

Altivar® 61/71 Control Terminal Board Kit VX4A1104

Retain for future use.

INTRODUCTION

This bulletin contains installation instructions for the Altivar 61/71 (ATV61/71) Control Terminal Board Kit. The kit is for use on the Altivar 61 and 71 drives listed in Table 1.

Replacing the control terminal board includes two steps:

1. Removing the existing control terminal board from the drive.
2. Installing a new control terminal board in the drive.

This document covers both of these procedures.

You will need the following tools for the procedures in this bulletin:

- 1/8" flathead screwdriver
- Voltmeter

Table 1: Altivar 61/71 Drives

Drive Frame Size	Drive Catalog Number (ATV*** ¹)
2	71H037M3, 61/71H075M3, 61/71H075N4, 61/71HU15M3, 61/71HU15N4, 61/71HU22N4
3	61/71HU22M3, 61/71HU30M3, 61/71HU30N4, 61/71HU40M3, 61/71HU40N4
4	61/71HU55M3, 61/71HU55N4, 61/71HU75N4
5A	61/71HD11N4, 61/71HU75M3
5B	61/71HD11M3X, 61/71HD15M3X, 61/71HD15N4, 61/71HD18N4
6	61/71HD18M3X, 61/71HD22M3X, 61/71HD22N4
7A	61/71HD30N4, 61/71HD37N4
7B	61/71HD30M3X, 61/71HD37M3X, 61/71HD45M3X
8	61/71HD45N4, 61/71HD55N4, 61/71HD75N4
9	61HC11N4, 61HD75M3X, 61/71HD55M3X, 61/71HD90N4
10	61HC13N4, 61HD90M3X, 71HC11N4, 71HD75M3X
11	61HC16N4, 71HC13N4
12	61HC22N4, 71HC16N4
13	61HC31N4, 71HC20N4, 71HC28N4, 61/71HC25N4
14	61HC50N4, 71HC31N4, 61/71HC40N4
15	61HC63N4, 71HC50N4

¹ The drive catalog numbers designate the drive family. For example, catalog number 61/71H075M3 designates model numbers **ATV61H075M3** and **ATV71H075M3**.

RELATED DOCUMENTATION

For complete instructions, refer to the documentation set provided on the CD included with the drive; or, download the document set from the Technical Library at www.schneider-electric.us.

BEFORE YOU BEGIN

Read and understand these instructions before performing any procedure on the drive.

The word “drive” as used in this bulletin refers to the controller portion of the adjustable speed drive as defined in the National Electrical Code (NEC).

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Read and understand this manual before installing or operating the Altivar 61/71 (ATV61/71) drive. Installation, adjustment, repair, and maintenance must be performed by qualified personnel.
- The user is responsible for compliance with all international and national electrical code requirements with respect to grounding of all equipment.
- Many parts of this drive, including the printed circuit boards, operate at the line voltage. **DO NOT TOUCH.** Use only electrically insulated tools.
- **DO NOT** touch unshielded components or terminal strip screw connections with voltage present.
- **DO NOT** short across terminals PA/+ and PC/- or across the DC bus capacitors.
- Before servicing the drive:
 - Disconnect all power, including external control power that may be present.
 - Place a “DO NOT TURN ON” label on all power disconnects.
 - Lock all power disconnects in the open position.
 - **WAIT 15 MINUTES** to allow the DC bus capacitors to discharge. Then follow the Bus Voltage Measurement procedure on page 2 to verify that the DC voltage is less than 42 V. The drive LED is not an indicator of the absence of DC bus voltage.
- Install and close all covers before applying power or starting and stopping the drive.

Failure to follow these instructions will result in death or serious injury.

BUS VOLTAGE MEASUREMENT

Procedure for Measuring the DC Bus Voltage

The DC bus voltage can exceed 1,000 Vdc. Use a properly rated voltage sensing device when performing this procedure. To measure the DC bus voltage:

1. Disconnect the drive power supply.
2. Wait 15 minutes for the DC bus capacitors to discharge.
3. Measure the voltage of the DC bus between the PA/+ and PC/- terminals to ensure that the voltage is less than 42 Vdc. These terminals are clearly labeled on each drive.
4. If the DC bus capacitors have not discharged completely, contact your local Schneider Electric representative. Do not repair or operate the drive.

Characteristics and Functions of the Power Terminals

Terminal	Function	Altivar 61/71 Drive
PA/+	DC bus + polarity and DC choke connection	All ratings
PC/-	DC bus – polarity	All ratings

REMOVING THE CONTROL TERMINAL BOARD

To remove the existing control terminal board:

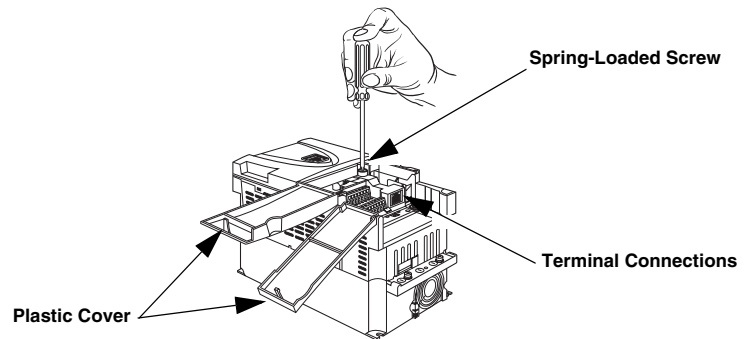
1. Before replacing the control terminal board, perform the bus voltage measurement procedure on page 2 of this bulletin.
2. Remove the control terminal board as follows. Refer to Figure 1.

- a. Open the plastic covers over the terminal board.
- b. Using a flathead screwdriver, disconnect all connections to the terminals on the control terminal board.

NOTE: Record the connection layout for reference when installing and connecting the new control terminal board.

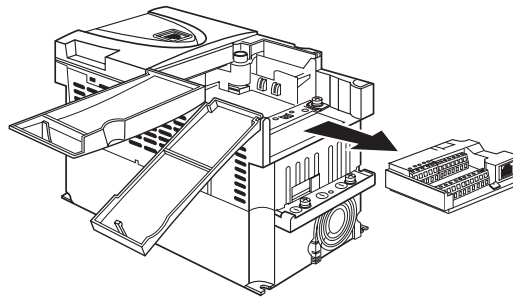
- c. Using a flathead screwdriver, loosen the spring-loaded screw in the upper right corner of the terminal board until it pops up.

Figure 1: Loosen the Spring-Loaded Screw



- d. Slide the terminal board toward the bottom of the drive and lift it out. Refer to Figure 2.

Figure 2: Remove the Terminal Board



INSTALLING THE NEW CONTROL TERMINAL BOARD

⚠ CAUTION

STATIC SENSITIVE COMPONENTS

Observe the electrostatic precautions below when handling drive circuit boards or when testing components. The control terminal board can be damaged by static electricity.

Failure to follow this instruction can result in equipment damage.

Observe the following precautions when handling static sensitive components:

- Keep static producing material such as plastic, upholstery, and carpeting out of the immediate work area.
- Store the control terminal board in its protective packaging when it is not installed in the drive.
- When handling the control terminal board, wear a conductive wrist strap connected to the control terminal board through a minimum of one MΩ resistance.
- Avoid touching exposed conductors and component leads with skin or clothing.

Install the control terminal board as follows. Refer to Figure 1 on page 3.

1. Position the control terminal board into the drive.
2. Slide the control terminal board toward the top of the drive.
3. Snap the control terminal board securely into place.
4. Using a flathead screwdriver, tighten the spring-loaded screw.
5. Using a flathead screwdriver, reestablish all connections to the terminals on the control terminal board.
6. Close the plastic covers over the control terminal board.
7. Completely test the drive operation before placing the drive into service.