ABB ICMK-CS31-A1.0 1SBP260057R1001

Installation & Commissioning Guide

01 Identity and replacement planning

Preserve the offered reference

Keep ICMK-CS31-A1.0 1SBP260057R1001 in the enquiry and work package. Its supplied nameplate specifies 24 V DC. Match the actual label, supply terminals and revision before using the ICMK-CS31 series reference configuration.

Identify the original station

Record the replaced Series 30 unit, central-controller type and program, CS31 address and complete extension arrangement. ABB supports selected replacement combinations; the method does not imply that every Series 30 station is interchangeable.

Plan the rewiring

The documented conversion retains the applicable central-program behavior but requires rewiring. Prepare a terminal and channel map before removal so the original process I/O meaning is preserved.

Separate configuration from process I/O

The eight local inputs on ICMK-CS31 select configuration functions. The remote unit has no outputs. Plan the required process channels through the applicable extension modules and verify their configured range and assignment.

Control the affected process

Place connected machinery and field circuits in the approved maintenance state. Isolate all applicable power sources before handling terminals or modules. Preserve the as-found configuration before making any change.

Keep the configuration evidence

Record the complete marking, order code and actual 24 V DC unit label together. Confirm the revision-specific circuit before wiring; the series order-code comparison does not override the supplied unit nameplate.

Technical source: supplied unit nameplate; ABB AC31 ICMK-CS31 series documentation, 1SBC121001M0201-b (02.07). Supply, power and input-current values follow the nameplate. Other entries are series references; confirm their applicability to the installed revision and configuration. Do not select supply wiring from the order code alone.

02 Power, mounting and CS31 wiring

Confirm the supply label

The supplied ICMK-CS31-A1.0 1SBP260057R1001 nameplate specifies 24 V DC. Power is marked 6 W without extensions and 10 W with extensions. Match the terminal diagram and polarity before applying power; do not use an AC supply based on the order code alone.

Respect the mounting position

Use the documented 35 mm DIN rail or M4 screw mounting. Horizontal operation permits 0–55 °C; vertical operation permits 0–40 °C. The IP20 unit needs the protection provided by an appropriate enclosure.

Prepare the terminals

The removable terminal blocks accept conductors up to 2.5 mm². The manufacturer gives an indicative tightening torque of 0.5 N.m. Secure conductors without damaging the terminal and inspect the installed connection.

Maintain bus continuity

Use shielded twisted pair for CS31. Connect Bus 1 to Bus 1 and Bus 2 to Bus 2 along the network. Follow the manufacturer shield-terminal arrangement; do not reverse the two data conductors.

Terminate only the ends

Fit a 120 ohm, 1/4 W resistor at each end of the CS31 bus. Preserve the actual physical topology; adding end termination at intermediate stations can impair communication.

Check the supply and input markings

Use the actual label: supply 24 V DC; eight inputs 0-24 V DC, 5 mA. Do not infer an isolated auxiliary output or its current rating from a different ICMK-CS31 supply version.

Review any later substitution

A changed extension, central controller or signal type can change the required configuration. Recheck the applicable ABB tables and channel map before accepting a proposed replacement.

03 Address and configuration inputs

Set the station address

Use the two rotary switches for tens and units. Retain the address expected by the central program and original remote station. Check the entire segment for address duplication before energizing.

Select the documented arrangement

Configuration input 0 participates in the documented mode and extension limits. Choose its state from the exact ABB replacement table for the original unit and selected extensions.

Identify analog extensions

Input 1 relates to ICST08A7/A8 and input 2 to ICST08A9 selection. Confirm the actual extension type before wiring either state; similar module appearance does not establish equivalent channel behavior.

Select temperature and analog modes

Input 3 selects the documented temperature mode. Input 4 selects the applicable positive analog or three-wire temperature arrangement. Verify the installed sensor wiring and supported configuration together.

Preserve reserved functions

Inputs 5 and 6 are reserved. Leave them according to the applicable manufacturer configuration; do not assign a process or user-defined function.

Check upper-channel assignment

Input 7 selects the documented upper channel group 08–15. Confirm the final process map against the central program and original station before connecting the process.

Verify electrical levels

The supplied nameplate marks eight inputs 0-24 V DC, 5 mA. Confirm revision-specific thresholds and filtering before applying series reference values; record the actual input states.

Maintain cabinet conditions

Keep the unit within the temperature limit for its mounting orientation. Inspect terminal seating, bus cable condition and enclosure protection during scheduled maintenance without disturbing a running process unnecessarily.

04 Commissioning and diagnostics

Inspect before power

Check the order code and supply version, terminal map, extension order, bus polarity and termination. Confirm that no field circuit can drive an unintended machine action when the station starts.

Check POWER

The POWER indication confirms the supply state. If absent, investigate the 24 V DC source and wiring under the approved electrical procedure before diagnosing the bus or configuration.

Check RUN

RUN blinking indicates reception of a valid message. Compare the actual CS31 address with the central-controller configuration and inspect bus wiring if valid communication is absent.

Interpret ERR

ERR on indicates an error; ERR blinking indicates a configuration error. Review extension identities, local configuration-input states and the selected replacement arrangement instead of repeatedly resetting an unresolved mismatch.

Prove channel mapping

Check each affected process input and output through the extension modules. Confirm the channel number, signal range, polarity and central-program interpretation using a controlled functional test.

Authorize service release

Remove maintenance controls only after the complete process response and diagnostic state are accepted. Retain the nameplate images, wiring map, address, configuration states and test results with the maintenance record.

Related products

Portfolio navigation only; these links do not establish compatibility or an approved substitution.

ABB ICMK14F1 1SBP260050R1001	View product
ABB 07DI92	View product
ABB 07KT97 WT97	View product

Discuss the exact offered unit

Send the complete marking, quantity and available label photos for review. Confirm condition and included items in the quotation.

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