

Topic: Passwords in a PLC

Applicable model	AH500 series, DVP-EC3 series, DVP-SX2 series, DVP-EH3 series, DVP-SS2 series, DVP-EH2 series, DVP-SE series, DVP-ES2/EX2 series, DVP-SV2 series, DVP-SX series, DVP-ES series, DVP-SV series, DVP-10MC series, DVP-EX series, DVP-SA2 series, TP04P series, TP70P series
keyword	Password

Passwords in a PLC

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1. Preface and Purpose

Preface:

- A Users can use WPLSoft or ISPSoft to set passwords for all PLCs
- B DVPPCC01 can be used to read data in a PLC which is protected by passwords and write data to a PLC which is protected by passwords.

Purpose:

Understanding how to use WPLSoft or ISPSoft to set passwords

- PLC password and limitation on the number of guesses
- Subroutine password
- PLC ID and program ID
- Project password
- Disabling the uploading of a program

Understanding how to set passwords for DVPPCC01, use DVPPCC01 to read data in a PLC which is protected by passwords, and use DVPPCC01 to write data to a PLC which is protected by passwords

- PLC password
- PLC ID
- Subrouting password

2. Password List and Applicable Models

2.1 DVP Series PLCs and TP Series Text Panels

Model	PLC password	Limitation on the number of guesses	Subroutine password	PLC ID and Program ID	Disabling the uploading of a program	Project password (Set by software)
ES/EC/EC3	V	v. 8.20 and above	v. 8.20 and above	v. 8.20 and above	v. 8.20 and above	WPLSoft v. 2.20 (and above) and ISPSOft v. 1.60 (and above) support project passwords.
SS (The production of DVP-SS has been discontinued since 2013.)	V	--	--	--	--	
EX	V	v. 8.20 and above	v. 8.20 and above	v. 8.20 and above	v. 8.20 and above	
SA (The production of DVP-SA has been discontinued since 2013.)	V	--	--	--	--	
SX	V	v. 3.00 and above	v. 3.00 and above	v. 3.00 and above	v. 3.00 and above	
SC (The production of DVP-SC has been discontinued since 2013.)	V	--	--	--	--	
EH (The production of DVP-EH has been discontinued since 2010.)	V	--	--	--	--	
EH2 (The production of DVP-EH2 will be discontinued at the end of 2014.)	V	v. 1.40 and above	v. 1.40 and above	v. 1.40 and above	--	
SV (The production of DVP-SV will be discontinued at the end of 2014.)	V	v. 1.40 and above	v. 1.40 and above	v. 1.40 and above	--	
ES2/EX2	V	V	V	V	V	
SS2	V	V	V	V	V	
SA2	V	V	V	V	V	
SX2	V	V	V	V	V	
SE	V	V	V	V	V	
MC	V	V	V	V	V	
EH3	V	V	V	V	V	
SV2	V	V	V	V	V	
TP04P/TP70P	V	V	V	V	V	

2.2 AH500 Series PLCs

Model	PLC password	Limitation on the number of guesses	Subroutine password	PLC ID and program ID	Disabling the uploading of a program	Project password (Set by software)
AHCPU510-EN	V	V	V	V	--	ISPSOft supports project passwords.
AHCPU510-RS2	V	V	V	V	--	
AHCPU520-EN	V	V	V	V	--	
AHCPU520-RS2	V	V	V	V	--	
AHCPU530-EN	V	V	V	V	--	
AHCPU530-RS2	V	V	V	V	--	

Note 1:

(a) Blank cell: Not supported

(b) V: Supported

(c) Vx.xx: Supported by firmware version x.xx and above

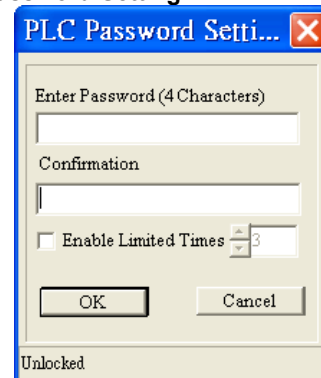
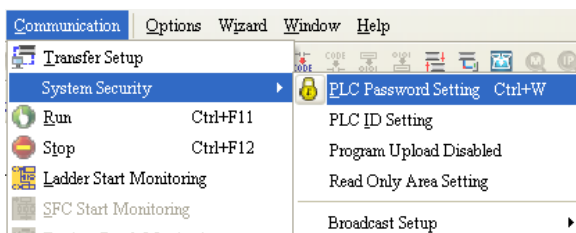
Note 2: WPLSOft v. 2.20 and ISPSOft v. 1.60 are release on March, 2012.

Note 3: WPLSOft supports DVP series PLCs and TP series text panels. ISPSOft supports DVP series PLCs, TP series text panels, and AH500 series PLCs.

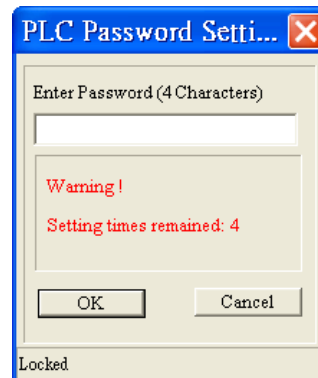
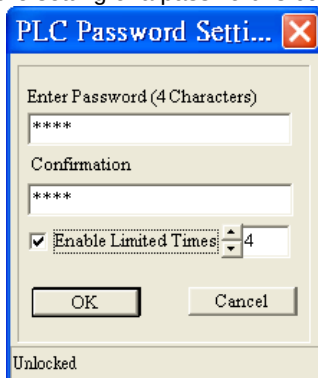
3. Using WPLSoft to Set Passwords

3.1 Setting a PLC Password and Limiting the Number of Failures Allowed

If there is a need to limit users who can use a PLC program, **PLC Password Setting** in WPLSoft can be used. Point to **System Security** on the **Communication** menu, and click **PLC Password Setting**.



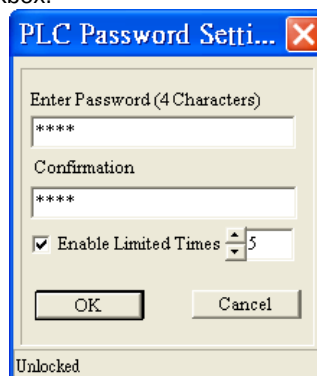
A PLC password is composed of four characters at most, e.g. 1234. The **Enable Limited Times** checkbox can be selected. The value selected in the box next to the **Enable Limited Times** checkbox should be in the range of 2 to 255. Click **OK** after the setting of a password is complete.



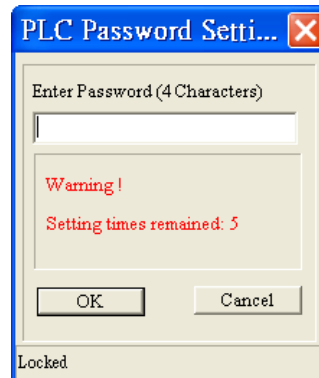
If there is a need to unlock the PLC protected by the password set, the password needs to be typed. The remaining number of failures allowed is the value selected in the box next to the **Enable Limited Times** checkbox.

Example:

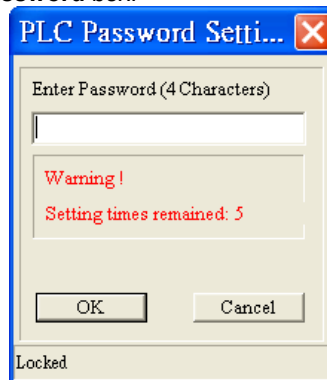
Users have to type "abcd" in the **Enter Password** box, select the **Enable Limited Times** checkbox, and select 5 in the box next to the **Enable Limited Times** checkbox.



The users have to click **OK**.



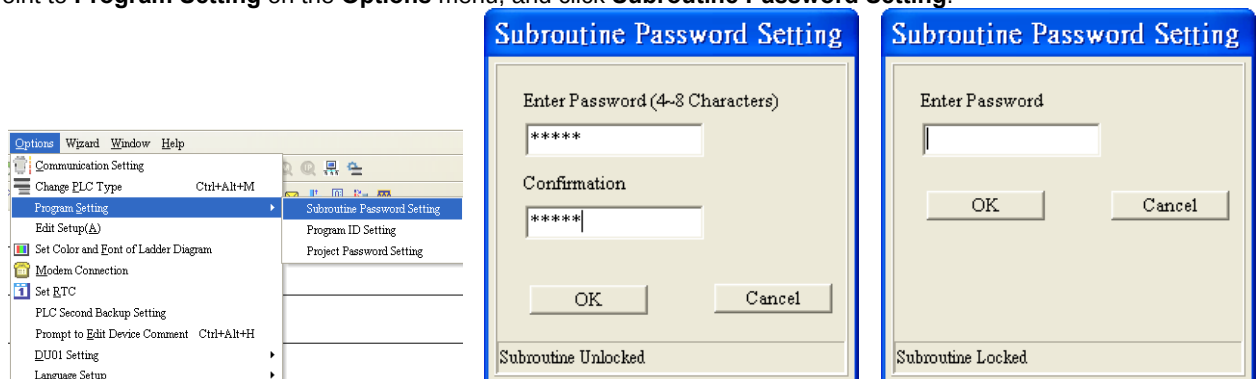
The window below appears when the users want to upload/download the program protected by the password. The password needs to be typed in the **Enter Password** box.



After **OK** is clicked, the program can be uploaded/downloaded. If the number of guesses exceeds 5, the PLC will be locked, and the program can not be uploaded/downloaded. The users can only restore the PLC to its default settings if they forget the password. The restoration of a PLC to its default settings is described below.

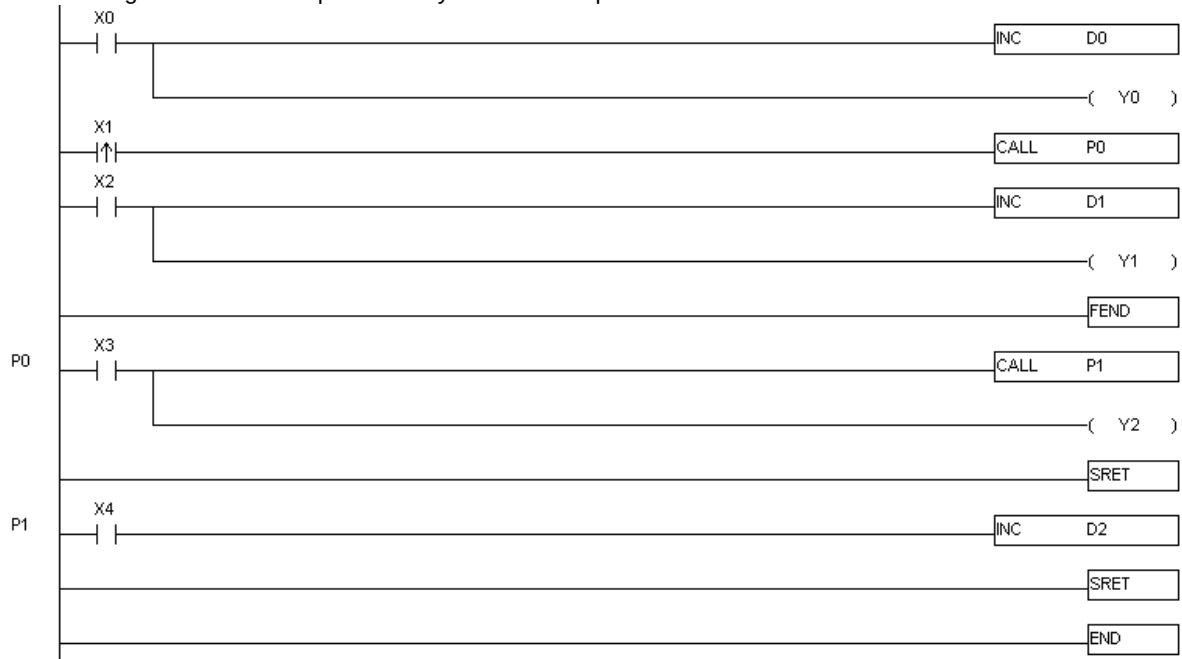
3.2 Setting a Subroutine Password

If users want to hide the subroutines in a program, they can use **Subroutine Password Setting**. Point to **Program Setting** on the **Options** menu, and click **Subroutine Password Setting**.

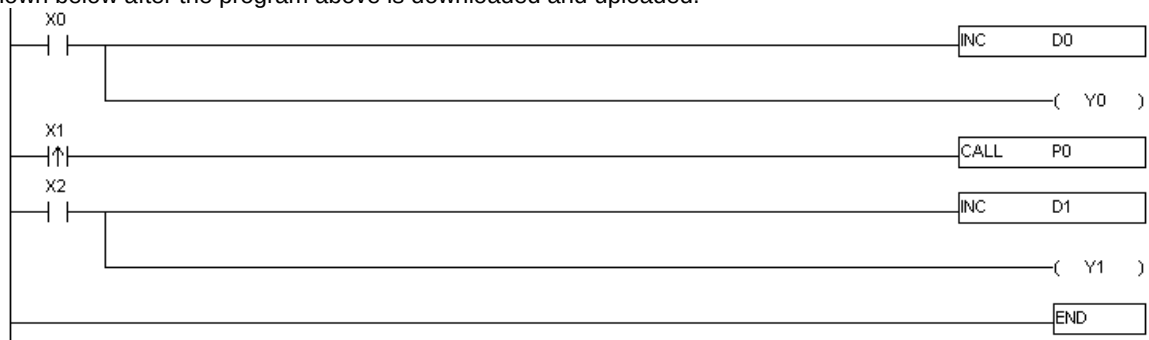


A subroutine password is composed of four to eight characters, e.g. 12345.

(1) A ladder diagram which is not protected by a subroutine password is shown below.



(2) If the program above is protected by a subroutine password, the ladder diagram shown in WPLSoft will be the one shown below after the program above is downloaded and uploaded.



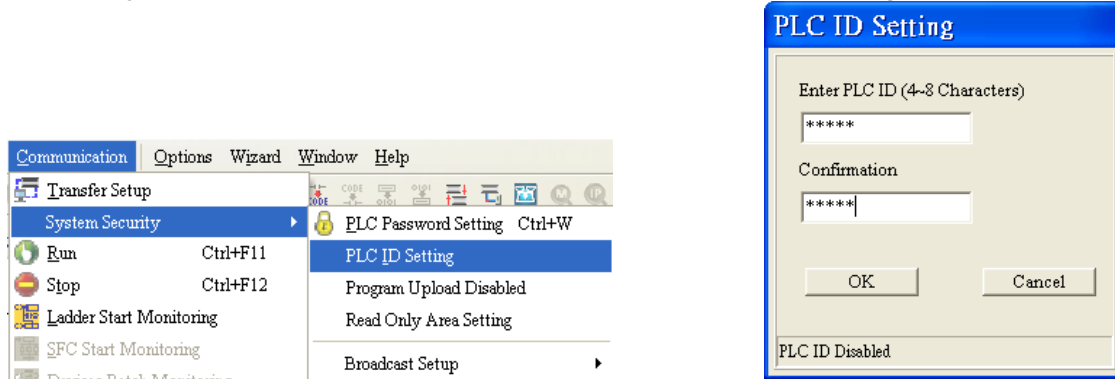
Note: When the program in a PLC is read, or a program is written to a PLC, WPLSoft does not tell the PLC whether the subroutines in the program are unlocked. After the subroutines in a program are unlocked, WPLSoft will display the subroutines following FEND.

3.3 Setting a PLC ID and a Program ID

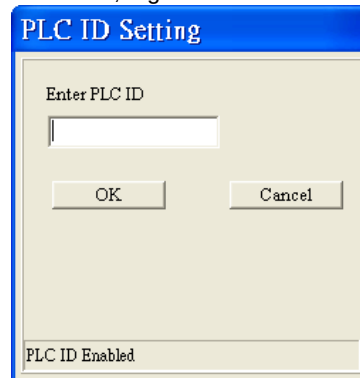
If a PLC ID is different from a program ID, a program code can not be successfully downloaded to a PLC.

(1) Setting a PLC ID

Point to **System Security** on the **Communication** menu, and click **PLC ID Setting**.

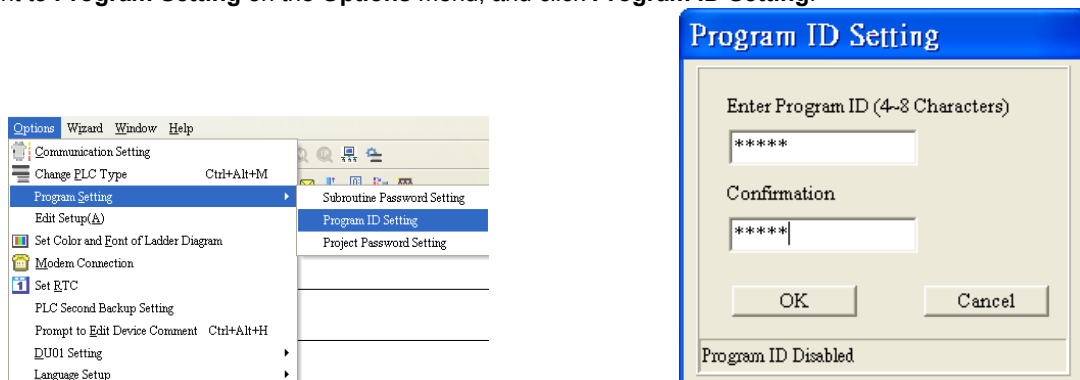


A PLC ID is composed of four to eight characters, e.g. 12345. Click **OK** after the setting of a PLC ID is complete.

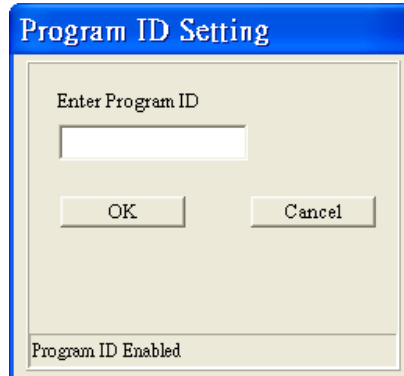


(2) Setting a program ID

Point to **Program Setting** on the **Options** menu, and click **Program ID Setting**.



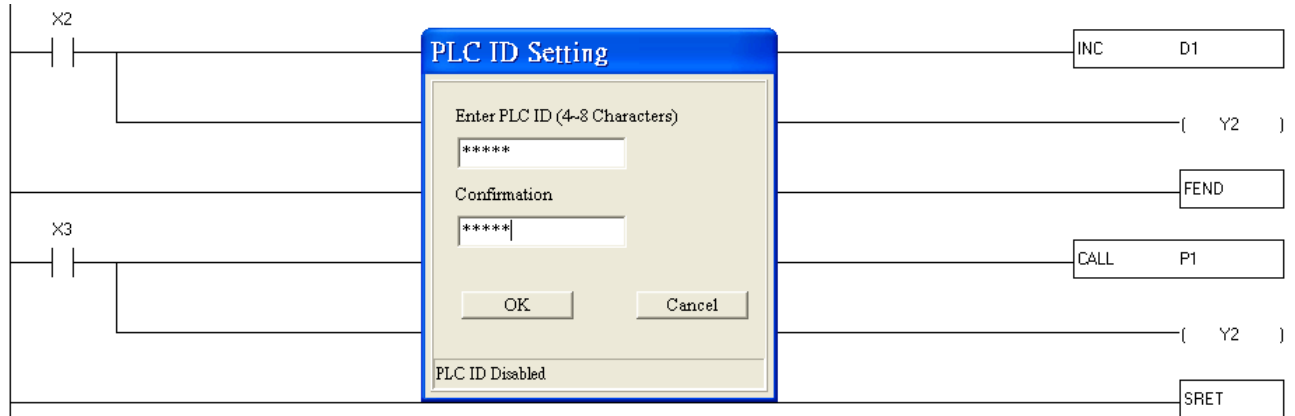
A program ID is composed of four to eight characters, e.g. 12345. Click **OK** after the setting of a program ID is complete.



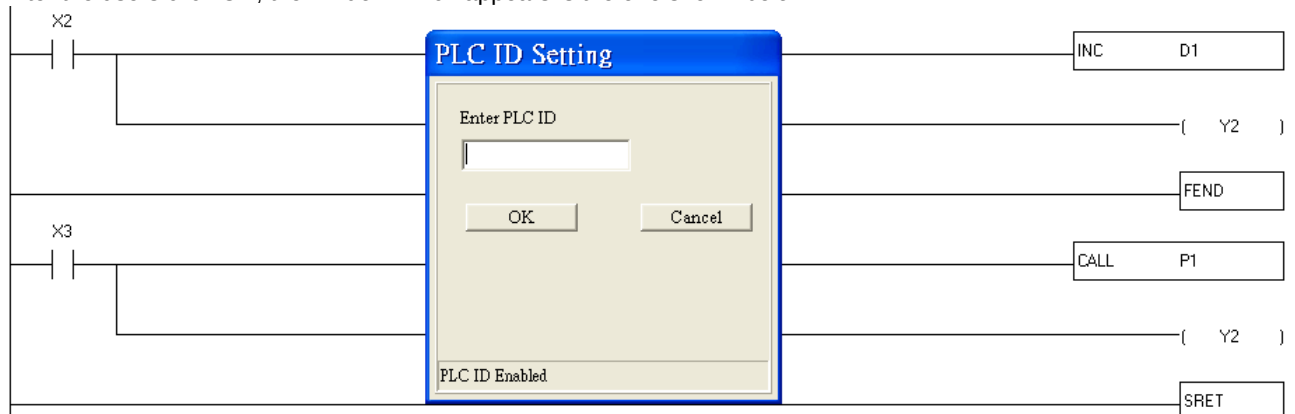
Example:

Users have to open the **PLC ID Setting** window after they write a program.

PLC ID: ABCDE

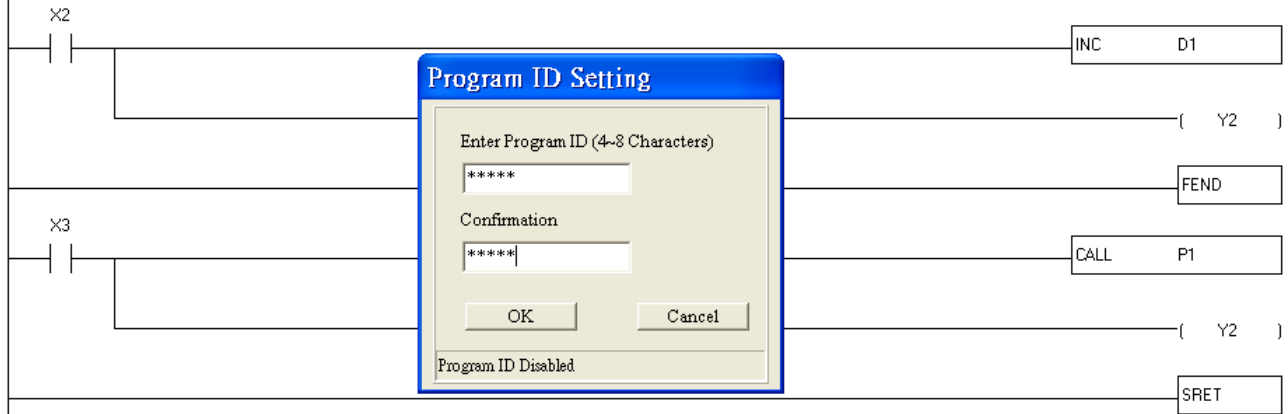


After the users click **OK**, the window which appears is the one shown below.

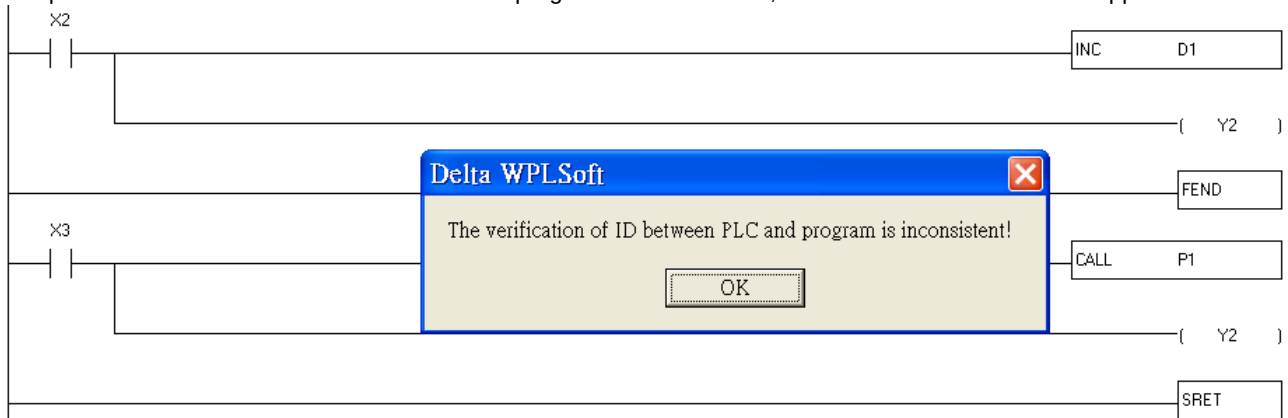


The users have to click **Cancel** in the **PLC ID Setting** window, and set a program ID.

Program ID: ABCDE

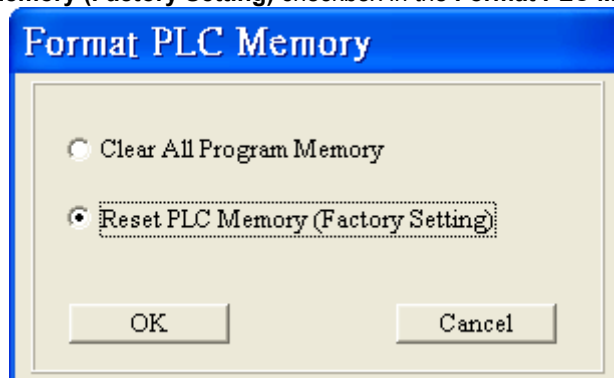


After a PLC ID and a program ID are set, WPLSoft will check whether the two IDs are the same if the program needs to be uploaded/downloaded. If the PLC ID and the program ID are different, the window shown below will appear.



Note: If users forget a password, they can restore the PLC used to its default settings. If a PLC is restored to its default settings, the program in the PLC will be cleared.

If users want to restore a PLC to its default settings, they have to click **Format PLC Memory** on the **Communication** menu, select the **Reset PLC Memory (Factory Setting)** checkbox in the **Format PLC Memory** window, and click **OK**.

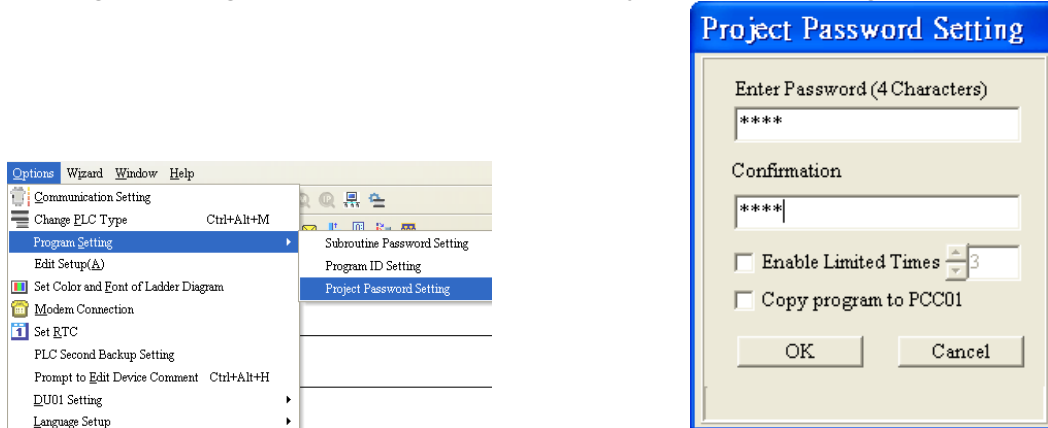


3.4 Setting a Project Password

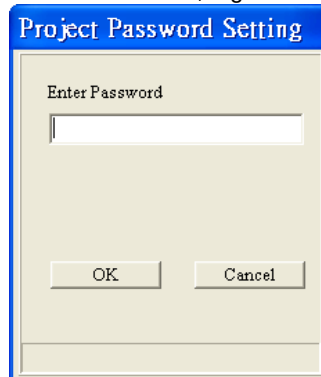
Users can use a project password to lock a project.

(1) Setting a project password:

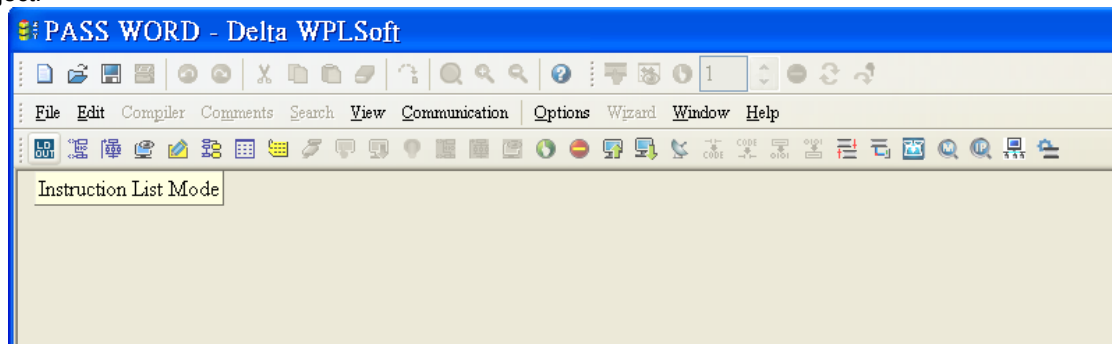
Point to **Program Setting** on the **Options** menu, and click **Project Password Setting**.

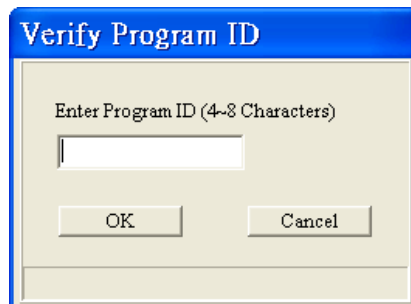


A project password is composed of four characters at most, e.g. 1234.

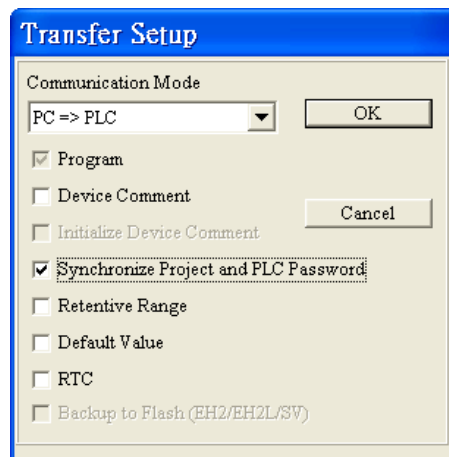


(2) After users save a project which is protected by a project password, they need to click **Instruction List Mode/Ladder Diagram Mode/SFC Diagram mode**, and enter the project password if they want to reopen the project.

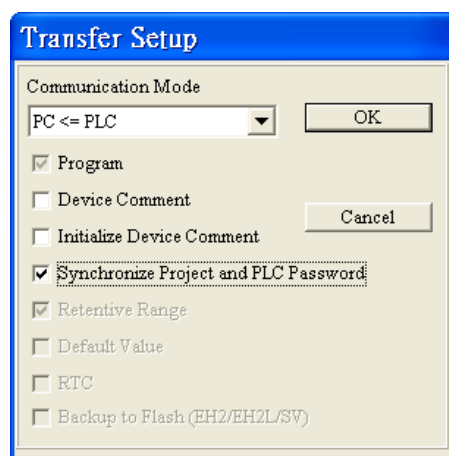




- (3) After a project password is set for a project, users can select the **Synchronize Project and PLC Password** checkbox in the **Transfer Setup** window when the program in the project is downloaded to a PLC. After the **Synchronize Project and PLC Password** checkbox is selected, the PLC password set will be the same as the project password.



- (4) After a project password is set for a project, users can select the **Synchronize Project and PLC Password** checkbox in the **Transfer Setup** window when the program in the project is uploaded to WPLSoft. After the **Synchronize Project and PLC Password** checkbox is selected, the project password set will be the same as the PLC password.

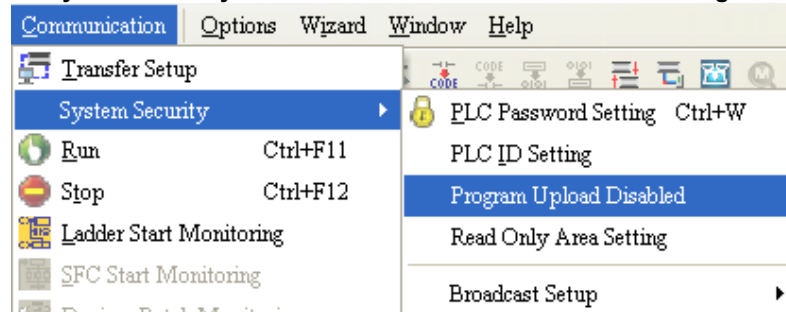


3.5 Disabling the Uploading of a Program

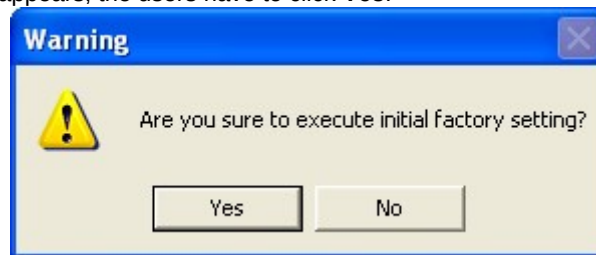
If the uploading of the program in a PLC is disabled, the program can not be uploaded. Note: After users disable the uploading of a program, they can not cancel the setting. If the users want to cancel the setting, they have to restore the PLC used to its default settings. If the program used is restored to its default settings, the program in the PLC will be cleared.

- (1) Disabling the uploading of a program

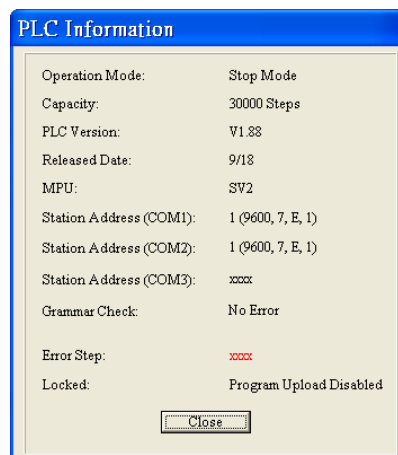
Users have to point to **System Security** on the **Communication** menu, and click **Program Upload Disabled**.



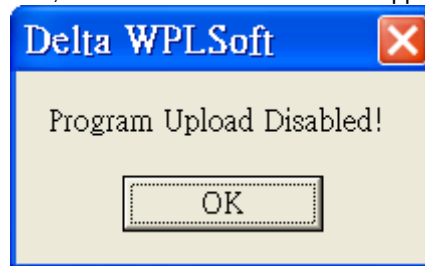
After the **Warning** window appears, the users have to click **Yes**.



- (2) After the users disable the uploading of the program in a PLC, **Program Upload Disabled** will appear in the **PLC Information** window.



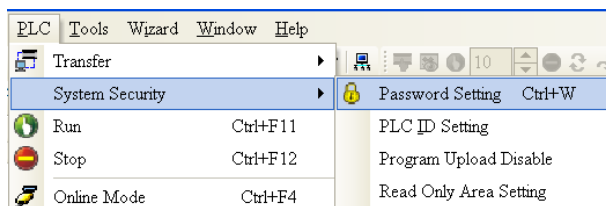
- (3) If the uploading of a program is disabled, the window shown below will appear after **Read from PLC** is clicked.



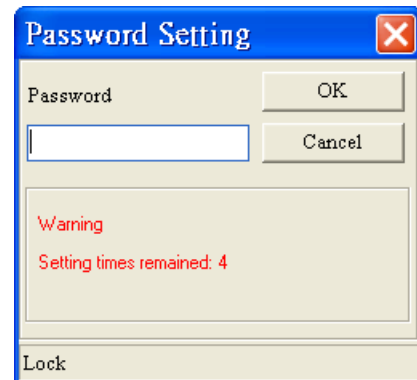
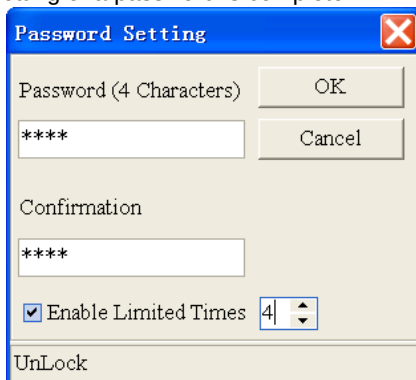
4. Using ISPSOft to Set Passwords

4.1 Setting a Password and Limiting the Number of Failures Allowed

If there is a need to limit users who can use a PLC program, **Password Setting** in ISPSOft can be used. Point to **System Security** on the **PLC** menu, and click **Password Setting**.



A password is composed of four characters at most, e.g. 1234. The **Enable Limited Times** checkbox can be selected. The value selected in the box next to the **Enable Limited Times** checkbox should be in the range of 2 to 255. Click **OK** after the setting of a password is complete.



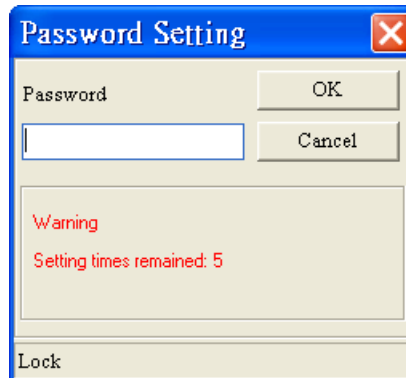
If there is a need to unlock the PLC protected by the password set, the password needs to be typed. The remaining number of failures allowed is the value selected in the box next to the **Enable Limited Times** checkbox.

Example:

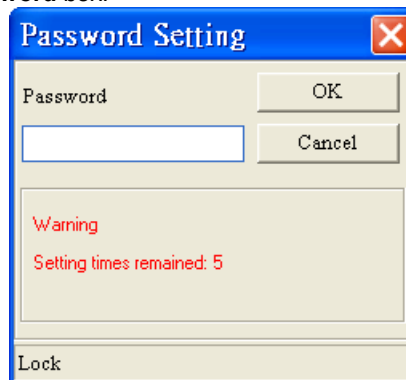
Users have to type "abcd" in the **Password** box, select the **Enable Limited Times** checkbox, and select 5 in the box next to the **Enable Limited Times** checkbox.



The users have to click **OK**.



The window below appears when the users want to upload/download the program protected by the password. The password needs to be typed in the **Password** box.

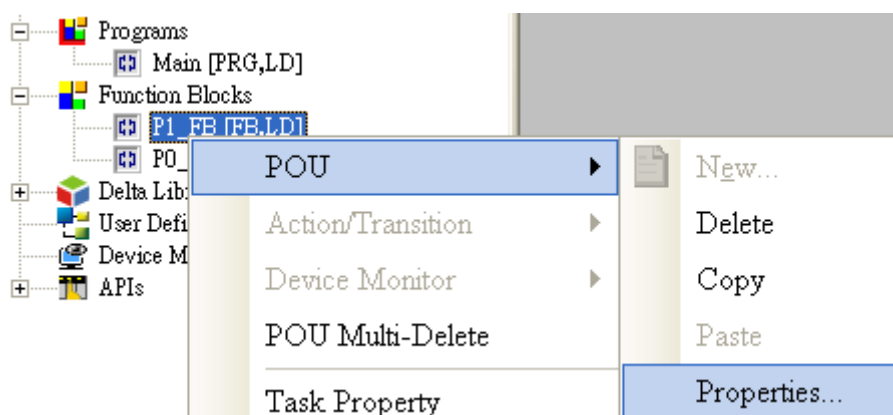


After **OK** is clicked, the program can be uploaded/downloaded. If the number of guesses exceeds 5, the PLC will be locked, and the program can not be uploaded/downloaded. The users can only restore the PLC to its default settings if they forget the password. The restoration of a PLC to its default settings is described below.

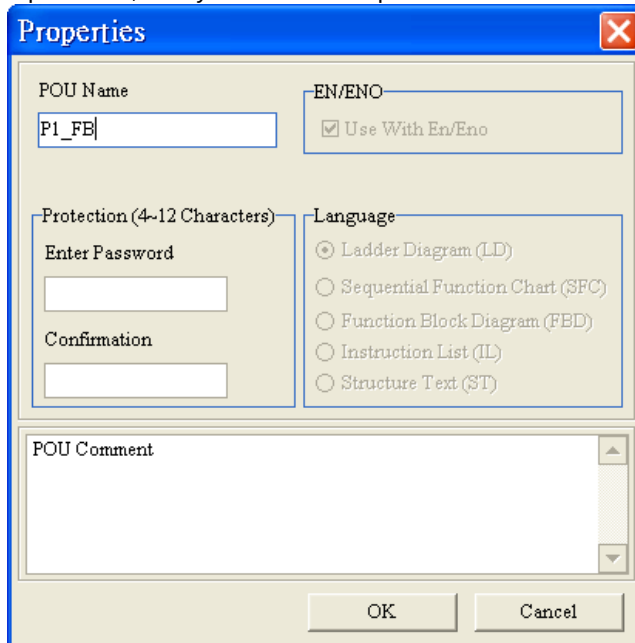
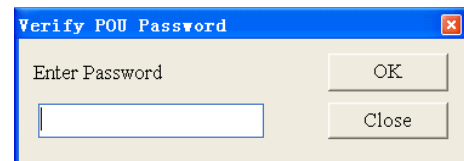
4.2 Setting a Subroutine Password

After users create subroutines in function blocks (POUs), they can set passwords for the POU. The steps in setting a subroutine password are described below.

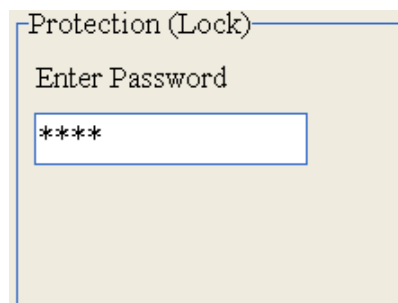
- (1) The users have to right-click a POU in the **Function Blocks** section in the project management area, point to **POU** on the context menu which appears, and click **Properties....**



- (2) The users have to type a password twice in the **Protection** section in the **Properties** window. The password typed in the Enter Password box and the password type in the **Confirmation** box must be the same. The users can type letters, numbers, and marks. Click **OK** after the setting of a password is complete. If a POU is protected by a password, the system asks for a password whenever the POU is reopened.

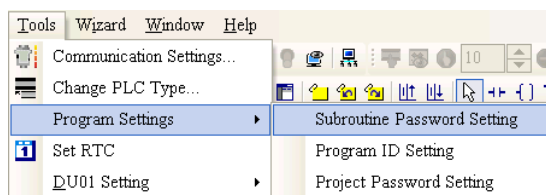
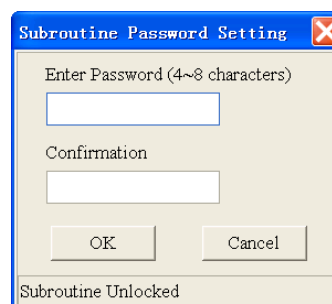
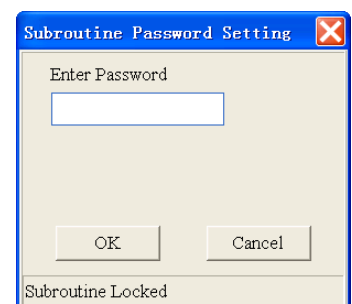



- (3) If the users want to unlock the POU, they have to reopen the **Properties** window, type the password set, and click **OK**.



If users want to download the program in ISPSoft to a PLC, and upload the program to WPLSoft, they have to set a subroutine password in ISPSoft first.

Point to **Program Settings** on the **Tools** menu, and click **Subroutine Password Setting**. (AH500 series PLCs do not support the function.)

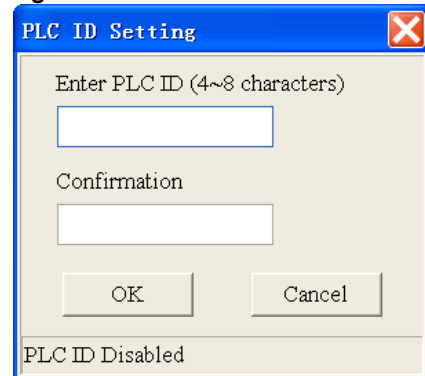
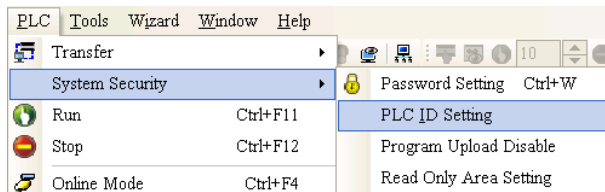




4.3 PLC ID and Program ID

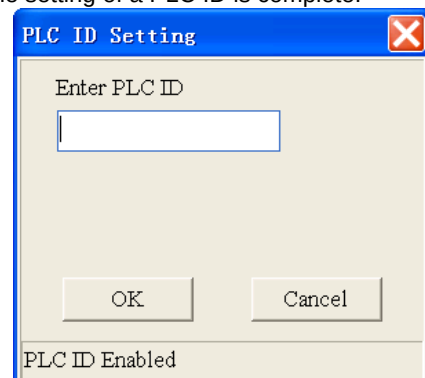
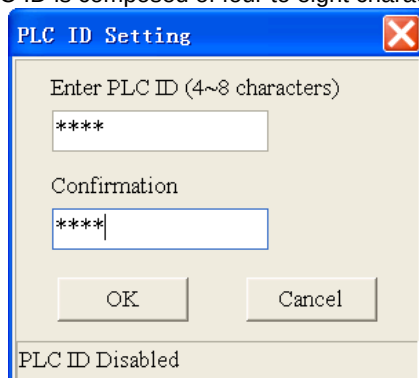
If users want to download a program to a PLC, the program ID set for the program in ISPSoft and the PLC ID set for the PLC must be the same. A project protected by a program ID can only be downloaded to a specific PLC, and the PLC ID set for the PLC must be the same as the program ID set for the project.

(1) Setting a PLC ID

Point to **System Security** on the **PLC** menu, and click **PLC ID Setting**.

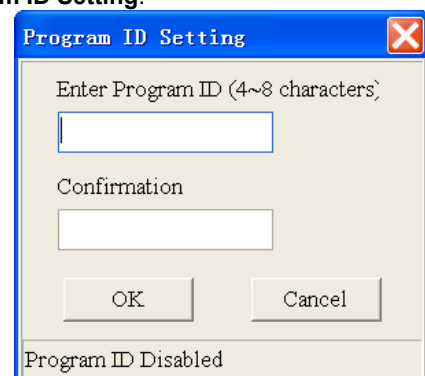
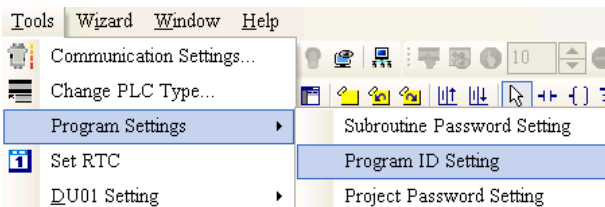


A PLC ID is composed of four to eight characters. Click **OK** after the setting of a PLC ID is complete.

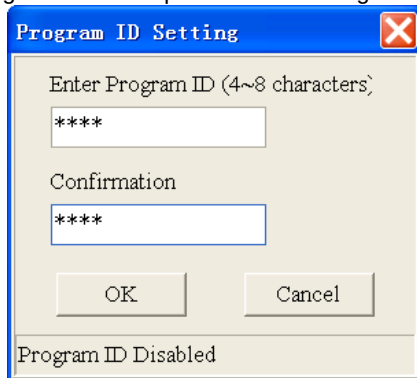


(2) Setting a program ID

Point to **Program Setting** on the **Options** menu, and click **Program ID Setting**.



A program ID is composed of four to eight characters. Click **OK** after the setting of a program ID is complete.



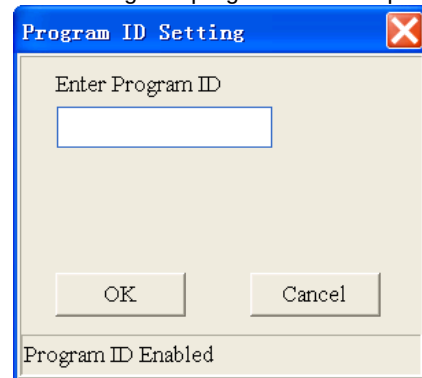
Program ID Setting

Enter Program ID (4~8 characters)

Confirmation

OK Cancel

Program ID Disabled



Program ID Setting

Enter Program ID

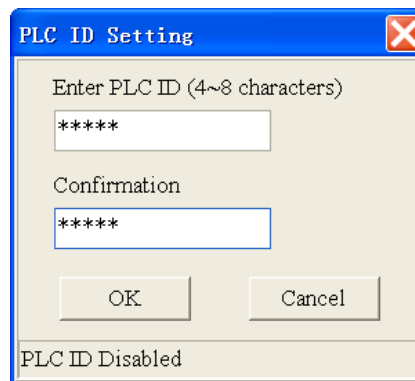
OK Cancel

Program ID Enabled

Example:

Users have to open the **PLC ID Setting** window after they write a program.

PLC ID: ABCDE



PLC ID Setting

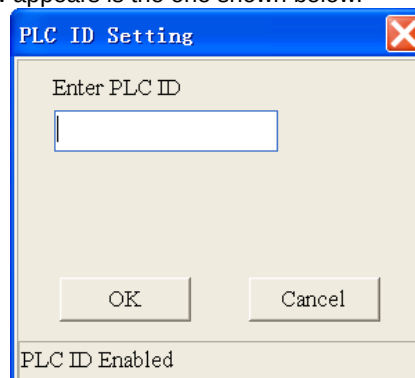
Enter PLC ID (4~8 characters)

Confirmation

OK Cancel

PLC ID Disabled

After the users click **OK**, the window appears is the one shown below.



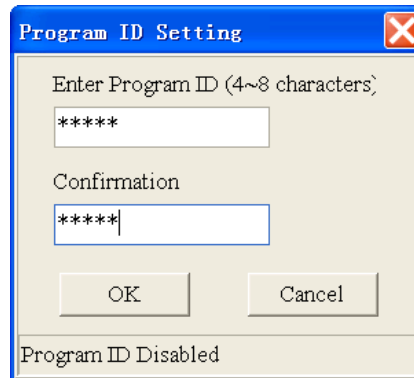
PLC ID Setting

Enter PLC ID

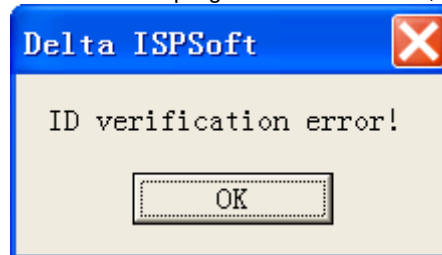
OK Cancel

PLC ID Enabled

The users have to click **Cancel** in the **PLC ID Setting** window, and set a program ID.
Program ID: ABCDE



After a PLC ID and a program ID are set, ISPSOft will check whether the two IDs are the same if the program needs to be uploaded/downloaded. If the PLC ID and the program ID are different, the window shown below will appear.

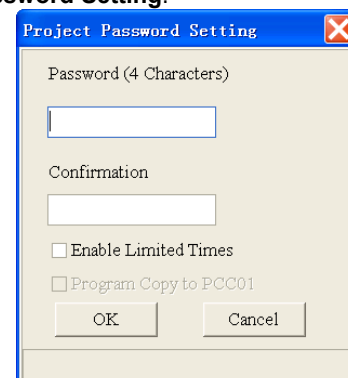
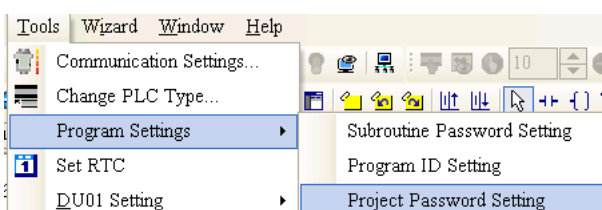


4.4 Setting a Project Password

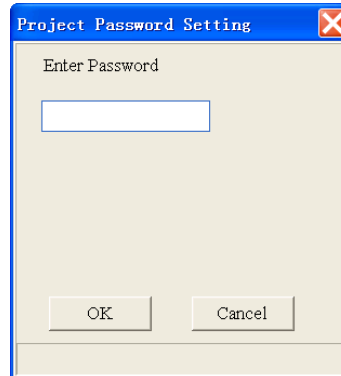
Users can use a project password to lock a project.

(1) Setting a project password:

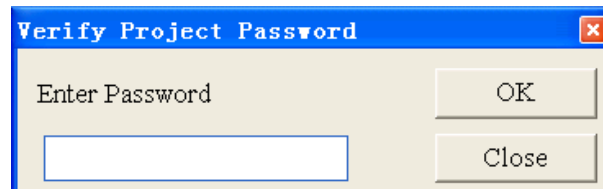
Point to **Program Settings** on the **Tools** menu, and click **Project Password Setting**.



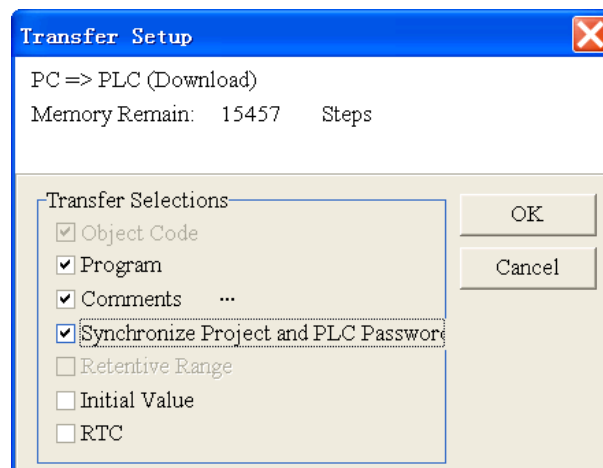
A project password is composed of four characters at most, e.g. 1234. Click **OK** after the setting of a project password is complete.



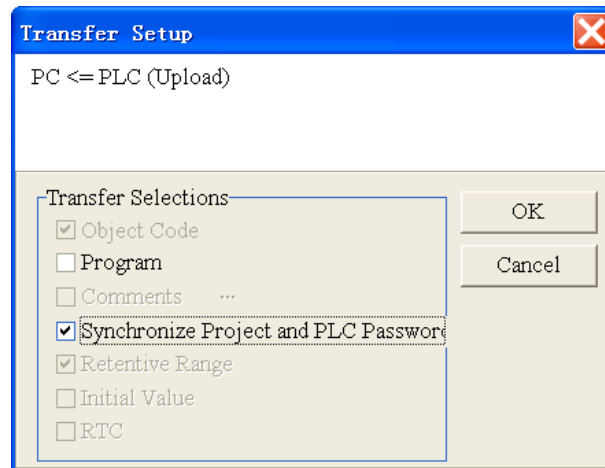
- (2) After users save a project which is protected by a project password, they need to enter the project password if they want to reopen the project.



- (3) After a project password is set for a project, users can select the **Synchronize Project and PLC Password** checkbox in the **Transfer Setup** window when the program in the project is downloaded to a PLC. After the **Synchronize Project and PLC Password** checkbox is selected, the PLC password set will be the same as the project password.



- (4) After a project password is set for a project, users can select the **Synchronize Project and PLC Password** checkbox in the **Transfer Setup** window when the program in the project is uploaded to ISPSoft. After the **Synchronize Project and PLC Password** checkbox is selected, the project password set will be the same as the PLC password.

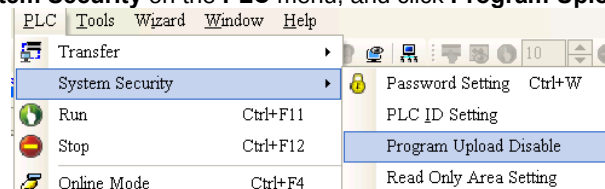


4.5 Disabling the Uploading of a Program

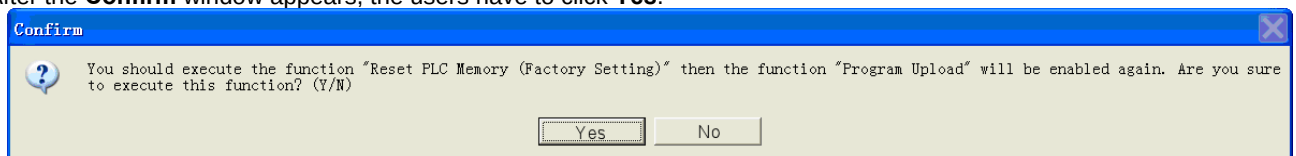
If the uploading of the program in a PLC is disabled, the program can not be uploaded. Note: After users disable the uploading of a program, they can not cancel the setting. If the users want to cancel the setting, they have to restore the PLC used to its default settings. If the program used is restored to its default settings, the program in the PLC will be cleared. (AH500 series PLCs do not support the function.)

- (1) Disabling the uploading of a program

Users have to point to **System Security** on the **PLC** menu, and click **Program Upload Disabled**.



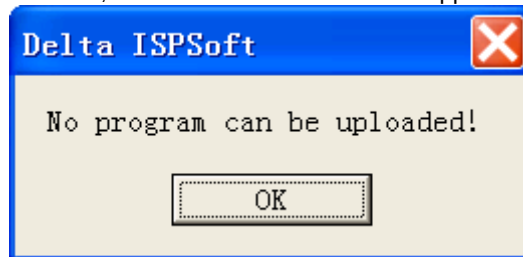
After the **Confirm** window appears, the users have to click **Yes**.



- (2) After the users disable the uploading of the program in a PLC, a message saying that the setting is successful will appear.

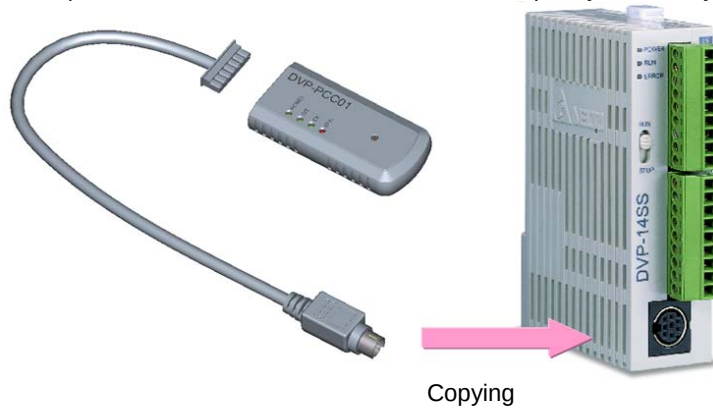


(3) If the uploading of a program is disabled, the window shown below will appear after **Upload from PLC** is clicked.

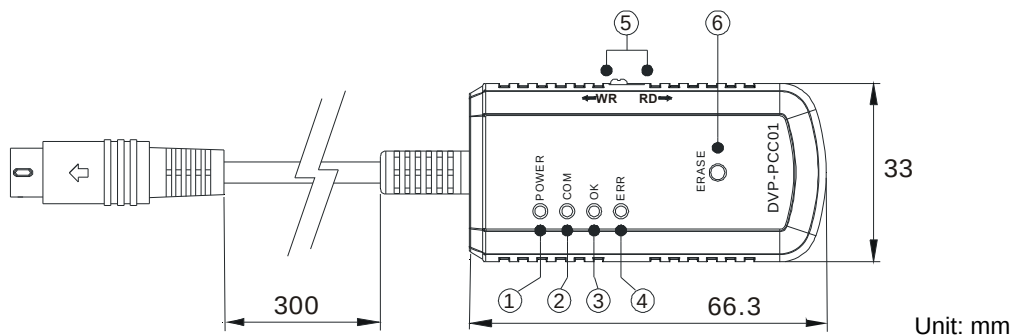


5. Using DVPPCC01 to Write a Program / Parameters to a PLC / Read the Program / Parameters in a PLC

DVPPCC01 supports the copying of the program/parameters in a DVP series PLC. DVPPCC01 writes a program/parameters to a PLC and reads the program/parameters in a PLC through a COM on the PLC. It supports passwords, PLC IDs, subroutine passwords. It can be used to transmit data quickly and safely.



5.1 Appearance



① Power indicator	④ Error indicator
② Communication indicator	⑤ Read (RD)/Write (WR) switch
③ Completion indicator	⑥ Data erasing button

5.2 Basic Functions

(1) Transmission speed:

Default communication protocol: ASCII, 9600, 7, E, 1

Transmission speed: 9600~115200 bps (ES/EX/EC/SS supports 9600 bps.)

(2) Reading/Writing data

Before DVPPCC01 is used to read data in a PLC or write data to a PLC, the PLC needs to be powered.

Step	(PLC→DVPPCC01) Reading data	(PLC←DVPPCC01) Writing data
1	Set the RD/WR switch on DVPPCC01 to RD.	Set the RD/WR switch on DVPPCC01 to WR, and make sure that the PLC stops running.
2	Connect DVPPCC01 to a COM on the PLC, and wait for five seconds.	Connect DVPPCC01 to a COM on the PLC, and wait for five seconds.
3	After the reading of the data in the PLC is complete, the OK indicator will be ON.	After the writing of data to the PLC is complete, the OK indicator will be ON.
4	Remove DVPPCC01 from the PLC.	Remove DVPPCC01 from the PLC.

5.3 Clearing the Data in DVPPCC01

First, connect DVPPCC01 to a COM on a PLC. Second, press the ERASE button in five seconds when the POWER indicator is ON. If the OK indicator is ON, the clearing of the data in DVPPCC01 is complete. Finally, remove the DVPPCC01.

5.4 Limiting the Number of Times Data Is Copied

DVPPCC01 firmware version 2.0 (and above) has a function of limiting the number of times data is copied. If the function is enabled, the number of times DVPPCC01 can copy data will be limited.

5.4.1 Setting the Number of Times DVPPCC01 Can Copy Data

- (1) Use WPLSoft to set M1480 to ON, and write the number of times DVPPCC01 can copy data to D1088.
- (2) Set the RD/WR switch on DVPPCC01 to RD, and connect DVPPCC01 to a COM on the PLC.
- (3) If DVPPCC01 reads that M1480 is ON, it will read the value in D1088, and store the value. (Exception: If M1480 is ON, but the value in D1088 is 0, the function of limiting the number of times DVPPCC01 can copy data will not be enabled.)

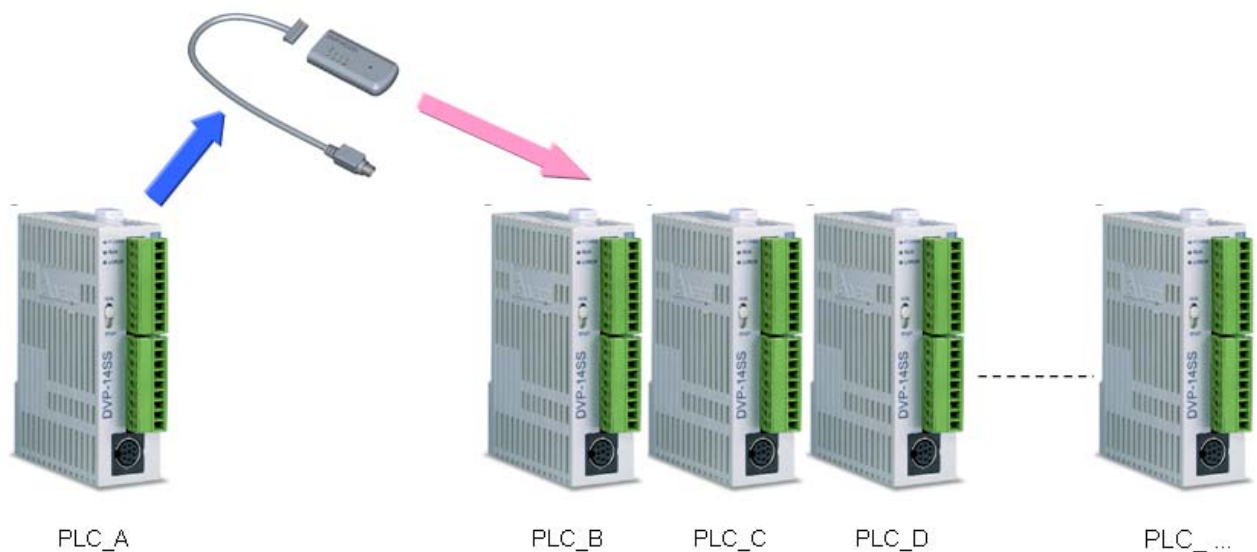
5.4.2 Setting the RD / WR Switch on DVPPCC01 to WR

- (1) When DVPPCC01 is powered, it judges whether the function of limiting the number of times it can copy data is enabled. If the function of limiting the number of times it can copy data is enabled, it will check the number of times which remain. If the number of times which remain is 0, the ERR indicator will blink, and DVPPCC01 will not continue copying a program.
- (2) If the number of times which remain is greater than 0, DVPPCC01 will begin to copy data into a PLC.
- (3) After the copying of data is complete, 1 will be subtracted from the number of times which remain, and the difference will be stored.

Example:

A program/Parameters can be copied into several PLCs by means of DVPPCC01.

Procedure: The program in WPLSoft is downloaded to PLC_A. → DVPPCC01 reads the program in PLC_A. → DVPPCC01 writes the program to PLC_B →

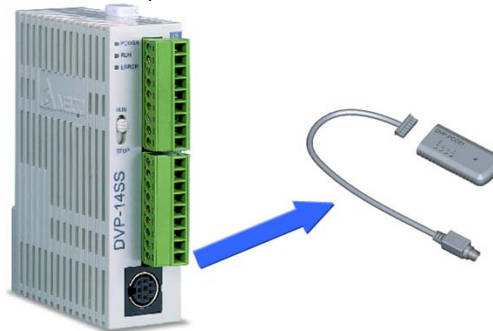


- **Backing the data in a PLC up onto DVPPCC01 (PLC→DVPPCC01)**

Step 1: Use WPLSoft to set M1480 to ON, write the number of times DVPPCC01 can copy data to D1088, and download the program in WPLSoft to a PLC. (The number of times DVPPCC01 can copy data is two.)

D1088		K2
M1480		

Step 2: After the RD/WR switch on DVPPCC01 is set to RD, DVPPCC01 will begin to read the program in the PLC, and the values in M1480 and D1088 will be copied into DVPPCC01.



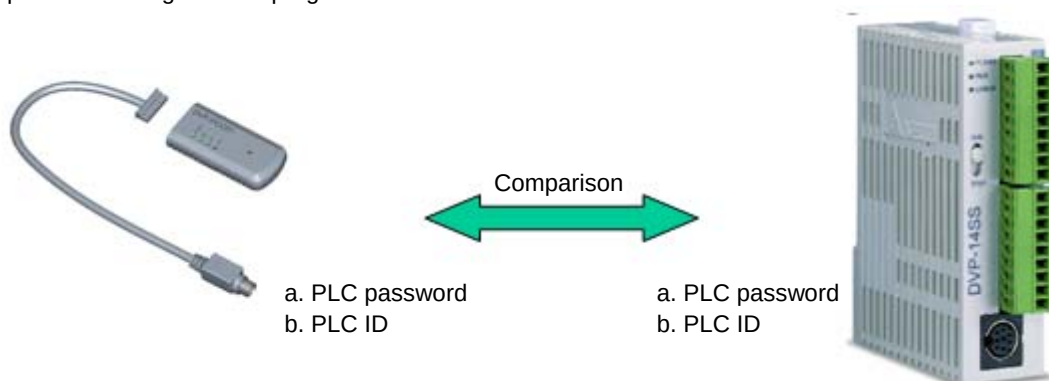
- **Copying the data in DVPPCC01 into a PLC (DVPPCC01→PLC)**

Step 1: After the RD/WR switch on DVPPCC01 is set to WR, the program in DVPPCC01 can be copied into PLC_B and PLC_C. When the program in DVPPCC01 is copied into PLC_D, the ERR indicator blinks. The number of times DVPPCC01 can copy data is reached.

Note: Before users use DVPPCC01 to write data to a PLC or read data in a PLC, they have to make sure that the PLC stops running. Please refer to DVPPCC01 Instruction Sheet for more information.

5.5 Setting a Password / PLC ID / Subroutine Password for DVPPCC01

Before the data in DVPPCC01 is written to a PLC protected by a PLC password and a PLC ID, the PLC password and the PLC ID in DVPPCC01 are compared with the PLC password and the PLC ID protecting the PLC. If the PLC password and the PLC ID in DVPPCC01 are the same as the PLC password and the PLC ID protecting the PLC, the data in DVPPCC01 will be written to the PLC. Besides, if DVPPCC01 is used to read data in a PLC, it will read the subroutine password along with the program in the PLC. If DVPPCC01 is used to write data to a PLC, it will write the subroutine password along with the program in it to the PLC.



5.5.1 Steps in Setting a PLC Password for DVPPCC01

- (1) Write a PLC password to D1086 and D1087 in a PLC by means of ISPSOft or WPLSoft, and set M1086 in the PLC to ON.
- (2) Set a PLC password for the PLC.
- (3) Set the RD/WR switch on DVPPCC01 to RD. After DVPPCC01 is connected to a COM on the PLC, DVPPCC01 will begin to read the program and the parameters in the PLC.
- (4) After DVPPCC01 finishes reading the data in the PLC, it will judge whether M1086 is ON. If M1086 is ON, DVPPCC01 will read the values in D1086 and D1087, and regard the values as the PLC password set for it. After the reading of the values in D1086 and D1087 is complete, the OK indicator on DVPPCC01 will be ON, and DVPPCC01 can be disconnected from the PLC.

5.5.2 Steps in Setting a PLC ID for DVPPCC01

- (1) Write a PLC ID to D1996~D1999, and the length of the PLC ID to D1995 in a PLC by means of ISPSOft or WPLSoft.
- (2) Set a PLC ID for the PLC. The PLC ID set must be the same as the PLC ID written to D1996~D1999.
- (3) Set the RD/WR switch on DVPPCC01 to RD. After DVPPCC01 is connected to a COM on the PLC, DVPPCC01 will begin to read the program and the parameters in the PLC.
- (4) When DVPPCC01 reads the data in the PLC, it asks the PLC whether it has a PLC ID. If the PLC has a PLC ID, DVPPCC01 will read the values in D1995~D1999, and regard the values as the PLC ID set for it. After the reading of the value in D1995~D1999 is complete, the OK indicator on DVPPCC01 will be ON, and DVPPCC01 can be disconnected from the PLC.

5.5.3 Setting a Subroutine Password for DVPPCC01

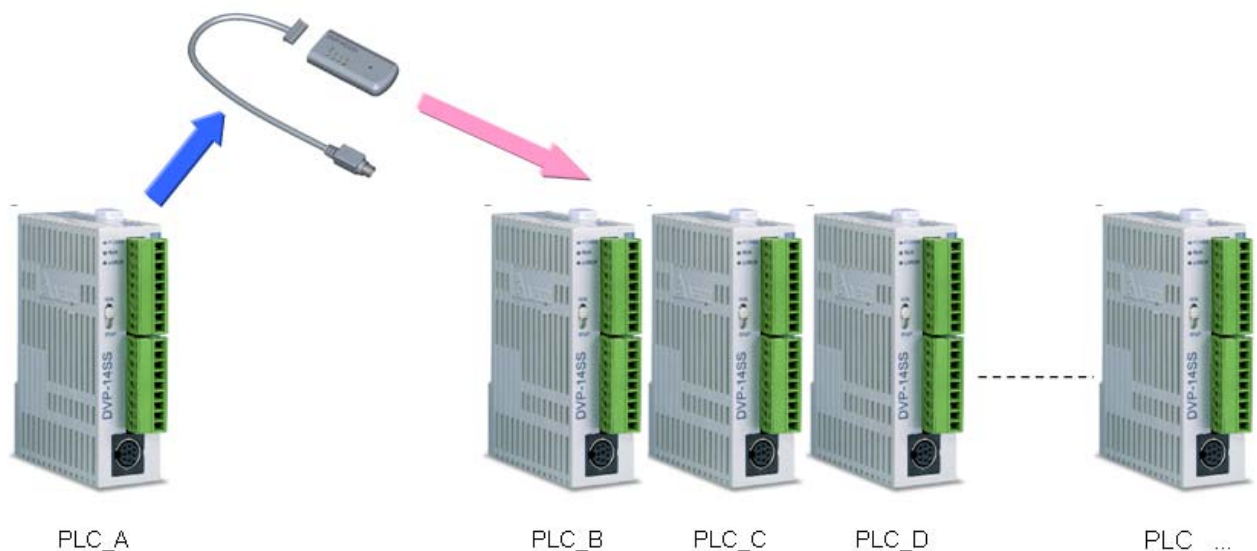
The subroutine password along with the program in the PLC is read by DVPPCC01. If the program in a PLC has a subroutine password, DVPPCC01 will read the subroutine password, and regard it as the subroutine password set for it.

Example:

A program/Parameters protected by passwords can be copied into several PLCs by means of DVPPCC01.

Procedure: WPLSoft is used to set passwords for PLC_A. → DVPPCC01 reads the passwords in PLC_A. → DVPPCC01 writes the passwords to PLC_B →

Related passwords: PLC password/PLC ID/Subroutine password



● Clearing the data in DVPPCC01

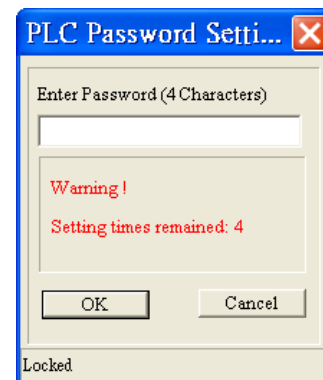
First, connect DVPPCC01 to a COM on a PLC. Second, press the ERASE button in five seconds when the POWER indicator is ON. If the OK indicator is ON, the clearing of the data in DVPPCC01 is complete. Finally, remove the DVPPCC01.

● Backing the data and the password in a PLC up onto DVPPCC01 (PLC→DVPPCC01)

Step 1: Write a PLC password to D1086 and D1087 in PLC_A, and set M1086 in PLC_A to ON.

Use WPLSoft to write a PLC password to D1086 and D1087 in PLC_A, set M1086 to ON, and use the PLC password to protect PLC-A. (The PLC password written to D1086 and D1087 is the ASCII code "ABCD" (the hexadecimal value H41424344).)

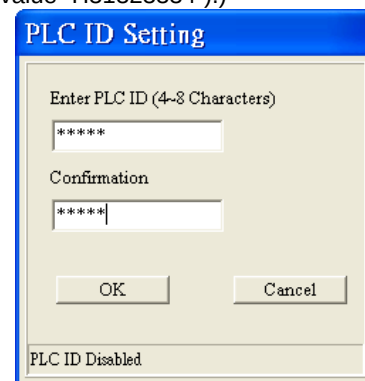
D1086		H4142
D1087		H4344
M1086		



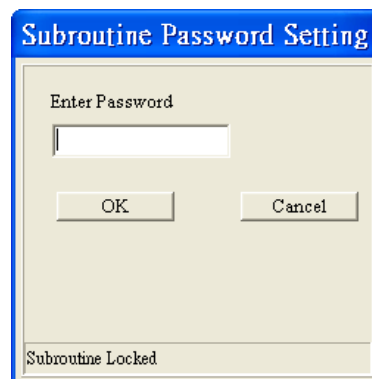
Step 2: Write a PLC ID to D1996~D1999 in PLC_A, and write the length of the PLC ID to D1995 in PLC_A.

Use WPLSoft to write a PLC ID to D1996~D1999 in PLC_A, and use the PLC ID to protect PLC_A. (The PLC ID written to D1996~D1999 is the ASCII code "1234" (the hexadecimal value "H31323334").)

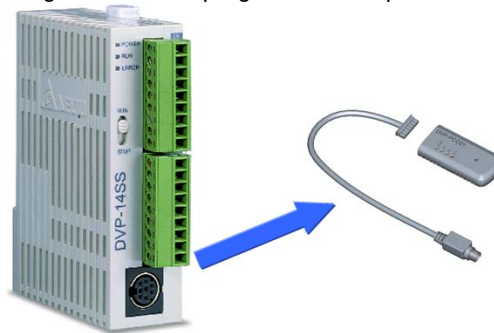
D1996		H3132
D1997		H3334
D1995		H4



Step 3: Use WPLSoft to set a subroutine password, and download the program in WPLSoft to PLC_A. (The subroutine password set is "5678".)



Step 4: PLC_A must stop running. Set the RD/WR switch on DVPPCC01 to RD. After DVPPCC01 is connected to a COM on PLC_A, DVPPCC01 will begin to read the program and the parameters in PLC_A.



PLC : A

After the reading of the data in PLC_A is complete, the OK indicator on DVPPCC01 will be ON, and DVPPCC01 can be disconnected from PLC_A.

- **Copying the data in DVPPCC01 into a PLC (DVPPCC01→PLC)**

Step 1:

Situation 1: PLC_B is not protected by passwords.

PLC_B stops running. Set the RD/WR switch on DVPPCC01 to WR. After DVPPCC01 is connected to a COM on PLC_B, DVPPCC01 will begin to write a program and parameters to PLC_B.

Set the RD/WR switch on DVPPCC01 to WR.

PLC_B is not protected by passwords.
PLC_B stops running.



Situation 2: PLC_B is protected by passwords.

PLC_B stops running. Set a PLC password and a PLC ID for PLC_B. (The PLC password set is "ABCD", and the PLC ID set is "1234".) The PLC password and the PLC ID set must be the same as the PLC password and the PLC ID in DVPPCC01. Set the RD/WR switch on DVPPCC01 to WR. After DVPPCC01 is connected to a COM on PLC_B, DVPPCC01 will begin to write a program and parameters to PLC_B.

1. Set the RD/WR switch on DVPPCC01 to WR.
2. PLC password=ABCD
3. PLC ID=1234

PLC_B is protected by passwords.

1. PLC_B stops running.
2. PLC password=ABCD
3. PLC ID=1234



After the writing of the data in DVPPCC01 is complete, the OK indicator on DVPPCC01 will be ON, and DVPPCC01 can be disconnected from the PLC_B.

Step 2: After users use WPLSoft to read the program in PLC_B, they can find that DVPPCC01 can be used to read the program in a PLC protected by passwords, and write a program to a PLC protected by passwords.

Note: If users want to use DVPPCC01 to write data to a PLC/read the data in a PLC, the PLC must stop running. Please refer to DVPPCC01 Instruction Sheet for more information.

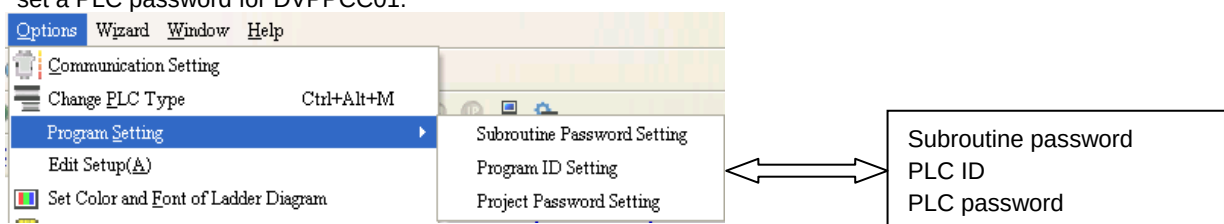
5.6 Special Functions of ES2

Users can use special functions of DVP-ES2 to set a PLC password and a PLC ID for DVPPCC01, and do not need to set special D devices or M devices.

Note: ES2 version 2.80 (and above) and DVPPCC01 version 1.6 (and above) support the special functions described below.

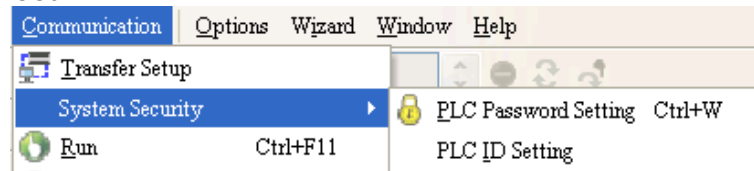
5.6.1 Setting Passwords for DVPPCC01

- (1) After users point to Program Setting on the Options menu, they can click **Subroutine Password Setting**, **Program ID Setting** or **Project Password Setting**. **Subroutine Password Setting** is used to set a subroutine password for DVPPCC01, **Program ID Setting** is used to set a PLC ID for DVPPCC01, and **Project Password Setting** is used to set a PLC password for DVPPCC01.



- (2) The users have to set a PLC password and a PLC ID for ES2.

The users have to point to **System Security** on the **Communication** menu, and click **PLC Password Setting** or **PLC ID Setting**. The PLC password and the PLC ID set for ES2 must be the same as the PLC password and the PLC ID set for DVPPCC01.



- (3) After the users complete step (1) and step (2), they can download the program in WPLSoft to ES2.

5.6.2 Copying Passwords into DVPPCC01

Set the RD/WR switch on DVPPCC01 to RD. After DVPPCC01 is connected to a COM on ES2, DVPPCC01 will read the subroutine password, the PLC password, and the PLC ID which are set for it. If the PLC password and the PLC ID set for DVPPCC01 are not successfully downloaded to ES2, there will be a PLC password/ID comparison error, and users need to repeat step (1) in section 5.6.1. If DVPPCC01 successfully reads the subroutine password, the PLC password, and the PLC ID set for it, the OK indicator will be ON.

Example:

The special functions of ES2 can be used to set passwords for DVPPCC01, and the passwords set for ES2 can be copied into several PLCs.

Procedure: WPLSoft is used to set passwords for ES2_A. → DVPPCC01 reads the passwords in ES2_A. → DVPPCC01 writes the passwords to ES2_B →

Related passwords: PLC password/PLC ID/Subroutine password



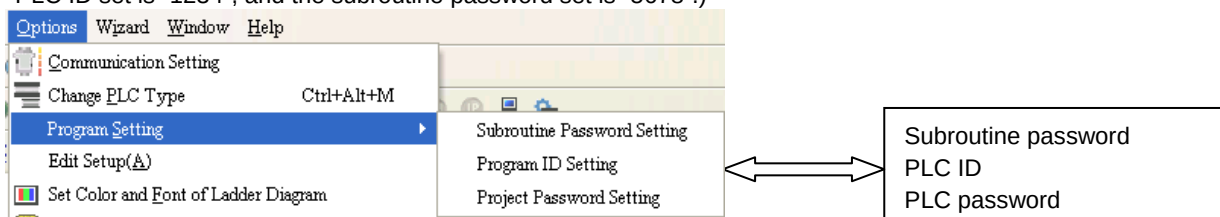
- **Clearing the data in DVPPCC01**

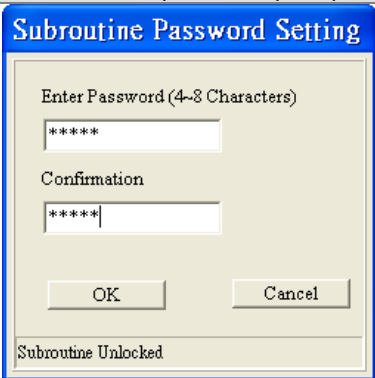
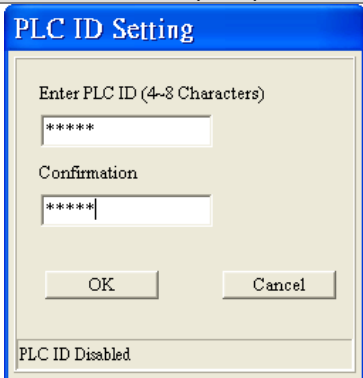
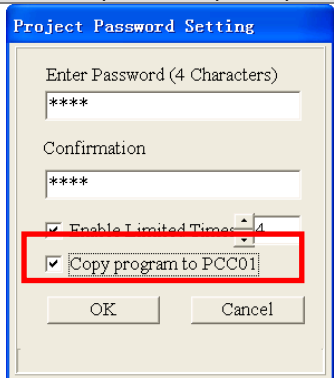
First, connect DVPPCC01 to a COM on a PLC. Second, press the ERASE button in five seconds when the POWER indicator is ON. If the OK indicator is ON, the clearing of the data in DVPPCC01 is complete. Finally, remove the DVPPCC01.

- **Backing the data and the password in a PLC up onto DVPPCC01 (PLC → DVPPCC01)**

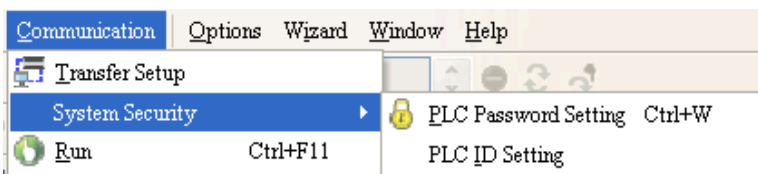
Step 1: Write a PLC password to, a PLC ID, and a subroutine password to ES2_A.

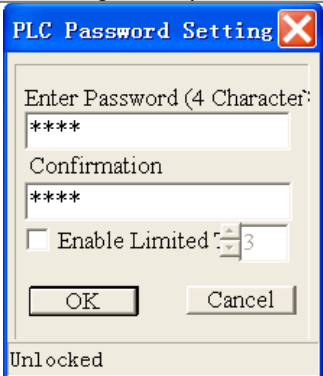
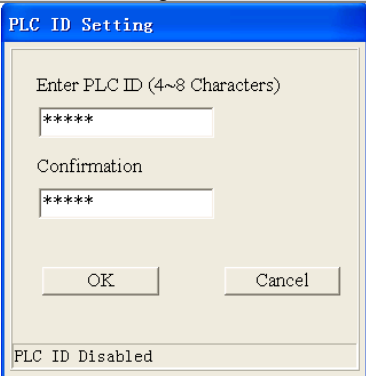
Use WPLSoft to set a PLC password, a PLC ID, and a subroutine password. (The PLC password set is "ABCD", the PLC ID set is "1234", and the subroutine password set is "5678".)



Subroutine password (5678)	PLC ID (1234)	PLC password (ABCD)
 Subroutine Password Setting Enter Password (4~8 Characters) ***** Confirmation ***** OK Cancel Subroutine Unlocked	 PLC ID Setting Enter PLC ID (4~8 Characters) ***** Confirmation ***** OK Cancel PLC ID Disabled	 Project Password Setting Enter Password (4 Characters) **** Confirmation **** ☒ Enable Limited Time: 4 ☒ Copy program to PCC01 OK Cancel

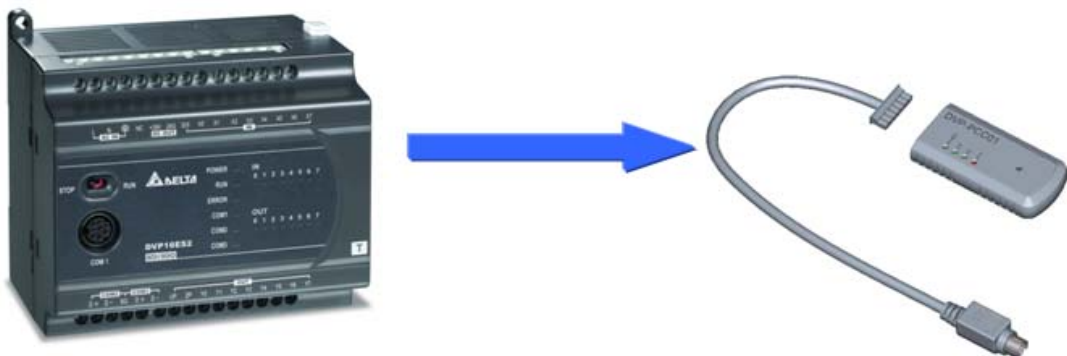
Step 2: Use WPLSoft to set a PLC password and a PLC ID for ES2_A.



Setting a PLC password	Setting a PLC ID
 PLC Password Setting Enter Password (4 Characters) **** Confirmation **** ☐ Enable Limited Time: 3 OK Cancel Unlocked	 PLC ID Setting Enter PLC ID (4~8 Characters) ***** Confirmation ***** OK Cancel PLC ID Disabled

Step 3: Download the program in WPLSoft to ES2_A.

Step 4: ES2_A must stop running. Set the RD/WR switch on DVPPCC01 to RD. After DVPPCC01 is connected to a COM on ES2_A, DVPPCC01 will begin to read the program and the parameters in ES2_A.



After the reading of the data in ES2_A is complete, the OK indicator on DVPPCC01 will be ON, and DVPPCC01 can be disconnected from ES2_A.

● Copying the data in DVPPCC01 into a PLC (DVPPCC01→PLC)

Step 1:

Situation 1: ES2_B is not protected by passwords.

ES2_B stops running. Set the RD/WR switch on DVPPCC01 to WR. After DVPPCC01 is connected to a COM on ES2_B, DVPPCC01 will begin to write a program and parameters to ES2_B.

Set the RD/WR switch on DVPPCC01 to WR.

ES2_B is not protected by passwords.
ES2_B stops running.



Situation 2: ES2_B is protected by passwords.

ES2_B stops running. Set a PLC password and a PLC ID for ES2_B. (The PLC password set is "ABCD", and the PLC ID set is "1234".) The PLC password and the PLC ID set must be the same as the PLC password and the PLC ID in DVPPCC01. Set the RD/WR switch on DVPPCC01 to WR. After DVPPCC01 is connected to a COM on ES2_B, DVPPCC01 will begin to write a program and parameters to ES2_B.

1. Set the RD/WR switch on DVPPCC01 to WR.
2. PLC password=ABCD
3. PLC ID=1234

ES2_B is protected by passwords.

1. ES2_B stops running.
2. PLC password=ABCD
3. PLC ID=1234



After the writing of the data in DVPPCC01 is complete, the OK indicator on DVPPCC01 will be ON, and DVPPCC01 can be disconnected from the ES2_B.

Step 2: After users use WPLSoft to read the program in ES2_B, they can find that DVPPCC01 can be used to read the program in a PLC protected by passwords, and write a program to a PLC protected by passwords.

5.7 Making a DVP-ES/EX/EC Series PLC Run / Stops Running

Although there is no RUN/STOP switch on a DVP-ES/EX/EC series PLC, use can make it run/stop running by means of DVPPCC01. The users have to connect DVPPCC01 to a DVP-ES/EX/EC series PLC when the DVP-ES/EX/EC series PLC runs. They have to set the RD/WR switch on DVPPCC01 to WR. DVPPCC01 can not write data to the DVP-ES/EX/EC series PLC. The users have to press the ERASE button in thirty seconds when the ERR indicator and the OK indicator blinks simultaneously. The DVP-ES/EX/EC series PLC stops running. The users can remove and then connect DVPPCC01. After DVPPCC01 finishes writing data, the users have to press the ERASE button in thirty seconds when the OK indicator is ON. The DVP-ES/EX/EC series PLC runs again.

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