Siemens 6SL3000-0KH14-0AA0

01 SINAMICS Precharging Resistor / system role

Product function and operating context

Siemens 6SL3000-0KH14-0AA0 limits DC-link charging current during the resistor-based precharge sequence before the main bypass path is closed.

The resistance is 4.0 ohms with ±10% tolerance, and the specified pulse load is 18000 watt-seconds. This energy rating must not be interpreted as a continuous 18 kW dissipation rating.

Functional path

Line supply	Precharge contactor and resistors	Charging DC link	Controlled bypass path

Configuration	4.0 Ω resistance, ±10%
Interface	18000 W·s pulse-energy rating
Operating feature	Three- or six-resistor circuit arrangement

The diode-based frame-GD infeed uses precharging contactors and resistors, followed by a bypass contactor or circuit breaker. The internal Basic Line Module sequence controls those switching devices in the prescribed order.

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02 Technical operating envelope

Nominal resistance	4.0 Ω
Resistance tolerance	±10%
Pulse-load energy	18000 W·s
Associated line-voltage range	500–690 V, three phase
Associated infeed architecture	Diode-based Basic Line Module, frame GD

Resistor quantity per phase	1, or 2 in parallel according to design
Total resistor quantity	3 or 6 for the specified three-phase circuit
Precharge-contactor control	Basic Line Module X9:5,6
Bypass-contactor control	Basic Line Module X9:3,4

The resistor is part of the diode-based frame-GD Basic Line Module precharging circuit. System power and input current identify the associated infeed, not resistor continuous ratings.

Operating interpretation

18000 W·s is pulse energy, not a continuous-power claim.

Configuration boundary

Match resistor quantity, DC-link capacitance and internally controlled contactor sequence.

How many 6SL3000-0KH14-0AA0 resistors are used in the three-phase arrangement?

The specified arrangement uses one per phase or two in parallel per phase, giving three or six resistors according to the required DC-link capacitance.

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03 System integration and applications

DC-link charging limitation

The resistor limits current during the initial charging of the specified infeed circuit.

Frame-GD Basic Infeed

It forms part of a diode-based S120 Basic Line Module arrangement.

Parallel precharge paths

Two resistors per phase can be used where the engineered capacitance arrangement requires them.

Precharge fault investigation

Resistance, contactor sequence and link capacitance can be checked together during service.

System and supply context

Siemens 6SL3000-0KH14-0AA0 operates within the following defined system context. Confirm the 4.0-ohm resistor and the complete frame-GD precharge design.

Application boundary

The resistor is part of the diode-based frame-GD Basic Line Module precharging circuit. System power and input current identify the associated infeed, not resistor continuous ratings.

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04 Engineering selection decisions

Is the 18000 W·s value of 6SL3000-0KH14-0AA0 a continuous power rating?

No. It is a pulse-energy value of 18000 joules. The charging sequence and thermal recovery conditions must be assessed separately.

Where does 6SL3000-0KH14-0AA0 operate in the infeed sequence?

It is in the resistor-based precharging path of a diode-based frame-GD Basic Line Module, before the main bypass path is closed.

Which control terminals are associated with the 6SL3000-0KH14-0AA0 precharge contactor?

The engineering arrangement uses X9:5,6 for the precharging contactor and X9:3,4 for the bypass contactor or circuit breaker.

Why must DC-link capacitance be reviewed when replacing 6SL3000-0KH14-0AA0?

Capacitance affects the charging duty and the required resistor arrangement. Adding drive capacitance without checking precharge design can overload the charging circuit.

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05 Configuration boundary and references

Lifecycle and support

The current manufacturing and factory-support phase of 6SL3000-0KH14-0AA0 is unconfirmed. Apter Power availability is assessed separately from manufacturer lifecycle status.

Replacement assessment

Match resistor quantity, DC-link capacitance and internally controlled contactor sequence.

Document roles

Use the original manufacturer excerpt for its preserved technical tables and drawings. This product brief explains selection and system context. The separate installation guide covers preparation, connection, tests and handover; use it together with the applicable manufacturer instructions.

Technical basis

Siemens SINAMICS Engineering Manual, February 2020.

Related product navigation

- Siemens 6SE7090-0XX84-0AB0
- Siemens 6ES7153-2BA02-0XB0

These are related references, not confirmed substitutes or an automatically approved assembly.

Product enquiries