1734-EP24DC

01 / Scope and power boundaries

Allen-Bradley 1734-EP24DC is a POINT I/O expansion power supply that extends POINTBus power and creates a separate 24V DC field-power segment for modules to its right.

Two separate current budgets

POINTBus output	1 A or 1.3 A, depending on mounting orientation and input voltage. Add the backplane current of each downstream module.
Field-power path	Up to 10 A field-bus supply current. Calculate the attached field-device load separately from the POINTBus load.
Station boundary	Use with POINT I/O adapters. A segment supports 4 to 17 modules according to individual module current demand.

Before work begins

Identify every source feeding the adapter, expansion supply and field loads. Remove the relevant power before wiring or replacement and apply the site isolation procedure. Do not connect 120/240V AC to the DC input.

Equipment identity

Match the 1734-EP24DC catalog number and hardware series to the station. The K-suffix selection is conformal coated; keep the full catalog identification in the service record.

Product and installation enquiries

sales13@apterpower.com | +86 18030235313

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02 / Pre-installation planning

Input and supply	24V DC nominal; allowed input 10 to 28.8V DC. Allow for the maximum 6 A, 10 ms inrush.
Horizontal installation	1 A POINTBus output at 10 to 19.2V input; 1.3 A at 19.2 to 28.8V input.
Vertical installation	1 A POINTBus output throughout the 10 to 28.8V input range.
Cabinet environment	Open-style construction needs an appropriate enclosure. Surrounding air must stay between -20 and +55 °C.
Mounting ground	Use grounded zinc-plated, chromate-passivated steel DIN rail and suitable end anchors.

Power segmentation

Place the expansion supply where a new downstream field-voltage segment is required. Separate inputs from outputs or analog from digital circuits as the station design requires. Verify adapter and total-station limits.

Source requirements

Apply the relevant SELV/PELV and Class 2 or Limited Voltage/Current source requirements. Hazardous-location use depends on the actual product marking and all enclosure conditions.

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Apter Power guide - apply manufacturer instructions and site procedures.

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03 / Mounting and connection

1 / Seat the supply	Engage the interlocking side pieces with the adjacent unit and press the supply onto the DIN rail until the latch locks.
2 / Connect chassis ground	Terminals 2 and 3 connect chassis ground. Maintain the rail grounding path.
3 / Connect common and V	Terminals 4 and 5 are common; 6 and 7 are the DC supply. Terminals 0 and 1 are not connected.
4 / Check conductors	Use 22 to 14 AWG solid or stranded copper rated at least 75 °C. Tighten the terminal screws to 0.6 N.m.
5 / Close the station	Seat adjacent modules fully and cover the final exposed interconnection with the end cap.

Replacement access

Remove the terminal block using its handle and remove the module immediately to the right from its base. Release the rail locking mechanism, lift the supply and install the replacement while engaging both adjoining sides.

Before applying power

Verify polarity, tight connections, the intended field-voltage partition and the calculated module-current demand. Do not use connector appearance as proof of correct wiring.

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04 / Commissioning and acceptance

Incoming DC	Measure the source under the intended load. Confirm it remains within the specified input range.
System-power indicator	Steady green is the normal energized condition. If off, check the applicable supply and connections.
Field-power indicator	Steady green is the normal energized condition. Check the downstream field-voltage segment and its field load.
I/O verification	Prove affected inputs and outputs using the approved station procedure. A green supply indicator alone does not prove every I/O function.
Load and temperature	Confirm the installed orientation, POINTBus current budget and cabinet air temperature under normal operating load.

Acceptance boundary

The new field segment starts to the right of the supply. Ensure modules on both sides receive the intended voltage and that no unintended power connection defeats the partition.

Release record

Retain catalog and series identification, station layout, supply measurements, current calculations and functional-test results with the maintenance record.

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05 / Diagnostics and service record

No system-power indication	Check the input source, polarity, terminal connections and downstream load against the orientation-dependent output limit.
No field-power indication	Trace the field supply and common to the expansion module and check the affected field-voltage segment.
I/O fault with green indicators	Continue with adapter and I/O-module diagnostics. Normal supply indicators do not confirm configuration, communications or field-device operation.

Technical basis

Rockwell Automation POINT I/O 24V DC Expansion Power Supply Installation Instructions, 1734-IN058M-EN-P, July 2026. This Apter Power guide supports preparation and does not replace the original instructions.

Other Allen-Bradley I/O references

Allen-Bradley 1769-IQ32

Allen-Bradley 1769-IQ16K

Allen-Bradley 1794-OF4I

Separate I/O families for portfolio navigation. These are not 1734-EP24DC substitutes or confirmed POINT I/O companions.

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