01 / Identity and job scope

ABB

BCU-12 3AUA0000110430

Drive Control Unit

Product role

ABB BCU-12 3AUA0000110430 is a converter control unit with seven fiber-optic connections and integrated converter-data logging.

BCU-12
Control program and I/O

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V1–V7
Fiber-optic branches

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Converters
Controlled power modules

Applicability

Hardware values describe BCU-12. From internal BCON-12 revision R, compatibility with older firmware and bootloaders is restricted; confirm the actual hardware and software combination before replacement.

Hardware and configuration

BCU-12 provides seven fiber-optic converter connections. Its BPEB-05 expansion board adds five branches to the two basic connections, while integrated branching functionality collects converter data on an SDHC card for service analysis. Optical pairs connected to the same control unit must have equal lengths; the supported cable limit depends on fiber construction.

Planning basis

This Apter Power guide supports identification and engineering planning. Apply the complete manufacturer and machine-builder procedures for the actual installation.

02 / Configuration and interface readiness

Item	Configuration relationship
Function	Converter control via fiber-optic links
Optical channels	7, V1–V7
External supply	24 V DC ±10%, 2 A
Redundant supply inputs	Two connections at XPOW
Digital inputs	6, DI1–DI6
Configurable digital I/O	2, DIO1 and DIO2
Analog inputs	2 differential; −10…+10 V or −20…+20 mA

Technical context

The control interfaces include six digital inputs, two configurable digital inputs/outputs, two differential analog inputs, two analog outputs and three relay outputs. Analog inputs support −10 to +10 V or −20 to +20 mA selection; analog outputs provide 0–20 mA into a load below 500 ohms. XPOW accepts two external 24 V DC supplies for redundancy.

Which analog signals can BCU-12 3AUA0000110430 accept?

The two differential analog inputs support −10 to +10 V or −20 to +20 mA. Select the input mode with the corresponding switches.

What load applies to the analog outputs on BCU-12 3AUA0000110430?

The two analog outputs provide 0–20 mA and require a load resistance below 500 ohms.

03 / Installation and connection decisions

Isolate the drive

Follow the drive safety instructions and verify discharge before accessing the control unit.

Check hardware revision

Review the BCON-12 revision and firmware compatibility, especially revision R and later.

Match optical pairs

Retain optical channel assignments and equal cable-pair lengths.

Select analog mode

Match current or voltage input selection to the connected signal source.

Installation context

Three option slots accept applicable F-type adapters or I/O extensions, with an additional RDCO communication option position. The converter memory unit is separate from the SDHC diagnostic card and must not be exchanged while powered. Units using BCON-12 revision R or later require a firmware and bootloader compatibility review; the physical BCU-12 identity alone does not establish compatibility with an older drive.

What is stored on the diagnostic card of BCU-12 3AUA0000110430?

The SDHC card records converter-module data collected through the optical branches for fault tracing and analysis. It is distinct from the converter memory unit.

Can the memory unit of BCU-12 3AUA0000110430 be exchanged while powered?

No. Remove power from the control unit before removing or installing the converter memory unit.

04 / Functional acceptance planning

Application	Controlled review
Converter coordination	Use the seven optical branches to connect the converter modules specified for the drive arrangement.
Fault-data capture	Collect real-time converter data on the SDHC card for structured service analysis.
Drive control interfaces	Connect configured analog, digital and relay signals using the terminal assignments and load limits.
Drive hardware maintenance	Preserve converter identity, control-program memory and compatible firmware when replacing the control unit.

What optical cable rule applies to BCU-12 3AUA0000110430?

Fiber-optic pairs connected to one control unit must have equal lengths. Maximum lengths are 35 m for 1 mm plastic fiber and 100 m for 200 micrometre hard-clad silica fiber.

Why must firmware compatibility be checked for BCU-12 3AUA0000110430?

From internal BCON-12 revision R, compatibility with older drive firmware and bootloaders is restricted. Match the hardware revision and software before replacement.

Release boundary

Confirm the correct control program, converter hardware and safety interfaces before releasing the drive.

Record
Keep the original configuration

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Test
Observe controlled response

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Release
Authorize normal operation

05 / Technical handover and support

Retained information

Keep the complete BCU-12 3AUA0000110430 marking, host identity, connection photographs, configuration backup and controlled-test results in the service record.

Support planning

Confirm current support and replacement guidance with ABB for the installed identity and configuration. Apter Power availability and dispatch are separate quotation matters.

Reference basis

ABB BCU-02/12/22 Control Units Hardware Manual, 3AUA0000113605 Rev. D; ABB 3AUA0000110430 product information.

Apter Power technical summary; not a manufacturer-issued manual. Apply the original instructions for the actual installation.

Related industrial automation products

Navigation only; no substitution or compatibility claim.

ABB SNAT7261QCP

ABB NRED-61-E

ABB NGDR-07C-NGDR-07-FF1400R12IP4

Discuss your installed configuration

Send the full unit marking and connection details.

sales13@apterpower.com | +86 18030235313