

# Ground Bar Kit for FK09/FB09 and FK10/FB10

## iC7 Series Frequency Converters

### 1 Overview

#### 1.1 Description

The ground bar kit provides extra grounding points for iC7 Series Frequency Converters. The kits fit the following frames:

- FK09a/FB09a
- FK10a/FB10a
- FK09c/FB09c
- FK10c/FB10c

The frame is listed on the frequency converter product label.

#### 1.2 Kit Numbers

Use these instructions with the following kits.

**Table 1: Ground Bar Kit Numbers**

Number	Kit 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. Most kits contain a single ground bar, except kit 176F4186, which has a 2-part split ground bar.

**Table 2: Items Supplied in Ground Bar Kits**

Item	Quantity
Ground bar	1–2
Left bracket	1
Right bracket	1
Screws	5–6

## 2 Installation

### 2.1 Safety Information

#### NOTICE

##### QUALIFIED PERSONNEL

Only qualified personnel are allowed to install the parts described in these installation instructions.

- Disassembly and reassembly of the frequency converter must be done in accordance with the corresponding service guide.
- Use the standard fastener torque values from the service guide, unless the torque value is specified in these instructions.

#### ⚠ WARNING ⚠

##### ELECTRICAL SHOCK HAZARD

The frequency converter contains dangerous voltages when connected to mains voltage. Improper installation, and installing or servicing with power connected, can cause death, serious injury, or equipment failure.

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

#### ⚠ WARNING ⚠

##### DISCHARGE TIME (20 MINUTES)

The frequency converter contains DC-link capacitors, which can remain charged even when the frequency converter is not powered. High voltage can be present even when the warning 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, permanent magnet type motors, and remote DC-link supplies, including battery back-ups, UPS, and DC-link connections to other frequency converters.
- Wait 20 minutes for the capacitors to discharge fully before performing any service or repair work.
- Measure the voltage level to verify full discharge.

#### NOTICE

##### ELECTROSTATIC DISCHARGE

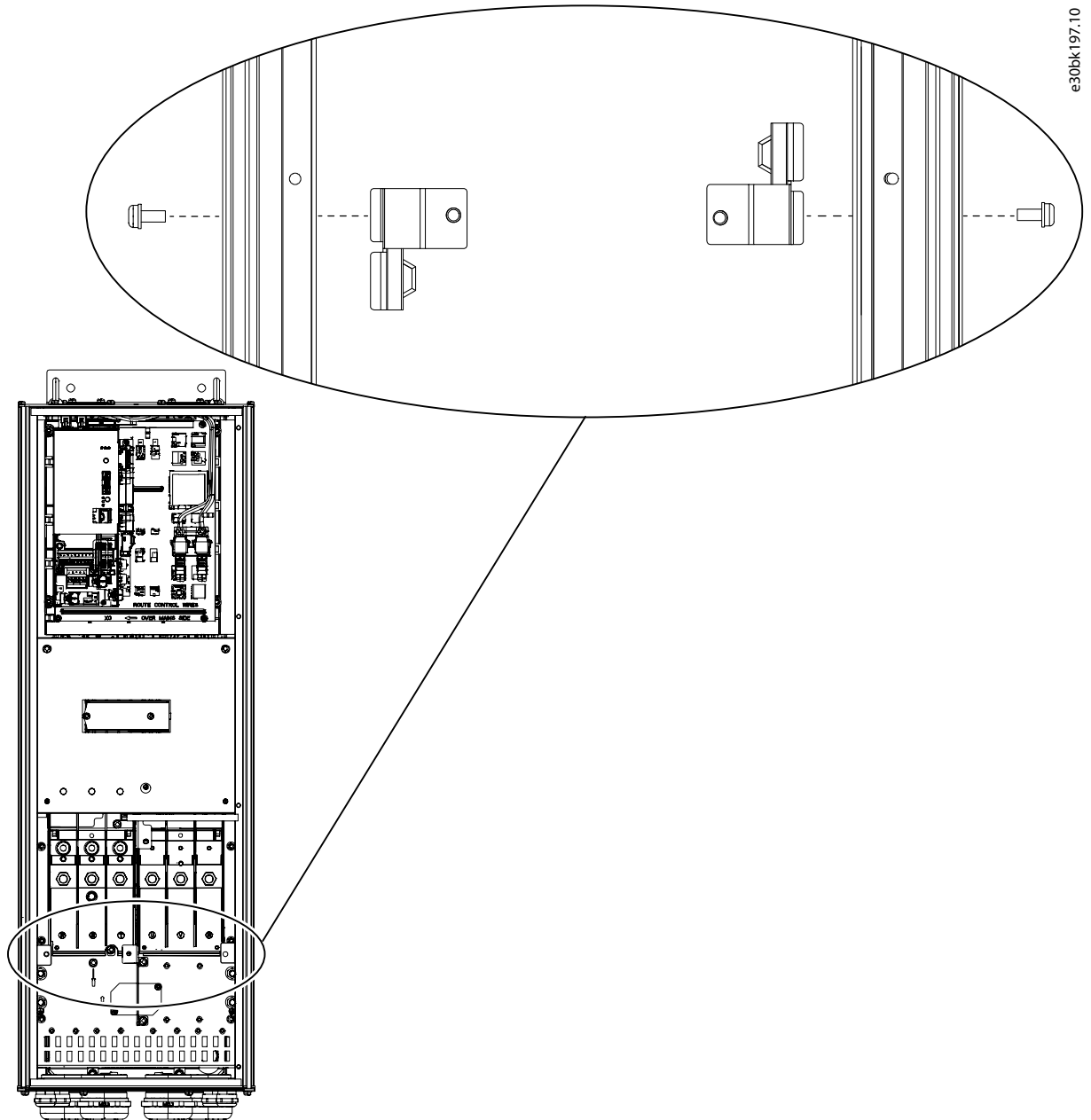
Electrostatic discharge can damage components.

- Ensure discharge before touching internal frequency converter 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.

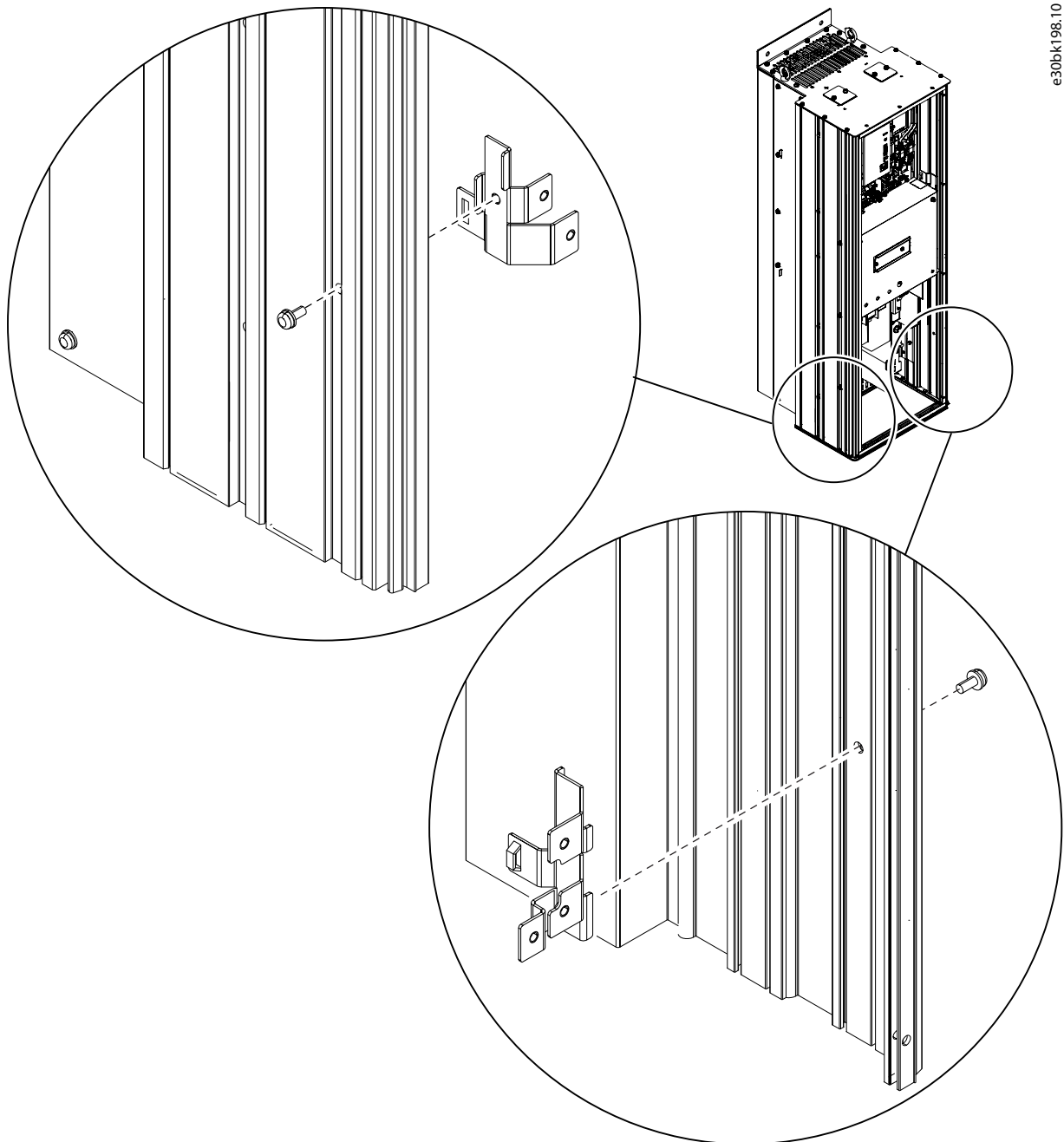
1. Remove the existing side brackets by removing 2 screws (T25) from the cabinet exterior, 1 from the left bracket and 1 from the right bracket. See [Illustration 1](#).



**Illustration 1: Removal of Existing Side Brackets**

2. Attach the new left bracket by fastening 1 M5x12 screw (T25) through the side panel of the cabinet and into the bracket. Repeat for the right bracket.

The left and right brackets differ from each other. See [Illustration 2](#) for the positioning of each bracket.



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**Illustration 2: Installation of Left and Right Brackets**

### 2.3 Installing the Single Ground Bar

For kits with a single ground bar, use the following steps to install the ground bar. See [Illustration 3](#).

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 M5x12 screws (T25), 1 in each end of the ground bar.

- Fasten 1 M5x12 screw (T25) in the center of the ground bar, attaching it to the lower EMC shield.

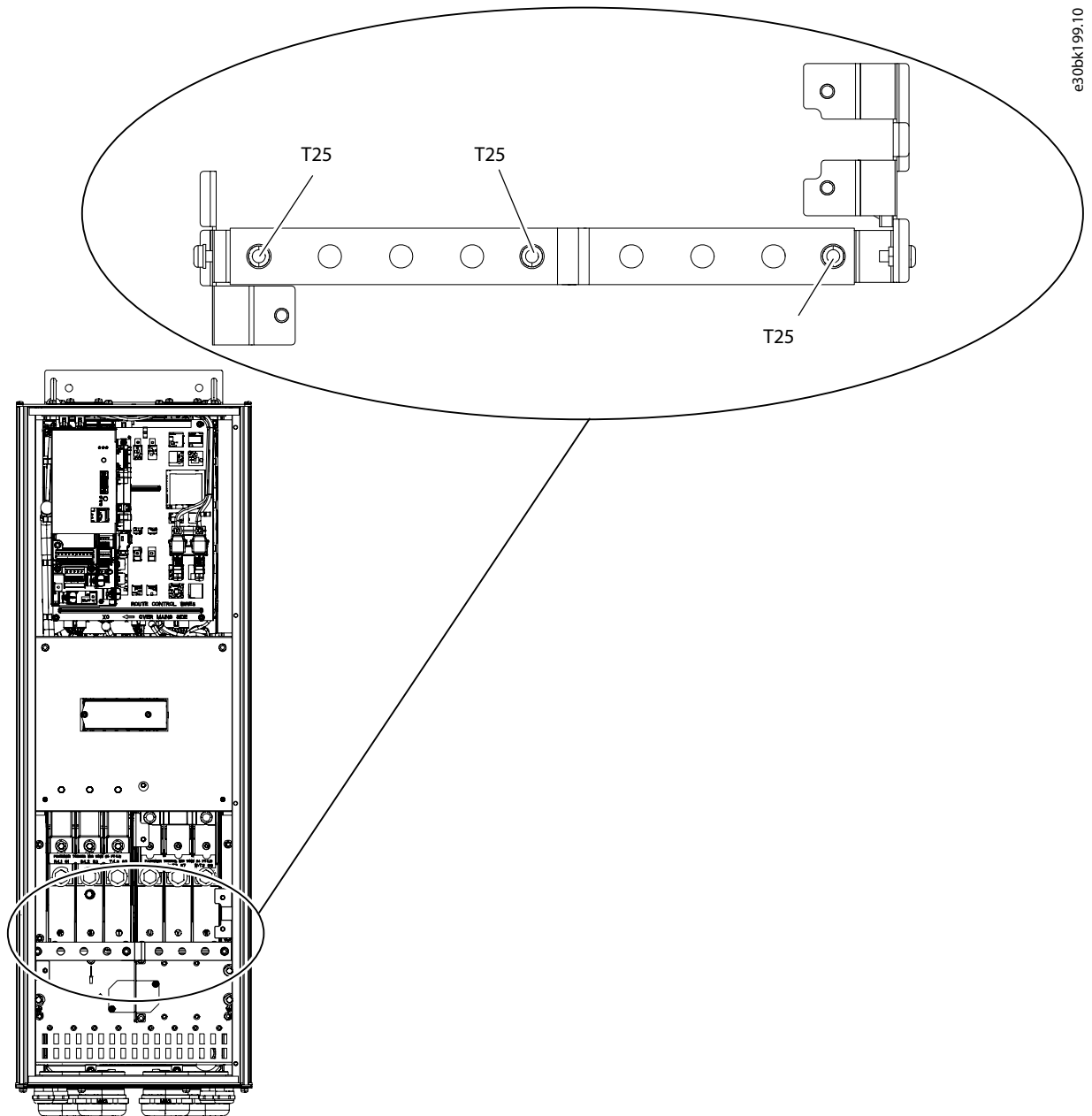


Illustration 3: Installation of Single Ground Bar (FK09a/FB09a, FK10a/FB10a, FK10c/FB10c)

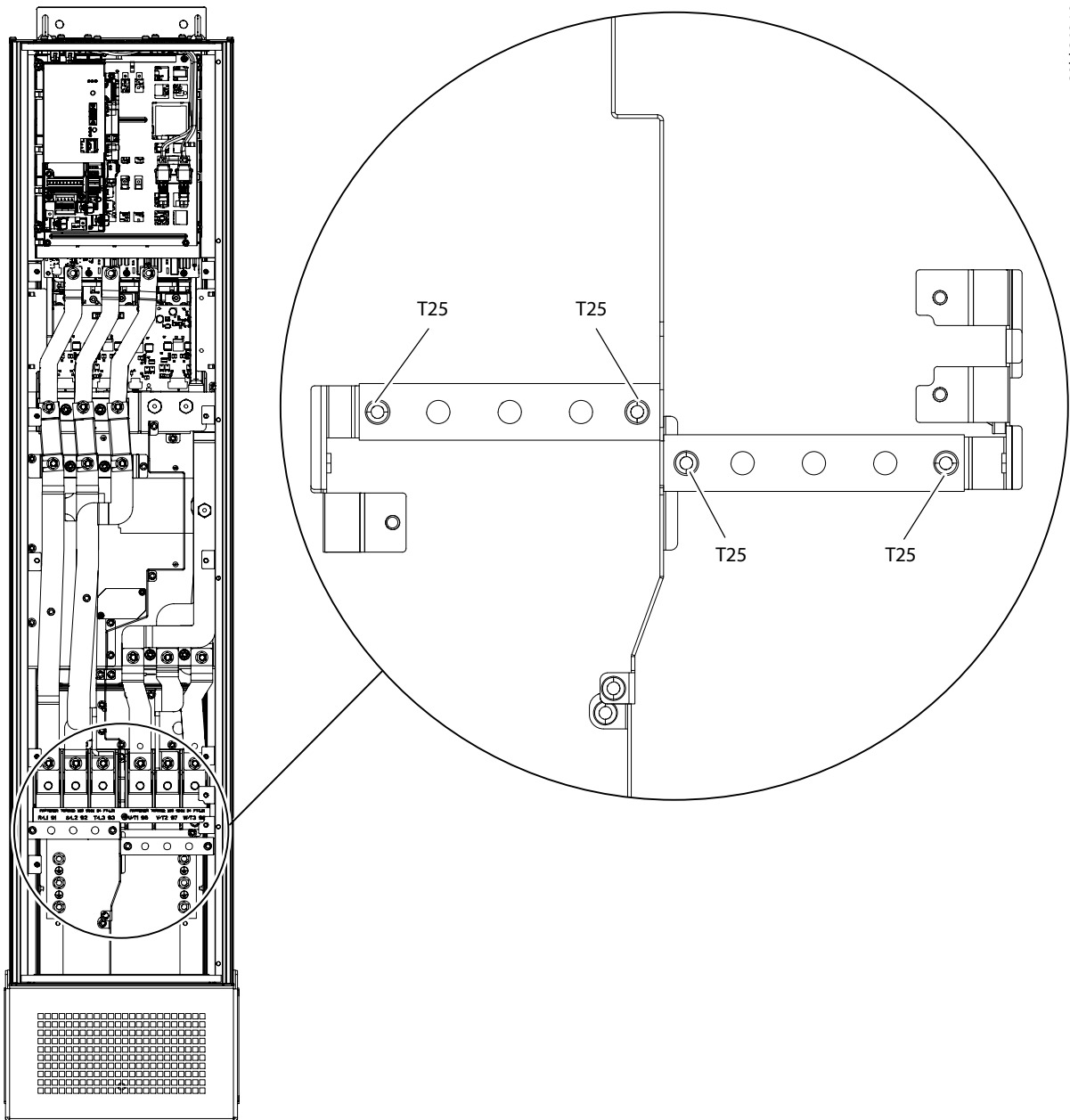
## 2.4 Installing the Split Ground Bar

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

- Attach the left ground bar between the left side bracket and the EMC shield using 2 M5x18 screws (T25), 1 in each end of the ground bar.

The right ground bar attaches to the EMC shield just below the position of the left ground bar. See [Illustration 4](#).

- Attach the right ground bar between the EMC shield and the right side bracket using 2 M5x18 screws (T25), 1 in each end of the ground bar.



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Illustration 4: Installation of Split Ground Bar (FK09c/FB09c)

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