

APTER POWER PRODUCT MANUAL

6DD1640-0AH0

SIMATIC TDC SM500 Signal Module

The Siemens 6DD1640-0AH0 is an SM500 signal module for SIMATIC TDC systems. It concentrates binary, analog, encoder, and pulse interfaces so high-performance control applications can exchange field and drive signals with the configured processor and interface modules.

It is used in dynamic drive, motion, and process-control systems where varied real-time signals must be acquired or issued through a coordinated TDC hardware configuration.

Manufacturer	Siemens
Prepared by	Apter Power
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APTER POWER SALES TEAM

INDUSTRIAL AUTOMATION PRODUCT SUPPORT

One TDC Signal Hub for Analog, Binary, and Encoder Data.

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6DD1640-0AH0

1. Product Overview and Identity

The Siemens 6DD1640-0AH0 is an SM500 signal module for SIMATIC TDC systems. It concentrates binary, analog, encoder, and pulse interfaces so high-performance control applications can exchange field and drive signals with the configured processor and interface modules.

It is used in dynamic drive, motion, and process-control systems where varied real-time signals must be acquired or issued through a coordinated TDC hardware configuration.

Model Configuration

Field	Verified information
Complete model	6DD1640-0AH0
Manufacturer	Siemens
Product description	SIMATIC TDC SM500 Signal Module

Key Features

- Exact 6DD1640-0AH0 identity retained
- Manufacturer-source data separated from unconfirmed values
- SM500 signal module
- System context: SIMATIC TDC
- 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	SM500 signal module
Binary outputs	16
Binary inputs	16
Analog inputs	8
Integrating analog inputs	4
Analog outputs	8
Pulse encoder inputs	4
Absolute encoder inputs	4
Analog output range	-10 to +10 V, plus/minus 10 mA
Analog output resolution	12 bit

Verification Note

Use the complete 6DD1640-0AH0 identifier. 6DD1640-0AH0 belongs to the legacy SIMATIC TDC hardware generation covered by the reviewed manual. Confirm current service status with Siemens. Values not published in the cited Siemens source are intentionally not inferred.

3. Functions, Applications and Components

Core Functions

- It is used in dynamic drive, motion, and process-control systems where varied real-time signals must be acquired or issued through a coordinated TDC hardware configuration.
- Maintains the documented SIMATIC TDC system role for this exact article number.
- Provides an exact reference for engineering, maintenance, and quotation review.

Application Areas

Application	System role
High-performance drives	Exchange encoder, analog, and binary signals for fast control loops.
Rolling and converting lines	Coordinate motion feedback and actuator commands.
Process and test systems	Combine varied real-time signal types in one TDC module.

Compatible Components

- SIMATIC TDC rack and processor configuration specified by Siemens
- SBxx or SU12 interface modules connected with the prescribed SC62 cable
- Sensors, encoders, and loads within the SM500 channel specifications

Lifecycle Status

6DD1640-0AH0 belongs to the legacy SIMATIC TDC hardware generation covered by the reviewed manual. Confirm current service status with Siemens.

4. Installation Precautions

- Use only the channel wiring and cable types specified for SM500
- Check SC62 cable routing and interface-module assignment
- Observe ESD controls
- Verify analog reference and grounding
- Back up the TDC project before changing the module

STOP - Verify before installation

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

5. Official Source and Use Notice

Official source

Siemens SIMATIC TDC Hardware manual, SM500 signal-module section.

Apter Power product page

<https://www.apterpower.com/Siemens/6DD1640-0AH0>

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.

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