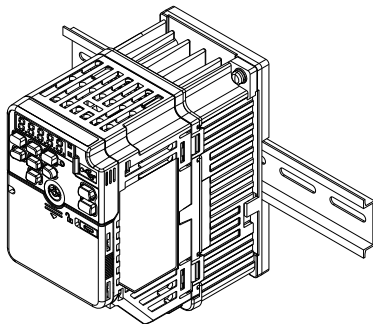


Yaskawa AC Drive Option DIN Rail Attachment Installation Manual

Type ZPZ-GA50Vx, EZZ08122D

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 Receiving

◆ Applicable Documentation

Document	Description
Yaskawa AC Drive Option	Read this manual before you install this option to the drive.
DIN Rail Attachment Installation Manual	This manual gives information about how to install the option and attach the drive to a DIN rail.
Yaskawa AC Drive Manuals	<p>For information about drive settings, refer to the manuals for the drive with which you are using this option.</p> <p>The manuals provide information about basic installation, wiring, operation procedures, functions, troubleshooting, and maintenance.</p> <p>The manuals also include important information about parameter settings and tuning the drive.</p> <p>You can download drive manuals from the Yaskawa product and technical information website shown on the back cover of this manual.</p>

◆ Glossary

Terminology Used in this Document	Description
Drive	YASKAWA AC Drive GA500
Attachment, Option	Yaskawa Drive Option DIN Rail Attachment

2 General Safety

◆ Supplemental Safety Information

⚠ DANGER *This signal word identifies a hazard that will cause serious injury or death if you do not prevent it.*

⚠ WARNING *This signal word identifies a hazard that can cause death or serious injuries if you do not prevent it.*

⚠ CAUTION Identifies a hazardous situation, which, if not avoided, can cause minor or moderate injury.

NOTICE This signal word identifies a property damage message that is not related to personal injury.

◆ Section Safety

General Precautions

- Some figures in the instructions include options and drives without covers or safety shields to more clearly show the inside of the drive. Replace covers and shields before operation. Use options and drives only as specified by the instructions.
- The figures in this manual are examples only. All figures do not apply to all products included in this manual.
- Yaskawa can change the products, specifications, and content of the instructions without notice to make the product and/or the instructions better.
- If you damage or lose these instructions, contact a Yaskawa representative or the nearest Yaskawa sales office on the rear cover of the manual, and tell them the document number on the front cover to order new copies.

⚠ DANGER *Electrical Shock Hazard. Do not examine, connect, or disconnect wiring on an energized drive. Before servicing, disconnect all power to the equipment and wait for the time specified on the warning label at a minimum. The internal capacitor stays charged after the drive is de-energized. The charge indicator LED extinguishes when the DC bus voltage decreases below 50 Vdc. When all indicators are OFF, measure for dangerous voltages to make sure that the drive is safe. If you do work on the drive when it is energized, it will cause serious injury or death from electrical shock. The drive has internal capacitors that stay charged after you de-energize the drive.*

⚠ CAUTION *Burn Hazard. Do not touch a hot drive heatsink. De-energize the drive, wait for a minimum of 15 minutes, then make sure that the heatsink is cool before you replace the cooling fans. If you touch a hot drive heatsink, it can burn you.*

⚠ WARNING *Electrical Shock Hazard. Only let approved personnel install, wire, maintain, examine, replace parts, and repair the drive. If personnel are not approved, it can cause serious injury or death.*

⚠ WARNING *Sudden Movement Hazard. Tighten the screws to the specified tightening torque. Incorrect tightening torques can cause damage to equipment and cause serious injury or death from falling equipment.*

NOTICE

When you touch the drive and circuit boards, make sure that you observe correct electrostatic discharge (ESD) procedures. If you do not follow procedures, it can cause ESD damage to the drive circuitry.

3 Overview

Use this option to attach the drive to a DIN rail.

This option will let you attach the drive to a DIN rail in the enclosure panel.

You can use this option when the installation environment of the drive meets the specifications shown in *Installation Environment on page 7*.

◆ Compatible Products

This installation kit is compatible with these drives:

- GA500

◆ Installation Environment

The installation environment is important for the lifespan of the product and to make sure that the drive performance is correct. Make sure that the installation environment agrees with these specifications.

Environment	Conditions
Area of Use	Indoors
Power Supply	Overvoltage Category III (IEC60664)

3 Overview

Environment	Conditions
Ambient Temperature Setting	IP20/UL Open Type: -10 °C to +50 °C (14 °F to 122 °F) IP20/UL Type1: -10 °C to +40 °C (14 °F to 104 °F) <ul style="list-style-type: none">• Drive reliability is better in environments that do not have wide temperature fluctuations.• When installing the drive in an enclosure, use a cooling fan or air conditioner to keep the internal air temperature in the permitted range.• Do not let the drive freeze.
Humidity	95%RH or less Do not let condensation form on the drive.
Storage Temperature	-20 °C to +70 °C (-4 °F to +158 °F) (short-term temperature during transportation)
Surrounding Area	Pollution degree 2 or less (IEC 60664-1) Install the drive in an area without: <ul style="list-style-type: none">• Oil mist, corrosive or flammable gas, or dust• Metal powder, oil, water, or other unwanted materials• Radioactive or flammable materials.• Harmful gas or fluids• Salt• Direct sunlight Keep wood and other flammable materials away from the drive.
Altitude	1000 m (3281 ft) Maximum Note: Derate the output current by 1% for each 100 m (328 ft) to install the drive in altitudes between 1000 to 4000 m (3281 to 13123 ft). It is not necessary to derate the rated voltage in these conditions: <ul style="list-style-type: none">• Installing the drive at 2000 m (6562 ft) or lower• Installing the drive between 2000 to 4000 m (6562 to 13123 ft) and grounding the neutral point on the power supply. Contact Yaskawa or your nearest sales representative when not grounding the neutral point.

Environment	Conditions
Vibration	<ul style="list-style-type: none"> • 10 Hz to 20 Hz: 0.6 G (5.9 m/s², 19.36 ft/s²) • 20 Hz to 55 Hz: 0.2 G (2.0 m/s², 6.56 ft/s²)
Installation Orientation	Install the drive vertically for sufficient airflow to cool the drive.

NOTICE *Do not put drive peripheral devices, transformers, or other electronics near the drive. Shield the drive from electrical interference if components must be near the drive. Components near the drive can cause incorrect drive operation from electrical interference.*

NOTICE *Do not let unwanted objects, for example metal shavings or wire clippings, fall into the drive during drive installation. Put a temporary cover over the drive during installation. Remove the temporary cover before start-up. Unwanted objects inside of the drive can cause damage to the drive.*

4 Receiving

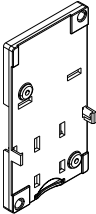

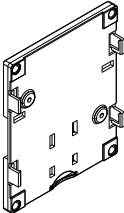

1. Examine the products for damage.
If there is damage to the products, contact the shipping company immediately. The Yaskawa warranty does not include damage from shipping.
2. Verify the product model number to make sure that you received the correct model.
If you have problems with the products, contact the distributor where you purchased the products or the Yaskawa sales office immediately.

◆ Drive Model and Attachment

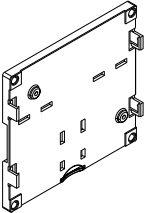

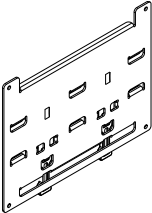

Table 4.1 Drive Model and Attachment

Drive Model			Attachment Model
Three-Phase 200 V Class	Single-Phase 200 V Class	Three-Phase 400 V Class	
2001, 2002, 2004, 2006	B001, B002, B004	-	ZPZ-GA50V1
2008, 2010, 2012	B006, B010	4001, 4002, 4004, 4005, 4007, 4009	ZPZ-GA50V2
2018, 2021	B012	4012	ZPZ-GA50V3
-	B018	-	EZZ08122D

◆ Option Package Contents

Model	Attachment	Mounting Screw
ZPZ-GA50V1	 <p>#1</p>	 <p>3 × 8 tapping screw: #2</p>
ZPZ-GA50V2	 <p>#1</p>	 <p>3 × 8 tapping screws: 2</p>

5 Option Dimensions

Model	Attachment	Mounting Screw
ZPZ-GA50V3	 <p>#1</p>	 <p>3 × 8 tapping screw: #2</p>
EZZ08122D	 <p>#1</p>	 <p>M4 × 12 pan head screws: #4</p>

5 Option Dimensions

Table 5.1 Attachment Model and Exterior Dimensions

Drive Model			Attachment Model	Reference
Three-Phase 200 V Class	Single-Phase 200 V Class	Three-Phase 400 V Class		
2001, 2002, 2004, 2006	B001, B002, B004	-	ZPZ-GA50V1	Figure 5.1
2008, 2010, 2012	B006, B010	4001, 4002, 4004, 4005, 4007, 4009	ZPZ-GA50V2	Figure 5.2

Drive Model			Attachment Model	Reference
Three-Phase 200 V Class	Single-Phase 200 V Class	Three-Phase 400 V Class		
2018, 2021	B012	4012	ZPZ-GA50V3	Figure 5.3
-	B018	-	EZZ08122D	Figure 5.4

◆ Option Dimensions

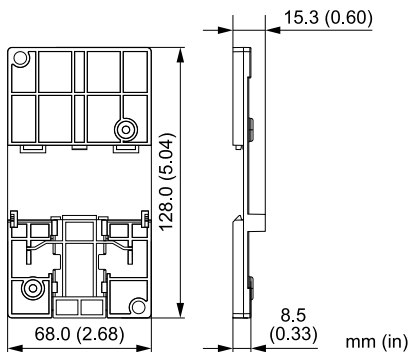


Figure 5.1 Dimensions Diagram 1

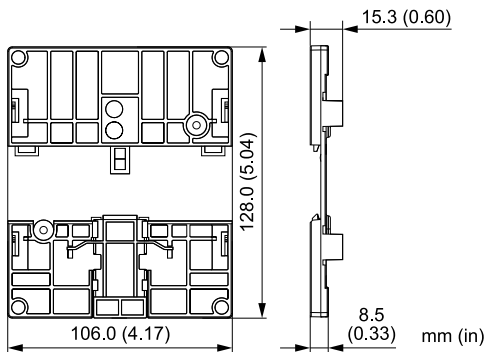


Figure 5.2 Dimensions Diagram 2

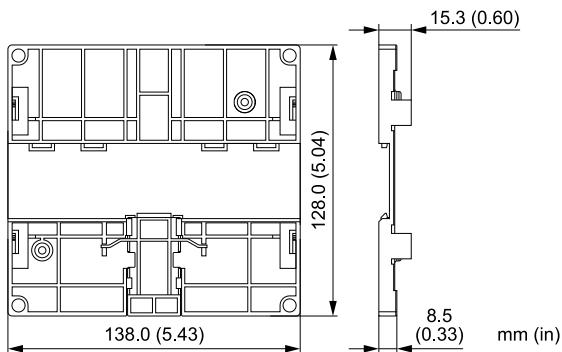


Figure 5.3 Dimensions Diagram 3

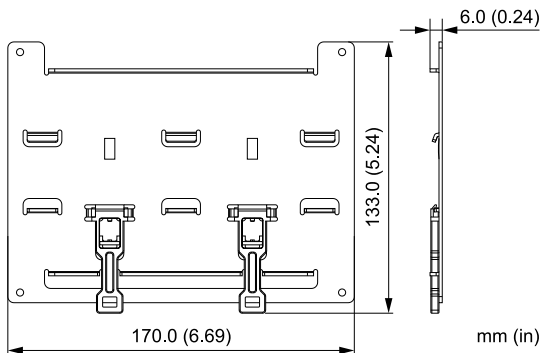


Figure 5.4 Dimensions Diagram 4

6 Installation Procedure

◆ Necessary Tools

To install the attachment, use these tools:

- Phillips screwdriver #2

◆ Attachment Models and Installation Procedure

⚠ CAUTION *Crush Hazard. Tighten terminal cover screws and hold the case safely when you move the drive. If the drive or covers fall, it can cause moderate injury.*

The installation procedure is different for different drive models. Refer to [Table 6.1](#).

Table 6.1 Attachment Installation Procedure

Drive Model			Attachment Model	Procedure	Reference
Three-Phase 200 V Class	Single-Phase 200 V Class	Three-Phase 400 V Class			
2001, 2002, 2004, 2006	B001, B002, B004	-	ZPZ-GA50V1	Procedure A	16
2008, 2010, 2012	B006, B010	4001, 4002, 4004, 4005, 4007, 4009	ZPZ-GA50V2		
2018, 2021	B012	4012	ZPZ-GA50V3		
-	B018	-	EZZ08122D	Procedure B	17

■ Install the Attachment

Install the Attachment (Procedure A)

Install the attachment on the drive heatsink.

Tighten the screws to a correct tightening torque:

- 3 × 8 tapping screw: 0.98 to 1.33 N·m (8.67 to 11.77 in·lb)

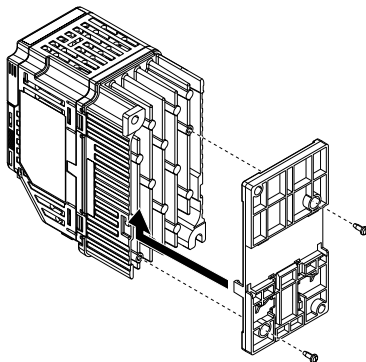


Figure 6.1 Install the Attachment

Install the Attachment (Procedure B)

Install the attachment on the drive heatsink.

Tighten the screws to a correct tightening torque:

- M4 × 12 pan head screw: 0.98 to 1.33 N·m (8.67 to 11.77 in·lb)

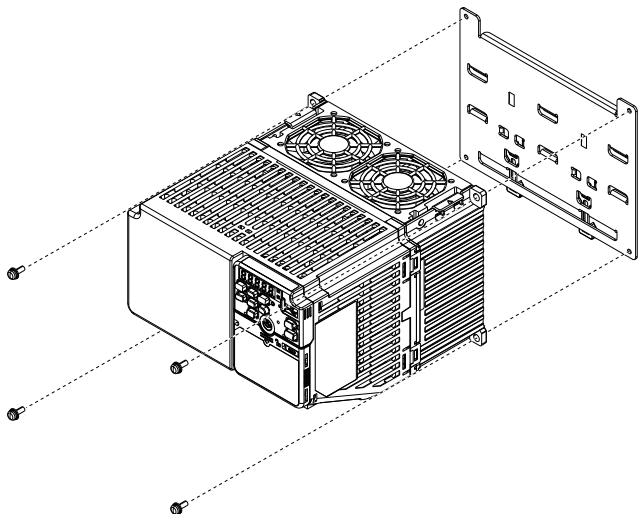


Figure 6.2 Install the Attachment

■ Attach the Drive to the DIN Rail

Put the hook of the attachment on the DIN rail and push the drive until the hook clicks into place on the DIN rail.

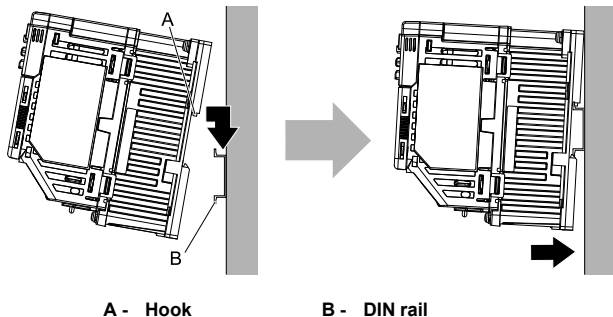


Figure 6.3 Attach the Drive to the DIN Rail

■ Remove the Drive from the DIN Rail

Pull down on the hook of the attachment and pull the drive forward to remove it.

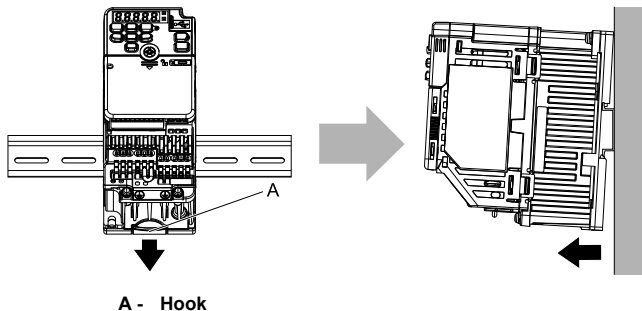


Figure 6.4 Remove the Drive from the DIN Rail

Revision History

Date of Publication	Revision Number	Section	Revised Content
February 2019	-	-	First Edition

Yaskawa AC Drive Option DIN Rail Attachment Installation Manual

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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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