

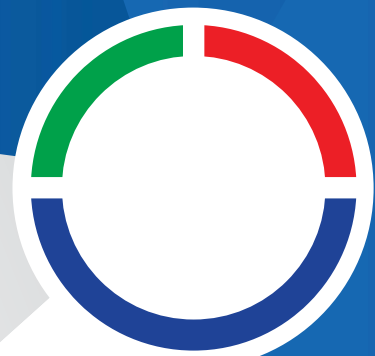
# YASKAWA

# GA500 AC Microdrive

## AC Microdrive for Industrial Applications Manual Supplement

Affected  
documents:

GA500 Installation & Primary Operation (TOEPC71061752)  
GA500 Technical Reference (SIEPC71061752)  
GA500 Quick Setup Procedure (TOEPC71061769)



Simplify drive start-up  
Get DriveWizard Mobile

<https://www.yaskawa.com/dwm>

## 1 Supplemental Information - Applicable Documents

The contents of this supplement apply to the product instructions in [Table 1.1](#).

**Table 1.1 Affected Documents**

Drive Series	Document
GA500	Installation & Primary Operation (TOEPC71061752)
	Technical Reference (SIEPC71061752)
	Quick Setup Procedure (TOEPC71061769)

## 2 Short Circuit Protection Requirements for UL Listing

**⚠ WARNING** *Electrical Shock Hazard. After the input protective device trips, do not immediately energize the drive or operate peripheral devices. Wait for the time specified on the warning label at a minimum and make sure that all indicators are OFF. Then check the wiring and peripheral device ratings to find the cause of the problem. If you do not know the cause of the problem, contact Yaskawa before you energize the drive or peripheral devices. If you do not fix the problem before you operate the drive or peripheral devices, it can cause serious injury or death.*

### ◆ UL Compliance

Install one of these types of short circuit protection devices in [Table 2.1](#) to comply with UL 61800-5-1. Semiconductor protective type fuses are recommended, but the table also shows alternative short circuit protection devices.

When you use MCCBs, RK1 or RK5 fuses, you must mount the drive in a ventilated enclosure according to the minimum enclosure volume specified in this document.

#### ■ Current-limiting Molded Case Circuit Breaker (MCCB) Ratings

- Maximum MCCB rating is 200% of the Normal-Duty drive full load output amp (FLA) rating.

**Note:**

You can substitute an alternate UL listed current limiting type MCCB where the peak let-through current and  $I^2t$  of the alternate MCCB is not greater than the specified MCCB in this table.

#### ■ Non-Semiconductor Fuse Ratings

- Maximum CC, J, T, RK1 or RK5 fuse rating is 175% of the Normal-Duty drive full load output amp (FLA) rating.

#### ■ Short Circuit Current Rating (SCCR)

The maximum SCCR provided by drive and fuse, or drive and MCCB combinations in this document, is 31,000 RMS symmetrical amps.

- **240 V models:** Use the protection specified in this document to prepare the drive for use on a circuit capable of delivering not more than 31,000 RMS symmetrical amps and not more than 240 Vac.
- **480 V models:** Use the protection specified in this document to prepare the drive for use on a circuit capable of delivering not more than 31,000 RMS symmetrical amps and not more than 480 Vac.

#### ■ Electric Code Compliance

The user must provide short circuit protection to protect input branch circuits as specified by the National Electric Code (NEC), the Canadian Electric Code, Part 1 (CEC), and local codes.

## ■ Required Short Circuit Protection

**Table 2.1 Required Short Circuit Protection for GA500 AC Drives**

Drive Catalog Code GA50U	Semiconductor Fuse Part Number <i>Manufacturer: Eaton/ Bussman</i>	Class CC, J or T Fuse Maximum Amps	MCCB Catalog Number <i>Manufacturer: Schneider Electric</i>	MCCB Maximum Amps	Class RK1 or RK5 Fuse Maximum Amps	Enclosure Volume Minimum (in <sup>3</sup> )
			Ventilated Protected Enclosure Required			
<b>Single-phase 240 V Class</b>						
B001	FWH-25A14F	3.5	HLL36015	15	3.5	600
B002	FWH-25A14F	6	HLL36015	15	6	600
B004	FWH-60B	12	HLL36015	15	12	600
B006	FWH-80B	20	HLL36025	25	20	600
B010	FWH-100B	35	HLL36040	40	35	960
B012	FWH-125B	40	HLL36045	45	40	960
B018	FWH-150B	60	HLL36070	70	60	960
<b>Three-phase 240 V Class</b>						
2001	FWH-25A14F	2	HLL36015	15	2	600
2002	FWH-25A14F	3.2	HLL36015	15	3.2	600
2004	FWH-25A14F	6	HLL36015	15	6	600
2006	FWH-25A14F	10	HLL36015	15	10	600
2008	FWH-70B	12	HLL36015	15	12	600
2010	FWH-70B	15	HLL36015	15	15	600
2012	FWH-70B	20	HLL36020	20	20	600
2018	FWH-90B	30	HLL36035	35	30	960
2021	FWH-90B	35	HLL36040	40	35	960
2030	FWH-100B	50	HLL36060	60	50	960
2042	FWH-150B	70	HLL36080	80	n/a	960
2056	FWH-200B	90	HLL36110	110	n/a	2560
2070	FWH-200B	110	HLL36125	125	n/a	2560
2082	FWH-225B	125	HLL36150	150	n/a	2560
<b>Three-phase 480 V Class</b>						
4001	FWH-40B	2	HLL36015	15	2	960
4002	FWH-40B	3.5	HLL36015	15	3.5	960
4004	FWH-50B	7	HLL36015	15	7	960
4005	FWH-70B	9	HLL36015	15	9	960
4007	FWH-70B	12	HLL36015	15	12	960
4009	FWH-90B	15	HLL36015	15	15	960
4012	FWH-90B	20	HLL36020	20	20	960
4018	FWH-80B	30	HLL36035	35	30	960
4023	FWH-100B	40	HLL36040	40	40	960
4031	FWH-125B	50	HLL36060	60	50	2560
4038	FWH-175B	60	HLL36075	75	n/a	2560
4044	FWH-200B	75	HLL36080	80	n/a	2560
4060	FWH-200B	100	HLL36110	110	n/a	2560

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## Revision History

Date of Publication	Revision Number	Section	Revised Content
March 2020	B	All	Format and layout and wording. Normalized the Fuse and MCCB table.



# GA500 AC Microdrive

## Manual Supplement

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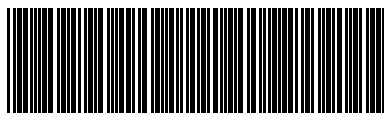
In the event that the end user of this product is to be the military and said product is to be employed in any weapons systems or the manufacture thereof, the export will fall under the relevant regulations as stipulated in the Foreign Exchange and Foreign Trade Regulations. Therefore, be sure to follow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

Original Instructions

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