Notes on the CE Marking of SIMATIC S5-100U Ex

EU EMV Directive 89/336/EEC

The following applies for the SIMATIC products described in this manual:

Products bearing the CE marking meet the requirements of EU Directive 89/336/EEC 'Electromagnetic Compatibility' and the harmonized European standards (EN) listed therein.

In accordance with the above-mentioned EU Directive, Article 10, the EU declarations of conformity are held at the disposal of the competent authorities at the address below:

Siemens Aktiengesellschaft
Bereich Automatisierungstechnik
AUT E 14
Postfach 1963
D-92209 Amberg
Federal Republic of Germany

Area of Application

SIMATIC S5-100U Ex products have been designed for use in the industrial area and meet the following requirements:

Area of Application	Requirements:	
	Emitted interference	Immunity
Industry	EN 50081-2 : 1993	EN 50082-2 : 1995

Observing the Installation Guidelines

SIMATIC products meet the requirements if you:

1. Observe the installation guidelines described in the manual when installing and operating the equipment.
2. Observe, in addition, the following rules regarding installing the devices and working on switching cabinets and the notes on the individual modules.

Installing the Devices

Programmable controllers of the SIMATIC S5-100U Ex range must be installed in electrical equipment rooms in closed housings (for example, metal or plastic switchboxes).

Working on Switching Cabinets

In order to protect the modules from static electrical discharge, operating personnel discharge themselves of static electricity before opening switching cabinets or switchboxes.

Notes on the Individual Modules

Additional measures are required when using the following modules.

Order Number	Module	Measures Required
6ES5 437-8EA12	Digital input module	Signal lines must be shielded. Apply the shield of the signal lines on the shielding bar at the entrance to the cabinet.
6ES5 457-8EA12	Digital output module	

Updated Technical Specifications

Contrary to the information in the ‘General Technical Specifications’ of the manual, the EMC specifications listed below apply for modules bearing the CE marking.

The specifications are only valid for devices installed in accordance with the installation guidelines named above.

Electromagnetic Compatibility Specifications	Test Values
Immunity to static electrical discharge	
tested in accordance with EN 61000-4-2	Discharge to air 8 kV Discharge on contact 4 kV
Immunity to electromagnetic fields	
tested in accordance with EN V 50140 (amplitude-modulated HF)	80 to 1000 MHz 10 V/m 80% AM (1kHz)
tested in accordance with EN V 50204 (pulse-modulated HF)	900 MHz 10 V/m 50% ED, 200 Hz repetition frequency
Immunity to fast transient bursts	
tested in accordance with EN 61000-4-4 Supply lines for 120/230 V AC Supply lines for 24 V DC Signal lines (I/O and bus lines)	 2 kV 2 kV 2 kV*
Immunity to high frequency tested in accordance with EN V 50141	0.15 to 80 MHz 10 V 80% AM (1kHz) Source impedance 150 Ω
Emitted interference	
tested in accordance with EN 55011 Emission of electromagnetic fields Emitted interference over supply cable	 Limit value class A, Group 1 Limit value class A, Group 1

* Signal lines that are not used for process control, for example, connections to external printers: 1 kV

Notes for Machine Manufacturers

Introduction

The SIMATIC programmable controller system is not a machine as defined in the EU Machinery Directive. There is therefore no declaration of conformity for SIMATIC with regard to the EU Machinery Directive 89/392/EEC.

EU Machinery Directive 89/392/EEC

The EU Machinery Directive 89/392/EEC regulates requirements relating to machinery. A machine is defined here as an assembly of linked parts or components (see also EN 292-1, Paragraph 3.1).

SIMATIC is part of the electrical equipment of a machine and must therefore be included by the machine manufacturer in the declaration of conformity procedure.

Electrical Equipment of Machinery in Accordance with EN 60204

The EN 60204-1 standard (Safety of Machinery, Electrical Equipment of Machines, Part 1, Specification for General Requirements) applies for the electrical equipment of machinery.

The table below is designed to help you with the declaration of conformity and to show which criteria apply to SIMATIC according to EN 60204-1 (as at June 1993).

EN 60204-1	Subject/Criterion	Remarks
Paragraph 4	General requirements	Requirements are met if the devices are mounted/ installed in accordance with the installation guidelines. Please observe the explanations in ‘Notes on CE Marking of SIMATIC S5’ in this respect.
Paragraph 11.2	Digital input/output interfaces	Requirements are met.
Paragraph 12.3	Programmable equipment	Requirements are met if the devices for protection of memory contents against change by unauthorized persons are installed in locked cabinets.
Paragraph 20.4	Voltage tests	Requirements are met.