

Fieldbus EMC Plate for FA09-FA12

iC7 Series Frequency Converters

1 Overview

1.1 Description

The fieldbus EMC plate kit provides strain relief for the X1/X2 fieldbus cables, and also allows shield termination of the fieldbus cables. The kit is compatible with iC7 Series Frequency Converters in FA09, FA10, FA11, and FA12 frames. The frame is listed on the frequency converter product label.

1.2 Kit Number

Use these instructions with the following kit.

Table 1: Number for Fieldbus EMC Plate Kit

| Kit number | Description |
|------------|-------------------------------|
| 176F3529 | Fieldbus EMC Plate, FA09-FA12 |

1.3 Items Supplied


Table 2: Parts in Fieldbus EMC Plate Kit for FA09-FA12

| Item | Quantity |
|--------------------|----------|
| Fieldbus EMC plate | 1 |

2 Installation

2.1 Safety Information

⚠ CAUTION




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 regulations.

WARNING



DISCHARGE TIME

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 the specified time 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 backups, UPS, and DC-link connections to other frequency converters.
- Disconnect or lock the motor.
- Disconnect any brake option.
- Disconnect any DC connection option and any connections to the DC terminals DC(+) and DC(-).
- Wait for the capacitors to discharge fully. The minimum waiting time is specified in the following discharge time table and is listed on the frequency converter labeling.
- Before performing any service or repair work, use an appropriate voltage measuring device to make sure that the capacitors are fully discharged.

Table 3: Discharge Time

| AC drive | Minimum waiting time |
|--------------------------------|----------------------|
| Fx09–Fx10 frequency converters | 20 minutes |
| Fx11–Fx12 frequency converters | 40 minutes |

2.2 Installing the Fieldbus EMC Plate in FA09/FA10/FA11/FA12

The fieldbus EMC plate serves as both an EMC shield and a strain relief for the fieldbus cables. To install the kit in FA09–FA12 frames, use the following steps.

1. Locate the plastic cover for the X1/X2 fieldbus cable connectors in the top left corner of the frequency converter.
2. Unfasten 2 M4x10 mm Torx screws (T20) from the plastic cover, and lift it out of the top plate of the frequency converter.

Keep the 2 screws for use in step 5.

3. Position the fieldbus EMC plate on top of the frequency converter over the 2 screw holes where the plastic cover was removed.
4. Insert the plastic cover back into the top plate.
5. Fasten 2 screws (T20) retained in step 2, attaching the fieldbus EMC plate between the top plate and plastic cover.

See [Figure 1](#).

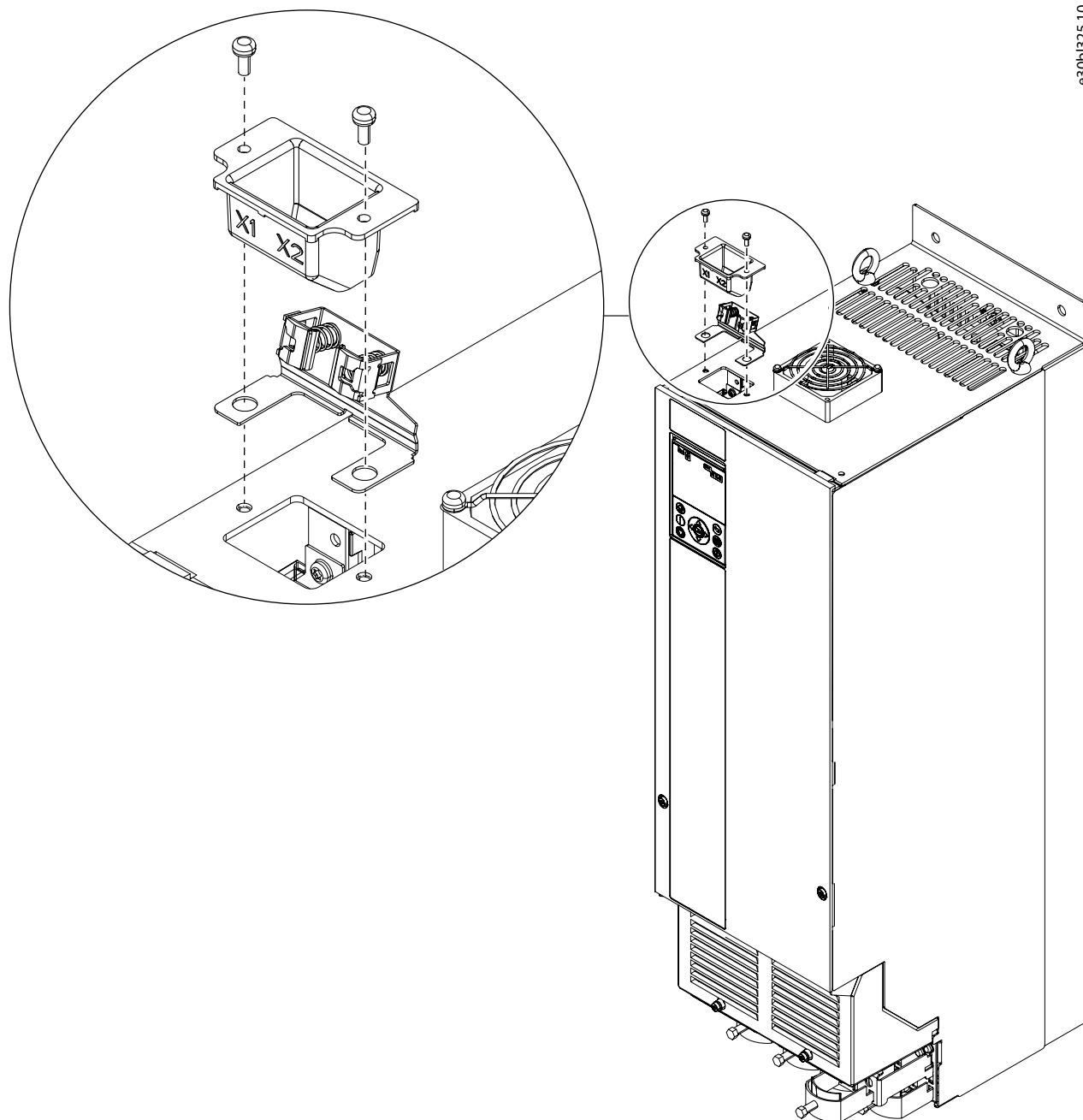


Figure 1: Fieldbus EMC Plate Installation

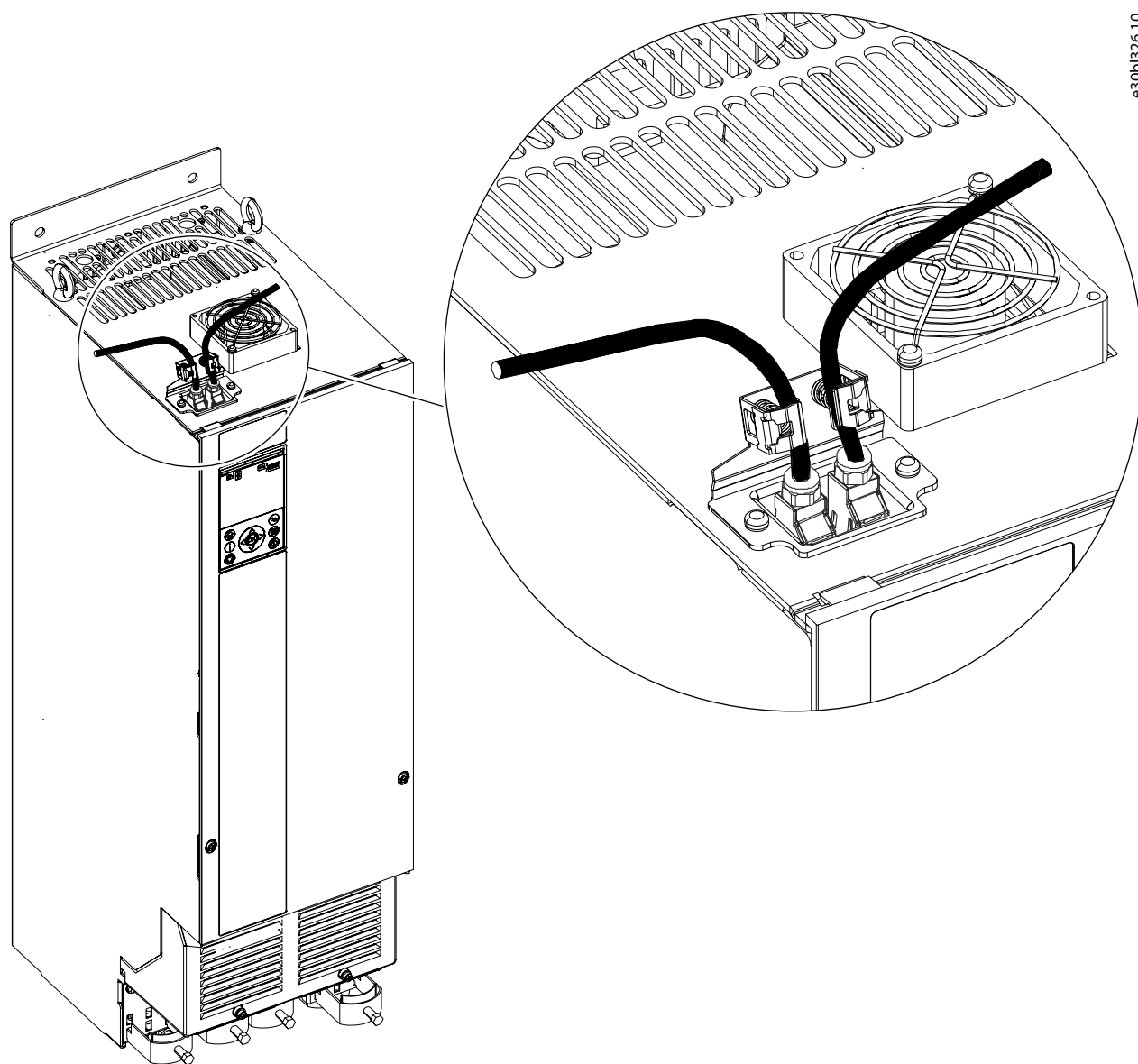
6. Route the fieldbus cables through the clamps on the fieldbus EMC plate.

See [Figure 2](#).

7. Attach the cables to the 2 RJ45 connectors at X1 and X2 on the control board.

Industrial-grade RJ45 cables are recommended for optimal connection.

8. For more information on cable routing and grounding, refer to the relevant iC7 Series fieldbus operating guide.



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Figure 2: Connection of Fieldbus Cables to X1/X2 Port in FA09-FA12 Frames

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