RS232C Converter Unit Instruction Manual

RS2001Z-0

Table of Contents

This RS232C communication unit cannot use at TOSVERT VF-S7/S7e inverter has a CPU whose version is V100 to V102.

For checking the version number of the CPU, refer to the “Monitor” paragraph in the instruction manual of the inverter.

Toshiba Schneider Inverter Corporation

NOTE

1. Make sure that this instruction manual is delivered to the end user of the RS232C converter unit.
2. Read this manual before installing or operating the RS232C Converter unit. And keep it in a safe place for reference.

Preface

Thank you for purchasing the “RS-232C Converter Option Unit(RS2001Z)” for TOSVERT series inverter. Read the safety precautions in the “*Inverter Instruction Manual”* before powering up your inverter. Using this RS-232C Option Unit, a communication between the inverter, which has the common serial option (communication) connector, and a host computer is available.

Please read the entire manual carefully before attempting to control your inverter via RS-232C serial connection. Besides this instruction manual, the “*Serial Communications Function Manual*” is needed to develop software which communicates with the inverter.

In addition, it has this manual kept to the operator using "RS232C Converter Unit", and please use it for future maintenance and inspection.

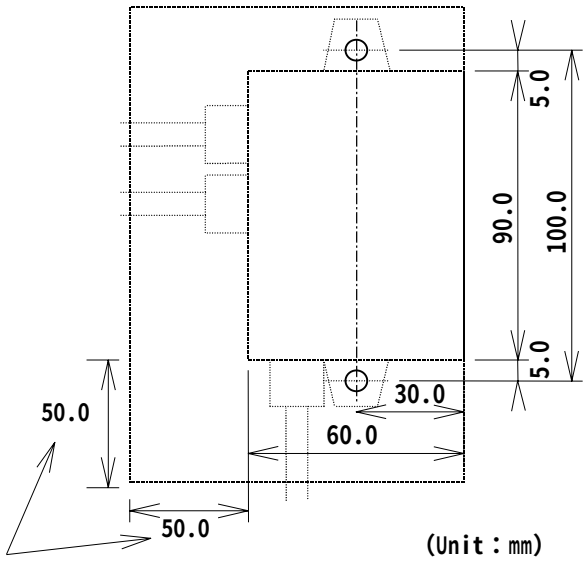
[Explanation of part number of RS-232C Option Unit]

RS2001Z - 0

- Revision number
- Cable length Z: Without cable (Cable length between inverter and Option Unit)
- Model number of RS-232C Option Unit
- Symbol of RS-232C

[About an installation]

There is a hole for installations of 3.2mm width in a unit. Using the screw not more than M3, please attach and be sure to use it.



Please secure about 5 cm space for cable wiring.

(Note)The RS-232C Option Unit (Part Number : RS2001Z) is not provided with connection cable between the inverter and Option Unit, and connection cable between Option unit and Computer. This should be purchased separately.

Part number of connection cable between the inverter and Option Unit	Cable length
CAB0011	1m (1.2m, 4ft)
CAB0013	3m (3.6m, 12ft)
CAB0015	5m (4.8m, 16ft)

Part number of connection cable between the Option Unit and Computer (For DB9 connector)	Cable length
CAB0025	4.8m (16ft)

Carefully read the following notes
Safety precautions

On the inverter and in its instruction manual, important information is contained for preventing injuries to users and damages to assets and for proper use of the device. Read the instruction manual attached to the inverter along with this instruction manual for completely understanding the safety precautions and adhere to the contents of these manuals.

■ **Handling in general**

⚠ Danger	
Never Disassemble	▼ Never disassemble, modify or repair the product. Disassembling the inverter could cause electric shocks, fire or injuries. For repairs, call your agency.
Prohibited	▼ Do not remove connectors when the power is on. It could lead to electric shocks. ▼ Do not put or insert foreign objects such as waste cable, bars, or wires into the product. It could lead to electric shocks or fire. ▼ Do not splash water over the product. It could lead to electric shocks or fire.
Mandatory	▼ Wiring should be conducted after turning the inverter power off. ▼ Turn off the power immediately in case any abnormalities such as smokes, smells or abnormal noise are found. Neglect of these conditions could lead to fire. For repairs, call your agency.

■ **Transportation and installation**

⚠ Danger	
Prohibited	▼ Do not install or operate the inverter if it is damaged or any part is missing from it. Operating the inverter in a defective condition could lead to electric shocks or fire. For repairs, call your agency. ▼ Do not put any inflammable material near the product. It could catch fire if the product sparks because of a breakdown and the like. ▼ Do not install the product where it could be splashed with water and the like. It could lead to electric shocks or fire.
Mandatory	▼ The product must be used under environmental conditions prescribed in this instruction manual. Using the product under conditions not specified by the instruction manual could lead to breakdown.
⚠ Cautions	
Prohibited	▼ Do not install the product in any place subject to vibrations or it could fall. Otherwise it can cause injury to people.

■ **About operation**

⚠ Danger	
Prohibited	▼ Do not wipe the body with a wet cloth. It could lead to electric shocks. ▼ Do not pull on the cable It could cause damage or error.

■ **About disposal of the product**

⚠ Cautions	
Mandatory	▼ Dispose of the product as an industrial waste. Unless it is disposed of as an industrial waste, it will become risks for human injury.

■ **Cautions on use**

Cautions	
	▼ Avoid installation locations that may be subjected to rapid changes in ambient temperature or/and humidity. ▼ Route the transmission cable separate from the inverter input/output power wiring. When disconnecting connection cable, make sure to hold its connector with care not to give unreasonable stress to the cable and the unit. ▼ Since connectors of optional cables have locking pawls for disconnection prevention at the inverter and the Option Unit, disconnect such a connector while pressing the pawl by finger for unlocking. ▼ Mount the Option Unit securely on the panel, otherwise it could fall and cause malfunction or breakdown. ▼ Connect an electromagnetic contactor or the like between the inverter and the power source to secure external control of emergency stop of operation. ▼ Do not assign the same inverter number to more than one inverter in the same system. ▼ The inverter's EEPROM has a life of 10,000 write cycles. Do not write to the same EEPROM address more than 10,000 times.

1.Connection and start-up

Connect the inverter with a host computer according to the procedure mentioned below.

1) Make sure the charge lamp of the inverter is off, more than 10 minutes later after turned the power off.

2) Connect the communication connectors (INVERTER1 and INVERTER2) of the RS-232C Converter Unit to the inverter, which has common serial option (communication) connector, with the optional cable.

3) Connect the communication connector (RS232C) of the RS232C Option Unit to the communication connector of the computer with the optional cable.

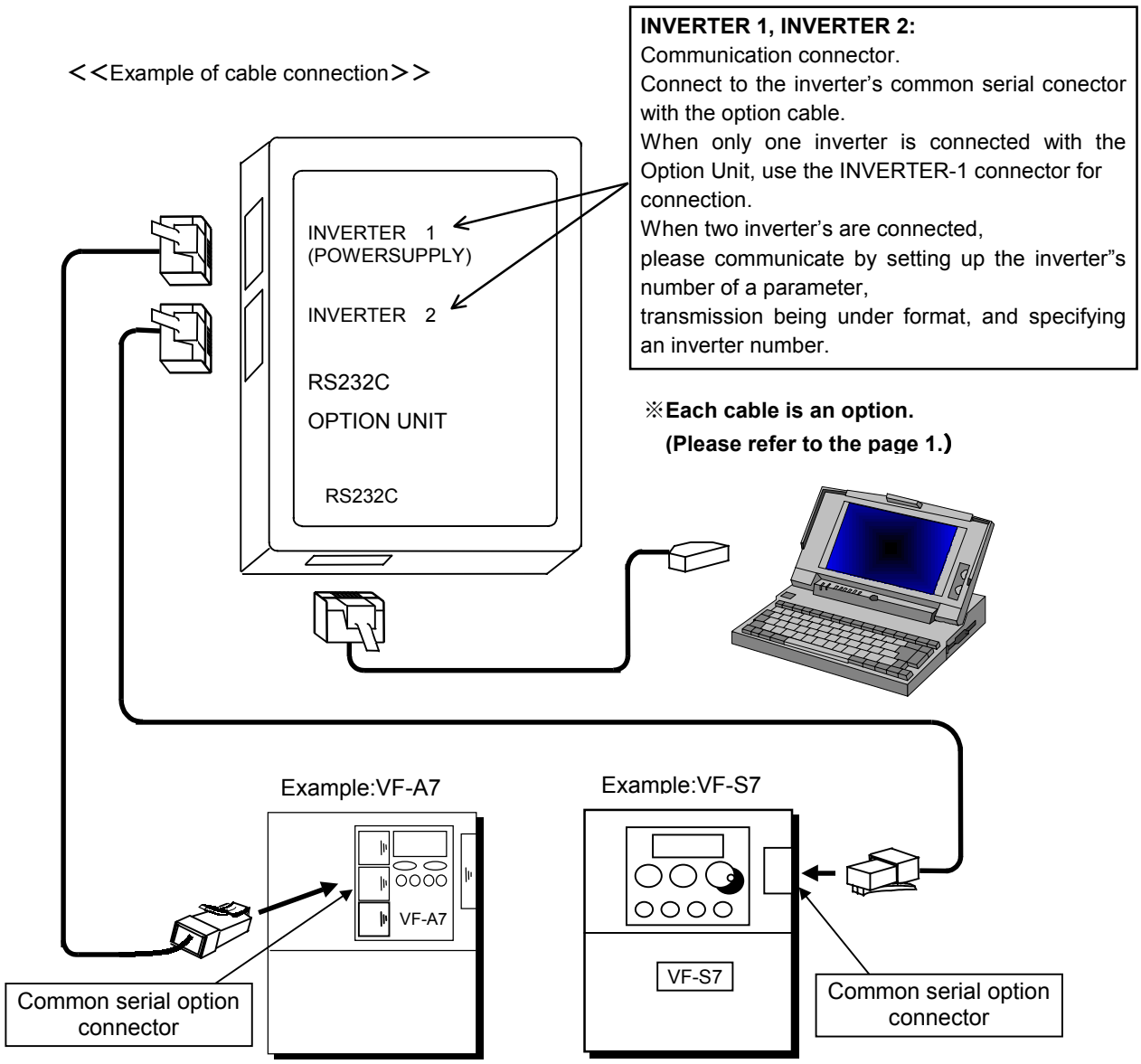
4) Fix the communication cables after connected.

5) Power on the inverter after finished connection.

6) Set communication parameters to the inverter.

※In case of removing the cable, remove it after confirmed item (1) above.

<<Example of cable connection>>



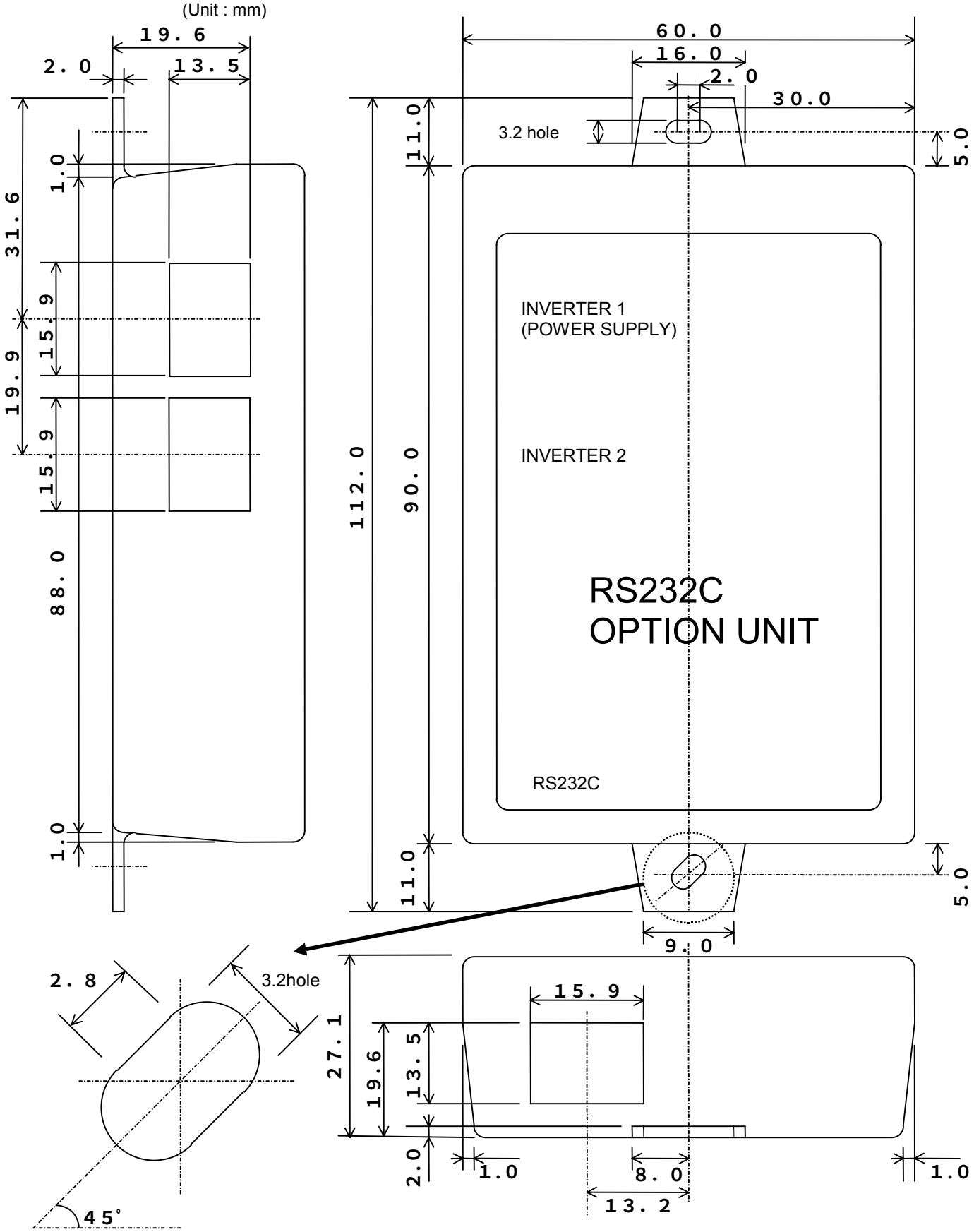
INVERTER 1, INVERTER 2:
Communication connector.
Connect to the inverter's common serial conector with the option cable.
When only one inverter is connected with the Option Unit, use the INVERTER-1 connector for connection.
When two inverter's are connected,
please communicate by setting up the inverter"s number of a parameter,
transmission being under format, and specifying an inverter number.

※**Each cable is an option.**
(Please refer to the page 1.)

2.Dimensions

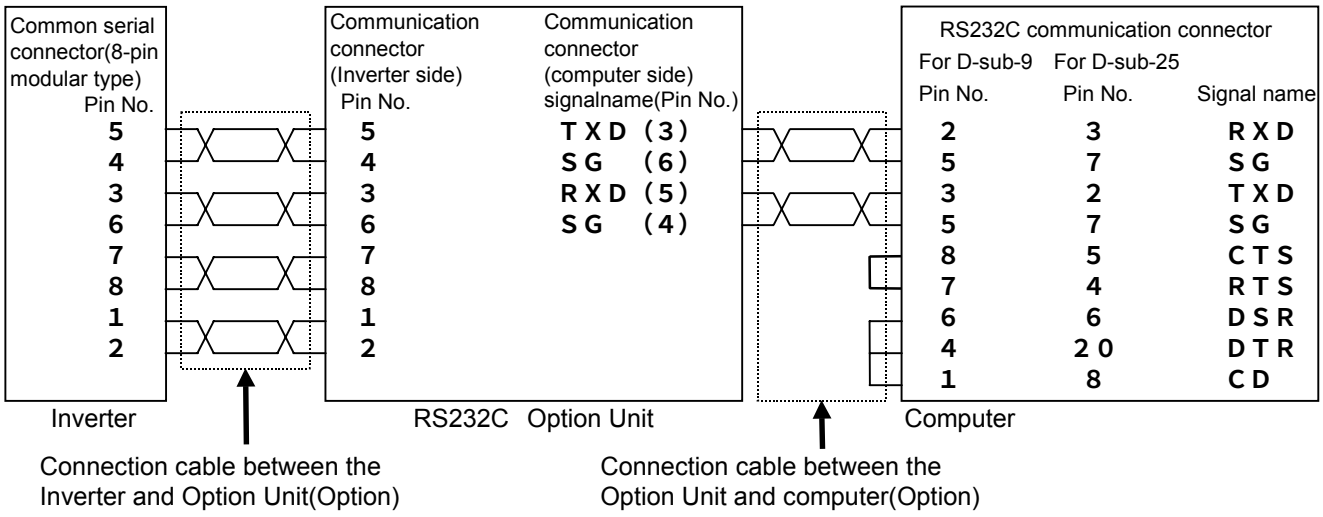
Dimensions of the RS-232C Option Unit (with connector terminal (removal side)) are shown below.

(Unit : mm)



3.Cable Connection

Connect the inverter with a host computer according to the procedure mentioned below.



4.Specifications

Item	Specifications
Part number	RS2001Z-0
Service environment	Indoors. Altitude of less than 1000m (3280 ft). Must not be exposed to direct sunlight, subjected to corrosive and/or explosive gases, vapor, dust, chips, cutting oil, grinding agent, etc.
Ambient temperature	From -10°C to +50°C (14°F to 104°F)
Storage temperature	From -25°C to +65°C (-13°F to 149°F)
Relative humidity	20 to 90% (no condensation allowed)
Vibration	5.9m/s^2 or less
Cooling system	Self-cooling

5.Warranty

Any part of the RS232C Option Unit that proves defective will be repaired and adjusted free of charge under the following conditions:

1. If and when a trouble occurs on the option unit properly installed and handled within one year of delivery, and if the trouble is clearly attributable to defects inherent in our design and manufacture, the product will be repaired free of charge.
2. The warranty covers only the delivered option unit.
3. Even in the term of the warranty, repair/adjustment service will be charged for the following cases.
   1) Fault or damage resulting from misuse, unauthorized modification or repair.
   2) Fault or damage resulting from falling down of the product or traffic accident during transportation.
   3) Fault or damage originating from fire, salt water/salty breezes, some kind of gas, earthquake, storm or flood, lightning, abnormal supply voltage, other natural disasters.
   4) Fault or damage caused by improper use of this option unit as it is used for a purpose out of its original function.
4. If there is another special warranty contracted for this option unit , the special warranty has priority over this warranty.