How to use GE iFIX with DVP28SV11R/T + DVPEN01-SL

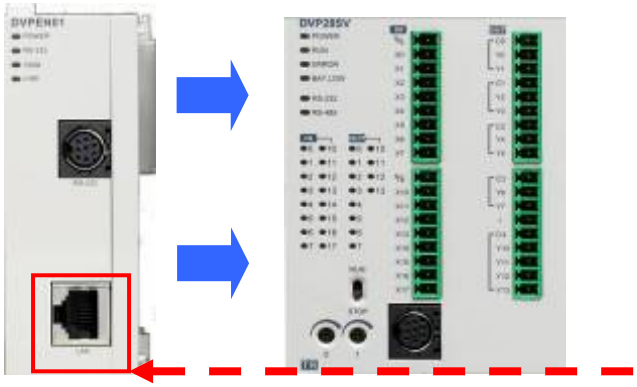
In this technical note, we cover the following topics.

1. How to connect DVP28SV and EN01
2. How to setup GE iFIX communication with DVP28SV by EN01
3. How to setup GE iFIX communication with DVP28SV by RS-485

1. How to connect DVP28SV and EN01

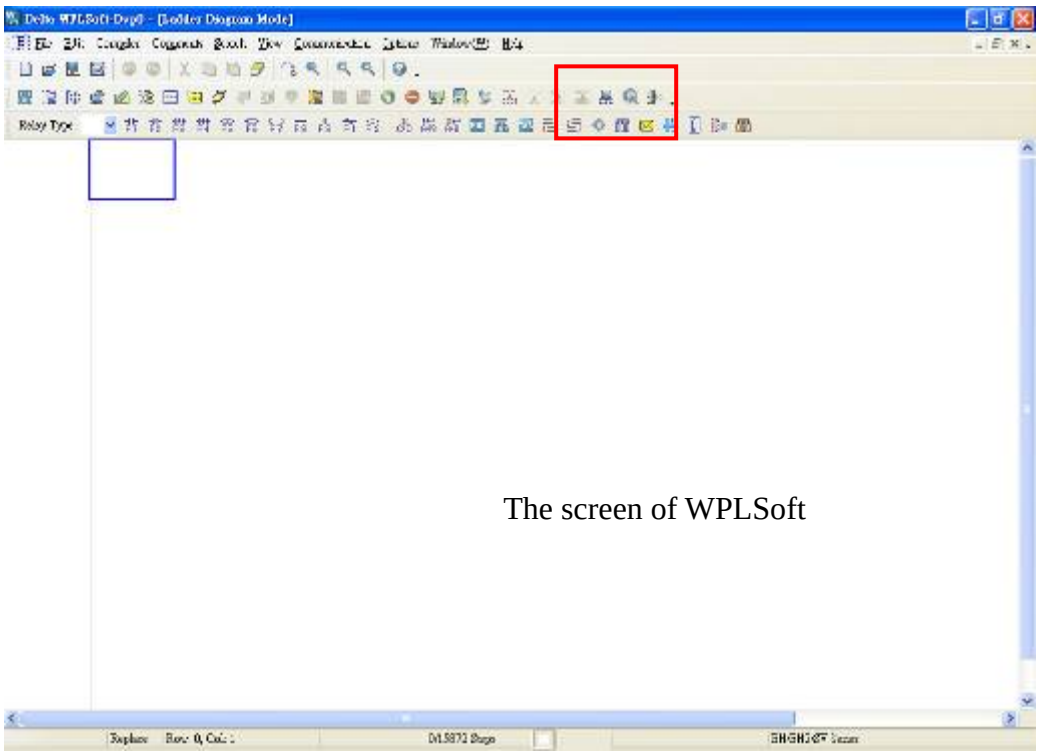
1-1. Plug EN01 to 28SV left side.

1-2. Connect Ethernet via EN01 「LAN」 hole .



Connect Ethernet

1-3. Open WPLSoft to configure EN01



The screen of WPLSoft

：Looking for EN01 module via broadcasting.

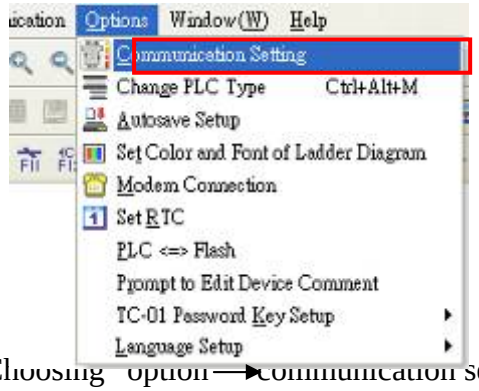
：Looking for EN01 module via indicating IP address.

：Configuring EN01 via RS-232.(Doesn't need to connect to Ethernet)

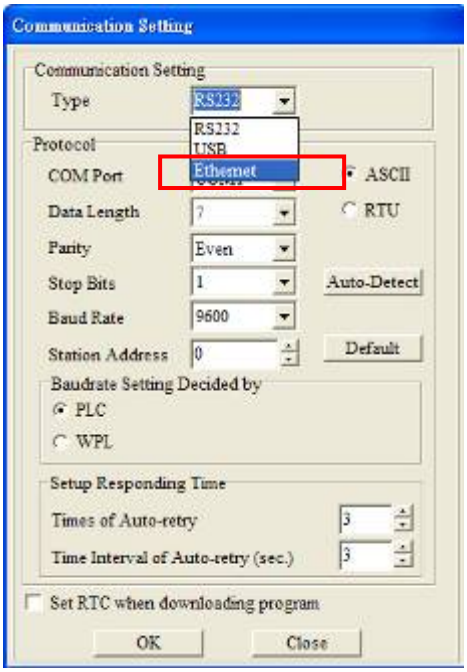
1-4. There is two way to search EN01 via Ethernet.

- Broadcast:

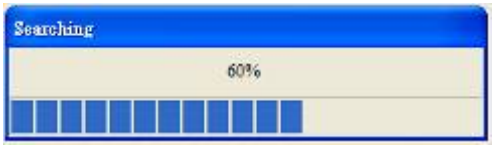
  If this is the first time you connect EN01 to Ethernet and have no idea what's its IP address, then you can use "broadcast" to look for EN01 in the network.



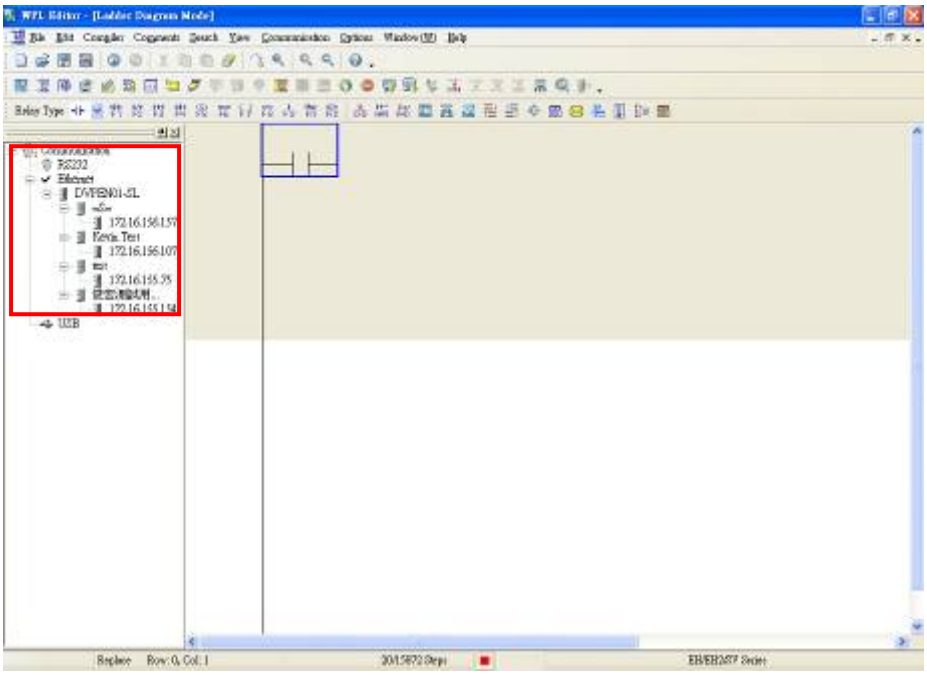
Choosing "option→communication setting" to set PLC communication port.



Set "Ethernet " as your communication port.



Press “Broadcast” button, then WPLSoft will start to search EN01 in the network.



If success, the left window will show all EN01 modules in the network.

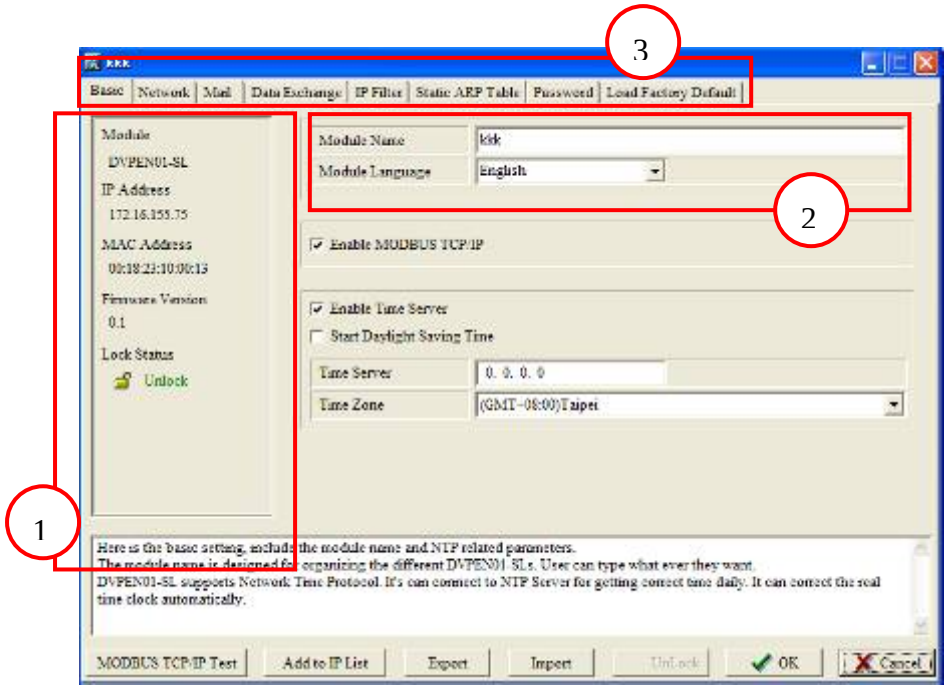
- Indicate IP address:

Press “IP search” button, then the input IP address window will pop out.
User can type IP address in the upper space.

If success, the result will be just like the broadcast.

1-5. How to configure EN01.

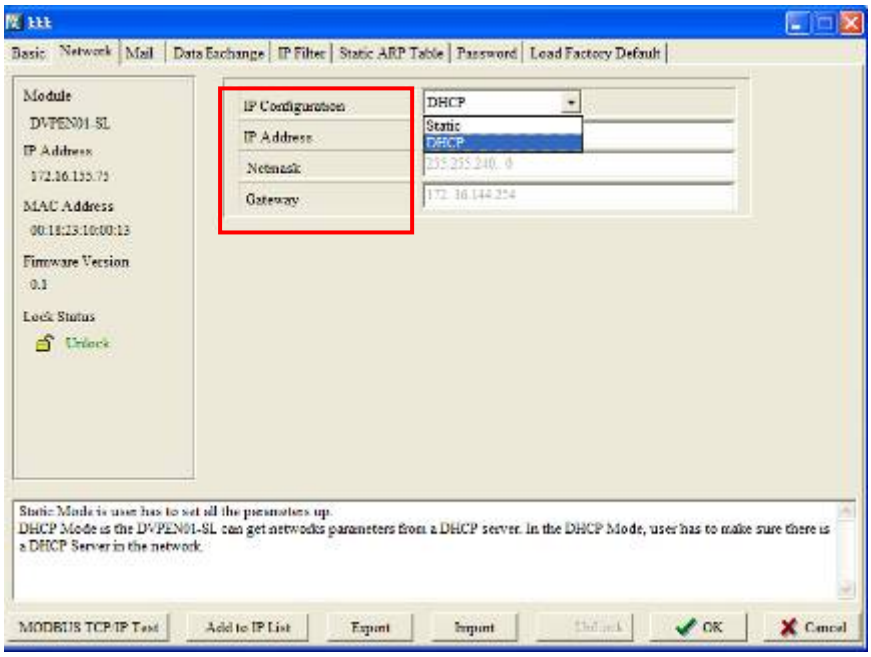
- Double click the module in the left window.
- The configuration window will be pop out.



①. The basic information of EN01, includes IP address, MAC address, firmware version and so on.

②. Module name and language. (user define)

③. Option of EN01.

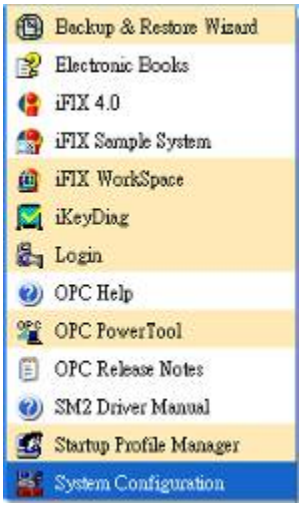


Network setting –IP configuration (Static/DHCP), IP address, Netmask, Gateway.

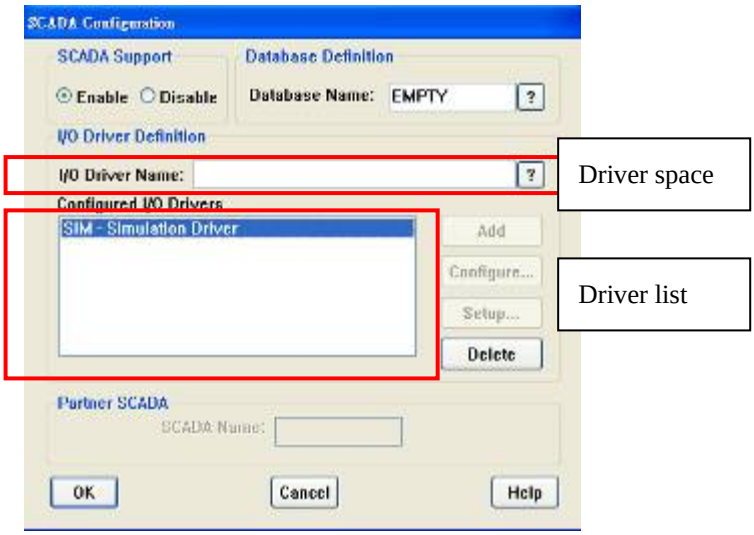
2. How to setup GE iFIX communication with DVP28SV by EN01

2-1. After installation finished, open **system configuration**，

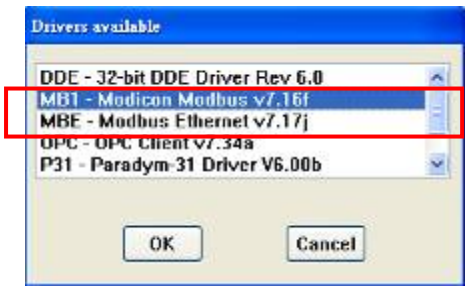
Start→All programs→Proficy HMI SCADA iFIX4.0→system configuration to enter SCU configuration.



2-2. Select  icon to setup Driver. Then the configuration window will pop up.



2-3. Press 『？』 on Driver space, the **drivers available** window will pop up.



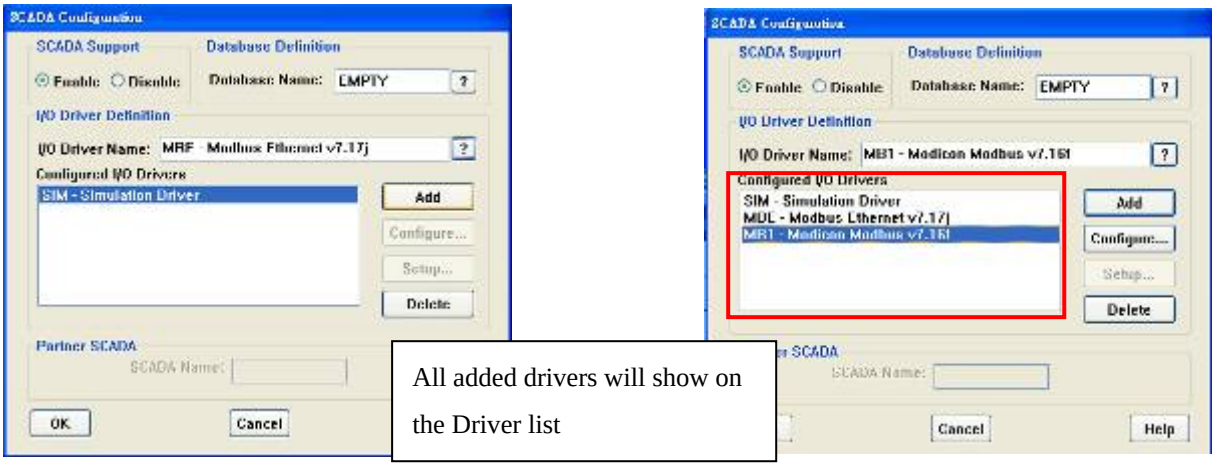
MB1- Modbus Driver

MBE- Modbus Ethernet Driver

Choose **MBE** to connect **EN01**

Choose **MB1** to connect **RS485**

2-4. After setting finished, press 『**OK**』, the selected drivers will be showed on Driver space, then select **Add** to add driver.



All added drivers will show on the Driver list

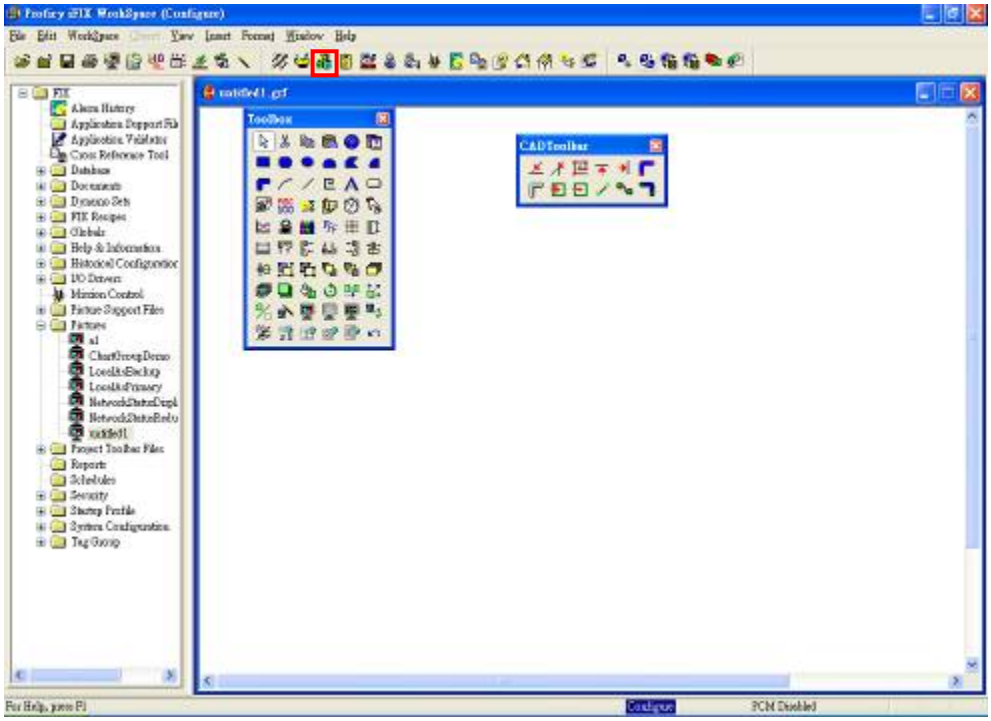
2-5. Press OK if all needed drivers be set, then it will return to main configuration screen , all set drivers will show on the left side, user can add 8 drivers most. Then save and exit.

2-6. Open iFIX.

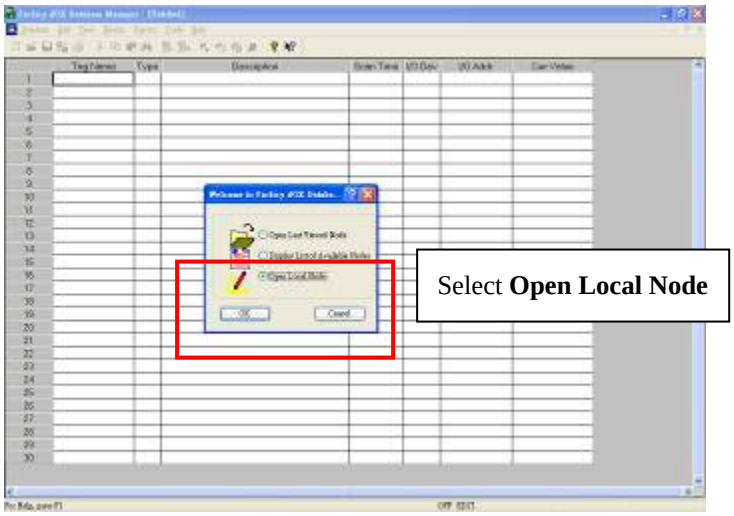
Select to enter iFIX

2-7. Loading screen

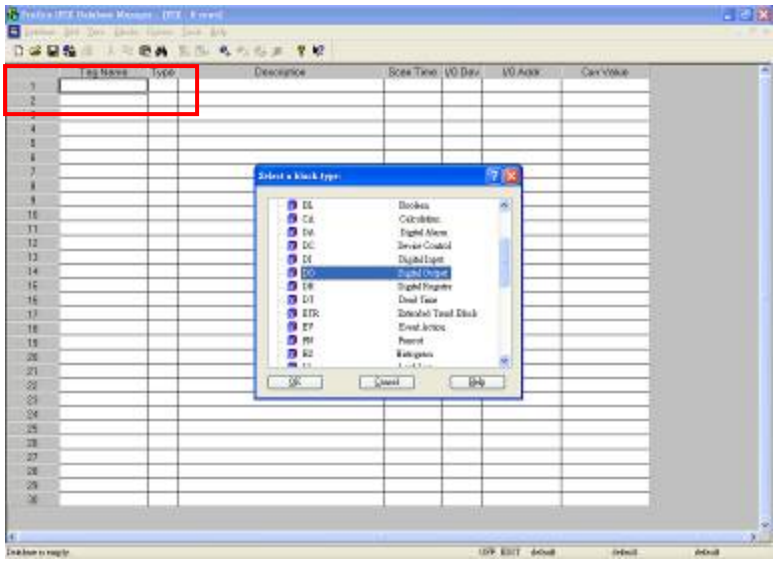
2-8. Select  to configure Tag, in main window.



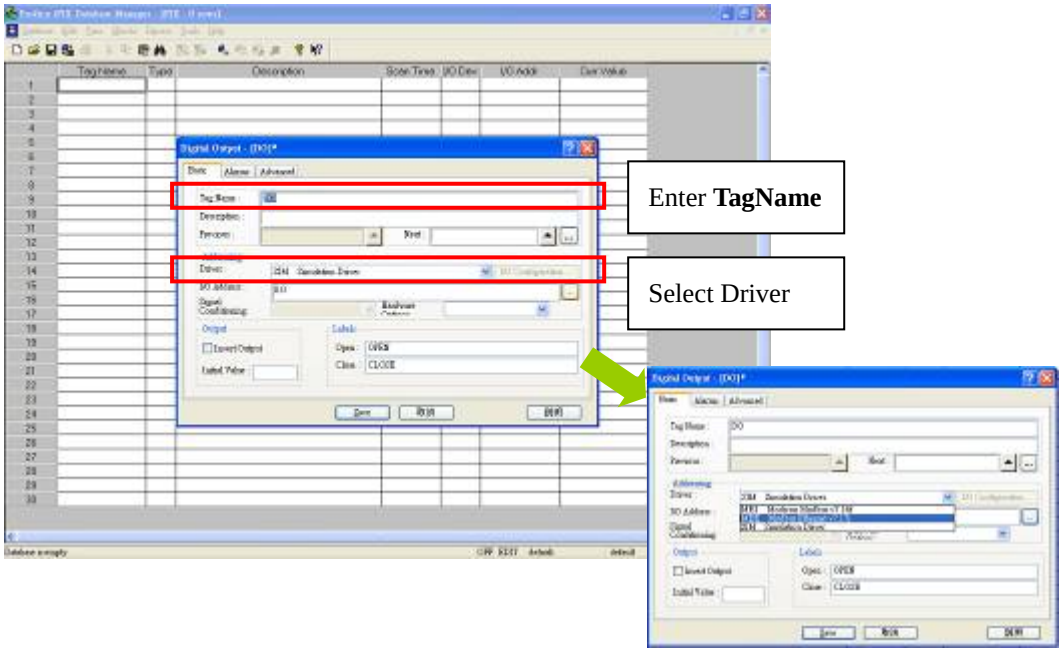
2-9. Tag configuration screen.



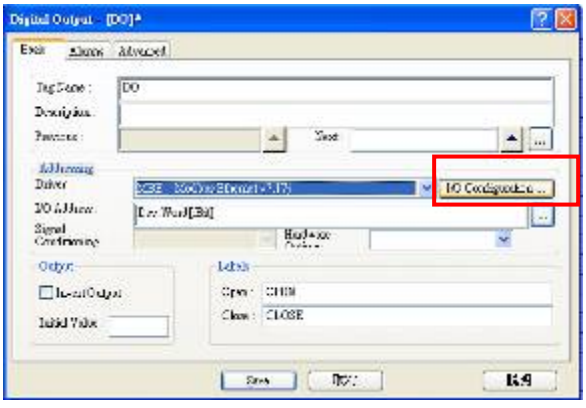
2-10. Double click Tag Name space, the **block type** selecting window will pop up.



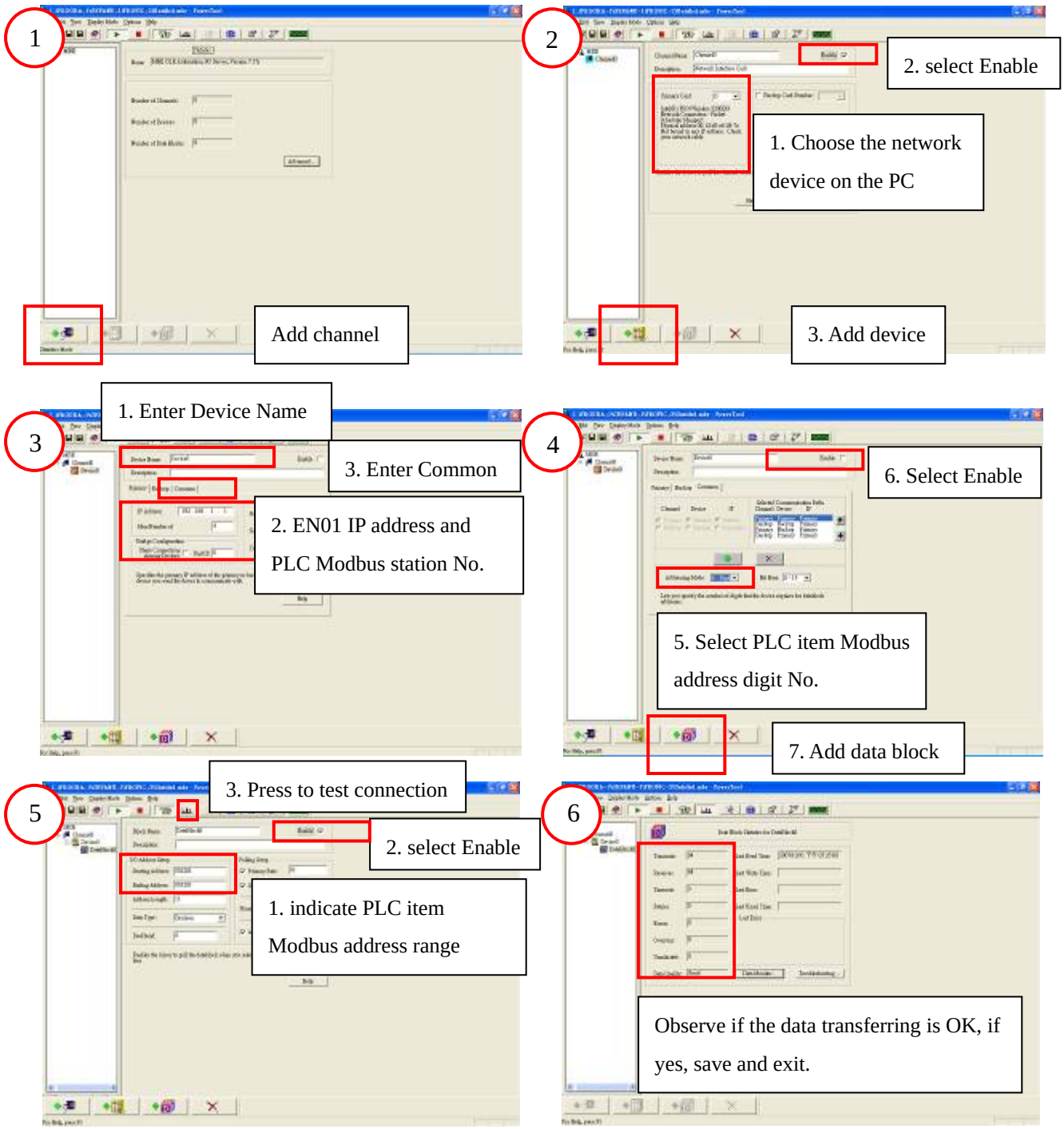
2-11. Choose DI(O) for digital input(output), or AI(O) for analog input(output) then press OK to enter configuration window.



2-12. Enter **I/O Configuration** after selecting driver.

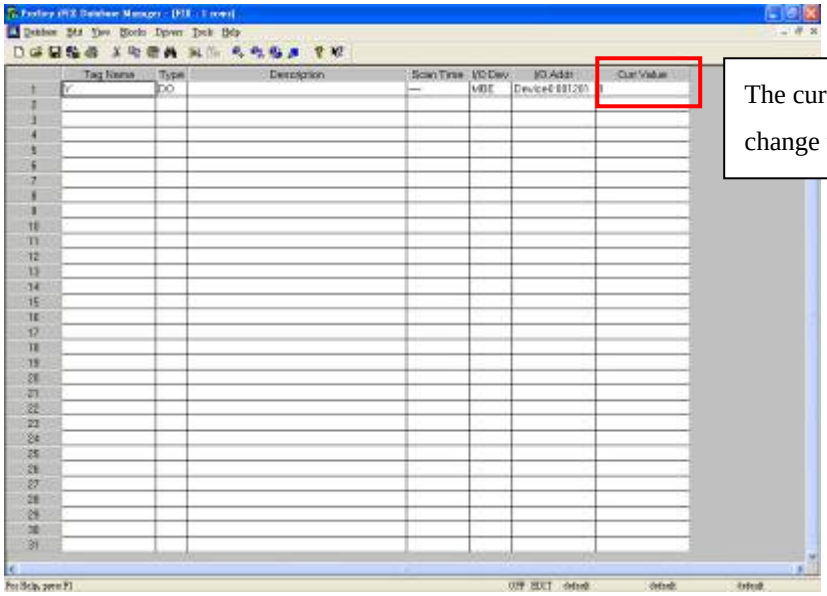


2-13. I/O configuration steps：



2-14. Enter device name and Modbus address to set the Tag. The form must be ： Dev:Word[: Bit] Ex：Device0:001281, device name is Device0, and the Modbus address is 001281(Y0)。

2-15. Tag configuration window.



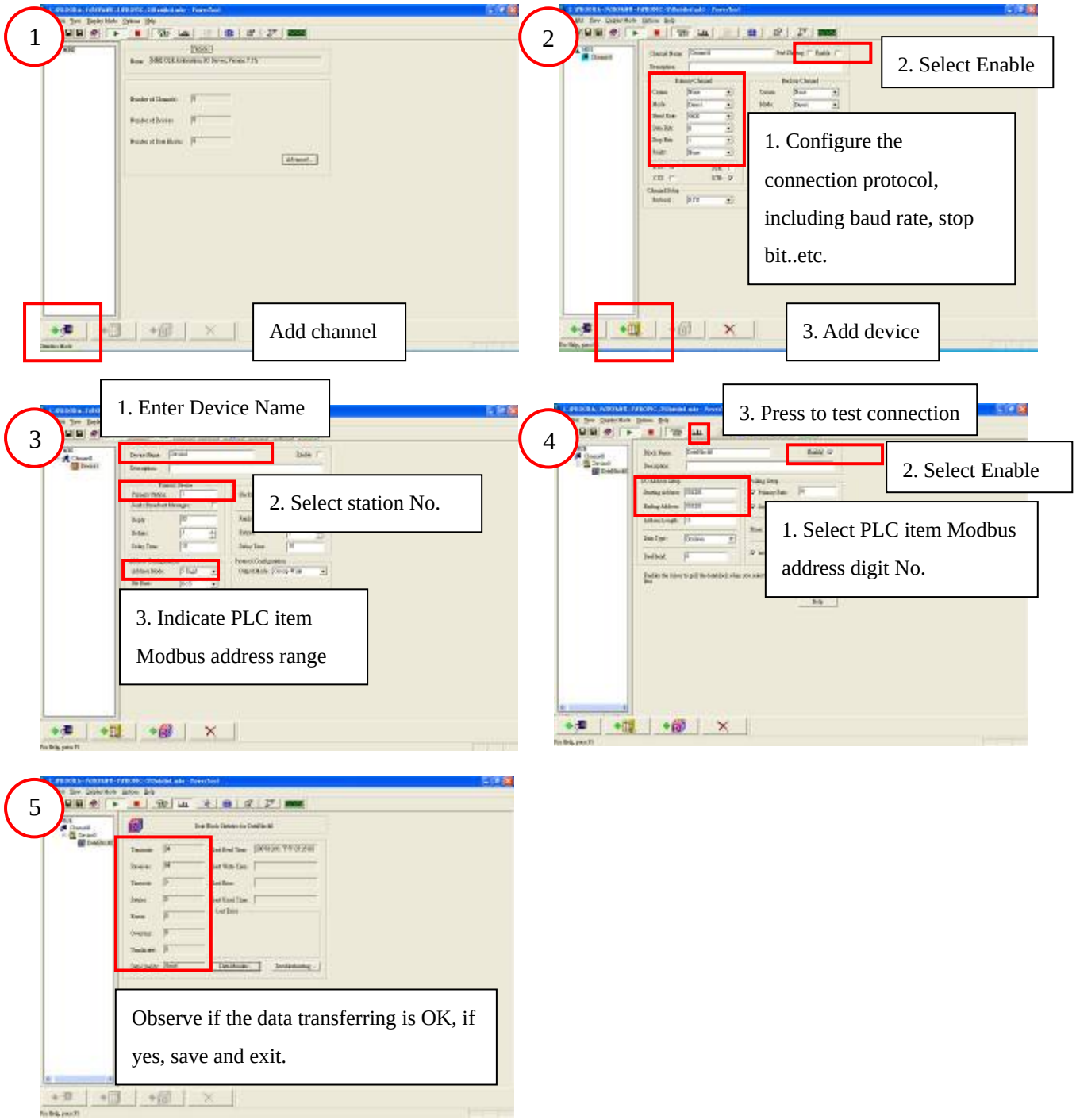
The current value of the tag, and user can change the value by entering value directly.

2-16. Back to main window to edit the screen if Tag configuring and test is no problem.

3. How to setup GE iFIX communication with DVP28SV by RS485

3-1. Please refer step 2-1~2-12 to configure.

3-2. I/O configuration steps：



3-3. Follow step 2-12~2-16 to finish configuration.

Appendix 1

Modbus address table of Delta DVP series PLC.

Device	Range		Type	DVP address (Hex)	Modbus address (Dec)	Effective		
						ES/EX/SS	SA/SX/SC	EH
S	000~255		bit	0000~00FF	000001~000256	0~127	0~1024	0~1024
S	256~511		bit	0100~01FF	000247~000512			
S	512~767		bit	0200~02FF	000513~000768			
S	768~1023		bit	0300~03FF	000769~001024			
X	000~377		bit	0400~04FF	101025~101208	0~177	0~177	0~377
Y	000~377		bit	0500~05FF	001281~001536			
T	000~255		bit	0600~06FF	001537~001792	0~127	0~255	0~255
			Word	0600~06FF	401537~401792			
M	000~255		bit	0800~08FF	002049~002304	0~1279	0~4095	0~4095
M	256~511		bit	0900~09FF	002305~002560			
M	512~767		bit	0A00~0AFF	002561~002816			
M	768~1023		bit	0B00~0BFF	002817~003072			
M	1024~1279		bit	0C00~0CFF	003073~003328			
M	1280~1535		bit	0D00~0DFF	003329~003584			
M	1536~1791		bit	B000~B0FF	045057~045312	0~1279	0~4095	0~4095
M	1792~2047		bit	B100~B1FF	045313~045568			
M	2048~2303		bit	B200~B2FF	045569~045824			
M	2304~2559		bit	B300~B3FF	045825~046080			
M	2560~2815		bit	B400~B4FF	046081~046636			
M	2816~3071		bit	B500~B5FF	046637~046592			
M	3072~3327		bit	B600~B6FF	046593~046848			
M	3328~3583		bit	B700~B7FF	046849~047104			
M	3584~3839		bit	B800~B8FF	047105~047360			
M	3840~4095		bit	B900~B9FF	046361~047616			
C	0~199	16-bit	bit	0E00~0EC7	003585~003784	0~127	0~199	0~199
			Word	0E00~0EC7	403585~403784			
	200~255	32-bit	bit	0EC8~0EFF	003785~003840	232~255	200~255	200~255
			Dword	0EC8~0EFF	403785~403840			

Device	Range	Type	DVP address (Hex)	Modbus address (Dec)	Effective		
					ES/EX/SS	SA/SX/SC	EH
D	000~255	Word	1000~10FF	404097~404352	0~1311	0~4999	0~9999
D	256~511	Word	1100~11FF	404353~404608			
D	512~767	Word	1200~12FF	404609~404864			
D	768~1023	Word	1300~13FF	404865~405120			
D	1024~1279	Word	1400~14FF	405121~405376			
D	1280~1535	Word	1500~15FF	405377~405632			
D	1536~1791	Word	1600~16FF	405633~405888			
D	1792~2047	Word	1700~17FF	405889~406144			
D	2048~2303	Word	1800~18FF	406145~406400			
D	2304~2559	Word	1900~19FF	406401~406656			
D	2560~2815	Word	1A00~1AFF	406657~406912			
D	2816~3071	Word	1B00~1BFF	406913~407168			
D	3072~3327	Word	1C00~1CFF	407169~407424			
D	3328~3583	Word	1D00~1DFF	407425~407680			
D	3584~3839	Word	1E00~1EFF	407681~407936	0~1311	0~4999	0~9999
D	3840~4095	Word	1F00~1FFF	407937~408912			
D	4096~4351	Word	9000~90FF	408913~409168			
D	4352~4607	Word	9100~91FF	436865~437120			
D	4608~4863	Word	9200~92FF	437121~437376			
D	4864~5119	Word	9300~93FF	437377~437632			
D	5120~5375	Word	9400~94FF	437633~437888			
D	5376~5631	Word	9500~95FF	437889~438144			
D	5632~5887	Word	9600~96FF	438145~438400			
D	5888~6143	Word	9700~97FF	438401~438656			
D	6144~6399	Word	9800~98FF	438657~438912			
D	6400~6655	Word	9900~99FF	438913~439168			
D	6656~6911	Word	9A00~9AFF	439169~439424			
D	6912~7167	Word	9B00~9BFF	439425~439680			

Device	Range	Type	DVP address (Hex)	Modbus address (Dec)	Effective		
					ES/EX/SS	SA/SX/SC	EH
D	7168~7423	Word	9C00~9CFF	439937~440192	0~1311	0~4999	0~9999
D	7424~7679	Word	9D00~9DFF	440193~440448			
D	7680~7935	Word	9E00~9EFF	440449~440704			
D	7936~8191	Word	9F00~9FFF	440705~440960			
D	8192~8447	Word	A000~A0FF	440961~441216			
D	8448~8703	Word	A100~A1FF	441217~441472			
D	8704~8959	Word	A200~A2FF	441473~441728			
D	8960~9125	Word	A300~A3FF	441729~441984			
D	9126~9471	Word	A400~A4FF	441985~442240			
D	9472~9727	Word	A500~A5FF	442241~442496			
D	9728~9983	Word	A600~A6FF	442497~442752			
D	9984~9999	Word	A700~A70F	442753~443008			