



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
- ▶ 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

S Series PLC

Compact, Flexible Extension!

DVP-SS2

2nd Generation Standard Slim PLC



Model name	Specifications
DVP14SS211R	⊖DC ⊖ 8 ⤴ 6 ⤴ (R) ⤴
DVP14SS211T	⊖DC ⊖ 8 ⤴ 6 ⤴ (T) ⤴
DVP12SS211S	⊖DC ⊖ 8 ⤴ 4 ⤴ (S) ⤴

⊖DC : DC power supply ⊖ 8 ⤴ : Inputs ⤴ 6 ⤴ : 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 ⤴ 6 ⤴ (R) ⤴ 4AI/2AO
DVP20SX211T	⊖DC ⊖ 8 ⤴ 6 ⤴ (T) ⤴ 4AI/2AO
DVP20SX211S	⊖DC ⊖ 8 ⤴ 6 ⤴ (S) ⤴ 4AI/2AO

⊖DC : DC power supply ⊖ 8 ⤴ : Inputs ⤴ 6 ⤴ : 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 ⤴ 4 ⤴ (R) ⤴
DVP12SA211T	⊖DC ⊖ 8 ⤴ 4 ⤴ (T) ⤴

⊖DC : DC power supply ⊖ 8 ⤴ : Inputs ⤴ 4 ⤴ : Outputs
 (T) ⤴ : Transistor output (R) ⤴ : Relay output

DVP-SV2

High Performance Slim PLC



Model name	Specifications
DVP28SV11R2	⊖DC ⊖ 16 ⤴ 12 ⤴ (R) ⤴
DVP28SV11T2	⊖DC ⊖ 16 ⤴ 12 ⤴ (T) ⤴
DVP28SV11S2	⊖DC ⊖ 16 ⤴ 12 ⤴ (S) ⤴
DVP24SV11T2	⊖DC ⊖ 10 ⤴ 12 ⤴ (T) ⤴ 2AI

⊖DC : DC power supply ⊖ 16 ⤴ : Inputs ⤴ 12 ⤴ : 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 ⤴ 4 ⤴ (R) ⤴
DVP12SE11T	⊖DC ⊖ 8 ⤴ 4 ⤴ (T) ⤴

⊖DC : DC power supply ⊖ 8 ⤴ : Inputs ⤴ 4 ⤴ : Outputs
 (T) ⤴ : Transistor output (R) ⤴ : Relay output



Slim 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
Power supply voltage	100 ~ 240VAC (-15% ~ 10%), 50/60Hz ±5%	24VDC (-15% ~ 20%)
Fuse capacity	2A/250VAC	ES: 2A/250VAC; SV: 2.5A/30VDC
Spike voltage durability	1500VAC (Primary-secondary); 1500VAC (Primary-PE); 500VAC (Secondary-PE)	
Insulation impedance	>5MΩ (all I/O point-to-ground: 500VDC)	
Noise immunity	ESD: 8KV Air Discharge EFT: Power Line, 2kV Digital I/O: 1kV Analog & Communication I/O: 1kV RS: 26MHz ~ 1GHz, 10V/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	10kHz	20kHz	100kHz	200kHz	
Input signal type	Sink/Source				
Input signal voltage	24VDC ±10% (5mA)				
Response time*2	EH3/SV2/PM	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
	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

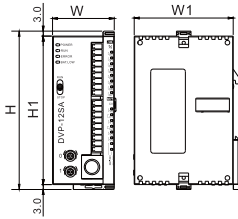
	Relay-R	Transistor-T		
		General speed	High speed	
Max. exchange (working) frequency	1Hz*2	10kHz	100kHz	200kHz
Current spec.	EH3/SV2/PM	0.3A/point @40°C	SA2/SX2/ES2/EX2/SE Resistive: 0.5A/point (4A/COM) Conductive: 12W (24VDC) Light bulb: 2W (24VDC)	EH3/SV2/PM Resistive: 0.5A/point (4A/COM) Conductive: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

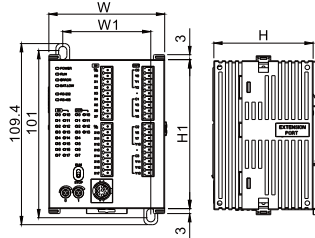
SE/SX/SS2/SA2
Series PLC

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

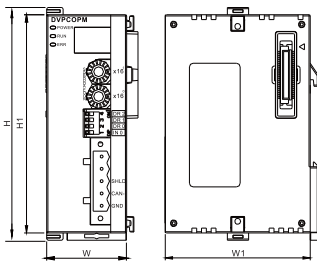


S Series
IO & Extension Modules

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

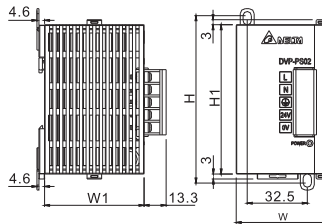
Left-Side High-Speed
Extension Modules

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



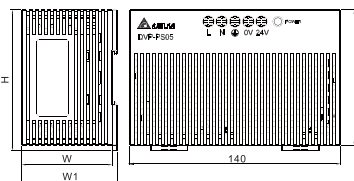
PS01/02
Power Supply Modules

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



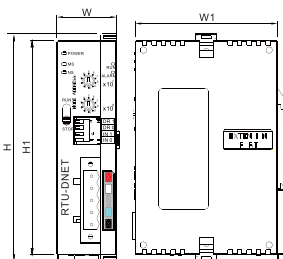
PS05
Power Supply Modules

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

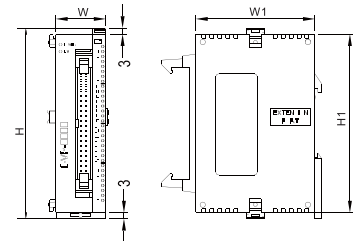


Remote I/O Modules

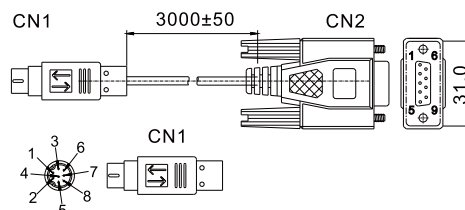
Model name (mm)	H	H1	W	W1
RTU-DNET	96	90	25.2	60
RTU-485	96	90	25.2	60
RTU-EN01	96	90	25.2	60
RTU-PT01	96	90	25.2	60



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



PIN Definition of DVPACAB2A30

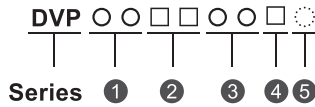


PC/HMI COM Port		PLC COM1 Port	
9 PIN D-SUB female		8 PIN MINI DIN	
Tx	3	Rx	4
Rx	2	Tx	5
GND	5	GND	8
	7	5V	1,2

Unit: mm

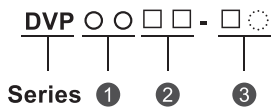
Model Name Explanation

• PLC



- 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



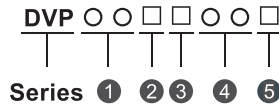
- Total I/O**
- Model**
 HC : High-speed counter
 PU : Single-axis positioning module
- Model**
 S : SS / SA / SX / SC / SV / SS2 / SA2 / SX2 / SV2 / SE / MC series PLC
 H2 / H3 : EH2 / EH3 / PM series PLC
 SL : left-side extension for SV series PLC

• Accessory: Other



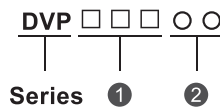
- Accessory**
- Type**
 Bt : Battery
- Type : 01, 02**

• DI/DO Module



- 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

• Peripherals



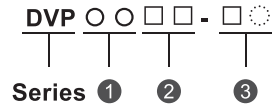
- Product name**
 DU : Digital display panel
- Type / function**
 01 : Type 01
 02 : Type 02
 03 : Type 03

• Function Card



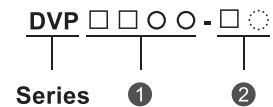
- Function Card**
- Type**
 232 : RS-232 card
 422 : RS-422 card
 485 : RS-485 card
 2AD : 2ch analog input
 2DA : 2ch analog output
- Particular definition**
 S : Slave mode
 (applicable to COM3 coding only)

• AI/AO Module



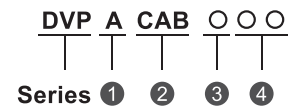
- Total I/O**
- Model**
 AD : Analog / digital conversion
 DA : Digital / analog conversion
 PT : PT type temperature module
 TC : Thermocouple type temperature Module
 XA : AD + DA module
 LC : Load cell module
 RC : Resolver module
- Model**
 S or S2 : SS / SA / SX / SC / SV / SS2 / SA2 / SX2 / SV2 / 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



- 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



- 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"/>	○	○	○		○	○	○	○
	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"/>			○ ^{*3}	△	△	△	○	△
	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"/>	△	○ ^{*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