

Altivar™ 31, Altivar 312, and Altivar 32 Motor Cable Installation Guidelines for Baggage Conveyance Applications

Retain for future use.

Scope of Bulletin

Table 1: Required Documentation

Document Title	Document No.
<i>Altivar 31 Installation Manual</i>	VVDED303041NA
<i>Altivar 31 Start-Up Guide</i>	VVDED303043US
<i>Altivar 312 Installation Manual</i>	BBV46391
<i>Altivar 312 Simplified Manual</i>	BBV46396
<i>Altivar 32 Installation Manual</i>	S1A28686
<i>Altivar 32 Quick Start Guide</i>	S1A41715

This bulletin contains guidelines for installing unshielded motor power cables on 230 V and 460 V Altivar 31, Altivar 312, and Altivar 32 AC drives rated 5 hp and lower, and operating at the default switching frequency of 4 kHz.

These guidelines are for use in baggage conveyance applications where up to three sets of unshielded motor power cables (four wires per set) are in one conduit or cable tray, cable lengths are up to 500 feet, and inverter duty motors compliant with NEMA MG-1 Part 31 are required.

This bulletin supplements the documentation listed in Table 1. Read and understand all the instructions in this bulletin and in the other required documentation before installing motor power cables.

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Placing motor power cables from multiple AC drives in close proximity can induce voltage on adjacent cabling.
- De-energize all drives and use lockout / tag-out procedures before performing installation or maintenance.
- WAIT 15 MINUTES for Altivar 312 and Altivar 32 drives (3 minutes for Altivar 31 drives) to allow the DC bus capacitors to discharge. Then follow the Bus Voltage Measurement procedure in the Installation Manual to verify that the DC voltage is less than 42 V. The drive LEDs are not indicators of the absence of DC bus voltage.

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

Cable Installation Guidelines

Follow these guidelines when installing unshielded motor power cables:

- Use four wires for each motor—one per phase plus one ground wire for each motor.
- Do not install more than three sets of motor power wires (four wires per set) per conduit or cable tray.
- Do not use mineral-impregnated cable. Mineral-impregnated cable increases the likelihood of capacitive coupling.
- Install the cables in a dry location. Wet cables increase the likelihood of capacitive coupling between sets of motor cables.
- Consult Table 2 for cable lengths and associated filter requirements.

Table 2: Cable Lengths and Filter Requirements

For 0.5–5 hp ATV31/ATV312/ATV32 AC drives installed with unshielded cable and a maximum of three sets of cables per conduit or cable tray

Cable length:	100–299 ft	300–500 ft
Filter requirements:	No filter required.	dv/dt filter recommended.

Electrical equipment should be installed, operated, serviced, and maintained only by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material.

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