

## Installation Instructions

# Power Control Card, Power Card, Rectifier Module, IGBT Module, and DC Link Capacitor

## VLT<sup>®</sup> AutomationDrive FC 360

These instructions provide information about replacement of the following components in the VLT<sup>®</sup> AutomationDrive FC 360:

- Power control card
- Power card
- Rectifier module
- IGBT module
- DC link capacitor

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 VLT<sup>®</sup> AutomationDrive FC 360 Service Manual.

### 1.1.1 Items Supplied

Items supplied depend on ordered code number and enclosure type of the frequency converter.

#### Power Control Card

Code number	Items supplied
132b0287	<ul style="list-style-type: none"> <li>• Power Control Card 30 kW</li> </ul>
132b0288	<ul style="list-style-type: none"> <li>• Power Control Card 37 and 45 kW</li> </ul>
132b0305	<ul style="list-style-type: none"> <li>• Power Control Card 55 kW</li> </ul>
132b0306	<ul style="list-style-type: none"> <li>• Power Control Card 75 kW</li> </ul>

#### Power Card

Order number	Items supplied
132b0289	<ul style="list-style-type: none"> <li>• Power Card 30 kW (including IGBT, DC Capacitor)</li> <li>• Heat compound</li> </ul>
132b0290	<ul style="list-style-type: none"> <li>• Power Card 37 kW (including IGBT, DC Capacitor)</li> <li>• Heat compound</li> </ul>
132b0291	<ul style="list-style-type: none"> <li>• Power Card 45 kW (including IGBT, DC Capacitor)</li> <li>• Heat compound</li> </ul>
132b0307	<ul style="list-style-type: none"> <li>• Power Card 55 and 75 kW</li> </ul>

#### Rectifier Module

Order number	Items supplied
132b0293	<ul style="list-style-type: none"> <li>• Rectifier Module (dual pack) 30 and 37 kW</li> <li>• Heat compound</li> </ul>
132b0294	<ul style="list-style-type: none"> <li>• Rectifier Module (dual pack) 45 kW</li> <li>• Heat compound</li> </ul>
132b0309	<ul style="list-style-type: none"> <li>• Rectifier Module (dual pack) 55 and 75 kW</li> <li>• Heat compound</li> </ul>

#### IGBT Module (only enclosure type J7)

Order number	Items supplied
132b0310	<ul style="list-style-type: none"> <li>• IGBT Module (dual pack)</li> <li>• Heat compound</li> <li>• Gate drive cable</li> </ul>

#### DC Link Capacitor (only enclosure type J7)

Order number	Items supplied
132b0311	<ul style="list-style-type: none"> <li>• DC capacitor, 55 kW</li> </ul>
132b0312	<ul style="list-style-type: none"> <li>• DC capacitor, 75 kW</li> </ul>

### 1.1.2 Tools Required

- Screwdrivers:
  - Flat-edged
  - T10
  - T20
  - T25
  - T30
- N8 socket wrench
- N10 socket wrench
- N5 Allen key

### 1.1.3 Safety Instructions

#### **⚠ WARNING**

##### DISCHARGE TIME

The frequency converter contains DC-link capacitors, which can remain charged even when the frequency converter is not powered. Failure to wait the specified time after power has been removed before performing service or repair work, could result in death or serious injury.

1. Stop the motor.
2. Disconnect AC mains, permanent magnet type motors, and remote DC-link power supplies, including battery back-ups, UPS, and DC-link connections to other frequency converters.
3. Wait for the capacitors to discharge fully, before performing any service or repair work. The duration of waiting time is specified in *Table 1.1*.

Voltage [V]	Minimum waiting time (minutes)	
	4	15
380-480	0.37-7.5 kW	11-75 kW

High voltage may be present even when the warning LEDs are off!

Table 1.1 Discharge Time

### 1.1.4 Installation

Follow the instructions provided in the *VLT<sup>®</sup> AutomationDrive FC 360 Service Manual* to disassemble the frequency converter and replace the relevant components.

