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- › [Schneider Electric](#) /
- › [Altivar Machine ATV320 Variable Speed Drive User Manual](#)

Schneider Electric ATV320U40M3C

Altivar Machine ATV320 Variable Speed Drive User Manual

Model: ATV320U40M3C | Brand: Schneider Electric

1. INTRODUCTION

This manual provides essential information for the installation, operation, and maintenance of the Schneider Electric Altivar Machine ATV320 Variable Speed Drive. The ATV320 is designed for industrial applications requiring precise control of asynchronous motors, offering 4kW power at 200 to 240V, 3 phases, in a compact form factor.

Please read this manual thoroughly before attempting to install or operate the device. Retain this manual for future reference.

2. SAFETY INFORMATION

DANGER: ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH HAZARD. This equipment must be installed, adjusted, and maintained by qualified personnel only. Disconnect all power before working on the drive. Wait 15 minutes after disconnecting power to allow capacitors to discharge. Failure to follow these instructions will result in death or serious injury.

Always adhere to local and national electrical codes and safety regulations.



Figure 2.1: Front view of the ATV320 drive, highlighting the safety warning label. This label indicates the presence of dangerous voltage and the need to wait 15 minutes after power disconnection before servicing.

3. PRODUCT OVERVIEW

The Altivar Machine ATV320 is a compact variable speed drive designed for integration into various industrial machines. It provides advanced motor control capabilities for asynchronous motors.

3.1. Main Components

- **Control Panel:** Features a display, navigation buttons (ESC, green knob), and status indicators (FAULT, CAN Run, CAN Err).
- **Power Terminals:** For connecting input power and motor output.
- **Control Terminals:** For connecting control signals, sensors, and communication.
- **Cooling Fan:** Located at the rear/bottom for heat dissipation.



Figure 3.1: Front-right view of the ATV320 drive, showing the control panel with its display and green navigation knob, as well as the overall compact design.



Figure 3.2: Rear-right view of the ATV320 drive, illustrating the various connection terminals for power input, motor output, and control signals. The cooling fan is visible at the bottom.

4. SETUP AND INSTALLATION

4.1. Mounting

The ATV320 drive is designed for vertical mounting in an enclosure. Ensure adequate clearance for ventilation, especially above and below the unit, to allow for proper airflow to the cooling fan. Refer to the dimensions in the specifications section for precise measurements.

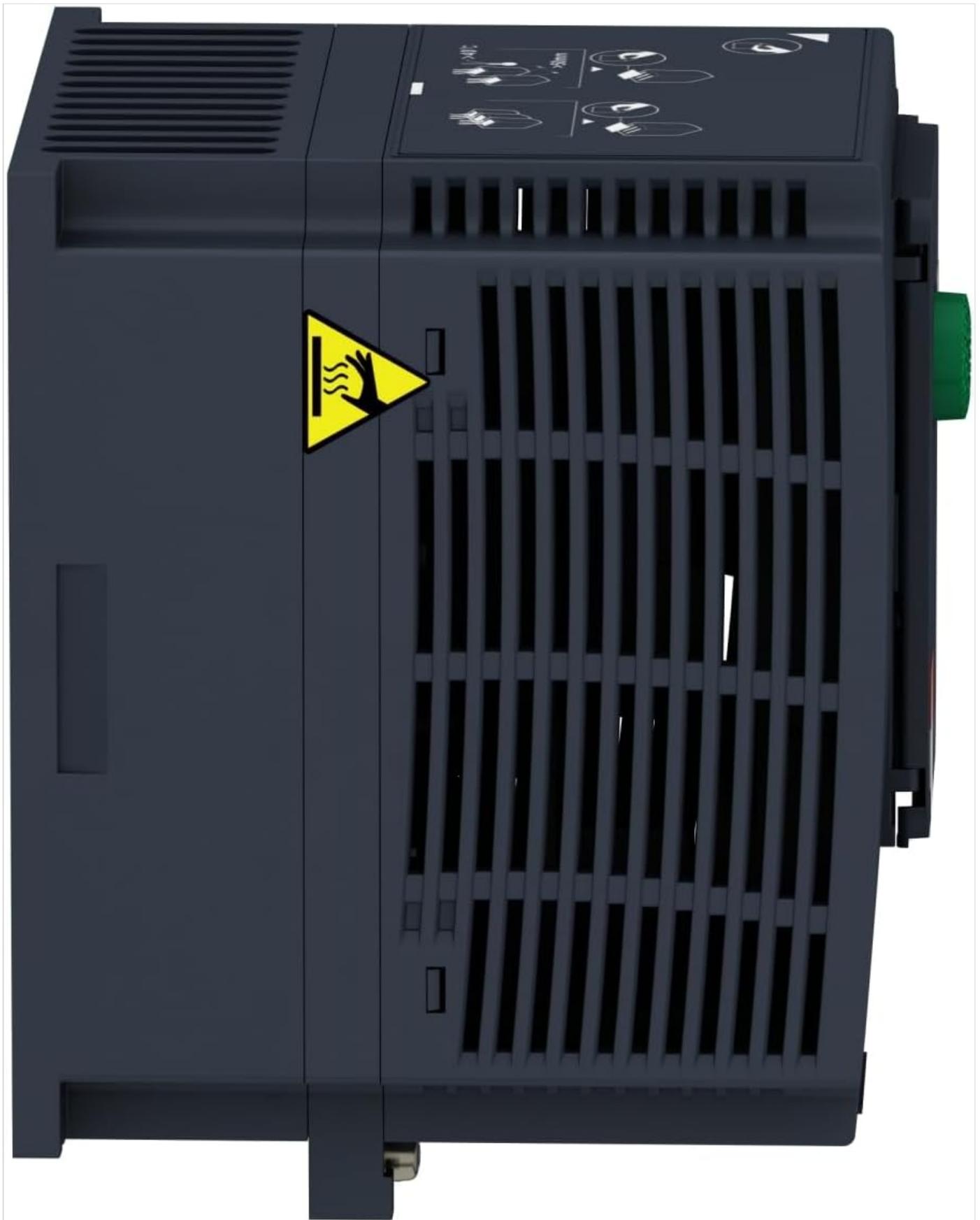


Figure 4.1: Left side view of the ATV320 drive, showing the ventilation fins crucial for heat dissipation. Proper clearance around these fins is necessary for optimal performance.

4.2. Electrical Connections

All electrical connections must be performed by qualified personnel in accordance with local and national electrical codes.

- **Input Power:** Connect 200-240V, 3-phase AC power to the designated input terminals.
- **Motor Connection:** Connect the 3-phase asynchronous motor to the output terminals.

- **Grounding:** Ensure proper grounding of the drive and motor for safety and EMC compliance.
- **Control Wiring:** Connect control signals (e.g., start/stop, speed reference, fault reset) to the control terminals as per your application requirements.

The drive is rated for 17.5 Amps and 4 kW. Ensure that input power supply and motor are compatible with these ratings.

5. OPERATING INSTRUCTIONS

5.1. Initial Power-Up

1. Verify all electrical connections are secure and correct.
2. Apply input power to the drive. The control panel display should illuminate.
3. The drive may prompt for initial setup parameters. Follow the on-screen instructions or refer to the detailed programming manual for specific parameter settings.

5.2. Basic Operation via Control Panel

- **Green Knob:** Used for navigating menus and adjusting parameter values. Rotate to scroll, press to select or confirm.
- **ESC Button:** Used to exit menus or cancel an operation.
- **Display:** Shows operational status, parameter values, and fault codes.

For detailed programming and advanced operation, consult the comprehensive programming guide available from Schneider Electric.

6. MAINTENANCE

Regular maintenance helps ensure the longevity and reliable operation of the ATV320 drive. Always disconnect all power and wait 15 minutes before performing any maintenance.

- **Cleaning:** Keep the drive clean and free from dust and debris. Use a soft, dry cloth. Do not use solvents.
- **Ventilation:** Ensure cooling fan and ventilation openings are not obstructed. Periodically check and clean the fan if necessary.
- **Connections:** Periodically check all electrical connections for tightness. Loose connections can cause overheating or intermittent operation.
- **Environmental Conditions:** Ensure the operating environment remains within specified temperature and humidity ranges.

7. TROUBLESHOOTING

If the drive exhibits unexpected behavior or displays a fault code, refer to the following general guidelines. For specific fault codes and detailed troubleshooting procedures, consult the comprehensive programming manual.

- **No Power:** Check input power supply, fuses, and circuit breakers.
- **Motor Not Running:** Verify motor connections, control signals (start command, speed reference), and ensure no fault codes are active.
- **Overcurrent/Overload:** Check motor load, motor parameters, and ensure proper sizing of the drive for the application.
- **Overheating:** Check ambient temperature, ensure proper ventilation, and clean cooling fins/fan.
- **Fault Indication:** Note the fault code displayed on the control panel and refer to the detailed manual for its meaning.

and corrective actions.

8. SPECIFICATIONS

Feature	Value
Model Number	ATV320U40M3C
Brand	Schneider Electric
Voltage	200-240 Volts
Wattage	4 KW
Phase Type	Three Phase
Amperage	17.5 Amps
Item Dimensions (L x W x H)	10.55 x 7.48 x 9.65 inches
Item Weight	2.61 Kilograms
Material	Copper
Color	Black
Included Components	Hardware

9. WARRANTY INFORMATION

For detailed warranty terms and conditions, please refer to the official Schneider Electric warranty statement provided with your product or visit the Schneider Electric website. Warranty coverage typically applies to defects in materials and workmanship under normal use.

10. TECHNICAL SUPPORT AND CONTACT

For technical assistance, product inquiries, or to locate a service center, please contact Schneider Electric customer support. You can find contact information and additional resources on the official [Schneider Electric website](#) or through their authorized distributors.



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