

Touch Protection Kit for FK11/FB11 and FK12/FB12 iC7 Series Frequency Converters

1 Overview

1.1 Description

The touch protection kit is compatible with iC7 Series Frequency Converters in the following frames:

- FK11
- FB11
- FK12
- FB12

The kit adds a polycarbonate shield over the mains terminals and busbars. It provides protection against accidental touch of the power terminals to comply with local and national regulations.

1.2 Kit Numbers

Use these instructions with the following kits.

Table 1: Numbers for Touch Protection Kits

| Kit number | Description |
|------------|---------------------------------|
| 176F4132 | Touch protection kit, FK11/FB11 |
| 176F4135 | Touch protection kit, FK12/FB12 |

1.3 Items Supplied

Table 2: Parts in Touch Protection Kits for FK11/FB11 and FK12/FB12

| Item | Quantity |
|-------------------------------|----------|
| Upper touch protection shield | 1 |
| Lower touch protection shield | 1 |
| Bracket wire tie | 14 |
| M5x12 mm screw | 28 |

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 (40 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 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 drives.
- Disconnect or lock PM motor.
- Wait for the capacitors to discharge fully. The minimum waiting time is 40 minutes.
- Before performing any service or repair work, use an appropriate voltage measuring device to make sure that the capacitors are fully discharged.

⚠ CAUTION



INTERNAL FAILURE HAZARD

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

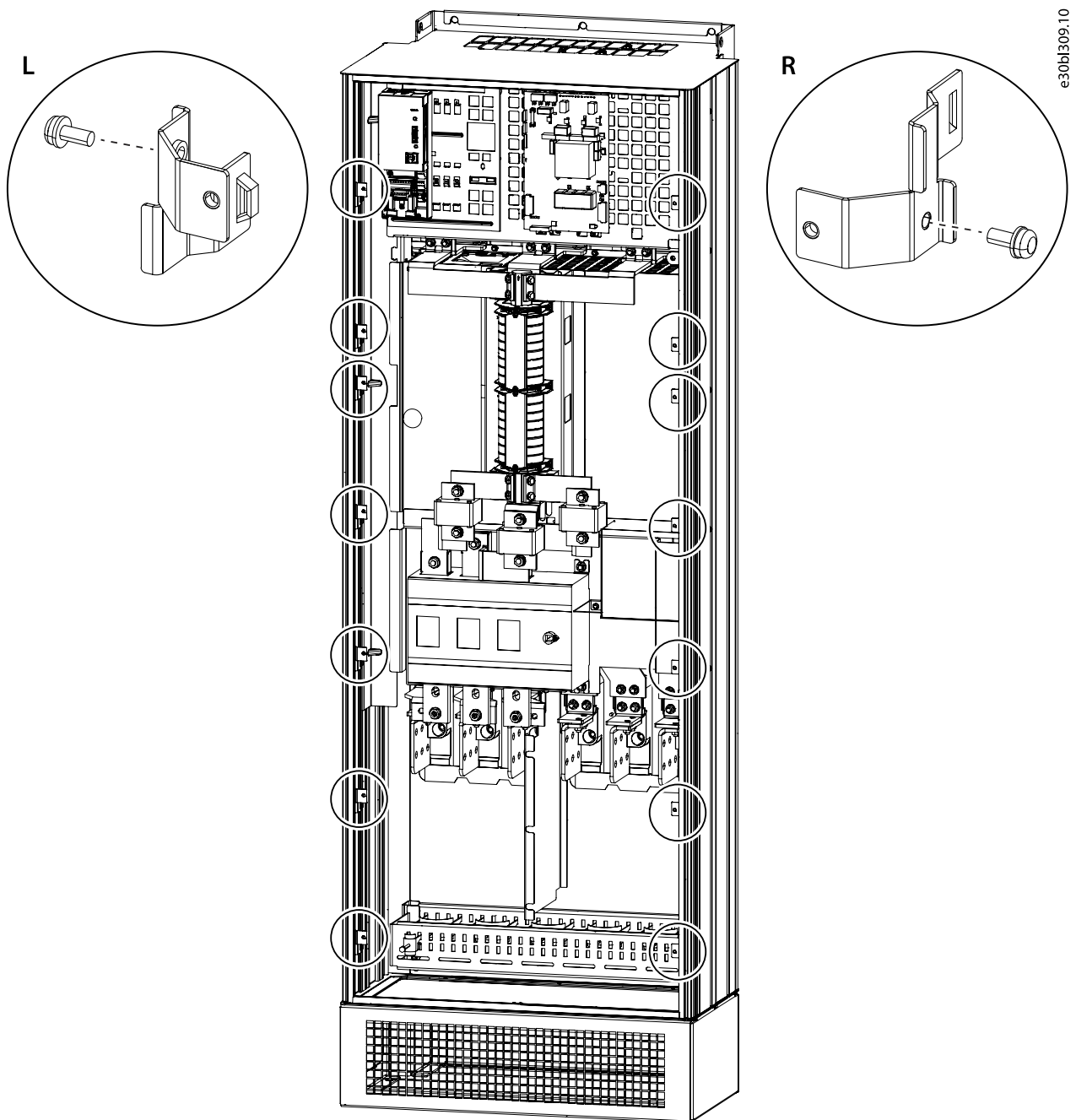
- Ensure that all safety covers are in place and securely fastened before applying power.

2.2 Installing the Touch Protection Kit in FK11/FB11 and FK12/FB12

The touch protection kit for FK11/FB11 and FK12/FB12 frequency converters is a 2-part shield attached with brackets to the front of the drive. To install the touch protection kit, use the following steps.

1. Unfasten 7 screws (T25) and open the frequency converter door.
2. Clip and discard the plastic ties attaching the wires to the 14 brackets at the front edges of the cabinet.
3. Remove 14 brackets from the cabinet by removing 14 screws (T25), 1 screw from each bracket.
4. Install 14 new brackets from the kit by fastening 14 screws (T25), 1 screw in each bracket.

The left and right brackets are positioned differently from one another. For the orientation and location of the brackets, see [Figure 1](#). Tighten screws to 2.3 Nm (20 in-lb).



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Figure 1: Installation of Left and Right Brackets

5. Secure the wiring to the new brackets using the 14 wire ties from the kit.
6. Remove the protective plastic film from the front and back of the 2 touch protection shields.
7. Feed the control panel cable through the cable access hole in the upper shield.

See [Figure 3](#).

8. Position the upper shield at the front edge of the cabinet, aligning the screw holes in the shield with the holes in the upper 4 brackets.

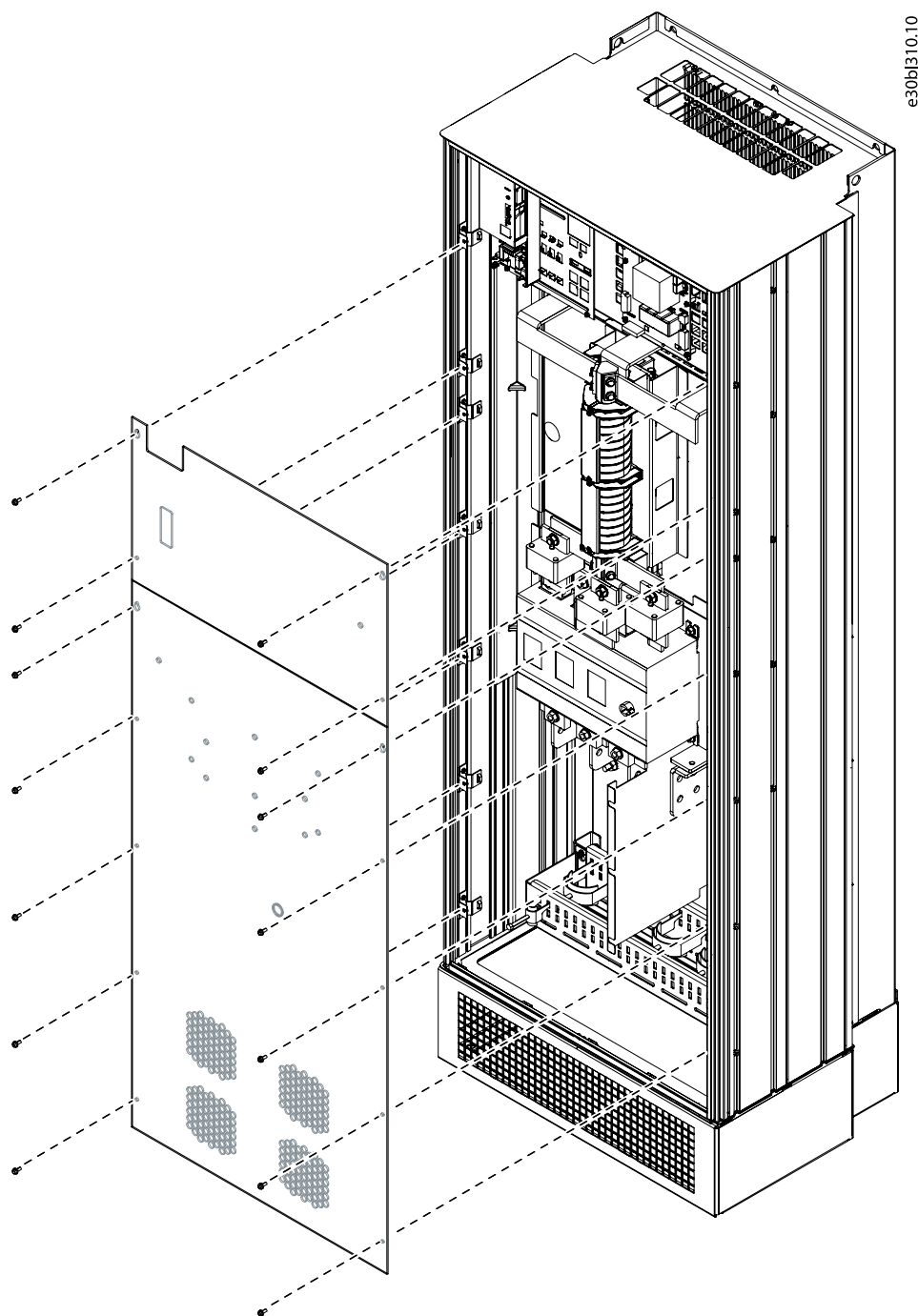


Figure 2: Installation of Upper and Lower Touch Protection Shields

9. Loosely fasten 4 M5x12 mm screws (T25) from the kit, attaching the upper shield to the brackets.
10. Position the lower shield at the front edge of the cabinet, aligning the shield holes with the holes in the lower 10 brackets.
11. Loosely fasten 10 M5x12 mm screws (T25) from the kit, attaching the lower shield to the brackets.

Torque all shield fasteners to 2.3 Nm (20 in-lb).

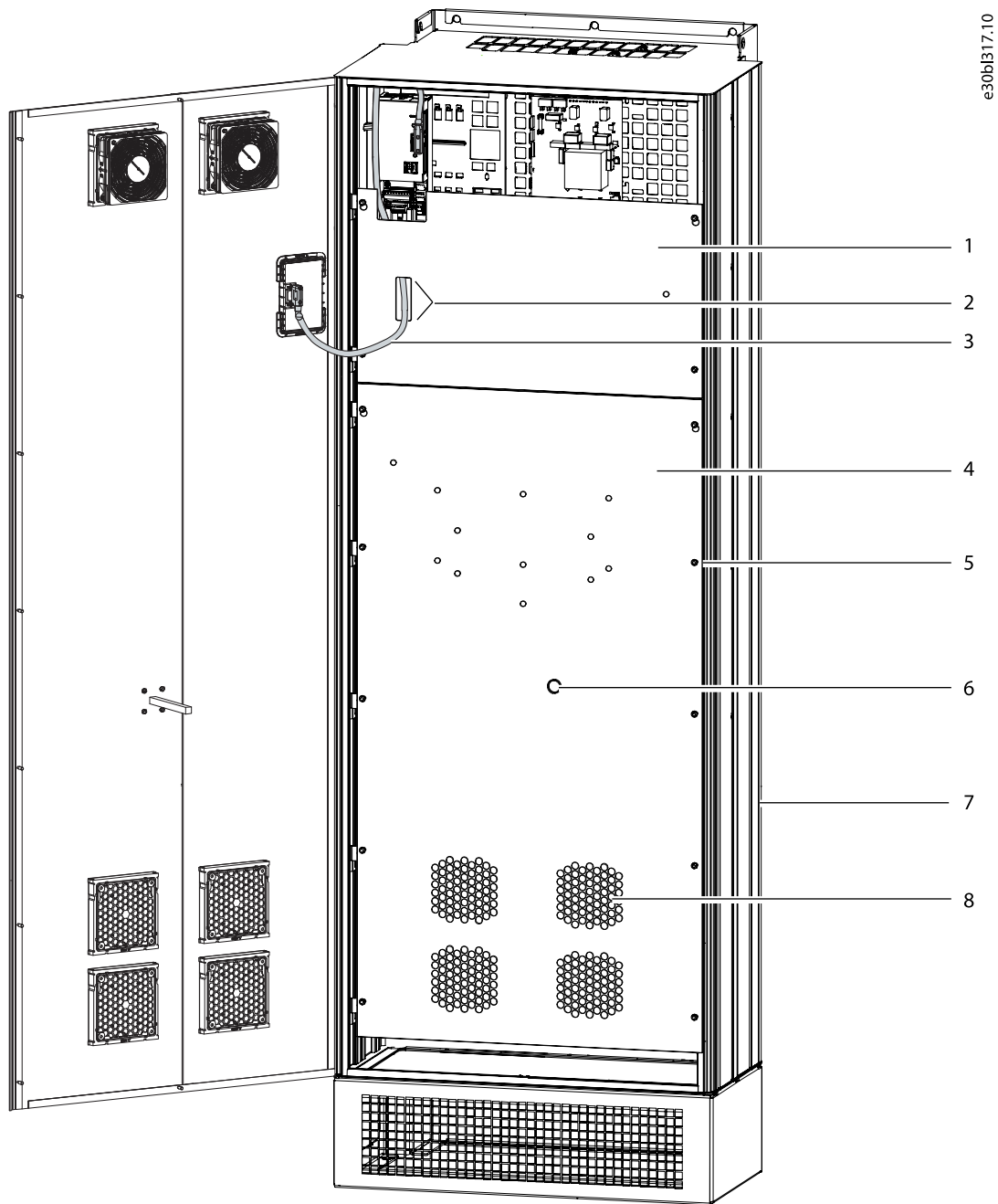


Figure 3: Frequency Converter with Touch Protection Kit Installed

| | | | |
|---|---------------------|---|------------------------|
| 1 | Upper shield | 2 | Cable access hole |
| 3 | Control panel cable | 4 | Lower shield |
| 5 | M5x12 mm screw | 6 | Disconnect access hole |
| 7 | Cabinet | 8 | Air vent |

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