

VLT® 24 V DC Supply MCB 107

VLT® Series FC 102, FC 103, FC 202, and FC 301/FC 302

1 Scope of Delivery, Safety, and Installation

1.1 Purpose of the Manual

This installation guide describes the installation of the VLT® 24 V DC Supply MCB 107.

1.2 Purpose of the VLT® 24 V DC Supply MCB 107

VLT® 24 V DC Supply MCB 107 option is a low voltage supply to the control card or any option card installed. This option keeps the control section (including parameter configurations) and any installed option alive during a power failure.

NOTICE

External power supply

To achieve the intended functionality, an external 24 V DC supply as specified below has to be connected to the terminals of the option.

Specifications for VLT 24 V DC Supply MCB 107

Specification	Value
Input voltage range	24 V DC \pm 15% (maximum 37 V for 10 s)
Maximum input current	2.2 A
Average input current for FC 301/FC 302	0.9 A
Maximum cable length	75 m (246 ft)
Input capacitance load	<10 μ F
Power-up delay	<0.6 s

Connection terminals

- Terminal 35: - external 24 V DC supply
- Terminal 36: + external 24 V DC supply

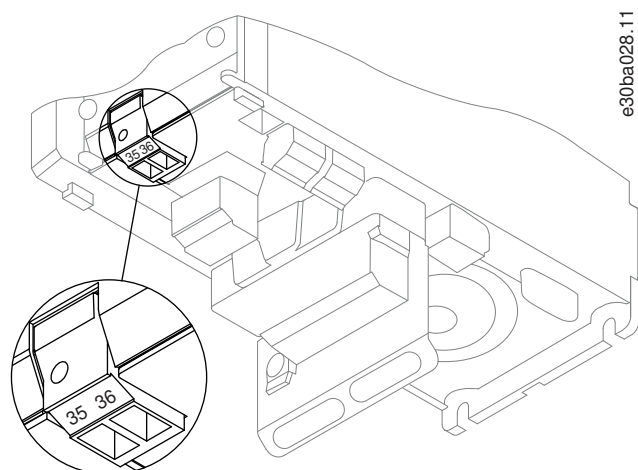


Illustration 1: Connection to MCB 107 on Enclosure Sizes A2 and A3

1.3 Items Supplied

The VLT® 24 V DC Supply MCB 107 is available in 2 versions: Standard and coated.

Table 1: Ordering Numbers

Version	Ordering number
Standard	130B1108
Coated	130B1208

1.4 Safety Instructions

For important information about safety precautions for installation, refer to the product-specific operating guide.

⚠ WARNING ⚠

DISCHARGE TIME

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 indicator lights are off.

Failure to wait the specified time after power has been removed before performing service or repair work could result in death or serious injury.

- Stop the motor.
- Disconnect AC mains, permanent magnet type motors, and remote DC-link supplies, including battery back-ups, UPS, and DC-link connections to other drives.
- Wait for the capacitors to discharge fully. The minimum waiting time is specified in the table *Discharge time* and is also visible on the nameplate on top of the drive.
- Before performing any service or repair work, use an appropriate voltage measuring device to make sure that the capacitors are fully discharged.

Table 2: Discharge Time, VLT® HVAC Drive FC 102 and VLT® Refrigeration Drive FC 103

Voltage [V]	Minimum waiting time (minutes)		
	4	7	15
200–240	1.1–3.7 kW (1.5–5 hp)	–	5.5–45 kW (7.5–60 hp)
380–480	1.1–7.5 kW (1.5–10 hp)	–	11–90 kW (15–125 hp)
525–600	1.1–7.5 kW (1.5–10 hp)	–	11–90 kW (15–125 hp)
525–690	–	1.1–7.5 kW (1.5–10 hp) (FC 102 only)	11–90 kW (15–125 hp) (FC 102 only)

Table 3: Discharge Time, VLT® AQUA Drive FC 202

Voltage [V]	Minimum waiting time (minutes)		
	4	7	15
200–240	0.25–3.7 kW (0.34–5 hp)	–	5.5–45 kW (7.5–60 hp)
380–480	0.37–7.5 kW (0.5–10 hp)	–	11–90 kW (15–125 hp)
525–600	0.75–7.5 kW (1.0–10 hp)	–	11–90 kW (15–125 hp)
525–690	–	1.1–7.5 kW (1.5–10 hp)	11–90 kW (15–125 hp)

Table 4: Discharge Time, VLT® AutomationDrive FC 301/FC 302

Voltage [V]	Minimum waiting time (minutes)		
	4	7	15
200–240	0.25–3.7 kW (0.34–5 hp)	–	5.5–37 kW (7.5–50 hp)
380–500	0.25–7.5 kW (0.34–10 hp)	–	11–75 kW (15–100 hp)
525–600	0.75–7.5 kW (1–10 hp)	–	11–75 kW (15–100 hp)
525–690	–	1.5–7.5 kW (2–10 hp)	11–75 kW (15–100 hp)

1.5 Installing the D-Option

Prerequisites:

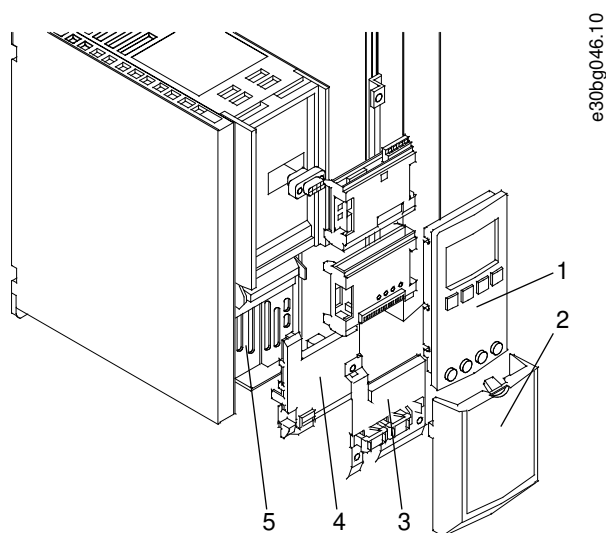
The following tools are required for installing the option:

- Torx 10 screwdriver.
- Flat-head screwdriver.

Procedure

1. Disconnect power to the drive.
 2. Disconnect power to the live part connections on the relay terminals.
 3. Remove the LCP or the blind cover.
 4. Remove the terminal cover.
 5. Remove the control cables.
 6. Remove the cable decoupling plate.
- For enclosure sizes A2 and A3, also remove the plastic cover underneath the decoupling plate (if installed).
7. Insert the option in the D-option slot.
 8. Mount the cable decoupling plate.
 9. Connect the control cables and relieve the cables with the enclosed cable strips.
 10. Attach the terminal cover and the LCP, or the blind cover.
 11. Connect power to the drive.

Example:



1 LCP	2 Terminal cover
3 Cable decoupling plate	4 D-option
5 D-option slot	

Illustration 2: Installing a D-Option in an A2/A3 Enclosure

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