



## FAQ – Control

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## DVP Series PLC

**Q Which programming software is available for Delta PLC series? How to get it?**

A The free programming software for PLC DVP series is ISPSoft.  
It is free to download on our website – [Download Center](#).

**Q Which Human Machine Interface supports Delta PLC series? And how is the communication setting?**

A The HMI's from Fuji, HiTech, EasyView, Digital (GP), other 3<sup>rd</sup> party HMI and Delta DOP support Delta's PLC series.

Please choose the communication mode as 9600, E, 7, 1 and set the Station No=1 of DVP PLC series

**Q What are the advantages of selecting Delta PLC DVP series if users already have Delta AC Motor Drive, AC Servo system or temperature controller?**

A Most Delta products are designed with a built-in RS-485 interface with Modbus ASCII/RTU communication protocol, thus reducing the need for extra communication extension modules or converters and saving users the cost. Moreover, DVP series have convenient built-in Modbus commands or with the PLC Easy Link function, users can easily design the Read and Write program for one or more than one communication device to make the complicated conversion during data exchange easier.

**Q There are 2 built-in communication ports, RS-232 and RS-485, for PLC DVP series. Is it possible to connect these 2 ports with both computer and Human Machine Interface simultaneously? If it is possible, what should you be aware of?**

A It is possible to connect both RS-232 and RS-485 to external devices simultaneously, but users shall be aware of Slave or Master mode for the communication ports. Basically, RS-232 is used to connect a Slave device for the PLC, and in this case, the commands like RS, MODWR, or MODRW are available for RS-485. In another case, once both RS-232 and RS-485 are used to connect to

one or more than one Master devices, commands like RS, DODRD, or MODRW will no longer be available.

**Q If DVP-ES series is already in use, can its program be written directly into other higher-class models, such as SA or EH series?**

A The program of DVP series is designed to be compatible with higher-class models. For example, a program for the model with 4K program capacity (EX/SS) can be used in the models of 8K (SA/SX/SC) and 16K (EH). Similarly, a program for 8K (SA/SX/SC) PLC can be used in 16K (EH) PLC.

**Q The special extension module of the PLC is up to 8 units. Is it possible to extend the module more than 8 units if situation needed?**

A Delta is the first one to design RS-485 interface built inside the special extension modules (AD/DA/XA/PT/TC, etc.) for the PLC DVP series. This design enables the special extension modules to work similarly as an independent MPU or as system operation of separate Remote I/O without connection to PLC MPU's extension ports. Through the built-in RS-485 of PLC DVP series and its convenient Modbus commands or PLC Easy Link function, users can easily Read and Write the data in the special extension modules. If the master controller is PC or HMI, Modbus ASCII/RTU communication protocol can be selected for directly connecting to special extension modules.

**Q In what situation can the PLC not read the input signals?**

A The PLC's total reaction time from the input signal to the output operation is decided by input filter/delay time (in order to prevent signal misinterpretation from noise and switching spikes) and program scan time. For example, the factory default for X0~X17 input filter/delay time of the DVP series is 10ms (D1020 and D1021 are equal to K10). In this case, if the program scan time is 5ms, the width for one cycle total reaction time must be at least 15ms or greater (Reaction time = input filter/delay time + program scan time). If faster reaction time is required, users can adjust the values of D1020 and D1021 to increase the response time of the input terminal in the MPU or use the external stop command and function to immediately read the input signal.

**Q What is the maximum high speed counter frequency in all DVP series?**

**A** Please refer to the table below.

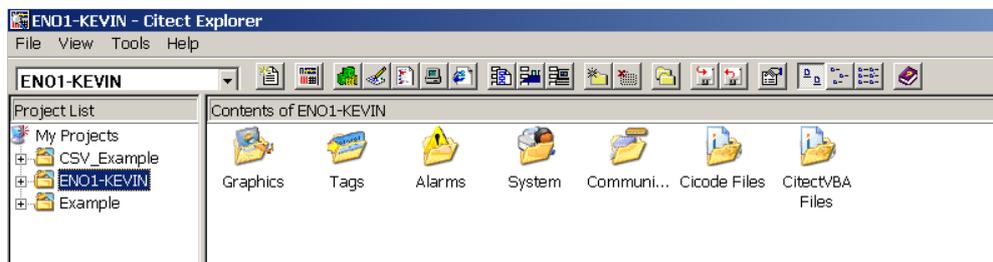
Spec.		1 phase 1 input	1 phase 2 input	2 phase 2 input
Model	Points	Bandwidth	Points	Bandwidth
ES/EX/SS	7	20kHz	3	4kHz
SA/SX	9	20kHz	3	4kHz
SC	2/4/2	20kHz/10kHz/100kHz	1/1	4kHz/50kHz

Spec.	General		Hardware high-speed counter					
	1 phase 1 input		1 phase 1 input		1 phase 2 input		2 phase 2 input	
Model	Points	Bandwidth	Points	Count frequency	Points	Count frequency	Points	Count frequency
EH	6	20kHz	4(2/2)	200kHz/30kHz	4(2/2)	200kHz/30kHz	4(2/2)	100kHz/30kHz

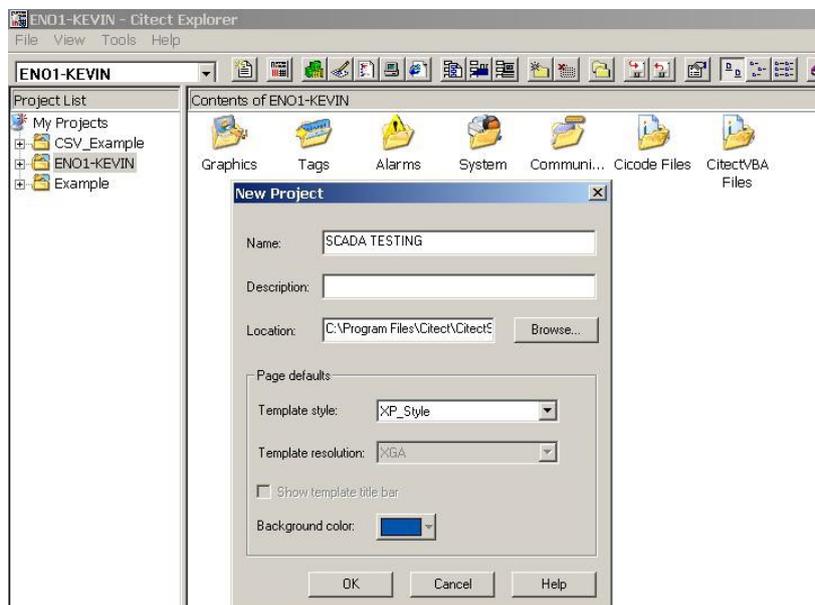
**Q How to setup SCADA communication with DVP28SV by RS-485?**

**A** Please see the example – Citect SCADA below.

1. Open **Citect Explorer** after installation



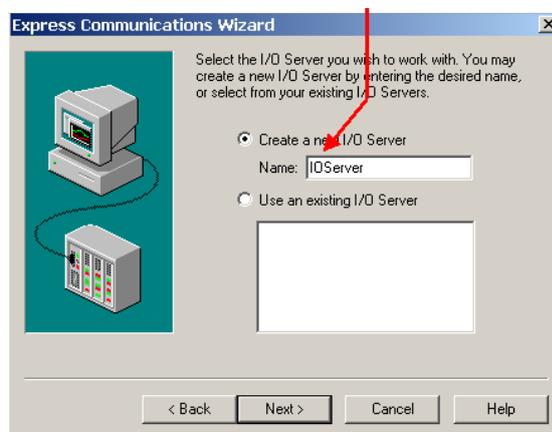
2. Enter project name and description and click **OK**.



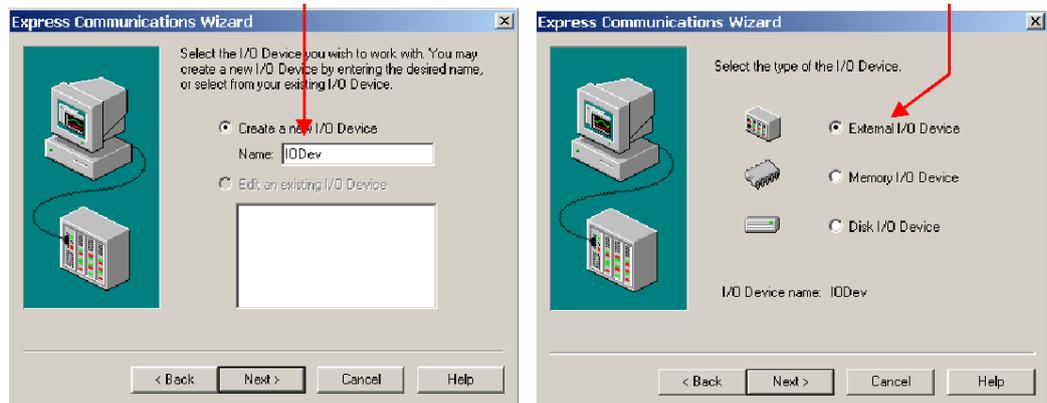
3. Select the project you created on left window and enter the **Communication folder**.



4. Select **Express IO Device Setup**. Firstly click Next and then enter I/O server name.



5. Enter I/O Device and select **External I/O Device**.



6. Select **Modicon/984/Serial (Modebus ASCII protocol)**. Then, enter the Modbus address of PLC.
7. Select the COM Port. After setting is complete, click on **Finish**.
8. Follow the SCADA operation procedure to create new topic and setup I/O.

**Q      How many ways do I have to up/download programs to Delta PLC?**

**A**      There are three ways to connect the PC directly to the PLC:

1. Via the PC RS-232 port with cable UC-PRG020-12A (programming via RS-232 port).
2. Via a PC USB port with converter IFD6500 (programming via RS-485 port).
3. Via the PC Ethernet port with DVPEN01-SL (need high-speed parallel port compatibility).

To connect the PC to the PLC through the HMI (direct link), we also have three ways:

1. Using standard USB wiring (UC-PRG015-01A) and direct link function.  
Monitoring the PLC and HMI at the same time is also allowed.
2. Using HMI with Ethernet and direct link function (only ISPSOft 1.00.08 and up).  
Monitoring the PLC and HMI at the same time is also allowed.
3. Using the USB Host port to download the program to the PLC (for now only DVP files).

# HMI

## DOP Series

**Q Which is the edit software for DOP series HMI? Where can I find it?**

A The software for DOP series HMI is DOPSoft. It is free to download on Delta's website – Download Center.

**Q Which controllers are compatible with and support Delta HMI?**

A Delta HMI's support all Delta industrial automation product series, including Delta PLC series, VFD AC motor drives, DTx Temperature Controllers and ASDA Servo drives.

Other compatible controllers are:

Allen Bradley	Delta	Danfoss	Facon PLC
Festo	GE	Hust CNC	Koyo
LG	Li Yan	M2i	Matsushita
Mirle	Mitsubishi	MKS	Modbus
Modicon	NIKKIDENSO	Omron	Siemens
Taia	Ti	Vigor	YOKOGAWA

**Q How is the upload/download speed of Delta HMI products?**

A For Delta HMI products, user can upload/download program via built-in COM, Ethernet port or USB port in best speed. It is much faster to use USB port when downloading editing program than to use traditional COM port.

**Q How many languages does Delta HMI software support?**

A While installing the software, three languages are available, namely traditional Chinese, simplified Chinese and English. If the software is installed already, it is also able to change the language with resuming the software after changing language.

**Q Can the data be saved when instantaneous power cut occurs to Delta HMI products?**

A Yes. Please choose 'Non-volatile' in DOPSoft (Option > History setup > Append > choose 'Non-volatile' in dialogue box and select 'Buffer Properties' to save history and alarm record when the power is cut. You can use SD card or USB stick to output the data.

**Q Is it possible to simultaneously use different communication protocols when Delta HMI products are connected to other external device?**

A There are two types of communication ports for Delta HMI products, one is for COM ports and the other is for USB port. The USB port is used for uploading/downloading the program. The other two COM ports are used for controlling two different communication protocols: COM1 for RS-232 and COM2 for RS-232/422/485 and Ethernet port for Ethernet communication.

**Q Why can't the PC read USB port (PC > HMI)?**

A After installing Delta HMI software editor, the DOPSoft system will automatically come up with Jungo WinDriver device when the software is activated for the first time. Then the user needs to indicate a USB port in PC and activate it to read HMI. After the USB port is activated, the user can see "HMI" under "Human Interface Devices" in "Device Manager" from PC. For details please refer to the screen below, the ports are used to control two different communication protocols, COM1 for RS-232 and COM2 for RS-232/422/485.

## TP Series

**Q Which editing software do I need for the TP series and how do I get it?**

A The software editor for TP series is called 'TPEditor'. It is free to download on Delta's website – Download Center.

**Q Where can I find the manual and the related document of the TP series?**

A All user manuals and the related documentation can be found on Delta's website – Download Center.

**Q What controllers compatibly support Delta TP series?**

A Delta TP series support all the series of Delta Industrial Automation products, including PLC, AC Motor Drive, Temperature Controller, HMI and Servo system. Other compatible controllers are shown as below:

Brand	Product	Brand	Product
Allen Bradley	MicroLogix PLC	Facon PLC	FB Series
Koyo	DL/SU Series	LG	Master K120S/200S PLC
Mitsubishi	FX, FXN, A Series, J71UC24	Modbus	ASCII (Master), RTU(Master)
Modicon	TSX Micro (Uni-TelWay), NEZA (Uni-TelWay)	Omron	C Series, TPM1A
Siemens	S7-200, S7_300_PLC_without_PC_adaptor, S7_300_PLC_with_PC_adaptor	Vigor	M Series