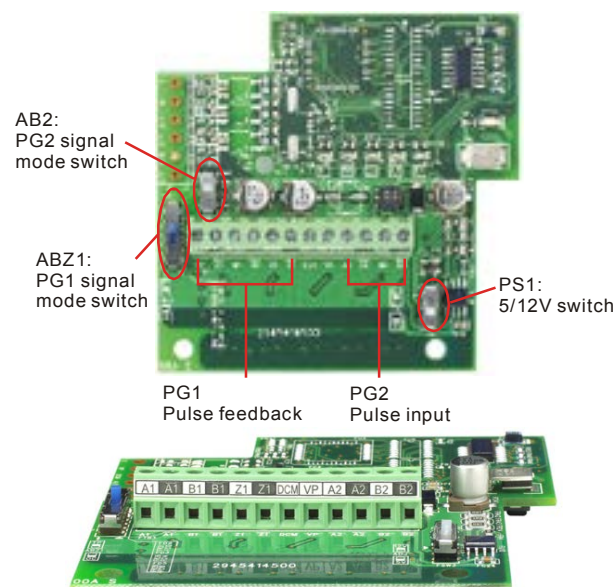


EMV-PG01 Instruction Sheet

1 EMV-PG01X

1.1 Outline



1.2 Terminals descriptions

Terminal Symbols	Descriptions
VP	Power source of EMV-PG01X (use PS1 to switch 12V/5V) Output Voltage: +5V/+12V±5% 200mA
DCM	Power source and input signal common
A1, $\overline{A1}$ B1, $\overline{B1}$ Z1, $\overline{Z1}$	Input signal. Input type is selected by ABZ1. It can be 1-phase or 2-phase input. Maximum 300kP/sec
A2, $\overline{A2}$ B2, $\overline{B2}$	Input signal. Input type is selected by AB2. It can be 1-phase or 2-phase input. Maximum 300kP/sec
$\oplus$	Grounding

1.3 Wiring 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).
- Recommended wire size 0.21 to 0.81mm² (AWG24 to AWG18).

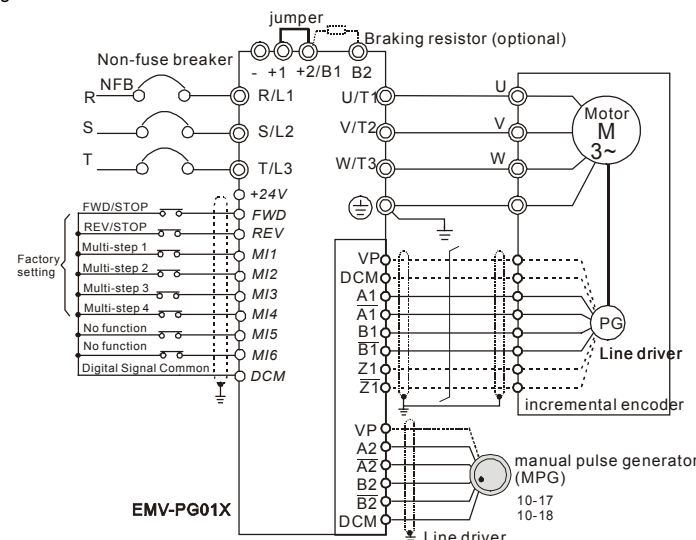
1.4 Wire Length

The wire length and signal frequency are in inverse proportion.

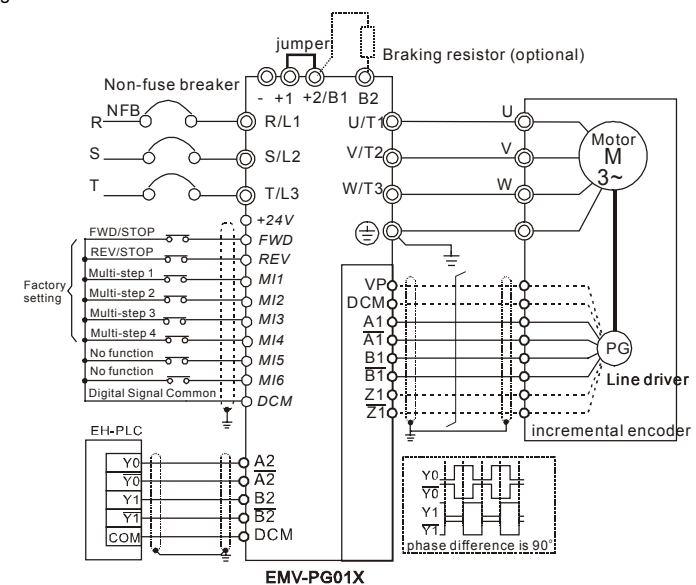
Types of Pulse Generators	Maximum Wire Length	Wire Gauge
Output Voltage	50m	1.25mm ² (AWG16) or above
Open Collector	50m	
Line Driver	300m	
Complementary	70m	

1.5 Basic Wiring Diagram

A. Wiring 1



B. Wiring 2

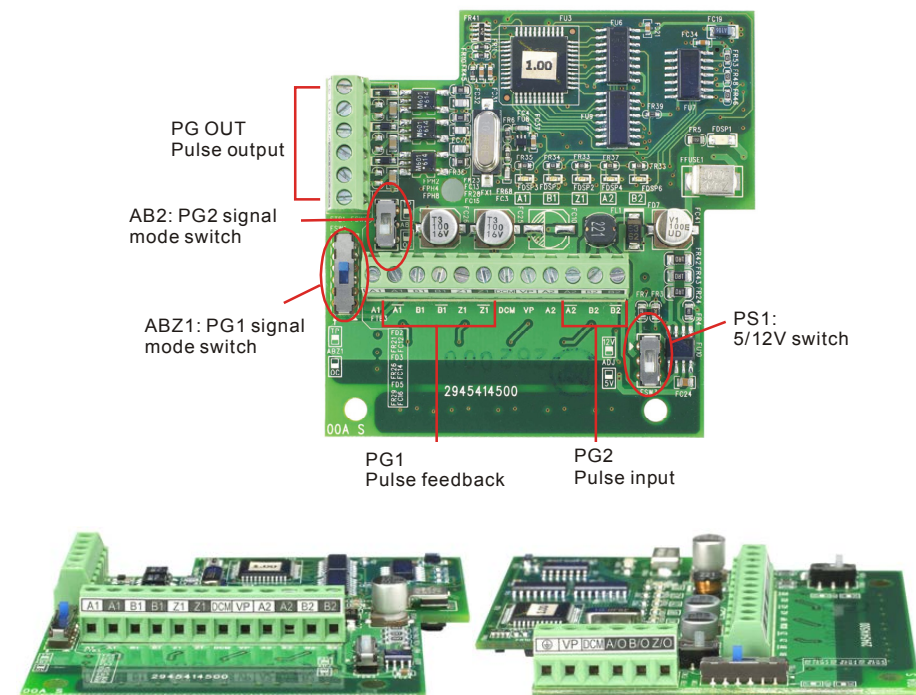


1.6 Types of Pulse Generators (Encoders)

Types of Pulse Generators	ABZ1+ PS1		AB2+PS1	
	5V	12V	5V	12V
VOLTAGE	OC 12V TP 5V	OC 12V TP 5V	OC 12V TP 5V	OC 12V TP 5V
Open collector	OC 12V TP 5V	OC 12V TP 5V	OC 12V TP 5V	OC 12V TP 5V
Line driver	OC 12V TP 5V	OC 12V TP 5V	OC 12V TP 5V	OC 12V TP 5V
Complementary	OC 12V TP 5V	OC 12V TP 5V	OC 12V TP 5V	OC 12V TP 5V

2 EMV-PG01O

2.1 Outline



2.2 Terminals Descriptions

Terminal Symbols	Descriptions
VP	Power source of EMV-PG01O (use PS1 to switch 12V/5V) Output Voltage: +5V/+12V±5% 200mA
DCM	Power source and input signal common
A1, $\overline{A1}$ B1, $\overline{B1}$ Z1, $\overline{Z1}$	Input signal from encoder. Input type is selected by ABZ1. It can be 1-phase or 2-phase input. Maximum 300kP/sec
A2, $\overline{A2}$ B2, $\overline{B2}$	Input signal from encoder. Input type is selected by AB2. It can be 1-phase or 2-phase input. Maximum 300kP/sec
A/O, B/O, Z/O	Output signal. It has division frequency function (Pr.10-16), open collector: max. output DC20V 50mA
$\oplus$	Grounding

2.3 Wiring 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).
- Recommended wire size 0.21 to 0.81mm² (AWG24 to AWG18).

2.4 Wire Length

The wire length and signal frequency are in inverse proportion.

Types of Pulse Generators	Maximum Wire Length	Wire Gauge
Output Voltage	50m	1.25mm ² (AWG16) or above
Open Collector	50m	
Line Driver	300m	
Complementary	70m	

2.5 Basic Wiring Diagram

Types of Pulse Generators	ABZ1+PS1		AB2+PS1	
	5V	12V	5V	12V
VOLTAGE 	OC 12V TP 5V	OC 12V TP 5V	OC 12V TP 5V	OC 12V TP 5V
Open Collector 	OC 12V TP 5V	OC 12V TP 5V	OC 12V TP 5V	OC 12V TP 5V
Line Driver 	OC 12V TP 5V	OC 12V TP 5V	OC 12V TP 5V	OC 12V TP 5V
Complementary 	OC 12V TP 5V	OC 12V TP 5V	OC 12V TP 5V	OC 12V TP 5V

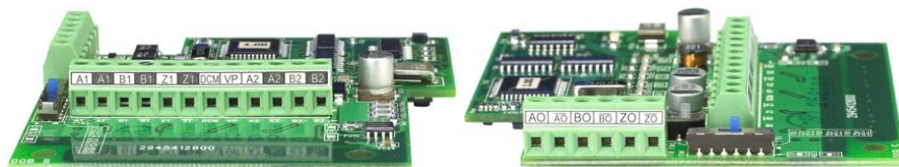
PG OUT
pulse output

AB2: PG2 signal
mode switch

ABZ1: PG1 signal
mode switch

PG1
pulse feedback

PG2
pulse input



Terminal Symbols	Descriptions
VP	Power source of EMV-PG01L Output Voltage: +5V±5% 200mA
DCM	Power source and input signal common
A1, $\overline{A1}$ B1, $\overline{B1}$ Z1, $\overline{Z1}$	Input signal. Input type is selected by ABZ1. It can be 1-phase or 2-phase input. Maximum 300kP/sec
A2, $\overline{A2}$ B2, $\overline{B2}$	Input signal. Input type is selected by AB2. It can be 1-phase or 2-phase input. Maximum 300kP/sec
$\overline{AO}$, $\overline{BO}$, $\overline{ZO}$ $\overline{AO}$, $\overline{BO}$, $\overline{ZO}$	Output signal. It has division frequency function (Pr.10-16), Line driver: max. output DC5V 50mA
	Grounding

- A. 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).
- B. Recommended wire size 0.21 to 0.81mm² (AWG24 to AWG18).

The wire length and signal frequency are in inverse proportion.

Types of Pulse Generators	Maximum Wire Length	Wire Gauge
Output Voltage	50m	1.25mm ² (AWG16) or above
Open Collector	50m	
Line Driver	300m	
Complementary	70m	

Types of Pulse Generators	ABZ1	AB2
	5V	5V
VOLTAGE 		
Open collector 		
Line driver 		
Complementary 		