

Fan Power Board Replacement for Fx11–Fx12

iC7 Series Frequency Converters

1 Overview

1.1 Description

The fan power board replacement kit contains all components required to install a new fan power board in iC7 Series Frequency Converters including:

- Fx11 = FA11/FK11/FB11
- Fx12 = FA12/FK12/FB12

1.2 Kit Number

Use these instructions with the following kits.

Table 1: Fan Power Board Replacement Kit

Number	Description
176F3933	Fan power board for Fx11–Fx12

1.3 Items Supplied

The following parts are contained in the kit.

Table 2: Items Supplied in Fan Power Board Replacement Kits for Fx11-Fx12

Item	Quantity
Fan power board	1
Installation instructions	1

2 Installation

2.1 Safety Information

NOTICE

QUALIFIED PERSONNEL

Only qualified, Danfoss authorized 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 service guide.
- Use the standard fastener torque values from the service guide, unless the torque value is specified in these instructions.

⚠ WARNING ⚠

DISCHARGE TIME (40 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 LED indicator lights are off. Failure to wait 40 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 back-ups, UPS, and DC-link connections to other frequency converters.
- Disconnect or lock the motor.
- Disconnect any brake option.
- Disconnect any DC connector option.
- Wait 40 minutes for the DC-link capacitors to discharge fully.
- Before performing any service or repair work, measure the voltage level to verify that the capacitors are fully discharged.

⚠ 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.

NOTICE

ELECTROSTATIC DISCHARGE

Electrostatic discharge can damage components.

- Ensure electrostatic discharge before touching internal frequency converter components, for example by touching a grounded, conductive surface or by wearing a grounded armband.

2.2 Removing the Fan Power Board

To remove the fan power board, use the following steps. Refer to [Illustration 1](#) and [Illustration 2](#).

1. Unfasten the screws (T25) and open the door or remove the cover of the frequency converter.

The number of screws varies based on the size of the cabinet.

2. If the touch protection option is present, unfasten the screws (T25) and remove it.

The number of screws varies based on the size of the cabinet.

3. Unplug the cables from the fan power board connectors:
 - a. MK100 (to power board MK504)
 - b. MK101 (to heat sink/mixing fans)
 - c. MK102 (to door/top fans)
 - d. MK802 (to DC link)
 - e. MK803 (to power board MK902)

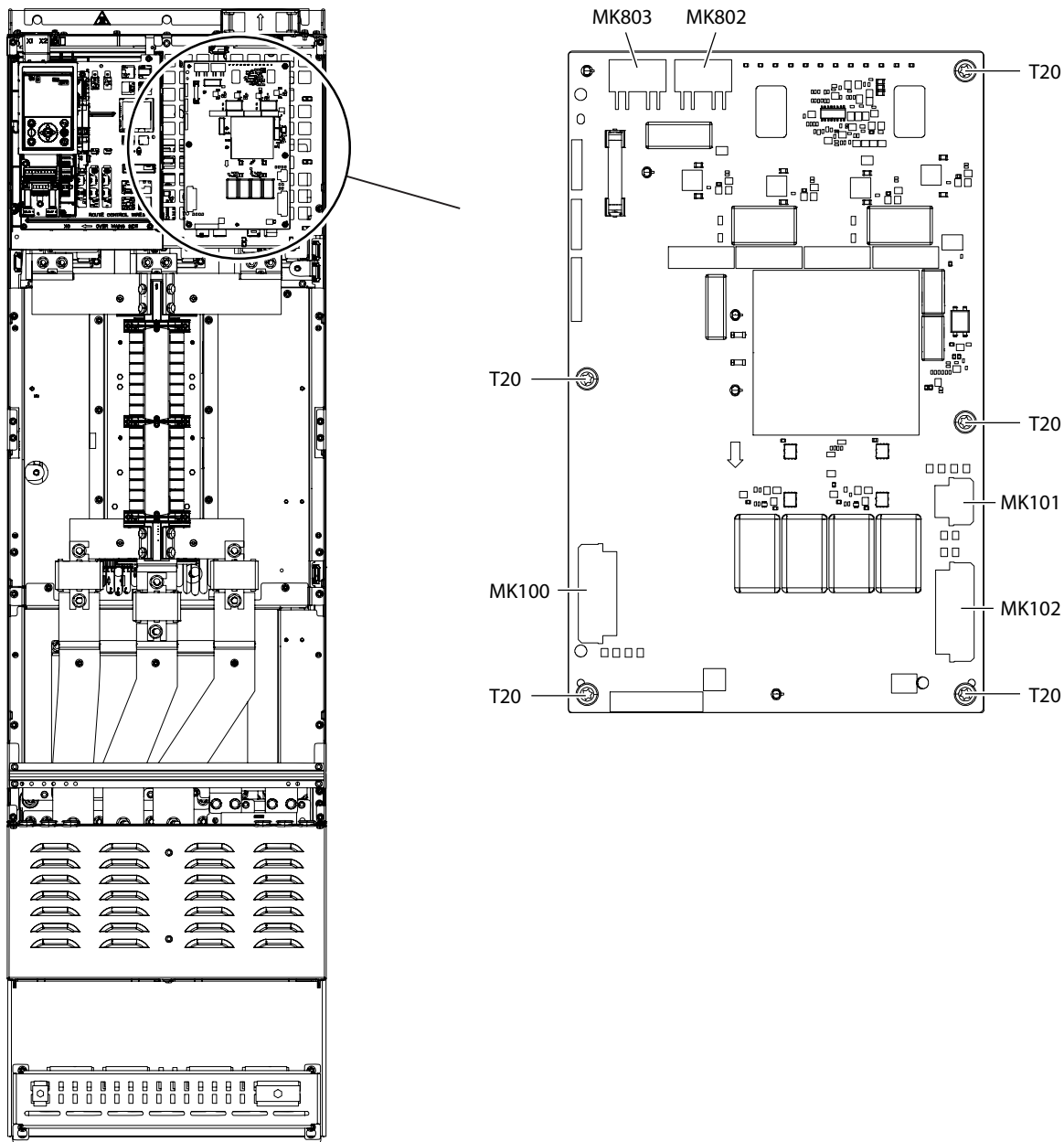


Illustration 1: Fan Power Board Removal

4. Remove 5 screws (T20) from the fan power board.

Keep the screws for use with the new fan power board.

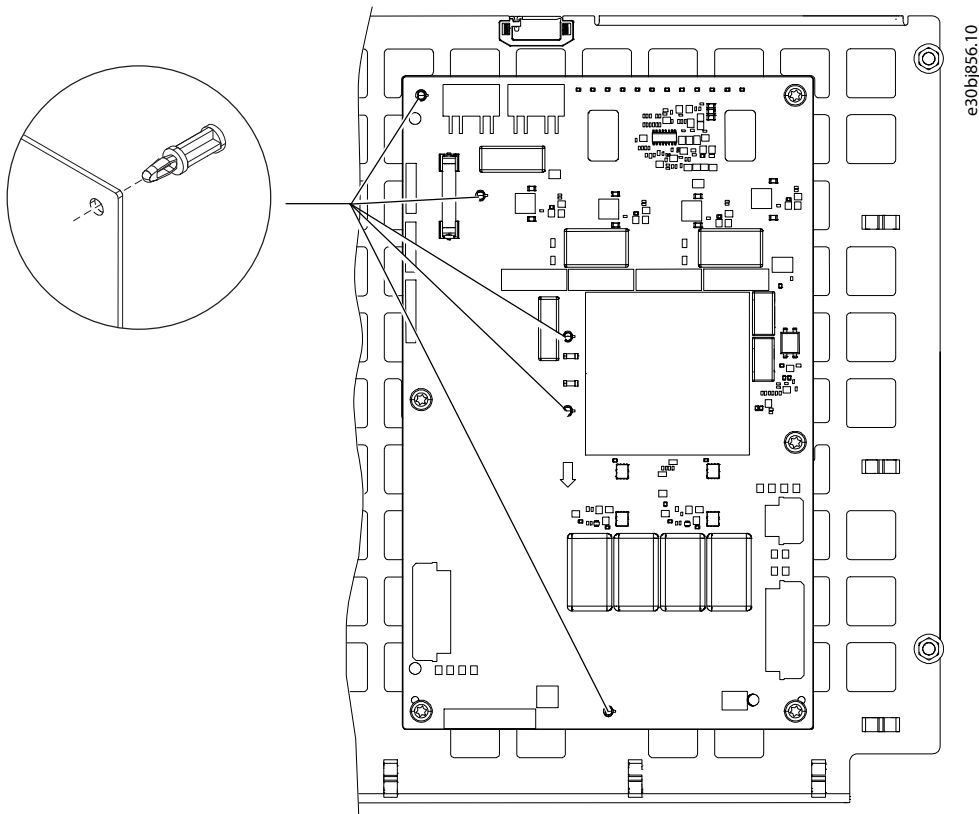


Illustration 2: Location of Fan Power Board Standoffs

5. Remove the fan power board from 5 plastic standoffs, pinching the standoff tips to compress them.
6. Remove the fan power board from the frequency converter and discard it.

2.3 Installing the Fan Power Board

To install the fan power board, use the following steps.

1. Position the fan power board on the power board mounting plate, and press onto the 5 plastic standoffs.
2. Fasten 5 screws (T20) in the fan power board.

Torque the screws to 2.27 Nm (20.1 lb in).

3. Attach the cables to the following fan power board connectors:
 - a. MK100 (to power board MK504)
 - b. MK101 (to heat sink and mixing fans)
 - c. MK102 (to door/top fans)
 - d. MK802 (to DC link)
 - e. MK803 (to power board MK902)
4. Route the cables through the cable clips on the power board mounting plate.
5. If present, install the touch protection option and fasten the screws (T25).

The number of screws varies based on the size of the cabinet.

6. Close the door or install the front cover and fasten the screws (T25).

The number of screws varies based on the size of the cabinet.

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