

6RA8075-6DS22-0AA0

Siemens SINAMICS DCM Two-Quadrant DC Converter

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.

BRAND	Siemens	FAMILY	SINAMICS DCM
PART	6RA8075-6DS22-0AA0	SYSTEM ROLE	Provides a rated DC armature power path

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MANUFACTURER SOURCE RECORD

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

Product Overview

SYSTEM FUNCTION

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.

FUNCTION 1

Provides a rated DC armature power path

FUNCTION 2

Controls the connected DC-motor field circuit

FUNCTION 3

Coordinates speed and current control in the SINAMICS DCM platform

FUNCTION 4

Supports staged diagnostics and drive recommissioning

System Components

COMPONENT	DOCUMENTED ROLE
Host / carrier	SINAMICS DCM
Primary interface	Provides a rated DC armature power path
Engineering context	The converter uses a B6C armature bridge with a separate controllable field rectifier and requires the documented electronics supply, forced-air flow, motor feedback and commissioning sequence. Applications include controlled DC-motor speed and torque operation where motoring is required in two quadrants.
Commissioning duty	Review converter diagnostics and complete a staged functional test before production release.

TECHNICAL NOTE

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.

Technical Data

PARAMETER	VALUE	PARAMETER	VALUE
Drive family	SINAMICS DCM	Fan supply	24 V DC, internal
Operation / bridge	Two-quadrant / B6C	Cooling air requirement	300 m3/h
Armature input	400 V, 3 AC; 174 A	Sound pressure level	52.4 dB(A)
Rated armature output	485 V DC; 210 A	Rated ambient temperature	0 to 40 deg C
Field rectifier	Controllable	Storage / transport temperature	-40 to 70 deg C
Rated frequency	45 to 65 Hz	Rated installation altitude	Up to 1000 m
Electronics supply	380-480 V, 2 AC, 1 A or 190-240 V, 2 AC, 2 A		

Related Products on Apter Power

MODEL	SYSTEM ROLE	APTER POWER 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
6SL3352-1AE37-5BA1	replacement power block	View 6SL3352-1AE37-5BA1 page
6AU1455-2AD00-0AA0	SIMOTION controller	View 6AU1455-2AD00-0AA0 page
6ES7223-1BL22-0XA0	digital I/O module	View 6ES7223-1BL22-0XA0 page
6SE7041-8HK85-1HA0	PER2 interface	View 6SE7041-8HK85-1HA0 page
6SE7041-8EK85-0HA0	PER3 interface	View 6SE7041-8EK85-0HA0 page

ENGINEERING BOUNDARY

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.

Applications and Precautions

Common Applications

Industrial DC-motor speed control

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

Winder and line-drive modernization

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

Two-quadrant conveyor drives

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

DC-drive cabinet replacement

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

Product Precautions

- 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.
- 5

Verify motor, field winding and speed-feedback data against the approved drive project.
- 6

Restore the validated SINAMICS DCM parameter set and interlock logic.
- 7

Check phase sequence, armature polarity, field current and rotation at controlled output.
- 8

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

IMPORTANT NOTICE

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.

ACCEPTANCE CHECK	REQUIRED EVIDENCE
Identity	6RA8075-6DS22-0AA0
Configuration	Check phase sequence, armature polarity, field current and rotation at controlled output.
Functional release	Review converter diagnostics and complete a staged functional test before production release.

Engineer FAQ

Q1 What power conversion function does 6RA8075-6DS22-0AA0 perform?

It is a two-quadrant SINAMICS DCM converter using a B6C armature bridge with a controllable field rectifier.

Q3 Which motor connections must be recorded before replacing 6RA8075-6DS22-0AA0?

Record armature polarity, field conductors, motor data, feedback wiring, protective conductor and interlocks.

Q5 How is 6RA8075-6DS22-0AA0 configured after hardware replacement?

Restore the validated SINAMICS DCM parameter set, motor and field data, feedback selection and interlock logic.

Q7 How should 6RA8075-6DS22-0AA0 be commissioned?

Use staged energization, verify field current and armature polarity, prove rotation and then test the approved two-quadrant sequence.

Q2 Which rated armature values apply to 6RA8075-6DS22-0AA0?

The official article record lists 400 V, 3 AC at 174 A input and 485 V DC at 210 A output.

Q4 What cooling check is required for 6RA8075-6DS22-0AA0?

Maintain the documented forced-air path and verify the 300 m3/h cooling-air requirement before loaded operation.

Q6 Which feedback checks apply to 6RA8075-6DS22-0AA0?

Confirm feedback-device identity, polarity, scaling and actual-speed response before enabling normal regulation.

Q8 What evidence should be retained for 6RA8075-6DS22-0AA0 maintenance?

Keep the article and hardware record, connection map, parameter backup, motor data, diagnostic log and controlled test results.

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