

Ground Bar Kit for FK09/FB09 and FK10/FB10

iC7 Series Frequency Converters

1 Overview

1.1 Description

The ground bar kit fits iC7 Series Frequency Converters in FB09a, FK09a, FB10a, and FK10b frames. The frame is listed on the frequency converter product label.

The ground bar kit can be installed in drives both with or without a touch protection option.

1.2 Kit Numbers

Use these instructions with the following kits.

Table 1: Numbers for Ground Bar Kits

Number	Description
176F4170	Ground bar kit, FK09a/FB09a
176F4171	Ground bar kit, FK10a/FB10a
176F4186	Ground bar kit, FK09c/FB09c
176F4187	Ground bar kit, FK10c/FB10c

1.3 Items Supplied

The kits contain a ground bar with brackets and fasteners for attaching the ground bar. Kits for FK09a/FB09a and FK10a/FB10a contain a single ground bar. Kits for FK09c/FB09c and FK10c/FB10c have a 2-part split ground bar.

Table 2: Items Supplied in Single Ground Bar Kits (176F4170 and 176F4171)

Item	Quantity
Ground bar	1
Left bracket	1
Right bracket	1
Screws	5

Table 3: Items Supplied in Split Ground Bar Kits (176F4186 and 176F4187)

Item	Quantity
Ground bar	2
Left bracket	1
Right bracket	1
Screws	6

2 Installation

2.1 Safety Information

WARNING



ELECTRIC SHOCK HAZARD

AC drives contain dangerous voltages when connected to mains voltage. Installing or servicing the drive with power connected can cause death, serious injury, or equipment failure.

- Only use qualified electricians for the installation.
- Disconnect the drive from all power sources before installation or service.
- Treat the drive as live whenever the mains voltage is connected.
- Follow the guidelines in these instructions and local electrical safety regulations.

WARNING



DISCHARGE TIME (20 MINUTES)

The drive contains DC-link capacitors, which can remain charged even when the drive is not powered. High voltage can be present even when the warning LED indicator lights are off.

Failure to wait 20 minutes after power has been removed before performing service or repair work can result in death or serious injury.

- Stop the motor.
- Disconnect AC mains and remote DC-link power supplies, including battery backups, UPS, and DC-link connections to other drives.
- Disconnect or lock the PM motor.
- Wait for the capacitors to discharge fully. The minimum waiting time is 20 minutes.
- Before performing any service or repair work, use an appropriate voltage measuring device to make sure that the capacitors are fully discharged.

WARNING

INTERNAL FAILURE HAZARD

An internal failure in the drive can result in serious injury when the drive is not properly closed.

- Ensure that all safety covers are in place and securely fastened before applying power.

NOTICE

ELECTROSTATIC DISCHARGE

Electrostatic discharge can damage components.

- Follow standard ESD procedures.
- Ensure discharge before touching internal components, for example by touching a grounded, conductive surface or by wearing a grounded armband.

2.2 Replacing the Side Brackets

Before installing the ground bar, use the following steps to replace the existing brackets with the brackets from the kit.

1. Remove the existing side brackets by removing 2 screws (T25) from the cabinet exterior, 1 from the left bracket and 1 from the right bracket. See [Figure 1](#).
2. Attach the new left bracket by fastening 1 screw (T25) through the side panel of the cabinet and into the bracket. Repeat for the right bracket.

If the kit has screws of different lengths, use the shorter screws to attach the brackets.

The left and right brackets differ from each other. For FK09a/FB09a/FK10a/FB10a frames, see [Figure 2](#) for the positioning of each bracket. For FK09c/FB09c/FK10c/FB10c frames, see [Figure 3](#).

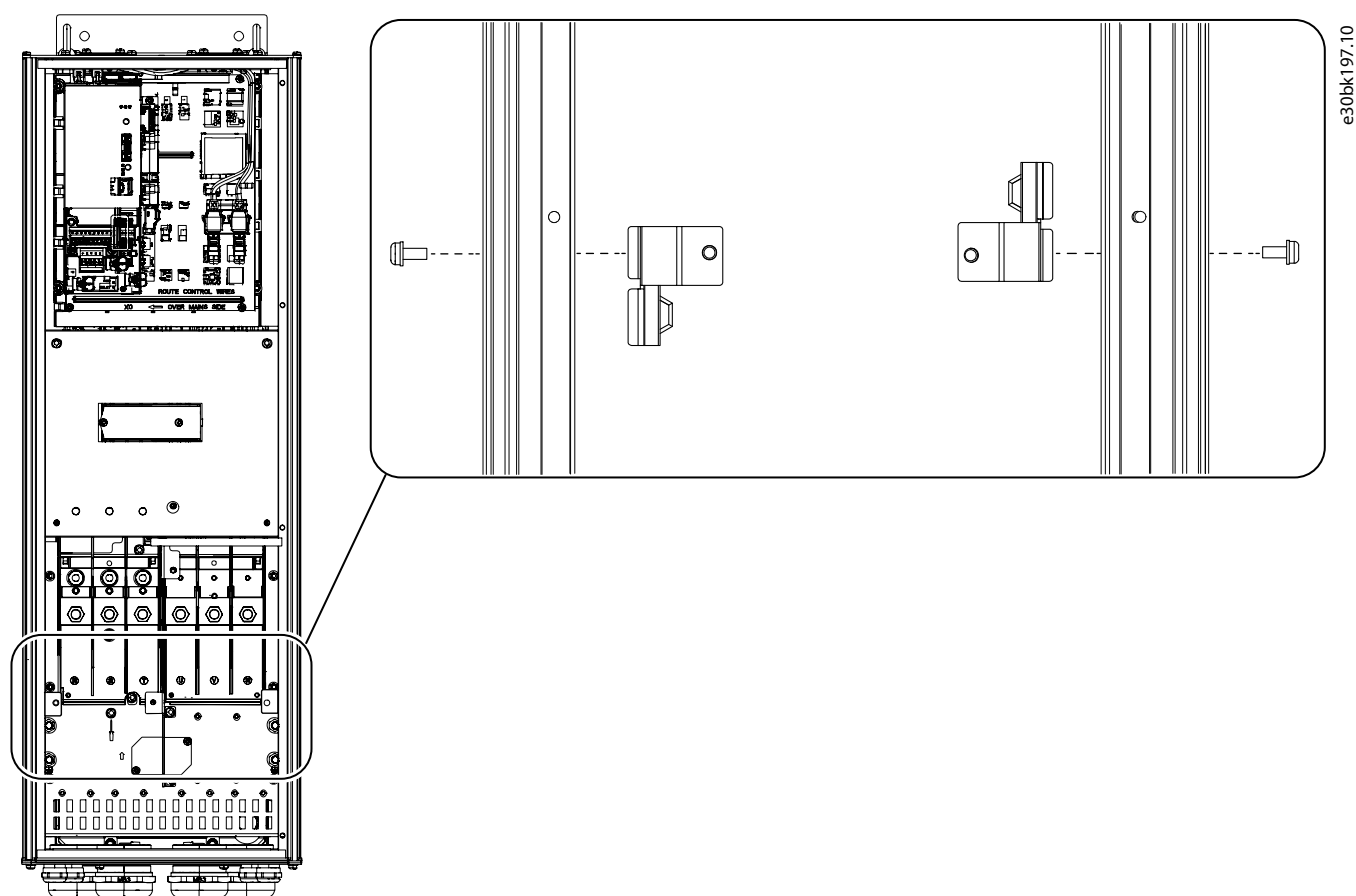


Figure 1: Removal of Existing Side Brackets

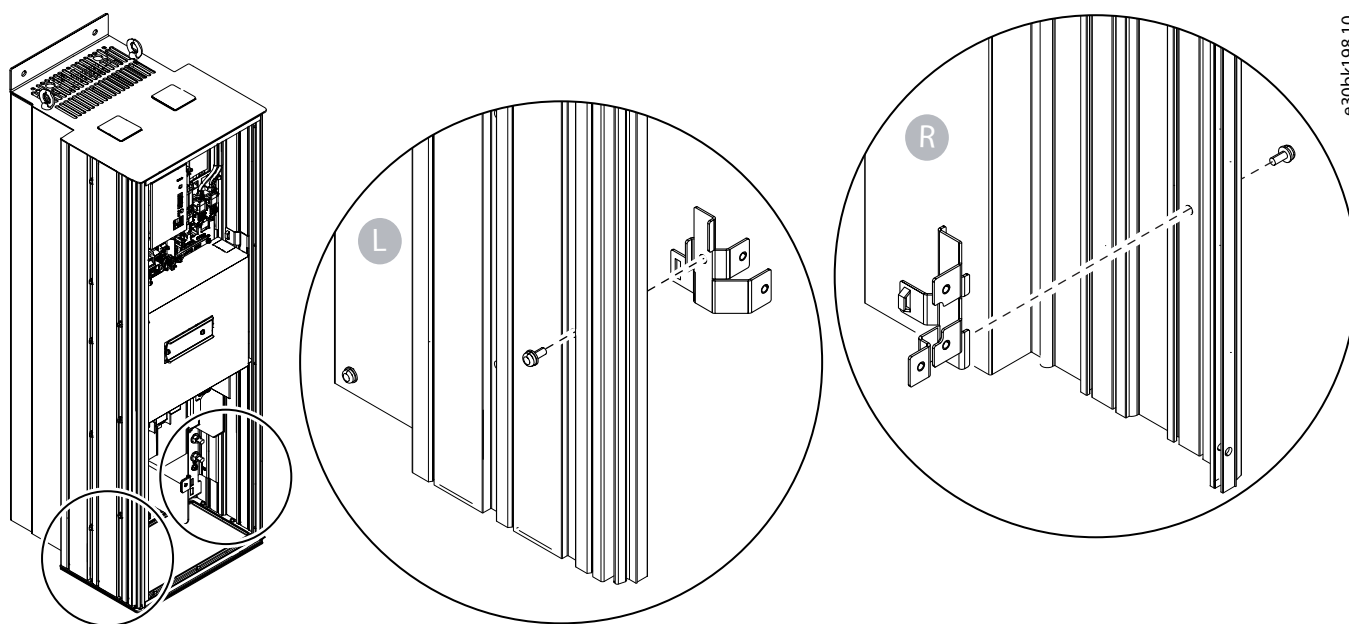


Figure 2: Installation of Left and Right Brackets (FK09a/FB09a and FK10a/FB10a Frames)

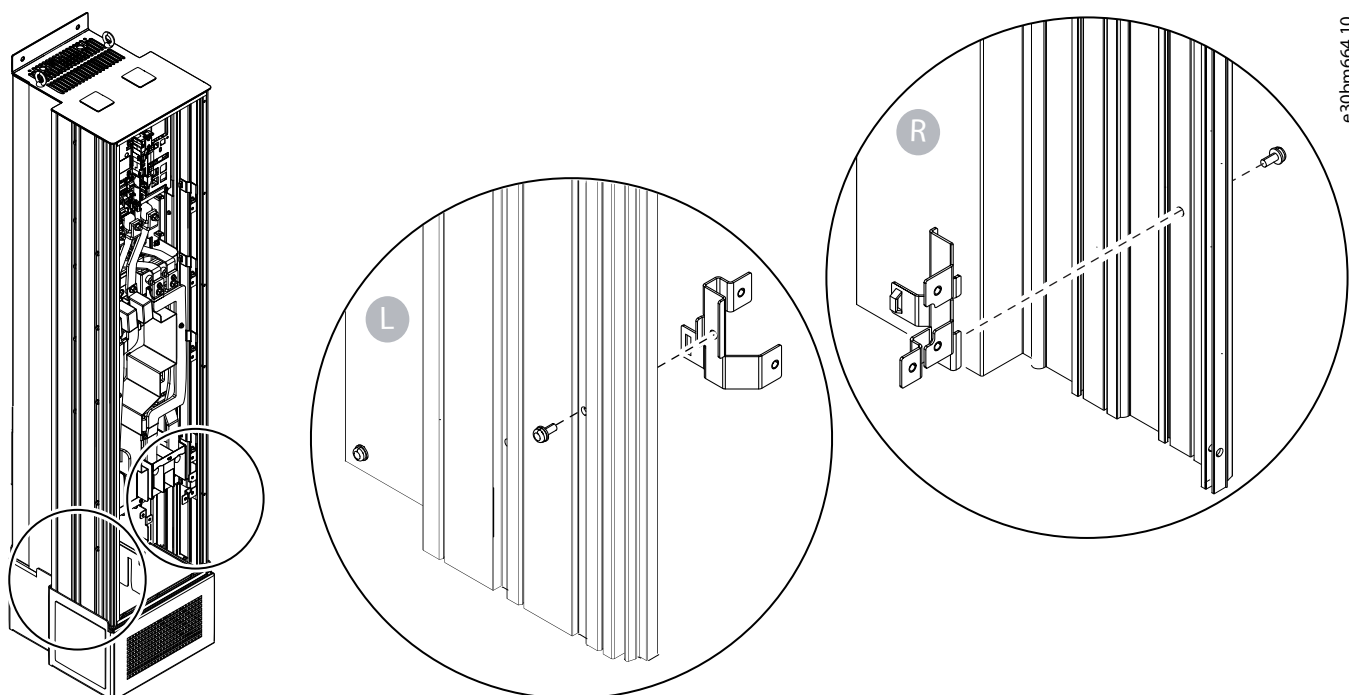


Figure 3: Installation of Left and Right Brackets (FK09c/FB09c and FK10c/FB10c Frames)

2.3 Installing the Single Ground Bar

For kits with a single ground bar, use the following steps to install the ground bar. See [Figure 4](#). For kits with a 2-piece split ground bar, refer to [2.4 Installing the Split Ground Bar](#).

1. Attach the ground bar to the 2 brackets by fastening 2 screws (T25), 1 in each end of the ground bar.
2. Fasten 1 screw (T25) in the center of the ground bar, attaching it to the lower EMC shield.

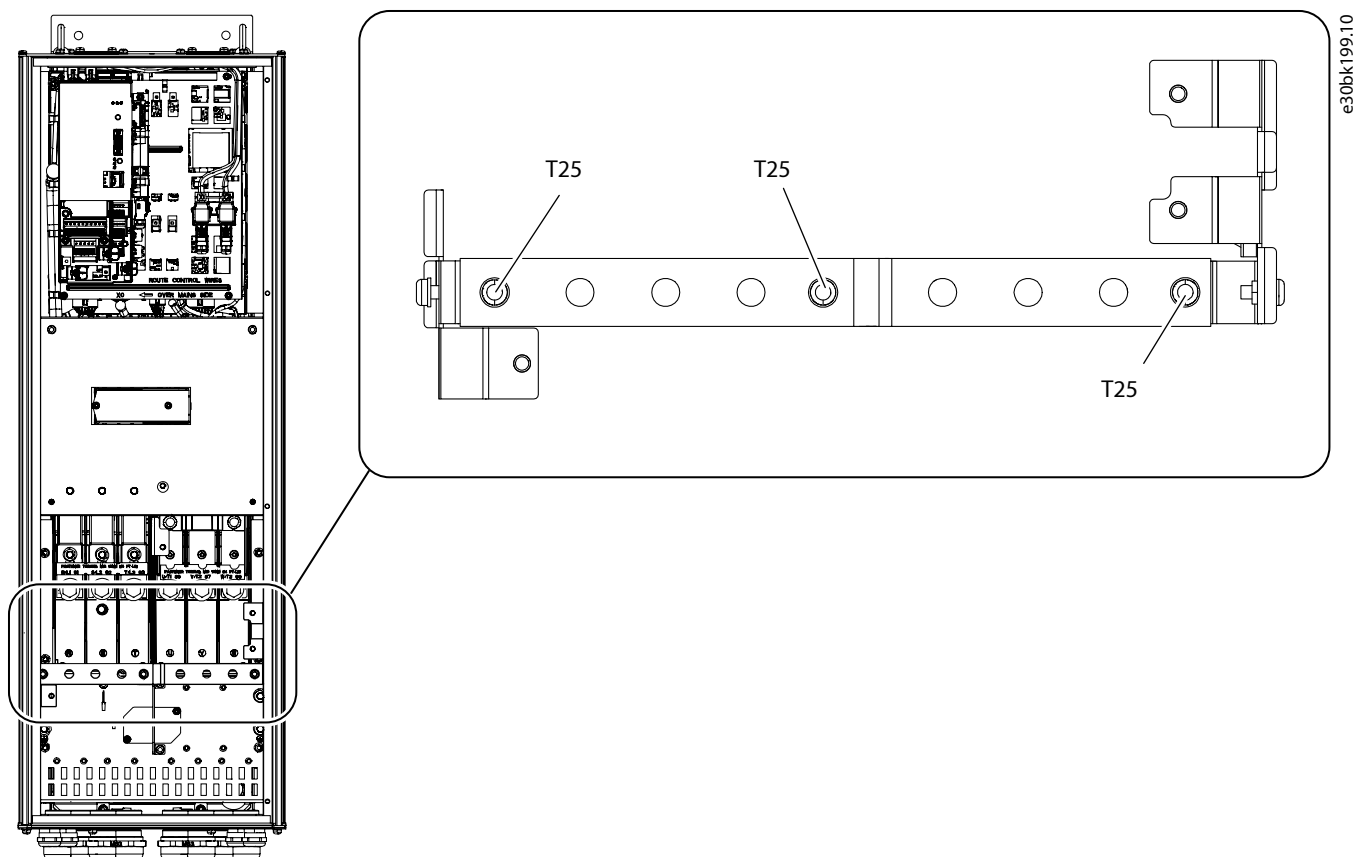


Figure 4: Installation of Single Ground Bar in FK09a/FB09a and FK10a/FB10a Frames

2.4 Installing the Split Ground Bar

For kits with a 2-part split ground bar, use the following steps to attach the left and right sections of the ground bar.

1. Attach the left ground bar between the left bracket and the EMC shield using 2 screws (T25), 1 in each end of the ground bar.
See [Figure 5](#).
2. Attach the right ground bar between the EMC shield and the right side bracket using 2 screws (T25), 1 in each end of the ground bar.

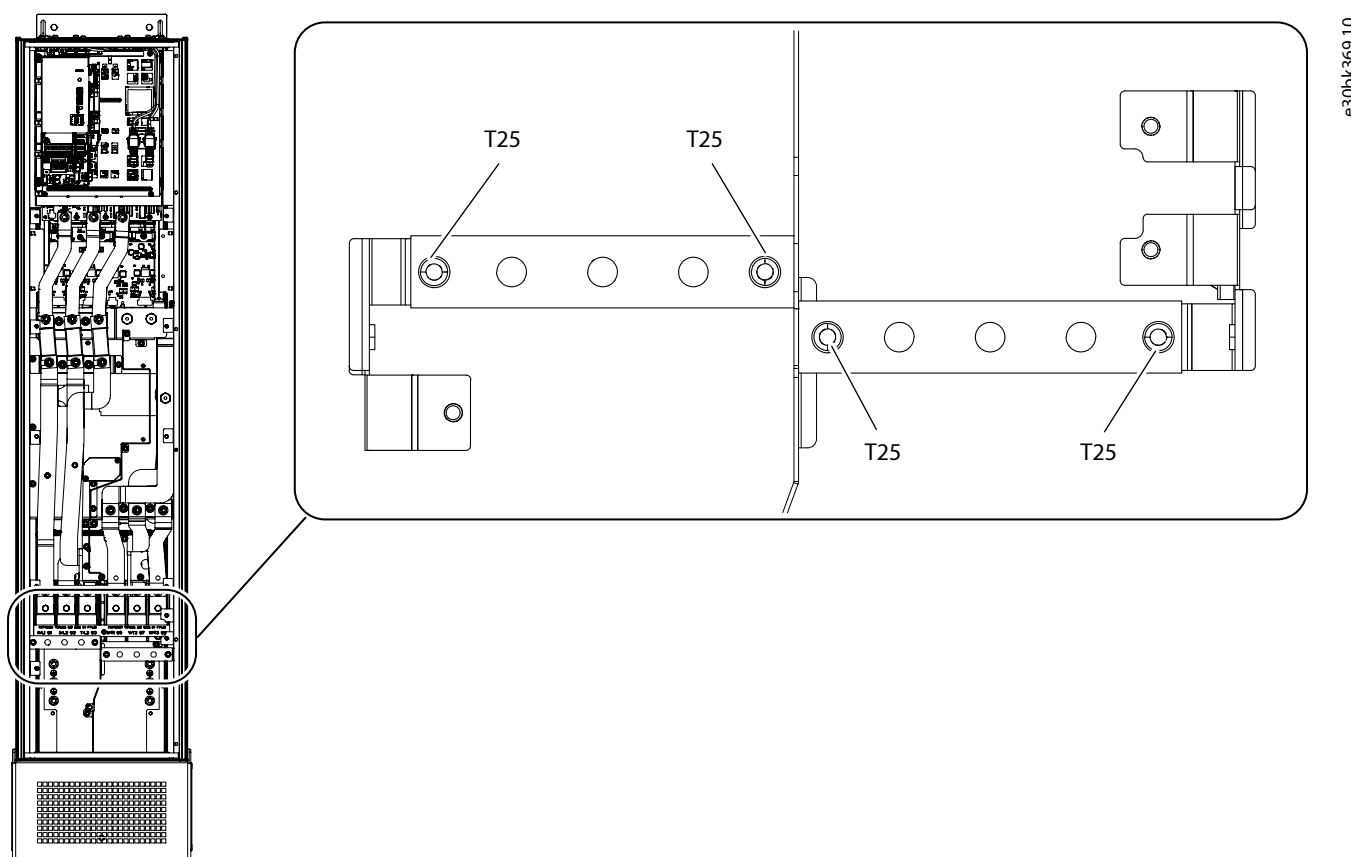


Figure 5: Installation of Split Ground Bar in FK09c/FB09c and FK10c/FB10c Frames

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