PRECAUTIONS

This section provides general precautions for using the V670-series Electromagnetic Inductive RFID System and related devices.

The information contained in this section is important for the safe and reliable application of the V670-series Electromagnetic Inductive RFID System. You must read this section and understand the information contained before attempting to set up or operate a V670-series Electromagnetic Inductive RFID System.

1 Intended Audience

This manual is intended for the following personnel, who must also have knowledge of electrical systems (an electrical engineer or the equivalent).

- Personnel in charge of installing systems.
- Personnel in charge of designing systems.
- Personnel in charge of managing systems and facilities.

2 General Precautions

The user must operate the product according to the performance specifications described in the operation manuals.

Before using the product under conditions which are not described in the manual or applying the product to nuclear control systems, railroad systems, aviation systems, vehicles, combustion systems, medical equipment, amusement machines, safety equipment, and other systems, machines, and equipment that may have a serious influence on lives and property if used improperly, consult your OMRON representative.

Make sure that the ratings and performance characteristics of the product are sufficient for the systems, machines, and equipment, and be sure to provide the systems, machines, and equipment with double safety mechanisms.

This manual provides information for installing and operating the V670-series Electromagnetic Inductive RFID System. Be sure to read this manual before attempting to use the System and keep this manual close at hand for reference during operation.

⚠ **WARNING** It is extremely important that a V670-series Electromagnetic Inductive RFID System be used for the specified purpose and under the specified conditions, especially in applications that can directly or indirectly affect human life. You must consult with your OMRON representative before applying the System to the above-mentioned applications.

3 Safety Precautions

⚠ **WARNING** Always connect to a ground of 100 Ω or less when installing the System. Not connecting to a ground of 100 Ω or less may result in electric shock.

⚠ **WARNING** Do not touch any of the terminals or terminal blocks while the power is being supplied. Doing so may result in electric shock.

⚠ **WARNING** Do not attempt to take any unit apart or touch the inside while the power is being supplied. Doing so may result in electric shock.

4 Application Precautions

⚠ **Caution** Be sure to observe the following precautions to ensure safety in installing or operating the System.

- Do not use the System in an environment subject to flammable, explosive, or corrosive gases.
- Do not attempt to take any Units apart, to repair any Units, or to modify any Units in any way.
- Be sure that all the mounting screws, terminal screws, and cable connector screws are tightened to the torque specified in the relevant manuals.
- Use crimp terminals of specified size for wiring.
- Be sure that the items with locking devices are properly locked into place before using the System.
- Be sure that the DC Power Supply Unit exclusively designed for the V670 Series is used and is not connected to any other device.
- Be sure that the power supply voltage is within the rated range of 24 VDC+10% and -10%.
- Install the ferrite core supplied with the V670-CD1D according to the specified instructions.
- Be sure to observe all warnings, cautions, and safety precautions specified in the manual.

5 Correct Use

⚠ **Caution** Do not install the V670-CD1D and V670-H11 in the following locations:

- Locations subject to direct sunlight.
- Locations subject to condensation as the result of severe changes in temperature.
- Locations subject to corrosive or flammable gases.
- Locations subject to shock or vibration.

⚠ **Caution** **Be sure to observe the following wiring precautions**

- Do not wire the lines of the RFID System alongside high–tension or power lines.
- Check the polarity of each terminal and make sure not to make mistakes in polarity.

⚠ **Caution** Be sure to observe the following precaution when cleaning the V670-CD1D:

- Organic solvents may damage the paint coating on the casing or resin part of the product. Do not use paint thinner or any other organic solvent to clean the product.

6 Applicable Standards

The V670-CD1D and V670-H11 conforms to the following standards:

European Standard

EN 300 330 (1999)

EN 301 489-3(EN 301 489-1)

FCC (USA)

FCC Part 15 Subpart C

7 EN/IEC Standards

- In connection with EC unification, eighteen European countries will integrate their conventional safety standards into EN standards. When the EN standards come into effect, they will apply as the unified European standards in place of the conventional safety standards.
- EN standards are based on IEC standards. Therefore, machines that are exported to Europe from Asia or North America must satisfy EN standards. Otherwise, the machines must satisfy IEC standards if the machines do not fall under EN standards.
- The CE marking is provided by EC Directives. A product bearing a CE marking meets the safety standards specified by all relevant EC Directives. If the product is a machine, it must satisfy the EC Machinery Directive, Low-voltage Directive (LVD), and EMC requirements of the EC Directives. The product must satisfy the EMC and LVD requirements of the EC Directives, if the product is a home electronics appliance or office machine. Machines bearing CE markings can be freely exported to European countries. In other words, a CE marking is the passport for export to Europe.
- EC Directives are provided for the purpose of European unification. Approximately 300 EC Directives have been passed. EC Directives for machines are called Machine Directives. According to the Machine Directives (EC Directive Document number 89/392/EEC), machines exported to Europe on and after January 1, 1995 must bear CE markings.
- EMC standards are for electro-magnetic compatibility. A machine must satisfy the EMC requirements of EC directives by taking countermeasures against EMI (electro-magnetic interference) and EMC (electro-magnetic susceptibility).

Electromagnetic Inductive RFID System

The V670-CD1D satisfies the following EC Directives.

ID Controller	EMC Directives	Remarks
V670-CD1D	EMI Standard: EN300330 EMS Standard: EN301489-3	Attach a ferrite core (TDK ZCAT2032-0930) each to the DC power supply line and FG line of the Controller.

⚠ **WARNING** This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

8 FCC Notices

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.