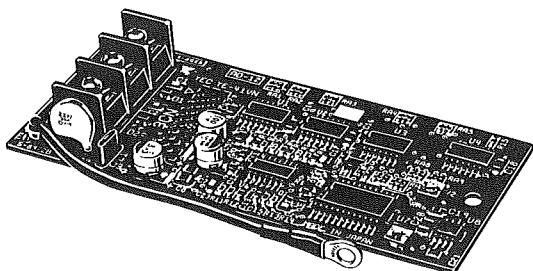


# OMRON

## Model 3G3IV-PAO12 ANALOG MONITOR CARD

### INSTRUCTION SHEET

Thank you for purchasing an OMRON product. Read this thoroughly and familiarize yourself with the functions and characteristics of the product before using it. Keep this instruction sheet for future reference.



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The analog monitor card 3G3IV-PAO12\*1 (hereinafter called PAO12), an onboard type option card, is mounted on the inverter control board to output analog signals for monitoring the inverter outputs (output frequency, output current, etc.)

PAO12 output resolution: 11 bits (without code, positive polarity output)

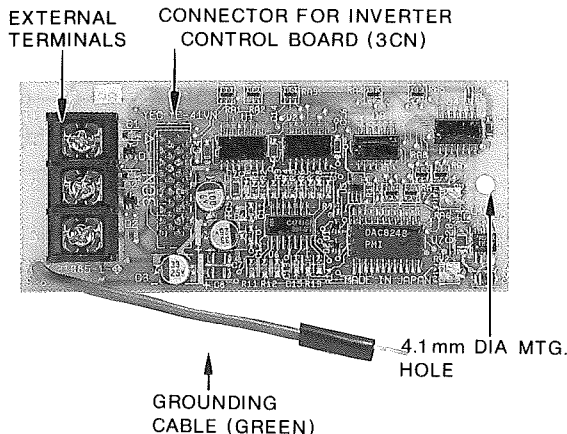
\* 1. AO-12 appears as a model number on the body of Analog Monitor Card (3G3IV-PAO12)

#### PRECAUTIONS

- (1) Before using PAO12, read the instruction manual of the applicable inverters (SYSDRIVE 3G3IV).
- (2) Before connection of PAO12 connector or external terminals, turn off the inverter AC main circuit power supply and check that inverter CHARGE indicator lamp is out.

#### 1. SPECIFICATIONS

Output Method
Output resolution : 11 bits + SIGN (1/2048)
Output voltage : -10 to +10V (non-insulated)
Output channel : 2 channels



ANALOG MONITOR CARD PAO12

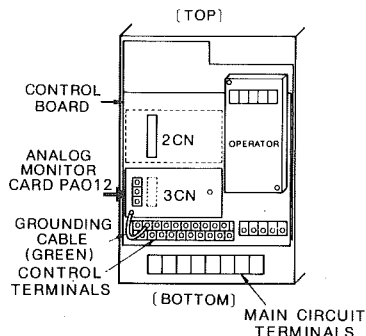
#### 2. INSTALLATION TO INVERTER (Fig. 1)

- (1) Turn off AC main circuit power supply and remove the inverter face plate. Check that the inverter CHARGE indicator lamp is out.
- (2) Mount PAO12 connector 3CN on connector 3CN (number of pins: 34 poles) on the inverter control board. Insert the optional card support on the control board to PAO12 support hole (1 point) to support the PAO12.

#### NOTE

PAO12 cannot be mounted on any connectors other than 3CN.

- (3) Connect PAO12 grounding cable (green) to control terminal No. 12 on the inverter control board.
- (4) After installing the PAO12 connect to peripheral equipment. When connection is completed, replace the inverter face plate.



SYSDRIVE 3G3IV

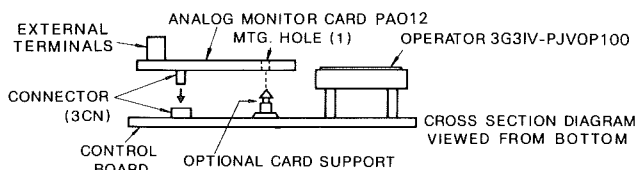
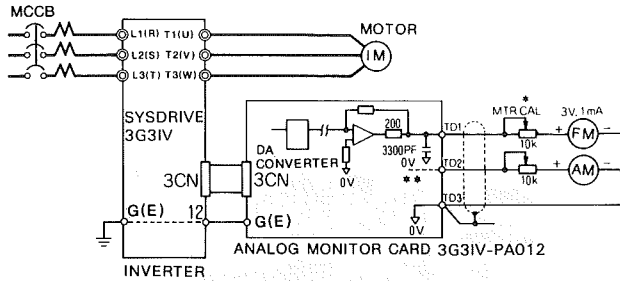


Fig. 1 Installation of Analog Monitor Card PAO12

### 3. INTERCONNECTION BETWEEN EQUIPMENT

Fig. 2 shows interconnection of inverter with PAO12 and peripheral equipment where PAO12 output is connected to a pulse counter.



\* In some applications, MTR.CAL can be omitted by setting or adjusting program constants (bn-□□).

\*\* TD2 output circuit is the same as that of TD1.

Fig. 2 Interconnection Diagram

### PRECAUTIONS FOR WIRING

- (1) Separate PAO12 control signal wiring (terminals TD1 to TD3) from main circuit wiring or other power lines.
- (2) Use shielded cable for control signal wiring and prepare the ends as shown in Fig. 3 to prevent malfunctions caused by noise. Wiring length must be 50m or less.

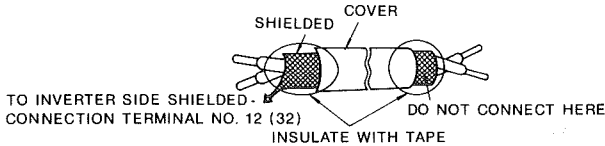


Fig. 3 Preparation of Shielded Cable Ends

### 4. EXTERNAL TERMINAL FUNCTIONS

PAO12 has 3 external terminals for connection with peripheral equipment. Table 1 shows the terminal functions.

Table 1

Terminal Symbol	Screw Size	Function	Signal Level	Output Accuracy	Remarks
TD1	M3	Analog signal output : channel 1 *	-10 to +10V (Output impedance 200 Ω) †	Refer to Par. 5.	Output resolution: 11 bits+SIGN (1/2048)
TD2		Analog signal output : channel 2 *			
TD3		Common terminal	0V		

\* Output contents of TD1 or TD2 analog signal can be selected by setting the inverter program constants. For details, refer to "EXTERNAL TERMINAL OUTPUT CONTENTS AND ACCURACY".

† Output signal level of TD1 or TD2 analog signal can be adjusted by setting the inverter program constants. For details, refer to "OUTPUT SIGNAL LEVEL SETTING".

• When PAO12 is mounted on SYSDRIVE 3G3IV, output signal level varies 0 to + 10V. In this case, negative polarity (0 to - 10) cannot be output.

• Output signal level can be output up to 11V by setting program constants.

### 5. EXTERNAL TERMINAL OUTPUT CONTENTS AND ACCURACY

Table 2 Connection with 3G3IV

External Terminal	Program Constant No	Set Value	Output Contents	Output Accuracy
TD1 Channel 1	Sn-28 1st/2nd digit	00	Output frequency : Max. frequency/100%	0.5%
		01	Output current : inverter rated current/100%	3.0%
TD2 Channel 2	Sn-28 3rd/4th digit	10	Output voltage ref. : input voltage/100%	1.5%
		11	DC voltage (Vpn) : 400V/100%(200V class) : 800V/100%(400V class)	1.5%

### 6. OUTPUT SIGNAL LEVEL SETTING

Output signal level of external terminal TD1 or TD2 can be set by 10V/□□□ %.

Applicable inverter	External Terminal	Program Constant No.	Setting Range	Setting Unit	Initial Value
SYSDRIVE 3G3IV	TD1	bn-11	0 to 255%	1%	10V/100%
	TD2	bn-12			10V/200%

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