: es of <u>type</u> :	*.dat data(*.dat)			pen ancel	
				(2)	Click.	

Saving the setting in a file

The current parameter settings can be saved in a file.

1 Select "Save" from the "Data" menu of the "PUM loader – PUM Parameters Support" screen (on P.23).



2 Select the file in which the parameter settings are to be saved on the "Save as" screen, and then click [Save].



Exiting the PUM parameter loader

Exit the PUM parameter loader as follows.

1 Select "Exit" from the "File" menu of the "PUM loader – PUM Parameters Support" screen (on P.23).



2 Click [Yes] on the "Exit" window.

Click [Yes] to save the parameter setting currently selected and go to 3.

Exit		
D		
Do you w	ant to save and exit?	
Yes	No	Cancel
Click		

- ■Not to save the parameter setting currently selected Click [No].
- ■To cancel the exit from PUM parameter loader Click [Cancel].

3 Select a file in which the data is to be saved on the "Save as" screen, and then click [Save]."

Save As					? X	
Save in	DATA		• +	🖻 💣 🎫		
My Recent Documents Desktop My Documents My Computer	sample					(1) Select the file in which the data is to be saved.
My Network Places	File <u>n</u> ame: Save as <u>t</u> ype:	<mark>*.dat</mark> data(*.dat)		• •	<u>S</u> ave Cancel	(2) Click.

9 Troubleshooting

The following table lists the trouble symptoms that may appear when the setting of the module-type temperature controller is made using the PUM parameter loader, their causes, and remedies.

Trouble	Causes	Solution					
None of the connected module is capable of communicating with	Improper PUM parameter loader software connection	Check that the PUM parameter loader software and the modules are connected properly.					
the loader software.	Improper connection of the PUM parameter loader connecting cables	Check the connection of the PUM parameter loader connecting cable. Check if the cable is break or not.					
		Check if the assembly of the PUM parameter loader connecting cable is proper or not.					
	Improper station No. setting	Check if communicating to the correct station number.					
		Check if the set station number is duplicated.					
	Incompatible communication conditions	Check that the communication specifications of the loader software and those of the module are compatible.					
	Several master are defined.	Define only one master.					
Only some of the connected modules cannot communicate with the PUM parameter loader.	Improper PUM parameter loader software connection	Check that the loader software is connected to the master of internal communication between modules.					
Parameters can not be changed.	RS-485 communication permission is set to "Read only".	Change the setting to "Readable/Writable".					
	The parameter input value tried to write the value out of the setting range	Change the parameter input value to the one in the setting range and then write again.					
Parameter setting that has not been changed is changed.	SV value may be changed as a result of changing the SV value.	Set the SV limit value larger than the SV value. Set the SV value within the SV limit value range.					
	The parameter set value for industrial value display is automatically changed by change of PV input type, PV scale (Analog input type, Analog input scale for Analog module), decimal point position, unit display.						
	Alarm settings are automatically changed depending on the setting of DO output event type.	_					
After download, parameter value was displayed as "-".	When selected an enhanced communication module, the value to the register address was set, which can not be accepted by a module.	Upload (or restart the loader), and restore from the "-" state, and then set the appropriate register address.					
Parameters are displayed as "" after uploading/downloading.	Communication error may be occurring.	Check the communication environment. Check the master/slave setting in connected modules.					
Online mode cannot be used.	Online mode cannot be used if startup is carried out by clicking "File selection startup mode".	Start from "Startup mode/Module data reception launch mode".					

Trouble	Causes	Solution
Data display is not updated when parameters are copied.	The tree display is not updated.	Click the parameters on the parameter tree display (on the left side of the screen) to update the tree.
"Communication port does not open" is displayed.	Multiple communication programs have been started.	Terminate the all communication program, and then restart the PUM parameter loader.

10 Table of corresponding revision No. to PUM parameter loader

This parameter loader corresponds to the revision numbers of PUM series listed in the table below..

Parameter			F	Languages					
version	Control module	Event module	Analog module	Enhanced comm module [Mitsubishi's PLC programless comm]	Enhanced comm module [PROFIBUS]	Japanese	English	Chinese *3	
1.1.1	0	0	×	×	×	0	\bigcirc	×	
1.3.2	0	0	0	01A *1	×	0	\bigcirc	×	
1.3.5	0	0	0	02A *2	0	0	0	0	

[Legend symbols]

\bigcirc	·	•	•	·	·	·	·	·	·	·	·	·	·	·	·	·	·	•	•	•	·	·	•	•	•	•

· · Operate on the corresponding parameter version.

 $\times \cdots Unsupported. Use the parameter version marked \bigcirc .

Character string, such as "01A" · · · Operable parameter loader version differs depending on the revision No. of PUM series. Check the revision No. with the following procedures, and use the corresponding parameter loader version.

Find the revision No. of PUM series described on the seal by removing the front terminal block. Ex : In the case of a control module, the seal shown as below is applied.



*1: Use the version before 1.3.2.

*2: Use the version after 1.3.5.

*3: Operation on other than the Chinese-language version of Windows results in garble.