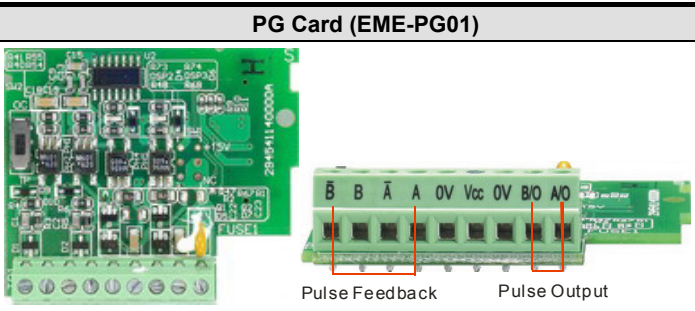


# EME-PG01 Pulse Generator Card for VFD-E Series Instruction Sheet

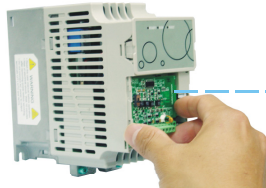
- ◆ Please thoroughly read this instruction sheet before installing option cards and putting them into use.
- ◆ The content of this instruction sheet may be revised without prior notice. Please consult our distributors or download the most updated version at <http://www.delta.com.tw/industrialautomation>.

## 1 Layout



## 2 Installation

- Make sure that the AC Motor Drive is powered off before operation. DO NOT insert or remove the card when the AC Motor Drive is powered on.
- Please mount the extension card as shown and fix it with the screw packed with the card.



Screw torque:  
Maximum 2kgf-cm

- Terminals Screw Torque: Maximum 2kgf-cm
- Wire Length

Types of Encoder Output	Maximum Length	Wire Gauge
Voltage	50m	14 ~ 24 AWG (2.1 ~ 0.2 mm <sup>2</sup> )
Open Collector	50m	
Line Driver	300m	
Complementary	70m	

### NOTE

- EME-PG01 needs additional power source DC 5 ~ 24V, as to details please refer to table of terminals descriptions.
- Only when the extension card is correctly installed on the AC Motor Drive, the extension card will be automatically detected. The parameters can be set in Group 13. If extension card is not installed, only parameters Group 0 ~ Group 10 can be set. Refer to Chapter 5: Parameters in the user manual for further details.

## 3 Notes


- Please use a shielded cable to prevent interference. Do not run control wires parallel to any high voltage AC power line (200 V and above).
- The wire length and signal frequency are in inverse proportion.
- Always use this product in a clean indoor location free from dust, corrosive gas and liquid.
- When the relays are used to switch inductive loads (relays, contactors, motors, etc), connect an RC network or Varistor parallel to the load to suppress voltage spikes.
- For safety, it is recommended to use fuses for the circuitry that is switched by the relays. The fuse specification must be within the specified contact limits.
- The ends of wires must be tinned or crimped.
- To avoid interference, route the extension card wires separately and as far away (at least 15cm) as possible from other control wires, motor wires and power wires, etc. Where these wires must cross each other, please make sure they are at a 90° angle.
- Always use and operate this product within the limit of its specifications.

## 4 Specification


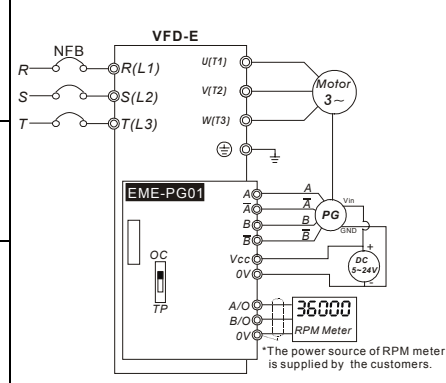

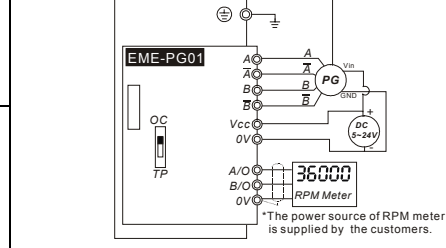

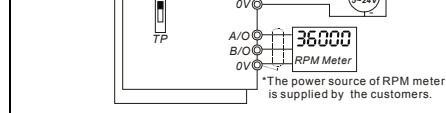

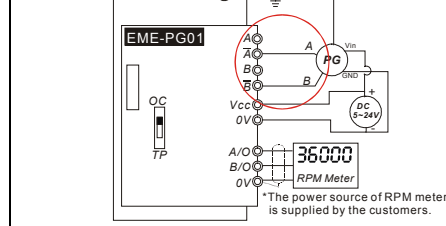
### Environmental

Operating Temperature	-10°C to 50°C (non-condensing and not frozen)
Storage Temperature	-20° C to + 60°C
Ambient Humidity	Less than 90%RH (non-condensing)
Installation Altitude	Below 1000m
Vibration	Below 20 Hz: Maximum 9.81 m/s <sup>2</sup> (1G); 20 ~ 50Hz: Maximum 5.88 m/s <sup>2</sup> (0.6G)

### Terminals Descriptions

Terminal Symbols	Descriptions
Vcc	Input Voltage: DC 5 ~ 24V <b>When the encoder output type is voltage output, input voltage is DC 12 ~ 24V</b>
0V	Power source and input signal common
A, $\bar{A}$ B, $\bar{B}$	Input signal from the encoder. Input type is selected by SW2. It can be 1-phase or 2-phase input. Maximum 300KP/sec
A/O, B/O	Output signal from the encoder. Open collector: max. output DC24V 50mA
	Grounding

## 5 Types of Encoder Output

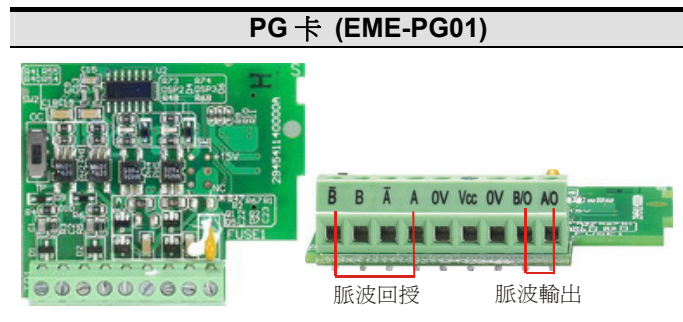
Types of Encoder Output	SW2	Wiring Diagram
Voltage		
Line driver		
Complementary		
Open collector		

Note: Based on the design, the input signal terminals from the encoder should be connected to the terminals of  $\bar{A}$  and  $\bar{B}$  on EME-PG01 card, not the terminals of A and B, so as to avoid damage to the encoder.

# EME-PG01 VFD-E 系列之 PG 速度回授卡說明書

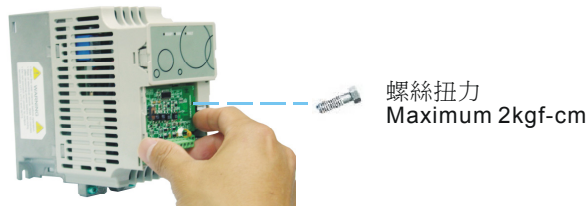
- ◆ 請詳細閱讀下列說明後才使用本產品，以確保使用安全。
- ◆ 由於產品精益求精，當內容規格有所修正時，請洽詢代理商或至台達網站(<http://www.delta.com.tw/industrialautomation/>)下載最新版本。

## 1 外觀



## 2 安裝方式

- 安裝前請確認驅動器在斷電狀態下。
- 請以下圖方式安裝擴充卡並使用包裝內的螺絲固定以避免擴充卡鬆脫。



- 端子螺絲扭力：Maximum 2kgf-cm
- 線徑線長

編碼器輸出型式	最大長度	線徑
電壓輸出型 Voltage	50m	AWG14 ~ 24 (2.1 ~ 0.2mm <sup>2</sup> )
開集極型 Open Collector	50m	
差動型 Line Driver	300m	
互補型 Complementary	70m	

### NOTE

- EME-PG01 需外加電源 DC 5 ~ 24V，詳細規格請參考端子規格表。
- 若擴充卡正確安裝至變頻器上，變頻器將會自動偵測擴充卡且可使用參數群 13(Group 13)設定。如沒有安裝擴充卡的話，參數只有 Group 0 ~ Group 10 可設定。詳細參數設定請參考使用手冊第五章參數說明。

## 3 注意事項

- 為防止干擾請務必使用有被覆的隔離線，且不可與 AC200V 以上的回路並排。
- 配線的長度 (與訊號頻率成反比關係)。
- 請使用此產品於無腐蝕性氣體、液體及無塵垢的室內。
- 連接電感性負載 (繼電器，電磁接觸器，馬達等) 時，請加裝火花消除器(RC network or Varistor)於線圈側。
- 基於安全考量，請於迴路內加裝保險絲 (規格不可大於接點限制)。
- 線頭請吃錫或打端子。
- 基於安規上的考量，配線請保持獨立且與其它控制線，馬達線，電源線等保持 15cm 以上距離，如有交錯的必要請保持垂直配線。
- 任何時刻的操作皆不可超過規格上的限制。

## 4 規格

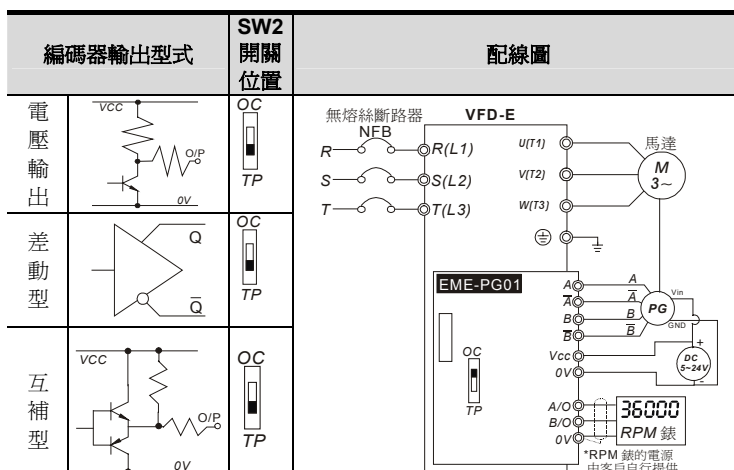
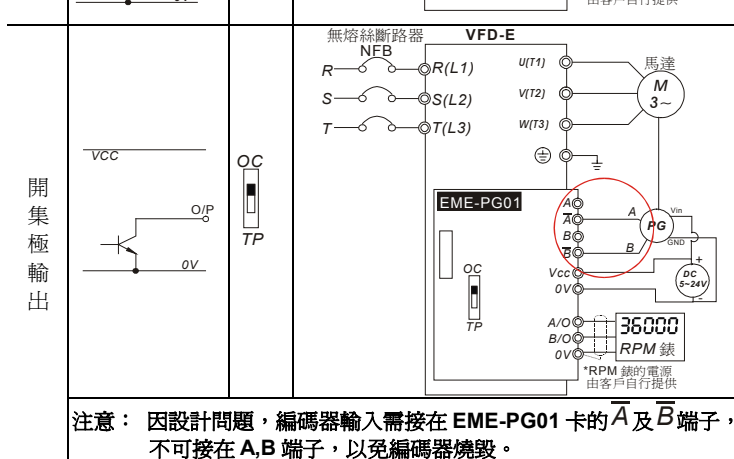
### ■ 環境

操作溫度	-10°C to 50°C (無結露且無結凍)
儲存溫度	-20°C to +60°C
環境溼度	90%RH 以下 (無結露)
安裝高度	低於 1000m
震動	20 Hz 以下: Maximum 9.81 m/s <sup>2</sup> (1G); 20 ~ 50Hz: Maximum 5.88 m/s <sup>2</sup> (0.6G)

### ■ 端子規格

端子	說明
Vcc	輸入電壓範圍：DC 5 ~ 24V 編碼器形式為電壓輸出型 Voltage output 時電壓輸入範圍需為 DC 12 ~ 24V
0V	電源及信號共同點
A, A-bar B, B-bar	編碼器回授信號輸入端子 (可由 SW2 選擇編碼器型式) 可單相輸入或二相輸入，最高可接受 300KP/Sec
A/O, B/O	編碼器信號輸出 開極集輸出 最大 DC24V 50mA
⊕	接地端子

## 5 可搭配編碼器輸出的型式

編碼器輸出型式	SW2 開關位置	配線圖
電壓輸出	OC TP	
差動型	OC TP	
互補型	OC TP	
開集極輸出	OC TP	

注意：因設計問題，編碼器輸入需接在 EME-PG01 卡的 A 及 B 端子，不可接在 A, B 端子，以免編碼器燒毀。

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