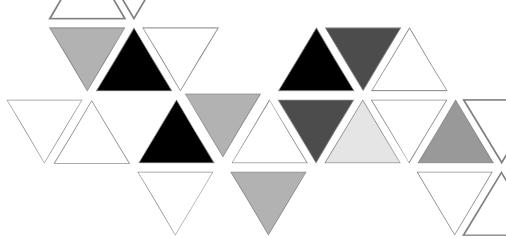




2007-12-27



5011671300-AD60



DVP06AD-S INSTRUCTION SHEET

安装說明 安装说明

- ▲ Analog Input Module
- ▲ 類比輸入模組
- ▲ 模拟输入模块



www.delta.com.tw/industrialautomation

Warning

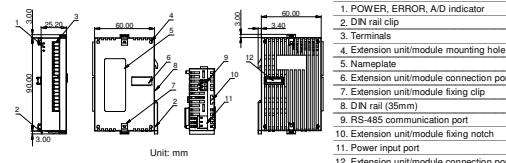
- Please read this instruction carefully before use.
 DO NOT touch any terminal when the power is switched on. Switch off the power before wiring.
 DVP06AD-S is an OPEN-TYPE device and therefore should be installed in an enclosure free of airborne dust, humidity, electric shock and vibration. The enclosure should prevent non-maintenance staff from operating the device (e.g. key or specific tools are required to open the enclosure) in case danger and damage on the device may occur.
 DO NOT connect input AC power supply to any of the I/O terminals; otherwise serious damage may occur. Check all the wiring again before switching on the power.
 DO NOT touch any internal circuit in 1 minute after the power is switched off.
 Make sure the ground terminal (GND) is correctly grounded in order to prevent electromagnetic interference.

1 Introduction

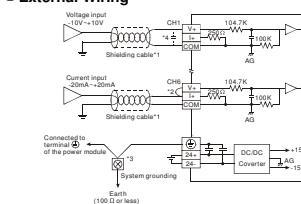
Model Explanation & Peripherals

- Thank you for choosing Delta DVP series. The analog signal input module DVP06AD-S is able to receive 6 points of external analog signal inputs (both in voltage and current) and convert the signals into 14-bit digital ones. It is able to read and write the data in the module through FROM/TO instructions given by the program of DVP-PLC SS/SAX/SC/SV series MPU. There are 49 16-bit control registers in the module.
- The user can select voltage or current output by wiring. Range of voltage output: ±10V DC (resolution: 1.25mV). Range of current output: ±20mA (resolution: 5µA).

Product Profile & Outline



External Wiring



- *1: When performing analog input, please isolate other power wirings.
 *2: When connecting to current signals, please make sure to short-circuit "V_s" and "I_s" terminals.
 *3: Please connect the GND terminal on both the power module and DVP06AD-S to the system earth point and ground the system contact or connect it to the cover of power distribution cabinet.
 *4: If the ripples at the loaded input terminal are too significant that causes noise interference on the wiring, connect the wiring to 0.1 ~ 0.47µF 25V capacitor.

Note: DO NOT wire empty terminals.

2 Specifications

■ Functions

Analog/Digital (6/A/D) module	Voltage input	Current input
Power supply voltage	24V DC (20.4V DC ~ 28.8V DC) (-15% ~ +20%)	
Analog input channel	6 channels/module	
Range of analog input	±10V	±20mA
Range of digital conversion	±8,000	±4,000
Resolution	14 bits (1LSB=1.25mV)	13 bits (1LSB=5µA)
Input impedance	200kΩ or more	250Ω
Overall accuracy	±0.5% when in full scale (25°C, 77°F) ±1% when in full scale in the range of 0 ~ 55°C, 32 ~ 131°F	
Response time	3ms × the number of channels	
Isolation	Isolation between digital area and analog area. No isolation among channels.	
Range of absolute input	±15V	±32mA
Digital data format	13 significant bits out of 16 bits are available; in 2's complement.	
Average function	Yes. Available for setting up in CR#2 ~ CR#7; range: K1 ~ K20.	
Self-diagnosis	Upper and lower bound detection/channel	
Communication mode (RS-485)	ASCII/RTU mode. Communication speed: 4,800/9,600/19,200/38,400/57,600/115,200 ASCII data format: 7-bit, even bit, 1 stop bit (7, E, 1) RTU data format: 8-bit, even bit, 1 stop bit (8, E, 1) RS-485 cannot be used when connected to PLC MPU in series.	
When connected to DVP-PLC MPU in series	The modules are numbered from 0 to 7 automatically by their distance from MPU. Maximum 8 modules are allowed to connect to MPU and will not occupy any digital I/O points.	

■ Others

Power supply	
Max. rated power consumption	24V DC (20.4V DC ~ 28.8V DC) (-15% ~ +20%), 2W, supplied by external power.
Environment	
Operation/storage	Operation: 0°C ~ 55°C (temperature); 50 ~ 95% (humidity); pollution degree 2. Storage: -25°C ~ 70°C (temperature); 5 ~ 95% (humidity).
Vibration/shock immunity	International standards: IEC 61131-2, IEC 68-2-6 (TEST Fc)/IEC 61131-2 & IEC 68-2-7 (TEST Ea)

3 Installation & Wiring

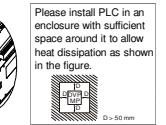
■ Mounting Arrangements and Wiring Notes

How to Install DIN rail

DVP-PLC can be secured to a cabinet by using the DIN rail of 35mm in height and 7.5mm in depth. When mounting PLC to DIN rail, be sure to use the end bracket to stop any side-to-side movement of PLC and reduce the chance of wires being loosen. A small retaining clip is at the bottom of PLC. To secure PLC to DIN rail, place the clip on the rail and gently push it up. To remove it, pull the retaining clip down and gently remove PLC from DIN rail, as shown in the figure.

Wiring

1. Use 22-16AWG (1.5mm) single or multiple core wire on I/O wiring terminals. The specification of the terminal is shown in the figure on the left. The PLC terminal screws shall be tightened to 1.9kg·cm (1.7 in-lbs).
 2. DO NOT place the I/O signal wires and power supply wire in the same wiring duct.
 3. Use 60/75°C copper wires only.



Please install PLC in an enclosure with sufficient space around it to allow heat dissipation as shown in the figure.
 D = 50 mm

4 Control Registers

CR	RS-485 parameter address	Latched	Register content	b15 b14 b13 b12 b11 b10 b9 b8 b7 b6 b5 b4 b3 b2 b1 b0	
#0	H4000	O R	Model name	Set by the system. Data length: 8 bits (b7 ~ b0). DVP06AD-S model code=H'C8.	
#1	H4001	O R/W	Input mode setting	Reserved CH6 CH5 CH4 CH3 CH2 CH1	
#2	H4002	O R/W	Communication address setting	Input mode: Default=H'0000. Mode 0: Voltage input (-10V ~ +10V) Mode 1: Voltage input (-5V ~ +10V) Mode 2: Current input (-20mA ~ +20mA) Mode 3: Current input (-20mA ~ +20mA)	
#3	H4021	O R/W	Return to default setting; OFFSET/GAIN tuning authorization	CH1 CH2 CH3 CH4 CH5 CH6	
#4	H4022	O R	Firmware version	Take the setting of CH1 for example: b1: CH0 for upper/lower bound alarm on the input value for the channel, 0=disabled; 1=enabled (default). b2: OFFSET/GAIN tuning, 0=forbidden; 1=allowed (default). b3: When b12 ~ b15 = 1, all values in CH1 ~ CH6 will return to default settings. b12 ~ b15 = 0 will return to 0 automatically after the setting is completed.	
#5 ~ #8	For system use			Return to default: CH6 CH5 CH4 CH3 CH2 CH1	
#9	Symbol: ☐ Latched (when written in through RS-485 communication). ☒ Non-latched. R: Able to read data from FOMR instruction or RS-485 communication. W: Able to write data by TO instruction or RS-485 communication. LSB (Least Significant Bit): 1. For voltage input: 1LSB=10V/8,000=1.25mV. 2. For current input: 1LSB=20mA/4,000=5µA.			Take the setting of CH1 for example: b1: CH0 for upper/lower bound alarm on the input value for the channel, 0=disabled; 1=enabled (default). b2: OFFSET/GAIN tuning, 0=forbidden; 1=allowed (default). b3: When b12 ~ b15 = 1, all values in CH1 ~ CH6 will return to default settings. b12 ~ b15 = 0 will return to 0 automatically after the setting is completed.	
#10	CR#0 ~ CR#4: The corresponding parameter addresses H'4000 ~ H'4022 are for users to read/write data by RS-485 communication. When using RS-485, the user has to separate the module with MPU first. a. Function codes: 03H (read register data); 06H (write 1 word datum to register); 10H (write many words data to register). b. Latched CR should be written by RS-485 communication to stay latched. CR will not be latched if written by MPU through TO/DO instruction.			Return to default: CH6 CH5 CH4 CH3 CH2 CH1	
#11	The working mode of the 6 channels in the analog input module. There are 4 modes for each channel which can be set up separately. For example, if the user needs to set up CH1: mode 0 (b2 ~ b0=0) and CH2: mode 1 (b5 ~ b3=01), CH3: mode 2 (b8 ~ b6=10), CH4: mode 3 (b11 ~ b9=01), CH5: mode 0 (b1 ~ b9=00), CH6: mode 1 (b11 ~ b9=01). CR#1 has to be set as H'004A and the higher bits (b12 ~ b15) have to be reserved. Default value=H'0000.			Take the setting of CH1 for example: b1: CH0 for upper/lower bound alarm on the input value for the channel, 0=disabled; 1=enabled (default). b2: OFFSET/GAIN tuning, 0=forbidden; 1=allowed (default). b3: When b12 ~ b15 = 1, all values in CH1 ~ CH6 will return to default settings. b12 ~ b15 = 0 will return to 0 automatically after the setting is completed.	
#12	CR#1: The working mode of the 6 channels in the analog input module. There are 4 modes for each channel which can be set up separately. For example, if the user needs to set up CH1: mode 0 (b2 ~ b0=0) and CH2: mode 1 (b5 ~ b3=01), CH3: mode 2 (b8 ~ b6=10), CH4: mode 3 (b11 ~ b9=01), CH5: mode 0 (b1 ~ b9=00), CH6: mode 1 (b11 ~ b9=01). CR#1 has to be set as H'004A and the higher bits (b12 ~ b15) have to be reserved. Default value=H'0000.			Return to default: CH6 CH5 CH4 CH3 CH2 CH1	
#13	CR#2 ~ CR#4: Range of settings in CH1 ~ CH6: K1 ~ K20. The settings of average times of the signals at CH1 ~ CH6. Range: K1 ~ K20. For example, if the average time at CH1 is to be set as K10 and CH2 as K18, CR#2 has to be set as H'120A. CR#3 ~ 4 apply the same rule. The default setting of each channel-K10. Default settings of CR#2 ~ CR#4 are all H'00A0.			Return to default: CH6 CH5 CH4 CH3 CH2 CH1	
#14	CR#5 ~ CR#8: Average of the signals at CH1 ~ CH6 obtained from the settings in CR#2 ~ CR#4. For example, if the settings in CR#2 ~ CR#4 is 10, the content in CR#5 ~ CR#8 will be the average of the most recent 10 signals at CH1 ~ CH6.			Return to default: CH6 CH5 CH4 CH3 CH2 CH1	

Download from Www.Somunuals.com. All Manuals Search And Download.

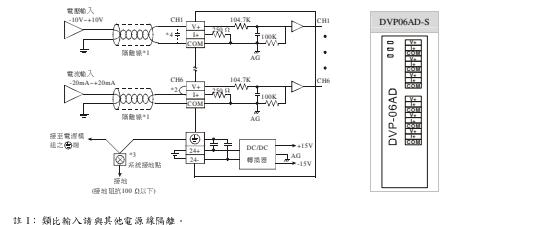
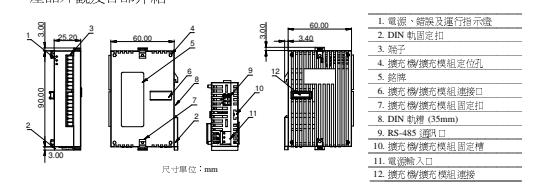
注意事項

- 請在使用之前，詳細閱讀本使用說明書。
 請勿在上電時觸摸任何端子，實施配線，務必關閉電源。
 本機為開框型 (OPEN-TYPE) 機殼，因此使用前請確認，必須將之安裝於具防塵、防潮及免於電擊、衝擊之外的開敞型機殼內，另須具備適當措施（如：特殊之工具或鑰匙才可打開）防止非維護人員操作或意外碰觸本體，造成危險損壞。
 交流輸入端子不可直接連接至地端子，否則可能造成嚴重的損壞，因此請在上電之前再次確認電源配線。
 入電端子與地端子之間，請勿短接，以免燒壞內部元件。
 本體上之地端子 (GND) 請正確的接地，以提高產品抗雜訊能力。

1 產品簡介

- 說明及週邊裝置
 • 適應您使用台灣 DVP 系列產品，DVP06AD-S 類比信號輸入模組可接受外部 6 點類比信號輸入 (電壓或電流皆可) 將之轉換成 14 位元之數位信號，透過 DVP-PLC SS/SAX/SC/SV 主機程式以指令 FROM/TO 來達成各個模組之資料，模組內具有 49 個 CR (Control Register) 儲存器，每個儲存器 16 bits。
 • 使用 DVP-PLC 時選擇脈衝輸入或電流輸入、電壓輸入範圍 ±20mA (解析度為 5µA)。

2 產品外觀及各部介紹



- 1: 類比輸入端與其他電源隔離。
 2: 如果連接電流信號時，V_s 及 I_s 端子請勿短路。
 3: 請務必接電源組之 (a) 端連接到系統地點，再將系統接點作第3種接法接回到地電源之 (b) 端上。
 4: 如果輸入電壓有浪涌或跳波現象，請接 0.1 ~ 0.47µF 25V 之電容。
 註意：電感子 ● 請勿接線。

2 規格

功能規格

類比數位 (6/A/D) 模組	電壓輸入 (Voltage input)	電流輸入 (Current input)
電壓範圍	24V DC (20.4V DC ~ 28.8V DC) (-15% ~ +20%)	6通道/台
類比訊號輸入通道	±10V	±20mA
數位轉換範圍	±8,000	±4,000
解析度	14 bits (1LSB=1.25mV)	13 bits (1LSB=5µA)
輸入阻抗	200kΩ 以上	250Ω
總和精密度	±0.5% 在 (25°C, 77°F) 範圍內滿刻度時。	
±1% 在 (0 ~ 55°C, 32 ~ 131°F) 範圍內滿刻度時。		
響應時間	3ms × 通道數	
隔離方式	數位區與類比區有隔離，通道間未隔離。	
絕對輸出範圍	±15V	±32mA
數位資料格式	16位元二進數，最大有效位 13 bits。 有 (CR#2 ~ CR#7) 可設定，範圍 K1 ~ K20	
平均功能		
自我診斷功能		
通訊模式 (RS-485)		
RS-485 通訊無法使用		
與 DVP-PLC 主機串接說明		
模組編址以靠近主機之順序自動編號由 0 到 7，最大可連接 8 台且不佔用數位 I/O 點數。		
其他規格		
額定最大消耗功率	直流 24V DC (20.4V DC ~ 28.8V DC) (-15% ~ +20%), 2W, 由外部電源供應。	
環境規格		
操作: 0°C ~ 55°C (溫度) ; 50 ~ 95% (濕度)		
儲存: -25°C ~ 70°C (溫度) ; 5 ~ 95% (濕度)		
耐衝擊/衝擊		
國際標準規範 IEC 61131-2, IEC 68-2-6 (TEST Fc)/IEC 61131-2 & IEC 68-2-27 (TEST Ea)		

Free Manuals Download Website

<http://myh66.com>

<http://usermanuals.us>

<http://www.somanuals.us>

<http://www.manual-lib.com>

<http://www.404manual.com>

<http://www.luxmanual.com>

<http://aubethermostatmanual.com>

Golf course search by state

<http://golfingnear.com>

Email search by domain

<http://emailbydomain.com>

Auto manuals search

<http://auto.somanuals.com>

TV manuals search

<http://tv.somanuals.com>