Installation Instructions

Terminal Torque Instructions
VLT® Midi Drive FC 280

These instructions give information on the torque values for the terminal blocks used in the VLT® Midi Drive FC 280.

Part Numbers

Description	Part number
Terminals for enclosure sizes K1–K3	132B0420
Terminals for enclosure sizes K4 and K5	132B0421

Table 1.1 Accessory Bag Numbers (cannot be Ordered as Spare Parts)

Description	Ordering number
Terminals for enclosure sizes K1–K5	132B0350

Table 1.2 Spare Part Numbers

Only Danfoss qualified personnel is allowed to install this equipment. The personnel must be familiar with the instructions and safety measures described in the *VLT® Midi Drive FC 280 Operating Guide*.

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 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 1.3*.**
- **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 1.3 Discharge Time

Tools Required

- SZS 0.6x3.5 mm slot screwdriver

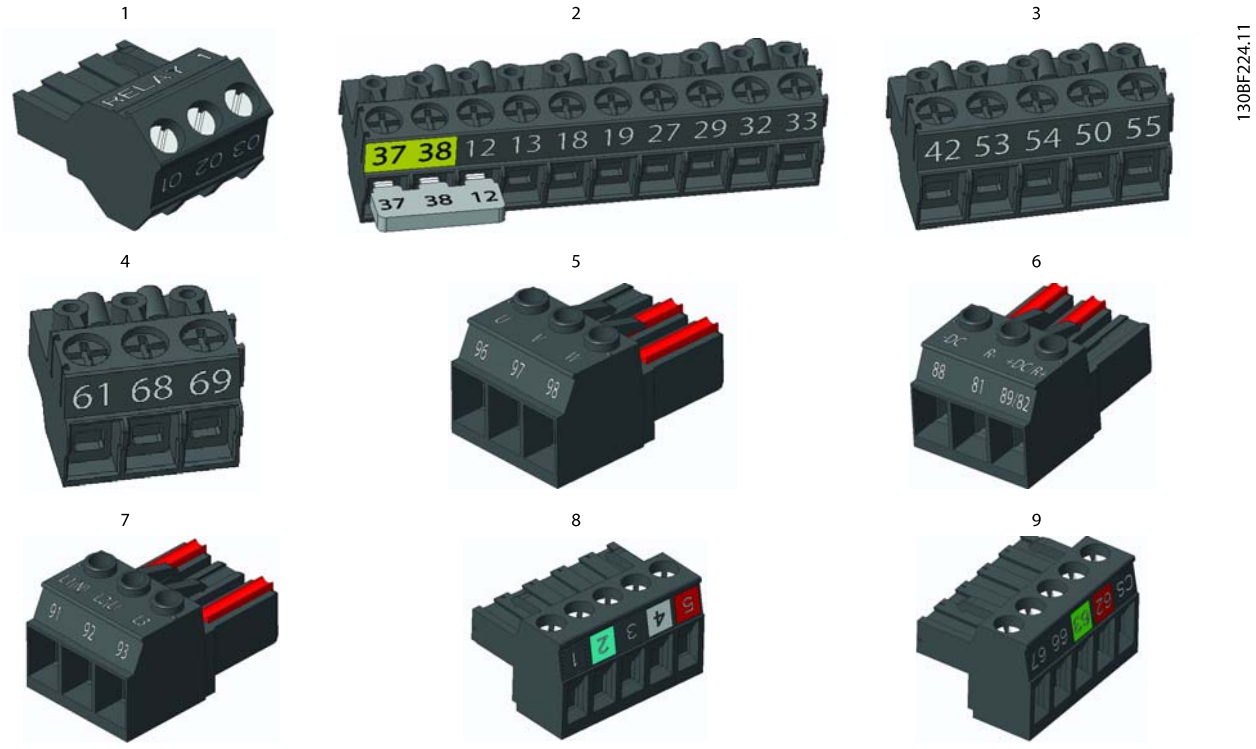
Torque Instructions

NOTICE

DESTRUCTION OF TERMINALS OR LOOSE CABLES

Applying too much torque can destroy the terminal blocks. Applying too low torque can result in loose cables.

- **Only use a screwdriver as specified in *chapter 1.1.3 Tools Required*.**
- **Apply the needed tightening torque as specified in *Illustration 1.1*.**
- **Do not apply more torque than the maximum torque as specified in *Illustration 1.1*.**



Item	Designation	Tightening torque [Nm (in-lb)]	Maximum torque [Nm (in-lb)]
1	Plug connector, relay 1	0.5 (4.4)	0.6 (5.3)
2	I/O terminal plug, 10-pole	0.35 (3.1)	0.4 (3.5)
3	I/O terminal plug, 5-pole		
4	I/O terminal plug, 3-pole		
5	Motor plug, 3-pole 7.62	≤4 mm²/AWG 12: 0.5 (4.4), >4 mm²/AWG 12: 0.7 (6.2)	≤4 mm²/AWG 12: 0.6 (5.3), >4 mm²/AWG 12: 0.8 (7.1)
6	BR DC plug, 3-pole 7.62		
7	Mains plug, 3-pole 7.62		
8	CANopen plug, 5-pole	0.5 (4.4)	0.6 (5.3)
9	PROFIBUS plug, 5-pole		

Illustration 1.1 Tightening Torque for Terminals

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