

PG Encoder Card (Additional) "OPC-E1-PG3"

This instruction manual contains the additional information about OPC-E1-PG3 to the instruction manual INR-SI47-1118-EU.

1. Acceptance Inspection

The model name "OPC-E1-PG3" is printed on the PG interface card.

2. PG Specifications

Table 2.1 Specifications of Applicable PG and PG Interface Card

Item		Specifications
Applicable PG	Encoder system	Incremental system
	Pulse resolution	20 to 3000 P/R
	Input power requirements	12Vdc±10%/80mA or less, 15Vdc±10%/60mA or less
PG power supply	Internal power supply	12Vdc±10%/80mA or 15Vdc±10%/60mA
	External power supply	12Vdc±10%/more than 80mA or 15Vdc±10%/more than 60mA
Output signal	Open collector (pull-up resistor: 2350Ω) Complementary (totem-pole push-pull) voltage output	
Max. input frequency	Open collector	cable up to 30m(98 ft) : 100kHz, up to 100m(328 ft) : 30kHz
	Complementary	cable up to 30m(98 ft) : 30kHz

Note 1 : When the PG power is 200mA or more, use an external power supply.

Note 2 : The external power supply should be within the voltage specifications of the PG.

3. Terminal Specifications

Table 3.1 Terminal Specifications

Terminal symbol	Name	Functions
PI	External power supply input	Power input terminal from the external device External power supply capacity: 12Vdc±10%/80mA or more or 15Vdc±10%/60mA or more
PO	Power supply for PG	Power output terminal 12Vdc±10%/80mA or 15Vdc±10%/60mA
CM	PG common	Common terminal for power supply and PG input
YA	A phase pulse input Y	Assigned functions as follows according to functions. <ul style="list-style-type: none"> • For commands (Same as XA, XB, XZ at p.1-5, Table1.4) • For feedback (Same as YA, YB, YZ at p.1-5, Table1.4)
YB	B phase pulse input Y	
YZ	Z phase pulse input Y	

CM	YA	YB	YZ	PO	PI
----	----	----	----	----	----

Figure 3.1 Terminal layout

Select internal power supply for PG (12V/15V) by SW12 on the interface card.

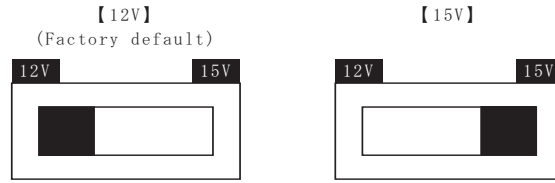


Figure 3.2 Select internal power supply

4. Function Specifications

OPC-E1-PG3 changes into the following specification compared with OPC-E1-PG.

■ **Chapter 6 SPEED CONTROL** (P.6-2)

■ **Chapter 7 POSITIONING CONTROL** (P.7-6)

This function code switches the feedback pulse input mode with the data in the ones place as listed below. Setting of tens digit of o01 is ignored and doesn't reflect to any operating mode.

Table 4.1 Data for o01

Feedback pulse input mode	Data for o01
B phase pulse input	0
Forward/reverse pulse input	1
A/B phase pulse input	2

■ **Chapter 6 SPEED CONTROL** (P.6-2,P.6-3,P.6-4)

The function codes of the feedback input setting of the speed control with PG are a table below.

Table 4.2 Function Codes

Code		Name	Data setting range	Unit	Default setting	Change when running
OPC-E1-PG	OPC-E1-PG3					
o09	o05	Feedback Input (Encoder pulse resolution) (Filter time constant) (Pulse count factor 1) (Pulse count factor 2)	20 to 3600	P/R	1024	N
o10	o06		0.000 to 5.000	s	0.005	Y
o11	o07		1 to 9999	-	1	N
o12	o08		1 to 9999	-	1	N

■ **Chapter 7 POSITIONING CONTROL** (P.7-9)

Table 4.3 lists input assignments for terminals [XA], [XB] and [XZ] when the positioning control, speed control with PG and speed control with pulse rate input share the PG terminals.

Table 4.3 Function Assignments of PG Terminals

Pulse train input, F01/C30 data is 12.	Speed control with PG, F42/A14 data is 3 or 4.	Positioning control, S/R is assigned.	Normal mode (Except the right column mode)	Serial pulse receiving mode, SPRM is ON
No	No	No	Pulse monitor	
		Yes	Positioning control	Serial pulse (J86)
	Yes	No	Speed control	
		Yes	Speed control / Positioning control	
Yes	No	No	Pulse train input	
		Yes	Pulse monitor	
	Yes	No	Pulse monitor (Pg alarm happens.)	
		Yes		

5. Terminal "PLC"

Terminal "PLC" can supply source current of digital input terminals X1-X5,FWD,REV only when digital input terminals are used as source logic.

Note Don't use terminal "PLC" in a purpose except the above. Otherwise the inverter may damaged.

Fuji Electric Systems Co., Ltd.
Fuji Electric Corp. of America

47520 Westinghouse Drive Fremont, CA 94539, U.S.A.
 Tel.+1-510-440-1060 Fax.+1-510-440-1063
 Toll-free support 1-888-900-FUJI(3854)
INR-SI47-1142b-EU REV. 052010

<http://www.fujielectric.com/fecoa/>

Information subject to change without notice.