

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

## DVP-ES2/EX2

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



reddot design award  
winner 2010



### 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



### ES2 Series Extension Cable Modules

DVPAEXT01-E2



## Slim Series Extension Modules

### Left-Side High-Speed Extension Modules

#### 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**  
DVPSM12-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<sup>\*1</sup>  
DVP202LC-SL<sup>\*1</sup>



### 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



#### 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.

# Product Line-up

Select your desired specifications and locate the most suitable PLC.

What do you need?

Select specifications

Check

Locate 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"/>			○	△	△	△	○	△
		<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

## Model Name Explanation

### DVP CPU Module

#### DVP32ES00T2

DVP	32	ES	00	T	2
Series Name	Total I/O	Model	Power Supply	Output Type	Version
		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	00: AC power input 11: DC power input	R: Relay T: Transistor (NPN) M: Mixed with differential signal S: Transistor (PNP) RC: Relay + CANopen TC: Transistor + CANopen	2: 2 <sup>nd</sup> generation 3: 3 <sup>rd</sup> generation

### DI / DO Module

#### DVP08SP11T

DVP	08	S	P	11	T
Series Name	Total I/O	Model	I/O Type	Power Supply	Output Type
		X: ES/EX series PLC S: SS/SA/SX/SC/SV/SS2/SA2/SX2/SV2/SE/MC series PLC H: EH2/EH3/PM series PLC	M: Input point N: Output point P: Input + output	00: AC power input 11: DC power input	R: Relay T: Transistor (NPN) TS: Transistor (PNP) N: None output

#### DVP16XP211T

DVP	16	XP2	11	T
Series Name	Total I/O	Model	Power Supply	Output Type
		XP2: Inputs + outputs for ES2/EX2 series XM2: Inputs for ES2/EX2 series XN2: Outputs for ES2/EX2 series	00: AC power input 11: DC power input	R: Relay T: Transistor (NPN) N: None output

### AI / AO Module

#### DVP04AD-E2

DVP	04	AD	-	E2
Series Name	Channel Number	Model		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		S or S2: SS/SA/SX/SC/SV/SS2/SA2/ S or S2: 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

# Model Name Explanation

## PI / PO Module

### DVP01PU-H2

DVP	01	PU	-	H2
Series Name	Total I/O	Model		Model
		HC: High-speed counter PU: Single axis positioning module		S: SS/SA/SX/SC/SV/SS2/SA2/ S: SX2/SV2/SE/MC series PLC H2/H3: EH2/EH3/PM series PLC SL: Left-side extension for SV series PLC

## Network Module

### DVPDNET-SL

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

## Function Card

### DVP-F232

DVP	F	232	
Series Name	Function Card	Type	Particular Definition
		232: RS-232 card 422: RS-422 card 485: RS-485 card EN01: Ethernet card 2AD: 2ch analog input 2DA: 2ch analog output	S: Slave mode (applicable to COM3 coding only)

## Accessory: Cable

### DVPACAB7230

DVP	A	CAB	2	30
Series Name	Accessory	Type	Type	Length
		CAB: Cable	1, 2, 3, 4, .....	15: 1.5m 30: 3.0m

## Accessory: Other

### DVPABT01

DVP	A	BT	01
Series Name	Accessory	Type	Type
		Bt: Battery	01, 02 .....

# Specifications & Ordering Information

## Electrical Specifications

	AC	DC
<b>Power Supply Voltage</b>	100~240 V <sub>AC</sub> (-15%~10%), 50/60Hz ±5%	24 V <sub>DC</sub> (-15%~20%)
<b>Fuse Capacity</b>	2A/250 V <sub>AC</sub>	ES: 2A/250 V <sub>AC</sub> ; SV: 2.5A/30 V <sub>DC</sub>
<b>Spike Voltage Durability</b>	1500 V <sub>AC</sub> (Primary-secondary); 1500 V <sub>AC</sub> (Primary-PE); 500 V <sub>AC</sub> (Secondary-PE)	
<b>Insulation Impedance</b>	>5 MΩ (all I/O point-to-ground: 500 V <sub>DC</sub> )	
<b>Noise Immunity</b>	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, 10V/m	
<b>Earth</b>	The diameter of grounding wire shall not be shorter than that of the power supply cable. (When many PLCs are in use at the same time, please make sure every PLC is properly grounded.)	
<b>Storage/Operation</b>	Storage: -25°C~70°C(temperature); 5%~95% (humidity) Operation: 0°C~55°C(temperature); 5%~95% (humidity); pollution degree 2	

## Input Specifications<sup>\*1</sup>

Max. Input Frequency	10 kHz	20 kHz	100 kHz	200 kHz	
<b>Input Signal Type</b>	NPN (Sink)/PNP (Source)				
<b>Input Signal Voltage</b>	24 V <sub>DC</sub> ±10% (5 mA)				
<b>Response time<sup>*2</sup></b>	<b>EH3/SV2/PM</b>	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
	<b>ES2/EX2</b>				
	<b>ES/EX</b>				
	<b>SX</b>				
	<b>SS2</b>				
	<b>SA2/SX2/SE</b>				

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

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

## Output Specifications<sup>\*1</sup>



	Relay-R	Transistor-T		
		General speed	High speed	
<b>Max. Exchange (working) Frequency</b>	1Hz <sup>*2</sup>	10 kHz	100 kHz	200 kHz
<b>Current spec.</b>	<b>EH3/SV2/PM</b>	0.3A/point @40°C	SA2/SX2/ES2/EX2/SE Resistive: 0.5A/point (4A/COM) Conductive: 12W (24 V <sub>DC</sub> ) Light bulb: 2W (24 V <sub>DC</sub> )	EH3/SV2/PM Resistive: 0.5A/point (4A/COM) Conductive: 12W (24 V <sub>DC</sub> ) Light bulb: 2W (24 V <sub>DC</sub> )
	<b>ES2/EX2</b>			
	<b>ES/EX</b>			
	<b>SX</b>			
	<b>SS2/SA2/SX2/SE</b>			
<b>Voltage Spec.</b>	250 V <sub>AC</sub> /30 V <sub>DC</sub>	30 V <sub>DC</sub>		
<b>Response Time</b>	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.

# Specifications & Ordering Information



## ES/EX Series PLC

Product Name	Power Supply	Output Method	Inputs	Outputs	Model Name	Certificates
ES Series Standard PLC	100~240V <sub>AC</sub>	Relay	8	6	DVP14ES00R2	 
	100~240V <sub>AC</sub>	Transistor	8	6	DVP14ES00T2	
	100~240V <sub>AC</sub>	Relay	16	8	DVP24ES00R2	
	100~240V <sub>AC</sub>	Transistor	16	8	DVP24ES00T2	
	100~240V <sub>AC</sub>	Relay	18	12	DVP30ES00R2	
	100~240V <sub>AC</sub>	Relay	16	16	DVP32ES00R2	
	100~240V <sub>AC</sub>	Transistor	16	16	DVP32ES00T2	
	100~240V <sub>AC</sub>	Relay	24	16	DVP40ES00R2	
	100~240V <sub>AC</sub>	Transistor	24	16	DVP40ES00T2	
	100~240V <sub>AC</sub>	Relay	36	24	DVP60ES00R2	
EX Series Analog PLC	100~240V <sub>AC</sub>	Relay	8	6	DVP20EX00R2	
		Analog	4	2		
	100~240V <sub>AC</sub>	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	100~240V <sub>AC</sub>	Relay	6	4	DVP10EC00R3	 
	100~240V <sub>AC</sub>	Transistor	6	4	DVP10EC00T3	
	100~240V <sub>AC</sub>	Relay	8	6	DVP14EC00R3	
	100~240V <sub>AC</sub>	Transistor	8	6	DVP14EC00T3	
	100~240V <sub>AC</sub>	Relay	8	8	DVP16EC00R3	
	100~240V <sub>AC</sub>	Transistor	8	8	DVP16EC00T3	
	100~240V <sub>AC</sub>	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 <sub>AC</sub>	Transistor	12	8	DVP20EC00T3	
	100~240 V <sub>AC</sub>	Relay	12	12	DVP24EC00R3	
	100~240 V <sub>AC</sub>	Transistor	12	12	DVP24EC00T3	
	100~240 V <sub>AC</sub>	Relay	18	12	DVP30EC00R3	
	100~240 V <sub>AC</sub>	Transistor	18	12	DVP30EC00T3	
	100~240 V <sub>AC</sub>	Relay	16	16	DVP32EC00R3	
	100~240 V <sub>AC</sub>	Transistor	16	16	DVP32EC00T3	
	100~240 V <sub>AC</sub>	Relay	24	16	DVP40EC00R3	
	100~240 V <sub>AC</sub>	Transistor	24	16	DVP40EC00T3	
	100~240 V <sub>AC</sub>	Relay	28	20	DVP48EC00R3	
	100~240 V <sub>AC</sub>	Transistor	28	20	DVP48EC00T3	
	100~240 V <sub>AC</sub>	Relay	36	24	DVP60EC00R3	
100~240 V <sub>AC</sub>	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 <sub>AC</sub>	Relay	8	8	DVP16ES200R	
	100~240 V <sub>AC</sub>	Transistor	8	8	DVP16ES200T	
	100~240 V <sub>AC</sub>	Relay	16	8	DVP24ES200R	
	100~240 V <sub>AC</sub>	Transistor	16	8	DVP24ES200T	
	100~240 V <sub>AC</sub>	Relay	16	16	DVP32ES200R	
	100~240 V <sub>AC</sub>	Transistor	16	16	DVP32ES200T	
	240V <sub>DC</sub>	Relay	16	16	DVP32ES211T	
	100~240 V <sub>AC</sub>	Transistor	24	16	DVP40ES200R	
	100~240 V <sub>AC</sub>	Relay	24	16	DVP40ES200T	
	100~240 V <sub>AC</sub>	Transistor	36	24	DVP60ES200R	
ES2 Series Built-in CANopen PLC	100~240 V <sub>AC</sub>	Transistor	36	24	DVP32ES200RC	
	100~240 V <sub>AC</sub>	Relay	36	24	DVP32ES200TC	
EX2 Series Analog PLC	100~240 V <sub>AC</sub>	Relay	8	6	DVP20EX200R	
		Analog	4	2		
	100~240 V <sub>AC</sub>	Transistor	8	6	DVP20EX200T	
EX2 Series Temperature/ Analog PLC	100~240 V <sub>AC</sub>	Relay	16	10	DVP30EX200R	
		Analog	3	1		
	100~240 V <sub>AC</sub>	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 <sub>AC</sub>	Relay	-	24	DVP24XN200R	
	100~240 V <sub>AC</sub>	Transistor	-	24	DVP24XN200T	
	100~240 V <sub>AC</sub>	Relay	16	8	DVP24XP200R	
	100~240 V <sub>AC</sub>	Transistor	16	8	DVP24XP200T	
	100~240 V <sub>AC</sub>	Relay	16	16	DVP32XP200R	
	100~240 V <sub>AC</sub>	Transistor	16	16	DVP32XP200T	

Control


# Specifications & Ordering Information

## ES2/EX2 Series Digital/Analog Module (24V<sub>DC</sub>)



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

\*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 <sub>AC</sub>	Relay	8	8	DVP16EH00R3	
	100~240V <sub>AC</sub>	Transistor	8	8	DVP16EH00T3	
	100~240V <sub>AC</sub>	Relay	12	8	DVP20EH00R3	
	100~240V <sub>AC</sub>	Transistor	12	8	DVP20EH00T3	
	100~240V <sub>AC</sub>	Transistor	16	16	DVP32EH00T3	
	100~240V <sub>AC</sub>	Relay	16	16	DVP32EH00R3	
	100~240V <sub>AC</sub>	Differential	16	16	DVP32EH00M3	
	100~240V <sub>AC</sub>	Relay	16	16	DVP32EH00R3-L	
	100~240V <sub>AC</sub>	Transistor	16	16	DVP32EH00T3-L	
	100~240V <sub>AC</sub>	Transistor	24	16	DVP40EH00T3	
	100~240V <sub>AC</sub>	Relay	24	16	DVP40EH00R3	
	100~240V <sub>AC</sub>	Relay	24	24	DVP48EH00R3	
	100~240V <sub>AC</sub>	Transistor	24	24	DVP48EH00T3	
	100~240V <sub>AC</sub>	Relay	32	32	DVP64EH00R3	
	100~240V <sub>AC</sub>	Transistor	32	32	DVP64EH00T3	
	100~240V <sub>AC</sub>	Relay	40	40	DVP80EH00R3	
	100~240V <sub>AC</sub>	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	
	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"> <li>• 4 points of analog voltage (-10V~+10V)/current (-20mA~+20mA) <sup>*1</sup></li> <li>• Input resolution: 14-bit</li> <li>• Built-in RS-485 interface</li> </ul>			DVP04AD-H2	
	<ul style="list-style-type: none"> <li>• 4 points of analog voltage (0V~+10V)/current (0mA~+20mA) output <sup>*1</sup></li> <li>• Resolution: 12-bit</li> <li>• Built-in RS-485 interface</li> </ul>			DVP04DA-H2	
	<ul style="list-style-type: none"> <li>• 4 points of analog voltage (-10V~+10V)/current (-20mA~+20mA) input</li> <li>• 2 points of analog voltage (0V~+10V)/current (0mA~+20mA) output</li> <li>• Resolution: 12-bit</li> <li>• Built-in RS-485 interface</li> </ul>			DVP06XA-H2	
	<ul style="list-style-type: none"> <li>• 4 points of platinum RTD (Pt100, Pt1000, Ni100, Ni1000) sensor input <sup>*1</sup>/ 0~300Ω or 0~3000Ω resistance input</li> <li>• Resolution: 0.1°C</li> <li>• Built-in RS-485 interface</li> </ul>			DVP04PT-H2	
	<ul style="list-style-type: none"> <li>• 4 points of thermocouple (J, K, R, S, T, E, N Type) sensor input <sup>*1</sup>/0~150mV voltage input</li> <li>• Resolution: 0.1°C</li> <li>• Built-in RS-485 interface</li> </ul>			DVP04TC-H2	
	<ul style="list-style-type: none"> <li>• 8 points of thermocouple (J, K, R, S, T, E, N Type) sensor input <sup>*1</sup>/ 0~150mV or ±150mV voltage input</li> <li>• Resolution: 0.1°C</li> <li>• Built-in RS-485 interface</li> </ul>			DVP08TC-H2	
	<ul style="list-style-type: none"> <li>• 4 channels of differential voltage (-10V~+10V)/current (-20mA~+20mA) input</li> <li>• Resolution: 16-bit</li> <li>• Built-in RS-485 interface</li> </ul>			DVP04AD-H3	
	<ul style="list-style-type: none"> <li>• 4 channels of voltage (-10V~+10V)/current (0~+20mA) output</li> <li>• Resolution: 16-bit</li> <li>• Built-in RS-485 interface</li> </ul>			DVP04DA-H3	
<ul style="list-style-type: none"> <li>• 4 channels of differential voltage (-10V~+10V)/current (-20mA~+20mA) input</li> <li>• 2 channels of voltage (-10V~+10V)/current (0~+20mA) output</li> <li>• Resolution: 16-bit</li> <li>• Built-in RS-485 interface</li> </ul>			DVP06XA-H3		

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





### EH3 Series Extension Module/Function Card

Product Name	Description	Model Name	Certificates
Positioning Module	Servo position control module (single axis, 200kHz)	DVP01PU-H2	
High-Speed Counter	High-speed counter module (1CH)	DVP01HC-H2	
Communication Module	PROFIBUS DP slave communication module	DVPPF02-H2	
	CANopen slave communication module	DVPCP02-H2	
	DeviceNet slave communication module	DVPTD02-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	



Control

# Specifications & Ordering Information


## S Series PLC

Product Name	Power Supply	Output Method	Inputs	Outputs	Model Name	Certificates
SV2 Series Functional PLC	24V <sub>dc</sub>	Relay	16	12	DVP28SV11R2	
	24V <sub>dc</sub>	Transistor (NPN)	16	12	DVP28SV11T2	
	24V <sub>dc</sub>	Transistor (PNP)	16	12	DVP28SV11S2	
	24V <sub>dc</sub>	Transistor (NPN)	10 (2AI)	12	DVP24SV11T2	
Execution time of basic instructions			0.24 μs			
SS2 Series Standard PLC	24V <sub>dc</sub>	Relay	8	6	DVP14SS211R	
	24V <sub>dc</sub>	Transistor (NPN)	8	6	DVP14SS211T	
	24V <sub>dc</sub>	Transistor (PNP)	8	4	DVP12SS211S	
SA2 Series Advanced PLC	24V <sub>dc</sub>	Relay	8	4	DVP12SA211R	
	24V <sub>dc</sub>	Transistor	8	4	DVP12SA211T	
SX2 Series Analog PLC	24V <sub>dc</sub>	Relay	8 (4AI)	6(2AO)	DVP20SX211R	
	24V <sub>dc</sub>	Transistor (NPN)	8 (4AI)	6(2AO)	DVP20SX211T	
	24V <sub>dc</sub>	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 <sub>dc</sub>	Relay	8	4	DVP12SE11R	
	24V <sub>dc</sub>	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 <sub>dc</sub>	Relay	4 (2AI)	2 (2AO)	DVP10SX11R	
	24V <sub>dc</sub>	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 connector	-	32	DVP32SN11TN	
MIL connector	32	-	DVP32SM11N		
Product Name	Description			Model Name	Certificates
Analog I/O Module	<ul style="list-style-type: none"> <li>4 points of analog input voltage (-10V~+10V)/ current (-20mA~+20mA)</li> <li>Input resolution: 14-bit</li> </ul>		<ul style="list-style-type: none"> <li>Built-in RS-485 interface</li> <li>Differential input</li> </ul>	DVP04AD-S2	
	<ul style="list-style-type: none"> <li>4 points of analog output voltage (0V~+10V)/ current (0mA~+20mA)</li> </ul>		<ul style="list-style-type: none"> <li>Output resolution: 12-bit</li> <li>Built-in RS-485 interface</li> </ul>	DVP04DA-S2	
	<ul style="list-style-type: none"> <li>Analog input+output module (6 points)</li> <li>4 points of analog input voltage (-10V~+10V)/current (-20mA~+20mA)</li> <li>2 points of analog output voltage (0V~+10V)/ current (0mA~+20mA)</li> </ul>		<ul style="list-style-type: none"> <li>Input/output resolution: 12-bit</li> <li>Built-in RS-485 interface</li> <li>Differential input</li> </ul>	DVP06XA-S2	
	<ul style="list-style-type: none"> <li>4 points of analog input voltage (-10V~+10V)/current (-20mA~+20mA)</li> <li>Input resolution: 14-bit</li> </ul>		<ul style="list-style-type: none"> <li>Built-in RS-485 interface</li> <li>Single-ended input</li> </ul>	DVP04AD-S	

## S Series Analog Module


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

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


Product Name	Description	Model Name	Certificates
Left-Side High-Speed Analog I/O Module	<ul style="list-style-type: none"> <li>4 groups of analog input *1</li> <li>Signal range: 1~5V, 0~5V, -5~5V, 0~10V, -10~10V, 4~20mA, 0~20mA, -20~20mA</li> <li>Resolution: 16-bit</li> <li>Single channel On/Off setup enhances entire conversion efficiency</li> <li>Conversion time: 250µs/point</li> <li>Off-line alarm (1~5V, 4~20mA)</li> </ul>	DVP04AD-SL	
	<ul style="list-style-type: none"> <li>4 groups of analog output *1</li> <li>Signal range: 0~10V, -10~10V, 4~20mA, 0~20mA</li> <li>Resolution: 16-bit</li> <li>Offers single channel On/Off setup</li> <li>Conversion time: 250µs/point</li> </ul>	DVP04DA-SL	
Left-Side High-Speed Load Cell Module	<ul style="list-style-type: none"> <li>1 set of load cell module *1</li> <li>Resolution: 24-bit</li> </ul>	<ul style="list-style-type: none"> <li>Connectable to 4-wire/6-wire load cell sensor</li> <li>Measurable range: 0~80mV/V</li> </ul> New DVP201LC-SL	
	<ul style="list-style-type: none"> <li>1 set of load cell module *1</li> <li>Resolution: 24-bit</li> <li>Connectable to 4-wire/6-wire load cell sensor</li> </ul>	<ul style="list-style-type: none"> <li>Measurable range: 0~80mV/V</li> <li>Built-in I/O control: 2DI/4DO/1AO</li> </ul> New DVP211LC-SL	
	<ul style="list-style-type: none"> <li>2 sets of load cell module *1</li> <li>Resolution: 24-bit</li> </ul>	<ul style="list-style-type: none"> <li>Connectable to 4-wire/6-wire load cell sensor</li> <li>Measurable range: 0~80mV/V</li> </ul> New DVP202LC-SL	
	<ul style="list-style-type: none"> <li>Supports 2 channels of load cell signal input *1</li> <li>Resolution: 20-bit</li> <li>Connectable to 4-wire/6-wire load cell sensor</li> <li>Measurable range: 0~6mV/V</li> </ul>	DVP02LC-SL	
	<ul style="list-style-type: none"> <li>Supports 1 channel of load cell signal input *1</li> <li>Resolution: 20-bit</li> <li>Connectable to 4-wire/6-wire load cell sensor</li> <li>Measurable range: 0~6mV/V</li> </ul>	DVP01LC-SL	
Temperature Measurement Module	<ul style="list-style-type: none"> <li>6 points of platinum RTD (Pt100, Pt1000, Ni100, Ni1000) sensor input</li> <li>Resolution: 0.1°C</li> </ul>	DVP06PT-S	
	<ul style="list-style-type: none"> <li>4 points of platinum RTD (Pt100, Pt1000, Ni100, Ni1000) sensor input *1 (Version 4.06 and above supports Pt1000, Ni100, Ni1000)</li> <li>Resolution: 0.1°C</li> <li>Built-in RS-485 interface</li> </ul>	DVP04PT-S	
	<ul style="list-style-type: none"> <li>4 points of thermocouple (J, K, R, S, T type) sensor input *1</li> <li>Resolution: 0.1°C</li> <li>Built-in RS-485 interface</li> </ul>	DVP04TC-S	
Positioning Module	Servo position control module (single axis, 200kHz)	DVP01PU-S	
Communication Module	DeviceNet slave communication module	DVPDT01-S	
	PROFIBUS DP slave communication module	DVPPF01-S	
Left-Side High-Speed Communication Module	Ethernet communication module, 10/100Mbps	DVPEN01-SL	
	DeviceNet master communication module, 500Kbps	DVPDNET-SL	
	CANopen master communication module, 1Mbps	DVPCOPM-SL	
	PROFIBUS DP slave communication module, 12Mbps	DVPPF02-SL	
	RS-485/RS-422, serial communication module, 460Kbps	DVPSCM12-SL	
	BACnet MS/TP Slave communication module, 460Kbps	DVPSCM52-SL	
Remote I/O Module	RS-485 remote I/O module, connectable to S series I/O modules	RTU-485	
	Ethernet remote I/O module, connectable to S series I/O modules	RTU-EN01	
	DeviceNet remote I/O module, connectable to S series I/O modules	RTU-DNET	
	PROFIBUS remote I/O module, connectable to S series I/O modules	RTU-PD01	

# Specifications & Ordering Information


## Communication Converter

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


## PM Series

Product Name	Power Supply	Output Method	Inputs	Outputs	Model Name	Certificates
General Purpose Motion Controller	100 ~ 240V <sub>AC</sub>	Differential	16	16	DVP10PM00M	
		(Built-in 4-axis of independent 1MHz pulse output)				
Professional Motion Controller	100 ~ 240V <sub>AC</sub>	Differential	8	8	DVP20PM00DT	
		(Built-in 2-axis of independent 500kHz pulse output)			DVP20PM00D	
		(Built-in 3-axis of independent 500kHz pulse output)			DVP20PM00M	
PM Series Extension Module		Description			Model Name	
DVP-PM Communication card		Ethernet/CANopen communication card			DVP-FPMC	
DVP-PM Memory card		Data backup memory card (64K words) (Only supported by 20PM Series)			PM-PCC01	
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 <sub>DC</sub>	CANopen DS402	8	4	DVP10MC11T	


## Peripheral Accessories

Product Name	Description	Model Name	Certificates
Accessory	Data backup memory card (DVP-EH3 only)	DVP-512FM	
	Data backup memory card (64K words)	DVPPCC01	
	Communication cable for PC (9-pin & 25-pin D-Sub) and PLC, 3m	DVPACAB230	
	Communication cable for PC (9-pin D-Sub) and PLC, 3m	DVPACAB2A30	
	Communication cable for PC (9-pin D-Sub) and PLC (90° bend), 1m	DVPACAB2B10	
	I/O connection cable for DVP-32SM series	DVPACAB7A10	
	I/O connection cable for DVP-32SN series	DVPACAB7B10	
	External terminal module for DVP-32SM series (Dual-deck Euro type terminal to MIL connector)	DVPAETB-ID32A	
	External terminal module for DVP-32SN series (MIL connector to single-deck Euro type terminal)(16 relays included)	DVPAETB-OR16A	
	Supports 4 types of RS-485 connectors	ADP485-01	
	Connection cable for ADP485-01 and ASDA-A series servo	ADPCAB03A	
	Connection cable for ADP485-01 and ASDA-B series servo	ADPCAB03B	
	I/O extension cable for ES/EX series, 0.3m	DVPACAB403	
	Extension cable for EH series PLC and extension module, 0.7m	DVPACAB4A07	
	DeviceNet/ CANopen distribution box, 1 for 2	TAP-CN01	
	DeviceNet/ CANopen distribution box, 2 for 3	TAP-CN02	
	DeviceNet/ CANopen distribution box, 2 for 3 RJ45	TAP-CN03	
	CANopen main-line AWG18	TAP-CB01	
	CANopen sub-line AWG24	TAP-CB02	
	CANopen sub-line, RJ45 connector, 0.3m	TAP-CB03	
	CANopen sub-line, RJ45 connector, 0.5m	TAP-CB05	
	CANopen sub-line, RJ45 connector, 1m	TAP-CB10	
	CANopen sub-line, RJ45 connector, 2m	TAP-CB20	
	CANopen sub-line, RJ45 connector, 3m	TAP-CB30	
	CANopen sub-line, RJ45 connector, 10m	TAP-CB100	
	3.6V lithium battery (unchargeable) for EH/SX series PLC	DVPABT01	
	Terminal resistance for CANopen communication (RJ45)	TAP-TR01	
	TP programming cable	DVPACAB530	

## 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)

## Industrial Power Supply

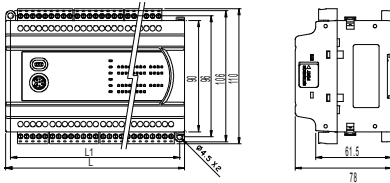
Series	Power Supply	Inputs	Outputs	Power	Output Current	Model Name	Certificates
DVP	1-phase	85~264V <sub>AC</sub>	24V <sub>DC</sub>	24W	1A	DVPPS01	
				48W	2A	DVPPS02	
				120W	5A	DVPPS05	

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

# Dimensions Dimensions are in mm

## ES2/EX2 Series PLC

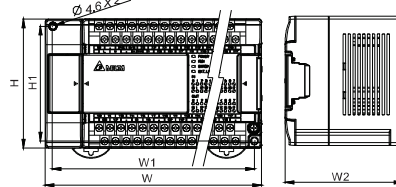
Model Name	L	L1
DVP16ES200R/T	105	97
DVP24ES200R/T	125	117
DVP32ES200R/T	145	137
DVP32ES200RC	145	137
DVP32ES200TC	145	137
DVP32ES211T	145	137
DVP40ES200R/T	165	157
DVP60ES200R/T	225	217
DVP20EX200R/T	145	137
DVP30EX200R/T	165	157



## EH3 Series PLC

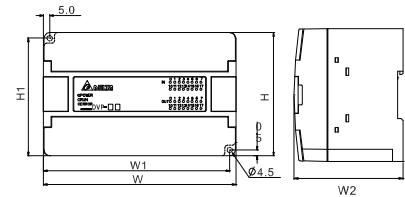
Model Name	H	H1	W	W1	W2
DVP16EH00R3/T3	90	80	113	103	82
DVP20EH00R3/T3	90	80	113	103	82
DVP32EH00M3	90	80	143.5	133.5	82
DVP32EH00R3/T3	90	80	143.5	133.5	82
DVP32EH00R3-L	90	80	143.5	133.5	82
DVP32EH00T3-L	90	80	143.5	133.5	82
DVP40EH00R3/T3	90	80	158.8	153.8	82
DVP48EH00R3/T3	90	80	174	164	82
DVP64EH00R3/T3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



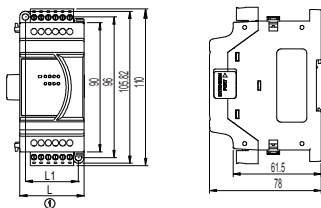
## ES/EX Series PLC

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

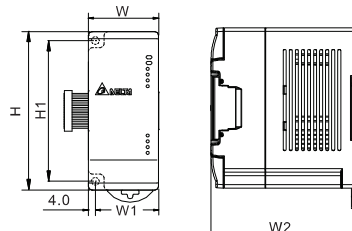
Model Name	L	L1	Type
DVP08XM211N	45	37	(1)
DVP08XP211R/T	45	37	(1)
DVP08XN211R/T	45	37	(1)
DVP16XM211N	70	62	(2)
DVP16XP211R/T	70	62	(2)
DVP16XN211R/T	70	62	(2)
DVP24XP200R/T	145	137	(2)
DVP24XN200R/T	145	137	(2)
DVP32XP200R/T	145	137	(2)
DVP04AD-E2	70	62	(2)
DVP02DA-E2	70	62	(2)
DVP04DA-E2	70	62	(2)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

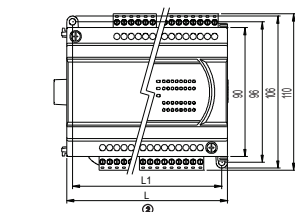
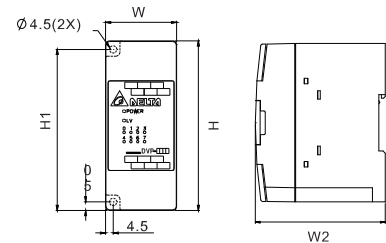
Model Name	H	H1	W	W1	W2
DVP08HM11N	90	80	40	36	82
DVP16HM11N	90	80	55	51	82
DVP32HM11N	90	80	143.5	133.5	82.2
DVP08HN11R/T	90	80	40	36	82
DVP32HN00R/T	90	80	143.5	133.5	82.2
DVP08HP11R/T	90	80	40	36	82
DVP16HP11R/T	90	80	55	51	82
DVP32HP00R/T	90	80	143.5	133.5	82.2
DVP48HP00R/T	90	80	174	164	82.2
Model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



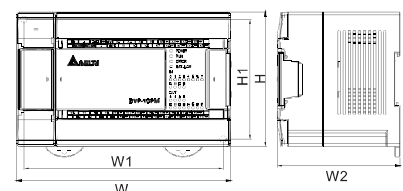
## ES/EX Series I/O & Extension Modules

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

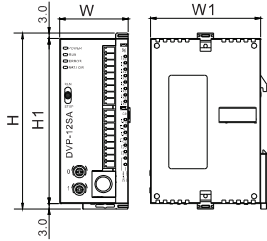
Model Name	H	H1	W	W1	W2
DVP20PM00D	90	80	174	164	82
DVP20PM00M	90	80	174	164	82
DVP10PM00M	90	80	143.5	133.5	82





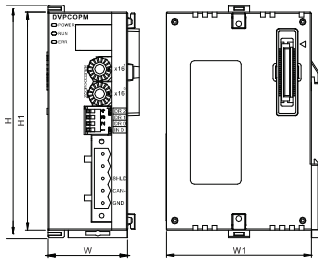
SE/SX/SS2/SA2 Series PLC

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



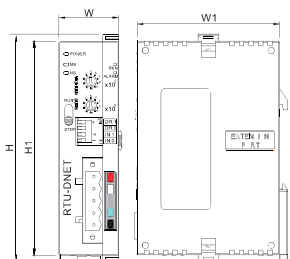
Left-Side High-Speed Extension Modules

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



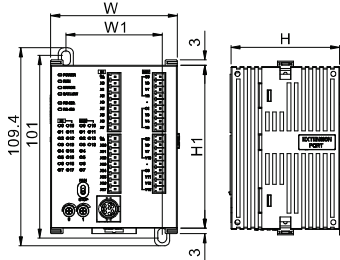
Remote I/O Modules

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



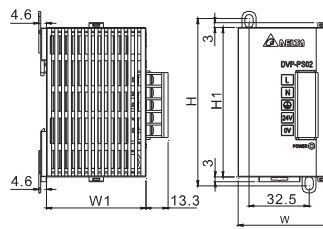
SV2/SX2/MC Series PLC

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



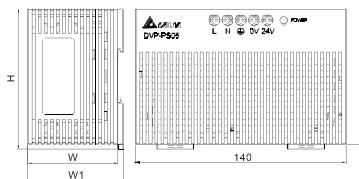
PS01/02 Power Supply Modules

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

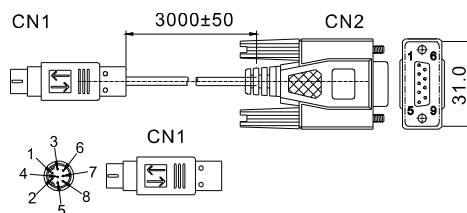


PS05 Power Supply Modules

Model Name	H	H1	W	W1
DVPPS05	93.3	90	60	63.4

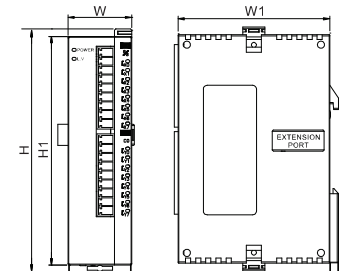


PIN Definition of DVPACAB2A30

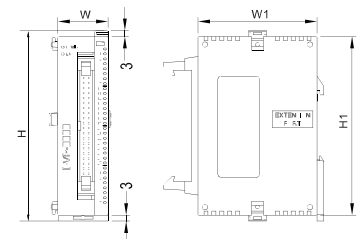


S Series I/O & Extension Modules

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



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



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
		5V	1,2

Unit: mm

# Wiring

## DVP-EH Series High-speed Multi-function PLC

Series	Model
DVP-EH3	DVP16EH00R3, DVP16EH00T3, DVP20EH00R3, DVP20EH00T3, DVP32EH00M3, DVP32EH00R3, DVP32EH00R3-L, DVP32EH00T3, DVP32EH00T3-L, DVP40EH00R3, DVP40EH00T3, DVP48EH00R3, DVP48EH00T3, DVP64EH00R3, DVP64EH00T3, DVP80EH00R3, DVP80EH00T3

### ■ Wiring Input Terminals

#### 1. Open-collector input terminals

##### Applicable model:

All high-speed multi-function PLCs except the differential input terminals of DVP32EH00M3

NPN (Sink)	PNP (Source)
NPN (Sink)=The current flows into the common terminal S/S	PNP (Source)=The current flows from the common terminal S/S

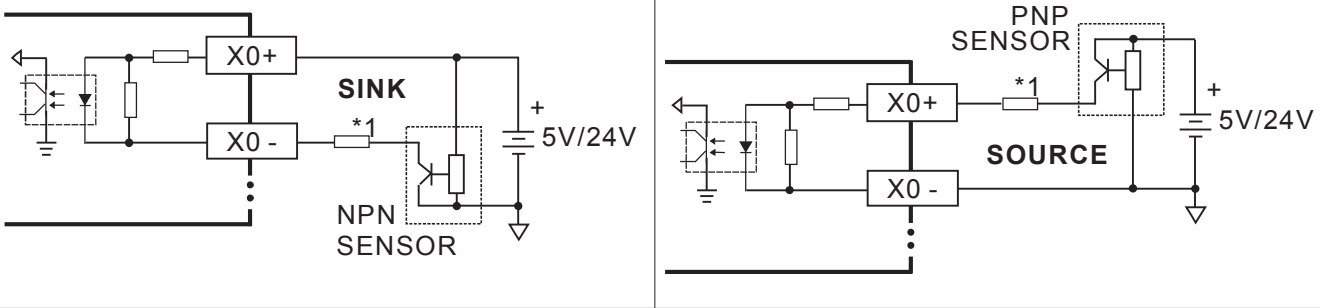
#### 2. Differential input terminals

##### Applicable model:

DVP32EH00M3

The wiring below is used for high speed and high noise.

If a frequency is less than 50kHz and there is not much noise, input terminals can be connected to 5 V/24 V direct-current power. A wiring diagram for an NPN sensor and a wiring diagram for a PNP sensor are shown below.



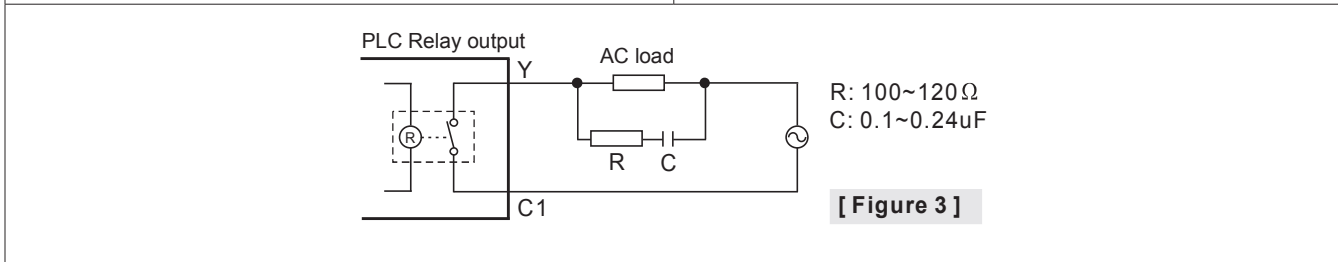
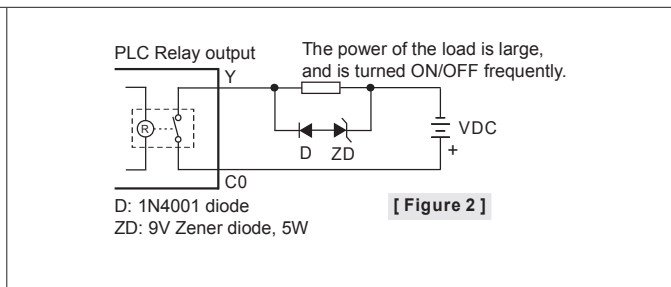
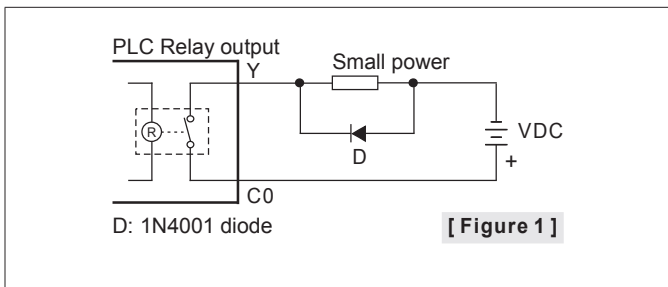
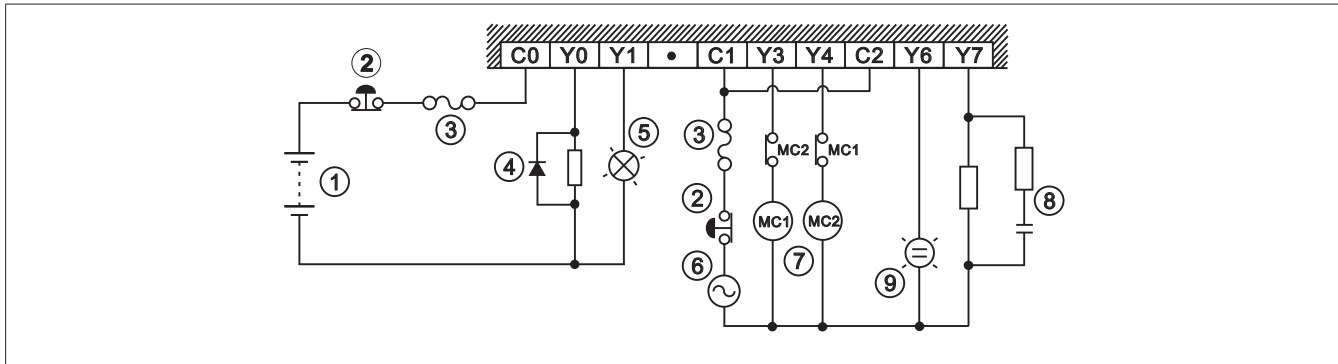
\*1. The resistor is only applicable to 24 V and 2 kΩ/0.5 W wiring.

## ■ Wiring Output Terminals

### 1. Wiring relay output terminals

#### Applicable model:

DVP16EH00R3, DVP20EH00R3, DVP32EH00R3, DVP32EH00R3-L, DVP40EH00R3, DVP48EH00R3, DVP64EH00R3, DVP80EH00R3, DVP32EH00M3 (relay output)



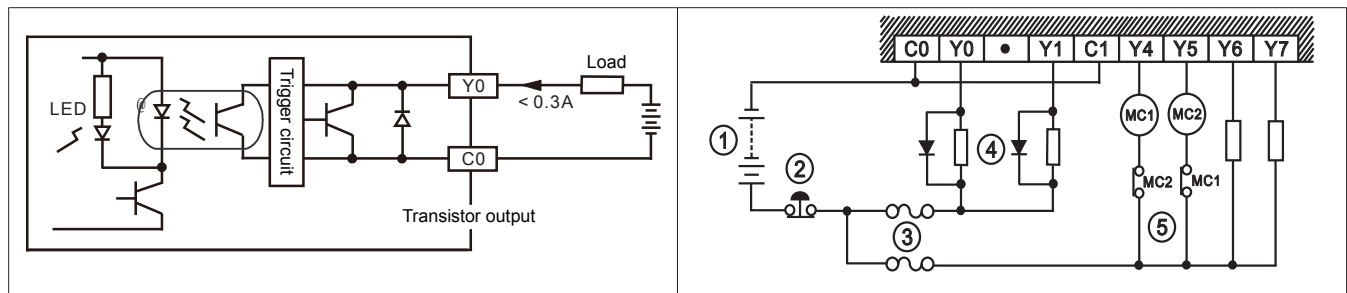
# Wiring

①	Direct-current power supply	②	Emergency stop: An external switch is used.
③	Fuse: To protect an output circuit, a fuse having a breaking capacity in the range of 5A to 10A is connected to a common terminal.		
④	Transient voltage suppression diode: It can be used to lengthen the lifespan that a contact has. 1.A Diode is used to suppress the DC passing a load when the power of the load is small. (Please see [Figure 1].) 2.A Diode and a Zener diode are used to suppress the DC passing a load when the power of the load is large, and is turned ON/OFF frequently. (Please see [Figure 2].)		
⑤	Incandescent lamp (resistive load)	⑥	Alternating-current power supply
⑦	Mutually exclusive output: For example, Y3 controls the clockwise rotation of a motor, and Y4 controls the counterclockwise rotation of the motor. The interlock circuit which is formed, and the program in the PLC ensure that there are protective measures if an abnormal condition occurs.		
⑧	Surge absorber: It can be used to reduce the noise produced by an AC load. (Please see [Figure 3].)		
⑨	Indicator: Neon lamp		

## 2. Wiring (NPN) transistor output terminals

### Applicable model:

DVP16EH00T3, DVP20EH00T3, DVP32EH00T3, DVP32EH00T3-L, DVP40EH00T3, DVP48EH00T3, DDVP64EH00T3, DVP80EH00T3

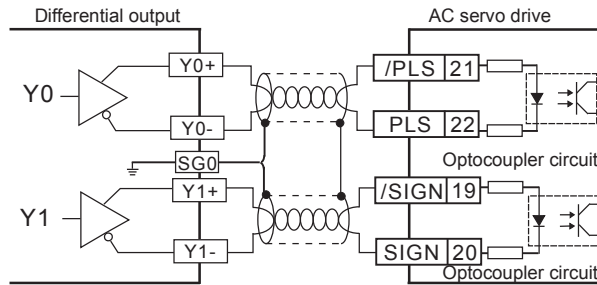


### 3. Wiring differential output terminals

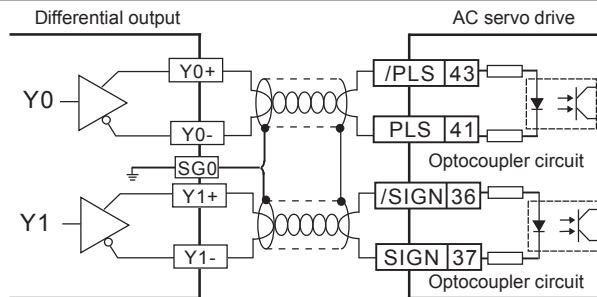
**Applicable model:**

DVP32EH00M3

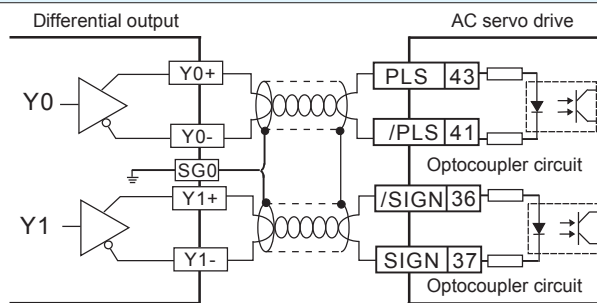
**1. Connecting differential output terminals to an AC servo drive ASDA-A/ASDA-A+ /ASDA-A2 series AC servo drive**



**2. Connecting differential output terminals to an AC servo drive ASDA-B series AC servo drive**



**3. Connecting differential output terminals to an AC servo drive ASDA-AB series AC servo drive**



# Wiring

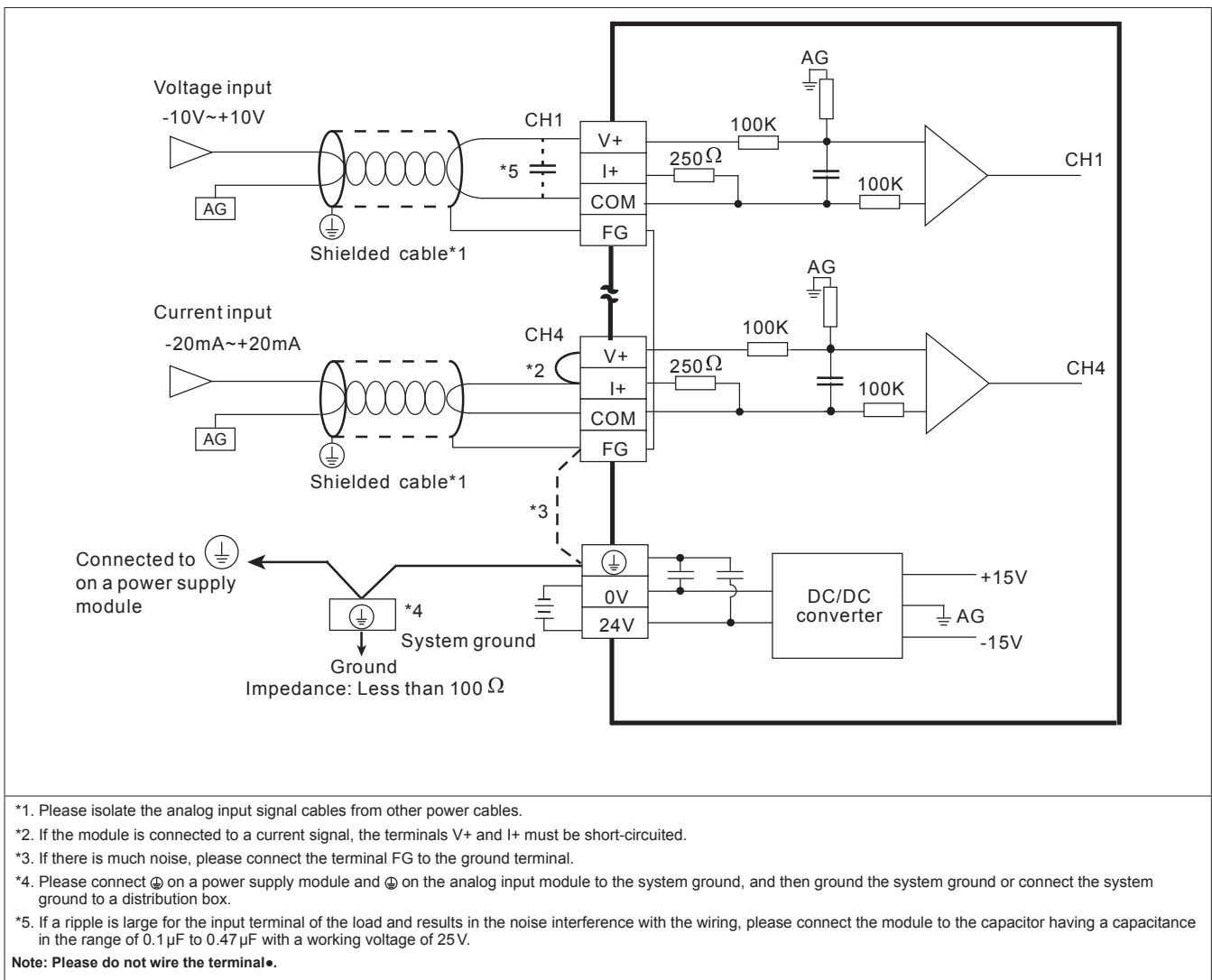
## Analog Modules

Analog input module	DVP04AD-H2	DVP04AD-H3	DVP04DA-H3	DVP04DA-H2
Analog input/output module	DVP06XA-H2	DVP06XA-H3		

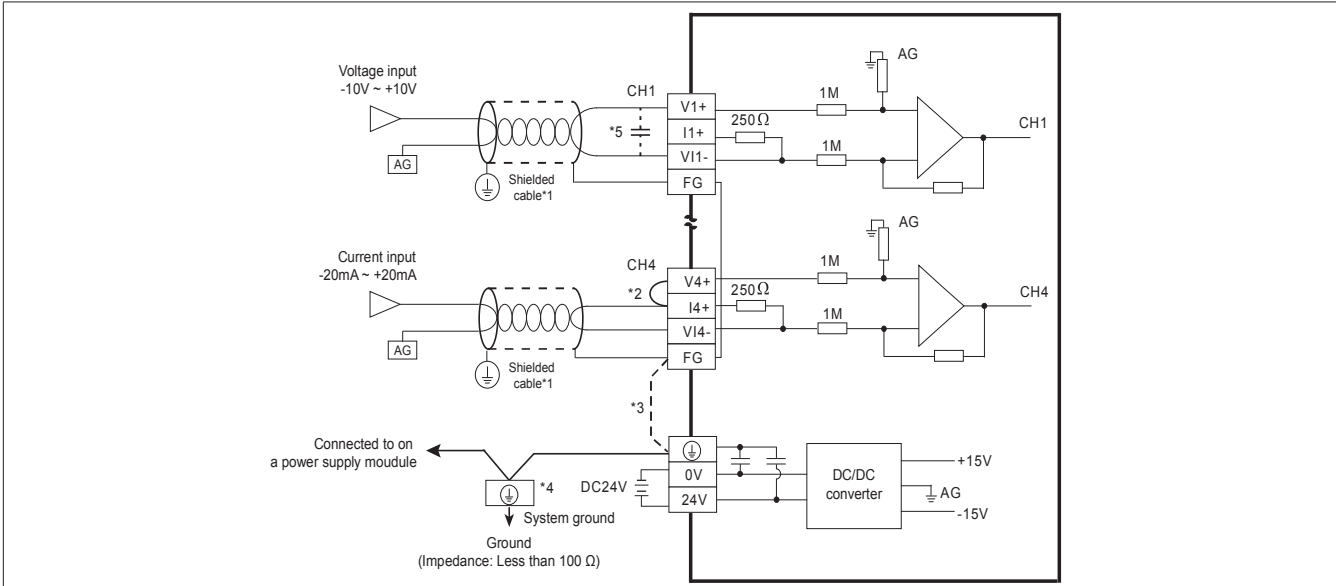
### Analog input module

#### Applicable model:

DVP04AD-H2

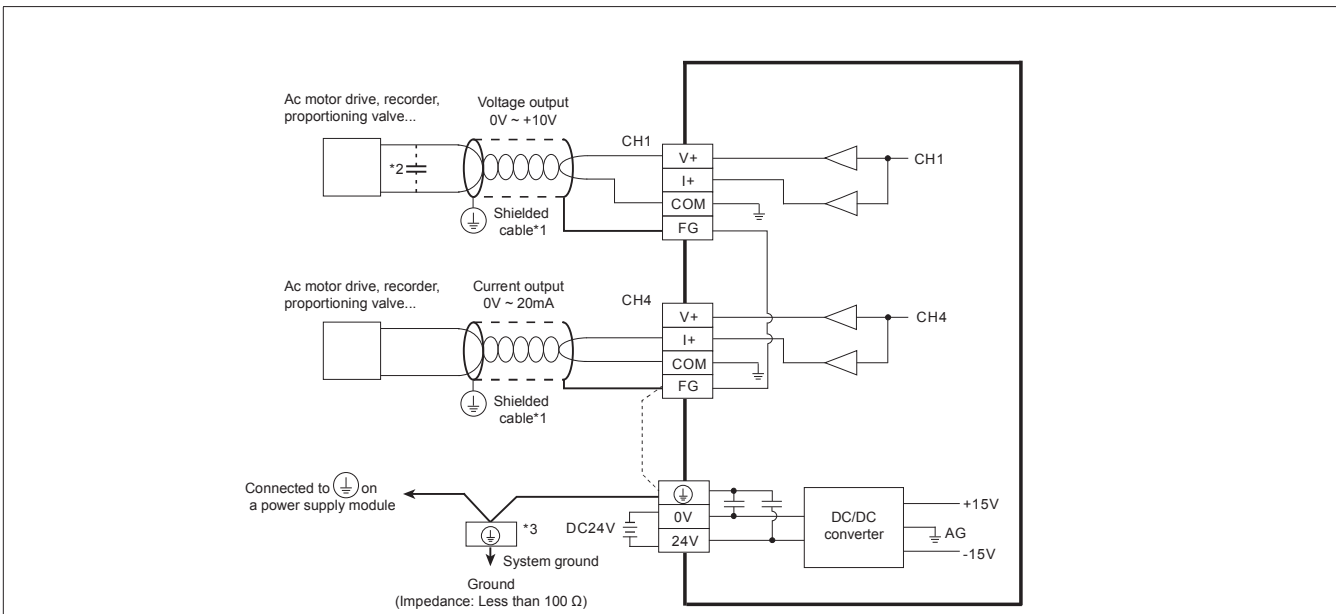


**Applicable model:**  
DVP04AD-H3



- \*1. Please isolate the analog input signal cables from other power cables.
  - \*2. If the module is connected to a current signal, the terminals V4+ and I4+ must be short-circuited.
  - \*3. If there is much noise, please connect the terminal FG to the ground terminal.
  - \*4. Please connect Ⓧ on a power supply module and Ⓧ on the analog input module to the system ground, and then ground the system ground or connect the system ground to a distribution box.
  - \*5. If a ripple is large for the input terminal of the load and results in the noise interference with the wiring, please connect the module to the capacitor having a capacitance in the range of 0.1 μF to 0.47 μF with a working voltage of 25V.
- Note:** Please do not wire the terminal.

**Applicable model:**  
DVP04DA-H3, DVP04DA-H2



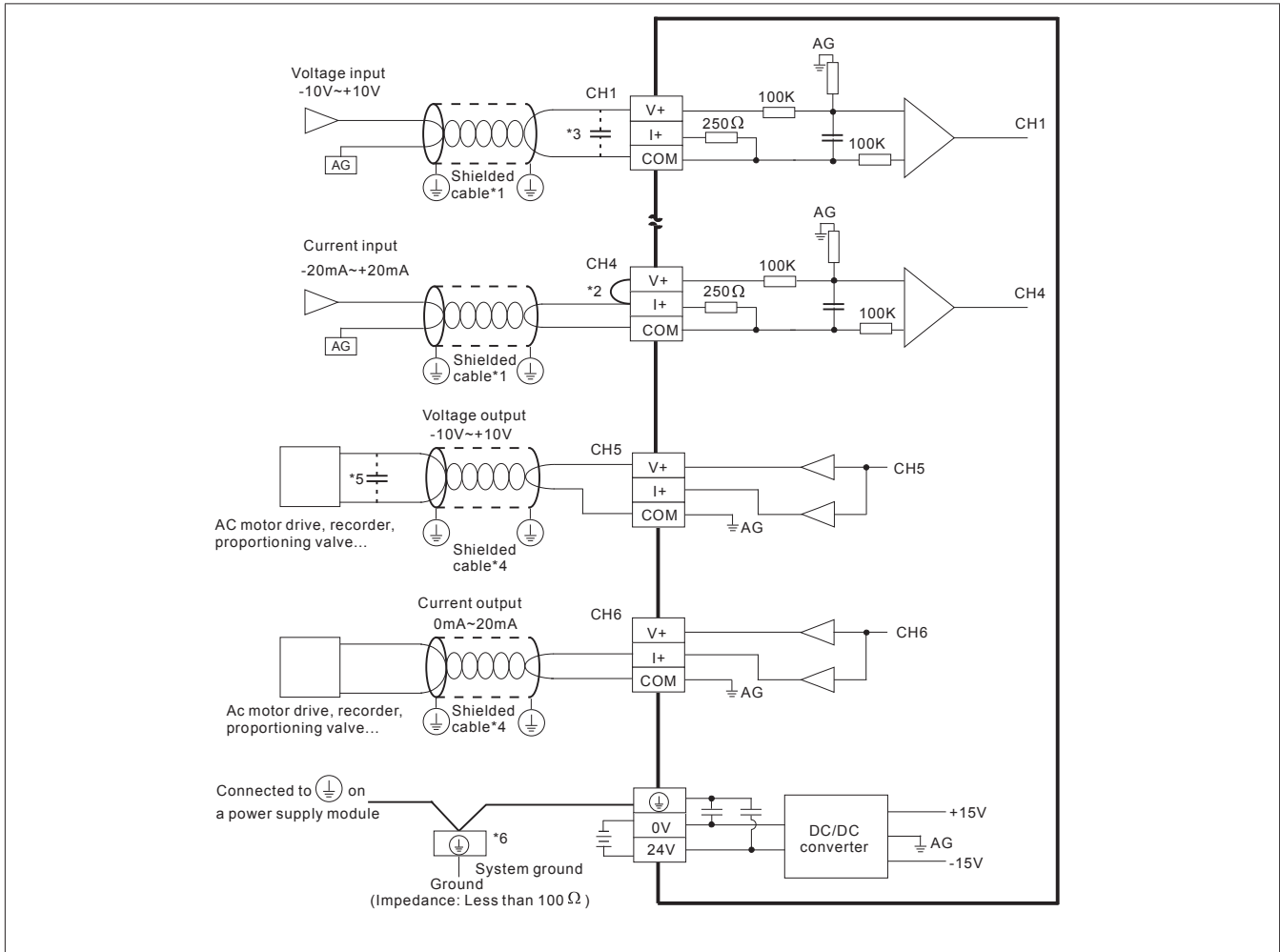
- \*1. Please isolate the analog output signal cables from other power cables.
  - \*2. If a ripple is large for the input terminal of the load and results in the noise interference with the wiring, please connect the module to the capacitor having a capacitance in the range of 0.1 μF to 0.47 μF with a working voltage of 25V.
  - \*3. Please connect Ⓧ on a power supply module and Ⓧ on the analog output module to the system ground, and then ground the system ground or connect the system ground to a distribution box.
  - \*4. If there is much noise, please connect the terminal FG to the ground terminal.
- Note:** Please do not wire the terminal.

# Wiring

## Analog input / output module

### Applicable model:

DVP06XA-H2



\*1. Please isolate the analog input signal cables from other power cables.

\*2. If the module is connected to a current signal, the terminals V+ and I+ must be short-circuited.

\*3. If the ripple in the input voltage results in the noise interference with the wiring, please connect the module to the capacitor having a capacitance in the range of 0.1  $\mu\text{F}$  to 0.47  $\mu\text{F}$  with a working voltage of 25V.

\*4. Please isolate the analog output signal cables from other power cables.

\*5. If a ripple is large for the input terminal of the load and results in the noise interference with the wiring, please connect the module to the capacitor having a capacitance in the range of 0.1  $\mu\text{F}$  to 0.47  $\mu\text{F}$  with a working voltage of 25V.

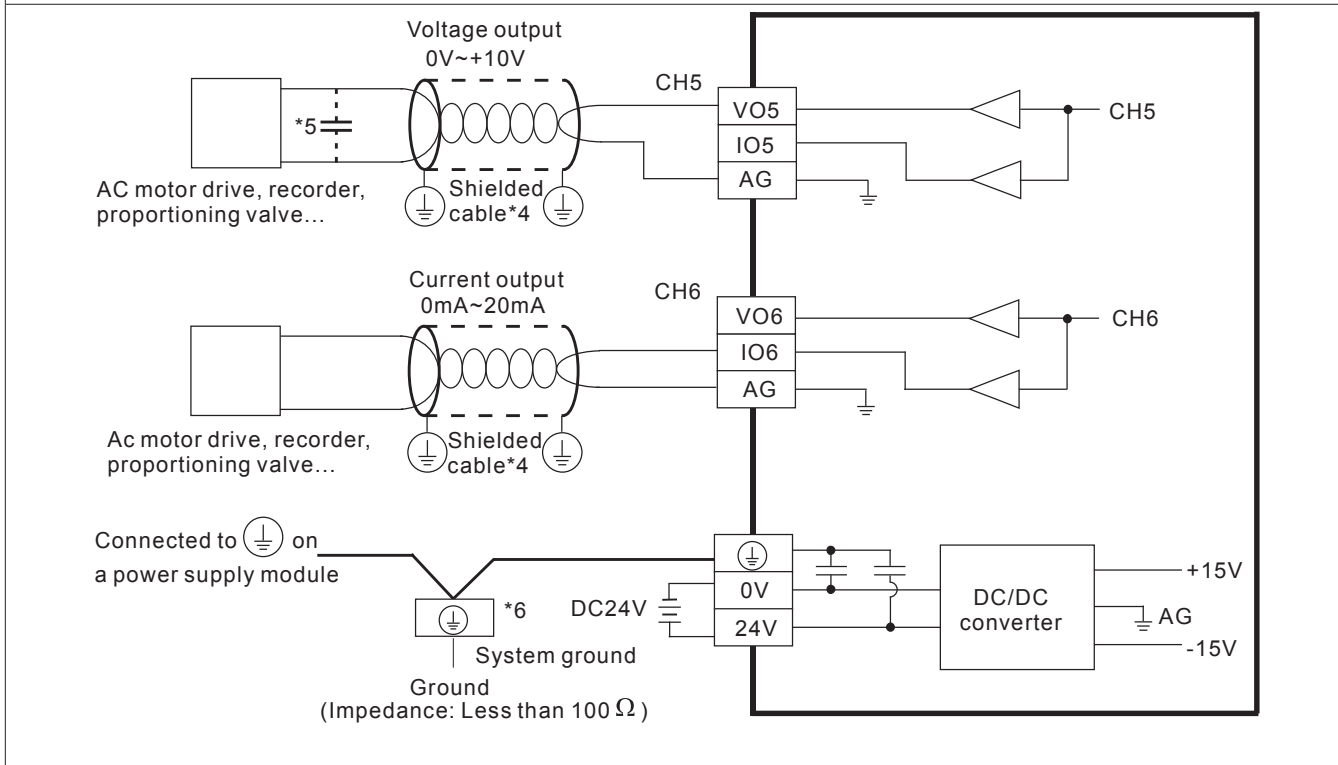
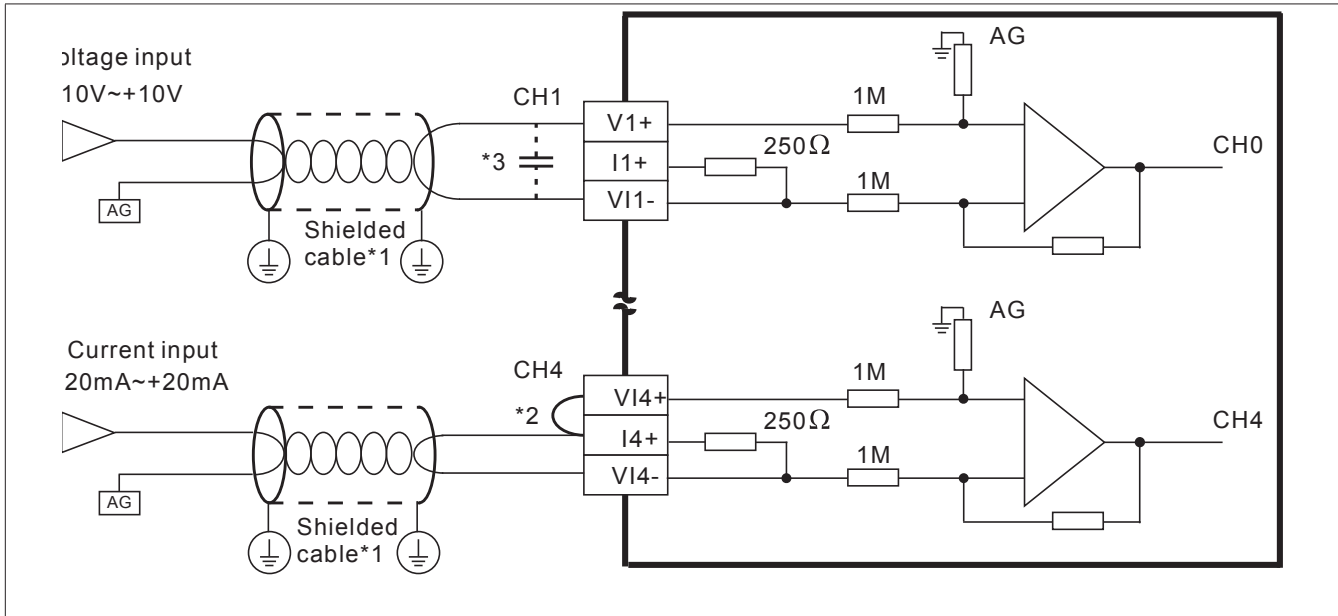
\*6. Please connect  $\oplus$  on a power supply module and  $\ominus$  on the module to the system ground, and then ground the system ground or connect the system ground to a distribution box.

**Note:** Please do not wire the terminal.



Applicable model:

DVP06XA-H3



- \*1. Please isolate the analog input signal cables from other power cables.
- \*2. If the module is connected to a current signal, the terminals V+ and I+ must be short-circuited.
- \*3. If the ripple in the input voltage results in the noise interference with the wiring, please connect the module to the capacitor having a capacitance in the range of 0.1  $\mu\text{F}$  to 0.47  $\mu\text{F}$  with a working voltage of 25V.
- \*4. Please isolate the analog output signal cables from other power cables.
- \*5. If a ripple is large for the input terminal of the load and results in the noise interference with the wiring, please connect the module to the capacitor having a capacitance in the range of 0.1  $\mu\text{F}$  to 0.47  $\mu\text{F}$  with a working voltage of 25V.
- \*6. Please connect Ⓧ on a power supply module and Ⓧ on the module to the system ground, and then ground the system ground or connect the system ground to a distribution box.

Note: Please do not wire the terminals.

# Wiring

## ■ Digital Input/Output Modules

DVP08HM11N	DVP16HM11N	DVP32HM11N	DVP08HN11R	DVP08HP11R
DVP16HP11R	DVP08HN11T	DVP08HP11T	DVP16HP11T	DVP32HN00R
DVP32HP00R	DVP48HP00R	DVP32HN00T	DVP32HP00T	DVP48HP00T

### A. Wiring input terminals

Wiring DC input terminals (NPN (Sink) and PNP (Source))

#### Applicable model:

The input terminals of all digital modules

NPN (Sink)	PNP (Source)
NPN (Sink)=The current flows into the common terminal S/S	PNP (Source)=The current flows from the common terminal S/S

### B. Wiring output terminals

B.1 Wiring relay output terminals

#### Applicable model:

DVP08HN11R, DVP08HP11R, DVP16HP11R, DVP32HN00R, DVP32HP00R, DVP48HP00R

PLC Relay output Y

Small power

D: 1N4001 diode

**[ Figure 1 ]**

PLC Relay output Y

The power of the load is large, and is turned ON/OFF frequently.

D: 1N4001 diode  
ZD: 9 V Zener diode, 5 W

**[ Figure 2 ]**

PLC Relay output Y

AC load

R: 100~120 Ω  
C: 0.1~0.24 μF

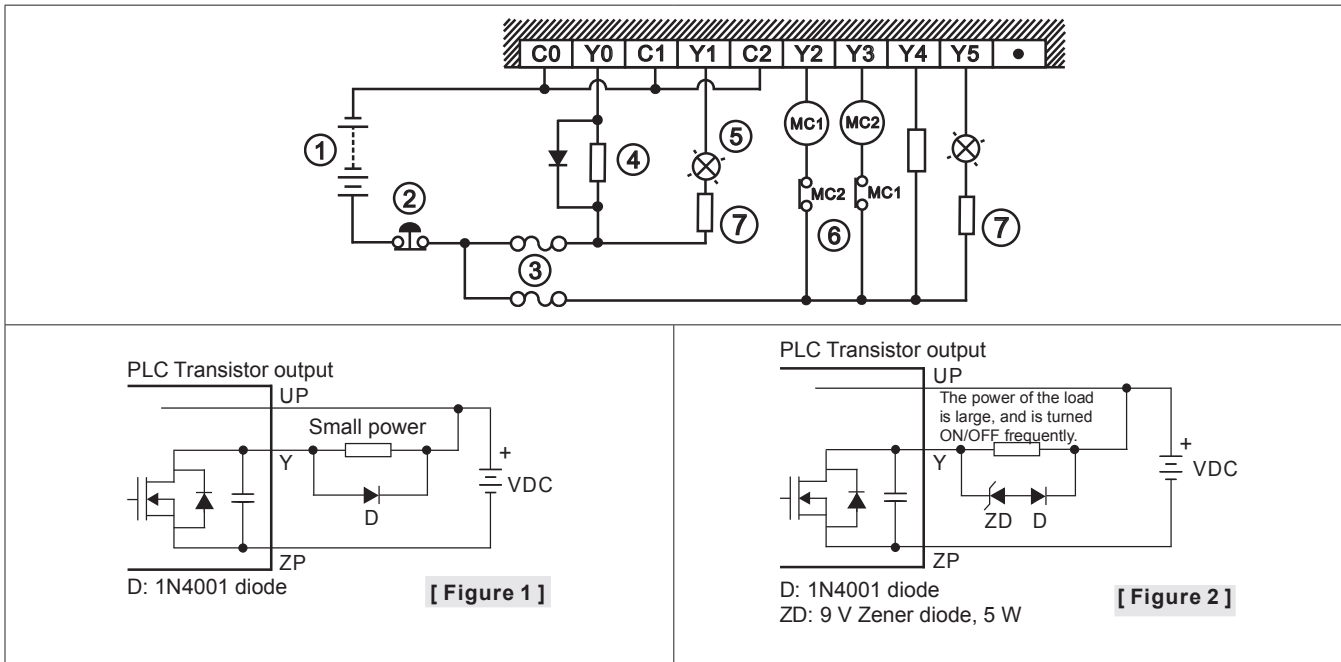
**[ Figure 3 ]**

①	Direct-current power supply	②	Emergency stop: An external switch is used.
③	Fuse: To protect an output circuit, a fuse having a breaking capacity in the range of 5A to 10A is connected to a common terminal.		
④	Transient voltage suppression diode: It can be used to lengthen the lifespan that a contact has. 1.A Diode is used to suppress the DC passing a load when the power of the load is small. (Please see [Figure 1].) 2.A Diode and a Zener diode are used to suppress the DC passing a load when the power of the load is large, and is turned ON/OFF frequently. (Please see [Figure 2].)		
⑤	Incandescent lamp (resistive load)	⑥	Alternating-current power supply
⑦	Mutually exclusive output: For example, Y2 controls the clockwise rotation of a motor, and Y3 controls the counterclockwise rotation of the motor. The interlock circuit which is formed, and the program in the PLC ensure that there are protective measures if an abnormal condition occurs.		
⑧	Surge absorber: It can be used to reduce the noise produced by an AC load. (Please see [Figure 3].)		

B.2 Wiring transistor output terminals

Applicable model:

DVP08HN11T, DVP08HP11T, DVP16HP11T, DVP32HN00T, DVP32HP00T, DVP48HP00T



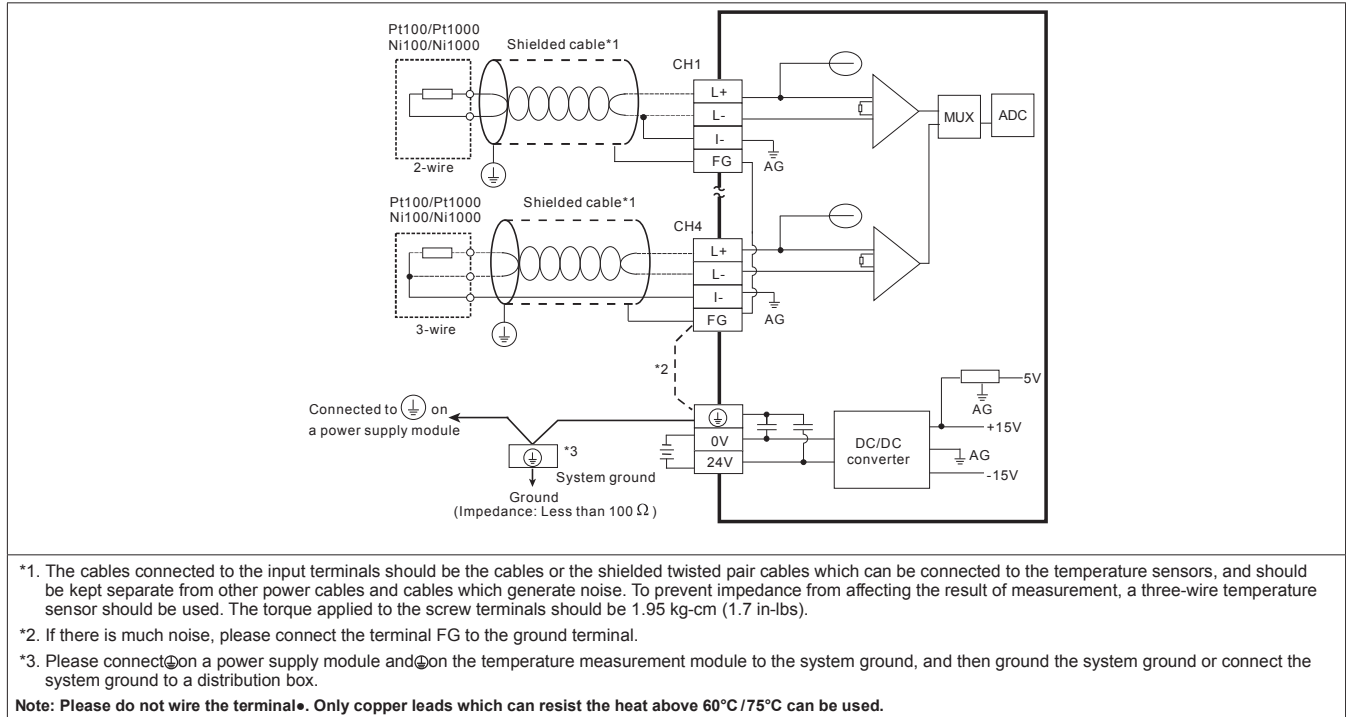
①	Direct-current power supply	②	Emergency stop	④	Fuse
④	The output terminals of a transistor module are open-collector output terminals. If Y0/Y1 is a pulse output terminal of a transistor module, the output current passing through the output pull-up resistor of the transistor module must be greater than 0.1A to ensure that the transistor module operates normally. 1.A Diode is used to suppress the DC passing a load when the power of the load is small. (Please see [Figure 1].) 2.A Diode and a Zener diode are used to suppress the DC passing a load when the power of the load is large, and is turned ON/OFF frequently. (Please see [Figure 2].)				
⑤	Incandescent lamp (resistive load)				
⑥	Mutually exclusive output: For example, Y2 controls the clockwise rotation of a motor, and Y3 controls the counterclockwise rotation of the motor. The interlock circuit which is formed, and the program in the PLC ensure that there are protective measures if an abnormal condition occurs.				
⑦	If an incandescent lamp (resistive load) is driven, an NTC resistor needs to be connected in series				

# Wiring

## ■ Temperature Measurement Module (RTDs)

### Applicable model:

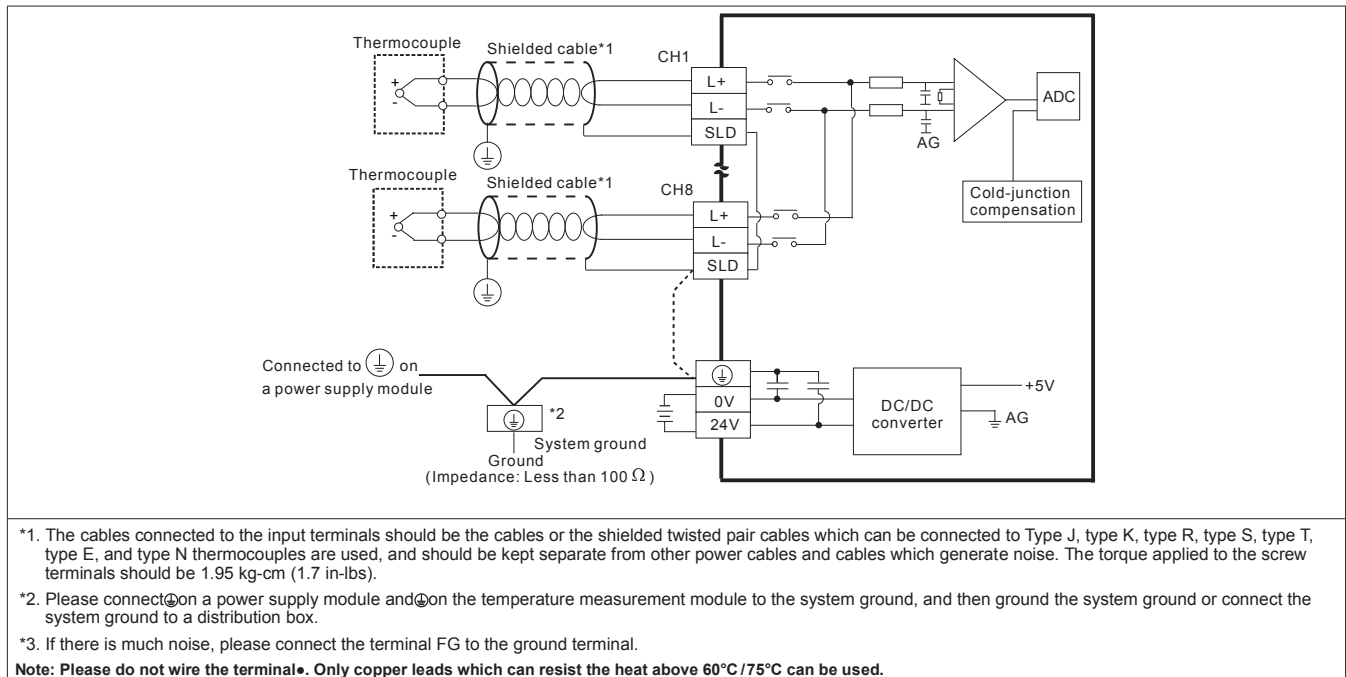
DVP04PT-H2



## ■ Temperature Measurement Module (Thermocouples)

### Applicable model:

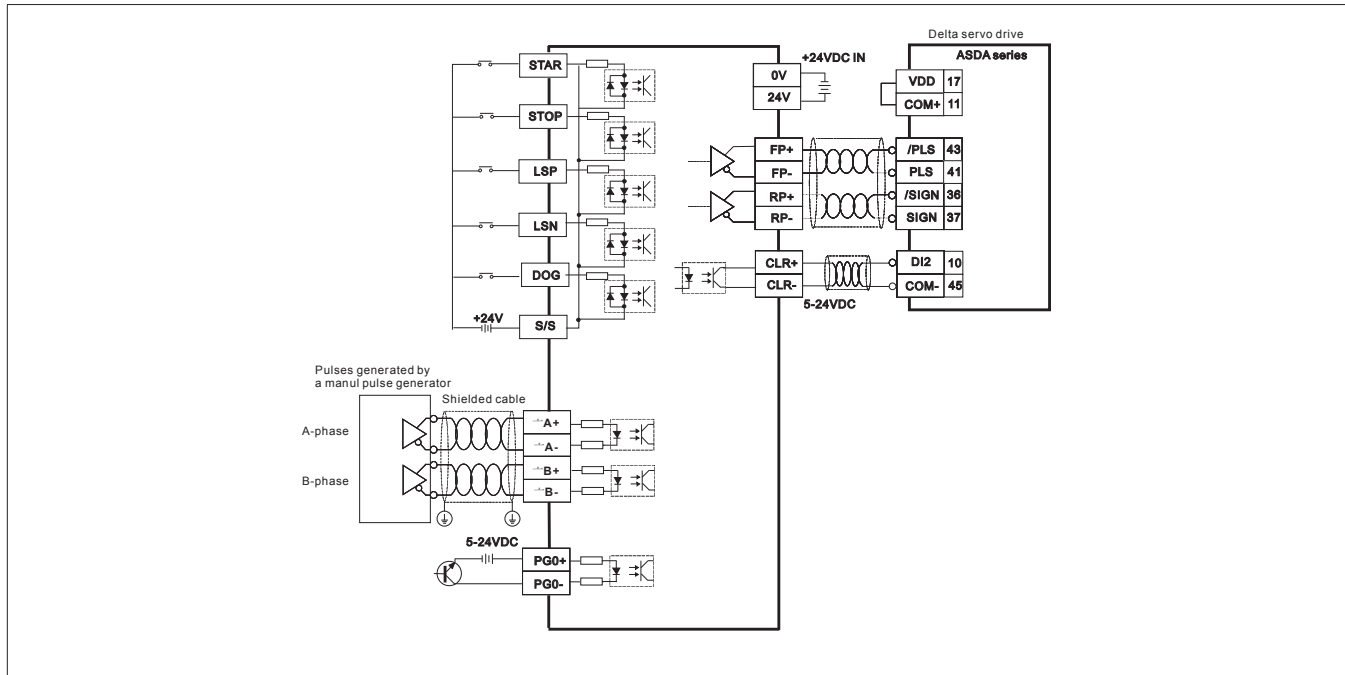
DVP04TC-H2, DVP08TC-H2



■ Position Control Module

Applicable model:

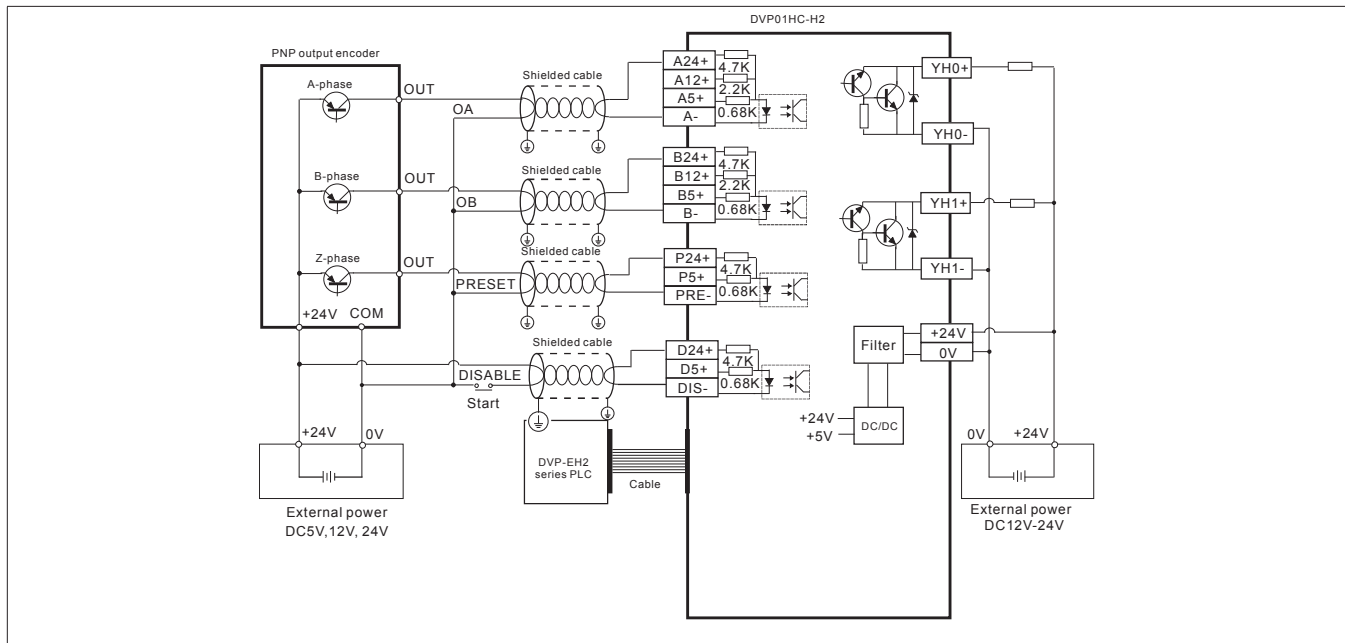
DVP01PU-H2



■ High-speed Counter Module

Applicable model:

DVP01HC-H2



Notes:

\*1. If an NPN output encoder is used, users have to note the polarities of the input terminals of DVP01HC-H2.

\*2. The inrush current drawn by DVP01HC-H2 when DVP01HC-H2 is turned on is 0.8 A. The maximum regular operating current of DVP01HC-H2 is 0.2A. (The voltage of the power input is +24V.)

# Wiring

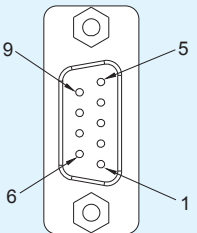
## ■ Communication Modules

### Applicable model:

DVPPF02-H2

### Definitions of the pins in a PROFIBUS-DP connector

Pin	Name	Description
1, 2	-	N/C
3	Rxd/Txd-P	Receiving/Transmitting data (P (B))
4	-	N/C
5	DGND	Signal ground
6	VP	Supply voltage (positive voltage)
7	-	N/C
8	Rxd/Txd-N	Receiving/Transmitting data (N (A))
9	-	N/C

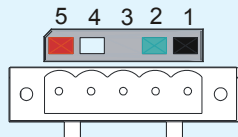


### Applicable model:

DVPDT02-H2

### Definitions of the pins in a DeviceNet connector

Pin	Signal	Color	Description
1	V-	Black	0V <sub>DC</sub>
2	CAN_L	Blue	Signal (negative pole)
3	SHIELD	-	Shield
4	CAN_H	White	Signal (positive pole)
5	V+	Red	24V <sub>DC</sub>

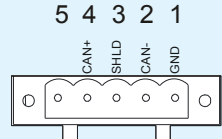


### Applicable model:

DVPCP02-H2

### CANopen connector

Pin	Signal	Description
1	GND	GND
2	CAN_L	Signal (negative pole)
3	SHLD	Shielded cable
4	CAN_H	Signal (positive pole)
5	-	Reserved

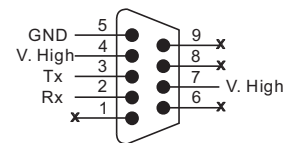


## ■ Function Card

### 1. Applicable model:

DVP-F232 (male DB-9 connector)

### Definitions of the pins in a PROFIBUS-DP connector



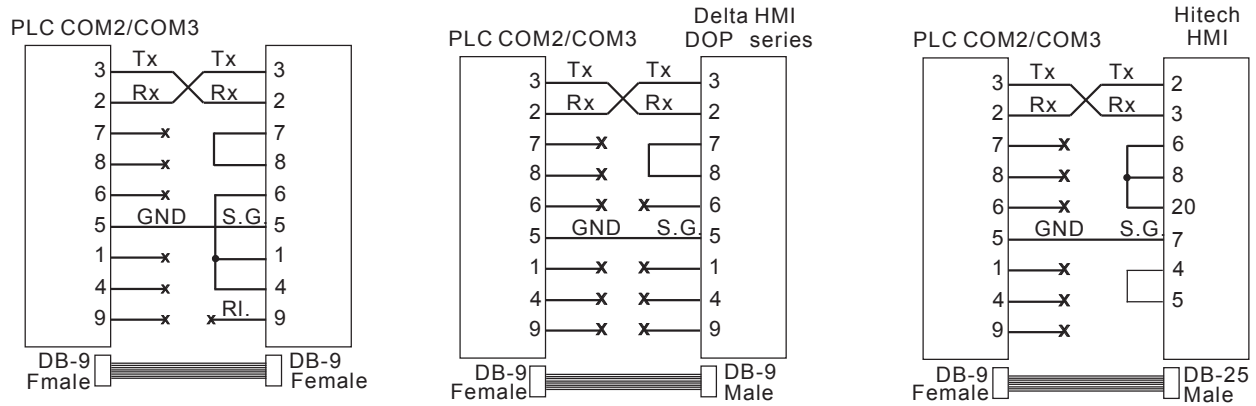
V. High: High potential, i.e. logic 1

\*1. The cables connected to the input terminals should be the cables or the shielded twisted pair cables which can be connected to Type J, type K, type R, type S, type T, type E, and type N thermocouples are used, and should be kept separate from other power cables and cables which generate noise. The torque applied to the screw terminals should be 1.95 kg-cm (1.7 in-lbs).

\*2. Please connect ⓐ on a power supply module and ⓑ on the temperature measurement module to the system ground, and then ground the system ground or connect the system ground to a distribution box.

**Note:** Please do not wire the terminal. Only copper leads which can resist the heat above 60°C/75°C can be used.

Examples of slave modes



2. Applicable model:

DVP-F422

Signal	Description
Tx+	Transmitting data (positive pole)
Tx-	Transmitting data (negative pole)
Rx+	Receiving data (positive pole)
Rx-	Receiving data (negative pole)

GND	Rx-	Rx+	Tx-	Tx+
-----	-----	-----	-----	-----

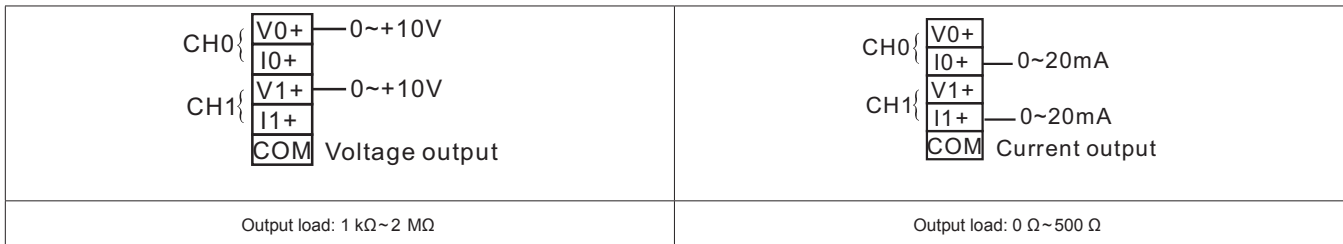
3. Applicable model:

DVP-F2AD



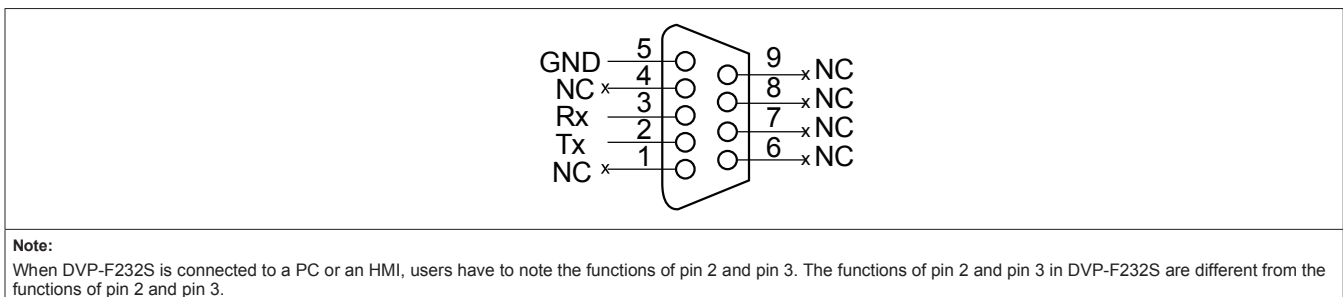
4. Applicable model:

DVP-F2DA



5. Applicable model:

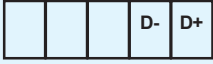
DVP-F232S (female DB-9 connector)



# Wiring

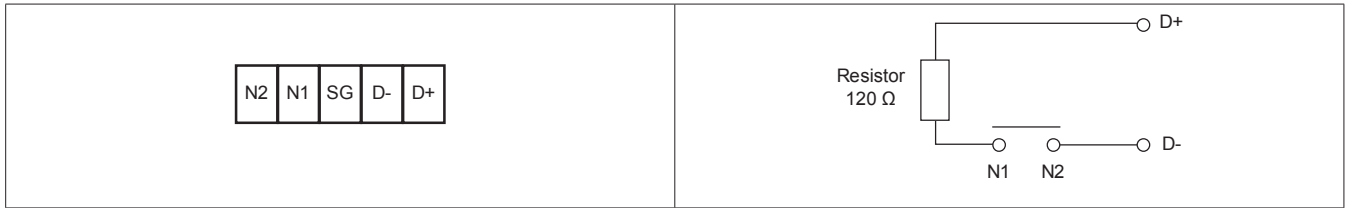
## 6. Applicable model:

DVP-F485S (Only for DVP-EH2 series)

Signal	Description	
D+	Signal (positive pole)	
D-	Signal (negative pole)	

## 7. Applicable model:

DVP-F485 (only for DVP-EH3 series PLCs)





## DVP Series Slim PLC

Series	Model
DVP-SS2	DVP14SS211R, DVP14SS211T, DVP12SS211S
DVP-SA2	DVP12SA211R, DVP12SA211T
DVP-SX	DVP10SX11R, DVP10SX11T
DVP-SX2	DVP20SX211R, DVP20SX211S, DVP20SX211T
DVP-SE	DVP12SE11R, DVP12SE11T
DVP-SV2	DVP28SV11R2, DVP28SV11T2, DVP28SV11S2, DVP24SV11T2

### ■ Wiring Input Terminals (NPN (Sink) and PNP (Source))

**Applicable model:**

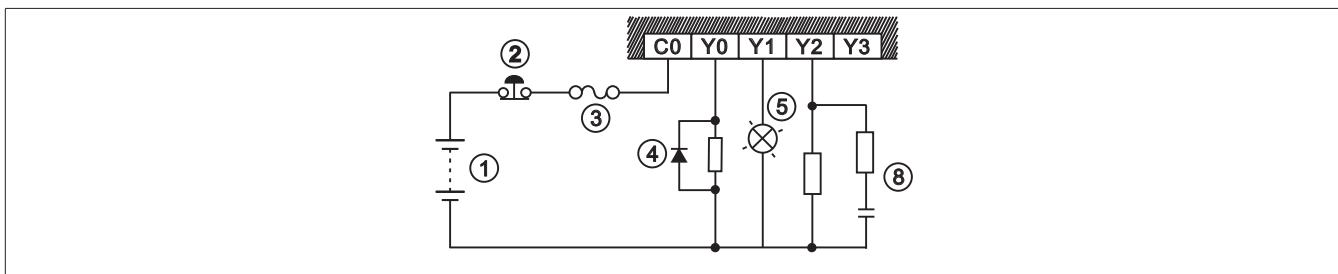
All slim PLCs

NPN (Sink)	PNP (Source)
NPN (Sink)=The current flows into the common terminal S/S	PNP (Source)=The current flows from the common terminal S/S

### Wiring Relay Output Terminals

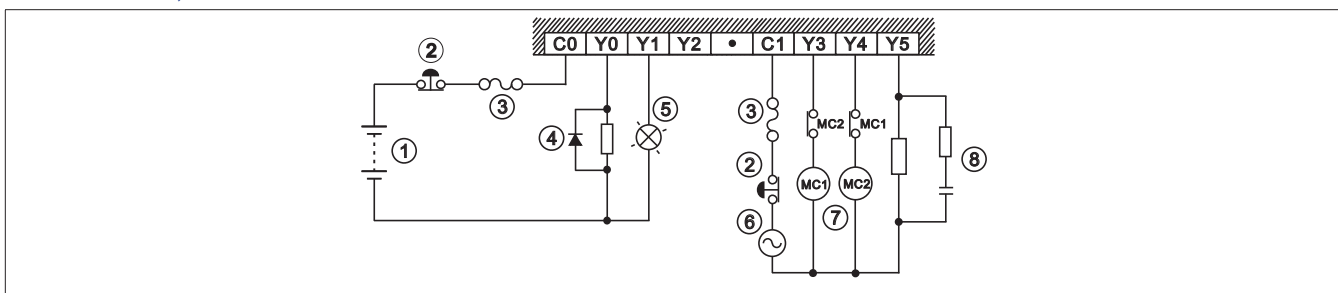
**Applicable model:**

DVP12SA211R, DVP12SE11R



**Applicable model:**

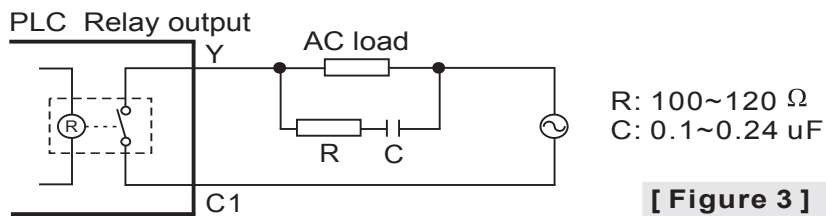
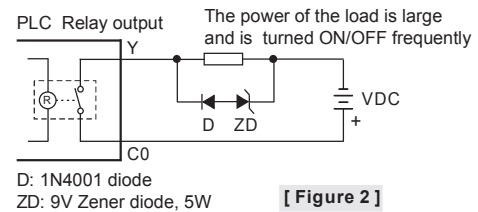
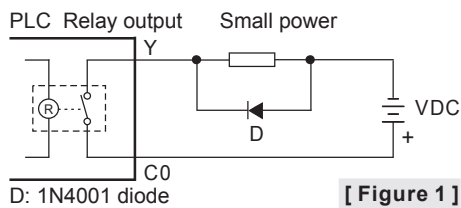
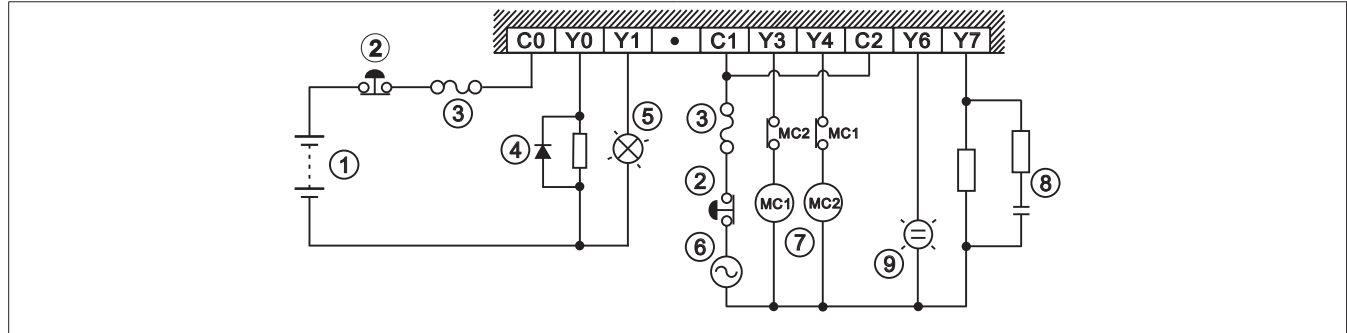
DVP14SS211R, DVP20SX211R



# Wiring

## Applicable model:

DVP28SV11R2



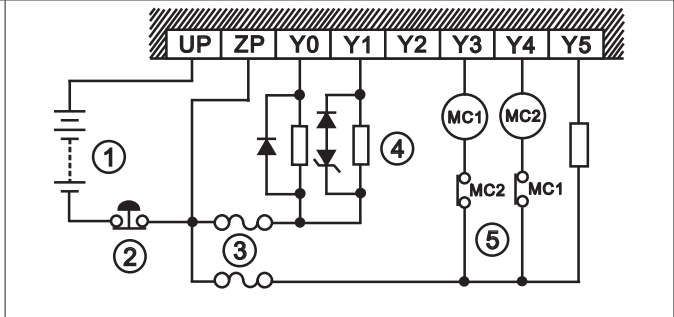
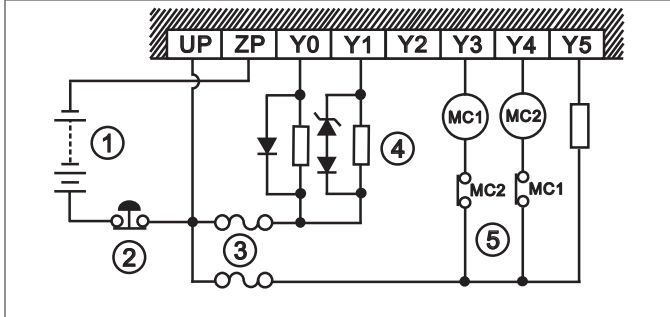
①	Direct-current power supply	②	Emergency stop: An external switch is used.
③	Fuse: To protect an output circuit, a fuse having a breaking capacity in the range of 5A to 10A is connected to a common terminal.		
④	Transient voltage suppression diode: It can be used to lengthen the lifespan that a contact has. 1. A Diode is used to suppress the DC passing a load when the power of the load is small. (Please see [Figure 1].) 2. A Diode and a Zener diode are used to suppress the DC passing a load when the power of the load is large, and is turned ON/OFF frequently. (Please see [Figure 2].)		
⑤	Incandescent lamp (resistive load)	⑥	Alternating-current power supply
⑦	Mutually exclusive output: For example, Y3 controls the clockwise rotation of a motor, and Y4 controls the counterclockwise rotation of the motor. The interlock circuit which is formed, and the program in the PLC ensure that there are protective measures if an abnormal condition occurs.		
⑧	Surge absorber: It can be used to reduce the noise produced by an AC load. (Please see [Figure 3].)		
⑨	Indicator: Neon lamp		

■ Wiring Transistor Output Terminals

Transistor output (NPN)	Transistor output (PNP)
-------------------------	-------------------------

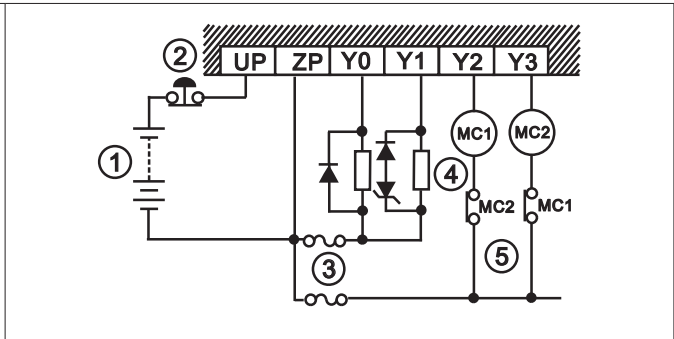
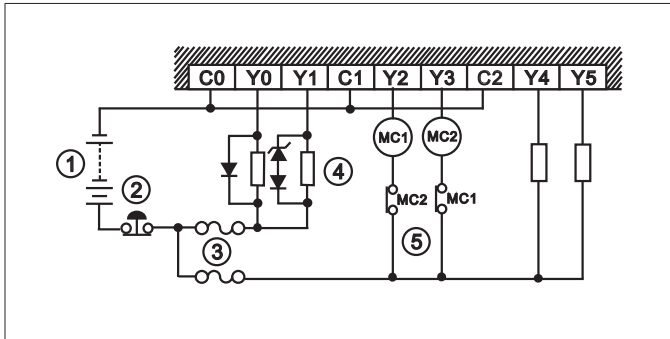
**Applicable model:**  
DVP14SS211T, DVP20SX211T

**Applicable model:**  
DVP20SX211S



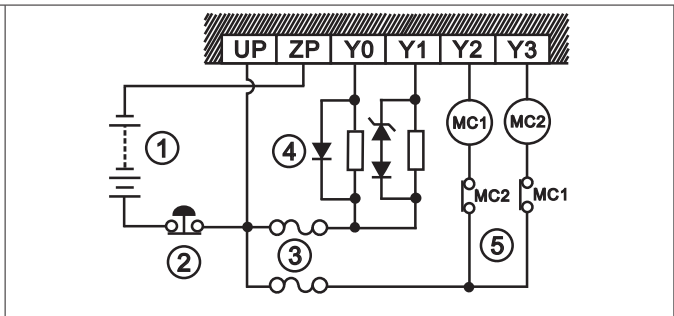
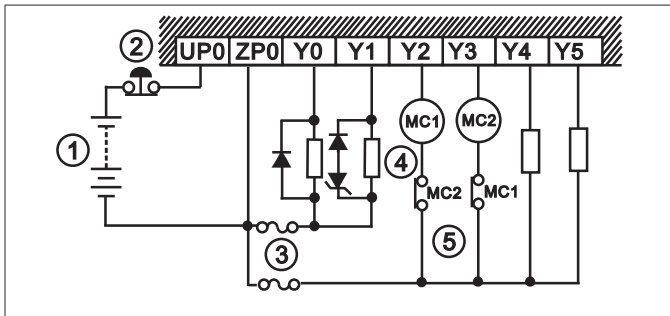
**Applicable model:**  
DVP24SV11T2

**Applicable model:**  
DVP12SS211S



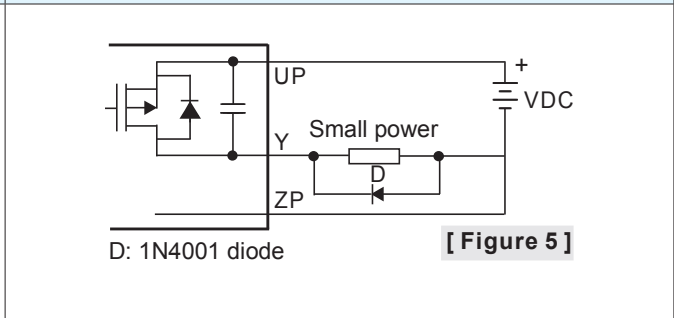
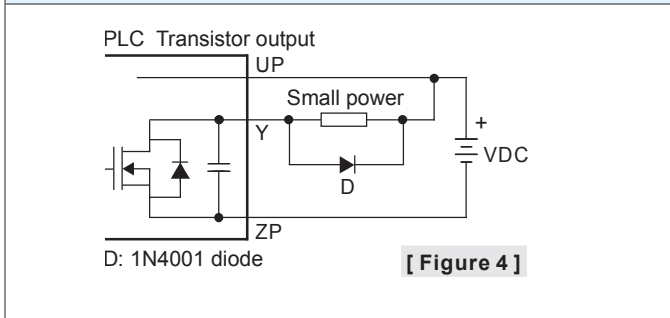
**Applicable model:**  
DVP12SA211T, DVP12SE11T

**Applicable model:**  
DVP28SV11S2

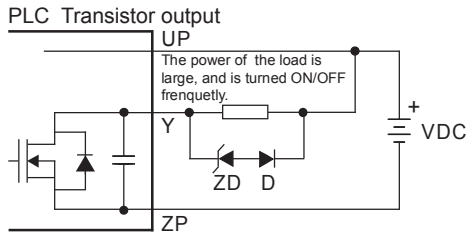
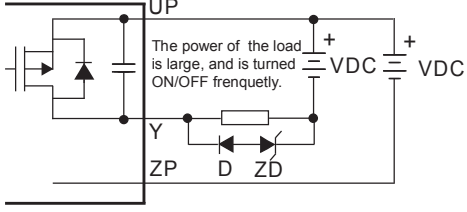


Description of transistor output circuits

Transistor output (NPN)	Transistor output (PNP)
-------------------------	-------------------------

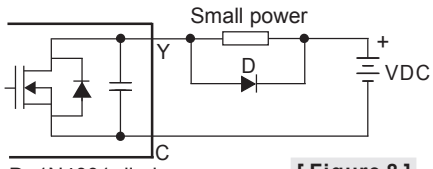
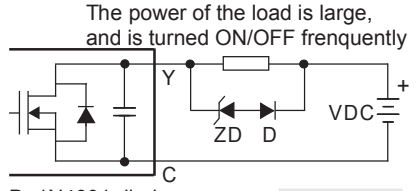


# Wiring

Transistor output (NPN)	Transistor output (PNP)
 <p>D: 1N4001 diode ZD: 9V Zener diode, 5W</p> <p style="text-align: right;"><b>[ Figure 6 ]</b></p>	 <p>D: 1N4001 diode ZD: 9V Zener diode, 5W</p> <p style="text-align: right;"><b>[ Figure 7 ]</b></p>

## Applicable model:

DVP28SV11T, DVP28SV11T2

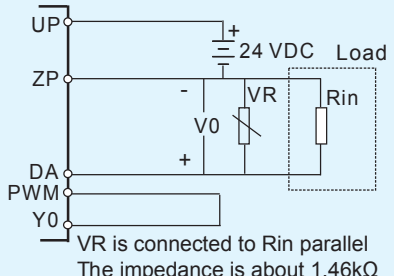
 <p>D: 1N4001 diode</p> <p style="text-align: right;"><b>[ Figure 8 ]</b></p>	 <p>D: 1N4001 diode ZD: 9V Zener diode, 5W</p> <p style="text-align: right;"><b>[ Figure 9 ]</b></p>
--	--

①	Direct-current power supply	②	Emergency stop	④	Fuse
④	<p>Transient voltage suppression diode: It can be used to lengthen the lifespan that a contact has.</p> <p>1.A Diode is used to suppress the DC passing a load when the power of the load is small. (Please see [Figure 4] and [Figure 5].) (Please see [Figure 8] for more information about wiring DVP28SV11T/DVP28SV11T2.)</p> <p>2.A Diode and a Zener diode are used to suppress the DC passing a load when the power of the load is large, and is turned ON/OFF frequently. (Please see [Figure 6] and [Figure 7].) (Please see [Figure 9] for more information about wiring DVP28SV11T/DVP28SV11T2.)</p>				
⑤	<p>Mutually exclusive output: For example, Y3 controls the clockwise rotation of a motor, and Y4 controls the counterclockwise rotation of the motor. The interlock circuit which is formed, and the program in the PLC ensure that there are protective measures if an abnormal condition occurs.</p>				

## ■ Wiring Analog Output

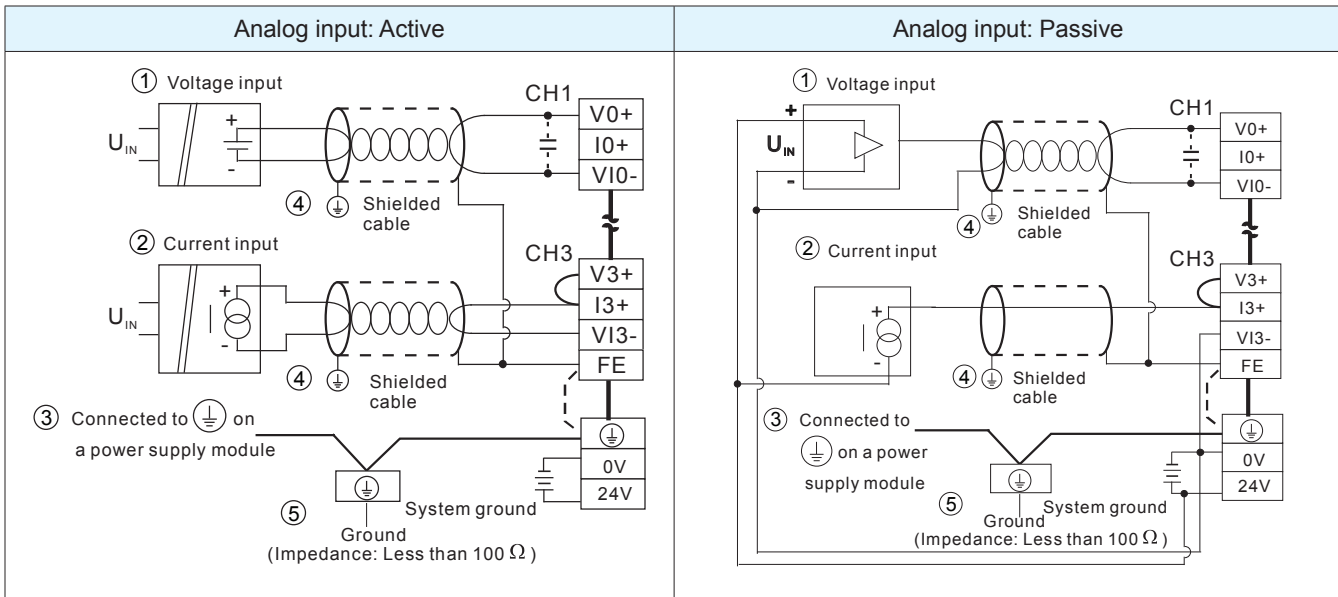
### Applicable model:

DVP12SS211S

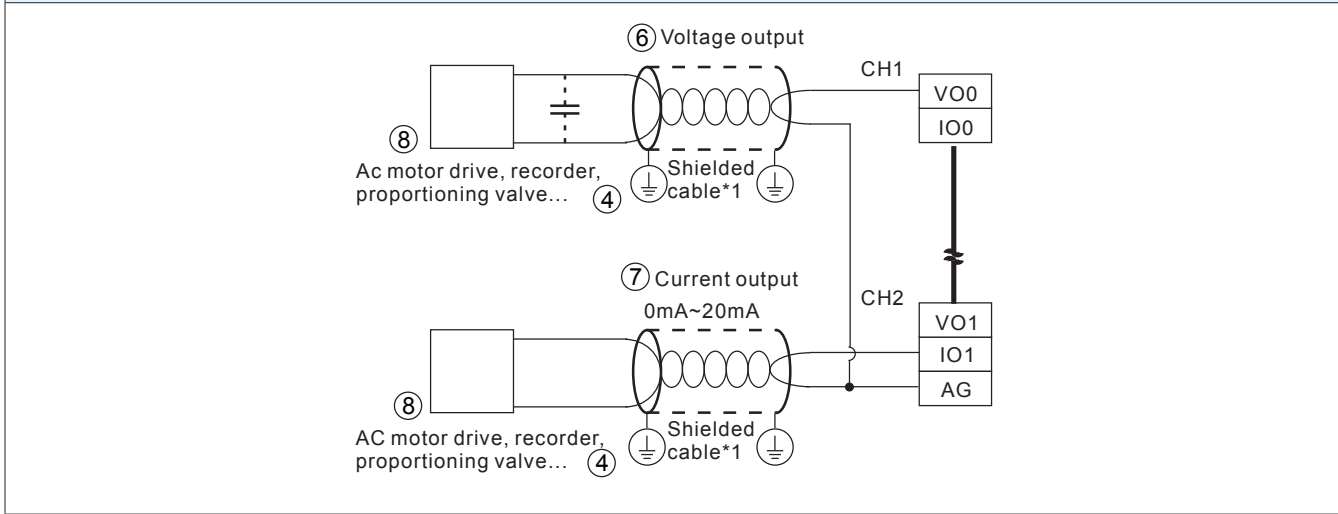
	Item	Specifications
 <p>VR is connected to Rin parallel The impedance is about 1.46kΩ</p>	DA range	0~10V <sub>DC</sub>
	Value range	0~100
	Resolution*1	0.1V (1~9V)
	Output impedance	2kΩ
	Minimum load	1.5kΩ
	D/A conversion time	<70ms

\*1. 1V~9V is a linear area. The resolution is 0.1V. 0V~1V and 9V~10V are nonlinear areas. The output probably cannot reach the voltage set.

■ Wiring the Analog Input/Output Terminals of a DVP-SX2 Series PLC



■ Analog output

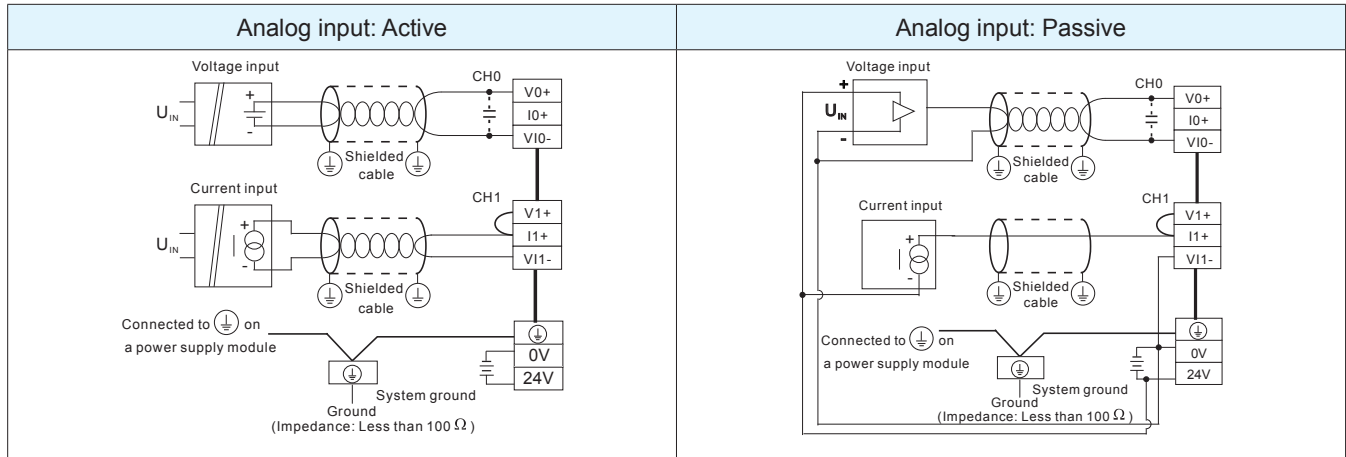


① Voltage input	② Current input
③ Connected to Ⓧ on a power supply module	④ Shielded cable
⑤ Third ground (Impedance: Less than 100 Ω)	⑥ Voltage output
⑦ Current output	⑧ AC motor drive, recorder, proportioning valve...

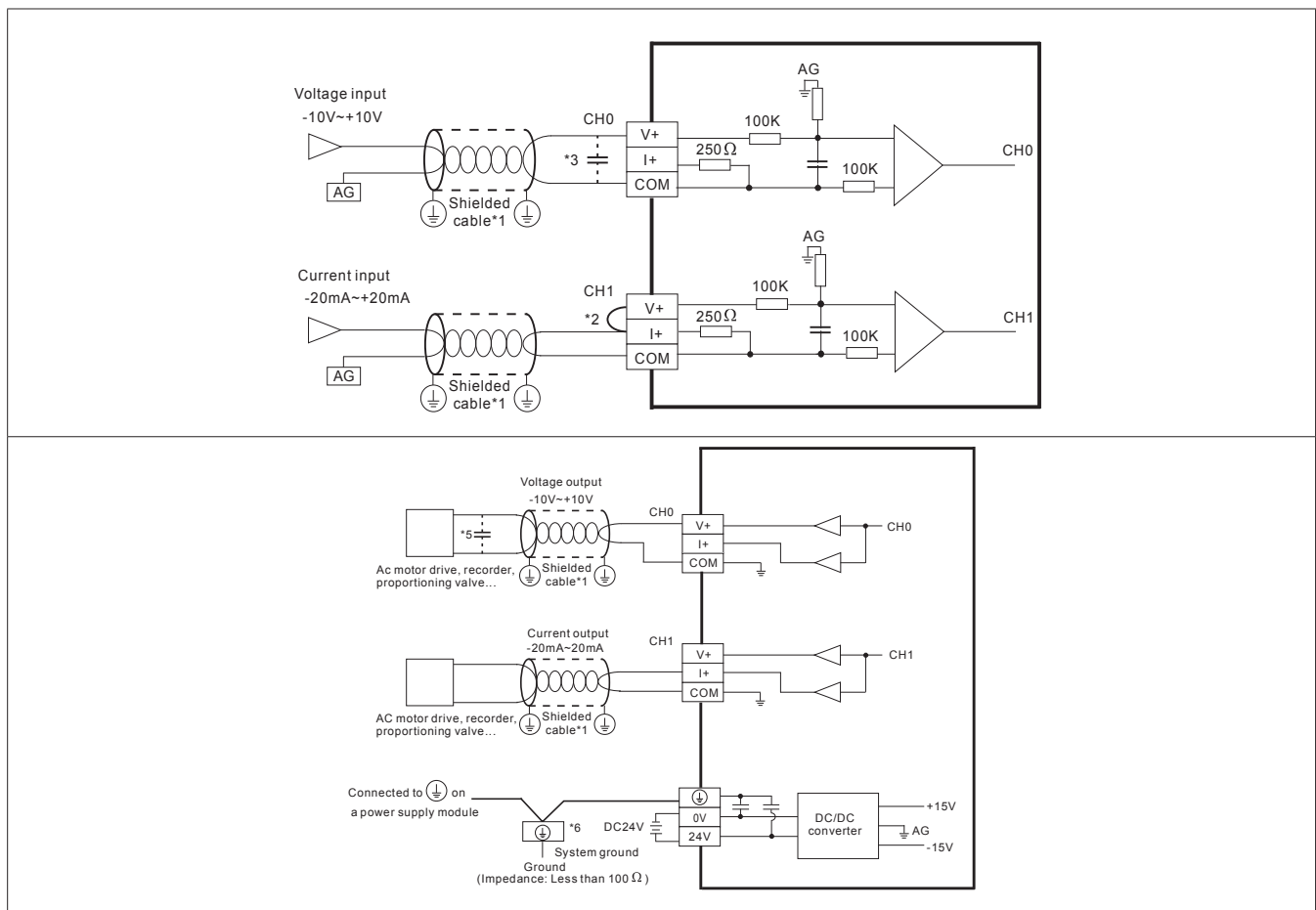
Note: If a module is connected to a current signal, the terminals V+ and I+ must be short-circuited.

# Wiring

## ■ Wiring the Analog Input Terminals of DVP24SV11T2



## ■ Wiring the Analog Input/Output Terminals of a DVP-SX Series PLC



- \*1. Please isolate the analog input signal cables from other power cables.
- \*2. If the module is connected to a current signal, the terminals V+ and I+ must be short-circuited.
- \*3. If the ripple in the input voltage results in the noise interference with the wiring, please connect the module to the capacitor having a capacitance in the range of 0.1  $\mu$ F to 0.47  $\mu$ F with a working voltage of 25V.
- \*4. Please isolate the analog output signal cables from other power cables.
- \*5. If a ripple is large for the input terminal of the load and results in the noise interference with the wiring, please connect the module to the capacitor having a capacitance in the range of 0.1  $\mu$ F to 0.47  $\mu$ F with a working voltage of 25V.
- \*6. Please connect  $\oplus$  on a power supply module and  $\ominus$  on the module to the system ground, and then ground the system ground or connect the system ground to a distribution box.

**Note:** Please do not wire the terminal  $\bullet$ .

## ■ Analog Modules

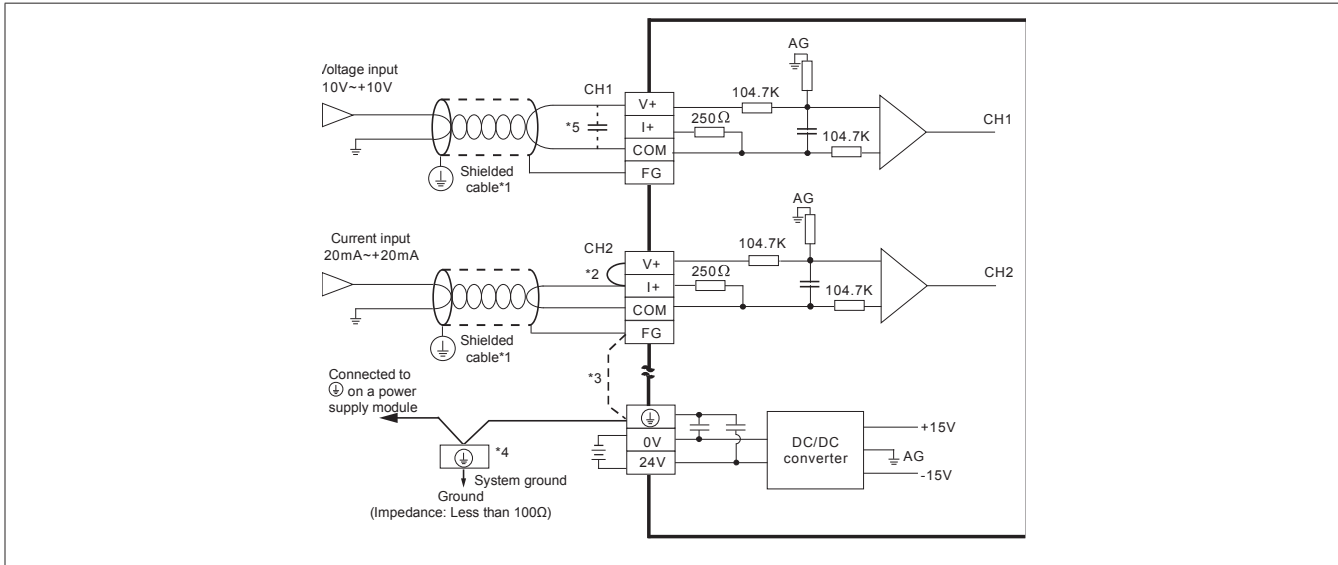
### Applicable model:

DVP04AD-S	DVP06AD-S	DVP02DA-S	DVP06XA-S
DVP04AD-SL	DVP04DA-SL	DVP04AD-S2	DVP04DA-S2
DVP06XA-S2			

### Wiring Analog Modules

#### 1. Applicable model:

DVP04AD-S, DVP06AD-S



\*1. Please isolate the analog input signal cables from other power cables.

\*2. If a current signal is connected, the connection between V+ and I+ (the connection between V4+ and I4+) needs to be a short circuit.

\*3. If there is much noise, please connect the terminal FG to the ground terminal.

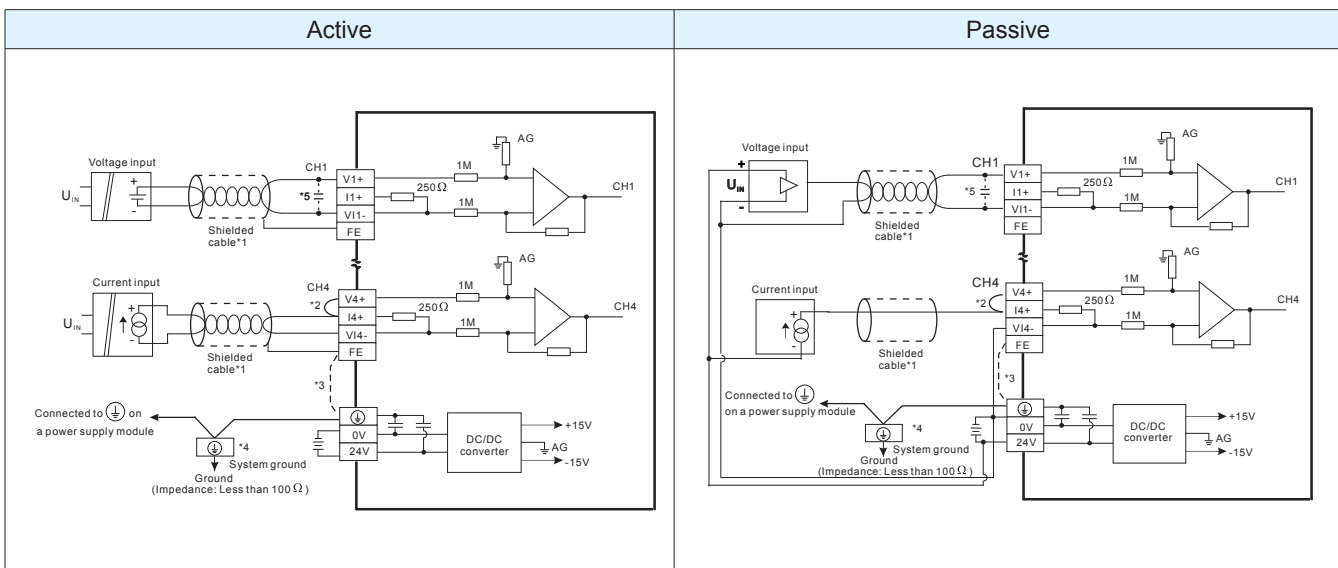
\*4. Please connect ⊕ on a power supply module and ⊕ on the module to the system ground, and then ground the system ground or connect the system ground to a distribution box.

\*5. If ripple voltage results in interference with the wiring, please connect a 0.1~0.47 μF and 25V capacitor.

**Note: Please do not wire the terminal.**

#### 2. Applicable model:

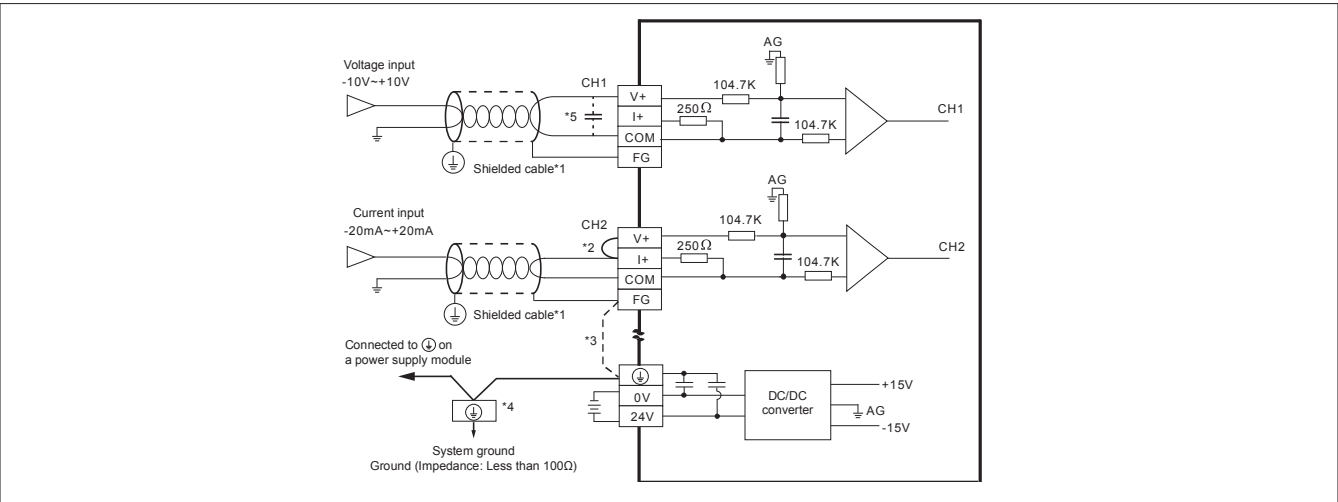
DVP04AD-SL



# Wiring

## 3. Applicable model:

DVP02DA-S, DVP04DA-S, DVP04DA-SL



\*1. Please isolate the analog output cable from other power cables.

\*2. If noise interferes with the wiring, and makes the ripple voltage of the input terminal of the load connected high, please connect a 0.1 ~ 0.47  $\mu\text{F}$  and 25V capacitor.

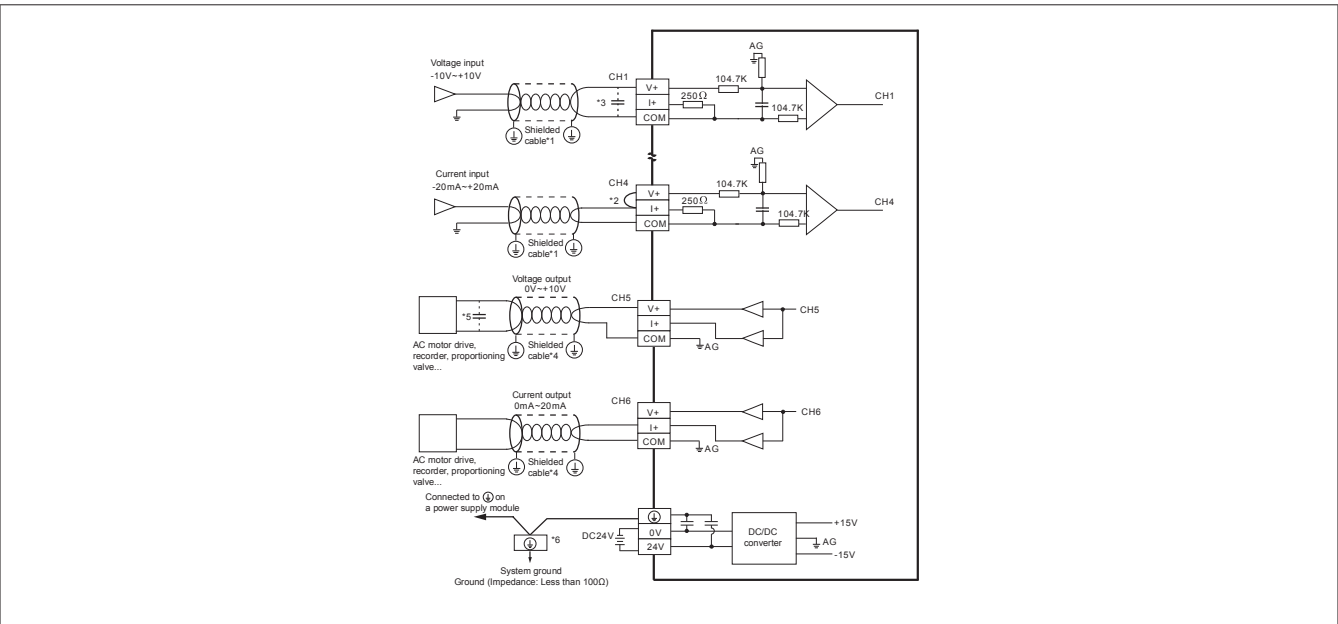
\*3. Please connect  $\oplus$  on a power supply module and  $\oplus$  on the analog output module to the system ground, and then ground the system ground or connect the system ground to a distribution box.

\*4. If there is much noise, please connect the terminal FG to the ground terminal.

**Note:** Please do not wire the terminal  $\ominus$ .

## 4. Applicable model:

DVP06XA-S



\*1. Please isolate the analog input cable from other power cables.

\*2. If a current signal is connected, the connection between V+ and I+ (the connection between V4+ and I4+) needs to be a short circuit.

\*3. If ripple voltage results in interference with the wiring, please connect a 0.1 ~ 0.47  $\mu\text{F}$  and 25V capacitor.

\*4. Please isolate the analog output cable from other power cables.

\*5. If noise interferes with the wiring, and makes the ripple voltage of the input terminal of the load connected high, please connect a 0.1 ~ 0.47  $\mu\text{F}$  and 25V capacitor.

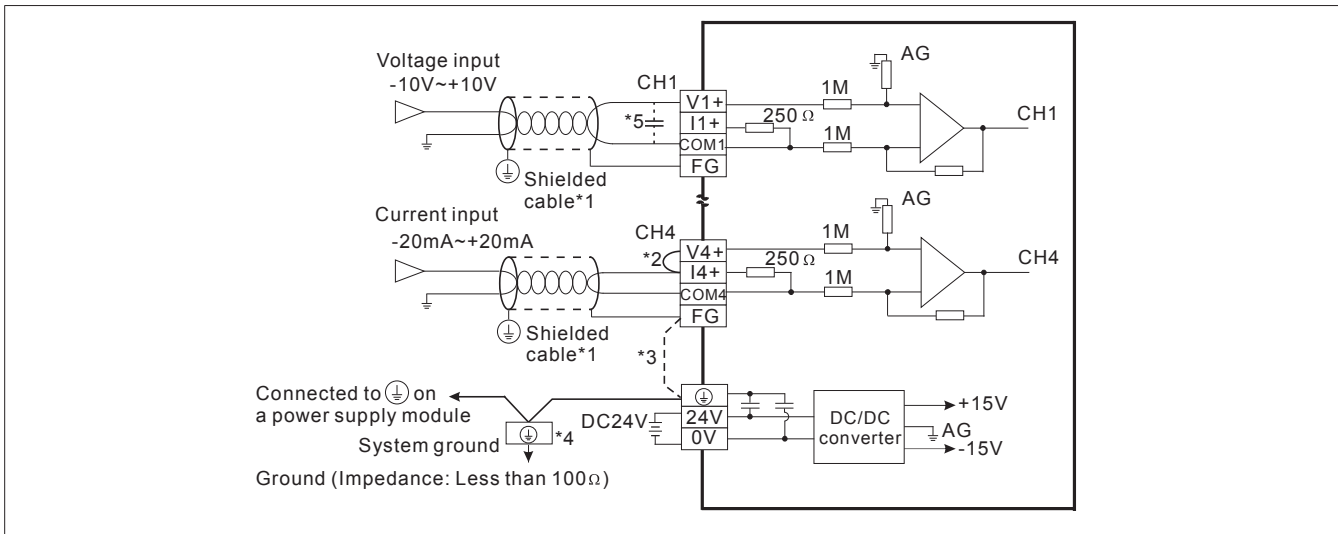
\*6. Please connect  $\oplus$  on a power supply module and  $\oplus$  on the analog input module to the system ground, and then ground the system ground or connect the system ground to a distribution box.

**Note:** Please do not wire the terminal  $\ominus$ .



5. Applicable model:

DVP04AD-S2

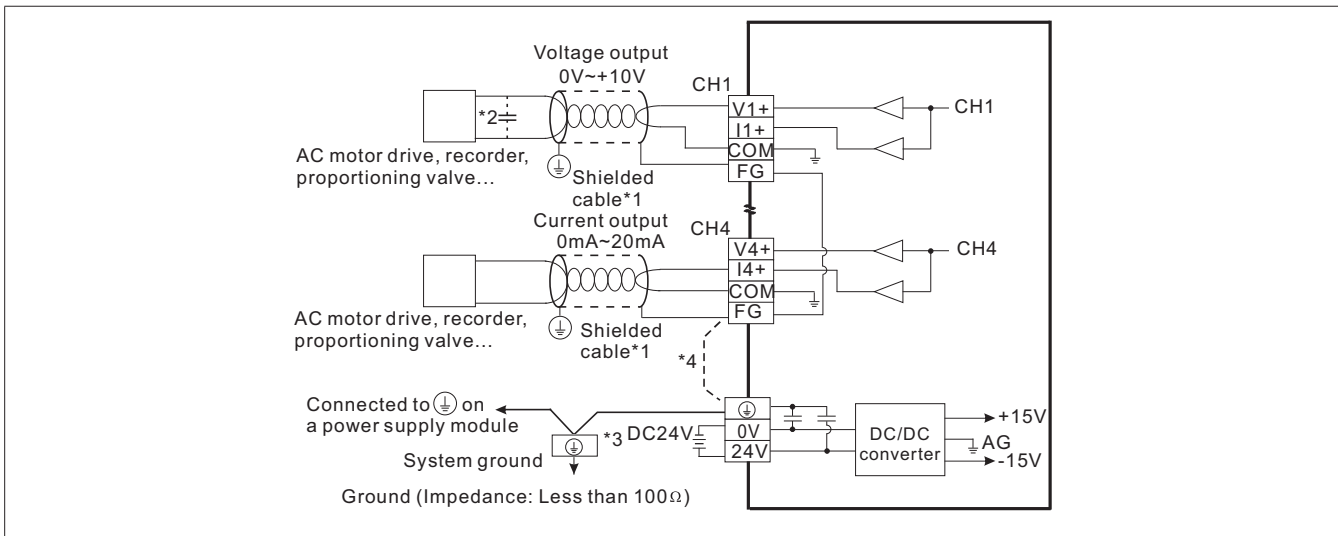


- \*1. Please isolate the analog input signal cables from other power cables.
- \*2. If a current signal is connected, the connection between V+ and I+ (the connection between V4+ and I4+) needs to be a short circuit.
- \*3. If there is much noise, please connect the terminal FG to the ground terminal.
- \*4. Please connect ⊕ on a power supply module and ⊕ on the module to the system ground, and then ground the system ground or connect the system ground to a distribution box.
- \*5. If ripple voltage results in interference with the wiring, please connect a 0.1~0.47 μF and 25V capacitor.

Note: Please do not wire the terminal.

6. Applicable model:

DVP04DA-S2



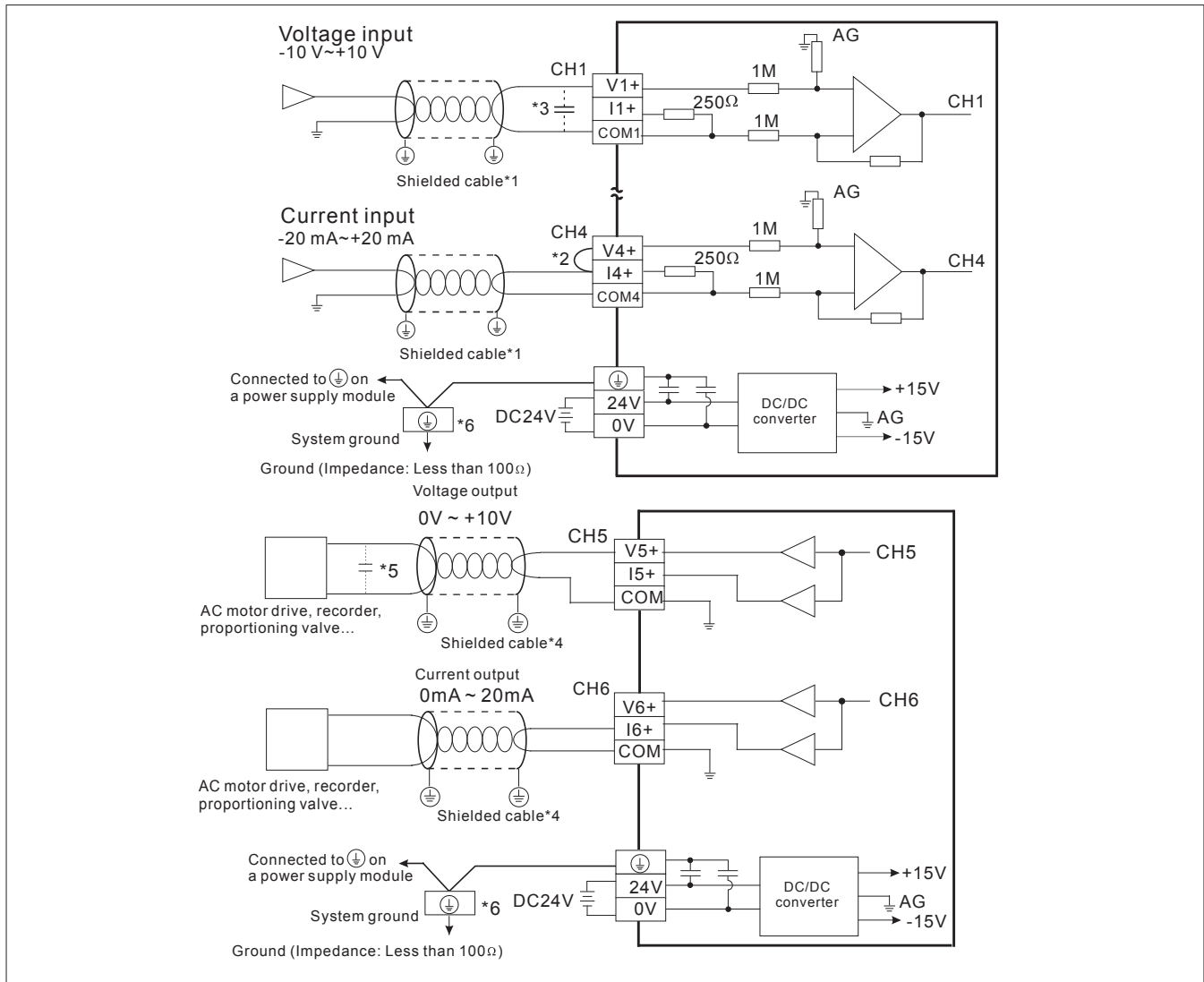
- \*1. Please isolate the analog output cable from other power cables.
- \*2. If noise interferes with the wiring, and makes the ripple voltage of the input terminal of the load connected high, please connect a 0.1~0.47 μF and 25V capacitor.
- \*3. Please connect ⊕ on a power supply module and ⊕ on the analog output module to the system ground, and then ground the system ground or connect the system ground to a distribution box.
- \*4. If there is much noise, please connect the terminal FG to the ground terminal.

Note: Please do not wire the terminal.

# Wiring

## 7. Applicable model:

DVP06XA-S2



- \*1. Please isolate the analog input cable from other power cables.
- \*2. If a current signal is connected, the connection between V+ and I+ (the connection between V4+ and I4+) needs to be a short circuit.
- \*3. If ripple voltage results in interference with the wiring, please connect a 0.1~0.47 μF and 25V capacitor.
- \*4. Please isolate the analog output cable from other power cables.
- \*5. If noise interferes with the wiring, and makes the ripple voltage of the input terminal of the load connected high, please connect a 0.1~0.47 μF and 25V capacitor.
- \*6. Please connect Ⓧ on a power supply module and Ⓧ on the analog input module to the system ground, and then ground the system ground or connect the system ground to a distribution box.

## ■ Wiring Digital Input/Output Modules

### Applicable model:

DVP08SM11N	DVP08SM10N	DVP16SM11N	DVP06SN11R
DVP08SN11R	DVP08SN11T	DVP16SN11T	DVP08SN11TS
DVP16SN11TS	DVP08SP11R	DVP08SP11T	DVP16SP11R
DVP08SP11TS	DVP16SP11TS	DVP32SM11N	DVP32SN11TN

### A. Wiring Input Terminals

Wiring DC input terminals (NPN (Sink) and PNP (Source))

#### Applicable model:

All digital modules except DVP08SM10N

NPN (Sink)	PNP (Source)
NPN (Sink)=The current flows into the common terminal S/S	PNP (Source)=The current flows from the common terminal S/S

Wiring AC input terminals

#### Applicable model:

DVP08SM10N

Wiring diagram	Specifications for a 110V <sub>AC</sub> input terminal	
	Input voltage	85~132V <sub>AC</sub> , 50~60 Hz
	Input impedance	19Kohm/50 Hz, 16Kohm/60 Hz
	Input current	9.2 mA 110 V <sub>AC</sub> /60 Hz
	Voltage level (ON/OFF)	79 V 3.8 mA/30 V 2.5 mA
	Response time	15 ms
	Electrical isolation/Indicator	Optocoupler/The LED indicator is ON.

# Wiring

## B. Wiring Output Terminals

### B.1 Wiring relay output terminals

#### Applicable model:

DVP06SN11R, DVP08SN11R, DVP08SP11R, DVP16SP11R

①	Please do not wire the terminal●.	②	Fuse
③	Diode: There is no protective mechanism in the relay output terminals of a PLC. If a DC inductive load is used, a diode needs to be connected in parallel. After a diode is connected to a DC load in parallel, the lifespan of the contact of the relay terminal connected to the DC load will be lengthened. The diode which is connected to a DC load must withstand 5~10 times the voltage of the DC load, and the forward current passing through the diode must be greater than the current passing through the DC load		
④	Mutually exclusive output: The interlock circuit which is formed, and the program in the PLC used ensure that there are protective measures if an abnormal condition occurs.	⑤	Emergency stop: An external switch is used.
⑥	Surge absorber: There is no protective mechanism in the relay output terminals of a PLC. If an AC inductive load is used, a surge absorber (a capacitor having a capacitance of 0.1 μF, and a resistor having a resistance in the range of 100ohm to 120ohm) needs to be connected in parallel. After a surge absorber is connected to an AC load in parallel, the noise produced by the AC load will be reduced, and the lifespan of the contact of the relay terminal connected to the AC load will be lengthened.		
⑦	Inductive load	⑧	Incandescent lamp (resistive load)
⑨	Direct-current power supply	⑩	Alternating-current power supply

### B.2 Wiring transistor output terminals (NPN (Sink))

#### Applicable model:

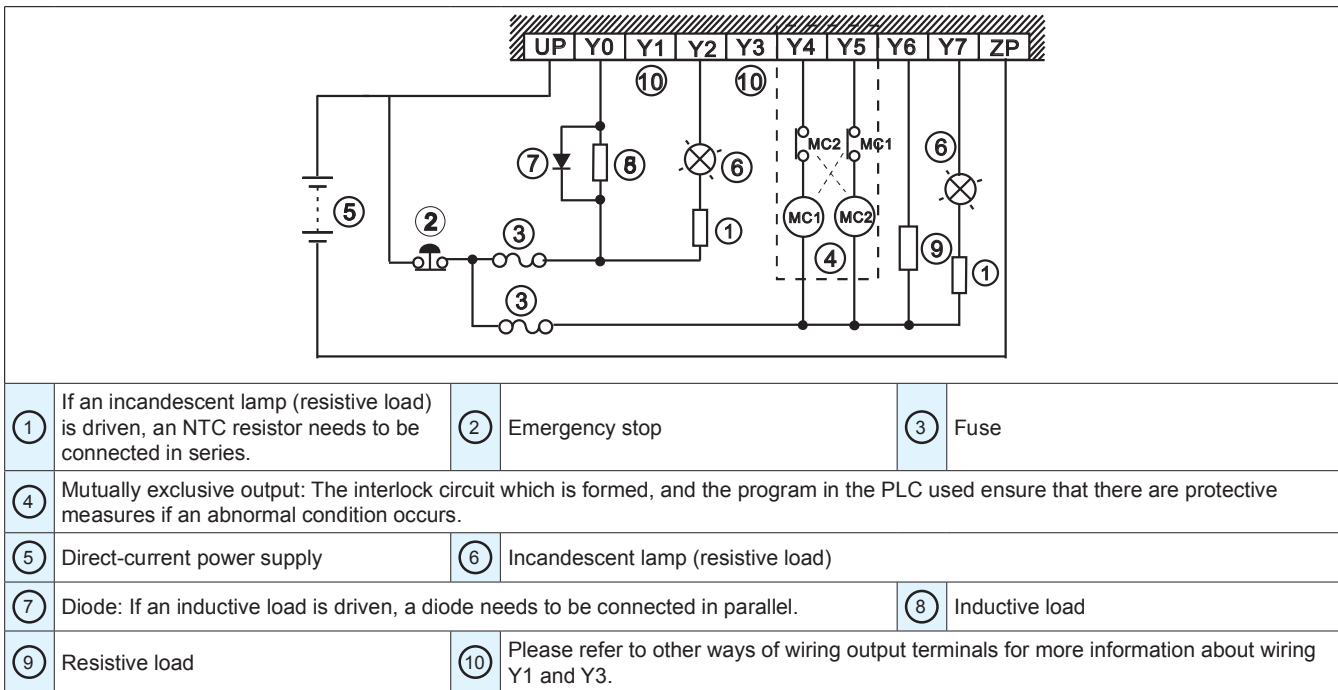
DVP08SP11T, DVP08SN11T, DVP16SP11T

①	Please do not wire the terminal●.	②	Emergency stop	④	Fuse
④	Mutually exclusive output: The interlock circuit which is formed, and the program in the PLC used ensure that there are protective measures if an abnormal condition occurs.				
⑤	Direct-current power supply	⑥	Incandescent lamp (resistive load)		
⑦	Diode: The 39 V Zener diode in a PLC protects the transistor output terminals of the PLC. If an inductive load is driven, a Zener diode needs to be connected in parallel.				
⑧	Inductive load	⑨	Resistive load	⑩	If an incandescent lamp (resistive load) is driven, an NTC resistor needs to be connected in series.

B.2 Wiring transistor output terminals (PNP (Source))

**Applicable model:**

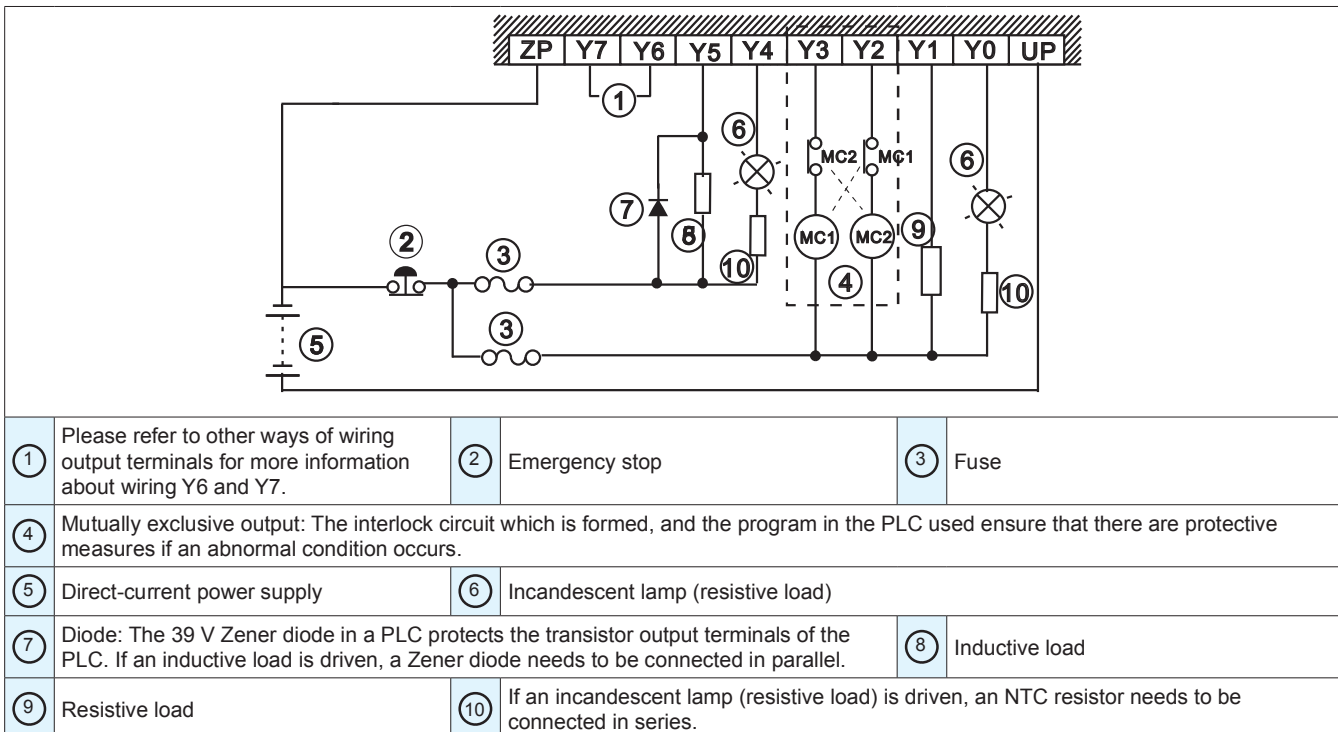
DVP16SN11T, DVP32SN11TN



B.3 Wiring transistor output terminals (PNP (Source))

**Applicable model:**

DVP08SP11TS, DVP16SP11TS, DVP08SN11TS, DVP16SN11TS



# Wiring

## C.1 Wiring pins

### Applicable model:

DVP32SM11N, DVP32SN11TN

DVP32SM11N				DVP32SN11TN			
X0	10	02	X1	Y0	10	02	Y1
X2	30	04	X3	Y2	30	04	Y3
X4	50	06	X5	Y4	50	06	Y5
X6	70	08	X7	Y6	70	08	Y7
X10	90	010	X11	Y10	90	010	Y11
X12	110	012	X13	Y12	110	012	Y13
X14	130	014	X15	Y14	130	014	Y15
X16	150	016	X17	Y16	150	016	Y17
S/S	170	018	S/S	ZP	170	018	ZP
NC	190	020	NC	UP	190	020	UP
X20	210	022	X21	Y20	210	022	Y21
X22	230	024	X23	Y22	230	024	Y23
X24	250	026	X25	Y24	250	026	Y25
X26	270	028	X27	Y26	270	028	Y27
X30	290	030	X31	Y30	290	030	Y31
X32	310	032	X33	Y32	310	032	Y33
X34	330	034	X35	Y34	330	034	Y35
X36	350	036	X37	Y36	350	036	Y37
S/S	370	038	S/S	ZP	370	038	ZP
NC	390	040	NC	UP	390	040	UP
DVP32SM				DVP32SN			

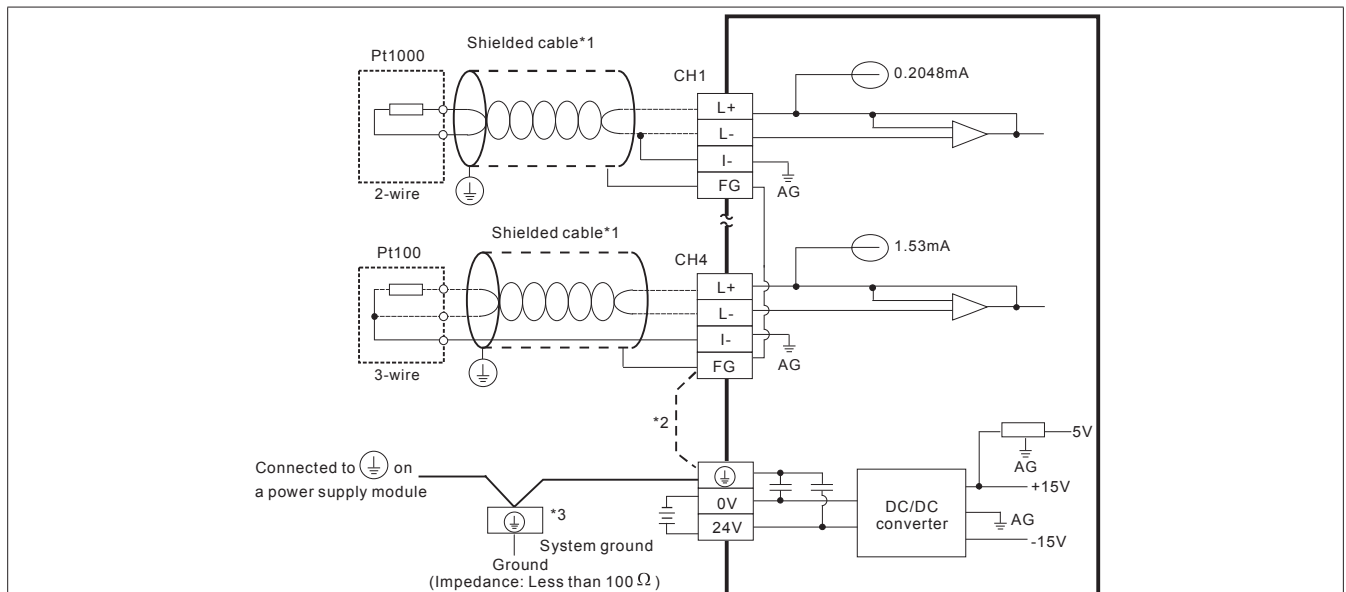
- The pins on DVP32SN11TN are NPN transistor output pins.
- To prevent DVP32SN11TN from being burned out, users have to pay attention to the following points.
  1. Pin 19, pin 20, pin 39, and pin 40 can only be connected to +24V<sub>DC</sub>.
  2. Pin 17, pin 18, pin 37, and pin 38 can only be connected to GND.

## ■ Temperature Measurement Modules

### 1. Temperature measurement module (RTDs)

#### Applicable model :

DVP04PT-S



\*1. The cables connected to the input terminals should be the cables or the shielded twisted pair cables which can be connected to the temperature sensors, and should be kept separate from other power cables and cables which generate noise.

\*2. If there is much noise, please connect the terminal FG to the ground terminal.

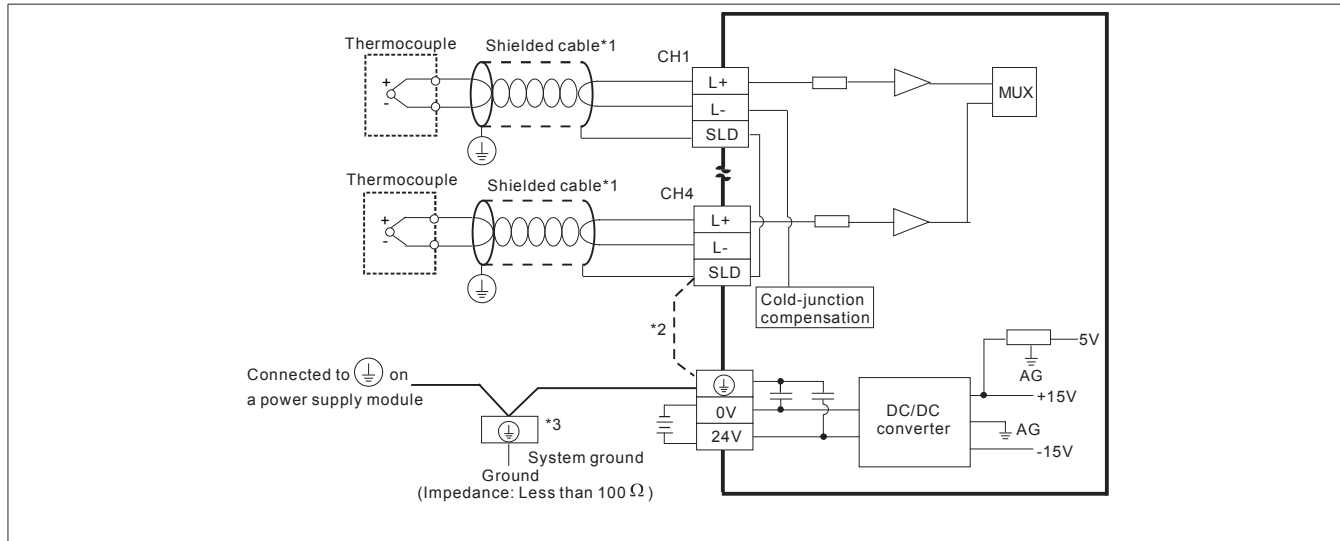
\*3. Please connect ⊕ on a power supply module and ⊕ on DVP04PT-S to the system ground, and then ground the system ground or connect the system ground to a distribution box.

**Note:** Please do not wire the terminal.

## 2. Temperature measurement module (thermocouples)

### Applicable model:

DVP04TC-S



\*1. The cables connected to the input terminals should be the cables or the shielded twisted pair cables which can be connected to Type J, type K, type R, type S, type T, type E, and type N thermocouples are used, and should be kept separate from other power cables and cables which generate noise. The torque applied to the screw terminals should be 1.95 kg-cm (1.7 in-lbs).

\*2. If there is much noise, please connect the terminal SLD to the ground terminal.

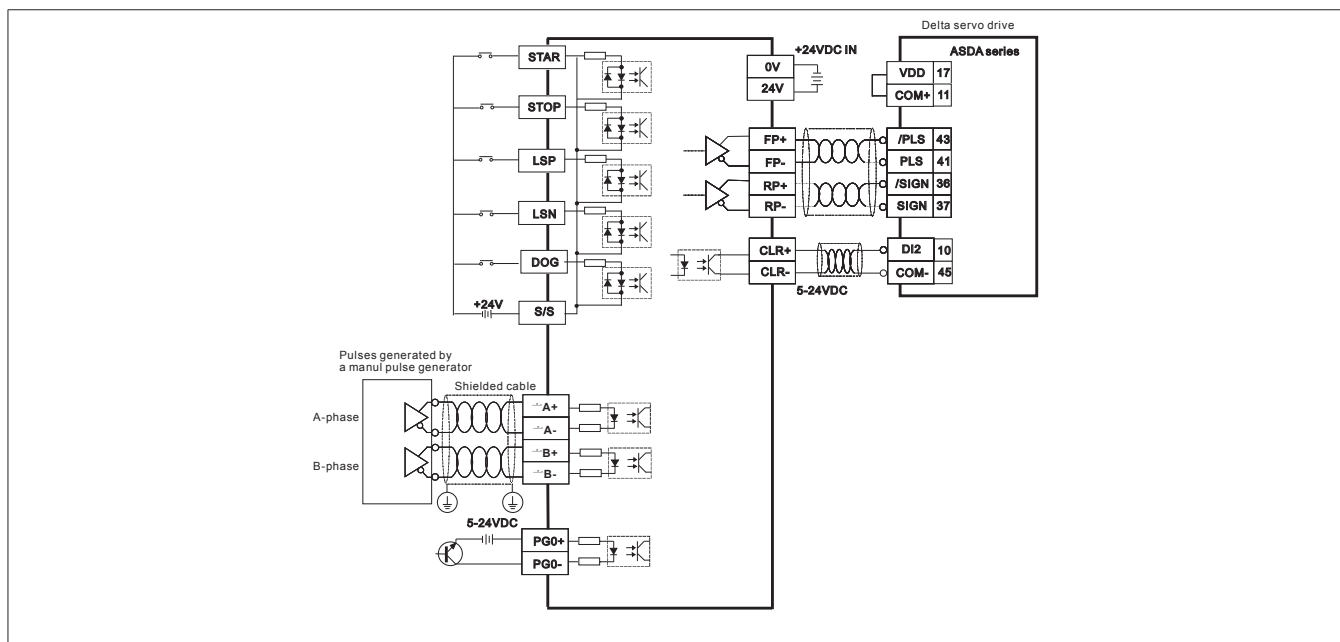
\*3. Please connect ⊕ on a power supply module and ⊕ on DVP04TC-S to the system ground, and then ground the system ground or connect the system ground to a distribution box.

**Note: Please do not wire the terminals. Only copper leads which can resist the heat above 60°C/75°C can be used.**

## ■ Position Control Module

### Applicable model:

DVP01PU-S



\*1. Please use single-core cables or multi-core cables. The diameters of the cables used should be in the range of 22 AWG to 16 AWG (1.5 mm). The torque applied to the screw terminals should be 1.95 kg-cm (1.7 in-lbs).

\*2. Please do not put input signal cables and output signal cables or power cables in a cable tray.

\*3. Please connect ⊕ on a power supply module and ⊕ on DVP04TC-S to the system ground, and then ground the system ground or connect the system ground to a distribution box.

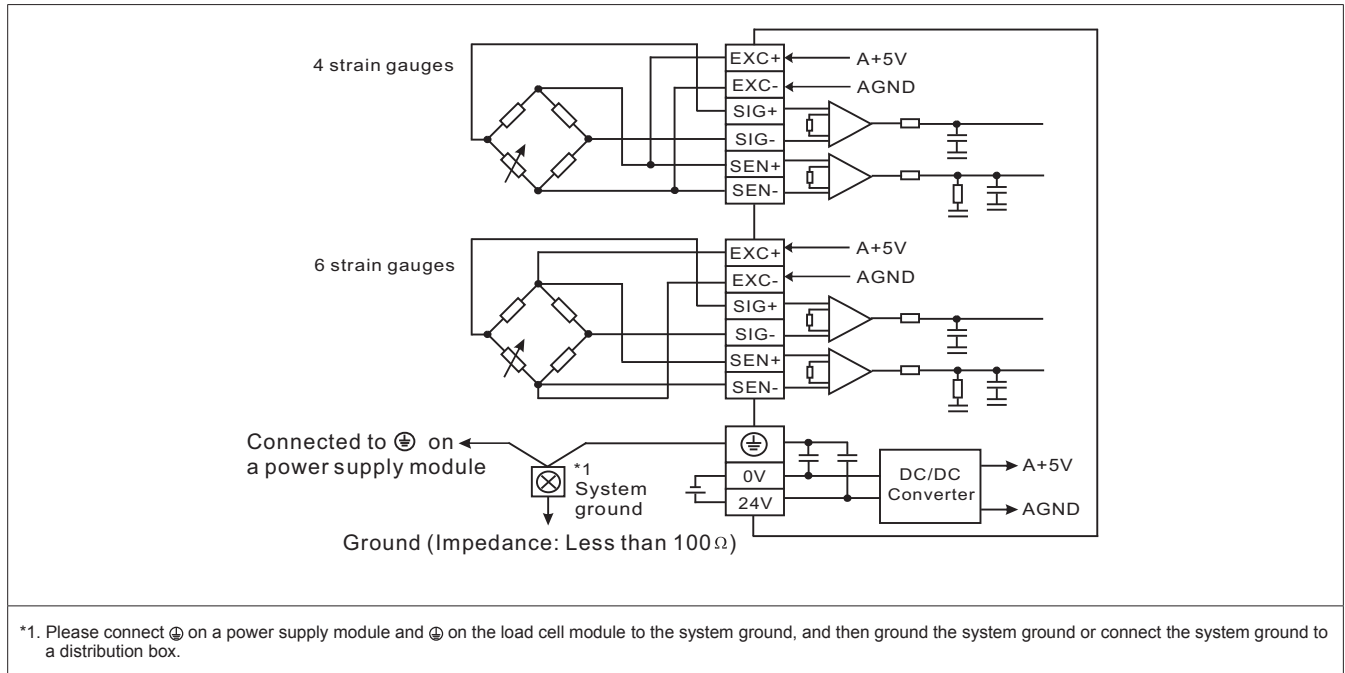
**Note: Please do not wire the terminals. Only copper leads which can resist the heat above 60°C/75°C can be used.**

# Wiring

## ■ Load Cell Modules

### Applicable model:

DVP01LC-SL, DVP02LC-SL, DVP201LC-SL, DVP202LC-SL, DVP211LC-SL



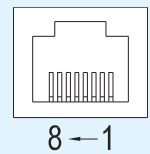
## ■ Communication Modules

### 1. Applicable model:

DVPEN01-SL, RTU-EN01

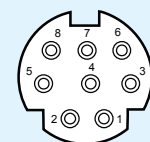
#### Definitions of the pins in an RJ-45 connector

Pin	Signal	Description	Pin	Signal	Description
1	Tx+	Transmitting data (positive pole)	5	--	N/C
2	Tx-	Transmitting data (negative pole)	6	Rx-	Receiving data (negative pole)
3	Rx+	Receiving data (positive pole)	7	--	N/C
4	--	N/C	8	--	N/C



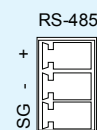
#### Definitions of the pins in an RS-232 connector

Pin	Signal	Description	Pin	Signal	Description
1	--	N/C	5	Tx	Transmitting data
2	--	N/C	6	--	N/C
3	--	N/C	7	--	N/C
4	Rx	Receiving data	8	GND	Ground



#### Definitions of a European terminal block

Pin	Signal	Description
1	SG	Signal ground
2	D-	Data (negative pole)
3	D+	Data (positive pole)



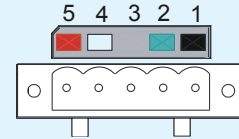


**2. Applicable model:**

DVPDNET-SL, RTU-DNET

**DeviceNet connector**

Pin	Signal	Color	Description
1	V-	Black	0V <sub>DC</sub>
2	CAN_L	Blue	Signal (negative pole)
3	SHIELD	-	Shield
4	CAN_H	White	Signal (positive pole)
5	V+	Red	24V <sub>DC</sub>

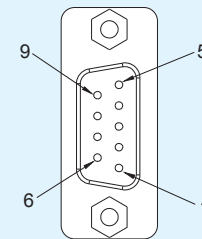


**3. Applicable model:**

DVPPF01-S, DVPPF02-SL

**Definitions of the pins in a PROFIBUS-DP connector**

Pin	Name	Description
1, 2	-	N/C
3	Rxd/Txd-P	Receiving/Transmitting data (P (B))
4	-	N/C
5	DGND	Signal ground
6	VP	Supply voltage (positive voltage)
7	-	N/C
8	Rxd/Txd-N	Receiving/Transmitting data (N (A))
9	-	N/C

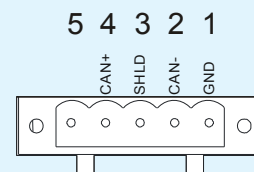


**4. Applicable model:**

DVPCOPM-SL

**CANopen connector**

Pin	Signal	Description
1	GND	GND
2	CAN_L	Signal (negative pole)
3	SHLD	Shielded cable
4	CAN_H	Signal (positive pole)
5	-	Reserved

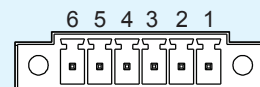


**5. Applicable model:**

DVPSCM12-SL, DVPSCM52-SL

**Definitions of the pins in an RS-485/RS-422 connector**

Pin	Signal	Description
1	-	TX+
2	-	TX-
3	D+	RX+
4	D-	RX-
5	SG	SG
6	-	SG



# Wiring

## DVP-ES/ES2 Series PLC

Series	Model
<b>DVP-ES</b>	DVP14ES00R2, DVP14ES00T2, DVP24ES00R2, DVP24ES00T2, DVP30ES00R2, DVP30ES00T2, DVP32ES00R2, DVP32ES00T2, DVP40ES00R2, DVP40ES00T2, DVP60ES00R2, DVP60ES00T2
<b>DVP-EC3</b>	DVP10EC00R3, DVP10EC00T3, DVP14EC00R3, DVP14EC00T3, DVP16EC00R3, DVP16EC00T3, DVP20EC00R3, DVP20EC00T3, DVP24EC00R3, DVP24EC00T3, DVP30EC00R3, DVP30EC00T3, DVP32EC00R3, DVP32EC00T3, DVP40EC00R3, DVP40EC00T3, DVP60EC00R3, DVP60EC00T3
<b>DVP-EX</b>	DVP20EX00R2, DVP20EX00T2
<b>DVP-ES2</b>	DVP16ES200R, DVP16ES200T, DVP24ES200R, DVP24ES200T, DVP32ES200R, DVP32ES200T, DVP32ES211T, DVP40ES200R, DVP40ES200T, DVP60ES200R, DVP60ES200T
<b>DVP-ES2-C</b>	DVP32ES200RC, DVP32ES200TC
<b>DVP-EX2</b>	DVP20EX200R, DVP20EX200T, DVP30EX200R, DVP30EX200T

### ■ Wiring Input Terminals (NPN (Sink) and PNP (Source))

#### Applicable model:

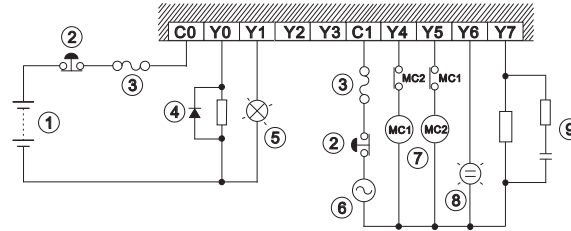
All DVP-ES/ES2 series PLCs

NPN (Sink)	PNP (Source)
NPN (Sink)=The current flows into the common terminal S/S	PNP (Source)=The current flows from the common terminal S/S

### ■ Wiring Relay Output Terminals

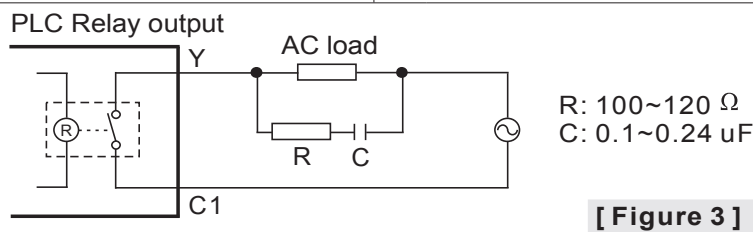
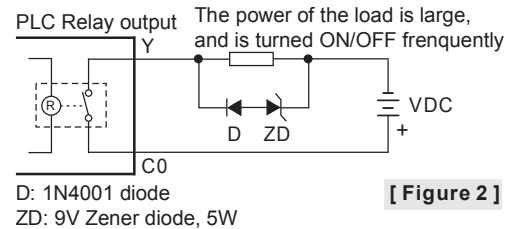
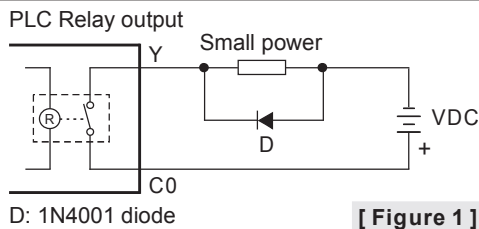
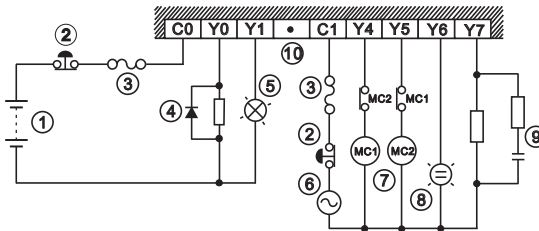
#### Applicable model:

DVP16ES200R, DVP24ES200R, DVP32ES200R, DVP40ES200R, DVP60ES200R, DVP20EX200R, DVP30EX200R, DVP32ES200RC



#### Applicable model:

DVP14ES00R2, DVP14ES01R2, DVP24ES00R, DVP24ES00R2, DVP24ES01R2, DVP24ES11R2, DVP30ES00R2, DVP32ES00R, DVP32ES00R2, DVP32ES01R2, DVP40ES00R2, DVP60ES00R2, DVP20EX00R2, DVP20EX11R2, DVP10EC00R3, DVP14EC00R3, DVP16EC00R3, DVP20EC00R3, DVP24EC00R3, DVP30EC00R3, DVP32EC00R3, DVP40EC00R3, DVP60EC00R3



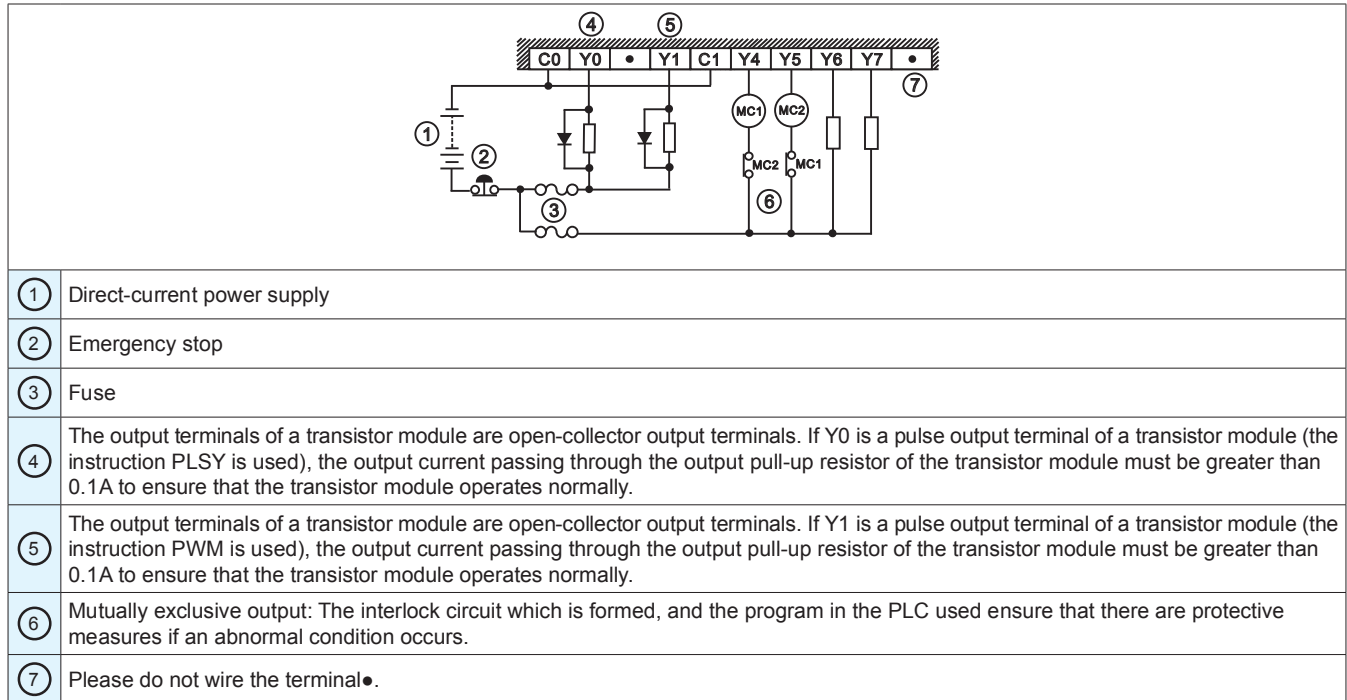
①	Direct-current power supply	②	Emergency stop: An external switch is used.
③	Fuse: To protect an output circuit, a fuse having a breaking capacity in the range of 5A to 10A is connected to a common terminal.		
④	Transient voltage suppression diode: It can be used to lengthen the lifespan that a contact has. A Diode is used to suppress the DC passing a load when the power of the load is small. (Please see [Figure 1].) A Diode and a Zener diode are used to suppress the DC passing a load when the power of the load is large, and is turned ON/OFF frequently. (Please see [Figure 2].)		
⑤	Incandescent lamp (resistive load)	⑥	Alternating-current power supply
⑦	Mutually exclusive output: For example, Y4 controls the clockwise rotation of a motor, and Y5 controls the counterclockwise rotation of the motor. The interlock circuit which is formed, and the program in the PLC ensure that there are protective measures if an abnormal condition occurs.		
⑧	Indicator: Neon lamp	⑨	Surge absorber: It can be used to reduce the noise produced by an AC load. (Please see [Figure 3].)

# Wiring

## ■ Wiring Transistor Output Terminals

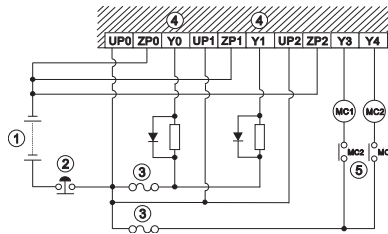
Applicable model:

**DVP-ES/EX series:** DVP14ES00T2, DVP24ES00T2, DVP32ES00T2, DVP40ES00T2, DVP60ES00T2, DVP20EX00T2



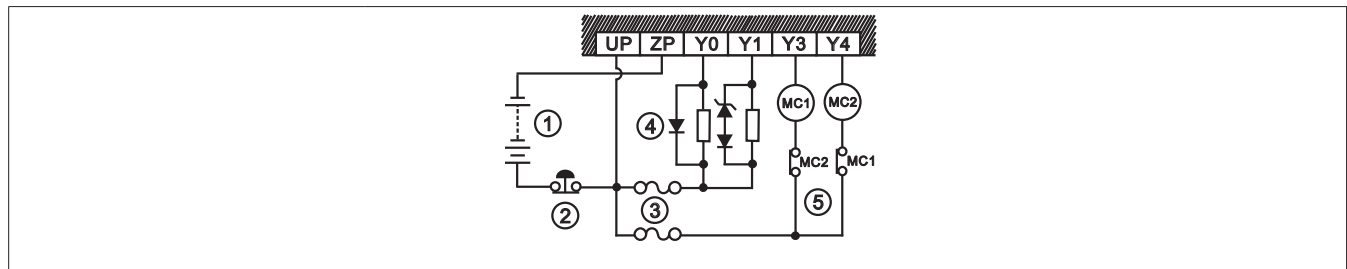
Applicable model:

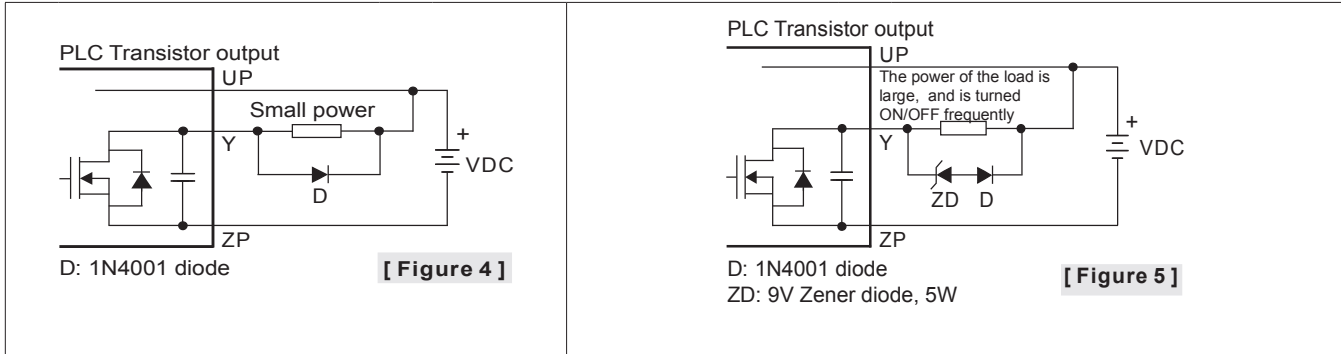
**DVP-ES/EC3 series:** DVP30ES00T2, DVP10EC00T3, DVP14EC00T3, DVP16EC00T3, DVP20EC00T3, DVP24EC00T3, DVP30EC00T3, DVP32EC00T3, DVP40EC00T3, DVP60EC00T3



**DVP-ES2/EX2 series:**

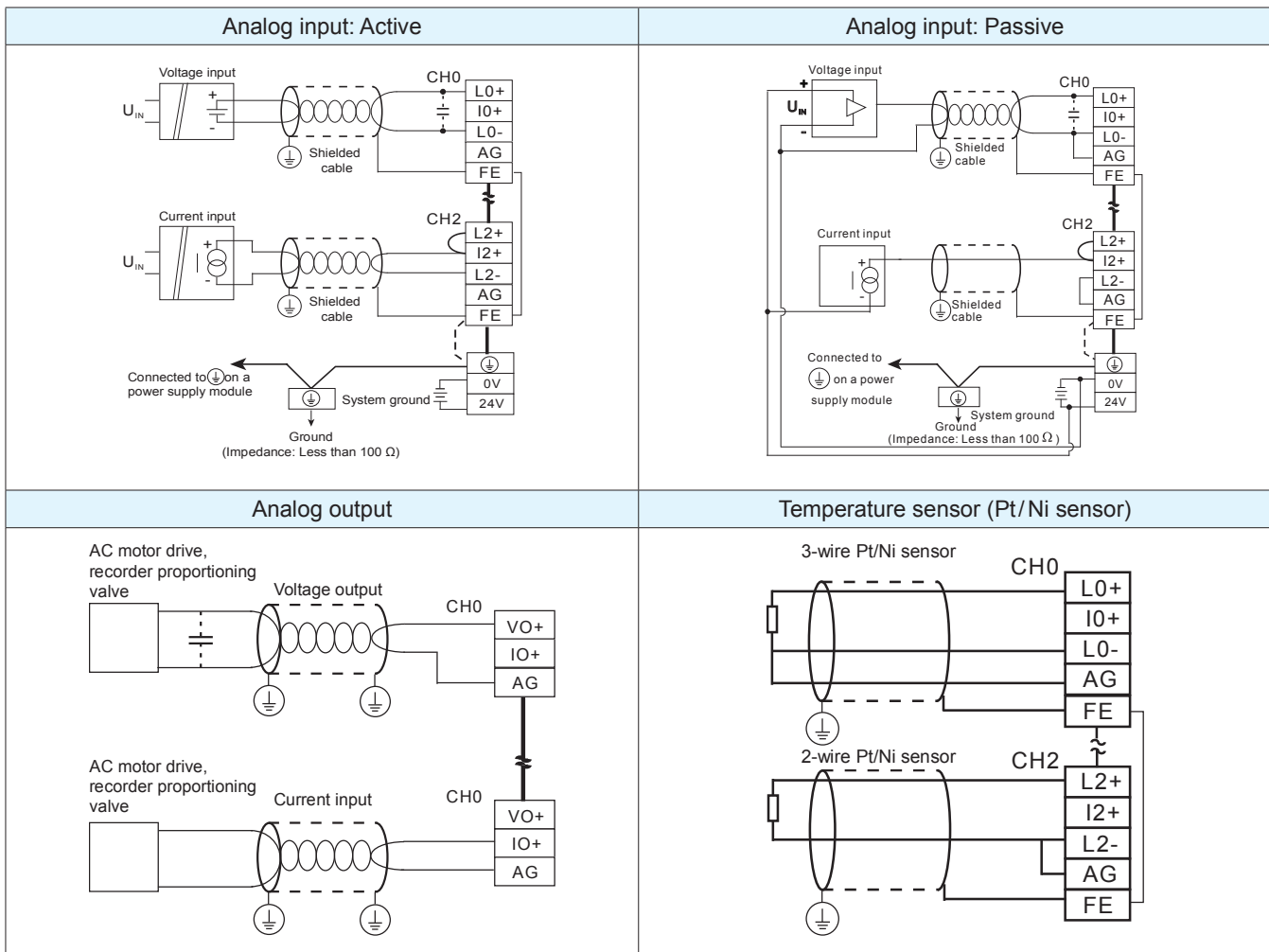
DVP16ES200T, DVP24ES200T, DVP32ES200T, DVP32ES211T, DVP40ES200T, DVP60ES200T, DVP32ES200TC, DVP20EX200T, DVP30EX200T





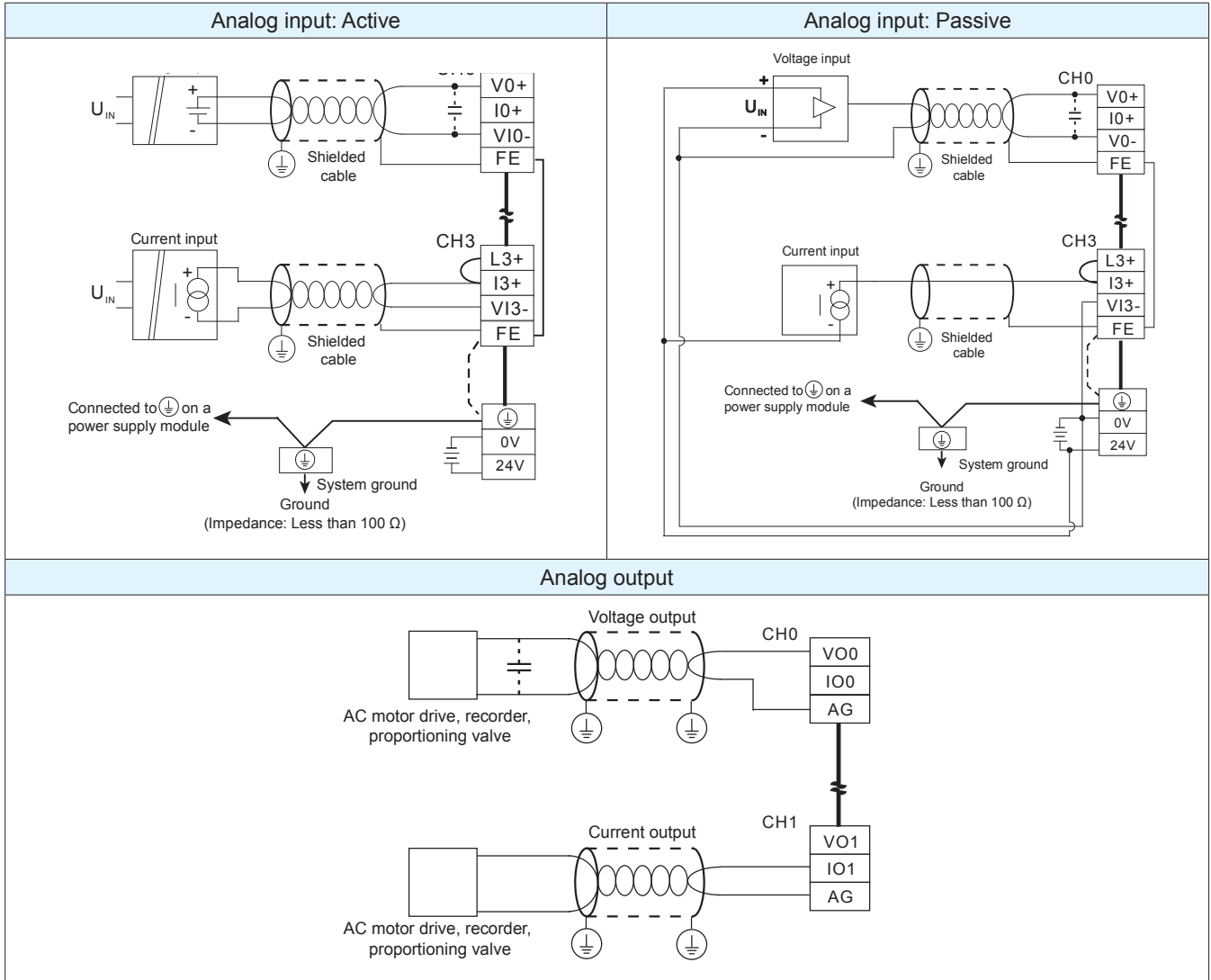
- |   |                  |        |
|---|------------------|--------|
| ① Direct-current power supply   | ② Emergency stop | ③ Fuse |
| <p>④ Transient voltage suppression diode: It can be used to lengthen the lifespan that a contact has.<br/>                 A Diode is used to suppress the DC passing a load when the power of the load is small. (Please see [Figure 4].)<br/>                 A Diode and a Zener diode are used to suppress the DC passing a load when the power of the load is large, and is turned ON/OFF frequently. (Please see [Figure 5].)</p> |                  |        |
| <p>⑤ Mutually exclusive output: For example, Y3 controls the clockwise rotation of a motor, and Y4 controls the counterclockwise rotation of the motor. The interlock circuit which is formed, and the program in the PLC ensure that there are protective measures if an abnormal condition occurs.</p>  |                  |        |

**■ Wiring the Analog Input/Output Terminals and the Temperature Sensors of DVP30EX200R/DVP30EX200T**

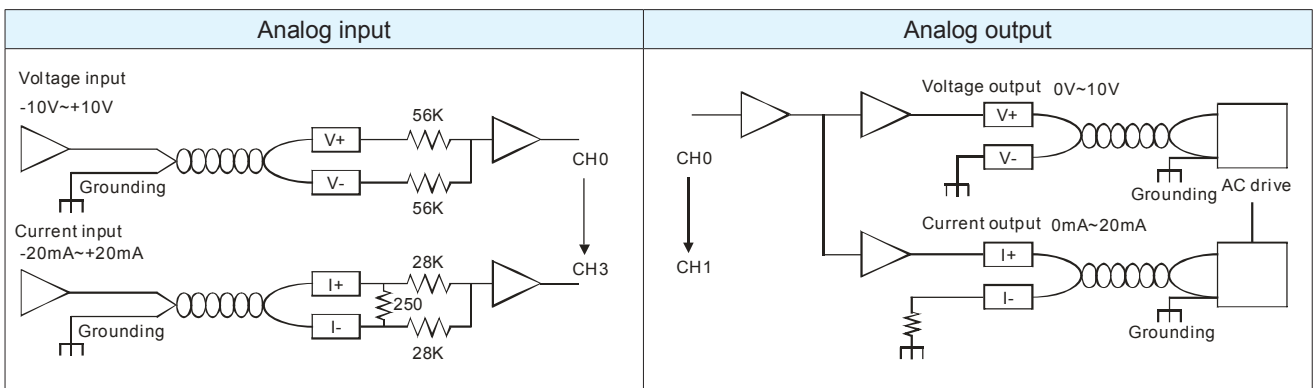


# Wiring

## ■ Wiring the Analog Input/Output Terminals of DVP20EX200R/DVP20EX200T



## ■ Wiring the Analog Input/Output Terminals of DVP20EX00R2/DVP20EX00T2



# Analog Modules

## Applicable model

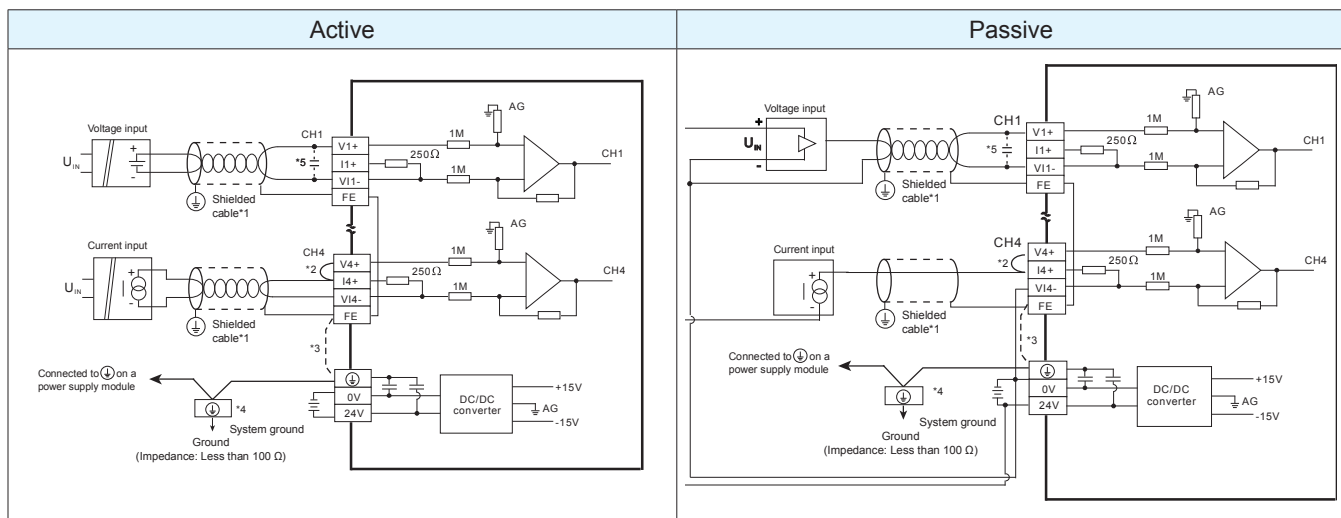
DVP-ES2/EX2 series modules

DVP04AD-E2, DVP02DA-E2, DVP04DA-E2, DVP06XA-E2

### ■ Wiring Analog Modules

#### 1.Applicable model:

DVP04AD-E2, DVP06XA-E2 (analog input)



\*1. Please isolate the analog input signal cables from other power cables.

\*2. If the module is connected to a current signal, the terminals V4+ and I4+ must be short-circuited.

\*3. If there is much noise, please connect the terminal FE to the ground terminal.

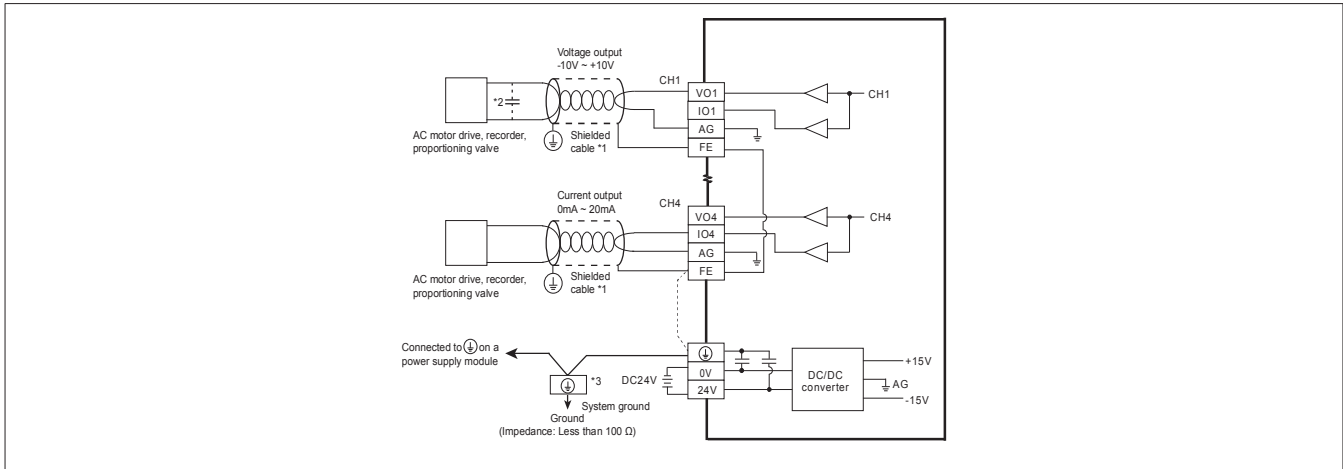
\*4. Please connect ⊕ on a power supply module and ⊕ on the module to the system ground, and then ground the system ground or connect the system ground to a distribution box.

\*5. If the ripple in the input voltage results in the noise interference with the wiring, please connect the module to the capacitor having a capacitance in the range of 0.1 μF to 0.47 μF with a working voltage of 25V.

# Wiring

## 2.Applicable model:

DVP02DA-E2, DVP04DA-E2, DVP06XA-E2 (analog output)



\*1. Please isolate the analog input signal cables from other power cables.

\*2. If a ripple is large for the input terminal of the load and results in the noise interference with the wiring, please connect the module to the capacitor having a capacitance in the range of 0.1  $\mu\text{F}$  to 0.47  $\mu\text{F}$  with a working voltage of 25V.

\*3. Please connect  $\oplus$  on a power supply module and  $\ominus$  on the module to the system ground, and then ground the system ground or connect the system ground to a distribution box.

## Wiring Digital Input / Output Modules

### Applicable model:

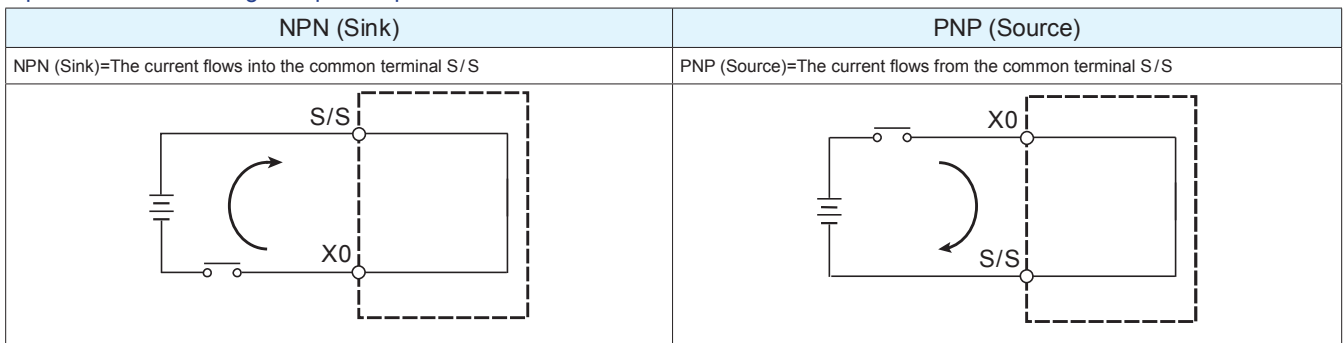
<b>DVP-ES/EX series</b>	DVP08XM11N, DVP08XP11R, DVP08XP11T, DVP08XN11R, DVP08XN11T, DVP16XM11N, DVP16XN11R, DVP16XN11T, DVP24XN11R, DVP24XP11R, DVP32XP11R, DVP24XN11T, DVP24XP11T, DVP32XP11T
<b>DVP-ES2/EX2 series</b>	DVP08XM211N, DVP08XP211R, DVP08XP211T, DVP08XN211R, DVP08XN211T, DVP16XM211N, DVP16XP211R, DVP16XP211T, DVP16XN211R, DVP16XN211T, DVP24XN200R, DVP24XN200T, DVP24XP200R, DVP24XP200T, DVP32XP200R, DVP32XP200T

### A. Wiring input terminals

Wiring DC input terminals (NPN (Sink) and PNP (Source))

#### Applicable model:

Input terminals of all digital input/output modules





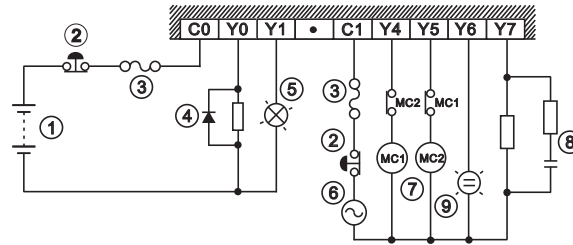
## B. Wiring output terminals

### B.1 Wiring relay output terminals

**Applicable model:**

**DVP-ES/EX series:** DVP08XN11R, DVP16XN11R, DVP24XN11R, DVP08XP11R, DVP24XP11R, DVP32XP11R

**DVP-ES2/EX2 series:** DVP24XN200R, DVP24XP200R, DVP32XP200R, DVP08XN211R, DVP08XP211R, DVP16XN211R, DVP16XP211R

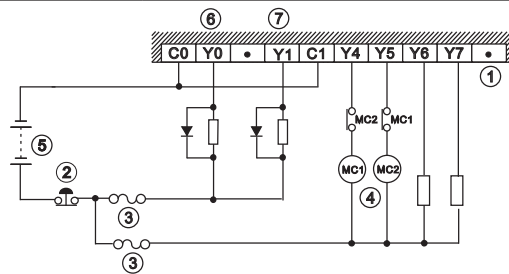


①	Direct-current power supply	②	Emergency stop: An external switch is used.
③	Fuse: To protect an output circuit, a fuse having a breaking capacity in the range of 5A to 10A is connected to a common terminal.		
④	Transient voltage suppression diode: It can be used to lengthen the lifespan that a contact has.		
⑤	Incandescent lamp (resistive load)	⑥	Alternating-current power supply
⑦	Mutually exclusive output: For example, Y3 controls the clockwise rotation of a motor, and Y4 controls the counterclockwise rotation of the motor. The interlock circuit which is formed, and the program in the PLC ensure that there are protective measures if an abnormal condition occurs.		
⑧	Surge absorber: It can be used to reduce the noise produced by an AC load.		
⑨	Indicator: Neon lamp		

### B.2 Wiring Transistor Output Terminals

**Applicable model:**

**DVP-ES/EX series:** DVP08XN11T, DVP16XN11T, DVP24XN11T, DVP08XP11T, DVP24XP11T, DVP32XP11T



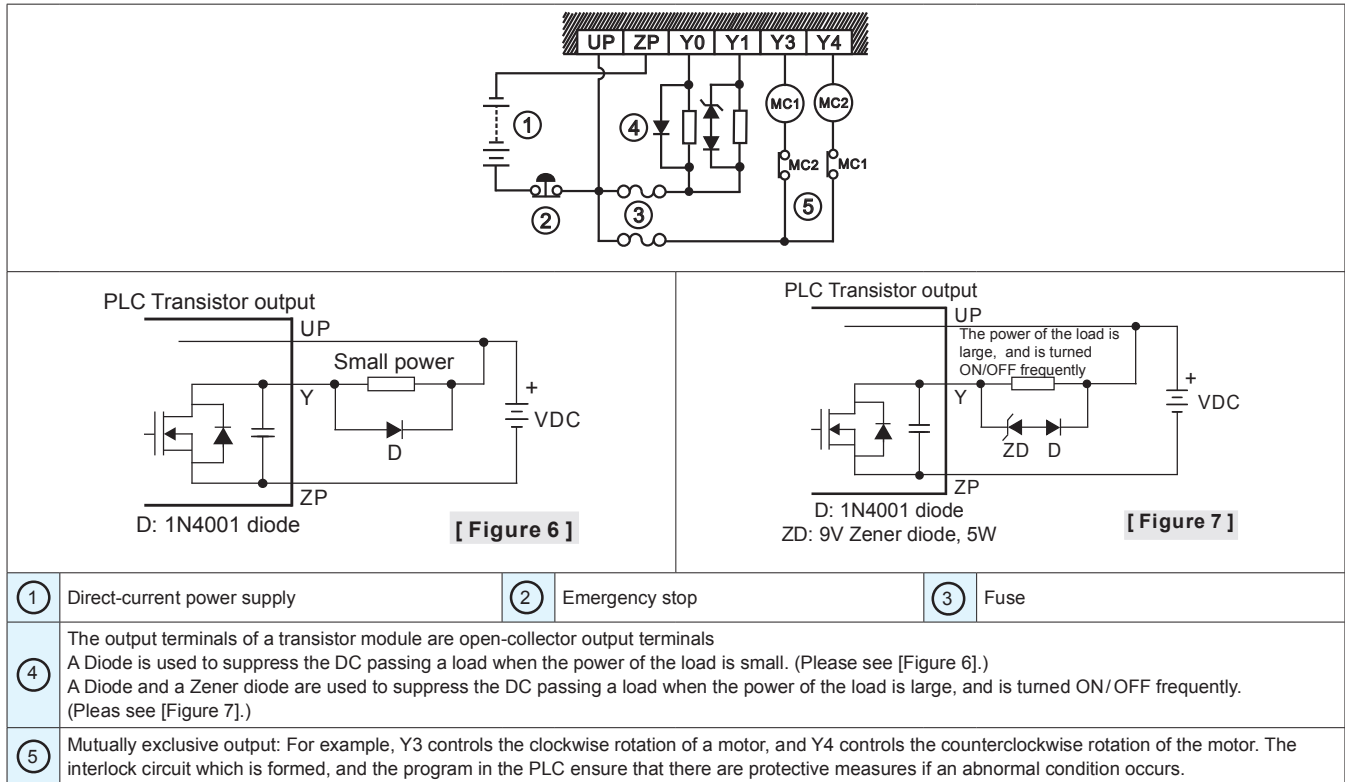
①	Please do not wire the terminal●.	②	Emergency stop	③	Fuse
④	Mutually exclusive output: The interlock circuit which is formed, and the program in the PLC used ensure that there are protective measures if an abnormal condition occurs.				
⑤	Direct-current power supply				
⑥	The output terminals of a transistor module are open-collector output terminals. If Y0 is a pulse output terminal of a transistor module (the instruction PLSY is used), the output current passing through the output pull-up resistor of the transistor module must be greater than 0.1A to ensure that the transistor module operates normally.				
⑦	The output terminals of a transistor module are open-collector output terminals. If Y1 is a pulse output terminal of a transistor module (the instruction PWM is used), the output current passing through the output pull-up resistor of the transistor module must be greater than 0.1A to ensure that the transistor module operates normally.				

# Wiring

## Applicable model:

### DVP-ES2/EX2 series:

DVP24XN200T, DVP24XP200T, DVP32XP200T, DVP08XN211T, DVP08XP211T, DVP16XN211T, DVP16XP211T

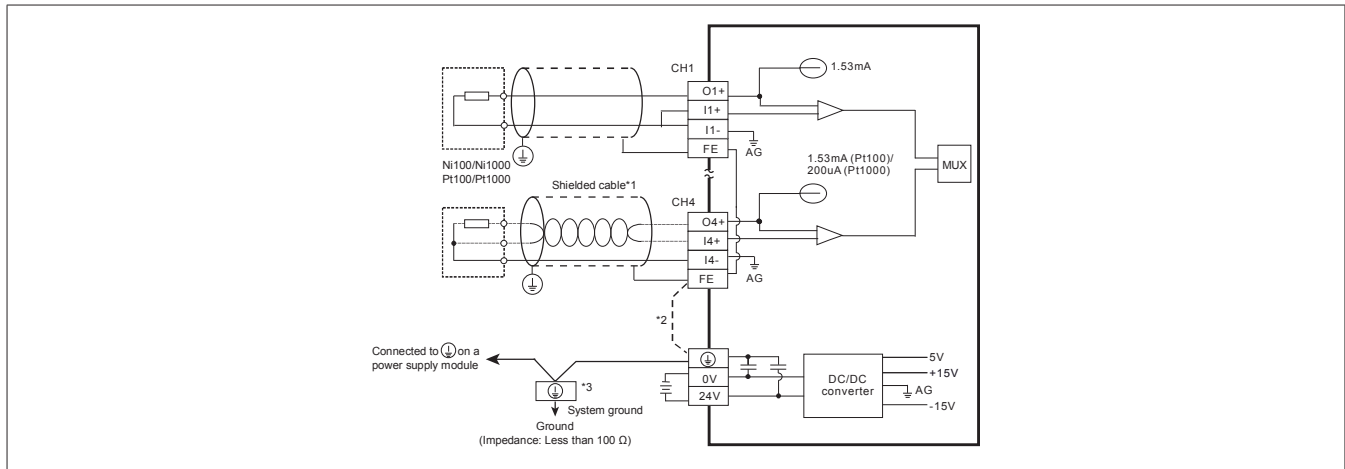


## Temperature Measurement Module

### 1. Temperature measurement module (RTD)

#### Applicable model: DVP-ES2/EX2 series:

DVP04PT-E2

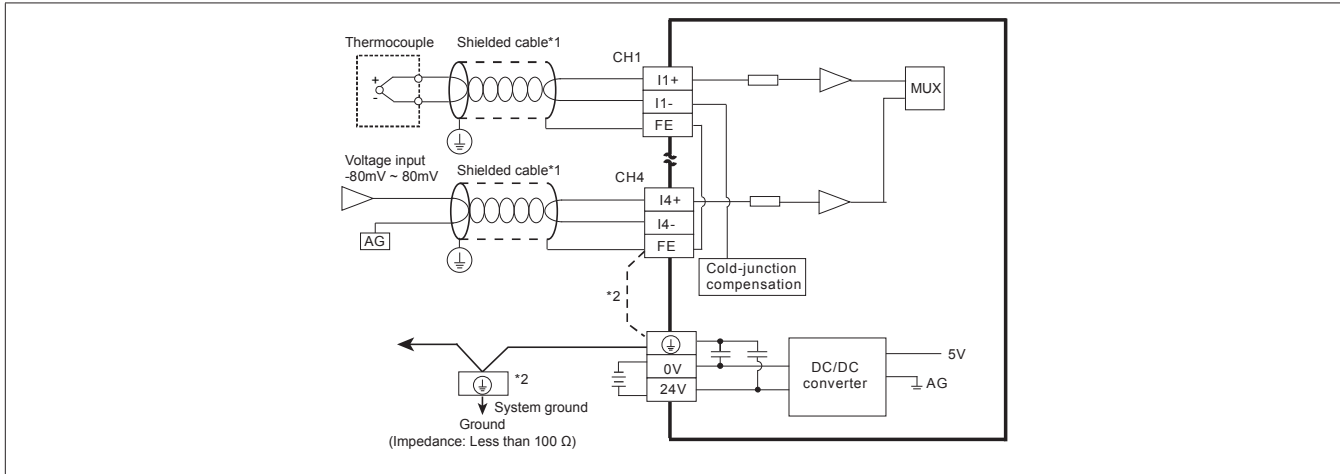


- \*1. The cables connected to the input terminals should be the cables or the shielded twisted pair cables which can be connected to Pt100/Pt1000 sensors, and should be kept separate from other power cables and cables which generate noise. Please use a three-wire temperature sensor. If users want to use a two-wire temperature sensor, I+ and I- must be short-circuited.
- \*2. If there is much noise, please connect the terminal FE to the ground terminal.
- \*3. Please connect ① on a power supply module and ③ on the module to the system ground, and then ground the system ground or connect the system ground to a distribution box.

## 2. Temperature measurement module (thermocouple)

Applicable model: DVP-ES2/EX2 series:

DVP04TC-E2



\*1. The cables connected to the input terminals should be the cables or the shielded twisted pair cables which can be connected to Type J, type K, type R, type S, type T, type E, and type N thermocouples are used, and should be kept separate from other power cables and cables which generate noise.

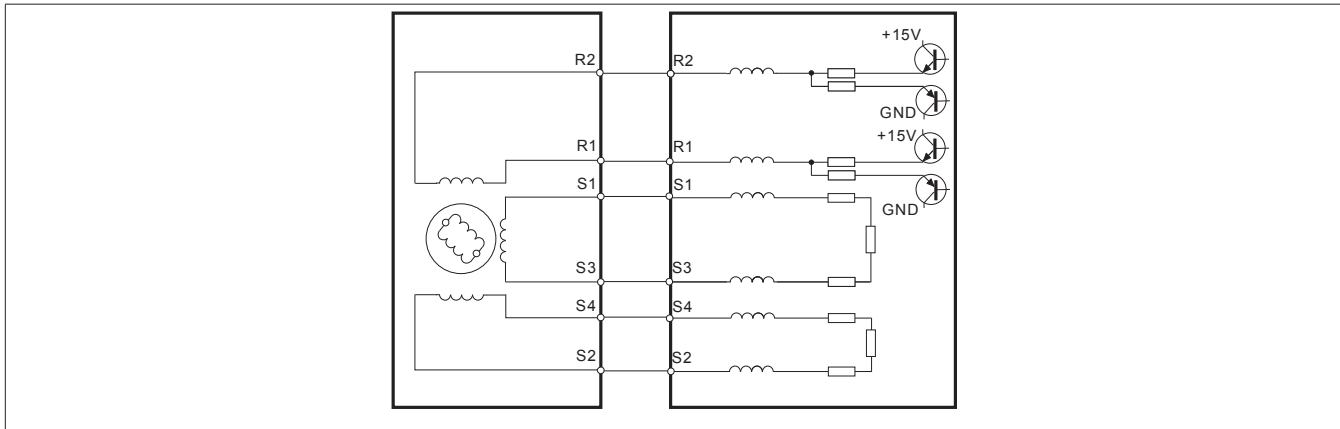
\*2. Please connect Ⓞ on a power supply module and Ⓞ on the temperature measurement module to the system ground, and then ground the system ground or connect the system ground to a distribution box.

## Resolver Input Module

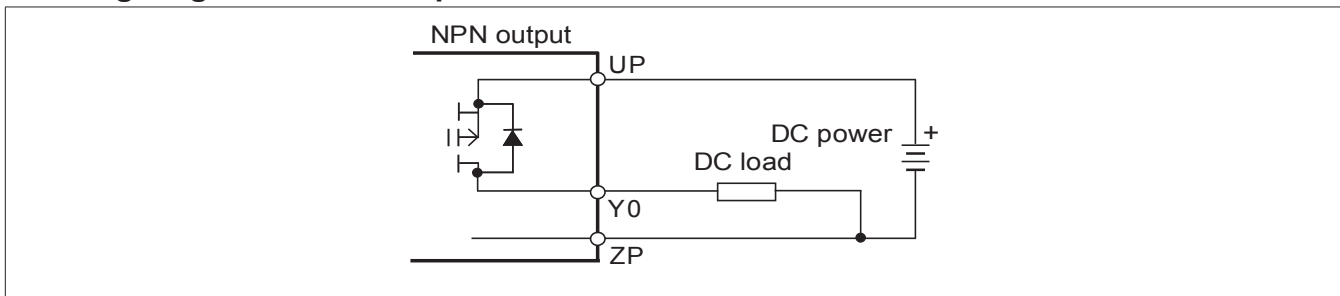
Applicable model: DVP-ES2/EX2 series:

DVP10RC-E2

### ■ Wiring diagram for the input terminals



### ■ Wiring diagram for the output terminals



# Wiring

## Motion Control Series PLC

Applicable model:

DVP10PM00M

DVP20PM00D

DVP20PM00M

DVP20PM00DT

DVP10MC11T

### 1. Wiring input terminals

#### A. Open-collector input terminals

Applicable model:

DVP10PM00M, DVP20PM00D, DVP20PM00M, DVP20PM00DT, DVP10MC11T

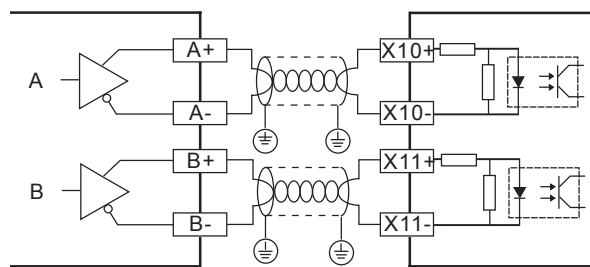
NPN (Sink)	PNP (Source)
NPN (Sink)=The current flows into the common terminal S/S	PNP (Source)=The current flows from the common terminal S/S

#### B. Differential input terminals

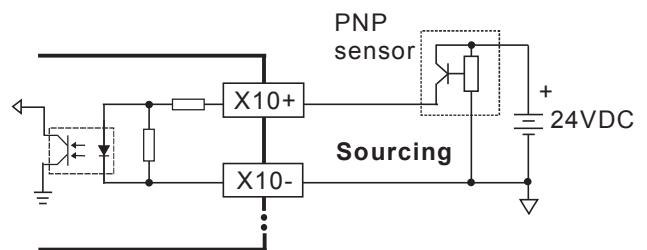
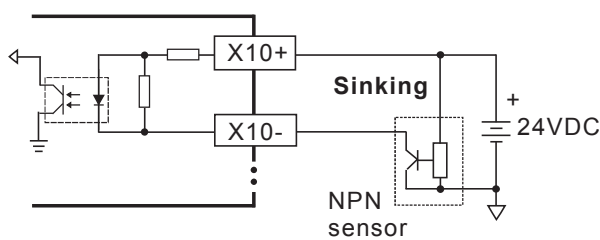
Applicable model:

DVP10PM00M

(1) The wiring below is used for high speed and high noise.



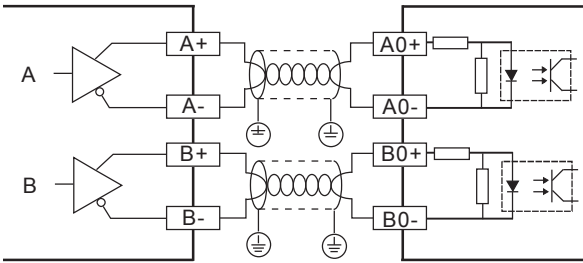
(2) Differential input terminals are connected to a sensor.



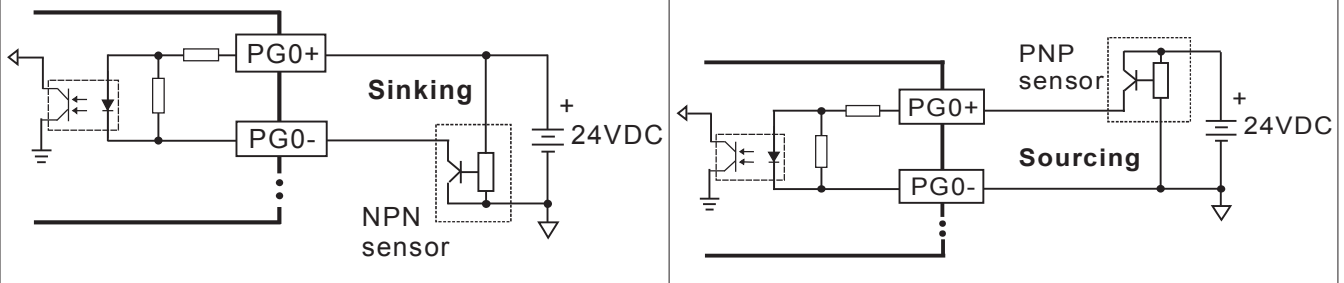
**Applicable model:**

DVP20PM00D, DVP20PM00M, DVP20PM00DT

(1) The wiring below is used for high speed and high noise.



(2) The wiring below will be used if a frequency is less than 50 kHz and there is not much noise.



**2. Wiring output terminals**

**A. Relay output terminals**

**Applicable model:**

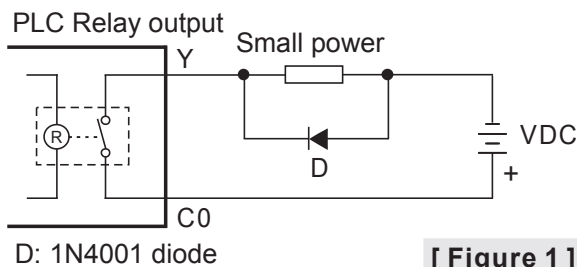
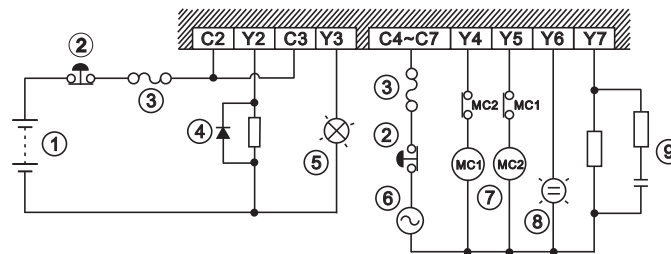
DVP20PM00D, DVP20PM00M

Note:

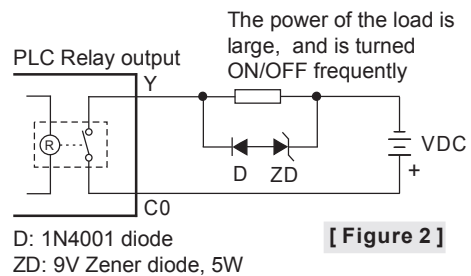
Y0~Y7 of DVP20PM00D are relay output terminals.

Y2~Y3 of DVP20PM00M are low-speed transistor output terminals, and

Y4~Y7 of DVP20PM00M are relay output terminals.

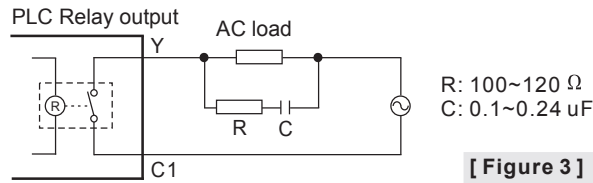


[ Figure 1 ]



[ Figure 2 ]

# Wiring

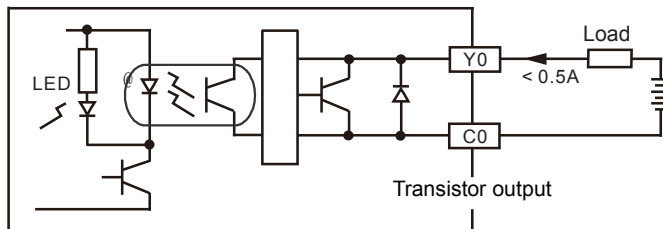


①	Direct-current power supply	②	Emergency stop: An external switch is used.
③	Fuse: To protect an output circuit, a fuse having a breaking capacity in the range of 5A to 10A is connected to a common terminal.		
④	Transient voltage suppression diode: It can be used to lengthen the lifespan that a contact has. A Diode is used to suppress the DC passing a load when the power of the load is small. (Please see [Figure 1].) A Diode and a Zener diode are used to suppress the DC passing a load when the power of the load is large, and is turned ON/OFF frequently. (Please see [Figure 2].)		
⑤	Incandescent lamp (resistive load)	⑥	Alternating-current power supply
⑦	Mutually exclusive output: For example, Y4 controls the clockwise rotation of a motor, and Y5 controls the counterclockwise rotation of the motor. The interlock circuit which is formed, and the program in the PLC ensure that there are protective measures if an abnormal condition occurs.		
⑧	Indicator: Neon lamp		
⑨	Surge absorber: It can be used to reduce the noise produced by an AC load. (Please see [Figure 3].)		

## B. Transistor output terminals

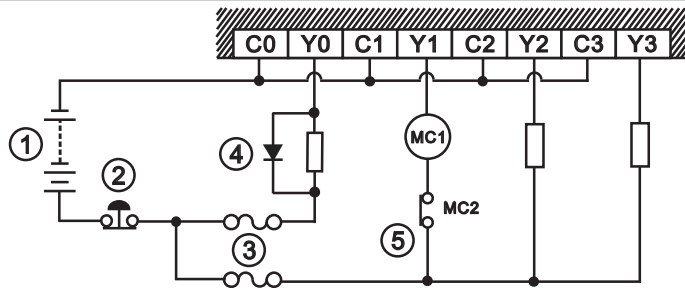
### Applicable model:

DVP10PM00M, DVP20PM00M, DVP20PM00DT .



### Applicable model:

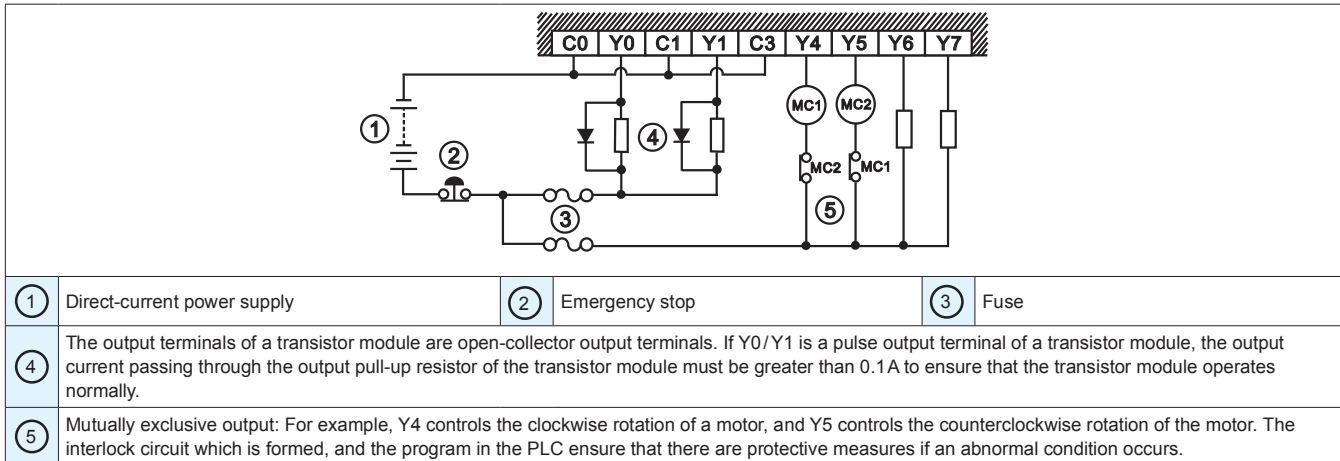
DVP10PM00M



**Applicable model:**

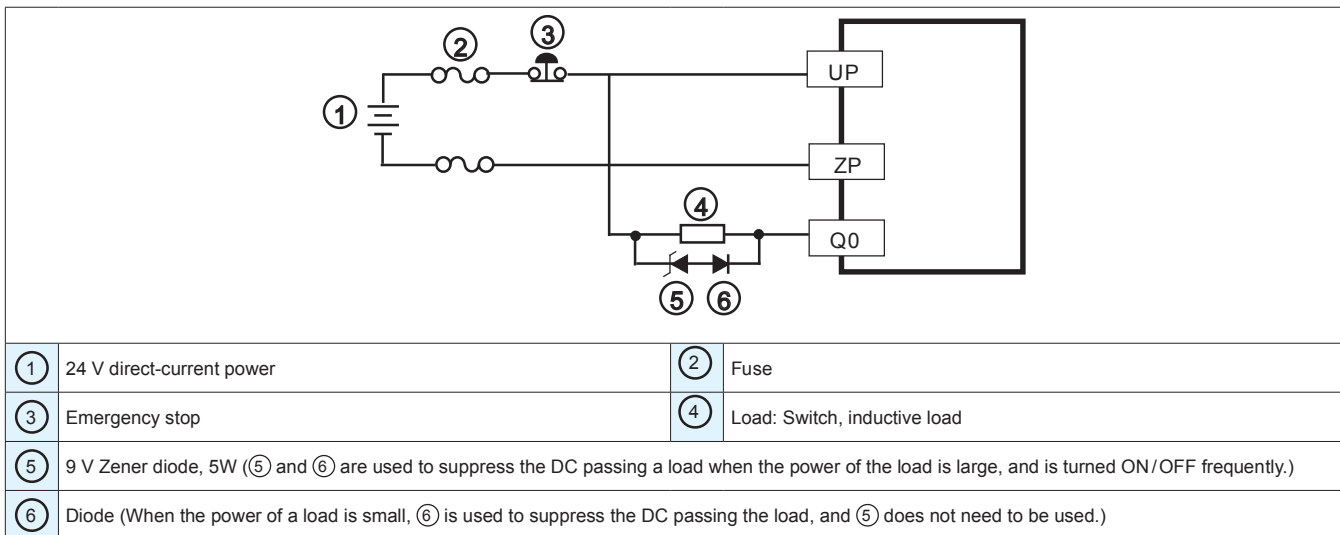
DVP20PM00M, DVP20PM00DT

Note: Y2~Y3 of DVP20PM00M are low-speed transistor output terminals, and Y4~Y7 of DVP20PM00M are relay output terminals. Y0~Y7 of DVP20PM00DT are low-speed transistor output terminals.



**Applicable model:**

DVP10MC11T



# Wiring

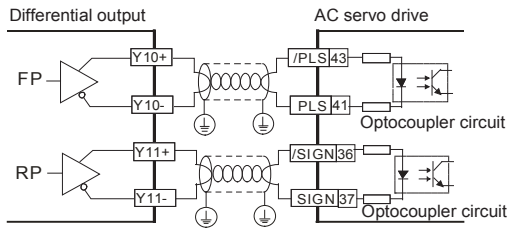
## C. Differential output terminals

### Applicable model:

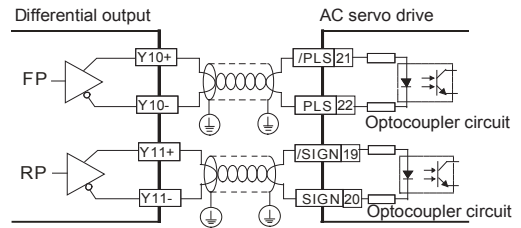
DVP10PM00M

#### Connecting differential output terminals to an AC servo drive

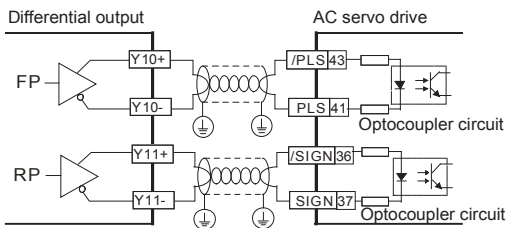
• ASDA-A/ASDA-A+/ASDA-A2 series AC servo drive



• ASDA-B series AC servo drive



• ASDA-AB series AC servo drive

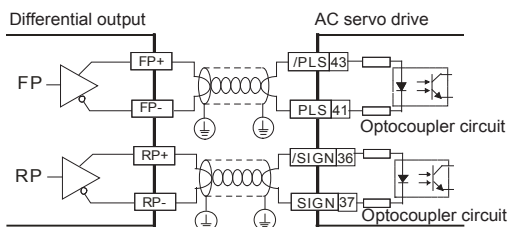


### Applicable model:

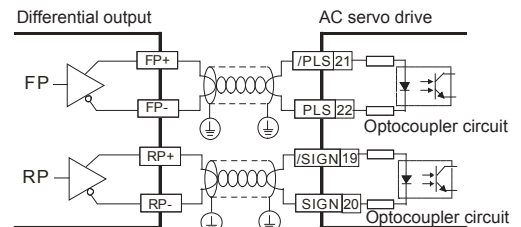
DVP20PM00D, DVP20PM00M, DVP20PM00DT

#### Connecting differential output terminals to an AC servo drive

• ASDA-A/ASDA-A+/ASDA-A2 series AC servo drive



• ASDA-B series AC servo drive



• ASDA-AB series AC servo drive

