

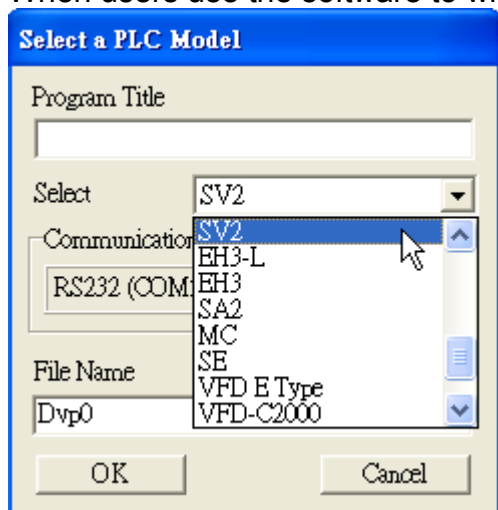
Product	DVP	Applicable Model	DVP28SV11T2 DVP28SV11R2	Confidential Level	<input checked="" type="checkbox"/> General <input type="checkbox"/> Classified <input type="checkbox"/> Top secret
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Object: Helping customers understand the differences between the SV2 series PLC and the SV series PLC, and use the new SV2 series PLC

1. The differences between the SV2 series PLC and the SV series PLC

- Model name: SV2→DVP28SV11□2 SV→DVP28SV11□

When users use the software to write the program, they need to choose the model.



- The program capacity of the SV2 series PLC is increased to 30K steps, and the number of data registers is increased to 12000.
- For the SV2 series PLC, STL only can be executed before the 16Kth step. If it is executed after the 16Kth step and the program is compiled, there is a warning message as follows.



- For the SV2 series PLC, the speed of executing MOV is increased to 4.8 us, and that of executing other applied instructions is also increased by four times or five times.
- The execution speed of the SV2 series PLC is four times that of the SV series PLC.

2. The newly added functions of the SV2 series PLC and instructions

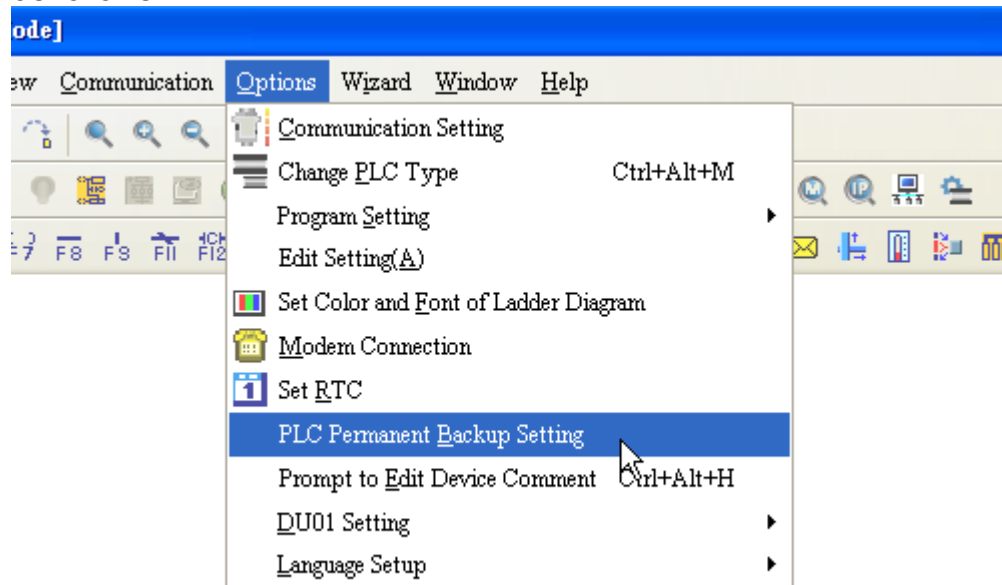
- The number of external interrupts is increased to sixteen. (Please refer to section 2.1 in Operation Manual for more information.)
I00□(X0), I10□(X1), I20□(X2), I30□(X3),
I40□(X4), I50□(X5), I60□(X6), I70□(X7),
I90□(X10), I91□(X11), I92□(X12), I93□(X13),
I94□(X14), I95□(X15), I96□(X16), I97□(X17),
16 interrupts (□=1, rising edge-triggered \lrcorner · □=0, falling edge-triggered \llcorner)
- The number of mask interrupts is increased to three. (Please refer to section 2.11 in Operation Manual for more information.)

Parameter Channel	Interrupt pause	External input	Deceleration time	Number of decelerations	Mask interrupt	Pause flag
CH0 (Y0, Y1)	M1156	X0	D1348	D1232~D1233	D1026, D1027	M1538
CH1 (Y2, Y3)	M1157	X1	D1349	D1234~D1235	D1135~D1136	M1539
CH2 (Y4, Y5)	M1158	X2	D1350	D1236~D1237	D1154~D1155	M1540
CH3 (Y6, Y7)	M1159	X3	D1351	D1238~D1239	None	M1541

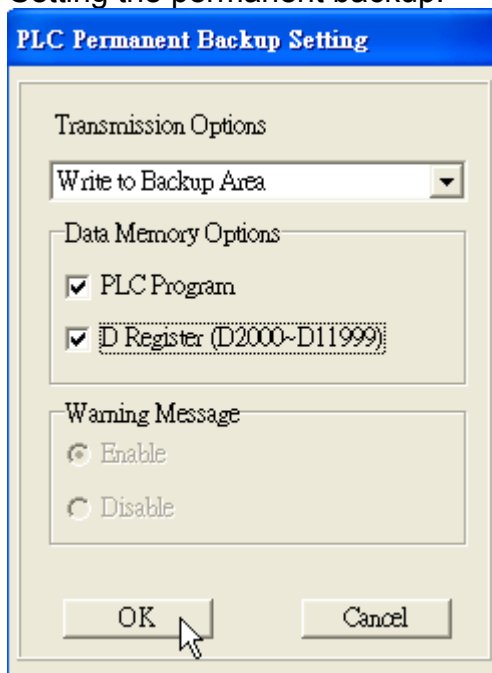
- The newly added instruction CSFO can be used to follow the speed, and has the function of the manual pulse generator. (Please refer to API 207 in Operation Manual for more information.)
- The newly added instructions DVSP0 and DICF can be used to generate the variable speed. (Please refer to API 198 and API 199 in Operation Manual for more information.)
- DZRN can be used to detect the limit switches, make the pulse output stop at the positive position, search for the Z phase, and output a certain number of pulses. (Please refer to API 156 in Operation Manual for more information.) (Please notice that there is a condition of using inputs and outputs.)
- The direction outputs with which DZRN is used are Y1, Y3, Y5, and Y7. (Please refer to API 156 in Operation Manual for more information.)

Output (D)	Y0	Y2	Y4	Y6
Corresponding direction output	Y1	Y3	Y5	Y7
DOG (S ₃)	X2	X6	X12	X16
Disabling the left limit	M1570 is ON.	M1571 is ON.	M1572 is ON.	M1573 is ON.
Input of the left limit	X3	X7	X13	X17
Stopping at the right side of the DOG	M1574 is ON.	M1575 is ON.	M1576 is ON.	M1577 is ON.
Searching for the Z phase (M1578 is OFF.)	Z phase	X1	X5	X11
	D1312: The number of times the Z phase is searched for	Positive value: Searching for the Z phase in the positive direction Negative value: Searching for the Z phase in the negative direction		
Number of pulses (M1578 is ON.)	D1312: The number of pulses	Positive value: The pulse output is in the positive direction. Negative value: The pulse output is in the negative direction.		
Clearing the output (M1346 is ON.)	Y10	Y11	Y12	Y13

- The bandwidth of C235~C240 can reach 10 KHz.
- COM1 can be used as a master or a slave. (Please refer to API 150 in Operation Manual for more information.)
- GPS and DSPA are newly added instruction. (Please refer to API 177 and API 178 in Operation Manual for more information.)
- ASDRW is a newly added instruction. (Please refer to API 206 in Operation Manual for more information.)
- The program in the PLC is automatically backed up permanently. Even if the battery runs down, the program does not disappear. Besides, the PLC is equipped with the permanent backup function. The second program and data can be stored. The operation of the software is as follows.



Setting the permanent backup:



If users can not use the software on the spot, they can use the special data register and the special auxiliary relay to read and write the second backup data.

D1064	The PLC reads H55AA from the flash memory. The PLC writes HAA55 into the flash memory.
M1164	The value in D1064 is read/written from/into the internal flash ROM. (When the execution is complete, it becomes OFF automatically.)

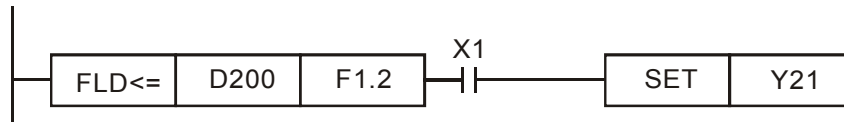
- There are newly added instructions which are applied to the word devices. For example, BLD, BOUT, and etc. (Please refer to API 266~API 274 in Operation Manual for more information.)



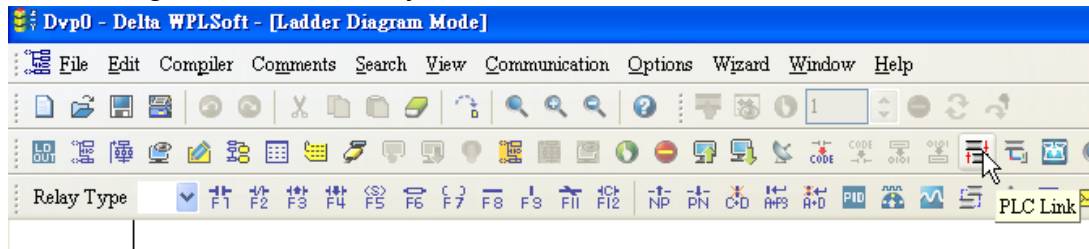
Instruction: Operation:
BLD D0 K3 Contact A of bit3 in D0 is loaded.
 OUT Y0 Y0 is driven.

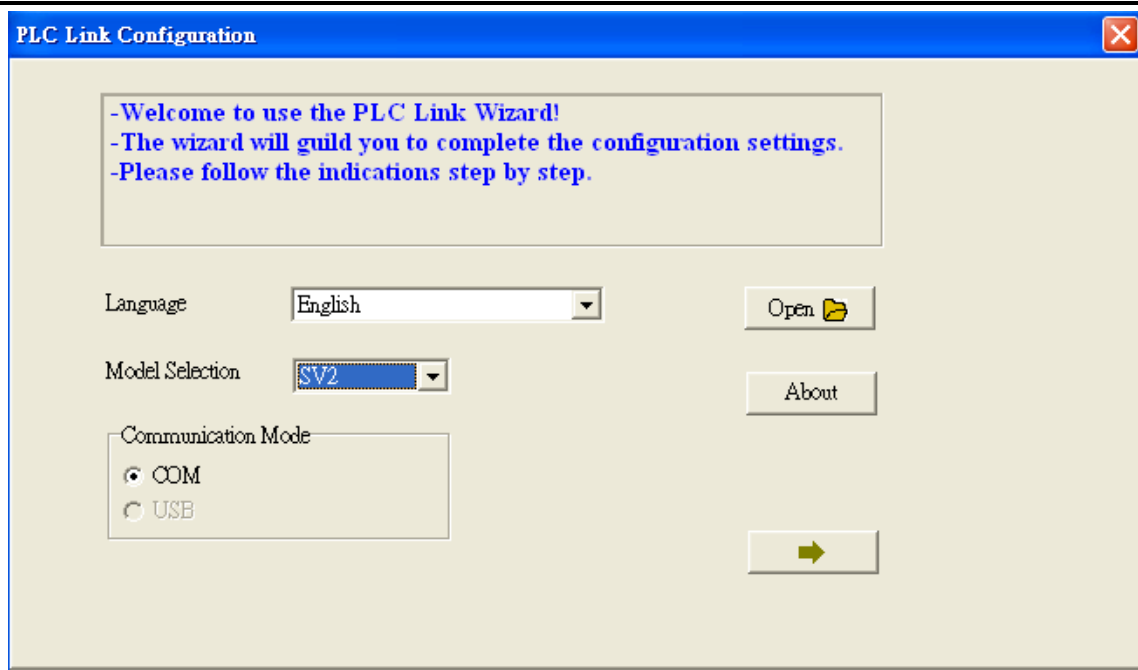
- The comparison instructions related to the floating-point numbers are newly added. For example, FLD>=, and etc. (Please refer to API 275~API 292 in Operation Manual for more information.)

Example: If the floating-point number in (D201, D200) is less than F1.2, and X1 is ON, Y21 keeps ON.

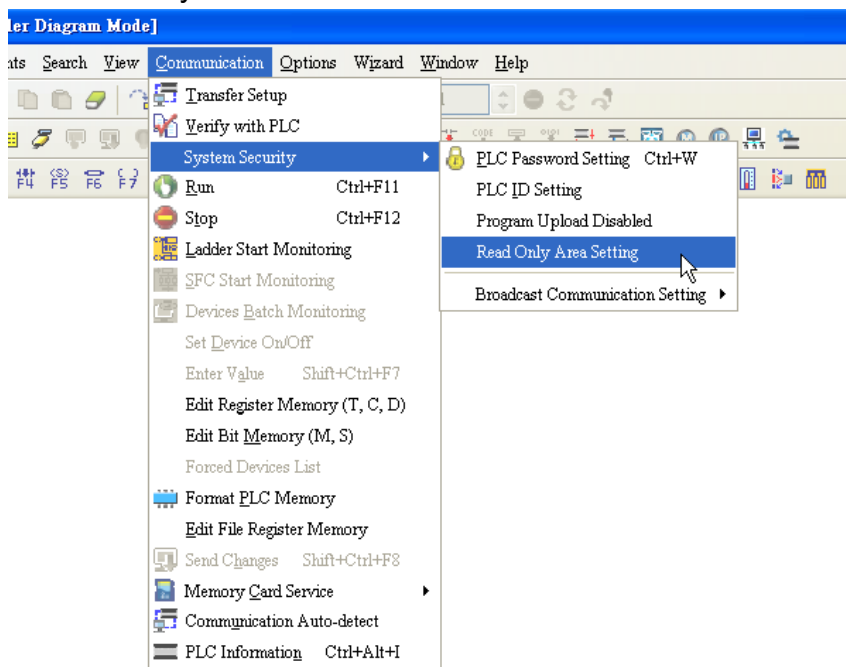


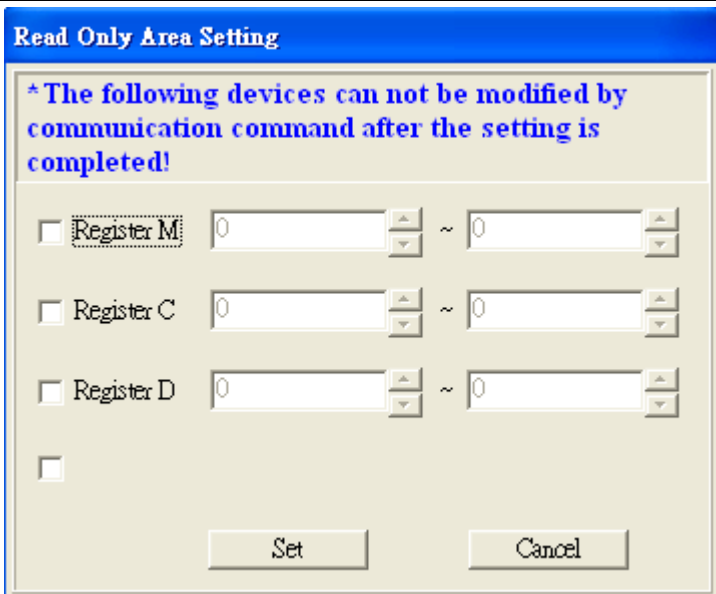
- When the PLC link is enabled, and M1356 is ON, the values in D1900~D1931 are taken as the station addresses. (Please refer to section 2.16 in Operation Manual for more information.)
The setting of the PLC link by means of WPLSoft is as follows.



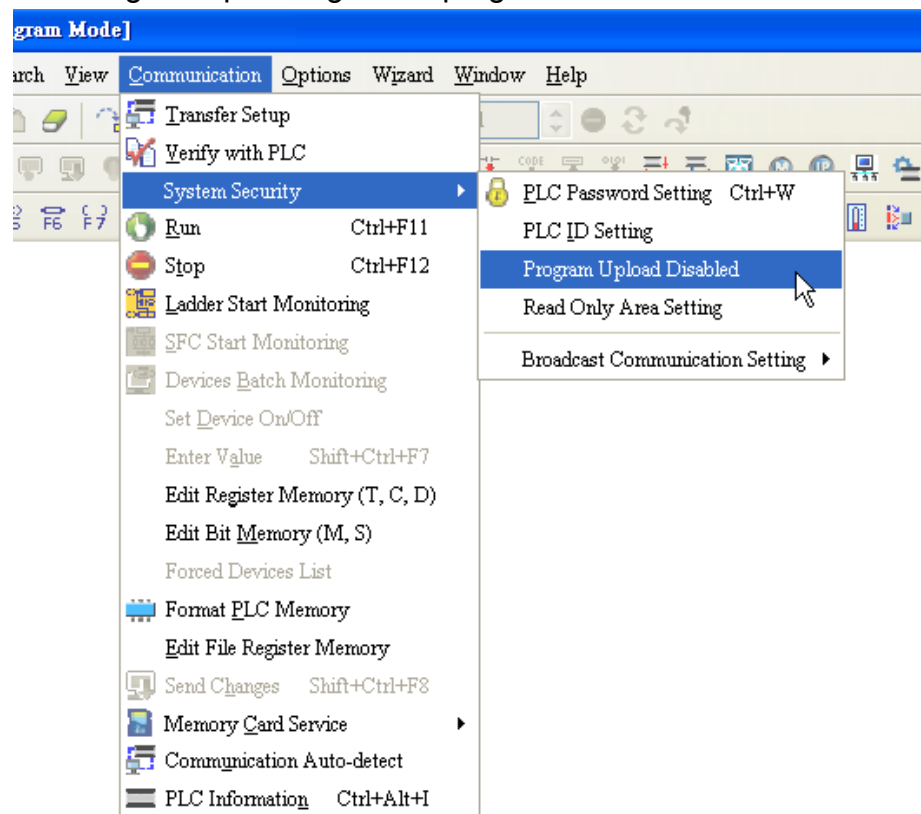


- Users can set the read-only areas, and disable the uploading of the program. The setting of the read-only areas is as follows.





Disabling the uploading of the program:



3. The SV2 series PLC cancels the functions of the SV series PLC.

- M1312~M1333, which are used to enable and reset C235~C240, are canceled.