ABB AFPS-11C

Engineering Installation, Diagnostic and Acceptance Guide

ABB AFPS-11C is a 1 kw fan-inverter power-supply board for the ABB ACS800-67 converter module architecture. The complete marking must be matched to the installed hardware, wiring and configuration before replacement.

01 Work package

Complete model	AFPS-11C
Product type	1 kW fan-inverter power-supply board
Manufacturer	ABB
Technical source	ABB ACS800-67 Wind Turbine Converters Hardware Manual

Field decisions

1 Establish identity

Capture the full marking, installed companion components and baseline before disconnection.

2 Inspect interfaces

Verify mounting, cable, connector, armor, approval and environmental boundaries.

3 Fit the exact chain

Preserve the documented probe-cable-Proximitor or sensor-monitor relationship.

4 Prove response

Use the approved stopped-machine and operating acceptance procedure.

5 Record as left

Save markings, configuration, test values and operating observations.

Pre-work evidence

Installed drawing	Record the drawing, machine location and channel designation that govern AFPS-11C.
Probe marking	Capture the complete order identity and any tag or revision visible on the delivered item.
Mechanical reference	Record thread or sleeve datum, insertion depth, lock position and expected target travel.
Cable identity	Confirm lead construction, connector condition, routing, strain relief and electrical-length relationship.
Companion electronics	Record the matching extension cable, Proximitor or signal conditioner and monitor channel.

02 Interface and configuration map

Board designation	AFPS-11C
ABB drawing position	A433
Documented function	Fan inverter power supply
Documented power class	1 kW
Converter family	ACS800-67 wind turbine converter
Associated fan inverter	AFIN-01C at position A432
Associated fan	Y41 in converter layout
Installation location	Internal converter-module assembly
Cooling-system role	Supplies the fan-inverter circuit
Certification record	Added to ACS800 multidrive certification in 2009
Board-level voltage	Use installed circuit diagram; not assigned from family value
Connector map	Use delivered converter circuit diagram
Replacement boundary	Do not substitute APOW control-power boards for AFPS fan power supply

Chain controls

Target condition	Confirm target material, width, runout surface and clearance from nearby conductive material.
Static baseline	Record stopped-machine gap or bias and compare it with the approved maintenance baseline.
Operating baseline	Record monitor indication and expected response after the complete channel is returned to service.

03 Installation workflow

Confirm the complete identity

Match every field of AFPS-11C with the approved spare-parts record before installation.

Control electrostatic exposure

Use grounded handling, antistatic packaging and protected work surfaces for exposed electronics.

Verify the host interface

Confirm connector keying, slot assignment, supply and companion hardware before energizing.

Preserve configuration evidence

Record switches, firmware, parameters, terminal assignments and as-found diagnostics before removal.

Inspect environmental condition

Check contamination, corrosion, ventilation, vibration and cabinet temperature before fitting the replacement.

Prove the installed function

Complete the manufacturer and site acceptance procedure, then retain the as-left result with the maintenance record.

Application checks

Converter cooling supply

Provide power to the documented 1 kW fan-inverter circuit.

Wind-turbine converter maintenance

Maintain the ACS800-67 internal cooling chain.

Fan-system fault isolation

Separate supply-board, inverter-board and fan-motor causes.

Exact-board replacement

Restore the A433 assembly and its documented connectors.

Controlled sequence

01 Isolate	Place the monitored machine and channel in the approved maintenance state; prove the required isolation.
02 Photograph	Capture AFPS-11C, the installed datum, connector, route and companion-component markings.
03 Measure	Record mechanical position and the applicable stopped-machine electrical reading before removal.
04 Compare	Check delivered identity, interfaces and evidence against the approved drawing and spare-parts record.
05 Install	Fit without twisting the lead; preserve thread engagement, target clearance, bend radius and strain relief.
06 Set point	Establish the operating gap or datum only with the approved stopped-machine procedure.
07 Prove	Compare local reading, monitor indication and controlled operating response with the accepted baseline.
08 Handover	Record as-left values, photographs, deviations, responsible technician and release approval.

04 Diagnostic decision table

How should AFPS-11C be distinguished from the converter control-power board?	Confirm the A433 location, fan-inverter supply role and connector destinations; do not identify it only by board size or nearby power components.
What should be tested if AFPS-11C does not start the cooling fan?	Check incoming protected power, board output, AFIN-01C command path, fan motor circuit and interlocks in the converter diagram.
How should AFPS-11C connectors be handled during replacement?	Photograph each plug, mark orientation, inspect locking and discoloration, and reconnect only after comparing the converter circuit diagram.
What proves AFPS-11C is functioning after installation?	Verify fan start and hold behavior, stable output under load, correct airflow and absence of cooling-system diagnostics.
What evidence should be recorded before replacing AFPS-11C?	Capture the complete nameplate, installed slot or mounting position, companion hardware, wiring identifiers and the accepted operating baseline for the 1 kw fan-inverter power-supply board.
How should an intermittent fault around AFPS-11C be isolated?	Separate field wiring, connector, supply, grounding, configuration and host-system causes. Reproduce the symptom under a controlled test and change only one variable at a time.
What configuration evidence should be retained after commissioning AFPS-11C?	Retain the hardware identity, firmware or parameter record where applicable, channel assignment, as-left measurements, alarm or diagnostic state and the approved functional-test result.
When should AFPS-11C be rejected during incoming inspection?	Quarantine the item if the complete marking, connector keying, board revision, protective coating, terminal condition or required companion hardware differs from the approved replacement record.

Release review

Installation relationship	Restore AFPS-11C at ABB position A433 with the documented AFIN-01C fan-inverter and fan circuit.

System boundary	Use only in the ABB converter configuration and connector arrangement documented for the installed unit.
Technical reference	ABB ACS800-67 Wind Turbine Converters Hardware Manual.

Engineering questions

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Acceptance and support

Retain the full marking, installed-chain identities, test readings and approved machine configuration. Confirm the exact offered item and included scope in the written quotation.

Discuss the exact marking and installed application with Apter Power.
sales13@apterpower.com | +86 18030235313

Verified related product references

Related product	PM511V16 3BSE011181R1
Related product	BCU-12 3AUA0000110430
Related product	ZINT-571 3AUA0000077333
Related product	CI858K01 3BSE018135R1

Commissioning record template

Installed asset	Machine, bearing, channel or cabinet reference
Companion identities	Probe, cable, sensor, interface or monitor markings
Mechanical datum	Mounting reference, reach, alignment or sealing condition
Electrical datum	Chain length, connector, shield, supply or input assignment
Before-work baseline	Gap, bias, vibration, continuity or channel observation
As-left result	Final measured value and functional proof
Approval basis	Applicable drawing, control requirement or site procedure
Handover	Technician, date, revision and maintenance-record location

Escalation triggers

Identity conflict	Stop if the complete marking, suffix, revision or approval identity differs from the approved record.

Host mismatch	Escalate if the rack, carrier, backplane, terminal unit or controller assignment is not documented for AFPS-11C.
Interface damage	Do not energize with bent contacts, damaged insulation, loose retainers, contamination or heat discoloration.
Environmental breach	Review any exposure beyond the documented temperature, vibration, humidity, contamination or enclosure boundary.
Unapproved substitution	Do not transfer ratings or compatibility from an adjacent order code without manufacturer evidence.
Configuration conflict	Stop if hardware settings, firmware, channel assignment or project configuration disagree with the installed record.
Unstable measurement	Investigate noise, drift, intermittent status or inconsistent readings before replacing another component.
Failed functional proof	Keep the asset in the approved maintenance state until the complete acceptance sequence is passed and recorded.

Evidence package

Nameplate evidence	Overall and close photographs showing AFPS-11C, revision, approval and serial details where present.
Installation evidence	Views of the rack position, mechanical datum, terminal assignment, cable route and strain relief.
Configuration evidence	Export or screenshots identifying the approved hardware assignment and parameters without exposing credentials.
Baseline evidence	As-found readings with units, test conditions, machine state and the instrument used.
Inspection evidence	Connector, contact, insulation, fastener, contamination and heat-condition observations.
Functional evidence	As-left readings and the controlled input, output or channel response used for acceptance.
Change evidence	Any wiring, setting, firmware or mechanical change linked to its approved work reference.
Release evidence	Technician, reviewer, date, asset reference and the maintenance-record location for traceability.

Evidence quality controls

Traceability	Each value is tied to AFPS-11C, the asset location, test state, instrument and date.
Repeatability	The same approved method and comparable operating state are used for before-and-after readings.
Resolution	Recorded precision does not exceed the capability of the instrument or source document.
Reference state	Stopped, energized, loaded and process-running observations are clearly distinguished.
Change control	Every changed setting, connection or mechanical datum has an approved reason and reviewer.
Retention	Evidence remains accessible with the maintenance record for future troubleshooting and replacement review.