



# Toshiba VEC008Z - Digital Encoder Manual

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## Introduction

TOSVERT VF-AS3 series inverter is applicable as PG feedback interface for differential line driver output (TIA/EIA RS422) type

encoder.

This manual contains information on installation of this option. See Digital Encoder instruction manual (E6582148) for detail configuration and functions.

Prohibited	<ul style="list-style-type: none"><li>Do not use the encoder out of applicable type specified in this manual. This can result in damage or accident.</li></ul>
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## Interface connector

### Connector

15pin D subminiature connector (high density type: DE-15 / HD15) is prepared in this option. Pin numbers of connector are shown the figure in below. Prepare the same type male connector separately for the cable end of interconnection cable.

### Pin assignment

No.	Symbol	Input/ output	Function / Electrical specifications	Internal circuit
1	A	Input	Phase A PG feedback (TIA/EIA-RS422)	Refer to (a)
2	NA	Input	Termination: 120Ω	
3	PGVC (24V)	Output	Power supply for encoder DC 24V (+10/-15%), 100mA	Refer to (b)
4	-	-	(reserved)	-
5	-	-		
6	-	-	(don't use)	-
7	PGVC (12V)	Output	Power supply for encoder DC 12V (+/-5%), 100mA	Refer to (b)
8	PGCC	Common	Equipotential terminal for encoder	
9	-	-	(NC)	-

10	B	Input	Phase B PG feedback (TIA/EIA-RS422) Termination: 120Ω	Refer to (a)
11	NB	Input		
12	-	-	(don't use)	-
13	-	-		
14	-	-		
15	PGVC (5V)	Output	Power supply for encoder DC 5.2V (+/-5%), 250mA	Refer to (b)
Housing	Shield	-	Cable shield (metal housing of connector) This part is connected to PE terminal inside the inverter	-
Internal circuit				
(a)				
(b)				

## Wiring

Multi-layer shielded cable is recommended.  
When wiring, follow the instructions bellow.

- Use twisted pair wire for A/NA, B/NB and PGVC/PGCC each
- For PGVC, select a pin according to the encoder supply specification. Parameter configuration is also needed (See instruction manual)
- Do not connect any wire to unused pins
- Recommended wire size is 0.25 mm<sup>2</sup> (AWG26) for signal line (A, NA, B and NB), 0.5mm<sup>2</sup> (AWG20) for power supply (PGVC and PGCC)
- The cable length is 100m at maximum. At that time, supply voltage drop by wire impedance should be taken into account.

## Mounting and removing

### Mounting

1. Insert the option into the slot B straightly and slowly. Keep the option from hitting other parts near slot.
2. The option should be inserted until the body is totally covered by the slot. (Refer to the picture above)

### Removing

1. Remove the option in the direction of arrow while pushing the "PUSH" tab by a screw driver.

## Outline drawing and terminals

### Outline drawing

## Product Specification

Item	Specification
Type form	VEC008Z
Product name	Digital Encoder
Function	PG feedback interface (Line driver type)
Applicable encoder	Incremental rotary encoder with differential line driver (TIA/EIA RS422) output
Pulse frequency	300kHz or less (Duty: 50% +/- 10%)

Power supply voltage for encoder (Open circuit voltage)	Pin3 (24V): 24V +10%/-15% Pin7 (12V): 12V +/-5% Pin15 (5V): 5.2V +/-5%
Maximum load of power supply for encoder	Pin3 (24V): 100mA Pin7 (12V): 100mA Pin15 (5V): 250mA
Recommended cable	Multi-layer shielded cable Size: 0.25 mm <sup>2</sup> (AWG26) for signal line, 0.5mm <sup>2</sup> (AWG20) for power supply Length: 100m or less
Connector	D subminiature connector (DE-15 / HD15)
Applicable model	VF-AS3 (Applicable on slot B)
Operation Environment	Operating temperature: -10 to 50°C (Inverter operating temperature), in accordance with inverter for other environment.
Storage temperature	-25 to 70°C

## Documents / Resources

### Download manual

Here you can download full pdf version of manual, it may contain additional safety instructions, warranty information, FCC rules, etc.

[Download Toshiba VEC008Z - Digital Encoder Manual](#)

### Need Assistance?

Do you have a question about the VEC008Z that isn't answered in the manual? Leave your question here.

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## Related Manuals for Toshiba VEC008Z

### [Media Converter Toshiba VEC008Z Installation Manual](#)

Digital encoder (2 pages)

### [Media Converter Toshiba TOSVERT VF-AS1 Instruction Manual](#)

Expansion io card option 2 (19 pages)

### [Media Converter Toshiba TOSVERT VF-S15 Series Manual](#)

(51 pages)

### [Media Converter Toshiba TOSVERT VF-nC3 Instruction Manual](#)

(66 pages)

### [Media Converter Toshiba TOSVERT VF-AS3 Instruction Manual](#)

(32 pages)

### [Media Converter Toshiba TOSVERT VF-AS3 Instruction Manual](#)

Rs485 communication function (20 pages)

### [Media Converter Toshiba LF620 Instruction Manual](#)

Electromagnetic flowmeter converter (160 pages)

### [Media Converter Toshiba LF620 Manual](#)

Electromagnetic flowmeter converter (8 pages)

### [Media Converter Toshiba USB001Z Instruction Manual](#)

Usb-to-serial conversion unit (8 pages)

### [Media Converter Toshiba RS-485 Installation Manual](#)

Usb to rs-485 converter port verification (8 pages)

### [Media Converter Toshiba USB001Z Instruction Manual](#)

Toshiba usb-to-serial conversion unit instruction manual (17 pages)

### [Media Converter Toshiba RS4001Z-0 Instruction Manual](#)

Rs485 converter unit (10 pages)

### [Media Converter Toshiba L5232 Instruction Manual](#)

Electromagnetic flowmeter converter (174 pages)

### [Media Converter Toshiba RS4002Z-0 Instruction Manual](#)

Rs485 converter unit (14 pages)

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