

# Installation Instructions

## Space Heater Kit for E1h/E2h Drives

### VLT<sup>®</sup> Series FC 102, FC 103, FC 202, and FC 302

#### Description

The space heater kit fits the following drives in E1h and E2h enclosures:

- VLT<sup>®</sup> HVAC Drive FC 102
- VLT<sup>®</sup> Refrigeration Drive FC 103
- VLT<sup>®</sup> AQUA Drive FC 202
- VLT<sup>®</sup> AutomationDrive FC 302

The space heater kit includes a pair of 40 W anti-condensation heaters for installation inside E1h and E2h enclosures.

#### Kit Part Numbers

Use these instructions with the following kits.

Kit number	Kit description
176F6748	Space heater kit for E1h/E2h drives

Table 1.1 Part Numbers for Kits

#### Items Supplied

The space heater kit contains the following items.

Item	Quantity
Space heater with terminals	2
Bracket	2
M4x8mm screw	4

Table 1.2 Items Supplied in Space Heater Kit

#### Safety Information

#### **⚠ WARNING**

##### ELECTRICAL SHOCK HAZARD

VLT<sup>®</sup> series drives contain dangerous voltages when connected to mains voltage. Improper installation, and installing or servicing with power connected, can cause death, serious injury, or equipment failure.

To avoid death, serious injury, or equipment failure:

- Only use qualified electricians for the installation.
- Disconnect the drive from all power sources before installation or service.
- Treat the drive as live whenever the mains voltage is connected.
- Follow the guidelines in these instructions and local electrical safety codes.

#### **⚠ WARNING**

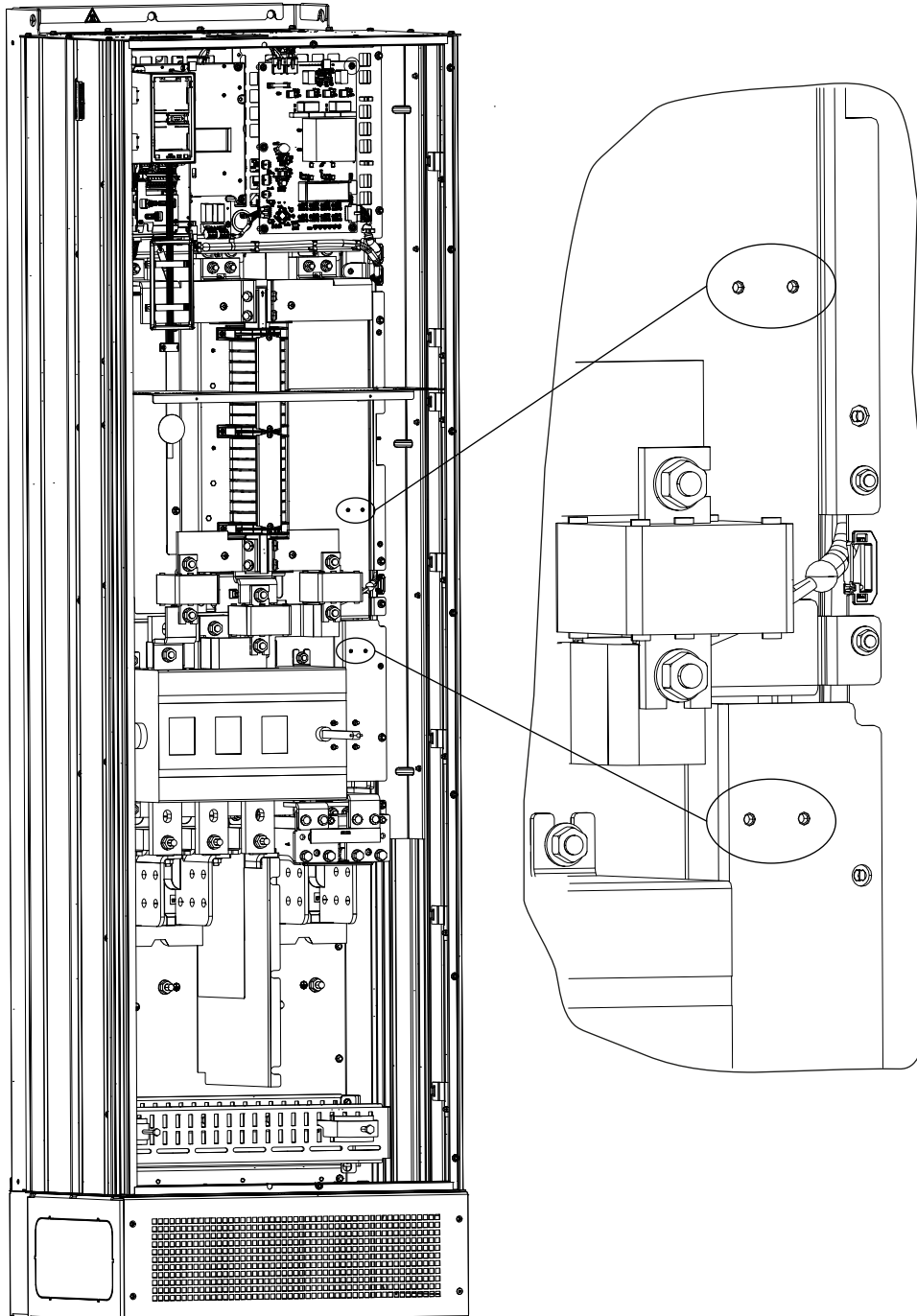
##### DISCHARGE TIME

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 LED indicator lights are off. Failure to wait 40 minutes 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 drives.
- Disconnect or lock PM motor.
- Wait 40 minutes for capacitors to discharge fully.
- Before performing any service or repair work, use an appropriate voltage measuring device to make sure that the capacitors are fully discharged.

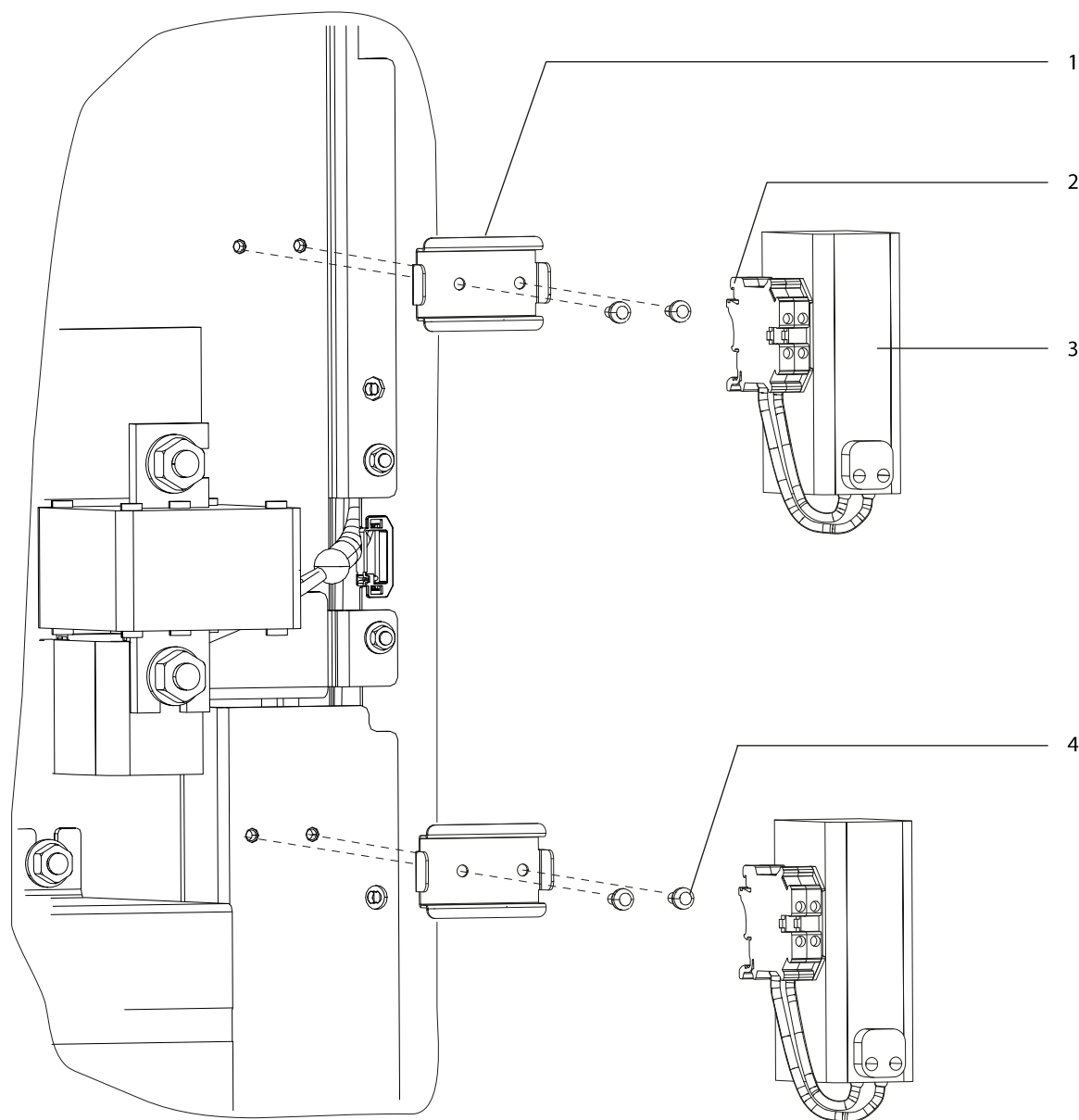
## Installing the Space Heater Kit

The space heater kit includes 2 anti-condensation heaters and brackets for installation in E1h or E2h drives. To install the heaters, use the following steps. Refer to *Illustration 1.1* to *Illustration 1.3*.



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Illustration 1.1 Location of Space Heater Mounting Holes

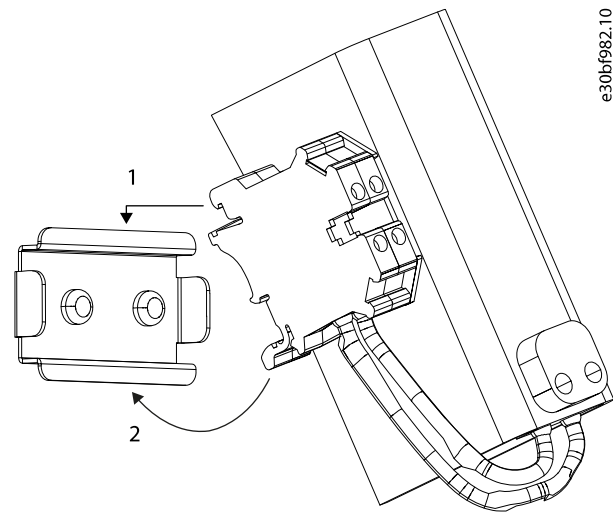


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1	Bracket	3	Space heater
2	Terminals	4	M4x8mm screw

Illustration 1.2 Installation of Space Heater Brackets

1. Position the 2 brackets from the kit over the mounting holes at the back of the drive enclosure. For the location of the mounting holes, see *Illustration 1.1*.
2. Fasten 4 M4x8mm screws (T20), 2 in each bracket. Tighten to 2.3 Nm (20 in-lb). See *Illustration 1.2*.
3. Each space heater has a metal mounting clip on the back of the heater that snaps on to the bracket.
  - 3a Position each heater at a 45° angle with the top lip of the heater mounting clip positioned over the upper edge of the bracket. See *Illustration 1.3*.
  - 3b Rotate the heater downward, pressing it firmly onto the lower edge of the bracket until it snaps into place.
  - 3c Snap the terminals onto the bracket next to the heaters in the same manner.
4. Attach the customer wiring to the A1 and A2 terminals on each heater.



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1	Positioning upper lip of heater mounting clip over bracket
2	Rotating downward to snap into place

**Illustration 1.3 Installation of Heater and Terminals on Bracket**

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