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reddot design award
winner 2010

2nd 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
- ▶ Execution speed: 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

New Member of DVP-ES2 Series

2nd 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

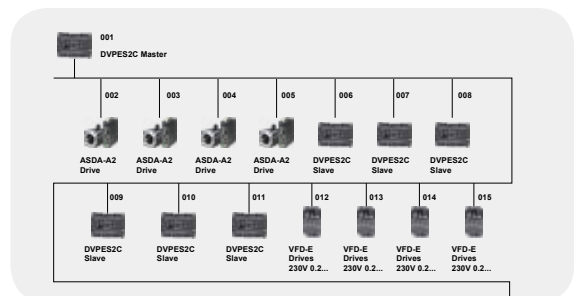
Fast processing speed

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

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-EX2 Series

2nd 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: 4 k 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

Note: Versions over V8.00 support this function

Built-in Analog I/O in EX2 Model			
Analog Input		Analog Output	
Channels	3	Channels	1
Resolution	16-bit	Resolution	12-bit
Spec.	-20~20 mA or -10~10 V	Spec.	0~20 mA or -10~10 V

Built-in Temperature Control Function		
Sensor	Pt100/Pt1000	Ni100/Ni1000
Temperature Range	-200°C~800°C	-100°C~180°C
Value Range	-2000~8000	-1000~1800

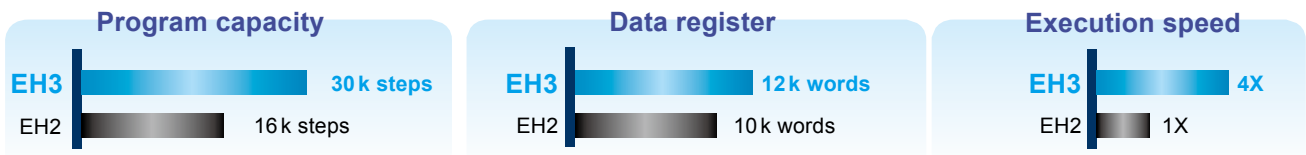
Built-in High-Speed Counters					
1-phase 1 input		1-phase 2 inputs		2-phase 2 inputs	
Counters	Bandwidth	Counters	Bandwidth	Counters	Bandwidth
2/2	20 kHz/10 kHz	1	20 kHz	1	4 kHz



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 200 kHz pulse output (DVP40/48/64/80EH00T3)
- ▶ Supports max. 4 hardware 200 kHz 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 when one set of programs and data are damaged
- ▶ Up to 4-level password protection for 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	200 kHz/20kHz	2/2	200kHz/20kHz

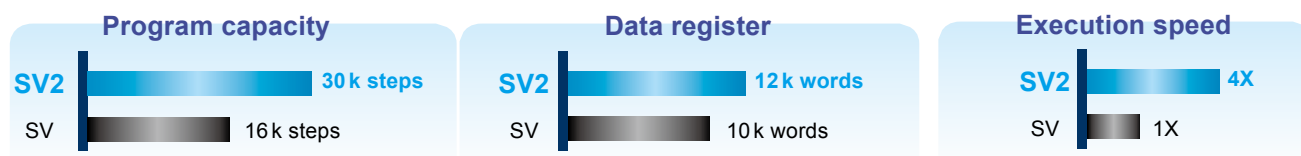
*The specifications in this table are applicable only for DVP40EH00R3/DVP40EH00T3. For input/output specifications of other models, refer to the I/O specifications table in page 20.



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 200 kHz pulse output
- ▶ Supports 2 hardware 200 kHz and 2 hardware 20 kHz 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. Added 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.

24SV2 PLC has a built-in 2AI (12-bit) with Y10/Y12 of 10kHz output.

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	10 kHz	2/2	200 kHz/20 kHz	2/2	200 kHz/20 kHz	2/2	200 kHz/20 kHz



2nd 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
- ▶ Execution speed: 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 10 kHz pulse output
- ▶ 8 points of high-speed counters: 20 kHz/4 points, 10 kHz/4 points

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	20 kHz/10 kHz	2	20 kHz	2/2	10 kHz/5 kHz

2nd 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
- ▶ Execution speed: 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: 100 kHz/2 points, 10 kHz/2 points
- ▶ 8 points of high-speed pulse input: 100 kHz/2 points, 10 kHz/6 points, 1 set of A/B phase 50 kHz
- ▶ 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	100 kHz/10 kHz	2	100 kHz	1/3	50 kHz/5 kHz



2nd 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
- ▶ Execution speed: LD: 0.35 μ s, MOV: 3.4 μ s
- ▶ 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) 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: 100 kHz/2 points, 10 kHz/2 points
- ▶ 8 points of high-speed pulse input: 100 kHz/2 points, 10 kHz/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 ~ 20 mA or -10 ~ 10 V or 4 ~ 20 mA	Spec.	0 ~ 20 mA or -10 V ~ 10 V or 4 ~ 20 mA

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
- ▶ Execution speed: LD: 0.64 μ s, MOV: 2 μ s
- ▶ Built-in Ethernet and supports MODBUS TCP and Ethernet/IP Slave (Adapter)
- ▶ 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: 100 kHz/2 points, 10 kHz/2 points
- ▶ 8 points of high-speed pulse input: 100 kHz/2 points, 10 kHz/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	100 kHz/ 10 kHz	2	100 kHz	1/3	50 kHz/ 5 kHz

Pulse-train Motion Controller

DVP-PM



General Purpose Motion Controller

DVP10PM00M

2/3/4/5/6-axis linear interpolation motion control. Highly accurate PWM 200 kHz 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: 64 k steps/Data register: 10 k words
- ▶ Execution speed: 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 200kHz 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 MPG, single-speed and two-speed positioning)
- ▶ 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

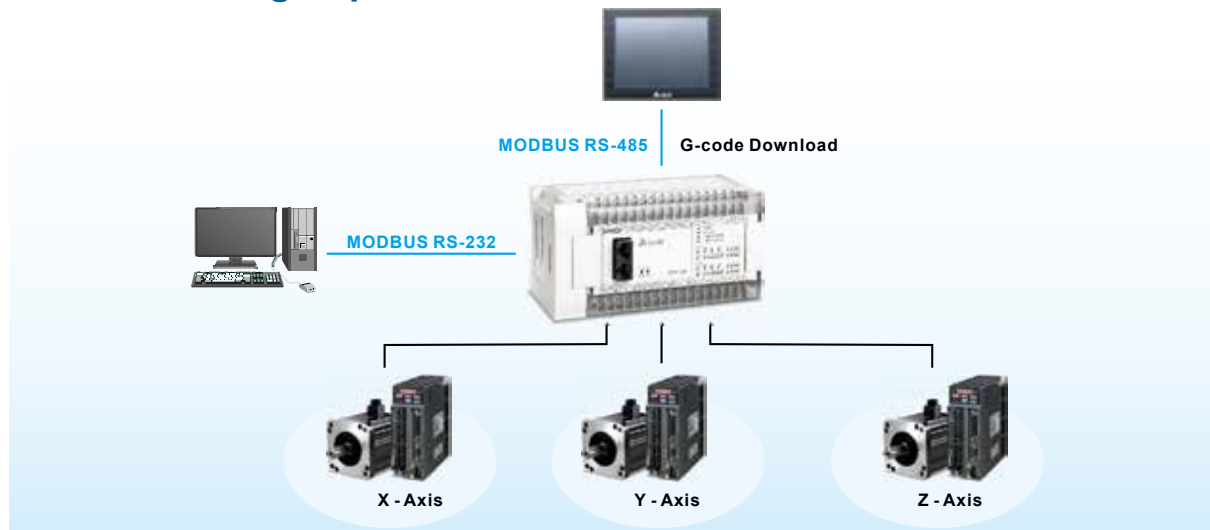
Supports electronic cam (2048 points) function for flying shear and rotary cut applications

- ▶ Built-in 16 I/O points. Max. 512 I/O points
- ▶ Program capacity: 64 k steps/Data register: 10 k 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 500 kHz
- ▶ Supports MPG inputs
- ▶ Single-axis motion control function (supports MPG, single-speed and two-speed positioning)
- ▶ Electronic gear function

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



Function Cards for DVP-PM

Model Name	Specifications	Features
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"> 1. Complies with CANopen CiA301 V4.0.2 protocol. 2. Supports CANopen CiA402 V2.0 synchronous axes, 126 asynchronous axes. 3. Provides high-speed program upload/download via Ethernet.

PMSoft

The programming software for G-Code editing, motion path simulation, positioning route planning and electronic cam setup

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

PLCopen Function Block function

Electronic Cam

Electronic cam editing

Network Type Motion Controller

DVP-MC

CANopen Motion Controller

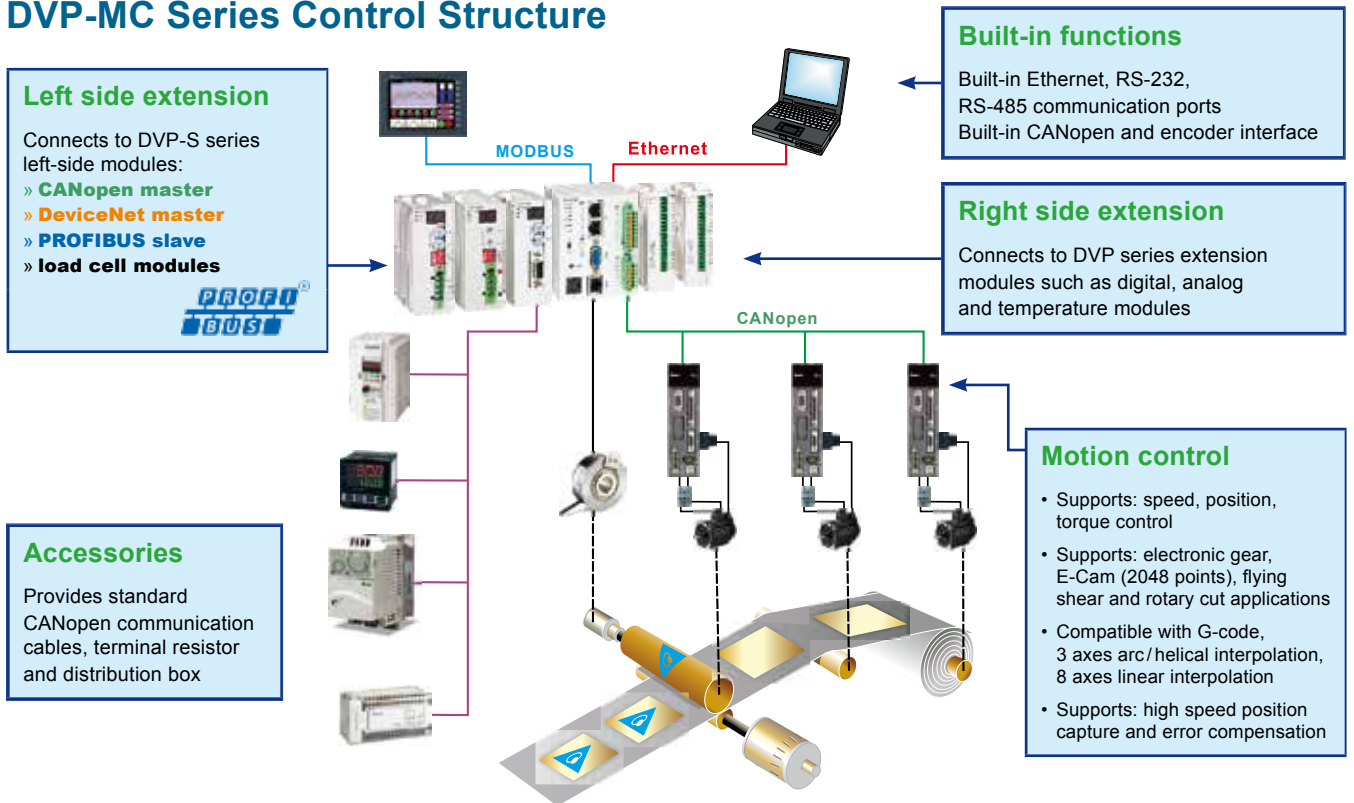
DVP10MC11T

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 instructions

- ▶ 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 instructions 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



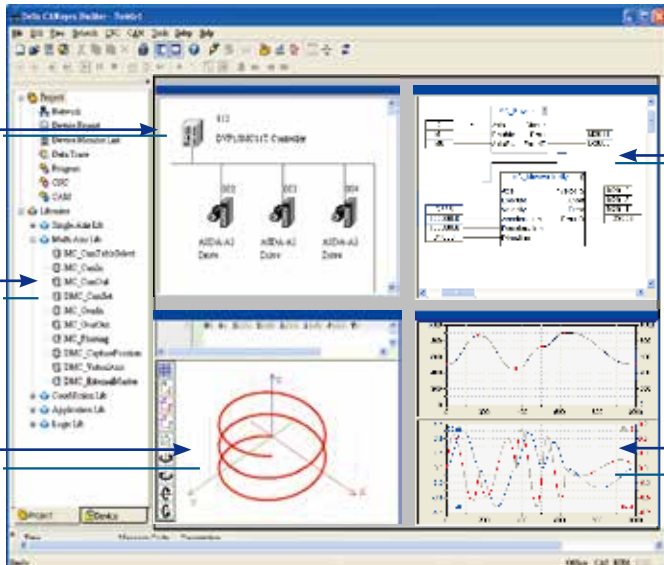
CANopen Accessories

Model Name	Specifications	Features
TAP-CB03/CB05/CB10/B20/CB30/CB100	0.3 m/0.5 m/1 m/2 m/3 m/10 m CANopen sub-line	RJ45 connector for both ends
TAP-CB01/CB02	CANopen main-line/sub-line	Adopt AWG18/AWG24 CANopen cables for long distances
TAP-CN01/02/03	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

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

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

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

The flying shear function built-in to the DVP-PM is able to complete synchronous conveyance and cutting speed, and ensure precise cutting results on conveyor belts.



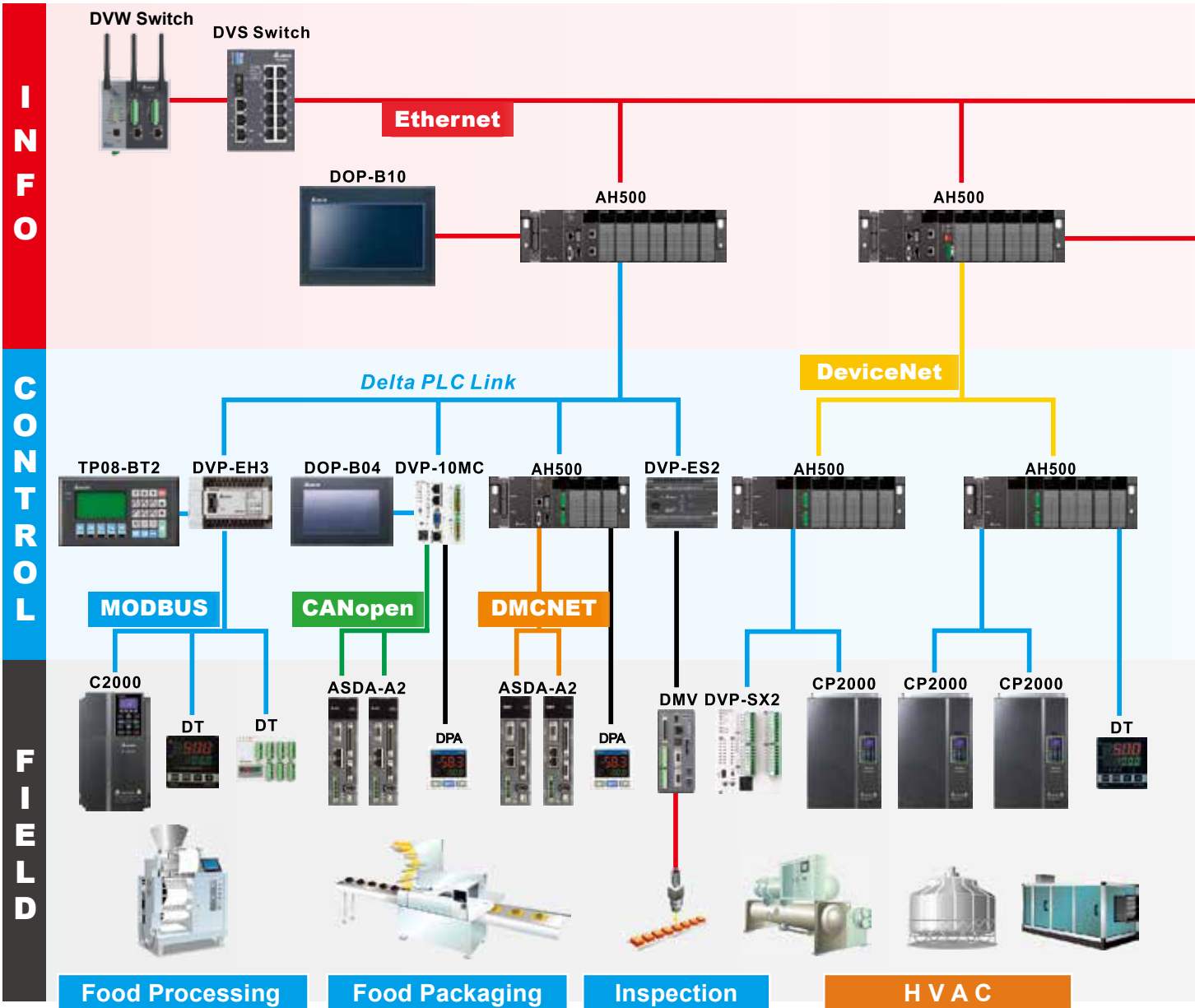
CNC Lathe

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

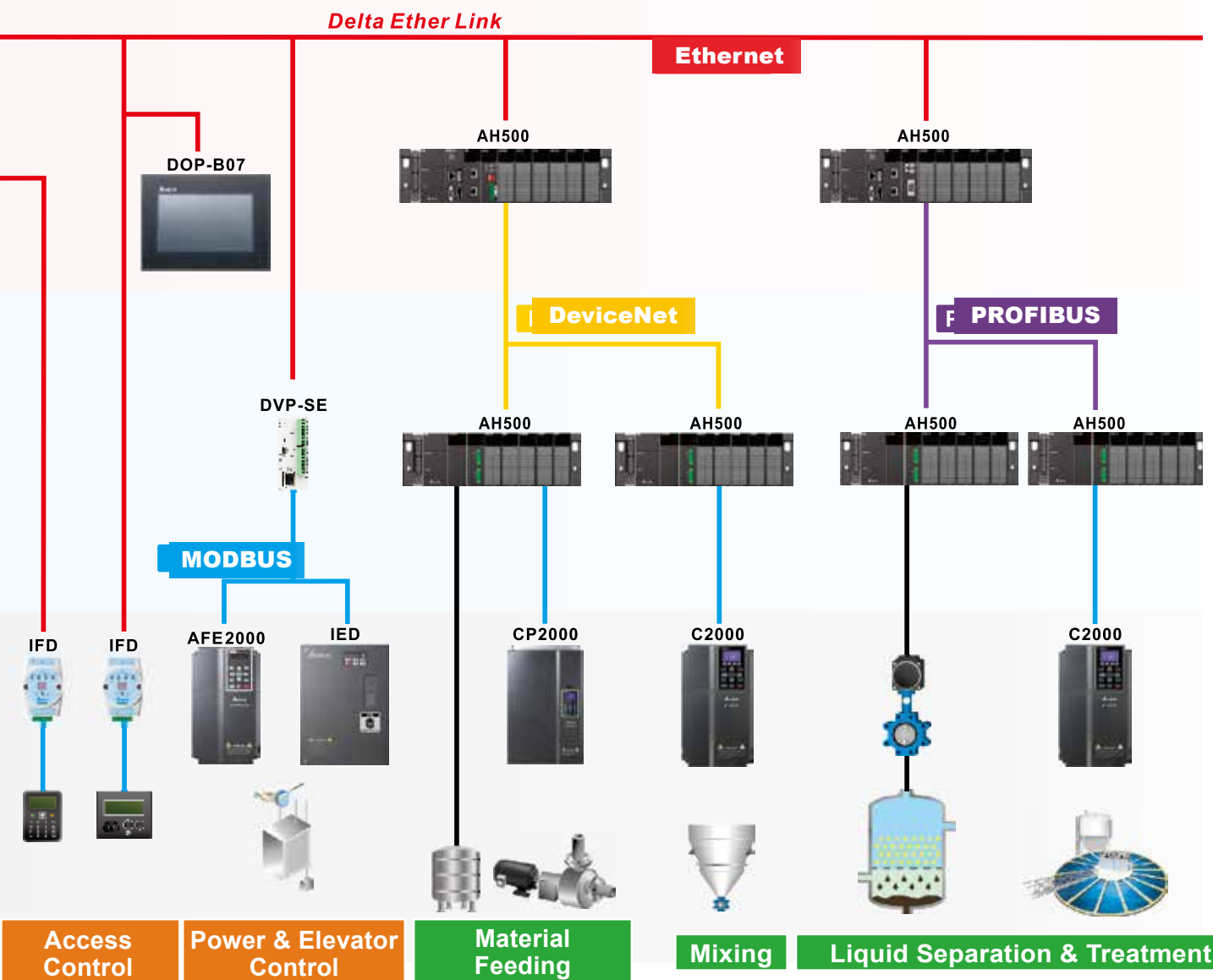
Delta CANopen products support CANopen DS301 and DSP402 protocols, and are able to achieve multi-axis, high-speed and complex motion control with max. speed of 1Mbps.

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.

EH Series PLC and Extension Modules

Small PLC with the Highest Operation Efficiency

DVP-EH3

- ▶ Max. 512 I/O points
- ▶ 200 kHz 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



Model Name	Specifications
DVP16EH00R3	Ⓐ 8 8 Ⓡ → 2 counters of 200 kHz input
DVP16EH00T3	Ⓐ 8 8 Ⓣ → 2 counters of 200 kHz input, 2 axes of 200 kHz output
DVP20EH00R3	Ⓐ 12 8 Ⓡ → 2 counters of 200 kHz input, 1 counter of 20 kHz input
DVP20EH00T3	Ⓐ 12 8 Ⓣ → 2 counters of 200 kHz input, 2 axes of 200 kHz output
DVP32EH00R3	Ⓐ 16 16 Ⓡ → 4 counters of 200 kHz input
DVP32EH00T3 ^{*2}	Ⓐ 16 16 Ⓣ → 4 counters of 200 kHz input, 4 axes of 200 kHz output
DVP32EH00M3 ^{*2}	Ⓐ 16 16 Ⓜ → 4 counters of 200 kHz input (Differential: 2 sets), 4 axes of 200 kHz output (Differential: 2 sets)
DVP32EH00R3-L ^{*1}	Ⓐ 16 16 Ⓡ → 4 counters of 200 kHz input
DVP32EH00T3-L ^{*1*2}	Ⓐ 16 16 Ⓣ → 4 counters of 200 kHz input, 4 axes of 200 kHz output
DVP40EH00R3	Ⓐ 24 16 Ⓡ → 4 counters of 200 kHz input
DVP40EH00T3	Ⓐ 24 16 Ⓣ → 4 counters of 200 kHz input, 4 axes of 200 kHz output
DVP48EH00R3	Ⓐ 24 24 Ⓡ → 4 counters of 200 kHz input
DVP48EH00T3	Ⓐ 24 24 Ⓣ → 4 counters of 200 kHz input, 4 axes of 200 kHz output
DVP64EH00R3	Ⓐ 32 32 Ⓡ → 4 counters of 200 kHz input
DVP64EH00T3	Ⓐ 32 32 Ⓣ → 4 counters of 200 kHz input, 4 axes of 200 kHz output
DVP80EH00R3	Ⓐ 40 40 Ⓡ → 4 counters of 200 kHz input
DVP80EH00T3	Ⓐ 40 40 Ⓣ → 4 counters of 200 kHz input, 4 axes of 200 kHz output

Ⓐ : AC power supply ↻ : Inputs ↗ : Outputs Ⓡ : Relay output Ⓣ : Transistor output Ⓜ : Differential output

*1 Supports left-side high-speed extension.

*2 DVP32EH Series PLCs produced after 2014 support 4 axes of 200 kHz output

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



Motion Control

Single-Axis Positioning

- DVP01PU-H2



DVP32EH00R3-L & DVP32EH00T3-L are also compatible with left-side high-speed extension modules for

- DVP-SV2 series.

High-Speed Counter

- DVP01HC-H2



ES2 Series PLC and Extension Modules

The Most Profitable Solution for Sequential Control

DVP-ES2/EX2

- ▶ 100 kHz 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 C → Inputs (T) → Transistor output

⊖ DC power supply ↑ Outputs (R) → Relay output

DVP-EX2

Model Name	Specifications
DVP20EX200R	⊖ 8 6 ↑ (R) → 4AI/2AO
DVP20EX200T	⊖ 8 6 ↑ (T) → 4AI/2AO
DVP30EX200R	⊖ 16 10 ↑ (R) → 3AI/1AO
DVP30EX200T	⊖ 16 10 ↑ (T) → 3AI/1AO

⊖ AC power supply C → Inputs (T) → Transistor output

⊖ 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^{*1}



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

2nd 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 I : Inputs O : Outputs
 (T) → : Transistor output (NPN) (R) → : Relay output
 (S) → : Transistor output (PNP)

DVP-SX2

2nd 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 I : Inputs O : Outputs
 (T) → : Transistor output (NPN) (R) → : Relay output
 (S) → : Transistor output (PNP)

DVP-SA2

2nd 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 I : Inputs O : 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 I : Inputs O : 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 I : Inputs O : Outputs
 (T) → : Transistor output (R) → : Relay output



Slim Series Extension Modules

Left-Side High-Speed Extension Modules^{*1}

Network Modules

- **DeviceNet Master**
DVPCNET-SL
- **CANopen Master**
DVPCOPM-SL



- **Ethernet**
DVPEN01-SL



- **PROFIBUS-DP Slave**
DVPPF02-SL

- **RS-422/RS-485 Serial Communication Module**
DVPSCM12-SL



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

Analog Function Extension

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



Load Cell/Tension

- **Load Cell Module**
DVP01LC-SL
DVP02LC-SL
DVP201LC-SL
DVP211LC-SL
DVP202LC-SL



General Extension Modules

I/O Point Extension

- **Input Point Extension**
DVP08SM11N
DVP16SM11N



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



- **Input/Output Point Extension**
DVP08SP11R/T
DVP08SP11TS
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



- **Temperature Control :**
DVP02TUN-S
DVP02TUR-S
DVP02TUL-S



Communication Modules

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



Power Supply Modules

- DVPPS01
DVPPS02
DVPPS05



Axis Control Module

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



*1. DVP32EH00R3-L & DVP32EH00T3-L are also compatible with the left-side high-speed extension modules.

Specifications

Electrical Specifications

	AC	DC
Power Supply Voltage	100~240 V _{AC} (-15%~10%), 50/60Hz ±5%	24 V _{DC} (-15%~20%)
Fuse Capacity	2A/250 V _{AC}	ES: 2A/250 V _{AC} ; SV: 2.5A/30 V _{DC}
Spike Voltage Durability	1500 V _{AC} (Primary-secondary); 1500 V _{AC} (Primary-PE); 500 V _{AC} (Secondary-PE)	
Insulation Impedance	>5MΩ (all I/O point-to-ground: 500 V _{DC})	
Noise Immunity	ESD: 8 kV Air Discharge EFT: Power Line, 2 kV Digital I/O: 1 kV Analog & Communication I/O: 1 kV RS: 26MHz~1 GHz, 10 V/m	
Earth	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.)	
Storage/Operation	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	10 kHz	20 kHz	100 kHz	200 kHz	
Input Signal Type	NPN (Sink)/PNP (Source)				
Input Signal Voltage	24 V _{DC} ±10% (5mA)				
Response time^{*2}	EH3/SV2/PM	OFF→ON: 20 μs ON→OFF: 50 μs	ES/EX/SX/SS2/SX2 OFF→ON: 3.5 μs ON→OFF: 20 μs	ES2/EX2/SA2/SX2 OFF ON: 2.5 μs ON→OFF: 5 μs	EH3/SV2/PM OFF→ON: 0.15 μs ON→OFF: 3 μs
	ES2/EX2				
	ES/EX				
	SX				
	SS2				
	SA2/SX2/SE				

*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	
Max. Exchange (working) Frequency	1Hz ^{*2}	10 kHz	100 kHz	200 kHz
Current spec.	EH3/SV2/PM	2A/1 Point 0.3A/point @40°C	SA2/SX2/ES2/EX2/SE Resistive: 0.5A/point (4A/COM) Conductive: 12W (24 V _{DC}) Light bulb: 2W (24 V _{DC})	EH3/SV2/PM Resistive: 0.5A/point (4A/COM) Conductive: 12W (24 V _{DC}) Light bulb: 2W (24 V _{DC})
	ES2/EX2			
	ES/EX			
	SX			
	1.5A/1 Point			
SS2/SA2/SX2/SE				
Voltage Spec.	250 V _{AC} /30 V _{DC}	30 V _{DC}		
Response Time	10ms	OFF→ON: 20 μs ON→OFF: 30 μs	OFF→ON: 2 μs ON→OFF: 3 μs	OFF→ON: 0.5 μs ON→OFF: 2.5 μs

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

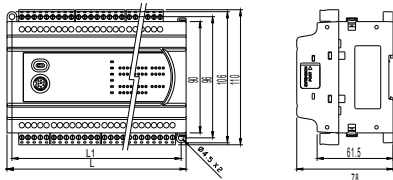
*2. Relay life: Resistive load more than 200,000 times; conductive load more than 80,000 times.

Dimensions

Dimensions are in mm

ES2/EX2 Series PLC

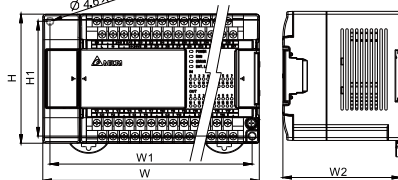
Model Name	L	L1
DVP16ES200R/T	105	97
DVP24ES200R/T	125	117
DVP32ES200R/T	145	137
DVP32ES200RC	145	137
DVP32ES200TC	145	137
DVP32ES211T	145	137
DVP40ES200R/T	165	157
DVP60ES200R/T	225	217
DVP20EX200R/T	145	137
DVP30EX200R/T	165	157



EH3 Series PLC

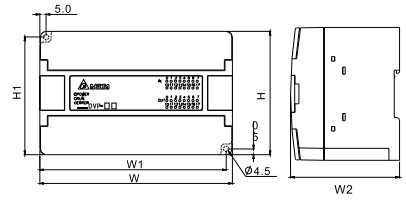
Model Name	H	H1	W	W1	W2
DVP16EH00R3/T3	90	80	113	103	82
DVP20EH00R3/T3	90	80	113	103	82
DVP32EH00M3	90	80	143.5	133.5	82
DVP32EH00R3/T3	90	80	143.5	133.5	82
DVP32EH00R3-L	90	80	143.5	133.5	82
DVP32EH00T3-L	90	80	143.5	133.5	82
DVP40EH00R3/T3	90	80	158.8	153.8	82
DVP48EH00R3/T3	90	80	174	164	82
DVP64EH00R3/T3	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



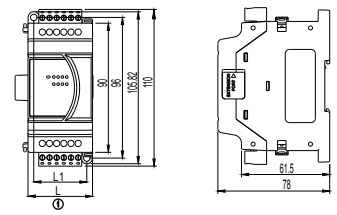
ES/EX Series PLC

Model Name	H	H1	W	W1	W2
DVP14ES00R2/T2	100	95	104	99	82
DVP24ES00R2/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	90	85.5	185	180.5	89.6
DVP20EX00R2/T2	100	95	155	150	82



ES2/EX2 Series Extension Modules

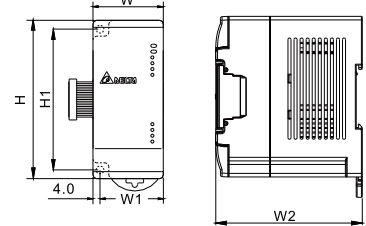
Model Name	L	L1	Type
DVP08XM211N	45	37	(1)
DVP08XP211R/T	45	37	(1)
DVP08XN211R/T	45	37	(1)
DVP16XM211N	70	62	(2)
DVP16XP211R/T	70	62	(2)
DVP16XN211R/T	70	62	(2)
DVP24XP200R/T	145	137	(2)
DVP24XN200R/T	145	137	(2)
DVP32XP200R/T	145	137	(2)
DVP04AD-E2	70	62	(2)
DVP02DA-E2	70	62	(2)
DVP04DA-E2	70	62	(2)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

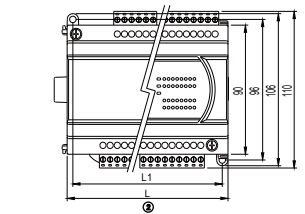
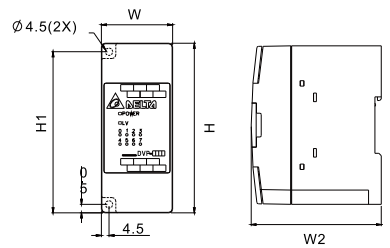
Model Name	H	H1	W	W1	W2
DVP08HM11N	90	80	40	36	82
DVP16HM11N	90	80	55	51	82
DVP32HM11N	90	80	143.5	133.5	82.2
DVP08HN11R/T	90	80	40	36	82
DVP32HN00R/T	90	80	143.5	133.5	82.2
DVP08HP11R/T	90	80	40	36	82
DVP16HP11R/T	90	80	55	51	82
DVP32HP00R/T	90	80	143.5	133.5	82.2
DVP48HP00R/T	90	80	174	164	82.2
Model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



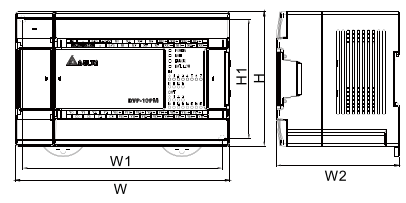
ES/EX Series I/O & Extension Modules

Model Name	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



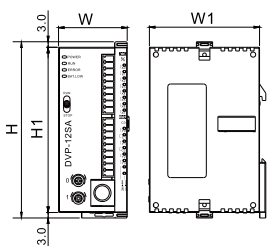
PM Series PLC

Model Name	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



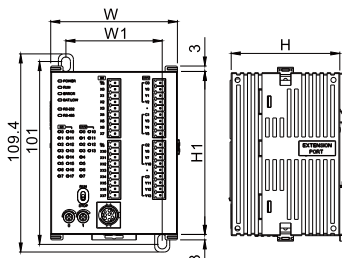
SE/SX/SS2/SA2 Series PLC

Model Name	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	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

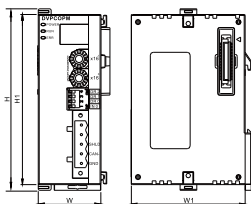


S Series I/O & Extension Modules

Model Name	H	H1	W	W1
DVP08SM11N	96	90	25.2	60
DVP06SN11R	96	90	25.2	60
DVP08SN11R/T/TS	96	90	25.2	60
DVP08SP11R/T/TS	96	90	25.2	60
DVP16SP11R/T/TS	96	90	25.2	60
DVP16SN11T	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

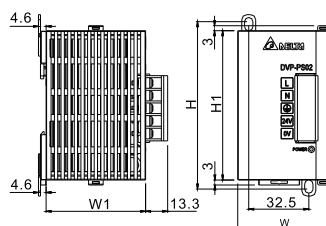
Left-Side High-Speed Extension Modules

Model Name	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
DVP201LC-SL	96	90	33.1	60
DVP202LC-SL	96	90	33.1	60
DVP211LC-SL	96	90	33.1	60



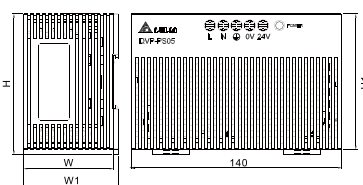
PS01/02 Power Supply Modules

Model Name	H	H1	W	W1
DVPPS01	100	90	36.5	60
DVPPS02	100	90	55	60



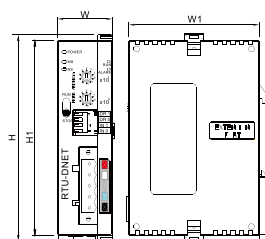
PS05 Power Supply Modules

Model Name	H	H1	W	W1
DVPPS05	93.3	90	60	63.4

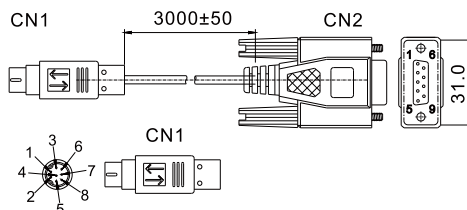


Remote I/O Modules

Model Name	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-PD01	96	90	25.2	60

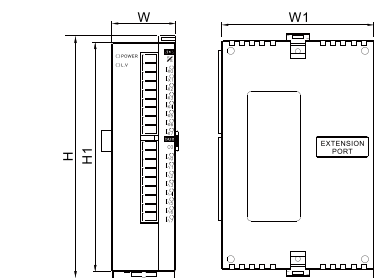


PIN Definition of DVPACAB2A30

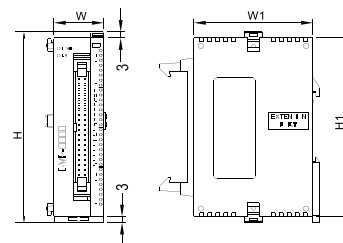


PC/HMI COM Port 9 PIN D-SUB female		PLC COM1 Port 8 PIN MINI DIN	
Tx	3	Rx	4
Rx	2	Tx	5
GND	5	GND	8
	7	5V	1,2
	8		

Unit: mm



Model Name	H	H1	W	W1
DVP32SN11TN	96	90	25.2	60
DVP32SM11N	96	90	25.2	60

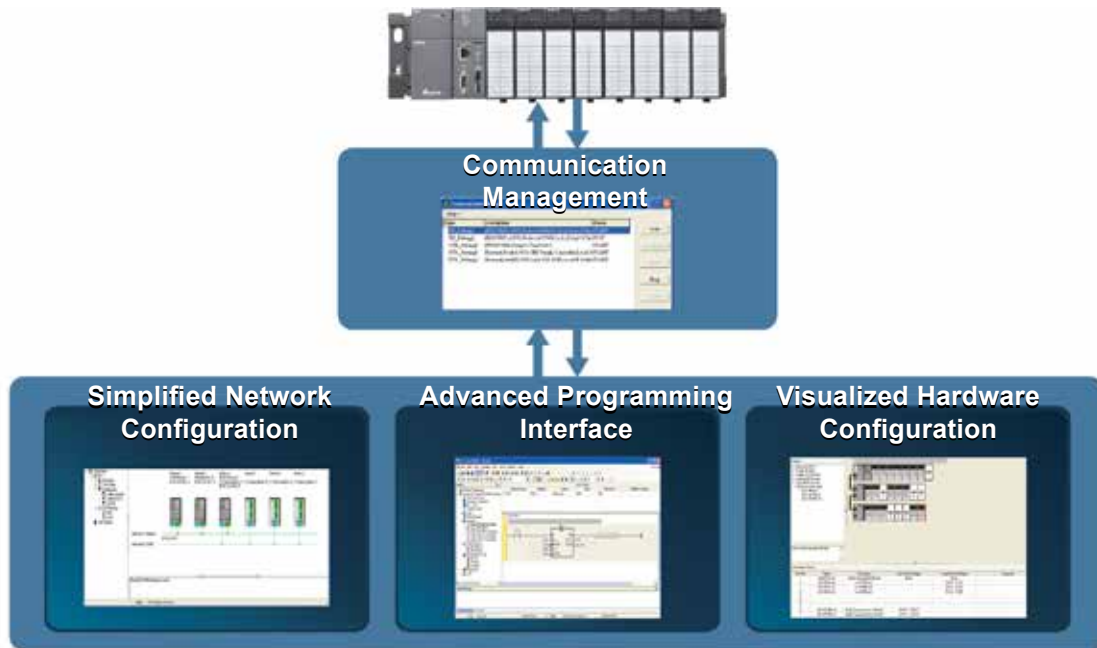


ISPSOft V2.0

Highly Accessible Programming Software

Fully Integrated Interface

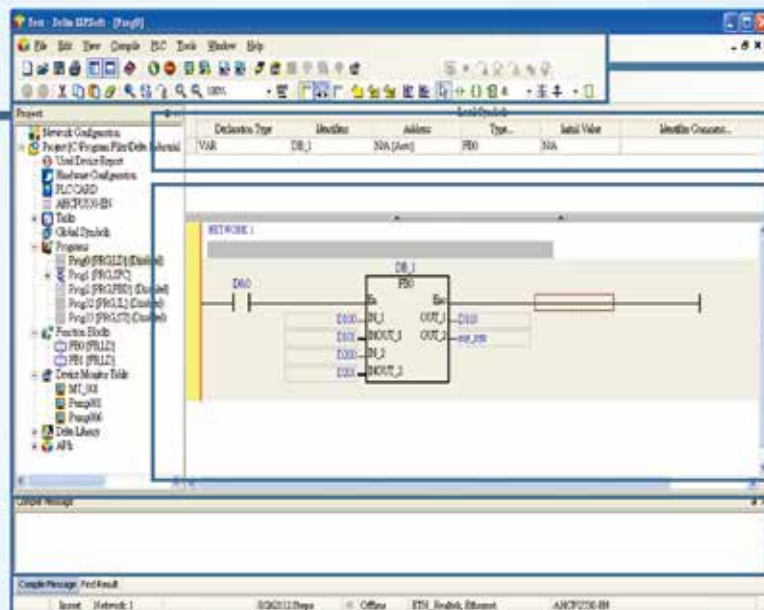
Advanced Programming Interface + Visualized Hardware Configuration + Simplified Network Configuration



Advanced Programming Interface

Project Management Window

- **New functions:** Network configuration, hardware configuration and PLC card
- Supports 5 programming languages (LD/FBD/SFC/IL/ST)
- **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
- **User Library:** Users can design frequently used instructions for specific applications in different industries
- **Task:** Supports cyclic, I/O interrupt, timer interrupt, external interrupt, etc. Software will provide the usable tasks for different CPU
- Built-in Delta Function Blocks provide convenient programming environment for operators.



- **Toolbar**
- **Symbol Table**
- **Program Editing Area**
- **Message Window**

Visualized Hardware Configuration

Module Selection

Module Description

Toolbar

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

Hardware Configuration Area

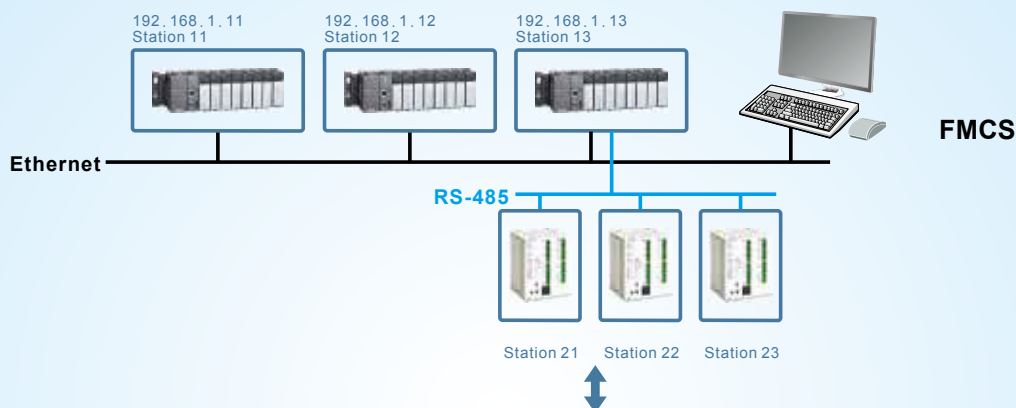
- Operations of Cut/Copy/Paste/Delete are available for modules and racks
- Parameters of each module can be directly configured

Rack Information

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

Station	Name	Description	Input Device Range	Output Device Range	Comments
0	ARMADA-SA	All Power Supply Module	None	None	
1	ARMADA-SA-01	All base CPU Module	None	None	
2	ARMADA-SA-02	32 x DI, 32 x DO	000 - 00 10		
3	ARMADA-SA-03	32 x DI, 32 x DO	000 - 00 10		
4	ARMADA-SA-04	32 x DI, 32 x DO, 16 x AI, 16 x AO	000 - 00 10	000 - 00 10	
5	ARMADA-SA-05	32 x DI, 32 x DO, 16 x AI, 16 x AO	000 - 00 10	000 - 00 10	
6	ARMADA-SA-06	32 x DI, 32 x DO, 16 x AI, 16 x AO	000 - 00 10	000 - 00 10	
7	ARMADA-SA-07	32 x DI, 32 x DO, 16 x AI, 16 x AO	000 - 00 10	000 - 00 10	
8	ARMADA-SA-08	32 x DI, 32 x DO, 16 x AI, 16 x AO	000 - 00 10	000 - 00 10	
9	ARMADA-SA-09	32 x DI, 32 x DO, 16 x AI, 16 x AO	000 - 00 10	000 - 00 10	
10	ARMADA-SA-10	32 x DI, 32 x DO, 16 x AI, 16 x AO	000 - 00 10	000 - 00 10	

Simplified Network Configuration



Network Device Selection

Toolbar

Network Configuration Area

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

Network Information

TP Series Human Machine Interface

7-Inch Touch Panel HMI with Built-in PLC

TP70P-RM0

- ▶ Adopts core of SS2 series PLC with program of 2k steps and D devices of 5k words
- ▶ 7" TFT-LCD
- ▶ Touch screen
- ▶ Built-in USB port for program upload/download
- ▶ Built-in 2 sets of communication port
- ▶ Supports MODBUS ASCII/RTU modes
- ▶ Built-in real-time clock (RTC)

Dimensions	7" (154 × 85 mm)
Resolution	800 × 480
Display Color	65535 colors
Flash Memory	64M bytes
SRAM	64K bytes
Function Keys	Not available
Password	Available
Recipe Function	Not available
Real-time Clock	Available
Serial COM Port	2 Sets of Communication Port
Editing Software	TPEditor

4-Line Text Panel HMI

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 × 35.24 mm)
Resolution	192 × 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

4-Line Text Panel HMI

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 × 35.24 mm)
Resolution	192 × 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

8-Line Text Panel HMI

TP08G-BT2

- ▶ 3.8" STN-LCD
- ▶ Resolution: 240 × 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" (83 × 41 mm)
Resolution	240 × 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

7-Inch Touch Panel HMI with Built-in PLC

TP70P

- ▶ Adopts core of SS2 series PLC with program of 4 k steps and D devices of 5 k words
- ▶ Provides 2 sets of 10 kHz high speed pulse input
- ▶ 7" TFT-LCD
- ▶ Touch screen
- ▶ Built-in USB port for program upload/download
- ▶ Built-in 2 sets of communication port
- ▶ Supports MODBUS ASCII/RTU modes
- ▶ Built-in real-time clock (RTC)
- ▶ Digital and Analog I/O terminals available

Dimensions	7" (154 × 85 mm)
Resolution	800 × 480
Display Color	65535 colors
Flash Memory	64M bytes
SRAM	64K bytes
Function Keys	Not available
Password	Available
Recipe Function	Not available
Real-time Clock	Available
Serial COM Port	2 sets for RS-485
Editing Software	TPEditor









4-Line Text Panel HMI with Built-in PLC

TP04P

- ▶ Adopts core of SS2 series PLC with program of 8 k steps and D devices of 5 k words
- ▶ Provides 2 sets of 10 kHz 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 and Analog I/O terminals available

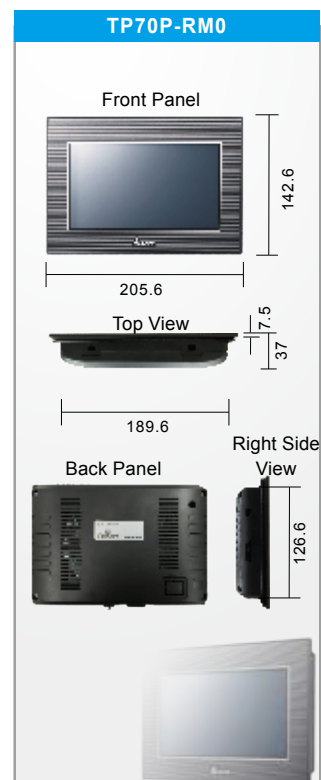
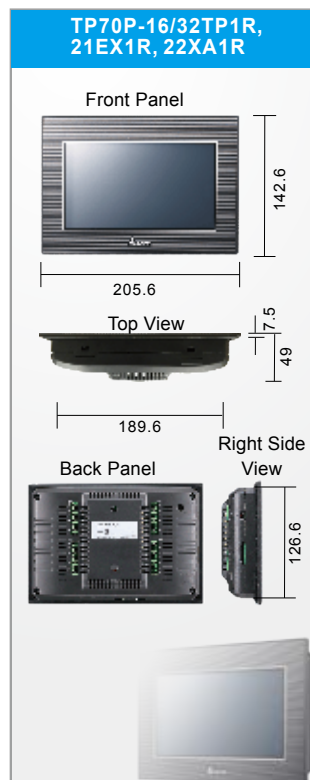
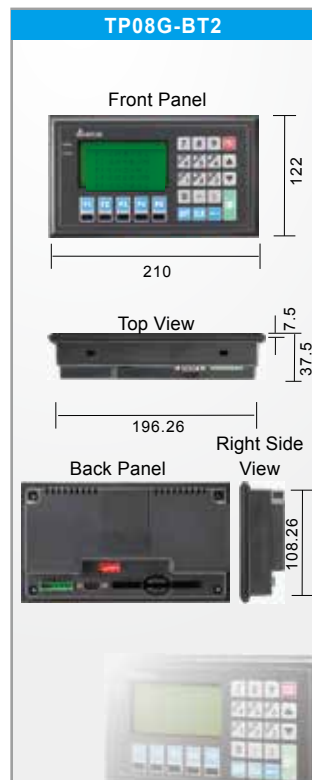
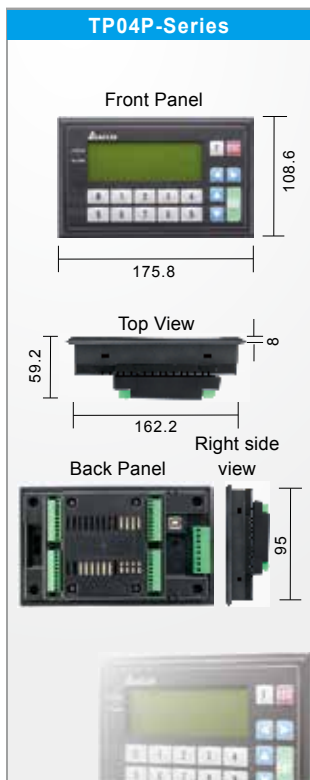
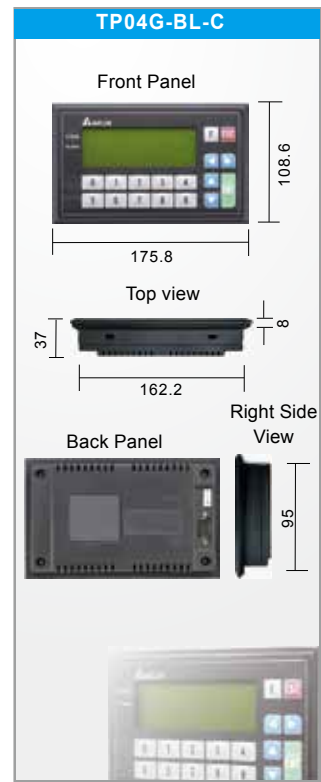
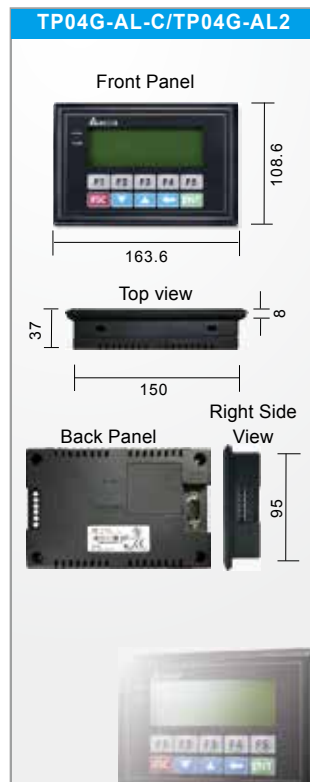
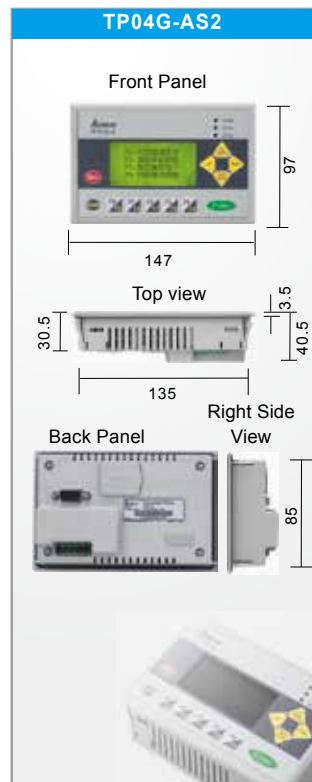
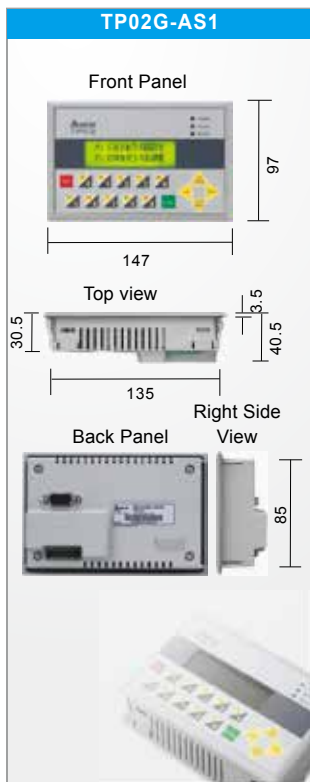
Dimensions	4.1" (101.8 × 35.24 mm)
Resolution	192 × 64
Display Color	Monochrome
Flash Memory	1M bytes
SRAM	64K bytes
Function Keys	17 function keys
Password	Available
Recipe Function	Not available
Real-time Clock	Available
Serial COM Port	2 sets for RS-485
Editing Software	TPEditor



		Text Panel HMI					Text Panel/Touch Panel HMI with Built-in PLC		
Model		TP02G-AS1	TP04G-AS2	TP08G-BT2	TP04G-AL-C	TP04G-AL2	TP04G-BL-C	TP04P-Series	TP70P-Series
									
Screen Type		STN-LCD							TFT-LCD
Display Color		Monochrome							65535
Display Specifications	Resolution	160 x 32	128 x 64	240 x 128	192 x 64			800 x 480	
	Backlight	Life span of backlight is about 50,000 hours at 25°C							20,000 hours
Display Range		72 x 22mm	3" (67 x 32mm)	3.8" (83 x 41mm)	4.1" (101.8 x 35.24mm)			7" (154 x 85mm)	
Flash Memory		256K bytes		1M bytes	256K bytes		1M bytes	64M bytes	
Program Download Port		COM1 (RS-232)					COM1(USB)	USB	
Serial COM Port	COM1	RS-232	RS-232/422		RS-232	RS-232/422	RS-232	-	-
	COM2	RS-485			-	RS-422/485	RS-422/485	RS-485	《TP70P with I/O》 RS-485 《TP70P-RM0》 RS-232
	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		+24V _{DC} (-10% ~ +20%)							-
Backup Battery		3V lithium battery CR2032 x 1/battery life: 5 years							
Buzzer		85 dB							
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		IEC 61131-2, IEC 68-2-6 (TEST Fc); 5Hzsf<8.4Hz Continuous: 3.5 mm; 8.4 Hz ≤ f ≤ 150 Hz Continuous: 1.0 g							
Shock		IEC 61131-2, 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 ~ 230 MHz, Limits: 40 dB uV/m; Frequency: 230 MHz ~ 1 GHz, Limits: 47 dB uV/m							
Radiated Electromagnetic Field		EN61000-4-3, Frequency: 80 ~ 2000 MHz, 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 x 108.8 x 37	175.8 x 108.6 x 59.2	《TP70P with I/O》 205.6 x 142.6 x 49 《TP70-RM0》 205.6 x 142.6 x 37		
Panel Cutout		136 x 85	196 x 108	151 x 96	163 x 96	163 x 96	191x128		
Weight		240g	430g	268g	270g	292g	500g	《TP70P with I/O》 680g 《TP70-RM0》 620g	
Safety Approvals (Waterproof Class of Front Panel)		IP65/NEMA4 & CE, UL Type 4 indoor			IP65/NEMA4 & CE, UL				
Editing Software		TPEditor V1.87							

Product Outline & Dimensions

Dimensions are in mm



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
 EC : EC 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)
 RC : Relay + CANopen
 TC : Transistor + CANopen
- 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: Other

DVP A BT ○ ○

Series ① ② ③

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

• 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)
 N : None output

• Remote I/O

RTU □ □ ○ ○

Series ①

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

• Function Card

DVP - F ○ ○ ○ ○ □ □ □ □

Series ① ② ③

- Function Card**
- Type**
 232 : RS-232 card
 422 : RS-422 card
 485 : RS-485 card
 2AD : 2ch analog input
 2DA : 2ch analog output
- Particular definition**
 S : Slave mode
 (applicable to COM3 coding only)

• 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

• 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

*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"/>			△*1		△*1	△*1	△*1	△*1
	CANopen	<input type="checkbox"/>	⊙		△*1		△*1	△*1	△*1	△*1
	PROFIBUS	<input type="checkbox"/>			△*1		△*1	△*1	△*1	△*1
Positioning	2-axis output	<input type="checkbox"/>	○	○	○	○	○	○		○
	4-axis output	<input type="checkbox"/>			⊙				○	
	> 4 axes	<input type="checkbox"/>			△	△	△	△	△	△
	2-axis interpolation	<input type="checkbox"/>	○	○	○		○	○	○	○
	100 kHz high speed	<input type="checkbox"/>	○	○			○	○		○
	200 kHz high speed	<input type="checkbox"/>			○	△	△	△	○	△
High-speed Counting	≤ 2 channels	<input type="checkbox"/>	○	○		○	○	○		○
	≥ 3 channels	<input type="checkbox"/>			○*3	△	△	△	○	△
	100 kHz high speed	<input type="checkbox"/>	○	○			○	○		○
	200 kHz high speed	<input type="checkbox"/>			○	△	△	△	○	△
Analog Function	< 4 channels (AD)	<input type="checkbox"/>	△	○	△	△	△	○	△	△
	< 2 channels (DA)	<input type="checkbox"/>	△	○*2	△	△	△	○*2	△	△

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	100~240 V _{AC}	Relay	8	6	DVP14ES00R2	
	100~240 V _{AC}	Transistor	8	6	DVP14ES00T2	
	100~240 V _{AC}	Relay	16	8	DVP24ES00R2	
	100~240 V _{AC}	Transistor	16	8	DVP24ES00T2	
	100~240 V _{AC}	Relay	18	12	DVP30ES00R2	
	100~240 V _{AC}	Relay	16	16	DVP32ES00R2	
	100~240 V _{AC}	Transistor	16	16	DVP32ES00T2	
	100~240 V _{AC}	Relay	24	16	DVP40ES00R2	
	100~240 V _{AC}	Transistor	24	16	DVP40ES00T2	
	100~240 V _{AC}	Relay	36	24	DVP60ES00R2	
100~240 V _{AC}	Transistor	36	24	DVP60ES00T2		
EX Series Analog PLC	100~240 V _{AC}	Relay	8	6	DVP20EX00R2	
		Analog	4	2		
	100~240 V _{AC}	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	100~240 V _{AC}	Relay	6	4	DVP10EC00R3	
	100~240 V _{AC}	Transistor	6	4	DVP10EC00T3	
	100~240 V _{AC}	Relay	8	6	DVP14EC00R3	
	100~240 V _{AC}	Transistor	8	6	DVP14EC00T3	
	100~240 V _{AC}	Relay	8	8	DVP16EC00R3	
	100~240 V _{AC}	Transistor	8	8	DVP16EC00T3	
	100~240 V _{AC}	Relay	12	8	DVP20EC00R3	


EC3 Series PLC

Product Name	Power Supply	Output Method	Inputs	Outputs	Model Name	Certificates
EC3 Series Standard PLC	100 ~ 240 V _{AC}	Transistor	12	8	DVP20EC00T3	
	100 ~ 240 V _{AC}	Relay	12	12	DVP24EC00R3	
	100 ~ 240 V _{AC}	Transistor	12	12	DVP24EC00T3	
	100 ~ 240 V _{AC}	Relay	18	12	DVP30EC00R3	
	100 ~ 240 V _{AC}	Transistor	18	12	DVP30EC00T3	
	100 ~ 240 V _{AC}	Relay	16	16	DVP32EC00R3	
	100 ~ 240 V _{AC}	Transistor	16	16	DVP32EC00T3	
	100 ~ 240 V _{AC}	Relay	24	16	DVP40EC00R3	
	100 ~ 240 V _{AC}	Transistor	24	16	DVP40EC00T3	
	100 ~ 240 V _{AC}	Relay	28	20	DVP48EC00R3	
	100 ~ 240 V _{AC}	Transistor	28	20	DVP48EC00T3	
	100 ~ 240 V _{AC}	Relay	36	24	DVP60EC00R3	
100 ~ 240 V _{AC}	Transistor	36	24	DVP60EC00T3		
Fastest execution time of basic instructions		3.8 μs	Execution time of MOV instruction		5.04 μs	

ES2/EX2 Series PLC

Product Name	Power Supply	Output Method	Inputs	Outputs	Model Name	Certificates	
ES2 Series Standard PLC	100 ~ 240 V _{AC}	Relay	8	8	DVP16ES200R		
	100 ~ 240 V _{AC}	Transistor	8	8	DVP16ES200T		
	100 ~ 240 V _{AC}	Relay	16	8	DVP24ES200R		
	100 ~ 240 V _{AC}	Transistor	16	8	DVP24ES200T		
	100 ~ 240 V _{AC}	Relay	16	16	DVP32ES200R		
	100 ~ 240 V _{AC}	Transistor	16	16	DVP32ES200T		
	240 V _{DC}	Relay	16	16	DVP32ES211T		
	100 ~ 240 V _{AC}	Transistor	24	16	DVP40ES200R		
	100 ~ 240 V _{AC}	Relay	24	16	DVP40ES200T		
	100 ~ 240 V _{AC}	Transistor	36	24	DVP60ES200R		
ES2 Series Built-in CANopen PLC	100 ~ 240 V _{AC}	Transistor	16	16	DVP32ES200RC		
	100 ~ 240 V _{AC}	Relay	16	16	DVP32ES200TC		
EX2 Series Analog PLC	100 ~ 240 V _{AC}	Relay	8	6	DVP20EX200R		
		Analog	4	2			
EX2 Series Temperature / Analog PLC	100 ~ 240 V _{AC}	Relay	16	10	DVP30EX200R		
		Analog	3	1			
EX2 Series Temperature / Analog PLC	100 ~ 240 V _{AC}	Transistor	16	10	DVP30EX200T		
		Analog	3	1			
Fastest execution time of basic instructions		0.35 μs	Execution time of MOV instruction		3.4 μs		

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 ~ 240 V _{AC}	Relay	-	24	DVP24XN200R	
	100 ~ 240 V _{AC}	Transistor	-	24	DVP24XN200T	
	100 ~ 240 V _{AC}	Relay	16	8	DVP24XP200R	
	100 ~ 240 V _{AC}	Transistor	16	8	DVP24XP200T	
	100 ~ 240 V _{AC}	Relay	16	16	DVP32XP200R	
	100 ~ 240 V _{AC}	Transistor	16	16	DVP32XP200T	

Ordering Information

ES2/EX2 Series Digital/Analog Module (24V_{DC})

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"> 4 points of analog voltage (10V, 5V)/current (20 mA, 0~20 mA, 4~20 mA) input ** Resolution: 14-bit (-32,000~+32,000) 			DVP04AD-E2	
	<ul style="list-style-type: none"> 4 points of analog voltage (-10V~+10V)/current (0~20 mA, 4~20 mA) output** Resolution: 14-bit (-32,000~+32,000)/(0~+32,000) 			DVP04DA-E2	
	<ul style="list-style-type: none"> 2 points of analog voltage (-10V~+10V)/current (0~20 mA, 4~20 mA) output ** Resolution: 14-bit (-32,000~+32,000)/(0~+32,000) 			DVP02DA-E2	
	<ul style="list-style-type: none"> 4 points of analog voltage (10V, 5V)/current (20 mA, 0~20 mA, 4~20 mA) input ** Input resolution: 14-bit (-32,000~+32,000) 2 points of analog voltage (-10V~+10V)/current (0~20 mA, 4~20 mA) output Output resolution: 14-bit (-32,000~+32,000)/(0~+32,000) 			DVP06XA-E2	
ES2/EX2 Series Temperature Measurement Module	<ul style="list-style-type: none"> 4 points of platinum RTD (Pt100, Pt1000, Ni100, Ni1000) sensor input/0~300Ω resistance input ** Resolution: 16-bit With PID temperature control 			DVP04PT-E2	
	<ul style="list-style-type: none"> 4 points of thermocouple (J, K, R, S, T, E, N Type) sensor input/-80mV~+80mV voltage input ** Resolution: 20-bit With PID temperature control 			DVP04TC-E2	
Absolute Resolver Module	<ul style="list-style-type: none"> Converts 1 set of resolver input signal (angle/speed) into digital signals Resolution: 12-bit Supports disconnection detection for distance up to 50m 			DVP10RC-E2	

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

EH3 Series PLC

Product name	Power Supply	Output Method	Inputs	Outputs	Model Name	Certificates
EH3 Series Standard PLC	100~240V _{AC}	Relay	8	8	DVP16EH00R3	
	100~240V _{AC}	Transistor	8	8	DVP16EH00T3	
	100~240V _{AC}	Relay	12	8	DVP20EH00R3	
	100~240V _{AC}	Transistor	12	8	DVP20EH00T3	
	100~240V _{AC}	Transistor	16	16	DVP32EH00T3	
	100~240V _{AC}	Relay	16	16	DVP32EH00R3	
	100~240V _{AC}	Differential	16	16	DVP32EH00M3	
	100~240V _{AC}	Relay	16	16	DVP32EH00R3-L	
	100~240V _{AC}	Transistor	16	16	DVP32EH00T3-L	
	100~240V _{AC}	Transistor	24	16	DVP40EH00T3	
	100~240V _{AC}	Relay	24	16	DVP40EH00R3	
	100~240V _{AC}	Relay	24	24	DVP48EH00R3	
	100~240V _{AC}	Transistor	24	24	DVP48EH00T3	
	100~240V _{AC}	Relay	32	32	DVP64EH00R3	
	100~240V _{AC}	Transistor	32	32	DVP64EH00T3	
	100~240V _{AC}	Relay	40	40	DVP80EH00R3	
	100~240V _{AC}	Transistor	40	40	DVP80EH00T3	
Execution time of basic instructions			0.24 μs			

EH3 Series Digital/Analog Module

Product Name	Output Method	Inputs	Outputs	Model Name	Certificates
Digital Module	Relay	4	4	DVP08HP11R	CE UL US
	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	DVP32HP00R	
	Transistor	16	16	DVP32HP00T	
	Relay	24	24	DVP48HP00R	
Transistor	24	24	DVP48HP00T		
Analog Module	<ul style="list-style-type: none"> 4 points of analog voltage (-10V~+10V)/current (-20mA~+20mA)^{*1} Input resolution: 14-bit Built-in RS-485 interface 			DVP04AD-H2	CE UL US
	<ul style="list-style-type: none"> 4 points of analog voltage (0V~+10V)/current (0mA~+20mA) output^{*1} Resolution: 12-bit Built-in RS-485 interface 			DVP04DA-H2	
	<ul style="list-style-type: none"> 4 points of analog voltage (-10V~+10V)/current (-20mA~+20mA) input 2 points of analog voltage (0V~+10V)/current (0mA~+20mA) output Resolution: 12-bit Built-in RS-485 interface 			DVP06XA-H2	
	<ul style="list-style-type: none"> 4 points of platinum RTD (Pt100, Pt1000, Ni100, Ni1000) sensor input^{*1}/ 0~3000Ω or 0~3000Ω resistance input Resolution: 0.1C Built-in RS-485 interface 			DVP04PT-H2	
	<ul style="list-style-type: none"> 4 points of thermocouple (J, K, R, S, T, E, N Type) sensor input^{*1}/0~150mV voltage input Resolution: 0.1C Built-in RS-485 interface 			DVP04TC-H2	
	<ul style="list-style-type: none"> 8 points of thermocouple (J, K, R, S, T, E, N Type) sensor input^{*1}/ 0~150mV or ±150mV voltage input Resolution: 0.1C Built-in RS-485 interface 			DVP08TC-H2	
	<ul style="list-style-type: none"> 4 channels of differential voltage (-10V~+10V)/current (-20mA~+20mA) input Resolution: 16-bit Built-in RS-485 interface 			DVP04AD-H3	
	<ul style="list-style-type: none"> 4 channels of voltage (-10V~+10V)/current (0~+20mA) output Resolution: 16-bit Built-in RS-485 interface 			DVP04DA-H3	
<ul style="list-style-type: none"> 4 channels of differential voltage (-10V~+10V)/ current (-20mA~+20mA) input 2 channels of voltage (-10V~+10V)/current (0~+20mA) output Resolution: 16-bit Built-in RS-485 interface 			DVP06XA-H3		

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

EH3 Series Extension Module/Function Card

Product Name	Description	Model Name	Certificates
Positioning Module	Servo position control module (single axis, 200 kHz)	DVP01PU-H2	CE UL US
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	
	2 points of analog voltage (0~10V)/current (0~20mA) input Resolution: 12-bit	DVP-F2AD	
	2 points of analog voltage (0~10V)/current (0~20mA) output Resolution: 12-bit	DVP-F2DA	
Ethernet communication card	DVP-FEN01		

Ordering Information


S Series PLC

Product Name	Power Supply	Output Method	Inputs	Outputs	Model Name	Certificates
SV2 Series Functional PLC	24V _{DC}	Relay	16	12	DVP28SV11R2	
	24V _{DC}	Transistor (NPN)	16	12	DVP28SV11T2	
	24V _{DC}	Transistor (PNP)	16	12	DVP28SV11S2	
	24V _{DC}	Transistor (NPN)	10 (2AI)	12	DVP24SV11T2	
Execution time of basic instructions			0.24 μs			
SS2 Series Standard PLC	24V _{DC}	Relay	8	6	DVP14SS211R	
	24V _{DC}	Transistor (NPN)	8	6	DVP14SS211T	
	24V _{DC}	Transistor(PNP)	8	4	DVP12SS211S	
SA2 Series Advanced PLC	24V _{DC}	Relay	8	4	DVP12SA211R	
	24V _{DC}	Transistor	8	4	DVP12SA211T	
SX2 Series Analog PLC	24V _{DC}	Relay	8 (4AI)	6(2AO)	DVP20SX211R	
	24V _{DC}	Transistor (NPN)	8 (4AI)	6(2AO)	DVP20SX211T	
	24V _{DC}	Transistor (PNP)	8 (4AI)	6(2AO)	DVP20SX211S	
Fastest execution time of basic instructions		0.35 μs	Execution time of MOV instruction		3.4 μs	
SE Network PLC	24V _{DC}	Relay	8	4	DVP12SE11R	
	24V _{DC}	Transistor	8	4	DVP12SE11T	
Fastest execution time of basic instructions		0.64 μs	Execution time of MOV instruction		2 μs	
SX series Analog PLC	24V _{DC}	Relay	4 (2AI)	2 (2AO)	DVP10SX11R	
	24V _{DC}	Transistor	4 (2AI)	2 (2AO)	DVP10SX11T	
Fastest execution time of basic instructions		3.8 μs	Execution time of MOV instruction		5.04 μs	


S Series Digital/Analog Module

Product name	Output Method	Inputs	Outputs	Model Name	Certificates
Digital ModuleZ	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, MIL	-	32	DVP32SN11TN	
MIL	32	-	DVP32SM11N		
Product Name	Description			Model Name	Certificates
Analog I/O Module	<ul style="list-style-type: none"> 4 points of analog input voltage (-10V~+10V)/ current (-20 mA~+20 mA) Input resolution: 14-bit 		<ul style="list-style-type: none"> Built-in RS-485 interface Differential input 	DVP04AD-S2	
	<ul style="list-style-type: none"> 4 points of analog output voltage (0V~+10V)/ current (0 mA~+20 mA) 		<ul style="list-style-type: none"> Output resolution: 12-bit Built-in RS-485 interface 	DVP04DA-S2	
	<ul style="list-style-type: none"> Analog input+output module (6 points) 4 points of analog input voltage (-10V~+10V)/ current (-20 mA~+20 mA) 2 points of analog output voltage (0V~+10V)/ current (0 mA~+20 mA) 		<ul style="list-style-type: none"> Input/output resolution: 12-bit Built-in RS-485 interface Differential input 	DVP06XA-S2	
	<ul style="list-style-type: none"> 4 points of analog input voltage (-10V~+10V)/ current (-20 mA~+20 mA) Input resolution: 14-bit 		<ul style="list-style-type: none"> Built-in RS-485 interface Single-ended input 	DVP04AD-S	

S Series Analog Module

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

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"> 4 groups of analog input *1 Signal range: 1~5V, 0~5V, -5~5V, 0~10V, -10~10V, 4~20mA, 0~20mA, -20~20mA Resolution: 16-bit Single channel On/Off setup enhances entire conversion efficiency Conversion time: 250µs/point Off-line alarm (1~5V, 4~20mA) 	DVP04AD-SL		
	<ul style="list-style-type: none"> 4 groups of analog output *1 Signal range: 0~10V, -10~10V, 4~20mA, 0~20mA Resolution: 16-bit Offers single channel On/Off setup Conversion time: 250µs/point 	DVP04DA-SL		
Left-Side High-Speed Load Cell Module	<ul style="list-style-type: none"> 1 set of load cell module*1 Resolution: 24-bit 	<ul style="list-style-type: none"> Connectable to 4-wire/6-wire load cell sensor Measurable range: 0~80mV/V 		DVP201LC-SL
	<ul style="list-style-type: none"> 1 set of load cell module*1 Resolution: 24-bit Connectable to 4-wire/6-wire load cell sensor 	<ul style="list-style-type: none"> Measurable range: 0~80mV/V Built-in I/O control: 2DI/4DO/1AO 		DVP211LC-SL
	<ul style="list-style-type: none"> 2 sets of load cell module*1 Resolution: 24-bit 	<ul style="list-style-type: none"> Connectable to 4-wire/6-wire load cell sensor Measurable range: 0~80mV/V 		DVP202LC-SL
	<ul style="list-style-type: none"> Supports 2 channels of load cell signal input*1 Resolution: 20-bit Connectable to 4-wire/6-wire load cell sensor Measurable range: 0~6mV/V 			DVP02LC-SL
	<ul style="list-style-type: none"> Supports 1 channel of load cell signal input*1 Resolution: 20-bit Connectable to 4-wire/6-wire load cell sensor Measurable range: 0~6mV/V 			DVP01LC-SL
Temperature Measurement Module	<ul style="list-style-type: none"> 6 points of platinum RTD (Pt100, Pt1000, Ni100, Ni1000) sensor input Resolution: 0.1 C 			DVP06PT-S
	<ul style="list-style-type: none"> 4 points of platinum RTD (Pt100, Pt1000, Ni100, Ni1000) sensor input*1 (Version 4.06 and above supports Pt1000, Ni100, Ni1000) Resolution: 0.1 C Built-in RS-485 interface 		DVP04PT-S	
	<ul style="list-style-type: none"> 4 points of thermocouple (J, K, R, S, T type) sensor input*1 Resolution: 0.1 C Built-in RS-485 interface 		DVP04TC-S	
	<ul style="list-style-type: none"> 2 points of universal analog input: 0~10V, 0~20mA, 4~20mA; Thermocouple: J, K, R, S, T, E, N, B, C, L, U, TXK, PLII; RTD: Pt100, JPt100, Pt1000, Cu50, Cu100, Ni100, Ni1000, LG-Ni1000 Resolution: analog 16-bit; Sensor: 0.1 C 4 points of NPN transistor output: 24V_{bc}/300mA Output point: built-in PID program control/manual control 	<ul style="list-style-type: none"> Connectable to 4-wire/6-wire load cell sensor Measurable range: 0~80mV/V 	<p>New</p> DVP02TUN-S	
	<ul style="list-style-type: none"> 2 points of universal analog input: 0~10V, 0~20mA, 4~20mA; Thermocouple: J, K, R, S, T, E, N, B, C, L, U, TXK, PLII; RTD: Pt100, JPt100, Pt1000, Cu50, Cu100, Ni100, Ni1000, LG-Ni1000 Resolution: analog 16-bit; Sensor: 0.1 C 4 points of relay output: 24V_{oc}/3A Output point: built-in PID program control/manual control 		<p>New</p> DVP02TUR-S	
	<ul style="list-style-type: none"> 2 points of universal analog input: 0~10V, 0~20mA, 4~20mA; Thermocouple: J, K, R, S, T, E, N, B, C, L, U, TXK, PLII; RTD: Pt100, JPt100, Pt1000, Cu50, Cu100, Ni100, Ni1000, LG-Ni1000 Resolution: analog 16-bit; Sensor: 0.1 C 2 points of analog output: 0~10V, 0~20mA, 4~20mA Output point: built-in PID program control/manual control 		<p>New</p> DVP02TUL-S	

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

Ordering Information

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

Product Name	Description	Model Name	Certificates
Positioning Module	Servo position control module (single axis, 200 kHz)	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, 10/100 Mbps	DVPEN01-SL	
	DeviceNet master communication module, 500 Kbps	DVPDNET-SL	
	CANopen master communication module, 1 Mbps	DVPCOPM-SL	
	PROFIBUS DP slave communication module, 12 Mbps	DVPPF02-SL	
	RS-485/RS-422, serial communication module, 460 Kbps	DVPSCM12-SL	
Remote I/O Module	BACnet MS/TP Slave communication module, 460 Kbps	DVPSCM52-SL	
	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	

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	100~240V _{AC}	Differential	16	16	DVP10PM00M	
		(Built-in 4-axis of independent 1MHz pulse output)				
Professional Motion Controller	100~240V _{AC}	Differential	8	8	DVP20PM00DT	
		(Built-in 2-axis of independent 500 kHz pulse output)				
		(Built-in 3-axis of independent 500 kHz pulse output)				
PM Series Extension Module		Description		Model Name		
DVP-PM Communication card		Ethernet/CANopen communication card		DVP-FPMC		
Execution time of basic instructions		0.13 μs		Execution time of MOV instruction		3.74 μs

MC Series

Product Name	Power Supply	Communication protocol	Inputs	Outputs	Model Name	Certificates
Network Type Motion Controller	24V _{DC}	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	CE UL US
	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	CE
	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	CE UL US
		8DI 16DO - - - Relay TP04P-32TP1R	
		8DI 8DO 4AI 2AO - Relay TP04P-22XA1R	
		8DI 8DO 2AI 1AO 2PT Relay TP04P-21EX1R	
TP70P	Resolution: 800 x 400 Serial COM ports: USB & RS-485	8DI 8DO - - - Relay TP70P-16TP1R	
		16DI 16DO - - - Relay TP70P-32TP1R	
		8DI 8DO 4AI 2AO - Relay TP70P-22XA1R	
		8DI 8DO 2AI 1AO 2PT Relay TP70P-21EX1R	
	Resolution: 800 x 400 Serial COM ports: USB & RS-232/485	- - - - - TP70P-RM0	
TP08	Resolution: 240 x 128, Serial COM ports: RS-232 & RS-422/RS-485, 0 ~ 9 numeric keys available	TP08G-BT2	

Software

Product Name	Description	OS (Windows based software)
ISPSOft	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)
WPLSOft	Programming software for DVP-PLC	Windows 98, Me, NT4.0, 2000, XP, Vista, Windows 7 (32-bit/64-bit)
TPEditor	Editing software for TP series HMI	Windows 98, Me, NT4.0, 2000, XP, Vista, Windows 7 (32-bit/64-bit)
PMSOft	Programming software for PM series	Windows 2000, XP, Vista, Windows 7 (32-bit/64-bit)
DCISOft	Delta communication integration software	Windows 2000, XP, Vista, Windows 7 (32-bit/64-bit)
DeviceNet Builder	DeviceNet configuration software	Windows 2000, XP, Vista, Windows 7 (32-bit/64-bit)
CANopen Builder	CANopen configuration software	Windows 2000, XP, Vista, Windows 7 (32-bit/64-bit)
NetView builder	CAN bus Message Analysis Software	Windows 2000, XP, Vista, Windows 7 (32-bit)

Starter kit

Product Name	Model Name	Starter Kit Contents
New Delta PLC Starter kit	UT-14SS2-A	DVP14SS211R(PLC), DOP-B07S410(HMI) and accessory
	UT-12SE-A	DVP12SE11R (PLC), DOP-B07E415 (HMI) and accessory

Industrial Power Supply

Series	Power Supply	Inputs	Outputs	Power	Output Current	Model Name	Certificates
DVP	1-phase	85~264V _{AC}	24V _{DC}	24W	1A	DVPPS01	CE UL US
				48W	2A	DVPPS02	
				120W	5A	DVPPS05	

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

Ordering Information

Accessories

Type	Model name	Descriptions	Specification		Applicable Modules
			Length	Connector / Terminal block	
PLC programming and serial communication cable	UC-PRG015-01A	communication cable for PLC (mini USB) to PC	1.5m	PC (USB ↔ mini USB) PLC	DVP-SE/DVP-SX2/AH500
	UC-PRG015-02A	communication cable for TP (USB B type) to PC	1.5m	PC (USB ↔ USB B type) TP	TP70P/TP04P / DOP
	UC-PRG020-12A	communication cable for PLC (DB9 female / 8-pin mini-DIN male) to PC	2m	PC (DB9 female ↔ 8-pin mini-DIN male) PLC	DVP/TP RS-232
	UC-PRG030-01A	communication cable for PLC (mini USB) to PC	3m	PC (USB ↔ mini USB) PLC	DVP-SE/SX2 AH500
	UC-PRG030-02A	communication cable for TP (USB B type) to PC	3m	PC (USB ↔ USB B type) TP	TP70P / TP04P / DOP
	UC-PRG030-10A	communication cable for PLC / HMI / TP (DB9 female) to PC	3m	PC (DB9 female ↔ DB9 female) PLC/HMI/TP	PLC/HMI/TP (DB9 female)
	UC-PRG030-20A	communication cable for PLC / HMI (RJ45) to PC	3m	PC (RJ45 ↔ RJ45) PLC/HMI	DVP-SE DVPEN02-L AHCPU5 □□ -EN AH10EN-5A
	UC-MS010-02A	communication cable for PLC (8-pin mini-DIN male) to PC	1m	PC (DB9 female ↔ 8-pin mini-DIN male) PLC	DVP PLC RS-232
	UC-MS020-01A	communication cable for PLC (8-pin mini-DIN male) to PC	2m	PC (DB9 female ↔ 8-pin mini-DIN male) PLC	
	UC-MS020-06A	communication cable for PLC (8-pin mini-DIN male) to HMI	2m	HMI (DB9male ↔ 8-pin mini-DIN male) PLC	
	UC-MS030-01A	communication cable for PLC (8-pin mini-DIN male) to PC	3m	PC (DB9 female ↔ 8-pin mini-DIN male) PLC	
	UC-MS030-06A	communication cable for PLC (8-pin mini-DIN male) to HMI	3m	HMI (DB9male ↔ 8-pin mini-DIN male) PLC	
	UC-ET010-24A	I/O extension cable for connecting external terminal modules	1m	PLC (MILIDC40 ↔ IDC40) external terminal modules	
UC-ET010-24B	I/O extension cable for connecting external terminal modules	1m	PLC (MILIDC40 ↔ IDC40) external terminal modules (shielded wire)	DVP32SM11N ↔ UB-10-ID32A DVP32SN11TN ↔ UB-10-OT32A	
UC-ET010-24C	I/O extension cable for connecting external terminal modules	1m	PLC (MILIDC40 ↔ IDC20 x 2) external terminal modules	DVP32SN11TN ↔ UB-10-OR16A	
UC-ET010-24D	I/O extension cable for connecting external terminal modules	1m	PLC (MILIDC40 ↔ IDC20 x 2) external terminal modules (shielded wire)	DVP32SN11TN ↔ UB-10-OR16A	
UC-ET020-24B	I/O extension cable for connecting external terminal modules	2m	PLC (MILIDC40 ↔ IDC40) external terminal modules (shielded wire)	DVP32SM11N ↔ UB-10-ID32A DVP32SN11TN ↔ UB-10-OT32A	
UC-ET020-24D	I/O extension cable for connecting external terminal modules	2m	PLC (MILIDC40 ↔ IDC20 x 2) external terminal modules (shielded wire)	DVP32SN11TN ↔ UB-10-OR16A	
UC-ET030-24B	I/O extension cable for connecting external terminal modules	3m	PLC (MILIDC40 ↔ IDC40) external terminal modules (shielded wire)	DVP32SM11N ↔ UB-10-ID32A DVP32SN11TN ↔ UB-10-OT32A	
UC-ET030-24D	I/O extension cable for connecting external terminal modules	3m	PLC (MILIDC40 to IDC20 x 2) external terminal modules (shielded wire)	DVP32SN11TN ↔ UB-10-OR16A	
Motion control cable / Industrial communication cable	UC-CMC003-01A	CANopen communication cable	0.3m	--	DVP-COPM-SL DVP-10MC DVP-CP02-H2 TAP-CN03
	UC-CMC005-01A	CANopen communication cable	0.5m	--	
	UC-CMC010-01A	CANopen communication cable	1m	--	
	UC-CMC015-01A	CANopen communication cable	1.5m	--	
	UC-CMC020-01A	CANopen communication cable	2m	--	
	UC-CMC030-01A	CANopen communication cable	3m	--	
	UC-CMC050-01A	CANopen communication cable	5m	--	
	UC-CMC100-01A	CANopen communication cable	10m	--	
	UC-CMC200-01A	CANopen communication cable	20m	--	
UC-EMC003-02A	EtherCAT communication cable	0.3m	--	AH10EMC-5A	

Accessories

Type	model name	Descriptions	Specification		Applicable modules
			Length	Connector/Terminal block	
Industrial communication cable	UC-DN01Z-01A	DeviceNet communication cable	305 m	--	DVPDNET-SL RTU-DNET DVPDT02-H2 TAP-CN01 TAP-CN02 TAP-CN03
	UC-DN01Z-02A	DeviceNet communication cable	305 m	--	AH10COPm-5A AH10DNET-5A AHRTU-DNET-5A TAP-CN01 TAP-CN02 TAP-CN03
	UC-PF01Z-01A	PROFIBUS communication cable	305 m	--	AH10PFBS-5A AH10PFBS-5A AHRTU-PFBS-5A
External terminal module	UB-10-OR16A	external terminal module for DVP32SN output module	--	16-point relay output, 20-pin MIL	DVP32SN11TN
	UB-10-OT32A	external terminal module for DVP32SN output module	--	32-point transistor output, 40-pin MIL	DVP32SN11TN
	UB-10-ID32A	external terminal module for DVP32SM digital input module	--	32-point input, MIL	DVP32SM11TN
Connector	UN-03EN-04A	RJ45 connector	--	--	--
	UN-03PF-01A	PROFIBUS connector	--	--	--
	UN-03PF-02A	PROFIBUS connector	--	--	DVPPF02-SL DVPPF02-H2
	UN-03PF-03A	PROFIBUS connector	--	--	--
Peripheral Accessories	Data backup memory card (DVP-EH3 only)				DVP-512F m
	Data backup memory card (64k words)				DVPPCC01
	Communication cable for PC (9-pin & 25-pin D-Sub) and PLC, 3 m				DVPACAB230
	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, 0.3 m				DVPACAB403
	Extension cable for EH series PLC and extension module, 0.7 m				DVPACAB4A07
	DeviceNet/CANopen distribution box, 1 for 2				TAP-CN01
	DeviceNet/CANopen distribution box, 2 for 3				TAP-CN02
	DeviceNet/CANopen distribution box, 2 for 3 RJ45				TAP-CN03
	3.6V lithium battery (unchargeable) for EH/SX series PLC				DVPABT01
	Terminal resistance for CANopen communication (RJ45)				TAP-TR01
	TP programming cable				DVPACAB530