Instruction Bulletin

Altivar® 61 and 71 Drive Controllers
Supplementary Instructions for Controller Inside Card VW3A3501

Retain for future use.

INTRODUCTION

This bulletin contains supplementary instructions and precautions for the Controller Inside Card VW3A3501. Use the information in this bulletin to update the *Altivar® 71 Controller Inside Card* instruction bulletin. The headings in this document reflect the chapter names and headings in the instruction bulletin.

The controller inside option card can be used on both Altivar 61 (ATV61) and Altivar 71 (ATV71) drive controllers. The *Altivar® 71 Controller Inside Card* instruction bulletin, atv71_Controller_Inside_EN_V1, references procedures in various ATV71 drive documents. If you are installing the option card in an ATV61 drive controller, consult the documentation supplied with your ATV61 drive controller instead.

BEFORE YOU BEGIN

In this section:

- Replace the opening Danger message with the following:

⚠ DANGER

HAZARDOUS VOLTAGE

- Read and understand this bulletin in its entirety before installing or operating ATV61 and ATV71 drive controllers. Installation, adjustment, repair, and maintenance of the drive controllers must be performed by qualified personnel.
- The user is responsible for conforming to all applicable code requirements with respect to grounding all equipment.
- Many parts in this drive controller, including printed wiring boards, operate at line voltage. DO NOT TOUCH. Use only electrically insulated tools.
- DO NOT short across DC bus capacitors or touch unshielded components or terminal strip screw connections with voltage present.
- Before servicing the drive controller:
  - — Disconnect all power, including external control power that may be present, before servicing the drive controller.
  - — Place a “DO NOT TURN ON” label on the drive controller disconnect.
  - — Lock the disconnect in the open position.
  - — WAIT FIFTEEN MINUTES for the DC bus capacitors to discharge. Then follow the DC bus voltage measurement procedure to verify that the DC voltage is less than 45 V. The drive controller LEDs are not accurate indicators of the absence of DC bus voltage.
- Install and close all covers before applying power or starting and stopping the drive controller.

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

- Add the following Warning message to this section.

> **⚠ WARNING**
>
> **LOSS OF CONTROL**
>
> - The designer of any control scheme must consider the potential failure modes of control paths and, for certain critical control functions, provide a means to achieve a safe state during and after a path failure. Examples of critical control functions are emergency stop and overtravel stop.
> - Separate or redundant control paths must be provided for critical control functions.
> - System control paths may include communication links. Consideration must be given to the implications of unanticipated transmission delays or failures of the link.[1]
> - Each implementation of an ATV61 or ATV71 Controller Inside card must be individually and thoroughly tested for proper operation before being placed into service.
>
> **Failure to follow these instructions can result in death, serious injury, or equipment damage.**

[1] For additional information, refer to NEMA ICS 1.1 (latest edition), "Safety Guidelines for the Application, Installation, and Maintenance of Solid State Control" and to NEMA ICS 7.1 (latest edition), "Safety Standards for Construction and Guide for Selection, Installation and Operation of Adjustable-Speed Drive Systems."

Programming

Replace the paragraph beginning with "In order to program...," with the following statement.

In order to program the Controller Inside option card, programmers must be trained and have working knowledge of CoDeSys. CoDeSys is a third party IEC 61131-3 programming system used in the automation industry.

HARDWARE SETUP

Receipt

Add the following Caution message to this section.

> **CAUTION**
>
> **STATIC SENSITIVE COMPONENTS**
>
> This option card can be damaged by static electricity. Observe the following precautions for handling static sensitive components when removing the card from its packaging:
>
> - Keep static producing material (plastic, upholstery, carpeting, etc.) out of the immediate work area.
> - Avoid touching exposed conductors and components leads with skin or clothing.
> - To store the option card, replace it in its original package (including the anti-static bag) and store it at -13 to 158 F (-25 to 70 C).
>
> **Failure to follow these instructions can result in equipment damage.**

Installing the card in the drive

Replace the note with the following:

NOTE: So that the controller inside card's LEDs are visible, ensure that the I/O extension card is installed on the drive controller first. Then install the controller inside card on the I/O extension card.

Data backup battery

Add the following Danger message to this section.

⚠ DANGER

UNINTENDED EQUIPMENT OPERATION

Do not remove or replace the battery with power applied.

Failure to follow this instruction will result in death or serious injury.

CONFIGURATION

Configuring the switches

Add the following safety messages to this section.

⚠ DANGER

UNINTENDED EQUIPMENT OPERATION

Do not change the configuration switches with power applied.

Failure to follow this instruction will result in death or serious injury.

⚠ WARNING

LOSS OF CONTROL

- The designer of any control scheme must consider the potential failure modes of control paths and, for certain critical control functions, provide a means to achieve a safe state during and after a path failure. Examples of critical control functions are emergency stop and overtravel stop.
- Separate or redundant control paths must be provided for critical control functions.
- System control paths may include communication links. Consideration must be given to the implications of unanticipated transmission delays or failures of the link.[1]
- Each implementation of an ATV61 or ATV71 Controller Inside card must be individually and thoroughly tested for proper operation before being placed into service.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

[1] For additional information, refer to NEMA ICS 1.1 (latest edition), "Safety Guidelines for the Application, Installation, and Maintenance of Solid State Control" and to NEMA ICS 7.1 (latest edition), "Safety Standards for Construction and Guide for Selection, Installation and Operation of Adjustable-Speed Drive Systems."

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Schneider Electric USA
8001 Knightdale Blvd.
Knightdale, NC 27545 USA
1-888-SquareD (1-888-778-2733)
www.us.SquareD.com