

6RA8075-6DS22-0AA0

Siemens SINAMICS DCM Two-Quadrant DC Converter

INSTALLATION, INTERFACE AND VALIDATION WORKBOOK

6RA8075-6DS22-0AA0 is a Siemens SINAMICS DCM DC converter for two-quadrant drives with a B6C armature bridge. It converts a 400 V three-phase input at 174 A into a rated 485 V DC, 210 A output and includes a controllable field rectifier.

STEP	GATE	ENGINEERING PURPOSE
01	IDENTIFY	Confirm article, host and hardware
02	ISOLATE	Secure power and stored energy
03	CONNECT	Restore documented interfaces
04	VALIDATE	Prove diagnostics and function

WORKBOOK PURPOSE

Field-ready identity, isolation, connection, commissioning and closeout records for this exact Siemens article.

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Installation Readiness Gate

Complete the identity, host-system and isolation checks before disturbing the installed hardware.

- 1

Confirm the complete 6RA8075-6DS22-0AA0 marking and B6C two-quadrant execution.
- 2

Isolate the 400 V armature supply, electronics supply and field circuits; prove the DC link discharged.
- 3

Record armature, field, fan, feedback, control and protective-conductor connections.
- 4

Maintain the required 300 m3/h cooling path and cabinet clearances.

Pre-Work Evidence

EVIDENCE ITEM	RECORDED VALUE
Complete article marking	6RA8075-6DS22-0AA0
Host / carrier	SINAMICS DCM
Primary system role	Provides a rated DC armature power path
Acceptance boundary	Review converter diagnostics and complete a staged functional test before production release.
Source record	SINAMICS DCM DC Converter Catalog and Operating Instructions

WORK AUTHORIZATION RECORD

Work order: _____

Drawing / revision: _____

Checked by: _____

Date: _____

Isolation and Access Register

CONTROL POINT	ENGINEER RECORD
Incoming supply	Isolated / proved
Stored energy	Discharged / proved
Field connections	Identified / protected
ESD control	Established / recorded

Pre-Work Documentation

DOCUMENT	ENGINEER RECORD
Connection photograph	Reference / file
Configuration backup	Reference / revision
Diagnostic baseline	Reference / result

Connection and Installation Sequence

INSTALLATION PRINCIPLE

Install 6RA8075-6DS22-0AA0 with the documented armature, field, electronics and protective-conductor connections and maintain the required forced-air path. Before enabling the motor, confirm parameter-set identity, speed feedback, current-control behavior, field current, rotation and two-quadrant operating sequence under controlled conditions.

- 1

Verify motor, field winding and speed-feedback data against the approved drive project.
- 2

Restore the validated SINAMICS DCM parameter set and interlock logic.
- 3

Check phase sequence, armature polarity, field current and rotation at controlled output.
- 4

Review converter diagnostics and complete a staged functional test before production release.

Connection Record

CONNECTION GROUP	AS-FOUND / AS-LEFT RECORD	STATUS
Power / field connection	Reference / terminal	Checked
Signal / interface	Reference / connector	Checked
Ground / shield	Reference / point	Checked
Accessory / carrier	Reference / part	Checked

MODEL-SPECIFIC RELEASE LIMIT

Confirm 6RA8075-6DS22-0AA0, B6C two-quadrant bridge, 400 V / 174 A armature input, 485 V DC / 210 A output, motor and field ratings, electronics and fan supplies, feedback device, grounding, firmware, parameter backup, interlocks and controlled rotation and braking tests before commissioning.

Interface Acceptance Criteria

ACCEPTANCE ITEM	REQUIRED EVIDENCE
Identity	6RA8075-6DS22-0AA0
Host match	SINAMICS DCM
Connection proof	Restore the validated SINAMICS DCM parameter set and interlock logic.
Configuration proof	Check phase sequence, armature polarity, field current and rotation at controlled output.

Commissioning and Acceptance Record

Record each controlled verification step before the equipment returns to automatic operation.

NO.	ACCEPTANCE CHECK	RESULT	RECORD
1	Article and host identity	PASS / FAIL	Initial / date
2	Mechanical installation	PASS / FAIL	Initial / date
3	Power and field wiring	PASS / FAIL	Initial / date
4	Grounding and shielding	PASS / FAIL	Initial / date
5	Configuration restoration	PASS / FAIL	Initial / date
6	Signal or power-path response	PASS / FAIL	Initial / date
7	Diagnostics and alarms	PASS / FAIL	Initial / date
8	Final functional release	PASS / FAIL	Initial / date

Engineering Notes

RECORD AREA	ENGINEER ENTRY
As-found condition	
Corrective action	
As-left configuration	
Outstanding restriction	
Release authorization	

CONTROLLED COMMISSIONING

Review converter diagnostics and complete a staged functional test before production release.

Diagnostics and Release Log

EVENT	ENGINEERING RECORD
Initial energization	Result / observation
Interface or signal response	Result / observation
Alarm and diagnostic review	Result / observation
Functional release	Name / date

Maintenance Verification and Closeout

Industrial DC-motor speed control

Supplies and regulates the armature and field circuits of a matched DC motor.

Two-quadrant conveyor drives

Supports forward motoring and controlled electrical braking in the engineered machine sequence.

Winder and line-drive modernization

Provides a documented SINAMICS DCM platform for an existing DC motor and control project.

DC-drive cabinet replacement

Restores a 210 A converter position while preserving feedback, field and interlock records.

Related Engineering Pages

MODEL	ENGINEERING ROLE	APTER POWER PAGE
6SE7041-8EK85-0HA0	PER3 interface	View 6SE7041-8EK85-0HA0 page
6SE7041-8GK85-0HA0	PER3 interface	View 6SE7041-8GK85-0HA0 page
6SL3200-0SP01-0AA0	CIM PM-IF assembly	View 6SL3200-0SP01-0AA0 page
6SE7090-0XX84-3DB1	operator panel	View 6SE7090-0XX84-3DB1 page
6SE7090-0XX84-2FA0	PMU unit	View 6SE7090-0XX84-2FA0 page
6SL3120-2TE21-0AA4	double motor module	View 6SL3120-2TE21-0AA4 page
6SL3320-1TE33-1AA3	motor module	View 6SL3320-1TE33-1AA3 page
6SL3362-0AG00-0AA1	drive component	View 6SL3362-0AG00-0AA1 page

MANUFACTURER SOURCE RECORD

SINAMICS DCM DC Converter Catalog and Operating Instructions
Catalog D 23.1, November 2024; Siemens article record 6RA8075-6DS22-0AA0

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