

APTER POWER PRODUCT MANUAL

6ES7212-1AF40-0XB0

SIMATIC S7-1200F CPU 1212FC DC/DC/DC Fail-safe Compact CPU

The Siemens 6ES7212-1AF40-0XB0 is a SIMATIC S7-1200F CPU 1212FC DC/DC/DC Fail-safe Compact CPU that combines standard compact I/O with fail-safe program execution in a CPU 1212FC.

In a correctly engineered SIMATIC S7-1200F installation, it runs standard and safety-related logic in the engineered F-system while acquiring onboard digital and analog inputs and driving six transistor outputs. It works with the exact host hardware, power, wiring, field devices, firmware, and project configuration published for this complete article number. It is applied in small safety-integrated machines requiring a compact F-CPU and limited standard I/O expansion.

Manufacturer	Siemens
Prepared by	Apter Power
Document ID	AP-SIE-15-6ES7212-1AF40-0XB0-PM-R1
Revision	R1
Issue date	2026-08-20

APTER POWER SALES TEAM

INDUSTRIAL AUTOMATION PRODUCT SUPPORT

**Compact standard control. Integrated F-capability.
One verified 1212FC identity.**

WHATSAPP / PHONE +86 180 3023 5313
EMAIL sales13@apterpower.com
WEBSITE www.apterpower.com



SCAN FOR PRODUCT & QUOTE
6ES7212-1AF40-0XB0

1. Product Overview and Identity

The Siemens 6ES7212-1AF40-0XB0 is a SIMATIC S7-1200F CPU 1212FC DC/DC/DC Fail-safe Compact CPU that combines standard compact I/O with fail-safe program execution in a CPU 1212FC.

In a correctly engineered SIMATIC S7-1200F installation, it runs standard and safety-related logic in the engineered F-system while acquiring onboard digital and analog inputs and driving six transistor outputs. It works with the exact host hardware, power, wiring, field devices, firmware, and project configuration published for this complete article number. It is applied in small safety-integrated machines requiring a compact F-CPU and limited standard I/O expansion.

Model Configuration

Field	Verified information
Complete model	6ES7212-1AF40-0XB0
Manufacturer	Siemens
Product description	SIMATIC S7-1200F CPU 1212FC DC/DC/DC Fail-safe Compact CPU

Key Features

- Exact Siemens article number 6ES7212-1AF40-0XB0
- SIMATIC S7-1200F CPU 1212FC DC/DC/DC Fail-safe Compact CPU
- 8 DI 24 V DC; 6 DO 24 V DC; 2 AI 0 to 10 V DC
- 24 V DC; 20.4 to 28.8 V DC
- 90 x 100 x 75 mm
- 0.37 kg approximate published weight

2. Technical Specifications

Only manufacturer-confirmed information is stated. Values absent from the named Siemens source are marked for nameplate or document verification.

Parameter	Verified value
Product type	SIMATIC S7-1200F CPU 1212FC DC/DC/DC Fail-safe Compact CPU
Complete article number	6ES7212-1AF40-0XB0
Product type designation	CPU 1212FC DC/DC/DC
System	SIMATIC S7-1200F
Supply voltage	24 V DC; 20.4 to 28.8 V DC
Integrated I/O	8 DI 24 V DC; 6 DO 24 V DC; 2 AI 0 to 10 V DC
Work memory	150 KB
PROFINET	1 PROFINET port
Supported local expansion	1 signal board, up to 2 signal modules, and up to 3 communication modules
IP degree of protection	IP20
Device dimensions	90 x 100 x 75 mm (W x H x D)
Approximate device weight	0.37 kg
Country of origin	Germany
Lifecycle	Siemens Industry Mall lists the complete article number as a PM300 Active Product. Confirm the current regional lifecycle, delivery status, firmware, and engineering-software requirements when quoting.

Verification Note

Use the complete 6ES7212-1AF40-0XB0 identifier. Siemens Industry Mall lists the complete article number as a PM300 Active Product. Confirm the current regional lifecycle, delivery status, firmware, and engineering-software requirements when quoting. Values not published in the cited Siemens sources are intentionally not inferred.

3. Functions, Applications and Components

Core Functions

- Runs standard and safety-related logic in the engineered F-system while acquiring onboard digital and analog inputs and driving six transistor outputs.
- Maintains the documented CPU 1212FC DC/DC/DC role for the complete 6ES7212-1AF40-0XB0 article number.
- Provides a model-specific basis for engineering, wiring, commissioning, diagnostics, and replacement verification.

Application Areas

Application	System role
Safety-integrated compact machines	Executes standard and fail-safe application logic in the engineered S7-1200F system
Guarding and emergency functions	Coordinates compatible F-I/O and safety devices according to the validated safety program
Standard machine I/O	Processes the integrated digital and analog signals for normal control functions
Compact F-system networking	Uses PROFINET for small safety-integrated machines requiring a compact F-CPU and limited standard I/O expansion within the approved safety architecture

Compatible Components

- SIMATIC S7-1200F hardware configuration explicitly supporting 6ES7212-1AF40-0XB0
- STEP 7 / TIA Portal version and CPU firmware stated in the current Siemens data sheet
- SIMATIC Memory Card, signal board, signal modules, and communication modules within the published CPU 1212FC DC/DC/DC limits
- 24 V DC sensors, analog transmitters, output loads, PROFINET devices, connectors, shielding, and circuit protection engineered to Siemens ratings
- Siemens F-I/O, safety devices, safety manual, PROFIsafe configuration, and validated safety program matched to the required safety function

Lifecycle Status

Siemens Industry Mall lists the complete article number as a PM300 Active Product. Confirm the current regional lifecycle, delivery status, firmware, and engineering-software requirements when quoting.

4. Installation Precautions

- Confirm every character of 6ES7212-1AF40-0XB0, the CPU 1212FC DC/DC/DC marking, hardware revision, and firmware against the TIA Portal project.
- Isolate power and verify 24 V DC; 20.4 to 28.8 V DC; follow Siemens conductor, terminal, grounding, and circuit-protection requirements.
- Check 24 V DC output polarity, 0.5 A channel limit, group current, pulse-output frequency, and load suppression before connecting field loads.
- Separate analog and communication wiring from power conductors; terminate shields and references according to the S7-1200 system manual.
- Validate the complete safety function with the approved safety program, F-I/O parameters, signatures, diagnostics, proof-test procedure, and responsible safety engineer before operation.

STOP - Verify before installation

Use the complete 6ES7212-1AF40-0XB0 identifier. Siemens Industry Mall lists the complete article number as a PM300 Active Product. Confirm the current regional lifecycle, delivery status, firmware, and engineering-software requirements when quoting. Values not published in the cited Siemens sources are intentionally not inferred.

Use the physical nameplate and current Siemens documents as the controlling records.

5. Official Source and Use Notice

Official source

Siemens official technical data sheet for 6ES7212-1AF40-0XB0: <https://support.industry.siemens.com/teddatasheet/?caller=SIOS&format=pdf&language=en&mlfbs=6ES7212-1AF40-0XB0>; Siemens official S7-1200 System Manual landing page: <https://support.industry.siemens.com/cs/ww/en/view/109759862>

Apter Power product page

<https://www.apterpower.com/Siemens/6es7212-1af40-0xb0>

Use Notice

This is an original Apter Power product-specific reference prepared from the Siemens source named above. It is not a Siemens publication and does not replace the original data sheet, nameplate, certificate, installation drawing, safety instructions, or machine-builder documentation.

ASK FOR QUOTE

For availability and quotation details, visit www.apterpower.com or contact sales13@apterpower.com.