

YASKAWA AC Drive Option

Back-up Capacitor Unit for Momentary Power Loss Installation Manual

Type: P0010, P0020

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

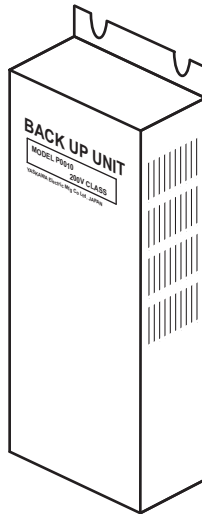
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Use the Back-up Capacitor Unit for Momentary Power Loss Option to continue drive operation when a momentary power loss of up to 2 seconds occurs. Mount the Option separately from the drive. Read this manual and the instruction manual of drive on which this unit is mounted before using the Back-up Capacitor Unit for Momentary Power Loss Option.

CAUTION

1. Read this manual and the instruction manual of drive on which this unit is mounted before using the back-up capacitor unit.
2. For connection of the back-up capacitor unit for momentary power loss, turn off the drive main circuit power supply and make sure that drive CHARGE indicator has been turned off.



Back-up Capacitor Unit for Momentary Power Loss Option
Model P0010 (200 V Class), and P0020 (400 V Class)

Terms

- Drive:
- Varispeed G7-Series Inverter
 - YASKAWA H1000-Series Drive
 - YASKAWA A1000-Series Drive
 - YASKAWA V1000-Series Drive
 - YASKAWA T1000A-Series Drive
 - YASKAWA T1000V-Series Drive
 - YASKAWA E1000-Series Drive
 - YASKAWA U1000-Series Drive
 - YASKAWA Z1000U-Series Drive
 - YASKAWA AC Drive GA700
 - YASKAWA AC Drive GA800

1 STANDARD SPECIFICATIONS

If operation should continue for approximately 2 seconds during momentary power loss, use the following tables to select the appropriate Back-up Capacitor Unit for Momentary Power Loss Option for the drive models listed.

Drive models not listed under the respective Drive Classes do not require the option to continue operation for approximately 2 seconds during momentary power loss.

| | | | | | | | | | | |
|--|---|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|--------------------|--------------------|
| Voltage | 200 V Class | | | | | | | | | |
| Model | P0010 | | | | | | | | | |
| Drive Class | Varispeed G7 | A1000 | V1000 | T1000A | T1000V | E1000 | U1000 | Z1000U | GA700 | GA800 |
| Model | CIMR-□ | | | | | | | | CIPR-□ | |
| | 20P4 to 27P5 | 2A0004 to 2A0056 | 2A0001 to 2A0040 | 2A0004 to 2A0056 | 2A0001 to 2A0040 | 2A0004 to 2A0040 | 2A0028 to 2A0248 | 2A0028 to 2A0248 | 2004 to 2056 | 2004 to 2056 |
| Drive Terminals | B1-⊖ | | | | | | p1-n1 | | B1-⊖ | |
| Momentary Power Loss Operation Selection Parameter | L2-01 | | | | | | | | | |
| Momentary Power Loss Ride-Thru Time Parameter | L2-02 | | | | | | | | | |
| Power Supply Voltage | 243 to 400 Vdc | | | | | | | | | |
| Charging Time | Charging time constant τ = approx.4.5 s | | | | | | | | | |
| Charge Display | Displayed until main circuit DC voltage becomes 50 V or less. | | | | | | | | | |

| | | |
|---------------|---------------|--|
| Voltage | | 200 V Class |
| Model | | P0010 |
| Environ-ments | Location | Indoor (no corrosive gases, dirt, or dust) |
| | Ambient Temp. | -10 to +50°C (+14 to +122°F) |
| | Storage Temp. | -20 to +60°C (-4 to +140°F) |
| | Humidity | 90%RH or less (non-condensing) |
| | Vibration | Up to 1 G for 20 Hz or less, up to 0.2 G for 20 to 50 Hz |
| Enclosure | | Open-Chassis Type, NEMA Type 1 (Enclosed Wall-Mounted) |

| | | | | | | | | | | | |
|--|---|--|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|--------------------|--------------------|
| Voltage | 400 V Class | | | | | | | | | | |
| Model | P0020 | | | | | | | | | | |
| Drive Class | Varispeed G7 | H1000 | A1000 | V1000 | T1000A | T1000V | E1000 | U1000 | Z1000U | GA700 | GA800 |
| Model | CIMR-□ | | | | | | | | | CIPR-□ | |
| | 40P4 to 47P5 | 4A0003 to 4A0018 | 4A0002 to 4A0031 | 4A0001 to 4A0023 | 4A0002 to 4A0031 | 4A0001 to 4A0023 | 4A0002 to 4A0023 | 4A0011 to 4A0930 | 4A0011 to 4A0930 | 4002 to 4031 | 4002 to 4031 |
| Drive Terminals | B1-⊖ | | | | | | | p1-n1 | | B1-⊖ | |
| Momentary Power Loss Operation Selection Parameter | L2-01 | | | | | | | | | | |
| Momentary Power Loss Ride-Thru Time Parameter | L2-02 | | | | | | | | | | |
| Power Supply Voltage | 460 to 800 Vdc | | | | | | | | | | |
| Charging Time | Charging time constant $\tau = \text{approx.}0.7 \text{ s}$ | | | | | | | | | | |
| Charge Display | Displayed until main circuit DC voltage becomes 50 V or less. | | | | | | | | | | |
| Environ- -ments | Location | Indoor (no corrosive gases, dirt, or dust) | | | | | | | | | |
| | Ambient Temp. | -10 to +50°C (+14 to +122°F) | | | | | | | | | |
| | Storage Temp. | -20 to +60°C (-4 to +140°F) | | | | | | | | | |
| | Humidity | 90%RH or less (non-condensing) | | | | | | | | | |
| | Vibration | Up to 1 G for 20 Hz or less, up to 0.2 G for 20 to 50 Hz | | | | | | | | | |
| Enclosure | Open-Chassis Type, NEMA Type 1 (Enclosed Wall-Mounted) | | | | | | | | | | |

2 CONNECTION TO DRIVE

Prior to installing the option, wire the drive, make the necessary connections to the drive terminals, and verify that the drive functions normally without the option installed. Refer to the manual packaged with the drive for information on wiring and connecting the drive.

1. Shut off power to the drive.

WARNING! 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. After shutting off the power, wait for at least the amount of time specified on the drive before touching any components.

2. Remove the front cover of the drive to access the “B1” and \ominus terminals on the drive. When connecting to U1000 or Z1000U, connect to the drive’s n1 and p1 terminals.
3. For Enclosed Wall-mounted versions of the Back-up Capacitor Option Unit, Remove the front cover of the Back-up Capacitor Option Unit.
4. Connect the Back-up Capacitor Option Unit and drive as shown in Fig. 1. When using U1000 or Z1000U, refer to Fig.2. The Back-up Capacitor Option Unit uses M4 sized terminal screws. Use 2 mm²(14 AWG) or larger wires for connections.

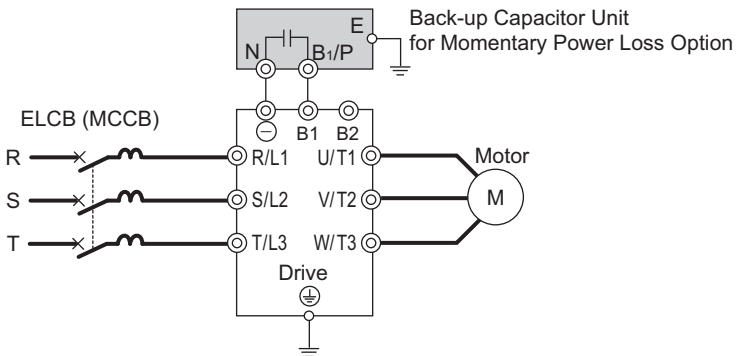


Fig. 1 Connection Diagram for Drive and Option (Example: GA700)

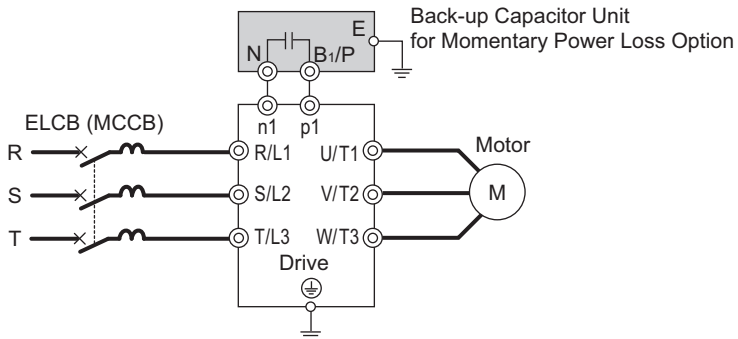


Fig. 2 Connection Diagram for Drive and Option (Example: U1000)

5. Set the drive parameters for momentary power loss.

(Example: GA700)

- Momentary Power Loss Operation Selection
(L2-01 = 1: Recover within L2-02)
- Momentary Power Loss Operation Ride-Thru Time (L2-02 = 2.0 s)

3 Exterior and Mounting DIMENSIONS

Models P0010 and P0020 have the same dimensions.

The Option mounts using 4 M6 screws. Mount the Option separately from the drive.

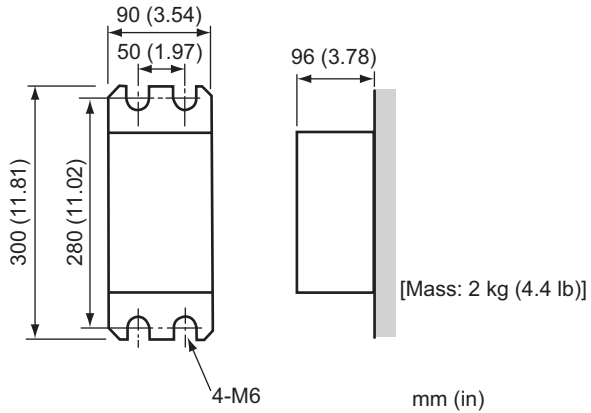


Fig. 3 External Dimensions

4 Disposal

■ Disposal Instructions

Correctly dispose of this product and packing material as specified by applicable regional, local, and municipal laws and regulations.

■ WEEE Directive

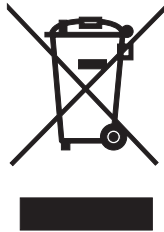


Fig. 4 WEEE Mark

The wheelie bin symbol on this product, its manual, or its packaging identifies that you must recycle it at the end of its product life.

You must discard the product at an applicable collection point for electrical and electronic equipment (EEE).

Do not discard the product with usual waste.

YASKAWA AC Drive Option Back-up Capacitor Unit for Momentary Power Loss 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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