# Installation Instructions
# Power Decoupling Plate
# VLT® Midi Drive FC 280

## Use Description

These instructions provide information about replacement of the I/O decoupling plate (for K1 enclosure size only) and power decoupling plate in the frequency converter.

Only Danfoss-authorized, qualified personnel is allowed to repair this equipment. The personnel must be familiar with the instructions and safety measures described in the *service manual*.

## Items Supplied

Items supplied depend on the ordering number and enclosure size of the frequency converter.

| Ordering numbers | Items supplied |
|---|---|
| 132B0373 | • I/O decoupling plate, K1<br>• Power decoupling plate, K1<br>• Screws (M4x12) |
| 132B0374 | • Power decoupling plate, K2/K3<br>• Screws (M4x12) |
| 132B0375 | • Power decoupling plate, K4/K5<br>• Screws (M4x12) |

**Table 1.1 Items Supplied**

## Tools Required

- Screwdriver:
  - Flat-edged

  or
  - T20

## Safety Instructions

**⚠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 LED 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 and remote DC-link power supplies, including battery back-ups, UPS, and DC-link connections to other frequency converters.**
- **Disconnect or lock PM motor.**
- **Wait for the capacitors to discharge fully. The minimum waiting time is specified in *Table 1.2*.**
- **Before performing any service or repair work, use an appropriate voltage measuring device to make sure that the capacitors are fully discharged.**

| Voltage [V] | Power range [kW (hp)] | Minimum waiting time (minutes) |
|---|---|---|
| 200–240 | 0.37–3.7 (0.5–5) | 4 |
| 380–480 | 0.37–7.5 (0.5–10) | 4 |
| | 11–22 (15–30) | 15 |

**Table 1.2 Discharge Time**

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# Mounting Power Decoupling Plate

## For K1–K3 enclosure sizes

1. Remove the earth screw (M6x12) from the frequency converter.
2. Mount the power decoupling plate on the frequency converter and fasten it with the 2 supplied screws (M4x12), as shown in *Illustration 1.1*.
   Tightening torque: 1.1–1.3 Nm.
3. Remount the earth screw (M6x12).
   Tightening torque: 0.5–0.8 Nm.
4. For K1 enclosure size only: Mount the I/O decoupling plate on the power decoupling plate with 2 M4x12 screws (supplied), as shown in *Illustration 1.2*, before mounting assembly on frequency converter as shown in *Illustration 1.3*.
   Tightening torque: 1.1–1.3 Nm

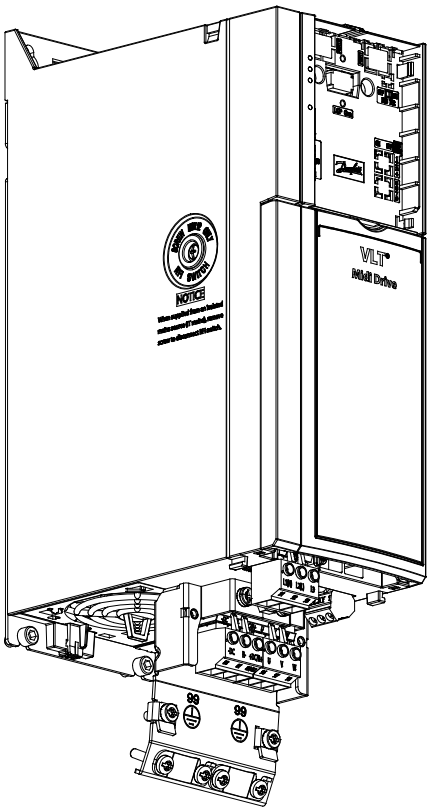
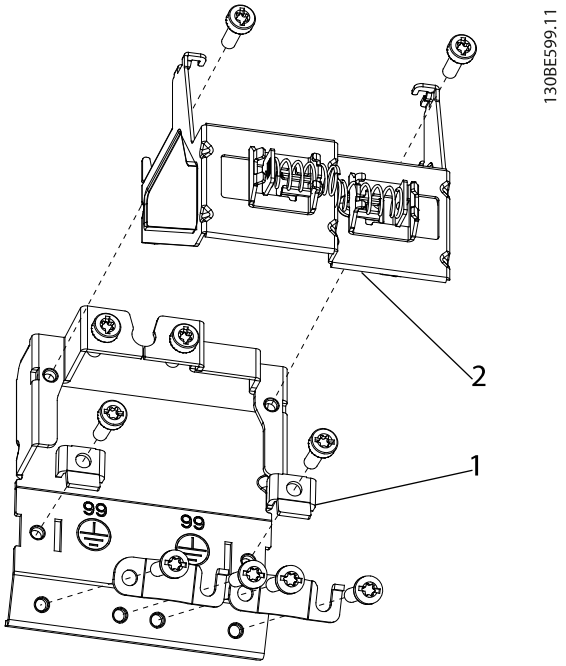



**Illustration 1.1 Frequency Converter with Power Decoupling Plate, K2/K3**




| | |
|---|---|
| 1 | Power Decoupling Plate, K1 |
| 2 | I/O Decoupling Plate, K1 |

**Illustration 1.2 Power Decoupling Plate and I/O Decoupling Plate, K1**

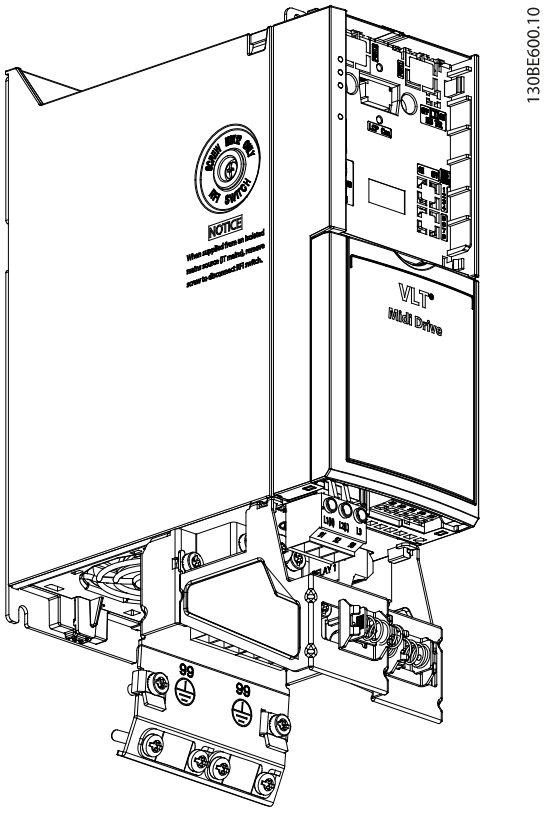



**Illustration 1.3 Frequency Converter with Power Decoupling Plate and I/O Decoupling Plate, K1**


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## For K4 and K5 enclosure sizes

1. Remove the earth plate from the frequency converter (K4 only).
2. Mount the power decoupling plate on the frequency converter and fasten it with the 2 supplied screws (M4x12).
   Tightening torque: 1.1–1.3 Nm.
3. Remount the earth screw (M6x12).
   Tightening torque: 0.5–0.8 Nm.

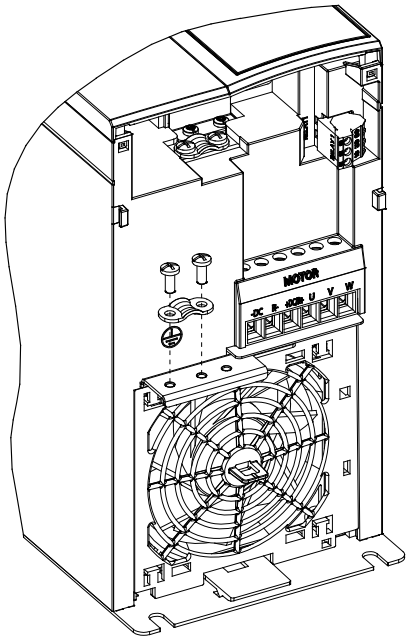



**Illustration 1.4 Remove the Ground Plate, K4**

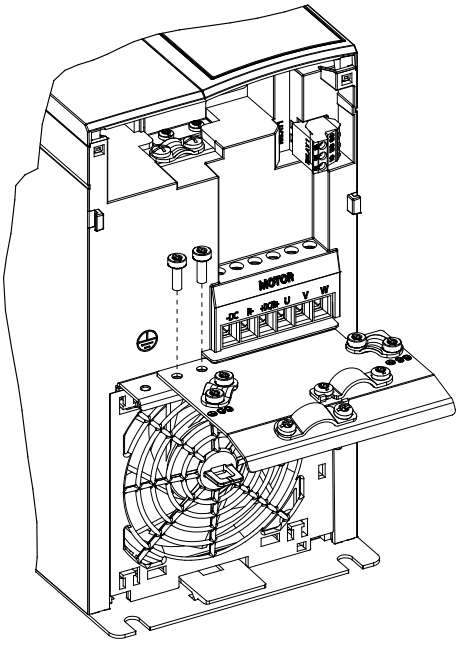



**Illustration 1.5 Mount the Power Decoupling Plate, K4/K5**


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