

SRP30 Series FpSrp30 Loader Instruction Manual

Thank you for purchasing a Shimaden product. After making sure the product fits the expected description, you should carefully read the instruction manual and get a good understanding of the contents before attempting to operate the loader.

Request

The instruction manual (hereinafter referred to as “manual”) should be kept in a handy place where the end user can refer to it when necessary.

Preface

The manual describes the FpSrp30 Loader parameter setting tool for the SRP30 Series.

The manual does not contain precautions for handling, mounting method, wiring, description of functions or operation method for the SRP30 Series. For information on those topics you should refer to section 15 (Communication Setting) of the main instruction manual.

WARNING!

You should provide protective/safety circuits, etc., to ensure safety of the system in the unlikely event of product failure or malfunction, or in the case there is a defect in the program you created. By doing so, you minimize accidents that could potentially result in injury, death or serious disaster.

The contents of this document are subject to change without prior notification.

Attention has been paid to ensure accuracy of the contents. Shimaden shall, however, bear no responsibility whatsoever for damages of any type, including indirect damage, incurred as a result of clerical errors, incomplete information, or use of information contained herein.

The loader may not operate properly according to the way it is used and/or usage environment (system, etc.).

Operation is not guaranteed on PCs that are not constructed by a commercial manufacturer (self-constructed PC, etc.).

■ Recommended operation environment

Supported operating system: Windows 7, Windows 10

Hard disk open space: 500 MB

Memory capacity: Windows recommended

*Windows, including Windows 7, Windows 10 are registered trademarks of Microsoft Corporation in the United States and other countries.

SHIMADEN CO., LTD.

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1. Install and uninstall

1-1. Install

You can install the parameter setting tool to your PC using following procedure.

(1) Download “SRP30 Parameter Setting Tool” software SRP30” from our website at <http://www.shimaden.co.jp>.

(2) Click Setup.exe in the downloaded folder to start the installation.

The installer is launched automatically. Install by following the guidance on the screen.

1-2. Uninstall

You can uninstall the parameter setting tool from your PC using following procedure.

(1) Launch “Install/uninstall programs” from the Control Panel and uninstall “FpSrp30 Loader.”

2. Launch/exit

2-1. Launch

You can launch the parameter setting tool using following procedure.

(1) Launch the parameter setting tool by [Start] menu → [Shimaden Soft] → [FpSrp30 Loader].

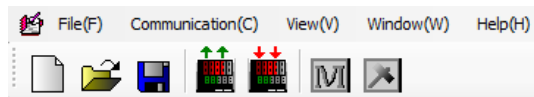
2-2. Exit

You can quit the parameter setting tool using following procedure.


(1) Exit the parameter setting tool by [File] menu → [Exit Application].

3. Toolbar

Functions of the toolbar are as follows.





 Create a new parameter setting screen.

 Load previously saved parameters.

 Save created parameters.

 Load currently set parameters from specified SRP30.


 Load created parameters to SRP30.

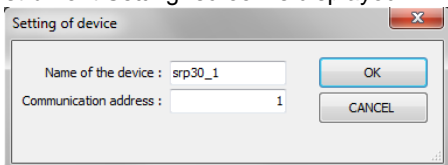
 Monitor SRP30 PV and SV values.

 Set parameters required for communication.

4. New

Use the following procedure to create a new parameter setting screen.

- (1) Click the  button of the tool bar or select [New] from the [File] menu.
- (2) "Instrument Setting" screen is displayed.

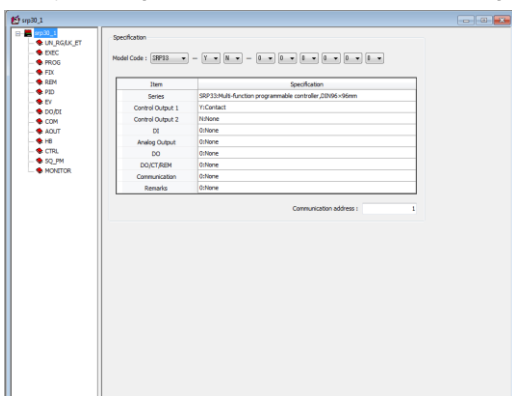


Instrument name: Specify any name for the SRP30 Series to be set.

The name is used to distinguish instruments from each other on the screen; the SRP30 Series instrument is not affected by the name.

Communication address: Specify the communication address set for the SRP30 Series instrument to be set.

- (3) Enter by clicking the [OK] button and the following parameter setting screen appears.

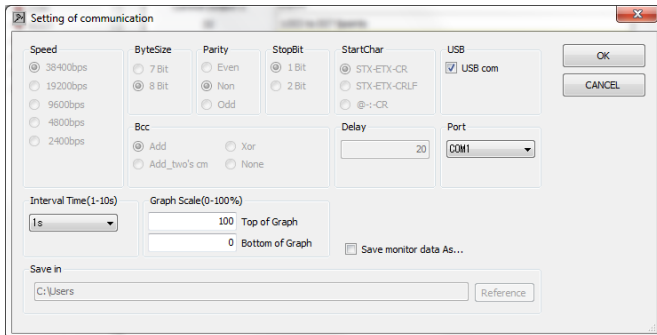


*Clicking the [Cancel] button interrupts processing.

*You can create up to 100 parameter setting screens.

5. Communication setting

(1) Click the  button of the toolbar or select [Setting] from the [Communication] menu.



*Set according to the instrument for which parameters are to be set.

5-1. If “USB Communication” is checked:

(1) Communications settings are fixed as follows:

Communication speed: 38400 bps, data length: 8 bits, parity: Non, stop bit: 1 bit, BCC: ADD, communication address: 1

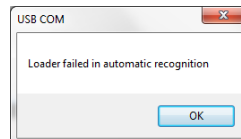
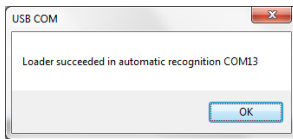
*Check and set port No. with the “Device manager” of the PC, etc.

(2) Port No. of SRP30 Series instrument is acquired automatically under the following conditions:

- When parameter setting tool is launched
- When [OK] button of “Communication Setting” is clicked

(3) Message display when port No. is automatically recognized

- When completed without error
- When error occurs



*If error occurs, port No. set last time is used by default.
Recheck communication conditions, etc.

6. Read and save


You can read and save parameters created using the following procedure.

6-1. Save

(1) Click the  button of the toolbar and the file save dialog box appears for you to provide a file name and save it.

*Once saved, the file is overwritten without the dialog box being displayed. To save under another name, select [Save as] from the [File] menu.


6-2. Read file

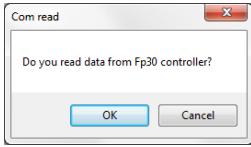
(1) Click the  button of the toolbar and the file open dialog box appears for you to select a file name and load the contents.

7. Read from and write to SRP30 Series instruments

You can load parameter values from or to SRP30 Series instruments using the following procedure.


7-1. Read

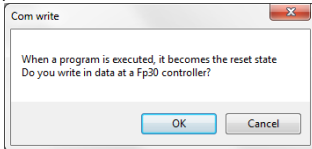
- (1) Click the  button of the toolbar or select [Read] from the [Communication] menu.
- (2) The screen to confirm the read process appears. Click [OK].



*Clicking the [Cancel] button cancels the process.

7-2. Write

- (1) Click the  button of the toolbar or select [Write] from the [Communication] menu.
- (2) The screen to confirm the write process appears. Click [OK].



*Clicking the [Cancel] button cancels the process.

Note 1: Because some parameters cannot be changed by communication depending on the functions allotted to DI code, “Non” is temporarily written into DI code when processing starts. The DI code set by the tool is once again written after other parameters have been set.

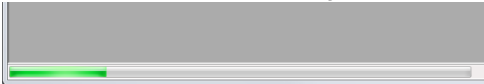
If an error occurs while parameters are being set, the DI code may remain set to “Non.” Be sure to check parameters after setting.

Note 2: Parameters cannot be written when the instrument is running. When processing starts, the parameters are written after the instrument is reset. If the instrument is running, we recommend resetting before performing the process.

7-3. After starting read/write

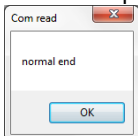
If read/write processing is started by the instrument, process flow is as follows:

- (1) Read/write starts and the progress bar is displayed at the bottom of the screen.

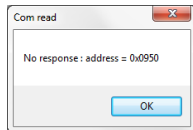


- (2) When read/write is finished, a message informing you that the process is complete is displayed.

▪ When completed without error



▪ When error occurs




*If an error occurs, recheck communication conditions, etc.

- (3) If read processing is completed successfully, the read values appear on the screen.

*Depending on the product's specifications, some parameters cannot be read. If so, revise as needed.

● Items requiring revision

- Control output 1: Contact, SSR drive voltage, current, voltage
- Control output 2: Contact, SSR drive voltage, current, voltage
- Analog output: 0–10 mV, 4–20 mA, 0–10 V
- Remote setting input: 4–20 mA, 1–5 V, 0–10 V
- Communication: RS485, RS232C

You can find out which functions your instrument is equipped with, but you cannot tell the product type by communication. After confirmation of the functions given above, the  items are selected for initial setting. Refer to the product code of the instrument to make the correct settings.

*The items given above have nothing to do with subsequent parameter setting. If you are not worried about not being in agreement with the product code, there is no need to revise.

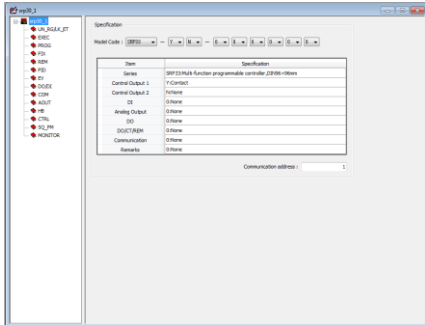
8. Parameter setting screen

There are several parameter setting screens for the different functions. Select the required screen and edit the values of the desired parameters.

Parameters that cannot be edited depending on optional specifications or setting conditions remain grayed out and cannot be selected. For setting range, etc. of various parameters, see the main instruction manual and communication interface instruction manual.

8-1. “Product specifications” setting screen

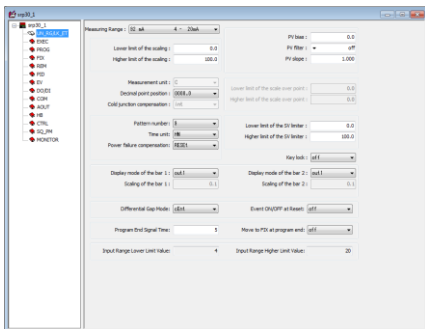
Screen for setting specifications of the instrument.



- Set according to the instrument for which parameters are to be set.
- By performing “read” processing, you can configure settings that depend on having or not having optional specifications, etc., according to the instrument. Some parameters such as control output, analog output, and remote setting input cannot be set properly. The subsequent parameter setting is not affected but, if this makes you feel uncomfortable, you can revise to fit your instrument.
- If setting product specifications without “reading” from a file, be sure to set in accordance with the instrument. If parameter setting does not match the instrument, a communication error will result when you attempt to write the values.

8-2. “Input-related” setting screen

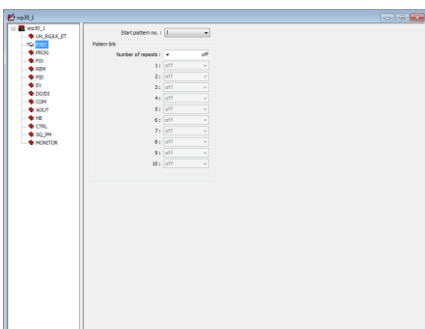
Screen used primarily to set input-related parameters.



- **The parameters of this screen are the basic parameters for each screen. Keep in mind that the set values of other screens may be set to default settings if settings of this screen are modified.**
- **The parameters of this screen should be set in the very beginning.**

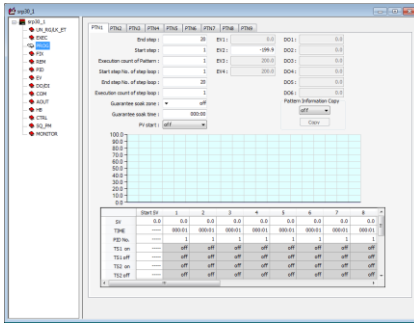
8-3. “EXEC-related” setting screen

Screen used primarily to set EXEC-related parameters.



8-4. “Program-related” setting screen

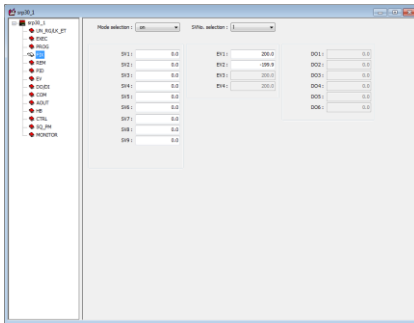
Screen used primarily to set program-related parameters.



- Set tS1–tS8 (time signal) for “event type” or “DO type” to enable the time signal parameter.
- Time setting example 010:01: Input “10.01” or “10:1.”

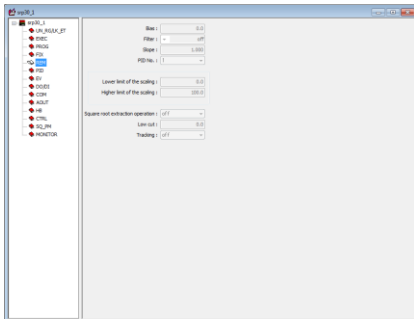
8-5. “FIX-related” setting screen

Screen used primarily to set FIX-related parameters.



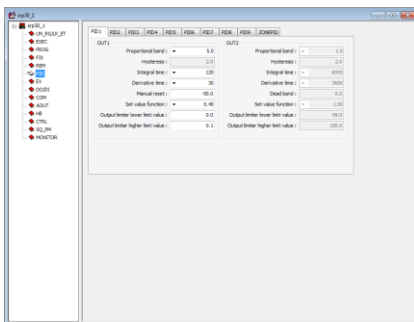
8-6. “Remote setting input-related” setting screen

Screen used primarily to set remote setting input-related parameters.



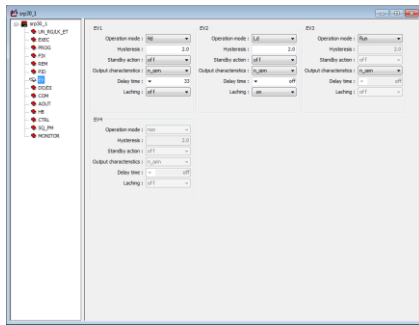
8-7. “PID-related” setting screen

Screen used primarily to set PID-related parameters.



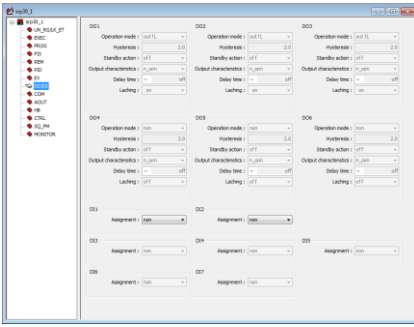
8-8. "Event output-related" setting screen

Screen used primarily to set event output-related parameters.



8-9. "DO/DI-related" setting screen

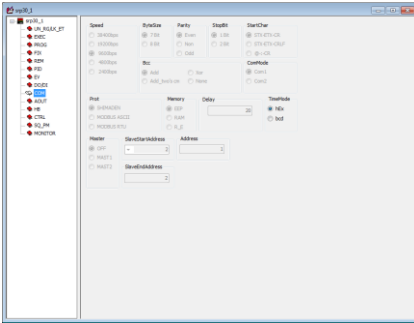
Screen used primarily to set DO/DI-related parameters.



8-10. "Communication" setting screen

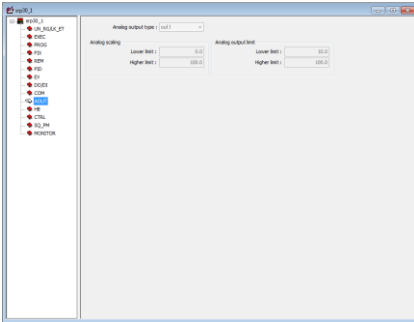
Screen used primarily to set communication-related parameters.

- Used to set communication parameters only when USB communication is checked as mentioned in section 5. Communication Setting.



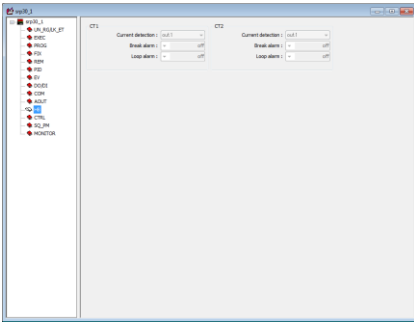
8-11. "Analog output-related" setting screen

Screen used primarily to set analog output-related parameters.



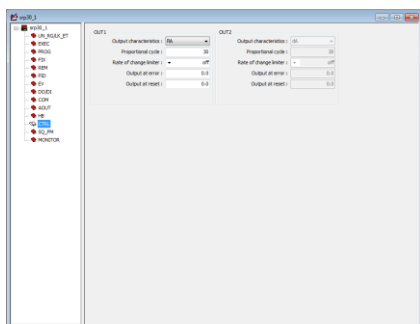
8-12. "Heater break alarm-related" setting screen

Screen used primarily to set heater break-related parameters.



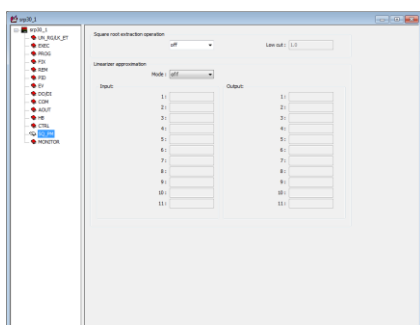
8-13. “Control output-related” setting screen

Screen used primarily to set control output-related parameters.




8-14. “Square root extraction/10-segment operation-related” setting screen

Screen used primarily to set square root extraction/10-segment operation-related parameters.



9. Monitor function

The loader is equipped with a monitor screen group display function for the SRP30 Series instruments in addition to the parameter setting function.

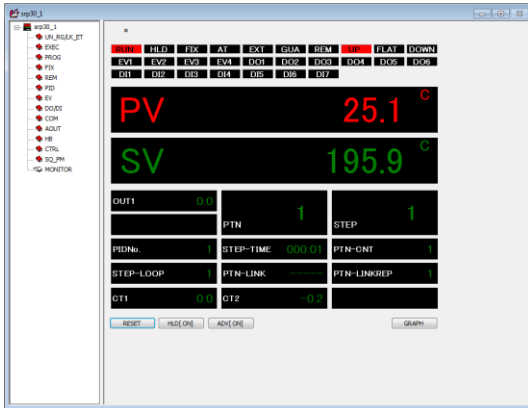
(1) Click the  button on the toolbar to start the monitor function.

Clicking when the function is running turns it off.

(2) Setting "Interval Time" on the communication setting dialog enables you to change data reading interval.

9-1. "Monitor" screen

Displaying the monitor screen enables you to operate RUN/RESET, HLD, and ADV by monitor value and button.



*You can edit parameters on various setting screens while using the monitor function.

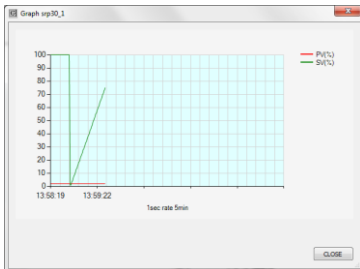
However, the read and write functions cannot be used while using the monitor function.

*The x button on the window cannot be used while using the monitor function.

*RUN/RESET, HLD, and ADV buttons can only be operated when using the monitor function.

*Keep in mind that this may differ from the instrument actually being communicated with.

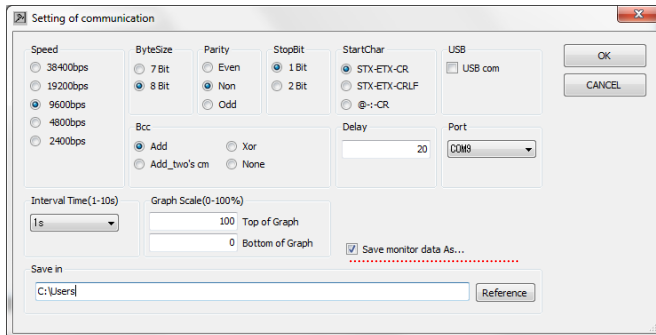
Clicking the [GRAPH] button on the monitor screen displays a PV and SV values graph.



*The [GRAPH] button can only be operated when using the monitor function.

9-2. Save measurement data

Placing a check in the box next to “Save monitor results in file” on the communication setting screen enables you to save measurement data in a file.



After checking the “Save monitor results in file” box, specify the folder where the file is to be saved in the “Saving location.” A folder of the date on which monitoring starts is created in the specified location and a file is created in the folder.

File name example: srp30_1_12_30_10.csv

Instrument name Hour Minute Second

9-3. Graph scale setting

Setting “Graph Scale” on the communication setting screen enables you to set the Y axis higher limit (100% measurement range) and the lower limit (0% measurement range).

*Graph display cycle is the data read time (Interval Time).

*Be sure to set the higher and lower limits so there is at least 10% difference between the two.

*With regard to the technical details of products, please contact your nearer Shimaden dealer.

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

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