01 / Identity and job scope

SIEMENS

6DD1601-0AE0

Processor Module

Product role

Siemens 6DD1601-0AE0 is a SIMADYN D PG16 processor module for numerical processing and drive-level control of line-commutated converters.

Program memory
Installed MS submodule

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PG16
Drive-level processing

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SITOR arrangement
Converter pulse control

Applicability

Detailed PG16 design data apply to SWE type 4656019004.01, product version higher than M and software from V2.3. Match the actual version before applying those values.

Hardware and configuration

The 6DD1601-0AE0 PG16 performs drive-level numerical processing and regulating functions for line-commutated converters. The applicable PG16 design uses a 16-bit 80C186 processor at 16 MHz and converter firing-pulse logic. The detailed reference applies to SWE type 4656019004.01, product versions above M and software from V2.3; retain these conditions when checking an offered unit.

Planning basis

This Apter Power guide supports identification and engineering planning. Apply the complete manufacturer and machine-builder procedures for the actual installation.

02 / Configuration and interface readiness

Item	Configuration relationship
Module designation	PG16
System	SIMADYN D
Control application	Line-commutated converters
Reference processor	16-bit 80C186, 16 MHz
Reference RAM	64 KB; backup from power supply
Program memory	MS-series plug-in submodule at X50
Reference binary inputs	4, non-isolated, interrupt-capable

Technical context

The reference design provides 64 KB RAM with battery backup from the power supply and a socket for an MS-series program-memory submodule. User code executes under the SIMADYN D real-time operating system, with configuration-dependent interrupt-controlled cycles of at least 1 ms. Four non-isolated binary inputs can trigger process-interrupt jobs, and four non-isolated 24 V binary outputs support fast exchange with another processor.

Which processor is used in the reference design of 6DD1601-0AE0?

The applicable PG16 design uses a 16-bit 80C186 running at 16 MHz, together with converter-pulse logic.

How is program memory provided for 6DD1601-0AE0?

System firmware and user software reside on a compatible plug-in MS-series memory submodule at X50. Preserve the installed program and memory configuration.

03 / Installation and connection decisions

Verify the version

Match the full order code, SWE type and product revision against the applicability of the PG16 instructions.

Preserve software

Record the installed MS memory submodule and retain the controller program before replacement.

Remove power

Never insert or withdraw PG16 under power; isolate the converter and control system using the approved procedure.

Check signal levels

The reference binary interfaces are non-isolated. Verify common potentials and actual wiring before reconnection.

Installation context

A 50-pin X7 connector carries the SITOR interface, while X5 supports external synchronization and commissioning signals. The X01 serial interface is for service dialogue with the Hex monitor using the appropriate hybrid interface; it is not a configurable process-communication port. The front seven-segment display identifies the configured processor or displays a fault code. The board occupies two rack slots and must not be inserted or withdrawn under power.

Can binary inputs on 6DD1601-0AE0 initiate interrupts?

All four binary inputs in the applicable reference design can be configured as interrupt inputs to start a process-interrupt job.

Is the X01 port on 6DD1601-0AE0 a configurable communication port?

No. It is a service interface for Hex-monitor dialogue and requires the corresponding hybrid interface module.

04 / Functional acceptance planning

Application	Controlled review
Converter regulation	Use PG16 in its configured SIMADYN D application for line-commutated converter control.
Processor synchronization	Use the configured binary interfaces for fast processor-to-processor exchange while preserving signal levels and interrupt allocation.
SITOR integration	Match X7 wiring, the power section and the retained firing configuration before releasing converter operation.
Diagnostic service	Use processor-number and fault-code indications together with the appropriate Hex-monitor service arrangement.

How does 6DD1601-0AE0 connect to the SITOR arrangement?

The PG16 SITOR interface uses the 50-pin X7 connection. The connected power section and associated wiring must match the installed engineering configuration.

Can 6DD1601-0AE0 be replaced while energized?

No. The PG16 must not be inserted or removed under power. It occupies two rack slots.

Release boundary

Confirm processor indication and controlled converter response before restoring the normal operating sequence.

Record
Keep the original configuration

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Test
Observe controlled response

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Release
Authorize normal operation

05 / Technical handover and support

Retained information

Keep the complete 6DD1601-0AE0 marking, host identity, connection photographs, configuration backup and controlled-test results in the service record.

Support planning

Confirm current support and replacement guidance with Siemens for the installed identity and configuration. Apter Power availability and dispatch are separate quotation matters.

Reference basis

Siemens PG16 User Manual, Dk-Nr. 222142, Edition 05.95.

Apter Power technical summary; not a manufacturer-issued manual. Apply the original instructions for the actual installation.

Related industrial automation products

Navigation only; no substitution or compatibility claim.

Siemens 6DD1610-0AG1

Siemens 6DD3460-0AC0

Siemens 6DD1683-0BC0

Discuss your installed configuration

Send the full unit marking and connection details.

sales13@apterpower.com | +86 18030235313