

USB-to-Serial Conversion Unit Instruction Manual

USB001Z

Thank you for purchasing a “USB-to-serial conversion unit (USB001Z),” an optional device for the TOSVERT series inverters.

This instruction manual contains important information to avoid endangering actual operators and other persons and damaging properties and to ensure the proper and safe product usage. Please read this manual carefully along with the instruction manual for your inverter and the communication function manual.

When using the USB-to-serial conversion unit, keep this manual handy for future maintenance and inspections. Please confirm the latest information on our web site “www.inverter.co.jp”.

1. Safety precaution





This instruction manual contains important information to avoid endangering actual operators and other persons and damaging properties and to ensure the proper and safe product usage.

Before reading this manual, fully understand the safety precautions in the instruction manual accompanying your inverter. Also, strictly observe the precautions described in this manual.




■ Limits in purpose

- ▼ Never use this unit with any device other than TOSVERT series inverter, or it could cause an accident.



■ General Operation

 Warning	
 Disassembly prohibited	<ul style="list-style-type: none"> ▼ Never disassemble, modify or repair. This can result in electric shock, fire and injury. For repairs, call your sales agency.
 Prohibited	<ul style="list-style-type: none"> ▼ Don't place or insert any kind of object into the inverter (electrical wire cuttings, rods, wires). This can result in electric shock or fire. That may result in electric shock or fire. ▼ Do not allow water or any other fluid to come in contact with this unit. Do not wipe this unit with a wet cloth. That may result in electric shock or fire.
 Mandatory	<ul style="list-style-type: none"> ▼ Before attempting any wiring steps, power off your inverter and make sure that the inverter charge lamp is no longer lit. ▼ If this unit begins to emit smoke or an unusual odor, or unusual sounds, immediately turn power off. If the equipment is continued in operation in such a state, the result may be fire. Call your local sales agency for repairs.



■ Transportation & installation

 Warning	
 Prohibited	<ul style="list-style-type: none"> ▼ Do not place any inflammable substances near this unit. If an accident occurs in which flame is emitted, this could lead to fire.
 Mandatory	<ul style="list-style-type: none"> ▼ Operate under the environmental conditions prescribed in the instruction manual. Operations under any other conditions may result in malfunction. ▼ Provide your inverter or other equipment with safety devices to prevent a serious accident from resulting even if the unit malfunctions or fails to operate. Usage without a safety device can result in an accident. ▼ Use the Toshiba-specified cable for connecting this optional unit. (Refer to page 4.) The use of any other option may result in an accident.

■ Operations

 Warning	
 Prohibited	<ul style="list-style-type: none"> ▼ Do not apply a dropping shock or other physical shocks. Otherwise, damage or malfunction will result. ▼ Do not yank the interconnect cable. Otherwise, damage or malfunction will result. ▼ Even if this product is deactivated by the occurrence of an event such as an abnormality, when power is supplied to the inverter, do not bring any regions of your body into contact with the inverter terminals. Contact during the power-on status of the inverter can result in electric shock.

■ Disposal

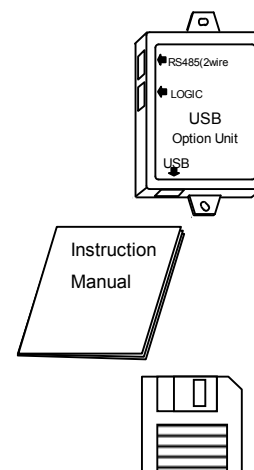
 Caution	
 Mandatory	<ul style="list-style-type: none"> ▼ For safety's sake, do not dispose of the disused inverter yourself but ask an industrial waste disposal agent (*). If the collection, transport and disposal of industrial waste is done by someone who is not licensed for that job, it is a punishable violation of the law. (Laws in regard to cleaning and processing of waste materials) (*) Persons who specialize in the processing of waste and known as "industrial waste product collectors and transporters" or "industrial waste disposal persons."

2. Accessories check

The USB-to-serial conversion unit is composed of the items listed below.

Check for missing or damaged components.

- | | |
|--|---|
| (1) USB-to-serial conversion unit | 1 |
| (USB001Z) | |
| (2) USB-to-serial Conversion Unit Instruction Manual | 1 |
| (This manual: E6581282) | |
| (3) Floppy disk..... | 1 |
| - Device driver | |
| - Instruction Manual (Detail :E6581299) | |



[Note]

This unit does not include an inverter-unit connection cable or a personal computer-unit connection cable. Purchase these cables separately. (Refer to section 3.)

3. Connecting and starting the USB001Z unit

To connect the USB001Z unit to your computer, follow these steps:

- 1) Turn off the input power to the inverter, and after waiting for at least 15 minutes, make sure that the charge lamp on the inverter is no longer lit. (Your personal computer can remain powered on.)
- 2) Connect a USB cable to the USB port on the USB001Z unit and to a USB port on your computer.

When connecting the USB001Z unit to your computer for the first time, you have to install its driver. Refer to Detailed Manual.

- 3) Connect an inverter-unit connection cable (optional) between the communication connector of the USB001Z and that of the inverter. At this time, be careful not to apply force to the connectors. (Refer to the instruction manual of the inverter for connection to the connection port of the inverter.)

RS 485 (2-wire type) side: Connectable to such an RS485 (2-wire type) interface port as that of the VF-AS1.

LOGIC side: Connectable to such a common serial interface port as that of the VF-nC1, S9, S11, A7, or P7.

* ~~Connect the cable only to either RS485 or LOGIC.~~

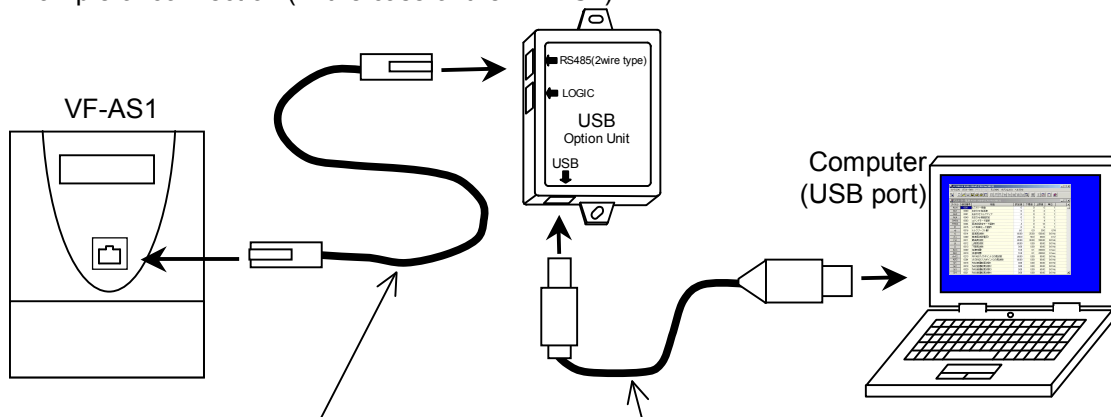
- 4) Turn on the power to the inverter, and set communication parameters.

* Before disconnecting the USB communication unit, also perform above step 1) beforehand.

* Avoid connecting the conversion unit to a USB hub or extended USB port (e.g., PCMCIA card). Or else the conversion unit may become unstable, depending on the environment in which it is used.

⚠ Warning	
	▼ Do not disconnect the USB cable during communication with the inverter.
Prohibited	

■ Example of connection (In the case of the VF-AS1)



- Inverter-unit connection cable (Optional)

Model number	Cable length
CAB0011	1.2m
CAB0013	3.6m
CAB0015	4.8m

- USB cable (A-B connection type)

Use a commercially available USB cable.
(Compliant with USB 1.1/2.0)
Recommended Cable length: 1m

4. Specifications

Item	Specifications
Model number	USB001Z
Applicable model	Model with either an RS485 (2-wire type) connector or a common serial connector. Usable applications: PCM001Z (V013 or successor), PCS001Z (V001 or successor)
Applicable OS	Windows 98 SE , Windows 2000, Windows XP SP1** However, the personal computer** must have a USB port (series A).
Use environments	Indoor operation at an altitude of 1,000m or less and free from direct sunlight, potentially corrosive or explosive gases, steam, dust particles, dust/dirt, and machining fluids (grinding liquid, coolant, included)
Ambient temperature	0 to +50°C
Storage temperature	-25 to +65°C
Relative humidity	20 to 93% (free from condensation and vapor)
Vibration	5.9m/s ² (0.6G) or less (10 to 55Hz) (Compliant with IEC 60068-2-6)
Cooling method	Self-cooling

*1: Windows® is listed above as the abbreviation for a Microsoft® Windows® operating system. Microsoft® and Windows® are registered trademarks or trademarks of the US Microsoft Corporation in the USA and other countries.

*2: No warranty as to the suitability of this product for any computer and any peripheral equipment is either made or implied.

5. Warranty

Any part of the unit that proves defective will be repaired free of charge under the following conditions:

1. This product will be repaired free of charge, if some trouble occurs under normal handling within one year of delivery and is caused obviously by a defect in design or workmanship.
2. The warranty applies only to the delivered unit.
3. For the following kinds of failure or damage, the repair cost shall be borne by the customer even within the warranty period.
 - 1) Failure or damage caused by improper or incorrect use or handling, or unauthorized repair or modification of the inverter.
 - 2) Failure or damage caused by the unit falling or an accident during transportation after the purchase
 - 3) Failure or damage caused by fire, salty water or wind, corrosive gas, earthquake, storm or flood, lightning, abnormal voltage supply, or other natural disasters.
 - 4) Damage due to the use of the USB-serial communication conversion unit for non-intended purposes.
4. If there are any warranty conditions otherwise provided for, those conditions will govern.