APTER POWER
INDUSTRIAL AUTOMATION

MANUFACTURER-SOURCE TECHNICAL REFERENCE

ABB RDCU-12C-3AUA0000036521

Product Reference

ACS800 drive control unit containing an RMIO-12C motor-control and I/O board

DOCUMENT SCOPE

Independent Apter Power manual compiled only from the cited ABB manufacturer sources. No product photograph is included.

Product / lookup identity	ABB RDCU-12C-3AUA0000036521
Reference number	3AUA0000036521
Document basis	Published ABB product records, PDFs, and manuals listed on page 3

Product page

https://www.apterpower.com/ABB/rdcu-12c-3aua0000036521

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Product role and published parameters

WHAT IT IS, WHAT IT DOES, AND WHERE IT FITS

ABB RDCU-12C is an ACS800 drive control unit built around the RMIO-12C motor-control and I/O board. It accepts three analogue inputs, six programmable 24 V digital inputs plus a start-interlock input, and provides two analogue outputs and three relay outputs for external control and status signals. The unit connects optically to the inverter or IGBT-supply power section over ABB PPCS and can host documented I/O, pulse-encoder, fieldbus and DDCS options together with a CDP-312R control panel. It supports motor, inverter and external process-I/O control in compatible ACS800 systems, including a documented grid-side converter role in ACS800-67LC equipment. ABB directly verifies programmed code 3AUA0000036521P; the requested unsuffixed code requires label confirmation.

Published field	Manufacturer-published value or verified identity note
Product type	ACS800 drive control unit
Contained control board	RMIO-12C motor-control and I/O board
Supply input	+24 V DC ±10%; 250 mA typical without options, 1200 mA maximum with options
Analogue inputs	3: two differential current inputs and one differential voltage input
Analogue outputs	2 programmable 0/4 to 20 mA outputs
Digital inputs	6 programmable 24 V inputs plus DIIL start interlock
Relay outputs	3

System function and signal path

01	External analogue inputs, programmable digital inputs and the DIIL start-interlock signal enter the RMIO-12C motor-control and I/O board inside RDCU-12C.
02	The loaded ACS800 application program processes those control and feedback signals according to the matched converter configuration.
03	RDCU-12C exchanges control data with the inverter or IGBT-supply power section over ABB's 10 MBd PPCS optical-fibre link.
04	Two analogue outputs and three relay outputs return documented command, indication or status interfaces to external equipment.

Applications, answers, and official sources

1. Motor and inverter control in compatible ACS800 variable-speed drive systems
2. External analogue and digital process/control signal interfacing for ACS800 drives
3. Encoder-feedback integration when a documented RTAC option module is fitted
4. Fieldbus or DDCS integration through documented option modules where supported

Frequently asked questions

What is ABB RDCU-12C?	It is an ACS800 drive control unit that contains the RMIO-12C motor-control and I/O board.
What supply does RDCU-12C require?	It requires +24 V DC ±10%. ABB gives a typical current of 250 mA without options and a maximum of 1200 mA with options.
How many analogue signals can it handle?	It has three analogue inputs: two programmable differential current inputs and one programmable differential voltage input. It also has two programmable 0/4 to 20 mA analogue outputs.
How many digital and relay channels are provided?	The control unit provides six programmable 24 V digital inputs, one DIIL start-interlock input and three relay outputs.
How does RDCU-12C communicate with the power section?	It uses ABB's 10 MBd PPCS protocol over an optical-fibre link to the inverter or IGBT-supply module.
Which option modules can be installed?	ABB documents RAIO and RDIO I/O modules, RTAC pulse-encoder modules, RPBA or RMBA fieldbus modules where supported, and an RDCO DDCS communication option.

Official ABB sources

ABB product page: 3AUA0000036521P RDCU-12C Control Board - Programmed	https://www.abb.com/global/en/products/3aua0000036521p
RDCU-02C, RDCU-12C and RDCU-16C Drive Control Units Hardware Manual, Rev C	https://library.e.abb.com/public/c23045e0f662a9ddc12574ce0045ed3f/EN_RDCU_HW_C.pdf
ACS800-67LC Wind Turbine Converters Hardware Manual	https://library.e.abb.com/public/4ea69db0f352467a94ff0d77604d674d/EN_ACS800-67LC_HW_C_A4.pdf
ACS800-04/04M/U4 Drive Modules Hardware Manual	https://library.e.abb.com/public/372c56e182ce42fbabdb886bd8e3cd47/EN_ACS800_04_R7_R8_HW_G_A4.pdf