



YASKAWA

YASKAWA AC Drive-Option USB Copy Unit Technical Manual

Type JVOP-181

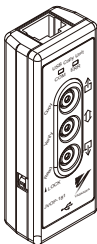
To properly use the product, read this manual thoroughly and retain for easy reference, inspection, and maintenance. Ensure the end user receives this manual.

安川インバータ オプション

USB付きコピーユニット 取扱説明書

形式 JVOP-181

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1 Preface and Safety

◆ General Safety

Read and understand this manual before using the copy unit.

The following conventions are used to indicate safety messages in this manual. Failure to heed these messages could result in serious or possibly even fatal injury or damage to the products or to related equipment and systems.



WARNING

Indicates a hazardous situation, which, if not avoided, could result in death or serious injury.

NOTICE

Indicates a property damage message.

NOTICE: *will also be indicated by a bold key word embedded in the text followed by an italicized safety message.*

1 Preface and Safety

◆ Safety Messages



Electrical Shock Hazard

Do not remove covers or touch circuit boards while the power is on.

Failure to comply could result in death or serious injury.

2 Receiving

Please perform the following tasks after receiving the copy unit:

1. Inspect the copy unit for damage. If the copy unit appears damaged upon receipt, contact the shipper immediately.
2. Verify receipt of all components, including USB copy unit; USB cable (30 cm/11.8 in.); RJ-45 cable (1 m/39.4 in.).

3 Product Overview

3 Product Overview

◆ About this Product

The copy unit has two functions:

- Allows the drive to connect to the USB port on a PC
- Reading and copying drive parameter settings so that those settings can be transferred to another drive

Note: PC software includes DriveWizardPlus and DriveWorksEZ.

DriveWizardPlus is used for editing parameters, operating the drive, and monitoring drive performance when the drive is connected to a PC.

DriveWorksEZ uses visual programming to allow the user to create customized application programs.

◆ Compatible Drives

The copy unit is compatible with the following Yaskawa drives:

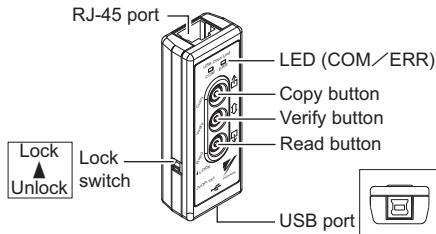
Drive	Software Version <1>
A1000	All Versions
V1000	1010 and later
J1000	All Versions

<1> The software version appears on the drive nameplate next to “PRG”.

4 Components and Functions

4 Components and Functions

◆ Component Names and Functions



◆ Communication Ports

- RJ-45 port or communication port of the Drive connects the copy unit to a drive using the provided RJ-45 cable
- USB port connects the copy unit to a PC using the provided USB cable.

Note: When connecting the copy unit to a PC or drive, use only the cables provided.

Yaskawa cannot guarantee proper operation if other cables are used.

4 Components and Functions

◆ Buttons/Switch

Button/ Switch	Operation
Read </>	Saves parameter settings from the drive
Verify </>	Compares parameters on the drive with the settings saved to the copy unit
Copy </>	Copies parameters settings that have been saved to the copy unit onto the drive
Lock	Read button is locked when the switch is set to the up position

</> Press and hold the button for at least one second to activate the function.

◆ Option LED Display

Below is a list of meanings for the various LED combinations on the copy unit.

COM	ERR	Meaning
ON	ON	Lights for 0.5 seconds when the power is first switched on
ON	OFF	Normal operation
Flashing	OFF	Data is being exchanged between the drive and the copy unit

4 Components and Functions

COM	ERR	Meaning
OFF	Flashing	No parameters have been saved to the unit <1>
OFF	OFF	Cable is not properly connected <2>
OFF	ON	Indicates an error in the copy unit <3>

- <1> After properly setting all drive parameters, connect the copy unit and press and hold the Read button for one second to save parameter settings to the copy unit.
- <2> Make sure the cable is properly connected.
- <3> Replace the copy unit.

5 Connection the Drive to a PC

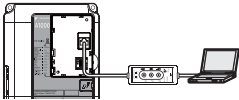
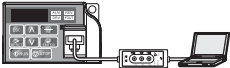
5 Connection the Drive to a PC

◆ Usage

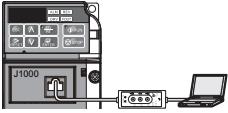
- The copy function does not work when the copy unit is used for connecting the drive to a PC.
- The copy unit will not function if connected to a PC that is in sleep mode.

◆ Connection Diagram and Instructions

Note: For instructions on connecting a PC to the drive, refer to the drive technical manual. Connect A1000 to the USB port on any PC using a USB cable.

Drive	Connection Port	Port Location
A1000	RJ-45 Port of the Drive	
V1000	Communications Port of the Drive	

5 Connection the Drive to a PC

Drive	Connection Port	Port Location
J1000	RJ-45 Port of RS232C Interface Connected to a Drive	 The diagram shows a Yaskawa J1000 drive unit. On the front panel, there is an RS232C interface with an RJ-45 port. A cable is connected from this port to a small USB-to-RS232C adapter. This adapter is then connected to a laptop computer.

1. Install the USB driver from the installation CD of DriveWizardPlus or our Web site.
U.S.: <http://www.yaskawa.com>
Europe: <http://www.yaskawa.eu.com>
Japan: <http://www.e-mechatronics.com>
Other areas: contact a Yaskawa representative
2. All communication ports in this copy unit are used to connect to a PC or drive using the cables provided.
3. Use DriveWizardPlus or DriveWorksEZ to operate the drive. Refer to the manuals for those products for detailed operating instructions.

6 Using the Copy Function

6 Using the Copy Function

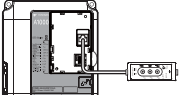
◆ Usage

NOTICE: *Never use the copy unit while the drive is running the motor. Whenever using the copy unit, the drive should be fully stopped. Failure to comply could result in abnormal operation of drive or equipment.*

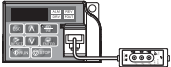
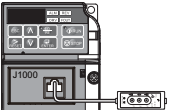
- Parameters can only be saved to a drive when the voltage class, capacity, control mode, and software version match.

◆ Connecting the Copy Unit and Instructions

Using the copy unit with a drive requires the RJ-45 cable included in the package.

Drive	Connection Port	Port Location
A1000	RJ-45 Port of the Drive	

6 Using the Copy Function

Drive	Connection Port	Port Location
V1000	Communications Port of the Drive	
J1000	RJ-45 Port of RS232C Interface Connected to a Drive	

While reading, verifying, or copying data between the drive and copy unit, the “COM” light on the copy unit will flash, and a message will appear on the drive’s display screen.

Once the task of reading, copying, or verifying data is complete, the “COM” light on the copy unit will go out and “*End*” will appear on the drive’s display screen.

- **Read**
Press and hold the Read button for one second to save parameters from the drive to the copy unit. While saving settings from the drive to the copy unit, “*rEAd*” will flash on the display screen.
- **Verify**
Press and hold the Verify button for one second to confirm that the parameter settings in the drive and the parameter settings saved to the copy unit match. During this time, “*UrFY*” will flash on the display screen.

6 Using the Copy Function







- Copy
Press and hold the Copy button for one second to write parameter settings from the copy unit to the drive. While saving settings from the copy unit to the drive, “*COPY*” will flash on the display screen.

◆ Drive LED Display and Meaning

Use the table below to understand the drive LED when the copy unit is connected.

Display		Description
<i>COPY</i>	CoPy	Writing parameter settings (flashing)
<i>CPEr</i>	CPeR	Control mode of the drive does not match the copy unit <I>
<i>CPyE</i>	CPyE	Error writing data <D>
<i>CSEr</i>	CSEr	Error occurred in the copy unit <S>
<i>dFpS</i>	dFpS	Drive model does not match to the another drive <I>
<i>End</i>	End	Task completed
<i>iFEr</i>	iFEr	Communication error between copy unit and drive

6 Using the Copy Function

Display		Description
	ndAT	<ul style="list-style-type: none">• Model, voltage class, capacity, and/or control mode differ <1>• No data is saved to the copy unit <4>
	rdEr	Error reading data <5>
	rEAd	Reading parameter settings (flashing)
	vAEr	Voltage class and/or drive capacity does not match <1>
	vFyE	Parameter settings in the drive and those saved to the copy unit are not the same
	vrFy	Comparing parameter settings (flashing)

- <1> Parameters can only be copied to a drive when the power supply specifications, capacity, control mode, and software version match.
- <2> Press and hold the Copy button for one second. The copy unit will copy parameter settings previously saved to the copy unit to the drive.
- <3> Replace the copy unit.
- <4> Connect the copy unit to a drive with the proper parameter settings and press and hold the Read button for one second. The copy unit will then save the settings from the drive.
- <5> Press and hold the Read button for one second. The copy unit will save the settings from the drive.

7 Specifications

7 Specifications

Item	Specification
Port	RJ-45
	USB 2.0
Power supply	Powered from a PC or drive
Operating system	Windows 2000 / XP
Memory	Stores parameters settings for a single drive
Operating temperature	-10 to +50°C
Storage temperature	-20 to +60°C
Dimensions (mm)	30 (W) × 80 (H) × 20 (D)

8 Yaskawa Locations

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Phone 1-847-887-7000 Fax 1-847-887-7370

YASKAWA ELÉTRICO DO BRASIL LTDA.

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9 Revision History

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August 2008		All chapters	Revision: The title of the Manual
			Addition: Application to the A1000 and J1000 drives.

YASKAWA AC Drive-Option USB Copy Unit Technical Manual

安川インバータ オプション USB付きコピーユニット 取扱説明書

この製品に関するお問い合わせ先については、9章 お問い合わせ先をご覧ください。

Any inquiries related to the product can be directed to the address listed at chapter 9.



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