

Installation Instructions

VLT[®] 24 V DC Supply MCB 107

VLT[®] Series FC 102, FC 103, FC 202, and FC 302

Purpose of the Option

Use the VLT[®] 24 V DC Supply MCB 107 option as a low voltage supply to the control card or any option card installed. This option keeps the control section (including configuring the parameters) and any installed option alive during a power failure.

Items Supplied

- VLT[®] 24 V DC Supply MCB 107.

VLT[®] 24 V DC Supply MCB 107 is available in two versions: Standard and coated.

Version	Ordering number
Standard	130B1108
Coated	130B1208

Table 1.1 Ordering Numbers

Safety Instructions

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

⚠ 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 duration of waiting time is specified in tables in this section.
- Before performing any service or repair work, use an appropriate voltage measuring device to make sure that the capacitors are fully discharged.

Voltage [V]	Minimum waiting time (minutes)					
	4	7	15	20	30	40
200–240	1.1–3.7 kW (1.50–5 hp)	–	5.5–45 kW (7.5–60 hp)	–	–	–
380–480	1.1–7.5 kW (1.50–10 hp)	–	11–90 kW (15–121 hp)	–	–	315–1000 kW (450–1350 hp)
400	–	–	–	90–315 kW (121–450 hp)	–	–
500	–	–	–	110–355 kW (150–500 hp)	–	–
525	–	–	–	75–315 kW (100–450 hp)	–	–
525–600	1.1–7.5 kW (1.50–10 hp)	–	11–90 kW (15–121 hp)	–	–	–
690	–	–	–	90–315 kW (100–350 hp)	–	–
525–690	–	1.1–7.5 kW (1.50–10 hp)	11–90 kW (15–121 hp)	–	400–1400 kW (500–1550 hp) 450–1400 kW (600–1550 hp)	–

Table 1.2 Discharge Time, VLT® HVAC Drive FC 102

Voltage [V]	Minimum waiting time (minutes)				
	4	7	15	20	40
200–240	0.25–3.7 kW (0.34–5 hp)	–	5.5–37 kW (7.5–50 hp)	–	–
380–480	0.25–7.5 kW (0.34–10 hp)	–	11–75 kW (15–100 hp)	110–315 (150–450 hp)	355–450 (500–600 hp) 355–560 (500–750 hp)
525–600	0.75–7.5 kW (1.0–10 hp)	–	11–75 kW (15–100 hp)	–	–
525–690	–	1.5–7.5 kW (2–10 hp)	11–75 kW (15–100 hp)	55–400 (75–400 hp)	450–630 (600–750 hp) 450–800 (600–950 hp)

Table 1.3 Discharge Time, VLT® Refrigeration Drive FC 103

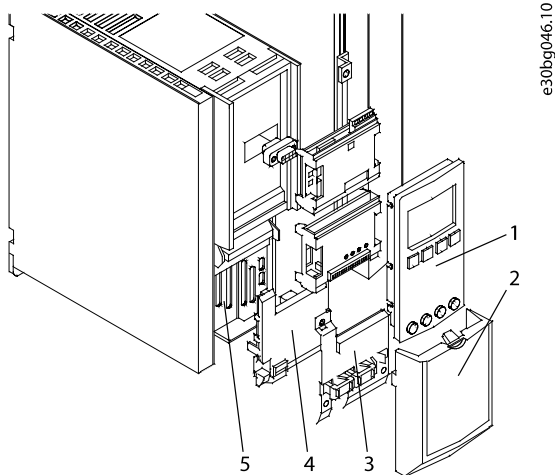
Voltage [V]	Minimum waiting time (minutes)					
	4	7	15	20	30	40
200–240	0.25–3.7 kW (0.34–5 hp)	–	5.5–45 kW (7.5–60 hp)	–	–	–
380–480	0.37–7.5 kW (0.5–10 hp)	–	11–90 kW (15–121 hp)	110–315 kW (150–450 hp)	–	315–1000 kW (450–1350 hp) 355–560 kW (500–750 hp)
525–600	0.75–7.5 kW (1–10 hp)	–	11–90 kW (15–121 hp)	–	400–1400 kW (400–1550 hp)	–
525–690	–	1.1–7.5 kW (1.5–10 hp)	11–90 kW (10–100 hp)	75–400 kW (75–400 hp)	–	450–800 kW (450–950 hp)

Table 1.4 Discharge Time, VLT® AQUA Drive FC 202

Voltage [V]	Minimum waiting time (minutes)					
	4	7	15	20	30	40
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)	90–200 kW (150–350 hp)	250–500 kW (450–750 hp)	250–800 kW (450–1350 hp) 315–500 (500–750 hp)
400	–	–	–	90–315 kW (125–450 hp)	–	–
500	–	–	–	110–355 kW (150–450 hp)	–	–
525	–	–	–	55–315 kW (75–400 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)	37–315 kW (50–450 hp)	355–1200 kW (450–1550 hp)	355–2000 kW (450–2050 hp) 355–710 kW (400–950 hp)
690	–	–	–	55–315 kW (75–400 hp)	–	–

Table 1.5 Discharge Time, VLT® AutomationDrive FC 302

Installation



Follow these steps:

1. Remove the LCP or the blind cover.
2. Remove the terminal cover.
3. Remove the cable decoupling plate and the plastic cover underneath.
4. Insert VLT® 24 V DC Supply MCB 107 in the option slot.
5. Mount the cable decoupling plate.
6. Attach the terminal cover, the LCP, or the blind cover.

When MCB 107 is powering the control circuit, the internal 24 V supply is automatically disconnected.

1	LCP
2	Terminal cover
3	Cable decoupling plate
4	VLT® 24 V DC Supply MCB 107
5	D-option slot

Illustration 1.1 Installing the Option

Specifications

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 302	0.9 A
Maximum cable length	75 m (246 ft)
Input capacitance load	<10 μ F
Power-up delay	<0.6 s

Table 1.6 VLT[®] 24 V DC Supply MCB 107 Specifications

Connection terminals

Terminal 35: - external 24 V DC supply.

Terminal 36: + external 24 V DC supply.

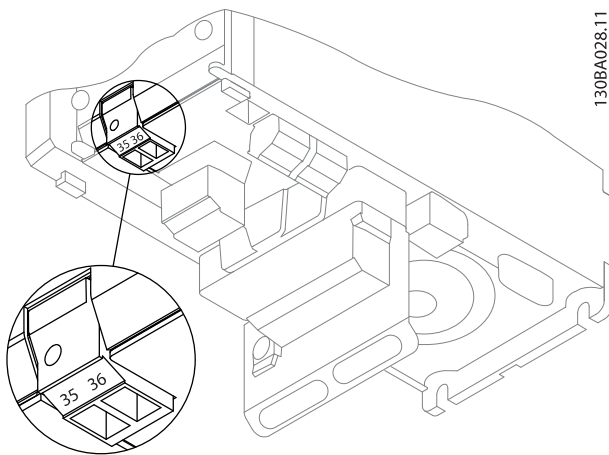


Illustration 1.2 Connection to MCB 107 on Enclosure Types A2 and A3.

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