

The Innovative Solution with High Performance,  
an Abundant Selection and Amazing Expandability.



Automation for a Changing World

# Delta Programmable Logic Controller DVP Series



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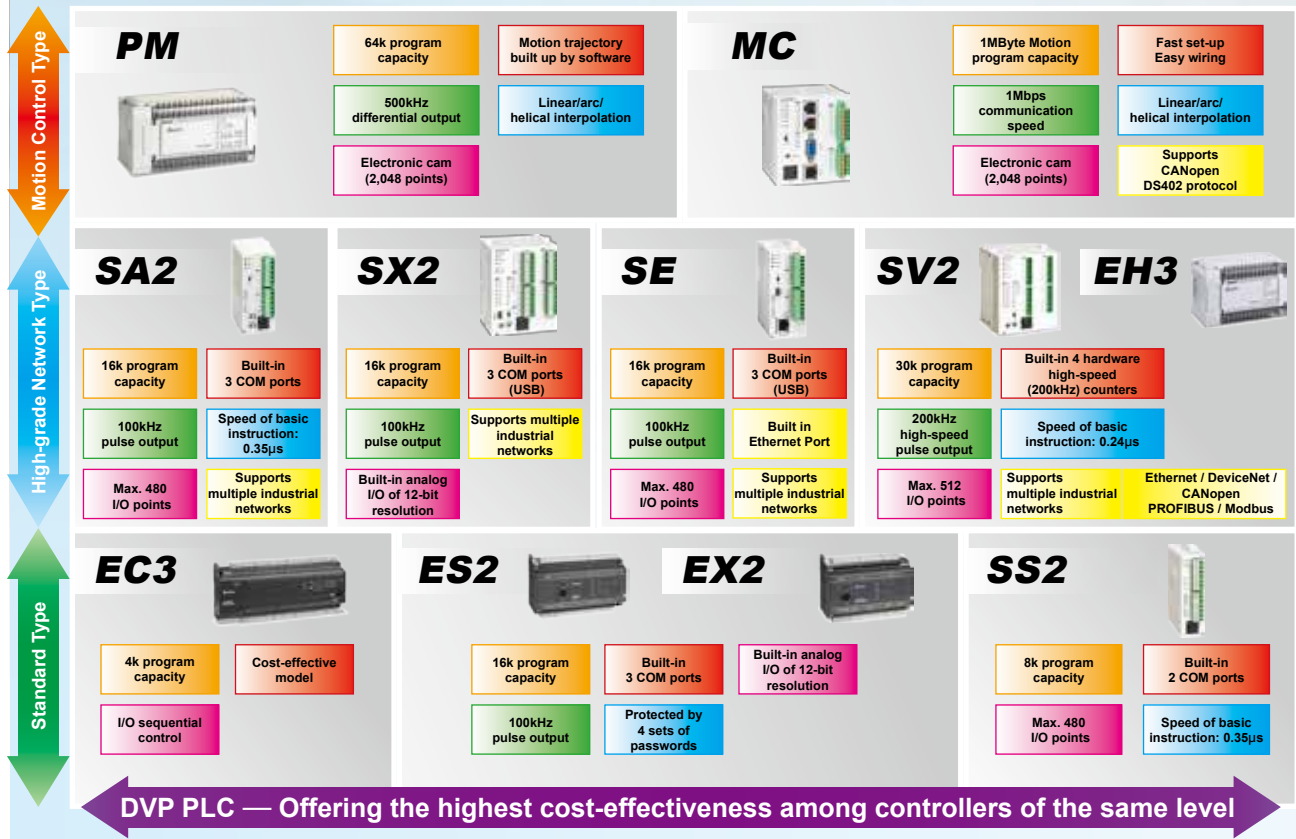


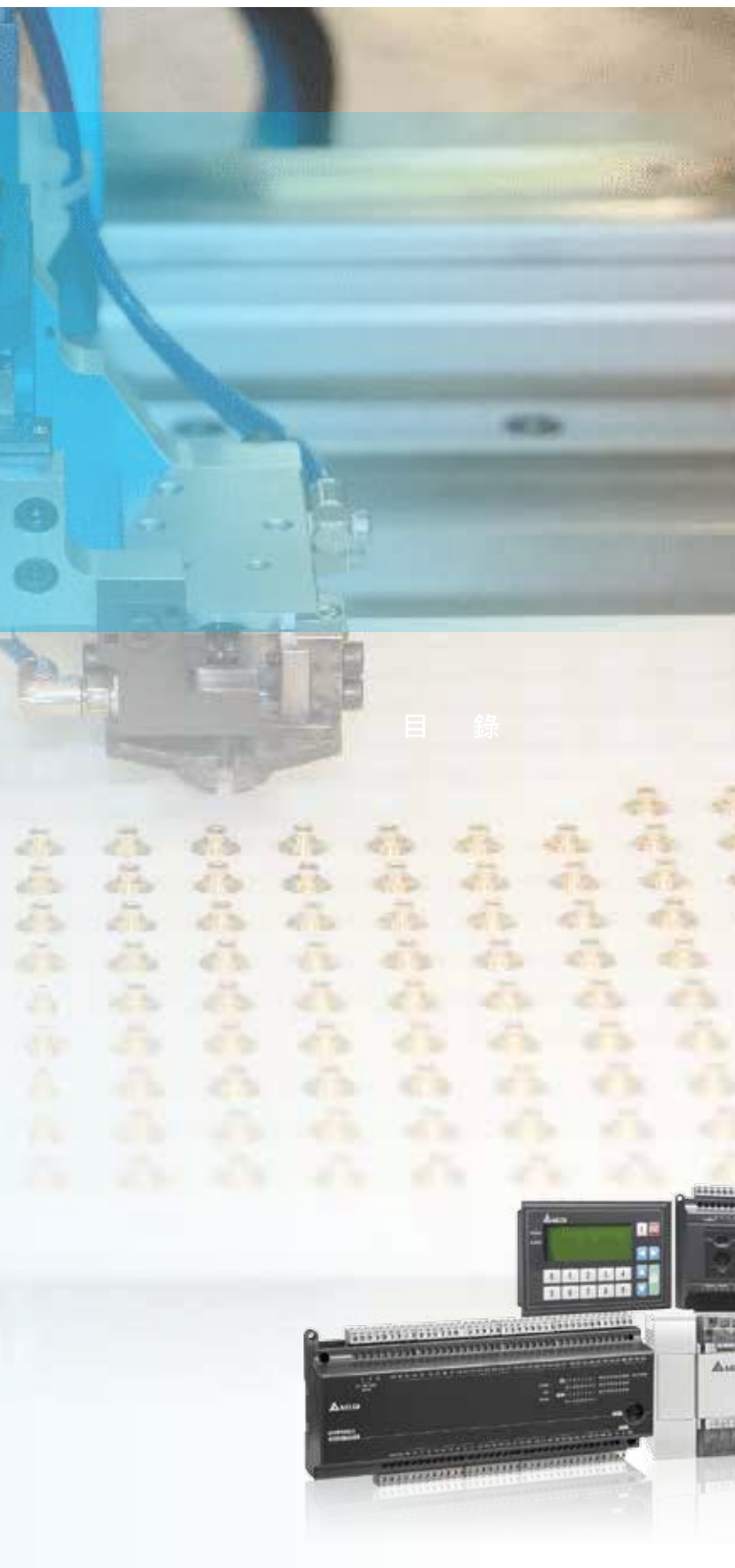
**DELTA**  
Smarter. Greener. Together.

# The Perfect Small PLC Revolution!

After launching the first DVP series PLCs for industrial automation applications, Delta has devoted itself to delivering more innovative products that satisfy customers' needs and meet the requirements for a wide variety of applications.

Delta PLCs offer a broad range of controllers and modules which all feature high performance, multiple functions and efficient program editing tools. In addition to the user-friendly programming software and faster execution speed, we also provide complete industry-focused solutions, motion control solutions, and industrial fieldbus solutions with Delta's new PLC series. We integrate our PLCs with Delta's industrial automation products to deliver a total integrated solution. As your most reliable partner, Delta is dedicated to creating value for our customers.





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## 2<sup>nd</sup> Generation Standard Type PLC DVP-ES2/EX2

- Integrated communication functions
- Built-in 1 RS-232 and 2 RS-485 ports
- V2.0 and later version models support real time clock (RTC) and file register (5k words)
- ▶ Adopts 32-bit CPU
- ▶ DVP-ES2 provides 16/20/24/32/40/60 I/O points for a variety of applications
- ▶ DVP20EX2 provides 12-bit 4 analog inputs/2 analog outputs. With the aid of 14-bit analog input/ output extension module and built-in PID auto tuning function, it offers a complete analog control solution
- ▶ Program capacity: 16k steps/Data register: 10k words
- ▶ Higher execution speed compared to the competition:  
LD: 0.35µs, MOV: 3.4µs
- ▶ Highly efficient processing ability: 1k steps of programs can be completed within 1ms
- ▶ Max.100kHz pulse control. Specific motion control instructions such as mark/masking and instant frequency changing are available for multi-axes applications
- ▶ Up to 4 levels of password protection secures your source programs and intellectual property

### Built-in High-Speed Counters

1-phase 1 input		1-phase 2 inputs		2-phase 2 inputs	
Counters	Bandwidth	Counters	Bandwidth	Counters	Bandwidth
2/6	100kHz/10kHz	2	100kHz	1/3	15kHz/5kHz

## New Member of DVP-ES2 Series

### 2<sup>nd</sup> Generation Standard Type PLC with built-in CANopen interface DVP32ES200RC/TC

Inheriting the fast execution speed of ES2, this series boosts productivity with a built-in 1Mbps CANopen interface and specializes in noise-immunity and easy wiring

Fast processing speed

High-speed industrial network: CANopen

- ▶ Adopts 32-bit CPU
- ▶ COM3 supports standard CANopen DS301 protocol
- ▶ Provides versatile communication types: PDO, SDO,synchronous (SYNC), Emergency, NMT and many more
- ▶ 1Mbps high speed transmission for large data  
Maximum PDO transmission up to 390 bytes  
Maximum PDO receiving up to 390 bytes
- ▶ Ability to connect with 16 slaves via CANopen
- ▶ CANopen Builder software is used to construct slave nodes





## New Member of DVP-EX2 Series

### 2<sup>nd</sup> Generation Temperature/Analog I/O PLC DVP30EX200R/T

Integrated controller able to control temperature and analog input

- ▶ Adopts 32-bit CPU
- ▶ Built-in 16-bit 3 analog inputs/12-bit 1 analog output
- ▶ With built-in PID auto tuning function, it offers a complete analog control solution
- ▶ Provides 3 analog inputs for PT/Ni temperature input, precision of 0.1 degree can be readily achieved
- ▶ Suitable for the specific industries that require temperature and analog input control such as boiler industries and HVAC

### Basic Type PLC DVP-EC3

Applicable for sequence control and simple RS-485/MODBUS communication

- ▶ Built-in I/O: 10/14/16/20/24/30/32/40/48/60
- ▶ Program capacity: 4k steps
- ▶ COM port: Built-in RS-232 & RS-485 ports (10/14-point models do not support RS-485), compatible with MODBUS ASCII/RTU protocol
- ▶ Supports 2 points (Y0, Y1) of independent high-speed (max. 10kHz) pulse output

#### Built-in Analog I/O in EX2 Model

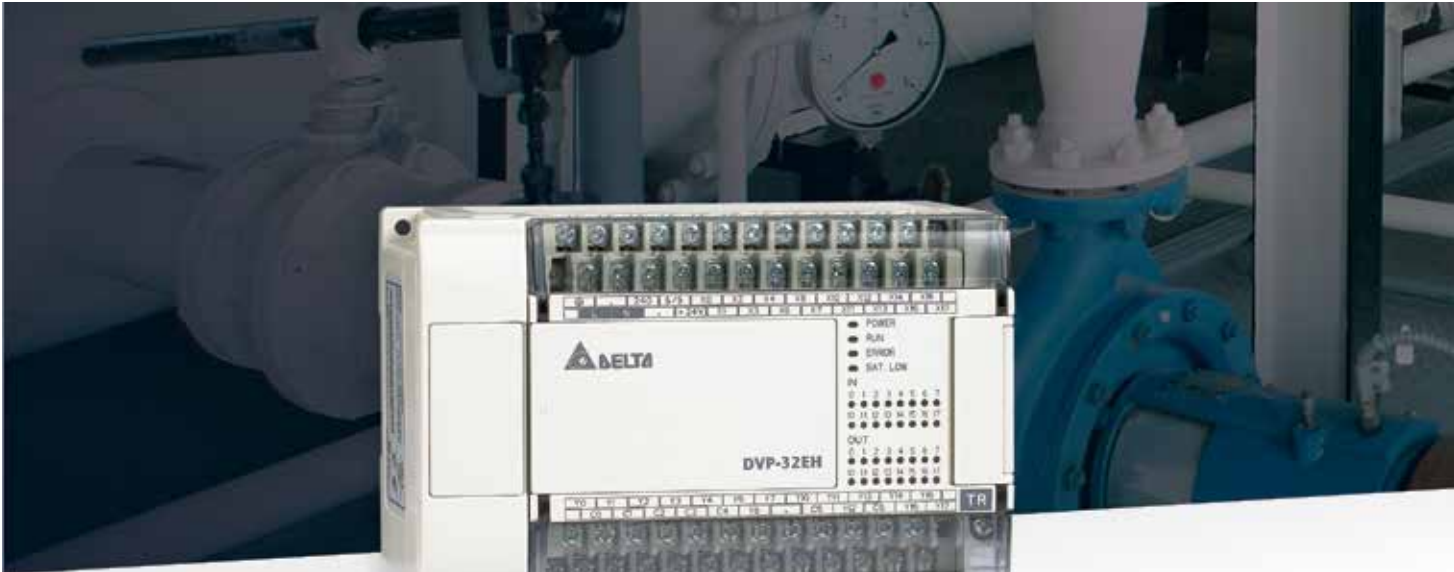
Analog Input		Analog Output	
<b>Channels</b>	3	<b>Channels</b>	1
<b>Resolution</b>	16-bit	<b>Resolution</b>	12-bit
<b>Spec.</b>	-20~20mA or -10~10V	<b>Spec.</b>	0~20mA or -10~10V

#### Built-in Temperature Control Function

<b>Sensor</b>	PT100/PT1000	NI100/NI1000
<b>Temperature Range</b>	-200°C~800°C	-100°C~180°C
<b>Value Range</b>	-2000~8000	-1000~1800

#### Built-in High-Speed Counters

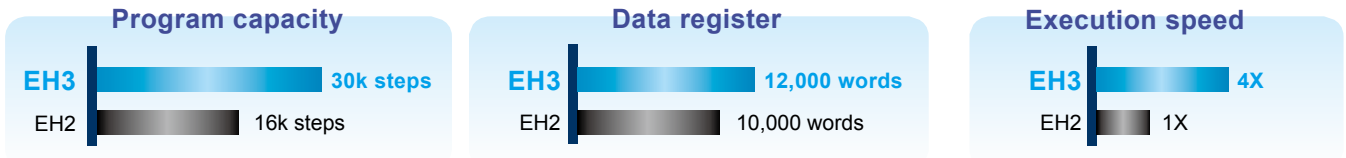
1-phase 1 input		1-phase 2 inputs		2-phase 2 inputs	
Counters	Bandwidth	Counters	Bandwidth	Counters	Bandwidth
2/2	20kHz/10kHz	1	20kHz	1	4kHz



## High Performance PLC

### DVP-EH3

The new generation DVP-EH3 PLC is the high-end model of the Delta DVP-E series. It provides larger program capacity and data registers for more demanding and complex applications.



#### Excellent Motion Control

- ▶ High-speed pulse output: 4 axes of 200kHz pulse output (DVP40/48/64/80EH00T3)
- ▶ Supports max. 4 hardware 200kHz high-speed counters
- ▶ Increases many motion control instructions to meet applications that require high-speed and high-precision positioning control such as labeling machines, packaging machines and printing machines
- ▶ Offers linear/arc interpolation motion control
- ▶ Provides up to 16 external interrupt pointers

#### Complete Program Protection

- ▶ Auto backup function to prevent the loss of programs and data even when the battery runs out
- ▶ Second copy function provides a backup for extra insurance in the event that one set of programs and data are damaged
- ▶ Up to 4-level password protection protects your source programs and intellectual property

#### Outstanding Operation Performance

32-bit CPU + ASIC dual processors support floating point operations.  
The max. execution speed of basic instructions is able to reach 0.24μs.

#### Flexible Function Extension Modules & Cards

Multiple selections of extension modules and function cards provide analog I/O, temperature measurement, additional single-axis motion control, high-speed counting, 3rd serial communication port and Ethernet communication card are available.

#### PLC Link

PLC Link allows users to link up a max. of 32 units to the network without having to install extra communication extension modules.

#### Built-in 4 Hardware High-Speed Counters

Standard		Hardware high-speed counter					
1-phase 1 input		1-phase 1 input		1-phase 2 inputs		2-phase 2 inputs	
Counters	Bandwidth	Counters	Bandwidth	Counters	Bandwidth	Counters	Bandwidth
8	10kHz	4	200kHz	2/2	200kHz/20kHz	2/2	200kHz/20kHz

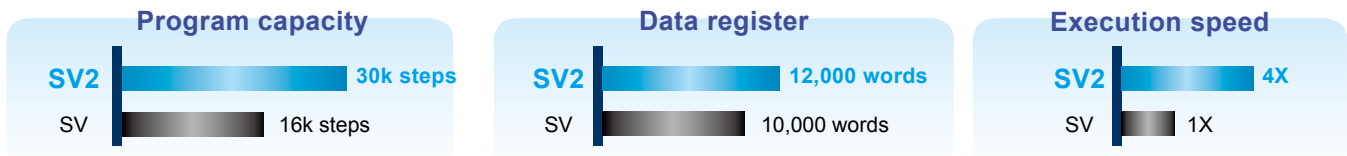
\*The specifications in this table are applicable only for DVP40EH00R3/DVP40EH00T3. For input/output specifications of other models, refer to the I/O specifications table in page 20.



## High Performance Slim PLC

### DVP-SV2

The new generation DVP-SV2 PLC is the high-end model of the Delta DVP-S series. It provides larger program capacities and data registers for more demanding and complex applications.



#### Excellent Motion Control

- ▶ High-speed pulse output: 4 axes of 200kHz pulse output
- ▶ Supports 2 hardware 200kHz and 2 hardware 20kHz high speed counters
- ▶ Increases many motion control instructions to meet the applications that require high-speed and high-precision positioning control such as labeling machines, packaging machines and printing machines
- ▶ Offers linear/arc interpolation motion control
- ▶ Provides up to 16 external interrupt pointers

#### Complete Program Protection

- ▶ Auto backup function to prevent the loss of programs and data even when the battery runs out
- ▶ Second copy function provides a backup for extra insurance in the event that one set of programs and data are damaged
- ▶ Up to 4-level password protection protects your source programs and intellectual property

Supports DVP-S series left-side and right-side modules. Add new ETHRW instruction for Ethernet communication

#### Outstanding Operation Performance

32-bit CPU + ASIC dual processors support floating point operations. The max. execution speed of basic instructions is able to reach 0.24μs.

#### Built-in 4 Hardware High-Speed Counters

Standard		Hardware high-speed counter					
1-phase 1 input		1-phase 1 input		1-phase 2 inputs		2-phase 2 inputs	
Counters	Bandwidth	Counters	Bandwidth	Counters	Bandwidth	Counters	Bandwidth
8	10kHz	2/2	200kHz/20kHz	2/2	200kHz/20kHz	2/2	200kHz/20kHz



## 2<sup>nd</sup> Generation Standard Slim PLC DVP-SS2

**Economic and Compact PLC**  
**Max. 480 I/O points**

- ▶ Adopts 32-bit CPU
- ▶ Program capacity: 8k steps/Data register: 5k words
- ▶ Higher execution speed compared to the competition:  
LD: 0.35µs, MOV: 3.4µs
- ▶ Built-in RS-232 and RS-485 ports (Master/Slave)
- ▶ Supports standard MODBUS ASCII/RTU protocol and PLC Link function

### Motion Control Functions

- ▶ 4 points of 10kHz pulse output
- ▶ 8 points of high-speed counters:  
20kHz/4 points, 10kHz/4 points

## 2<sup>nd</sup> Generation Advanced Slim PLC DVP-SA2

**Advanced PLC Supporting Left-side High Speed Modules**

- ▶ Adopts 32-bit CPU
- ▶ Program capacity: 16k steps/Data register: 10k words
- ▶ Higher execution speed compared to the competition:  
LD: 0.35µs, MOV: 3.4µs
- ▶ Built-in 1 RS-232 and 2 RS-485 ports (Master/Slave)
- ▶ Supports standard MODBUS ASCII/RTU protocol and PLC Link function
- ▶ No battery required. Maintenance-free.  
(Real time clock operates for 15 days after power off)
- ▶ Supports DVP-S series left-side and right-side modules

### Motion Control Functions

- ▶ 4 points of high-speed pulse output: 100kHz/2 points, 10kHz/2 points
- ▶ 8 points of high-speed pulse input: 100kHz/2 points, 10kHz/6 points,  
1 set of A/B phase 50kHz
- ▶ Supports 2-axis linear and arc interpolation

### Built-in High-Speed Counters

1-phase 1 input		1-phase 2 inputs		2-phase 2 inputs	
Counters	Bandwidth	Counters	Bandwidth	Counters	Bandwidth
4/4	20kHz/10kHz	2	20kHz	2/2	10kHz/5kHz

### Built-in High-Speed Counters

1-phase 1 input		1-phase 2 inputs		2-phase 2 inputs	
Counters	Bandwidth	Counters	Bandwidth	Counters	Bandwidth
2/6	100kHz/10kHz	2	100kHz	1/3	50kHz/5kHz





## 2<sup>nd</sup> Generation Analog I/O Slim PLC DVP-SX2

- Compact PLC with Outstanding Analog Functions
- 4 Analog Inputs, 2 Analog Outputs, High Efficient PID Auto Tuning Performance

- ▶ Adopts 32-bit CPU
- ▶ Program capacity: 16k steps/Data register: 10k words
- ▶ Higher execution speed compared to the competition: LD: 0.35μs, MOV: 3.4μs
- ▶ Built-in mini USB, RS-232 and RS-485 ports (Master/Slave)
- ▶ Supports standard MODBUS ASCII/RTU protocol and PLC Link function
- ▶ Supports real time clock for version 2.0 and above (no battery required) It operates for at least one week after power off
- ▶ Supports DVP-S series left-side and right-side modules

### Motion Control Functions

- ▶ 4 points of high-speed pulse output: 100kHz/2 points, 10kHz/2 points
- ▶ 8 points of high-speed pulse input: 100kHz/2 points, 10kHz/6 points
- ▶ Supports 2-axis linear and arc interpolation

#### Built-in Analog I/O

Analog Input		Analog Output	
Channels	4	Channels	2
Resolution	12-bit	Resolution	12-bit
Spec.	-20~20mA or -10~10V 4~20mA	Spec.	0~20mA or -10V~10V 4~20mA

## Network Type Advanced Slim PLC DVP-SE

- The most complete network type slim PLC in the industry
- Provides 8 digital inputs and 4 digital outputs
- Built-in mini USB, Ethernet, and 2 RS-485 ports

- ▶ Adopts 32-bit CPU
- ▶ Program capacity: 16k steps/Data register: 12k words
- ▶ Higher execution speed compared to the competition: LD: 0.64μs, MOV: 2μs
- ▶ Built-in Ethernet supports MODBUS TCP and Ethernet/IP
- ▶ IP Filter function is a firewall that offers the first line of defense and provides protection from malware and network threats
- ▶ Supports DVP-S series left-side and right-side modules
- ▶ No battery required. Maintenance-free (Real time clock operates for 15 days after power off)

### Motion Control Functions

- ▶ 4 points of high-speed pulse output: 100kHz/2 points, 10kHz/2 points
- ▶ 8 points of high-speed pulse input: 100kHz/2 points, 10kHz/6 points
- ▶ Supports 2-axis linear and arc interpolation

#### Built-in High-Speed Counters

1-phase 1 input		1-phase 2 inputs		2-phase 2 inputs	
Counters	Bandwidth	Counters	Bandwidth	Counters	Bandwidth
2/6	100kHz/10kHz	2	100kHz	1/3	50kHz/5kHz

# Pulse-train Motion Controller

## DVP-PM



### General Purpose Motion Controller

#### DVP10PM00M

- 2/3/4/5/6-axis linear interpolation motion control
- Highly accurate PWM 200kHz output, resolution 0.3%
- 8 groups of high-speed captures (mark correction, frequency measurement), comparative output, Mark/Mask function (for bag making)
- ▶ Built-in 24 I/O points. Max. 256 I/O points
- ▶ Program capacity: 64k steps/Data register: 10k words
- ▶ Higher execution speed compared to the competition: LD: 0.13μs, MOV: 2.1μs
- ▶ Built-in RS-232 and RS-485 ports
- ▶ Supports standard MODBUS ASCII/RTU protocol

#### ■ Motion Control Functions

- ▶ High-speed pulse output: built-in 6 sets of A/B phase pulse outputs
- ▶ 2 sets of 200 kHz output, 4 sets of 1 MHz output
- ▶ 6 sets of high-speed counters and hardware digital filter for counting
- ▶ Supports MPG inputs
- ▶ Single-axis motion control function (supports 1st speed, 2nd speed, MPG function)
- ▶ Electronic gear function

### Professional Motion Controllers

#### DVP20PM00D/M/DT

- Compatible with G-code/M-code
- 3-axis linear/arc/helical interpolation
- Not only a motion controller but also an extension module
- ▶ Functions as an extension module with DVP -PM and DVP-EH2 series
- ▶ PM Series (as an extension module) requires only Start/Stop command from the main PLC to function as a stand-alone motion controller without the limitation of PLC cycle time

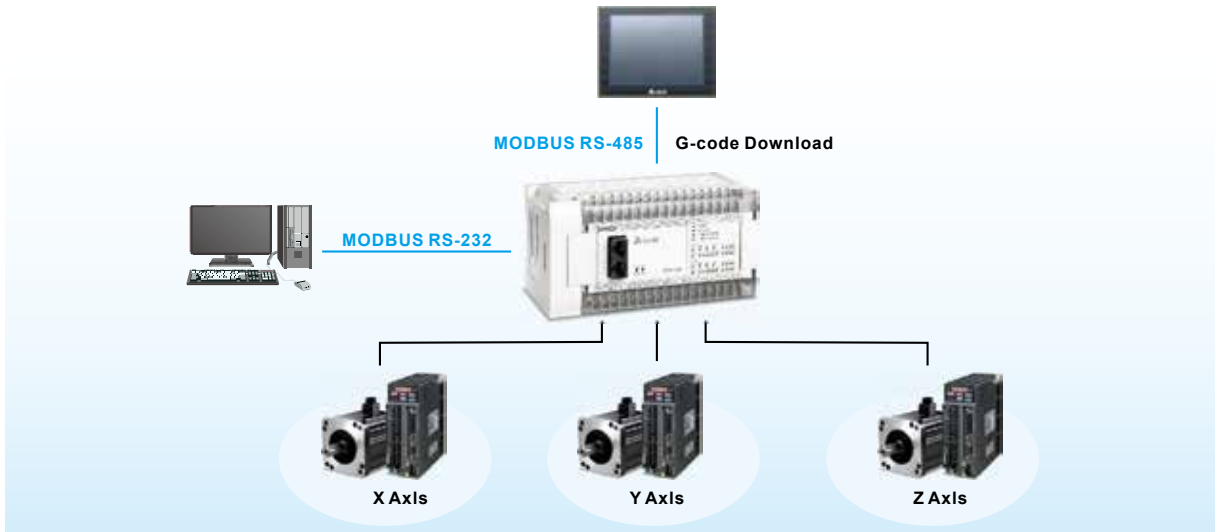
#### ■ Supports electronic cam (2048 points) function for flying shear and rotary cut applications

- ▶ Built-in 16 I/O points. Max. 512 I/O points
- ▶ Program capacity: 64k steps/Data register: 10k words
- ▶ Built-in RS-232 and RS-485 ports
- ▶ Supports standard MODBUS/ASCII/RTU protocol

#### ■ Motion Control Functions

- ▶ Built-in A/B phase differential signal outputs: 2 sets (DVP20PM00D)/3 sets (DVP20PM00M). Max. differential output frequency is 500kHz
- ▶ Supports MPG inputs
- ▶ Single-axis motion control function (supports 1st speed, 2nd speed, MPG function)
- ▶ Electronic gear function

# DVP-PM Series High-speed Pulse-train Motion Controller



## Function Cards for DVP-PM

Model name	Specifications	Features
PM-PCC01	Data backup memory card	Auto read/write program
DVP-FPMC	Ethernet/CANopen communication card *Supports DVP-EH2 function cards: DVP-F2AD, DVP-F2DA, DVP-F232S, DVP-F485S	<ol style="list-style-type: none"> <li>1. Complies with CANopen CiA301 V4.0.2 protocol.</li> <li>2. Supports CANopen CiA402 V2.0 synchronous axes, 126 asynchronous axes.</li> <li>3. Provides high-speed upload/download of Ethernet program.</li> </ol>

## PMSoft

The programming software for G-code editing, motion trajectory simulation, positioning route instruction and electronic cam establishment

**Variable Declaration**

Separate from the program. The corresponding physical I/O point of the variable is defined only after the program is compiled. Users do not need to modify the program.

**Function Block**

A complicated project can be divided into many function blocks. A function block can be used repeatedly. The import/export function makes the programming more convenient.

**Full Monitoring**

The "program monitoring" and "device monitoring" allow users to keep track of the operation of the program.

**Motion Network Function Block**

PLC Open Function Block function

**Electronic Cam**

Electronic cam editing

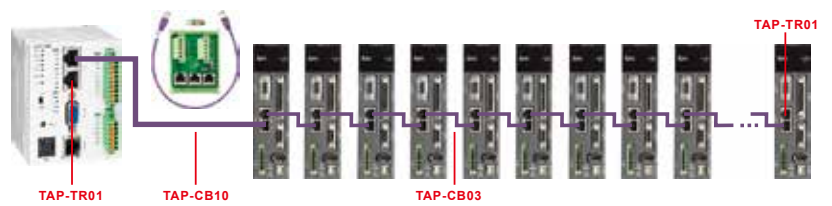
# Network Type Motion Controller

## DVP-MC

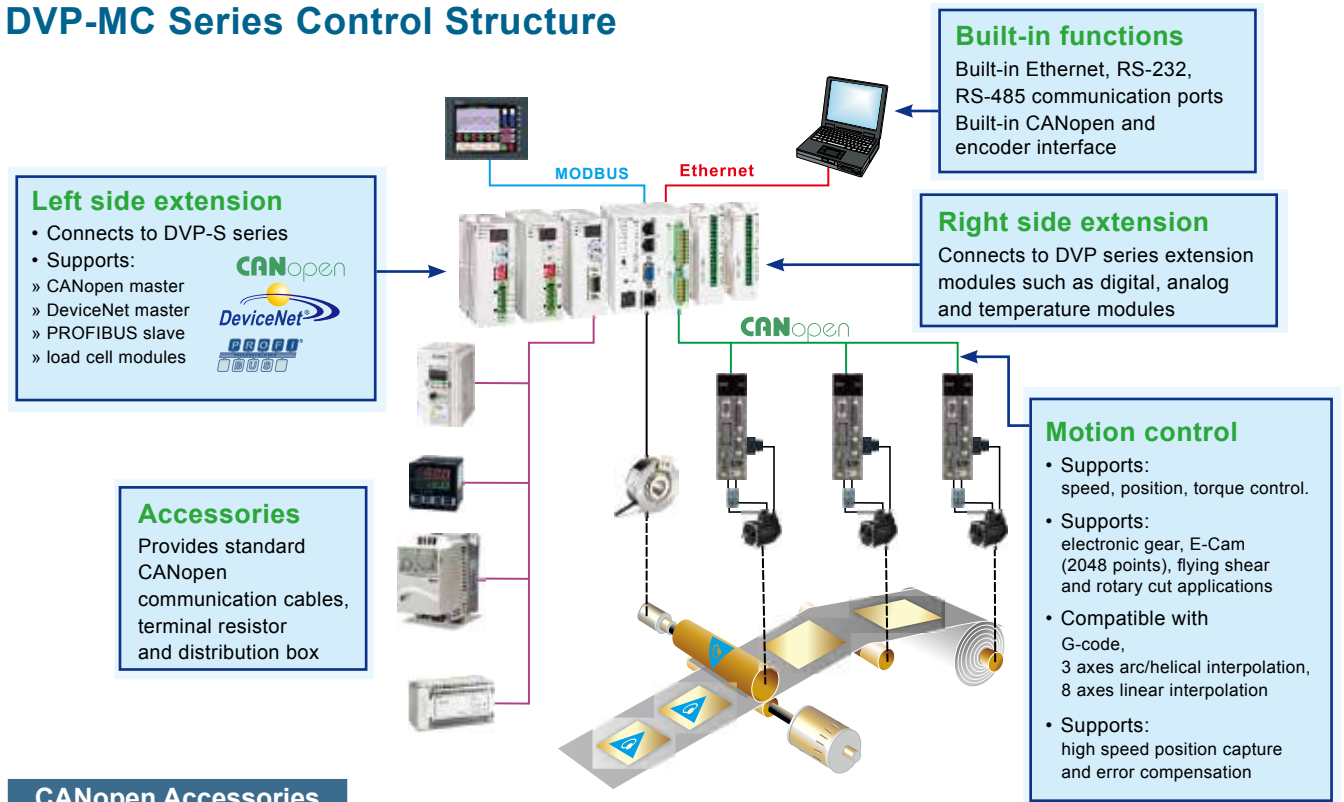
### CANopen Motion Controller

#### DVP10MC11T

- Up to 16 axes can be controlled through high-speed CANopen communication, offering system stability and easier wiring
- Built-in E-Cam, flying shear and rotary cut commands
- ▶ Built-in 12 I/O points (8 sets of high-speed inputs, 4 sets of high-speed outputs)
- ▶ Max. 240 inputs and 240 outputs
- ▶ Built-in motion control commands for easier operation
- ▶ Synchronously controls 4 axes in 2ms and 8 axes in 4ms
- ▶ High precision control with interpolation function



## DVP-MC Series Control Structure

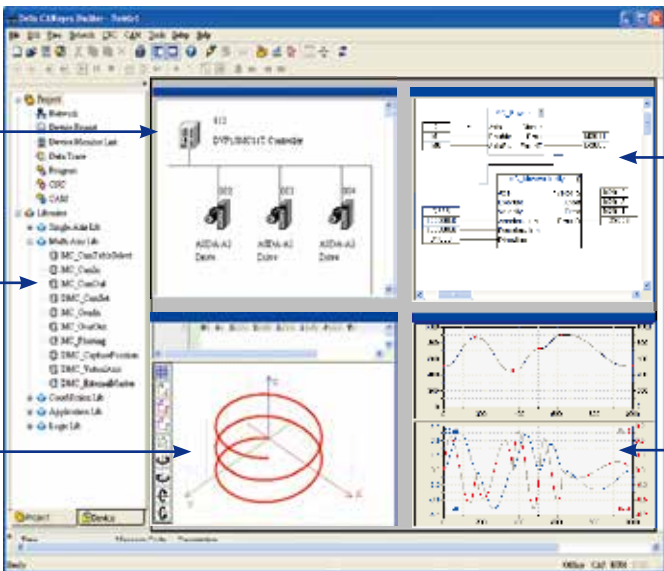


### CANopen Accessories

Model name	Specifications	Features
TAP- CB03/CB05/CB10/CB20	0.3m/0.5m/1m/2m CANopen sub-line	RJ45 connector for both ends
TAP-CB01/CB02	CANopen main-line/sub-line	Used for longer CANopen communication distance
TAP-CN03	Distribution Box	Built-in terminal resistor 120 ohm
TAP-TR01	Terminal Resistor	Terminal Resistor 120 Ohm

# CANopen Builder

- Featuring network arrangement, motion control programming, G-code editor/graph preview and E-Cam curve planning
- Supports international standard function blocks for motion control, enhancing program editing efficiency



**■ Network arrangement**  
Supports network scanning for listing all the equipment

**■ Program editing**  
Supports CFC, function blocks connection and syntax check

Supports international standard function blocks for motion control

**■ E-Cam curve planning**  
Users can plan E-Cam curves according to their needs for more complex control

**■ G-code editor and preview**  
Supports G-code editing and preview, direct DXF files import available

# Professional Motion Control Applications

Designed as the most outstanding and economical motion controller, DVP-PM provides flying shear, rotary cut, electronic cam and many high-level functions to achieve highly precise motion control.

## Robot Arm

Electronic Cam (E-Cam) function enables the robot arm to perform multi-axis control. After the required positions are memorized in the PLC, users can enable the electronic cam function to create the E-Cam profile and conduct trajectory tracking and multi-axes motion control required in robot arm applications.



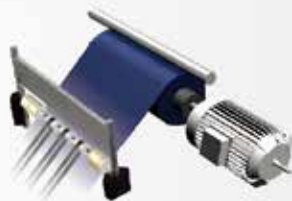
## High-Speed Cutting Machine

Average PLC cutting motion is limited by operation speed, poor synchronization, large amounts of calculations and long CPU processing time, resulting in a disproportionate cutting result and affecting the quality of end products. The basic demands, however, can be fulfilled under low speed while rough surface and low quality appear under high speed. The electronic cam function offered by DVP-PM and DVP-MC is able to generate dynamic cam curves for rotary cut to ensure precise cutting results.



## Digital Board Cutting Machine

Typically, a PLC finishes cutting with an interruption, followed by a large error. Now the rotary cut function built into the DVP-PM is able to complete all kinds of demands, such as synchronous conveyance and cutting speed, to ensure precise cutting results.



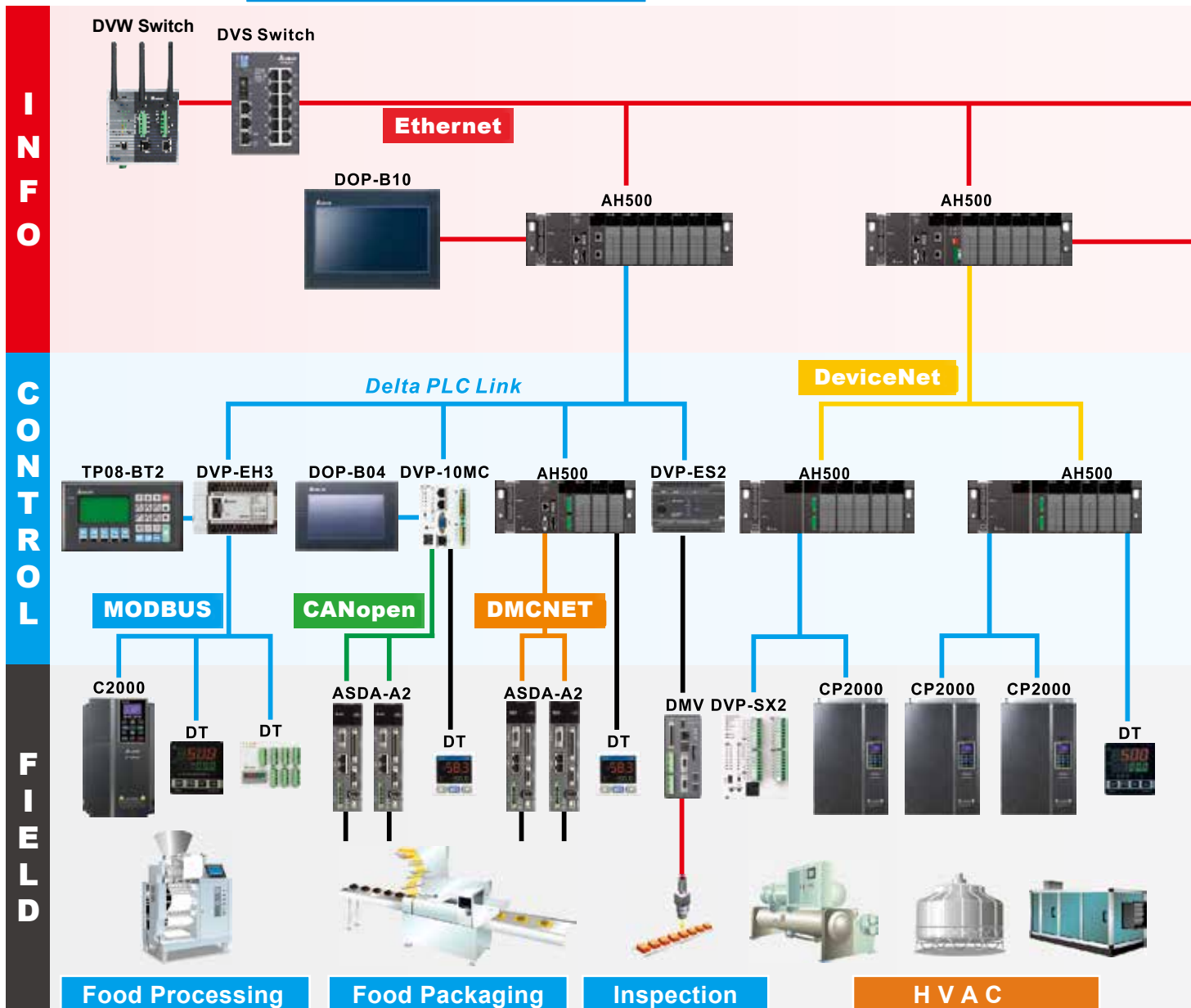
## CNC Lathe

DVP-PM controls multi-axis motion. Two axes complete the motion by linear or arc interpolation, and the other two work independently, controlling the independent or synchronous ascending/descending of the vertical axis on two sides.



# Industrial Automation Solutions

## Factory Automation



### Ethernet

Delta Ethernet products transcend the limits of transmission distance, offering 10/100Mbps high-speed transmission and efficient remote monitoring.

### CANopen

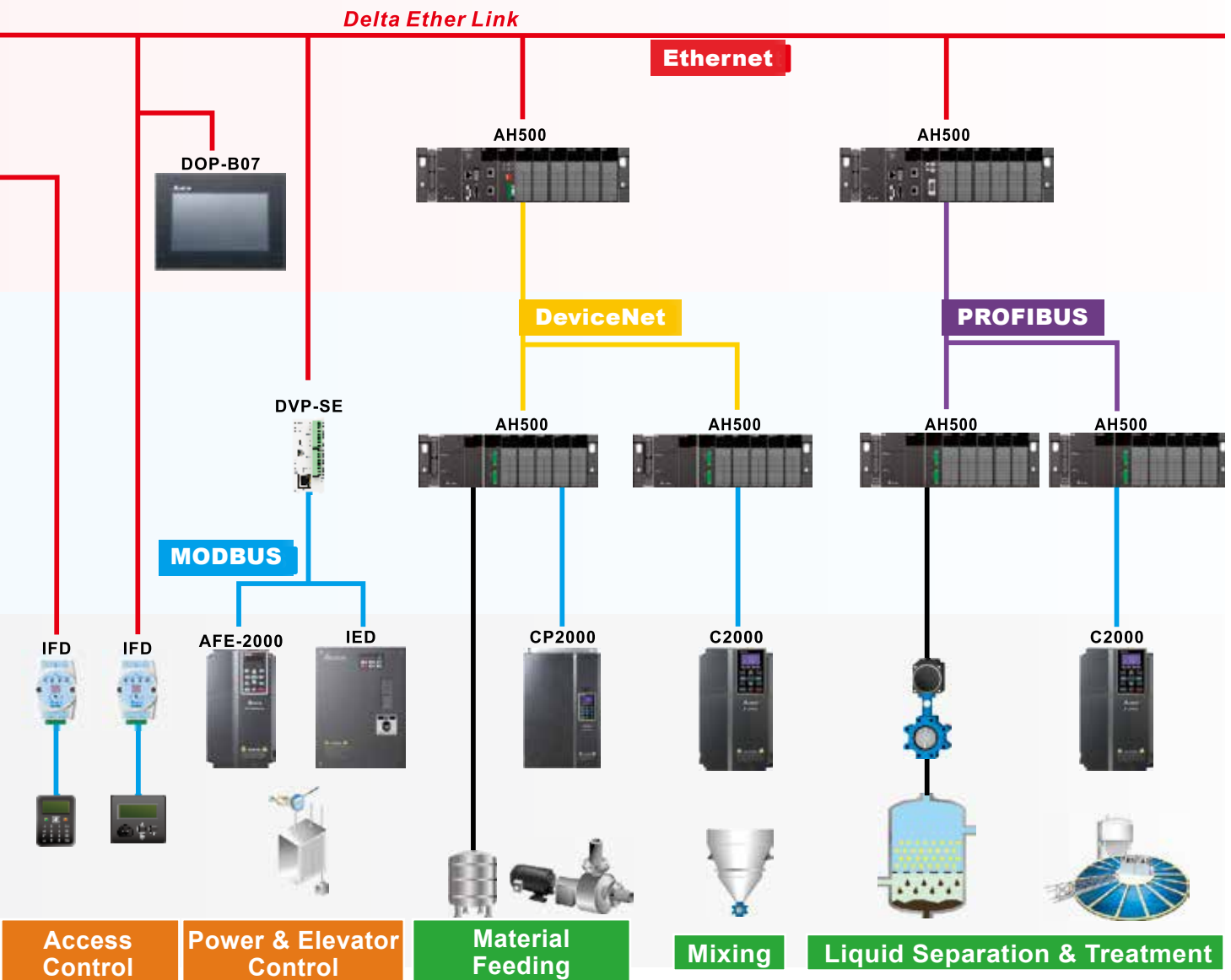
Delta CANopen products support CANopen DS301 and DSP402 protocols, and are able to achieve multi-axis, high-speed and complex motion control with max. speed 1Mbps.

### DMCNET

Delta DMCNET offers 10Mbps communication speed, constructing a real-time control system which supports multi-axis synchronous motion. The system can be connected to servo motors, remote digital or analog I/O modules, step motors, DD motors, linear motors, MPG modules, and more.

## Building Automation

## Process Automation



### MODBUS

Delta MODBUS serial products integrate easily with devices of other brands, and for communication among RS-232, RS-422, RS-485 and custom-defined formats, offering greater flexibility for on-site applications.

### DeviceNet

Delta DeviceNet products support interconnections among products of different brands and wire-saving network topology. The 500kbps stable and noise resistant fieldbus data transmission is suitable for harsh industrial sites.

### PROFIBUS

Delta PROFIBUS products support 12Mbps communication speed and are suitable for distributed automated industrial control networks.



## Standard 4 Line Text Panels

### TP04G-AL-C TP04G-AL2

- ▶ 4.1" STN-LCD
- ▶ User-defined function keys available
- ▶ Supports RS-232/RS-422/RS-485 COM ports (TP04G-AL2)
- ▶ Password protection function available
- ▶ User-defined boot screen available
- ▶ Built-in real-time clock (RTC)

Dimensions	4.1" (101.8 x 35.24mm)
Resolution	192 x 64
Display Color	Monochrome
Flash Memory	256k bytes
SRAM	16k/10k bytes
Function keys	10 function keys
Password	Available
Recipe function	Not available
Real-time clock	Available
Serial COM port	RS-232 & RS-422/485
Editing software	TPEditor

## Standard Numeric Entry 4 Line Text Panel PLC

### TP04P

- ▶ Adopts core of SS2 series PLC with program of 8K steps and D devices of 5K words
- ▶ Provides 2 sets of 10kHz high speed pulse input
- ▶ 4.1" STN-LCD
- ▶ Provides 0~9 numeric keys with user defined function
- ▶ Built-in USB port for program upload/download
- ▶ Built-in 2 sets of RS-485 communication port
- ▶ Supports MODBUS ASCII/RTU modes
- ▶ User-defined boot screen available
- ▶ Built-in real-time clock (RTC)
- ▶ Digital I/O points available

Dimensions	4.1"(101.8×35.24mm)
Resolution	192 x 64
Display Color	Monochrome
Flash Memory	1M bytes
SRAM	64k bytes
Function keys	17 function keys
Password	Available
Recipe function	Not available
Real-time clock	Available
Serial COM port	2 sets for RS-485
Editing software	TPEditor





## Standard Numeric Entry 4 Line Text Panel

### TP04G-BL-C

- ▶ 4.1" STN-LCD
- ▶ 0~9 numeric keys and user-defined function available
- ▶ Built-in RS-232 and RS-422/RS-485 ports
- ▶ Supports MODBUS ASCII/RTU modes
- ▶ Password protection function available
- ▶ User-defined boot screen available
- ▶ Built-in real-time clock (RTC)

Dimensions	4.1" (101.8 x 35.24mm)
Resolution	192 x 64
Display Color	Monochrome
Flash Memory	256k bytes
SRAM	10k bytes
Function keys	17 function keys
Password	Available
Recipe function	Not available
Real-time clock	Available
Serial COM port	RS-232 & RS-422/485
Editing software	TPEditor

## Multi-function 8 Line Text Panel

### TP08G-BT2

- ▶ 3.8" STN-LCD
- ▶ Resolution: 240 x 128 dots
- ▶ Built-in 1024KB flash memory
- ▶ 24 user-defined function keys
- ▶ Built-in RS-232 and RS-422/RS-485 COM ports
- ▶ Supports recipes and macro functions

Dimensions	3.8" ( 83mm x 41 mm)
Resolution	240 x 128
Display Color	Monochrome
Flash Memory	1M bytes
SRAM	64k bytes
Function keys	24 function keys
Password	Available
Recipe function	Available
Real-time clock	Available
Serial COM port	RS-232 & RS-422/485
Editing software	TPEditor

# TP Hardware Specifications

Model		TP02G-AS1	TP04G-AS2	TP08G-BT2	TP04G-AL-C	TP04G-AL2	TP04G-BL-C	TP04P-Series
Display specifications	Screen type	STN-LCD						
	Display color	Monochrome						
	Resolution	160 x 32	128 x 64	240 x 128	192 x 64			
	Backlight	Life span of backlight is about 50,000 hours at 25°C						
	Display range	72 x 22mm	3" (67 x 32mm)	3.8" (83 x 41mm)	4.1" (101.8 x 35.24mm)			
Flash memory	256k bytes		1M bytes		256k bytes		1M bytes	
Program download port	COM1 (RS-232)							COM1(USB)
Serial COM port	COM1	RS-232	RS-232/422		RS-232	RS-232/422	RS-232	-
	COM2	RS-485		-	RS-485	RS-485	RS-485	RS-485
	COM3	-		-	-	-	-	RS-485
Extension interface	The slot for program copy card							
Real-time clock	-	Built-in						
Auxiliary keys	System keys	6	7	12	5		7	
	Function keys	10	5	12	5		10	
Operating voltage	DC +24V (-10%~+20%)							
Backup battery	3V lithium battery CR2032 x 1 / battery life: 5 years							
Buzzer	85dB							
Cooling method	Natural air circulation							
Operating temperature	0°C~50°C							
Storage temperature	-20°C~ +60°C							
Operating humidity	10%~90% RH (0~40°C)							
Vibration	IEC61131-2, IEC 68-2-6 (TEST Fc) 5Hz ≤ f < 8.4Hz Continuous: 3.5mm 8.4Hz ≤ f ≤ 150Hz Continuous: 1.0g							
Shock	IEC61131-2, IEC 68-2-27 (TEST Ea) 15g peak, 11ms duration, half-sine, three shocks in each direction per axis, on 3 mutually perpendicular axes (total of 18 shocks)							
Radiated emission	CISPR11, Class A Frequency: 30~230MHz, Limits: 40dB uV/m; Frequency: 230MHz~1GHz, Limits: 47dB uV/m							
Radiated electromagnetic field	EN61000-4-3, Frequency: 80~2000MHz, Limits: 10V/m							
Electrostatic discharge	EN61000-4-2, Air Discharge: 8KV, Contact Discharge: 4KV							
Fast transient burst	EN61000-4-4, Power Line: 1KV, Communication I/O: 500V							
Dimensions (Width (W) × Height (H) × Depth (D))	147 x 97 x 35.5		210 x 122 x 45		163.6 x 108.6 x 37		175.8× 108.8×37	175.8× 108.6×59.2
Panel cutout	136 x 85		196 x 108		151 x 96		163×96	163×96
Weight	240g		430g		268g	270g	292g	500g
Safety approvals (Waterproof class of front panel)	IP65/NEMA4 & CE, UL Type 4 indoor				IP65/NEMA4 & CE, UL			

# Product Outline & Dimensions

**TP02G-AS1**

Front panel: 147 (width), 97 (height)

Right side view: 85 (depth)

Top view: 135 (width), 30.5 (height)

Back panel

Unit: mm

**TP04G-AS2**

Front panel: 147 (width), 97 (height)

Right side view: 85 (depth)

Top view: 135 (width), 30.5 (height)

Back panel

Unit: mm

**TP08G-BT2**

Front panel: 210 (width), 122 (height)

Right side view: 108.26 (depth)

Top view: 196.26 (width), 37.5 (height)

Back panel

Unit: mm

**TP04G-AL-C/TP04G-AL2**

Front panel: 163.6 (width), 108.6 (height)

Right side view: 95 (depth)

Top view: 150 (width), 37 (height)

Back panel

Unit: mm

**TP04G-BL-C**

Front panel: 175.8 (width), 108.6 (height)

Right side view: 95 (depth)

Top view: 162.2 (width), 37 (height)

Back panel

Unit: mm

**TP04P-Series**

Front panel: 175.8 (width), 108.6 (height)

Right side view: 95 (depth)

Top view: 162.2 (width), 59.2 (height)

Back panel

Unit: mm

# EH Series PLC and Extension Modules

## Small PLC with the Highest Operation Efficiency!

### **DVP-EH3**

- ▶ Max. 512 I/O points
- ▶ 200kHz high-speed pulse output
- ▶ Brand-new high-speed extension modules
- ▶ Supports linear/arc interpolation
- ▶ L type supports left-side extension



#### Function Cards

- For RS-232/RS-422/RS-485 Communication (COM3 Port, DVP-EH3 series PLC only)

DVP-F232



DVP-F422



DVP-F485



- For Ethernet Communication

DVP-FEN01



- Analog I/O

DVP-F2AD  
DVP-F2DA



#### Accessories

- Data Backup Card

DVP-512FM (EH3 only)



DVPPCC01  
(for general purpose)



- Data Transmission Cable

DVPACAB2A30



- Digital Display Panel

DVPDU01



Model name	Specifications
DVP16EH00R3	2 counters of 200kHz input
DVP16EH00T3	2 counters of 200kHz input, 2 axes of 200kHz output
DVP20EH00R3	2 counters of 200kHz input, 1 counter of 20kHz input
DVP20EH00T3	2 counters of 200kHz input, 2 axes of 200kHz output
DVP32EH00R3	4 counters of 200kHz input
DVP32EH00T3	4 counters of 200kHz input, 2 axes of 200kHz output
DVP32EH00M3	4 counters of 200kHz input (Differential: 2 sets), 2 axes of 200kHz output (Differential)
DVP32EH00R3-L*	4 counters of 200kHz input
DVP32EH00T3-L*	4 counters of 200kHz input, 2 axes of 200kHz output
DVP40EH00R3	4 counters of 200kHz input
DVP40EH00T3	4 counters of 200kHz input, 4 axes of 200kHz output
DVP48EH00R3	4 counters of 200kHz input
DVP48EH00T3	4 counters of 200kHz input, 4 axes of 200kHz output
DVP64EH00R3	4 counters of 200kHz input
DVP64EH00T3	4 counters of 200kHz input, 4 axes of 200kHz output
DVP80EH00R3	4 counters of 200kHz input
DVP80EH00T3	4 counters of 200kHz input, 4 axes of 200kHz output

:AC power supply   :Inputs   :Outputs   :Relay output   :Transistor output   :Differential output  
 \*Supports left-side high-speed extension.

### Digital I/O Modules

#### Input Point Extension

DVP08HM11N  
DVP16HM11N  
DVP32HM11N



#### Output Point Extension

DVP08HN11R/T  
DVP32HN00R/T



#### Input/Output Point Extension

DVP08HP11R/T  
DVP16HP11R/T  
DVP32HP00R/T  
DVP48HP00R/T



### Analog I/O Modules

#### Analog Function Extension

##### Analog Input

- DVP04AD-H2  
V : 14-bit  
I : 13-bit
- DVP04AD-H3  
V : 16-bit  
I : 16-bit



##### Analog Output

- DVP04DA-H2  
V : 12-bit  
I : 12-bit
- DVP04DA-H3  
V : 16-bit  
I : 16-bit



##### Analog Input/Output

- DVP06XA-H2  
Input 4CH / Output 2CH  
V : 12-bit/V : 12-bit  
I : 11-bit/I : 12-bit
- DVP06XA-H3  
V : 16-bit  
I : 16-bit



#### Temperature Measurement

##### Sensor:PT100

- DVP04PT-H2



##### Sensor:

- DVP04TC-H2  
J, K, R, S, E, N, T thermocouple  
0~150mV
- DVP08TC-H2  
J, K, R, S, E, N, T thermocouple  
±150mV



**DVP32EH00R3-L & DVP32EH00T3-L are also compatible with left-side high-speed extension modules for DVP-SV2 series.**

#### Motion Control

##### Single-Axis Positioning

- DVP01PU-H2



##### High-Speed Counter

- DVP01HC-H2



# ES2 Series PLC and Extension Modules

## The Most Cost-Effective Solution for Sequential Control!

### DVP-ES2/EX2

- ▶ 100kHz pulse output
- ▶ Analog input/output



reddot design award  
winner 2010



### DVP-ES2

Model name	Specifications
DVP16ES200R	⊖ 8 8 (R)
DVP16ES200T	⊖ 8 8 (T)
DVP24ES200R	⊖ 16 8 (R)
DVP24ES200T	⊖ 16 8 (T)
DVP32ES200R	⊖ 16 16 (R)
DVP32ES200T	⊖ 16 16 (T)
DVP32ES211T	⊖DC 16 16 (T)
DVP32ES200RC	⊖ 16 16 (R)
DVP32ES200TC	⊖ 16 16 (T)
DVP40ES200R	⊖ 24 16 (R)
DVP40ES200T	⊖ 24 16 (T)
DVP60ES200R	⊖ 36 24 (R)
DVP60ES200T	⊖ 36 24 (T)

⊖ : AC power supply    ↻ : Inputs    (T) : Transistor output  
 ⊖DC : DC power supply    ↑ : Outputs    (R) : Relay output

### DVP-EX2

Model name	Specifications
DVP20EX200R	⊖ 6 6 (R) 4AI/2AO
DVP20EX200T	⊖ 6 6 (T) 4AI/2AO
DVP30EX200R	⊖ 16 10 (R) 3AI/1AO
DVP30EX200T	⊖ 16 10 (T) 3AI/1AO

⊖ : AC power supply    ↻ : Inputs    (T) : Transistor output  
 ⊖DC : DC power supply    ↑ : Outputs    (R) : Relay output

#### Digital I/O Modules

##### Input Point Extension

DVP08XM211N  
DVP16XM211N



##### Output Point Extension

DVP08XN211R/T  
DVP16XN211R/T  
DVP24XN200R/T



##### Input/Output Point Extension

DVP08XP211R/T  
DVP16XP211R/T  
DVP24XP200R/T  
DVP32XP200R/T



#### Analog I/O Modules

##### Input Point Extension

DVP04AD-E2



##### Output Point Extension

DVP04DA-E2  
DVP02DA-E2



##### Input/Output Point Extension

DVP06XA-E2



#### Temperature

##### Measurement Modules

DVP04PT-E2



DVP04TC-E2



#### Resolver Modules

DVP10RC-E2<sup>\*1</sup>



#### ES2 Series Extension Cable Modules

DVPAEXT01-E2



\*1. Contact your sales representative for the official launch date of the DVP10RC-E2 module.

# S Series PLC

## Compact, Flexible Extension!

### DVP-SS2

2<sup>nd</sup> Generation Standard Slim PLC



Model name	Specifications
DVP14SS211R	—DC— 8 I 6 O (R) →
DVP14SS211T	—DC— 8 I 6 O (T) →
DVP12SS211S	—DC— 8 I 4 O (S) →

—DC— :DC power supply    C → : Inputs    U ↑ : Outputs  
 T → :Transistor output (NPN)    R → :Relay output  
 S → :Transistor output (PNP)

### DVP-SX2

2<sup>nd</sup> Generation Analog I/O Slim PLC



Model name	Specifications
DVP20SX211R	—DC— 8 I 6 O (R) → 4AI/2AO
DVP20SX211T	—DC— 8 I 6 O (T) → 4AI/2AO
DVP20SX211S	—DC— 8 I 6 O (S) → 4AI/2AO

—DC— :DC power supply    C → : Inputs    U ↑ : Outputs  
 T → :Transistor output (NPN)    R → :Relay output  
 S → :Transistor output (PNP)

### DVP-SA2

2<sup>nd</sup> Generation Advanced Slim PLC



Model name	Specifications
DVP12SA211R	—DC— 8 I 4 O (R) →
DVP12SA211T	—DC— 8 I 4 O (T) →

—DC— :DC power supply    C → : Inputs    U ↑ : Outputs  
 T → :Transistor output    R → :Relay output

### DVP-SV2

High Performance Slim PLC



Model name	Specifications
DVP28SV11R2	—DC— 16 I 12 O (R) →
DVP28SV11T2	—DC— 16 I 12 O (T) →
DVP28SV11S2	—DC— 16 I 12 O (S) →
DVP24SV11T2	—DC— 10 I 12 O (T) → 2AI

—DC— :DC power supply    C → : Inputs    U ↑ : Outputs  
 T → :Transistor output (NPN)    R → :Relay output  
 S → :Transistor output (PNP)

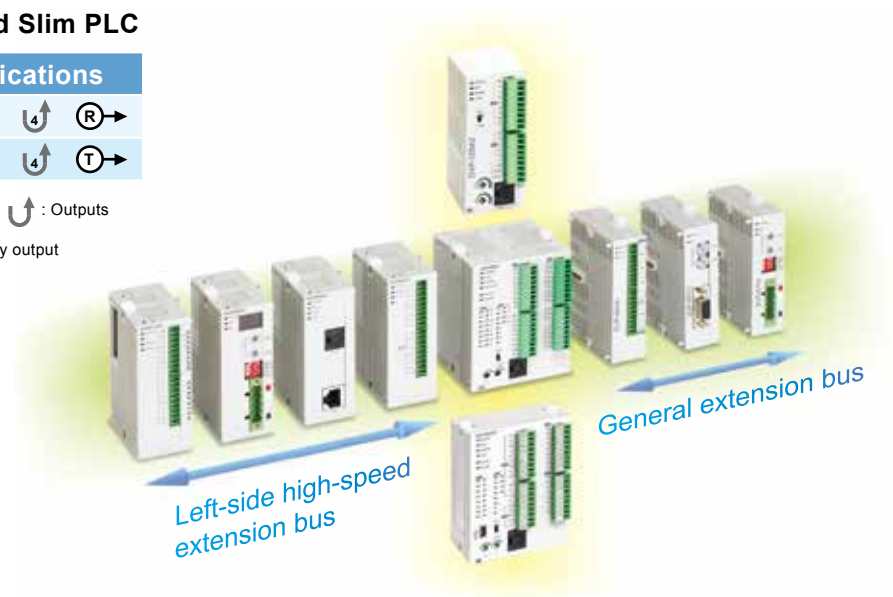
### DVP-SE

Network Type Advanced Slim PLC



Model name	Specifications
DVP12SE11R	—DC— 8 I 4 O (R) →
DVP12SE11T	—DC— 8 I 4 O (T) →

—DC— :DC power supply    C → : Inputs    U ↑ : Outputs  
 T → :Transistor output    R → :Relay output



# S Series Extension Modules

## Left-Side High-Speed Extension Modules

### Network Modules

- **DeviceNet Master**  
DVPDNET-SL
- **CANopen Master**  
DVPCOPM-SL



- **Ethernet**  
DVPEN01-SL
- **PROFIBUS-DP Slave**  
DVPPF02-SL



- **RS-422/RS-485 Serial Communication Module**  
DVPSM12-SL



- **BACnet MS/TP Slave Serial Communication Module**  
DVPSM52-SL

### Analog Function Extension

- **Analog Input**  
DVP04AD-SL
- **Analog Output**  
DVP04DA-SL



### Load Cell/Tension

- **Load Cell Module**  
DVP01LC-SL  
DVP02LC-SL



## General Extension Modules

### I/O Point Extension

- **Input Point Extension**  
DVP08SM11N  
DVP16SM11N



- **Output Point Extension**  
DVP06SN11R  
DVP08SN11R/T  
DVP08SN11TS\*1  
DVP16SN11T  
DVP16SN11TS\*1



- **Input/Output Point Extension**  
DVP08SP11R/T  
DVP08SP11TS\*1  
DVP16SP11R/T  
DVP16SP11TS



- **Pin Header Input**  
DVP32SM11N



- **Pin Header Output**  
DVP32SN11TN



- **Digital Switch**  
DVP08ST11N



### Analog Function Extension

- **Analog Input**  
DVP04AD-S  
DVP06AD-S  
DVP04AD-S2



- **Analog Output**  
DVP04DA-S  
DVP02DA-S  
DVP04DA-S2



- **Analog Input/Output**  
DVP06XA-S  
DVP06XA-S2



### Temperature Measurement

- **Sensor : PT100, PT1000**  
DVP04PT-S  
DVP06PT-S



- **Sensor : J,K,R,S,T thermocouple**  
DVP04TC-S



### Motion Control

- **Single-Axis Positioning**  
DVP01PU-S



### Communication Modules

- **PROFIBUS Slave**  
DVPPF01-S
- **DeviceNet Slave**  
DVPDT01-S



### Power Supply Modules

- DVPPS01
- DVPPS02
- DVPPS05



\*1. Contact your sales representative for the official launch date of the left-side high-speed extension modules.  
\*2. DVP32EH00R3-L & DVP32EH00T3-L are also compatible with the left-side high-speed extension modules.



# Electrical Specifications

	AC	DC
<b>Power supply voltage</b>	100~240VAC (-15%~10%), 50/60Hz ±5%	24VDC (-15%~20%)
<b>Fuse capacity</b>	2A/250VAC	ES:2A/250VAC; SV: 2.5A/30VDC
<b>Spike voltage durability</b>	1500VAC (Primary-secondary); 1500VAC (Primary-PE); 500VAC (Secondary-PE)	
<b>Insulation impedance</b>	>5MΩ (all I/O point-to-ground: 500VDC)	
<b>Noise immunity</b>	ESD: 8KV Air Discharge EFT: Power Line, 2kV Digital I/O: 1kV Analog & Communication I/O: 1kV RS: 26MHz~1GHz, 10V/m	
<b>Earth</b>	The diameter of grounding wire shall not be shorter than that of the power supply cable. (When many PLCs are in use at the same time, please make sure every PLC is properly grounded.)	
<b>Storage / operation</b>	Storage: -25°C~70°C(temperature); 5%~95% (humidity) Operation: 0°C~55°C(temperature); 5%~95% (humidity); pollution degree 2	

## Input Specifications\*1

Max. input frequency	10kHz	20kHz	100kHz	200kHz	
<b>Input signal type</b>	Sink/Source				
<b>Input signal voltage</b>	24VDC ±10% (5mA)				
<b>Response time*2</b>	<b>EH3/SV2/PM</b>	OFF→ON: 20μs ON→OFF: 50μs	ES/EX/SX/SS2/SX2 OFF→ON: 3.5μs ON→OFF: 20μs	ES2/EX2/SA2/SX2 OFF ON: 2.5μs ON→OFF: 5μs	EH3/SV2/PM OFF→ON: 0.15μs ON→OFF: 3μs
	<b>ES2/EX2</b>				
	<b>ES/EX</b>				
	<b>SX</b>				
	<b>SS2</b>				
	<b>SA2/SX2/SE</b>				

\*1. For more detailed specifications, see "Specification" section in the instruction sheet of each model.

\*2. When the input point on PLC conducts only general input functions, use D1020 or D1021 to adjust the response time. (Default: 10ms)

## Output Specifications\*1

	Relay-R	Transistor-T		
		General speed	High speed	
<b>Max. exchange (working) frequency</b>	1Hz <sup>-2</sup>	10kHz	100kHz	200kHz
<b>Current spec.</b>	<b>EH3/SV2/PM</b>	0.3A/point @40°C	SA2/SX2/ES2/EX2/SE Resistive: 0.5A/point (4A/COM) Conductive: 12W (24VDC) Light bulb: 2W (24VDC)	EH3/SV2/PM Resistive: 0.5A/point (4A/COM) Conductive: 12W (24VDC) Light bulb: 2W (24VDC)
	<b>ES2/EX2</b>			
	<b>ES/EX</b>			
	<b>SX</b>			
	<b>SS2/SA2/SX2/SE</b>			
<b>Voltage spec.</b>	250VAC/30VDC	30VDC		
<b>Response time</b>	10ms	OFF→ON: 20μs ON→OFF: 30μs	OFF→ON: 2μs ON→OFF: 3μs	OFF→ON: 0.5μs ON→OFF: 2.5μs

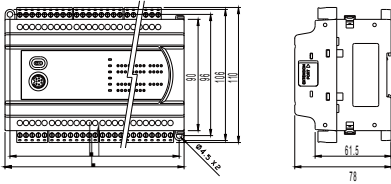
\*1. For more detailed specifications, see "Specification" section in the instruction sheet of each model.

\*2. Relay life: Resistive load more than 200,000 times; conductive load more than 80,000 times.

# Dimensions

## ES2/EX2 Series PLC

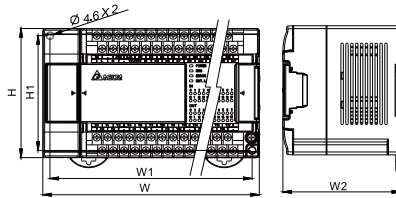
Model name (mm)	L	L1
DVP16ES200R/T	105	97
DVP24ES200R/T	125	117
DVP32ES200R/T	145	137
DVP32ES200RC	145	137
DVP32ES200TC	145	137
DVP32ES211T	145	137
DVP40ES200R/T	165	157
DVP60ES200R/T	225	217
DVP20EX200R/T	145	137
DVP30EX200R/T	165	157



## EH3 Series PLC

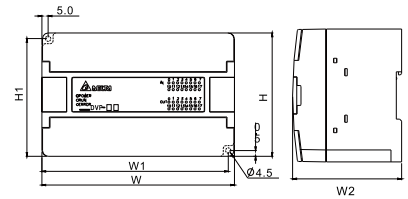
Model name (mm)	H	H1	W	W1	W2
DVP16EH00R3/T3	90	80	113	103	82
DVP20EH00R3/T3	90	80	113	103	82
DVP32EH00M3	90	80	143.5	133.5	82
DVP32EH00R3/T3	90	80	143.5	133.5	82
DVP32EH00R3-L	90	80	143.5	133.5	82
DVP32EH00T3-L	90	80	143.5	133.5	82
DVP40EH00R3/T3	90	80	158.8	153.8	82
DVP48EH00R3/T3	90	80	174	164	82
DVP64EH00R3/T3	90	80	212	202	82
DVP80EH00R3/T3	90	80	276	266	82

\* The dimension of DVP-EH3 series is the same as DVP-EH2 series



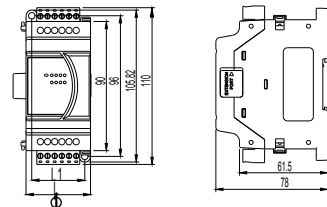
## ES/EX Series PLC

Model name (mm)	H	H1	W	W1	W2
DVP14ES00R2/T2	100	95	104	99	82
DVP24ES00(11)R2/T2	100	95	155	150	82
DVP30ES00R2/T2	100	95	155	150	82
DVP32ES00R2/T2	100	95	155	150	82
DVP40ES00R2/T2	100	95	155	150	82
DVP60ES00R2/T2	100	85.5	185	180.5	89.6
DVP20EX00(11)R2/T2	100	95	155	150	82



## ES2/EX2 Series Extension Modules

Model name (mm)	L	L1	Type
DVP08XM211N	45	37	①
DVP08XP211R/T	45	37	①
DVP08XN211R/T	45	37	①
DVP16XM211N	70	62	②
DVP16XP211R/T	70	62	②
DVP16XN211R/T	70	62	②
DVP24XP200R/T	145	137	②
DVP24XN200R/T	145	137	②
DVP32XP200R/T	145	137	②
DVP04AD-E2	70	62	②
DVP02DA-E2	70	62	②
DVP04DA-E2	70	62	②
DVP06XA-E2	70	62	②
DVP04PT-E2	70	62	②
DVP04TC-E2	70	62	②
DVP10RC-E2	70	62	②

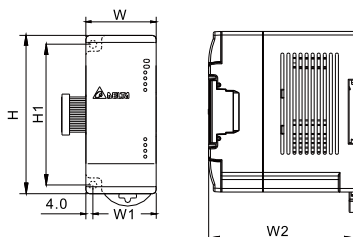


## EH3 Series I/O & Extension Modules

Model name (mm)	H	H1	W	W1	W2
DVP08HM11N	90	80	40	36	82
DVP16HM11N	90	80	55	51	82
DVP32HM11N	90	80	143.5	133.5	82.2
DVP08HN11R/T	90	80	40	36	82
DVP32HN00R/T	90	80	143.5	133.5	82.2
DVP08HP11R/T	90	80	40	36	82
DVP16HP11R/T	90	80	55	51	82
DVP32HP00R/T	90	80	143.5	133.5	82.2
DVP48HP00R/T	90	80	174	164	82.2

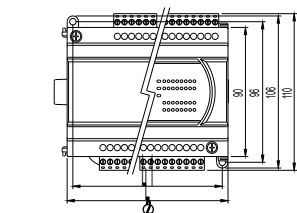
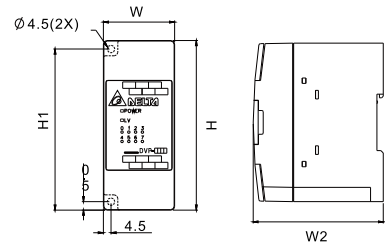
Model name (mm)	H	H1	W	W1	W2
DVP04AD-H2	90	80	60	56	82
DVP04DA-H2	90	80	60	56	82
DVP06XA-H2	90	80	60	56	82
DVP04PT-H2	90	80	60	56	82
DVP04TC-H2	90	80	60	56	82
DVP01PU-H2	90	80	60	56	82
DVPDT02-H2	90	80	40	46	82
DVPCP02-H2	90	80	40	46	82
DVPPF02-H2	90	80	40	46	82
DVP04AD-H3	90	80	60	56	82
DVP04DA-H3	90	80	60	56	82
DVP06XA-H3	90	80	60	56	82

\* The dimension of DVP-EH3 series is the same as DVP-EH2 series



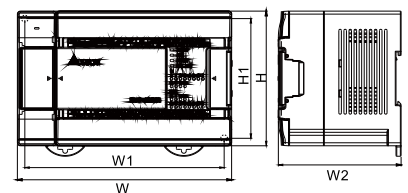
## ES/EX Series I/O & Extension Modules

Model name (mm)	H	H1	W	W1	W2
DVP08XM11N	100	95	42	37.5	82
DVP16XM11N	100	95	104	99	82
DVP08XN11R/T	100	95	42	37.5	82
DVP16XN11R/T	100	95	155	150	82
DVP24XN11R/T	100	95	155	150	82
DVP24XN00R/T	100	95	155	150	82
DVP08XP11R/T	100	95	42	37.5	82
DVP24XP11R/T	100	95	155	150	82



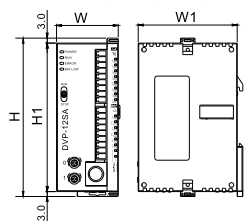
## PM Series PLC

Model name (mm)	H	H1	W	W1	W2
DVP20PM00D	90	80	174	164	82
DVP20PM00M	90	80	174	164	82
DVP10PM00M	90	80	143.5	133.5	82



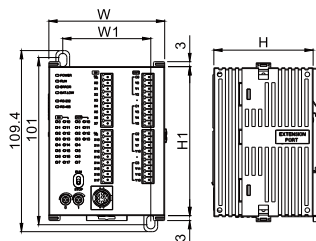
## SE/SX/SS2/SA2 Series PLC

Model name (mm)	H	H1	W	W1
DVP14SS211R/T	96	90	25.2	60
DVP12SS211S	96	90	25.2	60
DVP12SA211R/T	96	90	37.4	60
DVP12SE11R/T	96	90	37.4	60
DVP10SX11R/T	96	90	37.4	60



## SV2/SX2/MC Series PLC

Model name (mm)	H	H1	W	W1
DVP28SV11R2/T2	60	90	70	53.2
DVP20SX211R/T/S	60	90	70	53.2
DVP10MC11T	60	90	70	53.2

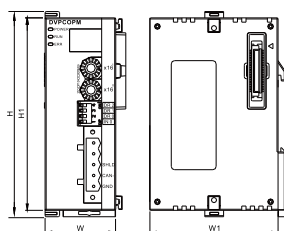


## S Series IO & Extension Modules

Model name (mm)	H	H1	W	W1
DVP08SM11N	96	90	25.2	60
DVP06SN11R	96	90	25.2	60
DVP08SN11R/T	96	90	25.2	60
DVP08SP11R/T	96	90	25.2	60
DVP16SP11R/T	96	90	25.2	60
DVP16SN11T	96	90	25.2	60
DVP08SP11TS	96	90	25.2	60
DVP08SN11TS	96	90	25.2	60
DVP16SN11TS	96	90	25.2	60
DVP04AD-S	96	90	25.2	60
DVP04AD-S2	96	90	25.2	60
DVP06AD-S	96	90	25.2	60
DVP02DA-S	96	90	25.2	60
DVP04DA-S	96	90	25.2	60
DVP04DA-S2	96	90	25.2	60
DVP06XA-S	96	90	25.2	60
DVP06XA-S2	96	90	25.2	60
DVP04PT-S	96	90	25.2	60
DVP06PT-S	96	90	25.2	60
DVP04TC-S	96	90	25.2	60
DVP01PU-S	96	90	25.2	60
DVPPF01-S	96	90	25.2	60
DVPDT01-S	96	90	25.2	60

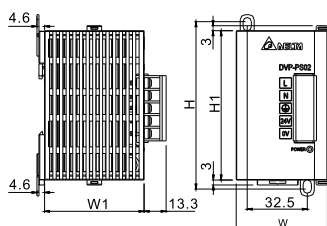
## Left-Side High-Speed Extension Modules

Model name (mm)	H	H1	W	W1
DVPEN01-SL	96	90	33.1	60
DVPCOPM-SL	96	90	33.1	60
DVPDNET-SL	96	90	33.1	60
DVPPF02-SL	96	90	33.1	60
DVPSCM12-SL	96	90	33.1	60
DVPSCM52-SL	96	90	33.1	60
DVP04AD-SL	96	90	33.1	60
DVP04DA-SL	96	90	33.1	60
DVP01LC-SL	96	90	33.1	60
DVP02LC-SL	96	90	33.1	60



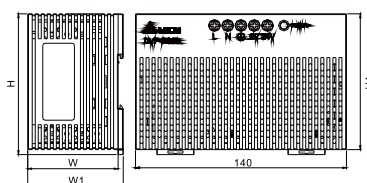
## PS01/02 Power Supply Modules

Model name (mm)	H	H1	W	W1
DVPPS01	100	90	36.5	60
DVPPS02	100	90	55	60



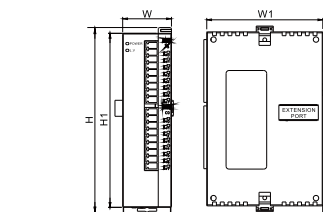
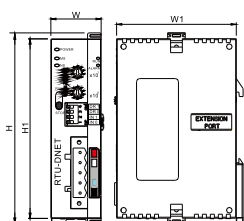
## PS05 Power Supply Modules

Model name (mm)	H	H1	W	W1
DVPPS05	93.3	90	60	63.4

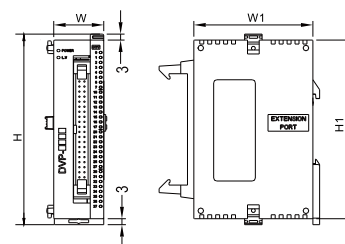


## Remote I/O Modules

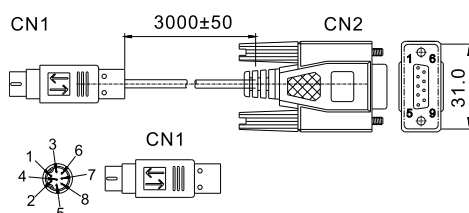
Model name (mm)	H	H1	W	W1
RTU-DNET	96	90	25.2	60
RTU-485	96	90	25.2	60
RTU-EN01	96	90	25.2	60
RTU-PT01	96	90	25.2	60



Model name (mm)	H	H1	W	W1
DVP32SN11TN	96	90	25.2	60
DVP32SM11N	96	90	25.2	60



## PIN Definition of DVPACAB2A30



PC/HMI COM Port		PLC COM1 Port	
9 PIN D-SUB female		8 PIN MINI DIN	
Tx	3	Rx	4
Rx	2	Tx	5
GND	5	GND	8
	7	5V	1,2

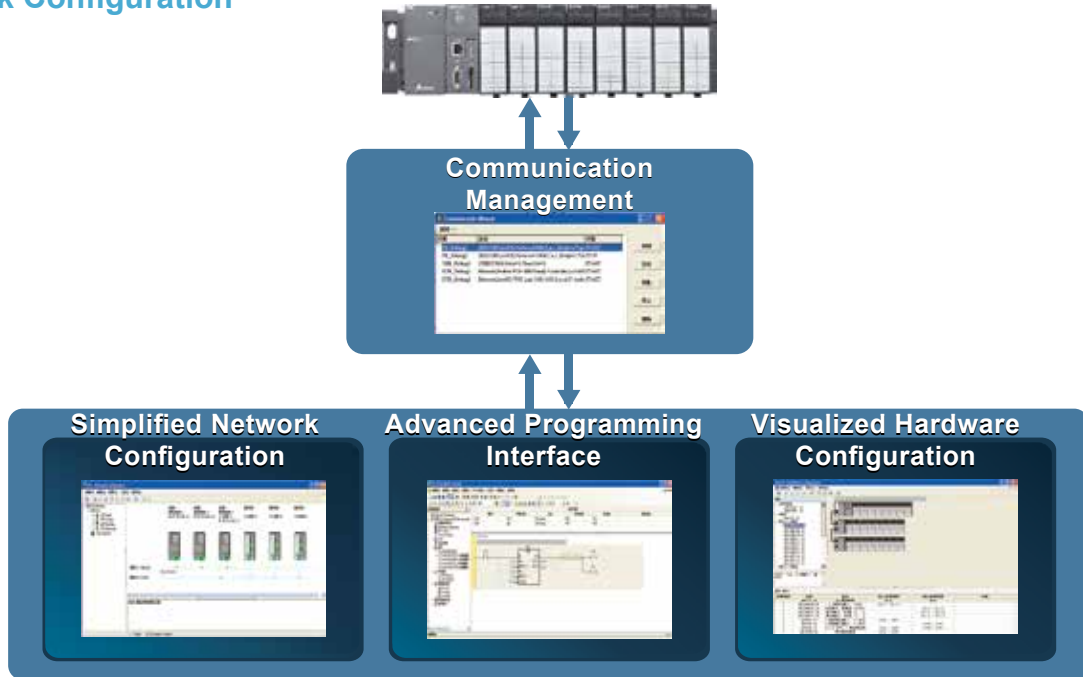
Unit: mm

# ISPSOft V2.0

## Highly Accessible Programming Software

### Fully Integrated Interface:

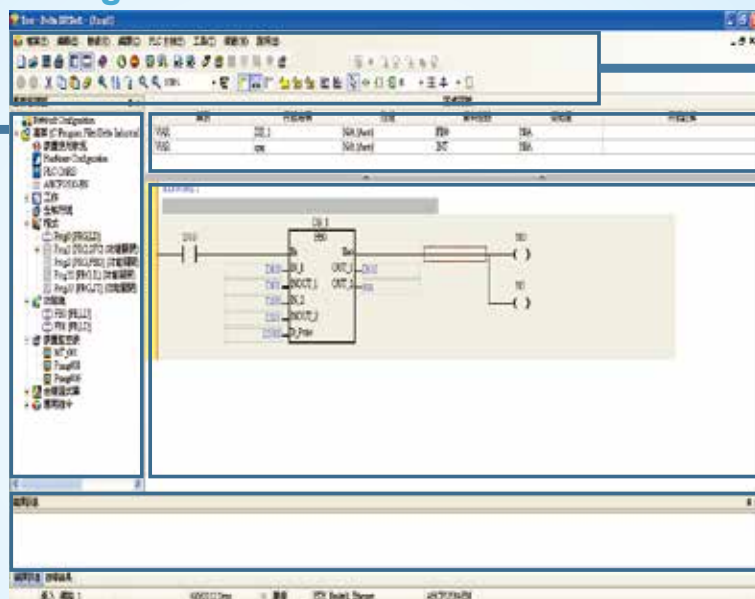
Advanced Programming Interface + Visualized Hardware Configuration + Simplified Network Configuration



### Advanced Programming Interface

#### Project Management Window

- **New functions:** Network configuration, hardware configuration and PLC card.
- Supports 5 programming languages (LD/FBD/SFC/IL/ST)\* in both main program and FB.
- **Function Blocks:** Symbols can be introduced in call-by-value or call-by-reference types. Function blocks can be called in function block for up to 32 levels.
- **Monitor Table:** It can be stored and managed separately. Multiple monitor tables can be stored in a single project.
- **Delta Library:** Users can design frequently used instructions for specific applications in different industries.
- **Task:** Supports external interrupts and timer interrupts.



Toolbar

Symbol Table

Program Editing Area

Message Window

\* For DVP-series PLC, up to 4 languages (IL/LD/SFC/ST) are supported according to the product version.

## Visualized Hardware Configuration

**Module Selection**

**Module Description**

Slot No.	Name	Description	Input Device Range	Output Device Range	Comments
	AP000K-AA	All Power Supply Module	Star	Star	
0	AP000KAB1	All base CPU Station	Star	Star	
1	AP000AB1-00	32 x DI, 16 x DO	Y00 - Y013		
2	AP000AKT-00	32 x DI, 16 x DO	Y00 - Y013		
3	AP000AKT-00	32 x DI, 16 x DO	Y00 - Y013	Y10 - Y13	
4	AP000A-0A	8 x AI 14 Bit	D0 - D11		
5	AP000A-0A	8 x AO 14 Bit	D16 - D23		
6	AP000A-0A	4 x AO 14 Bit	D24 - D27	D16 - D23	
7	AP000A-0A	4 x AO 14 Bit	D28 - D31	D24 - D27	

**Toolbar**

- System hardware configuration can be monitored in On-Line mode
- Hardware configuration can be displayed by Scan function

**Hardware Configuration Area**

- Operations of Cut/Copy/Paste/Delete are available for modules and racks
- Parameters of each module can be directly configured

**Rack Information**

- I/O device range can be specified by the user

## Simplified Network Configuration

192.168.1.11 Station 11

192.168.1.12 Station 12

192.168.1.13 Station 13

Ethernet

RS-485

Station 21 Station 22 Station 23

FMCS

**Network Device Selection**

**Toolbar**

**Network Configuration Area**

- Master device settings
- Ether Link editing function
- PLC Link editing function

**Network Information**

**Ether Link**

**PLC Link**

# Model Name Explanation

**• PLC**

DVP ○ ○ □ □ ○ ○ □ ○

Series ① ② ③ ④ ⑤

- Total I/O**
- Model**  
 ES/ES2 : ES/ES2 series PLC  
 EX/EX2 : EX/EX2 series PLC  
 SS/SS2 : SS/SS2 series PLC  
 SA/SA2 : SA/SA2 series PLC  
 SX/SX2 : SX/SX2 series PLC  
 SC : SC series PLC  
 SV : SV series PLC  
 SE : SE series PLC  
 PM : PM series PLC  
 MC : MC series PLC  
 EH : EH series PLC
- Power supply**  
 00 : AC power input  
 11 : DC power input
- Output type**  
 R : Relay  
 T : Transistor (NPN)  
 M : Mixed with differential signal  
 S : Transistor (PNP)
- Version**

**• PI/PO Module**

DVP ○ ○ □ □ - □ ○

Series ① ② ③

- Total I/O**
- Model**  
 HC : High-speed counter  
 PU : Single-axis positioning module
- Model**  
 S : SS/SA/SX/SC/SV/SS2/SA2/  
 SX2/SV2/SE/MC series PLC  
 H2 /H3 : EH2 /EH3 /PM series PLC  
 SL : left-side extension  
 for SV series PLC

**• Accessory: Cable**

DVP A CAB ○ ○ ○

Series ① ② ③ ④

- Accessory**
- Type**  
 CAB : Cable
- Type**  
 1, 2, 3, 4, .....
- Length**  
 15 : 1.5m  
 30 : 3.0m

**• DI/DO Module**

DVP ○ ○ □ □ ○ ○ □

Series ① ② ③ ④ ⑤

- Total I/O**
- Model**  
 X : ES/EX/ES2/EX2 series PLC  
 S : SS/SA/SX/SC/SV/SS2/SA2/  
 SX2/SV2/SE/MC series PLC  
 H : EH2/EH3/PM series PLC
- I/O type**  
 M : Input point  
 N : Output point  
 P : Input + output
- Power supply**  
 00 : AC power input  
 11 : DC power input
- Output type**  
 R : Relay  
 T : Transistor (NPN)  
 TS : Transistor (PNP)

**• Peripherals**

DVP □ □ □ ○ ○

Series ① ②

- Product name**  
 DU : Digital display panel
- Type/function**  
 01 : Type 01  
 02 : Type 02  
 03 : Type 03

**• Remote I/O**

RTU □ □ ○ ○

Series ①

- Model**  
 DNET : DeviceNet  
 485 : RS-485  
 EN01 : MODBUS TCP

**• Accessory: Other**

DVP A BT ○ ○

Series ① ② ③

- Accessory**
- Type**  
 Bt : Battery
- Type** : 01, 02 .....

**• AI/AO Module**

DVP ○ ○ □ □ - □ ○

Series ① ② ③

- Total I/O**
- Model**  
 AD : Analog/digital conversion  
 DA : Digital/analog conversion  
 PT : PT type temperature module  
 TC : Thermocouple type temperature  
 Module  
 XA : AD + DA module  
 LC : Load cell module  
 RC : Resolver module
- Model**  
 S or S2 : SS/SA/SX/SC/SV/SS2/SA2/  
 SX2/SV2/SE/MC series PLC  
 H2 or H3 : EH2/EH3/PM series PLC  
 SL : left-side extension for  
 S series PLC  
 E2 : ES2/ EX2 series PLC

**• Network Module**

DVP □ □ ○ ○ - □ ○

Series ① ②

- Model**  
 EN01 : MODBUS TCP  
 DNET : DeviceNet master  
 COPM : CANopen master  
 CP02 : CANopen Slave  
 DT01/02 : DeviceNet Slave  
 PF01/02 : PROFIBUS DP Slave
- Model**  
 S : SS/SA/SX/SC/SV/SS2/SA2/  
 SX2/SV2/SE/MC series PLC  
 H2 /H3 : EH2 /EH3 /PM series PLC  
 SL : left-side extension for  
 S series PLC

**• Function Card**

DVP - F ○ ○ ○ ○

Series ① ② ③

- Function Card**
- Type**  
 232 : RS-232 card  
 422 : RS-422 card  
 2OT : 2DOcard, transistor output
- Particular definition**  
 S : Slave mode  
 (applicable to COM3 coding only)

\*For the availability of the product models, please contact Delta sales representatives or refer to "Ordering Information" in this brochure.

# Select A Suitable PLC

Select your desired specifications and locate the most suitable PLC.



Item	Specifications	Check	Model							
			ES2	EX2	EH3	SS2	SA2	SX2	SV2	SE
Power supply	AC	<input type="checkbox"/>	⊙	⊙	○					
	DC	<input type="checkbox"/>				○	○	○	○	○
I/O points	< 256	<input type="checkbox"/>	△	△						
	< 512	<input type="checkbox"/>			△	△	△	△	△	△
Program capacity	< 8k	<input type="checkbox"/>				○				
	< 16k	<input type="checkbox"/>	○	○			○	○		○
	< 32k	<input type="checkbox"/>			○				○	
Output type	Transistor (NPN)	<input type="checkbox"/>	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙
	Transistor (PNP)	<input type="checkbox"/>				⊙	△	⊙	⊙	△
	Relay	<input type="checkbox"/>	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙
	Differential signal	<input type="checkbox"/>			⊙					
Communication	3 COM ports (RS-232/485)	<input type="checkbox"/>	○	○	△		○	○		
	Ethernet	<input type="checkbox"/>			△		△	△	△	○
	USB	<input type="checkbox"/>						○		○
	DeviceNet	<input type="checkbox"/>			△ <sup>*1</sup>		△ <sup>*1</sup>	△ <sup>*1</sup>	△ <sup>*1</sup>	△
	CANopen	<input type="checkbox"/>	⊙		△		△	△	△	△
	PROFIBUS	<input type="checkbox"/>			△		△	△	△	△
Positioning	2-axis output	<input type="checkbox"/>	○	○	○	○	○	○		○
	4-axis output	<input type="checkbox"/>			⊙				○	
	> 4 axes	<input type="checkbox"/>			△	△	△	△	△	△
	2-axis interpolation	<input type="checkbox"/>	○	○	○		○	○	○	○
	100kHz high speed	<input type="checkbox"/>	○	○			○	○		○
	200kHz high speed	<input type="checkbox"/>			○	△	△	△	○	△
High-speed counting	≤ 2 channels	<input type="checkbox"/>	○	○		○	○	○		○
	≥ 3 channels	<input type="checkbox"/>			○ <sup>*3</sup>	△	△	△	○	△
	100kHz high speed	<input type="checkbox"/>	○	○			○	○		○
	200kHz high speed	<input type="checkbox"/>			○	△	△	△	○	△
Analog function	< 4 channels (AD)	<input type="checkbox"/>	△	○	△	△	△	○	△	△
	< 2 channels (DA)	<input type="checkbox"/>	△	○ <sup>*2</sup>	△	△	△	○ <sup>*2</sup>	△	△

Note:

○ : With such specification, ⊙ : Varies upon model, △ : With such specification when connected to extension module/function card



\*1 : Series that support left-side modules supports master and slave, other series support only slave

\*2 : EX/SX2 series have 4 channels of analog input and 2 channels of analog output



\*3 : Besides the built-in 4 channels of high-speed counters, EH3 series can be connected to high-speed counter modules

# Ordering Information



## ES/EX Series PLC

Product name	Power supply	Output method	Inputs	Outputs	Model name	Certificates
ES series standard PLC	100~240VAC	Relay	8	6	DVP14ES00R2	 
	100~240VAC	Transistor	8	6	DVP14ES00T2	
	100~240VAC	Relay	16	8	DVP24ES00R2	
	100~240VAC	Transistor	16	8	DVP24ES00T2	
	100~240VAC	Relay	18	12	DVP30ES00R2	
	100~240VAC	Relay	16	16	DVP32ES00R2	
	100~240VAC	Transistor	16	16	DVP32ES00T2	
	100~240VAC	Relay	24	16	DVP40ES00R2	
	100~240VAC	Transistor	24	16	DVP40ES00T2	
	100~240VAC	Relay	36	24	DVP60ES00R2	
100~240VAC	Transistor	36	24	DVP60ES00T2		
EX series analog PLC	100~240VAC	Relay	8	6	DVP20EX00R2	
		Analog	4	2		
	100~240VAC	Transistor	8	6	DVP20EX00T2	
		Analog	4	2		

## ES/EX Series Digital Module



Product name	Output method	Inputs	Outputs	Model name	Certificates
Digital module	-	8	-	DVP08XM11N	 
	Relay	-	8	DVP08XN11R	
	Transistor	-	8	DVP08XN11T	
	-	16	-	DVP16XM11N	
	Relay	-	16	DVP16XN11R	
	Transistor	-	16	DVP16XN11T	
	Relay	-	24	DVP24XN11R	
	Transistor	-	24	DVP24XN11T	
	Relay	4	4	DVP08XP11R	
	Transistor	4	4	DVP08XP11T	
	Relay	16	8	DVP24XP11R	
	Transistor	16	8	DVP24XP11T	
	Relay	16	16	DVP32XP11R	
	Transistor	16	16	DVP32XP11T	

## EC3 Series PLC







Product name	Power supply	Output method	Inputs	Outputs	Model name	Certificates
EC3 series standard PLC	100~240VAC	Relay	6	4	DVP10EC00R3	 
	100~240VAC	Transistor	6	4	DVP10EC00T3	
	100~240VAC	Relay	8	6	DVP14EC00R3	
	100~240VAC	Transistor	8	6	DVP14EC00T3	
	100~240VAC	Relay	8	8	DVP16EC00R3	
	100~240VAC	Transistor	8	8	DVP16EC00T3	
	100~240VAC	Relay	12	8	DVP20EC00R3	





## EC3 Series PLC

Product name	Power supply	Output method	Inputs	Outputs	Model name	Certificates
EC3 series standard PLC	100~240VAC	Transistor	12	8	DVP20EC00T3	 
	100~240VAC	Relay	12	12	DVP24EC00R3	
	100~240VAC	Transistor	12	12	DVP24EC00T3	
	100~240VAC	Relay	18	12	DVP30EC00R3	
	100~240VAC	Transistor	18	12	DVP30EC00T3	
	100~240VAC	Relay	16	16	DVP32EC00R3	
	100~240VAC	Transistor	16	16	DVP32EC00T3	
	100~240VAC	Relay	24	16	DVP40EC00R3	
	100~240VAC	Transistor	24	16	DVP40EC00T3	
	100~240VAC	Relay	28	20	DVP48EC00R3	
	100~240VAC	Transistor	28	20	DVP48EC00T3	
	100~240VAC	Relay	36	24	DVP60EC00R3	
100~240VAC	Transistor	36	24	DVP60EC00T3		
Fastest execution time of basic instructions		3.8μs	Execution time of MOV instruction		5.04μs	

## ES2/EX2 Series PLC



Product name	Power supply	Output method	Inputs	Outputs	Model name	Certificates
ES2 series standard PLC	100~240VAC	Relay	8	8	DVP16ES200R	 
	100~240VAC	Transistor	8	8	DVP16ES200T	
	100~240VAC	Relay	16	8	DVP24ES200R	
	100~240VAC	Transistor	16	8	DVP24ES200T	
	100~240VAC	Relay	16	16	DVP32ES200R	
	100~240VAC	Transistor	16	16	DVP32ES200T	
	240VAC	Relay	16	16	DVP32ES211T	
	100~240VAC	Transistor	24	16	DVP40ES200R	
	100~240VAC	Relay	24	16	DVP40ES200T	
	100~240VAC	Transistor	36	24	DVP60ES200R	
ES2 series built-in CANopen PLC	100~240VAC	Transistor	36	24	DVP32ES200RC	 
	100~240VAC	Relay	36	24	DVP32ES200TC	
EX2 series analog PLC	100~240VAC	Relay	8	6	DVP20EX200R	 
		Analog	4	2		
	100~240VAC	Transistor	8	6	DVP20EX200T	
		Analog	4	2		
EX2 series temperature/analog PLC	100~240VAC	Relay	16	10	DVP30EX200R	
		Analog	3	1		
	100~240VAC	Transistor	16	10	DVP30EX200T	
		Analog	3	1		
Fastest execution time of basic instructions		0.35μs	Execution time of MOV instruction		3.4μs	

## ES2/EX2 Series Digital I/O Module (AC power supply)

Product name	Power supply	Output method	Inputs	Outputs	Model name	Certificates
ES2/EX2 digital module	100~240VAC	Relay	-	24	DVP24XN200R	 
	100~240VAC	Transistor	-	24	DVP24XN200T	
	100~240VAC	Relay	16	8	DVP24XP200R	
	100~240VAC	Transistor	16	8	DVP24XP200T	
	100~240VAC	Relay	16	16	DVP32XP200R	
	100~240VAC	Transistor	16	16	DVP32XP200T	

# Ordering Information



## ES2/EX2 Series Digital/Analog Module (DC24V)

Product name	Output method	Inputs	Outputs	Model name	Certificates
ES2/EX2 series digital module	-	8	-	DVP08XM211N	
	Relay	-	8	DVP08XN211R	
	Transistor	-	8	DVP08XN211T	
	Relay	4	4	DVP08XP211R	
	Transistor	4	4	DVP08XP211T	
	-	16	-	DVP16XM211N	
	Relay	-	16	DVP16XN211R	
	Transistor	-	16	DVP16XN211T	
	Relay	8	8	DVP16XP211R	
Transistor	8	8	DVP16XP211T		
ES2/EX2 series analog I/O module	<ul style="list-style-type: none"> <li>• 4 points of analog voltage (10V, 5V) / current (20mA, 0~20mA, 4~20mA) input <sup>*1</sup></li> <li>• Resolution:14-bit (-32,000~+32,000)</li> </ul>			DVP04AD-E2	 
	<ul style="list-style-type: none"> <li>• 4 points of analog voltage (-10V~+10V) / current (0~20mA, 4~20mA) output<sup>*1</sup></li> <li>• Resolution:14-bit (-32,000~+32,000) / (0~+32,000)</li> </ul>			DVP04DA-E2	
	<ul style="list-style-type: none"> <li>• 2 points of analog voltage (-10V~+10V) / current (0~20mA, 4~20mA) output <sup>*1</sup></li> <li>• Resolution:14-bit (-32,000~+32,000) / (0~+32,000)</li> </ul>			DVP02DA-E2	
	<ul style="list-style-type: none"> <li>• 4 points of analog voltage (10V, 5V) / current (20mA, 0~20mA, 4~20mA) input <sup>*1</sup></li> <li>• Input resolution: 14-bit (-32,000~+32,000)</li> <li>• 2 points of analog voltage (-10V~+10V) / current (0~20mA, 4~20mA) output</li> <li>• Output resolution:14-bit (-32,000~+32,000) / (0~+32,000)</li> </ul>			DVP06XA-E2	
ES2/EX2 series temperature measurement module	<ul style="list-style-type: none"> <li>• 4 points of platinum RTD (Pt100, Pt1000, Ni100, Ni1000) sensor input/ 0~300Ω resistance input <sup>*1</sup></li> <li>• Resolution: 16-bit</li> <li>• With PID temperature control</li> </ul>			DVP04PT-E2	
	<ul style="list-style-type: none"> <li>• 4 points of thermocouple (J, K, R, S, T, E, N Type) sensor input/-80mV~+80mV voltage input <sup>*1</sup></li> <li>• Resolution: 20-bit</li> <li>• With PID temperature control</li> </ul>			DVP04TC-E2	
Absolute resolver module	<ul style="list-style-type: none"> <li>• Converts 1 set of resolver input signal (angle/speed) into digital signals</li> <li>• Resolution: 12-bit</li> <li>• Supports disconnection detection for distance up to 50m</li> </ul>			DVP10RC-E2 <sup>*2</sup>	



\*1. Digital/analog photocoupler isolation. No isolation among channels.

\*2. Contact Delta sales representative or distributors for the official launch date.

## EH2/EH3 Series PLC



Product name	Power supply	Output method	Inputs	Outputs	Model name	Certificates
EH2/EH3 series standard PLC	100~240VAC	Relay	8	8	DVP16EH00R3	 
	100~240VAC	Transistor	8	8	DVP16EH00T3	
	100~240VAC	Relay	12	8	DVP20EH00R3	
	100~240VAC	Transistor	12	8	DVP20EH00T3	
	100~240VAC	Transistor	16	16	DVP32EH00T3	
	100~240VAC	Relay	16	16	DVP32EH00R3	
	100~240VAC	Differential	16	16	DVP32EH00M3	
	100~240VAC	Relay	16	16	DVP32EH00R3-L	
	100~240VAC	Transistor	16	16	DVP32EH00T3-L	
	100~240VAC	Transistor	24	16	DVP40EH00T3	
	100~240VAC	Relay	24	16	DVP40EH00R3	
	100~240VAC	Relay	24	24	DVP48EH00R3	
	100~240VAC	Transistor	24	24	DVP48EH00T3	
	100~240VAC	Relay	32	32	DVP64EH00R3	
	100~240VAC	Transistor	32	32	DVP64EH00T3	
	100~240VAC	Relay	40	40	DVP80EH00R3	
100~240VAC	Transistor	40	40	DVP80EH00T3		
Execution time of basic instructions				0.24μs		

## EH2/EH3 Series Digital/Analog Module

Product name	Output method	Inputs	Outputs	Model name	Certificates
Digital module	Relay	4	4	DVP08HP11R	 
	Transistor	4	4	DVP08HP11T	
	Relay	-	8	DVP08HN11R	
	Transistor	-	8	DVP08HN11T	
	-	8	-	DVP08HM11N	
	Relay	8	8	DVP16HP11R	
	Transistor	8	8	DVP16HP11T	
	-	16	-	DVP16HM11N	
	-	32	-	DVP32HM11N	
	Relay	-	32	DVP32HN00R	
	Transistor	-	32	DVP32HN00T	
	Relay	16	16	DVP32HP11R	
	Transistor	16	16	DVP32HP11T	
	Relay	24	24	DVP48HP00R	
Transistor	24	24	DVP48HP00T		
Analog module	<ul style="list-style-type: none"> <li>4 points of analog voltage (-10V~+10V)/current (-20mA~+20mA) <sup>*1</sup></li> <li>Input resolution: 14-bit</li> <li>Built-in RS-485 interface</li> </ul>			DVP04AD-H2	
	<ul style="list-style-type: none"> <li>4 points of analog voltage (0V~+10V)/current (0mA~+20mA) output <sup>*1</sup></li> <li>Resolution: 12-bit</li> <li>Built-in RS-485 interface</li> </ul>			DVP04DA-H2	
	<ul style="list-style-type: none"> <li>4 points of analog voltage (-10V~+10V)/current (-20mA~+20mA) input</li> <li>2 points of analog voltage (0V~+10V)/current (0mA~+20mA) output</li> <li>Resolution: 12-bit</li> <li>Built-in RS-485 interface</li> </ul>			DVP06XA-H2	
	<ul style="list-style-type: none"> <li>4 points of platinum RTD (PT100) sensor input <sup>*1</sup></li> <li>Resolution: 0.1°C</li> <li>Built-in RS-485 interface</li> </ul>			DVP04PT-H2	
	<ul style="list-style-type: none"> <li>4 points of thermocouple (J, K, R, S, T type) sensor input <sup>*1</sup></li> <li>Resolution: 0.1°C</li> <li>Built-in RS-485 interface</li> </ul>			DVP04TC-H2	
	<ul style="list-style-type: none"> <li>8 points of thermocouple (J, K, R, S, T type) sensor input <sup>*1</sup></li> <li>Resolution: 0.1°C</li> <li>Built-in RS-485 interface</li> </ul>			DVP08TC-H2	
	<ul style="list-style-type: none"> <li>4 channels of differential voltage (-10V~+10V) / current (-20mA~+20mA) input</li> <li>Resolution: 16-bit</li> <li>Built-in RS-485 interface</li> </ul>			DVP04AD-H3	
	<ul style="list-style-type: none"> <li>4 channels of voltage (-10V~+10V) / current (0~+20mA) output</li> <li>Resolution: 16-bit</li> <li>Built-in RS-485 interface</li> </ul>			DVP04DA-H3	
<ul style="list-style-type: none"> <li>4 channels of differential voltage (-10V~+10V)/ current (-20mA~+20mA) input</li> <li>2 channels of voltage (-10V~+10V) / current (0~+20mA) output</li> <li>Resolution: 16-bit</li> <li>Built-in RS-485 interface</li> </ul>			DVP06XA-H3		

\*1. Digital/analog photocoupler isolation. No isolation among channels.

## EH2/EH3 Series Extension Module/Function Card

Product name	Description	Model name	Certificates
Positioning module	Servo position control module (single axis, 200kHz)	DVP01PU-H2	 
High-speed counter	High-speed counter module (1CH)	DVP01HC-H2	
Communication module	PROFIBUS DP slave communication module	DVPPF02-H2	
	CANopen slave communication module	DVPCP02-H2	
	DeviceNet slave communication module	DVPDT02-H2	
Function card	RS-232 port conversion (EH2: COM2; EH3: COM3)	DVP-F232	
	RS-422 port conversion (EH2: COM2; EH3: COM3)	DVP-F422	
	RS-485 port extension (COM3), (DVP-EH3 only)	DVP-F485	
	<ul style="list-style-type: none"> <li>2 points of analog voltage (0~10V)/current (0~20mA) input</li> <li>Resolution: 12-bit</li> </ul>	DVP-F2AD	
	<ul style="list-style-type: none"> <li>2 points of analog voltage (0~10V)/current (0~20mA) output</li> <li>Resolution: 12-bit</li> </ul>	DVP-F2DA	
	Ethernet communication card	DVP-FEN01	
Digital display panel	Displays data in register and real-time clock	DVPDU01	

# Ordering Information



## S Series PLC

Product name	Power supply	Output method	Inputs	Outputs	Model name	Certificates
SV2 series functional PLC	24VDC	Relay	16	12	DVP28SV11R2	
	24VDC	Transistor (NPN)	16	12	DVP28SV11T2	
	24VDC	Transistor (PNP)	16	12	DVP28SV11S2	
	24VDC	Transistor (NPN)	10 (2AI)	12	DVP24SV11T2	
Execution time of basic instructions			0.24μs			
SS2 series standard PLC	24VDC	Relay	8	6	DVP14SS211R	
	24VDC	Transistor (NPN)	8	6	DVP14SS211T	
	24VDC	Transistor(PNP)	8	4	DVP12SS211S	
SA2 series advanced PLC	24VDC	Relay	8	4	DVP12SA211R	
	24VDC	Transistor	8	4	DVP12SA211T	
SX2 series analog PLC	24VDC	Relay	8 (4AI)	6(2AO)	DVP20SX211R	
	24VDC	Transistor (NPN)	8 (4AI)	6(2AO)	DVP20SX211T	
	24VDC	Transistor (PNP)	8 (4AI)	6(2AO)	DVP20SX211S	
Fastest execution time of basic instructions		0.35μs	Execution time of MOV instruction		3.4μs	
SE network PLC	24VDC	Relay	8	4	DVP12SE11R	
	24VDC	Transistor	8	4	DVP12SE11T	
Fastest execution time of basic instructions		0.64μs	Execution time of MOV instruction		2μs	
SX series analog PLC	24VDC	Relay	4 (2AI)	2 (2AO)	DVP10SX11R	
	24VDC	Transistor	4 (2AI)	2 (2AO)	DVP10SX11T	
Fastest execution time of basic instructions		3.8μs	Execution time of MOV instruction		5.04μs	



## S Series Digital/Analog Module

Product name	Output method	Inputs	Outputs	Model name	Certificates
Digital module	Relay	-	6	DVP06SN11R	
	Relay	-	8	DVP08SN11R	
	Transistor	-	8	DVP08SN11T	
	Transistor	-	16	DVP16SN11T	
	Relay	4	4	DVP08SP11R	
	Transistor	4	4	DVP08SP11T	
	-	8	-	DVP08SM11N	
	-	8	-	DVP08SM10N	
	Transistor (PNP)	-	8	DVP08SN11TS	
	Digital switch	8	-	DVP08ST11N	
	Relay	8	8	DVP16SP11R	
	Transistor (PNP)	4	4	DVP08SP11TS	
	Transistor (NPN)	8	8	DVP16SP11T	
	Transistor (PNP)	8	8	DVP16SP11TS	
	Transistor (PNP)	-	16	DVP16SN11TS	
	-	16	-	DVP16SM11N	
Transistor, Latched connector	-	32	DVP32SN11TN		
Latched connector	-	32	DVP32SM11N		
Product name	Description			Model name	Certificates
Analog I/O module	• 4 points of analog input voltage (-10V~+10V)/current (-20mA~+20mA) <sup>1)</sup>		• Input resolution: 14-bit (can switch to 16-bit)	DVP04AD-S2	
	• 4 points of analog input voltage (0V~+10V)/current (0mA~+20mA) <sup>1)</sup>		• Built-in RS-485 interface	DVP04DA-S2	
	• Analog input+output module (6 points)		• Resolution: 14-bit (can switch to 16-bit)	DVP06XA-S2	
	• 4 points of analog input voltage (-10V~+10V)/current (-20mA~+20mA)		• Built-in RS-485 interface		
• 4 points of analog input voltage (-10V~+10V)/ current (-20mA~+20mA) <sup>1)</sup>		• 2 points of analog output voltage (0V~+10V)/current (0mA~+20mA)	• Input/output resolution: 12-bit (can switch to 16-bit)	DVP04AD-S	
• Input resolution: 14-bit		• Built-in RS-485 interface			

## S Series Analog Module

Product name	Description	Model name	Certificates
Analog I/O module	<ul style="list-style-type: none"> <li>4 points of analog output voltage (0V~+10V)/ current (0mA~+20mA)<sup>*1</sup></li> <li>Output resolution: 14-bit</li> </ul>	DVP04DA-S	 
	<ul style="list-style-type: none"> <li>2 points of analog output voltage (0V~+10V)/ current (0mA~+20mA)<sup>*1</sup></li> <li>Output resolution: 12-bit</li> </ul>	DVP02DA-S	
	<ul style="list-style-type: none"> <li>6 points of analog input voltage (-10V~+10V)/ current (-20mA~+20mA)<sup>*1</sup></li> <li>Input resolution: 14-bit</li> </ul>	DVP06AD-S	
	<ul style="list-style-type: none"> <li>Analog input+output modules (6 points)</li> <li>4 points of analog input voltage (-10V~+10V)/current (-20mA~+20mA)</li> <li>2 points of analog output voltage (0V~+10V)/current (0mA~+20mA)</li> </ul>	DVP06XA-S	
	<ul style="list-style-type: none"> <li>Built-in RS-485 interface</li> <li>Input/output resolution: 12-bit</li> <li>Built-in RS-485 interface</li> </ul>		


## S Series Extension Module/Left-Side High-Speed Module

Product name	Description	Model name	Certificates
Left-side high-speed analog I/O module	<ul style="list-style-type: none"> <li>4 groups of analog input<sup>*1</sup></li> <li>Signal range: 1~5V, 0~5V, -5~5V, 0~10V, -10~10V, 4~20mA, 0~20mA, -20~20mA</li> <li>Resolution: 16-bit</li> <li>Single channel On/Off setup enhances entire conversion efficiency</li> <li>Conversion time: 250µs/point</li> <li>Off-line alarm (1~5 V, 4~20mA)</li> </ul>	DVP04AD-SL	 
	<ul style="list-style-type: none"> <li>4 groups of analog output<sup>*1</sup></li> <li>Signal range: 0~10V, -10~10V, 4~20mA, 0~20mA</li> <li>Resolution: 16-bit</li> <li>Offers single channel On/Off setup</li> <li>Conversion time: 250µs/point</li> </ul>	DVP04DA-SL	
Left-side high-speed load cell module	<ul style="list-style-type: none"> <li>Supports 2 channels of load cell signal input<sup>*1</sup></li> <li>Resolution: 20-bit</li> <li>Connectable to 4-wire/6-wire load cell sensor</li> <li>Measurable range: 0~6mV/V</li> </ul>	DVP02LC-SL	
	<ul style="list-style-type: none"> <li>Supports 1 channel of load cell signal input<sup>*1</sup></li> <li>Resolution: 20-bit</li> <li>Connectable to 4-wire/6-wire load cell sensor</li> <li>Measurable range: 0~6mV/V</li> </ul>	DVP01LC-SL	
Temperature measurement module	<ul style="list-style-type: none"> <li>6 points of platinum RTD (PT100, PT1000, NI100, NI1000) sensor input</li> <li>Resolution: 0.1°C</li> </ul>	DVP06PT-S	
	<ul style="list-style-type: none"> <li>4 points of platinum RTD (PT100, PT1000, NI100, NI1000) sensor input<sup>*1</sup> (Version 4.06 and above supports PT1000, NI100, NI1000)</li> <li>Resolution: 0.1°C</li> <li>Built-in RS-485 interface</li> </ul>	DVP04PT-S	
	<ul style="list-style-type: none"> <li>4 points of thermocouple (J · K · R · S · T type) sensor input<sup>*1</sup></li> <li>Resolution: 0.1°C</li> <li>Built-in RS-485 interface</li> </ul>	DVP04TC-S	
Positioning module	Servo position control module (single axis, 200kHz)	DVP01PU-S	
Communication module	DeviceNet slave communication module	DVPDT01-S	
	PROFIBUS DP slave communication module	DVPPF01-S	
Left-side high-speed communication module	Ethernet communication module, 10/100Mbps	DVPEN01-SL	
	DeviceNet master communication module, 500kbps	DVPDNET-SL	
	CANopen master communication module, 1Mbps	DVPCOPM-SL	
	PROFIBUS DP slave communication module, 12Mbps	DVPPF02-SL	
	RS-485/RS-422, serial communication module, 460kbps	DVPSCM12-SL	
	BACnet MS/TP Slave communication module, 460kbps	DVPSCM52-SL	
Remote I/O module	RS-485 remote I/O module, connectable to S series I/O modules	RTU-485	
	Ethernet remote I/O module, connectable to S series I/O modules	RTU-EN01	
	DeviceNet remote I/O module, connectable to S series I/O modules	RTU-DNET	
	PROFIBUS remote I/O module, connectable to S series I/O modules	RTU-PD01	


\*1. Digital/analog photocoupler isolation. No isolation among channels.

# Ordering Information


## Communication Converter

Product name	Description	Model name	Certificates
Converter	USB to RS-485 converter	IFD6500	
	USB to CAN converter	IFD6503	
	USB to RS-485 converter	IFD6530	
	MODBUS TCP to RS-232/485 converter	IFD9506	
	EtherNet/IP to RS-232/485 converter	IFD9507	
	DeviceNet to RS-232/485 converter	IFD9502	
	CANopen to RS-232/485 converter	IFD9503	
	RS-232 to RS-422/485 isolated converter	IFD8500	
	RS-485 to RS-422 isolated repeater	IFD8510	
	RS-422/485 to RS-232 addressable isolated converter	IFD8520	




## PM Series

Product name	Power supply	Output method	Inputs	Outputs	Model name	Certificates	
General purpose motion controller	100~240VAC	Differential	16	16	DVP10PM00M		
		(Built-in 4-axis of independent 1MHz pulse output)					
Professional motion controller	100~240VAC	Differential	8	8	DVP20PM00DT		
		(Built-in 2-axis of independent 500kHz pulse output)			DVP20PM00D		
		(Built-in 3-axis of independent 500kHz pulse output)			DVP20PM00M		
PM series extension module		Description			Model name		
DVP-PM Communication card		Ethernet/CANopen communication card			DVP-FPMC		
DVP-PM Memory card		Data backup memory card (64k words)			PM-PCC01		
Execution time of basic instructions		0.13μs		Execution time of MOV instruction			3.74μs


## MC Series

Product name	Power supply	Output method	Inputs	Outputs	Model name	Certificates
Network type motion controller	24VDC	CANopen DS402	8	4	DVP10MC11T	

## TP Series

Product name	Description	Model name	Certificates	
TP02	Resolution: 160 x 32, Serial COM ports: RS-232 & RS-485	TP02G-AS1		
TP04	Resolution: 128 x 64, Serial COM ports: RS-232 & RS-422/RS-485	TP04G-AS2		
	Resolution: 192 x 64, Serial COM ports: RS-232 & RS-422/RS-485	TP04G-AL2		
	Resolution: 192 x 64, Serial COM ports: RS-232	TP04G-AL-C		
Resolution: 192 x 64, Serial COM ports: RS-232 & RS-422/RS-485, 0~9 numeric keys available	TP04G-BL-C			
TP04P	Resolution: 192 x 64, Serial COM ports: USB & RS-485	8DI 8DO - - Relay	TP04P-16TP1R	
		8DI 16DO - - Relay	TP04P-32TP1R	
		8DI 8DO 4AI 2AO Relay	TP04P-22XAIR	
		8DI 8DO 2AI 1AO Relay	TP04P-21EX1R	
TP08	Resolution: 240 x 128, Serial COM ports: RS-232 & RS-422/RS-485, 0~9 numeric keys available	TP08G-BT2		


## Peripheral Accessories

Product name	Description	Model name	Certificates
Accessory	Data backup memory card (DVP-EH3 only)	DVP-512FM	
	Data backup memory card (64k words)	DVP-PCC01	
	Communication cable for PC (9-pin & 25-pin D-Sub) and PLC, 3m	DVPACAB230	
	Communication cable for PC (9-pin D-Sub) and PLC, 3m	DVPACAB2A30	
	Communication cable for PC (9-pin D-Sub) and PLC (90° bend), 1m	DVPACAB2B10	
	I/O connection cable for DVP-32SM series	DVPACAB7A10	
	I/O connection cable for DVP-32SN series	DVPACAB7B10	
	External terminal module for DVP-32SM series (32 inputs)	DVPAETB-ID32A	
	External terminal module for DVP-32SN series (16 outputs)	DVPAETB-OR16A	
	Supports 4 types of RS-485 connectors	ADP485-01	
	Connection cable for ADP485-01 and ASDA-A series servo	ADPCAB03A	
	Connection cable for ADP485-01 and ASDA-B series servo	ADPCAB03B	
	I/O extension cable for ES/EX series, 0.3m	DVPACAB403	
	Extension cable for EH series PLC and extension module, 0.7m	DVPACAB4A07	
	DeviceNet/CANopen distribution box, 1 for 2	TAP-CN01	
	DeviceNet/CANopen distribution box, 1 for 4	TAP-CN02	
	DeviceNet/CANopen distribution box, 1 for 4 RJ45	TAP-CN03	
	CANopen sub-line, RJ45 connector, 0.3m	TAP-CB03	
	CANopen sub-line, RJ45 connector, 0.5m	TAP-CB05	
	CANopen sub-line, RJ45 connector, 1m	TAP-CB10	
	CANopen sub-line, RJ45 connector, 2m	TAP-CB20	
	CANopen sub-line, RJ45 connector, 3m	TAP-CB30	
	CANopen sub-line, RJ45 connector, 10m	TAP-CB100	
3.6V lithium battery (unchargeable) for EH/SX series PLC	DVPABT01		
Terminal resistance for CANopen communication	TAP-TR01		
TP Programmer Cable	DVPACAB530		

## Software

Product name	Description	OS (Windows based software)
<b>ISPSoft</b>	PLC editing software for AH500 and DVP series (supports 5 programming languages: LD, FBD, SFC, ST, IL)	Windows 2000, XP, Vista, Windows 7 (32-bit/64-bit)
<b>WPLSoft</b>	Programming software for DVP-PLC	Windows 98, Me, NT4.0, 2000, XP, Vista, Windows 7 (32-bit/64-bit)
<b>TPEditor</b>	Editing software for TP series text panel	Windows 98, Me, NT4.0, 2000, XP, Vista, Windows 7 (32-bit/64-bit)
<b>PMSOft</b>	Programming software for PM series	Windows 2000, XP, Vista, Windows 7 (32-bit/64-bit)
<b>DCISOft</b>	Delta communication integration software	Windows 2000, XP, Vista, Windows 7 (32-bit/64-bit)
<b>DeviceNet Builder</b>	DeviceNet configuration software	Windows 2000, XP, Vista, Windows 7 (32-bit/64-bit)
<b>CANopen Builder</b>	CANopen configuration software	Windows 2000, XP, Vista, Windows 7 (32-bit/64-bit)
<b>DMT</b>	VB, VC, DLL library for DVP-PLC	Windows 2000, XP, Vista, Windows 7 (32-bit/64-bit)

## Industrial Power Supply

Series	Power supply	Inputs	Outputs	Power	Output current	Model name	Certificates
DVP	1-phase	85~264VAC	DC24V	24W	1A	DVPPS01	
				48W	2A	DVPPS02	
				120W	5A	DVPPS05	

\* [ Note ] For more ordering information, please refer to the catalogue for Delta Industrial Power Supply.



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## **Industrial Automation Headquarters**

### **Delta Electronics, Inc.**

Taoyuan Technology Center  
No.18, Xinglong Rd., Taoyuan City,  
Taoyuan County 33068, Taiwan  
TEL: 886-3-362-6301 / FAX: 886-3-371-6301

## **Asia**

### **Delta Electronics (Jiangsu) Ltd.**

Wujiang Plant 3  
1688 Jiangxing East Road,  
Wujiang Economic Development Zone  
Wujiang City, Jiang Su Province, P.R.C. 215200  
TEL: 86-512-6340-3008 / FAX: 86-769-6340-7290

### **Delta Greentech (China) Co., Ltd.**

238 Min-Xia Road, Pudong District,  
ShangHai, P.R.C. 201209  
TEL: 86-21-58635678 / FAX: 86-21-58630003

### **Delta Electronics (Japan), Inc.**

Tokyo Office  
2-1-14 Minato-ku Shibadaimon,  
Tokyo 105-0012, Japan  
TEL: 81-3-5733-1111 / FAX: 81-3-5733-1211

### **Delta Electronics (Korea), Inc.**

1511, Byucksan Digital Valley 6-cha, Gasan-dong,  
Geumcheon-gu, Seoul, Korea, 153-704  
TEL: 82-2-515-5303 / FAX: 82-2-515-5302

### **Delta Electronics Int'l (S) Pte Ltd.**

4 Kaki Bukit Ave 1, #05-05, Singapore 417939  
TEL: 65-6747-5155 / FAX: 65-6744-9228

### **Delta Electronics (India) Pvt. Ltd.**

Plot No 43 Sector 35, HSIIDC  
Gurgaon, PIN 122001, Haryana, India  
TEL : 91-124-4874900 / FAX : 91-124-4874945

## **Americas**

### **Delta Products Corporation (USA)**

Raleigh Office  
P.O. Box 12173, 5101 Davis Drive,  
Research Triangle Park, NC 27709, U.S.A.  
TEL: 1-919-767-3800 / FAX: 1-919-767-8080

### **Delta Greentech (Brasil) S.A.**

Sao Paulo Office  
Rua Itapeva, 26 - 3º andar Edifício Itapeva One-Bela Vista  
01332-000-São Paulo-SP-Brazil  
TEL: 55 11 3568-3855 / FAX: 55 11 3568-3865

## **Europe**

### **Deltronics (The Netherlands) B.V.**

Eindhoven Office  
De Witbogt 15, 5652 AG Eindhoven, The Netherlands  
TEL: 31-40-2592850 / FAX: 31-40-2592851

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