ABB BSFC-02C 3AXD50000011461

Complete Product Information

ABB BSFC-02C 3AXD50000011461 is a charging controller for an ACS880 multidrive DC-link charging arrangement. It supervises the charging and inverter power-switch sequence through its electrical and optical interfaces.

01 Power-path identity and published ratings

Controller family	BSFC-02C
Power input (X5)	115 V AC or 230 V AC ±10%
Supply frequency	50/60 Hz
Typical input current	40 mA at 115 V AC; 20 mA at 230 V AC
X5 input fuse	2 A slow microfuse
X5 terminal block	6-position detachable screw; ≤2.5 mm² wire
Solenoid-control voltage	115 V AC or 230 V AC, +10/−15%
Solenoid-control current	2 A max for 3.5 s; 4 A max for 20 ms

02 Functional role and system position

The BSFC-02C uses an AC supply at X5 and a separate X4 switch-feedback connection. The X5 terminal block also carries solenoid control, with a common slow 2 A microfuse. These functions belong to the charging controller and must be matched to the cabinet wiring before replacement.

Optical connections V1-V6 are specified as 5 MBd Avago Versatile Link transmitters and receivers. The plastic optical fiber run between the controller and inverter modules is limited to 4 m. ABB also specifies a 35 mm minimum fiber bend radius; connector cleanliness and routing affect reliable command transfer.

The unit mounts on a 35 mm rail and is specified for 0-70 °C with free air circulation. The BSFC-12C shares parts of the family layout but uses a 24 V DC input, so its electrical figures must not be substituted for the BSFC-02C AC-powered column.

03 Engineering highlights

Charge coordination

Directs the configured DC-link switch-on and switch-off sequence.

Interface separation

Uses X4/X5 electrical terminals and V1-V6 optical paths for distinct functions.

Service continuity

Retain front-switch positions and original cabinet connection records.

04 Evidence and applicability boundary

The BSFC-02C column identifies the electrical values. ABB also identifies 3AXD50000011461 as the BSFC-02C charging control board in its ACS880 retrofit parts list.

05 Isolation and energy-control map

Air-cooled multidrive charging

Coordinate the charging supply and DC switch arrangement specified for air-cooled ACS880 inverter modules.

Inverter optical control

Connect the designated inverter optical branches without exchanging V1-V6 assignments.

Power-switch feedback

Use the X4 feedback path to confirm switch state in the controller sequence.

Service replacement

Preserve switch settings, terminal mapping and the approved power-up procedure when replacing the controller.

06 Installation and protection controls

Isolate the cabinet

Follow the drive electrical-safety procedure and prove the DC link discharged before touching X4, X5 or optical branches.

Match the AC execution

Verify the BSFC-02C supply column and do not apply BSFC-12C 24 V DC wiring assumptions.

Record the optical map

Identify V1-V6 and the destination inverter module before disconnecting each fiber.

Protect the fiber ends

Handle connectors, keep end faces clean and maintain at least the specified bend radius.

Preserve switch settings

Photograph and record S1-S3 and terminal-block positions before removing the unit.

Prove the sequence

After controlled energization, confirm feedback, optical indications and the expected inverter switch-on and switch-off steps.

07 Technical notes

Power input	X5 accepts the AC supply; select 115 V or 230 V as installed and verify frequency and fuse.
Switch feedback	X4 provides a low-voltage feedback source; preserve its assignment and the actual switch-state comparison.
Solenoid output	Use the appropriate AC control voltage and observe the short-duration current limits.
Technical reference	ABB hardware manual 3AXD50000027498 Rev C; material code association from ABB ACS880 retrofit handbook.

08 Installed-system decision points

How should the AC supply for BSFC-02C 3AXD50000011461 be checked before energization?	Measure the actual X5 supply under the approved maintenance procedure and verify that the voltage and frequency agree with the BSFC-02C column, then check the cabinet fuse and wiring.
Why must BSFC-12C not replace BSFC-02C 3AXD50000011461 without an engineering review?	BSFC-12C uses a different 24 V DC supply. Compare the complete power, feedback, solenoid and optical arrangements before considering any substitution.
Which record prevents V1-V6 optical mix-ups on BSFC-02C 3AXD50000011461?	Label each cable with its BSFC port and destination inverter module before removal, then compare the restored mapping with the cabinet drawing and operating indications.

09 Electrical restoration and acceptance matrix

Safe-state proof	Apply the complete equipment isolation and stored-energy procedure before handling the unit. Exact model: BSFC-02C 3AXD50000011461.
Physical relationship	Restore polarity, orientation, connector and support relationships from the as-found record. Exact model: BSFC-02C 3AXD50000011461.
Controlled energization	Use the documented staged procedure and monitor the expected electrical and diagnostic response. Exact model: BSFC-02C 3AXD50000011461.
Final acceptance	Record stable operation, relevant measurements and the final fault-free state. Exact model: BSFC-02C 3AXD50000011461.

10 Published technical data - continuation

Switch feedback (X4)	15 V DC output; 10 mA max
X4 terminal block	4-position detachable screw; ≤2.5 mm² wire
Optical ports	V1-V6
Optical interface	Avago Versatile Link, 5 MBd
Plastic optical-fiber length	4 m maximum
Minimum fiber bend radius	35 mm
Operating temperature	0-70 °C, free air circulation
Mounting rail	35 mm, vertical or horizontal

11 Product-specific engineering FAQ

How should the AC supply for BSFC-02C 3AXD50000011461 be checked before energization?

Measure the actual X5 supply under the approved maintenance procedure and verify that the voltage and frequency agree with the BSFC-02C column, then check the cabinet fuse and wiring.

Why must BSFC-12C not replace BSFC-02C 3AXD50000011461 without an engineering review?

BSFC-12C uses a different 24 V DC supply. Compare the complete power, feedback, solenoid and optical arrangements before considering any substitution.

Which record prevents V1-V6 optical mix-ups on BSFC-02C 3AXD50000011461?

Label each cable with its BSFC port and destination inverter module before removal, then compare the restored mapping with the cabinet drawing and operating indications.

How is the switch-feedback path on BSFC-02C 3AXD50000011461 proven after reconnection?

Use the approved charge-sequence test to compare the X4 feedback indication with the actual power-switch state. Investigate disagreement before enabling inverter operation.

What limits govern optical-fiber routing from BSFC-02C 3AXD50000011461?

Keep the controller-to-inverter plastic optical fiber within the 4 m limit and maintain a bend radius of at least 35 mm. Inspect connectors for dirt or damage.

What must be retained when removing BSFC-02C 3AXD50000011461 from its rail?

Record the complete marking, S1-S3 positions, X4/X5 terminal assignments, optical-port map and cabinet reference before releasing the 35 mm mounting feet.

How should a failed solenoid-control test on BSFC-02C 3AXD50000011461 be investigated?

Check the X5 supply and common slow 2 A fuse, verify the coil wiring and inspect switch feedback. Apply the cabinet procedure rather than bypassing the charge interlock.

What acceptance evidence is needed after fitting BSFC-02C 3AXD50000011461?

Retain as-found and as-left wiring photos, supply and feedback readings, optical-port mapping, controller indicators and the controlled power-switch sequence result.

12 Lifecycle and supply boundary

The production and manufacturer-support phase of BSFC-02C 3AXD50000011461 has not been independently confirmed. Match the AC-powered execution and installed cabinet configuration for replacement planning.

Offered reference	ABB BSFC-02C 3AXD50000011461
Included items	the charging controller only; mating terminal blocks, optical cables and inverter modules are separate unless itemized
Identity check	Compare the complete marking, revision and connections with available unit photographs and the installed record.

13 Commissioning handover record

Isolation and discharge evidence	Retain with the complete model marking, installed asset reference and responsible acceptance sign-off.
Polarity or phase relationship	Retain with the complete model marking, installed asset reference and responsible acceptance sign-off.
Controlled energization result	Retain with the complete model marking, installed asset reference and responsible acceptance sign-off.
Final electrical condition	Retain with the complete model marking, installed asset reference and responsible acceptance sign-off.

14 Enquiry workflow

Review your reference	Send the full BSFC-02C 3AXD50000011461 marking, cabinet designation, label photos and required quantity.
Confirm the offer	Confirm the AC supply execution, terminal blocks, optical-port arrangement, condition and included items against the written offer.
Arrange dispatch	Agree the dispatch date, quantity and delivery details in the quotation.

15 Related product references

Recommended model	ABB CP-A RU 1SVR427071R0000
Recommended model	ABB GJR5143100R0001 35EK90
Recommended model	ABB GJR5146620R0001 35ZE94G
Recommended model	ABB 3BHE027867R0101
Recommended model	ABB NMFC03

Confirm the complete BSFC-02C 3AXD50000011461 marking, installed relationship and required quantity with Apter Power.

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