01 / Identity and job scope

ABB

DSTA170 57120001-FC

Analog Connection Unit

Product role

ABB DSTA170 57120001-FC provides field-wiring connections for eight DSAO120 analog-output channels in an Advant S100 I/O installation.

DSAO120
Eight converted outputs

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DSTA170
Voltage/current connections

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Field circuit
Controlled equipment

Applicability

DSTA170 57120001-FC is the connection unit for the DSAO120 analog-output arrangement. Output range and conversion resolution belong to the paired output board; cables and the board are separate items.

Hardware and configuration

DSTA170 is paired with the eight-channel DSAO120 analog-output board. The connection unit brings the channel signals to screw terminals for field wiring; it does not perform the digital-to-analog conversion. In the associated output set, DSAO120 provides bipolar voltage or current outputs with 12-bit resolution including the sign.

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
Connection function	Analog-output field wiring
Paired output board	DSAO120
Output channels	8
Voltage connections	8
Current connections	8
Signal selection	By connection to voltage or current terminals
Current-path configuration	Diode with solder-jumper bypass

Technical context

The unit provides eight voltage-output connections and eight current-output connections, allowing the required signal function to be chosen through the field connection for each channel. The DSAO120 arrangement is not galvanically isolated. The load and return wiring therefore need to follow the circuit design for that board rather than the isolated DSAO120A arrangement.

How is voltage or current selected on DSTA170 57120001-FC?

The selected field-wiring connection determines the signal function for each DSAO120 channel. Use the appropriate voltage or current connection and its return circuit.

Does DSTA170 57120001-FC provide isolated analog outputs?

The paired DSAO120 output arrangement has no galvanic isolation. The isolation characteristics of DSAO120A must not be applied to this arrangement.

03 / Installation and connection decisions

Confirm the paired board

Match DSTA170 to the installed DSAO120 arrangement; do not substitute DSTA171 or assume DSAO120A behavior.

Identify every channel

Record voltage/current selection and return wiring before disconnecting the field conductors.

Respect the isolation boundary

Treat the DSAO120 circuits as non-isolated and assess grounding and common-potential connections.

Preserve solder jumpers

Record the current-path bypass state. Change it only under the applicable ABB circuit procedure.

Installation context

Each current output has a diode with a solder-jumper bypass. Normal operation uses the bypass in place; the documented parallel-current-output arrangement requires the relevant bypass to be opened. This configuration applies when two current outputs feed the same control object and must be assessed as a complete circuit before any jumper change.

What is the purpose of the current-output diode on DSTA170 57120001-FC?

Each current-output path includes a diode that can be bypassed with a solder jumper. The bypass configuration changes between normal operation and the documented parallel-current arrangement.

What is the normal bypass setting for DSTA170 57120001-FC?

The current-output bypass jumpers are fitted for normal operation. Preserve the channel configuration and verify the circuit before changing a solder jumper.

04 / Functional acceptance planning

Application	Controlled review
Analog field termination	Connect eight DSAO120 output channels to the field equipment through the appropriate screw-terminal circuits.
Voltage-output wiring	Select the voltage connection and matching return for channels configured to drive a voltage-controlled load.
Current-output wiring	Use the current connection and return for the intended loop, respecting the non-isolated board arrangement.
Parallel-current circuit service	Maintain the documented diode-bypass arrangement when two output channels serve the same control object.

What changes when DSTA170 57120001-FC is used with parallel current outputs?

When two current outputs from the same or different boards feed one control object, the applicable bypass jumpers are opened in the documented arrangement. Do not parallel outputs without a complete circuit review.

Does DSTA170 57120001-FC determine analog-output resolution?

No. Conversion resolution belongs to DSAO120. The associated board provides 12-bit resolution including sign; DSTA170 is the field-wiring connection unit.

Release boundary

Perform a controlled channel check against the intended voltage or current signal and confirm the field response.

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 DSTA170 57120001-FC 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 S100 I/O Hardware Reference Manual, 3BSE002413R501, March 2004; Advant Controller 450 Product Guide, 3BSE015953R201 Rev. B.

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 PM511V16-3BSE011181R1

ABB TK851V010-3BSC950262R1

ABB SB522V1 3BSC760015R1

Discuss your installed configuration

Send the full unit marking and connection details.

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