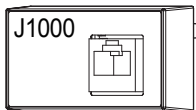


YASKAWA AC Drive-J1000 Option

RS-232C Interface Technical Manual

Type SI-232/J, SI-232/JC

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



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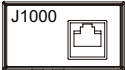
1 Preface and Safety

1 Preface and Safety

◆ Applicable Documentation

The following manuals are available for the RS-232C Interface Option:

Option Unit

	Yaskawa AC Drive -RS-232C Interface Option Technical Manual
	Read this manual first. The Technical Manual is packaged with the RS-232C Interface Option and contains a basic overview of wiring, settings, functions, and fault diagnoses.

1 Preface and Safety

Yaskawa Drive

 A photograph of a Yaskawa J1000 AC Drive. It is a grey, rectangular unit with a control panel on the top left featuring buttons for 'STOP', 'RESET', 'FWD', 'REV', and 'JOG'. Below the buttons is a small digital display. The main body of the drive has 'YASKAWA' and 'J1000' printed on it. At the bottom, there are technical specifications and safety warnings in both English and Japanese.	U.S. and Europe: Yaskawa AC Drive J1000 Quick Start Guide Other areas: Yaskawa AC Drive J1000 Installation & Start-Up Manual	To obtain instruction manuals for Yaskawa products access these sites: U.S.: http://www.yaskawa.com Europe: http://www.yaskawa.eu.com Japan: http://www.e-mechatronics.com Other areas: contact a Yaskawa representative. For questions, contact the local Yaskawa sales office or the nearest Yaskawa representative.
	Yaskawa AC Drive- J1000 Technical Manual	

◆ Terms

Note: Indicates a supplement or precaution that does not cause drive damage.

Drive: Yaskawa AC Drive -J1000 Series

Option: Yaskawa AC Drive -J1000 RS-232C Interface Option

1 Preface and Safety

◆ Registered Trademarks

- Company names and product names listed in this manual are registered trademarks of those companies.

◆ Supplemental Safety Information

Read and understand this manual before installing, operating, or servicing this option unit. The option unit must be installed according to this manual and local codes.

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.



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



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

1 Preface and Safety

CAUTION

Indicates a hazardous situation, which, if not avoided, could result in minor or moderate injury.

NOTICE

Indicates an equipment damage message.

2 Receiving

2 Receiving

◆ Receiving

Confirm the packaging after receiving the RS-232C Interface Option. If the wrong model is received or the RS-232C Interface Option does not function properly, contact your supplier.

Components packaged with the option:

- The RS-232C Interface for copy unit/PC communication (SI-232/J or SI-232/JC)
- Technical manual

◆ Additional Parts (Sold Separately)

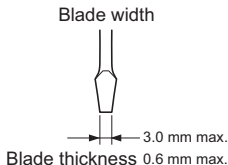
Option	Part Number	Comments
DriveWizard Plus	-	Available for download from e-mechatronics. www.e-mechatronics.com or at www.yaskawa.com in the U.S.
PC Interface Cable	WV103	D-sub 9 pin - RJ-45
USB Copy Unit	JVOP-181	Provided with an RJ-45 cable and a USB cable
LED Operator	JVOP-182	Available soon (Contact Yaskawa for details)

2 Receiving

Option	Part Number	Comments
LED Operator Cable	1 meter: WV001 3 meter: WV003	CAT5e UTP straight-through cable with RJ-45 8 pin connector

◆ Tool Requirements

Use a flat-blade screwdriver with the dimensions below for installation or removal of the option cover and RS-232C option.



3 Product Overview

3 Product Overview

◆ About this Product

The RS-232C Interface Option allows the drive to be connected to a network or external device.

Possible connected devices include:

- LED Operator
- Personal computer using DriveWizard Plus
- USB Copy Unit

These devices can be used to edit, view, and copy parameter settings in the drive.

SI-232/JC is more easily connected and disconnected than SI-232/J. This is useful when copying parameter settings between multiple drives.

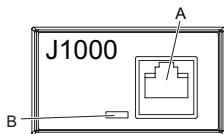
◆ Applicable Models

The RS-232C Option is used with these Yaskawa drive models.

Drive	Drive Software Version <1>
CIMR-J□□A□□□□BA□	≥1010

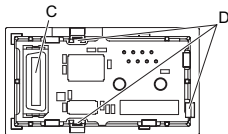
<1> See “PRG” on the drive nameplate for software version number.

4 Option Components



A – RJ-45 Port

**B – Option
Model
Number**



**C – Drive
Connector**

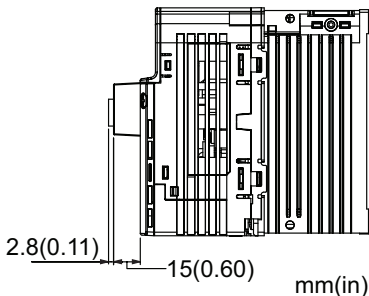
**D – Connection
Tabs <1>**

<1> Connection tabs are found only on the RS-232C interface (SI-232/J).

4 Option Components

◆ Dimensions

The installed Option interface adds 17.8 mm (0.70 in) to the total depth of the drive.



5 Installation Procedure

◆ Section Safety



Electrical Shock Hazard

Disconnect all power to the drive, before servicing.

Failure to comply will result in death or serious injury.

Wait at least one minute after all indicators are off. The drive has internal capacitors that remain charged even after the main power supply is disconnected. The drive charge LED will extinguish when the DC bus voltage is below 50Vdc. Measure drive DC bus voltage to confirm safe level.

5 Installation Procedure

NOTICE

Damage to Equipment

Use only Yaskawa connection cables or recommended cables.

Failure to comply may cause the drive or option to function incorrectly.

Properly connect the connectors.

Failure to comply may prevent proper operation and possibly damage equipment.

Do not exceed communication cable bend radius specifications.

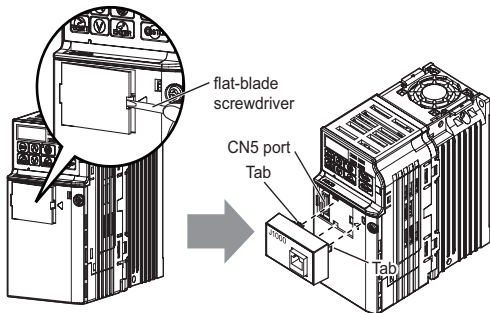
Failure to comply may result in broken wires or loose connections.

5 Installation Procedure

◆ Attaching the Option Interface

1. Insert a flat-blade screwdriver into the opening as shown in the diagram below to remove the option cover from the drive.
2. Insert the connector on the back of the interface into the CN5 port and click into position.

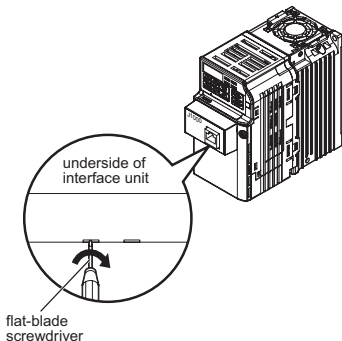
Note: The RS-232C Interface (SI-232/J) has three additional connection tabs that must also click into place to properly mount the option.



5 Installation Procedure

◆ Removing the option interface

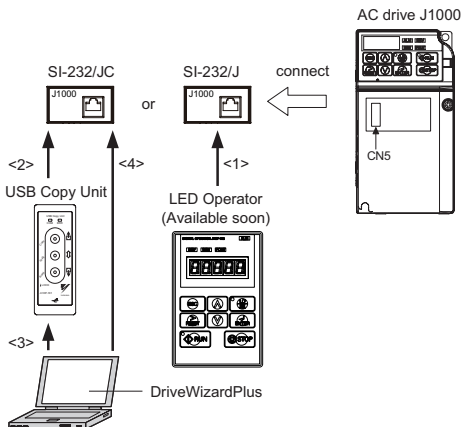
1. Use a flat-blade screwdriver as shown in the diagram to press gently against the small openings and disconnect the option unit.



5 Installation Procedure

◆ Connecting Peripheral Devices to the RS-232C Interface Option

NOTICE: Only use specific cables recommended by Yaskawa. Yaskawa cannot guarantee proper operation if non-specified cables are used.



5 Installation Procedure

- <1> Use the LED operator cable, WV001 or WV003.
- <2> Only use the RJ-45 cable supplied with the USB Copy Unit.
- <3> Only use the USB cable supplied with the USB Copy Unit.
- <4> Only use the cable, PN: WV103, when connecting the drive to a PC.

6 Related Drive Parameters

6 Related Drive Parameters

No.	Name	Description	Default
o2-06	Operation Selection when Digital Operator is Disconnected	Determines if the drive will stop when the digital operator is removed in Local mode or with b1-02 set to zero. 0: Disabled - The drive will not stop when the digital operator is removed. 1: Enabled - The drive will fault (OPR) and coast to stop when the digital operator is removed.	0

7 Troubleshooting

7 Troubleshooting

Problems with the option interface may trigger an operator error. Refer to the J1000 Technical Manual for all other errors.

◆ Fault

LED Operator Display		Fault Name
	oPr	Digital operator connection fault
Cause		Possible solution
LED operator is not properly connected to the drive or cables are damaged		• Check the connection between the LED operator and the drive • Replace the cable if damaged • Turn off the drive input power and disconnect the LED operator • Next reconnect the operator and turn the drive input power back on

8 Specifications

◆ Drive Specification

Item	Specification
Model Number	SI-232/J: RS-232C Interface for use with remote digital operator SI-232/JC: RS-232C Interface for use with copy unit and PC communication
Storage/ Installation Area	Indoors (an area free from oil mist and dust)
Ambient Temperature	-10 to +50°C
Humidity	95% RH or less with no condensation
Storage Temperature	-20 to +60°C allowed for short-term transport of the product
Altitude	1000 m or less

9 Yaskawa Locations

9 Yaskawa Locations

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10 Revision History

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└ Date of original
publication

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December 2007	—	—	First edition

YASKAWA AC Drive-J1000 Option

RS-232C Interface

Technical Manual

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



YASKAWA ELECTRIC CORPORATION

YASKAWA

In the event that the end user of this product is to be the military and said product is to be employed in any weapons systems or the manufacture thereof, the export will fall under the relevant regulations as stipulated in the Foreign Exchange and Foreign Trade Regulations. Therefore, be sure to follow all procedures and submit all relevant documentation according to any and all rules, regulations and laws that may apply.

Specifications are subject to change without notice for ongoing product modifications and improvements.

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