

APTER POWER PRODUCT MANUAL

6ES7450-1AP00-0AE0

SIMATIC S7-400 FM 450-1 Counter Function Module

The Siemens 6ES7450-1AP00-0AE0 is an FM 450-1 counter function module for SIMATIC S7-400. It acquires fast counter or encoder pulses on two channels and supplies count, status, comparison, and control information to the automation program.

It is used where pulse acquisition must run independently of the CPU scan, including positioning, length measurement, speed monitoring, and event counting on production machinery.

Manufacturer	Siemens
Prepared by	Apter Power
Document ID	AP-SIE-01-6ES7450-1AP00-0AE0-PM-R1
Revision	R1
Issue date	2026-08-14

APTER POWER SALES TEAM

INDUSTRIAL AUTOMATION PRODUCT SUPPORT

Count at Machine Speed. Keep the S7-400 Scan Focused.

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



SCAN FOR PRODUCT & QUOTE
6ES7450-1AP00-0AE0

1. Product Overview and Identity

The Siemens 6ES7450-1AP00-0AE0 is an FM 450-1 counter function module for SIMATIC S7-400. It acquires fast counter or encoder pulses on two channels and supplies count, status, comparison, and control information to the automation program.

It is used where pulse acquisition must run independently of the CPU scan, including positioning, length measurement, speed monitoring, and event counting on production machinery.

Model Configuration

Field	Verified information
Complete model	6ES7450-1AP00-0AE0
Manufacturer	Siemens
Product description	SIMATIC S7-400 FM 450-1 Counter Function Module

Key Features

- Exact 6ES7450-1AP00-0AE0 identity retained
- Manufacturer-source data separated from unconfirmed values
- FM 450-1 counter function module
- System context: SIMATIC S7-400
- Model-specific lifecycle and installation guidance

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
Module	FM 450-1 counter function module
Counter channels	2
Counter range	32-bit / signed 31-bit
Maximum input frequency	500 kHz with 5 V RS422 encoder input
Digital I/O	6 digital inputs; 4 digital outputs
Encoder supplies	5 V and 24 V
Supply	24 V DC; 20.4 to 28.8 V
Dimensions	25 x 290 x 210 mm
Net weight	Approx. 0.65 kg

Verification Note

Use the complete 6ES7450-1AP00-0AE0 identifier. Siemens lists this article as a repair part. Confirm current repair, exchange, and successor options against the complete MLFB before purchase. Values not published in the cited Siemens source are intentionally not inferred.

3. Functions, Applications and Components

Core Functions

- It is used where pulse acquisition must run independently of the CPU scan, including positioning, length measurement, speed monitoring, and event counting on production machinery.
- Maintains the documented SIMATIC S7-400 system role for this exact article number.
- Provides an exact reference for engineering, maintenance, and quotation review.

Application Areas

Application	System role
Position and length measurement	Count encoder pulses outside the normal CPU scan.
Machine sequencing	Generate control actions from comparison and counter states.
Speed and event monitoring	Acquire high-frequency pulses from rotating or indexed equipment.

Compatible Components

- SIMATIC S7-400 rack and CPU configuration approved for FM 450-1
- 48-pin front connector and wiring specified by Siemens
- 5 V RS422 or 24 V pulse sources within the documented limits

Lifecycle Status

Siemens lists this article as a repair part. Confirm current repair, exchange, and successor options against the complete MLFB before purchase.

4. Installation Precautions

- De-energize the rack before module or front-connector work
- Match encoder voltage, polarity, shielding, and channel assignment to the FM 450-1 manual
- Back up hardware configuration and parameter data before replacement
- Verify the 48-pin front connector wiring
- Commission first at a controlled machine speed

STOP - Verify before installation

Use the complete 6ES7450-1AP00-0AE0 identifier. Siemens lists this article as a repair part. Confirm current repair, exchange, and successor options against the complete MLFB before purchase. Values not published in the cited Siemens source 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 Industry Mall technical data for 6ES7450-1AP00-0AE0 and FM 450-1 documentation.

Apter Power product page

<https://www.apterpower.com/Siemens/6ES7450-1AP00-0AE0>

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.