



Analog I/O Slim PLC DVP-SX2

Analog model with highly efficient PID control function

- ▶ 32-bit CPU for high-speed processing
- ▶ Program capacity: 16 k steps
- ▶ Data register: 10 k words
- ▶ Max. execution speed of basic instructions: 0.35 μ s
- ▶ Built-in 4 analog inputs / 2 analog outputs
- ▶ Built-in mini USB, RS-232 and RS-485 ports (Master/Slave)
- ▶ Supports standard Modbus ASCII/RTU protocol and PLC Link function
- ▶ PID Auto Tuning function for highly efficient PID control
- ▶ No battery required; RTC function operates for at least one week after power off (hardware version 2.0 and above)
- ▶ Supports DVP-S Series modules (left-side and right-side)

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

Complete network communication functions for advanced industrial applications

- ▶ 32-bit CPU for high-speed processing
- ▶ Program capacity: 16 k steps
- ▶ Data register: 12 k words
- ▶ Max. execution speed of basic instructions: 0.64 μ s
- ▶ Built-in Ethernet
DVP12SE : Modbus & Ethernet/IP (Explicit message)
DVP26SE : Modbus & Ethernet/IP (Adapter mode, explicit message)
- ▶ Built-in mini USB port, RS-485 port*2 and Ethernet port that supports Modbus TCP and EtherNet/IP Slave (adapter)
※ Note: RS-485 will be reduced to 1 port in DVP26SE
- ▶ IP Filter functions as firewall for first line protection against malware and network threats
- ▶ Supports DVP-S Series modules (left-side and right-side)
※ Note: DVP26SE only supports right-side modules
- ▶ No battery required; RTC function 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, 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

Slim PLC DVP-S Series

Compact, Flexible Extension

DVP-SS2

Standard Slim PLC



Model Name	Specifications
DVP28SS211R	—DC— 16 12 (R)→
DVP28SS211T	—DC— 16 12 (T)→
DVP28SS211S ^{New}	—DC— 16 12 (T)→
DVP14SS211R	—DC— 8 6 (R)→
DVP14SS211T	—DC— 8 6 (T)→
DVP12SS211S	—DC— 6 4 (S)→

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

DVP-SX2

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 C Inputs U Outputs
 (T)→ Transistor output (NPN) (R)→ Relay output
 (S)→ Transistor output (PNP)

DVP-SA2

Advanced Slim PLC



Model Name	Specifications
DVP28SA211R ^{*1}	—DC— 16 12 (R)→
DVP28SA211T ^{*1}	—DC— 16 12 (T)→
DVP28SA211S ^{*1} ^{New}	—DC— 16 12 (T)→
DVP12SA211R	—DC— 8 4 (R)→
DVP12SA211T	—DC— 8 4 (T)→

^{*1} The models do not support left-side modules.

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

DVP-SE

Network Type Advanced Slim PLC



Model Name	Specifications
DVP26SE11R ^{*1}	—DC— 14 12 (R)→
DVP26SE11T ^{*1}	—DC— 14 12 (T)→
DVP26SE11S ^{*1} ^{New}	—DC— 14 12 (T)→
DVP12SE11R	—DC— 8 4 (R)→
DVP12SE11T	—DC— 8 4 (T)→

^{*1} The models do not support left-side modules.

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



Slim PLC DVP-S Series

Extension Modules

High-speed Extension Modules (left-side)^{*1}

Network Modules

- **DeviceNet Master**
DVDPNET-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 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 (right-side)^{*2}

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 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



- **Sensor: ^{New} NTC thermocouple**
DVP08NTC-S



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



- **Remote Temperature Control Module:**
DVP02TKN-S
DVP02TKR-S
DVP02TKL-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.

*2. Max. quantity of right-side extension module is 14, among which the quantity of -S and -S2 modules must be equal to or less than 8. If the total quantity of extension modules is over 14, applying high density extension modules is recommended.

Specifications

Electrical Specifications

	AC	DC
Power Supply Voltage	100~240 V _{AC} (-15%~10%), 50/60Hz ±5%	24 V _{DC} (-15%~20%)
Fuse Capacity	2 A/250 V _{AC}	ES: 2 A/250 V _{AC} ; SV: 2.5 A/30 V _{DC}
Spike Voltage Durability	1500 V _{AC} (Primary-secondary); 1500 V _{AC} (Primary-PE); 500 V _{AC} (Secondary-PE)	
Insulation Impedance	> 5 MΩ (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: 26 MHz~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% (5 mA)			
Response time ^{*2}	DVP-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	ES3/EH3/SV2/PM OFF→ON: 0.15 μs ON→OFF: 3 μs
	DVP-ES3/ES2/EX2				
	DVP-ES/EX				
	DVP-SX				
	DVP-SS2				
	DVP-SA2/SX2/SE				

*1. For more detailed specifications, see the "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}

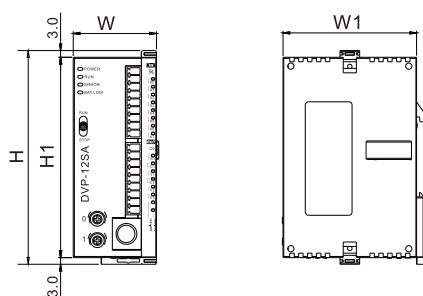
		Relay-R	Transistor-T		
			General-speed	High-speed	
Max. Exchange (working) Frequency		1Hz ⁻²	10 kHz	100 kHz	200 kHz
Current spec.	DVP-EH3/SV2/PM	2A/1 Point	0.3A/point @40°C	SA2/SX2/ES2/EX2/SE Resistive: 0.5A/point (4A/COM) Conductive: 12W (24 V _{DC}) Light bulb: 2W (24 V _{DC})	ES3/EH3/SV2/PM Resistive: 0.5A/point (4A/COM) Conductive: 12W (24 V _{DC}) Light bulb: 2W (24 V _{DC})
	DVP-ES3/ES2/EX2				
	DVP-ES/EX				
	DVP-SX	1.5A/1 Point			
	DVP-SS2/SA2/SX2/SE				
Voltage Spec.		250 V _{AC} /30 V _{DC}	30 V _{DC}		
Response Time		10 ms	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 the "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.

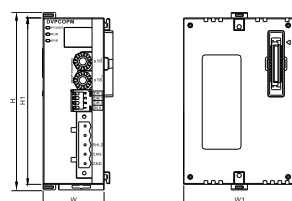
DVP-SE / SX / SS2 / SA2 Series

Model Name (mm)	H	H1	W	W1
DVP28SS211R/T/S	96	90	46	60
DVP28SA211R/T/S	96	90	46	60
DVP26SE11R/T/S	96	90	46	60
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



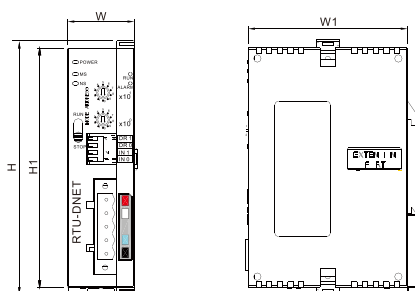
High-Speed Extension Modules (left-side)

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



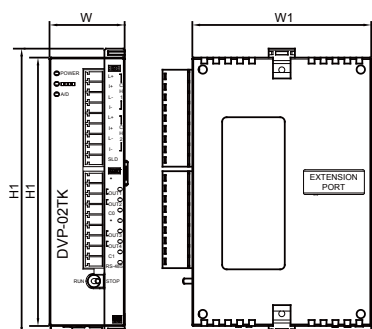
Remote I/O Modules

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-PD01	96	90	25.2	60
RTU-CN01 New	96	90	25.2	60
RTU-ECAT New	96	90	25.2	60



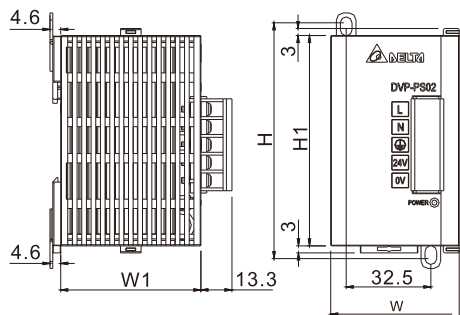
Remote Temperature Control Modules

Model Name (mm)	H	H1	W	W1
DVP02TKN-S	96	90	25.2	60
DVP02TKR-S	96	90	25.2	60
DVP02TKL-S	96	90	25.2	60



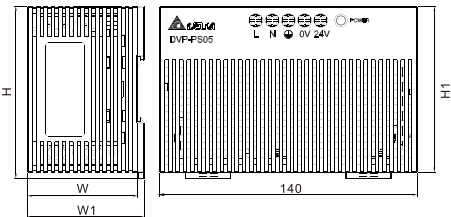
DVP-PS01/02 Power Supply Modules

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

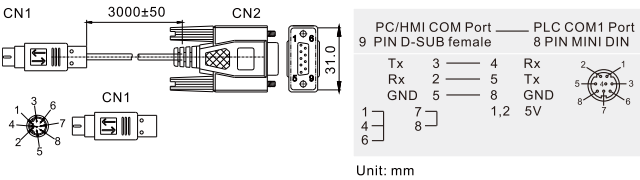


DVP-PS05 Power Supply Modules

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

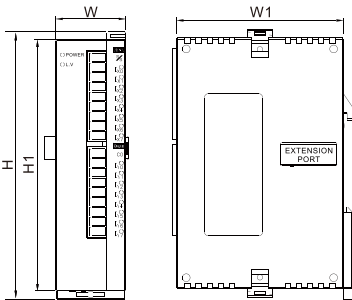


PIN Definition of UC-MS030-01A



DVP-S Series I/O and Extension Modules

Model Name (mm)	H	H1	W	W1
DVP08SM11N	96	90	25.2	60
DVP16SM11N	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
DVP08NTC-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
DVP02TUN-S	96	90	25.2	60
DVP02TUR-S	96	90	25.2	60
DVP02TUL-S	96	90	25.2	60



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

