No. DOC1067059-A
(NN65629901)

Operation Manual

PRODUCT NAME

Data Transfer Procedure

MODEL / Series

LECP6/LECPMJ

LECP6
LECPMJ

JXC51/61
JXCM1

It will be necessary for the user to refer to the operation manual for the controller.
(LECP6, LECPMJ, JXC51/ 61, JXCM1) and controller configuration software (ACT Controller).

SMC Corporation

Contents

Controller
1 . Safety Instructions

These safety instructions are intended to prevent hazardous situations and/or equipment damage. These instructions indicate the level of potential hazard with the labels of **"Caution," "Warning"** or **"Danger**.**"** They are all important notes for safety and must be followed in addition to International Standards (ISO/IEC)*1), and other safety regulations.

*1) ISO 4414: Pneumatic fluid power - General rules and safety requirements for systems and their components
ISO 4413: Hydraulic fluid power - General rules and safety requirements for systems and their components
IEC 60204-1: Safety of machinery - Electrical equipment of machines - Part 1: General requirements
ISO 10218-1: Robots and robotic devices - Safety requirements for industrial robots - Part 1:Robots
etc.

Danger	**Danger** indicates a hazard with a high level of risk which, if not avoided, will resultin death or serious injury.
Warning	**Warning** indicates a hazard with a medium level of risk which, if not avoided,couldresult in death or serious injury.
Caution	**Caution** indicates a hazard with a low level of risk which, if not avoided, could resultin minor or moderate injury.

Warning

1. The compatibility of the product is the responsibility of the person who designs the equipment or decides its specifications.
Since the product specified here is used under various operating conditions, its compatibility with specific equipment must be decided by the person who designs the equipment or decides its specifications based on necessary analysis and test results. The expected performance and safety assurance of the equipment will be the responsibility of the person who has determined its compatibility with the product. This person should also continuously review all specifications of the product referring to its latest catalog information, with a view to giving due consideration to any possibility of equipment failure when configuring the equipment.

2. Only personnel with appropriate training should operate machinery and equipment.
The product specified here may become unsafe if handled incorrectly. The assembly, operation and maintenance of machines or equipment including our products must be performed by an operator who is appropriately trained and experienced.

3. Do not service or attempt to remove product and machinery/equipment until safety is confirmed.
1. The inspection and maintenance of machinery/equipment should only be performed after measures to prevent falling or runaway of the driven objects have been confirmed.
2. When the product is to be removed, confirm that the safety measures as mentioned above are implemented and the power from any appropriate source is cut, and read and understand the specific product precautions of all relevant products carefully.
3. Before machinery/equipment is restarted, take measures to prevent unexpected operation and malfunction.

4. Our products cannot be used beyond their specifications. Our products are not developed, designed, and manufactured to be used under the following conditions or environments. Use under such conditions or environments is not covered.
1. Conditions and environments outside of the given specifications, or use outdoors or in a place exposed to direct sunlight.
2. Use for nuclear power, railways, aviation, space equipment, ships, vehicles, military application, equipment affecting human life, body, and property, fuel equipment, entertainment equipment, emergency shut-off circuits, press clutches, brake circuits, safety equipment, etc., and use for applications that do not conform to standard specifications such as catalogs and operation manuals.
3. Use for interlock circuits, except for use with double interlock such as installing a mechanical protection function in case of failure. Please periodically inspect the product to confirm that the product is operating properly.

Controller

1. Safety Instructions

⚠ Caution

We develop, design, and manufacture our products to be used for automatic control equipment, and provide them for peaceful use in manufacturing business.
Use in non-manufacturing business is not covered.
Products we manufacture and sell cannot be used for the purpose of transactions or certification specified in the Measurement Act.
The new Measurement Act prohibits use of any unit other than SI units in Japan.

Limited warranty and Disclaimer/Compliance Requirements

The product used is subject to the following "Limited warranty and Disclaimer" and "Compliance Requirements".
Read and accept them before using the product.

Limited warranty and Disclaimer

1. The warranty period of the product is 1 year in service or 1.5 years after the product is delivered, whichever is first.*2)
   Also, the product may have specified durability, running distance or replacement parts. Please consult your nearest sales branch.
2. For any failure or damage reported within the warranty period which is clearly our responsibility, a replacement product or necessary parts will be provided.
   This limited warranty applies only to our product independently, and not to any other damage incurred due to the failure of the product.
3. Prior to using SMC products, please read and understand the warranty terms and disclaimers noted in the specified catalog for the particular products.

***2) Vacuum pads are excluded from this 1 year warranty.**
A vacuum pad is a consumable part, so it is warranted for a year after it is delivered.
Also, even within the warranty period, the wear of a product due to the use of the vacuum pad or failure due to the deterioration of rubber material are not covered by the limited warranty

Compliance Requirements

1. The use of SMC products with production equipment for the manufacture of weapons of mass destruction (WMD) or any other weapon is strictly prohibited.
2. The exports of SMC products or technology from one country to another are governed by the relevant security laws and regulations of the countries involved in the transaction. Prior to the shipment of a SMC product to another country, assure that all local rules governing that export are known and followed.

2. Data Transfer Procedure

2. 1 Outline

This manual provides the data transfer procedure from LECP6 (hereafter named LECP) to JXC51/61 (hereafter named JXC) and from LECPMJ series to JXCM1 series.

There are 2 types of data, Step data and Parameter data. The data can be stored on a PC using the controller configuration software (ACT Controller).
The data then becomes transferable by writing the data stored from the PC to the JXC.

Data Transfer Procedure

Step1 How to store the LECP data

Step2 Writing Parameter data to the JXC

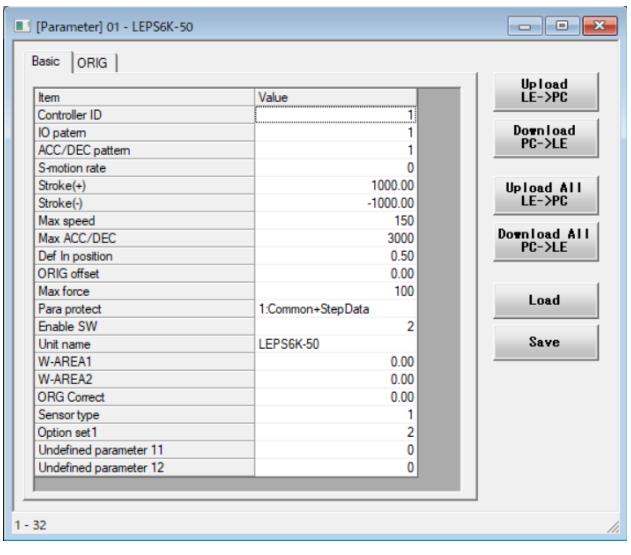
Step3 Writing Step data to the JXC

2. 2 Transfer of the extended parameters

Parameters which can be transferred using this procedure are the Base and ORG parameters which can be edited with the parameter protect “1” or “2”.
For extended parameters which become editable with the parameter protect “3” (Drive, Motor, Default, ALM), refer to the procedure used for the LECP.

Parameter protect is “1”(initial value) or ”2”

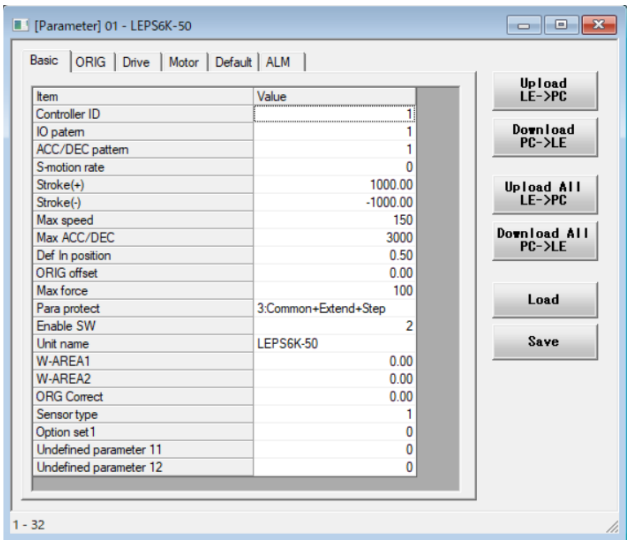
Basic parameter, Return to origin parameter



Parameter protect is “3”

Basic parameter, Return to origin parameter,

Extended parameter (Drive, Motor, Default, ALM)

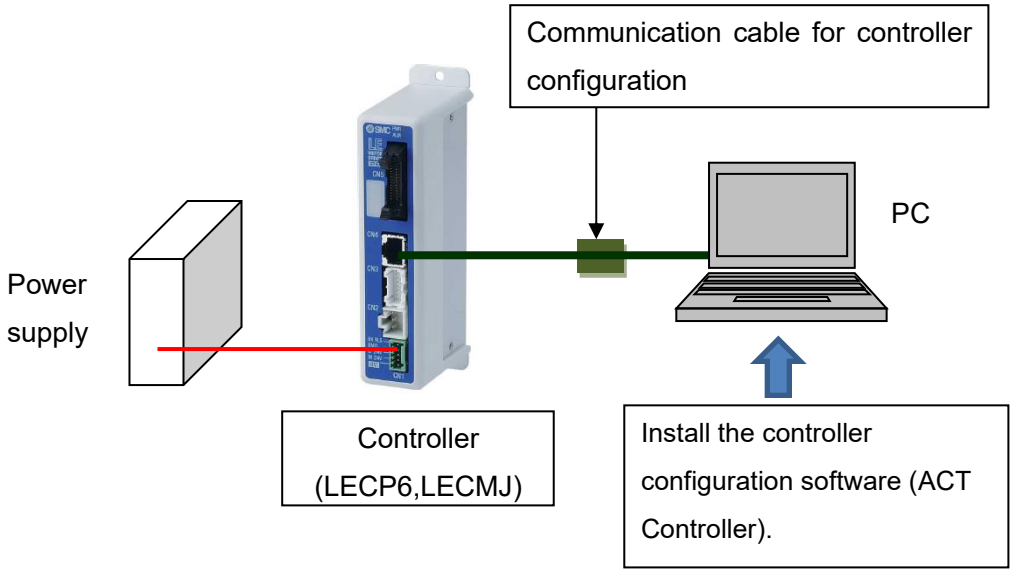


3. Step1 How to store the LECP data

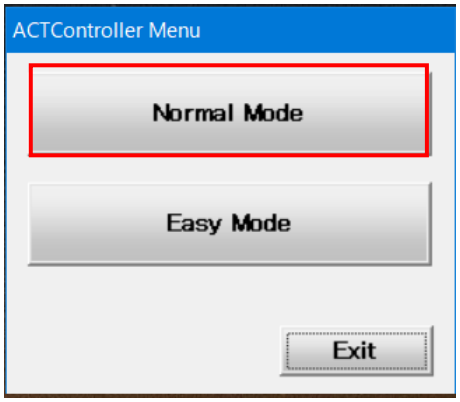
3. 1 Preparation

The data can be stored using the controller configuration software (ACT Controller). Please refer to the Installation Manual for the controller configuration kit.

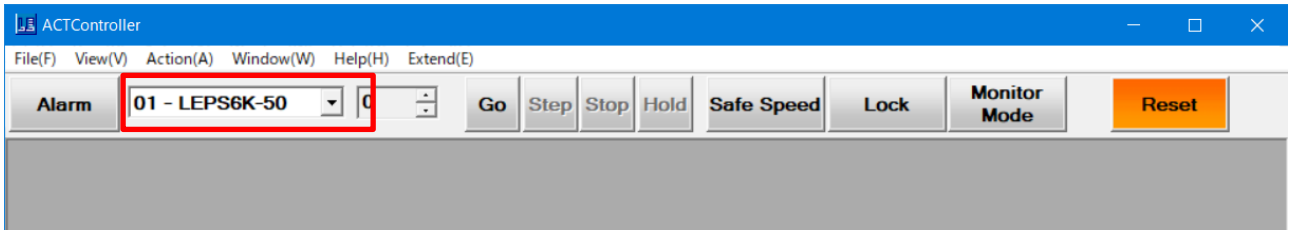
Refer to the drawing below for the connection set up. Refer to the operation manual for the controller (LECP6 or LECPMJ) and the controller configuration software.



Supply power to the controller and start the controller configuration software (ACT Controller). Select the “Normal Mode” in the menu shown below.



Confirm that the correct electric actuator model is shown in the upper part of the ”Normal Mode” screen.



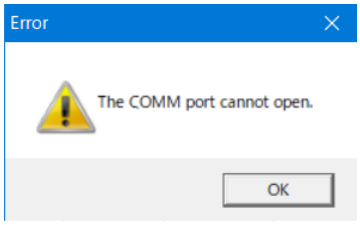
When “Offline” appears, the communication is not established.

Restart the controller configuration software after checking the points below.

- The controller configuration software and the USB driver for the communication cable are installed in the computer.
- The PC and controller are connected by using the communication cable for controller configuration.
- The controller is supplied with power.

⚠Caution

The controller's data cannot be set unless the PC can communicate with the controller. If the following window is shown, the COM port setting may be wrong.
Select "Action", "System" and "Setting" from the menu in order, and check the communication settings.

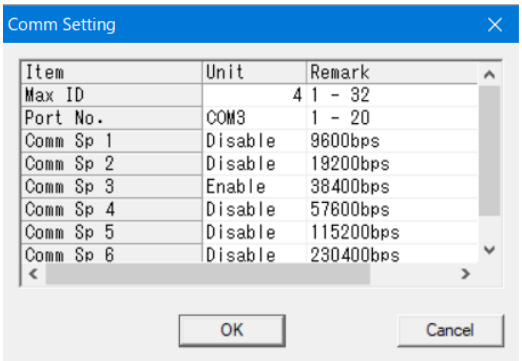


＜How to perform communication setting＞

Maximum axis

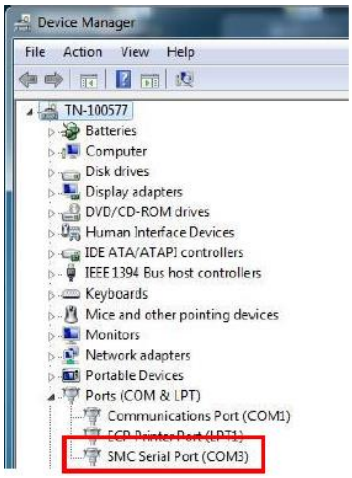
The maximum ID number for checking the connected equipment is set.

(Ex.) 4: the ID numbers 1 to 4 are checked.



COM port

The COM port number of the connected PC is set. (Check the COM port number by starting the device manager on the PC while the communication cable for controller configuration is connected to the PC).



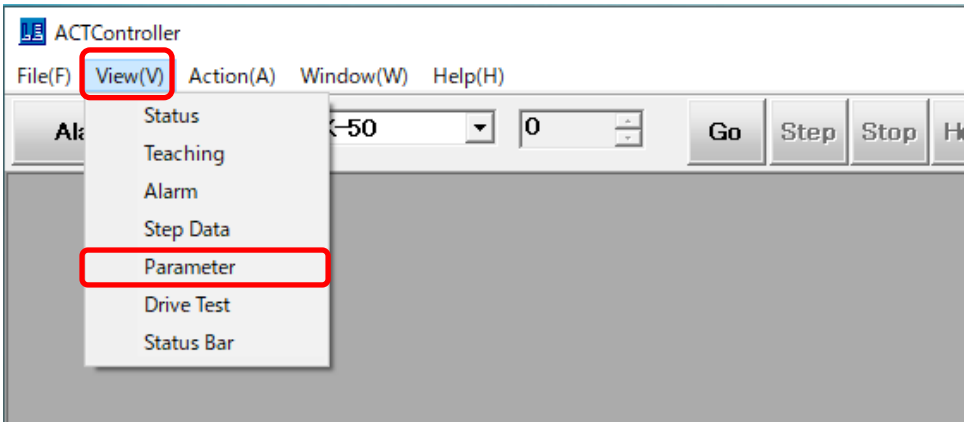
(Example of Device Manager screen)

Speed

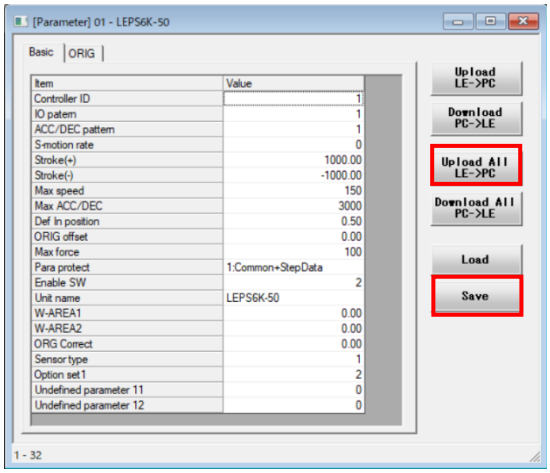
The communication speed for searching when the connection is checked is set (the initial value of the controller is 38400 bps).

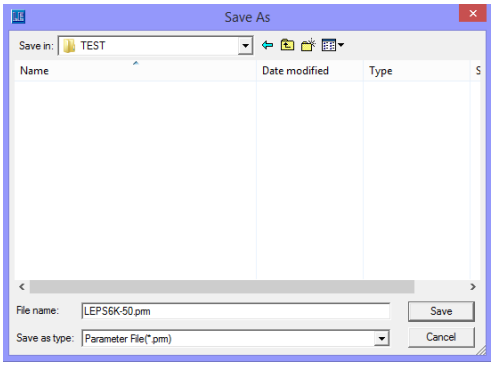
3. 2 How to store parameter files

When the parameter window is not displayed, select “View(V)” from the menu bar in the Normal mode screen and select “Parameter”.



Select “Upload All” in the parameter window (shown below) and read the parameter from the controller. Select “Save” to save the parameter file to the PC.

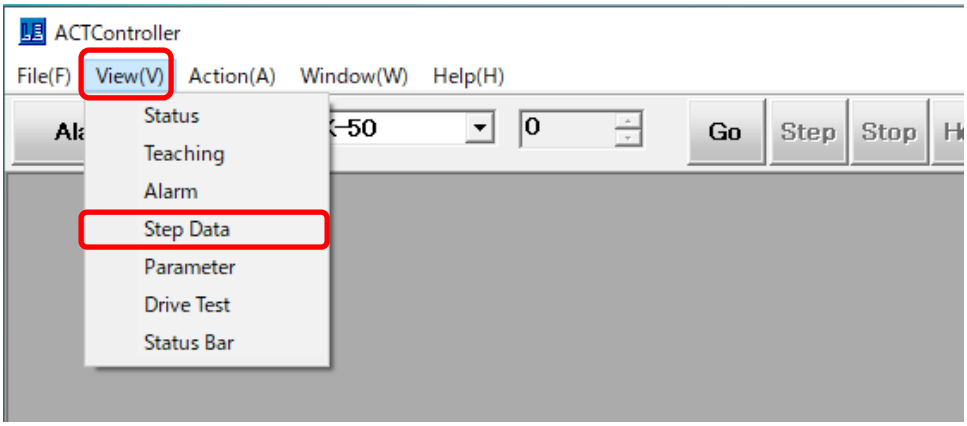




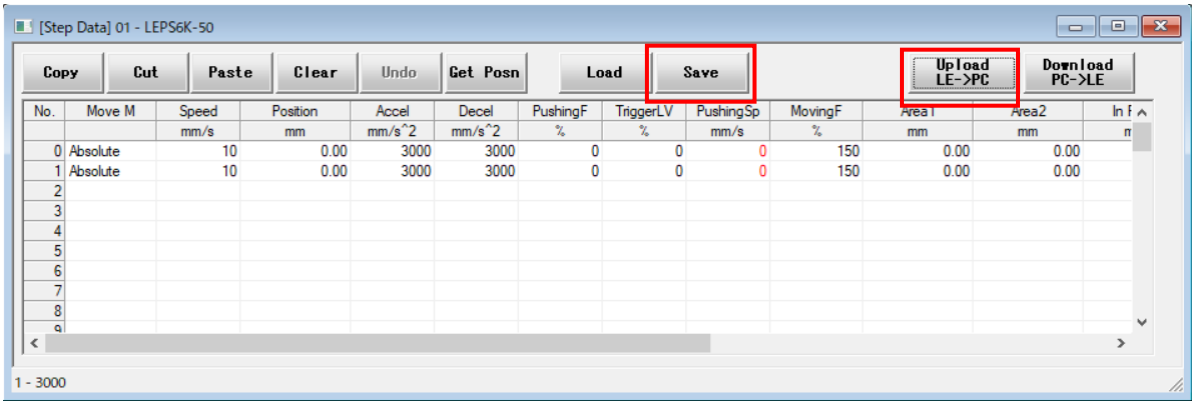
When "Save" is selected, the screen for saving the file is displayed. Enter the parameter file name and click “Save”.

3. 3 Step Data storage

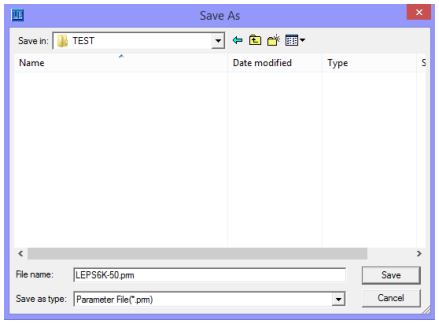
When the step data window is not displayed, select “View(V)” from the menu bar in the Normal mode screen and select “Step Data”.



Select “Upload” from the step data window (shown below) and read the data from the controller. Select “Save” to save the step data file to the PC.



When "Save" is selected,
the screen for saving the file is displayed.
Enter the parameter file name and click “Save”.



3. 4 End

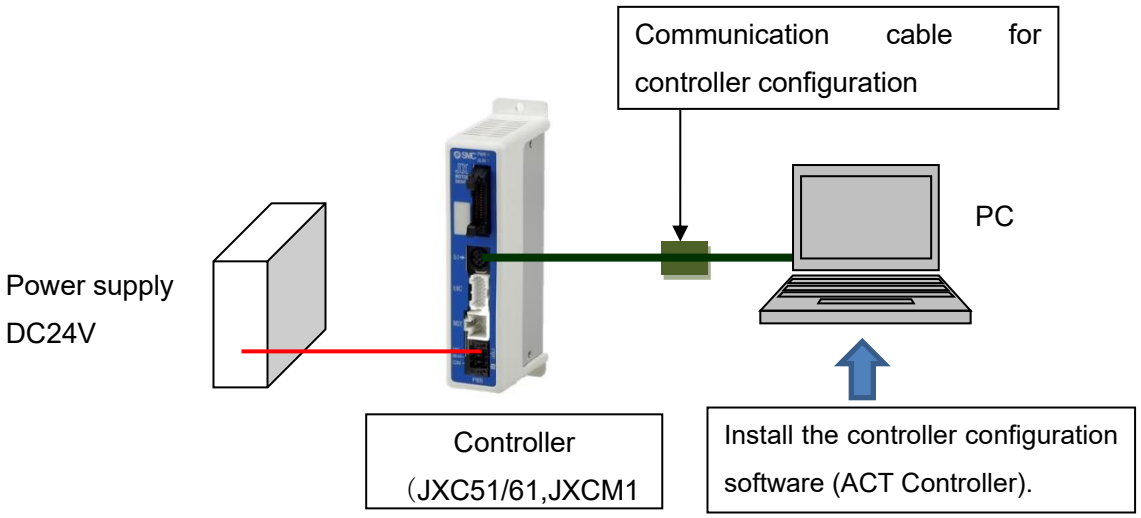
After storing the parameters and step data, close the controller configuration software and turn off the power to the controller. Then, disconnect the communication cable from the PC to the controller.

4. Step2 Writing parameter data to the JXC

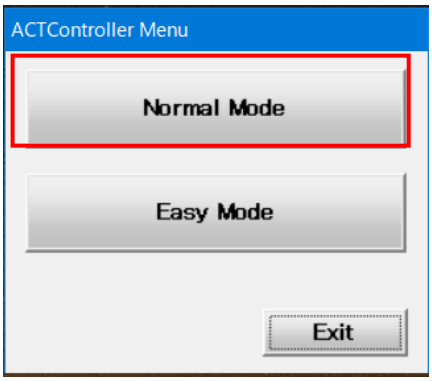
4. 1 Preparation

The data can be stored using the controller configuration software (ACT Controller). Please refer to the Installation Manual for the controller configuration kit.

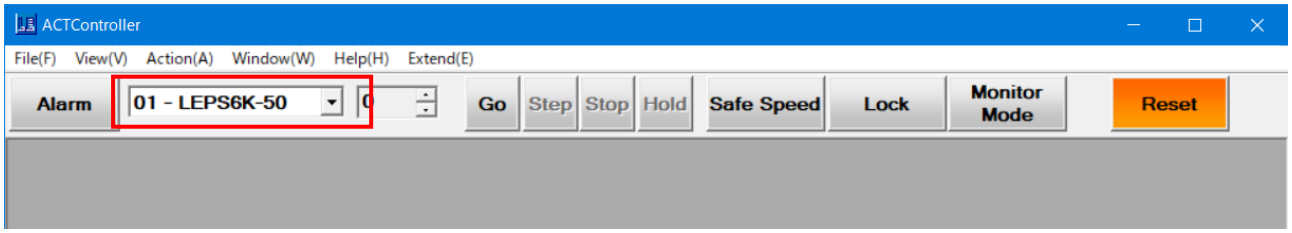
Refer to the drawing below for the connection set up. Refer to the operation manual for the controller (JXC51/61 or JXCM1) and controller configuration software.



Supply power to the controller and start the controller configuration software (ACT Controller). Select “Normal Mode” in the menu (shown below).



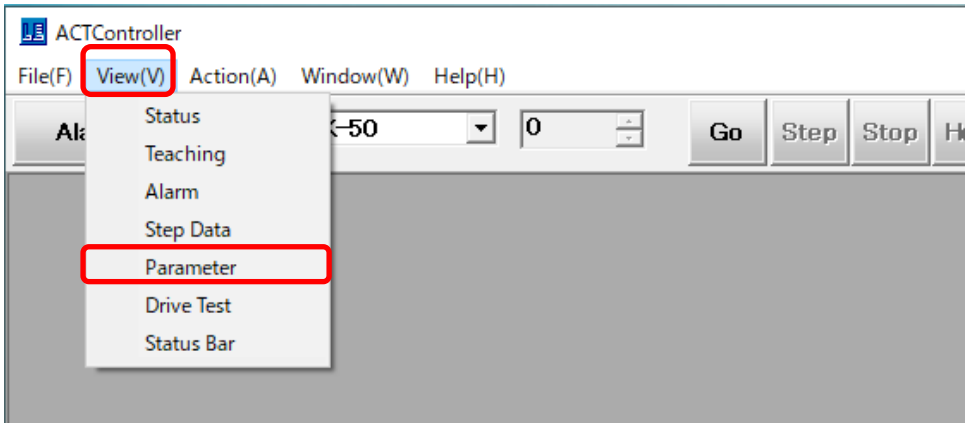
When communication is established between the controller and the controller configuration software, the electric actuator model is shown in the Normal Mode screen.



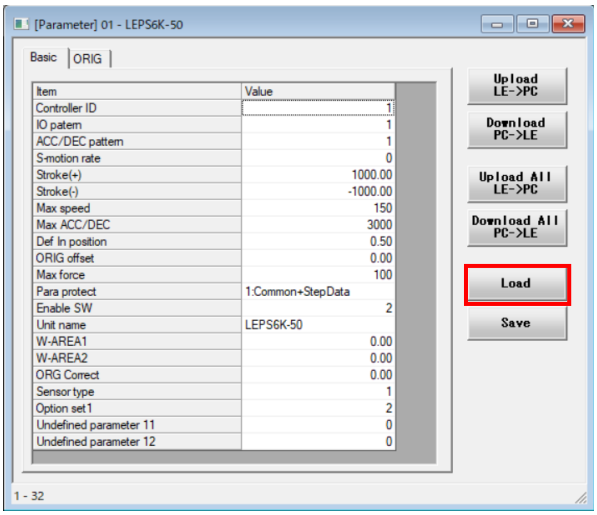
* When “Offline” appears, the communication is not established. Check the “3.1 Preparation”.

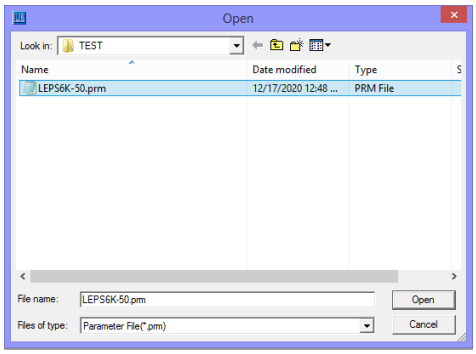
4. 2 How to Store parameter files

When the parameter window is not displayed, select “View(V)” from the menu bar in the Normal mode screen and select “Parameter”.



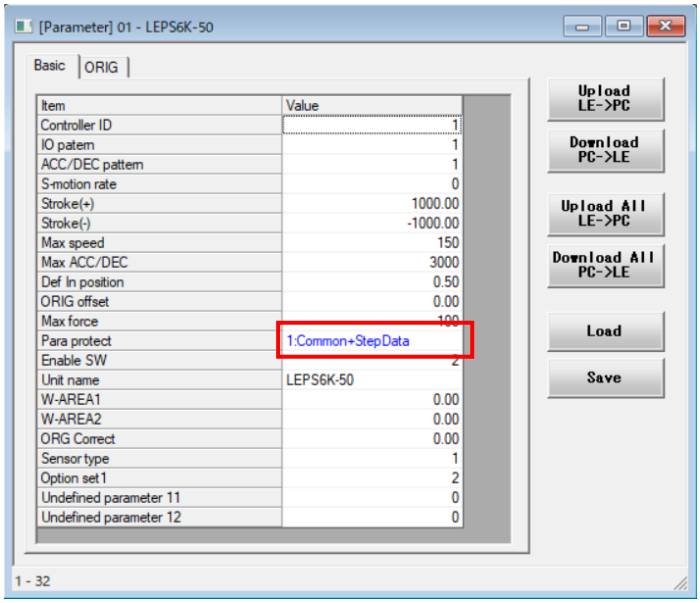
Select "upload" from the parameter window (shown below) and read the saved parameter file which was stored from the controller.



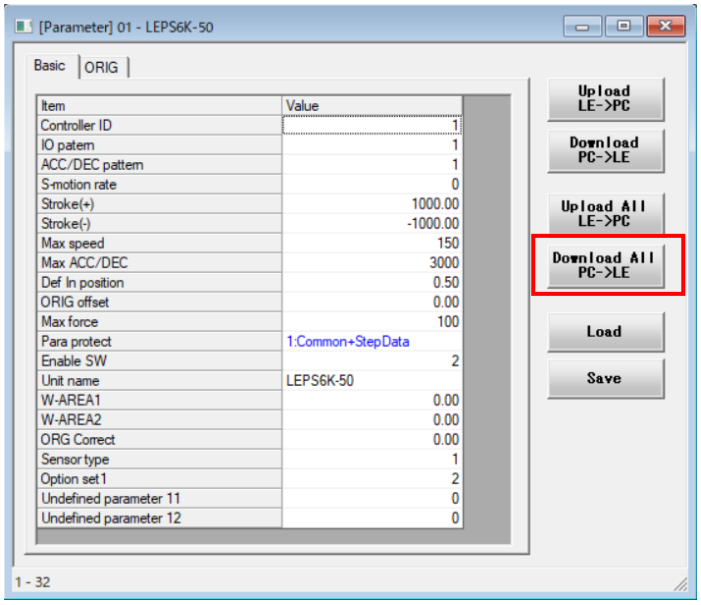


When “Load” is selected, the screen for reading the file appears. Select the parameter file and click "Open".

Confirm that the parameter protect in the basic parameter is set to “1:Basic + Step ”. If the setting value is other than "1: Basic + Step," change it to "1: Basic + Step.



Select the “Download All” button to write the parameter protect to the controller.



The PWR light of the controller (JXC51/61, JXCM1) flashes during writing. When the writing is complete, the PWR light will change from flashing to a steady light.

Next, the step data is written. Go to “5. Step 3 Writing step data to the JXC”.

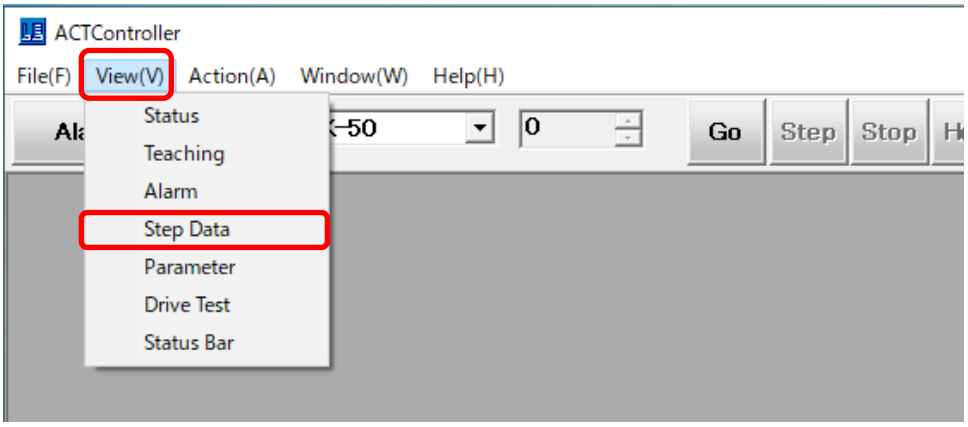
5. Step3 Writing step data to the JXC

5. 1 Writing Step Data

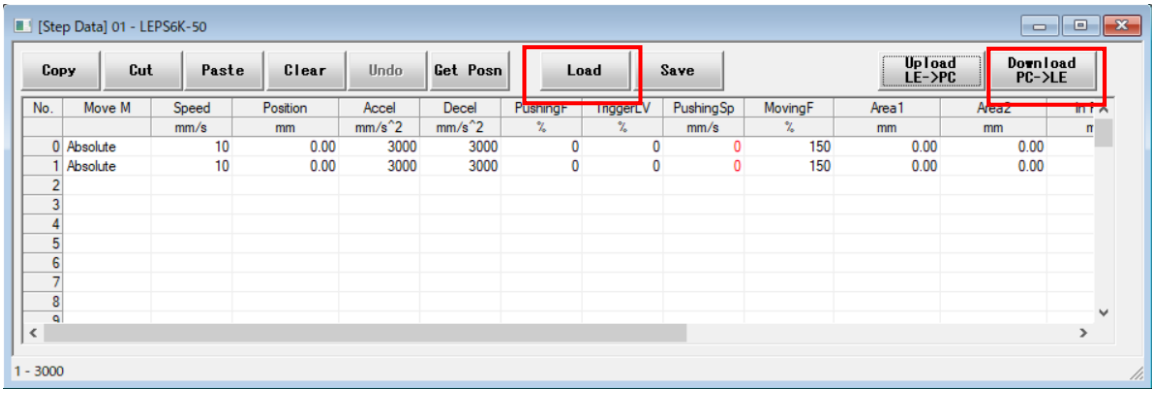
This step follows “Step 2. Data Writing parameters to the JXC”.

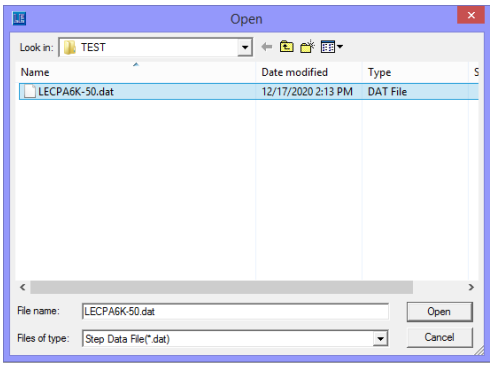
Before performing this step, check “4.1 Preparation”.

When the step data window is not displayed, select “View(V)” from the menu bar in the Normal mode screen and select “Step Data”.



Select "Load" from the step data window (shown below) and read the Step data file. Select “Download” and write the step data to the controller.





When “Load”is selected, the screen for reading the file appears.

Select the step data file and click "Open".

5. 2 End

The PWR light of the controller (JXC51/61, JXCM1) flashes during writing. When the writing is complete, the PWR light will change from flashing to a steady light.

Close the controller configuration software and turn off the power to the controller. Then, disconnect the communication cable from the PC to the controller.

6. Data transfer to a blank controller

Data cannot be transferred using the “back-up” function or “writing after specifying files” function from the blank controller data tool (LEC-BCW and JXC-BCW).

To transfer the LECP data to the blank controller (JXC-BC):

After writing the electric actuator data to be used for the blank controller using the "Writing by selecting actuator" from the blank controller data tool (JXC-BCW), transfer the data according to the procedure described in this manual.

* Please download the blank controller data tool from the SMC website.
  SMC website https://www.smcworld.com

Revision history
A: "Safety Instrutions" revised [Feb 2025]

SMC Corporation

URL https://www.smcworld.com