Siemens 3RW4076-6BB44

01 Three-Phase Motor Soft Starter / system role

Product function and operating context

Siemens 3RW4076-6BB44 reduces starting stress before bypassed running, making acceleration duty and motor protection central to selection.

A soft starter controls the acceleration process and then transfers running current through its bypass arrangement. It does not provide continuous adjustable-frequency speed control. Match the application to the intended starting and stopping behavior.

Integration checkpoints

- Reduced-stress motor starting
- Fixed-speed motor circuits
- Motor protection integration
- Legacy SIRIUS replacement

Starting method	Controlled acceleration followed by integrated bypass
Protection role	Motor overload and internal device protection
Application boundary	Standard in-line motor circuit

Starting capability depends on load torque, motor inertia, current limitation and the allowed thermal duty. A lower current setting can prolong acceleration and may prevent the motor from reaching operating speed. Evaluate the complete starting cycle.

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02 Technical operating envelope

Rated operating current	432 A at 40 degrees C
Operating current at 50 degrees C	385 A
Operating current at 60 degrees C	335 A
Motor power	250 kW at 400 V and 40 degrees C
Main supply	200-460 V AC
Control supply	230 V AC; 50/60 Hz

Integrated bypass	Yes
Motor overload protection	Yes
Adjustable current limitation	Yes
Inside-delta connection	Not supported
Minimum motor-current setting	207 A
Typical running power loss	165 W at rated current and 40 degrees C

Use the exact hardware execution with the supported system configuration and installation conditions.

Is inside-delta wiring supported by 3RW4076-6BB44?

No. Use the supported standard circuit and approved wiring design. An inside-delta arrangement used for another starter family must not be copied to this execution.

What should be checked if 3RW4076-6BB44 starts once but trips on repeated starts?

Review acceleration duration, starts per duty cycle, cooling and motor load. Repeated starts accumulate heat differently from one cold start. Diagnose the thermal duty before changing protection settings.

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03 System integration and applications

Reduced-stress motor starting

Control acceleration where the load and starting duty are suitable.

Fixed-speed motor circuits

Bypass the power electronics after the starting phase.

Motor protection integration

Coordinate the configured overload function with the installation.

Legacy SIRIUS replacement

Assess the preferred successor against wiring, ratings and duty.

System and supply context

3RW4076-6BB44 belongs to the SIRIUS motor control installation described by the technical reference. Connected equipment and accessories must be included explicitly in the configured assembly.

Application boundary

The following uses describe supported engineering roles; they do not establish interchangeability with another model or remove application-specific validation.

Can 3RW4076-6BB44 regulate motor speed continuously like a variable-frequency drive?

No. It is a soft starter for starting and stopping duties, with integrated bypass for running operation. Applications requiring continuous frequency-based speed control need a suitable drive system.

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04 Engineering selection decisions

Why can excessive current limiting on 3RW4076-6BB44 prevent a successful start?

Reducing current also reduces available starting torque. If load torque remains too high, acceleration is prolonged or stalled and heating increases. Adjust within the approved motor and starter design rather than assuming the lowest current is always best.

Why must ambient temperature be considered when selecting 3RW4076-6BB44?

Permitted operational current decreases as ambient temperature rises. Assess cabinet temperature and the actual motor duty together. The rating at 40 degrees C must not be carried unchanged into a hotter enclosure.

Does the motor-overload function of 3RW4076-6BB44 replace all feeder protection?

No. Upstream short-circuit protection and installation coordination remain necessary. Select the protection arrangement for the actual supply and motor circuit; overload monitoring alone is not a complete fault-protection scheme.

Can the preferred successor to 3RW4076-6BB44 be installed without an engineering comparison?

No. Compare terminal assignments, control supply, motor rating, protection functions and starting duty. A preferred successor designation guides selection but does not eliminate the need to validate the installed circuit.

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05 Configuration boundary and references

Lifecycle and support

Phased out. The preferred successor is SIRIUS 3RW5076-6AB14; installation compatibility still requires assessment.

Replacement assessment

Compare the complete 3RW4076-6BB44 identity, installed connections and configuration before selecting a replacement. The control supply and main motor circuit have separate voltage requirements. Preserve the specified control arrangement and external protection coordination when replacing the starter, and assess the motor-overload settings against the actual motor nameplate.

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 product data sheet, 3RW4076-6BB44.

Related product navigation

- Siemens 6ES7221-1BF22-0XA0
- Siemens 6ES7153-4BA00-0XB0
- Siemens 6ES7212-1AE40-0XB0

Related products for separate application assessment; verify the platform and interface. No interchangeability is implied.

Product enquiries