

# A P P E N D I X

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## ***LVD Installation Instructions***

### **Complying with the Low Voltage Directive (LVD)**

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The S Drive, when installed according to the procedures in the main body of this user guide, may not necessarily comply with the Low Voltage Directive (LVD) of the European Economic Community. To install the S Drive so that it complies with LVD, you must follow the additional procedures described in this appendix. If this is not done, the protection of the product may be impaired.

For more information about LVD, see 73/23/EEC and 93/68/EEC, published by the European Economic Community (EEC).

### **Additional Installation Procedures for LVD Compliance**

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#### **Environmental Conditions**

##### **Pollution Degree**

The S Drive is designed for pollution degree 2.

##### **Installation Category**

The S Drive is designed for installation category II.

#### **Electrical**

##### **Connecting and Disconnecting Power Mains**

The S Drive's protective earth connection is provided through its make first/break last earth terminal on the power mains connector. You must reliably earth the S Drive's protective earth connection. Attach or remove the S Drive's power plug only while input power is OFF.

##### **Using an Isolation Transformer**

The S Drive's mains voltage is limited to 120 VAC nominal, single phase. If your mains voltage is higher, use an isolation transformer located between the power mains and the S Drive. Your isolation transformer should be insulated to ~2300V rms.

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#### **CAUTION**

Do not use an autotransformer.

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## Line Fuses

Line fuses need to be added to protect the transformer and associated wiring. If the live wire cannot be readily identified, fuse both phase conductors. The value of fuse required is given by:

$$(1.5 \times VA)/(\text{supply volts}) \quad [\text{amps}]$$

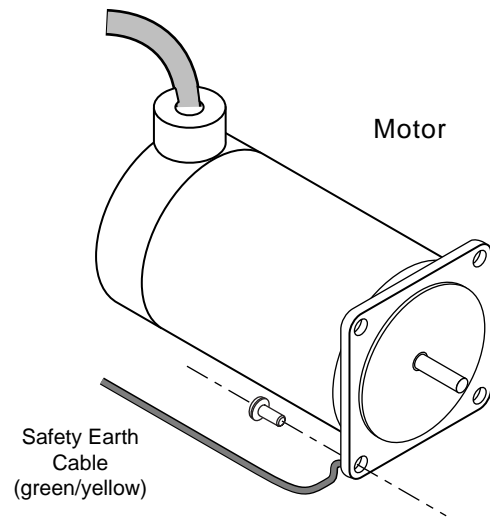
Fuse types should be anti-surge HBC.

## Providing a Protective Earth Connection for Motors

You must provide a connection from the motor to a reliable protective earth. This connection provides a protective earth for the motor contact point. The motor's protective earth connection is important for safety reasons, and **must not be omitted**.

Make connections according to the following instructions and diagram:

- ① Use a spade lug in combination with a star washer and mounting bolt to make good contact with the bare metal surface of the motor's mounting flange.
- ② Use a green and yellow striped wire to make the connection between the motor and earth. Wire gauge must be no thinner than the current-carrying wire in the motor's power cable.
- ③ Resistance between the motor and earth must be no greater than 0.1 Ω. Use thicker gauge wire if the resistance is too high.



*Providing Protective Earth Connection for Motor*

## Mechanical

### Installing in an Enclosure

The S Drive must be installed within an enclosure. The enclosure's interior must not be accessible to the machine operator. The enclosure should be opened only by skilled or trained service personnel.

## Servicing the S Drive

### Changing Firmware

Only skilled or trained personnel should change firmware.

### Do Not Replace Fuses

The S Drive has no fuses designed to be replaced by the user. Fuse failure indicates that other components have also failed. Fuses and other components should only be replaced by Compumotor or its designated repair facilities.

## Thermal Safety

### The S Drive May Be Hot

The S Drive may reach high temperatures during normal operations, and may remain hot after power is removed.

### The Motor May Be Hot

The motor may reach high temperatures during normal operations, and may remain hot after power is removed.

## Sonic Pressure








### High Sound Level

The sound level from some large frame step motors (NEMA 34, NEMA 42, and larger) may exceed 85 dBA. Actual sound level is application dependent, and varies with motor loads and mounting conditions. Measure the sound level in your application; if it exceeds 85 dBA, install the motor in an enclosure to provide sound baffling, or provide ear protection for personnel.

## Table of Graphic Symbols and Warnings

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The following symbols may appear in this User Guide, and may be affixed to the products discussed in this User Guide.

Symbol	Description
	Earth Terminal
	Protective Conductor Terminal
	Frame or Chassis Terminal
	Equipotentiality
	Caution, Risk of Electric Shock
	Caution, Refer to Accompanying Text
	Hot Surface

