Siemens 6SL3120-2TE13-0AA3

SINAMICS S120 Motor Module

VERIFIED ENGINEERING FACTS / 23 distinct technical points

Rated output current
2 x 3 A

Base-load current
2 x 2.6 A

S6 current at 40% duty
2 x 3.5 A

Peak output current
2 x 6 A

DC-link input
510 to 750 V DC in GH2 03/2006

Electronics supply
24 V DC, permitted 20.4 to 28.8 V

Electronics consumption
1.0 A at 24 V

Rated power
1.6 kW at 600 V DC, 4 kHz

Power loss
94 W including electronics

Efficiency
0.97 at 4 kHz

Cooling
Internal fan; 29.6 cubic metres per hour

DC-link capacitance
110 microfarads

Two-axis architecture
Each output is a separate 3 A motor channel. Check both motors, feedback circuits and drive assignments before transfer.

Busbar design
GH2 lists 100 A DC-link busbar and 20 A 24 V busbar current capacity for this family; coordinate with the actual line-up.

Peak duty
Check each axis against its 2.6 A base-load, 3.5 A S6 and 6 A peak limits. Do not sum the two channels into a single motor rating.

Switching and temperature
The manual lists 4 kHz without derating, 16 kHz with derating, 40 C ambient without derating and 55 C with derating. Apply actual derating curves.

Airflow
Allow unobstructed 29.6 cubic metres per hour at the module fan path and account for 94 W heat loss in the enclosure.

Installation record
Photograph both motor outputs, feedback connectors, DRIVE-CLiQ chain, PE connection, busbars and the full AA3 label before removal.

Pre-power inspection
Check 24 V supply polarity, PE, DC-link covers, both motor connections, fan clearance and original axis mapping.

Power isolation
Treat the DC link as hazardous until it is discharged and verified under the current equipment manual procedure.

Functional tests
Bring up one axis at a time with approved current and motion limits, then validate the second axis and simultaneous duty.

Handover record
Keep the AA3 label, parameter backup, both motor plates, cooling calculation, wiring photos and signed commissioning result.

Fault isolation
A fault on only one motor output calls for checks of that motor, cable and feedback before replacing the shared double module.

Manufacturer references: Siemens SINAMICS S120 Equipment Manual GH2, 03/2006

Technical enquiry

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