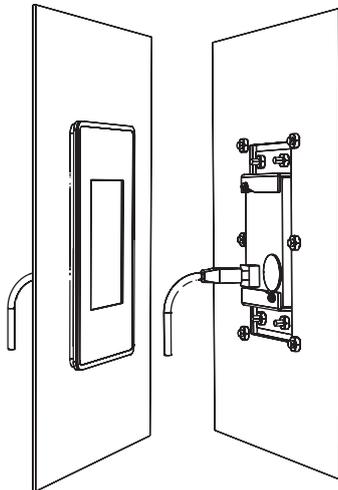


# YASKAWA AC Drive-1000 Series Option Operator Mounting Kit Installation Manual

Model No. UUX000526 or UUX000527

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

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## ◆ Applicable Documentation

The following manual are available for the 1000 Series Remote Operator Mounting Kit NEMA Type 4X/IP66.

### 1000 Series NEMA Type 4X/ IP66 Mounting Kit

	<p><b>1000 Series Operator Mounting Kit NEMA Type 4X/ IP66 Installation Manual: TOEP YEAOPT 02A</b></p> <p>Read this manual first. The installation manual is packaged with the mounting kit and contains a installation procedures for mounting a 1000 Series digital operator using the kit.</p>
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For the drive setup, refer to the drive Quick-Start Guide or Technical Manual.

### Drive Manuals

	<p><b>1000 Series Drive Manuals</b></p> <p>To obtain instruction manuals for Yaskawa products access these sites: U.S.: <a href="http://www.yaskawa.com">http://www.yaskawa.com</a> Europe: <a href="http://www.yaskawa.eu.com">http://www.yaskawa.eu.com</a> Japan: <a href="https://www.e-mechatronics.com">https://www.e-mechatronics.com</a> Other areas: contact a Yaskawa representative.</p> <p>For questions, contact the local Yaskawa sales office or the nearest Yaskawa representative.</p>
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## ◆ Terms

<b>Drive:</b>	Yaskawa AC Drive -1000 Series.
<b>Mounting Kit:</b>	1000 Series NEMA Type 4X/ IP66 Mounting Kit.
<b>Note:</b>	Indicates a supplement or precaution that does not cause drive damage.

# 1 Preface and Safety

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## ◆ 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.

### **DANGER**

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

### **WARNING**

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

### **CAUTION**

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

### **NOTICE**

**Indicates an equipment damage message.**

## ■ General Safety

### General Precautions

- The diagrams in this section may include option units and drives without covers or safety shields to illustrate details. Be sure to reinstall covers or shields before operating any devices. The option board should be used according to the instructions described in this manual.
- Any illustrations, photographs, or examples used in this manual are provided as examples only and may not apply to all products to which this manual is applicable.
- The products and specifications described in this manual or the content and presentation of the manual may be changed without notice to improve the product and/or the manual.
- When ordering a new copy of the manual due to damage or loss, contact your Yaskawa representative or the nearest Yaskawa sales office and provide the manual number shown on the front cover.

### DANGER

#### **Heed the safety messages in this manual.**

Failure to comply will result in death or serious injury.

The operating company is responsible for any injuries or equipment damage resulting from failure to heed the warnings in this manual.

### NOTICE

#### **Do not expose the drive to halogen group disinfectants.**

Failure to comply may cause damage to the electrical components in the option unit.

Do not pack the drive in wooden materials that have been fumigated or sterilized.

Do not sterilize the entire package after the product is packed.

# 2 Product Overview

### ◆ About This Product

This kit is designed to provide the functionality of the digital operator on an enclosure designed for a NEMA Type 1, 3R, 4, 4X, 12, or IPX6 environment. Refer to UL file number E131457 for details

**Chemical Resistance<sup>1</sup>:** The materials used in this kit were chosen specifically for resistance to harsh environments. This kit provides short-term protection from many chemicals, including the list below. For additional information, please contact the factory.

- Toluene
- Isopropyl Alcohol
- Cyclohexanone
- Ethyl Acetate
- Xylene
- 40% NaOH
- Concentrated HCl
- Gasoline
- Butyl Cellosolve

### ◆ Applicable Models

The mounting kit can be used with the digital operator models in [Table 1](#).

**Table 1 Applicable Digital Operator Models**

Model	Description
JVOP-180	LCD digital operator
JVOP-180C	LCD digital operator
JVOP-180CR	LCD digital operator
JVOP-182	LED digital operator
JVOP-183	LCD digital operator
JVOP-183R	LCD digital operator

<sup>1</sup> Chemical resistance is not evaluated by Underwriters Laboratories (UL).

## 3 Receiving

Perform the following tasks after receiving the mounting kit:

- Inspect the mounting kit for damage.  
If the mounting kit appears damaged upon receipt, contact the shipper immediately.
- Verify receipt of the correct model by checking the model number printed on the package of the mounting kit.
- If you have received the wrong model or the mounting kit does not perform properly, contact your supplier.

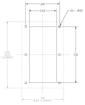
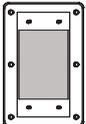
### ◆ Contents and Packaging

Table 2 Contents of Package

Description:	Mounting Kit UUX00526 or UUX00527	Installation Manual
-		
Quantity:	1	1

### 3 Receiving

**Table 3 Mounting Kit Components**

Item	Yaskawa Part Number	Description
 Quantity 1 ea.	UDM00236 DRW 000 00	<b>1:1 Cutout Template</b>
 Quantity 1 ea.	USP01314-1 </>	<b>Mounting Bracket Subassembly:</b> Sub assembly with gasket for panel mounting.  <b>Note:</b> Kit UUX000526 will have a blank label on the front of this assembly.  Kit UUX000527 will have a Yaskawa brand label on the front of this assembly.
 Quantity 2 ea.	USC00087-3	<b>M3 x 6 screw:</b> Used to assemble the Z-bracket to the back of the digital operator.
 Quantity 2 ea.	USP01229-1	<b>Z-bracket:</b> Assembled to the back of the digital operator.
 Quantity 4 ea.	USC-0491	<b>#8-32 nut w/captive washer:</b> Used to attach the Z-bracket subassembly with digital operator to the mounting bracket sub assembly.
 Quantity 6 ea.	USC-0492	<b>#10-32 nut w/captive washer:</b> Used to attach the final assembly to the panel.

Item	Yaskawa Part Number	Description
 Quantity 1 ea.	UWR0051	<b>Digital Operator Cable 3 ft:</b> Used to connect the digital operator to the drive.
 Quantity 1 ea.	UWR0052	<b>Digital Operator cable 10 ft:</b> Used to connect the digital operator to the drive.

<1> Carefully remove the inner protective plastic film from the mounting bracket membrane prior to kit installation. The outer protective film can be removed after installation is complete.

### ◆ Tool Requirements

*Table 4* lists the tools required to install the mounting kit with digital operator on the door of the enclosure panel.

**Table 4 Required Tools**

Tool	Description
Phillips screwdriver #2	For M3 x 6 screw
Select one: 11/32 inch box end wrench, socket wrench, nut driver or adjustable wrench.	For #8-32 nut
Select one: 3/8 inch box end wrench, socket wrench, nut driver or adjustable wrench.	For #10-32 nut

# 4 Installation Procedure

### ◆ Section Safety

#### DANGER

##### **Electrical Shock Hazard**

**Do not connect or disconnect wiring while the power is on.**

Failure to comply will result in death or serious injury.

Disconnect all power to the drive, wait at least five minutes after all indicators are off, measure the DC bus voltage to confirm safe level, and check for unsafe voltages before servicing to prevent electric shock. The internal capacitor remains charged even after the power supply is turned off. The charge indicator LED will extinguish when the DC bus voltage is below 50 Vdc.

#### WARNING

##### **Electrical Shock Hazard**

**Do not allow unqualified personnel to use equipment.**

Failure to comply could result in death or serious injury.

Maintenance, inspection, and replacement of parts must be performed only by authorized personnel familiar with installation, adjustment, and maintenance of this product.

**Do not remove the drive cover while the power to the drive is on.**

Failure to comply could result in death or serious injury.

### NOTICE

#### Damage to Equipment

**Use only Yaskawa connection cables or recommended cables.**

Failure to comply may cause the drive or LCD Operator Option to function incorrectly.

**Properly connect the connectors.**

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

**Partially tighten and torque all hardware prior to tightening to the rated torque specifications..**

Failure to comply may result in a poor dusttight seal between the kit and the enclosure.

**Tighten the screws in a cross-like pattern to prevent damage to the threads.**

**Do not exceed the recommended torque values as described in the instructions.**

**Do not exceed communication cable bend radius specifications.**

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

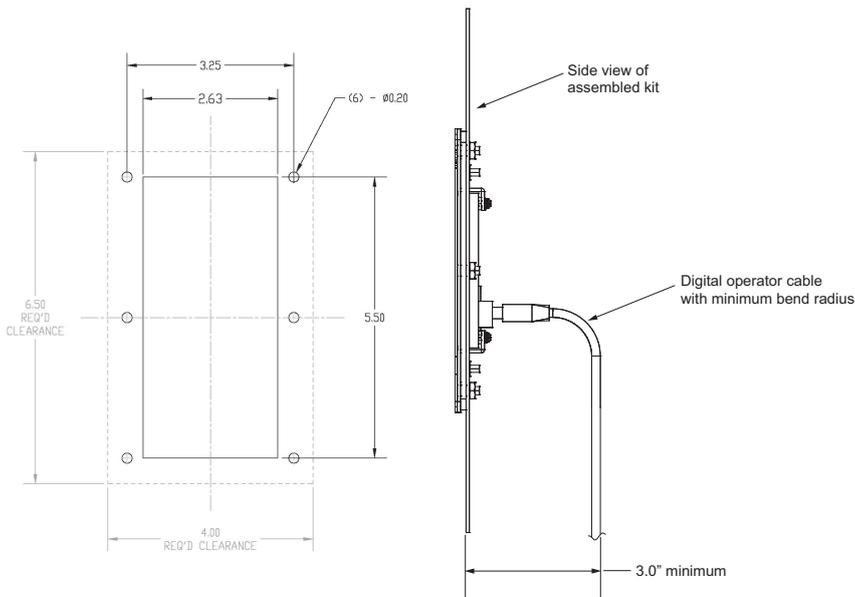
## 4 Installation Procedure

### ◆ Mounting Kit Assembly and Installation Procedure

**DANGER! Electrical Shock Hazard: Do not connect or disconnect wiring while the power is on. Failure to comply will result in death or serious injury. Before servicing, disconnect all power to the equipment. The internal capacitor remains charged even after the power supply is turned off. The charge indicator LED will extinguish when the DC bus voltage is below 50 Vdc. To prevent electric shock, wait at least five minutes after all indicators are OFF and measure the DC bus voltage level to confirm safe level.**

1. Turn off power to the drive by completely removing power to the enclosure. Wait 5 minutes for capacitor discharge.
2. Unpack and verify the contents of the Digital Operator Remote Mount Kit.
3. Create the cutout at the desired location on the customer supplied panel as shown in **Figure 1**. Use the 1:1 cutout template (drawing UDM00236) included in this kit.

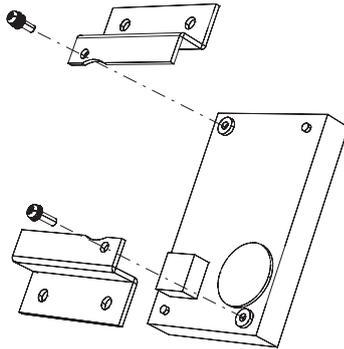
**Note:** Note that 3.0" clearance is required behind the operator kit to allow for cable routing. All dimensions +/- 0.03".



**Figure 1 Cutout Drawing and Side View Showing Recommended Bending Radius (Depth)**

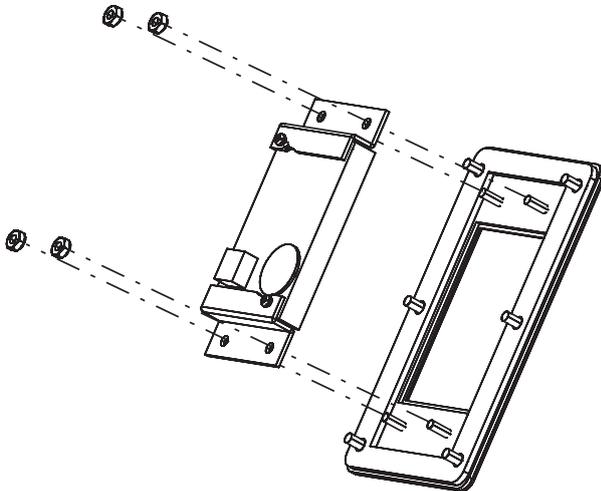
## 4 Installation Procedure

4. Assemble each Z-Bracket (qty. 2) to the backside of the Digital Operator (not included in kit). Use the provided M3x6 screws and tighten to 7 lb-in (0.79 Nm). Refer to [Figure 2](#).



**Figure 2 Z-Bracket Subassembly**

5. Mount the Z-Bracket Subassembly from the previous step to the Mounting Bracket Subassembly. Use the provided #8-32 nuts and tighten to 18 lb-in (2.03 Nm). Refer to [Figure 3](#).

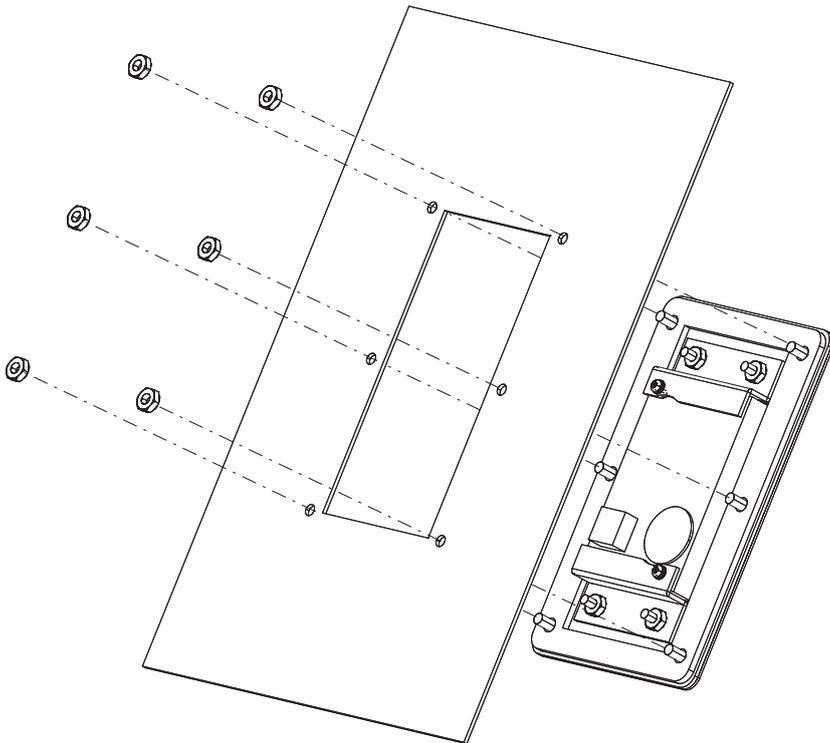


**Figure 3 Mounting Bracket Assembly**

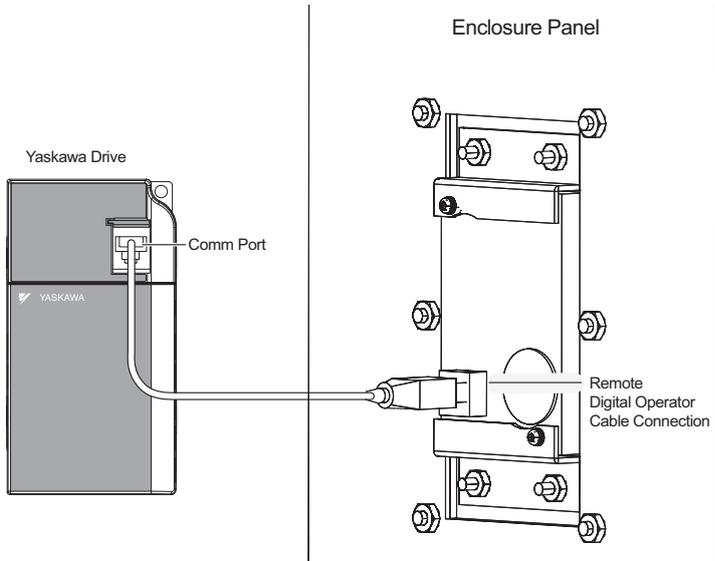
## 4 Installation Procedure

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- Complete installation by attaching the completed assembly to the end-use enclosure according to **Figure 4**. Use the provided #10-32 nuts and tighten to 30 lb-in. (3.39 Nm). Tighten the screws in a cross-like pattern to prevent damage to the threads and to assure proper sealing.



**Figure 4 Mounting Bracket Assembly**



**Figure 5 Communication Cable Connection**

**Note:** Use only Yaskawa recommended cables. Using a cable not specified may cause the digital operator or drive to malfunction.

7. Plug one end of the digital operator cable (3 ft and 10 ft cables included) to the female connector on the backside of the digital operator as shown in [Figure 5](#). Select the cable length best suited for the enclosure size. The remaining cable can be discarded.
8. Plug the other end of the digital operator cable to the female connector on the front of the drive. The location of the connector on the drive varies with drive size.
9. Secure the loose cable to the enclosure and protect the cable from sharp edges or from being pinched in the enclosure door. Make sure that opening and closing the enclosure door does not strain the cable or connections.

**WARNING! Sudden Movement Hazard - Clear personnel, secure equipment and check sequence and safety circuitry before starting the drive.** Failure to comply could result in death or serious injury from moving equipment.

**WARNING! Electrical Shock Hazard - Do not contact live electrical parts.** Failure to comply could result in death or serious injury. Never touch the output terminals directly with your hands or allow the output lines to come into contact with the drive case.

10. Apply main power to the drive and verify the digital operator functions properly. Refer to the installation manual supplied with the digital operator or the drive manual supplied with the drive.

## 5 Revision History

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# 5 Revision History

The revision dates and numbers of the revised manuals are given on the bottom of the back cover.

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publication

└─ Date of original  
publication

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October 2011	2	2	Added digital operator models to Table 1.
October 2011	1	3	Revised 1:1 Cutout Template part number.
October 2008	–	–	First edition



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