Siemens 6ES7417-4HL04-0AB0

01 Capture both H-system operating states

1. Record the installed CPU pair, hardware configuration, program baseline, retained operating data and synchronization arrangement. Compare both program and data work-memory requirements with their separate allocations. Identify which communication connectors serve process networks and which serve the H-system before planning a replacement.

2. A backup of one program file without hardware and partner-state information is not sufficient evidence for a redundant-system restoration.

Acceptance observation	The retained baseline describes both CPUs and their engineered relationship.
Evidence to retain	Connection map and approved baseline
Release boundary	Use the applicable SIMATIC S7-400 instructions and the approved application acceptance criteria.

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02 Protect the application and retained data

1. Review the actual operating state of the partner CPU and the approved maintenance method. Check the synchronization links and required I/O availability before disturbing hardware. Do not infer uninterrupted operation merely from the presence of a second CPU; the complete configured system must support the proposed activity.

2. If synchronization or partner readiness is degraded, resolve that condition or use the approved shutdown plan before proceeding.

Acceptance observation	The system state and maintenance method are compatible with the intended work.
Evidence to retain	Isolation and supply assessment
Release boundary	Use the applicable SIMATIC S7-400 instructions and the approved application acceptance criteria.

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03 Restore partner and synchronization compatibility

1. Restore the correct load-memory and application arrangement while preserving the assigned interface roles. Compare hardware revision, network parameters and H configuration with the retained baseline. Keep process outputs under the agreed maintenance controls until startup diagnostics and application state have been reviewed.

2. A successful power-up without correct program or hardware configuration must not be treated as a recovered control system.

Acceptance observation	The CPU loads the intended configuration and recognizes its assigned networks and partner.
Evidence to retain	Restored interface and configuration
Release boundary	Use the applicable SIMATIC S7-400 instructions and the approved application acceptance criteria.

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04 Verify I/O before controlled changeover

1. Observe synchronization and redundancy diagnostics, then check representative process data through the configured networks. Any deliberate switchover test must follow the approved plant test plan, with the expected output and communication behavior defined beforehand. Record the actual transition rather than assuming no disturbance occurred.

2. Unexpected loss of I/O, stale data or changed output state requires investigation before redundancy is accepted.

Acceptance observation	Partner coordination and tested application functions behave as designed.
Evidence to retain	Measured response and diagnostic state
Release boundary	Use the applicable SIMATIC S7-400 instructions and the approved application acceptance criteria.

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05 Record redundant readiness and restart behavior

1. Reconcile retained values and restart conditions with the process baseline. Remove temporary maintenance controls in the agreed sequence and confirm both the control function and redundancy status remain healthy. Archive the final project and hardware identities so later service can distinguish a program change from a hardware replacement.

2. A running application with unresolved redundancy diagnostics remains a limited operating condition, not full restoration.

Technical basis: Siemens product data sheet, 6ES7417-4HL04-0AB0.

Related product navigation

- Siemens 6ES7972-0AA01-0XA0
- Siemens 6ES7431-0HH00-0AB0
- Siemens 6ES7521-1BL00-0AB0

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